



Plant Inventory No. 208

Plant Materials Introduced in 1999
(Nos. 606708 - 612386)



Foreword

Plant Inventory No. 208 is the official listing of plant materials accepted into the U.S. National Plant Germplasm System (NPGS) between January 1 and December 31, 1999 and includes PI 606708 to PI 612386. The NPGS is managed by the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS). The information on each accession is essentially the information provided with the plant material when it was obtained by the NPGS. The information on an accession in the NPGS database may change as additional knowledge is obtained.

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The following were donated by Paul W. Bosland, New Mexico State University, Department of Plant, & Environmental Sciences, Las Cruces, New Mexico 88003-0003, United States. Received 11/14/1997.

PI 606708. *Capsicum tovarii* Eshbaugh et al.
Wild. NMCA 90008; Grif 14033. Collected in Peru.

The following were donated by Farmers Seed and Nursery Company, Faribault, Minnesota, United States. Received 1979.

PI 606709. *Solanum melongena* L.
Cultivar. NSL 6030; Grif 14168; WHITE BEAUTY.

The following were donated by Ferry-Morse Seed Company, Inc., P.O. Box 100, Mountain View, California 94042, United States. Received 1961.

PI 606710. *Solanum melongena* L.
Cultivar. NSL 6272; Grif 14169; CREOLE.

The following were donated by USDA, ARS, Horticultural Station, P.O. Box 1250, Cheyenne, Wyoming, United States. Received 1977.

PI 606711. *Solanum melongena* L.
Cultivar. NSL 28160; Grif 14176; EBONY KING.

PI 606712. *Solanum melongena* L.
Cultivar. NSL 28161; Grif 14177; FORT MEYERS MARKET.

PI 606713. *Solanum melongena* L.
Cultivar. NSL 28163; Grif 14179; MINNOVAL.

The following were donated by Corneli Seed Company, 101 Chouteau Avenue, Saint Louis, Missouri 63102, United States. Received 1964.

PI 606714. *Solanum melongena* L.
Cultivar. NSL 34202; Grif 14183; POMPANO MARKET.

The following were donated by H.G. Hastings Company, Atlanta, Georgia, United States. Received 1965.

PI 606715. *Solanum melongena* L.
Cultivar. NSL 37030; Grif 14187; FLORIDA SPECIAL.

The following were donated by USDA, ARS, Plant Genetic Resources Conservation Unit, 1109 Experiment Street, Griffin, Georgia 30223-1797, United States. Received 1968.

PI 606716. *Solanum melongena* L.

Uncertain. NSL 70795; Grif 14193; G-18366-2.

The following were developed by Craig F. Morris, USDA-ARS, Western Wheat Quality Lab., E-202 FSHN Facility East, Pullman, Washington 99164-6394, United States; Cal F. Konzak, Northwest Plant Breeding Company, NE 1725 Wheatland, Pullman, Washington 99163, United States. Received 12/18/1998.

PI 606717. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. Bai Huo D-null wx; WQL1BHWXD1b; NSGC 7354. GP-561. Pedigree - Selection from Bai Huo. Released 1999. A bulk of six plants selected and increased from the landrace 'Bai Huo' (originally obtained from the Chinese Academy of Agricultural Sciences, Beijing) are homozygous D-null at the Wx-D1 locus (Wx-D1b; Wx-D1 granule bound starch synthase, GBSS, EC 24.1.21, is lacking). Flowers without vernalization, but responds to 1-5 weeks of cold (4-8C) treatment. Carries the Pinb-D1b hardness allele; grain grown in California (1997-98) had a Single Kernel Characterization System hardness of 67+-13. Awneid and has red grain color (one or more R genes).

The following were collected by Hiroshi Nakano, Tropical Agriculture Research Center, Plant Breeding Lab., Okinawa Branch, Maesato 1091, Ishigaki, Okinawa 907, Japan; Maqbool A. Bhatti, National Agricultural Research Ctr., P.O. NARC, Park Road, Islamabad, Pakistan; Yoshinobu Egawa, National Institute of Agrobiological Resources, Tsukuba, Ibaraki, Japan. Donated by International Board for Plant Genetic Resources, AGPG, FAO, Via della terme de Caracalla, Rome, Latium 00100, Italy. Received 10/11/1994.

PI 606718. *Vigna unguiculata* (L.) Walp.

Landrace. 2751 (6); RAWAN/LOBIA; Grif 12287. Collected 09/17/1991 in Punjab, Pakistan. Latitude 31° 58' N. Longitude 74° 15' E. Elevation 250 m. Near Kamoke. Lat/lon accurate to Kamoke. From a village market. Population contains whitish seeds and light red-brown seeds. White seed dominant. Small seed size.

PI 606719. *Vigna unguiculata* (L.) Walp.

Landrace. 2765 (3); SPIN LOBIA; Grif 12288. Collected 09/21/1991 in North-West Frontier, Pakistan. Latitude 33° 4' N. Longitude 73° 1' E. Near Dhudial. Lat/lon accurate to Dhudial. From a village market. Two *Phaseolus vulgaris* seeds mixed in. White seed coat color. Medium seed size.

PI 606720. *Vigna unguiculata* (L.) Walp.

Landrace. 2854 (2); LOBIA; Grif 12289. Collected 10/30/1991 in North-West Frontier, Pakistan. Elevation 1800 m. Near Dogal-Patrak. Five km W Patrak. Fifty one km NE is Patrak. From farmstore. Highly variable, originally mixed with *Phaseolus vulgaris* [2854 (2) A]. Mixture of *Vigna* and *Phaseolus*. *Vigna* variable for seed coat color and size. *Phaseolus* red seed color. Large seed size.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington 99164-6434, United States. Received 07/12/1990.

PI 606721. *Vigna unguiculata* (L.) Walp.

Cultivated. WJK-PRC-28; W6 4486; Grif 12326. Collected 05/26/1990 in Shaanxi, China. Latitude 34° 16' N. Longitude 108° 54' E. Market vendor, Xian, from central Shaanxi Province. Lat/lon accurate to Xian. Seed mixture with different seed coat colors, shapes and sizes. Seed quality poor, some seeds damaged by bruchids.

PI 606722. *Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.

Cultivated. WJK-PRC-59; W6 4517; Grif 12327. Collected 05/30/1990 in Sichuan, China. Latitude 29° 34' N. Longitude 103° 44' E. Elevation 450 m. Open air market in Leshan, Sichuan Province. Lat/lon accurate to Leshan. Grown locally. Supposedly has a short pod. Primarily red seeds.

PI 606723. *Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.

Cultivated. WJK-PRC-60; W6 4518; Grif 12328. Collected 05/30/1990 in Sichuan, China. Latitude 29° 34' N. Longitude 103° 44' E. Elevation 450 m. Open air market in Leshan, Sichuan Province. Lat/lon accurate to Leshan. Grown locally. Supposedly a yard long bean.

The following were collected by L. Guarino, International Plant Genetic Resources Institute, Rome, Latium, Italy. Donated by Paul Quek, International Plant Genetics Resources Institute, Regional Office for Asia, the Pacific and Oceania, c/o IDRC, 7th Storey, RELC Building, Singapore. Received 11/29/1994.

PI 606724. *Vigna unguiculata* (L.) Walp.

Wild. 1044; Grif 12367. Collected 1988 in Yemen.

The following were collected by Citoyen Nlandu ne Nsaku, Institut de Recherche, Agronomique et Zootechnique (IRAZ), De La C.E.P.G.L., B.P. 91, Gitega, Burundi. Donated by Paul Quek, International Plant Genetics Resources Institute, Regional Office for Asia, the Pacific and Oceania, c/o IDRC, 7th Storey, RELC Building, Singapore. Received 11/29/1994.

PI 606725. *Vigna unguiculata* (L.) Walp.

Cultivated. GMN 50; Grif 12388. Collected 05/17/1989 in Kasai-Oriental, Zaire. Latitude 6° 45' S. Longitude 83° 57' E. Elevation 780 m. INERA Station.

The following were developed by Robert Elmore, Mississippi State University, Prairie Research Unit, P. O. Box 124, Prairie, Mississippi 39756, United States; Jimmie H. Hatchett, USDA-ARS, Dept of Entomology, Waters Hall, Manhattan, Kansas 66506-4004, United States; P. Stephen Baenziger, University of Nebraska, Department of Agronomy, 362D Plant Science Bldg., Lincoln, Nebraska 68583-0915, United States; Lenis A. Nelson, University of Nebraska-Lincoln, Institute of Agric. and Nat. Resources, Panhandle Res. & Extension Center, Scottsbluff, Nebraska 69361, United States; Clinton E. Peterson, USDA, ARS, Department of Horticulture, University of Wisconsin, Madison, Wisconsin 53706, United States; David D. Baltensperger, University of Nebraska, Panhandle Research, & Extension Center, Scottsbluff, Nebraska 69361-4939, United States; Don V. McVey, USDA, ARS, University of Minnesota, Cereal Rust Laboratory, St. Paul, Minnesota 55105, United States; B. Moreno-Sevilla, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68583, United States; C.J. Peterson, USDA, ARS, University of

Nebraska, Dept. of Agronomy, Lincoln, Nebraska 68583, United States; D.R. Shelton, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68583, United States; John E. Watkins, University of Nebraska, Dept. of Plant Pathology, Lincoln, Nebraska 68583, United States. Received 01/12/1999.

PI 606726. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "CULVER"; NE93554; NSGC 7355. PVP 9900404; CV-880. Pedigree - NE82419/Arapahoe = Trapper//Comanche/Ottawa/3/unknown CIMMYT line/Scout/4/Buckskin sib/Homestead/5/Arapahoe. Released 1999. Hard red winter wheat. Superior adaptation to dryland wheat production systems in southern and central Nebraska and similar growing areas in adjacent states. Awned, white-glumed. Field appearance similar to Alliance although not as yellow-green in color. Medium maturity. Winterhardiness good to very good. Moderately resistant to stem rust and leaf rust.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 01/13/1999.

PI 606727 PVPO. *Glycine max* (L.) Merr.

Cultivar. "92B23". PVP 9900085.

PI 606728 PVPO. *Glycine max* (L.) Merr.

Cultivar. "90B21". PVP 9900086.

PI 606729. *Glycine max* (L.) Merr.

Cultivar. "92B22". PVP 9900087.

PI 606730 PVPO. *Glycine max* (L.) Merr.

Cultivar. "93B34". PVP 9900088.

PI 606731 PVPO. *Glycine max* (L.) Merr.

Cultivar. "93B45". PVP 9900089.

PI 606732 PVPO. *Glycine max* (L.) Merr.

Cultivar. "90B93". PVP 9900090.

PI 606733 PVPO. *Glycine max* (L.) Merr.

Cultivar. "91B64". PVP 9900091.

PI 606734 PVPO. *Glycine max* (L.) Merr.

Cultivar. "92B05". PVP 9900092.

PI 606735 PVPO. *Glycine max* (L.) Merr.

Cultivar. "90B72". PVP 9900097.

PI 606736 PVPO. *Glycine max* (L.) Merr.

Cultivar. "91B52". PVP 9900098.

PI 606737 PVPO. *Glycine max* (L.) Merr.

Cultivar. "91B02". PVP 9900099.

PI 606738 PVPO. *Glycine max* (L.) Merr.

Cultivar. "95B33". PVP 9900100.

PI 606739 PVPO. *Glycine max* (L.) Merr.

Cultivar. "93B53". PVP 9900101.

PI 606740 PVPO. *Glycine max* (L.) Merr.
Cultivar. "90B43". PVP 9900102.

PI 606741 PVPO. *Glycine max* (L.) Merr.
Cultivar. "93B25". PVP 9900103.

PI 606742 PVPO. *Glycine max* (L.) Merr.
Cultivar. "90B31". PVP 9900104.

PI 606743. *Glycine max* (L.) Merr.
Cultivar. "93B71". PVP 9900105.

The following were developed by Jeff Pedersen, USDA, ARS, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68583-0937, United States; John J. Toy, USDA, ARS, University of Nebraska-Lincoln, 314 Biochemistry Hall; East Campus, Lincoln, Nebraska 68583-0737, United States. Received 11/09/1998.

PI 606744. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Breeding. Pureline. N244. GP-563. Pedigree - SC10 / SC559. Released 06/1998. R-line with potential to give high yielding hybrids. Anthesis in 86 days, averages 115 cm in height, purple plant color, white seed, and no pigmented testa.

PI 606745. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Breeding. Pureline. N245. GP-564. Pedigree - SC120 / SC133. Released 06/1998. R-line with the potential to give high yielding hybrids. Anthesis in 72 days, averaged 95 cm in height, tan plant color, white seed, and no pigmented testa.

PI 606746. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Breeding. Pureline. N246. GP-565. Pedigree - 83M3 / E35-1. Released 06/1998. R-line exhibiting very early maturity (59 days to anthesis), tan plant color, 75 cm in height, white seed, and no pigmented testa.

PI 606747. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Breeding. Pureline. N247. GP-566. Pedigree - 83M3 / E35-1. Released 06/1998. R-line exhibiting very early maturity (58 days to anthesis), tan plant color, 115 cm in height, white seed, and no pigmented testa.

The following were developed by Dennis Thomas, University of Illinois, Department of Crop Sciences, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; Cecil D. Nickell, University of Illinois, Department of Crop Sciences, 262 NSRC, Urbana, Illinois 61801, United States; Greg Noel, USDA-ARS, University of Illinois, Department of Plant Pathology, Urbana, Illinois 61801, United States; T.R. Cary, University of Illinois, Illinois Agr. Exp. Sta., Dept. of Agronomy, Urbana, Illinois 61801, United States; D.D. Hoffman, University of Illinois, Dept. of Crop Sciences, 1102 S. Goodwin, Urbana, Illinois 61801, United States. Received 11/23/1998.

PI 606748. *Glycine max* (L.) Merr.
Cultivar. Pureline. "REND"; LN92-10725. CV-401. Pedigree - Jack x Resnik. Indeterminate line with Group IV maturity (relative maturity 4.4) maturing 1 day later than Stressland and 1 day earlier than Mustang.

Flowers white, gray pubescence, brown pods at maturity, and dull yellow seeds with buff hila. May have up to 2% other plant and seed types. Susceptible to phytophthora rot (Races 1, 4, and 7) (*Phytophthora sojae*), brown stem rot (*Phialophora gregata*), and sudden death syndrome (*Fusarium solani*). Resistant to Races 2, 3, 4, 5 and 14 and moderately resistant to Race 1 when evaluated against soybean cyst nematode (*Heterodera glycines*) in the greenhouse.

The following were developed by Dennis Thomas, University of Illinois, Department of Crop Sciences, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; Cecil D. Nickell, University of Illinois, Department of Crop Sciences, 262 NSRC, Urbana, Illinois 61801, United States; Greg Noel, USDA-ARS, University of Illinois, Department of Plant Pathology, Urbana, Illinois 61801, United States; T.R. Cary, University of Illinois, Illinois Agr. Exp. Sta., Dept. of Agronomy, Urbana, Illinois 61801, United States; R.A. Leitz, University of Illinois, Dept. of Crop Sciences, 1102 S. Goodwin, Urbana, Illinois 61801, United States. Received 11/23/1998.

PI 606749. *Glycine max* (L.) Merr.

Cultivar. Pureline. "INA"; LN94-10527. CV-402. Pedigree - Jack x Hartwig. Indeterminate line with Group IV maturity (relative maturity 4.5) maturing 3 days later than Stressland and 1 day later than Mustang. Flowers white, gray pubescence, brown pods at maturity, and dull yellow seeds with buff hila. May have up to 2% other types. Susceptible to Phytophthora rot (Races 1, 4, and 7) (*Phytophthora sojae*), brown stem rot (*Phialophora gregata*), and sudden death syndrome (*Fusarium solani*). Resistant to Races 1, 3, and 5, and moderately susceptible to Race 4, and moderately resistant to Race 14 when evaluated against soybean cyst nematode (*Heterodera glycines*) in the greenhouse.

The following were collected by John L. Schwendiman, USDA-SCS, Plant Materials Center, Pullman, Washington, United States. Donated by John L. Schwendiman, USDA-SCS, Plant Materials Center, Pullman, Washington, United States; David Brenner, Iowa State University, Regional Plant Introduction Station, Room G212, Agronomy Building, Ames, Iowa 50011-1170, United States. Received 09/15/1972.

PI 606750. *Melilotus albus* Medik.

Wild. DB 98417; Ames 24964. Collected 1964 in Eskisehir, Turkey. Latitude 39° 40' N. Longitude 30° 20' E. Eskisehir, via grasslands and Animal Husbandry Research Station, Ankara. Separation from PI 383707 74ncpo01 of 20 biennial plants. Part of a regeneration planting of Row 417. Nineteen of the plants were of the standard type, one was the bushy type.

The following were collected by Hans-Martin Burki, CABI Bioscience Centre, Rue des Grillons 1, Delemont, Jura CH-2800, Switzerland. Received 12/14/1998.

PI 606751. *Amaranthus blitum* L. subsp. *blitum*

Wild. Ames 24974. Collected 10/1998 in Zurich, Switzerland. Latitude 47° 18' N. Longitude 8° 30' E. Elevation 442 m. Swiss Federal Research Station for Agroecology and Agriculture (FAL), CH 8046 Zurich. Sugarbeet field. Weakly pseudogleyic loamy brown soil from colluvium.

The following were developed by Pybas Vegetable Seed Company, P.O. Box 868, Santa Maria, California 93456, United States. Received 01/14/1999.

PI 606752 PVPO. *Lactuca sativa* L.

Cultivar. "BIG BEN". PVP 9900059.

The following were developed by W. Meyer, Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States; C.A. Rose-Fricker, Pure Seed Testing, Inc., 3057 G Street, Hubbard, Oregon 97032, United States; Melodee L. Fraser, Pure Seed Testing, Inc., P.O. Box 176, 606 Main Street, Rolesville, North Carolina 27571, United States. Received 01/14/1999.

PI 606753. *Festuca arundinacea* Schreb.

Cultivar. "OLYMPIC GOLD". PVP 9900106; CV-89. Pedigree - Advanced-generation synthetic. Plants used to develop Olympic Gold were initially selected for their excellent brown patch resistance and summer performance in turf trials near Rolesville, NC. In total, Olympic Gold traces approximately 59% of its origin to germplasm used in the breeding and development of 'Olympic' tall fescue. Early maturity, medium-dark tall fescue that has shown good turf quality in trials throughout the USA. Good summer turf performance. Good resistance to rhizoctonia blight, stem rust, leaf spot (*Drechslera dictyoides*), and gray leaf spot (*Pyricularia grisea*) and moderate resistance to Pythium blight (*Pythium aphanidermatum*).

The following were developed by Richard W. Ward, Michigan State University, Dept. of Crop & Soil Sciences, 382 Plant & Soil Sciences, East Lansing, Michigan 48824, United States. Received 01/14/1999.

PI 606754. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "BAVARIA". PVP 9900107. Pedigree - CO250/B7101//Pioneer line W9021R. Soft white winter wheat adapted to fall planting in Michigan. Glumes brown with square shoulder and an acute beak. Spike awnleted, lax, and fusiform in shape. Kernel white in color, ovate, large (0.38 g seed-1), with rounded cheeks and a mid-wide, mid-deep crease. Exhibits moderate to good field resistance to powdery mildew (*Erysiphe graminis*) and leaf rust (*Puccinia recondita*). Strongly resistant to Wheat Yellow Mosaic virus and has excellent winter hardiness. Excellent soft wheat milling and baking characteristics.

The following were developed by Novartis Seeds, Inc., United States. Received 01/14/1999.

PI 606755 PVPO. *Phaseolus vulgaris* L.

Cultivar. "ROG802". PVP 9900108.

The following were developed by Advanta Seeds Pacific, Inc., Oregon, United States. Received 01/14/1999.

PI 606756 PVPO. *Festuca arundinacea* Schreb.

Cultivar. "WILDFIRE"; ARCADE. PVP 9900111.

PI 606757 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "REDCOAT". PVP 9900112.

PI 606758 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "CORTEZ". PVP 9900113.

PI 606759 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "RESERVE". PVP 9900114.

PI 606760 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "ATF 192". PVP 9900115.

PI 606761 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "WYATT". PVP 9900116.

The following were developed by C.A. Rose-Fricker, Pure Seed Testing, Inc., 3057 G Street, Hubbard, Oregon 97032, United States; Melodee L. Fraser, Pure Seed Testing, Inc., P.O. Box 176, 606 Main Street, Rolesville, North Carolina 27571, United States. Received 01/14/1999.

PI 606762. *Festuca arundinacea* Schreb.
Cultivar. Population. "ENDEAVOR"; PST-5R94E. PVP 9900117; CV-90.
Pedigree - Traces maternal origin to the following 10 sources: two from Coyote, two from a plant collected from Holly Springs Country Club, Holly Springs, MS, one from Coronado, one from Rebel, one from Rebel Jr., one from Virtue, one from a plant collected on the campus of the University of Georgia, and one from a plant collected from an old turf in Atlanta, GA. Early-maturity, medium-dark green tall fescue that has a rapid establishment rate from seed and has excellent heat tolerance and resistance to rhizoctonia blight. Developed for turf uses including lawns, sports turfs, and golf course roughs. Especially well suited for those turf purposes in regions that have warm, humid summers. Performs well as a monostand, in blends with other turf-type tall fescues, or in mixtures with up to 5% Kentucky bluegrass.

The following were developed by Paragon Seed, Inc., United States. Received 01/14/1999.

PI 606763 PVPO. *Lactuca sativa* L.
Cultivar. "LIGHTHOUSE". PVP 9900122.

The following were developed by Timothy D. Murray, Washington State University, Dept. of Plant Pathology, P.O. Box 646430, Pullman, Washington 99164-6430, United States; Craig F. Morris, USDA-ARS, Western Wheat Quality Lab., E-202 FSHN Facility East, Pullman, Washington 99164-6394, United States; Clarence J. Peterson, USDA-ARS, Washington State University, Pullman, Washington, United States; Roland F. Line, USDA, ARS, Washington State University, 361 Johnson Hall, Pullman, Washington 99164, United States; Stephen S. Jones, Washington State University, Dept. of Crop & Soil Sciences, 383 Johnson Hall, Pullman, Washington 99164-6420, United States; S.R. Lyon, Washington State University, Dept. of Crop and Soil Sciences, Pullman, Washington 99164-6420, United States. Received 01/19/1999.

PI 606764. *Triticum aestivum* subsp. *compactum* (Host) Mackey

Cultivar. Pureline. "BRUEHL"; VO95435; WA007833; NSGC 7356. CV-912; PVP 200100258. Pedigree - UNA (NS 1971)/5/Oasis/4/Luke//Itana/CI1343 (WA6362)/3/Luke Mutant 14 (WA6242)/6/Tres/Eltan. Released 2001. Club-type soft white winter wheat. Semi-dwarf, awned, mid-season maturity, white straw and white glumes. Adapted for production in the areas of eastern Washington with snowmold infestations. Superior yield potential to Eltan, Sprague, and Hiller, especially under snowmold pressure. Matures seven days earlier than Eltan when recovering from severe snowmold infestation. Test weights are similar to Eltan and greater than Hiller. Good resistance to snowmold and stripe rust. Moderately susceptible to leaf rust, stem rust, *Cephalosporium* stripe, and eyespot.

The following were developed by Craig F. Morris, USDA-ARS, Western Wheat Quality Lab., E-202 FSHN Facility East, Pullman, Washington 99164-6394, United States; Roland F. Line, USDA, ARS, Washington State University, 361 Johnson Hall, Pullman, Washington 99164, United States; Stephen S. Jones, Washington State University, Dept. of Crop & Soil Sciences, 383 Johnson Hall, Pullman, Washington 99164-6420, United States; Richard Hoffman, Washington State University, Dept. of Crop & Soil Science, Spillman Farm, Pullman, Washington 99164-6420, United States; S.R. Lyon, Washington State University, Dept. of Crop and Soil Sciences, Pullman, Washington 99164-6420, United States; E. Donaldson, Washington State University, Dept. of Crop and Soil Sciences, Pullman, Washington 99164-6420, United States. Received 01/19/1999.

PI 606765. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "EDWIN"; H9109703; D88030; WA007834; NSGC 7357. CV-882. Pedigree - Jacmar/Stephens//Tres/4/PI 167822/CI 13438//Luke/3/Paha. Club-type soft white winter wheat. Tall, awnless, white glumes, and white straw. Adapted for production in the semi-arid region (<14 inches annual precipitation) of eastern Washington, as a replacement for Moro. Excellent emergence, straw strength and adult plant stripe rust resistance. Winter hardiness and snowmold resistance is similar to Eltan. Superior to Moro in yield and test weight. Excellent club wheat quality characteristics.

The following were developed by Edwin Donaldson, Washington State University, Dry Land Research Unit, P.O. Box B, Lind, Washington, United States; Stephen S. Jones, Washington State University, Dept. of Crop & Soil Sciences, 383 Johnson Hall, Pullman, Washington 99164-6420, United States. Received 01/19/1999.

PI 606766. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. N9408908; WA 7869; NSGC 7358. Pedigree - Buchanan/4/Kavkaz/3/PI 17346/Itana//Wanser. Hard red winter wheat. Tall, awned, mid to late season maturity, white straw, and white glumes. Adapted for production in the semi-arid region (<14 inches annual precipitation) of eastern Washington. Superior yield potential to all adapted hard reinter wheats. Grain protein content, test weight, and emergence similar to Buchanan. Good tolerance to snowmold, stripe rust, and *Cephalosporium* stripe. Susceptible to foot rot (eyespot).

The following were developed by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 04/1986.

PI 606767. *Amaranthus cruentus* L.

Cultivated. K 277; Ames 8272. This is a Mexican x Aztec breeding line. The orange and green striped stems make it easy to distinguish this line from weedy amaranths at emergence. Grain in the orange flowers matures about a week later than 1011.

The following were developed by Zeno W. Wicks III, South Dakota State University, Plant Science Department, NPB 248B, Brookings, South Dakota 57007, United States; M.L. Carson, South Dakota State University, Plant Sciences Department, Brookings, South Dakota 57007, United States; D.L. Robbins, South Dakota State University, Plant Sciences Department, Brookings, South Dakota 57007, United States; South Dakota State University, South Dakota Agricultural Exp. Station, Brookings, South Dakota, United States. Donated by Zeno W. Wicks III, South Dakota State University, Plant Science Department, NPB 248B, Brookings, South Dakota 57007, United States. Received 03/19/1991.

PI 606768. *Zea mays* L. subsp. *mays*

Breeding. Inbred. SD40; id=51072; 682-2/99; V963-2; V963-1; V963-3; Ames 15338. PL-75. Pedigree - Derived from eight generations of selfing an individual plant of Pioneer Hybrid 3709. Released 03/1985. Yellow dent inbred line. This line was evaluated for agronomic performance and in hybrid combination for yield and moisture. Released because of its potential to produce competitive hybrids for central and southern South Dakota. Derived by selfing for eight generations with selection for desirable plant, ear, and root traits. Evaluated for 3 years at Brookings and would be considered intermediate to late flowering because it silked 2 days after A632, 4 days after A619, 11 days after CM105, and 15 days after A654. Plants approximately 120 cm tall with ear placement approximately 75 cm above the ground. Light green with narrow and distinctly upright leaves, small tassels, and red cobs. Ear length about 15 cm and ears are borne on 7.5 cm shanks. 12 to 14 rows of medium size kernels on each cob. Seed moisture content about 20%, 60 days after pollination. Good vigor, ear fill, stalk strength, and stay green. Acceptable husk looseness and roots. Good combining ability with both A619 & A632, producing a 4 year average of 8.34 Mg/ha with A619 and 7.89 Mg/ha with A632 compared to 8.36 Mg/ha for Pioneer 3901 when tested at Brookings. Corn borer (*Ostrinia nubilalis*) resistance ratings on a 1 to 9 scale, averaged 3.00 in trials conducted in 1984-1985. Good resistance to northern corn leaf blight (*Exserohilum turcicum*), and acceptable resistance to stalk rot (*Diplodia maydis*).

PI 606769. *Zea mays* L. subsp. *mays*

Breeding. Inbred. SD41; id=72004; Ames 15339. PL-76. Pedigree - Derived from eight generations of selfing a single plant of the cross SDp309 X W64A. Released 03/1985. Yellow dent inbred line. Evaluated for agronomic performance and in hybrid combination for yield and moisture. Released because of its potential to produce competitive hybrids for central and southern South Dakota. Derived by selfing for eight generations with selection for desirable plant, ear, and root traits. At Brookings, intermediate to late flowering because it silked 1 day before A632, 1 day after A619, 8 days after CM105, and 12 days after A654(AES 500). Plants approximately 150 cm tall with ear placement 60-70 cm above the

ground. Narrow, dark green leaves, small tassels, and a red cob. Ear length is about 16.5 cm and ears are borne on 11 cm shanks. 18 rows of medium-small kernels. Seed moisture content about 20%, 60 days after pollination. Very good vigor and ear fill. Good stalk strength and husk looseness. Acceptable stay green and roots. Good combining ability with A632 producing a 4 year average of 7.90 Mg/ha compared to 8.36 Mg/ha for Pioneer 3901 when tested at Brookings. Corn borer (*Ostrinia nubilalis*) resistance ratings on a 1 to 9 scale, averaged 3.5 in trials conducted in 1984-85. Good resistance to northern corn leaf blight (*Exerhilum turcicum*), and good resistance to stalk rot (*Diplodia maydis*).

The following were developed by Mike McLaughlin, USDA, ARS, P. O. Box 5367, Highway 12, Mississippi State, Mississippi 39762-5367, United States; Gary A. Pederson, USDA, ARS, Waste Management and Forage, Research Unit, Mississippi State, Mississippi 39762-5367, United States. Received 12/18/1998.

PI 606770. *Trifolium repens* L.

Breeding. Population. PSVR1. GP-8. Pedigree - Derived from a single Regal plant. Released 1998. White clover developed for hypersensitive resistance to peanut stunt cucumovirus (PSV). Similar to Regal in appearance and growth and should be useful in producing PSV-resistant cultivars.

The following were developed by Mike McLaughlin, USDA, ARS, P. O. Box 5367, Highway 12, Mississippi State, Mississippi 39762-5367, United States; Timothy E. Fairbrother, USDA, ARS, Crops Science Research Lab., P. O. Box 5367, Mississippi State, Mississippi 39762-5367, United States; Dennis E. Rowe, USDA, ARS, Crop Science Research Lab., Forage Research Unit, Mississippi State, Mississippi 39762-5367, United States. Received 12/18/1998.

PI 606771. *Trifolium alexandrinum* L.

Breeding. Population. B1. GP-192. Pedigree - Produced from 3 PIs (468401, 517064, and 517060). Released 1998. Berseem clover resistant to bean yellow mosaic potyvirus (BYMV). Developed from intercrosses of plant introductions (PIs) screened for resistance to BYMV. Germplasm should be useful in development of BYMV-resistant cultivars.

PI 606772. *Trifolium alexandrinum* L.

Breeding. Population. B2. GP-193. Pedigree - Produced from 11 PIs (220147, 291548, 291549, 517056, 468402, 517057, 445883, 420811, 163315, 445897 and 445882) and Multicut. Released 1998. Berseem clover resistant to bean yellow mosaic potyvirus (BYMV). Developed from intercrosses of plant introductions (PIs) screened for resistance to BYMV. Germplasm should be useful in development of BYMV-resistant cultivars.

PI 606773. *Trifolium alexandrinum* L.

Breeding. Population. B3. GP-194. Pedigree - Produced from remnant healthy plants of 78 PI lines with <80% resistant plants, Bigbee, and Multicut. Released 1998. Resistant to bean yellow mosaic potyvirus (BYMV). Developed from intercrosses of plant introductions (PIs) screened for resistance by BYMV. Germplasm should be useful in development of BYMV-resistant cultivars.

PI 606774. *Trifolium alexandrinum* L.

Breeding. Population. B4. GP-195. Pedigree - Derived from intercross of

3 PIs (517055, 201954, and 241475). Released 1998. Berseem clover susceptible to bean yellow mosaic potyvirus (BYMV). Developed as an experimental control from intercroses of susceptible plant introductions (PIs) inoculated with BYMV in greenhouse tests. Germplasm should be useful as an experimental virus-susceptible control.

PI 606775. *Trifolium alexandrinum* L.

Breeding. Population. BYMVRB. GP-196. Pedigree - Derived from 9 PIs which included 8 named cultivars (468401, Lage; 220147, Frontier; 291548, Hustler; 291549, Musquawi; 468402, Balem; 420811, Eitan; 163315, Barain; 445875, Lyallpur Late; and 445882, Late Flowering). Released 1998. Berseem clover resistant to bean yellow mosaic potyvirus (BYMV). Resembles Multicut in growth habit and should be useful as a source of BYMV resistance for further selection and cultivar development.

The following were developed by Pybas Vegetable Seed Company, P.O. Box 868, Santa Maria, California 93456, United States. Received 01/25/1999.

PI 606776 PVPO. *Apium graveolens* L.

Cultivar. "SONORA". PVP 9900063.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 01/25/1999.

PI 606777 PVPO. *Medicago sativa* L.

Cultivar. "54H55". PVP 9900064.

The following were developed by Coastal Seeds, Inc., United States. Received 01/25/1999.

PI 606778 PVPO. *Lactuca sativa* L.

Cultivar. "HEARTS DELIGHT". PVP 9900066.

The following were developed by Goertzen Seed Research, Kansas, United States. Received 01/25/1999.

PI 606779. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "ENHANCER". PVP 9900068.

PI 606780. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "COSSACK". PVP 9900069.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 01/25/1999.

PI 606781 PVPO. *Phaseolus vulgaris* L.

Cultivar. "BABY BOP". PVP 9900070.

PI 606782 PVPO. *Phaseolus vulgaris* L.

Cultivar. "XP378". PVP 9900071.

PI 606783 PVPO. Phaseolus vulgaris L.
Cultivar. "XP371". PVP 9900072.

PI 606784 PVPO. Phaseolus vulgaris L.
Cultivar. "BEANY BABY". PVP 9900073.

The following were developed by USDA, ARS, Plant Genetic Resources Conservation Unit, 1109 Experiment Street, Griffin, Georgia 30223-1797, United States. Received 01/25/1999.

PI 606785 PVPO. Vigna unguiculata (L.) Walp.
Cultivar. "PETITE-N-GREEN". PVP 9900074.

The following were developed by Hazera Quality Seeds Ltd., Brurim, D.N., Shikmim, Israel. Received 01/25/1999.

PI 606786 PVPO. Triticum aestivum L. subsp. aestivum
Cultivar. "GALIL". PVP 9900075. Pedigree -
Hork/Yamhill//Kalyansona/Bluebird/3/Bobwhite 'S'.

PI 606787 PVPO. Triticum aestivum L. subsp. aestivum
Cultivar. "NEGEV". PVP 9900076.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 01/25/1999.

PI 606788 PVPO. Sorghum bicolor (L.) Moench subsp. bicolor
Cultivar. "PHB7W7L". PVP 9900077.

The following were developed by Speight Seed Farms, Inc., Box 507, Winterville, North Carolina 28590, United States. Received 01/25/1999.

PI 606789 PVPO. Nicotiana tabacum L.
Cultivar. "SPEIGHT NF3". PVP 9900078. Flue-cured.

The following were developed by Brotherton Seed Company, P.O. Box 1378, Moses Lake, Washington, United States. Received 01/25/1999.

PI 606790 PVPO. Pisum sativum L.
Cultivar. "TONIC". PVP 9900081.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 01/25/1999.

PI 606791 PVPO. Lactuca sativa L.
Cultivar. "BEN HUR". PVP 9900082.

The following were developed by Nickerson S.A., United States. Received 01/25/1999.

PI 606792 PVPO. *Pisum sativum* L.
Cultivar. "JASMINE". PVP 9900083.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; C.A. Rose-Fricker, Pure Seed Testing, Inc., 3057 G Street, Hubbard, Oregon 97032, United States; Melodee L. Fraser, Pure Seed Testing, Inc., P.O. Box 176, 606 Main Street, Rolesville, North Carolina 27571, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States. Received 01/25/1999.

PI 606793. *Poa pratensis* L.
Cultivar. "BLACKSTONE"; PST-638. PVP 9900084; CV-60. Pedigree - Originated as a single highly apomictic plant selected from the progeny of the Warren's A-25 x Blacksburg. Very dark, blue-green Kentucky bluegrass with reduced vertical growth and early spring green-up. Performed well in turf trials across the U.S. Good winter color compared to most Kentucky bluegrass cultivars and has shown good resistance to summer patch (*Magnaporth poae*), leaf spot, powdery mildew (*Erysiphe graminis*), dollar spot (*Sclerotinia homoeocarpa*), and stem rust (*Puccinia graminis*).

The following were developed by Texas Agricultural Experiment Station, Texas, United States. Received 01/25/1999.

PI 606794 PVPO. *Daucus carota* var. *sativus* Hoffm.
Cultivar. "BetaKing"; BETASWEET. PVP 9900093.

The following were developed by The J.C. Robinson Seed Company, Waterloo, Nebraska, United States. Received 01/25/1999.

PI 606795 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "MR724". PVP 9900094.

PI 606796 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "NR113". PVP 9900095.

The following were developed by Larry A. Walters, Nu-World Amaranth, Inc., P.O. Box 2202, Naperville, Illinois 60567, United States. Donated by Lynn Field, University of Minnesota, 135 Crops Research, 1903 Hendon Avenue, St. Paul, Minnesota 55108, United States. Received 05/08/1991.

PI 606797. *Amaranthus cruentus* L.
Cultivar. "A200D"; Hy015; Ames 15673. White seeded grain cultivar. Most of the stem, leaves, and inflorescence green. Base of stem pink.

The following were collected by Daniel Early, Central Oregon Community College, New College Way, Bend, Oregon 97701, United States. Developed by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Donated by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 04/15/1986.

PI 606798. *Amaranthus cruentus* L.

Breeding. RRC 1032; Ames 5596. Collected 1977 in Mexico, Mexico. Latitude 19° 15' N. Longitude 99° 1' W. Elevation 2200 m. Tuyehualco. Pedigree - Original, un-selected *A. cruentus* germplasm of RRC 362. RRC 1032 is the source of some important cultivars. The seeds are white, flowers green, red and marbled, leaves green and rufescent. The RRC class type is Mexican, mercado. There was much variability. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

PI 606799. *Amaranthus cruentus* L.

Breeding. RRC 1017; R 153; Ames 5623. Collected 1977 in Mexico, Mexico. Pedigree - SPS from RRC NUM 77S-362. Eliminated from grain development research after poor yields in 1978. The seeds are white, flowers marbled and red, leaves green. The RRC class type is: Mexican. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

Unknown source. Received 1999.

PI 606800. *Gossypium hirsutum* L.

SA 1098.

Unknown source. Received 1986.

PI 606801. *Gossypium hirsutum* L.

SA 1588; ACALA N 8577. Collected in United States.

Unknown source. Received 1986.

PI 606802. *Gossypium hirsutum* L.

SA 1589; ACALA SS 2086. Collected in United States.

Unknown source. Received 1986.

PI 606803. *Gossypium hirsutum* L.

SA 1590; ACALA SS 2280. Collected in United States.

The following were donated by T. W. Culp, USDA, ARS, Pee Dee Exp. Station, P.O. Box 271, Florence, South Carolina 29503, United States. Received 1979.

PI 606804. *Gossypium hirsutum* L.

Breeding. PD 9241; SA 1594. GP-46. Pedigree - Derived from crosses with southeastern commercial cultivars, Coker 421, Atlas and Carolina Queen. Developed specifically from a cross of Coker 421 x PD 4398. Info. from Crop Sci. 19(5):751 (1979) -- breeding line with extra fiber strength. Represents significant step in overcoming adverse association between yield and fiber quality (especially strength). Extremely susceptible to fusarium-wilt, rootknot-nematode complex and verticillium wilt. Combines well. Unusually high fiber elongation. Cultivated.

PI 606805. *Gossypium hirsutum* L.

"PD-1"; originally Pee Dee 4548; SA 1595. CV-85. Pedigree - Developed by pedigree selection from the cross of Pee Dee 4381 x PD 8623. Info. from Registration Notice, South Carolina Agr. Exp. St. (1984) -- high fiber strength. Commercial variety of upland cotton. Plant type moderately open. Well balanced. Vigorous seedling stage, with large leaves. Foliage medium heavy. At maturity, plants erect with excellent resistance lodging. Bolls medium sized. Fiber quality excellent. Yields equal or superior to leading southeastern cultivars. Fiber length within range med. staple cottons. Intermediate reaction Fusarium oxysporium & Meloidogyne. Adapted Southeast. Cultivated.

PI 606806. *Gossypium hirsutum* L.

"PD 2"; SA 1596. CV-86. Pedigree - Developed from bulked seed increase of an F3 plant selected from the composite cross of two F1 hybrids (FTA 266 x Atlas) x (AC 235 x Dixie King). Info. from Registration Notice, South Carolina Agricultural Experiment Station (1984) -- good yield due to rapid fruiting and shorter exposure period of fruiting parts to insect attacks. Resistant Fusarium oxysporium & Meloidogyne incognita (both intermediate reaction), rootknot nematode complex and boll weevil. Early maturing. High fiber strength. Compact plant type. Cultivated.

Unknown source. Received 1986.

PI 606807. *Gossypium hirsutum* L.

SA 1598; RRB2-10 (SUB-OKRA). Collected in United States.

Unknown source. Received 1986.

PI 606808. *Gossypium hirsutum* L.

SA 1610; LANKART LX571. Collected in United States.

The following were developed by Mississippi State University, Mississippi Agr. Exp. Sta., State College, Mississippi, United States. Received 1986.

PI 606809. *Gossypium hirsutum* L.

Cultivar. "DES 119"; SA 1611. PVP 8500176; CV-88. Collected in Mississippi, United States.

The following were developed by California Planting Cotton Seed Distributors, 30597 Jack Ave., Shafter, California 93263, United States. Received 09/22/1989.

PI 606810. *Gossypium hirsutum* L.

Aala SJ-2; SA 1626; Acala SJ-2. Collected in California, United States.

The following were developed by Mississippi State, Crop Science Research Laboratory, P.O. Box 5367, Mississippi State, Mississippi 39762, United States. Received 11/1990.

PI 606811. *Gossypium hirsutum* L.

SA 1661; AUBURN 634. Collected in Mississippi, United States.

Unknown source. Received 1990.

PI 606812. *Gossypium hirsutum* L.

PD 6992; SA 1666. GP-254. Collected in South Carolina, United States.

The following were developed by Rogers Delinting Company. Received 1990.

PI 606813. *Gossypium hirsutum* L.

SA 1667; RCD 102. Collected in Texas, United States.

The following were developed by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins, Colorado, United States. Received 04/23/1991.

PI 606814. *Gossypium hirsutum* L.

Cultivar. "Paymaster HS 26"; SA 1668. PVP 8600087. Collected in United States.

The following were developed by Ministerio de Agricultura, Pesa y Alimentacion, Seville, Sevilla, Spain. Received 01/1993.

PI 606815. *Gossypium hirsutum* L.

SA 1757; CRISTINA. Collected in Spain.

PI 606816. *Gossypium hirsutum* L.

SA 1758; VICTORIA. Collected in Spain.

The following were developed by J. F. Poisson, INTA - EEA, Saenz Pena, Buenos Aires, Argentina. Received 01/1993.

PI 606817. *Gossypium hirsutum* L.

SA 1759; CHACO 510 INTA. Collected in Buenos Aires, Argentina.

PI 606818. *Gossypium hirsutum* L.

SA 1760; GRINGO INTA. Collected in Buenos Aires, Argentina.

PI 606819. *Gossypium hirsutum* L.

SA 1761; GUAZUNCHO 2 INTA. Collected in Buenos Aires, Argentina.

PI 606820. *Gossypium hirsutum* L.

SA 1762; PORO INTA. Collected in Buenos Aires, Argentina.

The following were developed by F. Douglas Wilson, USDA, ARS, Western Cotton Research Laboratory, 4135 East Broadway Road, Phoenix, Arizona 85040, United States. Received 01/1993.

PI 606821. *Gossypium hirsutum* L.

SA 1766; CEDIX. Collected in Arizona, United States. Pedigree - EL SALVADOR-COTTON LEAF CRUMPLE VIRUS RESISTANCE.

- PI 606822. *Gossypium hirsutum* L.**
SA 1767; 4-BRACT. Collected in Arizona, United States. Pedigree - (TEXAS 703 X STONEVILLE 7A)(THRIP SUSCEPTIBLE).
- PI 606823. *Gossypium hirsutum* L.**
SA 1768; 3-BRACT. Collected in Arizona, United States. Pedigree - (TEXAS 703 X STONEVILLE 7A)(THRIP SUSCEPTIBLE).
- PI 606824. *Gossypium hirsutum* L.**
SA 1769; EPHEMERAL. Collected in Arizona, United States. Pedigree - DELTAPINE 61, SPONTANEOUS.
- PI 606825. *Gossypium hirsutum* L.**
SA 1770; PINK FILAMENT. Collected in Arizona, United States. Pedigree - TEXAS 1182 (LUKEFAHR, BAHAMONTE CALIFORNIA).
- PI 606826. *Gossypium hirsutum* L.**
SA 1771; UNDULATE. Collected in Arizona, United States. Pedigree - (TEXAS 301-14 X ACALA GLANDLESS)F3, SPONTANEOUS.

The following were donated by F. Douglas Wilson, USDA, ARS, Western Cotton Research Laboratory, 4135 East Broadway Road, Phoenix, Arizona 85040, United States. Received 1985.

- PI 606827. *Gossypium hirsutum* L.**
SA 1772; AET-5. Early maturity. High lint percentage. Nectaried. Normal pubescence. Normal leaf shape. Resistant to pink bollworm, *Pectinophora gossypiella*. Cultivated.
- PI 606828. *Gossypium hirsutum* L.**
Breeding. AET-5N; SA 1773. GP-260. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.
- PI 606829. *Gossypium hirsutum* L.**
Breeding. AET-5S; SA 1774. GP-261. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.
- PI 606830. *Gossypium hirsutum* L.**
Breeding. AET-5L; SA 1775. GP-263. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.
- PI 606831. *Gossypium hirsutum* L.**
Breeding. AET-5NS; SA 1776. GP-262. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.

PI 606832. *Gossypium hirsutum* L.

Breeding. AET-5NL; SA 1777. GP-264. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.

PI 606833. *Gossypium hirsutum* L.

Breeding. AET-5SL; SA 1778. GP-265. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.

PI 606834. *Gossypium hirsutum* L.

Breeding. AET-5NSL; SA 1779. GP-266. Info. from Crop Sci. 26(1):206 (1986) -- nectariless. Smoothleaf. Resistant pink bollworm (*Pectinophora gossypiella*). Comparative data available for yield, lint percentage, fiber length & strength, fiber elongation percent, and micronaire. Cultivated.

The following were developed by F. Douglas Wilson, USDA, ARS, Western Cotton Research Laboratory, 4135 East Broadway Road, Phoenix, Arizona 85040, United States. Received 01/1993.

PI 606835. *Gossypium hirsutum* L.

SA 1791; T39C-1-L. Collected in Arizona, United States. Pedigree - PINK BOLLWORM RESISTANT SELECTION FROM TEXAS 39.

PI 606836. *Gossypium hirsutum* L.

SA 1792; T39C-1-H. Collected in Arizona, United States. Pedigree - SUSCEPTIBLE SIB TO T39C-1-L.

PI 606837. *Gossypium hirsutum* L.

SA 1793; STONEVILLE 7A OKRA LEAF. Collected in Arizona, United States. Pedigree - PINK BOLLWORM RESISTANT.

The following were developed by Tom Kirby. Received 01/1993.

PI 606838. *Gossypium hirsutum* L.

SA 1794; S.N. 0039-2. Collected in California, United States. Pedigree - SJ-2 SURVIVOR, NEM/FUS=8290-4.

PI 606839. *Gossypium hirsutum* L.

SA 1795; S.N. 0040-2. Collected in California, United States. Pedigree - SJ-2 SURVIVOR, NEMA/FUS=8290-5.

PI 606840. *Gossypium hirsutum* L.

SA 1796; S.N. 0047-2. Collected in California, United States. Pedigree - SS2086 R54-17=7157, MED. HT. COLUMNAR.

PI 606841. *Gossypium hirsutum* L.

SA 1797; S.N. 0048-1. Collected in California, United States. Pedigree - G5244=G8160 x T4852 MEDIUM HEIGHT GLANDLESS.

- PI 606842. *Gossypium hirsutum* L.**
SA 1798; S.N. 0081-9. Collected in California, United States. Pedigree
- DES 9608 NECTARLESS=H6180.
- PI 606843. *Gossypium hirsutum* L.**
SA 1799; S.N. 0092-2. Collected in California, United States. Pedigree
- (LA FREGO 2-13170 x T1307) x SJ-2=H7050.
- PI 606844. *Gossypium hirsutum* L.**
SA 1800; S.N. 0093-2. Collected in California, United States. Pedigree
- DEL CERRO 153 (MIN. SIDE BRANCHES).
- PI 606845. *Gossypium hirsutum* L.**
SA 1801; S.N. 0094-2. Collected in California, United States. Pedigree
- DEL CERRO 169 (MIN. SIDE BRANCHES).
- PI 606846. *Gossypium hirsutum* L.**
SA 1802; S.N. 0099-1. Collected in California, United States. Pedigree
- (NILES 1657-77 x SJ-2), 1980 CROSS.
- PI 606847. *Gossypium hirsutum* L.**
SA 1803; S.N. 0133-9. Collected in California, United States. Pedigree
- NM1073 x S155, 2 x SJ-1 f6=H6097.
- PI 606848. *Gossypium hirsutum* L.**
SA 1804; S.N. 0143-8. Collected in California, United States. Pedigree
- A 76-73 (NM)=7421.
- PI 606849. *Gossypium hirsutum* L.**
SA 1805; S.N. 0185-9. Collected in California, United States. Pedigree
- NM1073 x S155, 2 x SJ-1, 3 x T5690.
- PI 606850. *Gossypium hirsutum* L.**
SA 1806; S.N. 0200-1. Collected in California, United States. Pedigree
- 4-42-58 MEDIUM HEIGHT 87-88.
- PI 606851. *Gossypium hirsutum* L.**
SA 1807; S.N. 0201-1. Collected in California, United States. Pedigree
- N6072 x T6310 (BEST '87 YIELD).
- PI 606852. *Gossypium hirsutum* L.**
SA 1808; S.N. 0202-2. Collected in California, United States. Pedigree
- (N9281 x T5690) x 4-42 CLUSTER, 87X.
- PI 606853. *Gossypium hirsutum* L.**
SA 1809; S.N. 0203-1. Collected in California, United States. Pedigree
- (N9281 x T5690) x SS2086 ROW 50, 1987X.
- PI 606854. *Gossypium hirsutum* L.**
SA 1810; S.N. 0204-1. Collected in California, United States. Pedigree
- (N9281 x T5690) x (YSLETA C x T5690) 87X.
- PI 606855. *Gossypium hirsutum* L.**
SA 1811; S.N. 0205-1. Collected in California, United States. Pedigree
- SS2086 ROW 50 x SJ-5, 87X.

PI 606856. *Gossypium hirsutum* L.
SA 1812; S.N. 0206-1. Collected in California, United States. Pedigree
- (N6072 x SS2086) x SJ-5, 87X.

PI 606857. *Gossypium hirsutum* L.
SA 1813; S.N. 0207-1. Collected in California, United States. Pedigree
- (N9281 x T5690) x (N6072 x SS2086), 87X.

PI 606858. *Gossypium hirsutum* L.
SA 1814; S.N. 0252-1. Collected in California, United States. Pedigree
- SB 3-10 (WALHOOD 82).

PI 606859. *Gossypium hirsutum* L.
SA 1815; S.N. 0253-9. Collected in California, United States. Pedigree
- COKER 310, MEDIUM HEIGHT 87-88.

PI 606860. *Gossypium hirsutum* L.
SA 1816; S.N. 0255-2. Collected in California, United States. Pedigree
- T6892 WILT RES SJ-4=8325.

The following were developed by University of California Cotton Extension,
Shafter, California, United States. Received 01/1993.

PI 606861. *Gossypium hirsutum* L.
SA 1817; S.N. 0256-1. Collected in California, United States. Pedigree
- AC42-2 "OKRA LEAF" (WALHOOD 82).

The following were developed by Tom Kirby. Received 01/1993.

PI 606862. *Gossypium hirsutum* L.
SA 1818; S.N. 0258-9. Collected in California, United States. Pedigree
- PI 451742 (CHINESE LINES).

PI 606863. *Gossypium hirsutum* L.
SA 1819; S.N. 0259-9. Collected in California, United States. Pedigree
- PI 451749 (CHINESE LINES).

PI 606864. *Gossypium hirsutum* L.
SA 1821; S.N. 0307-2. Collected in California, United States. Pedigree
- SS2086 R54-19 (WITH SIDE BRANCHES).

PI 606865. *Gossypium hirsutum* L.
SA 1822; S.N. 0308-1. Collected in California, United States. Pedigree
- MCMICHAELS (12302 x 1746) HIGH LINT %.

PI 606866. *Gossypium hirsutum* L.
SA 1823; S.N. 0309-1. Collected in California, United States. Pedigree
- MCMICHAELS 17-4-6 HIGH LINT %.

PI 606867. *Gossypium hirsutum* L.
SA 1824; S.N. 0310-1. Collected in California, United States. Pedigree
- MCMICHAELS 12302 HIGH LINT %.

PI 606868. *Gossypium hirsutum* L.
SA 1825; S.N. 0501-1. Collected in California, United States. Pedigree
- 12302-4 x (TANG x 4-42).

PI 606869. *Gossypium hirsutum* L.
SA 1826; S.N. 0502-1. Collected in California, United States. Pedigree
- NM7403 x ATE1-57.

The following were developed by University of California Cotton Extension,
Shafter, California, United States. Received 01/1993.

PI 606870. *Gossypium hirsutum* L.
SA 1827; S.N. 0503-1. Collected in California, United States. Pedigree
- T1307 x PD2165.

The following were developed by Tom Kirby. Received 01/1993.

PI 606871. *Gossypium hirsutum* L.
SA 1828; S.N. 0504-1. Collected in California, United States. Pedigree
- T1307=(C6TE x NM7378, NOT 8311).

PI 606872. *Gossypium hirsutum* L.
SA 1829; S.N. 0505-1. Collected in California, United States. Pedigree
- T4445=(12302 x (TANG x 4-42)) x T1307.

PI 606873. *Gossypium hirsutum* L.
SA 1830; S.N. 0506-1. Collected in California, United States. Pedigree
- T4445 x 12302.

PI 606874. *Gossypium hirsutum* L.
SA 1831; S.N. 0507-1. Collected in California, United States. Pedigree
- T4852 x S1391.

PI 606875. *Gossypium hirsutum* L.
SA 1832; S.N. 0508-1. Collected in California, United States. Pedigree
- S196 x NM B4364.

PI 606876. *Gossypium hirsutum* L.
SA 1833; S.N. 0509-1. Collected in California, United States. Pedigree
- C6TE x NM7403.

PI 606877. *Gossypium hirsutum* L.
SA 1834; S.N. 0512-1. Collected in California, United States. Pedigree
- (7389=N9281 x T5690) x (7341=CA1072).

PI 606878. *Gossypium hirsutum* L.
SA 1835; S.N. 0523-1. Collected in California, United States. Pedigree
- T1307-2 x PD2165, 3x MO71-327.

PI 606879. *Gossypium hirsutum* L.
SA 1836; S.N. 0530-1. Collected in California, United States. Pedigree
- (1656-77 x SJ-2) x 1656-77.

- PI 606880. *Gossypium hirsutum* L.**
SA 1837; S.N. 0543-1. Collected in California, United States. Pedigree
- (H6156 x G8160)=H7257.
- PI 606881. *Gossypium hirsutum* L.**
SA 1838; S.N. 0544-1. Collected in California, United States. Pedigree
- (H6114 x G4051)=H7258.
- PI 606882. *Gossypium hirsutum* L.**
SA 1839; S.N. 0545-1. Collected in California, United States. Pedigree
- (H6156 x G4051)=H7259.
- PI 606883. *Gossypium hirsutum* L.**
SA 1840; S.N. 0546-1. Collected in California, United States. Pedigree
- (H6156 x G4612)=H7260.
- PI 606884. *Gossypium hirsutum* L.**
SA 1841; S.N. 0548-1. Collected in California, United States. Pedigree
- (7158=2086 R54-10) x (7115=2086 R95-2).
- PI 606885. *Gossypium hirsutum* L.**
SA 1842; S.N. 0589-1. Collected in California, United States. Pedigree
- SS2280 R79-4, 1986 SELECTION.
- PI 606886. *Gossypium hirsutum* L.**
SA 1843; S.N. 0590-1. Collected in California, United States. Pedigree
- SJ-5 x SS2086, 1987 CROSS.
- PI 606887. *Gossypium hirsutum* L.**
SA 1844; S.N. 0591-1. Collected in California, United States. Pedigree
- SS2086 x SJ-5, 1987 CROSS.
- PI 606888. *Gossypium hirsutum* L.**
SA 1845; S.N. 0594-2. Collected in California, United States. Pedigree
- PIMA S-6 x SS2280 (ALL 4 LOCK).
- PI 606889. *Gossypium hirsutum* L.**
SA 1846; S.N. 0597. Collected in California, United States. Pedigree -
4-42 CLUSTER=7343 (MIN. SIDE BRANCHES).
- PI 606890. *Gossypium hirsutum* L.**
SA 1847; S.N. 0599-1. Collected in California, United States. Pedigree
- T6310=(C6TE x NM B3080)=7390.
- PI 606891. *Gossypium hirsutum* L.**
SA 1848; S.N. 0606-1. Collected in California, United States. Pedigree
- PANDORA (SHORT FRUITING BRANCH).
- PI 606892. *Gossypium hirsutum* L.**
SA 1849; S.N. 0029-9. Collected in California, United States. Pedigree
- SS2086 ROW 31 IN 1986.
- PI 606893. *Gossypium hirsutum* L.**
SA 1850; SS2086 ROW 49 IN 1986. Collected in California, United States.
Pedigree - SS2086 ROW 49 IN 1986.

- PI 606894. *Gossypium hirsutum* L.**
SA 1851; S.N. 0033-2. Collected in California, United States. Pedigree
- SS2086 ROW 95-19 IN 1986.
- PI 606895. *Gossypium hirsutum* L.**
SA 1852; S.N. 0034-2. Collected in California, United States. Pedigree
- SS2280 ROW 16-4 IN 1986.
- PI 606896. *Gossypium hirsutum* L.**
SA 1853; S.N. 0035-2. Collected in California, United States. Pedigree
- SJ-5 x SS2280, 1986 CROSS.
- PI 606897. *Gossypium hirsutum* L.**
SA 1854; S.N. 0036-8. Collected in California, United States. Pedigree
- 7136=(SJ-5 x 6-19-66), 79 CROSS "C".
- PI 606898. *Gossypium hirsutum* L.**
SA 1855; S.N. 0037-9. Collected in California, United States. Pedigree
- 7280=(C1 x (4852 x 6-19-66)), 82 CR. "C".
- PI 606899. *Gossypium hirsutum* L.**
SA 1856; S.N. 0038-9. Collected in California, United States. Pedigree
- 7046=SS2086 ROW 54-19 IN 1986 "C".
- PI 606900. *Gossypium hirsutum* L.**
SA 1857; S.N. 0043-2. Collected in California, United States. Pedigree
- ((N9281 x 5690) x (6072 x 2086)) x 7280.
- PI 606901. *Gossypium hirsutum* L.**
SA 1858; S.N. 0084-2. Collected in California, United States. Pedigree
- SS2280 ROW 16-5 IN 1986.
- PI 606902. *Gossypium hirsutum* L.**
SA 1859; S.N. 0085-2. Collected in California, United States. Pedigree
- SS2806 ROW 95-4 IN 1986.
- PI 606903. *Gossypium hirsutum* L.**
SA 1860; S.N. 0086-2. Collected in California, United States. Pedigree
- SS2086 ROW 95-18 IN 1986.
- PI 606904. *Gossypium hirsutum* L.**
SA 1861; S.N. 0087-2. Collected in California, United States. Pedigree
- SS2280, 21p FROM BEST 7 ROWS IN 87.
- PI 606905. *Gossypium hirsutum* L.**
SA 1862; S.N. 0089-9. Collected in California, United States. Pedigree
- 7280=(C1 x (4852 x 6-199-66)), 82 CR. "C".
- PI 606906. *Gossypium hirsutum* L.**
SA 1863; S.N. 0089-9. Collected in California, United States.
- PI 606907. *Gossypium hirsutum* L.**
SA 1864; S.N. 0090-9. Collected in California, United States. Pedigree
- 7136=(SJ-5 x 6-19-66) 1979 CROSS "C".

- PI 606908. *Gossypium hirsutum* L.**
SA 1865; S.N. 0091-2. Collected in California, United States. Pedigree
- (4-42 x DPL DWARF), 1989 COLUMNAR SEL.
- PI 606909. *Gossypium hirsutum* L.**
SA 1866; S.N. 0100-1. Collected in California, United States. Pedigree
- 8010-P5=2086 SHORT COLUMNAR SELECT.
- PI 606910. *Gossypium hirsutum* L.**
SA 1867; S.N. 0140-9. Collected in California, United States. Pedigree
- 7046=SS2086 ROW 54-19 IN 1986 "C".
- PI 606911. *Gossypium hirsutum* L.**
SA 1868; S.N. 0142-9. Collected in California, United States. Pedigree
- 7280=(C1 x (4852 x 6-19-66)), 82 CR "C".
- PI 606912. *Gossypium hirsutum* L.**
SA 1869; S.N. 0144-9. Collected in California, United States. Pedigree
- B101=7436.
- PI 606913. *Gossypium hirsutum* L.**
SA 1870; S.N. 0145-9. Collected in California, United States. Pedigree
- (4852 x DUNN 118)=7226.
- PI 606914. *Gossypium hirsutum* L.**
SA 1871; S.N. 0193-9. Collected in California, United States. Pedigree
- 7280=(C1 x (4852 x 6-19-66)), 82 CR "C".
- PI 606915. *Gossypium hirsutum* L.**
SA 1872; S.N. 0194-9. Collected in California, United States. Pedigree
- 7046=SS2086 ROW 54-19 IN 1986 "C".
- PI 606916. *Gossypium hirsutum* L.**
SA 1873; S.N. 0237-9. Collected in California, United States. Pedigree
- SS2086 ROW 35 IN 1986.
- PI 606917. *Gossypium hirsutum* L.**
SA 1874; S.N. 0240-2. Collected in California, United States. Pedigree
- 7749=(N6072 x 2086), 86 CROSS.
- PI 606918. *Gossypium hirsutum* L.**
SA 1875; S.N. 0241-2. Collected in California, United States. Pedigree
- 7605=(2086 x N8577), 86 CROSS.
- PI 606919. *Gossypium hirsutum* L.**
SA 1876; S.N. 0244-9. Collected in California, United States. Pedigree
- 7280=(C1 x (4852 x 6-19-66)), 82 CR "C".
- PI 606920. *Gossypium hirsutum* L.**
SA 1877; S.N. 0245-9. Collected in California, United States. Pedigree
- 7046=SS2086 ROW 54-19 IN 1986 "C".
- PI 606921. *Gossypium hirsutum* L.**
SA 1878; S.N. 0510-1. Collected in California, United States. Pedigree
- 7788=((A673 x N6072) x T5690), 87 SEL.

- PI 606922. *Gossypium hirsutum* L.**
SA 1879; S.N. 0511-1. Collected in California, United States. Pedigree
- 7887=SJ-2 x (SJ-2 x N6072), 87 SEL.
- PI 606923. *Gossypium hirsutum* L.**
SA 1880; S.N. 0609-1. Collected in California, United States. Pedigree
- SJ-2 SURVIVOR, NEMA/FUS NURSERY.
- PI 606924. *Gossypium hirsutum* L.**
SA 1881; S.N. 8034-2. Collected in California, United States. Pedigree
- 8324 x S155.
- PI 606925. *Gossypium hirsutum* L.**
SA 1882; S.N. 8035-2. Collected in California, United States. Pedigree
- N9281 x N6048.
- PI 606926. *Gossypium hirsutum* L.**
SA 1883; S.N. 8036-2. Collected in California, United States. Pedigree
- N5191 x 5690.
- PI 606927. *Gossypium hirsutum* L.**
SA 1884; S.N. 8037-2. Collected in California, United States. Pedigree
- N4212 x 5690.
- PI 606928. *Gossypium hirsutum* L.**
SA 1885; S.N. 8038-2. Collected in California, United States. Pedigree
- 87 SEL NEM/FUS SURVIVORS.
- PI 606929. *Gossypium hirsutum* L.**
SA 1886; S.N. 8039-2. Collected in California, United States. Pedigree
- N9281 x N6048.
- PI 606930. *Gossypium hirsutum* L.**
SA 1887; S.N. 8040-2. Collected in California, United States. Pedigree
- RELEASED GLANDLESS LINE.
- PI 606931. *Gossypium hirsutum* L.**
SA 1888; S.N. 8041-2. Collected in California, United States. Pedigree
- (PD2165 x 6142) x G4611.
- PI 606932. *Gossypium hirsutum* L.**
SA 1889; S.N. 8042-2. Collected in California, United States. Pedigree
- G4611 x G4387.
- PI 606933. *Gossypium hirsutum* L.**
SA 1890; S.N. 8043-2. Collected in California, United States. Pedigree
- (NM1479 x 6142) x G4611.
- PI 606934. *Gossypium hirsutum* L.**
SA 1891; S.N. 8082-2. Collected in California, United States. Pedigree
- 86 SEL NEM/FUS SURVIVORS.
- PI 606935. *Gossypium hirsutum* L.**
SA 1892; S.N. 8086-2. Collected in California, United States. Pedigree
- SJ-2 x N9281.

- PI 606936. *Gossypium hirsutum* L.**
SA 1893; S.N. 8087-2. Collected in California, United States. Pedigree
- RELEASED NEMATODE LINE.
- PI 606937. *Gossypium hirsutum* L.**
SA 1894; S.N. 8088-2. Collected in California, United States. Pedigree
- T1307 x G8160.
- PI 606938. *Gossypium hirsutum* L.**
SA 1895; S.N. 8089-2. Collected in California, United States. Pedigree
- G4387 x NMS920.
- PI 606939. *Gossypium hirsutum* L.**
SA 1896; S.N. 8090-2. Collected in California, United States. Pedigree
- G4387 x G4611.
- PI 606940. *Gossypium hirsutum* L.**
SA 1897; S.N. 8091-2. Collected in California, United States. Pedigree
- G4387 x NMG800.
- PI 606941. *Gossypium hirsutum* L.**
SA 1898; S.N. 8129-2. Collected in California, United States. Pedigree
- N9308 x SJ-2.
- PI 606942. *Gossypium hirsutum* L.**
SA 1899; S.N. 8130-2. Collected in California, United States. Pedigree
- N5141 x 1307.
- PI 606943. *Gossypium hirsutum* L.**
SA 1900; S.N. 8131-2. Collected in California, United States. Pedigree
- NEMATODE RELEASE.
- PI 606944. *Gossypium hirsutum* L.**
SA 1901; S.N. 8132-2. Collected in California, United States. Pedigree
- N5191 x (12302 x 4852).
- PI 606945. *Gossypium hirsutum* L.**
SA 1902; S.N. 8133-2. Collected in California, United States. Pedigree
- N6072 x N9311.
- PI 606946. *Gossypium hirsutum* L.**
SA 1903; S.N. 8134-2. Collected in California, United States. Pedigree
- N6072 x N8577.
- PI 606947. *Gossypium hirsutum* L.**
SA 1904; S.N. 8135-2. Collected in California, United States. Pedigree
- N8577 x N9311.
- PI 606948. *Gossypium hirsutum* L.**
SA 1905; S.N. 8137-2. Collected in California, United States. Pedigree
- G4387 x (6142 x S845).
- PI 606949. *Gossypium hirsutum* L.**
SA 1906; S.N. 8138-2. Collected in California, United States. Pedigree
- G8160 x (6142 x 7403).

- PI 606950. *Gossypium hirsutum* L.**
SA 1907; S.N. 8139-2. Collected in California, United States. Pedigree -
- 4-42-77 GS x G4387.
- PI 606951. *Gossypium hirsutum* L.**
SA 1908; S.N. 8301. Collected in California, United States. Pedigree -
PARENT OF N6072.
- PI 606952. *Gossypium hirsutum* L.**
SA 1909; S.N. 8302. Collected in California, United States. Pedigree -
5690 x 1307.
- PI 606953. *Gossypium hirsutum* L.**
SA 1910; S.N. 8303. Collected in California, United States. Pedigree -
4852 x (C6TE x DC503).
- PI 606954. *Gossypium hirsutum* L.**
SA 1911; S.N. 8304. Collected in California, United States. Pedigree -
(C6TE x 7403) x (1-57 x 364).
- PI 606955. *Gossypium hirsutum* L.**
SA 1912; S.N. 8305. Collected in California, United States. Pedigree -
(1-11 x 7403) x (1-57 x 364).
- PI 606956. *Gossypium hirsutum* L.**
SA 1913; S.N. 8306. Collected in California, United States. Pedigree -
4852 x (7403 x 1-57).
- PI 606957. *Gossypium hirsutum* L.**
SA 1914; S.N. 8307. Collected in California, United States. Pedigree -
12302 x (TANG x 4-42).
- PI 606958. *Gossypium hirsutum* L.**
SA 1915; S.N. 8308. Collected in California, United States. Pedigree -
4445 x (C6TE x DC503).
- PI 606959. *Gossypium hirsutum* L.**
SA 1916; S.N. 8309. Collected in California, United States. Pedigree -
7403 x 4-42-77.
- PI 606960. *Gossypium hirsutum* L.**
SA 1917; S.N. 8310. Collected in California, United States. Pedigree -
HAEF-242.
- PI 606961. *Gossypium hirsutum* L.**
SA 1918; S.N. 8311. Collected in California, United States. Pedigree -
C6TE x 7378.
- PI 606962. *Gossypium hirsutum* L.**
SA 1919; S.N. 8314. Collected in California, United States. Pedigree -
RELEASE-"NECTARILESS".
- PI 606963. *Gossypium hirsutum* L.**
SA 1920; S.N. 8315. Collected in California, United States. Pedigree -
RELEASE-"NECTARILESS".

- PI 606964. *Gossypium hirsutum* L.**
SA 1921; S.N. 8320. Collected in California, United States. Pedigree - SJ-2 GLANDLESS.
- PI 606965. *Gossypium hirsutum* L.**
SA 1922; S.N. 8321. Collected in California, United States. Pedigree - TANG x HAP.
- PI 606966. *Gossypium hirsutum* L.**
SA 1923; S.N. 8322. Collected in California, United States. Pedigree - 4-42 x TANG.
- PI 606967. *Gossypium hirsutum* L.**
SA 1924; S.N. 8323. Collected in California, United States. Pedigree - AHA 46-124-14.
- PI 606968. *Gossypium hirsutum* L.**
SA 1925; S.N. 8324. Collected in California, United States. Pedigree - 4852 x (7403 x 4-42-77).
- PI 606969. *Gossypium hirsutum* L.**
SA 1926; S.N. 8326. Collected in California, United States. Pedigree - (7403 x 4-42-77) x (1-57 x 364).
- PI 606970. *Gossypium hirsutum* L.**
SA 1927; S.N. 8327. Collected in California, United States. Pedigree - 4-42-77 GLANDLESS.
- PI 606971. *Gossypium hirsutum* L.**
SA 1928; S.N. 8025-2. Collected in California, United States. Pedigree - 4852 x PAYM DW(72X).
- PI 606972. *Gossypium hirsutum* L.**
SA 1929; S.N. 8026-2. Collected in California, United States. Pedigree - 4852 x 6-19-66 (78X).
- PI 606973. *Gossypium hirsutum* L.**
SA 1930; S.N. 8027-2. Collected in California, United States. Pedigree - SJC-1 x YSLETA COMP.
- PI 606974. *Gossypium hirsutum* L.**
SA 1931; S.N. 8028-2. Collected in California, United States. Pedigree - SJC-1 x (NRO 13-27 x 1307).
- PI 606975. *Gossypium hirsutum* L.**
SA 1932; S.N. 8029-2. Collected in California, United States. Pedigree - SJC-1 x ((M063 x 7403) x LUB2).
- PI 606976. *Gossypium hirsutum* L.**
SA 1933; S.N. 8030-2. Collected in California, United States. Pedigree - (NRO 13-27 x 1307) x B101(72X).
- PI 606977. *Gossypium hirsutum* L.**
SA 1934; S.N. 8031-9. Collected in California, United States. Pedigree - (Nr0 7-10 x 1307) x 4852 (72X).

- PI 606978. *Gossypium hirsutum* L.**
SA 1935; S.N. 8072-2. Collected in California, United States. Pedigree
- YSLETA COMP x PD6520 (72X).
- PI 606979. *Gossypium hirsutum* L.**
SA 1936; S.N. 8073-2. Collected in California, United States. Pedigree
- SJC-1 x (4852 x ACCO 266).
- PI 606980. *Gossypium hirsutum* L.**
SA 1937; S.N. 8074-2. Collected in California, United States. Pedigree
- SJC-1 x (4852 x DUNN 19).
- PI 606981. *Gossypium hirsutum* L.**
SA 1938; S.N. 8075-2. Collected in California, United States. Pedigree
- SJC-1 x DSMS SS1 PS.
- PI 606982. *Gossypium hirsutum* L.**
SA 1939; S.N. 8076-2. Collected in California, United States. Pedigree
- DSMS SS1 PS.
- PI 606983. *Gossypium hirsutum* L.**
SA 1940; S.N. 8077-2. Collected in California, United States. Pedigree
- SJC-1 x (4852 x DUNN 118).
- PI 606984. *Gossypium hirsutum* L.**
SA 1941; S.N. 8078-2. Collected in California, United States. Pedigree
- SJ-5 x (1307 x 6-19-66).
- PI 606985. *Gossypium hirsutum* L.**
SA 1942; S.N. 8079-2. Collected in California, United States. Pedigree
- YSLETA COMP x 5690.
- PI 606986. *Gossypium hirsutum* L.**
SA 1943; S.N. 8120-9. Collected in California, United States. Pedigree
- 6-19-66 x SJ-5.
- PI 606987. *Gossypium hirsutum* L.**
SA 1944; S.N. 8121-2. Collected in California, United States. Pedigree
- (MO63-277 c 7403) x LUB2.
- PI 606988. *Gossypium hirsutum* L.**
SA 1945; S.N. 8122-9. Collected in California, United States. Pedigree
- E1029 (NEW MEXICO).
- PI 606989. *Gossypium hirsutum* L.**
SA 1946; S.N. 8123-2. Collected in California, United States. Pedigree
- YSLETA COMPACT.
- PI 606990. *Gossypium hirsutum* L.**
SA 1947; S.N. 8124-2. Collected in California, United States. Pedigree
- NRO 13-22 x 1307 (72X).
- PI 606991. *Gossypium hirsutum* L.**
SA 1948; S.N. 8125-2. Collected in California, United States. Pedigree
- NRO 13-11 RESEL x 4852 (72X).

PI 606992. *Gossypium hirsutum* L.

SA 1949; S.N. 8126-2. Collected in California, United States. Pedigree - 4852 x DUNN 119 (72X).

Unknown source. Received 1999.

PI 606993. *Gossypium hirsutum* L.

SA 1950.

Unknown source. Received 1999.

PI 606994. *Gossypium hirsutum* L.

SA 1951.

The following were developed by Tom Kirby. Received 01/1993.

PI 606995. *Gossypium hirsutum* L.

SA 1952; S.N. 9001. Collected in California, United States. Pedigree - N8577 x (N8577 x N9311) 80X.

PI 606996. *Gossypium hirsutum* L.

SA 1953; S.N. 9010. Collected in California, United States. Pedigree - S438 C6-5.

PI 606997. *Gossypium hirsutum* L.

SA 1954; S.N. 9011. Collected in California, United States. Pedigree - C6TE.

PI 606998. *Gossypium hirsutum* L.

SA 1955; S.N. 9012. Collected in California, United States. Pedigree - AHA 46-124-14.

PI 606999. *Gossypium hirsutum* L.

SA 1956; S.N. 9013. Collected in California, United States. Pedigree - ATE ROW 534-1959.

PI 607000. *Gossypium hirsutum* L.

SA 1957; S.N. 9014. Collected in California, United States. Pedigree - 86-86 ROW 718-1960 "YSLETA".

PI 607001. *Gossypium hirsutum* L.

SA 1958; S.N. 9015. Collected in California, United States. Pedigree - C6TE 565 ROW 71-3-1959.

PI 607002. *Gossypium hirsutum* L.

SA 1959; S.N. 9016. Collected in California, United States. Pedigree - 4-42 x DPL DWARF R201B-1963.

PI 607003. *Gossypium hirsutum* L.

SA 1960; S.N. 9017. Collected in California, United States. Pedigree - 4-42 1961 MODEL.

- PI 607004. *Gossypium hirsutum* L.**
SA 1961; S.N. 9018. Collected in California, United States. Pedigree - 4-42-132 1962 PROG. INC.
- PI 607005. *Gossypium hirsutum* L.**
SA 1962; S.N. 9033. Collected in California, United States. Pedigree - N8577 x (N6072 x N8577) 80X.
- PI 607006. *Gossypium hirsutum* L.**
SA 1963; S.N. 9042. Collected in California, United States. Pedigree - AHA 46-124-14.
- PI 607007. *Gossypium hirsutum* L.**
SA 1964; S.N. 9043. Collected in California, United States. Pedigree - ACALA 29.
- PI 607008. *Gossypium hirsutum* L.**
SA 1965; S.N. 9044. Collected in California, United States. Pedigree - ACALA 51.
- PI 607009. *Gossypium hirsutum* L.**
SA 1966; S.N. 9045. Collected in California, United States. Pedigree - ATE x 4-42 R663-1959.
- PI 607010. *Gossypium hirsutum* L.**
SA 1967; S.N. 9046. Collected in California, United States. Pedigree - 5-12-7-6 R223-1960.
- PI 607011. *Gossypium hirsutum* L.**
SA 1968; S.N. 9047. Collected in California, United States. Pedigree - S5-4-1-7-27.
- PI 607012. *Gossypium hirsutum* L.**
SA 1969; S.N. 9048. Collected in California, United States. Pedigree - CAL 7-8.
- PI 607013. *Gossypium hirsutum* L.**
SA 1970; S.N. 9049. Collected in California, United States. Pedigree - ATE (1961).
- PI 607014. *Gossypium hirsutum* L.**
SA 1971; S.N. 9050. Collected in California, United States. Pedigree - STRAIN 1-61 (1961).
- PI 607015. *Gossypium hirsutum* L.**
SA 1972; S.N. 9065. Collected in California, United States. Pedigree - N6072 x (N6072 x N9311) 80X.
- PI 607016. *Gossypium hirsutum* L.**
SA 1973; S.N. 9074. Collected in California, United States. Pedigree - MISSDEL X P18C.
- PI 607017. *Gossypium hirsutum* L.**
SA 1974; S.N. 9075. Collected in California, United States. Pedigree - BEASLEY'S HYBRID.

PI 607018. *Gossypium hirsutum* L.
SA 1975; S.N. 9076. Collected in California, United States. Pedigree -
FLO GREEN SEED.

PI 607019. *Gossypium hirsutum* L.
SA 1976; S.N. 9077. Collected in California, United States. Pedigree -
CAL 7-5.

The following were developed by M. Kirby. Received 01/1993.

PI 607020. *Gossypium hirsutum* L.
SA 1977; S.N. 9078. Collected in California, United States. Pedigree -
CAL 4.

The following were developed by Tom Kirby. Received 01/1993.

PI 607021. *Gossypium hirsutum* L.
SA 1978; S.N. 9079. Collected in California, United States. Pedigree -
258A=C6TE x CAL7.

PI 607022. *Gossypium hirsutum* L.
SA 1979; S.N. 9080. Collected in California, United States. Pedigree -
1518(a x 11=R 1001-36-1963).

PI 607023. *Gossypium hirsutum* L.
SA 1980; S.N. 9081. Collected in California, United States. Pedigree -
4-42-155.

PI 607024. *Gossypium hirsutum* L.
SA 1981; S.N. 9082. Collected in California, United States. Pedigree -
MO 61-47 OF.

PI 607025. *Gossypium hirsutum* L.
SA 1982; S.N. 9097. Collected in California, United States. Pedigree -
SJ-2 x N8577 78X.

PI 607026. *Gossypium hirsutum* L.
SA 1983; S.N. 9106. Collected in California, United States. Pedigree -
WILDS A 51P1.

PI 607027. *Gossypium hirsutum* L.
SA 1984; S.N. 9107. Collected in California, United States. Pedigree -
TIDEWATER (SEABROOK).

PI 607028. *Gossypium hirsutum* L.
SA 1985; S.N. 9108. Collected in California, United States. Pedigree -
BAR x 16.

PI 607029. *Gossypium hirsutum* L.
SA 1986; S.N. 9109. Collected in California, United States. Pedigree -
1019(1 x 25-7=R1001-37-1963).

PI 607030. *Gossypium hirsutum* L.
SA 1987; S.N. 9110. Collected in California, United States. Pedigree -
4-42-25=R1129-1965.

- PI 607031. *Gossypium hirsutum* L.**
SA 1988; S.N. 9111. Collected in California, United States. Pedigree - A29 x (M x A).
- PI 607032. *Gossypium hirsutum* L.**
SA 1989; S.N. 9112. Collected in California, United States. Pedigree - AHA 7T x (M x A27).
- PI 607033. *Gossypium hirsutum* L.**
SA 1990; S.N. 9113. Collected in California, United States. Pedigree - S918 (12302 RESEL).
- PI 607034. *Gossypium hirsutum* L.**
SA 1991; S.N. 9114. Collected in California, United States. Pedigree - S845 (12302 RESEL).
- PI 607035. *Gossypium hirsutum* L.**
SA 1992; S.N. 9129. Collected in California, United States. Pedigree - W 8577 x (SJ-2 x N8577) 80X.
- PI 607036. *Gossypium hirsutum* L.**
SA 1993; S.N. 9138. Collected in California, United States. Pedigree - DELFOS 531C.
- PI 607037. *Gossypium hirsutum* L.**
SA 1994; S.N. 9139. Collected in California, United States. Pedigree - DELTA TYPE WEBBER.
- PI 607038. *Gossypium hirsutum* L.**
SA 1995; S.N. 9140. Collected in California, United States. Pedigree - MISSDEL 6 PI 1.
- PI 607039. *Gossypium hirsutum* L.**
SA 1996; S.N. 9141. Collected in California, United States. Pedigree - A40.
- PI 607040. *Gossypium hirsutum* L.**
SA 1997; S.N. 9142. Collected in California, United States. Pedigree - 4-42-132 (53).
- PI 607041. *Gossypium hirsutum* L.**
SA 1998; S.N. 9143. Collected in California, United States. Pedigree - 4-42-77 (64).
- PI 607042. *Gossypium hirsutum* L.**
SA 1999; S.N. 9144. Collected in California, United States. Pedigree - 4-42-162 (64).
- PI 607043. *Gossypium hirsutum* L.**
SA 2000; S.N. 9145. Collected in California, United States. Pedigree - S5304 PD 0111.
- PI 607044. *Gossypium hirsutum* L.**
SA 2001; S.N. 9146. Collected in California, United States. Pedigree - S5306 PD 6520.

- PI 607045. *Gossypium hirsutum* L.**
SA 2002; S.N. 9161. Collected in California, United States. Pedigree - SJ-2 x N9311 78X.
- PI 607046. *Gossypium hirsutum* L.**
SA 2003; S.N. 9170. Collected in California, United States. Pedigree - BALLARD'S D10.
- PI 607047. *Gossypium hirsutum* L.**
SA 2004; S.N. 9171. Collected in California, United States. Pedigree - C6-5 (R271-1961).
- PI 607048. *Gossypium hirsutum* L.**
SA 2005; S.N. 9172. Collected in California, United States. Pedigree - R-14-574 (R680-1961).
- PI 607049. *Gossypium hirsutum* L.**
SA 2006; S.N. 9173. Collected in California, United States. Pedigree - 4-42-176(64).
- PI 607050. *Gossypium hirsutum* L.**
SA 2007; S.N. 9174. Collected in California, United States. Pedigree - 4-42-94.
- PI 607051. *Gossypium hirsutum* L.**
SA 2008; S.N. 9175. Collected in California, United States. Pedigree - 4-42-135.
- PI 607052. *Gossypium hirsutum* L.**
SA 2009; S.N. 9176. Collected in California, United States. Pedigree - (1 x 1517) 548-13-9.
- PI 607053. *Gossypium hirsutum* L.**
SA 2010; S.N. 9177. Collected in California, United States. Pedigree - S5307 PD 0109.
- PI 607054. *Gossypium hirsutum* L.**
SA 2011; S.N. 9178. Collected in California, United States. Pedigree - S5303 PD 0113.
- PI 607055. *Gossypium hirsutum* L.**
SA 2012; S.N. 9186. Collected in California, United States. Pedigree - (1GS x 12302) x T1307.
- PI 607056. *Gossypium hirsutum* L.**
SA 2013; S.N. 9187. Collected in California, United States. Pedigree - T1307 x G8160.
- PI 607057. *Gossypium hirsutum* L.**
SA 2014; S.N. 9193. Collected in California, United States. Pedigree - SJ-2 x N9281 78X.
- PI 607058. *Gossypium hirsutum* L.**
SA 2015; S.N. 9202. Collected in California, United States. Pedigree - R-15-7 (ROW 1139-1963) HAEF.

- PI 607059. *Gossypium hirsutum* L.**
SA 2016; S.N. 9203. Collected in California, United States. Pedigree - HA 6-1-5 (ROW 244-1561).
- PI 607060. *Gossypium hirsutum* L.**
SA 2017; S.N. 9204. Collected in California, United States. Pedigree - 241 TH x STA C.
- PI 607061. *Gossypium hirsutum* L.**
SA 2018; S.N. 9205. Collected in California, United States. Pedigree - (1 x 1517) 49-13-4.
- PI 607062. *Gossypium hirsutum* L.**
SA 2019; S.N. 9206. Collected in California, United States. Pedigree - 1-62-595 (1962).
- PI 607063. *Gossypium hirsutum* L.**
SA 2020; S.N. 9207. Collected in California, United States. Pedigree - 4-42 1958 MODEL (1964).
- PI 607064. *Gossypium hirsutum* L.**
SA 2021; S.N. 9208. Collected in California, United States. Pedigree - 4-42 1963 MODEL (1959).
- PI 607065. *Gossypium hirsutum* L.**
SA 2022; S.N. 9209. Collected in California, United States. Pedigree - S5305 PD9241.
- PI 607066. *Gossypium hirsutum* L.**
SA 2023; S.N. 9210. Collected in California, United States. Pedigree - NM 1517-75.
- PI 607067. *Gossypium hirsutum* L.**
SA 2024; S.N. 9218. Collected in California, United States. Pedigree - S918 x G0717.
- PI 607068. *Gossypium hirsutum* L.**
SA 2025; S.N. 9219. Collected in California, United States. Pedigree - T1307 x PD2165.
- PI 607069. *Gossypium hirsutum* L.**
SA 2026; S.N. 9220. Collected in California, United States. Pedigree - ATE 1-57 x E364.
- PI 607070. *Gossypium hirsutum* L.**
SA 2027; S.N. 9234. Collected in California, United States. Pedigree - TH458.
- PI 607071. *Gossypium hirsutum* L.**
SA 2028; S.N. 9235. Collected in California, United States. Pedigree - HA 1-9.
- PI 607072. *Gossypium hirsutum* L.**
SA 2029; S.N. 9236. Collected in California, United States. Pedigree - TEF 193.

- PI 607073. *Gossypium hirsutum* L.**
SA 2030; S.N. 9237. Collected in California, United States. Pedigree - 4-42 1964 MODEL.
- PI 607074. *Gossypium hirsutum* L.**
SA 2031; S.N. 9238. Collected in California, United States. Pedigree - 4-42 1965 MODEL.
- PI 607075. *Gossypium hirsutum* L.**
SA 2032; S.N. 9239. Collected in California, United States. Pedigree - 1842-POSO RANCH 1963.
- PI 607076. *Gossypium hirsutum* L.**
SA 2033; S.N. 9240. Collected in California, United States. Pedigree - 4-42 BULK SELF-1951.
- PI 607077. *Gossypium hirsutum* L.**
SA 2034; S.N. 9241. Collected in California, United States. Pedigree - 12302-89.
- PI 607078. *Gossypium hirsutum* L.**
SA 2035; S.N. 9242. Collected in California, United States. Pedigree - S658=12302 S96-5.
- PI 607079. *Gossypium hirsutum* L.**
SA 2036; S.N. 9250-1. Collected in California, United States. Pedigree - (ATE 1-57 x E364) x (C6TE x NM 3080).
- PI 607080. *Gossypium hirsutum* L.**
SA 2037; S.N. 9251. Collected in California, United States. Pedigree - (12302 x TANG 4-42) x (G8160 x T4852).
- PI 607081. *Gossypium hirsutum* L.**
SA 2038; S.N. 9252. Collected in California, United States. Pedigree - T5690 x (G8160 x T4852).
- PI 607082. *Gossypium hirsutum* L.**
SA 2039; S.N. 9253. Collected in California, United States. Pedigree - "7391" INCREASE PEDIGREE SJ-5.
- PI 607083. *Gossypium hirsutum* L.**
SA 2040; S.N. 9266. Collected in California, United States. Pedigree - 257A=THEF x A29.
- PI 607084. *Gossypium hirsutum* L.**
SA 2041; S.N. 9267. Collected in California, United States. Pedigree - 741 PANDORA x TH x 1-HA-46.
- PI 607085. *Gossypium hirsutum* L.**
SA 2042; S.N. 9268. Collected in California, United States. Pedigree - 12302 (ROW 5713-1963).
- PI 607086. *Gossypium hirsutum* L.**
SA 2043; S.N. 9269. Collected in California, United States. Pedigree - 4-42 (1953).

- PI 607087. *Gossypium hirsutum* L.
SA 2044; S.N. 9270. Collected in California, United States. Pedigree - STRAIN 39 (1963).
- PI 607088. *Gossypium hirsutum* L.
SA 2045; S.N. 9271. Collected in California, United States. Pedigree - STRAIN 1602-5 (1963).
- PI 607089. *Gossypium hirsutum* L.
SA 2046; S.N. 9272. Collected in California, United States. Pedigree - 1-62-100 (1962).
- PI 607090. *Gossypium hirsutum* L.
SA 2047; S.N. 9273. Collected in California, United States. Pedigree - S1603 (12302).
- PI 607091. *Gossypium hirsutum* L.
SA 2048; S.N. 9274. Collected in California, United States. Pedigree - SS106 P18C (1959).
- PI 607092. *Gossypium hirsutum* L.
SA 2049; S.N. 9282. Collected in California, United States. Pedigree - 12302 x 1900-1.
- PI 607093. *Gossypium hirsutum* L.
SA 2050; S.N. 9283. Collected in California, United States. Pedigree - T4852 x T1307.
- PI 607094. *Gossypium hirsutum* L.
SA 2051; S.N. 9284. Collected in California, United States. Pedigree - (E364 x 12302) x T1307.
- PI 607095. *Gossypium hirsutum* L.
SA 2052; S.N. 9304. Collected in California, United States. Pedigree - NILES 6-19-66 (TALL, COLUMNAR).
- PI 607096. *Gossypium hirsutum* L.
SA 2053; S.N. 9305-1. Collected in California, United States. Pedigree - CAMDEE.
- PI 607097. *Gossypium hirsutum* L.
SA 2054; S.N. 9306-1. Collected in California, United States. Pedigree - PAYMASTER 792.
- PI 607098. *Gossypium hirsutum* L.
SA 2055; S.N. 9307-1. Collected in California, United States. Pedigree - NILES 6-19-66 x SJ-2 80X.
- PI 607099. *Gossypium hirsutum* L.
SA 2056; S.N. 9308-1. Collected in California, United States. Pedigree - CAMDEE x SJ-2 80X.
- PI 607100. *Gossypium hirsutum* L.
SA 2057; S.N. 9309. Collected in California, United States. Pedigree - PAYMASTER 792 x SJ-2 80X.

- PI 607101. *Gossypium hirsutum* L.**
SA 2058; S.N. 9310. Collected in California, United States. Pedigree - OKRA LEAF (WALHOOD SHORT BR).
- PI 607102. *Gossypium hirsutum* L.**
SA 2059; S.N. 9312. Collected in California, United States. Pedigree - STROMBERG CLUSTER.
- PI 607103. *Gossypium hirsutum* L.**
SA 2060; S.N. 9316. Collected in California, United States. Pedigree - NILES 6-19-66 x SJ-5 78X.
- PI 607104. *Gossypium hirsutum* L.**
SA 2061; S.N. 9317. Collected in California, United States. Pedigree - CAMD-E x SJ-5 78X.
- PI 607105. *Gossypium hirsutum* L.**
SA 2062; S.N. 9318. Collected in California, United States. Pedigree - PAYMASTER 792 x SJ-5 78X.
- PI 607106. *Gossypium hirsutum* L.**
SA 2063; S.N. 9319. Collected in California, United States. Pedigree - SPL728 (DWARF).
- PI 607107. *Gossypium hirsutum* L.**
SA 2064; S.N. 9320. Collected in California, United States. Pedigree - NILES 1657-77 (CLUSTER).
- PI 607108. *Gossypium hirsutum* L.**
SA 2065; S.N. 9322. Collected in California, United States. Pedigree - OKRA LEAF (WALHOOD SHORT BR).
- PI 607109. *Gossypium hirsutum* L.**
SA 2066; S.N. 9323. Collected in California, United States. Pedigree - 4-42 x PAYMASTER DW (WALHOOD).
- PI 607110. *Gossypium hirsutum* L.**
SA 2067; S.N. 9325-1. Collected in California, United States. Pedigree - YOUNGS ACALA.
- PI 607111. *Gossypium hirsutum* L.**
SA 2068; S.N. 9326-1. Collected in California, United States. Pedigree - ACALA 1064.
- PI 607112. *Gossypium hirsutum* L.**
SA 2069; S.N. 9327-1. Collected in California, United States. Pedigree - ACALA SHAFTER STATION.
- PI 607113. *Gossypium hirsutum* L.**
SA 2070; S.N. 9328-1. Collected in California, United States. Pedigree - (6-19-66 x SJ-5) x 6-19-66 80X.
- PI 607114. *Gossypium hirsutum* L.**
SA 2071; S.N. 9329-1. Collected in California, United States. Pedigree - (CAMDEE x SJ-5) x CAMDEE 80X.

- PI 607115. *Gossypium hirsutum* L.
SA 2072; S.N. 9330-1. Collected in California, United States. Pedigree - (PAYMASTER 792 x SJ-5) x PAYMASTER 792 80X.
- PI 607116. *Gossypium hirsutum* L.
SA 2073; S.N. 9331. Collected in California, United States. Pedigree - 6-1-5 x 7378.
- PI 607117. *Gossypium hirsutum* L.
SA 2074; S.N. 9333-1. Collected in California, United States. Pedigree - T1307 x G8160.
- PI 607118. *Gossypium hirsutum* L.
SA 2075; S.N. 9334-1. Collected in California, United States. Pedigree - SJ-5 x MEX NAKED 86X.
- PI 607119. *Gossypium hirsutum* L.
SA 2076; S.N. 9335-1. Collected in California, United States. Pedigree - SJ-5 x ARK CLEAN 86X.
- PI 607120. *Gossypium hirsutum* L.
SA 2077; S.N. 9336. Collected in California, United States. Pedigree - HA 6-1-5-22 (TALL, GS).
- PI 607121. *Gossypium hirsutum* L.
SA 2078; S.N. 9342-1. Collected in California, United States. Pedigree - DEL CERRO 247 RE: 7338.
- PI 607122. *Gossypium hirsutum* L.
SA 2079; S.N. 9343-1. Collected in California, United States. Pedigree - ORIGINAL ACALA.
- PI 607123. *Gossypium hirsutum* L.
SA 2080; S.N. 9344-1. Collected in California, United States. Pedigree - ACALA 1-13-3-1.
- PI 607124. *Gossypium hirsutum* L.
SA 2081; S.N. 9345-1. Collected in California, United States. Pedigree - McNAIR 235.
- PI 607125. *Gossypium hirsutum* L.
SA 2082; S.N. 9346. Collected in California, United States. Pedigree - HA6-1 x TH3865 (TALL).
- PI 607126. *Gossypium hirsutum* L.
SA 2083; S.N. 9347-1. Collected in California, United States. Pedigree - CHRP (WALHOOD SHORT BR.).
- PI 607127. *Gossypium hirsutum* L.
SA 2084; S.N. 9348-1. Collected in California, United States. Pedigree - ERG4 (WALHOOD SHORT BR.).
- PI 607128. *Gossypium hirsutum* L.
SA 2085; S.N. 9352. Collected in California, United States. Pedigree - NM1073 x S155, 2 x SJ-1, 3 x SJ-4 (UC631).

- PI 607129. *Gossypium hirsutum* L.
SA 2086; S.N. 9353. Collected in California, United States. Pedigree -
LA FREGO 2-13170 x T1307.
- PI 607130. *Gossypium hirsutum* L.
SA 2087; S.N. 9355-1. Collected in California, United States. Pedigree -
- PEDIGREE=H7050.
- PI 607131. *Gossypium hirsutum* L.
SA 2088; S.N. 9356. Collected in California, United States. Pedigree -
TEX 27 x M8.
- PI 607132. *Gossypium hirsutum* L.
SA 2089; S.N. 9357. Collected in California, United States. Pedigree -
RESELECT H6157-3.
- PI 607133. *Gossypium hirsutum* L.
SA 2090; S.N. 9361. Collected in California, United States. Pedigree -
CA1072.
- PI 607134. *Gossypium hirsutum* L.
SA 2091; S.N. 9362-1. Collected in California, United States. Pedigree -
- CA 1076-74-1 (SEMI CLUSTER, TALL).
- PI 607135. *Gossypium hirsutum* L.
SA 2092; S.N. 9363. Collected in California, United States. Pedigree -
NILES TA x M.
- PI 607136. *Gossypium hirsutum* L.
SA 2093; S.N. 9364. Collected in California, United States. Pedigree -
E364 x 12302-89.
- PI 607137. *Gossypium hirsutum* L.
SA 2094; S.N. 9365. Collected in California, United States. Pedigree -
S845 x T1307.
- PI 607138. *Gossypium hirsutum* L.
SA 2095; S.N. 9366. Collected in California, United States. Pedigree -
NM7403 x ATE 1-57.
- PI 607139. *Gossypium hirsutum* L.
SA 2096; S.N. 9367. Collected in California, United States. Pedigree -
T4852 x 12302.
- PI 607140. *Gossypium hirsutum* L.
SA 2097; S.N. 9368. Collected in California, United States. Pedigree -
ATE-11 x NM7403.
- PI 607141. *Gossypium hirsutum* L.
SA 2098; S.N. 9369. Collected in California, United States. Pedigree -
(12302 x TANG 4-42) x (G8160 x T4852).
- PI 607142. *Gossypium hirsutum* L.
SA 2099; S.N. 9370. Collected in California, United States. Pedigree -
6-1-5 x NM7378.

- PI 607143. *Gossypium hirsutum* L.
SA 2100; S.N. 9371. Collected in California, United States. Pedigree - G8160 x T4852.
- PI 607144. *Gossypium hirsutum* L.
SA 2101; S.N. 9372. Collected in California, United States. Pedigree - N9291 x N6048.
- PI 607145. *Gossypium hirsutum* L.
SA 2102; S.N. 9373. Collected in California, United States. Pedigree - N9311 x((4852 x (C6TE x 4-42-72))).
- PI 607146. *Gossypium hirsutum* L.
SA 2103; S.N. 9374. Collected in California, United States. Pedigree - 12302 x T4852.
- PI 607147. *Gossypium hirsutum* L.
SA 2104; S.N. 9375. Collected in California, United States. Pedigree - (E364 x 12302) x T4852.
- PI 607148. *Gossypium hirsutum* L.
SA 2105; S.N. 9376. Collected in California, United States. Pedigree - EARLY FLUFF 316.
- PI 607149. *Gossypium hirsutum* L.
SA 2106; S.N. 9377. Collected in California, United States. Pedigree - BR EMPIRE x A709.
- PI 607150. *Gossypium hirsutum* L.
SA 2107; S.N. 9378. Collected in California, United States. Pedigree - TH386.
- PI 607151. *Gossypium hirsutum* L.
SA 2108; S.N. 9379. Collected in California, United States. Pedigree - (CAMP x THEF) x (STA C x A29).
- PI 607152. *Gossypium hirsutum* L.
SA 2109; S.N. 9380. Collected in California, United States. Pedigree - CAL 2.
- PI 607153. *Gossypium hirsutum* L.
SA 2110; S.N. 9381. Collected in California, United States. Pedigree - G6142 x 12302-89 (66142=1 x 77 GS).
- PI 607154. *Gossypium hirsutum* L.
SA 2111; S.N. 9388. Collected in California, United States. Pedigree - FBCX-2 x S842.
- PI 607155. *Gossypium hirsutum* L.
SA 2112; S.N. 9391. Collected in California, United States. Pedigree - N8577 x ((4852 x (C6TE x 4-42-77))).
- PI 607156. *Gossypium hirsutum* L.
SA 2113; S.N. 8136-2. Collected in California, United States.

Unknown source. Received 1995.

PI 607157. *Gossypium hirsutum* L.
SA 2221.

Unknown source. Received 03/01/1994.

PI 607158. *Gossypium hirsutum* L.
SA 2223.

Unknown source. Received 12/01/1994.

PI 607159. *Gossypium hirsutum* L.
SA 2233.

Unknown source. Received 12/01/1994.

PI 607160. *Gossypium hirsutum* L.
SA 2234.

Unknown source. Received 12/01/1994.

PI 607161. *Gossypium hirsutum* L.
SA 2235.

Unknown source. Received 12/01/1994.

PI 607162. *Gossypium hirsutum* L.
SA 2236.

Unknown source. Received 12/01/1994.

PI 607163. *Gossypium hirsutum* L.
SA 2237.

Unknown source. Received 12/01/1994.

PI 607164. *Gossypium hirsutum* L.
SA 2238.

Unknown source. Received 12/01/1994.

PI 607165. *Gossypium hirsutum* L.
SA 2239.

Unknown source. Received 01/02/1995.

PI 607166. *Gossypium hirsutum* L.
"Siokra 104-90"; SA 2241.

The following were donated by Peggy Thaxton, Texas A&M University, Dept. of Soil and Crop Science, College Station, Texas 77843, United States. Received 01/02/1995.

PI 607167. *Gossypium hirsutum* L.
SA 2242.

Unknown source. Received 01/02/1995.

PI 607168. *Gossypium hirsutum* L.
SA 2243.

The following were developed by T.W. Rogers, Arkansas Agr. Exp. Sta., Arkansas, United States. Received 1974.

PI 607169. *Gossypium hirsutum* L.
Cultivar. "QUAPAW"; SA 2256. PVP 7200069.

Unknown source. Received 1995.

PI 607170. *Gossypium hirsutum* L.
SA 2257.

Unknown source. Received 1995.

PI 607171. *Gossypium hirsutum* L.
SA 2258.

Unknown source. Received 11/15/1995.

PI 607172. *Gossypium hirsutum* L.
SA 2269.

Unknown source. Received 10/1995.

PI 607173. *Gossypium hirsutum* L.
SA 2290.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 1974.

PI 607174. *Gossypium hirsutum* L.
Cultivar. "DELTAPINE 61"; SA 2291. PVP 7300103.

PI 607175. *Gossypium hirsutum* L.
Cultivar. "DELTAPINE 137"; SA 2293. PVP 7300014.

PI 607176. *Gossypium hirsutum* L.
Cultivar. "DELTAPINE 826"; SA 2294. PVP 7200143.

The following were developed by G & P Seed Company, Inc., United States.
Received 1978.

PI 607177. *Gossypium hirsutum* L.
Cultivar. "GP 3774"; SA 2295. PVP 7700018.

PI 607178. *Gossypium hirsutum* L.
Cultivar. "GP 3755"; SA 2296. PVP 7700019.

The following were developed by Delta and Pine Land Company, Scott,
Mississippi, United States. Received 1978.

PI 607179. *Gossypium hirsutum* L.
Cultivar. "DELTAPINE 80"; SA 2297. PVP 7800023.

The following were developed by Custom Ag Service, Inc., United States.
Received 1979.

PI 607180. *Gossypium hirsutum* L.
Cultivar. "CASCOT B-2"; SA 2298. PVP 7700042.

PI 607181. *Gossypium hirsutum* L.
Cultivar. "CASCOT L-7"; SA 2299. PVP 7700043.

The following were developed by Pioneer Hi-Bred International, Inc., 6800
Pioneer Pkwy., P.O. Box 316, Johnston, Iowa 50131-0316, United States.
Received 1979.

PI 607182. *Gossypium hirsutum* L.
Cultivar. "PR68"; SA 2300. PVP 7800104.

Unknown source. Received 08/1995.

PI 607183. *Gossypium hirsutum* L.
SA 2304.

Unknown source. Received 08/1995.

PI 607184. *Gossypium hirsutum* L.
SA 2305.

Unknown source. Received 1996.

PI 607185. *Gossypium hirsutum* L.
SA 2306.

Unknown source. Received 1995.

PI 607186. *Gossypium hirsutum* L.
SA 2319.

Unknown source. Received 1995.

PI 607187. *Gossypium hirsutum* L.
SA 2320.

Unknown source. Received 1995.

PI 607188. *Gossypium hirsutum* L.
SA 2321.

Unknown source. Received 1995.

PI 607189. *Gossypium hirsutum* L.
SA 2322.

Unknown source. Received 1995.

PI 607190. *Gossypium hirsutum* L.
SA 2323.

Unknown source. Received 1995.

PI 607191. *Gossypium hirsutum* L.
SA 2324.

Unknown source. Received 1995.

PI 607192. *Gossypium hirsutum* L.
SA 2325.

Unknown source. Received 1995.

PI 607193. *Gossypium hirsutum* L.
SA 2326.

Unknown source. Received 1995.

PI 607194. *Gossypium hirsutum* L.
SA 2327.

Unknown source. Received 1995.

PI 607195. *Gossypium hirsutum* L.
SA 2328.

Unknown source. Received 1995.

PI 607196. *Gossypium hirsutum* L.
SA 2329.

Unknown source. Received 1995.

PI 607197. *Gossypium hirsutum* L.
SA 2330.

Unknown source. Received 1995.

PI 607198. *Gossypium hirsutum* L.
SA 2331.

Unknown source. Received 1995.

PI 607199. *Gossypium hirsutum* L.
SA 2332.

Unknown source. Received 1995.

PI 607200. *Gossypium hirsutum* L.
SA 2333.

Unknown source. Received 1995.

PI 607201. *Gossypium hirsutum* L.
SA 2334.

Unknown source. Received 1995.

PI 607202. *Gossypium hirsutum* L.
SA 2335.

Unknown source. Received 1995.

PI 607203. *Gossypium hirsutum* L.
SA 2336.

Unknown source. Received 1995.

PI 607204. *Gossypium hirsutum* L.
SA 2337.

Unknown source. Received 1995.

PI 607205. *Gossypium hirsutum* L.
SA 2338.

Unknown source. Received 1995.

PI 607206. *Gossypium hirsutum* L.
SA 2339.

Unknown source. Received 1995.

PI 607207. *Gossypium hirsutum* L.
SA 2340.

Unknown source. Received 1995.

PI 607208. *Gossypium hirsutum* L.
SA 2341.

Unknown source. Received 1995.

PI 607209. *Gossypium hirsutum* L.
SA 2342.

Unknown source. Received 1995.

PI 607210. *Gossypium hirsutum* L.
SA 2343.

Unknown source. Received 1995.

PI 607211. *Gossypium hirsutum* L.
SA 2344.

Unknown source. Received 1995.

PI 607212. *Gossypium hirsutum* L.
SA 2345.

Unknown source. Received 1995.

PI 607213. *Gossypium hirsutum* L.
SA 2346.

The following were developed by J.H. Lambright, United States. Received 1979.

PI 607214. *Gossypium hirsutum* L.

Cultivar. "LAMBRIGHT GL-F"; SA 2347. PVP 7800029.

The following were developed by P. Hanks, United States; W. Hanks, United States. Received 1979.

PI 607215. *Gossypium hirsutum* L.

Cultivar. "NEW MEXICO ACALA #20"; SA 2348. PVP 7605014.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 1979.

PI 607216. *Gossypium hirsutum* L.

Cultivar. "DELTAPINE 70"; SA 2349. PVP 7800097.

Unknown source. Received 1998.

PI 607217. *Gossypium hirsutum* L.

SA 2351.

Unknown source. Received 1998.

PI 607218. *Gossypium hirsutum* L.

SA 2352.

Unknown source. Received 1998.

PI 607219. *Gossypium hirsutum* L.

Cultivar. SA 2353.

Unknown source. Received 1998.

PI 607220. *Gossypium hirsutum* L.

Cultivar. SA 2354.

Unknown source. Received 1998.

PI 607221. *Gossypium hirsutum* L.

Cultivar. SA 2355.

Unknown source. Received 1998.

PI 607222. *Gossypium hirsutum* L.

Cultivar. SA 2356.

Unknown source. Received 1998.

PI 607223. *Gossypium hirsutum* L.
Cultivar. SA 2357.

Unknown source. Received 1998.

PI 607224. *Gossypium hirsutum* L.
Cultivar. SA 2400.

Unknown source. Received 1998.

PI 607225. *Gossypium hirsutum* L.
Cultivar. SA 2401.

Unknown source. Received 1998.

PI 607226. *Gossypium hirsutum* L.
Cultivar. SA 2402.

Unknown source. Received 1998.

PI 607227. *Gossypium hirsutum* L.
Cultivar. SA 2403.

Unknown source. Received 1998.

PI 607228. *Gossypium hirsutum* L.
Cultivar. SA 2404.

Unknown source. Received 1998.

PI 607229. *Gossypium hirsutum* L.
Cultivar. SA 2405.

Unknown source. Received 1998.

PI 607230. *Gossypium hirsutum* L.
Cultivar. SA 2406.

Unknown source. Received 1998.

PI 607231. *Gossypium hirsutum* L.
Cultivar. SA 2407.

Unknown source. Received 1998.

PI 607232. *Gossypium hirsutum* L.
Cultivar. SA 2408.

Unknown source. Received 1998.

PI 607233. *Gossypium hirsutum* L.
Cultivar. SA 2409.

Unknown source. Received 1998.

PI 607234. *Gossypium hirsutum* L.
Cultivar. SA 2410.

Unknown source. Received 1998.

PI 607235. *Gossypium hirsutum* L.
Cultivar. SA 2411.

Unknown source. Received 1998.

PI 607236. *Gossypium hirsutum* L.
Cultivar. "Auburn 73B-12".

Unknown source. Received 1998.

PI 607237. *Gossypium hirsutum* L.
Cultivar. SA 2413.

Unknown source. Received 1998.

PI 607238. *Gossypium hirsutum* L.
Cultivar. SA 2414.

Unknown source. Received 1998.

PI 607239. *Gossypium hirsutum* L.
Cultivar. SA 2415.

Unknown source. Received 1998.

PI 607240. *Gossypium hirsutum* L.
Cultivar. SA 2416.

Unknown source. Received 1998.

PI 607241. *Gossypium hirsutum* L.
Cultivar. SA 2417.

Unknown source. Received 1998.

PI 607242. *Gossypium hirsutum* L.
Cultivar. SA 2418.

Unknown source. Received 1998.

PI 607243. *Gossypium hirsutum* L.
Cultivar. SA 2419.

Unknown source. Received 1998.

PI 607244. *Gossypium hirsutum* L.
Cultivar. SA 2420.

Unknown source. Received 1998.

PI 607245. *Gossypium hirsutum* L.
Cultivar. SA 2421.

Unknown source. Received 1998.

PI 607246. *Gossypium hirsutum* L.
Cultivar. SA 2422.

Unknown source. Received 1998.

PI 607247. *Gossypium hirsutum* L.
Cultivar. SA 2423.

Unknown source. Received 1998.

PI 607248. *Gossypium hirsutum* L.
Cultivar. SA 2424.

Unknown source. Received 1998.

PI 607249. *Gossypium hirsutum* L.
Cultivar. SA 2425.

Unknown source. Received 1998.

PI 607250. *Gossypium hirsutum* L.
Cultivar. SA 2426.

Unknown source. Received 1998.

PI 607251. *Gossypium hirsutum* L.
Cultivar. SA 2427.

Unknown source. Received 1998.

PI 607252. *Gossypium hirsutum* L.
Cultivar. SA 2428.

Unknown source. Received 1998.

PI 607253. *Gossypium hirsutum* L.
Cultivar. SA 2429.

Unknown source. Received 1998.

PI 607254. *Gossypium hirsutum* L.
Cultivar. SA 2430.

Unknown source. Received 1998.

PI 607255. *Gossypium hirsutum* L.
Cultivar. SA 2431.

Unknown source. Received 1998.

PI 607256. *Gossypium hirsutum* L.
Cultivar. SA 2432.

Unknown source. Received 1998.

PI 607257. *Gossypium hirsutum* L.
Cultivar. SA 2433.

Unknown source. Received 1998.

PI 607258. *Gossypium hirsutum* L.
Cultivar. SA 2434.

Unknown source. Received 1998.

PI 607259. *Gossypium hirsutum* L.
Cultivar. SA 2435.

Unknown source. Received 1998.

PI 607260. *Gossypium hirsutum* L.
Cultivar. SA 2436.

Unknown source. Received 1998.

PI 607261. *Gossypium hirsutum* L.
Cultivar. SA 2437.

Unknown source. Received 1998.

PI 607262. *Gossypium hirsutum* L.
Cultivar. SA 2438.

Unknown source. Received 1998.

PI 607263. *Gossypium hirsutum* L.
Cultivar. SA 2439.

Unknown source. Received 1998.

PI 607264. *Gossypium hirsutum* L.
Cultivar. SA 2440.

Unknown source. Received 1998.

PI 607265. *Gossypium hirsutum* L.
Cultivar. SA 2441.

Unknown source. Received 1998.

PI 607266. *Gossypium hirsutum* L.
Cultivar. SA 2442.

Unknown source. Received 1998.

PI 607267. *Gossypium hirsutum* L.
Cultivar. SA 2443.

Unknown source. Received 1998.

PI 607268. *Gossypium hirsutum* L.
Cultivar. SA 2444.

Unknown source. Received 1998.

PI 607269. *Gossypium hirsutum* L.
Cultivar. SA 2445.

Unknown source. Received 1998.

PI 607270. *Gossypium hirsutum* L.
Cultivar. SA 2446.

Unknown source. Received 1998.

PI 607271. *Gossypium hirsutum* L.
Cultivar. SA 2447.

Unknown source. Received 1998.

PI 607272. *Gossypium hirsutum* L.
Cultivar. SA 2448.

Unknown source. Received 1998.

PI 607273. *Gossypium hirsutum* L.
Cultivar. SA 2449.

Unknown source. Received 1998.

PI 607274. *Gossypium hirsutum* L.
Cultivar. SA 2450.

Unknown source. Received 1998.

PI 607275. *Gossypium hirsutum* L.
Cultivar. SA 2451.

Unknown source. Received 1998.

PI 607276. *Gossypium hirsutum* L.
Cultivar. SA 2452.

Unknown source. Received 1998.

PI 607277. *Gossypium hirsutum* L.
Cultivar. SA 2453.

Unknown source. Received 1998.

PI 607278. *Gossypium hirsutum* L.
Cultivar. SA 2454.

Unknown source. Received 1998.

PI 607279. *Gossypium hirsutum* L.
Cultivar. SA 2455.

Unknown source. Received 1998.

PI 607280. *Gossypium hirsutum* L.
Cultivar. SA 2456.

Unknown source. Received 1998.

PI 607281. *Gossypium hirsutum* L.
Cultivar. SA 2457.

Unknown source. Received 1998.

PI 607282. *Gossypium hirsutum* L.
Cultivar. SA 2458.

Unknown source. Received 1998.

PI 607283. *Gossypium hirsutum* L.
Cultivar. SA 2459.

Unknown source. Received 1998.

PI 607284. *Gossypium hirsutum* L.
Cultivar. SA 2460.

Unknown source. Received 1998.

PI 607285. *Gossypium hirsutum* L.
Cultivar. SA 2461.

Unknown source. Received 1998.

PI 607286. *Gossypium hirsutum* L.
Cultivar. SA 2462.

Unknown source. Received 1998.

PI 607287. *Gossypium hirsutum* L.
Cultivar. SA 2463.

Unknown source. Received 1998.

PI 607288. *Gossypium hirsutum* L.
Cultivar. SA 2464.

Unknown source. Received 1998.

PI 607289. *Gossypium hirsutum* L.
Cultivar. SA 2465.

Unknown source. Received 1998.

PI 607290. *Gossypium hirsutum* L.
Cultivar. SA 2466.

Unknown source. Received 1998.

PI 607291. *Gossypium hirsutum* L.
Cultivar. SA 2467.

Unknown source. Received 1998.

PI 607292. *Gossypium hirsutum* L.
Cultivar. SA 2468.

Unknown source. Received 1998.

PI 607293. *Gossypium hirsutum* L.
Cultivar. SA 2469.

Unknown source. Received 1998.

PI 607294. *Gossypium hirsutum* L.
Cultivar. SA 2470.

Unknown source. Received 1998.

PI 607295. *Gossypium hirsutum* L.
Cultivar. SA 2471.

Unknown source. Received 1998.

PI 607296. *Gossypium hirsutum* L.
Cultivar. SA 2472.

Unknown source. Received 1998.

PI 607297. *Gossypium hirsutum* L.
Cultivar. SA 2473.

Unknown source. Received 1998.

PI 607298. *Gossypium hirsutum* L.
Cultivar. SA 2474.

Unknown source. Received 1998.

PI 607299. *Gossypium hirsutum* L.
Cultivar. SA 2475.

Unknown source. Received 1998.

PI 607300. *Gossypium hirsutum* L.
Cultivar. SA 2476.

Unknown source. Received 1998.

PI 607301. *Gossypium hirsutum* L.
Cultivar. SA 2477.

Unknown source. Received 1998.

PI 607302. *Gossypium hirsutum* L.
Cultivar. SA 2478.

Unknown source. Received 1998.

PI 607303. *Gossypium hirsutum* L.
Cultivar. SA 2479.

Unknown source. Received 1998.

PI 607304. *Gossypium hirsutum* L.
Cultivar. SA 2480.

Unknown source. Received 1998.

PI 607305. *Gossypium hirsutum* L.
Cultivar. SA 2481.

Unknown source. Received 1998.

PI 607306. *Gossypium hirsutum* L.
Cultivar. SA 2482.

Unknown source. Received 1998.

PI 607307. *Gossypium hirsutum* L.
Cultivar. SA 2483.

Unknown source. Received 1998.

PI 607308. *Gossypium hirsutum* L.
Cultivar. SA 2484.

Unknown source. Received 1998.

PI 607309. *Gossypium hirsutum* L.
Cultivar. SA 2485.

Unknown source. Received 1998.

PI 607310. *Gossypium hirsutum* L.
Cultivar. SA 2486.

Unknown source. Received 1998.

PI 607311. *Gossypium hirsutum* L.
Cultivar. "Miscot 7802-51".

Unknown source. Received 1998.

PI 607312. *Gossypium hirsutum* L.
Cultivar. SA 2488.

Unknown source. Received 1998.

PI 607313. *Gossypium hirsutum* L.
Cultivar. SA 2489.

Unknown source. Received 1998.

PI 607314. *Gossypium hirsutum* L.
Cultivar. SA 2490.

Unknown source. Received 1998.

PI 607315. *Gossypium hirsutum* L.
Cultivar. SA 2491.

Unknown source. Received 1998.

PI 607316. *Gossypium hirsutum* L.
Cultivar. SA 2492.

Unknown source. Received 1998.

PI 607317. *Gossypium hirsutum* L.
Cultivar. SA 2493.

Unknown source. Received 1998.

PI 607318. *Gossypium hirsutum* L.
Cultivar. SA 2494.

Unknown source. Received 1998.

PI 607319. *Gossypium hirsutum* L.
Cultivar. SA 2495.

Unknown source. Received 1998.

PI 607320. *Gossypium hirsutum* L.
Cultivar. SA 2496.

Unknown source. Received 1998.

PI 607321. *Gossypium hirsutum* L.
Cultivar. SA 2497.

Unknown source. Received 1998.

PI 607322. *Gossypium hirsutum* L.
Cultivar. SA 2498.

Unknown source. Received 1998.

PI 607323. *Gossypium hirsutum* L.
Cultivar. SA 2499.

Unknown source. Received 1998.

PI 607324. *Gossypium hirsutum* L.
Cultivar. SA 2500.

Unknown source. Received 1998.

PI 607325. *Gossypium hirsutum* L.
Cultivar. SA 2501.

Unknown source. Received 1998.

PI 607326. *Gossypium hirsutum* L.
Cultivar. SA 2502.

Unknown source. Received 1998.

PI 607327. *Gossypium hirsutum* L.
Cultivar. SA 2503.

Unknown source. Received 1998.

PI 607328. *Gossypium hirsutum* L.
Cultivar. SA 2504.

Unknown source. Received 1998.

PI 607329. *Gossypium hirsutum* L.
SA 2505.

Unknown source. Received 1998.

PI 607330. *Gossypium hirsutum* L.
Cultivar. SA 2506.

Unknown source. Received 1998.

PI 607331. *Gossypium hirsutum* L.
Cultivar. SA 2507.

Unknown source. Received 1998.

PI 607332. *Gossypium hirsutum* L.
Cultivar. SA 2508.

Unknown source. Received 1998.

PI 607333. *Gossypium hirsutum* L.
Cultivar. SA 2509.

Unknown source. Received 1998.

PI 607334. *Gossypium hirsutum* L.
Cultivar. SA 2510.

Unknown source. Received 1998.

PI 607335. *Gossypium hirsutum* L.
Cultivar. SA 2511.

Unknown source. Received 1998.

PI 607336. *Gossypium hirsutum* L.
Cultivar. SA 2512.

Unknown source. Received 1998.

PI 607337. *Gossypium hirsutum* L.
Cultivar. SA 2513.

Unknown source. Received 1998.

PI 607338. *Gossypium hirsutum* L.
Cultivar. SA 2514.

Unknown source. Received 1998.

PI 607339. *Gossypium hirsutum* L.
Cultivar. SA 2515.

Unknown source. Received 1998.

PI 607340. *Gossypium hirsutum* L.
Cultivar. SA 2516.

Unknown source. Received 1998.

PI 607341. *Gossypium barbadense* L.
Cultivar. SA 2517.

Unknown source. Received 1998.

PI 607342. *Gossypium hirsutum* L.
Cultivar. SA 2518.

Unknown source. Received 1998.

PI 607343. *Gossypium hirsutum* L.
Cultivar. "Auburn 612 RNR".

Unknown source. Received 1998.

PI 607344. *Gossypium hirsutum* L.
Cultivar. SA 2520.

Unknown source. Received 1998.

PI 607345. *Gossypium hirsutum* L.
Cultivar. "Aub Fg 165".

Unknown source. Received 1998.

PI 607346. *Gossypium hirsutum* L.
Cultivar. "Aub Ne-56".

Unknown source. Received 1998.

PI 607347. *Gossypium hirsutum* L.
Cultivar. SA 2523.

Unknown source. Received 1998.

PI 607348. *Gossypium hirsutum* L.
Cultivar. SA 2524.

Unknown source. Received 1998.

PI 607349. *Gossypium hirsutum* L.
SA 2528.

Unknown source. Received 1998.

PI 607350. *Gossypium hirsutum* L.
SA 2529.

Unknown source. Received 1998.

PI 607351. *Gossypium hirsutum* L.
SA 2530.

Unknown source. Received 1998.

PI 607352. *Gossypium hirsutum* L.
SA 2531.

Unknown source. Received 1998.

PI 607353. *Gossypium hirsutum* L.
SA 2532.

Unknown source. Received 1998.

PI 607354. *Gossypium hirsutum* L.
SA 2533.

Unknown source. Received 1998.

PI 607355. *Gossypium hirsutum* L.
SA 2534.

Unknown source. Received 1998.

PI 607356. *Gossypium hirsutum* L.
SA 2535.

Unknown source. Received 1998.

PI 607357. *Gossypium hirsutum* L.
SA 2536.

Unknown source. Received 1998.

PI 607358. *Gossypium hirsutum* L.
SA 2537.

Unknown source. Received 1998.

PI 607359. *Gossypium hirsutum* L.
SA 2538.

Unknown source. Received 1998.

PI 607360. *Gossypium hirsutum* L.
SA 2539.

Unknown source. Received 1998.

PI 607361. *Gossypium hirsutum* L.
SA 2540.

Unknown source. Received 1998.

PI 607362. *Gossypium hirsutum* L.
SA 2541.

Unknown source. Received 1998.

PI 607363. *Gossypium hirsutum* L.
SA 2542.

Unknown source. Received 1998.

PI 607364. *Gossypium hirsutum* L.
SA 2543.

Unknown source. Received 1998.

PI 607365. *Gossypium hirsutum* L.
SA 2544.

Unknown source. Received 1998.

PI 607366. *Gossypium hirsutum* L.
SA 2545.

Unknown source. Received 1998.

PI 607367. *Gossypium hirsutum* L.
SA 2546.

Unknown source. Received 1998.

PI 607368. *Gossypium hirsutum* L.
SA 2547.

Unknown source. Received 1998.

PI 607369. *Gossypium hirsutum* L.
SA 2548.

Unknown source. Received 1998.

PI 607370. *Gossypium hirsutum* L.
SA 2549.

Unknown source. Received 1998.

PI 607371. *Gossypium hirsutum* L.
SA 2550.

Unknown source. Received 1998.

PI 607372. *Gossypium hirsutum* L.
SA 2551.

Unknown source. Received 1998.

PI 607373. *Gossypium hirsutum* L.
SA 2552.

Unknown source. Received 1998.

PI 607374. *Gossypium hirsutum* L.
SA 2553.

Unknown source. Received 1998.

PI 607375. *Gossypium hirsutum* L.
SA 2554.

Unknown source. Received 1998.

PI 607376. *Gossypium hirsutum* L.
SA 2555.

Unknown source. Received 1998.

PI 607377. *Gossypium hirsutum* L.
SA 2556.

Unknown source. Received 1998.

PI 607378. *Gossypium hirsutum* L.
SA 2557.

The following were developed by Lee Panella, USDA, ARS, Crops Research Lab, Sugarbeet Research Unit, Fort Collins, Colorado 80526-2083, United States. Received 01/11/1999.

PI 607379. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. Population. FC712(4X); 971018. GP-217. Pedigree - Colchicine doubled version of FC712. Tetraploid ($2n = 4x=36$), multigerm (MM), non O-type, pseudo self-fertile, and 4% green hypocotyls. Of 122 plants examined for pollen production, 8% were Type 0, 11% Type 1 (both considered male sterile), 14% Type 2, and 67% Type 3. Excellent resistance to *Rhizoctonia* root rot (*Rhizoctonia solani*) and good resistance to *Cercospora* leaf spot (*Cercospora beticola*).

The following were developed by James Klein, Southern Illinois University, Dept. of Plant and Soil Science, Carbondale, Illinois 62901-4415, United States; Mike E. Schmidt, Southern Illinois University, Department of Plant and Soil Sciences, MC 4415, Carbondale, Illinois 62901-4415, United States; R.J. Suttner, Southern Illinois University, Dept. of Plant, Soil, and General Agriculture, Carbondale, Illinois 62901-4415, United States; O. Myers, Jr., Southern Illinois University, Dept. of Plant, Soil, and General Agriculture, Carbondale, Illinois 62901-4415, United States. Received 12/29/1998.

PI 607380. *Glycine max* (L.) Merr.

Cultivar. Pureline. "LS92-1800". CV-399. Pedigree - Composite of six sublimes selected from LS87-1311 which segregated for flower color. Relative maturity of 4.3. Growth habit indeterminate, flowers white, tawny pubescence, and pod walls tan. Plant height averages 99 cm. Lodging score averages 1.4. Seedcoats shiny yellow with black hila. Seed size approx. 141 mg seed⁻¹. Seed composition averages 403 g kg⁻¹ oil on a dry weight basis. Resistance to soybean cyst nematode (*Heterodera glycines*) races 3, 5, and 14. Moderate resistance to SCN race 4. Moderately resistant to soybean sudden death syndrome (*Fusarium solani*).

Susceptible to races 1 and 4 of phytophthora rot (*Phytophthora sojae*) and soybean mosaic virus.

The following were developed by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States; Paul R. White, Iowa State University, Dept. of Agronomy, Ames, Iowa 50011, United States; Kendall R. Lamkey, USDA, ARS, Iowa State University, 1555 Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 12/14/1998.

PI 607381. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B110; 1998:30; Ames 24953. PL-297. Pedigree - BS13(S)C5-12-2-1-1-1-1-1-1-1-1. Tall, vigorous line with excellent plant height that flowers 90-95 days after planting. Ears with 16 rows of dent, yellow kernels, and pink cobs. Developed by pedigree selection from a strain of Iowa Stiff Stalk Synthetic (BSSS), BS12(S)C5.

PI 607382. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B111; 1998:32; Ames 24954. PL-298. Pedigree - BSSS(R)C9-107-1-1-2-1-1-1-1-1-1-1-1. Tall, vigorous line with good plant health and combining ability in crosses with lines with Lancaster Sure Crop germplasm. Flowers 90-95 days after planting. Ears with 14 rows of dent, yellow kernels, and pink cobs. Developed by single seed descent from a strain of Iowa Stiff Stalk Synthetic, BSSS(R)C9, after nine cycles of reciprocal recurrent selection from BSCB1(R) as the tester.

PI 607383. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B113; 1998:37; Ames 24955. PL-299. Pedigree - BS11(FR)C9-3237-12-1-1-1-1-2-1-1. Dark green, upright leaf orientation. Excellent plant health and good combining ability with lines having BSSS germplasm. Good seed yield of semi-dent. Ears with 14-16 rows, yellow kernels, and red cobs. Flowers 90-95 days after planting. Developed by Pedigree selection from BS11 after nine cycles of reciprocal full-sib selection with BS10 as the tester.

PI 607384. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B114; 1997:33; Ames 24956. PL-300. Pedigree - CIMMYT Pool 41-C15-19-2-1-1-1-1-1-1-1-1. Above average combining ability with lines having origins from BSSS and non-BSSS groups. Flowers 90-95 days after planting. Ears with 12 rows of yellow, semi-dent kernels and pink cobs. Developed by pedigree selection from CIMMYT Pool 41, which is a genetically broad-based population developed for temperate areas.

The following were developed by Dennis Thomas, University of Illinois, Department of Crop Sciences, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; Cecil D. Nickell, University of Illinois, Department of Crop Sciences, 262 NSRC, Urbana, Illinois 61801, United States; T.R. Cary, University of Illinois, Illinois Agr. Exp. Sta., Dept. of Agronomy, Urbana, Illinois 61801, United States. Received 03/01/1999.

PI 607385. *Glycine max* (L.) Merr.

Cultivar. Pureline. "LN92-7369". CV-405. Pedigree - Burlison x C1732. Indeterminate line of late Group II maturity (relative maturity 2.8). Flowers purple, tawny pubescence, brown pods at maturity, and shiny

yellow seeds with black hila. May have up to 2% other plant and seed types. Resistant to Phytophthora rot (races 1 and 7) (Phytophthora sojae). Susceptible to brown stem rot (Phialophora gregata), sudden death syndrome (Fusarium solani), and Races 3 and 4 of the soybean cyst nematode(SCN) (Heterodera glycines).

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States; Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States; Paul R. White, Iowa State University, Dept. of Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 02/24/1999.

PI 607386. Zea mays L. subsp. mays

Breeding. Population. BS21(R)C7; Ames 25187. GP-359. Pedigree - Selected from BS21 developed from the cross of BS5 and BS20. Developed from a cross of BS5, as a source of earliness, and BS20, which contributed root and stalk strength. Germplasm of BS21 includes about 54% Reid Yellow Dent, 18% Minnesota 13, 13% European Flint, and 15% from sources of unknown origin. Seven cycles of reciprocal recurrent half-sib selection with BS22 as tester were completed. Selection emphasized greater grain yield and improved root and stalk strength. Direct response was 4.4% cycle-1 for grain yield. Maturity classification is AES 500-600.

PI 607387. Zea mays L. subsp. mays

Breeding. Population. BS22(R)C7; Ames 25188. GP-360. Pedigree - Selected from BS22 developed by intermating 16 lines; A619, A632, B55, B68, C123, Ch9, CM37 (CMV3 x B14) B14, M14m Mo17, MS214, Pa884P, SD10, SD15, Va43, and W153R. Developed by intermating 16 earlier maturity inbred lines. Based on origin of lines, germplasm of BS22 includes 45% Reid Yellow Dent, 13% Lancaster Sure Crop, 9% Minnesota 13, and 33% from sources of unknown origin. Seven cycles of reciprocal recurrent half-sib selection with BS21 were completed. Selection emphasized greater yield and improved stalk and root strength. Direct response was 4.4% cycle-1 for grain yield. Maturity classification is AES 500-600.

The following were developed by Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; R.W. Briggs, Crow's Hybrid Corn Co., Milford, Illinois 60953, United States; T. Colbert, Pioneer Hi-Bred International, Inc., Princeton, Indiana 57670, United States; A. Mousel, Novartis Seeds, Inc., Stanton, Minnesota 55018, United States; J. Raycraft, 703 N. Linden, Normal, Illinois 61761, United States; K. Wrede, The J.C. Robinson Seed Company, Henrietta, Missouri 64036, United States. Received 08/01/1995.

PI 607388. Zea mays L. subsp. mays

Breeding. Population. GS01(R)C2; F016NO2; NSL 308676. GP-347. Pedigree - Developed by recombining BSL(S)C4 (PI 608771) and elite inbred lines derived from Lancaster. Yellow, semi-flint breeding population developed by Rod Edmondson, Funk Seeds International, Kinston, NC, from BSL(S)C4 (PI 608771 (Crop Sci. 12:132) [developed from the Lancaster Surecrop variety (PI 280061)]) and from elite inbred lines derived from Lancaster Surecrop. Two cycles of Reciprocal Recurrent Selection were completed

with a B73 derived inbred line tester. Multi-stage selection for improved disease resistance (southern corn leaf blight, anthracnose, and gray leaf spot), reduced lodging, and increased yield was used.

PI 607389. *Zea mays* L. subsp. *mays*

Breeding. Population. GS02(R)C3; D023NO3; NSL 308677. GP-348. Pedigree - Formed by recombining BSSS(R)C6, BSSS(R)C7, and BS13(S)C1. B73 and A632 were introgressed into RSSSC to form GS02C0. Yellow dent breeding population developed by Robert Briggs, Funk Seeds International, Rochelle, IL, from RSSSC with introgression of B73 [PI 550473 (Crop Sci. 12:721)], A632 (PI 587140), and four other Stiff stalk inbred lines. Three cycles of reciprocal recurrent selection involving multi-stage selection for improved resistance to northern corn leaf, reduced lodging, and increased yield were completed using an Oh43 derived inbred line as tester. RSSSC was developed from BSSS(R)C7 (Crop Sci. 14:341-342), BS13(S2)C1 (PI 608782 (Crop Sci. 19:755)], BSSS2(S2)C1 (Crop Sci. 11:140-141), and BSSS2(S1)C2 and was released by John Dudley (Crop Sci. 19:583-588).

PI 607390. *Zea mays* L. subsp. *mays*

Breeding. Population. GS03(R)C3; D036NO3; NSL 308678. GP-349. Pedigree - Developed from OhS3 (an Ohio selection from BS3) with introgression of B37. Yellow dent breeding population developed by Rod Edmondson, Funk Seeds International, Kinston, NC, from OhS3 (OhS3 (Crop Sci. 34:1132) is an Ohio selection from BS3 [PI 550474 (Crop Sci. 14:341-342)]).

PI 607391. *Zea mays* L. subsp. *mays*

Breeding. Population. GS15(R)C4; E156NO4; NSL 308679. GP-350. Pedigree - Developed from VACEX (Virginia Corn Belt Exotic breeding population) developed by Clarence Genter. Yellow, semi-flint breeding population developed by Rod Edmondson, Funk Seeds International, Kinston, NC from VACEX (Virginia-Corn Belt Exotic breeding population developed by Clarence Genter, Blacksburg, VA) with introgressions of four elite non-stiff stalk inbred lines. Four cycles of Reciprocal Recurrent Selection were completed with a B73 derived inbred line as tester. Multi-stage selection for improved disease resistance (southern corn leaf blight, gray leaf spot, and anthracnose), reduced lodging, and increased yield was used.

PI 607392. *Zea mays* L. subsp. *mays*

Breeding. Population. GS18(R)C2; C187NO2; NSL 308680. GP-351. Pedigree - Developed from PHWI(M)C9 [Pioneer Hi-Bred West Indies composite with sources: C5-3x660 (11.30%), C103 (3.67%), C103x595 (2.82%), C103xAI-11 (8.19%), C103xHI-19 (8.76%), HyxE7-10 (11.86%), M14xCBB2-19 (3.39%), and exotic sources from: Cuba (23.45%), Dominican Rep. (3.95%), Haiti (0.85%), Martinique (10.73%), St. Croix (2.82%), Trinidad (8.19%)]. Yellow, semi-dent breeding population developed from PHWI(M)C9 [Pioneer Hi-Bred West Indies composite (Crop Sci. 14:881-885; Crop Sci. 5:87-90; Crop Sci. 12:301-304; Crop Sci. 14:881-885)] by Terry Colbert, Funk Seeds International, Union City, TN. Two cycles of Reciprocal Recurrent Selection were completed with a non-stiff stalk inbred line as tester. Multi-stage selection for improved disease resistance (southern corn leaf blight, gray leaf spot, MDMV, and MCDV), reduced lodging, and increased yield was used.

PI 607393. *Zea mays* L. subsp. *mays*

Breeding. Population. GS20(R)C3; D205NO3; NSL 308681. GP-352. Pedigree -

Developed from NSS(2), NS(B)FR(2), BS17, BS20(S)C2 and 6 elite Stiff stalk inbred lines. Yellow dent breeding population developed by Ken Wrede, Funk Seeds International, Seward, NE, from NSS(2) (Crop Sci. 38:287-288, Crop Sci. 29:314-319), NS(B)FR(2), BS17 (PI 608780 (Crop Sci. 19:565)], BS20(S)C2 [PI 608776 (Crop Sci. 16:886-887)] and six elite Stiff stalk inbred lines. Three cycles of reciprocal recurrent selection involving multi-stage selection for reduced lodging and increased yield were completed using Mol7Ht as tester.

PI 607394. *Zea mays* L. subsp. *mays*

Breeding. Population. GS23(R)C2; F235NO2; NSL 308682. GP-353. Pedigree - Developed from NBS(2), NB(S)FR(2), VaCBS(S)C4, and BS11(FR)C2 (PI 550477). Yellow, semi-flint breeding population developed by Ken Wrede, Funk Seeds International, Seward, NE, from NBS(2) (Crop Sci. 38:287-288, Crop Sci. 29:314-319), NB(S)FR(2), VaCBS(S)C4 [Developed by four cycles of recurrent selection among S1 lines from Virginia Corn-Belt Southern (NSL 26526) by Clarence Genter (Crop Sci. 6:429-431, 4)], and BS11(FR)C2 [PI 550477 (Crop Sci. 14:341-342)]. Two cycles of Reciprocal Recurrent Selection were completed with B73 [PI 550473 (Crop Sci. 12:721)] as tester. Multi-stage selection for reduced lodging and increased yield was used.

PI 607395. *Zea mays* L. subsp. *mays*

Breeding. Population. GS24(R)C1; F24C01; NSL 308683. GP-354. Pedigree - Developed by intercrossing several elite non-Stiff stalk inbred lines. Yellow, dent breeding population was developed by Terry Colbert, Funk Seeds International, Union City, TN, by intercrossing several elite non-Stiff stalk inbred lines. One cycle of Reciprocal Recurrent Selection was completed with a stiff stalk inbred line as tester. Multi-stage selection for improved disease resistance (southern corn leaf blight, gray leaf spot, MDMV, and MCDV), reduced lodging, and increased yield was used.

PI 607396. *Zea mays* L. subsp. *mays*

Breeding. Population. GS27(R)C2; D278NO2; NSL 308684. GP-355. Pedigree - Developed from FS7B. Yellow, semi-dent breeding population developed from BS7B [(Ames 14257) Florida 767 improved by 7 cycles of recurrent selection with F44 x F6 as tester by Earl Horner, Gainesville, FL]. Two cycles of Reciprocal Recurrent Selection were completed with a non-Stiff stalk inbred line as tester by Joe Raycraft, Funk Seeds International, Coolidge, GA. Multi-stage selection for improved disease resistance (southern corn leaf blight, MDMV, and MCDV), reduced lodging, and increased yield was used.

PI 607397. *Zea mays* L. subsp. *mays*

Breeding. Population. GS32(R)C1; D328NO1; NSL 308685. GP-356. Pedigree - Developed from FS7B and an Elite Virus Dent Synthetic. Yellow, semi-dent breeding population developed from FS7B [(Ames 14257) Florida 767 improved by 7 cycles of recurrent selection with F44 x F6 as tester by Earl Horner, Gainesville, FL] and an Elite Virus Dent Synthetic by Joe Raycraft, Funk Seeds International, Coolidge, GA. One cycle of Reciprocal Recurrent Selection was completed with a non-Stiff stalk inbred line as tester. Multi-stage selection for improved disease resistance (southern corn leaf blight, MDMV, and MCDV), reduced lodging, and increased yield was used.

PI 607398. *Zea mays* L. subsp. *mays*

Breeding. Population. GS50(M)C4; E509NO4; NSL 308686. GP-357. Pedigree - Developed from CBW II with subsequent introgression of elite Corn Belt non-stiff stalk inbred lines. Yellow, semi-flint breeding population developed from CBW II (formed by Steve Eberhart in Kenya from more than 100 Latin American landrace accessions from CIMMYT and Corn Belt germplasm). Four cycles of mass selection were completed by Alan Mousel, Funk Seeds International, Boyton Beach, FL. In each cycle 7 rows of GS50 and one row comprised of a mixture of elite inbred lines derived from Funk's non-stiff stalk type breeding populations were planted. Seed was saved from GS50 selected plants.

PI 607399. *Zea mays* L. subsp. *mays*

Breeding. Population. GS51(M)C4; C519NO4; NSL 308687. GP-358. Pedigree - Developed from CBW I with subsequent introgression of elite Corn Belt stiff stalk inbred lines. Yellow, semi-dent breeding population developed from CBW I (formed by Steve Eberhart in Kenya from more than 100 Latin American landrace accessions from CIMMYT and Corn Belt germplasm). Four cycles of mass selection were completed by Alan Mousel, Funk Seeds International, Boyton Beach, FL. In each cycle 7 rows of BS51 and one row, comprised of a mixture of elite inbred lines derived from Funk's stiff stalk type breeding populations, were planted. Seed saved from GS51 selected plants.

The following were donated by E. S. Horner, University of Florida, Department of Agronomy, Gainesville, Florida 32631, United States. Received 10/03/1990.

PI 607400. *Zea mays* L. subsp. *mays*

Breeding. Population. Ames 14257; FS7B. Collected in Florida, United States. Pedigree - Developed from Florida 767. Yellow dent breeding population formed by intercrossing southern open-pollinated varieties. Seven cycles of recurrent selection with F44 x F6 as tester for improved disease resistance, reduced lodging, and higher yields were completed in Florida.

The following were donated by Virginia Polytechnic Institute and State University, Virginia Agr. Exp. Sta., Blacksburg, Virginia 24061, United States. Received 06/1963.

PI 607401. *Zea mays* L. subsp. *mays*

Breeding. Population. VaCBS; NSL 26526; Corn Belt-Southern Synthetic. Developed in United States. Originated in Florida in 1952-53 from crosses of several inbred lines commonly used in the corn belt with a composite of pollen from 2 nurseries of S.C & 1 of Miss. It has been maintained in isolation since that time with selection in recent years for yellow kernels and plants adapted to near Va. It has a wide diversity of germplasm, relatively low eared and has been selected for resistance to diseases in Virginia.

The following were collected by Zhemeng Institute of Agricultural Sciences, China. Donated by Jeff Dahlberg, USDA, ARS, Tropical Agric. Research Station, 2200 Ave. Pedro Albizu-Campos, Mayaguez, Puerto Rico. Received 03/19/1999.

PI 607402. Sorghum sp.

Cultivated. x2581; Dabailian. Collected in China. Latitude 42° 50' N. Longitude 120° 43' E. Naiman, Neimenggu. Lat/lon accurate to Naiman. Lysine content 4.73%.

PI 607403. Sorghum sp.

Cultivated. x2578; Dabailian. Collected in China. Latitude 42° 50' N. Longitude 120° 43' E. Naiman, Neimenggu. Lat/lon accurate to Naiman. Lysine content 4.54%.

The following were collected by Suihua Institute of Agricultural Sciences, China. Donated by Jeff Dahlberg, USDA, ARS, Tropical Agric. Research Station, 2200 Ave. Pedro Albizu-Campos, Mayaguez, Puerto Rico. Received 03/19/1999.

PI 607404. Sorghum sp.

Cultivated. 4179; Baigaoliang. Collected in Heilongjiang, China. Latitude 46° 15' 44" N. Longitude 126° 17' 8" E. Lanxi. Lat/lon accurate to Lanxi. Tolerant to cold stress.

The following were collected by Shanxi Academy of Agricultural Sciences, Yang Ling, Shanxi, China. Donated by Jeff Dahlberg, USDA, ARS, Tropical Agric. Research Station, 2200 Ave. Pedro Albizu-Campos, Mayaguez, Puerto Rico. Received 03/19/1999.

PI 607405. Sorghum sp.

Cultivated. 7806; Erniuxin. Collected in Shanxi, China. Latitude 37° 54' N. Longitude 113° 8' E. Shouyang. Lat/lon accurate to Shouyang. Tolerant to cold stress.

PI 607406. Sorghum sp.

Cultivated. 7915; Baiyuangaoliang. Collected in Shanxi, China. Latitude 39° 34' N. Longitude 113° 11' E. Yingxian. Lat/lon accurate to Yingxian. Tolerant to cold stress.

The following were collected by Heilongjiang Academy of Agricultural Sciences, Harbin, Heilongjiang, China. Donated by Jeff Dahlberg, USDA, ARS, Tropical Agric. Research Station, 2200 Ave. Pedro Albizu-Campos, Mayaguez, Puerto Rico. Received 03/19/1999.

PI 607407. Sorghum sp.

Cultivated. 4533; Heikebang. Collected in Heilongjiang, China. Latitude 45° 59' N. Longitude 126° 36' E. Hulan. Lat/lon accurate to Hulan. Tolerant to cold stress.

PI 607408. Sorghum sp.

Cultivated. 4091; Dasheyan. Collected in Heilongjiang, China. Latitude 45° 59' N. Longitude 126° 36' E. Hulan. Lat/lon accurate to Hulan. Tolerant to cold stress.

The following were donated by Jeff Dahlberg, USDA, ARS, Tropical Agric. Research Station, 2200 Ave. Pedro Albizu-Campos, Mayaguez, Puerto Rico. Received 03/19/1999.

PI 607409. Sorghum sp.

Cultivated. 4175; Pingdingxiang. Tolerant to cold stress.

The following were donated by Shaw Nature Reserve, Missouri Botanical Garden, P.O. Box 38, Gray Summit, Missouri 63039, United States; Kansas Wildflower Society, Kansas, United States. Received 04/01/1996.

PI 607410. Agastache scrophulariifolia (Willd.) Kuntze

Cultivated. Ames 22779. Collected 1992 in Kansas, United States.

The following were collected by I.G. Levichev. Donated by V.L. Komarov Botanical Institute, Russian Academy of Sciences, 2, Prof. Popov Street, St. Petersburg, Leningrad 197376, Russian Federation. Received 09/29/1992.

PI 607411. Alcea nudiflora (Lindl.) Boiss.

Wild. 3350; Ames 20013. Collected 1989 in Uzbekistan. Western Tian-Shan Mountains, Tschatkalik Range, Central Asia.

The following were collected by Harold Pellett, University of Minnesota, Minnesota Landscape Arboretum, P.O. Box 39, Chanhassen, Minnesota 55317, United States. Received 06/25/1997.

PI 607412. Alcea nudiflora (Lindl.) Boiss.

Wild. MLA 960799; Ames 23830. Collected 1996 in Taldyqorghan, Kazakhstan. Latitude 45° 31' N. Longitude 80° 43' 29" E. Elevation 1235 m. Khrebet Dzhungarskiy Alatau (mountains).

The following were donated by University of Guelph, Arboretum, Guelph, Ontario N1G 2W1, Canada. Received 05/25/1990.

PI 607413. Alnus incana subsp. rugosa (Du Roi) R. T. Clausen

Wild. 880365; Ames 13769. Collected in Ontario, Canada. Latitude 44° 52' N. Longitude 76° 46' W. Elevation 251 m. Frontenac Co., Palmerston Tp. Wet sand.

The following were collected by Armando De Jesus Machado, Universidade do Porto, Instituto de Botanica, Rua do Campo Alegre, 1191, Porto, Porto 4100, Portugal; Jose Loureiro Martins, Universidade do Porto, Instituto de Botanica, Rua do Campo Alegre, 1191, Porto, Porto 4100, Portugal; Andre Dos Anjos Da Serra, Universidade do Porto, Instituto de Botanica, Rua do Campo Alegre, 1191, Porto, Porto 4100, Portugal. Donated by Universidade do Porto, Instituto de Botanica, Rua do Campo Alegre, 1191, Porto, Porto 4100, Portugal. Received 06/04/1997.

PI 607414. Antirrhinum majus subsp. linkianum (Boiss. & Reut.) Rothm.

Wild. Index Seminum 263; Ames 23776. Collected 07/23/1996 in Portugal.

The following were donated by Peter van der Linden, The Morton Arboretum, 4100 Ill., Rte. 53, Lisle, Illinois 60532-1293, United States. Received 04/04/1995.

PI 607415. *Betula humilis* Schrank

Wild. 203-93; Ames 22435. Collected in Gorno-Altay, Russian Federation. Latitude 50° 35' N. Longitude 84° 58' E. Altai Mountains, near the village of Sugash. Low ground along stream.

The following were donated by Botanischer Garten der Univ. Halle, Halle (Saale), Saxony-Anhalt, Germany; Leibniz-Inst für Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben, Saxony-Anhalt D-06466, Germany. Received 06/21/1996.

PI 607416. *Calendula maroccana* Ball

Cultivated. CAL 10/93; Ames 23102.

The following were donated by Leibniz-Inst für Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben, Saxony-Anhalt D-06466, Germany; Jardin Botanique, Terrasse du Jardin Public, Place Bardineau, Bordeaux, Gironde 33000, France. Received 06/21/1996.

PI 607417. *Calendula maroccana* Ball

Cultivated. CAL 29/93; Ames 23103.

The following were donated by Karl Hammer, Inst. für Pflanzengenetik und Kulturpflanzenforschung, (IPK), Genebank, Gatersleben, Saxony-Anhalt D-06466, Germany. Received 06/10/1993.

PI 607418. *Calendula officinalis* L.

Uncertain. CAL 44/89; Ames 21131. Collected in Algeria. Djurdjura.

PI 607419. *Calendula suffruticosa* Vahl

Wild. Z 1; CAL 17/83; Ames 21121. Collected 1982 in Libya. Latitude 31° 57' N. Longitude 14° 2' E. Tamasilah, 15 km east of Bani Walid, Bani Walid District, Tripolitania.

PI 607420. *Calendula suffruticosa* subsp. *fulgida* (Raf.) Ohle

Wild. Z 5; CAL 23/86; Ames 21134. Collected 1985 in Sicily, Italy. Latitude 38° 2' N. Longitude 12° 35' E. Elevation 600 m. Erice.

The following were donated by Botanical Garden, University of Joensuu, P.O. Box 111, Joensuu, Pohjois-Karjala SF 80101, Finland. Received 04/30/1991.

PI 607421. *Dianthus arenarius* L.

Wild. 143; Ames 15626. Collected in Pohjois-Karjala, Finland. Latitude 62° 36' N. Longitude 30° 2' E. Kontiolahti, Kulho. Sandy hill.

The following were donated by Ogrod Botaniczny Uniwersytetu Im. Adama Mickiewicza, ul. Dabrowskiego 165, Poznan, Poznan 60-594, Poland. Received 08/16/1991.

PI 607422. *Dianthus carthusianorum* L.

Wild. 48; Ames 17757. Collected in Bydgoszcz, Poland. Latitude 53° 10' N. Longitude 17° 49' E. Zielonczyn.

The following were donated by Botanischer Garten, Universitat Leipzig, Linnestrasse 1, Leipzig, Saxony D-04103, Germany. Received 06/17/1991.

PI 607423. *Dianthus hybrid*

Cultivated. 1245; Ames 15742. Pedigree - Extremely variable, perennials with fragrant flowers and bearded petals. Likely OP garden hybrids.

PI 607424. *Dianthus hybrid*

Cultivated. 1251; Ames 15743. Pedigree - Extremely variable, perennials with fragrant flowers and bearded petals. Likely OP garden hybrids.

PI 607425. *Dianthus hybrid*

Cultivated. 1252; Ames 15744. Pedigree - Extremely variable, perennials with fragrant flowers and bearded petals. Likely OP garden hybrids.

PI 607426. *Gypsophila paniculata* L.

Cultivated. No. 1363; Ames 20108.

PI 607427. *Gypsophila scorzonerifolia* Ser.

Cultivated. No. 1366; Ames 20109.

The following were donated by Leibniz-Inst fur Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben, Saxony-Anhalt D-06466, Germany; Botanical Garden, Stockholm, Stockholm, Sweden. Received 06/21/1996.

PI 607428. *Heteranthemis viscidohirta* Schott

Cultivated. CHRY 26/78; D 94; Ames 23110.

The following were donated by USDA, ARS-Midwest Area, National Center for Agricultural Utilization Research, 1815 North University Street, Peoria, Illinois 61604, United States. Received 01/29/1998.

PI 607429. *Lavatera punctata* All.

Uncertain. 2-51; NU 42029; Ames 24397.

PI 607430. *Lavatera punctata* All.

Uncertain. 4-53; NU 43187; Ames 24398.

The following were collected by University de Neuchatel, Jardin Botanique, 22 Chemin di Chantemrie, Neuchatel, Neuchatel CH-2000, Switzerland. Donated by P. Kupfer, Jardin Botanique de l'Universite, Pertuis-du Sault 58, Neuchatel, Neuchatel CH-2000, Switzerland. Received 06/12/1995.

PI 607431. *Leucanthemum adustum* (W. D. J. Koch) Greml

Wild. Index Seminum 92; Ames 22480. Collected in Switzerland. Elevation 600 m. Foot of Jura Mountains.

The following were collected by Krystyna Dabrowska, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland; Maria Franszczak-Byc, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland;

Ryszard Sawicki, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland; Irena Stropek, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland. Donated by Hortus Botanicus, Universitatis Mariae Curie-Skłodowska, UL. Sławinkowska 3, Lublin, Lublin 20-818, Poland. Received 05/03/1995.

PI 607432. *Leucanthemum vulgare* Lam.

Wild. 2559; Ames 22457. Collected in Poland. Latitude 50° 59' N. Longitude 23° 11' E. Lopiennik, Krasnystaw.

The following were collected by Krystyna Dąbrowska, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland; Maria Frąszczak-Byc, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland; Ryszard Sawicki, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland; Małgorzata Rozycka, Ogród Botaniczny, Uniwersytetu Marii Curie-Skłodowskiej, ul. Sławinkowska 3, Lublin, Lublin 20-810, Poland. Donated by Instytut Hodowli i Aklimatyzacji Roslin, Ogród Botaniczny, Ul. Jezdziecka 5, Bydgoszcz, Bydgoszcz 85-687, Poland. Received 06/12/1996.

PI 607433. *Leucanthemum waldsteinii* (Sch. Bip.) Pouzar

Wild. 2337; Ames 23032. Collected in Krosno, Poland. Latitude 49° 6' N. Longitude 22° 39' E. Elevation 710 m. Bieszczady Mountains at Ustrzyki Górne.

The following were donated by USDA, ARS-Midwest Area, National Center for Agricultural Utilization Research, 1815 North University Street, Peoria, Illinois 61604, United States. Received 01/29/1998.

PI 607434. *Malva cretica* subsp. *althaeoides* (Cav.) Dalby

Uncertain. NU 44293; Ames 24441. Collected in Spain.

The following were donated by Denver Botanical Gardens, 909 York St., Denver, Colorado 80206, United States; Kuibyshev Botanical Garden, State University, Moscovskoe Shosse 36, Kuibyshev, Samara 443086, Russian Federation. Received 10/16/1988.

PI 607435. *Physocarpus ribesifolius* Kom.

Cultivated. Ames 10078.

The following were donated by USDA, ARS, U.S. National Arboretum, 3501 New York Avenue, N.E., Washington, District of Columbia 20002, United States. Received 01/25/1985.

PI 607436. *Rhodotypos scandens* (Thunb.) Makino

Wild. KNW 301; NA 55104; Ames 3490. Collected 1984 in Kyonggi, Korea, South. Beside village of Koju Dong, Taechong-myon taechong Island, Ongjingun. Thin woods.

The following were donated by The Morton Arboretum, Route 53, Lisle, Illinois 60532, United States. Received 03/10/1987.

PI 607437. *Rhus copallinum* L.

Wild. 65; Ames 7764. Collected in Kansas, United States. Montgomery County.

The following were donated by Peter van der Linden, The Morton Arboretum, 4100 Ill., Rte. 53, Lisle, Illinois 60532-1293, United States. Received 04/04/1995.

PI 607438. *Sibiraea laevigata* (L.) Maxim.

Wild. 211-93; Ames 22436. Collected in Gorno-Altay, Russian Federation. Latitude 50° 55' N. Longitude 85° 5' E. Yabagan Pass in Terchtinsky Range of the Altai Mountains. Base of west-facing slope below Yabagan.

The following were donated by Hortus Botanicus, Universitatis Mariae Curie-Sklodowska, UL. Slawinkowska 3, Lublin, Lublin 20-818, Poland. Received 08/21/1989.

PI 607439. *Sorbaria hybrid*

Cultivated. 2307; Ames 10741. Pedigree - Putative pedigree: *Sorbaria kirilowii* X *Sorbaria sorbifolia*.

The following were donated by University of Toronto, Seed Exchange Program, Department of Botany, Toronto, Ontario M5S 3B2, Canada. Received 04/08/1993.

PI 607440. *Spiraea alba* Du Roi

Wild. No. 143; Ames 20217. Collected 04/1993 in Ontario, Canada.

The following were donated by Robert G. McDaniel, University of Arizona, Department of Plant Sciences, Tucson, Arizona 85721, United States. Received 07/17/1995.

PI 607441. *Tanacetum cinerariifolium* (Trevir.) Sch. Bip.

Cultivated. Ames 21953. Arizona-bred stress tolerant synthetic. Progenitor seed which resulted in a patented clone, (Plant Patent Number 7495). NSSL destroyed the original sample, which was inviable per the June 12 letter.

The following were donated by Hortus Botanicus Academiae, Silvotechnicae, St. Petersburg, Leningrad, Russian Federation; Leibniz-Inst für Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben, Saxony-Anhalt D-06466, Germany. Received 02/05/1997.

PI 607442. *Tanacetum poteriiifolium* (Ledeb.) Grierson

Cultivated. TAN 4/81; Ames 23667.

The following were collected by Ju. A. Lux; T.K. Perfilova. Donated by V.L. Komarov Botanical Institute, Russian Academy of Sciences, 2, Prof. Popov

Street, St. Petersburg, Leningrad 197376, Russian Federation. Received 02/03/1994.

PI 607443. *Tanacetum vulgare* L.

Wild. 2705; Ames 21902. Collected in Leningrad, Russian Federation. Latitude 60° 49' N. Longitude 30° 13' E. Near the village of Plodovoye, Priosersk District.

The following were donated by USDA, ARS-Midwest Area, National Center for Agricultural Utilization Research, 1815 North University Street, Peoria, Illinois 61604, United States. Received 01/29/1998.

PI 607444. *Vaccaria hispanica* (Mill.) Rauschert *subsp. hispanica*

Uncertain. 4-52; NU 43017; Ames 24517.

The following were developed by Doug Brede, Jacklin Seed Company, West 5300 Riverbend avenue, Post Falls, Idaho 83854-9499, United States; S.H. Samudio, Jacklin Seed Company, 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 03/15/1999.

PI 607445. *Lolium perenne* L.

Cultivar. Population. "ACCENT"; MED-39. CV-199. Pedigree - Modified advanced generation synthetic developed from maternal progenies of 18 clones. The eighteen clones trace to plants selected from APM, Advent, Saturn, and Pinnacle perennial ryegrass varieties. Attractive turf with high density and medium-fine leaf texture. Improved turf quality. Moderate resistance to dollarspot (*Lanzia* and *Moellerodiscus*), large brown patch (*Rhizoctonia solani*), red thread (*Laerisaria fuciformis*), and gray leaf spot (*Pyricularia grisea*). Plant height from ground to top of spike 51.5 cm in 1995 and 55 cm in 1996.

The following were donated by Asian Vegetable Research and Development Center, P.O. Box 42, Shanhua, Tainan, Taiwan; Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 02/20/1981.

PI 607446. *Amaranthus tricolor* L.

Landrace. A75-74; RRC 110; RRC 78S-110; Ames 2046. Collected 09/01/1977 in Thailand. Latitude 18° 47' N. Longitude 98° 59' E. Chiang Mai. Seeds black, flowers green, leaves green. The RRC class type is: cultivated vegetable. Unusual white stems and petioles, without chlorophyll. Blooms early. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

The following were collected by F.J. Lawrence. Donated by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 04/15/1986.

PI 607447. *Amaranthus retroflexus* L.

Wild. RRC 543; Caribbean pigweed (Calaloo); Calaloo; Ames 5325. Collected 11/09/1979 in Jamaica. The seeds are black, flowers green, leaves green. The RRC class type is: weed. Caribbean pigweed, local name 'Calaloo.' It is said to be a wild variety eaten by humans, pigs,

and chickens. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA. Vegetable use is unusual for this species.

The following were donated by K. Omara, Assiut University, Assiut, Egypt. Received 04/20/1999.

- PI 607448 QUAR. *Zea mays* L. subsp. *mays***
Cultivar. Population. "ARAB MATAIR". Drought resistance.
- PI 607449 QUAR. *Zea mays* L. subsp. *mays***
Cultivar. Population. "PARIS-2". Drought resistance.
- PI 607450 QUAR. *Zea mays* L. subsp. *mays***
Cultivar. Population. "SAWAMAA-1". Drought and heat resistance.

The following were collected by Donald Pratt, Iowa State University, Botany Department, 353 Bessey Hall, Ames, Iowa 50011, United States. Received 04/01/1999.

- PI 607451. *Amaranthus palmeri* S. Watson**
Wild. Pop 49; Ames 25226. Collected 09/25/1998 in Kansas, United States. Latitude 39° 9' N. Longitude 96° 38' 24" W. 2-3 miles south of Manhattan on Highway 18, or 1 mile north of airport, Section 22, T10S, R7E, Riley County. Infestation in tomato field.
- PI 607452. *Amaranthus palmeri* S. Watson**
Wild. Pop 50; Ames 25227. Collected 09/25/1998 in Kansas, United States. Latitude 38° 30' N. Longitude 97° 7' 48" W. 6 miles east of Durham, Section 8, T18S, R3E, Marion County. Infestation in squash field.
- PI 607453. *Amaranthus tuberculatus* (Moq.) J. D. Sauer**
Wild. Pop 51; Ames 25228. Collected 09/25/1998 in Kansas, United States. Latitude 38° 30' N. Longitude 97° 7' 48" W. 6 miles east of Durham, Section 8, T18S, R3E, Marion County. Infestation in squash field.
- PI 607454. *Amaranthus palmeri* S. Watson**
Wild. Pop 52; Ames 25229. Collected 09/25/1998 in Kansas, United States. Latitude 38° 12' N. Longitude 97° 48' W. Near Hutchinson at mile marker 86, Highway 61, 2 miles from Keno County line, (T-21 S, R-5 W), McPherson County. Infestation in sorghum field.
- PI 607455. *Amaranthus palmeri* S. Watson**
Wild. Pop 53; Ames 25230. Collected 09/26/1998 in Kansas, United States. Latitude 37° 39' N. Longitude 98° 42' W. Behind Pratt Super 8 motel, just off Highway 61, (T-27 S, R-13 W), Pratt County. Sorghum field.
- PI 607456. *Amaranthus palmeri* S. Watson**
Wild. Pop 54; Ames 25231. Collected 09/26/1998 in Kansas, United States. Latitude 37° 48' N. Longitude 100° 12' W. Arkansas River at Howell, Section 20, T26S, R26W, Ford County. Dried, sandy riverbed.
- PI 607457. *Amaranthus palmeri* S. Watson**
Wild. Pop 55; Ames 25232. Collected 09/26/1998 in Kansas, United States.

Latitude 37° 51' 36" N. Longitude 100° 33' 36" W. Half mile south of Charleston, Section 24, T26S, R30W, Gray County. Harvested wheat field.

PI 607458. *Amaranthus retroflexus* L.

Wild. Pop 56; Ames 25233. Collected 09/26/1998 in Kansas, United States. Latitude 37° 51' 36" N. Longitude 100° 33' 36" W. Half mile south of Charleston, Section 24, T26S, R30W, Gray County. Harvested wheat field.

PI 607459. *Amaranthus arenicola* I. M. Johnst.

Wild. Pop 57; Ames 25234. Collected 09/27/1998 in Kansas, United States. Latitude 37° 57' N. Longitude 100° 50' 24" W. South bank of Arkansas River, near bridge of Highway 83, south of Garden City, Section 20, T24S, R32W, Finney County. Sandy river bank.

PI 607460. *Amaranthus retroflexus* L.

Wild. Pop 58; Ames 25235. Collected 09/27/1998 in Kansas, United States. Latitude 38° 3' N. Longitude 100° 54' W. 2-3 miles north of Garden City along Highway 83, Section 30, T23S, R33W, Finney County. Harvested wheat field.

PI 607461. *Amaranthus palmeri* S. Watson

Wild. Pop 59; Ames 25236. Collected 09/27/1998 in Kansas, United States. Latitude 38° 3' N. Longitude 100° 54' W. 2-3 miles north of Garden City along Highway 83, Section 30, T23S, R33W, Finney County. Harvested wheat field.

PI 607462. *Amaranthus tuberculatus* (Moq.) J. D. Sauer

Wild. Pop 60; Ames 25237. Collected 09/27/1998 in Kansas, United States. Latitude 39° 18' N. Longitude 100° 26' 24" W. South fork of the Solomon River, Section 4, T9S, R28W, Sheridan County. Dry river bed.

PI 607463. *Amaranthus hybridus* L.

Wild. Pop 61; Ames 25238. Collected 10/10/1998 in Iowa, United States. Latitude 40° 31' 12" N. Longitude 91° 27' W. Along Highway 61 at turn to Montrose, Section 3, Montrose Township, T66N, R5W, Lee County. Road construction site.

PI 607464. *Amaranthus retroflexus* L.

Wild. Pop 62; Ames 25239. Collected 10/10/1998 in Iowa, United States. Latitude 40° 31' 12" N. Longitude 91° 27' W. Along Highway 61 at turn to Montrose, Section 3, Montrose Township, T66N, R5W, Lee County. Road construction site. At the time of collection the bracts were noted to be short for *A. retroflexus*.

PI 607465. *Amaranthus retroflexus* L.

Wild. Pop 63; Ames 25240. Collected 10/10/1998 in Iowa, United States. Latitude 41° 0' N. Longitude 92° 10' 12" W. Batavia, Section 31, Locust Grove Township, T72N, R11W, Jefferson County. Margin of corn field. At the time of collection the bracts were noted to be short for *A. retroflexus*.

The following were donated by Charles O. Youtsey, Florida Dept. of Agriculture, Division of Industry & Consumer Services, 3027 Lake Alfred Road, Winter Haven, Florida 33881, United States. Received 01/01/1994.

PI 607466. *Afraegle paniculata* (Schumach.) Engl.

Wild. CRC 4033; RCRC 4033. Described in *The Citrus Industry* vol 1, p. 409-411. Origin: West Africa: Liberia (?), Ivory coast, Ghana, Dahomey, Nigeria. Source: DPI seeds (ARB-16-2) originated from seed obtained from Dr. Prevatt at Florida Southern College.

The following were donated by David T. Jones, University of Malaya, Department of Botany, Kuala Lumpur, Kuala Lumpur, Malaysia. Received 08/01/1991.

PI 607467. *Severinia disticha* (Blanco) Swingle

Wild. RCRC 4036; RRUT 15. Origin: Kg. Laut Kinarut, Papar District, Sabah, East Malaysia; in disturbed beach forest (wild). Collected by D.T. Jones, August 1, 1991 (DTJ 3352); Identification no. CFG 91027.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands; William Garcia Fernandez, PROINPA (Programa de Investigacion de la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cespced 923, Cochabamba, Cochabamba, Bolivia; Maria Luisa Ugarte, PROINPA (Programa de Investigacion de la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cespced 923, Cochabamba, Cochabamba, Bolivia. Received 04/26/1993.

PI 607468. *Solanum megistacrolobum* Bitter

Wild. SFVU 6577; BE-4652; Q 30525. Collected 02/19/1993 in Tarija, Bolivia. Latitude 21° 34' 54" S. Longitude 65° 1' 58" W. Elevation 3820 m. Aviles: 43.5 km N of town square of Yanchara, on road to Iscayachi, 13.3 km S of town square of Iscayachi. Growing in moist organic soil about and out of rock walls, and at cliff face, with *Loasa* and other Compositae. Corolla violet, pentagonal. Fruits round-ovoid.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands; William Garcia Fernandez, PROINPA (Programa de Investigacion de la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cespced 923, Cochabamba, Cochabamba, Bolivia. Received 04/26/1993.

PI 607469. *Solanum brevicaule* Bitter

Wild. SFVU 6607; Q 30526; BE-4652. Collected 02/23/1993 in Chuquisaca, Bolivia. Latitude 20° 44' 57" S. Longitude 65° 5' 7" W. Elevation 2993 m. Nor Cinti: Uturngo, 27.5 km E of bridge in San Pedro, on road to Culpina. Growing by rock wall by corn field. Corolla blue, rotate. Fruits round.

The following were donated by International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 12/05/1994.

PI 607470. *Solanum commersonii* Dunal
Wild. FB 4025C50.1; CIP 761097; Q 35503.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Roel Hoekstra, Center for Plant Breeding and Reproduction Research, Center for Genetic Resources The Netherlands (CGN), Droevendaalsesteeg 1, Wageningen, Gelderland 6700 AA, Netherlands; Braulio Vilchez, Instituto Tecnológico de Costa Rica, Departamento de Biología, P.O. Box 159-7050, Cartago, Cartago, Costa Rica. Received 02/10/1997.

PI 607471. *Solanum longiconicum* Bitter
Wild. SHV 7133; Q 36875. Collected 12/12/1996 in Cartago, Costa Rica. Latitude 10° 0' N. Longitude 83° 45' W. Elevation 2910 m. Volcan Turrialba, 9.5 km on road towards volcano. Along road at base of steep mountain side. Corolla white or white with lila nerves. All fruits from 1 plant only.

The following were donated by Gino Aguirre, PROINPA, Programa de Investigación de la Papa, Casilla 405, Cochabamba, Cochabamba, Bolivia. Received 07/27/1993.

PI 607472. *Solanum stenotomum* Juz. & Bukasov
Landrace. "KHUCHI AKITA"; Q 30923; BE-4832.

The following were donated by M.S. Ramanna, Agricultural University, P.O.B. 386 / 6700 AJ, Lawickse Allee 166, Wageningen, Gelderland, Netherlands. Received 10/28/1996.

PI 607473. *Solanum tuberosum* L.
Breeding. EC 394; EC394; Q 36565.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Konrad Schuler, Institute for Plant Genetics, IPK, Genbank-Aussenstelle Nord, 0-2551, Gross Lusewitz, Germany; Antonio Rivera-Pena, INIFAP, Programa Nacional de la Papa, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands. Received 11/13/1997.

PI 607474. *Solanum x edinense* P. Berthault
Wild. RSSV 994; Q 37340. Collected 10/27/1997 in Mexico, Mexico. Latitude 19° 11' 12" N. Longitude 99° 39' 22" W. Elevation 2840 m. 2.4 km SW of Zacango (zoo) at SW end, on paved and then dirt road ascending base of Nevado de Toluca, E-facing slope of volcano. Growing in sandy soil under shrubs. Sixteen tubers (red skin) collected from one colony.

Unknown source. Received 01/27/1998.

PI 607475. *Solanum tuberosum* L.
Cultivar. "NICOLA"; Q 37418.

Unknown source. Received 04/01/1998.

PI 607476. *Solanum tuberosum* L.
Cultivar. "AEGGEBLOMME"; 3054; Q 37606.

Unknown source. Received 04/01/1998.

PI 607477. *Solanum tuberosum* L.
Cultivar. "GULAR VESTFIRSKAR"; 3147; Q 37610.

Unknown source. Received 04/01/1998.

PI 607478. *Solanum tuberosum* L.
Cultivar. "RAUDAR ISLENSKAR"; 3149; Q 37611.

Unknown source. Received 04/01/1998.

PI 607479. *Solanum tuberosum* L.
Cultivar. "ROD KVAEFJORD"; 3170; Q 37613.

Unknown source. Received 04/01/1998.

PI 607480. *Solanum tuberosum* L.
Cultivar. "JAMTLANDS VIT"; Q 37614.

Unknown source. Received 04/01/1998.

PI 607481. *Solanum tuberosum* L.
Cultivar. "RODA KROKAR"; 3193; Q 37615.

Unknown source. Received 04/01/1998.

PI 607482. *Solanum tuberosum* L.
Cultivar. "SORT FRA AUKRUST"; Q 37620.

Unknown source. Received 04/01/1998.

PI 607483. *Solanum tuberosum* L.
Cultivar. "BJORNA"; Q 37621.

Unknown source. Received 04/01/1998.

PI 607484. *Solanum tuberosum* L.
Cultivar. "pjellfinn"; 3212; Q 37622.

Unknown source. Received 04/01/1998.

PI 607485. Solanum tuberosum L.
Cultivar. "TYLSTRUP ODIN"; 3222; Q 37623.

Unknown source. Received 04/01/1998.

PI 607486. Solanum tuberosum L.
Cultivar. "HANKKIJA'S TUOMAS"; 3257; Q 37632.

Unknown source. Received 04/01/1998.

PI 607487. Solanum tuberosum L.
Cultivar. "VANHA PUMAINEN"; 3264; Q 37635.

Unknown source. Received 04/01/1998.

PI 607488. Solanum tuberosum L.
Cultivar. "LEMIN PUMAINEN"; 3267; Q 37636.

Unknown source. Received 04/01/1998.

PI 607489. Solanum tuberosum L.
Cultivar. "SVART VALDRES"; 3268; Q 37637.

Unknown source. Received 04/01/1998.

PI 607490. Solanum tuberosum L.
Cultivar. "perjunesblaar"; 3304; Q 37639.

Unknown source. Received 05/29/1998.

PI 607491. Solanum tuberosum L.
Cultivar. "SS-1356"; CIP 700313; Q 42823; Q 37702.

Unknown source. Received 05/29/1998.

PI 607492. Solanum tuberosum L.
Cultivar. CIP 702395; "PUMA MAQUI"; Q 37706.

Unknown source. Received 05/29/1998.

PI 607493. Solanum tuberosum L.
Cultivar. CIP 703244; "ZAPALLO"; Q 37709.

Unknown source. Received 05/29/1998.

PI 607494. Solanum tuberosum L.
Cultivar. "amarillo"; CIP 703267; Q 37710.

Unknown source. Received 05/29/1998.

PI 607495. *Solanum tuberosum* L.
Cultivar. "CHAUCHA AMARILLA"; CIP 703308; Q 37711.

Unknown source. Received 05/29/1998.

PI 607496. *Solanum tuberosum* L.
Cultivar. CIP 703316; "ISHCOPURO"; Q 37712.

Unknown source. Received 05/29/1998.

PI 607497. *Solanum tuberosum* L.
Cultivar. "papa chonca"; CIP 703606; Q 42837; Q 37713.

Unknown source. Received 05/29/1998.

PI 607498. *Solanum tuberosum* L.
Cultivar. "RUNTU HUAYRO"; CIP 704217; Q 37716.

Unknown source. Received 10/13/1998.

PI 607499. *Solanum tuberosum* L.
Genetic. C91.612; CIP 388611.22; Q 37856.

Unknown source. Received 10/13/1998.

PI 607500. *Solanum tuberosum* L.
Genetic. C91.640; CIP 388615.22; Q 37857.

Unknown source. Received 10/13/1998.

PI 607501. *Solanum tuberosum* L.
Genetic. C89.315; CIP 388972.22; Q 37858.

Unknown source. Received 10/13/1998.

PI 607502. *Solanum tuberosum* L.
Cultivar. "TACNA"; CIP 390478.9; Q 37859.

The following were donated by T. Trought, Office of Scientific Research, Amman, Jordan. Received 09/04/1952.

PI 607503. *Phalaris brachystachys* Link
Uncertain. W6 21078. Original seed of PI 202677 had 2 types of seed. *Phalaris brachystachys* was given a new PI number.

The following were developed by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Brady A. Vick, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105-5677, United States. Received 04/05/1999.

PI 607504. *Helianthus annuus* L.

Breeding. Inbred. HA 413. GP-247. Pedigree - Ha 821/2698-1. Maintainer line that produces hybrids which are higher in linoleic acid content than normal check hybrids grown in the U.S. The overall linoleic acid of hybrids produced by the female line was 68.5%.

The following were developed by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Brady A. Vick, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105-5677, United States. Donated by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Received 04/05/1999.

PI 607505. *Helianthus annuus* L.

Breeding. Inbred. HA 414. GP-248. Pedigree - HA 821/2698-1. Maintainer line that produces hybrids which are higher in linoleic acid content than normal check hybrids grown in the U.S. The overall linoleic acid of hybrids produced by the female line was 68.6%.

PI 607506. *Helianthus annuus* L.

Breeding. Inbred. RHA 415. GP-249. Pedigree - RHA 274/2696-1. Restorer line that produces hybrids which are higher in linoleic acid content than normal check hybrids grown in the U.S. The overall linoleic acid of hybrids produced by the restorer line was 68.1%.

PI 607507. *Helianthus annuus* L.

Breeding. Inbred. RHA 416. GP-250. Pedigree - RHA 274/2696-1. Restorer line that produces hybrids which are higher in linoleic acid content than normal check hybrids grown in the U.S. The overall linoleic acid of hybrids produced by the restorer line was 66.4%.

The following were developed by Thomas Gulya, USDA, ARS, North Dakota State University, Northern Crop Science Laboratory, Fargo, North Dakota 58105, United States; Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Gerald Seiler, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, University Station, Fargo, North Dakota 58105, United States. Donated by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Received 04/05/1999.

PI 607508. *Helianthus annuus* L.

Breeding. Inbred. RHA 418. GP-258. Pedigree - RHA 801/RHA 274//Myhoco H-9. Restorer line with plant height of 145 cm and has genes for fertility restoration of the PET1 cytoplasmic male sterility. Hybrids with the restorer line had 16% higher yield than checks over the 3 years of testing. Days from planting to flowering 70. Oil content (dry weight basis) 442 g kg⁻¹. Significantly lower Phomopsis infection.

The following were developed by Thomas Gulya, USDA, ARS, North Dakota State University, Northern Crop Science Laboratory, Fargo, North Dakota 58105, United States; Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Received 04/05/1999.

PI 607509. *Helianthus annuus* L.

Breeding. Inbred. HA-R6. GP-251. Pedigree - HA 323/Ames 3234. Population with resistance to rust race 777. Confection seed type, lodging resistance, and single-headed plant type.

The following were developed by Thomas Gulya, USDA, ARS, North Dakota State University, Northern Crop Science Laboratory, Fargo, North Dakota 58105, United States; Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Donated by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Received 04/05/1999.

PI 607510. *Helianthus annuus* L.

Breeding. Inbred. HA-R7. GP-252. Pedigree - RHA 324/Ames 3234. Population with resistance to rust race 777. Confection seed type, stem branching, and lodging resistance.

PI 607511. *Helianthus annuus* L.

Breeding. Inbred. HA-R8. GP-253. Pedigree - RHA 377/PI 432512. Population with resistance to rust race 777. Oilseed type selected for upper-stem branching, absence of anthocyanin in the seed coat, lodging resistance, oil content, and adaptability to the central and north-central production areas of the U.S. Seeds have a striped seed coat.

The following were developed by W. A. Compton, University of Nebraska, Department of Agronomy, Crop, Range, Soil, and Weed Sciences, Lincoln, Nebraska 68583, United States; J.H. Lonquist; N.E. Williams. Donated by Edward H. Coe, Jr., USDA, ARS, University of Missouri, Department of Agronomy, Columbia, Missouri 65211, United States. Received 05/06/1992.

PI 607512. *Zea mays* L. subsp. *mays*

Breeding. Inbred. N7A; id=51057; Ames 19322. GP-37. Pedigree - Selected from (Oh7 x 'Stiff Stalk Synthetic' gamete). Yellow dent inbred line selected from Oh7 x 'Stiff Stalk Synthetic' gamete. It flowers about 1 day later than B14A. It has good general combining ability and is very high yielding in certain crosses. N7A machine-combines poorly at high moisture levels but is a very good sheller at lower moisture levels. It has good late season health as a line but tends toward premature death in crosses. It tends to have above average resistance to leaf freckles and wilt and has good resistance to wheat streak mosaic virus and downy mildew. Its cold germination and early vigor should be adequate for use as a single cross seed parent, and pollen shed is adequate for its use as a male. Tassels extrude well for detasseling but pull hard. Maturity classification is about AES700.

The following were developed by Robert H. Peterson, University of Minnesota, 411 Borlaug Hall, 1991 Buford Circle, St. Paul, Minnesota 55108-6026, United States; Jon L. Geadelmann, Holden's Foundation Seeds, Inc., Minnesota Research Station, Rt. 1, Box 112, Stanton, Minnesota 55018, United States;

E.H. Rinke, Plant Improvement Station, Nova Lisboa, Angola; J.C. Sentz. Donated by University of Minnesota, Minnesota Agr. Exp. Sta., St. Paul, Minnesota 55108, United States. Received 03/19/1991.

PI 607513. *Zea mays* L. subsp. *mays*

Breeding. Population. AS-A; 1977:4164; id=83647; Ames 15419. GP-64. Pedigree - Developed from controlled six and eight-way crosses among 13 inbred lines (A90, A498, A508, A509, A513, CMD5, MS1334, ND203, W33, W59M, W65, W79A, W103). Yellow dent population developed from controlled six and eight-way crosses among 13 inbred lines (A90, A498, A508, A509, A513, CMD5, MS1334, ND203, W33, W59M, W65, W79A, W103). These crosses were randomly mated for six generations to produce the population. AS-A was used in a study of recurrent selection methods (Crop Sci. 11:658-661). AS-A is of AES300 maturity and has good stalk strength.

PI 607514. *Zea mays* L. subsp. *mays*

Breeding. Population. AS-B; 1977:4179; id=83649; Ames 15420. GP-65. Pedigree - Developed from 12 inbred lines (A90, A498, A508, A509, A513, ND203, R5, V3, W33, W65, W79A, W103) with W103 making up 5/16 of the population. Yellow dent population developed from 12 inbred lines (A90, A498, A508, A509, A513, ND203, R5, V3, W33, W65, W79A, W103). Emphasis was placed on earliness in that W103 made up 5/16 of the base population. Controlled crossing among the inbred lines produced eight-way crosses which were randomly mated for six generations. AS-B has good stalk strength and is of AES200 maturity.

PI 607515. *Zea mays* L. subsp. *mays*

Breeding. Population. AS-D; 1977:4194; id=83650; Ames 15421. GP-66. Pedigree - Developed from crosses involving eight inbred lines (A73, B14, CO106, ND255, Oh43, V3, WD, WF9). Yellow semident population developed from crosses involving eight inbred lines (A73, B14, CO106, ND255, Oh43, V3, WD, WF9). Selections from these crosses were randomly mated for six generations. The population was then subjected to several cycles of mass selection for early flowering and resistance to smut (caused by *Ustilago maydis*). AS-D is of AES100-200 maturity.

PI 607516. *Zea mays* L. subsp. *mays*

Breeding. Population. AS-DK(S)C3; Ames 15422. GP-68. Pedigree - Developed from crosses of Cuzco Blanco with 10 inbred lines (A90, A427, A495, A498, A509, A513, A556, CMD5, MS1334, ND203) by three cycles of S1 recurrent selection. Yellow floury population. Deep kernel variety of Peruvian origin, was crossed with 10 inbred lines (A90, A427, A495, A498, A509, A513, A556, CMD5, MS1334, ND203) to form AS-DK C0. Three cycles of recurrent selection for kernel depth were completed using the S1 progeny method, followed by three generations of random mating. Developed to provide a source of deep-kernel germplasm adapted to temperate latitudes. Kernels average 1.5 cm in depth. AES500 maturity.

PI 607517. *Zea mays* L. subsp. *mays*

Breeding. Population. AS-G; 1977:4209; Ames 15423. GP-67. Pedigree - Developed by crossing Netherlands and USSR introductions with early-flowering selections from early x late crosses among inbred lines of USA origin. Dark yellow flint population developed by crossing Netherlands and USSR introductions with early-flowering selections from early x late crosses among inbred lines of USA origin. These crosses were randomly mated for six generations. Very early population of AES100 maturity.

PI 607518. *Zea mays* L. subsp. *mays*

Breeding. Population. AS-3(HT)C3; 1977:4242; Ames 15424. GP-69. Pedigree - Developed from AS-3(HT)CO (derived from inbreds A73, A286, A295, A375, Oh5, Oh43, Oh51A, W22) by three cycles of half-sib recurrent selection with Minnesota Synthetic 1 as tester. Yellow dent population.

AS-3(HT)CO (formerly designated Minnesota Synthetic 3) was developed from random mating an eight-way cross of inbreds A73, A286, A295, A375, Oh5, Oh43, Oh51A, W22. Three cycles of half-sib recurrent selection for grain yield were completed with the tester Minnesota Synthetic 1 (Developed from intercrossing A71, A374, B164, Mich. 265, Mich. 401, SD100, W20, WR3). Effects of recurrent selection on genetic variability and performance of a synthetic maize variety were reported (Achmad Baihaki. 1973. M.S. Thesis, University of Minnesota, St. Paul).

AS-3(HT)C3 is of AES500-600 maturity.

The following were developed by H. Z. Cross, North Dakota State University, 329 Walster Hall, Fargo, North Dakota 58105, United States; William Wiidakas, North Dakota State University, Department of Agronomy, Fargo, North Dakota 58102, United States. Donated by H. Z. Cross, North Dakota State University, 329 Walster Hall, Fargo, North Dakota 58105, United States. Received 03/19/1991.

PI 607519. *Zea mays* L. subsp. *mays*

Breeding. Inbred. ND240; id=47879; Ames 15341. PL-40. Pedigree - Developed from (ND408 x ND230)x ND408. Yellow dent inbred line developed from (ND408 x ND230)x ND408 in a program designed to transfer the early maturity and vigor of ND230 into the more desirable agronomic type of ND408 by self pollination and selection for early silking date and agronomic type for several generations. At Fargo, ND240 flowers about 4 days later than ND230 and 8 days earlier than ND408. ND240 has a medium tall plant with upper ear placement slightly above the midpoint of the stalk. Usually single stalked and semiprolific. Produces medium long, thick ears with 18 to 20 rows of deep kernels. In 1974 NCR-2 tests, ND240 exhibited above average resistance to yellow leaf blight and high root-pulling resistance, but was susceptible to maize chlorotic dwarf virus. Has more resistance to root lodging than ND230. In tests in central North Dakota, ND240 has displayed high combining ability for yield, shelling percentage, and low ear moisture at harvest, but below average combining for stalk strength. Released because of its potential for use by hybrid corn seed industry in producing early, superior hybrids and for further use in breeding programs. Maturity classification is AES200. Sister line of ND241.

PI 607520. *Zea mays* L. subsp. *mays*

Breeding. Inbred. ND241; id=68493; Ames 15342. PL-41. Pedigree - Developed from (ND408 x ND230) x ND408. Yellow dent inbred line developed from (ND408 x ND230)x ND408 in a program designed to transfer the early maturity and vigor of ND230 into the more desirable agronomic type of ND408 by self pollination and selection for early silking date and agronomic type for several generations. ND241 is a sister line to ND240, but is slightly taller than ND240 with a higher ear placement. It has about the same number of leaves which are slightly longer and wider. At Fargo, ND241 flowers 2 days later than ND240. ND241 produces single stalked plants and is semiprolific. Ears are shorter and thinner than those of ND240 with 16 to 18 rows of kernels which tend to be

deeper. In 1974 regional tests, ND241 had above average root-pulling resistance and resistance to yellow leaf blight, and it had more resistance to maize dwarf mosaic virus and maize chlorotic dwarf virus than ND240. Susceptible to first brood European corn borer (*Ostrinia nubilalis*) feeding. Combining ability effects similar to ND240 for yield, ear moisture, and stalk strength, but lower general combining ability effects for shelling percentage. Released because of its potential use by the hybrid corn seed industry in producing early, superior hybrids and for further use in breeding programs. Maturity classification AES200.

The following were developed by Robert H. Peterson, University of Minnesota, 411 Borlaug Hall, 1991 Buford Circle, St. Paul, Minnesota 55108-6026, United States; Jon L. Geadelmann, Holden's Foundation Seeds, Inc., Minnesota Research Station, Rt. 1, Box 112, Stanton, Minnesota 55018, United States. Donated by University of Minnesota, Minnesota Agr. Exp. Sta., St. Paul, Minnesota 55108, United States. Received 03/19/1991.

PI 607521. *Zea mays* L. subsp. *mays*

Breeding. Inbred. "A661"; 1996:155; id=47619; 488-2/99; Ames 15425. PL-43. Pedigree - Developed from AS-A, a population derived from 13 Corn Belt lines (A90, A498, A508, A509, A513, CMD5, MS1334, ND203, W33, W59M, W65, W79A, W103). Yellow dent inbred line developed from AS-A (PI 607513; Crop Sci. 16:605-606), a population derived from 13 Corn Belt lines, by self-pollination and selection at plant densities of approximately 35,000/ha. Reaches 50% silk emergence 10 days earlier, is 9 cm shorter in plant height, and is equal to A632 in ear height when grown near St. Paul, MN. A661 has intermediate leaf-feeding (first brood) resistance to European corn borer. It had high general combining ability (GCA) for grain yield and satisfactory GCA for stalk strength in single and three-way cross hybrid performance tests conducted in central and northern Minnesota for 3 years. Has intermediate leaf-feeding resistance to first-brood *Ostrinia nubilalis*. Early AES300 maturity.

PI 607522. *Zea mays* L. subsp. *mays*

Breeding. Inbred. "A662"; 1996:157; id=67553; Ames 15426. PL-44. Pedigree - Developed from AS-A, a population derived from 13 Corn Belt lines (A90, A498, A508, A509, A513, CMD5, MS1334, ND203, W33, W59M, W65, W79A, W103). Yellow dent inbred line developed from AS-A (PI 607513; Crop Sci. 16:605-606), a population derived from 13 Corn Belt lines, by self-pollination and selection at plant densities of approximately 35,000/ha. Reaches 50% silk emergence 13 days earlier, is 36 cm shorter in plant height, and is 28 cm shorter in ear height than A632 when grown near St. Paul. In single and three-way-cross hybrids tested in central and northern Minnesota over 3 years, A662 demonstrated high GCA for grain and yield and satisfactory GCA for stalk strength. Intermediate resistance to leaf-feeding European corn borer. AES200 maturity.

PI 607523. *Zea mays* L. subsp. *mays*

Breeding. Inbred. "A663"; 1996:158; id=67554; Ames 15427. PL-45. Pedigree - Developed from (A427 x Cuzco Blanco)A427(2). Yellow dent inbred line developed from [A427 (Ames 23435) x Cuzco Blanco]A427(2) by self-pollination and selection at moderate plant densities. Cuzco Blanco is a Peruvian variety. A663 reaches 50% silk emergence 6 days later than A632 and is similar to A632 in plant and ear height when grown near St. Paul. Very high GCA for stalk strength and high GCA for

grain yield in single and three-way-cross hybrid performance tests conducted in southern Minnesota and northern Iowa for 3 years. Intermediate leaf-feeding resistance to European corn borer. AES600 maturity.

PI 607524. *Zea mays* L. subsp. *mays*

Breeding. Inbred. "A664"; 1996:159; id=67555; Ames 15428. PL-46.

Pedigree - Developed from (ND203 x A636) x A636(2). Yellow dent inbred line developed from (ND203 x A636) X A636(2) by selection for early flowering F2, BC1, and BC2 plants grown at densities of about 70,000 plants/ha. Subsequent selfing and selection was conducted at densities of about 35,000/ha. Reaches 50% silk emergence 7 days earlier and its plants are 9 cm shorter with ears 7 cm higher than those of A632 when grown near St. Paul. Three years of single and three-way-cross hybrid performance tests in central Minnesota have shown that A664 contributes high grain yield and satisfactory stalk strength to its hybrids. Moderately susceptible to leaf feeding by European corn borer. AES200 maturity.

PI 607525. *Zea mays* L. subsp. *mays*

Breeding. Inbred. "A665"; 1982:1259; id=47621; Ames 15429. PL-47.

Pedigree - Developed from (ND203 x A635) X A635(3). Yellow dent inbred line developed from (ND203 x A635) x A635(3) by selection for early flowering F2, BC1, and BC2 plants grown at densities of about 70,000 plants/ha. Subsequent selfing and selection was conducted at densities of about 35,000/ha. Reaches 50% silk emergence 6 days earlier than A632 when grown near St. Paul. Plant and ear heights of A665 are 35 and 20 cm shorter, respectively, than those of A632. A665 contributed high grain yield and satisfactory stalk strength to its hybrids in 3 years of single and three-way-cross hybrid performance tests conducted in central Minnesota. Intermediate leaf-feeding resistance to European corn borer. AES200 maturity.

The following were developed by H. Z. Cross, North Dakota State University, 329 Walster Hall, Fargo, North Dakota 58105, United States. Received 03/19/1991.

PI 607526. *Zea mays* L. subsp. *mays*

Breeding. Inbred. ND100; id=68487; Ames 15340. PL-48. Pedigree - Developed from (W129 x W128). Yellow dent inbred line developed from (W129 x W128), a cross of two early Wisconsin experimental inbreds, by self-pollination and selection for early silking and agronomic type for six generations. At Fargo, ND, ND100 silks about 15 days earlier than ND408 and 10 days earlier than ND300. Plants are medium short with ears borne on lower third of the stalk. Long, wide leaves and relatively small tassels. Ears are of medium length with 12 to 14 rows of rather shallow kernels. In 1977 NCR-2 tests, ND100 was rated resistant to wheat streak mosaic virus; tolerant to bacterial leaf blight (*Erwinia stewartii*); moderately susceptible to anthracnose stalk rot (*Colletotrichum graminicola*), diplodia stalk rot, and maize dwarf mosaic virus; and susceptible to northern leaf blight (*Helminthosporium turcicum*), anthracnose leaf blight (*Colletotrichum graminicola*), maize chlorotic dwarf virus, and European corn borer (*Ostrinia nubilalis*). In diallel tests in eastern North Dakota, ND100 has demonstrated good general combining ability effects for test weight, low ear moisture, and low root lodging. General combining ability for yield was good for an inbred with a maturity classification of AES 100. ND100 was released

for potential use to produce hybrids in areas with extremely short growing seasons and for use as a source of early maturity.

PI 607527. *Zea mays* L. subsp. *mays*

Breeding. Inbred. ND300; id=68500; Ames 15343. PL-49. Pedigree - Developed from (W739 x W845). Yellow dent inbred line developed from (W739 x W845) by self-pollination and selection for agronomic type for six generations. ND300 produces medium tall plants with relatively low ear placement, above average tassel size, and average leaf length and width. Plants are semi-prolific with long, slender ears borne on medium long shanks. Ears normally have 14 to 18 rows of average depth kernels. In 1977 NCR-2 tests, ND 300 was rated resistant to bacterial leaf blight and wheat streak mosaic virus; tolerant to anthracnose stalk rot; moderately susceptible to anthracnose leaf blight, diplodia stalk rot, and maize dwarf mosaic virus; and susceptible to northern leaf blight, maize chlorotic dwarf virus, and European corn borer. In diallel tests in eastern North Dakota, ND300 hybrids produced above average yields, test weights, and shelling percentages. General combining abilities for stalk and root lodging and ear moisture were satisfactory. Released for potential use in producing high yielding hybrids adapted to eastern North Dakota. AES300 maturity.

The following were developed by Sam C. Anand, University of Missouri, Department of Agronomy, 210 Waters Hall, Columbia, Missouri 65211, United States. Received 03/11/1999.

PI 607528. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Delsoy 5710". CV-404. Pedigree - Hartz 5164 x Hartwig. Late Maturity Group V (relative maturity 5.8) and is determinate in growth habit. Flowers white and tawny pubescence. Resistant to all known soybean cyst nematode (*Heterodera glycines*) races. Also resistant to southern root-knot nematode (*Meloidogyne incognita*) and peanut root-knot nematode (*M. arenaria*). Susceptible to stem canker. Seeds yellow with black hila. Protein 404 g kg⁻¹ and oil 190 g kg⁻¹.

The following were developed by Doug Brede, Jacklin Seed Company, West 5300 Riverbend avenue, Post Falls, Idaho 83854-9499, United States; S.H. Samudio, Jacklin Seed Company, 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 04/07/1999.

PI 607529. *Lolium perenne* L.

Cultivar. Population. "TOP GUN"; J-1703; 93-1703. CV-200. Pedigree - Developed from progenies of APM. Attractive turf with medium-high density and medium-fine leaf texture and good spring green up. Improved turf quality, and has demonstrated moderate resistance to dollarspot (*Lanzia* and *Moellerodiscus*), large brown patch (*Rhizoctonia solani*), and red thread (*Laetisaria fuciformis*).

The following were developed by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Elias M. Elias, North Dakota State University, Department of Plant Sciences, P.O. Box 5051, Fargo, North Dakota 58105-5051, United States. Received 04/15/1999.

PI 607530. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. Pureline. "MOUNTRAIL"; D901313. PVP 9900266; CV-886. Pedigree - D8479 / Renville. Released 1998. Yield high, kernels large, gluten strong, protein average, and day length-sensitive. Plants medium in height and maturity. Spikes mid-long, awned, oblong, mid dense, and erect. Kernels amber color and large-sized (38.1 mg). Strong gluten and 136 g kg⁻¹ Semolina protein. Grain volume 765.1 kg m⁻³. Resistant to stem rust (*Puccinia graminis*) and leaf rust (*P. recondita*).

PI 607531. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. Pureline. "MAIER"; D89135. PVP 9900265; CV-885. Pedigree - D8193 / D8335. Released 1998. Yield high, kernels large, gluten very strong, protein high, and day length-sensitive. Plants medium in height and maturity. Spikes mid-long, awned, oblong, lax, and erect. Kernels amber color and large-sized (38.2 mg). Strong gluten and 141 g kg⁻¹ semolina protein. Grain volume 753.5 kg m⁻³. Resistant to stem rust (*Puccinia graminis*) and leaf rust (*P. recondita*).

The following were developed by Sahin, Gerard Doustraat 3, Alphen Aan Den Rijn, South Holland 2406 GV, Netherlands. Donated by Johnny's Selected Seeds, Foss Hill Road, Albion, Maine 04910, United States. Received 01/19/1999.

PI 607532. *Amaranthus cruentus* L.
Cultivar. "Split Personality"; Ames 24985. Pedigree - A single off-type plant selection from *Amaranthus* of unknown origin in 1989 trials. Reselected for trueness of type in the following years, generation after generation. Ornamental with unusual irregularly patterned red and golden green spikes on sturdy stems resemble a jester's cap. Grown for their long-lasting flowers and long blooming period. Excellent for use as fresh or dried flowers. Support is advised. Grow in average well-drained soil. Height 36-48". Days to bloom 80-100.

The following were donated by Johnny's Selected Seeds, Foss Hill Road, Albion, Maine 04910, United States; Kieft Seeds Holland, P.O. Box 63, 1606 ZH Venhuizen, Venhuizen, North Holland 1607 MN, Netherlands. Received 01/19/1999.

PI 607533. *Amaranthus hypochondriacus* L.
Cultivar. "Green Thumb"; Ames 24986. Very short for this species, green flowers and foliage. Developed especially for ornamental cutting. Excellent for use as fresh or dried flowers. Grow in average well-drained soil. Long-lasting, colorful 12-24" upright spikes. Early to bloom and easy to grow. Excellent for front of border and in containers. Average 42,500 seeds/oz. Days to bloom 80-100.

PI 607534. *Amaranthus hypochondriacus* L.
Cultivar. "Pygmy Torch"; Ames 24987. Very short for this species, red flowers and foliage. Developed especially for ornamental cutting. Excellent for use as fresh or dried flowers. Grow in average well-drained soil. Long-lasting, colorful 12-24" upright spikes. Early to bloom and easy to grow. Excellent for front of border and in containers. Average 34,500 seeds/oz. Days to bloom 80-100.

The following were developed by Daniel W. Gorbet, University of Florida, Northern Florida Research and, Education Center, Marianna, Florida 32446-7906, United States; F.M. Shokes, Virginia Polytech Institute, Tidewater Agric. Res. & Ext. Center, 6321 Holland road, Suffolk, Virginia 23437-9588, United States. Received 05/13/1999.

PI 607535. *Arachis hypogaea* L.

Cultivar. "FLORIDA MDR 98"; UF 91108. PVP 9900212; CV-72. Pedigree - F84x28-5-4-2-b3-B (Southern Runner/Andru 93/UF 81206) (UF 81206=PI 203396 x F427B-3-1-7-4). Runner market-type peanut with multiple disease resistance. Good resistance to late leafspot (*C. personatum*), stem rot (*S. rolfsii*), and tomato spotted wilt virus. Matures about 150 days after planting in Florida, similar to Southern Runner. Pods larger than Southern Runner with similar reticulation. Seed has tan testa and a 100-seed weight of about 70 g. Seed about 51% oil with about 65% oleic fatty acid with an O/L of 3.8.

The following were developed by Novartis Seeds, Inc., United States. Received 05/13/1999.

PI 607536 PVPO. *Pisum sativum* L.

Cultivar. "SP496-2-2"; SL3009. PVP 9900214.

PI 607537 PVPO. *Pisum sativum* L.

Cultivar. "SUGAR PRINCE". PVP 9900216.

The following were developed by Turf Merchants, Inc., United States. Received 05/13/1999.

PI 607538 PVPO. *Festuca arundinacea* Schreb.

Cultivar. "AZTEC II". PVP 9900217.

The following were developed by Paragon Seed, Inc., United States. Received 05/13/1999.

PI 607539 PVPO. *Lactuca sativa* L.

Cultivar. "HALLMARK W". PVP 9900222.

PI 607540 PVPO. *Lactuca sativa* L.

Cultivar. "VENTANA". PVP 9900223.

The following were developed by Novartis Seeds, Inc., United States. Received 05/13/1999.

PI 607541 PVPO. *Glycine max* (L.) Merr.

Cultivar. "S80-J2". PVP 9900224.

The following were developed by DEKALB Genetics Corporation, United States. Received 04/13/1999.

PI 607542 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "83INI14". PVP 9900225.

PI 607543 PVPO. Zea mays L. subsp. mays
Cultivar. "86AQV2". PVP 9900226.

PI 607544 PVPO. Zea mays L. subsp. mays
Cultivar. "86ISI5". PVP 9900227.

PI 607545 PVPO. Zea mays L. subsp. mays
Cultivar. "WDHQ2". PVP 9900228.

PI 607546 PVPO. Zea mays L. subsp. mays
Cultivar. "83INI8". PVP 9900229.

PI 607547 PVPO. Zea mays L. subsp. mays
Cultivar. "01HGI2". PVP 9900230.

The following were developed by Western Plant Breeders, Inc., Phoenix, Arizona, United States. Received 04/13/1999.

PI 607548 PVPO. Triticum aestivum L. subsp. aestivum
Cultivar. "ZEKE". PVP 9900231. Pedigree - Early Hard Red Spring Population/Marshall.

PI 607549 PVPO. Triticum aestivum L. subsp. aestivum
Cultivar. Pureline. "CONAN". PVP 9900232. Pedigree - Rambo/Westbred 906R.

The following were developed by Abbott & Cobb, Inc., United States. Received 04/13/1999.

PI 607550 PVPO. Citrullus lanatus (Thunb.) Matsum. & Nakai
Cultivar. "W-9812". PVP 9900233.

The following were developed by DEKALB Genetics Corporation, United States. Received 04/13/1999.

PI 607551 PVPO. Zea mays L. subsp. mays
Cultivar. "F351". PVP 9900234.

PI 607552 PVPO. Zea mays L. subsp. mays
Cultivar. "22DHD11". PVP 9900235.

PI 607553 PVPO. Zea mays L. subsp. mays
Cultivar. "17INI20". PVP 9900236.

PI 607554 PVPO. Zea mays L. subsp. mays
Cultivar. "09DSS1". PVP 9900237.

PI 607555 PVPO. Zea mays L. subsp. mays
Cultivar. "01INL1". PVP 9900238.

PI 607556. Zea mays L. subsp. mays
Cultivar. "01DHD16". PVP 9900239.

The following were developed by Luther Talbert, Montana State University, Department of Plant Sciences, Bozeman, Montana 59717, United States; Greg D. Kushnak, Montana State University, Western Triangle Agric. Research Center, P.O. Box 1474, Conrad, Montana 59425, United States; Howard Bowman, Montana State University, Dept. of Plant & Soil Sciences, Bozeman, Montana 59717, United States; G.R. Carlson, Montana State University, Northern Agric. Research Center, Star Rt. 36, Havre, Montana 59501, United States; Joyce L. Eckhoff, Montana State University, Eastern Agric. Research Center, 1501 N. Central Avenue, Sidney, Montana 59270, United States; D.W. Wichman, Montana State University, Central Agric. Research Center, Moccasin, Montana 59462, United States; Susan P. Lanning, Montana State University, Plant Sciences & Plant Pathology Department, Leon Johnson Hall, 324A, Bozeman, Montana 59717, United States; Robert N. Stougaard, Montana State University, Northwestern Agric. Research Center, 4570 MT Hwy 35, Kalispell, Montana 59901, United States; D. Habernicht, Montana State University, Plant Sciences Dept., Bozeman, Montana 59717, United States. Received 05/03/1999.

PI 607557. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "SCHOLAR"; MT9433. CV-879; PVP 200000144. Pedigree - MT8808/Marberg = MT7746/Lew//Marberg. Released 1999. Hard red spring wheat. Maturity mid-season. Height normal (non-semidwarf). Resistant to stem rust (*Puccinia graminis*). Susceptible to leaf rust (*Puccinia recondita*) and Russian wheat aphid (*Diuraphis noxia*). Resistant to wheat stem sawfly (*Cephus ciactus*). Lodging moderately resistant.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 04/13/1999.

PI 607558. *Lactuca sativa* L.

Cultivar. "PX540". PVP 9900240.

The following were developed by Abbott & Cobb, Inc., United States. Received 04/13/1999.

PI 607559 PVPO. *Citrullus lanatus* (Thunb.) Matsum. & Nakai

Cultivar. "W-9809". PVP 9900241.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 04/13/1999.

PI 607560 PVPO. *Phaseolus vulgaris* L.

Cultivar. "BUSTER". PVP 9900242.

PI 607561 PVPO. *Phaseolus vulgaris* L.

Cultivar. "CABERNET". PVP 9900243.

PI 607562 PVPO. *Phaseolus vulgaris* L.

Cultivar. "HOOTER". PVP 9900244.

PI 607563. *Phaseolus vulgaris* L.

Cultivar. "CHARDONNAY". PVP 9900245.

PI 607564 PVPO. Phaseolus vulgaris L.

Cultivar. "McHALE". PVP 9900246.

PI 607565. Phaseolus vulgaris L.

Cultivar. "EX 8550547". PVP 9900247.

The following were developed by Thomas G. Isleib, North Carolina State University, Department of Crop Science, Box 7629, Raleigh, North Carolina 27695-7629, United States; R. Walton Mazingo, Tidewater Agricultural Research, and Extension Center, 6321 Holland Road, Suffolk, Virginia 23437, United States; Terry A. Coffelt, USDA, ARS, U.S. Water Conservation Laboratory, 4331 E. Broadway Rd., Phoenix, Arizona 85040-8807, United States. Received 05/03/1999.

PI 607566. Arachis hypogaea L.

Cultivar. Pureline. "VA 98R". CV-66; PVP 9900419. Pedigree - VA 81B / VA 780839P. Large-seeded virginia-type peanut with high yield potential (5%-12% higher than current cultivars). Plants spreading (runner) growth habit with prostrate lateral branches and an erect main stem. Main stem height short (25 cm). Maturity considered early (138-150 DAP), especially with irrigation. Testa color pink and excellent pod characteristics, which include bright color, shape, and size for the in-shell trade. Highly desirable by the peanut industry. Milling data shows 42% extra large kernels (ELK), 17% mediums, and 4.6% No. 1 and No.2's with a 70% total mill outturn. Removing the jumbo and fancy size pods for in-shell use indicates turn out of 10% jumbo size and 45% fancy size pods. Blanchability excellent with 89.2% whole blanched, 2.5% not blanched and 4.8% partially blanched for ELK. Shelf life acceptable by the industry based on iodine value of 98.6 and oleic/linoleic (O/L) acid ratio of 1.52. Does not have any known pest resistance.

The following were developed by Seeds West, Inc., United States. Received 04/13/1999.

PI 607567 PVPO. Cynodon dactylon (L.) Pers.

Cultivar. "MOHAWK". PVP 9900248.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 04/13/1999.

PI 607568. Lactuca sativa L.

Cultivar. "INVADER". PVP 9900249.

The following were developed by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Leonard Francl, North Dakota State University, Dept. of Plant Pathology, Fargo, North Dakota 58105, United States; J.B. Rasmussen, North Dakota State University, Dept. of Plant Pathology, Fargo, North Dakota 58105, United States; D.J. Cox, ECHO, 17430 Durrance Rd., North Fort Meyers, Florida 33917, United States; W. Moore, ConAgra Grain Processing Company, 1521 N. 15th Street, Omaha, Nebraska 68110, United States; J.A. Anderson, University of Minnesota, Department of Agronomy & Plant Genetics, 411 Borlaug Hall, St. Paul, Minnesota 55108, United States; G.W. Johnson, North Dakota State

University, Dept. of Plant Sciences, Fargo, North Dakota 58105, United States. Received 04/13/1999.

PI 607569. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "RANSOM"; ND 8955. PVP 9900250; CV-891. Pedigree - Seward/SD76705 (Centurk*5/Hand). Released 1998. Mid-maturity, similar to Roughrider. Plant height averages 79 cm, compared to 74 cm for Arapahoe and 84 mm for Seward. Spikes mid-dense, fusiform, awned, and white at maturity. Glumes medium length and width with rounded shoulders and acuminate beak. Seeds ovate, with rounded cheeks and medium brush. Resistance to stem rust (*Puccinia graminis*) races Pgt-QCCJ and -TPMK after inoculation of greenhouse-grown seedlings at moderate temperature (21°C), but susceptible to these same races at high temperature (27-29°C). Field-grown adult plants have consistently shown resistance to prevalent races of stem rust. Mod. resistant to prevalent races of leaf rust, but is more resistant than Roughrider or Seward. Relatively low grain volume weight of 746 kg m⁻³, less than Roughrider (764 kg m⁻³) and Seward (755 kg m⁻³). Grain protein content (127 g kg⁻¹) is intermediate between Roughrider (127 g kg⁻¹) and Seward (121 g kg⁻¹).

The following were developed by Merrill Lewis, Fossum Cereals, 830 Key St., Bellingham, Washington 98225, United States. Received 04/13/1999.

PI 607570 PVPO. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "455". PVP 9900251.

The following were developed by Gen-Tec Seeds, Limited, Woodslee, Ontario, Canada. Received 04/13/1999.

PI 607571 PVPO. *Phaseolus vulgaris* L.

Cultivar. "GTS 900". PVP 9900252.

The following were developed by Abbott & Cobb, Inc., United States. Received 04/13/1999.

PI 607572 PVPO. *Citrullus lanatus* (Thunb.) Matsum. & Nakai

Cultivar. "W-9811". PVP 9900253.

The following were developed by Coastal Seeds, Inc., United States. Received 04/13/1999.

PI 607573 PVPO. *Lactuca sativa* L.

Cultivar. "SILVERADO". PVP 9900254.

The following were developed by Fox Bean Company, United States. Received 04/13/1999.

PI 607574. *Phaseolus vulgaris* L.

Cultivar. "ELIZABETH". PVP 9900255.

The following were developed by Virginia Agricultural Experiment Station - Blacksburg, Blacksburg, Virginia, United States. Received 04/13/1999.

PI 607575 PVPO. Glycine max (L.) Merr.
Cultivar. "MFS-591". PVP 9900256.

The following were developed by Sure-Grow Seed, Inc., 7265 Highway 9 South, Centre, Alabama 35960, United States. Received 04/13/1999.

PI 607576 PVPO. Glycine max (L.) Merr.
Cultivar. "SG 759 RR". PVP 9900257.

The following were developed by Coastal Seeds, Inc., United States. Received 04/13/1999.

PI 607577 PVPO. Lactuca sativa L.
Cultivar. "PONDEROSA". PVP 9900259.

The following were developed by Advanta Seeds UK Limited, United Kingdom. Received 04/13/1999.

PI 607578. Pisum sativum L.
Cultivar. "GEMINI". PVP 9900260.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 04/13/1999.

PI 607579 PVPO. Triticum aestivum L. **subsp. aestivum**
Cultivar. "25W60". PVP 9900262. Pedigree -
Kavkaz/Hart//2550/3/2555*4/Stella/4/2548.

The following were developed by Novartis Seeds, Inc., United States. Received 04/13/1999.

PI 607580 PVPO. Phaseolus vulgaris L.
Cultivar. "ROG 331". PVP 9900263.

The following were developed by Terral Seed, Inc., Lake Providence, Louisiana, United States. Received 04/13/1999.

PI 607581 PVPO. Glycine max (L.) Merr.
Cultivar. "TV 4975". PVP 9900264.

The following were developed by Gen-Tec Seeds, Limited, Woodslee, Ontario, Canada. Received 04/13/1999.

PI 607582. Phaseolus vulgaris L.
Cultivar. "GTS 401". PVP 9900267.

The following were developed by Cornell Research Foundation, Inc., New York, United States. Received 04/13/1999.

PI 607583 PVPO. *Carica papaya* L.
Cultivar. "UH SunUP". PVP 9900268.

The following were developed by Pure Line Seeds, Inc., P.O. Box 8866, Moscow, Idaho 83843, United States. Received 04/13/1999.

PI 607584 PVPO. *Pisum sativum* L.
Cultivar. "RECRUIT". PVP 9900269.

The following were developed by Cornell Research Foundation, Inc., New York, United States. Received 04/13/1999.

PI 607585 PVPO. *Carica papaya* L.
Cultivar. "UH RAINBOW". PVP 9900270.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 04/13/1999.

PI 607586 PVPO. *Pisum sativum* L.
Cultivar. "XP 384". PVP 9900272.

The following were developed by Novartis Seeds, Inc., United States. Received 04/13/1999.

PI 607587 PVPO. *Phaseolus vulgaris* L.
Cultivar. "ROG 372". PVP 9900273.

The following were donated by USDA, ARS, Plant Science Research Division, Beltsville, Maryland 20705, United States. Received 02/1962.

PI 607588. *Zea mays* L. subsp. *mays*
Breeding. Population. NSL 8781; Yellow Paymaster. This is a yellow version of the standard Southern Variety, Neal Paymaster. May have value as breeding stock.

PI 607589. *Zea mays* L. subsp. *mays*
Landrace. Population. NSL 8782; Thompsons Prolific. This is an early variety adapted to Tennessee and similar latitude. May be useful as a source of earliness among Southern Types.

PI 607590. *Zea mays* L. subsp. *mays*
Breeding. Population. NSL 8783; Smooth Synthetic. This synthetic was made from lines having a minimum of kernel indentation. Has been used to a limited extent as a source for new inbred lines.

PI 607591. *Zea mays* L. subsp. *mays*
Breeding. Population. NSL 8784; Stiff Stalk Synthetic. This 16 line synthetic has been used extensively as source material for new lines in Iowa and Illinois. Has been an excellent source of new inbreds.

- PI 607592. *Zea mays* L. subsp. *mays***
Breeding. Population. NSL 8785; Rough Synthetic. This is a 16 line synthetic made of lines having rough kernel indentation. May be useful as source material for this trait.
- PI 607593. *Zea mays* L. subsp. *mays***
Landrace. Population. id=84540; NSL 8786; Silver King. A white variety which used to be widely grown in Northern Iowa and adjacent areas.
- PI 607594. *Zea mays* L. subsp. *mays***
Breeding. Population. NSL 8787; Ear Rot Resistant Synthetic. This is a 16 line synthetic made up of lines having a high degree of resistance to ear rots. May be useful as breed- ing stock.
- PI 607595. *Zea mays* L. subsp. *mays***
Breeding. Population. NSL 8788; Disease Susceptible Synthetic. This is a synthetic developed for possible use as a tester to evaluate disease resistance of new material. Has never been used extensively for this purpose.
- PI 607596. *Zea mays* L. subsp. *mays***
Breeding. Population. NSL 8789; Kyles Early Yellow. This is a synthetic made up of early southern lines and may by a source of earliness useful in the south.
- PI 607597. *Zea mays* L. subsp. *mays***
Breeding. Population. id=84204; NSL 8790; Low Ear Synthetic. This is a synthetic made from a series of low-eared inbred lines. It may have value as a source of the low-ear trait.
- PI 607598. *Zea mays* L. subsp. *mays***
Breeding. Population. NSL 8791; Early Synthetic. A synthetic made up of early lines for possible use as parental material in the northern part of the Corn Belt. Has never been used for this purpose except to a limited extent in Iowa.
- PI 607599. *Zea mays* L. subsp. *mays***
Landrace. Population. id=84167; NSL 8792; Krug. Krug was a high yielding variety developed in Illinois. Several inbred lines from this variety are in extensive commercial use.
- PI 607600. *Zea mays* L. subsp. *mays***
Landrace. Population. NSL 8793; Whatleys Prolific. This is a standard Southern variety.
- PI 607601. *Zea mays* L. subsp. *mays***
Breeding. Population. NSL 8794; Ear Rot Susceptible Synthetic. This synthetic was developed for possible usefulness as a tester. Has never been so used.
- PI 607602. *Zea mays* L. subsp. *mays***
Landrace. Population. NSL 8795; Midland. This variety was once widely grown in Kansas and Missouri. It has been a good source of inbred lines and is worth saving for its potential breeding value.

PI 607603. *Zea mays* L. subsp. *mays*

Breeding. Population. NSL 8796; Long Husked Krug. This strain was developed to have a long husked early strain. It may have possible use as parental material in the South where a combination of earliness and husk protection are required.

PI 607604. *Zea mays* L. subsp. *mays*

Landrace. Population. NSL 8797; Yellow Thompson. Thompson Prolific is an early white variety adapted to Tennessee and similar latitudes. This is a yellow strain developed from the white variety.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 06/26/1989.

PI 607605. *Vigna unguiculata* (L.) Walp.

Cultivated. PAK 61; W6 12059; Grif 1546. Collected 04/09/1986 in North-West Frontier, Pakistan. Latitude 34° 1' N. Longitude 71° 33' E. Purchased in market (Bazar), Peshawar. Lat/lon accurate to Peshawar.

The following were collected by L. Guarino, International Plant Genetic Resources Institute, Rome, Latium, Italy. Donated by Paul Quek, International Plant Genetics Resources Institute, Regional Office for Asia, the Pacific and Oceania, c/o IDRC, 7th Storey, RELC Building, Singapore. Received 11/29/1994.

PI 607606. *Vigna unguiculata* (L.) Walp.

Uncertain. 1006; Grif 12361. Collected 1988 in Yemen.

PI 607607. *Vigna unguiculata* (L.) Walp.

Uncertain. 1013; Grif 12362. Collected 1988 in Yemen.

PI 607608. *Vigna unguiculata* (L.) Walp.

Uncertain. 1016; Grif 12363. Collected 1988 in Yemen.

PI 607609. *Vigna unguiculata* (L.) Walp.

Uncertain. 1020; Grif 12364. Collected 1988 in Yemen.

PI 607610. *Vigna unguiculata* (L.) Walp.

Uncertain. 1037; Grif 12365. Collected 1988 in Yemen.

PI 607611. *Vigna unguiculata* (L.) Walp.

Uncertain. 1040; Grif 12366. Collected 1988 in Yemen.

PI 607612. *Vigna unguiculata* (L.) Walp.

Uncertain. 1051; Grif 12368. Collected 1988 in Yemen.

PI 607613. *Vigna unguiculata* (L.) Walp.

Uncertain. 1068; Grif 12369. Collected 1988 in Yemen.

PI 607614. *Vigna unguiculata* (L.) Walp.

Uncertain. 1078; Grif 12370. Collected 1988 in Yemen.

PI 607615. *Vigna unguiculata* (L.) Walp.

Uncertain. 1083; Grif 12371. Collected 1988 in Yemen.

- PI 607616. *Vigna unguiculata* (L.) Walp.**
Uncertain. 1087; Grif 12372. Collected 1988 in Yemen.
- PI 607617. *Vigna unguiculata* (L.) Walp.**
Uncertain. 1116; Grif 12373. Collected 1988 in Yemen.
- PI 607618. *Vigna unguiculata* (L.) Walp.**
Uncertain. 1249; Grif 12374. Collected 1988 in Yemen.
- PI 607619. *Vigna unguiculata* (L.) Walp.**
Uncertain. 15027; Grif 12378. Collected 1988 in Saudi Arabia.
- PI 607620. *Vigna unguiculata* (L.) Walp.**
Uncertain. 15033; Grif 12379. Collected 1988 in Saudi Arabia.
- PI 607621. *Vigna unguiculata* (L.) Walp.**
Uncertain. 15057; Grif 12380. Collected 1988 in Saudi Arabia.
- PI 607622. *Vigna unguiculata* (L.) Walp.**
Uncertain. 15061; Grif 12381. Collected 1988 in Saudi Arabia.
- PI 607623. *Vigna unguiculata* (L.) Walp.**
Uncertain. 15066; Grif 12382. Collected 1988 in Saudi Arabia.
- PI 607624. *Vigna unguiculata* (L.) Walp.**
Uncertain. 15068; Grif 12383. Collected 1988 in Saudi Arabia.

Unknown source. Received 10/1991.

- PI 607625. *Gossypium hirsutum* L.**
H0130; TEX 901.

Unknown source. Received 1999.

- PI 607626. *Gossypium hirsutum* L.**
TEX 953A.

Unknown source. Received 1999.

- PI 607627. *Gossypium hirsutum* L.**
TEX 1004A.

Unknown source. Received 1999.

- PI 607628. *Gossypium hirsutum* L.**
TEX 1007A.

The following were developed by EMBRAPA-CENARGEN, S.A.I.N. - Parque Rural - C.P. 10.2372, Brasilia, Federal District CEP 70.770, Brazil. Received 1986.

PI 607629. *Gossypium hirsutum* L.
TEX 2301. Collected in Brazil. Pedigree - INFAOL SI-20. COLL BY - M.J. LUKEFAHR.

PI 607630. *Gossypium hirsutum* L.
TEX 2302. Collected in Brazil. Pedigree - IPA 841 PRECOCE. COLL BY M.J. LUKEFAHR.

PI 607631. *Gossypium hirsutum* L.
TEX 2303. Collected in Brazil. Pedigree - MF 4. COLL BY - M.J. LUKEFAHR.

PI 607632. *Gossypium hirsutum* L.
TEX 2304. Collected in Brazil. Pedigree - ENPA 80/2BR. COLL BY - M.J. LUDKEFAHR.

PI 607633. *Gossypium hirsutum* L.
TEX 2305. Collected in Brazil. Pedigree - ENPA 78/3B. COLL BY - M.J. LUKEFAHR.

PI 607634. *Gossypium hirsutum* L.
TEX 2306. Collected in Brazil. Pedigree - ENPA 80/1B. COLL BY M.J. LUKEFAHR.

PI 607635. *Gossypium hirsutum* L.
TEX 2307. Collected in Brazil. Pedigree - VELUDO E-71. COLL BY - M.J. LUKEFAHR.

Unknown source. Received 07/06/1939.

PI 607636. *Gossypium hirsutum* L.
TEX 2309. Collected in Tamaulipas, Mexico.

Unknown source. Received 1986.

PI 607637. *Gossypium hirsutum* L.
TES 2310. Collected in Tamaulipas, Mexico.

Unknown source. Received 1986.

PI 607638. *Gossypium hirsutum* L.
TEX 2311. Collected in Thailand.

Unknown source. Received 1986.

PI 607639. *Gossypium hirsutum* L.
TEX 2312. Collected in Thailand.

Unknown source. Received 1986.

PI 607640. *Gossypium hirsutum* L.
TEX 2313. Collected in Thailand. Pedigree - FAINOI A25.

Unknown source. Received 1986.

PI 607641. *Gossypium hirsutum* L.

TEX 2314. Collected in Thailand. Pedigree - FAINOI A07.

Unknown source. Received 1987.

PI 607642. *Gossypium hirsutum* L.

TEX 2316. Collected in Mexico. Pedigree - WIR-6508, SAF-3I-2.

Unknown source. Received 1987.

PI 607643. *Gossypium hirsutum* L.

TEX 2317. Collected in India. Pedigree - WIR-6618, DS-59.

Unknown source. Received 1987.

PI 607644. *Gossypium hirsutum* L.

TEX 2318. Collected in Former Soviet Union. Pedigree - WIR-6627 AS-1C.

Unknown source. Received 1987.

PI 607645. *Gossypium hirsutum* L.

TEX 2319. Collected in Former Soviet Union. Pedigree - WIR-6628, AS-9C.

Unknown source. Received 1987.

PI 607646. *Gossypium hirsutum* L.

TEX 2320. Collected in Former Soviet Union. Pedigree - WIR-6629 AS-4C.

Unknown source. Received 1987.

PI 607647. *Gossypium hirsutum* L.

TEX 2321. Collected in Mexico. Pedigree - WIR-6642, QRT-6-11.

Unknown source. Received 1987.

PI 607648. *Gossypium hirsutum* L.

TEX 2322. Collected in Mexico. Pedigree - WIR-6647 SAE-23-1.

Unknown source. Received 1987.

PI 607649. *Gossypium hirsutum* L.

TEX 2323. Collected in Mexico. Pedigree - WIR-6661, Q-16-7.

Unknown source. Received 1987.

PI 607650. *Gossypium hirsutum* L.

TEX 2324. Collected in India. Pedigree - WIR-6677, 320-F.

The following were developed by Colima Collection, Colima, Mexico. Received 1987.

PI 607651. *Gossypium hirsutum* L.

TEX 2325. Collected in Colima, Mexico. COLL BY KOCH, ET AL - 87141 *.

Unknown source. Received 1987.

PI 607652. *Gossypium hirsutum* L.

TEX 2326. Collected in Michoacan, Mexico. COLL BY KOCH, ET AL - 87140.

Unknown source. Received 1986.

PI 607653. *Gossypium hirsutum* L.

TEX 2327. Collected in Paraguay.

Unknown source. Received 1986.

PI 607654. *Gossypium hirsutum* L.

TEX 2328. Collected in Paraguay.

Unknown source. Received 1987.

PI 607655. *Gossypium hirsutum* L.

TEX 2329. Collected in Mexico. Pedigree - P-193.

Unknown source. Received 1987.

PI 607656. *Gossypium hirsutum* L.

TEX 2330. Collected in Mexico. Pedigree - P-194.

Unknown source. Received 1987.

PI 607657. *Gossypium hirsutum* L.

TEX 2331. Collected in Mexico. Pedigree - P-195.

Unknown source. Received 07/06/1939.

PI 607658. *Gossypium hirsutum* L.

TEX 2332. Collected in United States.

Unknown source. Received 1987.

PI 607659. *Gossypium hirsutum* L.

TEX 2333. Collected in Iran. Pedigree - GX-420, TEX 1437.

The following were developed by Socorro Island, Socorro Island, Revillagigedo, Mexico. Received 1981.

PI 607660. *Gossypium hirsutum* L.

TEX 2334. Collected in Mexico.

The following were developed by Playa Ostional Nicoya Peninsula, Guanacaste, Costa Rica. Received 1984.

PI 607661. *Gossypium hirsutum* L.

TEX 2335. Collected in Costa Rica. COLL BY GRAYUM & DeNEVERS #4644.

The following were developed by Socorro Island, Socorro Island, Revillagigedo, Mexico. Received 1979.

PI 607662. *Gossypium hirsutum* L.

TEX 2336. Collected in Mexico.

Unknown source. Received 1971.

PI 607663. *Gossypium hirsutum* L.

TEX 2339. Collected in Mexico. FR. ISLA DE ALGODON (NEAR SAN FERNANDO), TAMP.

The following were developed by Socorro Island, Socorro Island, Revillagigedo, Mexico. Received 1982.

PI 607664. *Gossypium hirsutum* L.

TEX 2340. Collected in Mexico.

PI 607665. *Gossypium hirsutum* L.

TEX 2342. Collected in Mexico.

PI 607666. *Gossypium hirsutum* L.

TEX 2344. Collected in Mexico.

Unknown source. Received 07/06/1939.

PI 607667. *Gossypium hirsutum* L.

TEX 2345. Collected in Venezuela. FR. MATURIN, VENEZUELA.

The following were developed by FRJ OM IRCT, Paraguay. Received 1986.

PI 607668. *Gossypium hirsutum* L.

TEX 2353. Collected in Paraguay. Pedigree - SP 510 X P 279 - 22.

- PI 607669. *Gossypium hirsutum* L.
TEX 2354. Collected in Paraguay. Pedigree - SP 510 X P 279 - 100.
- PI 607670. *Gossypium hirsutum* L.
TEX 2355. Collected in Paraguay. Pedigree - CHIR PAN - 4521.
- PI 607671. *Gossypium hirsutum* L.
TEX 2356. Collected in Paraguay. Pedigree - CHIRPAN 358.
- PI 607672. *Gossypium hirsutum* L.
TEX 2357. Collected in Paraguay. Pedigree - CHIRPAN 111.
- PI 607673. *Gossypium hirsutum* L.
TEX 2358. Collected in Paraguay. Pedigree - CHIRPAN 9736.
- PI 607674. *Gossypium hirsutum* L.
TEX 2359. Collected in Paraguay. Pedigree - CHIRPAN 26.
- PI 607675. *Gossypium hirsutum* L.
TEX 2360. Collected in Paraguay. Pedigree - CHIRPAN 173.
- PI 607676. *Gossypium hirsutum* L.
TEX 2361. Collected in Paraguay. Pedigree - CHIRPAN 433.
- PI 607677. *Gossypium hirsutum* L.
TEX 2362. Collected in Paraguay. Pedigree - 357 (0288).
- PI 607678. *Gossypium hirsutum* L.
TEX 2363. Collected in Paraguay. Pedigree - 432 (0289).
- PI 607679. *Gossypium hirsutum* L.
TEX 2364. Collected in Paraguay. Pedigree - 996 (0290).
- PI 607680. *Gossypium hirsutum* L.
TEX 2365. Collected in Paraguay. Pedigree - 7193-9W-79.
- PI 607681. *Gossypium hirsutum* L.
TEX 2366. Collected in Paraguay. Pedigree - 4912 X 37-1-73-1-3C.
- PI 607682. *Gossypium hirsutum* L.
TEX 2367. Collected in Paraguay. Pedigree - 77-3840 X 21-17-6-75.
- PI 607683. *Gossypium hirsutum* L.
TEX 2368. Collected in Paraguay. Pedigree - 8169-13-80.
- PI 607684. *Gossypium hirsutum* L.
TEX 2369. Collected in Paraguay. Pedigree - 8169-16-80-1.
- PI 607685. *Gossypium hirsutum* L.
TEX 2370. Collected in Paraguay. Pedigree - 8165-1-80.
- PI 607686. *Gossypium hirsutum* L.
TEX 2371. Collected in Paraguay. Pedigree - 77-3840-6M X 1656-71-3C.
- PI 607687. *Gossypium hirsutum* L.
TEX 2372. Collected in Paraguay. Pedigree - E X A4-6-78.

PI 607688. *Gossypium hirsutum* L.
TEX 2373. Collected in Paraguay. Pedigree - GF4-3840 X 63L-3-75-L.

PI 607689. *Gossypium hirsutum* L.
TEX 2374. Collected in Paraguay. Pedigree - CS-8309.

PI 607690. *Gossypium hirsutum* L.
TEX 2375. Collected in Paraguay. Pedigree - 1209-619 X A4-10W-77-1.

PI 607691. *Gossypium hirsutum* L.
TEX 2376. Collected in Paraguay. Pedigree - 1656-71-2C.

PI 607692. *Gossypium hirsutum* L.
TEX 2377. Collected in Paraguay. Pedigree - S X 491L-6M-4C.

Unknown source. Received 1987.

PI 607693. *Gossypium hirsutum* L.
TEX 2378. Collected in Michoacan, Mexico. Pedigree - *G. lauceolatum*.
COLL BY KOCH, FRYXELL, & ALTMAN 87199.

Unknown source. Received 1986.

PI 607694. *Gossypium hirsutum* L.
TEX 2379. Collected in Peten, Guatemala. COLL BY PAT BROWN FOR J.E.
JONES.

Unknown source. Received 1987.

PI 607695. *Gossypium hirsutum* L.
"HUICHOL COTTON"; TEX 2380. Collected in Mexico. COLL BY J.BAUML &
R.G.VOSS #1725.

Unknown source. Received 1987.

PI 607696. *Gossypium hirsutum* L.
TEX 2381. Collected in India. Pedigree - WIR-6682 (USSR-6).

Unknown source. Received 1987.

PI 607697. *Gossypium hirsutum* L.
TEX 2382. Collected in Peru. Pedigree - WIR-6716 (USSR-15).

The following were developed by N.I. Vavilov Institute of Plant Industry, 44
Herzen Street, Leningrad, Leningrad 190000, Russian Federation. Received
1985.

PI 607698. *Gossypium hirsutum* L.
TEX 2391. Collected in Russian Federation.

PI 607699. *Gossypium hirsutum* L.
TEX 2392. Collected in Russian Federation.

The following were developed by NI VAVILOV IPI, India. Received 1985.

PI 607700. *Gossypium hirsutum* L.
TEX 2393. Collected in India.

PI 607701. *Gossypium hirsutum* L.
TEX 2394. Collected in India.

The following were collected by A. E. Percival, USDA, ARS, Crop Germplasm Research Unit, 2765 F&B Road, College Station, Texas 77845, United States; James M. Stewart, University of Arkansas, Department of Crop, Soil, & Environmental Sciences, Fayetteville, Arkansas 72701, United States. Received 01/1991.

PI 607702. *Gossypium hirsutum* L.
TEX 2396. Collected 12/04/1991 in Baja California, Mexico.

Unknown source. Received 01/1991.

PI 607703. *Gossypium hirsutum* L.
TEX 2397. Collected 12/1990 in Baja California, Mexico.

The following were collected by M. J. Lukefahr, USDA Cotton Production Research, Laboratory, P.O. Box 267, Weslaco, Texas, United States. Received 1983.

PI 607704. *Gossypium hirsutum* L.
TEX 2398. Collected in Nigeria.

PI 607705. *Gossypium hirsutum* L.
TEX 2399. Collected in Amazonas, Brazil.

PI 607706. *Gossypium hirsutum* L.
TEX 2400. Collected in Amazonas, Brazil.

PI 607707. *Gossypium hirsutum* L.
TEX 2401. Collected in Amazonas, Brazil.

PI 607708. *Gossypium hirsutum* L.
TEX 2402. Collected in Amazonas, Brazil.

PI 607709. *Gossypium hirsutum* L.
TEX 2403. Collected in Amazonas, Brazil.

PI 607710. *Gossypium hirsutum* L.
TEX 2404. Collected in Para, Brazil.

PI 607711. *Gossypium hirsutum* L.
TEX 2405. Collected in Para, Brazil.

PI 607712. *Gossypium hirsutum* L.
TEX 2406. Collected in Bahia, Brazil.

PI 607713. *Gossypium hirsutum* L.
TEX 2407. Collected in Bahia, Brazil.

PI 607714. *Gossypium hirsutum* L.
TEX 2408. Collected in Brazil.

The following were collected by Gast. Received 1976.

PI 607715. *Gossypium hirsutum* L.
TEX 2409. Collected in American Samoa.

The following were collected by J.B Hutchinson, Cotton Research Station, Trinidad, Trinidad and Tobago. Received 07/06/1939.

PI 607716. *Gossypium hirsutum* L.
TEX 2410. Collected in Malta.

The following were collected by B.M. Boom. Received 08/1991.

PI 607717. *Gossypium hirsutum* L.
TEX 2411; BRIAN BOOM NO. 9967. Collected 03/19/1990 in Puerto Rico.

Unknown source. Received 08/1991.

PI 607718. *Gossypium hirsutum* L.
TEX 2412; NO. 7651. Collected in Venezuela.

Unknown source. Received 10/1991.

PI 607719. *Gossypium hirsutum* L.
TEX 2413. Collected in Bahamas.

The following were collected by A. E. Percival, USDA, ARS, Crop Germplasm Research Unit, 2765 F&B Road, College Station, Texas 77845, United States; James M. Stewart, University of Arkansas, Department of Crop, Soil, & Environmental Sciences, Fayetteville, Arkansas 72701, United States. Received 1988.

PI 607720. *Gossypium hirsutum* L.
"moco"; TEX 2415. Collected 09/03/1988 in Paraiba, Brazil.

PI 607721. *Gossypium hirsutum* L.
TEX 2416. Collected 03/09/1988 in Paraiba, Brazil.

PI 607722. *Gossypium hirsutum* L.
"moco"; TEX 2417. Collected 03/09/1988 in Paraiba, Brazil.

- PI 607723. *Gossypium hirsutum* L.
"moco"; TEX 2418. Collected 03/09/1988 in Paraiba, Brazil.
- PI 607724. *Gossypium hirsutum* L.
TEX 2419. Collected 09/03/1988 in Paraiba, Brazil.
- PI 607725. *Gossypium hirsutum* L.
"moco"; TEX 2420. Collected 09/03/1988 in Paraiba, Brazil.
- PI 607726. *Gossypium hirsutum* L.
TEX 2421. Collected 03/1988 in Paraiba, Brazil.
- PI 607727. *Gossypium hirsutum* L.
"moco"; TEX 2422. Collected 09/04/1988 in Brazil.
- PI 607728. *Gossypium hirsutum* L.
"moco"; TEX 2423. Collected 09/04/1988 in Brazil.
- PI 607729. *Gossypium hirsutum* L.
"moco"; TEX 2424. Collected 09/04/1988 in Brazil.
- PI 607730. *Gossypium hirsutum* L.
"moco"; TEX 2425. Collected 09/04/1988 in Brazil.
- PI 607731. *Gossypium hirsutum* L.
"moco"; TEX 2426. Collected 09/04/1988 in Brazil.
- PI 607732. *Gossypium hirsutum* L.
"moco"; TEX 2427. Collected 09/04/1988 in Brazil.
- PI 607733. *Gossypium hirsutum* L.
"moco"; TEX 2428. Collected 09/04/1988 in Brazil.
- PI 607734. *Gossypium hirsutum* L.
"moco"; TEX 2429. Collected 09/04/1988 in Brazil.
- PI 607735. *Gossypium hirsutum* L.
TEX 2430. Collected 09/04/1988 in Brazil.
- PI 607736. *Gossypium hirsutum* L.
"moco"; TEX 2431. Collected 09/04/1988 in Brazil.
- PI 607737. *Gossypium hirsutum* L.
"moco"; TEX 2432. Collected 09/04/1988 in Brazil.
- PI 607738. *Gossypium hirsutum* L.
"moco"; TEX 2433. Collected 09/04/1988 in Brazil.
- PI 607739. *Gossypium hirsutum* L.
"moco"; TEX 2434. Collected 09/05/1988 in Brazil.
- PI 607740. *Gossypium hirsutum* L.
"moco"; TEX 2435. Collected 09/05/1988 in Brazil.
- PI 607741. *Gossypium hirsutum* L.
"moco"; TEX 2436. Collected 09/05/1988 in Brazil.

PI 607742. *Gossypium hirsutum* L.
"moco"; TEX 2437. Collected 09/05/1988 in Brazil.

PI 607743. *Gossypium hirsutum* L.
"moco"; TEX 2438. Collected 09/05/1988 in Brazil.

PI 607744. *Gossypium hirsutum* L.
"moco"; TEX 2439. Collected 09/05/1988 in Brazil.

PI 607745. *Gossypium hirsutum* L.
"moco"; TEX 2440. Collected 09/05/1988 in Brazil.

PI 607746. *Gossypium hirsutum* L.
"moco"; TEX 2441. Collected 09/05/1988 in Brazil.

PI 607747. *Gossypium hirsutum* L.
"moco"; TEX 2442. Collected 09/05/1988 in Brazil.

PI 607748. *Gossypium hirsutum* L.
"moco"; TEX 2443. Collected 09/05/1988 in Brazil.

PI 607749. *Gossypium hirsutum* L.
"moco"; TEX 2444. Collected 09/06/1988 in Brazil.

PI 607750. *Gossypium hirsutum* L.
"moco"; TEX 2445. Collected 09/06/1988 in Brazil.

PI 607751. *Gossypium hirsutum* L.
"moco"; TEX 2446. Collected 09/06/1988 in Brazil.

PI 607752. *Gossypium hirsutum* L.
"moco"; TEX 2447. Collected 09/06/1988 in Brazil.

PI 607753. *Gossypium hirsutum* L.
"moco"; TEX 2448. Collected 09/06/1988 in Brazil.

PI 607754. *Gossypium hirsutum* L.
"moco"; TEX 2449. Collected 09/06/1988 in Brazil.

PI 607755. *Gossypium hirsutum* L.
"moco"; TEX 2450. Collected 09/06/1988 in Brazil.

PI 607756. *Gossypium hirsutum* L.
"moco"; TEX 2451. Collected 09/06/1988 in Brazil.

PI 607757. *Gossypium hirsutum* L.
"moco"; TEX 2452. Collected in Brazil.

PI 607758. *Gossypium hirsutum* L.
"moco"; TEX 2453. Collected in Brazil.

PI 607759. *Gossypium hirsutum* L.
TEX 2454. Collected 09/01/1988 in Brazil.

PI 607760. *Gossypium hirsutum* L.
"moco"; TEX 2455. Collected 09/06/1988 in Brazil.

- PI 607761. *Gossypium hirsutum* L.
"moco"; TEX 2456. Collected 09/06/1988 in Brazil.
- PI 607762. *Gossypium hirsutum* L.
"moco"; TEX 2457. Collected 09/07/1988 in Brazil.
- PI 607763. *Gossypium hirsutum* L.
"moco"; TEX 2458. Collected 09/07/1988 in Brazil.
- PI 607764. *Gossypium hirsutum* L.
"moco"; TEX 2459. Collected 09/08/1988 in Brazil.
- PI 607765. *Gossypium hirsutum* L.
TEX 2460. Collected 09/08/1988 in Brazil.
- PI 607766. *Gossypium hirsutum* L.
"moco"; TEX 2461. Collected 09/09/1988 in Brazil.
- PI 607767. *Gossypium hirsutum* L.
"moco"; TEX 2462. Collected 09/09/1988 in Paraiba, Brazil.
- PI 607768. *Gossypium hirsutum* L.
"moco"; TEX 2463. Collected 09/09/1988 in Paraiba, Brazil.
- PI 607769. *Gossypium hirsutum* L.
"moco"; TEX 2464. Collected 09/09/1988 in Ceara, Brazil.
- PI 607770. *Gossypium hirsutum* L.
"mocozino"; TEX 2465. Collected 09/09/1988 in Ceara, Brazil.
- PI 607771. *Gossypium hirsutum* L.
"mocozino"; TEX 2466. Collected 09/09/1988 in Ceara, Brazil.
- PI 607772. *Gossypium hirsutum* L.
"mocozino"; TEX 2467. Collected 09/09/1988 in Ceara, Brazil.
- PI 607773. *Gossypium hirsutum* L.
"moco"; TEX 2468. Collected 09/09/1988 in Ceara, Brazil.
- PI 607774. *Gossypium hirsutum* L.
TEX 2469. Collected 09/10/1988 in Ceara, Brazil.
- PI 607775. *Gossypium hirsutum* L.
"mocozilo"; TEX 2470. Collected 09/10/1988 in Ceara, Brazil.
- PI 607776. *Gossypium hirsutum* L.
"mocozino"; TEX 2471. Collected 09/11/1988 in Ceara, Brazil.
- PI 607777. *Gossypium hirsutum* L.
"moco"; TEX 2472. Collected 09/11/1988 in Pernambuco, Brazil.
- PI 607778. *Gossypium hirsutum* L.
"moco"; TEX 2473. Collected 09/11/1988 in Ceara, Brazil.

Unknown source. Received 1988.

PI 607779. *Gossypium hirsutum* L.

"moco"; TEX 2474. Collected 09/11/1988 in Ceara, Brazil.

The following were collected by A. E. Percival, USDA, ARS, Crop Germplasm Research Unit, 2765 F&B Road, College Station, Texas 77845, United States; James M. Stewart, University of Arkansas, Department of Crop, Soil, & Environmental Sciences, Fayetteville, Arkansas 72701, United States. Received 1988.

PI 607780. *Gossypium hirsutum* L.

"moco"; TEX 2475. Collected 09/12/1988 in Ceara, Brazil.

PI 607781. *Gossypium hirsutum* L.

"moco"; TEX 2476. Collected 09/12/1988 in Pernambuco, Brazil.

PI 607782. *Gossypium hirsutum* L.

"moco"; TEX 2477. Collected 09/12/1988 in Pernambuco, Brazil.

PI 607783. *Gossypium hirsutum* L.

"moco"; TEX 2478. Collected 09/13/1988 in Bahia, Brazil.

PI 607784. *Gossypium hirsutum* L.

"moco"; TEX 2479. Collected 09/14/1988 in Bahia, Brazil.

PI 607785. *Gossypium hirsutum* L.

"moco"; TEX 2480. Collected 09/15/1988 in Pernambuco, Brazil.

PI 607786. *Gossypium hirsutum* L.

"moco"; TEX 2481. Collected 09/15/1988 in Bahia, Brazil.

PI 607787. *Gossypium hirsutum* L.

"moco"; TEX 2482. Collected 09/16/1988 in Pernambuco, Brazil.

PI 607788. *Gossypium hirsutum* L.

"moco"; TEX 2483. Collected 09/17/1988 in Bahia, Brazil.

PI 607789. *Gossypium hirsutum* L.

"moco"; TEX 2484. Collected 09/17/1988 in Bahia, Brazil.

PI 607790. *Gossypium hirsutum* L.

"moco"; TEX 2485. Collected 09/18/1988 in Pernambuco, Brazil.

PI 607791. *Gossypium hirsutum* L.

"moco"; TEX 2486. Collected 09/18/1988 in Pernambuco, Brazil.

PI 607792. *Gossypium hirsutum* L.

"moco"; TEX 2487. Collected 09/18/1988 in Piaui, Brazil.

PI 607793. *Gossypium hirsutum* L.

"moco"; TEX 2488. Collected 09/18/1988 in Piaui, Brazil.

PI 607794. *Gossypium hirsutum* L.

"moco"; TEX 2489. Collected 09/18/1988 in Piaui, Brazil.

- PI 607795. *Gossypium hirsutum* L.
"moco"; TEX 2490. Collected 09/18/1988 in Piaui, Brazil.
- PI 607796. *Gossypium hirsutum* L.
"moco"; TEX 2491. Collected 09/19/1988 in Piaui, Brazil.
- PI 607797. *Gossypium hirsutum* L.
"moco"; TEX 2492. Collected 09/19/1988 in Ceara, Brazil.
- PI 607798. *Gossypium hirsutum* L.
"moco"; TEX 2493. Collected 09/19/1988 in Ceara, Brazil.
- PI 607799. *Gossypium hirsutum* L.
"moco"; TEX 2494. Collected 09/19/1988 in Ceara, Brazil.
- PI 607800. *Gossypium hirsutum* L.
"moco"; TEX 2495. Collected 09/19/1988 in Ceara, Brazil.
- PI 607801. *Gossypium hirsutum* L.
"moco"; TEX 2496. Collected 09/19/1988 in Ceara, Brazil.
- PI 607802. *Gossypium hirsutum* L.
"moco"; TEX 2497. Collected 09/19/1988 in Ceara, Brazil.
- PI 607803. *Gossypium hirsutum* L.
"moco"; TEX 2498. Collected 09/19/1988 in Ceara, Brazil.
- PI 607804. *Gossypium hirsutum* L.
"moco"; TEX 2499. Collected 09/20/1988 in Ceara, Brazil.
- PI 607805. *Gossypium hirsutum* L.
"moco"; TEX 2500. Collected 09/20/1988 in Ceara, Brazil.
- PI 607806. *Gossypium hirsutum* L.
"moco"; TEX 2501. Collected 09/20/1988 in Ceara, Brazil.
- PI 607807. *Gossypium hirsutum* L.
TEX 2502. Collected 09/20/1988 in Ceara, Brazil.
- PI 607808. *Gossypium hirsutum* L.
"moco"; TEX 2503. Collected 09/21/1988 in Brazil.
- PI 607809. *Gossypium hirsutum* L.
"moco"; TEX 2504. Collected 09/21/1988 in Brazil.
- PI 607810. *Gossypium hirsutum* L.
"moco"; TEX 2505. Collected 09/21/1988 in Brazil.
- PI 607811. *Gossypium hirsutum* L.
TEX 2506. Collected 09/21/1988 in Brazil.

Unknown source. Received 1988.

- PI 607812. *Gossypium hirsutum* L.
PS 141; TEX 2507. Collected in Brazil.

Unknown source. Received 1988.

PI 607813. *Gossypium hirsutum* L.
PS 142; TEX 2508. Collected in Brazil.

Unknown source. Received 1988.

PI 607814. *Gossypium hirsutum* L.
PS 143; TEX 2509. Collected in Brazil.

Unknown source. Received 1988.

PI 607815. *Gossypium hirsutum* L.
PS 144; TEX 2510. Collected in Brazil.

Unknown source. Received 1994.

PI 607816. *Gossypium hirsutum* L.
TEX 2511.

Unknown source. Received 1998.

PI 607817. *Gossypium hirsutum* L.
Landrace. TEX 2512. Collected in Tamaulipas, Mexico.

Unknown source. Received 1998.

PI 607818. *Gossypium hirsutum* L.
Landrace. TEX 2513. Collected in Oaxaca, Mexico.

Unknown source. Received 03/1995.

PI 607819. *Gossypium hirsutum* L.
TEX 2514. Collected in Oaxaca, Mexico.

Unknown source. Received 1998.

PI 607820. *Gossypium hirsutum* L.
Landrace. TEX 2515. Collected in Oaxaca, Mexico.

Unknown source. Received 1995.

PI 607821. *Gossypium hirsutum* L.
Landrace. TEX 2517. Collected in Sonora, Mexico. Latitude 27° 38' N.
Longitude 108° 57' W.

Unknown source. Received 1997.

PI 607822. *Gossypium hirsutum* L.
TEX 2518. Collected in Colima, Mexico.

Unknown source. Received 1997.

PI 607823. *Gossypium hirsutum* L.
TEX 2519. Collected in Colima, Mexico.

Unknown source. Received 1997.

PI 607824. *Gossypium hirsutum* L.
TEX 2520.

Unknown source. Received 1996.

PI 607825. *Gossypium hirsutum* L.
TEX 2521. Collected in Indonesia.

The following were developed by A. E. Percival, USDA, ARS, Crop Germplasm Research Unit, 2765 F&B Road, College Station, Texas 77845, United States. Received 09/26/1996.

PI 607826. *Gossypium hirsutum* L.
Breeding. TEX 835.

PI 607827. *Gossypium hirsutum* L.
Breeding. TEX 994.

The following were collected by Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington 99164-6434, United States; Edward J. Garvey, USDA, ARS, Natl. Germplasm Resources Laboratory, Room 409, Building 003, BARC-West, Beltsville, Maryland 20705-2350, United States; Lufter Xhuveli, Agricultural University of Tirana, Dept. of Agronomy, Rr."Myslym Shyri", Tirana, Albania. Received 09/1996.

PI 607828. *Dorycnium graecum* (L.) Ser.
Wild. Al 110; W6 18658. Collected 08/30/1996 in Albania. Latitude 41° 31' 10" N. Longitude 20° 5' 24" E. Elevation 780 m. Village of Pelsh, Mat District, along road to Peshkopi. The collectors observed that it is spreading. David Brenner observed in an Ames, Iowa grow-out (1999) that the flowers are white, with purple keels hidden by other flower parts. The rachis is very short, so that the five leaflets are almost sessile.

The following were developed by Milton C. Engelke, Texas A&M University, Research and Extension Center, 17360 Coit Road, Dallas, Texas 75252, United States; J.A. Reinert, Texas A&M University, Dept. of Soil and Crop Sciences, College Station, Texas 77843-6599, United States; B.A. Ruemmele, University of Rhode Island, Turfgrass Research and Extension, Kingston, Rhode Island

02881, United States; P.F. Colbaugh, Texas A&M University, Texas Agric. Exp. Sta., 17360 Coit Road, Dallas, Texas 75252, United States; K. B. Marcum, University of Arizona, Turfgrass Physiology, Tucson, Arizona, United States; R. H. White, Texas A&M University, Turfgrass Physiology, College Station, Texas, United States; S.J. Anderson, Texas A&M University, Dept. of Soil & Crop Sciences, College Station, Texas 77843-2474, United States. Donated by Reed E. Barker, USDA, ARS, Natl. Forage Seed Prod. Res. Ctr., Oregon State University, Corvallis, Oregon 97331-7102, United States. Received 05/1999.

PI 607829. *Zoysia matrella* (L.) Merr.

Cultivar. "Cavalier"; DALZ8507; CZOY 1. 10778; CV-212. Collected in Kyonggi, Korea, South. Latitude 37° 16' N. Longitude 126° 59' E. Collected from the grounds of Seoul National University campus, Suwon. Lat/lon accurate to Suwon. Pedigree - Single genotype vegetatively propagated which appears to be hybrid between *Z. matrella* and *Z. pacifica* with strong *matrella* traits. Multiple stress resistance including moderate cold hardiness, shade tolerance, salt tolerance and resistance to fall army worm, tropical sod web worm and tawny male cricket. Suitable for use in home lawns, golf course fairways, and park and recreational turfs in transition region and Southern U.S. Warm-season, sod-forming grass introduced from Asia. Used as lawngrass in southeastern U.S. Finer, denser sod, but less winter-hardy than *Zoysia japonica* Steud.

The following were developed by Milton C. Engelke, Texas A&M University, Research and Extension Center, 17360 Coit Road, Dallas, Texas 75252, United States. Donated by Reed E. Barker, USDA, ARS, Natl. Forage Seed Prod. Res. Ctr., Oregon State University, Corvallis, Oregon 97331-7102, United States. Received 05/1999.

PI 607830. *Zoysia matrella* (L.) Merr.

Cultivar. "DH 96-12"; CZOY 2. Warm-season, sod-forming grass introduced from Asia. Used as lawngrass in southeastern U.S. Finer, denser sod, but less winter-hardy than *Zoysia japonica* Steud.

The following were developed by Milton C. Engelke, Texas A&M University, Research and Extension Center, 17360 Coit Road, Dallas, Texas 75252, United States; J.A. Reinert, Texas A&M University, Dept. of Soil and Crop Sciences, College Station, Texas 77843-6599, United States; B.A. Ruenmele, University of Rhode Island, Turfgrass Research and Extension, Kingston, Rhode Island 02881, United States; P.F. Colbaugh, Texas A&M University, Texas Agric. Exp. Sta., 17360 Coit Road, Dallas, Texas 75252, United States; K. B. Marcum, University of Arizona, Turfgrass Physiology, Tucson, Arizona, United States; R. H. White, Texas A&M University, Turfgrass Physiology, College Station, Texas, United States; S.J. Anderson, Texas A&M University, Dept. of Soil & Crop Sciences, College Station, Texas 77843-2474, United States. Donated by Reed E. Barker, USDA, ARS, Natl. Forage Seed Prod. Res. Ctr., Oregon State University, Corvallis, Oregon 97331-7102, United States. Received 05/1999.

PI 607831. *Zoysia matrella* (L.) Merr.

Cultivar. "Diamond"; DALZ8502; CZOY 3. 10636; CV-214. Pedigree - Discovered in turf cultivar test plots at Dallas, Texas. Fine textured highly rhizomatous vegetatively propagated clone of *Zoysia matrella* which is noted specifically for excellent tolerance to low light conditions, salt tolerance and rapid recuperative ability. Suitable for

use as a warm-season turfgrass for putting greens and tee boxes on golf courses in the coastal regions of the southern U.S. where shade and salinity are a problem. Warm-season, sod-forming grass introduced from Asia. Used as lawngrass in southeastern U.S. Finer, denser sod, but less winter-hardy than *Zoysia japonica* Steud.

PI 607832. *Zoysia japonica* Steud.

Cultivar. "Palisades"; DALZ8514; CZOY 4. ; CV-215. Pedigree - A chance hybrid from a maternal clone Z44, a Beltsville, MD accession obtained in 1981, which was open pollinated in a nursery of 179 other zoysia accessions. Medium-coarse textured vegetatively propagated clone which is noted specifically for tolerance to low light conditions (shade), and low water use, excellent cold hardiness, and rapid recuperative ability. Intermediate in salt tolerance. Suitable for use as a warm-season turfgrass for golf course fairways, and roughs, shaded tee boxes throughout the transition zone, home lawns, sports fields, industrial parks, and highway medians. Optimum mowing height will range from 1.0-5.0 cm. On tees and fairways, mowing heights of 6-8 mm is possible with acceptable results. Warm-season, sod-forming grass from Asia. Used for general-purpose turf and erosion control in southeastern U.S. Relatively winter-hardy, but does not thrive or compete well where summers are short or cool. Grows best on heavy soils. Not drought resistant. Relatively coarse and tough. Produces seed, but generally planted vegetatively.

The following were developed by Victor B. Youngner, Riverside, California, United States. Donated by Reed E. Barker, USDA, ARS, Natl. Forage Seed Prod. Res. Ctr., Oregon State University, Corvallis, Oregon 97331-7102, United States. Received 05/1999.

PI 607833. *Zoysia japonica* Steud.

Cultivar. "El Toro"; UCR #1; CZOY 5. 5845. Pedigree - Discovered in turf cultivar plot at University of California South Coast Field Station. Warm-season, sod-forming grass from Asia. Used for general-purpose turf and erosion control in southeastern U.S. Relatively winter-hardy, but does not thrive or compete well where summers are short or cool. Grows best on heavy soils; not drought resistant. Relatively coarse and tough. Produces seed, but generally planted vegetatively. Zoysiagrass plant `El Toro` a new and distinct variety of *Zoysia* turfgrass (*Zoysia japonica*) characterized by its rapid establishment rate and shorter dormant period compared to other *Zoysia* varieties, its early spring greenup and good Fall color retention and further characterized by its superior tolerance to *Zoysia* rust (*Puccinia* Spp.) and high tolerance to drought.

The following were developed by Jorge A. Acosta-Gallegos, National Research Institute for Forestry Agriculture, CIRNOC-INIFAP-SARAH, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico; R. Ochoa-Marquez, National Research Institute for Forestry and Agriculture, Bean Research, Pabellon Experimental Station, Pabellon, Aguascalientes 20660, Mexico; S. Nunez-Gonzalez, National Research Institute for Forestry and Agriculture, Bean Program, Altos de Jalisco Experimental Station, Tepatitlan, Jalisco CP 47600, Mexico; R. Rosales-Serna, National Research Institute for Forestry and Agriculture, Bean/Cowpea-CRSP, Durango Experimental Station, Durango, Durango CP 34000, Mexico; Shree P. Singh, University of Idaho, Kimberly Research & Extension Ctr., 3793 North 3600 East, Kimberly, Idaho

83341-5076, United States; Simon Alvarado-Mendoza, INIFAP, CIFAP, Experimental Valle De Mexico, Apartado Postal No. 10, KM 38.5 CARR. Mex-VER/VIA Texcoco, Chapingo, Mexico, Mexico. Received 03/29/2000.

PI 607834. Phaseolus vulgaris L.

Cultivar. Pureline. "Negro Otomi"; NG 94060. CV-179. Pedigree - Developed from multiple interracial cross: Michoacan 91-A/3/BAT 304/G811//XAN 112/ABB6. Shiny black seeded bean of indeterminate growth habit (type III) developed for rainfed conditions in the highlands of Mexico. Average blooming and maturity 48 and 105 days after planting, respectively. Medium black seed which averages 31 g/100 seeds. In trials conducted in the subhumid highlands from 1994 to 1998, averaged 1940 kg ha⁻¹ and 960 kg ha⁻¹ in the semiarid highlands. Resistant to anthracnose rust, halo and common blight and carries the single dominant hypersensitive I gene for resistance to Bean Common Mosaic Virus (ECMV).

The following were developed by James H. Orf, University of Minnesota, Dept. of Agronomy and Plant Genetics, Minnesota Agr. Exp. Sta., St. Paul, Minnesota 55108, United States; Roxanne Denny, University of Minnesota, Dept of Plant Pathology, 350 Cargill Building 1500 Gortner Ave., St. Paul, Minnesota 55108, United States. Received 02/22/2000.

PI 607835. Glycine max (L.) Merr.

Cultivar. Pureline. "UM3"; ND(M)91-455; M91-455. CV-416; PVP 9800050. Pedigree - Natto x M87-926. Relative maturity of 0.0 and would be considered a full season cv. at lat. 46° to 48° N. Flowers white, tawny pubescence and tan pods. Seeds have yellow seed coat and yellow hilum. Semideterminate growth habit and averages about 62 cm tall. Seeds average about 7.5 grams per 100 seeds. Considered a natto type. Protein and oil content from 1996 URT data was 43.6% and 19.9%, respectively. Carries the Rps1 gene for phytophthora resistance (Phytophthora sojae).

The following were developed by William D. Branch, University of Georgia, Coastal Plain Experiment Station, Department of Crop and Soil Sciences, Tifton, Georgia 31793-0748, United States. Received 03/06/2000.

PI 607836. Arachis hypogaea L.

Cultivar. "Georgia Hi-O/L"; GA 942007. CV-67; PVP 200000255. Pedigree - GA-C330A / GA-T2636M. Released 1999. Large-seeded peanut with significantly higher O/L fatty acid ratio (ca. 40 vs 3) as compared to NC 7 in south Georgia. The high O/L trait provides for longer shelf-life, improved oil quality, and better nutrition. High level of resistance to TSWV being comparable to Georgia Green, which is a TSWV-resistant runner-type cultivar. Decumbent spreading growth habit, medium maturity, and pink testa color. Combines high yield, high O/L ratio, and high level of TSWV resistance into a large-seeded line.

The following were developed by Charles Tischler, USDA-ARS, Grassland, Soil, and Water Research Lab., 808 E. Blackland Rd., Temple, Texas 76502, United States; Mark A. Hussey, Texas A&M University, Department of Soil & Crop Sciences, Room 430, Heep Center, College Station, Texas 77843-2474, United States; William R. Ocumpaugh, Texas A&M University, Texas Agricultural Exp. Station, 3507 Highway 59 E, Beeville, Texas 78102-9410, United States; M.A.

Sanderson, USDA, ARS, Pasture Systems & Watershed Management Research Lab., Curtin Road, University Park, Pennsylvania 16802-3702, United States; H.W. Elbersen, ATO-DLO, Bornsesteeg 59, Postbus 17, Wageningen, Netherlands; Rod L. Reed, Angelo State University, Box 10888, ASU Station, 2601 West Avenue N, San Angelo, Texas 76909, United States. Received 02/06/2000.

PI 607837. *Panicum virgatum* L.

Breeding. Population. TEM-SLC. GP-77. Pedigree - Derived from Alamo switchgrass by 3 cycles of recurrent selection for low crown node placement under dim, continuous light. Average crown node elevation of 0.03 cm above the soil surface when grown from seed under continuous dim light (PPFD 1.5 $\mu\text{M m}^{-2} \text{sec}^{-1}$) at a constant temperature of 30 C for 7 days. Alamo has an average crown node elevation of 0.25 cm above the soil surface when grown under the same conditions. Thus, more responsive to red light in the seedling stage than Alamo. Indistinguishable from Alamo in the mature plant form (2 or more years of age).

PI 607838. *Panicum virgatum* L.

Breeding. Population. TEM-SEC. GP-78. Pedigree - Derived from Alamo switchgrass by 3 cycles of recurrent selection for high crown node placement under dim, continuous light. Average crown node elevation of 0.87 cm above the soil surface when grown from seed under continuous dim light (PPFD 1.5 $\mu\text{M m}^{-2} \text{sec}^{-1}$) at a constant temperature of 30 C for 7 days. Alamo has an average crown node elevation of 0.25 cm above the soil surface when grown under the same conditions. Thus, less responsive to red light in the seedling stage than Alamo. Indistinguishable from Alamo in the mature plant form (2 or more years of age).

The following were developed by Craig F. Morris, USDA-ARS, Western Wheat Quality Lab., E-202 FSHN Facility East, Pullman, Washington 99164-6394, United States; Jimmie H. Hatchett, USDA-ARS, Dept of Entomology, Waters Hall, Manhattan, Kansas 66506-4004, United States; Roland F. Line, USDA, ARS, Washington State University, 361 Johnson Hall, Pullman, Washington 99164, United States; Victor L. Demacon, USDA-ARS, Western Wheat Quality Lab, E-202 FSHN Facility East, Pullman, Washington 99164-6394, United States; Cal F. Konzak, Northwest Plant Breeding Company, NE 1725 Wheatland, Pullman, Washington 99163, United States; Kimberlee Kidwell, Washington State University, Dept. of Crop & Soil Sciences, Pullman, Washington 99164-6420, United States; G.S. Shelton, Washington State University, Dept. of Crop and Soil Sciences, Pullman, Washington 99164-6420, United States; D.A. Engle, Washington State University, Dept. of Crop and Soil Sciences, Pullman, Washington 99164-6420, United States; J.W. Burns, Washington State University, Dept. of Crop and Soil Sciences, Pullman, Washington 99164-6420, United States. Received 03/27/2000.

PI 607839. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "ZAK"; W9400154; WA 7850; K89792; NSGC 8669. PVP 200100257; CV-914. Pedigree - Pavon 'S'/5/PI167822/CI13438 113-6//Idaed/Marfed 68-5/4/Lemhi 66/3/Yaktana 54A*4/Norin 10/Brevor/6/Walladay/7/PI506355/8/Treasure. Released 2000. Common-type, soft white, semi-dwarf spring wheat. Awned, mid-season maturity, white straw and white glumes. Demonstrated tolerance to natural infestations of Hessian fly. Resistant to stripe rust and moderately resistant to leaf rust. Targeted to the northeastern and southeastern production regions of Washington state as a replacement for Penawawa and Alpowa due to its high grain yield potential and superior stripe rust resistance,

and/or as a replacement for Wakanz and Wawawai, based on its Hessian fly resistance. Outstanding end-product quality compared to other varieties currently in commercial production. High molecular weight glutenin subunits of null (1A), 6+8 (1B) and 2+12 (1D). Test weight is nearly equal to that of Penawawa, lower than Alpowa and Wawawai and higher than Vanna. Susceptible to the Russian wheat aphid.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Konrad Schuler, Institute for Plant Genetics, IPK, Genbank-Aussenstelle Nord, 0-2551, Gross Lusewitz, Germany; Antonio Rivera-Pena, INIFAP, Programa Nacional de la Papa, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands. Received 09/06/1997.

PI 607840. *Solanum demissum* Lindl.

Wild. RSSV 909; Q 37276. Collected 09/06/1997 in Aguascalientes, Mexico. Latitude 21° 46' 30" N. Longitude 102° 38' 55" W. Elevation 2400 m. on W slopes of Sierra El Laurel, ca 10 km by air SE of Calvillo, by the end of the road by a dam, passing Rancho de Los Adobes, SSP 1:250,000-scale Map F13-9. Growing at base of a stone fence. Three living plants and two immature round fruits collected, plants with violet corollas and round immature fruits.

PI 607841. *Solanum demissum* Lindl.

Wild. RSSV 920; Q 37278. Collected 09/11/1997 in Durango, Mexico. Latitude 24° 24' 56" N. Longitude 105° 35' 16" W. Elevation 2580 m. on dirt road W of Durango on way to Mazatlan, diverging N at Coyotes at San Miguel de Cruces, 92 km up this dirt road, 1:250,000-scale Map G13-11. growing in pine woods near roadside (E side). Eight mature fruits collected.

PI 607842. *Solanum stoloniferum* Schltdl. & Bouche

Wild. RSSV 921; Q 37279. Collected 09/12/1997 in Durango, Mexico. Latitude 24° 42' 37" N. Longitude 104° 38' 35" W. Elevation 1900 m. Km 87 along Rt 45 N of Durango to Hidalgo del Parral, SSP 1:250,000-scale Map G13-11. Growing under cactus plants in organic soil. 44 fruits collected from 8 plants.

PI 607843. *Solanum stoloniferum* Schltdl. & Bouche

Wild. RSSV 926; Q 37280. Collected 09/21/1997 in Coahuila, Mexico. Latitude 26° 50' 53" N. Longitude 101° 16' 27" W. Elevation 2070 m. near top of Sierra de La Gloria, from about 15 km E of Monclova on road to Candela, then S on road to farm of Dr. Cardenas (by swimming pool complex), up private dirt road to nearing top of sierra, then hike to top, SSP 1:250,000-scale Map. Growing under cacti and bushes. All stages of development from non-flowering to fruiting pl., corolla pentagonal, violet, 3 plants, two tubers, and 13 fruits collected.

PI 607844. *Solanum verrucosum* Schltdl.

Wild. RSSV 931; Q 37281. Collected 09/24/1997 in Nuevo Leon, Mexico. Latitude 23° 59' N. Longitude 99° 44' W. Elevation 2750 m. slopes of Cerro El Viejo, along logging path up hill, ca. 5.5 km (by air) ENE of

town square of Zaragoza, SSP 1:250,000-scale Map F14-2. Growing in a limestone rock pile along roadside. Corolla pentagonal, violet, fruits verrucose, maturing to mature, 20 fruits collected from five plants.

PI 607845. *Solanum verrucosum* Schltdl.

Wild. RSSV 932; Q 37282. Collected 09/24/1997 in Nuevo Leon, Mexico. Latitude 23° 59' N. Longitude 99° 43' W. Elevation 2850 m. slopes of Cerro El Viejo, along logging path up hill, ca. 6 km (by air) ENE of town square of Zaragoza, SSP 1:250,000-scale Map F14-2. Growing among stones of natural landslide of limestone rocks on steep slope. Corolla pentagonal, violet, fruits verrucose, 40 fruits collected from 10 plants.

PI 607846. *Solanum verrucosum* Schltdl.

Wild. RSSV 934; Q 37283. Collected 09/25/1997 in Nuevo Leon, Mexico. Latitude 24° 52' 41" N. Longitude 100° 13' 20" W. Elevation 3220 m. Cerro Potosi, NW of Galeana, on road to microwave tower, by the first of the two sets of towers, SSP 1:250,00-scale map G14-10. Growing in oak pine forest. Thousands of plants present. Plants with leaves varying much in morphology. Fruits with raised verrucose points to raised dots, to no dots.

PI 607847. *Solanum stoloniferum* Schltdl. & Bouche

Wild. RSSV 936; Q 37284; WRF 3608 - 607847 X 620874. Collected 09/30/1997 in Mexico, Mexico. Latitude 19° 14' 56" N. Longitude 99° 35' 15" W. Elevation 2610 m. INIFAP Experimental Station potato field, outskirts of Metepec, SSP 1:250,000-scale map E14-2. Growing along fence row. Corollas white and purple on different plants, 20 fruits collected from five plants.

PI 607848. *Solanum verrucosum* Schltdl.

Wild. RSSV 939; Q 37285. Collected 10/01/1997 in Hidalgo, Mexico. Latitude 20° 10' 4" N. Longitude 98° 41' 35" W. Elevation 2830 m. El Chico National Park N of Pachuca, 5 km W along the road diverging into the park, on both sides of road, by sign La Cabanas de Lobo, SSP 1:250,000-scale map F14-11. Growing in fir and oak forest with moss on leaf litter. No flowers present, fruits with raised verrucose points to non-raised clearer green dots, to no dots, 20 fruits collected from five pl.

PI 607849. *Solanum demissum* Lindl.

Wild. RSSV 940; Q 37286. Collected 10/01/1997 in Hidalgo, Mexico. Latitude 20° 10' 4" N. Longitude 98° 41' 35" W. Elevation 2830 m. El Chico National Park N of Pachuca, 5 km W along road diverging into the park, on S side of road, by sign La Cabanas de Lobo, SSP 1:250,000-scale map F14-11. Growing in fir and oak forest with moss on leaf litter. Four fruits collected from one plant.

PI 607850. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 941; Q 37287. Collected 10/01/1997 in Hidalgo, Mexico. Latitude 20° 18' 57" N. Longitude 98° 15' 16" W. Elevation 2290 m. on Metepec-Tenango de Doria road, 20 km NE of intersection of road entering Metepec, on N side of road, SSP 1:250,000-scale map E14-3. growing at base of rock. Plants to 30 cm tall, no flowers present, fruits ovoid, pointed at end.

PI 607851. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 943; Q 37288. Collected 10/01/1997 in Hidalgo, Mexico. Latitude 20° 18' 56" N. Longitude 98° 15' 30" W. Elevation 2270 m. on

Metepec-Tenango de Doria road, 16 km NE of intersection of this road with road entering Metepec, on S side of road on slope, SSP 1:250,000-scale map E14-3. Growing on slope by roadside and among and under shrubs down slope. 20 fruits collected from five plants.

PI 607852. *Solanum oxycarpum* Schiede

Wild. RSSV 944; Q 37289. Collected 10/01/1997 in Hidalgo, Mexico. Latitude 20° 18' 56" N. Longitude 98° 15' 30" W. Elevation 2280 m. on Metepec-Tenango de Doria road, 16 km NE of intersection of this road with road entering Metepec, on S side of road from 50 and then 250 m up slope off road, SSP 1:250,000-scale map E14-3. Growing in moist organic soil among and under shrubs. Fruits conic, eight fruits collected from three plants.

PI 607853. *Solanum oxycarpum* Schiede

Wild. RSSV 949; Q 37292. Collected 10/02/1997 in Veracruz, Mexico. Latitude 19° 36' 44" N. Longitude 97° 1' 55" W. Elevation 2188 m. collected at La Joya (Perote-Jalapa road) ca 100 m S of road by the restaurants on the road, SSP 1:250,000-scale map E14-3. Growing in pine litter with moss covering of soil covering volcanic rocks. 10 fruits collected from four plants, fruits mature, conical and pointed at end.

PI 607854. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 950; Q 37293. Collected 10/04/1997 in Puebla, Mexico. Latitude 18° 17' 50" N. Longitude 97° 3' 58" W. Elevation 2640 m. from Tehuacan to Oaxaca road, turn NE on road to Zoquitlan, 22 km along road, by divergence of road to Coyomeapa, SSP 1:250,000-scale map E14-6. Growing on steep slope in waste area by roadside, in area of pines and oaks, growing with *Solanum oxycarpum*. Six fruits collected from three plants.

PI 607855. *Solanum oxycarpum* Schiede

Wild. RSSV 951; Q 37294. Collected 10/04/1997 in Puebla, Mexico. Latitude 18° 17' 50" N. Longitude 97° 3' 58" W. Elevation 2640 m. from Tehuacan to Oaxaca road, turn NE on road to Zoquitlan, 22 km up road, by divergence of road to Coyomeapa, SSP 1:250,000-scale map E14-6. growing in waste area on steep slope by roadside, in area of pines and oaks, and in adjacent pine and oak woods, growing with *Solanum brachycarpum*. 50 fruits collected from 15 plants.

PI 607856. *Solanum oxycarpum* Schiede

Wild. RSSV 952; Q 37295. Collected 10/04/1997 in Oaxaca, Mexico. Latitude 18° 10' 31" N. Longitude 97° 0' 22" W. Elevation 2240 m. Km 25 on the road from Teotitlan to Huautla, about 20 m S of road above stream, SSP 1:250,000-scale map E14-6. Growing on steep slope by roadside, in pine and oak woods in shade. 13 fruits collected from five plants.

PI 607857. *Solanum oxycarpum* Schiede

Wild. RSSV 953; Q 37296. Collected 10/04/1997 in Oaxaca, Mexico. Latitude 18° 9' 57" N. Longitude 96° 59' 52" W. Elevation 2370 m. Km 27.2 on road from Teotitlan to Huautla, at Puerto Soledad, SSP 1:250,000-scale map E14-6. Growing in pine and oak woods. 20 fruits collected from eight plants.

PI 607858. *Solanum morelliforme* Bitter & Munch

Wild. RSSV 954; Q 37297. Collected 10/04/1997 in Oaxaca, Mexico. Latitude 18° 9' 57" N. Longitude 96° 59' 52" W. Elevation 2370 m. Km

27.2 on road from Teotitlan to Huautla, at Puerto Soledad, SSP 1:250,000-scale map E14-6. Growing on branch of a mature pine tree in shade. 20 fruits collected from four plants.

PI 607859. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 958; Q 37299. Collected 10/06/1997 in Oaxaca, Mexico. Latitude 16° 6' 58" N. Longitude 96° 28' 36" W. Elevation 2750 m. on Rt. 175 (Oaxaca to Puerto Angel road), 4.0 km N of N end (by church) of Suchiltepec, by km marker 143, by water drain underpass base on E side of road, SSP 1:250,000-scale map E14-2. Growing in moist organic soil in area of pine and oak woods. Corollas purple, rotate, 20 mature ovate fruits collected from five plants.

PI 607860. *Solanum oxycarpum* Schiede

Wild. RSSV 959; Q 37300. Collected 10/10/1997 in Chiapas, Mexico. Latitude 16° 48' 52" N. Longitude 92° 34' 58" W. Elevation 2800 m. Cerro Zontehuitz, 9.7 km up microwave tower road, turning off the San Cristobal de las Casas to Tenejapa Road, same location as Tarn et al. 277, SSP 1:250,000-scale map E15-11. Growing along roadside in black organic soil. Eight fruits collected from two plants, fruits ovate-conical, mature, corolla rotate, purple.

PI 607861. *Solanum oxycarpum* Schiede

Wild. RSSV 960; Q 37301. Collected 10/10/1997 in Chiapas, Mexico. Latitude 16° 49' 6" N. Longitude 92° 34' 49" W. Elevation 2950 m. 50 m walk down hill from uppermost of antenna cluster on Cerro Zontehuitz, by lower of two shrines, SSP 1:250,000-scale map E15-11. growing in black organic soil. Corollas white and purple in same population, fruits ovoid-conical, mature, 15 fr coll from five plants, lvs w & w/o interjected lfts.

PI 607862. *Solanum oxycarpum* Schiede

Wild. RSSV 961; Q 37302. Collected 10/11/1997 in Chiapas, Mexico. Latitude 15° 24' 13" N. Longitude 92° 10' 43" W. Elevation 2410 m. 17.4 km N of Rt. 190 just S of Motozintla, on road to El Porvenir, ca 50 m W of road, SSP 1:250,000-scale map D15-2 (very close to Spooner et al. 4211 collected in 1988). Growing in rich soil in openings in woods. Corolla rotate, purple, fruit conical, 16 fruits collected from four plants.

PI 607863. *Solanum clarum* Correll

Wild. RSSV 962; Q 37303. Collected 10/11/1997 in Chiapas, Mexico. Latitude 15° 27' 58" N. Longitude 92° 16' 50" W. Elevation 2850 m. 1.1 km N of town square of El Porvenir, on road to Siltepec, ca 50 m W of road, SSP 1:250,000-scale map D15-2 (very close to Spooner et al. collection 4216 collected in 1988). Growing in moss under mature pine trees in organic soil. No flowers, fruits rare, round, three fruits collected from three plants.

PI 607864. *Solanum schenckii* Bitter

Wild. RSSV 964; Q 37304. Collected 10/13/1997 in Oaxaca, Mexico. Latitude 17° 9' 44" N. Longitude 93° 35' 2" W. Elevation 2720 m. 3.5 km E of La Cumbre on road to Yuquila, and 3.3 km W of Yuquila, SSP 1:250,000-scale map E14-9. Growing in recent clearing in pine and oak woods. Corolla purple, lighter adaxially, upper pair of lateral leaflets decurrent on only some plants, 13 ovoid, verrucose fruits coll. 3 pl.

- PI 607865. *Solanum iopetalum*** (Bitter) Hawkes
 Wild. RSSV 965; Q 37305. Collected 10/18/1997 in Guerrero, Mexico.
 Latitude 17° 33' 2" N. Longitude 99° 41' 32" W. Elevation 2200
 m. road W of Chilpancingo de las Bravos, 1 km W of Omiltemi, 15 m off N
 side of road, SSP 1:250,000-scale map E14-8. Growing in clearing in oak
 pine woods. Corolla rotate, purple streaked with white, 12
 ovoid-conical fruits collected from three plants.
- PI 607866. *Solanum iopetalum*** (Bitter) Hawkes
 Wild. RSSV 966; Q 37306. Collected 10/18/1997 in Guerrero, Mexico.
 Latitude 17° 33' 3" N. Longitude 99° 42' 1" W. Elevation 2370 m.
 road W of Chilpancingo de los Bravos, 3 km W of Omiltemi, 15 m on S side
 of road, SSP 1:250,000-scale map E14-8. Growing in oak pine woods in
 rich soil over volcanic rocks. Corolla rotate, purple streaked with
 white, two ovoid-conical fruits collected from one plant.
- PI 607867. *Solanum iopetalum*** (Bitter) Hawkes
 Wild. RSSV 967; Q 37307. Collected 10/18/1997 in Guerrero, Mexico.
 Latitude 17° 33' 16" N. Longitude 99° 42' 45" W. Elevation 2530
 m. road W of Chilpancingo de los Bravos, 4.3 km W of Omiltemi, on both
 sides of road, SSP 1:250,000-scale map E14-8. Growing along roadside and
 in clearing in oak pine woods. Corolla rotate, purple streaked with
 white, 24 ovoid-conical fruits collected from eight plants.
- PI 607868. *Solanum demissum*** Lindl.
 Wild. RSSV 971; Q 37308. Collected 10/20/1997 in Mexico, Mexico.
 Latitude 19° 8' 52" N. Longitude 99° 48' 32" W. Elevation 3450
 m. on Rt. 10, 4.8 km S of La Puerta (on Rt. 134), on W side of road, in
 Parque Nacional Nevado de Toluca, on W-facing lower slopes of volcano,
 SSP 1:250,000-scale map E14-2. Growing in rich organic soil along
 roadside in area of pine and fir forest. Flowers not present, eight
 ovoid fruits collected from four plants.
- PI 607869. *Solanum demissum*** Lindl.
 Wild. RSSV 975; Q 37310. Collected 10/20/1997 in Mexico, Mexico.
 Latitude 19° 4' 37" N. Longitude 99° 50' 16" W. Elevation 3100
 m. at El Capulin, a small settlement 21.3 km S of La Puerta (on Rt.
 134), in Parque Nacional Nevado de Toluca, on W-facing lower slopes of
 volcano, SSP 1:250,000-scale map E14-2. Growing in rich organic soil
 about house and fields, in area of pine and fir woods, with *S. x*
edinense. Eight fruits collected from five plants.
- PI 607870. *Solanum iopetalum*** (Bitter) Hawkes
 Wild. RSSV 976; Q 37311. Collected 10/20/1997 in Mexico, Mexico.
 Latitude 19° 3' 59" N. Longitude 99° 50' 40" W. Elevation 3100
 m. from El Capulin, a small settlement 21.3 km S of La Puerta (on Rt.
 134), drive 2 km E and then S on track into forest, in Parque Nacional
 Nevado de Toluca, on W-facing lower slopes of volcano, SSP
 1:250,000-scale map E14-2. Growing in rich soil in pine and fir woods.
 Flowers not present, nine ovoid-conical fruits collected from four
 plants, this species abundant.
- PI 607871. *Solanum demissum*** Lindl.
 Wild. RSSV 977; Q 37312. Collected 10/20/1997 in Mexico, Mexico.
 Latitude 19° 3' 59" N. Longitude 99° 50' 40" W. Elevation 3100
 m. from El Capulin, a small settlement 21.3 km S of La Puerta (on Rt.

134), drive 2 km E and then S along track into woods, in Parque Nacional Nevado de Toluca, on W-facing lower slopes of volcano, SSP 1:250,000-scale map E14-2. Growing in rich organic soil along roadside pine and fir woods. Eight ovoid fruits collected from six plants.

PI 607872. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 982; Q 37313. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 9' 56" N. Longitude 99° 53' 35" W. Elevation 2750 m. Growing along roadside and 50 m downslope of road, on N side of Rt. 134, 35.7 km SW of Toluca (by posted road signs), shortly SW of entrance to Meson Viejo, SSP 1:250,000-scale map E4-12. Growing in pine fir woods. Corollas rotate, purple, 31 ovoid fruits collected from 11 plants.

PI 607873. *Solanum demissum* Lindl.

Wild. RSSV 984; Q 37314. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 9' N. Longitude 99° 53' W. Elevation 2750 m. growing about 500 m SW of Meson Viejo, about 35 km SW of Toluca (by posted road signs, SSP 1:250,000-scale map E14-2. Growing at base of Agave plant at edge of cultivated field. One plant with ovoid fruits collected.

PI 607874. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 987; Q 37315. Collected 10/23/1997 in Michoacan, Mexico. Latitude 19° 27' 48" N. Longitude 102° 20' 25" W. Elevation 2550 m. NW-facing slope of Volcan Tancitaro, 11 km SE of Periban on road to Paso la Nieve, then a 50 m walk uphill SE of road, SSP 1:250,000-scale map E13-3. Growing among shrubs in newly planted avocado plantation. Flowers absent, 27 round dotted or verrucose fruits collected from eight plants.

PI 607875. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 988; Q 37316. Collected 10/23/1997 in Michoacan, Mexico. Latitude 19° 27' N. Longitude 102° 20' W. Elevation 2600 m. NW-facing slope of Cerro Tancitaro, 11 km SE of Periban on road to Paso la Nieve, then a 1.5 km walk SE uphill, SSP 1:250,000-scale map E13-3. growing among shrubs in newly planted avocado plantation. Flowers absent, tubers and dotted and verrucose fruits collected.

PI 607876. *Solanum iopetalum* (Bitter) Hawkes

Wild. RSSV 989; Q 37317. Collected 10/23/1997 in Michoacan, Mexico. Latitude 19° 27' N. Longitude 102° 20' W. Elevation 2650 m. NW-facing slope of Cerro Tancitaro, 11 km SE of Periban on road to Paso la Nieve, then a 2 km walk SE up hill, SSP 1:250,000-scale map E13-3. growing among shrubs in newly planted avocado plantation. Corollas rotate with small acumens, white mottled purple, with white rays top and bottom, dotted or verrucose fruits collected.

PI 607877. *Solanum demissum* Lindl.

Wild. RSSV 996; Q 37318. Collected 10/27/1997 in Mexico, Mexico. Latitude 19° 10' 46" N. Longitude 99° 40' 19" W. Elevation 2800 m. 3.5 km SW of Zacango (zoo) at SW end, on paved and then dirt road ascending Nevado de Colima, on E-facing slope of volcano, SSP 1:250,000-scale map E14-2. Growing in sandy soil under shrubs. Flowers absent, two fruits collected from one plant.

PI 607878. *Solanum demissum* Lindl.

Wild. RSSV 997; Q 37319. Collected 10/27/1997 in Mexico, Mexico.

Latitude 19° 11' 46" N. Longitude 99° 13' 58" W. Elevation 3270 m. W-facing slope of Volcan Ajusco, about 5 km S of El Ajusco, on W side of road, SSP 1:250,000-scale map E14-2. Growing in organic soil among shrubs in area of pine trees. Flowers absent, 30 fruits and two tubers collected from 10 plants.

PI 607879. *Solanum demissum* Lindl.

Wild. RSSV 998; Q 37320. Collected 10/27/1997 in Mexico, Mexico. Latitude 19° 9' 35" N. Longitude 99° 23' 47" W. Elevation 3200 m. W-facing slope of Volcan Ajusco, Km 5 from Tlaxiaco-Ajusco, SSP 1:250,000-scale map E14-2. Growing on rocky organic soil in area of pine trees. Flowers absent, four fruits collected from two plants.

The following were collected by Antonio Rivera-Pena, INIFAP, Programa Nacional de la Papa, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico. Received 08/25/1988.

PI 607880. *Solanum hintonii* Correll

Wild. RH 97; Q 37330. Collected 08/25/1988 in Mexico, Mexico. Latitude 19° 2' N. Longitude 100° 6' W. Elevation 1860 m. 6.5 km SW of Temascaltepec-Valle de Bravo road, on road to San Pedro Tenayac, on S side of road, about 50 m downstream of bridge over road. Along streambank in area with pine and oak; some in moss. Flowers stellate and white, fruit conical, green and white mottle.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Alberto Salas, International Potato Center, Avenida La Molina 1895, PO Box 1558, Lima, Lima 12, Peru. Received 02/23/1998.

PI 607881. *Solanum acaule* Bitter

Wild. SS 7202; Q 37654. Collected 02/23/1998 in Puno, Peru. Latitude 16° 15' 39" S. Longitude 69° 0' 37" W. Elevation 3850 m. Yunguyo: in town of Muchace, ca. 10 km ENE of Yunguyo, 100 m N of road. growing in a cultivated potato field. Plants in flower and fruit.

PI 607882. *Solanum megistacrolobum* subsp. *toralapanum* (Cardenas & Hawkes) Giannattasio & D. M. Spooner

Wild. SS 7206; Q 37656. Collected 03/01/1998 in Puno, Peru. Latitude 15° 16' 52" S. Longitude 70° 16' 53" W. Elevation 3910 m. Lampa: 30.8 km S of big church in Pucara on new road to Julica, exactly at km 1291, ca. 100 m E (uphill) of road. Growing among rocks on slope below cliff. Plants common, fruits and flowers present.

PI 607883. *Solanum raphanifolium* Cardenas & Hawkes

Wild. SS 7207; Q 37657. Collected 03/02/1998 in Cuzco, Peru. Latitude 14° 29' 35" S. Longitude 71° 9' 51" W. Elevation 3700 m. Canchis: cemetery on SE end of town of Marangani, on E side of road to Puno. Growing in grasses in sunny areas and at edge of bushes. Purple, pentagonal corollas and mature fruits present.

PI 607884. *Solanum marinasense* Vargas

Wild. SS 7209; Q 37658. Collected 03/03/1998 in Cuzco, Peru. Latitude 13° 35' 32" S. Longitude 71° 52' 32" W. Elevation 3550 m. Cusco: from the Universidad Nacional San Antonio de Cusco on the S side of the

town of Cusco, E of main road through town, drive up road going toward Granja Kaira San Geronimo to km 7.5, then walk uphill 300 m. Growing in rocky field on slope among grasses and Compositae and shrubs. Purple pentagonal corollas and mottled spherical fruits present.

PI 607885. *Solanum brevicaulis* Bitter

Wild. SS 7219; Q 37661. Collected 03/06/1998 in Cuzco, Peru. Latitude 13° 14' 57" S. Longitude 71° 54' 37" W. Elevation 3740 m. Calca: 13.6 km N of town square of Calca on road to Lares, E side of road. growing among rocky soil and out of rock walls. Corollas purple, rotate, fruits globose to slightly oval.

PI 607886. *Solanum tuberosum* subsp. *andigenum* (Juz. & Bukasov) Hawkes

Cultivated. SS 7223; Q 37664. Collected 03/08/1998 in Cuzco, Peru. Latitude 13° 49' 37" S. Longitude 71° 49' 41" W. Elevation 2510 m. Paruro: 13.6 km S of Paruro on the road to Colcha. Growing in corn field. Escaped cultivar in corn field, tubers tan with purple splotches, no flowers present but mature fruits collected.

PI 607887. *Solanum santolallae* Vargas

Wild. SS 7228; Q 37666. Collected 03/12/1998 in Cuzco, Peru. Latitude 13° 10' 46" S. Longitude 72° 32' 30" W. Elevation 2650 m. Urubamba: growing along Inca train from Machu Pichu N to Winaywayna, about 1.5 km S of Winaywayna. Growing in organic soil in rockfall by path. Corollas rose-purple, rotate, fragrant, fruits conical, maturing.

PI 607888. *Solanum raphanifolium* Cardenas & Hawkes

Wild. SS 7234; Q 37669. Collected 03/13/1998 in Cuzco, Peru. Latitude 13° 13' 38" S. Longitude 72° 30' 19" W. Elevation 3700 m. Urubamba: growing about archaeological site of Runquracay, on Inca trail N and W of Machu Pichu, ca. 2 km E of village of Pacaymayo, at crossing of Inca Trail with Rio Pacaymayo. Growing among *Stipa ichu* grasses and among short bushes. Corollas purple, pentagonal, fruits globose to ovoid.

PI 607889. *Solanum buesii* Vargas

Wild. SS 7235; Q 37670. Collected 03/13/1998 in Cuzco, Peru. Latitude 13° 14' S. Longitude 72° 30' W. Elevation 3600 m. Urubamba: growing about Rio Pacaymayo, at village of Pacaymayo, at crossing of River with Inca Trail N and W of Machu Pichu. Growing by stream. Corollas purple, rotate with large acumens, fruits conical.

PI 607890. *Solanum chillonanum* Ochoa

Wild. SS 7239; Q 37671. Collected 03/21/1998 in Apurimac, Peru. Latitude 13° 50' 16" S. Longitude 72° 15' 8" W. Elevation 4050 m. Cotabambas: located at a place called Quellomayo, 39 km SE of center of town of Cotabambas, ca. (not measured) 10 km NW of town of Tambobamba, ca. 50 m E of road. Growing among rocks and *Stipa ichu* grass in humid organic soil. Corollas purple, rotate, fruits globose, plants to 50 cm tall.

PI 607891. *Solanum acroscopicum* Ochoa

Wild. SS 7243; Q 37673. Collected 04/05/1998 in Tacna, Peru. Latitude 17° 27' 4" S. Longitude 70° 0' 47" W. Elevation 3215 m. Tarata: 11.5 km NE of town square of Tarata on road to Anaque Putinaa, among bushes on sides of irrigation canal, just above water holding tank.

growing along sides of canal in area of very dry shrubs and cactus.
Fruits globose.

PI 607892. *Solanum acaule* Bitter

Wild. SS 7245; Q 37675. Collected 04/06/1998 in Moquegua, Peru.
Latitude 16° 51' 55" S. Longitude 70° 40' 14" W. Elevation 3660
m. Mariscal Nieto: 15 km NW of El Cruce on road to Carumas (33 km
between these places). Growing along roadside and adjacent upper slope
among *Stipa ichu* grasses and bushes. Mature fruits collected.

PI 607893. *Solanum* sp.

Wild. SS 7249; Q 37678. Collected 04/08/1998 in Moquegua, Peru.
Latitude 16° 37' 9" S. Longitude 71° 10' 26" W. Elevation 3300
m. General Sanchez Cerro: 2 km E of entrance (to the S) to town square
of Puquina on road to Omate, ca 100 m uphill (N or road). Growing in
sandy soil at border of cultivated field on ancient terrace ("andenes").
Corollas purple, rotate, fruits maturing to globose, spherical,
verrucose.

PI 607894. *Solanum medians* Bitter

Wild. SS 7250; Q 37679. Collected 04/09/1998 in Arequipa, Peru.
Latitude 16° 23' 48" S. Longitude 71° 26' 7" W. Elevation 2750
m. Arequipa: at base of small cliff on E side of Quebrada Honda, ca. 25
m from base of quebrada, ca. 100 m upstream (N) from Arequipa to
Chiguata road, at a point 59.8 km ENE of Pan American Highway (by posted
road signs). Growing in very dry stony and sandy soil. Plants brown and
withering, 10-20 cm tall, tubers small and light tan and shiny, fruits
globose.

PI 607895. *Solanum medians* Bitter

Wild. SS 7252; Q 37680. Collected 04/09/1998 in Arequipa, Peru.
Latitude 16° 16' 50" S. Longitude 71° 31' 1" W. Elevation 2600
m. Arequipa: 18 km N of main town square (Plaza de Armas) of Arequipa on
road to Cabreria (just S of this locality), then 100-150 m W or road.
growing among grasses and bushes and cacti in very dry sandy and rocky
soil. Plants brown and withering, 10-20 cm tall, tubers small and light
tan and shiny, fruits globose to ovoid.

PI 607896. *Solanum aymaraesense* Ochoa

Wild. SS 7257; Q 37684. Collected 04/17/1998 in Apurimac, Peru.
Latitude 14° 3' 44" S. Longitude 73° 14' 54" W. Elevation 2465
m. Aymareas: 400 E of San Francisco (a place located at the deviation of
the road N of Toraya), on S side of road, ca. 20 m from margin of Rio
Chalhuanca. Growing in organic soil among large rocks. Plants to 1 m
tall, flowers absent, fruits globose.

The following were developed by Joseph W. Saunders, USDA, ARS, Michigan State University, Sugarbeet, Bean & Cereal Res., East Lansing, Michigan 48823-1325, United States; J.M. Halloin, USDA, ARS, Sugarbeet and Bean Research Unit, Dept. of Botany and Plant Pathology, East Lansing, Michigan 48824, United States; J. Mitchell McGrath, USDA, ARS, Department of Crop and Soil Science, Michigan State University, East Lansing, Michigan 48824-1325, United States. Received 04/15/1999.

PI 607897. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. Population. EL48; 82B10-00. GP-223. Monogerm O type line with

resistance to *Aphanomyces*, *Cercospora*, *Aphanomyces*, and some resistance to *Rhizoctonia*.

The following were developed by J. Mitchell McGrath, USDA, ARS, Department of Crop and Soil Science, Michigan State University, East Lansing, Michigan 48824-1325, United States. Received 04/15/1999.

PI 607898. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. Population. SR80. Pedigree - Original parentage from G.W. Demmings globe shaped red table beet X sugarbeet selections. Self incompatible multigerm progeny segregating mainly red hypocotyl color, with moderate resistance to *Cercospora* leaf spot. Averages 107% root weight, 96% sucrose percentage, and 95% recoverable white sugar per ton compared with the commercial hybrid Mono-Hy-E4. Field trial hybrids having SR80 as pollinator parent averaged 100-123% root weight, 93-96% sucrose percentage, and 100% of the purity of Mono-Hy-E4. Can be machine harvested with 50% less soil adhering to the taproots than for Mono-Hy-E4. In comparison with SR87, a smooth root germplasm, produces about one ton per acre less root weight with 0.9% higher sucrose percentage. Root smoothness score of 2.25 in comparison of 1.75 for SR87 and 3.25 for Mono-Hy-E4.

The following were developed by J. C. Theurer, Sugarbeet Investigations, Crops Res. Lab., Utah State Univ., Logan, Utah 84322, United States; Joseph W. Saunders, USDA, ARS, Michigan State University, Sugarbeet, Bean & Cereal Res., East Lansing, Michigan 48823-1325, United States; J.M. Halloin, USDA, ARS, Sugarbeet and Bean Research Unit, Dept. of Botany and Plant Pathology, East Lansing, Michigan 48824, United States; J. Mitchell McGrath, USDA, ARS, Department of Crop and Soil Science, Michigan State University, East Lansing, Michigan 48824-1325, United States. Received 04/15/1999.

PI 607899. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. Population. SR87. GP-215. Pedigree - Original parentage from G.W. Demmings globe-shaped root progenies (selections from table beet x sugar beet) crossed with SP6822-0 MM, the pollen parent of hybrid USH20. Self incompatible multigerm progeny segregating for red and green hypocotyl, with good resistance to *Cercospora* leaf spot. Can be machine harvested with 25-30% of the soil adhering to the tap root compared with commercial hybrids. Hybrids having SR87 as pollinator averaged 103% root weight, 88% sucrose percent, and 100% clear juice purity of the commercial hybrid Mono-Hy-E4.

The following were developed by Gerald Wilde, Kansas State University, Department of Entomology, 123 Waters Hall, Manhattan, Kansas 66506-4004, United States; Mitchell R. Tuinstra, Kansas State University, Department of Agronomy, 2004 Throckmorton Plant, Manhattan, Kansas 66506-5501, United States; Mitchell R. Tuinstra, Kansas State University, Department of Agronomy, 2004 Throckmorton Plant, Manhattan, Kansas 66506-5501, United States. Received 04/14/1999.

PI 607900. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Breeding. Pureline. KS 97. GP-569. Pedigree - IS 2388 derivative. Agronomically acceptable grain sorghum with outstanding resistance to greenbug (*Schizaphis graminum*). 3-dwarf genotype that flowers in approx.

73 days and grows to a height of 82 cm.

The following were developed by Mitchell R. Tuinstra, Kansas State University, Department of Agronomy, 2004 Throckmorton Plant, Manhattan, Kansas 66506-5501, United States. Received 04/14/1999.

PI 607901. Sorghum bicolor (L.) Moench **subsp. bicolor**

Breeding. Pureline. KS 98. GP-570. Pedigree - KS71///KS71//IAP3BR/IS22253. Elite, grain-sorghum pollinator that restores male fertility in A1 cytoplasm. Good general combining ability and hybrids produced are well-adapted to the dryland environments commonly found in the Central Great Plains. 3-dwarf genotype that flowers in 76 days and grows to a height of 100 cm. Possesses purple plant color and seeds have yellow endosperm and unpigmented testa.

The following were developed by S.N. Nigam, Int. Crops Res. Inst. for the Semi-Arid Tropics, Legumes Program, Patancheru, Andhra Pradesh 502 324, India . Received 01/04/2000.

PI 607902. Arachis hypogaea L.

Breeding. ICGV 94094. Oil content high. Resistant to foliar diseases. Advanced breeding line.

PI 607903. Arachis hypogaea L.

Breeding. ICGV 94113. Oil content high. Resistant to foliar diseases. Advanced breeding line.

PI 607904. Arachis hypogaea L.

Breeding. ICGV 94118. Oil content high. Resistant to foliar diseases. Advanced breeding line.

PI 607905. Arachis hypogaea L.

Breeding. ICGV 95356. Oil content high. Resistant to foliar diseases. Advanced breeding line.

PI 607906. Arachis hypogaea L.

Breeding. ICGV 94271. Oil content high. Insect pest resistant. Advanced breeding line.

PI 607907. Arachis hypogaea L.

Breeding. ICGV 94255. Oil content high. BND resistant. Advanced breeding line.

PI 607908. Arachis hypogaea L.

Breeding. ICGV 94269. Oil content high. BND resistant. Advanced breeding line.

PI 607909. Arachis hypogaea L.

Breeding. ICGV 95233. Oil content low. Insect pest resistant. Advanced breeding line.

PI 607910. Arachis hypogaea L.

Breeding. ICGV 95359. Oil content low. Resistant to foliar diseases. Advanced breeding line.

PI 607911. *Arachis hypogaea* L.

Breeding. ICGV 95360. Oil content low. Resistant to foliar diseases. Advanced breeding line.

PI 607912. *Arachis hypogaea* L.

Breeding. ICGV 96254. Oil content low. Resistant to foliar diseases. Advanced breeding line.

The following were developed by S.L. Dwivedi, Int. Crops Res. Inst. for the Semi-Arid Tropics, Genetic Resources Program, Patancheru P.O., Andhra Pradesh 502 324, India; S.N. Nigam, Int. Crops Res. Inst. for the Semi-Arid Tropics, Legumes Program, Patancheru, Andhra Pradesh 502 324, India; Young Keun Cheong, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), 381, Korea, South; Jong-Tae Kim, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South; Youn-Sup Oh, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South; Myung-Kyu Oh, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South; Young-Sun Jang, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South; Moon-Soo Park, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South; Su-Yeon Cho, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South; Jung-Gon Kim, National Honam Agricultural Experiment Station, RDA, Iksan 570-080, Korea, South; Ki-Hun Park, Research Management Bureau, Rural Development Administration (RDA), Suwon 441-707, Korea, South; Jong-Chul Ko, National Honam Agricultural Experiment Station, Rural Development Administration (RDA), Iksan 570-080, Korea, South. Received 05/28/1999.

PI 607913. *Arachis hypogaea* subsp. *fastigiata* Waldron

Cultivar. Pureline. "JEOKWANGTANGKONG"; ICGV 86326. CV-63. Pedigree - ICGV 87124 x G 201 F2-B1-B1-B1-B1-B1. Spanish type peanut. Growth habit erect with large size obovate dark green leaves. Average primary and secondary branches are 11. Pods 2-seeded, small with slight to moderate pod constriction, moderate pod beak and slight pod reticulation and ridges. Meat content 73%, 100-seed weight 49g, oil content 50%, protein content 21%, and O/L ratio of 1.4. Seeds light red color. Highly resistant to pod rot (*Fusarium solani*).

The following were developed by ConAgra, Inc., United States. Received 06/28/1999.

PI 607914 PVPO. *Cicer arietinum* L.

Cultivar. "STAN". PVP 9900290.

The following were donated by University of Saskatchewan, Crop Science Department, Saskatoon, Saskatchewan S7N 0W0, Canada. Received 1978.

PI 607915. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "LAIRD". Result of line selection from PI 343028 from Russia. Large-seeded (Chilean type) with yellow cotyledons and is higher yielding than Commercial Chilean lentils. Seed is thicker than most and

colorless (occasional purple splotches). Stems contain anthocyanin pigmentation. Flower is white with faint blue veins on the banner. Keel has faint blue tip, fading to colorless. 2-3 flowers and pods on fine axillary pedicels. Adapted to Saskatchewan.

The following were developed by Jim Shine, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; Barry Glaz, USDA, ARS, Sugarcane Field Station, 12990 U.S. Highway 441 N, Canal Point, Florida 33438, United States; P.Y.P. Tai, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; Christopher W. Deren, University of Florida, Institute of Food and Agriculture, EREC Box 8003, Belle Glade, Florida 33430-4702, United States; Jimmie D. Miller, USDA, ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; Jack C. Comstock, USDA, ARS, US Sugarcane Research Field Station, 12990 US Hwy 441 N, Canal Point, Florida 33438, United States. Received 06/01/1999.

PI 607916. Saccharum hybrid

Cultivar. "CP 88-1540". CV-107. Pedigree - CP 81-1238 / CP 78-1610. Recommended for planting only on sandy soil where sucrose concentration and cane tonage were better than the standards. Shows adequate resistance for commercial production in Florida to sugarcane mosaic virus (strain E), eye spot (*Bipolaris sacchari*), smut (*Ustilago scitaminea*), rust (*Puccinia melanocephala*) and has moderate resistance to leaf scald (*Xanthomonas albilineans*).

PI 607917. Saccharum hybrid

Cultivar. "CP 88-1834". CV-108. Pedigree - CP 72-1210 / LCP 81-30. Cane yield high on organic soils and with moderate sucrose content. Production on sandy soils equaled that of the most widely grown cultivar. Recommended for planting on both organic and sand soils. Shows adequate resistance for commercial production in Florida to sugarcane mosaic virus (strain E), leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), smut (*Ustilago scitaminea*), rust (*Puccinia melanocephala*) and RSD (*Clavibacter xyli*). Fiber content 10.52% compared with 10.37% for CP 70-1133.

PI 607918. Saccharum hybrid

Cultivar. "CP 89-2143". CV-109. Pedigree - CP 81-1254 / CP 72-2086. Exceptional clone with higher levels of sugar concentration and cane tonage than the standard. Recommended for planting only on organic soils. Shows adequate resistance for commercial production in Florida to leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), smut (*Ustilago scitaminea*), rust (*Puccinia melanocephala*), and RSD (*Clavibacter xyli*). Moderately resistant to sugarcane mosaic virus (strain E). Fiber content of 9.85% compared to 10.37% for the CP 70-1133, the commercial check.

PI 607919. Saccharum hybrid

Cultivar. "CP 89-2377". CV-110. Pedigree - Parentage unknown. Recommended for planting only on organic soils where the sucrose content was standard with higher cane yields for higher sugar/unit area production. Shows adequate resistance for commercial production in Florida to sugarcane mosaic virus (strain E), leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), smut (*Ustilago scitaminea*), rust (*Puccinia melanocephala*), and RSD (*Clavibacter xyli*).

Fiber content of 8.9% compared to 10.4% for CP 70-113.

The following were developed by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Juan Dominguez, Andalusian Institute for Agricultural Research and Training, CIFA "Alameda del Obispo", Apdo. 3092, Cordoba, Cordoba 14071, Spain. Donated by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Received 05/10/1999.

PI 607920. *Helianthus annuus* L.

Breeding. Inbred. R-185. GP-230. Pedigree - RHA 801 / Odessa Hybrid Bulk . Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Homozygous for fertility restoration of PET1 cytoplasmic male sterility.

PI 607921. *Helianthus annuus* L.

Breeding. Inbred. R-188. GP-231. Pedigree - RHA 801 / Odessa Hybrid Bulk . Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Homozygous for fertility restoration of PET1 cytoplasmic male sterility.

PI 607922. *Helianthus annuus* L.

Breeding. Inbred. R-190. GP-232. Pedigree - RHA 274 / Turbo. Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Heterozygous for fertility restoration of PET1 cytoplasmic male sterility.

PI 607923. *Helianthus annuus* L.

Breeding. Inbred. R-201. GP-233. Pedigree - RHA 274 / Edirne 87. Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Heterozygous for fertility restoration of PET1 cytoplasmic male sterility.

PI 607924. *Helianthus annuus* L.

Breeding. Inbred. R-202. GP-234. Pedigree - RHA 274 / Edirne 87. Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Heterozygous for fertility restoration of PET1 cytoplasmic male sterility.

PI 607925. *Helianthus annuus* L.

Breeding. Inbred. R-206. GP-235. Pedigree - RHA 274 / Edirne 87. Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Homozygous for fertility restoration of PET1 cytoplasmic male sterility.

PI 607926. *Helianthus annuus* L.

Breeding. Inbred. R-207. GP-236. Pedigree - RHA 274 / Edirne 87. Excellent yield and oil content potential. Resistance to Orobanche (*Orobanche cernua*) and Race 2 downy mildew (*Plasmopara halstedii*). Homozygous for fertility restoration of PET1 cytoplasmic male sterility.

The following were developed by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States;

Kassim Al-Khatib, Kansas State University, Agronomy Department, Manhattan, Kansas 66506, United States. Donated by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Received 05/10/1999.

PI 607927. *Helianthus annuus* L.

Genetic. Population. IMISUN-1. GS-18. Pedigree - HA 89*3/ H. annuus. Oilseed maintainer genetic stock with single-headed characteristic. Segregating for resistance to imazethapyr and imazamox herbicides.

PI 607928. *Helianthus annuus* L.

Genetic. Population. IMISUN-2. GS-19. Pedigree - RHA 409//RHA 376*2/ H. annuus. Oilseed restorer genetic stock which will segregate for the recessive branching characteristic. Segregating for resistance to imazethapyr and imazamox herbicides.

PI 607929. *Helianthus annuus* L.

Genetic. Population. IMISUN-3. GS-20. Pedigree - HA 292*3 / H. annuus. Confection maintainer genetic stock with the single-headed characteristic. Segregating for resistance to imazethapyr and imazamox herbicides.

PI 607930. *Helianthus annuus* L.

Genetic. Population. IMISUN-4. GS-21. Pedigree - RHA 324//RHA 280*2/ H. annuus. Confection restorer genetic stock which will segregate for the recessive branching characteristic. Segregating for resistance to imazethapyr and imazamox herbicides.

The following were developed by Richard A. Frederiksen, Texas A&M University, Department of Plant Pathology, and Microbiology, College Station, Texas 77843, United States; Bill Rooney, USDA, ARS, Beasley Lab, TAMU, College Station, Texas 77841, United States; Fred R. Miller, Texas A & M University, Department of Soil & Crop Science, College Station, Texas 77843-2474, United States. Received 05/27/1999.

PI 607931. *Sorghum bicolor* (L.) Moench *subsp. bicolor*

Breeding. Pureline. SAP-373; Tx2911. GP-567. Pedigree - (SC719-11E*SC630-11E(II))-1-3-B2-B1-B1-B2-B3-2-CBK. Seed ovate, bright red pericarp (RRYYII), thick mesocarp (zz), and no testa (blblB2B2). Plant color purple (PPQQ), awnless, and purple glumes that cover approx. 30% of the grain. Panicles medium in size, slightly open, narrow and taper to point at the tip of the panicle. B-line in the A1 cytoplasmic genetic male sterility system. Days to anthesis ranged from 62 to 89 depending on the environment. Tall three dwarf (dwlDw2dw3dw4), with a phenotypic range of height from 120 to 135 cm. Resistant to systemic downy mildew pathotype 1 but susceptible to pathotype 3. Susceptible to head smut. Very resistant to grain mold.

The following were developed by Richard A. Frederiksen, Texas A&M University, Department of Plant Pathology, and Microbiology, College Station, Texas 77843, United States; Bill Rooney, USDA, ARS, Beasley Lab, TAMU, College Station, Texas 77841, United States; S.D. Collins, Texas Agr. Exp. Sta., Texas A&M University, College Station, Texas 77843, United States; Darrell T. Rosenow, Texas A&M University, Texas Agricultural Experiment Station, Route 3, Lubbock, Texas 79401, United States. Received 05/27/1999.

PI 607932. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Breeding. Pureline. TAM Bk-59. GP-568. Pedigree - Bulk of 18 F8 lines with pedigree of (BTx623*QL3-India). Requires 59 days to reach 50% anthesis with individual plants ranging from 64 to 78 days. Plants three dwarf in height (dwlDw2dw3dw4) and the height averages 106 cm with a range from 85 to 130 cm. Inflorescence shape compact-elliptic and glumes purple, awnless, and cover less than one-quarter of each caryopsis. Grain has white epicarp, thick mesocarp, lacks a pigmented testa, and plants purple pigmented. Resistant to pathotypes 1 and 3 of *P. sorghi* and to all known Texas races of *Sporisorium reilianum*. Susceptible to *Colletotrichum graminicola*, but there is a range of response. Immune to damage caused by maize dwarf virus.

The following were developed by Terrance P. Riordan, Nebraska Agricultural Experiment Station, University of Nebraska, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; Jennifer M. Johnson-Cicalese, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; F.P. Baxendale, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; R.C. Shearman, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; P.G. Johnson, Utah State University, Dept. of Plants, Soils & Biometeorology, 4820 Old Main Hill, Logan, Utah 84322-4820, United States; R.E. Gaussoin, University of Nebraska, Dept. of Hort., Lincoln, Nebraska, United States; R.V. Klucas, University of Nebraska, Dept. of Biochem., Lincoln, Nebraska, United States. Received 06/10/1999.

PI 607933. *Bouteloua dactyloides* (Nutt.) Columbus

Cultivar. "Cultivar 61". CV-196. Pedigree - Female clone selected from a stand of buffalograss east of Kensington, Smith County, Kansas. Low growing and dark color. Smaller stolon nodes and leaf measurements than Texoka, which results in a turf of finer texture. Pubescent leaves are a distinguishing characteristic. Size of female flowers is similar to other varieties. Nearly 100% female. Determined to have a nuclear DNA content of 2.58-0.02 picograms DNA per nucleus. Color gray-blue-green. Improved turfgrass quality compared to older, forage type buffalograsses like Texoka and to turf varieties 315, 378, 609 and Prairie. Exhibited superior quality when mowed at heights as low as 1.6cm. Moderate rate of establishment. As a typical northern-adapted cultivar, enters winter dormancy early in fall.

The following were developed by Terrance P. Riordan, Nebraska Agricultural Experiment Station, University of Nebraska, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; Jennifer M. Johnson-Cicalese, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; F.P. Baxendale, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; R.E. Gaussoin, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; R.C. Shearman, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; P.G. Johnson, Utah State University, Dept. of Plants, Soils & Biometeorology, 4820 Old Main Hill, Logan, Utah 84322-4820, United States; R.V. Klucas, University of Nebraska, Dept. of Biochem., Lincoln, Nebraska, United States. Received 06/10/1999.

PI 607934. *Bouteloua dactyloides* (Nutt.) Columbus

Cultivar. "Cultivar 118". CV-197. Pedigree - Female clone selected from NE 84-104. Male parent not known. Vigorous buffalograss similar to 609 but with improved winter hardiness. Exhibits stolon internodes similar to 315 and shorter than 609. Leaf measurements are like the other turf varieties and experimentals 315, 609, NE86-61, and Ne86-120, but smaller than Texoka. This results in a finer leaf texture than Texoka. Significantly less pubescence on nodes and leaves. Improved turf quality characteristics when compared to forage-type varieties, and is similar to other turf varieties. Much improved sod-forming ability when compared to other cultivars hardy in the northern part of the Great Plains. Exhibited excellent quality when mowed at heights as low as 1.6cm, similar to the height used on golf course fairways.

The following were developed by Terrance P. Riordan, Nebraska Agricultural Experiment Station, University of Nebraska, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; Jennifer M. Johnson-Cicalese, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; F.P. Baxendale, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; R.E. Gaussoin, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; John E. Watkins, University of Nebraska, Dept. of Plant Pathology, Lincoln, Nebraska 68583, United States; P.G. Johnson, Utah State University, Dept. of Plants, Soils & Biometeorology, 4820 Old Main Hill, Logan, Utah 84322-4820, United States; R.V. Klucas, University of Nebraska, Dept. of Biochem., Lincoln, Nebraska, United States. Received 06/10/1999.

PI 607935. *Bouteloua dactyloides* (Nutt.) Columbus

Cultivar. "Cultivar 120". CV-198. Pedigree - Female clone selected from a stand of buffalograss in Osborne County, Kansas. Dark green color and excellent turfgrass quality at low to high mowing heights. Exhibits excellent quality when mowed at heights as low as 1.6cm. Leaf width measurements are smaller than Texoka, indicating a finer texture of the resulting turf. Pubescent nodes and leaves are two of the most distinguishing characteristics. Female flowers tend to be larger than the other varieties, but not significantly larger than 315 and Texoka. Nearly 100% female.

The following were developed by Hugo E. Vivar, International Maize & Wheat Improvement Center, Lisboa 27, Apdo. Postal 6-641, Mexico City, Federal District 06600, Mexico; Patrick M. Hayes, Oregon State University, Department of Crop Science, Crop Science Building 107, Corvallis, Oregon 97331-3002, United States; Russ S. Karow, Oregon State University, Dept. of Crop & Soil Science, Corvallis, Oregon 97331-3002, United States; Ann Corey, Oregon State University, Dept. of Crop and Soil Science, 109 Crop Science Bldg., Corvallis, Oregon 97331-3002, United States; R. Dovel, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States; C. Mundt, Oregon State University, Dept. of Botany and Pl. Pathology, Corvallis, Oregon 97731, United States; K. Rhinart, Oregon State University, Dept. of Crop and Soil Sciences, Corvallis, Oregon 97731, United States. Received 07/08/1999.

PI 607936. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "ORCA"; BSR45; Icaro. CV-278. Pedigree - Calicuchima-sib/Bowman-derivative = LBIran/UNA8271//Gloria/Comanche/4/ND586/CIho2376//ND4880/3/4*Bowman.

Released 1998. Two-row spring barley with quantitative resistance to barley stripe rust (*Puccinia striiformis*) and Barley Yellow Dwarf Virus (BYDV). Quantitative trait loci (QTLs) determining resistance to barley stripe rust were mapped on chromosomes 4 (4H) and 7 (5H). Resistance to BYDV determined by the *Ryd2* gene on chromosome 3 (3H). One of 110 doubled haploid lines derived from the F1 of Calicutima-sib/Bowman-derivative. The doubled haploids were developed by the *Hordeum bulbosum* technique. Grain very plump, high test weight, and an acceptable yield record under irrigated conditions and under dryland conditions where earliness is an advantage. Novel quality profile of high starch content, high enzymes, and low beta glucan. Rough-awns, white-aleurone, and short rachilla hair. Additional genotype identifiers are 35 Restriction Fragment Length Polymorphisms (RFLPs) and 15 Simple Sequence Repeats.

The following were collected by William W. Roath, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Taciana Barbosa Cavalcanti, EMBRAPA-CENARGEN, SAIN - Parque Rural, Caixa Postal 10.2372, Brasilia, Federal District 70770, Brazil. Donated by L. Coradin, Centro Nacional de Recursos Geneticos, Empresa Brasileira de Pesquisa, Agropecuaria, CEP 70.000, Brasilia, Federal District, Brazil. Received 04/27/1990.

PI 607937. *Cuphea ericoides* Cham. & Schltdl.

Wild. TBC-WWR 365; TBC 365; BRA 001571; Ames 13575. Collected 03/01/1989 in Bahia, Brazil. Latitude 11° 33' S. Longitude 41° 6' W. Elevation 870 m. 8 km east-southeast of Morro do Chapeau on BA 052. Roadside flat into pasture, near rocky outcroppings, sands among rocks.

The following were collected by William W. Roath, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; G. Pedralli, EMBRAPA-CENARGEN, Centro Internacional de Mejoramiento de Maiz y Trigo, Brasilia, Federal District, Brazil. Donated by EMBRAPA-CENARGEN, S.A.I.N. - Parque Rural - C.P. 10.2372, Brasilia, Federal District CEP 70.770, Brazil. Received 05/06/1991.

PI 607938. *Cuphea calophylla* subsp. *mesostemon* (Koehne) Lourteig

Wild. GP-WWR 003026; BRA 002364; Ames 15481. Collected 11/01/1989 in Parana, Brazil. Latitude 25° 13' S. Longitude 49° 59' W. Elevation 895 m. Vila Velha. 31 km northwest of intersection Uniao da Vitoria and road to Cruz Machado, toward Cruz Machado at Rio Palmital. Roadside, open grassland.

PI 607939. *Cuphea varia* Koehne ex Bacig.

Wild. GP-WWR 003050; BRA 002488; Ames 15559. Collected 11/05/1989 in Parana, Brazil. Latitude 25° 34' S. Longitude 54° 32' W. Elevation 255 m. 6 km southeast of Foz do Iguacu toward falls on BR 469. Roadside into wet swampy pasture.

PI 607940. *Cuphea glutinosa* Cham. & Schltdl.

Wild. GP-WWR 003167; BRA 003204; Ames 15590. Collected 11/25/1989 in Rio Grande do Sul, Brazil. Latitude 29° 18' S. Longitude 50° 58' W. Elevation 740 m. 17 km southeast of Ana Rech toward Vila Oliva. Steep open grassland above road, rocky clay loams.

- PI 607941. *Cuphea glutinosa* Cham. & Schltdl.**
 Wild. GP-WWR 003181; BRA 003280; Ames 15593. Collected 11/26/1989 in Rio Grande do Sul, Brazil. Latitude 28° 17' S. Longitude 51° 12' W. Elevation 915 m. 4 km north of intersection BR285 and road to Esmeralda, at Muitos Capoes. Open grassland, slight slope above wet area, red clays.
- PI 607942. *Cuphea glutinosa* Cham. & Schltdl.**
 Wild. GP-WWR 003220; BRA 003581; Ames 15600. Collected 11/30/1989 in Santa Catarina, Brazil. Latitude 27° 17' S. Longitude 50° 28' W. Elevation 1095 m. 12 km west of Curitiba on BR470 toward Rio do Sul. Low wet area, clays. Maybe same as one of the accessions #52 thru #54.
- PI 607943. *Cuphea glutinosa* Cham. & Schltdl.**
 Wild. GP-WWR 003221; BRA 003590; Ames 15601. Collected 11/30/1989 in Santa Catarina, Brazil. Latitude 27° 35' S. Longitude 50° 23' W. Elevation 915 m. Ponte Alta. 29 km south of intersection BR470 and BR116 toward Lages, on BR116. Roadside grassland, heavy vegetation, brown loams.
- PI 607944. *Cuphea glutinosa* Cham. & Schltdl.**
 Wild. GP-WWR 003224; BRA 003620; Ames 15602. Collected 12/01/1989 in Santa Catarina, Brazil. Latitude 27° 15' S. Longitude 50° 27' W. Elevation 900 m. Ponte Alta do Norte. 29 km south of intersection BR470 and BR116 toward Lages, on BR116. Along roadway.
- PI 607945. *Cuphea glutinosa* Cham. & Schltdl.**
 Wild. GP-WWR 003234; BRA 003727; Ames 15605. Collected 12/01/1989 in Santa Catarina, Brazil. Latitude 26° 58' S. Longitude 50° 35' W. Elevation 1040 m. Near Lebon Regis. 36 km west of intersection BR116 and road to Lebon Regis. Open grassland among brush, slight slope, red clays.
- PI 607946. *Cuphea glutinosa* Cham. & Schltdl.**
 Wild. GP-WWR 003263; BRA 003930; Ames 15607. Collected 12/04/1989 in Parana, Brazil. Latitude 25° 45' S. Longitude 49° 41' W. Elevation 1050 m. 4 km northeast of Lapa toward Curitiba on BR476. Open grassland, mixed vegetation, along roadway to among rocks, light colored sandy soils.

The following were collected by William W. Roath, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Alvaro Campos, Universidad Nacional Autonoma de Mexico, Department of Botany, Mexico City, Federal District, Mexico. Donated by William W. Roath, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States. Received 09/30/1991.

- PI 607947. *Cuphea hookeriana* Walp.**
 Wild. WR-AC 3502; Ames 17782. Collected 09/11/1991 in Oaxaca, Mexico. Latitude 18° 10' N. Longitude 97° 53' W. Elevation 1910 m. 45.6 km east-northeast of Teotitlan toward Huautla on Mex 182. Steep rocky roadside, among rocks. Roadside to 10 m above road.
- PI 607948. *Cuphea hookeriana* Walp.**
 Wild. WR-AC 3504; Ames 17784. Collected 09/11/1991 in Oaxaca, Mexico.

Latitude 18° 8' N. Longitude 96° 52' W. Elevation 1195 m. 0.5 km from Huautlade Jimenez toward Eloxochitlan. Steep rocky roadside, gravels.

PI 607949. *Cuphea aequipetala* Cav.

Wild. WR-AC 3511; Ames 17791. Collected 09/14/1991 in Oaxaca, Mexico. Latitude 17° 12' N. Longitude 96° 36' W. Elevation 2310 m. Near El Punto. 30.9 km southwest of Ixtlan along Mex 175, near Resturante Del Monte. Extending from 2-3 km south of site to above Ixtlan. Roadside areas, at edge of brush near pine forrests. Rocky clay loams.

PI 607950. *Cuphea aequipetala* Cav.

Wild. WR-AC 3516; Ames 17795. Collected 09/15/1991 in Oaxaca, Mexico. Latitude 17° 1' N. Longitude 96° 6' W. Elevation 1830 m. 1.7 km west of Ayutla toward Mitla. Extends for several km either side of site. Roadside ditch. Clay loam.

PI 607951. *Cuphea cyanea* DC.

Wild. WR-AC 3517; Ames 17796. Collected 09/15/1991 in Oaxaca, Mexico. Latitude 17° 1' N. Longitude 96° 7' W. 2.5 km west of Ayutla toward Mitla. Roadside ditch near steep cut. Rocks and gravel.

PI 607952. *Cuphea wrightii* A. Gray var. *wrightii*

Wild. WR-AC 3519; Ames 17798. Collected 09/16/1991 in Oaxaca, Mexico. Latitude 17° 5' N. Longitude 96° 37' W. Elevation 1580 m. Near Oaxaca. 7.2 km north of junction Mex 190 and Mex 175, on Mex 175 toward Tuxtepec. Roadside ditch. Among heavy weeds, silt loam.

PI 607953. *Cuphea glossostoma* Koehne

Wild. WR-AC 3525; Ames 17804. Collected 09/19/1991 in Chiapas, Mexico. Latitude 16° 50' N. Longitude 93° 5' W. Elevation 1080 m. Near Tuxtla Ger. At end of road to El Sumidero canyon. Among rocks at lookout to along roadway. Heavy vegetation, rocks and gravel.

PI 607954. *Cuphea aequipetala* Cav.

Wild. WR-AC 3530; Ames 17808. Collected 09/21/1991 in Chiapas, Mexico. Latitude 17° 4' N. Longitude 92° 53' W. Elevation 1460 m. At north side of Jitotol, extending along Mex 195 north to at least Pueblo Nuevo and south of site for several km. Roadside grassy area. Sands to silt loam.

PI 607955. *Cuphea hookeriana* Walp.

Wild. WR-AC 3531a; Ames 17810. Collected 09/21/1991 in Chiapas, Mexico. Latitude 16° 55' N. Longitude 92° 55' W. Elevation 1300 m. Near Bochil. 18.1 km south of intersection of road to El Bosque and Mex 195, to Jitotol toward Tuxtla Ger. Brushy roadside into pasture. Gravel.

PI 607956. *Cuphea aequipetala* Cav.

Wild. WR-AC 3532; Ames 17811. Collected 09/22/1991 in Chiapas, Mexico. Latitude 16° 45' N. Longitude 92° 26' W. Elevation 2060 m. Near San Cristobal. 17.8 km east of intersection Mex 190 and Mex 199, on Mex 199 toward Ococingo. Grazed over raodside grassy area. Sands and gravel.

PI 607957. *Cuphea lutea* Rose

Wild. WR-AC 3537; Ames 17816. Collected 09/24/1991 in Oaxaca, Mexico. Latitude 17° 42' N. Longitude 96° 48' W. Elevation 1660 m. 8.1

km north of Mex 190 on road through San Juan del Estado, north of Oaxaca. Roadside ditch. Rocky clay.

The following were collected by Shirley A. Graham, Kent State University, Dept. of Biological Sciences, Kent, Ohio 44242-0001, United States. Received 10/17/1991.

PI 607958. *Cuphea aequipetala* Cav.

Wild. Graham 1065; Ames 17837. Collected in Oaxaca, Mexico. Latitude 15° 58' N. Longitude 96° 31' W. Elevation 2200 m. 29 km south of Miahuatlan on Hwy 175 to Pochutla. Disturbed roadside slopes in oak woods.

PI 607959. *Cuphea aequipetala* Cav.

Wild. Graham 1082; Ames 17839. Collected in Oaxaca, Mexico. Latitude 18° 2' N. Longitude 97° 49' W. Elevation 1600 m. 1 km north of Ixtapa on Highway 195 (Chiapa del Corzo to Pichualco road). Rocky limestone hills.

The following were donated by Shirley A. Graham, Kent State University, Dept. of Biological Sciences, Kent, Ohio 44242-0001, United States. Received 10/17/1991.

PI 607960. *Cuphea gaumeri* Koehne

Wild. Cabrera 9093; Ames 17849. Collected in Yucatan, Mexico. Yucatan peninsula.

The following were collected by Shirley A. Graham, Kent State University, Dept. of Biological Sciences, Kent, Ohio 44242-0001, United States. Received 10/17/1991.

PI 607961. *Cuphea hookeriana* Walp.

Wild. Graham 1023; Ames 17852. Collected in Nayarit, Mexico. Latitude 21° 22' N. Longitude 104° 53' W. 10 km south of Aquiles Serdan on Highway 200 (Tepic-Compostela road). Steep bank in open oak woods.

PI 607962. *Cuphea hookeriana* Walp.

Wild. Graham 1044; Ames 17853. Collected in Jalisco, Mexico. Latitude 19° 41' N. Longitude 103° 29' W. North of Nevado de Colima between Cd. Guzman and Autlan, 20 km west of Cd. Guzman.

PI 607963. *Cuphea hookeriana* Walp.

Wild. Graham 1030; Ames 17854. Collected in Jalisco, Mexico. Latitude 20° 46' N. Longitude 103° 50' W. 4 miles below summit, Cerro Tequila. Disturbed areas in oak woods.

PI 607964. *Cuphea hookeriana* Walp.

Wild. Graham 1047; Ames 17855. Collected in Michoacan, Mexico. Latitude 19° 51' N. Longitude 102° 29' W. 2 km west of Tarecuato on Jacona-Los Reyes road. Open pine-oak woods.

PI 607965. *Cuphea hookeriana* Walp.

Wild. Graham 1020; Ames 17856. Collected in Durango, Mexico. Latitude 23° 47' N. Longitude 105° 37' W. 185 km on Durango-Mazatlan

highway, 49 km east of Sinaloa-Durango line. Pine-oak forests.

PI 607966. *Cuphea hookeriana* Walp.

Wild. Graham 1080; Ames 17857. Collected in Chiapas, Mexico. Latitude 16° 48' N. Longitude 92° 55' W. Ca. 1 km north of Ixtapa on Highway 195 (Chiapa del Corzo to Pichualco road). Limestone hills.

PI 607967. *Cuphea hookeriana* Walp.

Wild. Graham 1087; Ames 17859. Collected in Chiapas, Mexico. Latitude 15° 22' N. Longitude 92° 14' W. 2 km south of Motozintla on Highway 211. Cloud forest, pine area.

PI 607968. *Cuphea hookeriana* Walp.

Wild. Graham 1088; Ames 17860. Collected in Oaxaca, Mexico. Latitude 18° 8' N. Longitude 97° 30' W. 22 km northwest of Huatla de Jimenez on road from Teotitlan. Exposed dry limestone banks.

PI 607969. *Cuphea llavea* Lex.

Wild. Graham 1021; Ames 17862. Collected in Nayarit, Mexico. Latitude 21° 30' N. Longitude 104° 54' W. 5 km northwest of Tepic on Highway 15-Libre. Oak woods.

The following were collected by Roger Fuentes-Granados, Iowa State University, Plant Introduction Station, G212 Agronomy, Ames, Iowa 50011, United States; William W. Roath, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Mark P. Widrlechner, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Alvaro Campos, Universidad Nacional Autonoma de Mexico, Department of Botany, Mexico City, Federal District, Mexico. Donated by William W. Roath, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Mark P. Widrlechner, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Alvaro Campos, Universidad Nacional Autonoma de Mexico, Department of Botany, Mexico City, Federal District, Mexico. Received 10/19/1993.

PI 607970. *Cuphea aequipetala* Cav.

Wild. RWCF 33; Ames 21522. Collected 10/06/1993 in Guanajuato, Mexico. Latitude 20° 51' N. Longitude 100° 31' W. Elevation 2180 m. Near Hda Las Mojas. Ca. 200 miles west of Guanajuato-Queretaro border, on highway from San Miguel de Allende to Queretaro. Limestone outcropping. Assoc. vegetation: Ipomoea, Eupatorium, Tagetes, *Cuphea aequipetala*. Photo 4/22.

PI 607971. *Cuphea aequipetala* Cav.

Wild. RWCF 40; Ames 21523. Collected 10/07/1993 in Hidalgo, Mexico. Latitude 20° 37' N. Longitude 99° 3' W. Elevation 2110 m. 6.3 km east of intersection with road to Cardonal, near Tolantongo National Park. Roadside ditch, moist, clay soils. Assoc. vegetation: cult agave, mixed grasses & composites. Photo 4/33-36.

The following were collected by CIDA, Apartado Oficial, La Alberca, Murcia 30150, Spain; Reinhard Vogel. Received 04/17/1996.

PI 607972. *Euphorbia lagascae* Spreng.

Wild. CIDA 305; Ames 22902. Collected 1986 in Cordoba, Spain. Latitude 37° 23' N. Longitude 1° 57' W. Near Huercal Overa along Highway N340 between Huercal Overa and Puerto Lumbreras.

PI 607973. *Euphorbia lagascae* Spreng.

Wild. CIDA 316; Ames 22913. Collected 1987 in Murcia, Spain. Latitude 37° 34' N. Longitude 1° 49' W. Near Puerto Lumbreras along Highway CV6202 between Puerto Lumbreras and Aguilas.

PI 607974. *Euphorbia lagascae* Spreng.

Wild. CIDA 325; Ames 22923. Collected 1987 in Murcia, Spain. Latitude 38° 14' N. Longitude 1° 25' W. Near Cieza along Highway N301 between Cieza and Murcia. Approximately 1 km from Rambla del Judio.

PI 607975. *Euphorbia lagascae* Spreng.

Wild. CIDA 341; Ames 22938. Collected 1988 in Murcia, Spain. Latitude 38° 4' N. Longitude 1° 3' W. Near Santomera along Highway N340 between Alicante and Murcia near the exit to La Mota.

PI 607976. *Euphorbia lagascae* Spreng.

Wild. CIDA 362; Ames 22959. Collected 1988 in Murcia, Spain. Latitude 37° 55' N. Longitude 1° 5' W. Near Tinosa between Molino at Highway C3319 and Los Garres. Latitude and longitude are estimates.

The following were donated by William Van Roekel, USDA-ARS, North Central Regional Plant Intro. Sta., Iowa State University, Ames, Iowa 50011-1170, United States. Received 08/04/1997.

PI 607977. *Euphorbia dentata* Michx.

Clone. Ames 23864. Developed in United States.

The following were collected by H. Hubatsch, Botanischer Garten, Universitat Leipzig, Linnestrasse 1, Leipzig, Saxony D-04103, Germany; Kurt Hubatsch, Botanischer Garten, Universitat Leipzig, Linnestrasse 1, Leipzig, Saxony D-04103, Germany. Donated by Botanischer Garten, Universitat Leipzig, Linnestrasse 1, Leipzig, Saxony D-04103, Germany. Received 09/03/1997.

PI 607978. *Euphorbia helioscopia* L.

Wild. Index Seminum 258; Ames 23900. Collected 1997 in Saxony, Germany. Latitude 51° 20' N. Longitude 12° 29' E. Baalsdorf.

The following were developed by Agripro Seeds, Inc., Iowa, United States. Received 06/28/1999.

PI 607979 PVPO. *Gossypium hirsutum* L.

Cultivar. "AP 7115". PVP 9900274.

The following were developed by DEKALB Genetics Corporation, United States. Received 06/28/1999.

PI 607980 PVPO. *Glycine max* (L.) Merr.

Cultivar. "CX433RR". PVP 9900276.

PI 607981. *Glycine max* (L.) Merr.
Cultivar. "CX262RR". PVP 9900277.

PI 607982 PVPO. *Glycine max* (L.) Merr.
Cultivar. "CX300". PVP 9900279.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 06/28/1999.

PI 607983 PVPO. *Helianthus annuus* L.
Cultivar. "PHA344". PVP 9900329.

PI 607984 PVPO. *Helianthus annuus* L.
Cultivar. "PHA283". PVP 9900330.

PI 607985 PVPO. *Helianthus annuus* L.
Cultivar. "PHA305". PVP 9900331.

PI 607986 PVPO. *Helianthus annuus* L.
Cultivar. "C9607CM". PVP 9900332.

The following were developed by Cornell University, New York Agric. Exp. Station, Ithaca, New York, United States; Molly Jahn, Cornell University, Department of Plant Breeding & Genetics, 313 Bradfield Hall, Ithaca, New York 14853-1902, United States. Received 06/28/1999.

PI 607987 PVPO. *Cucurbita moschata* Duchesne
Cultivar. "BUGLE"; PMR BUTTERNUT. PVP 9900258.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 06/28/1999.

PI 607988 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 422 B/RR". PVP 9900291.

PI 607989 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 237 B". PVP 9900292.

PI 607990 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 450 B/RR". PVP 9900293.

PI 607991 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 451 B/RR". PVP 9900294.

PI 607992 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 215 B". PVP 9900295.

PI 607993 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 409 B/RR". PVP 9900296.

PI 607994 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 429 RR". PVP 9900297.

The following were developed by Sure-Grow Seed, Inc., 7265 Highway 9 South, Centre, Alabama 35960, United States. Received 06/28/1999.

- PI 607995 PVPO. *Gossypium hirsutum* L.**
Cultivar. "SURE-GROW 125B/R". PVP 9900299.
- PI 607996 PVPO. *Gossypium hirsutum* L.**
Cultivar. "SURE-GROW 585B". PVP 9900300.
- PI 607997 PVPO. *Gossypium hirsutum* L.**
Cultivar. "SURE-GROW 585R". PVP 9900301.
- PI 607998 PVPO. *Gossypium hirsutum* L.**
Cultivar. "SURE-GROW 125R". PVP 9900302.
- PI 607999 PVPO. *Gossypium hirsutum* L.**
Cultivar. "SURE-GROW 501B/R". PVP 9900303.

The following were developed by HybriTech Seed International, Inc., A Unit of Monsanto Company, United States. Received 06/28/1999.

- PI 608000 PVPO. *Triticum aestivum* L. subsp. *aestivum***
Cultivar. Pureline. "THUNDERBOLT". PVP 9900304. Pedigree - Abilene/KS90WGRC10.
- PI 608001 PVPO. *Triticum aestivum* L. subsp. *aestivum***
Cultivar. "GIBSON". PVP 9900305. Pedigree - PFT7882/Hancock.
- PI 608002 PVPO. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Cultivar. "KARI". PVP 9900306. Pedigree - D8016/Vic.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 06/28/1999.

- PI 608003 PVPO. *Lactuca sativa* L.**
Cultivar. "PX 634B". PVP 9900307.

The following were developed by California Cooperative Rice Research Foundation, Biggs, California, United States. Received 06/28/1999.

- PI 608004 PVPO. *Oryza sativa* L.**
Cultivar. "CALHIKARI-201". PVP 9900310.
- PI 608005 PVPO. *Oryza sativa* L.**
Cultivar. "M-402". PVP 9900311.

The following were developed by T.J. Seed Company, United States. Received 06/28/1999.

- PI 608006 PVPO. *Glycine max* (L.) Merr.**
Cultivar. "TJS 410". PVP 9900312.

The following were developed by NDSU Research Foundation, North Dakota, United States. Received 06/28/1999.

PI 608007 PVPO. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "ARGENT". PVP 9900320. Pedigree - Grandin*5/ND614.

The following were developed by Western Valley Seed Company, Idaho, United States. Received 1975.

PI 608008. *Pisum sativum* L.

Cultivar. "ALMOTA"; NSL 89319. PVP 7500038.

The following were donated by Brotherton Seed Company, P.O. Box 1378, Moses Lake, Washington, United States. Received 1966.

PI 608009. *Pisum sativum* L.

Uncertain. NSL 43520; EARLY FREEZER.

The following were developed by W. Brotherton Seed Company. Donated by Michael Ambrose, AFRC Cereals Collection, John Innes Centre, Norwich Research Park, Norwich, England NR4 7UH, United Kingdom. Received 1995.

PI 608010. *Pisum sativum* L.

Cultivar. "PUGET"; JI 2434; Ps870964; W6 17583. Pedigree - DSP x Multiple parent/New Era-DSP 70. Released 1967. Multi-podded and high yielding, fusarium wilt resistance. Similar to Dark Skin Perfection.

The following were developed by James H. Helm, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1W8, Canada; Manuel Cortez, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1R1, Canada; Don Salmon, Agriculture and Agri-Food Canada, Field Crop Research Centre, 5030 50 Street, Lacombe, Alberta T4L 1W8, Canada; Patricia E. Juskiw, Alberta Agriculture, Field Crop Development Centre, 5030-50 St., Lacombe, Alberta T4L 1W8, Canada; T.R. Duggan, Alberta Agriculture, Field Crop Development Ctr., 5030-50 St., Lacombe, Alberta T4L 1W8, Canada; Vern S. Baron, Alberta Agriculture, Field Crop Development Ctr., 5030-50 St., Lacombe, Alberta T4L 1W8, Canada; Susan Albers, Alberta Agriculture, Field Crop Development Ctr., 5030-50 St., Lacombe, Alberta T5B 4K3, Canada. Received 06/11/1999.

PI 608011. X *Triticosecale* sp.

Cultivar. Pureline. "BOBCAT"; 88DL01076. CV-17; PVP 200200022. Pedigree - 7631-ED4B/RL4137//7431A-68E4/3/Panther'S'/4/87DE01. Released 1999. Winter triticale with short stature standard height, and good winter hardiness. Leaves medium green, medium wide, and medium long with glabrous sheaths and blades. Flag leaf medium green, medium wide and medium long with upright attitude. Kernels light red, medium wide, and medium in length. Spike tapering, erect in attitude, medium in density, medium long, waxy, easy threshing and very short awnlettes. Good resistance and moderate tolerance to conditions inducing sprouting. Well adapted to high snowfall areas of the Canadian prairies or in minimum tillage situations with good snow trapping.

The following were developed by W. Stewart, Alberta Agriculture, Bag Service #47, 5718-56 Avenue, Lacombe, Alberta T0C 1S0, Canada; James H. Helm, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1W8, Canada; Manuel Cortez, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1R1, Canada; Don Salmon, Agriculture and Agri-Food Canada, Field Crop Research Centre, 5030 50 Street, Lacombe, Alberta T4L 1W8, Canada; Patricia E. Juskiw, Alberta Agriculture, Field Crop Development Centre, 5030-50 St., Lacombe, Alberta T4L 1W8, Canada. Received 06/11/1999.

PI 608012. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "JAEGER"; HB608. CV-280. Pedigree - Nopal'S"-Ager[(F10.14/Mona-EmirxBco.Mr-Gvs)Api-CM67xOre]. Released 1999. Six row hullless feed barley. Spring habit, rough awned and amber aleurone. Flag leaf dark green, medium wide, and medium long. Spike dense, semi-erect and short. Kernel medium wide and medium length. Resistant to lodging and resistant to scald and septoria. High yielding adapted to the western prairies of Alberta.

The following were collected by Michigan State University, Department of Crop Science, East Lansing, Michigan, United States; USDA, SCS, Rose Lake Plant Materials Center, East Lansing, Michigan, United States. Received 04/18/1994.

PI 608013. *Viburnum opulus* var. *americanum* Aiton

Wild. 9031870; NA 64655. Collected 1981 in Ohio, United States. Latitude 41° 15' N. Longitude 81° 41' W. Summit Co. Typically found in moist wooded sites, it grows well on wet soils. It does not perform well on dry sites. Description differs from other accessions mainly in that it is one of the taller accessions with good lateral spread and good vigor. CSC Method of Selection: Selected by comparative evaluation, from an assembly of 69 accessions collected in 1981 and 1982 from the midwest and northwest US, on the basis of vigor, survival, size, foliage and genetic purity. CSC Anticipated Conservation Use: To be used in field windbreaks under center pivot irrigation and on non-irrigated cropland consisting of wet or organic soils. 2/13/89.

The following were collected by USDA, SCS, Rose Lake Plant Materials Center, East Lansing, Michigan, United States. Received 04/18/1994.

PI 608014. *Viburnum opulus* var. *americanum* Aiton

Wild. 9031881; NA 64657. Collected 1981 in Vermont, United States. Washington Co., Coolin Farm, Route 2 north of the Marsh-Plain motel. Typically found in moist wooded sites, it grows well on wet soils. It does not perform well on dry sites. Differs from other accessions in its exceptional vigor and abundant foliage. CSC Method of Selection: Selection by comparative evaluation, from an assembly of 69 accessions collected in 1981 and 1982 from the midwest and northeast US, on the basis of vigor, survival, size, foliage and genetic purity. CSC Anticipated Conservation Use: To be used in field windbreaks under center pivot irrigation and on non-irrigated cropland consisting of wet or organic soils. 2/13/89.

The following were collected by Andrea Lawrence, USDA, ARS, National Center

for, Genetic Resources Preservation, Fort Collins, Colorado 80521-4500, United States. Received 04/18/1994.

PI 608015. *Viburnum opulus* var. *americanum* Aiton

Wild. 9031863; Leelanau Germplasm; NA 64657. Collected 1981 in Michigan, United States. Leelanau County, Michigan. R11W, T28N. Typically found in moist wooded sites, it grows well on wet soils. It does not perform well on dry sites. Differs from other accessions in its exceptional vigor and abundant foliage. SCS Method of Selection: by comparative evaluation, from an assembly of 69 accessions collected in 1981 and 1982 from the Midwestern and Northeastern United States, on the basis of vigor, survival, size, foliage and genetic purity. SCS Anticipated Conservation Use: To be used in field windbreaks under center pivot irrigation and on nonirrigated cropland consisting of wet or organic soils.

The following were developed by Harley D. Jacquot, McGregor Land & Livestock, Inc., Colfax, Washington, United States. Received 1977.

PI 608016. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "JACMAR"; NSL 95258. PVP 7700045. Pedigree - Omar Selection SN-263/Moro. Released 1978.

The following were collected by J. And A. Faults, 906 Hastings, Delta, Colorado 81416, United States. Received 1980.

PI 608017. *Triticum turgidum* subsp. *polonicum* (L.) Thell.

Cultivated. Baxter; NSL 110275. Collected 1950 in Colorado, United States. Latitude 38° 59' N. Longitude 108° 27' W. Elevation 1473 m. InawEEP Canyon, southwest of Whitewater, Colorado. Lat/lon accurate to Whitewater. Found in a clay pot in a cave in Colorado in 1950.

The following were collected by H. Hauptli, University of California, Department of Agronomy and Range Science, Davis, California 95616, United States. Donated by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 04/15/1986.

PI 608018. *Amaranthus caudatus* L.

Genetic. HH 54; HH 54 early flowering; RRC 702; 54; Ames 5380. Collected 06/01/1981 in Bolivia. Pedigree - Segregated from HH 54 (PI 490607) as a rare early flowering plant in the 1980 David Ca. nursery, by Holly Hauptli. The segregation information was provided by Hauptli on the original seed packet. The seeds are white and pink, flowers pink, leaves green. The RRC class type is: South American. In a field planting at RRC the inflorescence was erect but did not mature seeds, plants were less diseased than the Peruvian *A. caudatus* types. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

The following were collected by H. Hauptli, University of California, Department of Agronomy and Range Science, Davis, California 95616, United States. Developed by David Brenner, Iowa State University, Regional Plant Introduction Station, Room G212, Agronomy Building, Ames, Iowa 50011-1170,

United States. Donated by Leon Weber, Rodale Research Center, P.O. Box 323, RD #1, Kutztown, Pennsylvania 19530, United States. Received 08/26/1994.

PI 608019. *Amaranthus caudatus* L.

Landrace. HH 75; RRC 610; Ames 22162. Collected 12/1979 in Pichincha, Ecuador. Latitude 0° 3' N. Longitude 78° 13' W. Tabacundo.
Pedigree - Separation from Ames 5261. The collector and Rodale Research Center noted a mixture of species in the original seed sample of HH 75 (Ames 5261). This is the *Amaranthus caudatus* portion. The seeds are black.

The following were developed by Mario C. Therrien, Agriculture and Agri-Food Canada, Brandon Research Centre, Box 1000A, Brandon, Manitoba R7A 5Z7, Canada . Received 08/19/1999.

PI 608020. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "AC BACON"; MB105; H85-9. CV-277. Pedigree - Tupper/Johnston//Conquest/3/Abec/4/Ellice/Bedford. Released 1998.
Six-row hullless spring barley of short stature, high yield potential and moderate straw strength. Broadly adapted to the Canadian Prairies and Eastern Canada. Hull retention is 10-14%, or moderate. Seed size large. Maturity mid-range. Resistant to *Rhynchosporium secalis* and *Cochliobolus sativum*. Spike mid-size and decumbent.

The following were developed by Verne A. Sisson, North Carolina State University, Crop Science Department, Oxford Tobacco Research Station, Oxford, North Carolina 27565, United States. Received 09/07/1999.

PI 608021. *Nicotiana tabacum* L.

Cultivar. Pureline. "OXFORD 414NF". CV-117. Pedigree - NC37NF / K346.
Short-day, photoperiod sensitive (non-flowering) flue-cured genotype with moderate resistance to bacterial wilt (*Pseudomonas solanacearum*), high resistance to black shank (*Phytophthora parasitica*), and resistant to Races 1 and 3 of root-knot nematodes (*Meloidogyne incognita*).
Excellent yielding ability and produces a good quality cured leaf.

The following were developed by Paul R. Beuselinck, USDA, ARS, University of Missouri, Department of Agronomy, Columbia, Missouri 65211, United States; Jeffrey J. Steiner, USDA, ARS, Natl. Forage Seed Prod. Res. Ctr., 3450 S.W. Campus Way, Corvallis, Oregon 97331-7102, United States. Received 09/07/1999.

PI 608022. *Lotus tenuis* Waldst. & Kit. ex Willd.

Breeding. Population. ARS-1207. GP-197. Pedigree - Traces to 38 foreign introductions and 4 domestic cultivars. One domestic and the 38 foreign introductions were originally collected in or acquired from Australia, Czechoslovakia, France, Greece, Hungary, Italy, Kazakhstan, the former Soviet Union, Spain, Turkey and Maryland, USA. The 3 other domestic naturalized accessions were collected near Half Moon Bay and Visalia, CA, USA. Narrow leaf trefoil with a broad genetic base compiled into a single source for selection of new cultivars.

PI 608023. *Lotus uliginosus* Schkuhr

Breeding. Population. ARS-1221. GP-198. Pedigree - Traces to 80 foreign introductions and 2 domestic cultivars. Introductions originally

collected in or acquired from Belgium, Germany, New Zealand, Portugal, South Africa, Spain, and Turkey. The two domestic cultivars, Kaiser and Marshfield, were obtained from the USDA-Natural Resources Conservation Service, Plant Materials Center in Corvallis, OR. A broad genetic base germplasm compiled into a single source for selection of new cultivars.

The following were developed by J. S. Rice, South Carolina Agr. Exp. Sta., Clemson University, Dept. of Agronomy and Soils, Clemson, South Carolina 29631, United States; A.R. Mazur, Clemson University, Dept. of Crop and Soil Environmental Science, Clemson, South Carolina 29634-0359, United States. Received 08/02/1999.

PI 608024. *Festuca arundinacea* Schreb.

Breeding. Population. CTFDD-3. GP-4. Pedigree - Rebel Jr., Aztec, Bonsai and Twilight. Very fine textured, very dark green color, low vertical growth habit, brown patch resistant, and leaf spot resistant. Flowering 15-20 days later than Ky 31.

PI 608025. *Festuca arundinacea* Schreb.

Breeding. Population. CTFD-3. GP-5. Pedigree - Rebel, Jaguar and Aztec. Fine textured, dark green color, vigorous grower, weakly rhizomatous, brown patch resistant, and leaf spot resistant. Flowering 15-20 days later than Ky 31.

PI 608026. *Festuca arundinacea* Schreb.

Breeding. Population. CTMM-3. GP-6. Pedigree - Derived from Rebel and Rebel Jr. Medium textured, medium green color, vigorous grower, weakly rhizomatous, brown patch resistant, and leaf spot resistant. Flowering 15 to 20 days later than Ky 31.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; Ronald F. Bara, Rutgers University, New Jersey Agricultural Experiment Station, Cook College, New Brunswick, New Jersey 08901, United States; Dirk A. Smith, New Jersey Agricultural Experiment Station, Plant Science Dept., Cook College, Rutgers Univ., New Brunswick, New Jersey 08903, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; Timothy M. Ford, Lebanon Seaboard Corporation, P.O. Box 10, Huntsville, Utah 84317, United States; Rachael Bara, Rutgers University, Cooks College, Plant Science Dept., New Brunswick, New Jersey 08901-8520, United States. Received 09/08/1999.

PI 608027. *Festuca arundinacea* Schreb.

Cultivar. Population. "MASTERPIECE". PVP 9900388; CV-83. Pedigree - Selected from old turfs of the United States and plants related to Rebel tall fescue. Attractive, medium-low-growing, turf type tall fescue capable of producing a medium-dense, persistent, medium-fine turf with a dark green color. Performed well in latest NTEP trials and showed moderately good resistance to the large brown patch disease (*Rhizoctonia solani*).

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520,

United States; Ronald F. Bara, Rutgers University, New Jersey Agricultural Experiment Station, Cook College, New Brunswick, New Jersey 08901, United States; Dirk A. Smith, New Jersey Agricultural Experiment Station, Plant Science Dept., Cook College, Rutgers Univ., New Brunswick, New Jersey 08903, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; Timothy M. Ford, Lebanon Seaboard Corporation, P.O. Box 10, Huntsville, Utah 84317, United States. Received 09/08/1999.

PI 608028. *Festuca arundinacea* Schreb.

Cultivar. Population. "REMBRANDT". PVP 9900389; CV-86. Pedigree - Selected from old turfs of the United States and plants related to Rebel tall fescue. Lower growing, turf-type tall fescue with an excellent record of overall performance in NTEP trials. Produces a dense, medium-dark green turf with fine leaves, good drought tolerance and medium-good resistance to large brown patch disease (*Rhizoctonia solani*)

The following were collected by Andrew L. Thomas, University of Missouri-Columbia, College of Agriculture, Food and Natural Resources, Southwest Missouri Center, Mount Vernon, Missouri 65712-9523, United States. Received 09/09/1999.

PI 608029. *Amaranthus albus* L.

Wild. Ames 25459. Collected 08/30/1999 in Missouri, United States. Latitude 37° 4' N. Longitude 93° 53' W. Elevation 378 m. Southwest Center, Mt. Vernon.

The following were collected by David Asch, University of Iowa, Office of the State Archaeologist, 302 Eastlawn, Iowa City, Iowa 52242, United States. Donated by Robert Myers, University of Missouri, Department of Agronomy, 210 Waters Hall, Columbia, Missouri 65211, United States; Gail E. Wagner, Univ. of South Carolina, Dept. of Anthropology, Columbia, South Carolina 29208, United States. Received 02/21/1995.

PI 608030. *Chenopodium berlandieri* var. *bushianum* (Aellen) Cronquist

Wild. 93.18; Ames 22376; 93.79. Collected 06/1997 in Illinois, United States. Latitude 39° 17' N. Longitude 90° 36' W. Near Kampsville. Our original seed was grown in a greenhouse in 1992 by Robert Myers.

The following were developed by Robert A. Graybosch, USDA-ARS, University of Nebraska, 314 Biochem Hall, Lincoln, Nebraska 68583, United States. Received 09/30/1999.

PI 608031. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. N95L1226; NSGC 8069. Pedigree - KS831936-3//Colt/Cody. Hard red winter wheat.

PI 608032. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. N95L1229; NSGC 8070. Pedigree - KS831936-3//Colt/Cody. Hard red winter wheat.

The following were developed by David B. Weaver, Auburn University, Department of Agronomy and Soils, 202 Funchess Hall, Auburn, Alabama 36849-5412, United States; R. Rodriguez-Kabana, Auburn University, Department of Plant Pathology, 139 Funchess Hall, Auburn, Alabama 36849-4201, United States; R.R. Sharpe, Auburn University, Alabama Agric. Exp. Sta., Dept. of Agronomy & Soils, Auburn, Alabama 36849, United States. Received 09/09/1999.

PI 608033. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Kuell"; Av 91-13. CV-411. Pedigree - N85-492 x Coker 85-483. Maturity Group VIII, adapted from 30° 20' to 35° North latitude. Determinate stem termination, purple flowers, gray pubescence, and brown pod walls. Seed yellow with buff hila. Plant height averages 96 cm. Seed have 21.1% oil and 41.2% protein. Resistant to races 3 and 14 of the soybean cyst nematode (*Heterodera glycines*), Southern root-knot nematode (*Meloidogyne incognita*), and frog-eye leaf spot (*Cercospora sojina*). Lodging (scale: 1 = no lodging, 5 = all plants prostrate) is 2.2.

The following were donated by Crites-Moscow Growers, Inc., 212 8th, P.O. Box 8912, Moscow, Idaho 83843, United States. Received 05/1997.

PI 608034. *Pisum sativum* L. subsp. *sativum*

Cultivated. "Columbian"; W6 19932. The primary dry pea of Eastern Washington in the 1980's and 1990's. Dumas Seed of Moscow, Idaho and Spokane Seed of Spokane, Washington contracted with Campbell's Soup to create "Improved Campbell Scotch". Colombian is a specific lot of "Improved Campbell Scotch" that is effectively a selection. Campbell Scotch was derived from a green seeded Thomas Laxton selection and a selection from a cross between Delwiche Early Scotch and a small seeded Alaska segregate(N227).

The following were developed by A. E. Hall, University of California, Department of Botany & Plant Sciences, Riverside, California 92521, United States; P.N. Patel, University of California, Dept. of Botany and Pl. Sciences, Riverside, California 92521-0124, United States; Jeff Ehlers, University of California, Department of Botany & Plant Sciences, Riverside, California 92521-0124, United States; W.C. Matthews, University of California, Dept. of Nematology, Riverside, California 92521-0415, United States; Philip A. Roberts, University of California, Department of Nematology, Riverside, California 92521-0415, United States. Received 09/09/1999.

PI 608035. *Vigna unguiculata* (L.) Walp.

Cultivar. Pureline. "CB27"; California Blackeye No. 27; H8-8-27. CV-167; PVP 200000183. Pedigree - UCR 336 / UCR 1393. Erect, indeterminate compact cowpea with heat tolerance during flowering and resistance to Races 3 and 4 of Fusarium wilt (*Fusarium oxysporum*) and root-knot nematodes (*Meloidogyne incognita* and *M. javanica*). Carries gene Rk and a recessive gene that together protects against Rk-virulent *M. incognita* and *M. javanica*. Reproduction and root-galling due to Rk-virulent *M. incognita* and *M. javanica* are about half those observed on cultivars CB46 and CB88. Begins flowering in about 52 days from sowing and the first flush of pods is mature in about 95 days when planted in early May in the San Joaquin Valley, CA. Average seed weight 224 mg/seed. Seed coat bright white and medium black 'eye'. Excellent canning quality.

The following were donated by John M. Kraft, USDA, ARS, Irrigated Agric. Research & Extension Ctr., 24106 North Bunn Road, Prosser, Washington 99350, United States. Received 1981.

PI 608036. *Pisum sativum* L.

Cultivar. 74SN3. GP-15. Pedigree - Parentage is {691005 x [('Small Sieve Freezer' X C-165) F3 X ('Early Perfection 3040' X C-165) F3] F6}F7. Info. from Crop Sci. 16(1):126 (1976) -- small-sieved canner breeding line. Resistant to wilt (a new strain capable of destroying pea varieties resistant to race 5). Has mixture dimpled and smooth green seed. Blooms at 12th to 14th node and sets single and double pods. Segregating for resistance to race 2. Cultivated. White flowered and about 1-1/2 to 2 feet tall at maturity under ideal growing conditions.

PI 608037. *Pisum sativum* L.

Cultivar. 74SN4. GP-16. Pedigree - Parentage is {691004 x [('Small Sieve Freezer' X C-165) F3 X ('Early Perfection 3040' X C-165) F3] F6}F7. Info. from Crop Sci. 16(1):126 (1976) -- small-sieved canner breeding line. Resistant to wilt (a new strain capable of destroying pea varieties resistant to race 5). Smooth green seeds. Blooms at 12th to 14th node and sets single and double pods. Cultivated. White flowered and about 1-1/2 to 2 feet tall at maturity under ideal growing conditions.

PI 608038. *Pisum sativum* L.

Cultivar. 74SN5. GP-17. Pedigree - Parentage [(Small Sieve Freezer X C-165) F3 X (Early Perfection 3040 X C-165) F3] F6 X 691004] F7. Small-sieved canner breeding line. Resistant to wilt (a new strain capable of destroying pea varieties resistant to race 5). Smooth green seeds. Blooms at 12th to 14th node and sets single and double pods. Cultivated. White flowered and about 1-1/2 to 2 feet tall at maturity under ideal growing conditions.

The following were developed by Steven J. Knapp, Oregon State University, Department of Crop & Soil Science, Crop Science Building, 451C, Corvallis, Oregon 97331-3002, United States; Jimmie M. Crane, Oregon State University, Dept. of Crop and Soil Science, Crop Science Bldg, Rm. 107, Corvallis, Oregon 97331-3002, United States. Received 09/15/1999.

PI 608039. *Limnanthes alba* subsp. *versicolor* (Greene) C. T. Mason

Breeding. Pureline. OMF64. GP-30. Pedigree - Developed from a wild *Limnanthes alba* ssp. *versicolor* population (PI 374801) by selecting for seeds/plant (in the absence of pollinators) among S0, S1, S2, S3, and S4 progeny. Selected progeny were advanced by single seed descent. The most strongly self-pollinated individual was selected and advanced each generation. Strongly self-pollinated inbred line that produces significantly more seed by self-pollination than Mermaid ($p < 0.0001$), a predominately allogamous, insect-pollinated cultivar. Produces 57.6 seeds/plant, whereas Mermaid produces 3.0 seeds/plant in the absence of pollinators. This is the first true breeding self-pollinated inbred line developed for meadowfoam. This germplasm line grows prostrately and is less productive than upright insect-pollinated cultivars, but is an excellent source of self-pollination and is agronomically superior to interspecific sources of self-pollination

(e.g. *L. floccosa* and *L. gracilis*).

The following were developed by Edward J. Souza, University of Idaho, Aberdeen Research & Extension Center, P.O. Box 870, Aberdeen, Idaho 83210, United States; James S. Quick, Colorado State University, Soil and Crop Sciences, Fort Collins, Colorado 80523, United States; Calvin H. Pearson, Colorado State University, Agricultural Experiment Station, Western Colorado Research Center - Fruita, Fruita, Colorado 81521, United States. Received 10/13/1999.

PI 608040. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "HAYDEN"; ID77349; ID 465. CV-893. Pedigree - A748OW-9-2/A75284W-1. Released 1999. Awned, medium height, brown-glumed and most similar to Manning in appearance. Spikes erect to inclined and averages 4 to 7 days later in maturity than Manning and equal to Jeff. Averages 5 cm taller than Manning and is similar in straw strength. When compared to the current highest performing HRW wheat, has a 11 percent higher grain yield when grown under dryland management in northwestern Colorado. Test weight about 1.3 kg hl⁻¹ lower than Manning in 2 yrs. of tests. Resistant to dwarf bunt (*T. caries*). Moderately susceptible to stripe rust (*Puccinia striiformis*). Resistant to stripe rust races CDL-17, CDL-37, and CDL-45 but is susceptible to race CDL-43. Excellent bread making quality. More tolerance to dough mixing than Manning and a slightly longer mixing requirement. Flour extraction is satisfactory and comparable to Utah 100 and Boundary. Interior and exterior loaf characteristics equal or superior to Manning.

The following were developed by M. Ken Ayccock, Jr., University of Maryland, Department of Agronomy, College Park, Maryland 20742, United States. Received 10/01/1999.

PI 608041. *Nicotiana tabacum* L.

Cultivar. Pureline. "MD 601"; Maryland type tobacco. CV-119. Pedigree - [(MD 341 x MD 609) x MD 609] BC7 F11. Maryland tobacco with resistance to three diseases: tobacco mosaic virus (TMV), wildfire (*Phytophthora syringae*), and black shank (*Phytophthora parasitica*). Similar to MD 609 for yield but has better quality as measured by the quality index and percentage of desirable cured leaf colors. Leaves long with medium width and pointed tips. Tall (76.4 cm), flowers 63 days after transplanting, and contains 3.16% total alkaloids.

PI 608042. *Nicotiana tabacum* L.

Cultivar. Pureline. "MD 402"; Maryland type tobacco. CV-118. Pedigree - [(A911 x MD 609) x MD 609] BC1 F13. Maryland tobacco with resistance to three diseases: tobacco mosaic virus (TMV), wildfire (*Pseudomonas syringae*), and black shank (*Phytophthora parasitica*). Similar to MD 609 for yield but has better quality. Leaves long with medium width and pointed tips. Tall (73.4 cm), flowers 64 days after transplanting, and contains 2.81% total alkaloids.

The following were developed by M.J. Murray, Unknown. Donated by Alfred Haunold, USDA, ARS, Oregon State University, Department of Crop Sciences, Corvallis, Oregon 97333, United States. Received 01/01/1983.

PI 608043. *Mentha spicata* L.

Breeding. CMEN 68. Pedigree - Selection from European stock.

The following were collected by M.J. Murray, Unknown. Donated by Alfred Haunold, USDA, ARS, Oregon State University, Department of Crop Sciences, Corvallis, Oregon 97333, United States. Received 01/01/1983.

PI 608044. *Mentha x dalmatica* Tausch

Wild. CMEN 168. Collected 1968 in Georgia. Latitude 43° 0' N. Longitude 41° 0' E. Elevation 0 m. Sukhumi, inland from the Black Sea beach. Pedigree - Collected from the wild in the USSR. *M. arvensis* or a *M. arvensis* x *M. aquatica* hybrid, collected by MJM in 1968 at Sukhumi, USSR. Hairy, axillary flowers, male sterile and probably the same as 10268 and 10269 but herbage has a very different peculiar odor (geranoil?).

The following were developed by M.J. Murray, Unknown. Donated by Alfred Haunold, USDA, ARS, Oregon State University, Department of Crop Sciences, Corvallis, Oregon 97333, United States. Received 01/01/1983.

PI 608045. *Mentha* hybrid

Breeding. CMEN 269. Pedigree - 10213(MEN 134,4n pepp) x *crispa*(2n=96)6th BC to 10213. *M. piperita* x *M. spicata* var. *crispa* 6th backcross to *M. piperita*.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; David Yarborough, University of Maine, 5722 Deering Hall, Orono, Maine 04469-5722, United States. Developed by Bruce Bartlett, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States; Barbara Reed, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 10/14/1999.

PI 608046. *Corylus heterophylla* Fisch. ex Trautv.

Cultivated. *C. heterophylla*; 99018; CCOR 703. Collected 09/1999 in Jilin, China. Latitude 42° 52' N. Longitude 129° 31' E. Elevation 0 m. Market sample collected from around Yanji City. Pedigree - Purchased at market by Yanji City, China.

The following were donated by John White, Ancient Lifeways Institute, Michael Hollow Road, Box 27, Michael, Illinois 62065, United States. Received 05/25/1999.

PI 608047. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*

Illiniwek Red Seeded Watermelon; Ames 25367. Some are naked. The earliest French explorers mentioned the different varieties of watermelon the Illiniwek were growing. One said the best were those with red seeds. The old Native American man who grew these watermelons died before any more information could be obtained.

The following were collected by Jack R. Harlan, USDA-ARS, New Crops Research Branch, Crops Research Division, Beltsville, Maryland 20705-2350, United States. Donated by Northeast Regional PI Station, USDA, ARS Plant Genetic Resources Unit, 630 W. North Street, Geneva, New York 14456-0462, United States; Jack R. Harlan, USDA-ARS, New Crops Research Branch, Crops Research Division, Beltsville, Maryland 20705-2350, United States. Received 10/26/1999.

PI 608048. *Cucurbita pepo* L.

Landrace. Col. No. 509; Separation from PI 269484; Ames 25654. Collected 11/1960 in Pakistan. Mangora village bazaar, Swat. Separation from *C. maxima* PI 269484; Col. No. 509, "kadu" (pumpkin); from Mangora village bazaar, Swat.

The following were developed by Marie Langham, South Dakota State University, Department of Plant Science, 219 Agr. Hall, Box 2207-A, Brookings, South Dakota 57007, United States; Jimmie H. Hatchett, USDA-ARS, Dept of Entomology, Waters Hall, Manhattan, Kansas 66506-4004, United States; Jeffrey L. Gellner, South Dakota State University, Plant Science Department, Box 2109, Brookings, South Dakota 57007, United States; Don V. McVey, USDA, ARS, University of Minnesota, Cereal Rust Laboratory, St. Paul, Minnesota 55105, United States; O.K. Chung, USDA-ARS, U.S. Grain Marketing Research Lab., Hard Winter Wheat Quality Lab., Manhattan, Kansas 66506, United States; Yue Jin, South Dakota State University, Plant Science Department, Plant Science Building - P.O. Box 2108, Brookings, South Dakota 57007, United States; C. Stymiest, South Dakota State University, Plant Science Dept., Brookings, South Dakota 57007, United States; J. Rickertsen, South Dakota State University, Plant Science Dept., Brookings, South Dakota 57007, United States; B.E. Ruden, South Dakota State University, Plant Science Dept., Brookings, South Dakota 57007, United States; S. Kalsbeck, South Dakota State University, Plant Science Department, Brookings, South Dakota 57007, United States; B.W. Seabourn, USDA, ARS, Grain Marketing and Production Research Center, Hard Winter Wheat Quality Lab., Manhattan, Kansas 66506, United States; Scott D. Haley, Colorado State University, Soil and Crop Sciences Department, 1170 Campus Delivery, Fort Collins, Colorado 80523, United States; R. Little, South Dakota State Univ., Plant Science Dept., Brookings, South Dakota 57007, United States. Received 10/25/1999.

PI 608049. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "HARDING"; SD92107. CV-887; PVP 200100268. Pedigree - Brule//Bennett/Chisholm/3/Arapahoe. Released 1999. Awne, red-glumed, medium-tall and medium-late maturity, hard red winter wheat with superior winter survival ability and a very broad disease resistance package. Moderately resistant or resistant to stem, leaf rust, tan spot, septoria leaf blotch, and wheat streak mosaic virus. Heterogeneous for resistance to the Great Plains Biotype of Hessian fly. Coleoptile length average and straw strength fair. End-use quality characteristics include average test weight, medium-high kernel weight, above average flour ash content, fair flour extraction, good flour protein content, good water absorption with average mixing time, good mixing tolerance, and good loaf volume.

Unknown source. Received 07/06/1939.

PI 608050. *Gossypium barbadense* L.

AS 79. Collected in Dominican Republic.

Unknown source. Received 07/06/1939.

PI 608051. *Gossypium barbadense* L.
AS 141. Collected in France.

Unknown source. Received 07/06/1939.

PI 608052. *Gossypium barbadense* L.
AS 148. Collected in France.

Unknown source. Received 07/06/1939.

PI 608053. *Gossypium barbadense* L.
AS 271. Collected in French Guiana.

Unknown source. Received 07/06/1939.

PI 608054. *Gossypium barbadense* L.
AS 363. Collected in Merida, Venezuela.

Unknown source. Received 07/06/1939.

PI 608055. *Gossypium barbadense* L.
AS 444. Collected in Colombia.

Unknown source. Received 07/06/1939.

PI 608056. *Gossypium barbadense* L.
AS 447. Collected in Colombia.

Unknown source. Received 07/06/1939.

PI 608057. *Gossypium barbadense* L.
AS 538. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608058. *Gossypium barbadense* L.
AS 543. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608059. *Gossypium barbadense* L.
AS 549. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608060. *Gossypium barbadense* L.
AS 552. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608061. *Gossypium barbadense* L.
AS 828. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608062. *Gossypium barbadense* L.
AS 844. Collected in Manabi, Ecuador.

Unknown source. Received 07/06/1939.

PI 608063. *Gossypium barbadense* L.
AS 1016. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608064. *Gossypium barbadense* L.
Collected in United States.

Unknown source. Received 07/06/1939.

PI 608065. *Gossypium barbadense* L.
LAMBERT X1730. Collected in Sudan.

Unknown source. Received 07/06/1939.

PI 608066. *Gossypium barbadense* L.
#1304. Collected in Ecuador.

Unknown source. Received 07/06/1939.

PI 608067. *Gossypium barbadense* L.
#1309. Collected in Galapagos Islands, Ecuador.

Unknown source. Received 07/06/1939.

PI 608068. *Gossypium barbadense* L.
CB 3118. Collected in Galapagos Islands, Ecuador.

Unknown source. Received 07/06/1939.

PI 608069. *Gossypium barbadense* L.
CB 3120. Collected in Galapagos Islands, Ecuador.

Unknown source. Received 07/06/1939.

PI 608070. *Gossypium barbadense* L.
CB 3122. Collected in Galapagos Islands, Ecuador.

Unknown source. Received 07/06/1939.

PI 608071. *Gossypium barbadense* L.
CB 3156. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608072. *Gossypium barbadense* L.
CB 3406. Collected in France.

Unknown source. Received 07/06/1939.

PI 608073. *Gossypium barbadense* L.
CB 3459. Collected in Catamarca, Argentina.

Unknown source. Received 07/06/1939.

PI 608074. *Gossypium barbadense* L.
CB 3470. Collected in Catamarca, Argentina.

Unknown source. Received 07/06/1939.

PI 608075. *Gossypium barbadense* L.
CB 3508. Collected in Bolivia.

Unknown source. Received 07/06/1939.

PI 608076. *Gossypium barbadense* L.
CB 3556. Collected in Santa Cruz, Bolivia.

Unknown source. Received 07/06/1939.

PI 608077. *Gossypium barbadense* L.
CB 3557. Collected in Santa Cruz, Bolivia.

Unknown source. Received 07/06/1939.

PI 608078. *Gossypium barbadense* L.
CB 3559. Collected in Paraguay.

Unknown source. Received 07/06/1939.

PI 608079. *Gossypium barbadense* L.
CB 3574. Collected in Michoacan, Mexico.

Unknown source. Received 07/06/1939.

PI 608080. *Gossypium barbadense* L.
CB 3594. Collected in Corrientes, Argentina.

Unknown source. Received 07/06/1939.

PI 608081. *Gossypium barbadense* L.
CB 3620. Collected in United Kingdom.

Unknown source. Received 07/06/1939.

PI 608082. *Gossypium barbadense* L.
#9. Collected in Alta Verapaz, Guatemala.

Unknown source. Received 07/06/1939.

PI 608083. *Gossypium barbadense* L.
CB 3764. Collected in Alta Verapaz, Guatemala.

Unknown source. Received 07/06/1939.

PI 608084. *Gossypium barbadense* L.
BABO. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608085. *Gossypium barbadense* L.
GRAND AKOUDSIN. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608086. *Gossypium barbadense* L.
ISHAN NIGERIA. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608087. *Gossypium barbadense* L.
MONO 63. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608088. *Gossypium barbadense* L.
CB 3797. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608089. *Gossypium barbadense* L.
6 B 3. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608090. *Gossypium barbadense* L.
3731. Collected in Cote D'Ivoire.

Unknown source. Received 07/06/1939.

PI 608091. *Gossypium barbadense* L.
TANGUIS SNA 7731. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608092. *Gossypium barbadense* L.
TANGUIS CN (W) 748-60. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608093. *Gossypium barbadense* L.
TANGUIS CN (C.P.R.) 712-60. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608094. *Gossypium barbadense* L.
TANGUIS LM 1041-49. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608095. *Gossypium barbadense* L.
"TANGUIS LMW 1730-60". Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608096. *Gossypium barbadense* L.
"TANGUIS ICA 274-59". Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608097. *Gossypium barbadense* L.
TANGUIS ICA 757-60. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608098. *Gossypium barbadense* L.
TANGUIS SNA 179. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608099. *Gossypium barbadense* L.
TANGUIS LMW 1736-60. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608100. *Gossypium barbadense* L.
TANGUIS LMW 1736-60-2. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608101. *Gossypium barbadense* L.
CB 3910. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608102. *Gossypium barbadense* L.
CB 3942. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608103. *Gossypium barbadense* L.
CB 3959. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608104. *Gossypium barbadense* L.
CB 4004. Collected in Brazil.

Unknown source. Received 07/06/1939.

PI 608105. *Gossypium barbadense* L.
CB 4005. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608106. *Gossypium barbadense* L.
CB 4017. Collected in Togo.

Unknown source. Received 07/06/1939.

PI 608107. *Gossypium barbadense* L.
CB 4018. Collected in Togo.

Unknown source. Received 07/06/1939.

PI 608108. *Gossypium barbadense* L.
CB 4043. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608109. *Gossypium barbadense* L.
CB 4044. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608110. *Gossypium barbadense* L.
CB 4045. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608111. *Gossypium barbadense* L.
CB 4046. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608112. *Gossypium barbadense* L.
CB 4048. Collected in Colombia.

Unknown source. Received 07/06/1939.

PI 608113. *Gossypium barbadense* L.
CB 4049. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608114. *Gossypium barbadense* L.
CB 4050. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608115. *Gossypium barbadense* L.
BLEAK HALL SEA ISLAND. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608116. *Gossypium barbadense* L.
CONCORD X GADDIS. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608117. *Gossypium barbadense* L.
MONTSERAT X GADDIS. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608118. *Gossypium barbadense* L.
GADDIS X PUERTO RICAN 556. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608119. *Gossypium barbadense* L.
COASTLAND RN-45. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608120. *Gossypium barbadense* L.
PIMA (RALEIGH STOCK). Collected in United States.

Unknown source. Received 07/06/1939.

PI 608121. *Gossypium barbadense* L.
AFS 1011. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608122. *Gossypium barbadense* L.
AFS 1012. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608123. *Gossypium barbadense* L.
AFS 1013. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608124. *Gossypium barbadense* L.
BAHAMAS 1. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608125. *Gossypium barbadense* L.
BG 114. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608126. *Gossypium barbadense* L.
BG 115. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608127. *Gossypium barbadense* L.
BG 116. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608128. *Gossypium barbadense* L.
BG 118. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608129. *Gossypium barbadense* L.
BG 119. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608130. *Gossypium barbadense* L.
BG 120. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608131. *Gossypium barbadense* L.
BOLIVIA 2. Collected in Bolivia.

Unknown source. Received 07/06/1939.

PI 608132. *Gossypium barbadense* L.
BOLIVIA 19144. Collected in Bolivia.

Unknown source. Received 07/06/1939.

PI 608133. *Gossypium barbadense* L.
BOLIVIA 19446. Collected in Bolivia.

Unknown source. Received 07/06/1939.

PI 608134. *Gossypium barbadense* L.
FONDILLER. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608135. *Gossypium barbadense* L.
FRYXELL #633. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608136. *Gossypium barbadense* L.
G.P. PIMA X Fl 5A X 5C. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608137. *Gossypium barbadense* L.
H-128. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608138. *Gossypium barbadense* L.
HOWARD'S SMOOTH SEL. #5. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608139. *Gossypium barbadense* L.
INCA COTTON. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608140. *Gossypium barbadense* L.
PERU 83-07-10-9. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608141. *Gossypium barbadense* L.
O.T. PIMA 67. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608142. *Gossypium barbadense* L.
SEABERRY 1095. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608143. *Gossypium barbadense* L.
SEA ISLAND WHITE FLOWER. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608144. *Gossypium barbadense* L.
ST. CROIX. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608145. *Gossypium barbadense* L.
TANGUIS 45. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608146. *Gossypium barbadense* L.
76-4372 (CHICLAYO PERU). Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608147. *Gossypium barbadense* L.
82-4761. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608148. *Gossypium barbadense* L.
82-4777. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608149. *Gossypium barbadense* L.
82-4793. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608150. *Gossypium barbadense* L.
82-4797. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608151. *Gossypium barbadense* L.
PERU 83-07-10-9. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608152. *Gossypium barbadense* L.
PERU 83-07-11-1. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608153. *Gossypium barbadense* L.
83-07-12-1. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608154. *Gossypium barbadense* L.
AG 171. Collected in Venezuela.

Unknown source. Received 07/06/1939.

PI 608155. *Gossypium barbadense* L.
Barrett 676. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608156. *Gossypium barbadense* L.
Vsg-SeSev7v7 X 1517-75 BC. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608157. *Gossypium barbadense* L.
Collected in Philippines.

Unknown source. Received 07/06/1939.

PI 608158. *Gossypium barbadense* L.
#1 NEGROS PHILLIPINES. Collected in Philippines.

Unknown source. Received 07/06/1939.

PI 608159. *Gossypium barbadense* L.
BG 76. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608160. *Gossypium barbadense* L.
BG 118. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608161. *Gossypium barbadense* L.
BG 117. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608162. *Gossypium barbadense* L.
BG 115. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608163. *Gossypium barbadense* L.
BG 113. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608164. *Gossypium barbadense* L.
BG 114. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608165. *Gossypium barbadense* L.
DEL PAIS AND PARDO. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608166. *Gossypium barbadense* L.
ST. CROIX WILD. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608167. *Gossypium barbadense* L.
13086. Collected in Amazonas, Brazil.

Unknown source. Received 07/06/1939.

PI 608168. *Gossypium barbadense* L.
Collected in Amazonas, Brazil.

Unknown source. Received 07/06/1939.

PI 608169. *Gossypium barbadense* L.
13053. Collected in Amazonas, Brazil.

Unknown source. Received 07/06/1939.

PI 608170. *Gossypium barbadense* L.
SEMI-ASPERO. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608171. *Gossypium barbadense* L.
PAIS-1. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608172. *Gossypium barbadense* L.
ASHABAD 8. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608173. *Gossypium barbadense* L.
7750-I. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608174. *Gossypium barbadense* L.
C-6022. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608175. *Gossypium barbadense* L.
9155-T. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608176. *Gossypium barbadense* L.
TADLA 29. Collected in Morocco.

Unknown source. Received 07/06/1939.

PI 608177. *Gossypium barbadense* L.
7318-V. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608178. *Gossypium barbadense* L.
6808-V. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608179. *Gossypium barbadense* L.
ARUARE. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608180. *Gossypium barbadense* L.
C-6024. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608181. *Gossypium barbadense* L.
C-6040. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608182. *Gossypium barbadense* L.
ASHABAD 1615. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608183. *Gossypium barbadense* L.
LINIA 7010. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608184. *Gossypium barbadense* L.
LINIA 7015. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608185. *Gossypium barbadense* L.
SURHAN. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608186. *Gossypium barbadense* L.
TERMEZ 9. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608187. *Gossypium barbadense* L.
LINIA 1780. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608188. *Gossypium barbadense* L.
C-6015. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608189. *Gossypium barbadense* L.
5230-B. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608190. *Gossypium barbadense* L.
GIZA 30. Collected in Egypt.

Unknown source. Received 07/06/1939.

PI 608191. *Gossypium barbadense* L.
9280-T. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608192. *Gossypium barbadense* L.
9549-T. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608193. *Gossypium barbadense* L.
9696-T. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608194. *Gossypium barbadense* L.
TADLA 116. Collected in Morocco.

Unknown source. Received 07/06/1939.

PI 608195. *Gossypium barbadense* L.
9182-T. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608196. *Gossypium barbadense* L.
ASHABAD 260B. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608197. *Gossypium barbadense* L.
ASHABAD 11. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608198. *Gossypium barbadense* L.
TADLA 32. Collected in Morocco.

Unknown source. Received 07/06/1939.

PI 608199. *Gossypium barbadense* L.
WIR 6304. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608200. *Gossypium barbadense* L.
WIR 7053. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608201. *Gossypium barbadense* L.
WIR 7417. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608202. *Gossypium barbadense* L.
WIR 7421. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608203. *Gossypium barbadense* L.
WIR 7422. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608204. *Gossypium barbadense* L.
WIR 7443. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608205. *Gossypium barbadense* L.
AS 79. Collected in Dominican Republic.

Unknown source. Received 07/06/1939.

PI 608206. *Gossypium barbadense* L.
PIN 162. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608207. *Gossypium barbadense* L.
AS 148. Collected in France.

Unknown source. Received 07/06/1939.

PI 608208. *Gossypium barbadense* L.
PIN 170. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608209. *Gossypium barbadense* L.
L.C.B. 3033. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608210. *Gossypium barbadense* L.
SAN PEDRO KIDNEY. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608211. *Gossypium barbadense* L.
PIMA S-3. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608212. *Gossypium barbadense* L.
AS 412. Collected in Cauca, Colombia.

Unknown source. Received 07/06/1939.

PI 608213. *Gossypium barbadense* L.
COASTLAND 320. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608214. *Gossypium barbadense* L.
J-4-22. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608215. *Gossypium barbadense* L.
J-4-29. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608216. *Gossypium barbadense* L.
J-4-44 #2. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608217. *Gossypium barbadense* L.
J-4-41 #4. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608218. *Gossypium barbadense* L.
AS 487. Collected in Arauca, Colombia.

Unknown source. Received 07/06/1939.

PI 608219. *Gossypium barbadense* L.
J-4-69 #2. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608220. *Gossypium barbadense* L.
J-4-96. Collected in Ancash, Peru.

Unknown source. Received 07/06/1939.

PI 608221. *Gossypium barbadense* L.
J-4-146. Collected in Ancash, Peru.

Unknown source. Received 07/06/1939.

PI 608222. *Gossypium barbadense* L.
PS-1 X 8373-1-7. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608223. *Gossypium barbadense* L.
CB 3991. Collected in Peru.

Unknown source. Received 07/06/1939.

PI 608224. *Gossypium barbadense* L.
ASPERO. Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608225. *Gossypium barbadense* L.
Collected in Former Soviet Union.

Unknown source. Received 07/06/1939.

PI 608226. *Gossypium barbadense* L.
AS 545. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608227. *Gossypium barbadense* L.
AS 1014. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608228. *Gossypium barbadense* L.
AS 1045. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608229. *Gossypium barbadense* L.
AS 1049. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608230. *Gossypium barbadense* L.
AS 1050. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608231. *Gossypium barbadense* L.
AS 1062. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608232. *Gossypium barbadense* L.
AS 92. Collected in Dominican Republic.

Unknown source. Received 07/06/1939.

PI 608233. *Gossypium barbadense* L.
AS 139. Collected in France.

Unknown source. Received 07/06/1939.

PI 608234. *Gossypium barbadense* L.
AS 150. Collected in France.

Unknown source. Received 07/06/1939.

PI 608235. *Gossypium barbadense* L.
AS 174. Collected in France.

Unknown source. Received 07/06/1939.

PI 608236. *Gossypium barbadense* L.
AS 175. Collected in France.

Unknown source. Received 07/06/1939.

PI 608237. *Gossypium barbadense* L.
AS 182. Collected in France.

Unknown source. Received 07/06/1939.

PI 608238. *Gossypium barbadense* L.
AS 409. Collected in Colombia.

Unknown source. Received 07/06/1939.

PI 608239. *Gossypium barbadense* L.
AS 485. Collected in Arauca, Colombia.

Unknown source. Received 07/06/1939.

PI 608240. *Gossypium barbadense* L.
AS 491. Collected in Santander, Colombia.

Unknown source. Received 07/06/1939.

PI 608241. *Gossypium barbadense* L.
AS 512. Collected in Tumbes, Peru.

Unknown source. Received 07/06/1939.

PI 608242. *Gossypium barbadense* L.
AS 526. Collected in Tumbes, Peru.

Unknown source. Received 07/06/1939.

PI 608243. *Gossypium barbadense* L.
AS 527. Collected in Tumbes, Peru.

Unknown source. Received 07/06/1939.

PI 608244. *Gossypium barbadense* L.
AS 530. Collected in Tumbes, Peru.

Unknown source. Received 07/06/1939.

PI 608245. *Gossypium barbadense* L.
AS 531. Collected in Tumbes, Peru.

Unknown source. Received 07/06/1939.

PI 608246. *Gossypium barbadense* L.
AS 539. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608247. *Gossypium barbadense* L.
AS 801. Collected in Ecuador.

Unknown source. Received 07/06/1939.

PI 608248. *Gossypium barbadense* L.
AS 803. Collected in Ecuador.

Unknown source. Received 07/06/1939.

PI 608249. *Gossypium barbadense* L.
AS 804. Collected in Ecuador.

Unknown source. Received 07/06/1939.

PI 608250. *Gossypium barbadense* L.
AS 806. Collected in Ecuador.

Unknown source. Received 07/06/1939.

PI 608251. *Gossypium barbadense* L.
AS 810. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608252. *Gossypium barbadense* L.
AS 817. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608253. *Gossypium barbadense* L.
AS 819. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608254. *Gossypium barbadense* L.
AS 820. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608255. *Gossypium barbadense* L.
AS 821. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608256. *Gossypium barbadense* L.
AS 822. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608257. *Gossypium barbadense* L.
AS 829. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608258. *Gossypium barbadense* L.
AS 831. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608259. *Gossypium barbadense* L.
AS 832. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608260. *Gossypium barbadense* L.
AS 833. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608261. *Gossypium barbadense* L.
AS 834. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608262. *Gossypium barbadense* L.
AS 835. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608263. *Gossypium barbadense* L.
AS 836. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608264. *Gossypium barbadense* L.
AS 837. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608265. *Gossypium barbadense* L.
AS 838. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608266. *Gossypium barbadense* L.
AS 839. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608267. *Gossypium barbadense* L.
AS 841. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608268. *Gossypium barbadense* L.
AS 842. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608269. *Gossypium barbadense* L.
AS 843. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608270. *Gossypium barbadense* L.
AS 845. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608271. *Gossypium barbadense* L.
AS 1005. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608272. *Gossypium barbadense* L.
AS 1006. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608273. *Gossypium barbadense* L.
AS 1008. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608274. *Gossypium barbadense* L.
AS 1010. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608275. *Gossypium barbadense* L.
AS 1011. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608276. *Gossypium barbadense* L.
AS 1012. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608277. *Gossypium barbadense* L.
AS 1018. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608278. *Gossypium barbadense* L.
AS 1019. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608279. *Gossypium barbadense* L.
AS 1020. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608280. *Gossypium barbadense* L.
AS 1021. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608281. *Gossypium barbadense* L.
AS 1024. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608282. *Gossypium barbadense* L.
AS 1025. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608283. *Gossypium barbadense* L.
AS 1026. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608284. *Gossypium barbadense* L.
AS 1027. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608285. *Gossypium barbadense* L.
AS 1028. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608286. *Gossypium barbadense* L.
AS 1030. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608287. *Gossypium barbadense* L.
AS 1031. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608288. *Gossypium barbadense* L.
AS 1032. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608289. *Gossypium barbadense* L.
AS 1033. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608290. *Gossypium barbadense* L.
AS 1034. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608291. *Gossypium barbadense* L.
AS 1036. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608292. *Gossypium barbadense* L.
AS 1037. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608293. *Gossypium barbadense* L.
AS 1038. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608294. *Gossypium barbadense* L.
AS 1039. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608295. *Gossypium barbadense* L.
AS 1044. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608296. *Gossypium barbadense* L.
AS 1053. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608297. *Gossypium barbadense* L.
AS 1055. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608298. *Gossypium barbadense* L.
AS 1056. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608299. *Gossypium barbadense* L.
AS 1057. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608300. *Gossypium barbadense* L.
AS 1058. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608301. *Gossypium barbadense* L.
AS 1061. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608302. *Gossypium barbadense* L.
AS 1063. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608303. *Gossypium barbadense* L.
PIN 155. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608304. *Gossypium barbadense* L.
PIN 175. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608305. *Gossypium barbadense* L.
AS 224. Collected in Barbados.

Unknown source. Received 07/06/1939.

PI 608306. *Gossypium barbadense* L.
AS 256. Collected in France.

Unknown source. Received 07/06/1939.

PI 608307. *Gossypium barbadense* L.
ASHMOUNI-2. Collected in United States.

Unknown source. Received 07/06/1939.

PI 608308. *Gossypium barbadense* L.
RED LEAF/BRAZIL. Collected in Brazil.

Unknown source. Received 07/06/1939.

PI 608309. *Gossypium barbadense* L.
AS 479. Collected in Narino, Colombia.

Unknown source. Received 07/06/1939.

PI 608310. *Gossypium barbadense* L.
AS 509. Collected in Piura, Peru.

Unknown source. Received 07/06/1939.

PI 608311. *Gossypium barbadense* L.
AS 536. Collected in Lima, Peru.

Unknown source. Received 07/06/1939.

PI 608312. *Gossypium barbadense* L.
AS 551. Collected in Loreto, Peru.

Unknown source. Received 07/06/1939.

PI 608313. *Gossypium barbadense* L.
AS 790. Collected in France.

Unknown source. Received 07/06/1939.

PI 608314. *Gossypium barbadense* L.
AS 805. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608315. *Gossypium barbadense* L.
AS 809. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608316. *Gossypium barbadense* L.
AS 812. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608317. *Gossypium barbadense* L.
AS 813. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608318. *Gossypium barbadense* L.
AS 814. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608319. *Gossypium barbadense* L.
AS 816. Collected in Loja, Ecuador.

Unknown source. Received 07/06/1939.

PI 608320. *Gossypium barbadense* L.
AS 818. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608321. *Gossypium barbadense* L.
AS 823. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608322. *Gossypium barbadense* L.
AS 824. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608323. *Gossypium barbadense* L.
AS 825. Collected in El Oro, Ecuador.

Unknown source. Received 07/06/1939.

PI 608324. *Gossypium barbadense* L.
AS 1007. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608325. *Gossypium barbadense* L.
AS 1013. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608326. *Gossypium barbadense* L.
AS 1015. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608327. *Gossypium barbadense* L.
AS 1022. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608328. *Gossypium barbadense* L.
AS 1043. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608329. *Gossypium barbadense* L.
AS 1047. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608330. *Gossypium barbadense* L.
AS 1048. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608331. *Gossypium barbadense* L.
AS 1060. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608332. *Gossypium barbadense* L.
AS 1064. Collected in Guayas, Ecuador.

Unknown source. Received 07/06/1939.

PI 608333. *Gossypium barbadense* L.
Collected in Belize.

Unknown source. Received 07/06/1939.

PI 608334. *Gossypium barbadense* L.
Collected in Belize.

Unknown source. Received 07/06/1939.

PI 608335. *Gossypium barbadense* L.
Collected in Belize.

Unknown source. Received 07/06/1939.

PI 608336. *Gossypium barbadense* L.
Collected in Belize.

Unknown source. Received 07/06/1939.

PI 608337. *Gossypium barbadense* L.
Collected in Belize.

Unknown source. Received 07/06/1939.

PI 608338. *Gossypium barbadense* L.
Collected in Belize.

Unknown source. Received 07/06/1939.

PI 608339. *Gossypium barbadense* L.
BARI INDIANS #1. Collected in Zulia, Venezuela.

Unknown source. Received 07/06/1939.

PI 608340. *Gossypium barbadense* L.
BARI INDIANS #2. Collected in Zulia, Venezuela.

Unknown source. Received 07/06/1939.

PI 608341. *Gossypium barbadense* L.
BARI INDIANS #3. Collected in Zulia, Venezuela.

Unknown source. Received 08/1991.

PI 608342. *Gossypium barbadense* L.
Collected in Chile.

Unknown source. Received 09/1992.

PI 608343. *Gossypium barbadense* L.
Collected in Namibia.

Unknown source. Received 02/1993.

PI 608344. *Gossypium barbadense* L.
LINE 8. Collected in United States. Pedigree - F4 FROM CROSS OF
COASTLAND 310 X PIMA-51.

Unknown source. Received 1988.

PI 608345. *Gossypium barbadense* L.
Wild. GB 1029. Collected in Brazil.

Unknown source. Received 06/1994.

PI 608346. *Gossypium barbadense* L.
GB 1030.

The following were collected by A. E. Percival, USDA, ARS, Crop Germplasm Research Unit, 2765 F&B Road, College Station, Texas 77845, United States; James M. Stewart, University of Arkansas, Department of Crop, Soil, & Environmental Sciences, Fayetteville, Arkansas 72701, United States. Received 1988.

PI 608347. *Gossypium barbadense* L.
Collected 08/31/1988 in Federal District, Brazil.

Unknown source. Received 1998.

PI 608348. *Gossypium barbadense* L.
GB 1049.

Unknown source. Received 1996.

PI 608349. *Gossypium barbadense* L.
GB 1060.

Unknown source. Received 1996.

PI 608350. *Gossypium barbadense* L.
GB 1061.

Unknown source. Received 1996.

PI 608351. *Gossypium barbadense* L.
GB 1062.

Unknown source. Received 1995.

PI 608352. *Gossypium barbadense* L.
GB 1063.

Unknown source. Received 1995.

PI 608353. *Gossypium barbadense* L.
GB 1064.

Unknown source. Received 1999.

PI 608354. *Gossypium barbadense* L.
GB 1067.

Unknown source. Received 1999.

PI 608355. *Gossypium barbadense* L.
GB 1068.

The following were developed by F. Kiehn, Agriculture and Agri-Food Canada, Research Centre, Unit 100 - 101 Route 100, Morden, Manitoba R6M 1Y5, Canada; H.C. Huang, Agriculture and Agri-Food Canada, Lethbridge Research Center, P.O. Box 3000, Lethbridge, Alberta T1J 4B1, Canada; H.H. Mundel, Agriculture and Agri-Food Canada, Research Centre, Box 3000, Lethbridge, Alberta T1J 4B1, Canada; G. Saindon, Agriculture and Agri-Food Canada, Potato Research Station, P.O. Box 20280, Fredericton, New Brunswick E3B 4Z7, Canada. Received 04/15/1999.

PI 608356. *Phaseolus vulgaris* L.
Cultivar. Pureline. "AC Redbond". CV-168. Pedigree - Ember //2x(NW63//Redcloud/Kentwood). High-yielding early-maturing (99 d compared to 102 d for NW63 in 13 trials). Lodging resistant small red dry bean suited to the narrow-row (drilling) production system used in non-traditional areas of western Canada. Type IIb indeterminate growth habit with no vines with a seed weight of 32.4g 100 seed-1. Moderately resistant to white mold (*Sclerotinia sclerotiorum*). Susceptible to common blight (*Xanthomonas campestris*) and halo blight (*Pseudomonas syringae*). Moderately resistant to root rot (*Fusarium oxysporum* and *Pythium ultimum*) and moderately susceptible to *Rhizoctonia solani*.

The following were developed by Lawrence D. Young, USDA, ARS, West Tennessee Experiment Station, 605 Airways Blvd., Jackson, Tennessee 38301, United States; Thomas C. Kilen, USDA, ARS, Soybean Production Research, P.O. Box 196, Stoneville, Mississippi 38776, United States. Received 04/02/1999.

PI 608357. *Glycine max* (L.) Merr.
Breeding. Pureline. D95-5246. GP-275. Pedigree - Bedford(6) x Tracy. Maturity Group V released to provide soybean breeders with a potential parent to develop multiple pest resistant cultivars. Developed by backcrossing to transfer the gene Rps3-a into the cultivar Bedford. Similar to Bedford for all observable traits and has the same level of resistance to races 3 and 14 of the soybean cyst nematode.

The following were developed by Robert E. Allan, USDA-ARS, Dept. of Crop & Soil Science, 209 Johnson Hall, Pullman, Washington 99164, United States. Received 04/23/1999.

PI 608358. *Triticum aestivum* L. subsp. *aestivum*
Genetic. Pureline. ARS 96621; PS 93331. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96621. Soft red winter wheat two gene

(Rht1,Rht2) semidwarf near-isoline. Plant height 55% of recurrent parent Nord Desprez (ND). Heading date 1 d later than ND. Spikes oblong, awnless, white. Kernels ovate, short to midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (21%), test weight (12%) and grain yield (13%). Higher harvest index (28%) and kernels/spike (56%) than ND and less lodging (6% vs 10%). Coldhardiness similar to ND (medium-low). Percent stand low (45%) vs ND (72%).

PI 608359. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96622; PS 93332. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96622. Soft red winter wheat two gene (Rht1,Rht2) semidwarf near-isoline. Plant height 51% of recurrent parent, Nord Desprez (ND). Heading date 2 d later than ND. Spikes oblong, awnless, white. Kernels ovate, short to midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (18%), test weight (10%), and grain yield (16%). Higher harvest index (26%) and kernels/spike (40%) than ND and has less lodging (1% vs 10%). Medium low coldhardiness similar to ND. Percent stand low (45%) vs ND (72%).

PI 608360. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96623; PS 93333. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96623. Soft red winter wheat two gene (Rht1,Rht2) semidwarf near-isoline. Plant height 49% of recurrent parent, Nord Desprez (ND). Heading date 3 d later than ND. Spikes oblong, awnless, white. Kernels ovate, short to midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (16%), test weight (10%), and grain yield (20%). Higher harvest index (24%) and kernels/spike (22%) than ND with less lodging (2% vs 10%). Medium low coldhardiness similar to ND. Percent stand low (45%) vs ND (72%).

PI 608361. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96624; PS 93334. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96624. Soft red winter wheat two gene (Rht1, Rht2) semidwarf near-isoline. Plant height 53% of recurrent parent, Nord Desprez (ND). Heading date 2 d later than ND. Spikes oblong, awnless, white. Kernels ovate, short to midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (17%), test weight (10%), and grain yield (19%). Higher harvest index (23%) and kernels/spike (42%) than ND with less lodging (2% vs 10%). Medium low coldhardiness similar to ND. Percent stand low (47%) vs ND (72%).

PI 608362. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96627; PS 93337. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96627. Soft red winter wheat one gene (Rht2) semidwarf near-isoline. Plant height 82% of recurrent parent, Nord Desprez (ND). Heading date 1 d later than ND. Spikes oblong, awnless, white spikes. Kernels midlong, ovate, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (7%) and test weight (6%), greater grain yield (3%), higher harvest index (17%), and kernels/spike (31%) than ND with less lodging (3% vs 10%). Coldhardiness similar to ND (medium-low). Percent stand lower (57%) than ND (72%).

PI 608363. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96629; PS 93339. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96629. Soft red winter wheat one gene (Rht1) semidwarf near-isoline. Plant height 87% of recurrent parent, Nord Desprez (ND) with similar heading date. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (7%) and test weight (4%), greater grain yield (14%), harvest index (10%) and kernels/spike (26%) than ND with less lodging (3% vs 10%). Coldhardiness similar to ND (medium-low). Percent stand lower (58%) vs ND (72%).

PI 608364. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96630; PS 93340. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96630. Soft red winter wheat one gene (Rht2) semidwarf near-isoline. Plant height 81% of recurrent parent, Nord Desprez (ND). Heading date 1 d later than ND. Spikes oblong, awnless, white. Kernels ovate, midlong, soft to semihard, and pale red; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (13%) and test weight (7%), greater grain weight (4%), harvest index 15%) and kernels/spike (31%) than ND with less lodging (3% vs 10%). Coldhardiness similar to ND (medium-low). Percent stand lower (53%) than ND (72%).

PI 608365. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96633; PS 93343. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96633. Soft red winter wheat one gene (Rht2) semidwarf near-isoline. Plant height 80% of recurrent parent, Nord Desprez (ND). Heading date 1 d later than ND. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard; crease midwide, middeep/pitted, germ and rush midsize. Compared to ND, lower kernel weight (12%) and test weight (6%), greater grain yield (3%), harvest index (23%) and kernels/spike (38%) than ND with less lodging (3% vs 10%). Coldhardiness similar to ND (medium-low). Percent stand low (53%) vs ND (72%).

PI 608366. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96636; PS 93346. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96636. Soft red winter wheat one gene (Rht1) semidwarf near-isoline. Plant height 90% of recurrent parent, Nord Desprez (ND). Heading date 1 d earlier than ND. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (14%) and test weight (1%), greater grain yield (9%), harvest index (15%) and kernels/spike (38%) than ND with less lodging (3% vs 10%). Coldhardiness similar to ND (medium-low) and percent stand lower (60%) vs ND (72%).

PI 608367. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96637; PS 93347. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96637. Soft red winter wheat one gene (Rht2) semidwarf near-isoline. Plant height 81% of recurrent parent, Nord Desprez (ND). Heading date 1 d later than ND. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, and soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (14%), test weight (7%), greater grain weight (2%), harvest index (17%) and kernels/spike (32%) than ND but similar for

lodging. Coldhardiness similar to ND (medium-low). Percent stand lower (57%) than ND (72%).

PI 608368. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96638; PS 93348. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96638. Soft red winter wheat one gene (Rht1) semidwarf near-isoline. Plant height 91% of recurrent parent, Nord Desprez (ND). Heading date 1 d earlier than ND. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (14%) and test weight (1%), greater grain yield (9%), harvest index (15%) and kernels/spike (29%) than ND with slightly less lodging (7% vs 10%). Coldhardiness similar to ND (medium-low) and percent stand lower (60%) vs ND (72%).

PI 608369. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96640; PS 93350. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96640. Soft red winter wheat one gene (Rht1) semidwarf near-isoline. Plant height 91% of recurrent parent, Nord Desprez (ND). Heading date 1 d earlier than ND. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard; crease midwide, middeep/pitted; germ and brush midsize. Compared to ND, lower kernel weight (10%) and test weight (1%), greater grain yield (12%), harvest index (13%) and kernels/spike (40%) than ND with less lodging (4% vs 10%). Coldhardiness similar to ND (medium-low). Percent stand lower (60%) vs ND (72%).

PI 608370. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96641; PS 93351. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96641. Soft red winter wheat midtall non-semidwarf (rht1,rht2) near-isoline. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard; crease midwide, middeep and some pitted. Germ and brush midsize. Very similar to the recurrent parent, Nord Desprez for plant height, heading date, lodging resistance, grain yield, kernel wt., test wt., harvest index, kernels/spike, coldhardiness and emergence ability.

PI 608371. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96642; PS 93352. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96642. Soft red winter wheat midtall non-semidwarf (rht1,rht2) near-isoline. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard;crease midwide, middeep and some pitted. Germ and brush midsize. Very similar to recurrent parent, Nord Desprez, for plant height, heading date, lodging resistance, grain yield, kernel wt., test wt., harvest index, kernels/spike, coldhardiness and emergence ability.

PI 608372. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96643; PS 93353. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96643. Soft red winter wheat midtall non-semidwarf (rht1,rht2) near-isoline. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard;crease midwide, middeep and some pitted. Germ and brush midsize. Very similar to the recurrent parent, Nord Desprez, for plant height, heading date, lodging resistance, grain yield, kernel wt., test wt., harvest index, kernels/spike, coldhardiness and emergence ability.

PI 608373. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS 96644; PS 93354. Pedigree - Norin 10/Brevor, 14//7*Nord Desprez, ARS 96644. Soft red winter wheat midtall non-semidwarf (rht1,rht2) near-isoline. Spikes oblong, awnless, white. Kernels ovate, midlong, pale red, soft to semihard;crease midwide, middeep and some pitted. Germ and brush midsize. Very similar to the recurrent parent, Nord Desprez, for plant height, heading date, lodging resistance, grain yield, kernel wt., test wt., harvest index, kernels/spike, coldhardiness and emergence ability.

The following were developed by Norman L. Taylor, University of Kentucky, Department of Agronomy, N-122 Agric. Sci. Bldg.-N, Lexington, Kentucky 40546-0019, United States; C. Mousset-Declas, INRA, SGAP BV 1540, Laboratoire des Leguminueses, Dijon, Cote-d'Or 21034, France; R.E. Mundell, University of Kentucky, Dept. of Agronomy, Lexington, Kentucky 40546-0091, United States. Received 04/27/1999.

PI 608374. *Trifolium pratense* L.

Genetic. 99-L38-1799; Tetraploid Ruffled Leaflet. GS-12. Pedigree - Two plants of the tetraploid Swiss cultivar Temara that expressed a ruffled leaflet trait were crossed in isolation. Tetraploid Ruffled Leaflet (98-L38-1799) is the result of three cycles of phenotypic recurrent selection for the ruffled leaflet trait on the hybrid progeny. Plants express puckering, crinkling or ruffling of the edges of leaflets. Condition expressed in field and greenhouse at Lexington, Kentucky. No gene symbols have been assigned.

The following were donated by James R. Steadman, University of Nebraska, Department of Plant Pathology, 406 Plant Science Hall, Lincoln, Nebraska 68583, United States. Received 10/30/1996.

PI 608375. *Phaseolus vulgaris* L.

Landrace. "Carioca"; W6 18693. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

PI 608376. *Phaseolus vulgaris* L.

Landrace. "Porrillo Sintetico"; W6 18694. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

PI 608377. *Phaseolus vulgaris* L.

Landrace. "Brasil 2"; W6 18695. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

PI 608378. *Phaseolus vulgaris* L.

Landrace. "Orguloso"; W6 18696. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

PI 608379. *Phaseolus vulgaris* L.

Landrace. "Rio Tibagi"; W6 18697. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

- PI 608380. Phaseolus vulgaris L.**
Landrace. "Durango 222"; W6 18698. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608381. Phaseolus vulgaris L.**
Landrace. "Zacatecano"; W6 18699. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608382. Phaseolus vulgaris L.**
Landrace. "Ojo de Cabra Santa Rita"; W6 18700. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608383. Phaseolus vulgaris L.**
Landrace. "Guanajuato 31"; W6 18701. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608384. Phaseolus vulgaris L.**
Landrace. "Dilnason"; W6 18702. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608385. Phaseolus vulgaris L.**
Landrace. "Frijola"; W6 18703. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608386. Phaseolus vulgaris L.**
Landrace. "Garbancillo Zarco"; W6 18704. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608387. Phaseolus vulgaris L.**
Landrace. "Flor de Mayo IV"; W6 18705. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608388. Phaseolus vulgaris L.**
Landrace. "Amarillo 154"; W6 18706. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608389. Phaseolus vulgaris L.**
Landrace. "Cejita"; W6 18707. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608390. Phaseolus vulgaris L.**
Landrace. "Jatu Rong"; W6 18708. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.

- PI 608391. Phaseolus vulgaris L.**
Landrace. "Ecuador 1056"; W6 18709. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608392. Phaseolus vulgaris L.**
Landrace. "Jalo EEP558"; W6 18710. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races. Used as a parent of the BAT93 x Jalo EEP558 RI population (recombinant inbred lines). For further information on the development of the population, and on justification of its use in genetic mapping studies see citations below.
- PI 608393. Phaseolus vulgaris L.**
Landrace. "Radical San Gil"; W6 18711. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608394. Phaseolus vulgaris L.**
Landrace. "Alubia Cerrillos"; W6 18712. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608395. Phaseolus vulgaris L.**
Landrace. "Frutilla Corriente"; W6 18713. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608396. Phaseolus vulgaris L.**
Landrace. "Coscorron Corriente"; W6 18714. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608397. Phaseolus vulgaris L.**
Landrace. "Tortolas Corriente"; W6 18715. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608398. Phaseolus vulgaris L.**
Landrace. "Blanco Espanol"; W6 18716. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608399. Phaseolus vulgaris L.**
Landrace. "Burros Argentinos"; W6 18717. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608400. Phaseolus vulgaris L.**
Landrace. "Mortino"; W6 18718. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.
- PI 608401. Phaseolus vulgaris L.**
Landrace. "Caballero"; W6 18719. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in Phaseolus vulgaris races.

PI 608402. Phaseolus vulgaris L.

Landrace. "Nuna Mani Roja"; W6 18720. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

PI 608403. Phaseolus vulgaris L.

Landrace. "Bolon Rojo"; W6 18721. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

PI 608404. Phaseolus vulgaris L.

Landrace. "Bolon Bayo"; W6 18722. Part of the group developed by J.R. Steadman as a broad spectrum pathogen test set testing variability in *Phaseolus vulgaris* races.

The following were donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States; Chinese Academy of Agricultural Sciences, Institute of Crop Germplasm Resources, Crop Introduction Laboratory, Beijing, Beijing 100081, China. Received 07/06/1995.

PI 608405. Oryza sativa L.

Cultivar. "WU FENG LENG SHUI ZHAN"; 170773; ISRUCGR 056; BE-7564; Q 35721. Developed in China. Wu Feng Leng Shui Zhan is an indica, glutinous, middle-season rice cultivar originating from Wufeng County, Hubei Province.

PI 608406. Oryza sativa L.

Cultivar. "BINYANG ZHAN"; 171095; ISRUCGR 057; BE-7564; Q 35722. Developed in China. Binyang Zhan is an indica, glutinous, middle-season rice cultivar originating from Laifeng County, Hubei Province.

PI 608407. Oryza sativa L.

Cultivar. "SHANG YING GU"; 160884; ISRUCGR 058; BE-7564; Q 35723. Developed in China. Shangying Gu is an indica, glutinous, late-season rice cultivar from Tiandeng County, Guangxi Province.

PI 608408. Oryza sativa L.

Cultivar. "JING GUZHI"; 170780; ISRUCGR 059; BE-7564; Q 35724. Developed in China. Jing Guzhi is an indica, glutinous, middle-season rice cultivar from Enshi City, Hubei Province.

PI 608409. Oryza sativa L.

Cultivar. "80 ZHAN"; 203260; ISRUCGR 060; BE-7564; Q 35725. Developed in China. 80 Zhan is an indica, glutinous, middle-season rice cultivar.

PI 608410. Oryza sativa L.

Landrace. 203281; ISRUCGR 061; Zhu Ya Gu; BE-7564; Q 35726. Collected in Sichuan, China. Latitude 30° 0' N. Longitude 103° 0' E. Zhuya Gu is an indica, glutinous, middle-season rice cultivar.

PI 608411. Oryza sativa L.

Cultivar. "BA WANG BIAN"; 203296; ISRUCGR 062; BE-7564; Q 35727. Developed in China. Bawang Bian is a japonica, glutinous, middle-season rice cultivar.

PI 608412. *Oryza sativa* L.

Landrace. 203502; ISRUCGR 063; Xu Xu Zhan; BE-7564; Q 35728. Collected in Sichuan, China. Latitude 30° 0' N. Longitude 103° 0' E. Xuxu Zhan is an indica, glutinous, middle-season rice cultivar.

The following were donated by International Rice Research Institute, P.O. Box 3127, Makati Central Post Office, Makati City, Luzon 1271, Philippines. Received 05/14/1996.

PI 608413. *Oryza sativa* L.

Breeding. CT8008-3-5-8P-M-2P; 17770; Q 36228. Developed in Colombia. Pedigree - CT7347/IR21015-72-3-3-3-1. Source 913431. Site UY4. Season WS. Nursery Remnant.

The following were developed by International Rice Research Institute, P.O. Box 3127, Makati Central Post Office, Makati City, Luzon 1271, Philippines. Received 05/14/1996.

PI 608414. *Oryza sativa* L.

Breeding. IR 52280-117-1-1-3; 16282; Q 36241. Pedigree - IR28222-9-2-2-2-2/IR31868-64-2-3-3-3//IR4563-52-1-3-6. Source 910746. Site UA. Season DS. Nursery Remnant.

PI 608415. *Oryza sativa* L.

Breeding. IR 52287-15-2-3-2; 16258; Q 36242. Pedigree - IR50353/IR32429-47-3-2-2. Source 900446. Site UY. Season DS. Nursery Remnant.

PI 608416. *Oryza sativa* L.

Breeding. IR 53386-100-3-2-2; 17148; Q 36244. Pedigree - IR 37704-131-2-1-3-2/IR 24632-34-2. Source 903478. Site UB1. Season WS. Nursery Remnant.

PI 608417. *Oryza sativa* L.

Breeding. IR 53942-69-3-1-1-1; 18167; Q 36246. Pedigree - IR 28224-3-2-3-2/IR 28222-9-2-2-2-2//IR 28143-51-3-3-1-3. Source 951011. Site UB2-UB3-3. Season DS. Nursery IRBPHN.

PI 608418. *Oryza sativa* L.

Breeding. IR 54055-142-2-1-2-3; 18168; Q 36248. Pedigree - TOX896-R-R-R-102/IR 37870-57-3-3-2//IR 28224-3-2-3-2. Source 951012. Site UB2-UB3-3. Season DS. Nursery Remnant.

PI 608419. *Oryza sativa* L.

Breeding. IR 54791-19-2-3; 17526; Q 36249. Pedigree - IR 64/IR 35293-125-3-2-3. Source 912326. Site UY-LOWER. Season DS. Nursery Remnant.

PI 608420. *Oryza sativa* L.

Breeding. IR 54950-181-2-1-2-3; 17529; Q 36250. Pedigree - New Sabarmati (Bas)/IR 24632-34-2. Source 922958. Site UB. Season DS. Nursery Remnant.

PI 608421. *Oryza sativa* L.

Breeding. IR 56382-17-3-2; 17536; Q 36252. Pedigree - IR 28239-94-2-3-6-2/IR 24632-34-2. Source 912336. Site UY-LOWER. Season DS. Nursery Remnant.

PI 608422. *Oryza sativa* L.

Breeding. IR 59606-119-3; 18148; Q 36261. Pedigree - IR 44592-62-1-3-3-2/IR 28239-94-2-3-6-2. Source 950749. Site UB2-UB3-3. Season DS. Nursery IRBPHN.

PI 608423. *Oryza sativa* L.

Breeding. IR 59625-15-2-1; 18160; Q 36263. Pedigree - IR 45912-9-1-2-2/IR 42000-211-1-2-2-3. Source 950751. Site UB2-UB3-3. Season DS. Nursery IRBPHN.

The following were donated by International Rice Research Institute, P.O. Box 3127, Makati Central Post Office, Makati City, Luzon 1271, Philippines. Received 05/14/1996.

PI 608424. *Oryza sativa* L.

Cultivar. "KAOHSIUNG SEN YU 338"; 17959; Q 36266. Developed in Taiwan. Pedigree - Suweon 264/Naking//IR1780-150-3. Source 922697. Site UU. Season DS. Nursery Remnant.

PI 608425. *Oryza sativa* L.

Breeding. OR79-21; 08201; Q 36271. Developed in India. Pedigree - OR10-135/W1263. Source 923368. Site UA. Season WS. Nursery Remnant.

PI 608426. *Oryza sativa* L.

Cultivar. "TAICHUNG SEN YU 365"; 15508; Q 36279. Developed in Taiwan. Pedigree - Taichung Sen Yu 358/Tainung Sen Yu 107. Source 881502. Site UG BANAUE. Season DS. Nursery Remnant.

The following were donated by Robert H. Dilday, USDA-ARS, Dale Bumpers National Rice Res. Ctr., 2980 Hwy 130 East, Stuttgart, Arkansas 72160, United States. Received 05/15/1996.

PI 608427. *Oryza sativa* L.

Cultivar. "UNBONGBYEO"; Q 36299. Developed in Korea, South. Pedigree - Fukei 102/3/Fukei 70*2//Somewake/3*Fujiminori.

The following were donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States; Chinese Academy of Agricultural Sciences, Inst. of Crop Breeding & Cultivation, Beijing, Beijing, China. Received 05/20/1997.

PI 608428. *Oryza sativa* L.

Cultivar. "XIFONG"; Q 37033. Developed in China.

PI 608429. *Oryza sativa* L.

Cultivar. "ZHONGXIAN NO. 1"; Q 37034. Developed in China. Pedigree - Xiangdao 80-66/Aihe.

The following were donated by Karen A. Moldenhauer, University of Arkansas, Rice Research & Extension Center, 2900 Hwy 130 E, Stuttgart, Arkansas 72160, United States. Received 09/10/1997.

PI 608430. *Oryza sativa* L.

Breeding. LINE III, HANOI; Q 37192. Developed in Vietnam. Glutinous.

PI 608431. *Oryza sativa* L.

Breeding. CML, HAIPONG; Q 37194. Developed in Vietnam. Salt tolerant mutant.

The following were developed by CLRRRI, Can Tho, Vietnam. Donated by Karen A. Moldenhauer, University of Arkansas, Rice Research & Extension Center, 2900 Hwy 130 E, Stuttgart, Arkansas 72160, United States. Received 09/10/1997.

PI 608432. *Oryza sativa* L.

Breeding. TNDB-100; Tai Nguyen; Q 37195. Long grain semi-dwarf mutant.

PI 608433. *Oryza sativa* L.

Breeding. OM 1570; Q 37196.

PI 608434. *Oryza sativa* L.

Breeding. OM 1706; Q 37197. Pedigree - IR35546-52-3-3-2/OM35-1.

PI 608435. *Oryza sativa* L.

Breeding. OM 1704; Q 37198.

PI 608436. *Oryza sativa* L.

Breeding. THDB; Q 37199.

The following were developed by Albin Anderson, North Dakota State University, Hultz Hall 269, Department of Entomology, Fargo, North Dakota 58105, United States; Robert Dregseth, North Dakota State University, Entomology Department, Hultz Hall, Room 270, Fargo, North Dakota 58105, United States; Larry G. Campbell, USDA, ARS, Northern Crops Research Laboratory, 1307 North 18th Street, Fargo, North Dakota 58105-5677, United States. Received 01/25/1999.

PI 608437. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. Population. F1016; NSL 383163. GP-207. Pedigree - Selected from population synthesized by crossing lines from the discontinued ARS (Logan, UT)/Amalgamated Sugar Co. sugarbeet root maggot resistance breeding program with maggot resistant selections from a population closely related to F1010 (PI 535818). Multigerm, green hypocotyl, diploid line. Roots white skin and flesh and sugarbeet shape. Sugarbeet root maggot damage substantially less than any commercial hybrid. On a zero to 9 scale, where higher ratings indicate more damage, rated between 1.8 and 2.6, compared to ratings of 4.7 to 5.8 for commercial hybrids.

The following were developed by Clay Sneller, University of Arkansas, Department of Agronomy, Fayetteville, Arkansas 72701, United States; Thomas G. Isleib, North Carolina State University, Department of Crop Science, Box 7629, Raleigh, North Carolina 27695-7629, United States; Brian W. Diers,

University of Illinois, Department of Crop Sciences, 1102 S. Goodwin Ave., Urbana, Illinois 61801, United States; J.F. Boyse, Michigan State University, Dept. of Crop and Soil Sci., East Lansing, Michigan 48824, United States. Received 02/01/1999.

PI 608438. *Glycine max* (L.) Merr.
Cultivar. Pureline. "Titan". CV-400. Pedigree - E86067 x Kenwood. Indeterminate with late group I maturity. Matures 125 days after planting, seed yield 3,366 kg ha⁻¹, and plant height 79cm. Seed 177 mg seed⁻¹, protein content 402 g kg⁻¹ and oil content 204 g kg⁻¹. Flowers purple, tawny pubescence, and yellow seeds with black hila. Does not have a major gene conferring resistance to phytophthora rot (*Phytophthora sojae*) and is susceptible to brown stem rot (*Phialophora gregata*). Partial resistance to sclerotinia stem rot (*Sclerotinia sclerotiorum*).

The following were developed by J. Rennie Stavely, USDA, ARS, Microbiology and Plant Pathology Lab., Room 252, Building 011A, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 12/09/1996.

PI 608439. *Phaseolus vulgaris* L.
Cultivated. "US 3"; W6 18970. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608440. *Phaseolus vulgaris* L.
Cultivated. "California Small White643 (differential)"; W6 18971. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608441. *Phaseolus vulgaris* L.
Cultivated. "Kentucky Wonder 780 (differential)"; W6 18974. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608442. *Phaseolus vulgaris* L.
Cultivated. "Golden Gate Wax (differential)"; W6 18976. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608443. *Phaseolus vulgaris* L.
Cultivated. "Early Gallatin (differential)"; W6 18977. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608444. *Phaseolus vulgaris* L.
Cultivated. "Ecuador 299"; W6 18979. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608445. *Phaseolus vulgaris* L.
Cultivated. "Mexico 235 (differential)"; W6 18980. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608446. *Phaseolus vulgaris* L.
Cultivated. "Mexico 309 (differential)"; W6 18981. Bean differential for bean rust (*Uromyces appendiculatus*).

PI 608447. *Phaseolus vulgaris* L.
Cultivated. "Brown Beauty"; W6 18982. Bean differential for bean rust (*Uromyces appendiculatus*).

- PI 608448. *Phaseolus vulgaris* L.**
Cultivated. "Pinto Olathe"; W6 18983. Bean differential for bean rust (*Uromyces appendiculatus*).
- PI 608449. *Phaseolus vulgaris* L.**
Cultivated. G4459; "NEP 2"; W6 18985. Bean differential for bean rust (*Uromyces appendiculatus*).
- PI 608450. *Phaseolus vulgaris* L.**
Cultivated. "Aurora (differential)"; W6 18986. Bean differential for bean rust (*Uromyces appendiculatus*).
- PI 608451. *Phaseolus vulgaris* L.**
Cultivated. "51051"; W6 18987. Bean differential for bean rust (*Uromyces appendiculatus*).

The following were donated by North Carolina State University, North Carolina Agr. Exp. Sta., Raleigh, North Carolina, United States. Received 1970.

- PI 608452. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 4; NSL 75981; Lathams Double. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608453. *Zea mays* L. subsp. *mays***
Landrace. Population. N C NO 5; NSL 75982; Woods Prolific. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608454. *Zea mays* L. subsp. *mays***
Landrace. Population. N C NO 7; NSL 75983; R D Howard. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608455. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 14; NSL 75984; Wilkes County White. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608456. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 15; NSL 75985; Yellow Horsetooth. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608457. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 16; NSL 75986; Blackland Jarvis. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608458. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 17; NSL 75987; NEWTON RED. Red seed, North Carolina Open-pollinated Corn Varieties.
- PI 608459. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 18; NSL 75988; WOODS GOLDEN DENT. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608460. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 19; NSL 75989; AYERS PROLIFIC. White seed, North Carolina Open-pollinated Corn Varieties.

- PI 608461. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 23; NSL 75990; SUTTON. White Seed, North Carolina Open-pollinated Corn Varieties.
- PI 608462. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 24; NSL 75991; JOHNSON. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608463. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 26; NSL 75992; HERRING. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608464. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 27; NSL 75993; LATHAMS YELLOW. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608465. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 30; id=71290; NSL 75995; MIDLAND. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608466. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 32; NSL 75996; NEWSOME. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608467. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 34; NSL 75997; FITZGERALD R1. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608468. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 35; NSL 75998; KINGS. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608469. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 37; NSL 75999; HIGHSMITH. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608470. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 38; NSL 76000; WHITLEYS. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608471. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 39; NSL 76001; WALLIS. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608472. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 42; NSL 76002; ROBESON COUNTY. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608473. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 44; NSL 76003; STROTHER YELLOW. Yellow seed, North Carolina Open-Pollinated Corn Varieties.
- PI 608474. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 46; NSL 76004; HIGHLAND HORSETOOTH. White seed, North Carolina Open-pollinated Corn Varieties.

- PI 608475. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 51; NSL 76005; EDMISTER. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608476. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 52; NSL 76006; ASHE COUNTY YELLOW. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608477. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 53; NSL 76007; BREVARD. Yellow seed, North Carolina Open-pollinated Corn varieties.
- PI 608478. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 54; NSL 76008; HOLCOMBE PROLIFIC. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608479. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 55; NSL 76009; HAYWOOD COUNTY. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608480. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 56; NSL 76010; NICHOLAS. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608481. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 58; NSL 76011; ELLIS. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608482. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 59; NSL 76012; VON CANNON. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608483. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 60; NSL 76013; BURLESON. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608484. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 63; NSL 76014; HUNTLEY. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608485. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 64; NSL 76015; BEAN. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608486. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 66; NSL 76016; FERRELL. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608487. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 68; NSL 76017; MIDDLETON. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608488. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 69; NSL 76018; SIMPSON. Yellow seed, North Carolina Open-pollinated Corn Varieties.

- PI 608489. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 70; NSL 76019; SHEPHERDS. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608490. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 71; NSL 76020; SHEPHERDS MIXED. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608491. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 72; NSL 76021; WINCHESTER. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608492. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 75; NSL 76022; HEEL TAP. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608493. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 76; NSL 76023; ALLEGHENY. Mixed seed color with red stripe, North Carolina Open-Pollinated Corn Varieties.
- PI 608494. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 78; NSL 76024; PATE. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608495. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 81; NSL 76025; MILLERS SPECIAL. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608496. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 82; NSL 76026; MOSS. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608497. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 83; NSL 76027; SMITH. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608498. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 84; NSL 76028; FURGESON. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608499. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 85; NSL 76029; WRIGHT. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608500. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 86; NSL 76030; BOYDS SPECIAL. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608501. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 89; NSL 76031; HOLLIDAYS. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608502. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 90; NSL 76032; JOHNSONS PROLIFIC. White seed, North Carolina Open-pollinated Corn Varieties.

- PI 608503. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 91; NSL 76033; LIMBERCOB. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608504. *Zea mays* L. subsp. *mays***
Breeding. Population. NC NO 92; NSL 76034; JARVIS LONG-EAR COMPOSITE. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608505. *Zea mays* L. subsp. *mays***
Breeding. Population. NC NO 93; NSL 76035; JARVIS BIG-EAR COMPOSITE. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608506. *Zea mays* L. subsp. *mays***
Breeding. Population. NC NO 94; NSL 76036; JARVIS LOW-EAR COMPOSITE. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608507. *Zea mays* L. subsp. *mays***
Breeding. Population. NC NO 95; NSL 76037; JARVIS HIGH-YIELD COMPOSITE. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608508. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 96; NSL 76038; WEEKLEYS. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608509. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 97; NSL 76039; ANDERSONS WHITE. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608510. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 98; NSL 76040; GATES COUNTY. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608511. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 99; NSL 76041; KELLOGS STRAWBERRY. Red seed, North Carolina Open-pollinated Corn Varieties.
- PI 608512. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 100; NSL 76042; HIGH YELLOW. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608513. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 102; NSL 76043; GRANTS SPECIAL. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608514. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 103; NSL 76044; HAWKES. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608515. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 104; NSL 76045; GATE POST. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608516. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 105; NSL 76046; Shoepeg; Shoe Peg.

- PI 608517. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 106; NSL 76047; JOHN FEQUETTE. White seed, North Carolina Open-pollinated Corn Varieties.
- PI 608518. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 107; NSL 76048; IOWA. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608519. *Zea mays* L. subsp. *mays***
Landrace. Population. NSL 76049; Smiths Shoepeg.
- PI 608520. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 109; NSL 76050; McCutchens Shoepeg; McCutchens Shoe Peg.
- PI 608521. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 110; NSL 76051; Yellow Shoepeg; Yellow Shoe Peg. Yellow seed, North Carolina Open-pollinated Corn Varieties.
- PI 608522. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 111; NSL 76052; LOCKLEAR. Mixed seed color, North Carolina Open-pollinated Corn Var.
- PI 608523. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 116; NSL 76053; BLUE TICK. White seed with blue kernels, North Carolina Open-pollinated Corn Varieties.
- PI 608524. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 118; NSL 76054; LAIL FLINT. Multicolored seed, North Carolina Open-pollinated Corn Var.
- PI 608525. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 127; NSL 76055; TOM DENTON. Yellow seed, North Carolina Open-pollinated Seed Collection.
- PI 608526. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 128; NSL 76056; MASONS NANTAHOLA MULTIPLE EAR. White seed, North Carolina Open-pollinated Seed Collection.
- PI 608527. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 130; NSL 76057; MAMA KAT CORN. White seed, North Carolina Open-pollinated seed collection.
- PI 608528. *Zea mays* L. subsp. *mays***
Landrace. Population. NC NO 134; NSL 76058; IREDELL VIRUS RESISTANT. White seed, North Carolina Open-pollinated corn collection.
- PI 608529. *Zea mays* L. subsp. *mays***
Landrace. Population. NC-2; NSL 82744; BIGGS TWO EAR. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608530. *Zea mays* L. subsp. *mays***
Landrace. Population. id=84566; NC-3; NSL 82745; SOUTHERN BEAUTY. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.

- PI 608531. Zea mays L. subsp. mays**
Landrace. Population. NSL 82746; DAVENPORT ROPER (R L). Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608532. Zea mays L. subsp. mays**
Landrace. Population. NC-11; NSL 82747; HONBARRIERS ENSILAGE. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608533. Zea mays L. subsp. mays**
Landrace. Population. NC-12; NSL 82748; EUREKA ENSILAGE. Received 12/71 from D.L.Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608534. Zea mays L. subsp. mays**
Landrace. Population. NC-13; NSL 82749; TAYLOR. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608535. Zea mays L. subsp. mays**
Landrace. Population. NC-25; NSL 82750; GOODMAN'S. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608536. Zea mays L. subsp. mays**
Landrace. Population. NC-29; NSL 82751; MOSS R R. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608537. Zea mays L. subsp. mays**
Landrace. Population. NC-31; NSL 82752; HOILMAN. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608538. Zea mays L. subsp. mays**
Landrace. Population. NC-33; NSL 82753; COKES PROLIFIC. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608539. Zea mays L. subsp. mays**
Landrace. Population. NC-36; NSL 82754; Tennessee Red Cob. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608540. Zea mays L. subsp. mays**
Landrace. Population. NC-40; NSL 82755; NIXON. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608541. Zea mays L. subsp. mays**
Landrace. Population. NC-41; NSL 82756; SEVEN SPRINGS. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608542. Zea mays L. subsp. mays**
Landrace. Population. NC-45; NSL 82757; STROTHER WHITE.
- PI 608543. Zea mays L. subsp. mays**
Landrace. Population. NC-47; NSL 82758; JOHNSON (WAKE COUNTY). Received 12/72 from D.L. Thompson, Crop Science dept., N.C. St. Univ.
- PI 608544. Zea mays L. subsp. mays**
Landrace. Population. NC-50; NSL 82759; POOR BOY. Received 12/71 from D.L. Thompson, Crop Science dept., N.C. St. Univ.

- PI 608545. Zea mays L. subsp. mays**
Landrace. Population. NC-57; NSL 82760; BAKERSVILLE. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608546. Zea mays L. subsp. mays**
Landrace. Population. NC-119; NSL 82761; LONG PRAIRE. Received 12/71 from D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608547. Zea mays L. subsp. mays**
Landrace. Population. NC-122; NSL 82762; SILAS FARMER. Received 12/72 from D.L.Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608548. Zea mays L. subsp. mays**
Landrace. Population. NC-129; NSL 82763; MASONS NANTAHALA. Received 12/72 form D.L. Thompson, Crop Science Dept., N.C. St. Univ.
- PI 608549. Zea mays L. subsp. mays**
Landrace. Population. NC-135; NSL 82764; VALLE CRUCIS. Received 12/72 from D.L. Thompson, Crop Science Dept., North Carolina State University.

The following were donated by USDA, ARS, North Carolina State University, North Carolina Agr. Exp. Sta, Raleigh, North Carolina 27607, United States. Received 02/1978.

- PI 608550. Zea mays L. subsp. mays**
Landrace. Population. NC VARIETY NO 8; NSL 96920; WARDS. Yellow seed color, 78 % germination in 1977.
- PI 608551. Zea mays L. subsp. mays**
Landrace. Population. NC VARIETY NO 9; NSL 96921; OBER PAUL. White seed color, 78 % germination in 1977.
- PI 608552. Zea mays L. subsp. mays**
Landrace. Population. NC VARIETY 48; NSL 96922; NO COB. Mixed white and yellow seed color, 90 % germination in 1977.
- PI 608553. Zea mays L. subsp. mays**
Landrace. Population. NSL 96923; Marion. White seed color, 70 % germination in 1977.
- PI 608554. Zea mays L. subsp. mays**
Landrace. Population. NC VARIETY 79; NSL 96924; JOHNSON (SILER CITY). Yellow seed color, 70 % germination in 1977.
- PI 608555. Zea mays L. subsp. mays**
Landrace. Population. NSL 96925; COLEY. Yellow seed color, 88 % germination 1977.
- PI 608556. Zea mays L. subsp. mays**
Landrace. Population. NC VARIETY 124; NSL 96926; GARDINERS. Yellow seed color, 68 % germination in 1977.
- PI 608557. Zea mays L. subsp. mays**
Landrace. Population. NC VARIETY 125; NSL 96927; HARRIS. Yellow seed color, 65 % germination 1977.

PI 608558. *Zea mays* L. subsp. *mays*

Landrace. Population. NC VARIETY 131; NSL 96928; POWELLS LARGE GRAIN. White seed color, 80% germination in 1977.

PI 608559. *Zea mays* L. subsp. *mays*

Landrace. Population. NSL 96930; N B JOHNSON. Mixed white and yellow seed color, 94 % germination in 1977.

PI 608560. *Zea mays* L. subsp. *mays*

Landrace. Population. NC VARIETY NO 20; NSL 96931; KNOWLES. White seed color, 96 % germination in 1977.

PI 608561. *Zea mays* L. subsp. *mays*

Landrace. Population. NSL 96932; SMITHWICK TWO EAR. White seed color, 96 % germination in 1977.

The following were developed by New Mexico State University Agricultural Experiment Station, Las Cruces, New Mexico 88003, United States. Received 02/19/1999.

PI 608562 PVPO. *Allium cepa* L.

Cultivar. "NuMex Sweetpak". PVP 9800315.

The following were developed by Busch Agricultural Resources, Inc., 3515 East County Road 52, Fort Collins, Colorado 80524, United States. Received 02/19/1999.

PI 608563 PVPO. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "B1614ml". PVP 9900124.

The following were donated by Montana Turfgrass Technologies, Montana, United States. Received 02/19/1999.

PI 608564. *Poa pratensis* L.

Cultivar. "LoMow". PVP 9900125.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 02/19/1999.

PI 608565 PVPO. *Medicago sativa* L.

Cultivar. "54H69". PVP 9900126.

The following were donated by Pioneer Hi-Bred International, Inc, United States. Received 02/19/1999.

PI 608566 PVPO. *Medicago sativa* L.

Cultivar. "53V63". PVP 9900127.

The following were developed by Kleinwanzlebener Saatzucht, Einbeck-Hannover, Lower Saxony, Germany. Received 02/19/1999.

PI 608567 PVPO. Zea mays L. subsp. mays
Cultivar. "KW7791". PVP 9900128.

The following were developed by Novartis Seeds, Inc., United States. Received 02/19/1999.

PI 608568 PVPO. Phaseolus vulgaris L.
Cultivar. "ONYX". PVP 9900129.

The following were developed by Holden's Foundation Seeds, Inc., United States. Received 02/19/1999.

PI 608569 PVPO. Zea mays L. subsp. mays
Cultivar. "LH266". PVP 9900130.

PI 608570 PVPO. Zea mays L. subsp. mays
Cultivar. "LH303". PVP 9900131.

PI 608571 PVPO. Zea mays L. subsp. mays
Cultivar. "LH277". PVP 9900132.

PI 608572 PVPO. Zea mays L. subsp. mays
Cultivar. "LH265". PVP 9900133.

PI 608573 PVPO. Zea mays L. subsp. mays
Cultivar. "LH229". PVP 9900134.

The following were developed by Virginia Agric. Exp. Station, Richmond, Virginia, United States. Received 02/19/1999.

PI 608574 PVPO. Glycine max (L.) Merr.
Cultivar. "MFS-553". PVP 9900135.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 02/19/1999.

PI 608575 PVPO. Gossypium hirsutum L.
Cultivar. "DeltaOPAL". PVP 9900136.

PI 608576 PVPO. Gossypium hirsutum L.
Cultivar. "DP4025". PVP 9900137.

PI 608577 PVPO. Gossypium hirsutum L.
Cultivar. "DP4049". PVP 9900138.

The following were developed by Kenneth Hignight, Advanta Seeds West, Inc., 33725 Columbus Street S.E., P.O. Box 1496, Albany, Oregon 97321-0452, United States; C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; Ronald F. Bara, Rutgers University, New Jersey Agricultural Experiment Station, Cook College, New Brunswick, New Jersey 08901, United States; Dirk A. Smith, New Jersey Agricultural Experiment Station, Plant Science Dept., Cook College,

Rutgers Univ., New Brunswick, New Jersey 08903, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; R. Stapp, Pennington Seed, Inc., P.O. Box 290, Madison, Georgia 30650, United States. Received 02/19/1999.

PI 608578. *Festuca arundinacea* Schreb.

Cultivar. "PLANTATION". PVP 9900142; CV-85. Pedigree - Plants selected from old turfs of the U.S. or the Rebel breeding program were evaluated in mowed clonal plots and/or spaced-plant nurseries. Intercrosses of best performing plants were subjected to many cycles of population improvement including population backcrossing combined with phenotypic and genotypic recurrent selection. Attractive, medium-dark-green, persistent, medium-low-growing, turf-type tall fescue with medium-fine leaf blades. Excellent record of performance in the NTEP turf trials established in 1996 and evaluated at 28 locations throughout the U.S. Ranked first in 1997 and second in 1998 in mean turfgrass quality of the 129 tall fescue cultivars evaluated in the 27 tests growing in full sun. Also performed well in a shade trial in Mississippi and under traffic stress at Mead, NE. Did well at varying nitrogen fertility regimes, different mowing heights, and various irrigation levels tested. Showed good performance in the cool-humid, cool-arid, and transition zones of the U.S.

The following were developed by Michigan State University, Michigan Agr. Exp. Sta., East Lansing, Michigan 48824, United States. Received 02/19/1999.

PI 608579 PVPO. *Avena sativa* L.

Cultivar. "IDA". PVP 9900143.

The following were developed by Kim Bodger, John Bodger & Sons Company, 1800 N. Tyler Avenue, South El Monte, California 91733, United States. Received 02/19/1999.

PI 608580. *Tagetes patula* L.

Cultivar. "DISCO GRANADA". PVP 9900144.

PI 608581. *Catharanthus roseus* (L.) G. Don

Cultivar. "SANTA FE". PVP 9900145.

The following were developed by Cenex Harvest States, United States. Received 02/19/1999.

PI 608582 PVPO. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "ALBION". PVP 9900146.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 02/19/1999.

PI 608583 PVPO. *Pisum sativum* L.

Cultivar. "PASO". PVP 9900147.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 02/19/1999.

PI 608584 PVPO. Brassica napus L.
Cultivar. "45A01". PVP 9900149.

The following were developed by Western Rice Research Busch Agricultural Resources, Inc., United States. Received 02/19/1999.

PI 608585 PVPO. Oryza sativa L.
Cultivar. "WRS-4431". PVP 9900150.

PI 608586 PVPO. Oryza sativa L.
Cultivar. "WRM-3538". PVP 9900151.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 02/19/1999.

PI 608587 PVPO. Brassica napus L.
Cultivar. "45A51". PVP 9900152.

The following were developed by Garst Seed Company, United States. Received 02/19/1999.

PI 608588. Zea mays L. subsp. mays
Cultivar. "ZS01231". PVP 9900153.

PI 608589. Zea mays L. subsp. mays
Cultivar. "ZS02234". PVP 9900154.

PI 608590. Zea mays L. subsp. mays
Cultivar. "ZS02433". PVP 9900155.

PI 608591. Zea mays L. subsp. mays
Cultivar. "ZS02461". PVP 9900156.

PI 608592. Zea mays L. subsp. mays
Cultivar. "ZS03822". PVP 9900157.

PI 608593. Zea mays L. subsp. mays
Cultivar. "ZS03940". PVP 9900158.

PI 608594. Zea mays L. subsp. mays
Cultivar. "ZS09247". PVP 9900159.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 02/19/1999.

PI 608595 PVPO. Pisum sativum L.
Cultivar. "XP 357". PVP 9900160.

PI 608596 PVPO. Pisum sativum L.
Cultivar. "MR. BIG". PVP 9900161.

PI 608597 PVPO. *Pisum sativum* L.
Cultivar. "XP 368". PVP 9900162.

The following were developed by Texas Agricultural Experiment Station, Texas, United States. Received 02/19/1999.

PI 608598 PVPO. *Agrostis stolonifera* var. *palustris* (Huds.) Farw.
Cultivar. "BACKSPIN". PVP 9900163.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608599. *Zea mays* L. subsp. *mays*
Landrace. Population. CRC 35; NSL 4046; Bloody Butcher. Collected 1960 in Colorado, United States. Latitude 39° 57' 40" N. Longitude 108° 17' 8" W. Elevation 1524 m. Purdy Mesa (summit) on Kannah Creek, Mesa County. Farm. Pedigree - Original source of variety was Bloody Butcher. Raber recently purchased his farm from Eugene Stephens who sold this corn along with the farm.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Abram J. Relyea, Colorado, United States. Developed by Sanchez, Chama, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608600. *Zea mays* L. subsp. *mays*
Landrace. Population. CRC 47; NSL 4047; Blue Flour. Collected 1960 in Colorado, United States. Latitude 37° 9' 43" N. Longitude 105° 22' 40" W. Elevation 2499 m. Chama, Costilla County. Pedigree - 2 years of culture on the Antecino farm with good isolation. Originally from a man named Sanchez in Chama who had been growing it for a number of years.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Angelo A. Blase, Colorado, United States. Developed by Felix Arrellano, Route 1, Box 131, Walsenburg, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608601. *Zea mays* L. subsp. *mays*
Landrace. Population. CRC 49; NSL 4048; Indian Corn; Blue Flour. Collected 1960 in Colorado, United States. Latitude 37° 37' N. Longitude 104° 50' W. Elevation 1920 m. 3 1/2 miles west of Walsenburg, Huerfano County. Pedigree - 43 years of culture on the Arrellano farm. Poor isolation, may have been some mixing with white

flour since 1917 and white dent since 1955 because of only 20 yards separation from the whites. Brought from Mexico by Arrellano's father in 1917.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Abram J. Relyea, Colorado, United States. Developed by Salvador Lopez, San Pablo, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608602. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 48; NSL 4049; Blue Flour. Collected 1960 in Colorado, United States. Latitude 37° 8' 57" N. Longitude 105° 23' 47" W. Elevation 2499 m. San Pablo, Costilla County. Pedigree - 39 years of culture on the Lopez farm. Good isolation since hybrids were not grown in the area. Mrs. Lopez received this corn from her father in 1921.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Forest T. McWilliams, Colorado, United States. Developed by Albert Henderson, Drennan, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608603. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 33; id=83769; NSL 4050; Calico. Collected 1960 in Colorado, United States. Latitude 38° 45' N. Longitude 104° 26' W. Elevation 1859 m. 1 mile east of Drennan, El Paso County. Pedigree - 12 years of culture on the Henderson farm. Fair isolation, probable crossing with Henderson's open-pollinated yellow dent and that of his neighbor's. Henderson mixed about 5% yellow kernels with the variety every few years. Originated from a man in Fountain, Colorado (~1948) who had grown it for 3 or 4 years. Henderson believed the man brought the corn from the Rocky Ford area.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Forest T. McWilliams, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608604. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 34; NSL 4051; Calico. Collected 1960 in Colorado, United States. Latitude 38° 58' N. Longitude 104° 13' W. Elevation 1981 m. 6 miles south and 4 1/2 miles east of Calhan, El Paso County. Pedigree - A number of years of culture on the Whitney farm with good isolation.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608605. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 5; NSL 4052; Binbuster Colorado Yellow Dent. Maize Genetics Cooperation Newsletter 35, 1961. Colo. Farm and Home Research, March-April, 1961.

PI 608606. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 23; NSL 4053; COLORADO 13. Maize Gen. Coop. Newsletter 35, 1961. Colo. Farm & Home Research, March-April, 1961.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Developed by John A. Williams, Route 4, Pueblo, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608607. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 24; NSL 4054; Colorado 13. Collected 1960 in Colorado, United States. Latitude 38° 15' N. Longitude 104° 35' W. Elevation 1402 m. A few miles east of Pueblo (around Road 24), Pueblo County. Pedigree - Original source of variety was Minnesota 13. ~35 years of culture on the Williams farm. Isolation was fair since Williams gave his neighbors the corn whenever their fields were nearby, and tried to keep his RYD at the other end of the farm. However, some mixing has probably occurred. Williams was supplied this corn by a Pueblo County agent named Bert Sawhill. Sawhill received the corn in 1920 from a seedsman in Colorado Springs named William Doner.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608608. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 6; id=83850; NSL 4055; Colorado Yellow Dent. Maize Genetics Coop. Newsletter 35, 1961. Colo. Farm & Home Research, March-April, 1961.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Richard O. Woodfin, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608609. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 28; NSL 4056; Cedaredge Special. Collected 1960 in Colorado, United States. Latitude 39° 9' 32" N. Longitude 108° 43' 42" W. Elevation 1372 m. Near Fruita, Mesa County. Pedigree - 3 years of culture on the McDowell farm. Fair isolation with the nearest corn 1/2 mile away and neither he or his neighbors grew hybrids. May have been crossed with Bloody Butcher at one time. McDowell was supplied this corn by C. Englehart, a seed dealer in Fruita. Englehart was supplied the corn by Tony Serve of Loma who had grown it for 15 years. Serve received it from John Eckert of Eckert in the Cedaredge area who had grown it for at least 20 years. Eckert may have crossed this variety with Bloody Butcher at one time.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Bruce G. Whitmore, Colorado, United States. Developed by John Jacobs, Eads, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608610. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 21; NSL 4057; 14-Row Kattle Corn. Collected 1960 in Colorado, United States. Latitude 38° 34' N. Longitude 102° 56' W. Elevation 1311 m. Prairie Queen Community, 6 miles north and 3 miles west of Eads, Kiowa County. Pedigree - Original source of variety was Lancaster Surecrop which Jacobs got from Pennsylvania. At least 20 years of culture on the Jacobs farm.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Developed by Floyd Mudge, 3109 East 1/2 Road, Route 1, Grand Junction, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608611. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 29; NSL 4058; Iowa Goldmine. Collected 1960 in Colorado, United States. Latitude 39° 8' N. Longitude 108° 27' W. Elevation 1433 m. 4 miles northeast of Grand Junction, Mesa County. Pedigree - Original source of variety was Iowa Goldmine from Iowa. At least 15 years of culture by Mudge. Mudge lived in several different places in the northern region of the valley and grew this corn in all of those places. Isolation unknown, closest corn at time of collection was 1/2 mile away.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608612. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 37; NSL 4059; Iowa Silvermine. Maize Gen. Coop. Newsletter 35, 1961. Colo. Farm & Home Research, March-April, 1961.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; James A. Spiers, Colorado, United States. Developed by Elmer Oestman, Wray, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608613. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 38; NSL 4060; Iowa Silvermine. Collected 1960 in Colorado, United States. Latitude 40° 20' N. Longitude 102° 14' W. Elevation 1158 m. 15 miles north of Wray, Yuma County. Pedigree

- Original source of variety was a strain of Iowa Silvermine (according to Oestman). 15 years of culture on Oestman farm with good isolation.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Forest T. McWilliams, Colorado, United States. Developed by Waite Whitney, Calhan, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608614. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 42; NSL 4061; Iowa Silvermine. Collected 1960 in Colorado, United States. Latitude 38° 58' N. Longitude 104° 13' W. Elevation 1981 m. 6 miles south and 4 1/2 miles east of Calhan, El Paso County. Pedigree - Original source of variety was Iowa Silvermine. 25 years of culture on Whitney farm. Good isolation since Whitney tried to keep it separated from other corn. The nearest corn at time of collection was Whitney's Calico field 1 1/4 miles southeast. This corn had been grown in the Calhan area since about 1910. Whitney received his corn from the Calhan area ~1935.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Richard O. Woodfin, Colorado, United States. Developed by Fred Selan, Grand Junction, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608615. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 30; NSL 4062; Iowa Yellow Dent. Collected 1960 in Colorado, United States. Latitude 39° 9' N. Longitude 108° 28' W. Elevation 1433 m. 4 miles northeast of Grand Junction, Mesa County. Pedigree - 38 years of culture on Selan farm. Fair isolation since there had been some crossing with other types. Original source of variety was Iowa. Selan brought his corn from the Uinta Basin of Utah in 1922.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; John T. Haddan, Colorado, United States. Developed by R.M. LeBlanc, RR 2, Holyoke, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608616. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 8; NSL 4064; LeBlanc's 90-Day Yellow Dent. Collected 1959 in Colorado, United States. Latitude 40° 39' N. Longitude 102° 20' W. Elevation 1158 m. 5 miles north and 3 miles west of Holyoke, Phillips County. Pedigree - 10 years of culture on LeBlanc farm. Fair isolation, had been kept as free as possible from hybrids. There was some crossing with a Yuma stock in 1950, but little evidence of the cross existed at the time of collection. LeBlanc was supplied this variety by Earl Cheney (1 mile north of Haxtun) in 1949. Cheney received the corn from Leonhard Fetzer. Fetzer received the corn from a man who brought it from Nebraska around 1930.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; John T. Haddan, Colorado, United States. Developed by Henry Lambert, Dailey, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608617. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 36; NSL 4065; Logan County White Dent. Collected 1960 in Colorado, United States. Latitude 40° 39' 24" N. Longitude 102° 43' 24" W. Elevation 1219 m. 1/4 mile south of Dailey, Logan County. Pedigree - Mixture of a local white variety and an early white variety from Minnesota. 13 years of culture on the Lambert farm with good isolation. Lambert obtained this corn from Chase Meakins (3 1/4 miles north and 1/4 mile east of Dailey) about 1947. Meakins, in turn, obtained it from George Hoffman (Iloff area). Hoffman received the corn from Stanley Mitchell (north of Proctor) about 1922-24. J.E. Morrison, Logan County agent, got 1 bushel of an early white variety from Minnesota. Hoffman mixed Morrison's corn with Mitchell's corn and made selections for several years.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Donald K. Chadwick, Colorado, United States. Developed by Art Brandenburg, Flagler, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608618. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 18; NSL 4066; Minnesota 13. Collected 1957 in Colorado, United States. Latitude 39° 22' N. Longitude 103° 0' W. Elevation 1433 m. 8 miles northeast of Flagler, Kit Carson County. Pedigree - Original source of variety was Minnesota 13. 27 years of culture on the Brandenburg farm with good isolation. Originated from a farmer southeast of Potter, Nebraska about 1930.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608619. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 31; NSL 4067; Minnesota 13. Collected 1960 in Colorado, United States. Latitude 39° 10' N. Longitude 108° 48' W. Elevation 1372 m. 5 miles west of Fruita, Mesa County. Pedigree - Original source of variety was Minnesota 13. 3 years of culture on the Serve farm. Fair isolation since Serve tried to maintain separation, but he also raised the variety Cedaredge Special. Purchased from a seed store in Salt Lake City, Utah about 1957 or 1958.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Edwin H. Amend, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608620. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 44; NSL 4068; Mixed Types. Collected 1960 in Colorado, United States. Latitude 40° 10' N. Longitude 103° 2' W. Elevation 1341 m. 1 1/2 miles north and 2 1/2 miles east of Platner, Washington County.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; John T. Haddan, Colorado, United States. Developed by Rex Meakins, Haxtun, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608621. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 4; Minnesota 13 X Reid's Yellow Dent; NSL 4069. Collected 1952 in Colorado, United States. Latitude 40° 42' N. Longitude 102° 38' W. Elevation 1219 m. 6 miles north of Haxtun, Phillips County. Pedigree - Variety originated from a mixture of Minnesota 13 (for earliness) and Reids Yellow Dent (for kernel depth). 37 years of culture on the Meakins farm. Good isolation since Meakins stopped growing it when hybrids came along. Rex Meakins's father, S.J. Meakins, started growing this corn about 1915. Rex Meakins grew it every year from 1921-1952.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Forest T. McWilliams, Colorado, United States. Developed by Albert Henderson, Drennan, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608622. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 22; Native Yellow Dent; NSL 4070. Collected 1960 in Colorado, United States. Latitude 38° 45' N. Longitude 104° 26' W. Elevation 1859 m. 1 mile east of Drennan, El Paso County. Pedigree - 39 years of culture on the Henderson farm. Every 2 or 3 years Henderson would add 5% of a 90-day eastern yellow dent (from southeast Kansas) to 95% of his own. He avoided "inbreeding" by selecting his seed corn over the entire field. Fair isolation since most of the corn grown in the region was open-pollinated derived from Henderson. Closest hybrid was 1 mile south and the prevailing winds were from the north. However, Henderson grew some Calico on his farm. This variety originated in the Drennan community in 1921 and Henderson grew it every year except one until time of collection.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Bruce G. Whitmore, Colorado, United States.

Developed by John Jacobs, Eads, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608623. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 20; NSL 4071; 12-Row Kattle Corn. Collected 1960 in Colorado, United States. Latitude 38° 34' N. Longitude 102° 56' W. Elevation 1311 m. Prairie Queen Community, 6 miles north and 3 miles west of Eads, Kiowa County. Pedigree - Original source of variety was Lancaster Surecrop from Pennsylvania. At least 20 years of culture on the Jacobs farm.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608624. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 12; NSL 4072; Wachter's True Gold. Collected 1960 in Colorado, United States. Latitude 40° 8' N. Longitude 102° 44' W. Elevation 1250 m. 1 mile north and 1 mile west of Yuma, Yuma County. Pedigree - 1 year of culture on the Renzelman farm. Fair isolation since there was not much corn grown in the area.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; James A. Spiers, Colorado, United States. Developed by John Clark, Wray, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608625. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 14; NSL 4073; Wachter's True Gold. Collected 1960 in Colorado, United States. Latitude 40° 5' N. Longitude 102° 22' W. Elevation 1158 m. 8-9 miles west of Wray, Yuma County. Pedigree - 25 years of culture on the Clark farm with fair isolation. Variety originated from a man in Yuma named Wachter around 1935. Clark replenished his own supply of corn about every 2 years with some corn from Wachter. However, after Wachter either died or left the area about 1955, Clark started saving his own seed.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Carl H. Powell, Colorado, United States. Developed by J.H. Winters, Delta, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608626. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 26; NSL 4074; Colorado 13. Collected 1960 in Colorado, United States. Latitude 38° 40' 35" N. Longitude 108° 4' 58" W. Elevation 1615 m. California Mesa (summit) near Delta, Delta County. Pedigree - Original source of variety was Minnesota 13. 42

years of culture on the Winters farm with good isolation. Variety originated from the Fort Collins-Longmont area in 1918.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Angelo A. Blase, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608627. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 43; White Dent; NSL 4075. Collected 1960 in Colorado, United States. Latitude 37° 37' N. Longitude 104° 50' W. Elevation 1920 m. 3 1/2 miles west of Walsenburg, Huerfano County. Pedigree - 4 years of culture on the Arrellano farm. Poor isolation, there may have been some mixing with Arrellano's white flour and blue flour corns. Variety originated from Mexico City in 1955 when a friend of Arrellano's brought back a handful of kernels.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Bruce G. Whitmore, Colorado, United States. Developed by Robert Sallee, Eads, Colorado, United States; Wayne Singer, Eads, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608628. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 41; White Dent; NSL 4076. Collected 1960 in Colorado, United States. Latitude 38° 34' N. Longitude 102° 56' W. Elevation 1311 m. Prairie Queen Community, 6 miles north and 3 miles west of Eads, Kiowa County. Pedigree - Native white dent with over 30 years of culture on the Sallee and Singer farm.

PI 608629. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 45; NSL 4077; Australian White Flint. Collected 1960 in Colorado, United States. Latitude 38° 34' N. Longitude 102° 56' W. Elevation 1311 m. Prairie Queen Community, 6 miles north and 3 miles west of Eads, Kiowa County. Pedigree - Original source of variety was Australian White Flint. 54 years of culture on the Sallee and Singer farm. Sallee brought this corn from Fort Scott, Kansas in 1906, where it had been grown by his father.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Angelo A. Blase, Colorado, United States. Developed by Felix Arrellano, Route 1, Box 131, Walsenburg, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608630. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 50; NSL 4078; White Flour. Collected 1960 in Colorado, United States. Latitude 37° 37' N. Longitude 104° 50' W. Elevation 1920 m. 3 1/2 miles west of Walsenburg, Huerfano County. Pedigree - 90 years of culture on the Arrellano farm. Poor isolation

since there may have been some mixing with Arrellano's white dent since 1955. Arrellano's father brought 1/2 cup of this variety from Taos, New Mexico in 1870.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Donald K. Chadwick, Colorado, United States. Developed by Bill Kroeger, Burlington, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608631. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 39; White Dent; NSL 4079. Collected 1960 in Colorado, United States. Latitude 39° 28' N. Longitude 102° 16' W. Elevation 1158 m. 12 miles north of Burlington, Kit Carson County. Pedigree - 30 years of culture on the Kroeger farm.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; John T. Haddan, Colorado, United States. Developed by Eldred Atkins, Haxtun, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608632. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 3; Yellow Dent; NSL 4080. Collected 1960 in Colorado, United States. Latitude 40° 41' N. Longitude 102° 38' W. Elevation 1219 m. 4 miles north of Haxtun, Phillips County. Pedigree - 14 years of culture on the Atkins farm. Fair isolation since hybrids had been across the road to the east since 1957, but prevailing wind is northwest. Variety originated from local growers (not Moon or Pond) in the Haxtun area in 1946. Two of the sources were Lawrence Atkins and a man named Fenningsmeyer.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Edwin H. Amend, Colorado, United States. Developed by Warren Harper, Star Route, Brush, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608633. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 10; Yellow Dent; NSL 4081. Collected 1959 in Colorado, United States. Latitude 40° 5' N. Longitude 103° 37' W. Elevation 1402 m. 12 miles south and 2 miles east of Brush, Morgan County. Pedigree - 20-30 years of culture on the Harper farm. Fair isolation since no steps were taken to isolate this variety, however not much corn was grown in the area. Variety originated from the Yuma area (it was believed Harper picked up his supply locally).

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; James A. Spiers, Colorado, United States. Developed

by Roland Houston, Eckley, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608634. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 17; Yellow Dent; NSL 4082. Collected 1960 in Colorado, United States. Latitude 40° 1' N. Longitude 102° 29' W. Elevation 1219 m. 8 miles south of Eckley, Yuma County. Pedigree - 15 years of culture on the Houston farm. Poor isolation since it was occasionally grown close to hybrids.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; John T. Haddan, Colorado, United States. Developed by Wilbur Kipp, RR 2, Haxtun, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608635. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 1; Yellow Dent; NSL 4083. Collected 1960 in Colorado, United States. Latitude 40° 40' N. Longitude 102° 39' W. Elevation 1219 m. 3 miles north and 3 miles west of Haxtun, Logan County. Pedigree - 13 years of culture on the Kipp farm. Original source of variety was J.A. Sand who had a field 1 1/2 miles south of Haxtun in 1947.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; James A. Spiers, Colorado, United States. Developed by Elmer Oestman, Wray, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608636. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 15; Yellow Dent; NSL 4084. Collected 1960 in Colorado, United States. Latitude 40° 20' N. Longitude 102° 14' W. Elevation 1158 m. 15 miles north of Wray, Yuma County. Pedigree - 10 years of culture on the Oestman farm. Poor isolation since some white corn (possibly belonging to his brother, Fred Oestman) apparently got into the stock since there were some white cap kernels and white cobs. An elevator was probably the original source of this variety.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Donald K. Chadwick, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608637. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 19; Yellow Dent; NSL 4085. Collected 1960 in Colorado, United States. Latitude 39° 34' N. Longitude 102° 5' W. Elevation 1158 m. 18 miles northeast of Burlington, Kit Carson County. Pedigree - 4 years of culture on the Paintin farm. Poor isolation since other corn had been grown fairly close. Variety originated from northeast of Wray in 1956.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608638. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 9; NSL 4086; YELLOW DENT. Maize Genetics Cooperation Newsletter 35, 1961. Colo. Farm and Home Research, March-April, 1961.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; John T. Haddan, Colorado, United States. Developed by W.W. Singleton, Fleming, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608639. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 2; Yellow Dent; NSL 4087. Collected 1960 in Colorado, United States. Latitude 40° 43' N. Longitude 102° 46' W. Elevation 1219 m. 4 miles north and 1 3/4 miles west of Dailey, Logan County. Pedigree - 10 years of culture on the Singleton farm. Poor isolation since the neighbors had grown hybrids for about 3 years. Variety was obtained from an elevator in Dailey about 1950, although it originated from the Yuma area.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1968.

PI 608640. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 13; NSL 4088; YELLOW DENT.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; James A. Spiers, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608641. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 16; Yellow Dent; NSL 4089. Collected 1959 in Colorado, United States. Latitude 40° 15' N. Longitude 102° 16' W. Elevation 1158 m. 14 miles northwest of Wray, Yuma County. Pedigree - 2 years of culture on the Smith farm with good isolation. Original source of variety is believed to be Homer Wheeler of Eckley who had grown this corn for many years.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608642. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 7; NSL 4090; YELLOW DENT. Maize Genetics Cooperation Newsletter 35, 1961. Colo. Farm and Home Research, March-April, 1961.

PI 608643. Zea mays L. subsp. mays

Landrace. Population. CRC 25; NSL 4091; Reids Yellow Dent. Maize Gen. Coop. Newsletter 35, 1961. Colo. Farm & Home Research, March-April, 1961.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Fred A. Fitzsimmons, Colorado, United States. Developed by Walter Hall, McElmo Route, Cortez, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608644. Zea mays L. subsp. mays

Landrace. Population. CRC 32; Hall's Corn; NSL 4192; Yellow Dent. Collected 1960 in Colorado, United States. Latitude 37° 19' 21" N. Longitude 108° 36' 39" W. Elevation 1463 m. McElmo Canyon, southwest of Cortez, Montezuma County. Pedigree - This variety originated from a cross Hall made about 1930 between Reid Yellow Dent and White Elephant (a white flint variety with a white cob). About 30 years of culture on the Hall farm. Good isolation since there had been little chance for crossing with other corns.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Bert L. Ransom, Colorado, United States. Developed by Carl Pedersen, Arapahoe, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1961.

PI 608645. Zea mays L. subsp. mays

Landrace. Population. CRC 40; White Dent; NSL 4193. Collected 1960 in Colorado, United States. Latitude 38° 51' N. Longitude 102° 10' 54" W. Elevation 1219 m. Arapahoe, Cheyenne County. Pedigree - Over 20 years of culture on the Pedersen farm with good isolation.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; James A. Spiers, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608646. Zea mays L. subsp. mays

Landrace. Population. CRC 51; NSL 4806; Minnesota 13. Collected 1961 in Colorado, United States. Latitude 40° 6' 50" N. Longitude 102° 29' 25" W. Eckley, Yuma County. Pedigree - Variety originated from Minnesota 13.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Developed by John Erion, Vineland, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608647. Zea mays L. subsp. mays

Landrace. Population. CRC 52; NSL 4828; Iowa Silvermine. Collected 1948 in Colorado, United States. Latitude 38° 14' N. Longitude 104° 27' W. Elevation 1402 m. 1 mile south and 3/4 mile east of Vineland, Pueblo County. Pedigree - Original source of variety was Iowa Silvermine. 33 years of culture on the Erion farm. Good isolation since Erion quit growing this variety when hybrids came along. Variety originated from Henry Fields Seed Company of Shenandoah, Iowa in 1914. Erion grew it from 1915 to about 1948. Some of the sample may have been grown by T.J. Thompson of Vineland, but it is all from Erion's stock.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608648. Zea mays L. subsp. mays

Landrace. Population. CRC 53; NSL 4829; Australian White Flint. Collected 1945 in Colorado, United States. Latitude 38° 14' 44" N. Longitude 104° 27' 32" W. Elevation 1402 m. Near Vineland, Pueblo County. Pedigree - Original source of variety was Australian White Flint. Several years of culture on the Thompson farm. At one time, Australian White Flint was grown in great quantities in the Vineland area. Thompson's neighbor, John Erion, remembers growing this corn in 1914.

PI 608649. Zea mays L. subsp. mays

Landrace. Population. CRC 54; id=72032; NSL 4830; Squaw Corn; Blue Squaw Corn. Collected 1961 in Colorado, United States. Latitude 40° 37' 32" N. Longitude 103° 12' 26" W. Near Sterling, Logan County.

The following were donated by Colorado State University, Colorado Agric. Exp. Station, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608650. Zea mays L. subsp. mays

Landrace. Population. CRC 60; NSL 67785; KERFOOT.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Edwin H. Amend, Colorado, United States. Donated by Robin L. Cuany, Colorado State University, Department of Agronomy, Soil & Crop Sciences, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608651. Zea mays L. subsp. mays

Landrace. Population. CRC 11; NSL 102713; Colorado Yellow Dent. Collected 1960 in Colorado, United States. Latitude 39° 57' N. Longitude 103° 12' W. Elevation 1402 m. 15 miles south of Akron, Washington County.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Donated by Robin L. Cuany, Colorado State

University, Department of Agronomy, Soil & Crop Sciences, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608652. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 27; NSL 102714; Golden Glow. Collected 1961 in Colorado, United States. Latitude 39° 3' 50" N. Longitude 108° 33' W. Western Slope near Grand Junction, Mesa County. Pedigree - Original source of variety was Golden Glow.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States; Chester R. Fithian, Colorado, United States. Donated by Robin L. Cuany, Colorado State University, Department of Agronomy, Soil & Crop Sciences, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608653. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 56; NSL 102715; Squaw Corn. Collected 1956 in Colorado, United States. Latitude 40° 20' N. Longitude 103° 58' W. 1 mile south of Weldona, Morgan County. Pedigree - 1 year of culture on the Schaeffer farm. Fair isolation since one ear had a few sweet corn kernels and Schaeffer said there was sweet corn nearby. Original source of variety was Barteldes Seed Company of Denver in 1956.

PI 608654. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 57; NSL 102716; Rainbow Flint. Collected 1953 in Colorado, United States. Latitude 40° 13' N. Longitude 103° 49' W. 2 miles west and 1 mile south of Fort Morgan, Morgan County.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Developed by William B. Foster, Elizabeth, Colorado, United States. Donated by Robin L. Cuany, Colorado State University, Department of Agronomy, Soil & Crop Sciences, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608655. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 58; NSL 102717; Iowa Silvermine. Collected 1959 in Colorado, United States. Latitude 39° 27' N. Longitude 104° 40' W. Elevation 1981 m. Near Elizabeth, 2 1/4 miles east of Hilltop, just inside the Elbert County border. Pedigree - Original source of variety was Iowa Silvermine. About 28 years of culture on the Foster farm. Good isolation since Foster practiced strict selection for pure white kernels. Yellow kernels very seldom showed in later years. This variety was brought from Iowa about 1921. It was then grown in the Hilltop area until about 1931 when Foster first received it.

The following were collected by David W. Crumpacker, Colorado State University, Corn Improvement Project, Department of Agronomy, Fort Collins, Colorado, United States. Donated by Robin L. Cuany, Colorado State University, Department of Agronomy, Soil & Crop Sciences, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608656. *Zea mays* L. subsp. *mays*

Landrace. Population. CRC 59; NSL 102718; Iowa Silvermine. Collected 1961 in Colorado, United States. Latitude 39° 10' N. Longitude 108° 47' W. 4 miles west of Fruita, or 1 1/2 miles southeast of Loma, Mesa County. Pedigree - Original source of variety was Iowa Silvermine. 4 years of culture on the Serve farm. Very good isolation since Serve tried to keep all his varieties at least 500 feet apart and none of his neighbors' corn was closeby. About 1954, Serve got this corn from Mr. Castor, who in turn got it from Mr. Nowles of Fruita. However, Serve did not grow the corn until about 1957.

The following were donated by Robin L. Cuany, Colorado State University, Department of Agronomy, Soil & Crop Sciences, Fort Collins, Colorado 80523, United States. Received 1979.

PI 608657. *Zea mays* L. subsp. *mays*

Landrace. Population. NSL 102719; CRC 61.

The following were developed by M. Rahman, Bangladesh Agr. Res. Inst., Ishurdi, Bangladesh; J. C. Kumar, Punjab Agricultural University, Department of Vegetable Crops, Landscaping and Floriculture, Ludhiana, Punjab 141 004, India; A. Sarker, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria; M.S. Hassan, Bangladesh Agricultural Research Institute, Pulses Research Centre, Joydebpur, Gazipur, Bangladesh; M.A. Afzal, Bangladesh Agricultural Research Institute, Pulses Research Centre, Joydebpur, Gazipur, Bangladesh; A.N.M.M. Murshed, Bangladesh Agricultural Research Institute, Pulses Research Centre, Joydebpur, Gazipur, Bangladesh; W. Zaman, Pulses Research Centre, BARI, Joydebpur, Bazipur-1701, Bangladesh. Donated by A. Sarker, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria. Received 02/23/1999.

PI 608658. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. Pureline. "Barimasur-3"; ILL 8147; BLx 8405-36. CV-9. Pedigree - Single plant selection from F2 population of BLL 79666 x Pabnalocal. Released 1995. Medium-seeded high yielding variety. Medium stature, semi-erect with dark green leaves without tendrils. Flowers white, and pod and leaves turn into straw color while stem remains green at maturity. Seed coat dark gray and cotyledon color bright orange. Average seed mass of ca. 2.5g 100 seed-1. Resistant to lentil rust (*Uromyces viciae-fabae*) and stemphylium blight (*Stemphylium botryosum*).

The following were collected by Doyle G. Whiting, 4416 Forest Lake Drive, Del Valle, Texas 78617-5612, United States. Donated by Kim Hummer, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 10/08/1998.

PI 608659. *Vitis* sp.

Wild. GVIT 1620. Collected 10/01/1998 in Texas, United States. Latitude 30° 16' N. Longitude 97° 44' W. From the wild, 10 miles from Austin, Texas. Lat/lon accurate to Austin. Collected from three old vines in the woods. Fruit black (purple), 1.5 to 1.8 cm. diam.

The following were collected by John Asbury, 4201 Dove Lane, Temple, Texas 76502-2953, United States. Donated by Diane S. Pavek, USDA, ARS, Natl. Germplasm Resources Laboratory, Building 003, 4th Floor, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 12/22/1998.

PI 608660. *Vitis monticola* Buckley

Wild. GVIT 1621. Collected 10/16/1998 in Texas, United States. Latitude 31° 20' N. Longitude 97° 35' W. Bell County, Texas. 0.3 miles from junction of County Road 343 and Farm Market Road 931, near Leon Junction. Lat/lon accurate to Leon Junction.

The following were donated by Asian Vegetable Research and Development Center, P.O. Box 42, Shanhua, Tainan, Taiwan; Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 02/20/1981.

PI 608661. *Amaranthus graecizans* subsp. *silvestris* (Vill.) Brenan

Cultivated. RRC 78S-104; A75-65; RRC 104; Chottichenloi; Ames 2035. Collected 09/01/1977 in India. The seeds are black, flowers red, leaves amaranthine (dark reddish purple). The RRC class type is: horsetooth. The dark red-purple leaf color is unusual for this species. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

The following were donated by Leibniz-Inst für Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben, Saxony-Anhalt D-06466, Germany; Botanical Garden, Institute of Ecology and Botany, of the Hungarian Academy of Sciences, Vacratot, Pest H-2163, Hungary. Received 05/30/1990.

PI 608662. *Amaranthus blitoides* S. Watson

Wild. AMA 68/78; Ames 13790. Collected in Hungary. A prostrate spreading annual herb.

The following were donated by Dominion Arboretum and Botanic Garden, Plant Research Institute, Ottawa, Ontario, Canada; Leibniz-Inst für Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben, Saxony-Anhalt D-06466, Germany. Received 05/30/1990.

PI 608663. *Amaranthus blitoides* S. Watson

Wild. AMA 66/89; Ames 13791. Collected in Canada. A prostrate spreading annual herb.

The following were developed by Carl W. Johnson, California Cooperative Rice Research Foundation, Inc., P.O. Box 306, Biggs, California 95917, United States; Shu-Ten Tseng, California Cooperative Rice Research Foundation, Inc., P.O. Box 306, Biggs, California 95917-0306, United States; Jeff Oster, California Cooperative Rice Research, Foundation, Inc., P.O. Box 306, Biggs, California 95917, United States; J.E. Hill, University of California, Cooperative Extension Service, Dept. of Agronomy & Range Science, Davis, California, United States; D.M. Brandon, Louisiana State University, Louisiana Agric. Exp. Station, Rice Experiment Station, Crowley, Louisiana, United States; Kent S. McKenzie, California Rice Research Foundation, P.O. Box 306, Biggs, California 95917, United States. Received 02/05/1999.

PI 608664. *Oryza sativa* L.

Cultivar. Pureline. "L-205"; 94-Y-40. PVP 9900309; CV-113. Pedigree - M7/R660//M7/R1588/3/82-Y-52/4/Rexmont/83-Y-45. Released 1999.

Photoperiod non-sensitive, early maturing, semidwarf long-grain rice. Leaves and spikelets glabrous except some hairs present on lemma and palea keels. Spikelet awnless and straw-colored with red apiculus and light purple stigma. Reaches 50% heading in about 88 days. Averaged 91 cm in height and resistant to lodging. Kernel has light brown pericarp, colorless, non-glutinous, non-aromatic endosperm with amylose content of 24.6% and an intermediate gelatinization temperature. 'Strong' viscogram profile.

PI 608665. *Oryza sativa* L.

Cultivar. Pureline. "CALMATI 201"; 96-Y-90. PVP 9900308; CV-114.

Pedigree - 82-Y-51/83-Y-45//L-202/PI373938/3/83-Y-45/PI457918. Released 1999. Photoperiod non-sensitive, early maturing, semidwarf, aromatic long-grain rice. Reaches 50% heading in about 91 days with average height of 100 cm. Leaves and spikelets pubescent. Apiculus color varies from colorless, light purple to purple. Rice kernel brown with light brown pericarp, colorless, non-glutinous, aromatic endosperm with amylose content of 23%. Intermediate gelatinization temperature and a kernel elongation ratio of 2.06 during cooking. Endosperm contains 660 ppb of 2-acetyl-1-pyrroline.

The following were developed by Harold E. Pattee, USDA, ARS, North Carolina State University, Box 7625, Raleigh, North Carolina 27695-7625, United States; Thomas G. Isleib, North Carolina State University, Department of Crop Science, Box 7629, Raleigh, North Carolina 27695-7629, United States; R. Walton Mozingo, Tidewater Agricultural Research, and Extension Center, 6321 Holland Road, Suffolk, Virginia 23437, United States; P.W. Rice, North Carolina State University, Dept. of Crop Science, Box 7629, Raleigh, North Carolina 27695-7629, United States; R.W. Mozingo II, North Carolina State University, Dept. of Crop Science, Box 7629, Raleigh, North Carolina 27695-7629, United States. Received 02/18/1999.

PI 608666. *Arachis hypogaea* L.

Cultivar. Pureline. "GREGORY"; N90009. CV-62; PVP 9900337. Pedigree - NC 7 / NC 9. Virginia-type with alternate branching. Growth habit intermediate between bunch and runner. Average mainstem length (31cm), leaflet size (60 mm long, 26 mm wide). Seeds large (104 mg seed-1) with pink testa and high oil content. Partially resistant to tomato spotted wilt virus and susceptible to early leafspot (*Cercospora arachidicola*), *Cylindrocladium* black rot (*Cylindrocladium parasiticum*), *Sclerotinia* blight (*Sclerotinia minor*), and stem rot (*Sclerotium rolfsii*). Significantly more jumbo pods (71 vs. 57%) and extra large kernels (51 vs. 48%) than NC 7, the standard large-seeded Virginia-type peanut cultivar.

The following were developed by Robert W. Matchett, Resource Seeds, Inc., 39438 Highway 113, P. O. Box 8755, Woodland, California 95776, United States; Lynn W. Gallagher, University of California, Department of Plant Sciences, One Shields Ave., Davis, California 95616, United States; Lee F. Jackson, University of California, Department of Plant Sciences, One Shields Avenue, Davis, California 95616-8780, United States; H.E. Vogt, University of

California, Department of Plant Sciences, Davis, California 95616, United States; Y. Paul Puri, University of California, Tulelake Field Station, Tulelake, California 96134, United States. Received 03/01/1999.

PI 608667. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "UC 937"; UCD 92-10615; NSGC 7359. CV-296. Pedigree - Smal/Sunbar 401/3/Gus/Kombyne//Smal. Smal = Steptoe/2*Diamant/3/Minn Dwarf 64.98-8/Briggs/4/Asse. Released 1999. Six-row spring barley. Semi-smooth awns. Intended for late fall to early winter sowing in the Central Valley of California. Moderately resistant to BYDV, leaf rust, powdery mildew, net blotch, and scald. Resistant to races of stripe rust existing in the Central Valley of California.

PI 608668. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "UC 960"; NSGC 7360. CV-297. Pedigree - Smal/Sunbar 401/3/Gus/Kombyne//Smal. Smal = Steptoe/2*Diamant/3/Minn Dwarf 64.98-8/Briggs/4/Asse. Released 1999. Six-row spring barley. Rough awns. Intended primarily for spring planting under long daylengths in the southern Klamath Basin. Moderately resistant to BYDV, leaf rust, net blotch, and scald. Resistant to races of barley stripe rust existing in the Central Valley of California and the Klamath Basin.

The following were developed by William D. Branch, University of Georgia, Coastal Plain Experiment Station, Department of Crop and Soil Sciences, Tifton, Georgia 31793-0748, United States. Received 02/22/1999.

PI 608669. *Arachis hypogaea* L.

Genetic. Pureline. Rusty-Leaf. GS-7. Pedigree - Off-type plant in a foundation seed increase field of Virginia Bunch 67 and has bred true-to-type since discovery in 1967. Released 1998. Plants have semi-erect or decumbent growth habits, medium maturity, and pink testa color. Leaf color light or pale green with small white speckled areas on the youngest leaflets giving a rusty appearance.

PI 608670. *Arachis hypogaea* L.

Genetic. Pureline. White-Spot Testa. GS-8. Pedigree - PI 203396 / Georgia Runner. Released 1998. Predominantly red testa color with small singular white spot located on the opposite end of the seed from the hilum. Plants have spreading growth habit and medium late maturity.

The following were developed by Richard N. Peaden, USDA, ARS, Irrigated Agricultural Research, & Extension Center, Prosser, Washington 99350, United States. Donated by George J. Vandemark, USDA, ARS, 24106 North Bunn Road, Prosser, Washington 99350, United States. Received 02/04/1999.

PI 608671. *Medicago sativa* L. subsp. *sativa*

Cultivar. Population. "WINEMA"; W45. Pedigree - Agate, Dawson, and BIC5WH. Developed to resist alfalfa mosaic virus (ALMV) and is intended to use in the Pacific Northwest and intermountain regions of the U.S. 67.8% resistant to AMLV, 29.6% resistant to bacterial wilt (*Clavibacter michiganensis* subsp. *insidiosum*), 61.1% resistant to Fusarium wilt (*Fusarium oxysporum*), 42.5% resistant to stem nematode (*Ditylenchus dipsaci*), 5.1% resistance to *Phytophthora* root rot (*Phytophthora megasperma*), 11.1% resistant to *Verticillium* wilt (*Verticillium albo-atrum*), 44.0% resistance to spotted alfalfa aphid (*Therioaphis*

maculata), 58.7% survival under blue alfalfa aphid attack. Fall dormancy is similar to Saranac. Yield 8.8 tons dry hay/acre compared to Vernema at 8.6 tons in the same tests. Yield 8.5 tons dry hay/acre compared to Vernal at 7.2 tons in the same tests.

The following were developed by Roger H. Ratcliffe, USDA-ARS, Entomology Hall, Purdue University, West Lafayette, Indiana 47907, United States; Herbert W. Ohm, Purdue University, Department of Agronomy, 915 West State Street, West Lafayette, Indiana 47907-2054, United States; Sue Cambron, USDA-ARS, Smith Hall, Room 135, 901 W. State Street, West Lafayette, Indiana 47907-2089, United States; Gregory E. Shaner, Purdue University, Dept. of Botany & Plant Pathology, 1155 Lilly Hall, West Lafayette, Indiana 47907-2054, United States; George Buechley, Purdue University, Dept. of Botany and Plant Pathology, 915 W. State St., West Lafayette, Indiana 47907-2054, United States; Keith Perry, Purdue University, Department of Botany and Plant Pathology, 1155 Lilly Hall of Life Sciences, West Lafayette, Indiana 47907-1155, United States; D.M. Huber, Purdue University, Dept. of Botany & Plant Pathology, West Lafayette, Indiana 47907, United States; H.C. Sharma, Purdue University, Department of Agronomy, West Lafayette, Indiana 47907, United States. Received 03/01/1999.

PI 608672. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "GOLDFIELD"; P89118RC1-9-3-3. CV-877; PVP 9900340. Pedigree - INW9241/3/Auburn//Caldwell/Sullivan/4/Clark; INW9241 = Auburn/9/Monon/Bruehl 236/6/Arthur 71/5/Arthur/Agatha/4/Beau/3/Arthur*2//Riley*3/Bulgaria 88/7/Beau//Siete Cerros/Arthur/8/Beau/Caldwell. Released 1999. Soft red winter wheat. Released for low incidence of Fusarium head blight (FHB) (*Fusarium graminearum*), winterhardiness, and moderate resistance to glume blotch (*Stagonospora nodorum*), and Septoria leaf blotch (*Septoria tritici*), and very good soft wheat milling and baking qualities. Developed by a modified pedigree breeding method and is the selfed progeny of an F5 plant. Resistant to *Puccinia recondita*, *Blumeria graminis*, soil borne wheat mosaic virus, wheat yellow mosaic virus, and *Gaeumannomyces graminis*. Susceptible to biotype L of *Mayetiola destructor*.

The following were developed by Roger H. Ratcliffe, USDA-ARS, Entomology Hall, Purdue University, West Lafayette, Indiana 47907, United States; Herbert W. Ohm, Purdue University, Department of Agronomy, 915 West State Street, West Lafayette, Indiana 47907-2054, United States; Sue Cambron, USDA-ARS, Smith Hall, Room 135, 901 W. State Street, West Lafayette, Indiana 47907-2089, United States; Gregory E. Shaner, Purdue University, Dept. of Botany & Plant Pathology, 1155 Lilly Hall, West Lafayette, Indiana 47907-2054, United States; George Buechley, Purdue University, Dept. of Botany and Plant Pathology, 915 W. State St., West Lafayette, Indiana 47907-2054, United States; Keith Perry, Purdue University, Department of Botany and Plant Pathology, 1155 Lilly Hall of Life Sciences, West Lafayette, Indiana 47907-1155, United States; H.C. Sharma, Purdue University, Department of Agronomy, West Lafayette, Indiana 47907, United States; V.M. Cook, Monsanto Global Seed Group, Spencer, Iowa 51301, United States. Received 03/01/1999.

PI 608673. *Avena sativa* L.

Cultivar. Pureline. "JAY"; P8640A1-31-5-4. CV-359; PVP 9900339. Pedigree - Avon//Rodney/Milford/11/Noble/CIav 6975/9/Mo.06328/8/CIav

8454/7/Otee/6/Clintford/5/Roxton, Victoria, Hajira, Banner/Ajax, Victoria, Hajira, Banner//Clinton59*7/Landhafer/3/PI 183989/Putnam/4/Clintford/10/Allen//Noble/Stout/4/Lang/3/Noble*2/IowaX43 4-II//Stout/NY5832-4*2/12/Iowa H728. Released 1998. Spring oat adapted throughout the midwest and upper midwest regions of the U.S. Resistant to prevalent cultures of *Puccinia coronata* var. *avenae* and has resistance/tolerance to barley yellow dwarf virus. Midseason in maturity, excellent lodging resistance, light tan grain color, high test weight and relatively high percent groat protein.

The following were developed by Mark J. Bassett, University of Florida, Department of Vegetable Crops, 1253 Fifield Hall, Gainesville, Florida 32611, United States. Received 12/09/1995.

PI 608674. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 26; W6 17624. Pedigree - Pure line 5-593, University of Florida. { [fin] [T] [Cl] [Z] [Bip] [Fib] [C r] [J] [G] [B] [V] [Rk] [Gy] [Asp] }; recurrent parent for all marker gene stocks; shiny-black unpatterned seed and purple unpatterned flowers.

PI 608675. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 28; W6 17626. Pedigree - BC3 to 5-593 from 94-93. [p*gri]; griseoalbus allele at [P], yielding gray-white seed and flowers nearly white with violet color in upper center of the banner.

PI 608676. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 29; W6 17627. Pedigree - BC3 to 5-593 from 93-527. [c*u]; "all recessive stock" of R. Prakken, via M. Dickson through M. Bassett. Unchangeable cartridge buff seed.

PI 608677. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 30; W6 17628. Pedigree - BC3 to 5-593 from 94-94. [c*v]; allele expresses ONLY with [V], brown tinged with grayish indigo seed color.

PI 608678. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 31; W6 17629. Pedigree - BC3 to 5-593 from 94-120. { [b] [v] }; yellow brown seed.

PI 608679. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 32; W6 17630. Pedigree - BC3 to 5-593 from 94-375. [v]; mineral brown seed.

PI 608680. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 33; W6 17631. Pedigree - BC3 to 5-593 from 2-469. [v*lae]; mineral brown seed, and pleiotropically with [B = black] a pink flower and a dark corona on seed.

PI 608681. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 34; W6 17632. Pedigree - BC3 from 5-593 to 94-121. { [G] [b] [V] }; dark brown-violet seed.

PI 608682. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 35; W6 17633. Pedigree - BC1 to 5-593 from 90-450. [sb-3]; spindly branch.

- PI 608683. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 36; W6 17634. Pedigree - BC1 to 5-593 from 91-584. [sil]; silver (leaf).
- PI 608684. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 37; W6 20615. Pedigree - BC3 to 5-593 from 97-14. { [g] [B] [v] }; gray-greenish brown (buffy citrine) seed.
- PI 608685. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 38; W6 20616. Pedigree - BC3 to 5-593 from 97-1. { [g] [b] [v] }; pale greenish-yellow seed.
- PI 608686. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 39; W6 20617. Pedigree - BC3 to 5-593 from 94-69. [j]; non-shiny dark purple seed with near-white in the corona region.
- PI 608687. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 40; W6 20618. Pedigree - BC3 from 5-593 to 94-73. { [z] [j] }; non-shiny dark purple seed (more pale than with [j] alone) and a white hilum ring & corona on seed.
- PI 608688. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 41; W6 20619. { [j] [v] }; grayish-violet seedcoat color, but for an unstable mineral brown margo region, and a near-white corona on seed.
- PI 608689. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 42; W6 20620. Pedigree - BC3 to 5-593 from 94-85. { [z] [j] [v] }; unstable pale grayish-green (or violet) pattern on seedcoat; a white hilum ring & corona on seed.
- PI 608690. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 43; W6 20621. { [j] [b] [v] }; grayish-violet seedcoat but for an unstable yellow-brown margo region; a white corona on seed.
- PI 608691. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 44; W6 20622. Pedigree - BC3 to 5-593 from 96-101. { [z] [j] [b] [v] }; highly variable pale gray or pale grayish-violet seedcoat (more pale than [j] alone); a white hilum ring & corona on seed.
- PI 608692. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 45; W6 20623. Pedigree - BC3 to 5-593 from 96-97. { [j] [b] }; highly variable grayish-brown or dark brown-violet seedcoat; a near-white corona on seed.
- PI 608693. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 46; W6 20624. Pedigree - BC3 to 5-593 from 97-19. { [j] [g] [B] [v] }; highly variable grayish-brown or grayish-Violet seedcoat; a near-white corona on seed.
- PI 608694. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 47; W6 20625. Pedigree - BC3 to 5-593 from 97-26. { [c*u] [b] [v] [rk] }; light red kidney seedcoat.

- PI 608695. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 48; W6 20626. Pedigree - BC3 to 5-593 from 95-148. { [?R] [b] [v] }; oxblood seedcoat color - slightly bluish-dark red kidney.
- PI 608696. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 49; W6 20627. Pedigree - BC3 to 5-593 from 93-197. { [c*u] [z] [j] }; pure white seedcoat color.
- PI 608697. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 50; W6 20628. Pedigree - BC3 to 5-593 from 93-198. { [c*u] [Z] [j] }; very pale cartridge-buff seedcoat; a brown hilum ring & white corona on seed.
- PI 608698. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 51; W6 20629. Pedigree - BC3 to 5-593 from 95-154. { [c*v] [D] [j] }; very pale gray seedcoat; a brown hilum ring & white corona on seed.
- PI 608699. *Phaseolus vulgaris* L.**
Genetic. PRAKKEN 75; Genetic Marker 52; W6 20630. Pedigree - Pureline; tester from R. Prakken. { [fin] [T] [P] [c*u] [z] [j] [G] [b] [v*lae] [Rk] [Asp] }; pure white seedcoat.
- PI 608700. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 53; W6 20631. Pedigree - BC2 to 5-593 (self-colored = totally colored) from 90-575. [t]; totally (colored = self-colored) black seed coat.
- PI 608701. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 54; W6 20632. Pedigree - BC3 to 5-593 (expansa with fibula arcs) from 95-133. [t]; expansa (minimus) with fibula arcs pattern on partly colored seed.
- PI 608702. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 55; W6 20633. Pedigree - BC3 to 5-593 (viragarcus) from 94-205. { [t] [z] }; viragarcus pattern of partly colored seed - allele at the "zonal" locus.
- PI 608703. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 56; W6 20634. Pedigree - BC3 to 5-593 (bipunctata) from 94-204. { [t] [z] [bip] }; "bipunctata" pattern of partly colored seed.
- PI 608704. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 57; W6 20635. Pedigree - BC3 to 5-593 from 96-133. { [p+] [pc] }; pure white cotyledons after germination & emergence, and "persistent" green "color" in pods & seed after senescence.
- PI 608705. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 58; W6 20636. Pedigree - BC2 to 5-593 from 96-123. [ace]; "acera" - shiny (high gloss) pods.
- PI 608706. *Phaseolus vulgaris* L.**
Genetic. Genetic Marker 59; W6 20637. Pedigree - BC3 to 5-593 from 94-116. [asp]; asper - rough seed coat surface; the commonly occurring dull (nonglossy) seed coat that has NO effect on seed coat color.

PI 608707. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 61; W6 20639. Pedigree - BC3 to 5-593 from 95-162. [p*stp]; formerly stp; pleiotropically a distinctive "stippled" pattern to seed coat & another pattern to flowers.

PI 608708. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 62; W6 20640. Pedigree - BC3 to 5-593 from 95-168. [p*hbw]; formerly stp*hbw, pleiotropically a distinctive stippled pattern to the seed coat & the "half banner white" pattern to the flower.

PI 608709. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 63; W6 20641. Pedigree - BC3 to 5-593 from 97-51. [p*mic]; formerly stp*mic, a white "micropyle" stripe to seed coat & no pattern to flower.

PI 608710. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 64; W6 20642. Pedigree - BC3 to 5-593. [V*wf]; black seed coat - with 'B' - & pleiotropically a white flower with red veins in the wing petals.

PI 608711. *Phaseolus vulgaris* L.

Genetic. Genetic Marker 65; W6 20643. Pedigree - BC1 to 5-593. [uni-3*nde]; "unifoliate" leaves at the lower nodes & normal leaves at higher notes - "node dependent expression"; partially fertile.

The following were donated by Karl Hammer, Inst. fur Pflanzengenetik und Kulturpflanzenforschung, (IPK), Genebank, Gatersleben, Saxony-Anhalt D-06466, Germany; Universitat Potsdam, Botanischer Garden, Maulbeerallee 2, Potsdam, Berlin 14469, Germany. Received 12/07/1993.

PI 608712. *Spinacia tetrandra* Steven ex M. Bieb.

Cultivated. SPI 153/89; Cornell ID #148; Ames 21728.

The following were donated by Karl Hammer, Inst. fur Pflanzengenetik und Kulturpflanzenforschung, (IPK), Genebank, Gatersleben, Saxony-Anhalt D-06466, Germany; Botanical Institute, Turcomania, Ashgabat, Ahal, Turkmenistan. Received 12/07/1993.

PI 608713. *Spinacia turkestanica* Iljin

Cultivated. SPI 158/84; Cornell ID #149; Ames 21729.

The following were developed by Agripro Seeds, Inc., Iowa, United States; United Grain Growers Ltd., Box 03, Semans, Saskatchewan, Canada. Received 03/22/1999.

PI 608714 PVPO. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "SAXON". PVP 9800360. Pedigree - Glenlea/N87-0002.

The following were developed by HybriTech Seed International, Inc., A Unit of Monsanto Company, United States. Received 03/22/1999.

PI 608715 PVPO. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. Pureline. "IVAN". PVP 9800361. Pedigree -
MN74103/Marshall//Success/3/W87-069/4/Bergen.

The following were developed by Busch Agricultural Resources, Inc., 3515 East County Road 52, Fort Collins, Colorado 80524, United States. Received 03/22/1999.

PI 608716 PVPO. *Oryza sativa* L.
Cultivar. "AB3004". PVP 9900164.

PI 608717 PVPO. *Oryza sativa* L.
Cultivar. "AB1542". PVP 9900165.

The following were developed by Stoneville Pedigreed Seed Company, Stoneville, Mississippi, United States. Received 03/22/1999.

PI 608718 PVPO. *Gossypium hirsutum* L.
Cultivar. "ST 373". PVP 9900166.

PI 608719 PVPO. *Gossypium hirsutum* L.
Cultivar. "BG 4740". PVP 9900167.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 03/22/1999.

PI 608720 PVPO. *Pisum sativum* L.
Cultivar. "NITRO". PVP 9900168.

The following were developed by Busch Agricultural Resources, Inc., 3515 East County Road 52, Fort Collins, Colorado 80524, United States. Received 03/22/1999.

PI 608721 PVPO. *Oryza sativa* L.
Cultivar. "AB2975". PVP 9900169.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 03/22/1999.

PI 608722. *Medicago sativa* L.
Cultivar. "58N58". PVP 9900170.

The following were developed by Robert H. Busch, USDA, ARS, University of Minnesota, Dept. of Agronomy & Plant Genetics, St. Paul, Minnesota 55108, United States; Don V. McVey, USDA, ARS, University of Minnesota, Cereal Rust Laboratory, St. Paul, Minnesota 55105, United States; G. Hareland, USDA, ARS, Fargo, North Dakota 58105, United States; Jochum Wiersma, University of Minnesota, Northwest Experiment Station, 108 Agricultural Research Center, Crookston, Minnesota 56716, United States; G. Linkert, University of Minnesota, St. Paul, Minnesota 55108, United States; Ruth Dill-Macky, University of Minnesota, Department of Plant Pathology, 495 Borlaug Hall, St.

Paul, Minnesota 55108, United States; H. Schmidt, Pioneer Hi-Bred International, Moorhead, Minnesota 56500, United States; I. Edwards, Biowest Australia Pty. Ltd., P.O. Box 136, Joondalup, Western Australia 6919, Australia. Received 03/08/1999.

PI 608723. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "HJ98"; SBE0050. PVP 9900171; CV-872. Pedigree - W8814/Norak. Released 1998. Hard red spring wheat. Agronomic data collected from 18 location years in Minnesota. Maturity intermediate with semidwarf height. Protein percent intermediate, averaging 14.5%. Resistant to all tested races of stem rust (*Puccinia graminis*) and is resistant to moderately resistant to leaf rust (*P. reconditia*) races in adult field tests. Moderately susceptible to fungal leaf disease but is moderately resistant to *Fusarium* head blight spread in the spike. Tolerance of seed to maintain plump kernels when infected by *Fusarium* is only average.

The following were developed by Seeds West, Inc., United States. Received 03/22/1999.

PI 608724. *Cynodon dactylon* (L.) Pers.

Cultivar. "SYDNEY". PVP 9900172.

The following were developed by Central Valley Seeds, Inc., United States. Received 03/22/1999.

PI 608725 PVPO. *Lactuca sativa* L.

Cultivar. "Diamond Back". PVP 9900173.

The following were developed by James H. Orf, University of Minnesota, Dept. of Agronomy and Plant Genetics, Minnesota Agr. Exp. Sta., St. Paul, Minnesota 55108, United States; Roxanne Denny, University of Minnesota, Dept of Plant Pathology, 350 Cargill Building 1500 Gortner Ave., St. Paul, Minnesota 55108, United States. Received 03/22/1999.

PI 608726. *Glycine max* (L.) Merr.

Cultivar. Pureline. "MN1401"; M90-1279. PVP 9900174; CV-413. Pedigree - BSR101 x Kato. Relative maturity of 1.4. Indeterminate growth habit, purple flowers, tawny pubescence and tan pods. Seeds have yellow seed coats, black hila and a dull seed coat luster. Averages about 90 cm tall. Seeds average about 19.5 grams per 100 seeds. Protein and oil content from 1995-1996 URT data was 42.9% and 20.0%, respectively. Carries the *Rps1* gene for resistance to *Phytophthora* root rot (*Phytophthora sojae*).

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 03/22/1999.

PI 608727. *Lactuca sativa* L.

Cultivar. "HONDO". PVP 9900175.

The following were developed by Stoneville Pedigreed Seed Company, Stoneville, Mississippi, United States. Received 03/22/1999.

PI 608728 PVPO. *Gossypium hirsutum* L.
Cultivar. "BXN 16". PVP 9900176.

PI 608729 PVPO. *Gossypium hirsutum* L.
Cultivar. "ST 239". PVP 9900177.

The following were developed by William Davis, 1109 Yonkers, Plainveiw, Texas 79072, United States. Received 03/22/1999.

PI 608730. *Gossypium hirsutum* L.
Cultivar. "B-2-1-6-10". PVP 9900182.

The following were developed by Enza Zaden De Enkhuizer Zaadhandel B.V., Enkhuizen, North Holland, Netherlands. Received 03/22/1999.

PI 608731. *Lactuca sativa* L.
Cultivar. "GRAPPA". PVP 9900183.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 03/22/1999.

PI 608732 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 675". PVP 9900184.

PI 608733 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 448 B". PVP 9900185.

PI 608734 PVPO. *Gossypium hirsutum* L.
Cultivar. "DP 388". PVP 9900186.

The following were developed by Novartis Seeds, Inc., United States. Received 03/22/1999.

PI 608735 PVPO. *Pisum sativum* L.
Cultivar. "SUGAR KING". PVP 9900187. Snap pea.

The following were developed by Southeast Distributors, Inc., United States. Received 03/22/1999.

PI 608736. *Gossypium hirsutum* L.
Cultivar. "PSC 952". PVP 9900188.

The following were developed by Charles E. Simpson, Texas A&M University, P. O. Box 292, Stephenville, Texas 76401, United States; Hassan A. Melouk, USDA, ARS, Oklahoma State University, Department of Plant Pathology, Stillwater, Oklahoma 74078, United States; Olin D. Smith, Texas A&M University, Department of Soil & Crop Sciences, College Station, Texas 77843-2474, United States. Received 03/22/1999.

PI 608737 PVPO. *Arachis hypogaea* L.

Cultivar. "TAMRUN 98"; Tx901417. PVP 9900189; CV-64. Pedigree - TP 107-11 // TxAG-5 / TP 107-11. Runner market-type peanut with partial resistance to sclerotinia blight (*Sclerotinia minor*), high grade, and good yield potential. Prostrate plant growth habit with leaflet size and shape, stem thickness, and leaf color similar to Florunner. Mainstems tend to be slightly shorter, but the secondary branches more compressed, making the mainstem more prominent than Florunner.

The following were developed by Sure-Grow Seed, Inc., 7265 Highway 9 South, Centre, Alabama 35960, United States. Received 03/22/1999.

PI 608738 PVPO. *Gossypium hirsutum* L.

Cultivar. "SURE-GROW 105". PVP 9900190.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 03/22/1999.

PI 608739 PVPO. *Gossypium hirsutum* L.

Cultivar. "PM 2326 BG/RR". PVP 9900191.

PI 608740 PVPO. *Gossypium hirsutum* L.

Cultivar. "PM 2280 BG/RR". PVP 9900192.

The following were developed by Delta & Pine Land Company, United States. Received 03/22/1999.

PI 608741 PVPO. *Gossypium hirsutum* L.

Cultivar. "PM 2320 RR". PVP 9900193.

PI 608742 PVPO. *Gossypium hirsutum* L.

Cultivar. "PM 2330 RR". PVP 9900194.

PI 608743 PVPO. *Gossypium hirsutum* L.

Cultivar. "PM 2192 BG". PVP 9900195.

The following were developed by Pure Seed Testing, Inc., 29975 S. Barlow Road, Canby, Oregon 97013, United States. Received 03/22/1999.

PI 608744 PVPO. *Festuca rubra* L. subsp. *rubra*

Cultivar. "FLORENTINE". PVP 9900196.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 03/22/1999.

PI 608745 PVPO. *Gossypium hirsutum* L.

Cultivar. "GC-500". PVP 9900197.

The following were developed by Waller Flowerseed Company, P.O. Box 935, 4th and Obispo Streets, Guadalupe, California 93434, United States. Received 03/22/1999.

- PI 608746. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE BURGUNDY". PVP 9900198.
- PI 608747. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE COOPER". PVP 9900199.
- PI 608748. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE DEEP LAVENDAR". PVP 9900200.
- PI 608749. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE LAVENDAR PINK". PVP 9900201.
- PI 608750. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE PEACH". PVP 9900202.
- PI 608751. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE RED". PVP 9900203.
- PI 608752. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE ROSE". PVP 9900204.
- PI 608753. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE WHITE". PVP 9900205.
- PI 608754. *Matthiola incana* (L.) W. T. Aiton
Cultivar. "VINTAGE YELLOW". PVP 9900206.

The following were developed by South Dakota Agric. Exp. Station, Highmore, South Dakota, United States. Received 03/22/1999.

- PI 608755 PVPO. *Triticum aestivum* L. **subsp. aestivum**
Cultivar. Pureline. "INGOT"; SD 3249. PVP 9900208. Pedigree - SD3080(Butte86/SD3004)/Dalen.

The following were developed by World Wide Wheat, L.L.C., United States. Received 03/22/1999.

- PI 608756 PVPO. *Triticum turgidum subsp. durum* (Desf.) Husn.
Cultivar. "UTOPIA". PVP 9900209. Pedigree - selection from composite cross AZ-MSFRS-86 Quality Enhanced Durum Wheat Germplasm.

The following were developed by Novartis Seeds, Inc., United States. Received 03/22/1999.

- PI 608757 PVPO. *Pisum sativum* L.
Cultivar. "SUGAR SPRINT". PVP 9900210. Snap pea.
- PI 608758 PVPO. *Phaseolus vulgaris* L.
Cultivar. "MEDINAH". PVP 9900211.

The following were developed by Martin Geibel, Genbank Obst, Bergweg 23, Dresden-Pillnitz, Saxony D-01326, Germany. Received 03/09/1999.

PI 608759. *Malus sylvestris* (L.) Mill.

Barenhecke 3 x Klipphausen; GMAL 4497. Collected in Germany. Latitude 51° 22' N. Longitude 14° 6' E. Saxonia (Ost-Erzgebirge and Elbe-Valley, near Dresden). Pedigree - *M. sylvestris*, Barenhecke 3 x *M. sylvestris*, Klipphausen. Cross of wild *M. sylvestris*; clone of this is Q 37771.

PI 608760. *Malus sylvestris* (L.) Mill.

Oelsen 2 x Hartmann-Muhle 1; GMAL 4498. Collected in Germany. Latitude 51° 22' N. Longitude 14° 6' E. Saxonia (Ost-Erzgebirge and Elbe-Valley, near Dresden). Pedigree - *M. sylvestris*, Oelsen 2 x *M. sylvestris*, Hartmann-Muhle 1. Cross of wild *M. sylvestris*.

The following were donated by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States; Shivabhai Patel, Seed Merchants & Producers, Gujarat, India. Received 04/15/1986.

PI 608761. *Amaranthus tricolor* L.

Cultivar. "Lalsag Bhaji"; LSK 129; RRC 389; Ames 5147. The seeds are black, flowers red, leaves red. The RRC class type is: cultivated vegetable. 'Lalsag Bhaji' Totally red plant for vegetable use. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

The following were collected by T.M. Koyama, New York Botanical Gardens, P.O. Box 366, Tuckahoe, New York 10707-0366, United States. Received 06/01/1987.

PI 608762. *Spinacia oleracea* L.

Uncertain. K-17068; Cornell ID #271; Ames 7837. Collected 02/22/1986 in Thailand. Latitude 17° 38' N. Longitude 98° 20' E. Doi Tung, Thai-Burmese frontier, Chaing Rai Province.

The following were developed by Robert F. Eslick, Montana State University, Plant and Soil Science Department, Bozeman, Montana 59715, United States. Donated by Research Corporation Technologies, Inc., United States. Received 1976.

PI 608763. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "WASHONUPANA"; Washanupana. PVP 7500061. Pedigree - Waxy Oderbrucker/7*Compana//Sermo/7*Compana. WA (waxy) SH (short) A (awned) NU (nude) PANA (Compana).

The following were developed by G. F. Sprague, University of Illinois, Department of Agronomy, Turner Hall, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States; Fred Dicke, 1430 Harding, Ames, Iowa 50010, United States; W.D. Guthrie, USDA, ARS, Dept. of Entomology, Iowa State University, Ames, Iowa 50010, United States; W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy,

Ames, Iowa 50011, United States; L.H. Penny. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 07/03/1998.

PI 608764. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B55; CSR 128; 69:1012. PL-7. Pedigree - B55 is a selection from the single cross Oh45 x W92 tested as (Oh45 x W92)-1-1-2. Released 1963. B55 is a selection from the single cross Oh45 x W92 that was released in 1963. The plant is large with a big ear and good pollen production. It has intermediate resistance to first brood European corn borer (*Ostrinia nubilalis*). Hybrids with B55 usually have above-average yield, satisfactory root and stalk strength, but slow ear drying. Maturity classification is AES700. B55 was developed in a research program and evaluated extensively in hybrid combinations. It was released in 1963 because of its potential value in seed production programs and further use in breeding programs.

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States; Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608765. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B77; 508-1/99; id=47641; Ames 18880. PL-39. Pedigree - B77 is a selection from Pioneer Two-Ear Composite (PHPRC), tested as BS11(FR)CO-Q51-3-2-1-2-1. B77 is a yellow dent inbred line that was selected from Pioneer Two-Ear Composite (PHPRC), a synthetic developed by crossing southern prolific germ plasm and Corn Belt lines. Pioneer Two-Ear Composite [BS11(FR)C0] was used as one of the populations for the reciprocal full-sib selection program described by Hallauer (Crop Sci. 7:192-195; Crop Sci. 14:341-342). Selection for a two-ear plant type has given a genotype that produces good second ears on nearly 100% of the plants at densities up to 38,000 plants/ha. Pollen production is satisfactory, silks emerge 1 to 2 days after the first shedding of pollen, and seed set is good on both ears. Seed is relatively small and shallow dented. The line has intermediate resistance to first brood European corn borer and common fungus leaf diseases and high resistance to maize chlorotic dwarf, but it is moderately susceptible to maize dwarf mosaic. Evaluations for yield in single crosses in Iowa for 4 years have shown B77 to have the highest average general combining ability of all the lines included in the tests. Its contribution to root and stalk strength in hybrids is adequate, but not outstanding. Although the line is late in silk emergence, grain moisture at harvest shows evidence of a fast-drying characteristic in single-cross hybrids. Extensive evaluation has shown that B77 is adapted to southern and south-central Iowa. Maturity classification is late AES800. B77 was evaluated extensively and released because of potential value to the hybrid corn seed industry and for further use in breeding programs.

PI 608766. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B79; V925-4; id=47642; 509-1/99; V925-5; V925-6; Ames 18881. PL-42. Pedigree - B79 is a selection from Iowa Two Ear Synthetic No. 1 (GP-12, PI 550446) tested as BS10(FR)CO-Q98-10-1-4-1. B79 is a yellow dent inbred line selected from Iowa Two-ear Synthetic No. 1 (PI

550446 registered in Crop Sci.11:140-141), a synthetic developed by intermating 10 inbred lines of USA North Central Corn Belt maturity that had strong potential to develop two ears/plant. Iowa Two-ear Synthetic No. 1 [BS10(FR)C0] was used as one of the populations for the reciprocal full-sib selection program described by Hallauer (Crop Sci. 7:192-195; Crop Sci. 14:341-342). Selection and self pollination in the ear-to-row system for several generations has given a genotype that produces a high frequency of harvestable second ears at moderate plant densities. The date of silk emergence of B79 is 3 to 4 days later than inbred B14A. Pollen production is satisfactory; silks emerge about 2 days after the first shedding of pollen; and seed set is good on both ears. The seed has intermediate size with a reddish color, and seed yield is relatively high. The line has intermediate resistance to broods of the European corn leaf blight, first and second broods of the European corn borer, but it is susceptible to sorghum downy mildew. Yield data from single-cross evaluations for 4 years in Iowa show that B79 had the highest average yield of the lines tested in single crosses with Mol7. Although the line is late in silk emergence, this lateness is not evident in single crosses on the basis of grain moisture at harvest. The inbred contributes a strong root system to hybrids; its contribution for stalk strength is adequate, but not outstanding. Extensive evaluation has shown that B79 is adapted to southern and south-central Iowa. Maturity classification is late AES800.

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608767. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B84; V926-1; id=47643; 1684-2/01; V926-2; V926-4; Ames 18886. PL-50. Pedigree - B84 is a selection from Iowa BSSS(HT)C7 [renamed BS13(S2)C0] that was tested as BS13(S2)CO-45-6-2-1-1. B84 is a yellow dent maize inbred line selected from BSSS(HT)C7, which is an improved Iowa Stiff Stalk synthetic developed by seven cycles of recurrent selection for yield and other traits. Selection was based on half-sib progeny performances with Ia13 double-cross as the tester parent. The designation was changed to BS13(S2)CO because S2 progeny became the basis for evaluation in the next cycle of selection. B84 evolved from one of the 10 S2 lines selected for recombination to give BS13(S2)C1 [BS13(S2)C1 (PI 608782) is registered in Crop Sci. 19:755]. The line has been developed by selection and self-pollination in the ear-to-row system for six generations. The plant has an erect-leaf orientation and will produce a high frequency of harvestable second ears when the plant density is less than 40,000 plants/ha. Pollen production is good, and silks emerge 1 to 2 days after the first shedding of pollen. The date of silk emergence is 1 to 2 days later than that of B73. Most ears have 14 to 16 kernel rows; the seed is yellow with a rounded crown and shallow dent and intermediate in size. Seed yield is good, being slightly higher than that of B73. Inbred B84 has intermediate resistance to leaf feeding by the European corn borer (*Ostrinia nubilalis* Hubner). Data from single-cross evaluations for 4 years in south-central and southern Iowa show that B84 yields better than B73 in single-cross hybrids, has similar root and stalk strength, but drops fewer ears. Although B84 was developed from the same

recurrent selection program as was B73, but two cycles later, the yield performance of the single cross between the two lines indicates that they should not be considered sister lines. Maturity classification is AES800.

PI 608768. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B87; id=66207; Ames 18884. PL-59. Pedigree - B87 is a selection from BS22 tested as BS22CO-148-1-1-2. B87 is a yellow dent maize inbred line selected from BS22 which is a synthetic variety that is similar to A619 x A632 for maturity. The line was developed by selection and self pollination in the ear-to-row system at high plant densities (approximately 59,000 plants/ha) for five generations. The first hybrid evaluation was in a S0 plant x H99 testcross in a recurrent selection program, and evaluations with H99 were continued in successive selfing generations. Data obtained in 11 experiments conducted from 1976 to 1980 in northern Iowa show that B87 is comparable to A632 for hybrid yield performance and superior for resistance to root and stalk lodging. Silk emergence for the line is 1 day earlier than for A632 (Iowa Exp. Stn. strain). The top ear node is approximately 10 cm lower than that of A632. With artificial infestation of first-brood, European corn borer (*Ostrinia nubilalis*, Hubner), the resistance rating is 3 (1 = highly resistant, 9 = highly susceptible). Pollen production and silk emergence are good under drought stress conditions: seed yield is comparable to that of A632. The ear is slender, slightly tapered with length similar to that of A632, and most ears have 12 kernel rows. The kernel has a smooth, shallow dent and intermediate yellow color. The plant will produce a high frequency of second ears when the plant density is less than 40,000 plants/ha. B87 seems to be a line that can be used as male or female in single-cross seed production. Maturity classification is AES600.

The following were developed by Fred Dicke, 1430 Harding, Ames, Iowa 50010, United States; W.D. Guthrie, USDA, ARS, Dept. of Entomology, Iowa State University, Ames, Iowa 50010, United States; W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States; Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States; L.H. Penny; Gene E. Scott, USDA, ARS, Corn Host Resistance Research Unit, P.O. Box 9555, Mississippi State, Mississippi 39762, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 07/03/1998.

PI 608769. *Zea mays* L. subsp. *mays*

Breeding. Population. Iowa Corn Borer Synthetic No. 7; BSCB7; CSR 97; 87:6301. GP-20. Pedigree - BSCB7 was developed from Pennsylvania Intermediate Synthetic. Information on source materials is not complete, but the following inbred lines were included: A, A71, C103, K155, NC34, Oh04, Oh26, Oh28, Oh40B, W23, L317, Os420, WF9, and M14. Released 1967. BSCB7 (Iowa Corn Borer Synthetic No. 7), BSCB8 (Iowa Corn Borer Synthetic No. 8), and BSCB6 [Iowa Corn Borer Synthetic No. 6 (PI 550453; Crop Sci. 11:140-141)] are yellow dent breeding populations developed after three cycles of recurrent selection for resistance to first brood of European corn borer (*Ostrinia nubilalis*) in Pennsylvania

Intermediate Synthetic, Pennsylvania Late Synthetic, and Pennsylvania Early Synthetic, respectively. The Pennsylvania Synthetics were developed by Dr. Wernham, Pennsylvania State University, in a program of selection for resistance to northern corn leaf blight. Originally, there was only one synthetic, but selection for maturity resulted in the three synthetics. Information on source materials is not complete, but the following inbred lines were included: A, A71, C103, K155, NC34, Oh04, Oh26, Oh28, Oh40B, W23, L317, Os420, WF9, and M14.

PI 608770. *Zea mays* L. subsp. *mays*

Breeding. Population. Iowa Corn Borer Synthetic No. 8; BSCB8; CSR 98; 87:6321. GP-21. Pedigree - BSCB8 was developed from Pennsylvania Late Synthetic. Information on source materials is not complete, but the following inbred lines were included: A, A71, C103, K155, NC34, Oh04, Oh26, Oh28, Oh40B, W23, L317, Os420, WF9, and M14. Released 1967. BSCB8 (Iowa Corn Borer Synthetic No. 8), BSCB7 (Iowa Corn Borer Synthetic No. 7), and BSCB6 [Iowa Corn Borer Synthetic No. 6 (PI 550453; Crop Sci. 11:140-141)] are yellow dent breeding populations developed after three cycles of recurrent selection for resistance to first brood of European corn borer (*Ostrinia nubilalis*) in Pennsylvania Late Synthetic, Pennsylvania Intermediate Synthetic, and Pennsylvania Early Synthetic, respectively. The Pennsylvania Synthetics were developed by Dr. Wernham, Pennsylvania State University, in a program of selection for resistance to northern corn leaf blight. Originally, there was only one synthetic, but selection for maturity resulted in the three synthetics. Information on source materials is not complete, but the following inbred lines were included: A, A71, C103, K155, NC34, Oh04, Oh26, Oh28, Oh40B, W23, L317, Os420, WF9, and M14.

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States; Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608771. *Zea mays* L. subsp. *mays*

Breeding. Population. BSL(S)C4; Ames 18893. GP-22. Pedigree - BSL(S)C4 was developed from the open-pollinated Lancaster Surecrop variety (PI 213697). Released 1971. BSL(S)C4 is a yellow dent breeding population developed from the open-pollinated Lancaster Surecrop variety by four cycles of recurrent S1 selection for stalk-rot resistance. Lancaster Surecrop (PI 213697) was obtained from the North Central Regional Plant Introduction Station, Ames, Iowa, in 1955. S1 progenies were grown with three replications at Ames, Iowa, each cycle and artificially inoculated with spores of *Diplodia zeae* (Schw.) Lev. The selection intensity was 12, 6, 12, and 11%, respectively, for the four cycles of selection. BSL(S)C0, C1, C2, and C3 were evaluated as populations per se and in testcross with two unrelated single-cross testers for several agronomic characters (Iowa State J. Sci. 43 (3):229-237; Iowa State J. Sci. 43(3):239-251). BSL(S)C3 was slightly taller, 3 days later in silk emergence, more resistant to natural stalk rot and field stalk lodging, and similar for grain yield (but higher in testcross yields) than

Lancaster Surecrop. BSL(S)C4, the next cycle of selection, is resistant to *D. zeae* as a variety and should be a superior source of inbred lines with satisfactory resistance to stalk rot and field stalk breakage.

PI 608772. *Zea mays* L. subsp. *mays*

Breeding. Population. BS5; id=83729; Ames 18887. GP-23. Pedigree - BS5 was developed by intermating twenty-three inbred lines: A265, A548, A554, A575, A619, B8, Ch9, F2, F7, F47, F49, F52, F431, Mt42, ND203, WD, WH, WJ, W9, W59M, W97A, W75, and W153R. Released 1971. BS5 is an early yellow dent synthetic that was developed by intermating twenty-three inbred lines: A265, A548, A554, A575, A619, B8, Ch9, F2, F7, F47, F49, F52, F431, Mt42, ND203, WD, WH, WJ, W9, W59M, W97A, W75, and W153R. This early synthetic was formed in the following manner: single crosses among lines, double crosses among single crosses; all possible double-double crosses among double crosses; and randomly mating the composite for two generations. The purpose for developing this synthetic was to provide an early population for recurrent selection and line development. No selection has been practiced in the synthetic, and the relative yield potential of the synthetic is unknown. BS5 is an early synthetic for central Iowa, requiring approximately 70 days from planting to silking.

PI 608773. *Zea mays* L. subsp. *mays*

Breeding. Population. BS7; CSR 99; 74. GP-24. Pedigree - BS7 was developed from Kenya CBK (CBK I) by two cycles of mass selection in Iowa. Released 1971. BS7 is a yellow dent semi-exotic breeding population derived from CBK [CBK I (PI 329228)] by two cycles of mass selection in Iowa. CBK I was formed at Kitale, Kenya, by the Major Cereal Project in Africa, with USAID, USDA-ARS, the East African Agriculture and Forestry Research Organization, and the Kenya Ministry of Agriculture, cooperating. CBK I included approximately 50% Corn Belt germplasm and approximately 50% exotic material. The Corn Belt sources were: BSSS2 (PI 550444), BSAA (PI 550448), BSBB (PI 550449), Iowa Two-ear Synthetic #1 (PI 550446), Krug Mass Selection, Nebraska Population V, Nebraska Population L, Pioneer 2-Ear Composite, Pioneer hybrids, DeKalb hybrids, Funk hybrids, and PAG hybrids. The exotic material was: French lines (F2, F7, F47, F49, F52, and F431), NBZ (Corn Belt X Brazilian varieties), Nebr. (Eto X early USA), Nebr. (Eto X Gaspé Flint), Alaskan Composite (Gaspé Flint X early USA double crosses), Kenya Katumani Panmix (composite of Central American material), Kenya Katumani IV (probably derived from *Salvadureno*), Kenya Embu II (composite of 14 Central American varieties), and Kenya Pp Coastal (composite of coastal Kenya material and Central American sources of *Puccinia polysora* resistance). Synthesis was done in five seasons of random mating at Kitale as follows: A bulk sample of all entries was planted over a 10-day period; pollen from this bulk was carried to a row for each entry of the synthetic. Entry identification of the "female" was maintained for the five cycles of synthesis to insure thorough recombination. A regional diallel grown in the Corn Belt indicated that the yield of CBK is slightly less than those of improved Corn Belt synthetics and that other agronomic characters are satisfactory (Crop Sci. 11:911-914). Seed color is segregating white and yellow.

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University,

Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608774. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B75; id=47639; 3095-2/00; Ames 18879. GP-62. Pedigree - B75 is a selection from Iowa Corn Borer Synthetic No. 3 [BSCB3 (PI 550450)]. B75 is a yellow dent germplasm line selected from BSCB3 (PI 550450 registered in Crop Sci. 11:140-141) which is a synthetic developed by intermating 16 inbred lines of USA North Central Corn Belt maturity that had good resistance to leaf feeding by the European corn borer. This single-eared line has been developed by selection and self pollination in the ear-to-row system for eight generations. The tassel has only one or two lateral branches, but the pollen production is satisfactory. Silk emergence, which occurs 2 to 3 days after the first shedding of pollen, is 2 to 3 days earlier than that of inbred B14A. The seed is relatively large and yield is good. It is highly resistant to leaf feeding by first-brood European corn borer, but is moderately susceptible to leaf-sheath and collar feeding by second brood. It has good field resistance to sorghum downy mildew, moderate resistance to southern corn leaf blight (race O) and northern corn leaf blight, and low-level resistance to maize dwarf mosaic virus and maize chlorotic dwarf virus. Evaluations in single-crosses have shown that B75 contributes average yield to hybrids, but does not contribute good root strength. Although it has good resistance to stalk rots, stalk strengths in hybrids is only average. Maturity classification is late AES700.

The following were developed by Don C. Peters, Oklahoma State University, Dept. of Entomology/Div. of Agric., 501 Life Sciences West, Stillwater, Oklahoma 74078-0464, United States; W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States; J.C. Owens; R.R. Rogers, Unknown. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608775. *Zea mays* L. subsp. *mays*

Breeding. Population. BS19(S)C2; Ames 18891. GP-72. Pedigree - BS19 was developed by two cycles of S1 selection in the maize synthetic originally called Iowa Early Rootworm Synthetic developed by intermating W153R, A239, A251, A265, A297, A417, A556, A632, Ms107, Oh43, R168, and SD10. Released 1976. BS19(S)C2 is a yellow dent improved population of a maize synthetic originally designated as Iowa Early Rootworm Synthetic. A large number of inbred lines were evaluated as inbreds per se and in hybrid combinations for corn rootworm tolerance and several root traits. Twelve inbred lines were selected as parent lines for an early synthetic to be used in further studies of resistance, particularly tolerance, to corn rootworms [*Diabrotica virgifera* Le Conte, *D. longicornis* (Say), and *D. undecimpunctata* Barber]. These lines were: W153, A239, A251, A265, A297, A417, A556, A632, Ms107, Oh43, R168, and SD10. Collectively, these inbred lines possessed root characteristics believed required in a population for good tolerance to corn rootworm larval damage. Recurrent selection based on the evaluation of S1 lines in replicated experiments was used for two cycles, resulting in the C2 population. Traits evaluated were resistance to root lodging in the second cycle, and root damage by larval feeding, root system size, and secondary root development in both cycles. In the first cycle, 234 S1 lines were evaluated, and 24 selected for recombination to give the C1. We

evaluated 122 S1 lines in the second cycle and selected 20 S1 lines for recombination to give BS19(S)C2. Predicted gains in each cycle indicate that this population will be a good source for early inbred lines that have adequate tolerance to corn rootworms. Also, several of the original parent lines were widely used as parent lines in hybrid seed programs; consequently, inbred lines developed from this source are expected to have above average general combining ability. The maturity classification is approximately AES500.

PI 608776. *Zea mays* L. subsp. *mays*

Breeding. Population. BS20(S)C2; Ames 18892. GP-73. Pedigree - BS20(S)C2 was developed by two cycles of S1 selection in BS20 (originally called Iowa Late Rootworm Synthetic) that was formed by intermating 12 inbred lines: B14A, B53, B57, B64, B67, B69, A73, N6, N28, R101, HD2286 (BSSS sel.), and 38-11. Released 1976. BS20(S)C2 is a yellow dent synthetic that was derived from BS20 (originally designated as Iowa Late Rootworm Synthetic). A large number of inbred lines were evaluated as inbreds per se and in hybrid combinations for corn rootworm tolerance and several root traits. Twelve inbred lines were selected as parent lines for a late synthetic, BS20, to be used in further studies of resistance or tolerance to corn rootworms. These lines were: B14A, B53, B57, B64, B67, B69, A73, N6, N28, R101, HD2286 (BSSS sel.), and 38-11. As a group, these inbred lines would contribute root characteristics believed required in a maize population for good tolerance to corn rootworm larval damage. Six of these lines originated from BSSS (Iowa Stiff Stalk Synthetic), and B64 derived from a backcross program in which B14 was the recurrent parent; consequently, BS20CO obtained more than 55% of its genes from BSSS. An evaluation of BS20CO in a synthetic diallel showed that it was superior in general combining ability for yield and resistance to root and stalk lodging (*Euphytica* 25:117-127). Recurrent selection based on the evaluation of S1 lines in replicated experiments was used for two cycles, resulting in the C2 population. The first cycle evaluation was of 234 S1 lines, and 24 were selected for recombination to give the C1. In the second cycle, 123 S1 lines were evaluated and 20 were selected and recombined to give the C2. Traits evaluated in both cycles were resistance to root lodging, root damage by larval feeding, root system size, and secondary root development. The C2 population has a vigorous plant with an extensive root system; thus, it is expected to be an excellent source from which breeders may develop inbred lines. The maturity classification is approximately AES800.

The following were developed by W.D. Guthrie, USDA, ARS, Dept. of Entomology, Iowa State University, Ames, Iowa 50010, United States; W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608777. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B85; id=67664; Ames 18882. GP-76. Pedigree - B85 was developed from BSCB6(S)C3-77. Inbred B85 is a yellow dent inbred line developed from BSCB6(S)C3. BSCB6 (PI 550453 registered in *Crop Sci.* 11:140-141) was first designated Iowa Corn Borer Synthetic No. 6. BSCB6(S)C3 was developed from Pennsylvania Early Synthetic by three cycles of recurrent selection based on S1 line resistance to leaf feeding by the European corn borer (*Ostrinia nubilalis* Hubner)

(resistance to first brood of the European corn borer). B85 has an erect-leaf orientation and is single-eared. Pollen production is adequate and silks emerge 3 to 4 days after the first shedding of pollen. The date for silk emergence is 2 days earlier than A632. The ear is relatively small, with 12 to 14 kernel rows, and the seed is intermediate in size with a shallow dent. Inbred B85 is highly resistant to leaf feeding by first brood of the European corn borer; consequently, it is a good source of resistance in an early maturity breeding program. Evaluations in northern Iowa for 4 years have shown that the line contributes good yield and stalk strength to hybrids, but that it contributes poor root strength. Maturity classification is AES500. B85 was evaluated extensively and released because of potential value in breeding programs of the hybrid seed industry.

PI 608778. *Zea mays* L. subsp. *mays*

Breeding. Inbred. B86; id=62064; Ames 18883. GP-77. Pedigree - B86 is a selection from the single cross B52 x Oh43 tested as (Oh43 x B52)-52-1-2-5-1. B86 is a yellow dent inbred line developed from the single cross, B52 x Oh43. Inbred Oh43 (Ames 19288) contributed leaf-feeding resistance to the European corn borer and B52 (PI 550454) contributed high resistance to sheath and collar feeding by the European corn borer after silk emergence (resistance to second brood of the European corn borer). B52 has also intermediate resistance to the first brood. Inbred B86 was developed by selection and self pollination in the ear-to-row system for the F3 to F5 generations. Artificial infestation of the corn borer was used in each generation, with separate nurseries for the first and second broods. Subsequent evaluations of B86 in two seasons with high level artificial infestations of the insect have shown that it is highly resistant to the first brood and nearly as resistant as B52 to the second brood. It is the first inbred stock of U.S. Corn Belt origin known to combine into one genotype good resistance to the insect for the life of the plant. Silk emergence is 1 to 2 days earlier than B52 or 5 to 6 days later than Oh43. Pollen production is satisfactory, and seed yield is good on an intermediate-sized ear. Limited evaluations in single crosses have shown that B86 contributes only average yield and root strength and that the stalks may be brittle. Maturity classification is late AES800.

PI 608779. *Zea mays* L. subsp. *mays*

Breeding. Population. BS1(HS)C1; Ames 18894. GP-78. Pedigree - BS1 was obtained by crossing Iowa Two-ear Synthetic No. 1 C2 (BS10) and Iowa Corn Borer Synthetic No. 3 (BSCB3) and random mating for two generations. 16 F6 lines were selected for recombination to give BS1(HS)C1. Released 1979. BS1 is a yellow dent maize breeding population that was obtained by crossing Iowa Two-Ear Synthetic No.1 C2 (Crop Sci. 11:140-141) and Iowa Corn Borer Synthetic No.3 (Crop Sci. 11:140-141) now designated BS10 and BSCB3, respectively, and random mating for two generations. BS10 was developed by recombining 10 two-eared inbred lines and then using mass selection for two generations to increase the frequency of two-eared plants. BSCB3, was developed by recombining 16 inbred lines that had high level resistance to leaf feeding in the whorl stage by (*Ostrinia nubilalis* Hubner) (first brood European corn borer resistance). Consequently, BS1 is a broad genetic base population and has favorable gene frequencies for resistance to stalk rot, resistance to first brood European corn borer, and prolificacy. Both BS10 and BSCB3, showed above average general combining ability in studies of a diallel of synthetics (Crop Sci. 12:16-18; Crop Sci. 8:448-451). BS1

was the source population in a breeding methods study in the development of inbred lines and, on the basis of results from the study, 16 F6 lines were selected for recombination to give BS1(HS)C1. The F6 lines were selected because of high grain yield and good root and stalk strength in testcrosses (doublecross tester) evaluated at low, intermediate, and high plant densities in eight location-year environments. Also, the inbred lines have good seed yield, resistance to first brood European corn borer, and resistance to stalk rot. BS1(HS)C1 should be an excellent source for inbred lines for use in the central U.S. Corn Belt. The maturity classification is early AES800.

PI 608780. *Zea mays* L. subsp. *mays*

Breeding. Population. BS17; id=83717; Ames 18889. GP-79. Pedigree - BS17 was developed by recombining six versions of BSSS from recurrent selection programs: BS13(S2)C2; BSSS(R)C7; BSSS2(S1)C3; BSSS2(S2)C2; BSSSC3 selected for stalk rot and first brood European corn borer resistance; BSSSC3 selected for tolerance to larval feeding by corn rootworm and for root strength. BS17 is a yellow dent breeding population that was developed by recombining six versions of Iowa Stiff Stalk Synthetic [BSSS (J. Am. Soc. Agron. 38:108-117)] from recurrent selection programs. These included: BS13(S2)C2 (Crop Sci. 19:755); BSSS(R)C7 (Crop Sci. 14:341); BSSS2(S1)C3 (Crop Sci. 11:140-141); BSSS2(S2)C2; BSSSC3 selected for stalk rot and first brood European corn borer resistance; BSSSC3 selected for tolerance to larval feeding by western corn rootworm (*Diabrotica virgifera* Le Conte), northern corn rootworm (*D. longicornis* Say), and southern corn rootworm (*D. undecimpunctata howardi* Barber) and for root strength. BS13(S2)C2 was developed from BSSS by recurrent selection with Ial3 (double-cross hybrid) as a tester for seven cycles [BSSS(HT) C7] and two cycles of selection based on S2 line performance. [B73 came from BSSS(HT)C5, and B84 came from BSSS (HT)C7.] Selection was primarily for grain yield and resistance to root and stalk lodging in all cycles, with some selection for resistance to first brood European corn borer in the last two cycles. BSSS(R)C7 evolved from seven cycles of reciprocal selection with BSCB1(R)Cn as the opposite population. BSSS2 (PI 550444) was obtained by crossing BSSS(HT)C6 and BSSS(R)C4 and by recurrent selection based on the evaluation of S1 lines to give BSSS2(S1)C3 and of S2 lines to give BSSS2(S2)C2. Grain yield and root and stalk strength have been the primary selection criteria in BSSS(R)C7, BSSS2(S1)C3, and BSSS2(S2)C2, with some selection for first brood European corn borer resistance in the last two cycles (Crop Sci. 12:16-18; Crop Sci. 8:448-451). The six synthetics were mated to give three crosses, which were composited and random-mated for three generations to give BS17. It should be an excellent source for inbred lines to use in the central U.S. Corn Belt. The average date of silk emergence is 1 to 2 days earlier than that of BSSS; thus, the maturity classification is AES800.

The following were developed by P. J. Loesch, Jr., Iowa State University, 101E Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608781. *Zea mays* L. subsp. *mays*

Breeding. Population. BSAAo2(S)C1; Ames 18896. GP-80. Pedigree - BSAAo2(S)C1 was developed from BSAA by crossing to o2 and three generations of backcrossing to BSAA with selection for o2 followed by

one cycle of S1 selection. BSAAo2(S)C1 is a yellow dent improved opaque-2 version of the broadly based Iowa Iowa Synthetic AA [BSAA (PI 550448; Crop Sci. 11:140-141)]. A homozygous stock for the opaque-2 gene was crossed to the normal BSAA population. The normal by opaque-2 cross was allowed to intermate and plants from opaque-2 kernels were backcrossed to the normal BSAA population. Three backcrosses each followed by one generation of intermating were made to the normal BSAA population. After the last intermating, S1 recurrent selection was initiated to improve the population for yield and other agronomic traits. One cycle of S1 recurrent selection was practiced with 200 S1 lines. The superior 10% for grain yield, percentage protein, and percentage lysine were recombined to form the C1. The resulting selected population was random mated for one additional generation and constitutes the germplasm available for general distribution. BSAAo2(S)C1 is a genetically broad based population of AES800 maturity that should be a useful breeding population for programs that include breeding for improved protein quality.

The following were developed by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States; O.S. Smith, AR, SEA, USDA, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608782. *Zea mays* L. subsp. *mays*

Breeding. Population. BS13(S2)C1; Ames 18895. GP-81. Pedigree - BS13(S)C1 was developed from Iowa Stiff Stalk Synthetic (BSSS) by seven cycles of half-sib selection [BSSS(HT)C7] and one cycle of S2 selection. BS13(S2)C1 is a yellow dent breeding population that was developed from Iowa Stiff Stalk Synthetic (BSSS) by seven cycles of half-sib selection [BSSS(HT)C7] and one cycle of S2 selection. Half-sib selection was initiated in BSSS in 1939 with double-cross Iowa 13 (J. Am. Soc. Agron. 38:108-117). [(L317 x BL239)(BL345 X MC401)], used as the tester and designated as BSSS(HT). After seven cycles of half-sib selection, one cycle of S2 selection was completed to form BS13(S2)C1. Evaluation of BSSS(HT)C7 after seven cycles of half sib selection showed that selection was effective for the yield improvement of the population itself and in crosses with testers (Crop Sci. 13:451-456; Crop Sci. 14:881-885). Selections from the cycles of selection of BSSS have shown it is a superior source population for the extraction of inbred lines that have high yield in crosses with Mol7. B73 was one of the 10 S1 selections used to form the sixth cycle, BSSS(HT)C6. B84 was one of the 10 S2 selections from the seventh cycle, BSSS(HT)C7. BSSS(HT)C7 was renamed as BS13(S2)C0, the population for S2 selection. BS13(S2)C1 is a breeding population that should be useful for the extraction of lines that have high yield as lines themselves and good combining ability with lines of 'Lancaster Surecrop' background. Although some selection pressure has been imposed for stalk lodging and first brood European corn borer (*Ostrinia nubilalis* Hubner) resistance the level of resistance is not high for either trait.

PI 608783. *Zea mays* L. subsp. *mays*

Breeding. Population. BS16; id=79479; Ames 18888. GP-82. Pedigree - BS16 was developed by six cycles of mass selection for adaptation in the ETO Composite obtained from Colombia, South America. BS16 is a yellow semi-dent breeding population that was developed by six cycles of mass

selection for adaptiveness in the ETO Composite from Colombia, South America (Crop Sci. 12:203-206). BS16 is adapted to central Iowa and its resistance to feeding by first and second-brood European corn borer (*Ostrinia nubilalis* Hubner) is above average. BS16 was tested as a cultivar in replicated yield tests (Crop Sci. 12:203-206); it had greater yield, similar grain moisture and stalk lodging, and greater root lodging and dropped ears than Iowa Stiff Stalk Synthetic. The combining ability of BS16 with other breeding populations has not been determined. BS16 is characterized by vigorous plants with large tassels and considerable leaf pubescence, and ears with semi-dent kernels that range from light yellow to light orange. BS16 is of Corn Belt maturity and includes germplasm different from that currently used in most breeding populations.

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States. Donated by Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Received 01/24/1992.

PI 608784. *Zea mays* L. subsp. *mays*

Breeding. Population. BS23; id=83723; Ames 18890. GP-94. Pedigree - BS23 was developed from maize germplasm and teosinte. BS23 is a yellow semi-dent breeding population developed from maize germplasm and teosinte. A maize composite that included teosinte (*Zea mexicana*) and maize germplasm was obtained from Dr. Mumm (Crow's Hybrid Co.) for use in research for prolific maize. The proportion of teosinte germplasm and the maize stocks are not known. Inbred lines of the two-ear type were developed and evaluated for agronomic performance with a double-double-cross tester. Eight lines were selected and recombined to give a synthetic variety, designated 'Teozea', which was further sib-mated with selection of two-ear plants for two generations. An additional generation of random mating with no selection was used to obtain the seed supply for distribution as BS23. Silk emergence is 3 to 4 days earlier than for BSSS CO. In central Iowa, BS23 has good disease resistance and usually shows a strong stay-green characteristic. There is a high frequency of second ears when the plant density is less than 40,000 plants/ha. In a seven-synthetic diallel experiment grow at 3 locations for 2 years (Hallauer and Malithano, 1976, *Euphytica* 25:117-127), BS23 was second highest for average hybrid yield, lower than average for percentage grain moisture, and slightly better than average for resistance to root and stalk lodging. It was second highest in yield for the crosses with BSSS CO. Because of some exotic Germplasm from teosinte, breeders may wish to explore this synthetic as a source for inbred lines. The maturity classification is AES700.

The following were developed by Doug Brede, Jacklin Seed Company, West 5300 Riverbend avenue, Post Falls, Idaho 83854-9499, United States; Mark J. Sellmann, Jacklin Seed Company, Research Dept., West 5300 Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 02/25/1999.

PI 608785. *Festuca arundinacea* Schreb.

Cultivar. Population. "BRANDY". CV-76. Pedigree - Modified advanced generation synthetic cultivar whose parentage traces back to 90% Pixie, 6% Crossfire, 2% Rebel, and 2% Vegas tall fesue. Attractive turfgrass

with high quality performance. Performs well in full sun and in shade. Darker green color than most contemporaries. Improved brown patch (*Rhizoctonia solani*) resistance.

PI 608786. *Festuca arundinacea* Schreb.

Cultivar. Population. "ARABIA". CV-77. Pedigree - Traces back to 50% Pixie, 19% Coronado, and 31% to polycrosses with various Jacklin experimentals. These Jacklin experimentals trace back 3 and 4 generations of repeated breeding and selection to Pixie, Rebel, Arid and Wrangler. Attractive turf that grows well under low fertility such as a nitrogen regime of 10-15 gm-2. Performs well under moderately low cutting heights of 1.5 to 3.8 cm. Good resistance to leaf spot disease (*Drechslera* spp.) and Pythium blight (*Pythium* spp.) Richer green color than most current varieties.

PI 608787. *Festuca arundinacea* Schreb.

Cultivar. Population. "ARID II". CV-78. Pedigree - Originated from 15 lines with parentage that traces to 40% Pixie, 31% various Jacklin experimentals, 7% J-1048, 7% Vegas, 3% Cochise, 3% Amigo, 3% Finelawn 88, 3% Coronado, and 3% Arid tall fescue. Attractive turf with improved overall turf quality. Performs well under traffic stress and maintains a good quality even under a moderately low height of cut (1.5 to 3.8cm). Darker green in color compared with comparable varieties. Tends to be earlier greening up in the spring.

PI 608788. *Festuca arundinacea* Schreb.

Cultivar. Population. "ARID 3". CV-79. Pedigree - Traces back to 83% Pixie and 17% Vegas tall fescue. Attractive turfgrass with improved overall turf quality. Maintains excellent quality even when subjected to traffic stress. Dark rich green color and it tends to be more dense in the spring. Good brown patch (*Rhizoctonia solani*) resistance.

The following were collected by E.L. Smith, USDA, ARS, 1301 N. Western St., Stillwater, Oklahoma 74075, United States. Received 03/1970.

PI 608789. *Triticum aestivum* L. subsp. *aestivum*

Landrace. ELS 6404-101-5; NSGC 7601. Collected 01/15/1964 in Harer, Ethiopia. Latitude 8° 0' N. Longitude 43° 0' E. Deggo. Pedigree - Separation of species from CItr 14721.

The following were collected by Jack R. Harlan, USDA-ARS, New Crops Research Branch, Crops Research Division, Beltsville, Maryland 20705-2350, United States. Received 01/1949.

PI 608790. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Landrace. 8355; NSGC 7602. Collected 09/09/1948 in Urfa, Turkey. Latitude 37° 1' 46" N. Longitude 37° 59' 25" E. Elevation 396 m. Birecik. Pedigree - Separation of species from PI 172554.

The following were donated by J. L. Hudson, Seedsman, P.O. Box 1058, Redwood City, California 94064, United States; Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States. Received 04/15/1986.

PI 608791. *Amaranthus hybrid*

Cultivar. "Oeschberg"; AMAR-1B; RRC 382; AMAR-18; Ames 5140. Pedigree - Parents include *Amaranthus cruentus* and a long bract species. An ornamental with red flowers, rufescent-greenish with red overtones leaves, and brown seeds. The RRC class type is: spike, the seeds matured early, with high yield at the RRC center in Pennsylvania.

The following were donated by Estacao de Melhoramento de Plantas, Elvas, Portalegre, Portugal. Received 09/28/1950.

PI 608792. *Triticum aestivum subsp. spelta* (L.) Thell.

Landrace. 2646A; Tomarense; 2830 V.H.; NSGC 7603. Collected in Portugal. Latitude 39° 30' N. Longitude 8° 0' W. Pedigree - Separation of species from PI 192856.

The following were collected by Louis Powers Reitz, Crops Research Division, USDA-ARS, Plant Industry Station, Beltsville, Maryland 20705-2350, United States. Received 09/06/1967.

PI 608793. *Triticum aestivum* L. *subsp. aestivum*

Landrace. Elephants Tooth; Candan-i-Phil; NSGC 7604. Collected in Kabul, Afghanistan. Latitude 34° 31' N. Longitude 69° 11' E. Elevation 1842 m. Ministry of Agriculture, Kabul. Pedigree - Separation of species from PI 321737.

The following were donated by Donald M. Stewart, USDA-ARS, Cooperative Rust Laboratory, University of Minnesota, St. Paul, Minnesota, United States; Turda Experiment Station, Turda, Cluj, Romania. Received 03/29/1971.

PI 608794. *Triticum aestivum* L. *subsp. aestivum*

Cultivated. NSGC 7605. Pedigree - Separation of species from PI 362071.

The following were collected by E. Bennett, Crop Ecology & Genetic Resources Unit, Plant Production and Protection Division, FAO, Rome, Latium, Italy. Received 04/13/1972.

PI 608795. *Triticum aestivum* L. *subsp. aestivum*

Landrace. FAO 29.913; NSGC 7606. Collected 1968 in Cyprus. Latitude 35° 0' N. Longitude 33° 0' E. Pedigree - Separation of species from PI 372447.

The following were collected by Institute of Agricultural Research, Addis Ababa, Shewa, Ethiopia. Received 04/23/1974.

PI 608796. *Triticum aestivum* L. *subsp. aestivum*

Landrace. IAR/W/215-1; NSGC 7607. Collected in Ethiopia. Latitude 8° 0' N. Longitude 38° 0' E. Pedigree - Separation of species from PI 387793.

The following were donated by USDA, ARS, Colorado Agric. Exp. Station, Fort Collins, Colorado, United States. Received 1977.

PI 608797. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4246; NSL 95219; A77-48. Collected in Chile. Crop year 1977. Immed. par. 73/5-1-13-L21. Product of selection and breeding for resistance to yellow wilt. Literature reference: John O. Gaskill, Roberto Ehrenfeld. 1976. Breeding sugarbeet for resistance to yellow wilt. J. American Society Sugar Beet Technol. 19:25-44.

PI 608798. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4248; NSL 95221; A77-50. Collected in Chile. Origin: Chile Crop year: 1977 Immed. parent 75/5-1-15-L46. Product of selection and breeding for resistance to yellow wilt. Lit. reference - John O. Gaskill, Roberto Ehrenfeld 1976. Breeding sugarbeet for resistance to yellow wilt. J. Am. Soc. Sugar Beet Technol. 19:25-44.

PI 608799. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4294; NSL 101193; A78-30. SEA increase of 74/6-3-48-L3, a product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 608800. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4296; NSL 101195; A78-32. SEA increase of 74/6-3-78-L4, a product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt. Do not distribute without approval from Research Leader, USDA-SEA-AR-WR, Sugarbeet Production Research, P.O. Box 5098, Salinas, California 93915.

The following were donated by Edward J. Ryder, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 1979.

PI 608801. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4315; NSL 103051; 5942. Sugarbeet nematode wilt tolerant selection made at the Institute voor Rationele Suikerproductie, Bergen op Zoom, th Netherlands.

The following were donated by J. O. Gaskill, Colorado State University, Crops Research Lab, WR Sugarbeet Production Research, Fort Collins, Colorado 80523, United States. Received 1980.

PI 608802. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4356; NSL 107415; A80-16. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 608803. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4357; NSL 107416; A80-17. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

The following were donated by Edward J. Ryder, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 1981.

PI 608804. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4405; NSL 142016; 0405. The tetraploid Janasz variety crossed with the tetraploid NBl inbred. Janasz is a high sucrose variety from Poland and NBl is a self-fertile multigerm inbred with resistance to bolting and curly top.

The following were developed by Frank Davis, USDA-ARS, Crop Science Research Lab., P.O. Box 5248, Mississippi State, Mississippi 39762, United States; W. Paul Williams, USDA-ARS-CHPRRU, Box 9555, 344 Dorman Hall, Mississippi State, Mississippi 39762, United States. Donated by W. Paul Williams, USDA-ARS-CHPRRU, Box 9555, 344 Dorman Hall, Mississippi State, Mississippi 39762, United States. Received 02/17/1999.

PI 608805. *Zea mays* L. subsp. *mays*

Breeding. Partinbred. Mp713. GP-345. Pedigree - Developed by selfing for 8 generations in a cross between two S1 lines from Multiple Borer Resistant (MBR) populations developed at CIMMYT. Height medium, kernels pale yellow and cobs white. Maturity classification AES 1100. Intermediate level of resistance to southwestern corn borer (5.0 on a scale of 0, no damage, to 9, heavy damage) and fall armyworm (4.5 on a scale of 0 to 9).

PI 608806. *Zea mays* L. subsp. *mays*

Breeding. Inbred. Mp714. GP-346. Pedigree - Developed by selfing for 8 generations in GT-DDSA (C5) (PI 518769). Height medium, kernels and cobs white. Maturity classification AES1100. Moderate resistance to leaf feeding by southwestern corn borer (5.6 on a scale of 0, no damage, to 9, heavy damage) and fall armyworm (5.5 on a scale of 0 to 9).

The following were developed by Doug Brede, Jacklin Seed Company, West 5300 Riverbend avenue, Post Falls, Idaho 83854-9499, United States; Mark J. Sellmann, Jacklin Seed Company, Research Dept., West 5300 Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 03/05/1999.

PI 608807. *Festuca arundinacea* Schreb.

Cultivar. Population. "WRANGLER II". CV-80. Pedigree - Maternal parentage is 27% Pixie, 27% Crossfire, 27% Twilight, 7% Avanti, 6% Monarch, and 6% Hubbard 87. Attractive turf with good overall quality. Good brown patch (*Rhizoctonia solani*) resistance. Darker genetic color.

PI 608808. *Festuca arundinacea* Schreb.

Cultivar. Population. "ALAMO E". CV-81. Pedigree - Advanced generation synthetic cultivar developed from the maternal progenies of 35 clones. The 35 clones trace to 20% Pixie, 20% various Medalist America Experimentals, 20% Hubbard 87, 13% Crossfire, 7% Shenandoah, 7% Twilgiht, 7% Monarch, and 6% Avanti tall fescue varieties. Attractive turfgrass with improved turf quality and superior genetic color. Resistance to Pythium blight (*Pythium* spp.) and stem rust (*Puccinia graminis*).

The following were developed by Victor Maddox, Mississippi State University, Plant and Soil Sciences, 117 Dorman Hall, Mississippi State, Mississippi 39759, United States; H. Wayne Phillely, Mississippi State University, Dept. of Plant & Soil Sciences, Box 9555, Mississippi State, Mississippi 39762, United States; J.M. Goatley, Jr., Mississippi State University, Dept. of

Plant and Soil Sciences, Mississippi State, Mississippi 39762, United States;
Jeff V. Krans, Mississippi State University, Department of Plant & Soil
Sciences, Box 9555, Mississippi State, Mississippi 39762, United States.
Received 03/08/1999.

PI 608809. *Agrostis stolonifera* L.

Breeding. Population. MSCB-3. GP-1. Pedigree - Developed from tissue culture involving callus induction from Penncross seed. Released 1994. Higher salt tolerance than Penncross. Useful in developing cultivars adapted to putting green application in the southeastern U.S.

PI 608810. *Agrostis stolonifera* L.

Breeding. Population. MSCB-4. GP-2. Pedigree - Developed from tissue culture involving callus induction from Penncross seed. Released 1994. Higher salt tolerance than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608811. *Agrostis stolonifera* L.

Breeding. Population. MSCB-10. GP-3. Pedigree - Developed from tissue culture involving callus induction from Penncross seed. Released 1994. Higher summer survival than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608812. *Agrostis stolonifera* L.

Breeding. Population. MSCB-11. GP-4. Pedigree - Ecotype collected in Mississippi. Released 1994. Higher summer survival than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608813. *Agrostis stolonifera* L.

Breeding. Population. MSCB-19. GP-5. Pedigree - Developed from tissue culture involving callus induction from Penncross seed. Released 1994. Higher summer survival than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608814. *Agrostis stolonifera* L.

Breeding. Population. MSCB-37. GP-6. Pedigree - Developed from tissue culture involving callus induction from Penncross seed. Released 1994. Higher summer survival than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608815. *Agrostis stolonifera* L.

Breeding. Population. MSCB-52. GP-7. Pedigree - Developed from tissue culture involving callus induction from Penncross seed. Released 1994. Higher summer survival than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608816. *Agrostis stolonifera* L.

Breeding. Population. MSCB-73. GP-8. Pedigree - Ecotype collected in Mississippi. Released 1994. Higher summer survival than Penncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608817. *Agrostis stolonifera* L.

Breeding. Population. MSCB-81. GP-9. Pedigree - Developed from tissue culture involving callus induction from Pennncross seed. Released 1994. Higher summer survival than Pennncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608818. *Agrostis stolonifera* L.

Breeding. Population. MSCB-304. GP-10. Pedigree - Developed from tissue culture involving callus induction from Pennncross seed. Released 1994. Higher summer survival than Pennncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608819. *Agrostis stolonifera* L.

Breeding. Population. MSCB-330. GP-11. Pedigree - Ecotype collected in Mississippi. Released 1994. Higher summer survival than Pennncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

PI 608820. *Agrostis stolonifera* L.

Breeding. Population. MSCB-388. GP-12. Pedigree - Developed from tissue culture involving callus induction from Pennncross seed. Released 1994. Higher summer survival than Pennncross. Useful in developing creeping bentgrass cultivars adapted to putting green application in the southeastern U.S.

The following were developed by W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station, Department of Agronomy, Ames, Iowa 50011, United States; Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Arnel R. Hallauer, Iowa State University, Department of Agronomy, 1401 Agronomy Hall, Ames, Iowa 50011-1010, United States. Donated by Iowa Agricultural Experiment Station, Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa, United States. Received 03/1970.

PI 608821. *Zea mays* L. subsp. *mays*

Breeding. Population. BS8; CSR 100; NSL 73998. GP-25. Pedigree - BS8 was developed from Kenya SK (CBK II) by two cycles of mass selection in Iowa. BS8 is a semi-exotic synthetic derived from Kenya SK (CBK II) by two cycles of mass selection in Iowa. SK (PI 347266) was formed at Kitale, Kenya, by the Major Cereals Project in Africa, with USAID, USDA-ARS, the East African Agriculture and Forestry Research Organization, and the Kenya Ministry of Agriculture, cooperating. SK includes germplasm from the southern USA and the Corn Belt and exotic material from Central and South America, Africa and Europe. The sources were: N. Carolina Jarvis and Indian Chief, DeKalb southern hybrids, Funk Deep South Syn., Funk Tropical Syn., Coker hybrids, Pioneer southern hybrids, Pioneer West Indies Synthetic (Iowa), Pioneer West Indies Synthetic (Tenn.), Pioneer Caribbean Composite, Pioneer Jamaica Synthetic, Tuxpeno X Lancaster, Yugoslav hybrids, Diacol V254, Diacol V540C, Nigeria Late Composite, Nigeria Composite C, Zambia SR52, Zambia Kalahari Syn., Ecuador 573, Puerto Rico GPO2 and GPO6, Cuba 40-Hawaii 5, Cometic, Israel hybrids, USA X Camalia, Kenya Embu I (composite of

Central America and USA Germplasm), Nigeria Bulk 2 (NS-1, Tsolo, Diacol V103, Miss.6002, Miss.6004, Metro, EAAFRO 270, EAAFRO 237, Br.155, and Metro). Synthesis was done in five seasons of random mating at Kitale as follows: A bulk sample of all entries was planted over a 10-day period; pollen from this bulk was carried to a row for each entry of the synthetic. Entry identification of the "female" was maintained for the five cycles of synthesis to insure thorough recombination. SK was evaluated in a regional diallel grown in seven southern locations (Crop Sci. 11:911-914). Seed color is segregating white and yellow.

The following were donated by Elwyn M. Meader, 43 Meaderboro Rd., Rochester, New Hampshire 03867-4235, United States; James McFerson, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456, United States. Received 08/13/1993.

PI 608822. *Rubus idaeus* L.

Cultivar. *R. idaeus* OP 'Fallred'; G-10533; 61-51. Pedigree - Open-pollinated composite of "Fallred". New Hampshire Red Raspberry, late season by 10 days.

The following were collected by Washburn. Donated by James McFerson, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456, United States. Received 08/13/1993.

PI 608823. *Rubus idaeus* L.

Cultivated. G-13180. Collected in Ohio, United States. Latitude 41° 39' N. Longitude 81° 20' W. East of Mentor, Ohio on Johnnycake Ridge in Mr. Washburn's garden. Lat/lon accurate to Mentor. Pedigree - Open-pollinated composite of "Red Everbearing Raspberry". Reference G-13180. Open-pollinated seed collected from 1964 to 1966. Main feature is much growth in first year; everbearing; very dark fruit. Pale bark, many prickles. Not a partial fall crop, a bit late for central Maine. Variable, but has a strong tendency for autumn fruiting.

The following were collected by Edward A. Pontzer, 500 Spruce St., St. Marys, Pennsylvania 15857, United States. Developed by Edward A. Pontzer, 500 Spruce St., St. Marys, Pennsylvania 15857, United States. Donated by James McFerson, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456, United States. Received 08/13/1993.

PI 608824. *Rubus idaeus* L.

Cultivar. G-17833; 67-11; Pontzer Blackberry. Collected in Pennsylvania, United States. Elevation 640 m. The Plants came from an abandoned field, growing among common blackberry. The field has since reverted to poverty grass. Pedigree - Open-pollinated composite of "Pontzer Blackberry".

The following were collected by Glenn W. Dobson, Rt 19, Wyoming, New York 14591, United States. Donated by James McFerson, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456, United States. Received 08/13/1993.

PI 608825. *Rubus idaeus* L.

Cultivar. G-14646; 65-65. Collected in New York, United States.

Pedigree - Open-pollinated composite of "Crimson Cone". Reference G-14646. Grows very tall, especially in semi-shade.

The following were donated by James McFerson, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456, United States. Received 08/13/1993.

PI 608826. *Rubus idaeus* L.

Cultivar. G-16889. Collected in England, United Kingdom. Pedigree - Open-pollinated tetraploid "Malling Expolit". Reference G-16889. Only tetraploid variety of red raspberry available. Slow growing, lacks vigor. Fruits are coarse with very large drupelets. No value except as polyploid for breeding.

PI 608827. *Rubus idaeus* L.

Cultivar. G-11869; OP 'Anelma'. Developed in Finland. Pedigree - Open-pollinated "Anelma", *R. idaeus* x *R. articus*. Reference PI 247797.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States; Sheng Ke Xi, The Chinese Academy of Forestry, Beijing, Beijing, China; Qinghua Zhang, Institute of Forest Ecology and Environment, Chinese Academy of Forestry, Wan Shou Shan, Beijing, Beijing 100091, China. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 10/24/1996.

PI 608828. *Rubus crataegifolius* Bunge

Wild. 96091; CRUB 1910. Collected 08/08/1996 in Heilongjiang, China. Latitude 44° 56' N. Longitude 128° 37' E. Elevation 325 m. 210 km east of Harbin. Small river valley among low hills Chang Guang Chei Ling, a branch of Changbai Mountains. Pedigree - collected from the wild in Heilongjiang, China. Bought from a peddler in Yabuli.

PI 608829. *Rubus crataegifolius* Bunge

Wild. 96054; CRUB 1911. Collected 08/01/1996 in Jilin, China. Latitude 42° 49' N. Longitude 127° 54' E. Elevation 431 m. Close to Ar Do Bai He. Hills at edge of creek open exposure. Pedigree - collected from the wild in Jilin, China.

PI 608830. *Rubus crataegifolius* Bunge

Wild. 96068; CRUB 1912. Collected 08/03/1996 in Jilin, China. Latitude 42° 9' N. Longitude 127° 32' E. Elevation 692 m. 5 - 6 km southeast of Songhianqhe Town. Valley in the foothills of Changbai Mountains roadside, disturbed earth. Pedigree - collected from the wild in Jilin, China.

PI 608831. *Rubus crataegifolius* Bunge

Wild. 96012A; CRUB 1913. Collected 07/20/1996 in Heilongjiang, China.

Latitude 45° 12' N. Longitude 126° 49' E. Elevation 0 m. Fruit was collected about 60 km south of Harbin. Pedigree - collected in the wild in Heilongjiang, China but sample was bought from a peddler near Harbin.

PI 608832. *Rubus crataegifolius* Bunge

Wild. 96093; CRUB 1914. Collected 08/09/1996 in Heilongjiang, China. Latitude 44° 57' N. Longitude 128° 59' E. Elevation 325 m. 30 km east of Yabuli Yabuli Forestry Bureau. Small river valley among low hills Chang Guang Chei Ling, a branch of the Changbai Mountains. Pedigree - collected from the wild in Heilongjiang, China.

PI 608833. *Rubus crataegifolius* Bunge

Wild. 96086; CRUB 1915. Collected 08/07/1996 in Heilongjiang, China. Latitude 45° 12' N. Longitude 126° 49' E. Elevation 0 m. Collected near Harbin. Said to have been harvested in mountains south of Harbin. Pedigree - collected from the wild in Heilongjiang, China purchased from a peddler in Harbin.

PI 608834. *Rubus parvifolius* L.

Wild. 608834; CRUB 1916. Collected 08/07/1996 in Heilongjiang, China. Latitude 45° 15' N. Longitude 127° 42' E. Harbin. Probably collected south of Harbin. Pedigree - collected from the wild in Heilongjiang, China. Bought from a peddler in a market in Harbin.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States; Sheng Ke Xi, The Chinese Academy of Forestry, Beijing, Beijing, China; Qinghua Zhang, Institute of Forest Ecology and Environment, Chinese Academy of Forestry, Wan Shou Shan, Beijing, Beijing 100091, China. Developed by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 10/24/1996.

PI 608835. *Rubus parvifolius* L.

Wild. 96050; Jilin Giant; *R. parvifolius* Tetraploid; CRUB 1917; Fengmanhong. Collected 07/31/1996 in Jilin, China. Latitude 43° 43' N. Longitude 126° 42' E. Elevation 154 m. collected beside lake 20 km southeast of Jilin. hills vendors beside lake said to have collected within 5-10 km. Pedigree - Purchased at market near Jilin, China purchased from vendors. Seed collected from vendors at a fruit market near Jilin, China in 1996 by Maxine Thompson, Chad Finn and Joseph Postman. Seedling population was grown by Chad Finn in Corvallis, Oregon. These numbered selections were among several seedlings selected by Chad Finn in 2000 for further evaluation.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States; Sheng Ke Xi, The Chinese Academy of Forestry, Beijing, Beijing, China; Qinghua Zhang, Institute of Forest Ecology and Environment, Chinese Academy of Forestry, Wan Shou Shan, Beijing, Beijing 100091, China. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 10/24/1996.

PI 608836. *Rubus arcticus* L. subsp. *arcticus*

Wild. 608836; CRUB 1918. Collected 07/18/1996 in Heilongjiang, China. Latitude 47° 11' N. Longitude 128° 52' E. Elevation 330 m. Dailing, Heilongjiang Liangshui Forest Preserve. Hills Xiao xing an ling dense herbaceous forest Open area along road near preserve headquarters. Pedigree - collected from the wild in Dailing, Heilongjiang China.

PI 608837. *Rubus arcticus* L. subsp. *arcticus*

Wild. 96042; CRUB 1919. Collected 07/27/1996 in Heilongjiang, China. Latitude 51° 40' N. Longitude 124° 23' E. Elevation 498 m. about 1 km north of Xin Ling Town. low hills (Da Xing An Ling) understory in forest. Pedigree - collected from the wild in Xin Ling, Heilongjiang, China.

PI 608838. *Rubus idaeus* L.

Cultivated. 96090; CRUB 1920. Collected 08/08/1996 in Heilongjiang, China. Latitude 44° 56' N. Longitude 128° 0' E. Elevation 325 m. Yabuli village (= apple for the wild *Malus baccata*) (=Yabloko). Pedigree - red raspberry selection found in China but likely introduced many years ago by the Russians, who established the village.

PI 608839. *Rubus idaeus* L.

Cultivated. 96094; CRUB 1921. Collected 08/09/1996 in Heilongjiang, China. Latitude 44° 57' N. Longitude 128° 59' E. Elevation 355 m. Hu Fong Forest Farm Yabuli Forestry Bureau 30 km east of Yabuli. roadside patch. Pedigree - escapes from cultivated red raspberry.

PI 608840. *Rubus multibracteatus* H. Lev. & Vaniot

Wild. 96105; CRUB 1922. Collected 1995 in Yunnan, China. Latitude 23° 9' N. Longitude 104° 44' E. Malipo. Lat/lon accurate to Malipo. Pedigree - collected from the wild in Yunnan, China.

The following were collected by Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States. Donated by Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Qinghua Zhang, Institute of Forest Ecology and Environment, Chinese Academy of Forestry, Wan Shou Shan, Beijing, Beijing 100091, China. Received 10/24/1996.

PI 608841. *Rubus niveus* Thunb.

Wild. 96126; CRUB 1923. Collected 09/1996 in Hubei, China. Latitude 31° 40' N. Longitude 110° 36' E. Elevation 1500 m. Shennongjia. Mountains, Nature Preserve. Pedigree - collected from the wild in Hubei, China.

PI 608842. *Rubus pungens* Cambess.

Wild. 96124; CRUB 1924. Collected 09/1996 in Hubei, China. Latitude 31° 40' N. Longitude 110° 36' E. Elevation 1500 m. Shennongjia. Mountains in Nature Preserve. Pedigree - collected from the wild in Hubei, China.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States; Sheng Ke Xi, The Chinese Academy of Forestry, Beijing, Beijing, China; Qinghua Zhang, Institute of Forest Ecology and Environment, Chinese Academy of Forestry, Wan Shou Shan, Beijing, Beijing 100091, China. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Maxine Thompson, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333, United States; Joseph Postman, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 10/24/1996.

PI 608843. *Rubus sachalinensis* H. Lev.

Wild. 96069; CRUB 1925. Collected 08/03/1996 in Jilin, China. Latitude 42° 9' N. Longitude 127° 15' E. Elevation 677 m. 8 - 10 km southeast of Songjianghe Town. Valley in foothills of Changbai Mountains along roadside. Pedigree - collected from the wild in Jilin, China.

PI 608844. *Rubus sachalinensis* H. Lev.

Wild. 96002; CRUB 1926. Collected 07/18/1996 in Heilongjiang, China. Latitude 42° 9' N. Longitude 127° 15' E. Elevation 330 m. 26 km northwest of Dailing city. Mixed evergreen hardwood forest with dense undergrowth. Hills Xiao xing an ling open area in front of main building at headquarters of nature preserve. Pedigree - collected from the wild in Jilin, China.

PI 608845. *Rubus sachalinensis* H. Lev.

Wild. 96018; CRUB 1927. Collected 07/23/1996 in Heilongjiang, China. Latitude 52° 12' N. Longitude 124° 5' E. Elevation 450 m. Jagedaqi (Huzhong Bureau) 50 km northeast of Huzhong. Roadside, broad river valley between low hills Da xing an ling. Pedigree - collected from the wild in Jagedaqi, Heilongjiang, China.

PI 608846. *Rubus sachalinensis* H. Lev.

Wild. 96067; CRUB 1928. Collected 08/03/1996 in Jilin, China. Latitude 41° 59' N. Longitude 127° 36' E. Elevation 640 m. 4 - 5 km Southeast of Jeng Bei Village (Songjianghe Forest Bureau). Valley in foothills of Changbai Mountains. Pedigree - collected from the wild in Jilin, China.

PI 608847. *Rubus sachalinensis* H. Lev.

Wild. 96061; CRUB 1929. Collected 08/02/1996 in Jilin, China. Latitude

41° 55' N. Longitude 127° 55' E. Elevation 1172 m. Changbai Shan (Changbai Mountains) Nature Preserve. Mountains collected by roadside. Pedigree - collected from the wild in Jilin, China.

PI 608848. *Rubus sachalinensis* H. Lev.

Wild. 96024; CRUB 1930. Collected 07/24/1996 in Heilongjiang, China. Latitude 52° 5' N. Longitude 123° 19' E. Elevation 526 m. Jagedaqui (Hu Zhong Bureau) southwest of HuZhong town. Hills road cut along road to Hu Zhong Natural Preserve. Pedigree - collected from the wild in Jagedaqui, Heilongjiang, China.

PI 608849. *Rubus crataegifolius* Bunge

Wild. 96064; CRUB 1931. Collected 08/02/1996 in Jilin, China. Latitude 42° 10' N. Longitude 127° 36' E. Elevation 862 m. in foothills of Changbai Mountains. Valley in Residential alley. Pedigree - collected from the wild in Jilin, China.

PI 608850. *Rubus arcticus* L.

Wild. 96015; CRUB 1932. Collected 07/22/1996 in Heilongjiang, China. Latitude 50° 18' N. Longitude 124° 7' E. Elevation 338 m. 17 km south of Jagedaqui Jagedaqui Forest Preserve. River valley, low hills edge of experimental Pinus plots. Pedigree - collected from the wild in Jagedaqui, Heilongjiang, China.

PI 608851. *Rubus saxatilis* L.

Wild. 96034; CRUB 1933. Collected 07/25/1996 in Heilongjiang, China. Latitude 53° 25' N. Longitude 122° 16' E. Elevation 438 m. Jagedaqui (Mo He Bureau) 74 km north of Mo He. Hilly (Da xing an ling) roadside near Pinus sylvestris mongolica, open forest. Pedigree - collected from the wild in Jagedaqui, Heilongjiang, China.

PI 608852. *Rubus saxatilis* L.

Wild. 96040; CRUB 1934. Collected 07/26/1996 in Heilongjiang, China. Latitude 52° 16' N. Longitude 124° 42' E. Elevation 369 m. Roadside - picked by a local girl along road from Mo He to Xin Ling. 16 km south of Ta He Town. Hilly (Da xing an ling). Pedigree - collected from the wild in Ta He, Heilongjiang, China.

The following were collected by Donna Rae McKay, USDA Forest Service, Forest Resources Bldg, Corvallis, Oregon 97331, United States. Received 03/19/1998.

PI 608853. *Rubus spectabilis* Pursh

Wild. CRUB 1965. Collected 07/11/1989 in Oregon, United States. Pedigree - Collected from the wild in Oregon.

PI 608854. *Rubus spectabilis* Pursh

Wild. CRUB 1966. Collected 06/1988 in Oregon, United States. Pedigree - Collected from the wild in Oregon.

PI 608855. *Rubus spectabilis* Pursh

Wild. CRUB 1967. Collected 07/11/1989 in Oregon, United States. Pedigree - Collected from the wild in Oregon.

PI 608856. *Rubus spectabilis* Pursh

Wild. CRUB 1968. Collected 06/10/1977 in Oregon, United States. Pedigree - Collected from the wild in Oregon.

The following were collected by Kim Hummer, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/11/1998.

PI 608857. *Rubus chamaemorus* L.

Wild. CRUB 1972. Collected 08/06/1998 in Alaska, United States. Latitude 60° 30' N. Longitude 151° 20' W. Elevation 10 m. Next to nature trail walking path, Kenai Wildlife Refuge, Soldatna, Alaska. Near edge of lake in open sun. Associated plants: *Vaccinium vitis-ideaus*, labrador tea and Sitka spruce. Pedigree - Open pollinated collection from the wild in Alaska.

PI 608858. *Rubus pedatus* Sm.

Wild. CRUB 1973. Collected 08/06/1998 in Alaska, United States. Latitude 60° 30' N. Longitude 151° 20' W. Elevation 10 m. Collected along edge of woodland nature trail, Kenai Wildlife Refuge, Soldatna, Alaska. The edge of tall Sitka Spruce woodland. Associated plants *Vaccinium vitis-ideaus*, Black Cottonwood and Devils Club. Pedigree - Collected from the wild in Alaska.

PI 608859. *Rubus idaeus* L.

Wild. CRUB 1974. Collected 08/07/1998 in Alaska, United States. Latitude 61° 26' 16" N. Longitude 150° 10' 5" W. Elevation 10 m. Along river's edge for about 0.5 mile, sampling many plants, Little Susitna River Park, Alaska. Very moist boggy location by river edge next to open woods. Associated with devil's club, red currant, watermelonberry, cranberry-bush (*Viburnum edulum*). Pedigree - Open pollinated collection from the wild in Alaska.

PI 608860. *Rubus pedatus* Sm.

Wild. CRUB 1975. Collected 08/06/1998 in Alaska, United States. Latitude 60° 30' N. Longitude 151° 20' W. Elevation 10 m. Collected along edge of woodland nature trail, Kenai Wildlife Refuge, Soldatna, Alaska. The edge of tall Sitka spruce woodland. Associated plants *Vaccinium vitis-ideaus*, Black Cottonwood and Devils Club. Pedigree - Open pollinated collection from the wild in Alaska.

PI 608861. *Rubus idaeus* L.

Wild. *R. idaeus*; KH98-13; CRUB 1979. Collected 08/10/1998 in Alaska, United States. Latitude 64° 49' 54" N. Longitude 147° 31' 59" W. Elevation 30 m. Sled Dog RV Park, Badger Loop Road, on the banks of the Chena River, about 4 miles east of Fairbanks, Alaska. Along river bank. Associated with grasses, ladyfern and *Fragaria virginiana*. Soil was dark brown, very sandy-loam, very little organic matter.

Unknown source. Received 11/21/1997.

PI 608862. *Sorghum bicolor* (L.) Moench *subsp. bicolor*

CSM 70; IS 22675; 97ML0001. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 608863. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 90; IS 22676; 97ML0002. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 608864. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 205; IS 22677; 97ML0003. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 608865. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 445; IS 22678; 97ML0004. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 608866. Sorghum bicolor (L.) Moench **subsp. bicolor**
CE 151-62; IS 22679; 97ML0005. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 608867. Sorghum bicolor (L.) Moench **subsp. bicolor**
CE 151-186; IS 22680; 97ML0006. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 608868. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1143; IS 25598; SOGOMBA TJIRA; 97ML0007. Collected 1982
in Mali.

Unknown source. Received 11/21/1997.

PI 608869. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1099; IS 25599; DJIMBIRI; 97ML0008. Collected 1982 in
Mali.

Unknown source. Received 11/21/1997.

PI 608870. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1129; IS 22601; MOLIA; 97ML0010. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608871. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1120; IS 25603; KANA; 97ML0012. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608872. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1142; IS 25604; MOLIA; 97ML0013. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608873. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1127; IS 25608; MOLIA TJIRA; 97ML0017. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608874. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1114; IS 25611; FARKA KOPSI; 97ML0020. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608875. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1125; IS 25612; MOLIA KARA; 97ML0021. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608876. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1162; IS 25613; FATI; 97ML0022. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608877. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1139; IS 25614; HAMCHI KOURI; 97ML0023. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608878. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 806; IS 25616; SOTA; 97ML0025. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608879. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 830; IS 25621; MBAYERI; 97ML0030. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608880. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 986; IS 25625; SABA; 97ML0034. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608881. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 879; IS 25628; FARKA KOMSIRI; 97ML0037. Collected 1982
in Mali.

Unknown source. Received 11/21/1997.

PI 608882. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 885; IS 25629; DIABANA KOKONO; 97ML0038. Collected 1982
in Mali.

Unknown source. Received 11/21/1997.

PI 608883. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 893; IS 25630; KARADANFA; 97ML0039. Collected 1982 in
Mali.

Unknown source. Received 11/21/1997.

PI 608884. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 948; IS 25633; SABA; 97ML0042. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608885. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 969; IS 25635; TIENINTIE; 97ML0044. Collected 1982 in
Mali.

Unknown source. Received 11/21/1997.

PI 608886. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 908; IS 25637; SOTA; 97ML0046. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608887. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 923; IS 25639; ALBAKARI; 97ML0048. Collected 1982 in
Mali.

Unknown source. Received 11/21/1997.

PI 608888. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1077; IS 25641; DJIMBIRI; 97ML0050. Collected 1982 in
Mali.

Unknown source. Received 11/21/1997.

PI 608889. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1090; IS 25642; KANA; 97ML0051. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608890. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1091; IS 25643; TIENDA; 97ML0052. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608891. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1092; IS 25644; KENINKE; 97ML0053. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608892. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1064; IS 25646; KANA; 97ML0055. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608893. Sorghum bicolor (L.) Moench **subsp. bicolor**

CSM 1054; IS 25647; ZIBI; 97ML0056. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608894. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 1046; IS 25648; HOMMA KOIRA; 97ML0057. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608895. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 938; IS 25649; MBAYERI; 97ML0058. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 608896. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 03; IS 25650; SEGUETENE; 97ML0059. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608897. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 04; KENDE YENKO; 97ML0061. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608898. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 05; IS 25651; KENINKE BA; 97ML0063. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608899. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 06; IS 25652; SAKOIKA; 97ML0064. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608900. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 08; KENDE DIE; 97ML0066. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608901. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 09; TIMIKALA; 97ML0067. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608902. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 11; KORIKORINI; 97ML0068. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608903. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 13; BABOUKOULA; 97ML0071. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608904. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 15; IS 25654; KENDE DAKARI; 97ML0072. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608905. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 17; IS 25655; NIONIFI; 97ML0075. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608906. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 24; IS 25659; KENINKE TELI; 97ML0082. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608907. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 25; TIEMARIFING; 97ML0084. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608908. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 29; IS 25661; NIENIFING; 97ML0088. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608909. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1349; IS 25662; SAKOIKA; 97ML0089. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608910. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 31; MANKALA; 97ML0091. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608911. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1350; IS 25663; KENDE BLE; 97ML0092. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608912. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 36; IS 25664; SEGUETENE; 97ML0094. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608913. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 40; IS 25666; TIABA NIO; 97ML0100. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608914. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 41; KENDE BLE; 97ML0101. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608915. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 42; IS 25667; SANAMANINKE; 97ML0102. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608916. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 49; KENDE BLE; 97ML0106. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608917. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 54; KENINKE; 97ML0109. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608918. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 58; KASSABANE NITILI; 97ML0110. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608919. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 59; GADIABA; 97ML0111. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608920. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 62; GOSSEKELE; 97ML0116. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608921. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 66; MANKALA TIAMANTERO; 97ML0121. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608922. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 67; MANKALA LE; 97ML0122. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608923. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 68; MANKALA KASSABANE; 97ML0123. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608924. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 71; IS 25675; KENINKE BA; 97ML0124. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608925. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 72; MANGAGNIE; 97ML0126. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608926. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 78; NIENIKO; 97ML0129. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608927. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 81; IS 25678; KELO; 97ML0133. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608928. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 88; IS 25680; KENINKE; 97ML0137. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608929. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 89; GADIABA; 97ML0138. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608930. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI91; KENDE BLE; 97ML0139. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608931. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 97; SOBENE; 97ML0144. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608932. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 98; IS 25683; TIAFOUGA; 97ML0145. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608933. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 99; NIENIKO; 97ML0147. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608934. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 100; MAGANKALA; 97ML0148. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608935. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 102; GADIABA TELI; 97ML0149. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608936. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 111; GADIABA; 97ML0156. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608937. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 112; KENINKE; 97ML0157. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608938. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 113; MANGANIE TAINE; 97ML0158. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608939. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 116; KENINKE; 97ML0159. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608940. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 121; RHAYE; 97ML0164. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608941. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 122; IS 25689; BICHNE; 97ML0166. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608942. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 126; IS 25691; BICHNE; 97ML0169. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608943. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 131; KENDE; 97ML0171. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608944. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 132; KENINKE; 97ML0172. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608945. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 133; TIMIKALA; 97ML0173. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608946. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 137; GADIABA; 97ML0178. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608947. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 141; IS 25695; GADIABA; 97ML0182. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608948. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 145; GADIABA; 97ML0185. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608949. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 147; TIAFOUGA; 97ML0188. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608950. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 153; KALA HAOUSSA; 97ML0193. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608951. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 155; KENINKE; 97ML0194. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608952. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 159; GADIABA; 97ML0197. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608953. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 160; SOBENE; 97ML0198. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608954. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 161; NIENIKO; 97ML0199. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608955. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 164; NIENIKO; 97ML0200. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608956. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 165; IS 25601; LAKAHIRI; 97ML0201. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608957. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 166; IS 25702; KOUROUNIENI; 97ML0204. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608958. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 169; IS 25703; KENINKE; 97ML0205. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608959. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 171; GADIABA; 97ML0209. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608960. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 172; IS 25705; KONOTENE; 97ML0211. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608961. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1351; LAKAHIRI; 97ML0216. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608962. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1352; GADIABA; 97ML0217. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608963. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 177; SOBENE; 97ML0218. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608964. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 181; IS 25709; RHAYE; 97ML0222. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608965. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI182; IS 25710; MANGAGNIE; 97ML0223. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608966. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 186; KELO; 97ML0227. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608967. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 190; IS 25713; AMADI BOUBOU; 97ML0230. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608968. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 191; NIO BA; 97ML0232. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608969. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 192; IS 25714; LAKAHIRI; 97ML0233. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608970. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 193; KOUROUNIENI; 97ML0235. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608971. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 195; IS 25716; DOUASSA; 97ML0238. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608972. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI198; IS 25717; LAKAHIRI; 97ML0240. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608973. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 199; MANGAGNIE; 97ML0242. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608974. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 200; IS 25718; GADIABA; 97ML0243. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608975. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 201; IS 25719; NIENIKO; 97ML0245. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608976. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1353; KONOTENE; 97ML0247. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608977. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 204; IS 25720; LAKAHIRI; 97ML0249. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608978. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 205; IS 25721; KENINKE; 97ML0250. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608979. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 208; IS 25724; GADIABA; 97ML0257. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608980. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 210; IS 25726; BIMBIRI; 97ML0260. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608981. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 211; LAKAHIRI; 97ML0262. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608982. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 216; IS 25728; MANGAGNIE; 97ML0265. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608983. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 217; LAKAHIRI; 97ML0267. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608984. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 219; IS 25729; MAGANKOULE; SG 4638; 97/269; 97ML0268.
Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608985. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 220; SAMOKON; 97ML0270. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608986. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 224; IS 25732; GADIABA DIE; 97ML0275. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608987. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 228; IS 25735; NIO BA; 97ML0282. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608988. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 229; IS 25736; DOUASSA; 97ML0283. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608989. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 231; IS 25737; LAKAHIRI; 97ML0285. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608990. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 232; NIENIKO; 97ML0287. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608991. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 236; NIENIKO TAINE; 97ML0288. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608992. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 237; IS 25738; SAMPA; SG 4650; 97/289; 97ML0289.
Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608993. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 238; LAKAHIRI; 97ML0291. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608994. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 240; DOUASSA; 97ML0294. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608995. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 241; KELO; 97ML0295. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608996. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 244; NIENIKO KORE; 97ML0296. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608997. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 245; WALA; 97ML0297. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608998. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 247; LAKAHIRI; 97ML0300. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 608999. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 248; KOULOU BA; 97ML0301. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609000. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 250; MANGAGNIE; 97ML0304. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609001. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 251; MANGA DOUMBE; 97ML0305. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609002. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 254; IS 25742; NIENIKO NITELI; 97ML0306. Collected 1978
in Mali.

Unknown source. Received 11/21/1997.

PI 609003. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 266; GADIABA BLEMA; 97ML0309. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609004. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 257; BAGUI NITELI; 97ML0311. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609005. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 258; MASSIRE; 97ML0312. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609006. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 260; BAGUI NITELI; 97ML0313. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609007. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 270; LAKAHIRI; 97ML0318. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609008. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 267; GADIABA BLEMA; 97ML0325. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609009. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 273; IS 25749; GADIABA BA; 97ML0326. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609010. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 274; KENINKE; 97ML0328. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609011. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 275; GADIABA NITELI; 97ML0329. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609012. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 277; NIENIKO TIEMA; 97ML0332. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609013. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 279; DARNE; 97ML0333. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609014. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 281; SAMPa; 97ML0336. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609015. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 284; MOUSSA ILE; 97ML0339. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609016. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 286; LAKAHIRI; 97ML0342. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609017. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 289; SAMPA; 97ML0347. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609018. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 290; NIENIKO; 97ML0348. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609019. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 291; DOUASSA; 97ML0349. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609020. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 292; LAKAHIRI; 97ML0350. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609021. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 297; IS 25757; TOURA NDIKOUO; 97ML0353. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609022. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 298; NIENIKO TIEBOUGOU; 97ML0355. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609023. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 300; KENDE; 97ML0356. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609024. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 303; GADIABA NITELI; 97ML0360. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609025. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 304; IS 25759; DEMBA ILE; 97ML0361. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609026. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 306; KINTI; 97ML0365. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609027. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 307; IS 25761; NIENIKO BA; 97ML0368. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609028. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 308; IS 25762; GADIABA BA; 97ML0369. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609029. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI311; IS 25763; NIENIKO NITELI; 97ML0371. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609030. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 312; IS 25764; GADIABA; 97ML0372. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609031. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 314; NIENIKO DIAGAFARA; 97ML0376. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609032. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 316; IS 25766; NIENINKO DIAGAFARA; SG 4709; 97/378;
97ML0377. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609033. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI321; IS 25769; DEMBA ILE; 97ML0382. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609034. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 323; SAMBANIERI; 97ML0386. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609035. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1354; BADOULOU DIAN; 97ML0389. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609036. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 328; IS 25772; MAKEBE; 97ML0391. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609037. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 329; SONIKOURA; 97ML0392. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609038. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1355; MAMADOU POULO; 97ML0395. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609039. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1356; IS 25774; MAMADOU PE; 97ML0396. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609040. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1357; NIENIKO; 97ML0398. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609041. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 334; NIENIKO; 97ML0401. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609042. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 336; DAMBA ILE; 97ML0404. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609043. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 329; DAMBA ILE; 97ML0407. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609044. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 340; IS 25778; DJOMBASSI; 97ML0408. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609045. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI341; GADIABA; 97ML0410. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609046. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1358; GADIABA; 97ML0415. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609047. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 347; DAMBA ILE; 97ML0418. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609048. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 348; IS 25782; DOUASSA; 97ML0419. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609049. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 350; GADIABA; 97ML0423. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609050. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 554; IS 25880; NIONIFI; 97ML0425. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609051. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 555; IS 25881; SOBENE; 97ML0426. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609052. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 556; SONIKOURA; 97ML0428. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609053. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 557; KOUROUNIENI; 97ML0429. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609054. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 558; IS 25882; DERENI; 97ML0430. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609055. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 559; IS 25883; KENDE DAKARI; 97ML0432. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609056. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 560; IS 25884; DORONKO; 97ML0435. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609057. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 567; IS 25885; NGUENE BA; 97ML0436. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609058. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 568; GADIABA BA; 97ML0438. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609059. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 569; IS 25886; KENDE BLE; 97ML0439. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609060. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 570; SONIKOURA OULE; 97ML0441. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609061. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 574; IS 25887; GADIABA BA; 97ML0442. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609062. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 576; IS 25888; MANGAGNIE; 97ML0444. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609063. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 579; IS 25889; MANGAGNIE; 97ML0446. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609064. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 581; IS 25890; KELO; 97ML0449. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609065. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 582; IS 25891; NIENIKO; 97ML0450. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609066. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 585; IS 25892; KENDE YENKO; 97ML0452. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609067. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 586; IS 25893; GADIABA BA; 97ML0454. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609068. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 587; KONOTENE; 97ML0456. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609069. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 588; IS 25894; GADIABA TELI; 97ML0457. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609070. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 589; IS 25895; KENDE DAKARI; 97ML0459. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609071. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 590; IS 25896; KENDE SIGUIKOU; 97ML0461. Collected 1978
in Mali.

Unknown source. Received 11/21/1997.

PI 609072. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 591; IS 25897; KENINKE TELI; 97ML0463. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609073. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI 592; IS 25898; NIOUKOUTOUNI; SG 4947; SG 4904; 97/466;
97ML0465. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609074. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1369; IS 25899; NIOKOUTOUNI; 97ML0467. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609075. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. SB58; IS 26009; CMDT-95 N'GONNIEBLEN; 97ML2652. Collected
1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609076. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1371; IS 25901; SOBENE; 97ML0472. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609077. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1372; GADIABA TELI; 97ML0473. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609078. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
Cultivated. MI1373; NIOKOUTOUNI; 97ML0474. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609079. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1376; IS 25904; BIMBIRI BA; 97ML0479. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609080. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1377; IS 25905; SHANEBA; 97ML0482. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609081. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 597; IS 25906; NIONIFI TELI; 97ML0483. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609082. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 604; SOBENE; 97ML0495. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609083. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 606; NIONIFI TELI; 97ML0496. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609084. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 607; KENINKE; 97ML0497. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609085. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 609; KENDE DAKARI; 97ML0500. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609086. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 612; NIENIFI; 97ML0501. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609087. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 613; IS 25913; NIENIE BLE; 97ML0502. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609088. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 614; KENDE FING; 97ML0504. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609089. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 615; KENDE YENKO; 97ML0505. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609090. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 616; IS 25914; KENDE SOKOU; 97ML0506. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609091. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 619; 97ML0512. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609092. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 620; NIO KA; 97ML0513. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609093. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 623; NIENIFI; 97ML0514. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609094. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 625; IS 25919; 97ML0518. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609095. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 626; GADIABA TELI; 97ML0521. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609096. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 627; MAGANKALA; 97ML0522. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609097. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI632; IS 25920; DERENI; 97ML0523. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609098. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI633; SAMARGALAKA; 97ML0525. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609099. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 637; IS 25921; DERENI; 97ML0526. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609100. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 638; IS 25922; NIONIFI; 97ML0528. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609101. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 640; IS 25924; KENDE YENKO; 97ML0533. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609102. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 642; GADIABA TELI; 97ML0536. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609103. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 649; IS 25929; DORONKO; 97ML0544. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609104. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 907; IS 26026; SEGUETENE; 97ML0545. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609105. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 908; IS 26027; DERE BLE; 97ML0548. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609106. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 909; KENINKE TELI; 97ML0549. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609107. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 913; IS 26039; DERE BLE; 97ML0552. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609108. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 927; IS 26035; KENINKE BA; 97ML0558. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609109. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 934; IS 26039; KALLA NIEGUE; 97ML0567. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609110. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 935; IS 26040; KALLA NIEGUE; 97ML0568. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609111. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 943; IS 26043; KALLA NIEGUE; 97ML0574. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609112. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 946; SEGUETENE; 97ML0580. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609113. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 949; KALLA NIEGUE; 97ML0581. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609114. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. MI 955; IS 26050; SEGUETENE; 97ML0589. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609115. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 957; IS 26051; TIOSSOUNOU; 97ML0591. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609116. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 958; IS 26052; BABATASSI; 97ML0593. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609117. Sorghum bicolor (L.) Moench **subsp. bicolor**
97ML0597. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609118. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 963; IS 26054; TIOSSOUNOU; 97ML0600. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609119. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 968; IS 26055; TIOSSOUNOU; 97ML0602. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609120. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 969; BABATASSI; 97ML0603. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609121. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 978; DOUMOUNOU; 97ML0612. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609122. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 980; IS 26061; HABOURO; 97ML0615. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609123. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 985; IS 26062; NIO BLENI; 97ML0617. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609124. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 993; IS 26068; KALLA KA; 97ML0628. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609125. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 997; IS 26070; SOUMANINKE; SG 5144; 97/631; 97ML0632.
Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609126. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 998; SEGUETENE; 97ML0634. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609127. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1010; IS 26076; DOUMOUNOU; 97ML0646. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609128. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. 1015; MBAYERI; 97ML0652. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609129. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1016; KENINKE TELI; 97ML0653. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609130. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1019; KENINKE BA; 97ML0654. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609131. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1021; KENDE BLE; 97ML0655. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609132. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1022; IS 26079; KENINKE GUESSE; 97ML0656. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609133. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1028; MBAYERI NDYAOUNDI; 97ML0662. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609134. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1032; KENDE OULE; 97ML0667. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609135. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1033; KALLA; 97ML0668. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609136. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1040; KENINKE; 97ML0671. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609137. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1047; MBAYERI SOTARI; 97ML0674. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609138. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1053; IS 26088; DOUNDOU KOUMARI; 97ML0680. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609139. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1054; IS 26089; DJIMBERI; SG 5717; SG 5175; 97/683; 97ML0682. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609140. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1057; SOTARI; 97ML0686. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609141. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1058; MBAYERI; 97ML0687. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609142. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1059; SAMPÀ; 97ML0688. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609143. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1063; MBAYERI DANIERI; 97ML0691. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609144. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1064; IS 26092; MOUNINGA; 97ML0692. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609145. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1069; MBAYERI; 97ML0700. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609146. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1070; KALLA; 97ML0701. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609147. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1071; KONGUIYA; 97ML0702. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609148. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1073; EME NA; 97ML0703. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609149. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1074; EME DOUMO; 97ML0704. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609150. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1075; IS 26096; EME SEKO; 97ML0705. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609151. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1076; IS 26097; EME TITIE; 97ML0707. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609152. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1077; MBAYERI; 97ML0709. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609153. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1078; EME NIAM; 97ML0710. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609154. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1080; IS 26098; MBAYERI MOUTIERI; 97ML0711. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609155. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1091; IS 26104; TOUSSOU DJALA; 97ML0724. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609156. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1092; IS 26105; TOUSSOU BA; 97ML0726. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609157. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1095; IS 26107; MGUILI DJALA; 97ML0730. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609158. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1100; EME MECQUE; 97ML0736. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609159. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1103; IS 26110; EME NA; 97ML0737. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609160. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1105; EME DOUMO; 97ML0741. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609161. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1109; IS 26114; EME PIRI; 97ML0747. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609162. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1111; IS 26115; EME NA; 97ML0748. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609163. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1112; EME DOUMO; 97ML0750. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609164. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1117; IS 26117; EME NIAM; 97ML0755. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609165. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1125; EME PIRI; 97ML0760. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609166. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1146; IS 26122; KENINKE; 97ML0766. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609167. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1149; KENDE; 97ML0767. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609168. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1159; IS 26125; EME DOUMO; 97ML0772. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609169. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1164; PERIGUEMENE; 97ML0774. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609170. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1165; EME PIILOU; 97ML0775. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609171. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1167; PERIGUEMENE; 97ML0776. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609172. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1174; EME GUENELE; 97ML0780. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609173. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1175; IS 26127; EME; 97ML0781. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609174. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1178; EME NA; 97ML0784. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609175. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1179; EME BANE; 97ML0785. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609176. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1180; EME PIILOU; 97ML0786. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609177. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1185; IS 26129; EME DIGUINE; 97ML0790. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609178. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1189; IS 26130; EME PILOU; 97ML0793. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609179. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1191; IS 26133; EME GADOU; 97ML0797. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609180. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1192; EME NA; 97ML0799. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609181. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1194; IS 26135; EME NAKOLO; 97ML0803. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609182. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1197; IS 26136; MBAYERI; 97ML0806. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609183. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1201; MBAYERI; 97ML0808. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609184. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1204; MEME; 97ML0809. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609185. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1208; IS 26137; KENINKE; 97ML0811. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609186. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1209; IS 26138; DJEBANA; 97ML0813. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609187. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1211; IS 26139; SAMERI; 97ML0815. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609188. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1212; IS 26140; MBAYERI; 97ML0816. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609189. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1215; IS 26141; SAMERI; 97ML0819. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609190. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1219; NIENIFING; 97ML0823. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609191. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1232; KENINKE DIE; 97ML0824. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609192. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1233; IS 26143; KENINKE BLE; 97ML0825. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609193. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1234; KALLA HAOUSSA; 97ML0826. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609194. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1234; KALLA HAOUSSA; 97ML0827. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609195. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1246; IS 26144; DJEBANA; 97ML0829. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609196. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1249; 97ML0830. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609197. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1266; IS 26147; KENINKE NINILI; 97ML0835. Collected 1978
in Mali.

Unknown source. Received 11/21/1997.

PI 609198. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1267; KENDE BLE; 97ML0837. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609199. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1274; 97ML0840. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609200. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1278; IS 26149; 97ML0842. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609201. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1280; SOBENE; 97ML0844. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609202. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1281; KINTO; 97ML0845. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609203. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1297; IS 26150; NIO BA; 97ML0846. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609204. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1285; IS 26151; NIO BA; 97ML0848. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609205. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1289; NIENIKO; 97ML0850. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609206. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1291; IS 26152; KENINKE; 97ML0851. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609207. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD5; IS 40038; 97ML0854. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609208. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD27; IS 40039; 97ML0855. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609209. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD30; IS 40040; 97ML0856. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609210. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD37; IS 40041; 97ML0857. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609211. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD38; IS 40042; 97ML0858. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609212. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD39; IS 40043; 97ML0859. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609213. Sorghum bicolor (L.) Moench **subsp. bicolor**
SMD73; IS 40044; 97ML0860. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609214. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40150; PROSPECTION1; 97ML0861. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609215. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40151; PROSPECTION2; 97ML0862. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609216. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40152; PROSPECTION3; 97ML0863. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609217. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40155; PROSPECTION6; 97ML0866. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609218. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40156; PROSPECTION7; 97ML0867. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609219. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40157; PROSPECTION8; 97ML0868. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609220. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40158; PROSPECTION9; 97ML0869. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609221. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40159; PROSPECTION10; 97ML0870. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609222. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40160; PROSPECTION11; 97ML0871. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609223. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40161; PROSPECTION12; 97ML0872. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609224. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40162; PROSPECTION13; 97ML0873. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609225. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40163; PROSPECTION14; 97ML0874. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609226. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40164; PROSPECTION16; 97ML0875. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609227. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40165; PROSPECTION17; 97ML0876. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609228. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40166; GADIABA DIADIONDER PROSPECTION18; 97ML0877. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609229. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40167; NIENINKE DIADIOUMBERA 19; 97ML0878. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609230. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40168; NIENINKO FING DIADIONMBER; 97ML0879. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609231. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40169; NIOFIONTO DIADIONMBER; 97ML0880. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609232. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40170; MAURITANIE1; 97ML0881. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609233. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 40171; MAURITANIE2; 97ML0882. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609234. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
IS 40172; MAURITANIE3; 97ML0883. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609235. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
IS 40173; MAURITANIE4; 97ML0884. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609236. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
IS 40174; MAURITANIE5; 97ML0885. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609237. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
IS 40175; MAURITANIE6; 97ML0886. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609238. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
IS 40176; MAURITANIE7; 97ML0887. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609239. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CIRAD2; 97ML0889. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609240. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CIRAD3; 97ML0890. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609241. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CIRAD4; 97ML0891. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609242. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CIRAD5; 97ML0892. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609243. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD6; 97ML0893. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609244. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD7; 97ML0894. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609245. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD8; 97ML0895. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609246. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD9; 97ML0896. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609247. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD10; 97ML0897. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609248. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD11; 97ML0898. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609249. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD12; 97ML0899. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609250. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD13; 97ML0900. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609251. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD15; 97ML0902. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609252. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD16; 97ML0903. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609253. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD17; 97ML0904. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609254. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD18; 97ML0905. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609255. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD19; 97ML0906. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609256. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD20; 97ML0907. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609257. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD21; 97ML0908. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609258. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD22; 97ML0909. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609259. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD23; 97ML0910. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609260. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD24; 97ML0911. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609261. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD25; 97ML0912. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609262. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD26; 97ML0913. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609263. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD27; 97ML0914. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609264. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD28; 97ML0915. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609265. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD29; 97ML0916. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609266. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD30; 97ML0917. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609267. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD32; 97ML0919. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609268. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD33; 97ML0920. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609269. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD34; 97ML0921. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609270. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD35; 97ML0922. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609271. Sorghum bicolor (L.) Moench **subsp. bicolor**
CIRAD37; 97ML0924. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609272. *Sorghum bicolor* (L.) Moench subsp. bicolor
CIRAD38; 97ML0925. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609273. *Sorghum bicolor* (L.) Moench subsp. bicolor
CIRAD39; 97ML0926. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609274. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM209; 97ML0927. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609275. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM288; 97ML0928. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609276. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM235; 97ML0929. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609277. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM274; 97ML0930. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609278. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM295; 97ML0931. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609279. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM298; 97ML0932. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609280. *Sorghum bicolor* (L.) Moench subsp. bicolor
CSM303; 97ML0933. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609281. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM305; 97ML0934. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609282. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM306; 97ML0935. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609283. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM307; 97ML0936. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609284. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM310; 97ML0937. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609285. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM313; 97ML0938. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609286. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM323; 97ML0939. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609287. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM335; 97ML0940. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609288. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM336; 97ML0941. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609289. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM364; 97ML0942. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609290. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM382; 97ML0943. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609291. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM388; 97ML0944. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609292. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM485; 97ML0945. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609293. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM506; 97ML0946. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609294. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM507; 97ML0947. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609295. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM513; 97ML0948. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609296. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM562; 97ML0949. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609297. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM564; 97ML0950. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609298. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM588; 97ML0951. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609299. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM602; 97ML0952. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609300. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM609; 97ML0953. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609301. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM622; 97ML0954. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609302. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM644; 97ML0955. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609303. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM660; 97ML0956. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609304. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; BALA KEDJOUGOU; 97ML0957. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609305. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; BIMBIRI; 97ML0958. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609306. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; BLANC DE KARIMANA; 97ML0959. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609307. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; DIABARIMOI; 97ML0960. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609308. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; ENDA SORGHUM; 97ML0961. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609309. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; FRIKAN; 97ML0962. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609310. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; KILABE; 97ML0963. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609311. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; KEKOHIBOA; 97ML0964. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609312. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; MANKOGARA; 97ML0965. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609313. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; MULODE; 97ML0966. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609314. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; NGUELTEDAKARI; 97ML0967. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609315. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; OUEDEZOURE; 97ML0968. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609316. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; OUENI; 97ML0969. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609317. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; SAKOIBA; 97ML0970. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609318. *Sorghum bicolor* (L.) Moench subsp. bicolor
SK97; SEGUETANA; 97ML0971. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609319. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; TIODI; 97ML0972. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609320. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; TIEMARIFING; 97ML0973. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609321. Sorghum bicolor (L.) Moench **subsp. bicolor**
SK97; FOULATIEBA; 97ML0975. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609322. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM259; 97ML0976. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609323. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM437; 97ML0978. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609324. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM464; 97ML0979. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609325. Sorghum bicolor (L.) Moench **subsp. bicolor**
MALISOR84-1; 97ML0980. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609326. Sorghum bicolor (L.) Moench **subsp. bicolor**
MALISOR84-7; 97ML0981. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609327. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ2; 97ML0983. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609328. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ3; 97ML0984. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609329. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ4; 97ML0985. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609330. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ6; 97ML0987. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609331. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ7; 97ML0988. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609332. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ8; 97ML0989. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609333. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ9; 97ML0990. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609334. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ10; BANIDOKA; 97ML0991. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609335. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ13; TIEMARIFING; 97ML0994. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609336. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ19; MALISOR84-7; 97ML1000. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609337. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ198(B); WALI HILE?; 97ML1003. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609338. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ200; WALA; 97ML1005. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609339. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ201; MATAMBA HILE; 97ML1006. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609340. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ202; HILE HINTINTE; 97ML1007. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609341. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ209; HOUSSA; 97/1085; 97ML1014. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609342. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ213; DIONI DIONI; 97ML1018. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609343. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ214; SAMBA GNIRI; 97ML1019. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609344. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ216; FITIRITA; 97ML1021. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609345. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ223; GADIABA BILEMA; 97ML1028. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609346. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ224; BAGUI BAGUI; 97ML1029. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609347. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ226; GADIABA DIE; 97ML1031. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609348. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ227; MAMONON; 97ML1032. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609349. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ229; NIOBOUGOU; 97ML1034. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609350. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ230; MADI COULE HILE; 97ML1035. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609351. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ231; MAGRAN COULE; 97ML1036. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609352. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ234; MADI HOWA HILE; 97ML1039. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609353. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ237; BOUNDOU KINTO; 97ML1042. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609354. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ238; SOUROU BOUGOU; 97ML1043. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609355. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ239; GUEYE MAMADI; 97ML1044. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609356. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ240; CANADA INTRODUCTION; 97ML1045. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609357. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ241; MANDANGO; 97ML1046. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609358. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ242; SIRAMISSE; 97ML1047. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609359. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ244; KOKO HILE; 97ML1049. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609360. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ245; BAGUI BAGUI; 97ML1050. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609361. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ248; SAMPA DOUNDE; 97ML1053. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609362. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ250; NIOBOUGOU; 97ML1055. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609363. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ251; BAMBARA; 97ML1056. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609364. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ252; ODIK INTRODUCTION; 97ML1057. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609365. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ253; SOMONGO; 97ML1058. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609366. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ257; SOKOU; 97ML1062. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609367. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ258; KOKO HILI; 97ML1063. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609368. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ259; MAMADOU HILE; 97ML1064. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609369. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ262; MELLA; 97ML1067. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609370. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ264; GADIAN KOULOU; 97ML1069. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609371. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ267; DEMBA HILE; 97ML1072. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609372. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ271; BADOUGOU; 97ML1076. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609373. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ272; NIOFIONTO; 97ML1077. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609374. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ281; BOIGUEL; 97ML1086. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609375. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ282; KENINKE TELI; 97ML1087. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609376. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ284; BODIBO; 97ML1089. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609377. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ285; LAKAHERI; 97ML1090. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609378. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ286; NIOFIONTO; 97ML1091. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609379. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ287; ODICK INTRODUCTION; 97ML1092. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609380. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ289; KENINKE BA; 97ML1094. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609381. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ291; NIENINKO MAOUDO; 97ML1096. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609382. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ295; LAKAHERI; 97ML1100. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609383. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ296; NIENINKO DJAOUDO; 97ML1101. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609384. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ297; NIENINKO SAMBA; 97ML1102. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609385. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ300; DOUENZTZA; 97ML1105. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609386. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ301; EL HADJI; 97ML1106. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609387. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ303; SAMPA; 97ML1108. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609388. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ305; LAKAHERI; 97ML1110. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609389. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ307; HILE BOUMBE; 97ML1112. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609390. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ314; DOUMENTZA; 97ML1119. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609391. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ316(A); SAMPA KORE; 97ML1121. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609392. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ316(B); SAMPA TAI; 97ML1121. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609393. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ317; KOUROUGNEGNE; 97ML1122. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609394. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ318; MANGAN DOUMBE; 97ML1123. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609395. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ319; MANGAN KOULE; 97ML1124. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609396. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ323; MANGAN KOULE; 97ML1128. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609397. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ326; DOUMENTZA; 97ML1131. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609398 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ327; LAKAHERI DIENI; 97ML1132. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609399 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ329; BOIGUEL; 97ML1134. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609400. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ330; DORA KORA; 97ML1135. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609401. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ331; SAMPA TAI; 97ML1136. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609402. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ335; LAKAHERI TA; 97ML1140. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609403. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ336; DIONI DIONI; 97ML1141. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609404. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ337; KOUROUGNEGNEBOIGUEL; 97ML1142. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609405. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ340; SAMBADOGUEL; 97ML1145. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609406. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ341; LAKAHERI; 97ML1146. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609407. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ346; LAKAHERI; 97ML1151. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609408. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ349; NIOBOUGOU; 97ML1154. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609409. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ350; DOUMENTZA; 97ML1155. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609410. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ352; SOMONGO; 97ML1157. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609411. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ354; BOIGUEL; 97ML1159. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609412. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ357; SOMONGO; 97ML1162. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609413. *Sorghum bicolor* (L.) Moench subsp. bicolor
CZ359; NIENIKO TA; 97ML1164. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609414. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ360; HAMADI BOUBOU; 97ML1165. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609415. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ362; NIOBA; 97ML1167. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609416 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ364; LAKAHERI; 97ML1169. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609417. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ365; SABOUNE DIE; 97ML1170. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609418. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ366; KENINKE BA; 97ML1171. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609419. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ367; KENINKE TELI; 97ML1172. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609420. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ368; BIMIRI; 97ML1173. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609421. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ369; BINKAWOULI; 97ML1174. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609422. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ370; LAKAHERI; 97/1175; 97ML1175. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609423. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ371; EMA; 97ML1176. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609424. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ372; EMA PILI; 97ML1177. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609425. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ373; EME; 97ML1178. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609426. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ375; EME NA; 97ML1180. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609427. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ376; KENINKE; 97ML1181. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609428. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ377; KENINKE TELI; 97ML1182. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609429. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ380; TIEMATIE; 97ML1185. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609430. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ381; SEGUE NION; 97ML1186. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609431. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ384; BOUNA NIONSHI; 97ML1189. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609432. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ390; EME NA; 97/1195; 97ML1196. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609433. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ391; EME PIRI; 97ML1197. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609434. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ393; EME SOUMDOULO; 97ML1199. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609435. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ396; EME PIRI; 97ML1203. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609436. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ398; EME DOUMO; 97ML1205. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609437. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ399; MAK A EME; 97ML1206. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609438. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ401; KELSE EME; 97ML1208. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609439. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ402; EME DOUMON; 97ML1209. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609440. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ403; EME YA OUDJI; 97ML1210. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609441. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ404; EME DOUMON; 97ML1211. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609442. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ406; EME DOUMON BANN; 97ML1213. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609443. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ412; ACOURANGO; 97ML1219. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609444. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ415; EME NA; 97ML1222. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609445. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ433; EME YA; 97ML1240. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609446. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ438; MAKA EME; 97ML1245. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609447. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ448; EME DOUMON; 97ML1255. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609448. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ451; EME GUIRIMON; 97ML1258. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609449. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ452; EME LA; 97ML1259. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609450. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ458; SINDIA; 97ML1265. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609451. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
CZ459; NOWAGA; 97ML1266. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609452. Sorghum bicolor (L.) Moench **subsp. bicolor**
CZ460; TARETA; 97ML1267. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609453. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM87/SC1332; 97ML1269. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609454. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM207/SC1333; 97ML1270. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609455. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM219/SC1334; 97ML1271. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609456. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM228/SC1335; SAP-386; 97ML1272. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609457. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM332/SC1336; 97ML1273. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609458. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM388/SC1337; 97ML1274. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609459. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM409/SC1338; 97ML1276. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609460. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM414/SC1339; 97ML1277. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609461. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM415/SC1340; 97ML1278. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609462. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM417R&BLGL/SC1341; 97ML1280. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609463. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM419/SC1342; 97ML1281. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609464. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM445/SC1344; 97ML1283. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609465. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM90/SC1345; 97ML1284. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609466. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM205,UC; 97ML1286. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609467. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1042/SC1423; SABA; 97ML1289. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609468. Sorghum bicolor (L.) Moench **subsp. bicolor**
SOBENE BABLE/SC1505; 97ML1292. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609469. Sorghum bicolor (L.) Moench **subsp. bicolor**
SWEET,CHEWING TYPE/SC1506/OR89PR; 97ML1293. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609470. Sorghum bicolor (L.) Moench **subsp. bicolor**
SEGUETANA/STRIGA RES./SC1507/NO; 97ML1294. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609471. Sorghum bicolor (L.) Moench **subsp. bicolor**
SEGUETANA CINZANA-E/93Q123; 97ML1295. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609472. Sorghum bicolor (L.) Moench **subsp. bicolor**
SEGUETANA. RES./ON FARM TRIAL 94; 97ML1296. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609473. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 953/HAMBO/?; HOMBO BI; 97ML1297. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609474 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 967/HAMBO/?; DJIMBIRI; 97ML1298. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609475. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1055,SABBA(FLOOD TYPE); SABA KOREI; 97ML1299. Collected
1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609476. Sorghum bicolor (L.) Moench **subsp. bicolor**
91COL#114(CMDT) MARGARI. 92Q116; 97ML1300. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609477. Sorghum bicolor (L.) Moench **subsp. bicolor**
BIMBIRI SOUMALE; 97ML1301. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609478. Sorghum bicolor (L.) Moench **subsp. bicolor**
BIMBIRI SOUMALE; 97ML1302. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609479. Sorghum bicolor (L.) Moench **subsp. bicolor**
SEGUETANATIE/91CMDTCOL.#105; 97ML1303. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609480. Sorghum bicolor (L.) Moench **subsp. bicolor**
SEGUETANA 87Q236; 97ML1304. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609481. *Sorghum bicolor* (L.) Moench subsp. bicolor
TIEMARFING; 97ML1305. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609482. *Sorghum bicolor* (L.) Moench subsp. bicolor
SEGUETANA/91CMDTCOL.#30 92Q100; 97ML1306. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609483. *Sorghum bicolor* (L.) Moench subsp. bicolor
KALAGA SEGUETANA/91CMDTCOL.#79 9; 97ML1307. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609484. *Sorghum bicolor* (L.) Moench subsp. bicolor
LAKAHERI 93Q108; 97ML1308. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609485. *Sorghum bicolor* (L.) Moench subsp. bicolor
GADIABA; 97ML1309. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609486. *Sorghum bicolor* (L.) Moench subsp. bicolor
MALISOR84-7; 97ML1312. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609487. *Sorghum bicolor* (L.) Moench subsp. bicolor
MALISOR84-5; 97ML1313. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609488. *Sorghum bicolor* (L.) Moench subsp. bicolor
MALISOR92-1/87LOF4-99; 97ML1314. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609489. *Sorghum bicolor* (L.) Moench subsp. bicolor
MALISOR92-2/87SB-F2-54-2; 97ML1315. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609490. Sorghum bicolor (L.) Moench **subsp. bicolor**
NAZOGALA'BF----/THU JCC; 97ML1316. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609491. Sorghum bicolor (L.) Moench **subsp. bicolor**
POP.KINK*(82CPO32)-2-1; 97ML1317. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609492. Sorghum bicolor (L.) Moench **subsp. bicolor**
97ML1503. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609493. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 803; KENINKE SOUROU; 97ML1505. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609494. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 804; KENINKE BLE; 97ML1506. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609495. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 805; KENINKE SOUROU; 97ML1507. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609496. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 806; SOTA; 97ML1508. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609497. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 807; MBAYERI; 97ML1509. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609498. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 808; MBAYERI; 97ML1510. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609499. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 809; SOTA SORARI; 97ML1511. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609500. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 810; SOTA SORARI; 97ML1512. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609501. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 811; MBAYERI BODERI; 97ML1513. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609502. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 812; MAMBO KOREI; 97ML1514. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609503. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 813; HAMBO BIBI; 97ML1515. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609504. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 814; SABA; 97ML1516. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609505. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 815; SOTA; 97ML1517. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609506. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 816; SOTA; 97ML1518. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609507. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 817; SOTA; 97ML1519. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609508. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 818; SOTA; 97ML1520. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609509. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 819; SOTA; 97ML1521. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609510. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 820; SOTA; 97ML1522. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609511. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 821; SONGOLO; 97ML1523. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609512. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 822; HOMBO; 97ML1524. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609513. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 823; TIENTIEN; 97ML1525. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609514. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 824; HAMBIBI; 97ML1526. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609515. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 824; HOMBO; 97ML1527. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609516. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 826; KELORISOTA; 97ML1528. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609517. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 827; SOTA; 97ML1529. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609518. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 828; MBAYERI; 97ML1530. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609519 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 829; SOTA; 97ML1531. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609520. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 830; TIEN TIEN; 97ML1532. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609521. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 833; TIEN TIEN; 97ML1535. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609522. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 834; HOMO BIBI; 97ML1536. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609523. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 835; TIEN TIEN; 97ML1537. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609524. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 836; TIEN TIEN; 97ML1538. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609525. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 837; TIEN TIEN; 97ML1539. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609526. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 838; SABA; 97ML1540. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609527. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 839; SOTA; 97ML1541. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609528. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 830; MBAYERI; 97ML1542. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609529. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 841; KENINKE; 97ML1543. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609530. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 842; SOTA; 97ML1544. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609531. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 843; KENINKE DIE; 97ML1545. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609532. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 844; SOTA; 97ML1546. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609533. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 845; MBAYERI; 97ML1547. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609534. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 846; MBAYERI DANIERI; 97ML1548. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609535. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 847; SOTARI; 97ML1549. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609536. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 848; MBAYERI; 97ML1550. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609537. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 849; MBAYERI; 97ML1551. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609538. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 850; MBAYERI; 97ML1552. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609539. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 852; SOTARI; 97ML1554. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609540. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 853; DOUDOU KOUNARI; 97ML1555. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609541. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 854; MBAYERI DANIERI; 97ML1556. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609542. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 855; MBAYERI; 97ML1557. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609543. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 857; MBAYERI DANIERI; 97ML1559. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609544. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 858; SOTA; 97ML1560. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609545. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 859; MBAYERI DANIERI; 97ML1561. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609546. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 860; SOTARI; 97ML1562. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609547. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 861; MBAYERI; 97ML1563. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609548. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 862; MBAYERI; 97ML1564. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609549. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 863; FARMARI; 97ML1565. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609550. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 864; DJUMBIRI; 97ML1566. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609551. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 865; SOTARI; 97ML1567. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609552. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 868; MBAYERI; 97ML1570. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609553 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 869; DOUNDOU KOUMARI; 97ML1571. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609554. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 870; SOTARI; 97ML1572. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609555. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 872; DJUMBIRI DANIERI; 97ML1574. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609556. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 873; SOTARI; 97ML1575. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609557. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 875; MBAYERI; 97ML1577. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609558 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 876; DJUMBIRI; 97ML1578. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609559. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 877; FARKA KOMSIRI; 97ML1579. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609560. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 878; DJUMBIRI DANIERI; 97ML1580. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609561. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 879; FARKA KOMSIRI; 97ML1581. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609562. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 880; SABARI; 97ML1582. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609563. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 881; SOTA; 97ML1583. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609564. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 882; MBAYERI; 97ML1584. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609565. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 883; DJIMBERI; 97ML1585. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609566. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 884; TCHINGUERE; 97ML1586. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609567. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 885; DIABANA KOKONO; 97ML1587. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609568. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 886; KENINKE; 97ML1588. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609569. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 887; DJEBENA WARA; 97ML1589. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609570. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 888; DJEBENA SOUROU; 97ML1590. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609571. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 889; DJEBENA TELI; 97ML1591. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609572. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 890; DJEBANA KALA DOUMA; 97ML1592. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609573. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 893; KARADANFA; 97ML1595. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609574. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. CSM 894; SABA; 97ML1596. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609575. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 895; DJEBANA KANDA; 97ML1597. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609576. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 896; SOTA; 97ML1598. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609577. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 897; MBAYERI; 97ML1599. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609578. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 898; DJEBANA; 97ML1600. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609579. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 899; HAMBO; 97ML1601. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609580. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 900; SOTA; 97ML1602. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609581. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 901; NIO BA; 97ML1603. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609582. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 902; KENINKE; 97ML1604. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609583. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 903; SABA; 97ML1605. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609584. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 904; HAMBO; 97ML1606. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609585. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 905; WARA; 97ML1607. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609586. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 906; SABA KOREI; 97ML1608. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609587. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 907; WARA; 97ML1609. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609588. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 908; SOTA; 97ML1610. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609589. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 909; SABA; 97ML1611. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609590. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 910; SABA; 97ML1612. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609591. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 911; SOTA; 97ML1613. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609592. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 912; DIABANA; 97ML1614. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609593. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 913; WARA; 97ML1615. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609594. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 914; SABA; 97ML1616. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609595. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 915; SOTA; 97ML1617. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609596. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 916; HAMBO; 97ML1618. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609597. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 917; SABA; 97ML1619. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609598. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 918; SOTA; 97ML1620. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609599. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 919; SABA; 97ML1621. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609600. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 920; ALBAKARI; 97ML1622. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609601. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 921; SOTA; 97ML1623. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609602. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 922; SABA; 97ML1624. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609603. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 923; ALBAKARI; 97ML1625. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609604 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 924; DJIMBIRI; 97ML1626. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609605. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 925; SABA KOREI; 97ML1627. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609606. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 926; DJIMBIRI; 97ML1628. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609607. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 927; SOTA; 97ML1629. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609608. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 928; SABA; 97ML1630. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609609. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 929; SOTA; 97ML1631. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609610. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 930; HAMBO; 97ML1632. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609611. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 931; SABA KOREI; 97ML1633. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609612. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 932; HAMBABIBA; 97ML1634. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609613. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 933; SOTA; 97ML1635. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609614. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 934; SABA BERI; 97ML1636. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609615. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 936; SOTA; 97ML1637. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609616. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 937; SABA BERI; 97ML1638. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609617. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 938; MBAYERI; 97ML1639. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609618. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 939; SABA; 97ML1640. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609619. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 940; HAMBO BI; 97ML1641. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609620. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 941; TIENETIE; 97ML1642. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609621. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 942; MBAYERI; 97ML1643. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609622. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 943; SOTA; 97ML1644. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609623. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 944; KENINKE; 97ML1645. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609624. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 945; DJIMBIRI; 97ML1646. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609625. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 946; HOMBO KOREI; 97ML1647. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609626. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 947; HOMBO BI; 97ML1648. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609627. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 948; SABA; 97ML1649. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609628. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 951; DJIMBIRI; 97ML1652. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609629. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 952; SABA; 97ML1653. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609630. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 954; FARKA KOBSI; 97ML1655. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609631. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 955; SABA BERI; 97ML1656. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609632. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 956; DOUDERI KOUMO; 97ML1657. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609633 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 957; DJIMBI; 97ML1658. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609634. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 958; FARKA KOPSI; 97ML1659. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609635. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 959; HILLELE; 97ML1660. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609636. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 960; TONDIGAME; 97ML1661. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609637. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 961; SABA KOREI; 97ML1662. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609638. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 962; DJIMBIRI; 97ML1663. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609639. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 963; DJIMBIRI; 97ML1664. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609640. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 964; FARKA KOPSI; 97ML1665. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609641. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 965; SABA KOREI; 97ML1666. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609642. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 966; HOMBO KOREI; 97ML1667. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609643. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 967; DJIMBIRI; 97ML1668. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609644. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 968; SOTA; 97ML1669. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609645 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 969; TIENINTIE; 97ML1670. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609646. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 970; FARKA KOPSI; 97ML1671. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609647. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 971; WARA; 97ML1672. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609648. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 972; KANO; 97ML1673. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609649. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 973; PAMAREDI; 97ML1674. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609650. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 974; MBAYERI MAOUNDI; 97ML1675. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609651. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 975; DJIMBIRI; 97ML1676. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609652. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 976; SABA; 97ML1677. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609653. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 977; SOTA; 97ML1678. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609654. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 978; HOMBO; 97ML1679. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609655. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 979; SABA KOREI; 97ML1680. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609656. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 980; SABA; 97ML1681. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609657. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 981; DJIMBIRI; 97ML1682. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609658. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 982; SABA; 97ML1683. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609659. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 983; HAMBO; 97ML1684. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609660. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 984; SOTA; 97ML1685. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609661 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 985; HAMBO; 97ML1686. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609662. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 986; SABA; 97ML1687. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609663 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 988; SABA KOREI; 97ML1689. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609664. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 989; SOTA; 97ML1690. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609665. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 990; SABA KOREI; 97ML1691. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609666. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 996; SABA TIENDA; 97ML1697. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609667. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 998; SOTA; 97ML1699. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609668. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 999; DJIMBIRI; 97ML1700. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609669. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1004; SABA KONO; 97ML1705. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609670. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1005; SABA; 97ML1706. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609671. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 1006; ALBAKARI; 97ML1707. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609672 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1007; HAMBO; 97ML1708. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609673. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1008; SOTA; 97ML1709. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609674. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1009; HAMBABA; 97ML1710. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609675. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1010; SABA; 97ML1711. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609676. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1012; SABA BERI; 97ML1713. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609677. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1013; MBAYERI; 97ML1714. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609678. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1014; SABA TIENDA; 97ML1715. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609679. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1015; ALBAKARI; 97ML1716. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609680. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1016; ALBAKARI; 97ML1717. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609681. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1017; SABA KOREI; 97ML1718. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609682. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1018; SOTA; 97ML1719. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609683. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1019; DJIMBIRI; 97ML1720. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609684. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1020; KANO; 97ML1721. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609685. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1021; SABA; 97ML1722. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609686. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1022; SOTA; 97ML1723. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609687. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1023; TIBI; 97ML1724. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609688. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1024; TIBI; 97ML1725. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609689. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1026; SABA; 97ML1727. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609690. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1027; TIBI; 97ML1728. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609691. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1028; ADAR; 97ML1729. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609692. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1029; SABA BERI; 97ML1730. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609693. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1030; SOROSOKO; 97ML1731. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609694. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1031; SABA TIENDA; 97ML1732. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609695. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1032; SABA TIENDA; 97ML1733. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609696. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1033; SOROSOKO; 97ML1734. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609697. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1034; SABA BOYA; 97ML1735. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609698. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1035; SABA BERI; 97ML1736. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609699. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1036; ZIBI; 97ML1737. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609700. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1037; SABA TIENDA; 97ML1738. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609701. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1038; ZIBI; 97ML1739. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609702. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1039; SABA KOREI; 97ML1740. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609703. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1040; DJIMBIRI; 97ML1741. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609704 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1041; DJIMBIRI; 97ML1742. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609705. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1042; SABA; 97ML1743. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609706. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1043; SABA; 97ML1744. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609707. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1044; DJIMBIRI; 97ML1745. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609708. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1045; HOMMA; 97ML1746. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609709. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1046; HOMMA KOIRA; 97ML1747. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609710. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1047; MOLIA; 97ML1748. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609711. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1048; HOMMA KOREI; 97ML1749. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609712. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1049; SABA KOREI; 97ML1750. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609713. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1051; SABA BERI; 97ML1752. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609714. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1052; SABA DJENGA; 97ML1753. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609715. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 1053; DJIMBIRI; 97ML1754. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609716. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 1054; ZIBI; 97ML1755. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609717. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1055; SABA KOREI; 97ML1756. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609718. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1056; FARKA KOPSI; 97ML1757. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609719. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1057; SABA BERI; 97ML1758. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609720. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1058; ZIBI; 97ML1759. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609721. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1060; FARKA KOPSI; 97ML1761. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609722. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1061; ZIBI; 97ML1762. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609723 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1062; TIEMA; 97ML1763. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609724. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1063; SOTA; 97ML1764. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609725. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1064; KANA; 97ML1765. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609726. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1065; SABA KOREI; 97ML1766. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609727. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1067; FARMARI; 97ML1768. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609728. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1068; DOUNDOU KOUMARI; 97ML1769. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609729. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1069; MBAYERI; 97ML1770. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609730. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1070; SOTA; 97ML1771. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609731. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1071; SABA; 97ML1772. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609732. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1072; DOUNDOU KOUMARI; 97ML1773. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609733. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1073; SOTA; 97ML1774. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609734. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1074; DOUNDOU KOUMARI; 97ML1775. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609735. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1075; MBAYERI; 97ML1776. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609736. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1076; MBAYERI; 97ML1777. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609737. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1077; DJIMBIRI; 97ML1778. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609738. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1078; SAMPA SOLARI; 97ML1779. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609739. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1079; SABA KOREI; 97ML1780. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609740. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1080; SOTA SOLARI; 97ML1781. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609741. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1081; HAMBO; 97ML1782. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609742. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1082; DOUNDOU KOUMARI; 97ML1783. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609743. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1085; FARMARI; 97ML1786. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609744. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1086; FARKA KOPSI; 97ML1787. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609745. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1087; MBAYERI; 97ML1788. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609746. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1088; DJIMBIRI; 97ML1789. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609747. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1089; DOUNDOU KOUMARI; 97ML1790. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609748. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1090; KANA; 97ML1791. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609749 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1091; TIENDA; 97ML1792. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609750. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1094; DOUNDOU KOUMARI; 97ML1795. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609751. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1095; SOTA SOLARI; 97ML1796. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609752. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1096; MBAYERI; 97ML1797. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609753. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1097; FARMARI; 97ML1798. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609754. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1098; FARKA KOPSI; 97ML1799. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609755. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1099; DJIMBIRI; 97ML1800. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609756. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1100; DOUNDOU KOUMARI; 97ML1801. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609757. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1101; MBAYERI; 97ML1802. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609758. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1102; KENINKE; 97ML1803. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609759. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1103; DJIMBIRI; 97ML1804. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609760. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1104; SOTA; 97ML1805. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609761. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1105; FARKA KOPSI; 97ML1806. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609762. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1106; DJIMBIRI; 97ML1807. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609763. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1107; MBAYERI; 97ML1808. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609764. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1108; FARMARI; 97ML1809. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609765. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1109; MBAYERI; 97ML1810. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609766. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1110; DOUNDOU KOUMARI; 97ML1811. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609767. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1111; SOTARI; 97ML1812. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609768. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1112; MBAYERI; 97ML1813. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609769. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1113; SOTA; 97ML1814. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609770. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1114; FARKA KOPSI; 97ML1815. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609771. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1115; DOUNDOU KOUMARI; 97ML1816. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609772. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1116; DJIMBIRI; 97ML1817. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609773. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1117; KANA; 97ML1818. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609774. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1118; MBAYERI; 97ML1819. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609775. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1119; MURIARI; 97ML1820. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609776. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1120; KANA; 97ML1821. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609777. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1121; EME DIGUERE; 97ML1822. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609778. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1122; NOSSIRI; 97ML1823. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609779. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1123; MBAYERI; 97ML1824. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609780. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1124; EME; 97ML1825. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609781. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1126; KARA; 97ML1827. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609782. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1127; MOLIA TJIRA; 97ML1828. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609783. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1128; TJIRA; 97ML1829. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609784. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1129; MOLIA; 97ML1830. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609785 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1130; TAMI TJELA; 97ML1831. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609786. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1131; BARGOULASSA; 97ML1832. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609787. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1132; MOLIA; 97ML1833. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609788. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1133; HOMMA KARA; 97ML1834. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609789. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1134; HOMMA TJIRA; 97ML1835. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609790 QUAR. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1135; MOLIA; 97ML1836. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609791. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1136; BARGOUSSALA; 97ML1837. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609792. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1137; TAMI TJELA; 97ML1838. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609793. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1138; HOMMA BIBO; 97ML1839. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609794. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1139; HAMCHI KOURI; 97ML1840. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609795. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1140; SOGOMBA KARA; 97ML1841. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609796. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1141; KOUMBOU LOUDJI; 97ML1842. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609797. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1142; MOLIA; 97ML1843. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609798. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1143; SOGOMBA TJIRA; 97ML1844. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609799. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1144; DJERI BASSI; 97ML1845. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609800. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1145; HAMCHI KOURI; 97ML1846. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609801. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1146; MOLIA; 97ML1847. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609802. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1147; TAMI TJIRA; 97ML1848. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609803. Sorghum bicolor (L.) Moench **subsp. bicolor**
CSM 1148; HOMMA TJIRA; 97ML1849. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609804. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1149; MOLIA; 97ML1850. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609805. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1150; HOMMA BIBO; 97ML1851. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609806. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1151; MOLIA; 97ML1852. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609807. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1153; HOMMA KARA; 97ML1854. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609808. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1154; BARGALOUSSA; 97ML1855. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609809. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1155; KANA; 97ML1856. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609810. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1156; KANA BIO; 97ML1857. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609811. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1159; KOUNTIE; 97ML1860. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609812. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1160; HOMMA BIO; 97ML1861. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609813. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1162; FATI; 97ML1863. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609814. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1163; BARGALOUSSA; 97ML1864. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609815. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1164; TAMI TJIRA; 97ML1865. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609816. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1165; HOMMA KARA; 97ML1866. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609817. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1166; SANKE TJELA; 97ML1867. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609818. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. CSM 1168; SABA KOREI; 97ML1869. Collected 1982 in Mali.

Unknown source. Received 11/21/1997.

PI 609819. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3817; BANK OUMANO ZIAMRI FING; 97ML2001. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609820. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3818; BANGON MANA SIGNETANE; 97ML2003. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609821. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3819; BANDIO KALAGNIGUE; 97ML2004. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609822. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3820; FARAKALA KONKA; 97ML2005. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609823. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3821; FIENWE DIOGONIEGUE; 97ML2006. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609824. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3822; FLATTIE BA KASSINESO; 97ML2007. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609825. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3823; FLATTIEBA DE GOLOKAUNA; 97ML2008. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609826. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3824; FLATTIABA DE TROKALA; 97ML2010. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609827. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3825; FLATTIE BAKASSINOTO; 97ML2011. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609828. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3826; FLATTIETA KINIERI; 97ML2012. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609829. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3827; GOUTINA KAFOULO; 97ML2013. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609830. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3828; GOUNTINA KALAWOGO; 97ML2014. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609831. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3829; GOUNTINA DIEGON KONIGUE; 97ML2015. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609832. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3830; GOUNTINA CHIONINGUE; 97ML2017. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609833. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3931; GOUNTINA KENE; 97ML2019. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609834. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3832; GOUNTINA; 97ML2020. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609835. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3833; KINITERI ZIEMARI FING; 97ML2022. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609836. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3834; KARAOELS DOIKOFIGUE; 97ML2023. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609837. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3835; KALAFONLO KARAGUANA; 97ML2024. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609838. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3836; KARAN JA DIO KOFIAGUE; 97ML2025. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609839. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3837; KARIGOWLA KALA JOULA; 97ML2026. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609840. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3838; KOLONI FLA TIEBA; 97ML2027. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609841. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3839; KOLONI ZIA MAIN; 97ML2028. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609842. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3840; NGOLOKOUNA ZUMARY; 97ML2029. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609843. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3841; OUBLA KALAGNIGIE; 97ML2030. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609844. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3842; OULLA TLOGNO; 97ML2031. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609845. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3843; OULLA; 97ML2032. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609846. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3844; OULLA KOONGA; 97ML2033. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609847. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3845; GURIKELA DIOKOFIGUE; 97ML2034. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609848. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3847; TANDIO DIOKOGNIGUE; 97ML2035. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609849. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3848; FLATTIE BA FING M. GAESSOSA; 97ML2036. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609850. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3849; TIRYO KALANGNIGUE; 97ML2037. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609851. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3850; YOWSSO KALAFLOULO; 97ML2038. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609852. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3851; YOWSSO ZANDIO KALAGNIGUE; 97ML2039. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609853. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3852; YOWSSO DIOKOGNIGUE; 97ML2040. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609854. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3853; 97ML2041. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609855. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3854; 97ML2042. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609856. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3855; 97ML2043. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609857. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3856; 97ML2044. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609858. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3857; 97ML2045. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609859. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3858; 97ML2046. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609860. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3859; 97ML2047. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609861. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3860; 97ML2048. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609862. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3861; 97ML2049. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609863. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3862; 97ML2050. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609864. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3863; 97ML2051. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609865. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3864; 97ML2052. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609866. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3865; 97ML2053. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609867. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3866; 97ML2054. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609868. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3867; 97ML2055. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609869. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3868; 97ML2056. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609870. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3870; 97ML2058. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609871. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3871; 97ML2059. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609872. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3872; 97ML2060. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609873. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3873; 97ML2061. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609874. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3874; 97ML2062. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609875. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3875; 97ML2063. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609876. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3876; 97ML2064. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609877. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3877; 97ML2065. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609878. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3678; 97ML2066. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609879. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3881; H 630; 97ML2069. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609880. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3882; SP 0; 97ML2070. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609881. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3884; SP2; 97ML2072. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609882. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3885; SP3; 97ML2073. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609883. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3886; SP4; 97ML2074. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609884. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3887; SP6; 97ML2075. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609885. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3888; SP7; 97ML2076. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609886. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3889; SP8; 97ML2077. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609887. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3890; SP9; 97ML2078. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609888. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3891; SP10; 97ML2079. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609889. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3892; SP11; 97ML2080. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609890. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3893; SP12; 97ML2081. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609891. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3894; SP14; 97ML2082. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609892. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3895; SP15; 97ML2083. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609893. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3896; SP19; 97ML2084. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609894. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3897; SP21; 97ML2085. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609895. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3898; SP27; 97ML2086. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609896. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3899; SP28; 97ML2087. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609897. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3900; SP34; 97ML2088. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609898. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3901; SP36; 97ML2090. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609899. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3902; SP37; 97ML2091. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609900. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3903; SP38; 97ML2092. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609901. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3904; SP39; 97ML2093. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609902. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3906; SP41; 97ML2095. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609903. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3908; SP44; 97ML2097. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609904. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 3909; SP44; 97ML2098. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609905. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 21394; HD260; 97ML2102. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609906. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 21395; HD259; 97ML2103. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609907. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 21397; HD266; 97ML2105. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609908. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 22669; GROFINF; 97ML2106. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609909. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 22670; SARRO; 97ML2107. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609910. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 22671; TIERMARIFING; 97ML2108. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609911. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 22672; SORGHO MOSSI; 97ML2109. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609912. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 22673; HODIENKORI; 97ML2110. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609913. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 22674; HD5; 97ML2111. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 609914. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 351; SONIKOURA; 97ML2112. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609915. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 357; KALA; 97ML2121. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609916. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 360; IS 25788; SONIKOURA; 97ML2122. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609917. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 361; IS 25789; MAKEBE; 97ML2124. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609918. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 365; IS 25790; 97ML2127. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609919. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 365; IS 25791; 97ML2128. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609920. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 366; IS 25792; MAKEBE; 97ML2129. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609921. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 367; KINTO; 97ML2131. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609922. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1359; IS 25793; NIENIKO; 97ML2132. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609923. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1360; LOUMBA NIO; 97ML2134. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609924. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1361; MAKEBE; 97ML2135. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609925. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI1362; IS 25794; SONIKOURA; 97ML2136. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609926. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1363; IS 25795; KINTO; 97ML2139. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609927. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1364; IS 25796; GADIABA; 97ML2140. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609928. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1365; IS 25797; KONKON OULE; 97ML2143. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609929. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 371; IS 25800; BAMBAROYA; 97ML2148. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609930. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 371; IS 25800; BAMBAROYA; 97ML2150. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609931. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 372; IS 25801; MAKEBE; 97ML2151. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609932. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1366; KINTO; 97ML2153. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609933. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI1368; IS 25803; KERAM; 97ML2157. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609934. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 380; NIO TELI; 97ML2162. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609935. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 387; IS 25809; BAYERI DIE; 97ML2169. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609936. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 396; KINTO OULE; 97ML2177. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609937. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 399; MAGNA BALI; 97ML2178. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609938. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 400; KINTO; 97ML2179. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609939. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 406; IS 25815; SOLOTO; 97ML2184. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609940. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 408; KINTI TELI; 97ML2186. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609941. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 409; IS 25816; SOLOTO; 97ML2188. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609942. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 410; IS 25817; NIO BA; 97ML2190. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609943. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 411; IS 25818; KINTI TOURAKOU; 97ML2191. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609944. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 413; IS 25819; MAKEBE; 97ML2194. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609945. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 414; IS 25820; KINTI TOURAKOU; 97ML2195. Collected 1978
in Mali.

Unknown source. Received 11/21/1997.

PI 609946. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 415; IS 25821; SOLOTO; 97ML2197. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609947. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 416; IS 25822; NIOLI KHYO; 97ML2200. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609948. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 418; IS 25823; SOLOTO; 97ML2201. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609949. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 421; KINTO OULE; 97ML2203. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609950. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 422; IS 25824; KINTO KOIMA; 97ML2204. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609951. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 423; IS 25825; NIO BA; 97ML2206. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609952. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 424; IS 25826; AMADI BOUBOU; 97ML2208. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609953. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 428; KINTO OULE; 97ML2210. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609954. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 429; IS 25827; KINTI TELI; 97ML2211. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609955. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 430; DIANSA SAMOKON; 97ML2213. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609956. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 431; IS 25828; KINTO FING; 97ML2214. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609957. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 432; IS 25829; KINTO OULE; 97ML2216. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609958. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 433; IS 25830; NIENIKO DIAGAFARA; 97ML2218. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609959. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 434; IS 25831; GADJANKOULOU; 97ML2220. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609960. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 435; IS 25832; GADIABA MELLO; 97ML2222. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609961. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 437; IS 25833; NIENIKO; 97ML2224. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609962. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 438; IS 25834; DIANSA; 97ML2226. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609963. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 440; KINTO OULE; 97ML2228. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609964. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 441; IS 25835; DIANSA SEGUETENE; 97ML2230. Collected 1978
in Mali.

Unknown source. Received 11/21/1997.

PI 609965. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 442; GADIABA MELLO; 97ML2231. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609966. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 443; IS 25836; GADIABA BA; 97ML2233. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609967. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI444; DIANSA DAGAFARA; 97ML2235. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609968. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 446; IS 25837; KINTO KOIMA; 97ML2236. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609969. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 447; IS 25838; KINTO FING; 97ML2238. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 609970. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 449; MASSIRE ILE; 97ML2240. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609971. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 450; IS 25839; SONIKOURA; 97ML2241. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609972. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 451; IS 25840; KELO; 97ML2243. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609973. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 452; MISSE ILE; 97ML2245. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609974. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 453; SAMPa; 97ML2246. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609975. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 454; IS 25841; SEGUETENE; 97ML2248. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609976. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 456; IS 25842; SAMOKON TELI; 97ML2249. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609977. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 457; SAMOKON BA; 97ML2251. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609978. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 458; IS 25843; KINTI TELI; 97ML2252. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609979. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 460; GADJANKOULOU; 97ML2254. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609980. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 461; IS 25844; DORONKO; 97ML2255. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609981. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 463; IS 25845; NIO TELI; 97ML2257. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609982. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 464; IS 25846; DORONKO; 97ML2259. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609983. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 465; IS 25847; GADIABA SIOLI; 97ML2261. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609984. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 466; KINTI TELI; 97ML2263. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609985. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 468; DORONKO; 97ML2264. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609986. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 469; NIO TELI; 97ML2265. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609987. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 470; GADIABA BA; 97ML2266. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609988. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 473; IS 25848; SONIKOURA; 97ML2268. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609989. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 476; BADIOUROUDIAN; 97ML2269. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609990. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 477; KENDE OULE; 97ML2270. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609991. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 478; IS 25849; SAMOKON; 97ML2271. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609992. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 478; IS 25850; SAMOKON; 97ML2273. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609993. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 480; IS 25851; SAMOKON; 97ML2274. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609994. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 484; IS 25852; SONIKOURA; 97ML2276. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609995. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 486; IS 25853; GUESSE; 97ML2278. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609996. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 487; IS 25854; FOLOUMBA OULE; 97ML2280. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609997. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 488; IS 25855; SAMOKON; 97ML2283. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609998. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 492; SAMOKON; 97ML2284. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 609999. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 492; IS 25856; SAMOKON; 97ML2285. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610000. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 495; NIO TELI; 97ML2287. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610001. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 496; IS 25857; KINTO; 97ML2288. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610002. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 497; IS 25858; GADJANKOULOU; 97ML2290. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610003. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 498; IS 25859; SEGUETENE; 97ML2292. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610004. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 499; NIO BOUGOU; 97ML2294. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610005. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 502; ABOUSSO; 97ML2296. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610006. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 504; IS 25860; GON; 97ML2297. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610007. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 505; IS 25861; SONIKOURA; 97ML2299. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610008. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 506; IS 25862; GADIABA TELI; 97ML2301. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610009. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 507; NIO TELI; 97ML2303. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610010. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 509; KINTI; 97ML2304. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610011. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 511; KENDE; 97ML2305. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610012. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 512; KENDE; 97ML2306. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610013. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 513; DORONKO; 97ML2307. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610014. Sorghum bicolor (L.) Moench **subsp. bicolor**

Cultivated. MI 516; IS 25863; DORONKO BA; 97ML2308. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610015. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 517; KENDE; 97ML2310. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610016. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 518; IS 25864; KENDE; 97ML2311. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610017. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 521; SONIKOURA; 97ML2314. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610018. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 522; KENDE DIE; 97ML2315. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610019. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 523; KENDE BLE; 97ML2316. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610020. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 524; IS 25865; SAMOKON; 97ML2317. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610021. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 527; IS 25866; SONIKOURA; 97ML2319. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610022. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 528; IS 25867; SAMPA; 97ML2321. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610023. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 531; IS 25868; KINTI MIGUE; 97ML2324. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610024. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 532; KINTI SONKOU; 97ML2325. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610025. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 533; IS 25869; DORONKO; 97ML2326. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610026. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 536; KINTI DIE; 97ML2328. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610027. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 537; IS 25870; DORONKO; 97ML2329. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610028. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 539; IS 25871; NIENIE BLE; 97ML2331. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610029. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 540; IS 25872; NIENIE OULE; 97ML2333. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610030. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 541; IS 25873; DORONKO; 97ML2335. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610031. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 544; IS 25874; KENDE SOKOU; 97ML2337. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610032. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 545; KENDE DAKARI; 97ML2339. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610033. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 546; IS 25875; DORONKO; 97ML2340. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610034. Sorghum bicolor (L.) Moench **subsp. bicolor**
IS 25876; 97ML2342. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610035. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 549; IS 25877; SONIKOURA; 97ML2343. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610036. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 550; NIONIFI; 97ML2345. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610037. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 552; IS 25878; DORONKO; 97ML2346. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610038. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 553; IS 25879; KENDE DIE; 97ML2348. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610039. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 652; DORONKO; 97ML2352. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610040. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 655; KENDE OULE; 97ML2355. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610041. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 656; IS 25932; BIMIRI; 97ML2356. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610042. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 660; IS 25933; KENDE DAKARI; 97ML2359. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610043. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 661; IS 25934; BIMBIRI; 97ML2361. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610044. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 662; IS 25935; BIMBIRI GUESSE; 97ML2363. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610045. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 665; IS 25936; KENDE DAKARI; 97ML2365. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610046. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 666; IS 25937; BIMBIRI GUESSE; 97ML2367. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610047. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 670; IS 25938; KENDE OULE; 97ML2369. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610048. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 672; IS 25940; SEGUETENE; 97ML2373. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610049. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 674; DORONKO TELI; 97ML2375. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610050. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 676; KITAKA; 97ML2377. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610051. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 680; IS 25941; SAKOIKA BLE; 97ML2379. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 610052. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 681; IS 25942; SAKOIKA TELI; 97ML2381. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 610053. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 682; IS 25943; KENDE DIE; 97ML2382. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 610054. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 683; IS 25944; KENDE BLENI; 97ML2384. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 610055. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 686; IS 25945; SAKOIKA BLE; 97ML2386. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 610056. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 687; KENDE DIE; 97ML2388. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610057. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 688; IS 25946; BIMBIRI GUESSE; 97ML2389. Collected 1978
in Mali.

Unknown source. Received 11/21/1997.

PI 610058. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 691; IS 25947; SAKOIKA TELI; 97ML2391. Collected 1978 in
Mali.

Unknown source. Received 11/21/1997.

PI 610059. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 698; IS 25953; SAKOIKA BLE; 97ML2403. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610060. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 699; KENDE DIE; 97ML2405. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610061. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 701; IS 25954; SEGUETENE; 97ML2406. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610062. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 701; SEGUETENE; 97ML2408. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610063. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 702; IS 25955; NIONIFI; 97ML2409. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610064. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 710; IS 25959; SAKOIKA BLE; 97ML2416. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610065. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 711; IS 25960; NIONIFI; 97ML2418. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610066. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 712; KENDE TELI; 97ML2420. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610067. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 713; IS 25961; KENDE BLE; 97ML2421. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610068. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 718; KENDE; 97ML2427. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610069. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 719; BIMBIRI SARA; 97ML2428. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610070. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 721; KENDE; 97ML2429. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610071. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 722; BIMBIRI; 97ML2430. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610072. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 725; BIMBIRI SARA; 97ML2431. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610073. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 728; KENDE; 97ML2433. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610074. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 729; KENDE DAKARI; 97ML2434. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610075. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 730; KENDE BLE; 97ML2435. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610076. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 735; KENDE BLE; 97ML2438. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610077. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 744; IS 25968; BIMBIRI BA; 97ML2445. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610078. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 747; IS 25970; BIMBIRI GUESSE; 97ML2449. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610079. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 756; IS 25975; KENDE SOUROUKOU; 97ML2459. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610080. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI757; IS 25976; BIMBIRI SARA; 97ML2461. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610081. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 758; IS 25977; BIMBIRI BA; 97ML2463. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610082. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 764; IS 25980; BIMBIRI SARA; 97ML2469. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610083. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 765; IS 25981; BIMBIRI GUESSE; 97ML2471. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610084. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 766; BIMBIRI BA; 97ML2472. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610085. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 766; BIMBIRI BA; 97ML2473. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610086. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 769; BIMBIRI GUESSE; 97ML2474. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610087. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 770; BIMBIRI SARA; 97ML2475. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610088. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 771; IS 25982; KENDE OULE; 97ML2476. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610089. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 773; IS 25983; KENDE SARA; 97ML2479. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610090. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 774; BIMBIRI BA; 97ML2480. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610091. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 777; IS 25984; BIMBIRI BA; 97ML2481. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610092. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 780; BIMBIRI GUESSE; 97ML2483. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610093. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 783; IS 25986; KENDE DIE; 97ML2486. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610094. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 786; BIMBIRI OULE; 97ML2488. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610095. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 787; BIMBIRI DIE; 97ML2489. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610096. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 790; KENDE DIE; 97ML2490. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610097. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 793; KENDE BLE; 97ML2491. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610098. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 794; BIMBIRI DIE; 97ML2492. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610099. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 798; KENDE DIE; 97ML2493. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610100. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 811; IS 25992; BIMBIRI DIE; 97ML2505. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610101. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 812; BIMBIRI BA; 97ML2507. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610102. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 816; KENDE DIE; 97ML2508. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610103. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 821; SEGUETENE; 97ML2513. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610104. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 822; SAKOIKA BLE; 97ML2514. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610105. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 827; SEGUETENE; 97ML2517. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610106. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 830; SAKOIKA BLE; 97ML2518. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610107. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 836; IS 25998; KALLA GOUE; 97ML2523. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610108. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 838; MINIANKA NIO; 97ML2527. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610109. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 841; KALLA GOUE; 97ML2528. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610110. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 842; IS 26000; SEGUETENE; 97ML2529. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610111. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 843; MINIANKA NIO; 97ML2531. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610112. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 846; KALLA KA; 97ML2532. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610113. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 847; IS 26001; SEGUETENE; 97ML2534. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610114. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 848; IS 26002; KALLA NIEGUE; 97ML2535. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610115. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 853; SEGUETENE; 97ML2541. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610116. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 856; KALLA GOUE; 97ML2542. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610117. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 857; IS 26005; SEGUETENE; 97ML2543. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610118. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 869; KALLA FIGUE; 97ML2555. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610119. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 870; KALLA NIEGUE; 97ML2556. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610120. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 874; IS 26011; KALLA FIGUE; 97ML2557. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610121. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 876; IS 26012; KALLA FIGUE; 97ML2559. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610122. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 878; SEGUETENE; 97ML2563. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610123. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 879; IS 26014; ZANGANIO; 97ML2564. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610124. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 881; IS 26015; SEGUETENE; 97ML2567. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610125. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 882; KENINKE TIMARI; 97ML2569. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610126. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 883; IS 26017; KENINKE BA; 97ML2570. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610127. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 884; IS 26018; KENINKE BA; 97ML2572. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610128. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 892; IS 26022; KENINKE BA; 97ML2580. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610129. Sorghum bicolor (L.) Moench **subsp. bicolor**
Cultivated. MI 901; BAGUI; 97ML2584. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610130. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 902; DERE BLE; 97ML2585. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610131. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 903; IS 26024; SEGUETENE; 97ML2586. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610132. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 904; IS 26025; KENINKE BA; 97ML2588. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610133. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 925; SEGUETENE; 97ML2592. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610134. *Sorghum bicolor* (L.) Moench subsp. bicolor
Cultivated. MI 926; IS 26034; BIMBIRI; 97ML2594. Collected 1978 in Mali.

Unknown source. Received 11/21/1997.

PI 610135. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB1; KENINKE R; 97ML2595. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610136. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB3; SEGUETANA OFFIENSO; 97ML2597. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610137. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB4; SB4KALAGA SEGUETANA; 97ML2598. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610138. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB9; BANIDIKA; 97ML2603. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610139. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB10; BAGOBA(NIGER); 97ML2604. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610140. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB11; KASSOROLA; 97ML2605. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610141. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB12; NIEMIKO; 97ML2606. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610142. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB13; LAKAHERI; 97ML2607. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610143. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB15; GADIABA; 97ML2609. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610144. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB16; BANDIOUGOUNIO; 97ML2610. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610145. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB17; BIMBIRI-SOUMALEN; 97ML2611. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610146. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB24; 97ML2618. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610147. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB26; 97ML2620. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610148. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB27; 97ML2621. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610149. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB30; 97ML2624. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610150. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB33; 97ML2627. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610151. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB34; 97ML2628. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610152. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB35; 97ML2629. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610153. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB36; 97ML2630. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610154. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB37; 97ML2631. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610155. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB39; 97ML2633. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610156. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB40; CMDT-41NIEKROGO; 97ML2634. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610157. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB41; CMDT-42; 97ML2635. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610158. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB42; CMDT-51; 97ML2636. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610159. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB43; CMDT-53 N'GONNIEBLEN; 97ML2637. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610160. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB45; CMDT-81 NIOTELIMAN; 97ML2639. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610161. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB46; CMDT-71 NIOSSOUMALE; 97ML2640. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610162. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB47; CMDT-67 N'UENIE WEULE; 97ML2641. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610163. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB48; CMDT-55 TIEBALA TELIMAN; 97ML2642. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610164. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB49; CMDT-56 TELIMANI; 97ML2643. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610165. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB50; CMDT-66 KASSOROLA; 97ML2644. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610166. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB55; CMDT58 KENINKE TELIMAN; 97ML2649. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610167. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB56; CMDT108 GUIESSEKERELE; 97ML2650. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610168. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB57; CMDT-52 MALOGONI; 97ML2651. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610169. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB59; CMDT-59 KALAFEGUE/KENINKE DIE; 97ML2653. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610170. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB60; CMDT-80 NION GUENI; 97ML2654. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610171. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB62; CMDT-57 KENINKE BLEN; 97ML2656. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610172. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB64; CMDT-78 KALANIGA; 97ML2658. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610173. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB65; CMDT-46 SOGUERENKOU; 97ML2659. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610174. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB66; CMDT-72 KUNI; 97ML2660. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610175. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB67; CMDT-44 TIEMARI; 97ML2661. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610176. Sorghum bicolor (L.) Moench **subsp. bicolor**
SB68; CMDT-65 MANKOGNEKI; 97ML2662. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610177. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB69; CMDT-68 KOLO SABA; 97ML2663. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610178. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB70; CMDT-50 SERIGNONO; 97ML2664. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610179. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB71; CMDT-64 KENINKEBA; 97ML2665. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610180. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB73; CMDT-87 BAGNIBAGNI; 97ML2667. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610181. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB74; CMDT-45; 97ML2668. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610182. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB75; CMDT-115; 97ML2669. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610183. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB76; CMDT-30; 97ML2670. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610184. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB77; CMDT-39; 97ML2671. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610185. *Sorghum bicolor* (L.) Moench subsp. bicolor
SB78; CMDT-76; 97ML2672. Collected in Mali.

Unknown source. Received 11/21/1997.

PI 610186. *Sorghum bicolor* (L.) Moench subsp. *bicolor*
SB79; CMDT-79; 97ML2673. Collected in Mali.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 10/04/1999.

PI 610187 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH3KP". PVP 9900380.

The following were developed by Mark E. Sorrells, Cornell University, Dept. of Plant Breeding & Genetics, 240 Emerson Hall, Ithaca, New York 14853-1902, United States; D. Benscher, Cornell University, Dept. of Plant Breeding, 252 Emerson Hall, Ithaca, New York 14853, United States; W.J. Cox, Cornell University, Dept. of Crop and Soil Sciences, 233 Emerson Hall, Ithaca, New York 14853, United States. Received 10/04/1999.

PI 610188. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. Pureline. "CALEDONIA"; Geneva Reselect. PVP 9900386; CV-943. Pedigree - variant in Geneva. Released 1998. Originated as an off-type in a 1987 breeder seed lot of Geneva. Evaluated for uniformity and selected for additional testing. Entered the 1991-92 Cornell Soft White Winter Wheat Regional Trial and has been evaluated each year to the present. First entered the Uniform Eastern Soft White Winter Wheat Nursery in 1993. In 8 yrs. of regional testing in New York State, the grain yield averaged 4% higher than contemporary cvs., Harus and Geneva and test weight averaged 75.7 kg/hl, 1 kg/hl below the mean of Harus and Geneva. Shorter than most other cvs. in the northeast and averages 86 cm, approx. 11 cm less than Geneva and Harus. Lodging resistance and winter hardiness similar to Geneva and Harus. Milling and baking characteristics are among the best for soft white winter wheat cvs. as determined by the USDA Soft Wheat Quality Lab., Wooster, OH. Susceptible to preharvest sprouting. Days to heading and maturity similar to most soft white winter cvs. grown in New York except Geneva which is 2 days earlier to reach anthesis. Stems and leaves yellow-green at booting and hollow white stems at maturity. At booting the flag leaf is erect and the stems have a waxy bloom. Spikes middense, fusiform, and apically awnletted. Glumes white, long, medium wide and have a rounded shoulder and an acute beak. Soft white kernels are ovate and have rounded cheeks, a medium brush, a narrow, middeep crease and an average mass for 1000 kernels of 35 g. Moderately resistant to prevalent races of loose smut (*Ustilago tritici*) and powdery mildew (*Erysiphe graminis*). Susceptible to fusarium head blight (*Fusarium graminearum*) and highly resistant to wheat spindle streak mosaic virus and wheat soil borne mosaic virus.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 10/04/1999.

PI 610189. *Lactuca sativa* L.
Cultivar. "PX 644". PVP 9900387.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; Ronald F. Bara, Rutgers University, New Jersey Agricultural

Experiment Station, Cook College, New Brunswick, New Jersey 08901, United States; Dirk A. Smith, New Jersey Agricultural Experiment Station, Plant Science Dept., Cook College, Rutgers Univ., New Brunswick, New Jersey 08903, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; Timothy M. Ford, Lebanon Seaboard Corporation, P.O. Box 10, Huntsville, Utah 84317, United States. Received 10/04/1999.

PI 610190. *Festuca arundinacea* Schreb.

Cultivar. "PICASSO"; LTP-501; Seed lot no. B37-9-408 (5866800-15326). PVP 9900390; CV-82. Pedigree - Synthetic cultivar selected from the maternal progenies of 96 clones. Parental germplasm traces to plants selected from old turfs of the United States starting in 1962 and to plants related to Rebel tall fescue. Intercrosses of selected plants were subjected to many cycles of phenotypic and genotypic selection. Attractive, dark green, low-growing, uniform, turf-type tall fescue. Excellent performance in turf trials in New Jersey.

PI 610191. *Lolium perenne* L.

Cultivar. "AFFIRMED"; LTP 95-1+4551. PVP 9900391; CV-207. Pedigree - Selections from old turfs were evaluated for turf performance including stress tolerance and pest resistance. Intercrosses of the best were then subjected to many cycles of population improvement. Moderately low-growing, turf-type perennial ryegrass with bright, dark green color, and an excellent record of performance in turf trials in New Jersey.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; Timothy M. Ford, Lebanon Seaboard Corporation, P.O. Box 10, Huntsville, Utah 84317, United States. Received 10/04/1999.

PI 610192. *Lolium perenne* L.

Cultivar. "EXACTA"; LTP-3351. PVP 9900392; CV-206. Pedigree - Over 90% of the parental germplasm traces to selections made from old turfs in the United States beginning in 1962. Additional germplasm traces to collections made in Europe. Selections were evaluated for turf performance, seed yield, and stress tolerance followed by many cycles of population improvement. Leafy, persistent, turf-type perennial ryegrass capable of producing a dense fine-textured, medium-low-growing turf with a bright, dark green color. Performed well in NJ turf trials.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; Timothy M. Ford, Lebanon Seaboard Corporation, P.O. Box 10, Huntsville, Utah 84317, United States; M. Mohr, New Jersey Agricultural Exp. Sta., Cook College, 88 Lipman Drive, New Brunswick, New Jersey 08901-8520, United States. Received 10/04/1999.

PI 610193. *Lolium perenne* L.

Cultivar. "CHURCHILL"; LTP-DLM. PVP 9900393; CV-208. Pedigree - Selections from old turfs of the United States and Europe were evaluated

for turf performance characteristics and seed yield potential. Intercrosses of best performing selections were then subjected to many cycles of population improvement. Low-growing, turf-type with bright, dark green color. Excellent performance in turf trials in New Jersey producing a dense turf with medium-fine leaves and improved mowing quality.

The following were developed by Peggy Thaxton, Texas A&M University, Dept. of Soil and Crop Science, College Station, Texas 77843, United States; Kamal M. El-Zik, Texas A&M University, Department of Soil & Crop Sciences, College Station, Texas 77843, United States. Received 10/04/1999.

PI 610194. *Gossypium hirsutum* L.

Cultivar. "TAMCOT LUXOR". PVP 9900394; CV-119. Pedigree - Selection from cross of the MAR breeding lines CABUCAHUGS-1-88 and CABUCAG8US-1-88. Glanded, possesses normal shaped leaves and bracts, has pubescent stems and leaves, and is nectaried. Cylindrical shaped growth habit, flowers with cream-colored pollen, and storm resistant bolls. Similar to Tamcot Sphinx in plant habit, nodes to first fruiting branch, and cm to first fruiting branch. Has the B2B3B7 genes that confer resistance to the 19 U.S. races of the bacterial blight pathogen (*Xanthomonas campestris*). Significantly larger boll than previous Tamcot cvs. and is an early maturity variety. Performed exceptionally well in the Coastal Bend, Upper Coast, Central Blacklands, Rolling Plains and High Plains Regions of Texas and in Oklahoma.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 10/04/1999.

PI 610195 PVPO. *Allium cepa* L.

Cultivar. "MARQUESA". PVP 9900395.

The following were developed by Hisparroz, S.A., Spain. Received 10/04/1999.

PI 610196. *Oryza sativa* L.

Cultivar. "GUADIMAR". PVP 9900396.

The following were developed by Arizona Plant Breeders, Inc., Arizona, United States. Received 10/04/1999.

PI 610197 PVPO. *Pennisetum clandestinum* Hochst. ex Chiov.

Cultivar. "AZ-1". PVP 9900397.

The following were developed by Seed Source, Inc., United States. Received 10/04/1999.

PI 610198. *Gossypium hirsutum* L.

Cultivar. "LIGUR". PVP 9900398.

The following were developed by Turf Merchants, Inc., United States. Received 10/04/1999.

PI 610199 PVPO. Festuca arundinacea Schreb.
Cultivar. "BONSAI 2000". PVP 9900399.

The following were developed by Resource Seeds, Inc., United States. Received 10/04/1999.

PI 610200 PVPO. X Triticosecale sp.
Cultivar. "105". PVP 9900400.

PI 610201 PVPO. X Triticosecale sp.
Cultivar. "111". PVP 9900401.

PI 610202 PVPO. Triticum aestivum L. **subsp. aestivum**
Cultivar. Pureline. "STANDER". PVP 9900403. Pedigree -
Cleo/Inia//Tadorna/Inia/3/Probrand 775.

The following were developed by Novartis Seeds, Inc., United States. Received 10/04/1999.

PI 610203 PVPO. Pisum sativum L.
Cultivar. "SP895-3-1"; SL3056. PVP 9900406.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 10/04/1999.

PI 610204. Lactuca sativa L.
Cultivar. "Antle 542"; px542. PVP 9900407.

The following were developed by A. Doug Brede, J.R. Simplot Co., 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 10/04/1999.

PI 610205. Poa pratensis L.
Cultivar. "RAMBO". PVP 9900408; CV-70. Pedigree - Originated as a highly apomictic single-plant selection from an open-pollinated cross in the Jacklin Seed breeding nurseries in 1992. Parentage traces to breeding line 90-0499, which originated as a naturally occurring hybrid of Midnight Kentucky bluegrass. Breeding line 90-0499 was selected from a breeding nursery north of Post Falls, ID, on 9 July 1990 and produced a moderately open turf with little or no ergot in seed production. In June 1991, a plant of 90-0499 was hybridized with pollen from 20 other Kentucky bluegrass, the resulting progeny were planted in a spaced-plant field nursery of 400 plants in July. Very dense, moderately dark green Kentucky bluegrass with improved turf quality performance. In seed production, is a medium strawed variety and is classified as late in seedhead maturity, meaning its seedheads emerge later from the boot than some other varieties. Head color at flowering is a sensitive differentiating factor for bluegrass. Rated an average 6.7 in head color, with 1 equal to no purpling, and 9 equal to dark purpling. By comparison, Midnight rated 7.3, Baron 5.5, and South Dakota Certified 3.0. Culm length averages 53 cm at maturity with a tapering at the edges of the plant. Panicles are similar in appearance to those of NuGlade,

but are more brownish-yellow in color if compared side by side. Culms are also a little taller than NuGlade and the leaves slightly lighter green in seed production.

The following were developed by Forage Genetics, Inc., Missouri, United States. Received 10/04/1999.

PI 610206 PVPO. *Medicago sativa* L.
Cultivar. "EVERGREEN". PVP 9900409.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 10/04/1999.

PI 610207 PVPO. *Medicago sativa* L.
Cultivar. "54V54". PVP 9900410.

PI 610208 PVPO. *Medicago sativa* L.
Cultivar. "53H81". PVP 9900411.

The following were developed by Glenn Page, Green Genes, Inc., 401 Second Street E., Wyananmingo, Minnesota 55983, United States. Received 10/04/1999.

PI 610209 PVPO. *Guizotia abyssinica* (L. f.) Cass.
Cultivar. "EARLYBIRD". PVP 9900412.

The following were developed by Nunes Vegetables, Inc., P.O. Box 673, Salinas, California 93902, United States. Received 10/04/1999.

PI 610210 PVPO. *Apium graveolens* var. *dulce* (Mill.) Pers.
Cultivar. "SWEET 16". PVP 9900413.

The following were developed by Turf Merchants, Inc., United States. Received 10/04/1999.

PI 610211 PVPO. *Lolium perenne* L.
Cultivar. "PARAGON". PVP 9900420.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 10/04/1999.

PI 610212 PVPO. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. "25R18". PVP 9900428. Pedigree -
Sumai/2555//2555*3/KU221-14/Eagle//NE73640/3/chenev/4/2510/5/2510.

PI 610213 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH2VE". PVP 9900415.

PI 610214. *Zea mays* L. subsp. *mays*
Cultivar. "PH4A4". PVP 9900416.

- PI 610215 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH1CP". PVP 9900417.
- PI 610216 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH2V7". PVP 9900418.
- PI 610217 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH1EM". PVP 9900421.
- PI 610218 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH1M8". PVP 9900422.
- PI 610219 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH1MD". PVP 9900423.
- PI 610220 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH3EV". PVP 9900424.
- PI 610221 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH4TF". PVP 9900425.
- PI 610222 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "PH9H3". PVP 9900426.

The following were developed by Novartis Seeds, Inc., United States. Received 10/04/1999.

- PI 610223 PVPO. *Zea mays* L. subsp. *mays***
Cultivar. "NP2213". PVP 9900427.

The following were developed by Chinese Academy of Agricultural Sciences, Inst. of Crop Breeding & Cultivation, Beijing, Beijing, China. Donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 09/28/1998.

- PI 610224. X *Triticosecale* sp.**
Breeding. 1890; NSGC 6566. Forage-type winter triticale.
- PI 610225. X *Triticosecale* sp.**
Breeding. 830; NSGC 6567. Forage-type winter triticale.
- PI 610226. X *Triticosecale* sp.**
Breeding. 237; NSGC 6568. Forage-type winter triticale.
- PI 610227. X *Triticosecale* sp.**
Breeding. 828; NSGC 6569. Forage-type winter triticale.

The following were donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States; Anseng Li, Chinese Academy of Science, Institute of Genetics, Building 917, Beijing, Beijing, China. Received 04/05/1999.

- PI 610228. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "ZANG QING 80"; NSGC 7608. Developed in China.

- PI 610229. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "ZANG QING 85"; NSGC 7609. Developed in China.
- PI 610230. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "ZANG QING 148"; NSGC 7610. Developed in China.
- PI 610231. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "ZANG QING 320"; NSGC 7611. Developed in China.
- PI 610232. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "ZANG QING 539"; NSGC 7612. Developed in China.
- PI 610233. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "ZANG QING 3179"; NSGC 7613. Developed in China.
Early, high yielding.
- PI 610234. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. Pureline. "SUMALA NO. 19"; NSGC 7614. Developed in China.
- PI 610235. *Hordeum vulgare* L. subsp. *vulgare***
Breeding. QB-01; NSGC 7615. Developed in China.
- PI 610236. *Hordeum vulgare* L. subsp. *vulgare***
Breeding. 880342; NSGC 7616. Developed in China.
- PI 610237. *Hordeum vulgare* L. subsp. *vulgare***
Breeding. 90QS-5; NSGC 7617. Developed in China.
- PI 610238. *Hordeum vulgare* L. subsp. *vulgare***
Breeding. 90QS-9; NSGC 7618. Developed in China.

The following were developed by M. Ken Ayccock, Jr., University of Maryland, Department of Agronomy, College Park, Maryland 20742, United States; Arvydas Grybauskas, University of Maryland, Dept Natural Resource Sciences, 2102 Plant Science Bldg., College Park, Maryland 20742-4452, United States.
Received 10/13/1999.

- PI 610239. *Nicotiana tabacum* L.**
Breeding. Pureline. MD A30; Maryland type tobacco. GP-53. Pedigree - [(A16 x A25) x L8] x MD 201}F15. Maryland type tobacco with resistance to tobacco mosaic virus (TMV) and Race O black shank (*Phytophthora parasitica*). Similar to cultivars MD 609, MD 872, and MD 201 with a five-year average yield of 2182 kg ha⁻¹, a quality index of 38.7, plant height at maturity of 86.4 cm, and content of total alkaloids and total nitrogen of 2.63 and 3.19%, respectively. Flowers 68 days after transplanting, and produces 23.4 leaves per plant. Leaves long with medium width and pointed tips.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 11/17/1999.

- PI 610240 PVPO. *Glycine max* (L.) Merr.**
Cultivar. "94B45". PVP 200000030.

PI 610241 PVPO. **Glycine max** (L.) Merr.
Cultivar. "94B53". PVP 200000031.

PI 610242 PVPO. **Glycine max** (L.) Merr.
Cultivar. "95B32". PVP 200000032.

PI 610243 PVPO. **Glycine max** (L.) Merr.
Cultivar. "93B84". PVP 200000033.

PI 610244 PVPO. **Glycine max** (L.) Merr.
Cultivar. "92B74". PVP 200000034.

PI 610245 PVPO. **Glycine max** (L.) Merr.
Cultivar. "93B35". PVP 200000035.

PI 610246 PVPO. **Glycine max** (L.) Merr.
Cultivar. "96B01". PVP 200000036.

PI 610247 PVPO. **Glycine max** (L.) Merr.
Cultivar. "91B53". PVP 200000037.

PI 610248 PVPO. **Glycine max** (L.) Merr.
Cultivar. "97B62". PVP 200000038.

PI 610249 PVPO. **Glycine max** (L.) Merr.
Cultivar. "92B35". PVP 200000039.

PI 610250 PVPO. **Glycine max** (L.) Merr.
Cultivar. "92B25". PVP 200000040.

PI 610251 PVPO. **Glycine max** (L.) Merr.
Cultivar. "92B24". PVP 200000041.

PI 610252 PVPO. **Glycine max** (L.) Merr.
Cultivar. "94B22". PVP 200000042.

PI 610253 PVPO. **Glycine max** (L.) Merr.
Cultivar. "93B54". PVP 200000043.

PI 610254 PVPO. **Glycine max** (L.) Merr.
Cultivar. "93B65". PVP 200000044.

PI 610255 PVPO. **Glycine max** (L.) Merr.
Cultivar. "95B53". PVP 200000045.

PI 610256 PVPO. **Glycine max** (L.) Merr.
Cultivar. "93B07". PVP 200000046.

The following were developed by Harold G. Marshall, USDA-ARS, Pennsylvania State University, Department of Agronomy, University Park, Pennsylvania 16823, United States; Robert W. Gooding, Ohio State University, Ohio Agricultural Research & Development Center, Department of Agronomy, Wooster, Ohio 44691-4096, United States; Larry D. Herald, Ohio State University, Dept. of Horticulture and Crop Science, Ohio Agric. Res. and Development Ctr., Wooster, Ohio 44691, United States. Received 11/01/1999.

PI 610257. *Avena sativa* L.

Cultivar. Pureline. "BURTON"; OH 1055. CV-363. Pedigree - Random/Jaycee//Orbit/Noble. Released 1996. High grain yield potential and improved grain volume weight. Maturity mid-season. More tolerant to Barley Yellow Dwarf Virus than Noble. Resistance to loose smut (*Ustilago avenae*). Susceptible to prevalent races of crown rust (*Puccinia coronata*). Juvenile growth habit semiprostrate. Culms medium in diameter, and culm and leaf margins glabrous. Ligules present. Panicles equilateral with ascending branches. Spikelet separation is by fracture, and floret separation is by abscission. Lemmas yellow and glabrous. Basal hairs absent. Secondary floret rachilla segments glabrous and midlong. Seed nonfluorescent under ultraviolet light with fluorescent variants occurring at less than 1.5%. Awns non-twisted and average 20mm in length when present. Kernels bright yellow, medium size, plump, and finely tapered at tips.

The following were developed by Robert K. Bacon, University of Arkansas, Dept. of Crop, Soil, and Env. Science, 115 Plant Science Bldg., Fayetteville, Arkansas 72701, United States; John T. Kelly, University of Arkansas, Department of Crop, Soil & Environmental Sciences, 115 Plant Science, Fayetteville, Arkansas 72701, United States. Donated by Robert K. Bacon, University of Arkansas, Dept. of Crop, Soil, and Env. Science, 115 Plant Science Bldg., Fayetteville, Arkansas 72701, United States. Received 10/26/1999.

PI 610258. *Brassica napus* L.

Breeding. AR91004; AR91004-12L-3. GP-7. Pedigree - Cobra / Glacier. Winter rapeseed with edible quality oil. Good winterhardiness and good yield potential. Yielded 2583 kg/ha at 7 Midwest locations and 1946 kg/ha at 7 Southeast sites in the 1997-98 National Canola Variety Trial. Although relatively tall (132 cm) did not lodge significantly more than the best entry (12% vs 6%). Shattering slightly more than test mean (8.3% vs 7.3%). High test weight (625 kg/m³) and total oil content approx. 44%. Good resistance to Blackleg disease.

The following were developed by Robert K. Bacon, University of Arkansas, Dept. of Crop, Soil, and Env. Science, 115 Plant Science Bldg., Fayetteville, Arkansas 72701, United States; John T. Kelly, University of Arkansas, Department of Crop, Soil & Environmental Sciences, 115 Plant Science, Fayetteville, Arkansas 72701, United States. Received 11/04/1999.

PI 610259. *Avena sativa* L.

Breeding. Population. ARKANSAS HULL-LESS. GP-56. Pedigree - Composite cross. Released 1999. Good winterhardiness and well adapted to Arkansas growing conditions. Contains variation for most traits with plant height ranging from 52-125 cm. Seeds moderately plump with an average 1000-kernel wt. of 29.0 g. Seeds high in protein (15.5%) with varying levels of trichomes.

The following were developed by David A. Van Sanford, University of Kentucky, Department of Plant & Soil Sciences, 327 Plant Science Bldg., Lexington, Kentucky 40546-0312, United States; C.R. Tutt, University of Kentucky, Kentucky Agric. Exp. Station, Princeton, Kentucky, United States; C.S. Swanson, University of Kentucky, Kentucky Agric. Exp. Station, Lexington,

Kentucky, United States; B. Mijatovic, University of Kentucky, Dept. of Agronomy, Lexington, Kentucky 40546-0091, United States. Received 11/15/1999.

PI 610260. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. KY 86C-61-8. CV-884. Pedigree - VA 66-24-10/Bajio 66//Pontiac/3/VA 68-22-7/Coker 747/Ark 39-3//Coker 68-15/VA 72-54-14. Released 1998. White-chaffed, awnletted soft red winter wheat with midlong spikes and intermediate size kernels. Early maturing, with a heading date similar to that of Patterson. Intermediate height, slightly taller than Foster. Winterhardiness similar to Patterson. Grain yield averaged approx. 113% of Clark, and 117% of Ernie. Test weight 747 kg m-3, slightly higher than Madison. Outstanding flour yield. In milling quality analyses in 1996 and 1997, for example, average straight grade flour yield was 72.6% compared to 69.7% for Caldwell. Moderately resistant to powdery mildew (*Erysiphe graminis*), Septoria leaf blotch (*Septoria tritici*), and glume blotch (*Stagnospora nodorum*). Resistant to some races of leaf rust (*Puccinia triticina*) and susceptible to barley yellow dwarf virus and to Hessian fly (*Mayetiola destructor*).

The following were developed by Ronald D. Barnett, University of Florida, North Florida Res. & Ed. Center, 155 Research Road, Quincy, Florida 32351-5677, United States. Received 08/16/1999.

PI 610261. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. FL8868; NSGC 8461. Pedigree - FL302-H9 backcross line/GA781176 (McNair1003/Coker 762). Soft red winter wheat. Resistant to Biotype L of Hessian fly.

The following were donated by Rodale Research Center, Rodale Press, Box 323, RD 1, Kutztown, Pennsylvania 19530, United States; Shivabhai Patel, Seed Merchants & Producers, Gujarat, India. Received 04/15/1986.

PI 610262. *Amaranthus blitum* L.

Cultivated. Tandulja; RRC 388; Ames 5146. The seeds are black, flowers green, leaves green. The RRC class type is: horsetooth. Observations from the Rodale Research Center, 1988 Rodale Amaranth Germplasm Catalog. Emmaus, PA.

The following were developed by Leonardo Velasco Varo, Instituto de Agricultura Sostenible, Apartado 4084, E-14080, Cordoba, Cordoba 14080, Spain; J. Munoz, Instituto de Agricultura Sostenible, Apartado 4084, Cordoba, Cordoba 14080, Spain; J.M. Fernandez, Institute for Sustainable Agriculture, Alameda del Obispo S/N E=14080, Cordoba, Cordoba, Spain. Received 11/29/1999.

PI 610263. *Carthamus tinctorius* L.

Genetic. Pureline. ENANA. GS-1. Pedigree - Developed from the Spanish cv. Rancho by chemical mutagenesis with ethylmethane sulfonate (EMS). Dwarf safflower genetic stock. Plants about 60cm tall compared with about 100cm for Rancho. Produces a large number of heads per plant (96.4) under low plant density (30,000 plants per ha), but not under a higher plant density (214,000 plant per ha produces 12.2 heads per plant). Orange flowers and white seeds. Similar to Rancho for flowering

date. Average thousand seed weight of 31.8g, a hull content of 31.5% and a seed oil content of 423 g kg⁻¹, compared with thousand seed weight of 48.2 g, hull content of 40.3% and oil content of 365 g kg⁻¹ for Rancho.

The following were developed by Greg D. Kushnak, Montana State University, Western Triangle Agric. Research Center, P.O. Box 1474, Conrad, Montana 59425, United States; Patrick F. Hensleigh, Montana State University, Plant Science & Plant Pathology, 324A Leon Johnson Hall, Bozeman, Montana 59717, United States; Patrick M. Hayes, Oregon State University, Department of Crop Science, Crop Science Building 107, Corvallis, Oregon 97331-3002, United States; Thomas K. Blake, Montana State University, Dept. of Plant Sciences & Plant Pathology, 109 Plant Biosciences Building, Bozeman, Montana 59717, United States; G.R. Carlson, Montana State University, Northern Agric. Research Center, Star Rt. 36, Havre, Montana 59501, United States; Joyce L. Eckhoff, Montana State University, Eastern Agric. Research Center, 1501 N. Central Avenue, Sidney, Montana 59270, United States; Leon E. Welty, Montana State University, Northwestern Agric. Research Center, Kalispell, Montana, United States; D.W. Wichman, Montana State University, Central Agric. Research Center, Moccasin, Montana 59462, United States; Robert N. Stougaard, Montana State University, Northwestern Agric. Research Center, 4570 MT Hwy 35, Kalispell, Montana 59901, United States; Ken Kephart, Montana State University, MSU Southern Ag. Research Center, 748 Railroad Highway, Huntley, Montana 59037, United States; J.G.P. Bowman, Montana State University, Dept. of Animal and Range Sciences, Bozeman, Montana 59717, United States. Received 12/02/1999.

PI 610264. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "VALIER"; MTLB30. PVP 200000156; CV-301. Pedigree - Lewis/Baronesse. Released 1999. Two-rowed white kernel midseason spring barley. Unlike its paternal parent Baronesse, retains sterile lateral florets. Nearly two days later to flower than its maternal parent Lewis. Frequently develops red-tipped awns late in the season, an obvious and distinctive characteristic. Approx. two centimeters shorter than Lewis, with correspondingly greater lodging resistance.

The following were donated by USDA-ARS/Utah Agric. Exp. Station, Logan, Utah, United States. Received 1961.

PI 610265. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. IDBBNR 4847; NSL 4725; NEW CT 9. New CT9 came about by propagation of sublines of curly-top resistant inbred CT9. However, it is believed that out-crosses to other unknown parentage was also involved. The New CT9 is more vigorous than the original. It is therefore propagated more easily and produces equal or superior hybrids to those made with inbred CT9.

PI 610266. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. IDBBNR 4849; NSL 4727; US 022/4. Is the 4th release of US 22, represents last self-sterile curly-top resist. var. The select. was made by Murphy & Owen from US 22/3. This vigorous var. is yld type, very hi in curly top resistance. Many curly-top resist. monogm lines have been derived by hybridization to this variety. Lit. refer. -- Advances in Agron., Vol VII, 1955. pp. 89-139.

PI 610267. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. IDBBNR 4854; NSL 4732; TRACY 2769 (SL 742). SL 742 was one of many lines developed by W. W. Tracy, Jr. It was observed to be very iniform and extremely susceptible to the curly-top disease. It was used extensively at River- side, California by N. J. Giddings and later at the U.S.D.A. Station at Salinas, by N. J. Giddings and later at the U.S.D.A. Station at Salinas, Calif. by C. W. Bennett to differrn. diff. cur-top vir. strns. Lit - Giddings, N.J. '46.

The following were donated by USDA, ARS, California Agric. Exp. Station, Davis, California, United States. Received 1978.

PI 610268. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. IDBBNR 4199; NSL 29900; SLC 101. Inbred SLC 101 monogerm is the original monogerm line derived from one monogerm plant found in Oregon in 1947. From this line after hybridization with different multigerm varieties were obtained all self-sterile, self-fertile strains, varieties, commerical hybrids and inbred lines in the USA, Canada, & in many European countries.

The following were donated by USDA, ARS, Colorado Agric. Exp. Station, Fort Collins, Colorado, United States. Received 1971.

PI 610269. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4214; NSL 80220; RS-1A. Product of selection in Chile for resistance to yellow wilt. Final report (supplement). CR dl-27(CA) July 1, 1971, issued by the Plant Science Research Div., ARS-USDA, the Beet Sugar Development Foundation, and Industria Azucarera Nacional S.A., pp. 6-9.

PI 610270. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4217; NSL 80223; RS-3. Selection and breeding sugarbeets for resistance to yellow wilt, final report (supplement). CR dl-27(CA) July 1, 1971, issued by the Plant Science Research Div., ARS-USDA, the Beet Sugar Development Foundation, and Industria Azucarera Nacional S.A., pp. 6-9. Prod. of selection in Chile for resistance to yellow wilt. Product of selection in Chile for resistance to yellow wilt.

The following were donated by Beet Sugar Development Foundation, P.O. Box 538, Fort Collins, Colorado 80521, United States. Received 1972.

PI 610271. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4218; NSL 81098; RS-1. Lit. reference - A Final Report on the Sugar Beets CR dl-27(CA) 7/1/71 (files). Product of selection in Chile for yellow wilt.

PI 610272. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4220; NSL 81602; RS-2B (LOT A). Product of selection in Chile for resistance to yellow wilt. Lit. reference: A final report on the sugar beets CR dl-27 (CA) 7/1/71 (files).

PI 610273. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4221; NSL 81603; RS-2B (LOT B). Lit. reference: A

final report on the sugar beets CR dl-27 (files). Product of selection in Chile for resistance to yellow wilt.

PI 610274. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4960; NSL 86576; 72/4-2-14-0. Seed rec'd at NSSL 1974 with 5 year restriction. Lit. reference -- "Selection and Breeding Sugarbeets for Resistance to Yellow Wilt" (Supplement Report) CR-dl-27 (CA) 7-1-71 (files) Seed requests (during 5-year restriction period) were approved by: Dr. James Fischer, Sec'y-Mgr., Beet Sug. Devlpmt Fndn.

PI 610275. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4223; NSL 86578; 72/4-41-1-T4. Product of selection in Chile for resistance to yellow wilt. one cycle of selection for resistance to bolting in the line, RS-2b(A). Lit. reference - "Report-Supplement - Selection & Breeding Sugarbeets for Resistance to Yellow Wilt" CR-dl-27 (CA) 7-1-71 (files).

The following were donated by USDA, ARS, NCGRP, National Center for Genetic Resources Preservation, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States. Received 1976.

PI 610276. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4225; NSL 91600; 71/3-1-3-L9 A75-30. J. O. Gaskill, USDA-ARS. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the ARS-USDA, the Beet Sugar Dev. Found. 39 pp. Prod. of selection & breeding in Chile for resist. to yel. wilt. Contact -- J. S. McFarlane, Res. Ldr, Sugarbeet Production, W. Region, ARS-USDA, P.O. Box 5098, Salinas, CA 93901.

PI 610277. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4226; NSL 91601; 71/3-1-3-L10 A75-31. J. O. Gaskill, 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the ARS-USDA and the Beet Sugar Development. 39 pp. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Reg., ARS-USDA, P.O. 5098, Salinas, CA 93901. Product of selection & brdg in Chile for resist. to yel. wil.

PI 610278. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4227; NSL 91602; 71/3-1-3-L13 A75-32. Lit. reference - J. O. Gaskill, 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the Ag. Research Service, USDA, and the Beet Sugar Dev. Found. 39 pp. Prod. of select. & brdg in Chile for resist. to yellow wilt. Contact - Dr. J. S. McFarlane, Res. Ldr, Sugarbt Prod., W. Reg., ARS-USDA, Box 5098, Salinas, CA.

PI 610279. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4228; NSL 91603; 71/3-1-3-L21 A75-33. J. O. Gaskill. 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the ARS-USDA, and the Beet Sugar Development Foundation. 39 pp.

PI 610280. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4229; NSL 91604; 71/3-1-3-L23 A75-34. J. O. Gaskill.

1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the Agricultural Res. Svc, USDA, and the Beet Sugar Development Foundation.. 39 pp. Contact - Dr. J. S. McFarlane, Res. Ldr, Sugarbeet Product. W. Region, ARS-USDA, P.O. 5098, Salinas, CA 93901.

PI 610281. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4230; NSL 91605; 71/3-1-3-L24 A75-35. J. O. Gaskill, 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the ARS-USDA, and the Beet Sugar Development Foundation. 39 pp. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Region, ARS-USDA, Box 5098, Salinas, CA 93901.

PI 610282. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4231; NSL 91606; 71/3-1-3-L30 A75-36. J. O. Gaskill. 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the ARS-USDA and the Beet Sugar Development Foundation. 39 pp. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Region, ARS-USDA, Box 5098, Salinas, CA 93901.

PI 610283. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4232; NSL 91607; 71/3-42-3-L1 A75-37. J. O. Gaskill. 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final Report for Cooperative Agreement No. 12-14-100-10,624(34) between the ARS-USDA, and the Beet Sugar Development Foundation. 39 pp. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Region, ARS-USDA, Box 5098, Salinas, CA 93901.

PI 610284. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4233; NSL 91608; 75W501H00. Lit. reference - J. O. Gaskill 1974. Selection and breeding sugarbeet for resistance to yellow wilt. Final report for Cooperative Agreement No. 12-14-100-19, 624(34) between the ARS-USDA, and the Beet Sugar Development Foundation. 39 pp. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Region, ARS-USDA, Box 5098, Salinas, CA 9390.

The following were donated by USDA, ARS, Colorado Agric. Exp. Station, Fort Collins, Colorado, United States. Received 1977.

PI 610285. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4234; NSL 93276; 76W601H00. Collected in Chile. Origin - Chile Product of selection and breeding in Chile for resistance to yellow wilt. Journal of American Society of Sugar Beet Technol. 19:25-44. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Region, ARS-USDA, Box 5098, Salinas, CA 93901.

PI 610286. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4235; NSL 93277; A76-36. Collected in Chile. Origin - Chile Production of selection and breeding in Chile for resistance to yellow wilt. Lit. reference: John O. Gaskill and Roberto Ehrenfeld. 1976. Breeding sugarbeet for resistance to yellow wilt. Journal of American Soc. of Sugar Beet Technol. 19:25-44. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Prod., W. Reg., ARS-USDA, Box 5098, Salinas, CA 93901.

- PI 610287. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4237; NSL 93279; A76-38. Collected in Chile. Origin - Chile. Originated for resistance to yel. wilt. Lit. reference - John O. Gaskill and Roberto Ehrenfeld. 1976. Breeding sugarbeet for resistance to yellow wilt. Journal of American Soc. Sugar Beet Technol. 19: 25-44. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Region, ARS-USDA, P.O. Box 5098, .
- PI 610288. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4239; NSL 93281; A76-40. Collected in Chile. Origin - Chile. Product of selection and breeding in Chile for resistance to yellow wilt. Lit. reference - John O. Gaskill & Roberto Ehrenfeld. 1976. Breeding sugarbeet for resist. to yellow wilt. Journal of American Soc. Sugar Beet Technol. 19: 25-44. Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, W. Reg. ARS-USDA, Box 5098, Salinas, CA 93901.
- PI 610289. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4240; NSL 93282; A76-41. Collected in Chile. Origin - Chile. Product of selection and breeding in Chile for resistance to yellow wilt. Lit. reference - John O. Gaskill and Roberto Ehrenfeld. Breeding sugarbeet for resistance to yellow wilt. Journal of American Society Sugar Beet Technol. 19: 25-44. Contact - Dr. J. S. McFarlane, Res. Leader, Sugarbeet Production, West. Reg, ARS-USDA, Box 5098, Salinas, CA 93901.
- PI 610290. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4242; NSL 93284; A77-16. Collected in Chile. Origin - Chile. Product of selection and breeding in Chile for resistance to yellow wilt. Lit. reference - John O. Gaskill and Roberto Ehrenfeld. 1976 Contact - Dr. J. S. McFarlane, Research Leader, Sugarbeet Production, Western Region, Agric. Research Service, USDA, P.O. Box 5098, Salinas, California 93901.
- PI 610291. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4244; NSL 95217; A77-46. Collected in Argentina. Origin - Argentina. Crop year 1977 Selection in Argentina from several Chilean lines. Product of selection and breeding for resistance to yellow wilt. Literature reference: John O. Gaskill, Roberto Ehrenfeld. 1976. Breeding sugarbeet for resistance to yellow wilt. J. Amer. Soc. Sugar Beet Technol. 19:25-44.
- PI 610292. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4245; NSL 95218; A77-47. Collected in Chile. Origin - Chile. Crop year 1977 Immed. parent 73/5-1-10-L24 Product of selection and breeding for resistance to yellow wilt. Lit. reference - John O. Gaskill and Roberto Ehrenfeld. 1976 Breeding sugarbeet for resistance to yellow wilt. Journal of American Soc. Sugar Beet Technol. 19: 25:44.
- PI 610293. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4247; NSL 95220; A77-49. Collected in Chile. Origin - Chile. Crop year - 1977 Immed. parent 73/5-1-15-T6. Product of selection and breeding for resistance to yellow wilt. Journal Am. Soc. Sugar Beet Technol. 19: 25-44.

The following were donated by USDA, ARS, Plant Science Research Division, Beltsville, Maryland 20705, United States. Received 1978.

PI 610294. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4251; NSL 97657; SP74566-01. SP 74566-01 is a cytoplasmic male-sterile monogerm line originating from SP 70550-01, the cytoplasmic male-sterile component of US H21. SP 74566-01 is moderately resistant to black root and highly resistant to leaf spot. When crossed with SP 6822-0, our standard multigerm pollinator, the hyb. was about = to US H20 in beet yld. Sucrose % was some- what lower than US H20. Purity was only slightly lower.

The following were donated by USDA, ARS, Colorado Agric. Exp. Station, Fort Collins, Colorado, United States. Received 1978.

PI 610295. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. FC 506 CMS; IDBBNR 4275; NSL 98166. GP-47. Registration document CP 47 in Crop Sci., Vol. 18, Nov-Dec 1978. Cytoplasmic male sterile equivalent of FC 506. Diploid ($2n = 2X = 18$) and flowers after short photothermal induction. High resistance to *Cercospora beticola* Sacc. (about equal to US 201).

PI 610296. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4289; NSL 101186; A78-25. SEA increase of 73/5-1-23-T4, a product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610297. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4290; NSL 101189; A78-26. SEA increase of 73/5-1-24-L33. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610298. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4292; NSL 101191; A78-28. SEA increase of 74/6-3-46-L4, product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610299. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4293; NSL 101192; A78-29. SEA increase of 74/6-4-47-L7, a product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610300. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4295; NSL 101194; A78-31. SEA increase of 74/6-3-50-L2, a product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

The following were donated by Edward J. Ryder, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 1979.

PI 610301. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4310; NSL 103028; 8563 (S14). Long term inbred (14 generations of selfing) developed from C563. Possesses resistance to bolting and curly top.

PI 610302. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4311; NSL 103031; 8600. Doubled haploid annual inbred with resistance to curly top. B. L. Hammond. 1966. Homozygous diploid sugar beets. Journal of American Soc. of Sugar Beet Technologists 14: 75-78. Vigorous with 9 chromosomes. Small flowers as compared to those of the diploids. The anthers contained mostly empty pollen grains. Flowers profusely during summer. Vigorous both as to foliage and root growth.

PI 610303. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4336; NSL 103072; 0755. Monogerm composite that segregates for genetic male sterility (a subscript 1 a subscript 1). Moderate resistance to curly top.

The following were donated by J. O. Gaskill, Colorado State University, Crops Research Lab, WR Sugarbeet Production Research, Fort Collins, Colorado 80523, United States. Received 1980.

PI 610304. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4348; NSL 107407; A79-53. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610305. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4349; NSL 107408; A79-54. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610306. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4350; NSL 107409; A79-55. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, marr: for resistance to yellow wilt.

PI 610307. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4351; NSL 107410; A79-56. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610308. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4352; NSL 107411; A79-57. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610309. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4353; NSL 107412; A79-58. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610310. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4354; NSL 107413; A79-59. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

PI 610311. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4355; NSL 107414; A79-60. Collected in Chile. A product of selection and breeding sugarbeet, in Chile, for resistance to yellow wilt.

The following were donated by Edward J. Ryder, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 1981.

PI 610312. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4386; NSL 141997; 1503HO. The cytoplasmic male sterile equivalent (14 backcrosses) of the 1503 inbred. Possesses resistance to downy mildew and bolting.

PI 610313. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4387; NSL 141998; 0533. Multigerm inbred susceptible to *Alternaria* leafspot. Lit: J. S. McFarlane, Roy Bardin and Wm. C. Snyder. 1954. An *Alternaria* leaf spot of the sugarbeet. American Society of Sugar Beet Technol. Proc. (Pt. 1):241-246.

PI 610314. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4388; NSL 141999; 1547HO/547 CMS. The cytoplasmic male sterile equivalent (21st backcross) of the 547 inbred. A multigerm line possessing bolting and curly top resistance used as a component of the US H6 variety. Lit: J. S. McFarlane and I. O. Skoyen. 1964. These new hybrid sugarbeet varieties for early planting. Calif. Agr. 18:2-4.

PI 610315. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4391; NSL 142002; 1569HO/569 CMS. The cytoplasmic male sterile equivalent (11th backcross) of the 569 inbred. Possesses resistance to bolting and curly top. Lit: J. S. McFarlane and I. O. Skoyen. 1965. Sugarbeet breeding lines combining resistance to bolting and disease. J. Am. Soc. Sugar Beet Technol. 13:555-562.

PI 610316. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4393; NSL 142004; 1502AA. A Mendelian male sterile of the NBl inbred which combines bolting and curly top resistance. Should segregate approx. 50% aa.

PI 610317. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4394; NSL 142005; 1564AA. A Mendelian male sterile of the 564 inbred that segregates approximately 50% aa.

PI 610318. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4395; NSL 142006; 1566AA. A Mendelian male sterile produced by crossing 563aa with 566Aa. Should segregate approximately 50% aa.

PI 610319. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4397; NSL 142008; 051. A type O selection from the high sugar, multigerm, open-germ, open-pollinated line 366 which is a bolting resistant selection from the commercial variety US 35/2.

PI 610320. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4398; NSL 142009; 055. A self-sterile monogerm line possessing moderate curly top and bolting resistance.

- PI 610321. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4399; NSL 142010; 056. A self-sterile monogerm developed from a cross between the American 955 line and a monogerm (P.I. 254575) from the USSR.
- PI 610322. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4411; NSL 142026; 717. Self-fertile, multigerm line with homozygous resistance (BmBm) to beet mosaic virus and moderate to good resistance to virus yellows, curly top, downy mildew, rust, and bolting. This line is uniform, with a dark green, small canopy. Theoretically, about 94% of 717 was derived from beet mosaic virus susceptible, self-sterile C17.
- PI 610323. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4417; NSL 142032; C301CMS/1755-29HO/1755-29CMS. CMS counterpart of C301.
- PI 610324. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4419; NSL 142034; 749-1. Composite of self-fertile, monogerm lines that have been selected from resistance to virus yellows. Composite has the general description of YR/2 S subscript 5(C13, C17 x CTR-S superscript f-mm)mm(symbol description of symbol that follows "mm", i.e., an x surrounded by a circle. Composite was prod. spec. for germplsm preserv. Seed from 228 selfed plants from 28 lines was completed.
- PI 610325. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4420; NSL 142035; 749-2. Composite of self-fertile, monogerm lines that have been selected for resist. to virus yellows. Composite has the general description of YR/2 S subscript 5 (C04 x CTR-S superscript f-mm)mm(Symbol description of symbol that follows "mm", i.e., an x surrounded by a circle. Seed from 168 selfed plants from 19 lines was composited.
- PI 610326. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4421; NSL 142036; 749-3. Composite of self-fertile, monogerm lines that have been selected for resist. to virus yellows. Composite has the general description of YR S subscript 5(C01, C10, C44 x CTR -S superscript f-mm)mm(Symbol description of symbol that follows the "mm", ie, an x surrounded by a circle. Seed fro 250 selfed plants from 28 lines was composited.
- PI 610327. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4422; NSL 142037; 750-1. Composite of self-fertile, monogerm lines that have been selected for resist. to virus yellows. Composite has the gen. description of YR S subscript 5 (CTR-S superscript f-mm x YR-S superscript f-MM)mm(Symbol description follows of the symbol that follows "mm", ie, an x surrounded by a circle. Seed from 270 selfed plants from 37 lines was composited.
- PI 610328. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4423; NSL 142038; 750-2.
- PI 610329. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4424; NSL 142039; 750-3. Composite of self-fertile, monogerm lines that have been selected for resistance to virus yellows.

Composite has the general description of YR[(CRT-mmaa x YR-S superscript f-MM) x YR-S superscript f-mm] mm(Symbol description -- since this symbol not avail. for this info. update -- x with a circle surrounding it. This came directly after the "mm". Seed from 193 selfed plants from 23 lines was composited.

PI 610330. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4425; NSL 142040; 750-4. Composite of self-fertile, monogerm lines that have select. for resist. to virus yellows. Composite has the general description of YR/2 (CTR-mmaa x CTR-S superscript f-mm)mm [symbol: x surrounded by a circle]. Seed from 59 selfed plant from 8 lines was composited.

The following were donated by J. C. Theurer, Sugarbeet Investigations, Crops Res. Lab., Utah State Univ., Logan, Utah 84322, United States. Received 1983.

PI 610331. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4467; NSL 183355; AT3994-1. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610332. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4468; NSL 183356; AT3994-2. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610333. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4471; NSL 183367; 0166. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610334. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4472; NSL 183369; 201. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610335. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5014; NSL 183371; 0265.

PI 610336. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4473; NSL 183372; 0299. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610337. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4474; NSL 183375; 340. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610338. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4475; NSL 183378; 431. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610339. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4476; NSL 183379; 455. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 610340. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4477; NSL 183380; 460. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

- PI 610341. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4478; NSL 183381; 461. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610342. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4479; NSL 183382; 503. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610343. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5019; NSL 183383; 512.
- PI 610344. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5020; NSL 183384; 0523.
- PI 610345. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5021; NSL 183385; 527.
- PI 610346. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4480; NSL 183386; 534. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610347. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4481; NSL 183387; 540.12. Crops Res. Lab, UT St.
Univ., Logan, UT 84322 No further background information available.
- PI 610348. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5022; NSL 183388; 547.
- PI 610349. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4482; NSL 183389; 548. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610350. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5024; NSL 183391; 553.
- PI 610351. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4483; NSL 183393; 648. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610352. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4484; NSL 183394; 706. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610353. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4486; NSL 183397; 806. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610354. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5029; NSL 183400; 867-1 SEL 4A.
- PI 610355. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5031; NSL 183402; 901.
- PI 610356. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4487; NSL 183403; 917. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.

- PI 610357. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5032; NSL 183404; 929.
- PI 610358. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5033; NSL 183405; 1121.
- PI 610359. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4488; NSL 183408; 1200. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610360. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5042; NSL 183415; 1618.
- PI 610361. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4489; NSL 183416; 1750. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610362. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 5043; NSL 183417; 2223.
- PI 610363. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4492; NSL 183425; 3509-21. Crops Res. Lab, UT St.
Univ., Logan, UT 84322 No further background information available.
- PI 610364. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4493; NSL 183426; 3511-10. Crops Res. Lab, UT St.
Univ., Logan, UT 84322 No further background information available.
- PI 610365. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4494; NSL 183427; 3513-13. Crops Res. Lab, UT St.
Univ., Logan, UT 84322 No further background information available.
- PI 610366. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4495; NSL 183428; 3519-8. Crops Res. Lab, UT St.
Univ., Logan, UT 84322 No further background information available.
- PI 610367. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4500; NSL 183433; 3566-13. Crops Res. Lab, UT St.
Univ., Logan, UT 84322 No further background information available.
- PI 610368. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4502; NSL 183435; 3570. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610369. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4503; NSL 183436; 3572. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610370. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4506; NSL 183439; 3620. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.
- PI 610371. *Beta vulgaris* L. **subsp. vulgaris**
Cultivated. IDBBNR 4508; NSL 183441; 3623. Crops Res. Lab, UT St. Univ.,
Logan, UT 84322 No further background information available.

- PI 610372. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 5049; NSL 183443; 4322.
- PI 610373. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4511; NSL 183445; 5070. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610374. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4513; NSL 183449; 6558. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610375. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4516; NSL 183452; 7212. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610376. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4519; NSL 183455; 7306. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610377. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 5054; NSL 183463; 7533.
- PI 610378. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 5055; NSL 183464; 7537.
- PI 610379. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4525; NSL 183465; 7539. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610380. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4526; NSL 183466; 8018. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610381. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4527; NSL 183467; 9000. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610382. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4528; NSL 183468; 9046A. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610383. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4529; NSL 183470; 9089. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610384. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4530; NSL 183471; 9229. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610385. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4537; NSL 183480; 46167. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610386. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4538; NSL 183481; 46173. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

- PI 610387. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4541; NSL 183484; 55128. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610388. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4542; NSL 183486; 76503. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610389. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4550; NSL 183502; 011. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610390. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4551; NSL 183503; 016. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610391. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4553; NSL 183506; 047. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610392. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4558; NSL 183512; 202H9. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610393. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4560; NSL 183516; 6F5. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610394. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4561; NSL 183517; 14I59C0. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610395. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4562; NSL 183518; 25A2. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610396. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 4563; NSL 183519; 36C1. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.
- PI 610397. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 5074; NSL 183525; F54-22.

The following were donated by Garry A. Smith, USDA, ARS, Crops Research Laboratory, Colorado State University, Fort Collins, Colorado 80523, United States. Received 1984.

- PI 610398. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 5076; NSL 188576; NS-359 (C2). Collected in China. A 2x, multigerm, open-pollinated, commercial sugarbeet variety provided by the Institute of Plant Germplasm Resources, Chinese Academy of Agricultural Science, Beijing, PRC.
- PI 610399. *Beta vulgaris* L. subsp. *vulgaris***
Cultivated. IDBBNR 5077; NSL 188577; NS-C3 (42X55). Collected in China. A 2x, multigerm, open-pollinated, commercial sugarbeet variety provided

by the Institute of Plant Germplasm Resources, Chinese Academy of Agricultural Science, Beijing, PRC.

PI 610400. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 5079; NSL 188579; NS-C5 (B-16). Collected in China. A 2x, multigerm, open-pollinated, commercial sugarbeet variety provided by the Institute of Plant Germplasm Resources, Chinese Academy of Agricultural Science, Beijing, PRC.

The following were donated by Robert T. Lewellen, USDA, ARS, Crop Improvement and Protection Research, 1639 E. Alisal St., Salinas, California 93905, United States. Received 1984.

PI 610401. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 5093; NSL 188593; 70026PL. Diploid, multigerm, self-sterile line from Italy with tolerance to rhizomania. Obtained from Dr. Carlo Tomassini, Alba Company, Padova, Italy.

PI 610402. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 5094; NSL 188594; 64308PL. Diploid, multigerm, self-sterile line from Italy with tolerance to rhizomania. Obtained from Dr. Carlo Tomassini, Alba Company, Padova, Italy.

PI 610403. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4575; NSL 189773; 83W301. Selected in Chile for resistance to yellow wilt.

PI 610404. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4576; NSL 189774; 83W302. Selection in Chile for resistance to yellow wilt.

PI 610405. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4577; NSL 189775; 83W303. Country of origin is Chile. Selection in Chile for resistance to yellow wilt.

PI 610406. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4578; NSL 189776; 83W304. Country of origin: Chile
Selection in Chile for yellow wilt resistance.

PI 610407. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4579; NSL 189777; 84W101. Country of origin: Chile
Selection in Chile for resistance to yellow wilt.

PI 610408. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4580; NSL 189778; 84W102. Country of origin: Chile
Selection in Chile for yellow wilt resistance.

PI 610409. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4581; NSL 189779; 84W103. Country of origin is Chile.
Selection in Chile for resistance to yellow wilt.

PI 610410. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4582; NSL 189780; 84W104. Country of origin is Chile.
Selection in Chile for yellow wilt resistance.

PI 610411. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4583; NSL 189781; 84W105. Country of origin: Chile
Selection in Chile for yellow wilt resistance.

PI 610412. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4584; NSL 189782; 83W106. Selection in Argentina for
resist. to yellow wilt.

PI 610413. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4585; NSL 189783; 84W107. Country of origin is Chile.
Selection in Chile for yellow wilt resistance.

PI 610414. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 4586; NSL 189784; 84W108. Country of origin: Chile
Selection in Chile for resistance to yellow wilt.

The following were donated by Richard Yu, USDA, ARS, Sugarbeet Production
Research, 1639 Alisal St., Salinas, California 93905, United States. Received
1985.

PI 610415. Beta vulgaris L. subsp. vulgaris

Breeding. IDBBNR 5096; NSL 195504; EL40 BREEDING LINE 30 & 18. A
lfspot-bk root resist., self-ster., from 02 clone through 3 generations
of selection. The 1st 2 select. cycles were primarily for incrds lf spot
resist. & lg root size in com- petition. The 3rd cyc. of select. was for
lfspt resistance in Ohio from lns w/high yld & qlty perfor. in Michigan.
Roots were selected for size in competition and shape. Breeders' Seed
No. 70P23.

PI 610416. Beta vulgaris L. subsp. vulgaris

Breeding. IDBBNR 5099; NSL 195507; EL40 BREEDING LINE 22 & 9. Leafspot,
blackroot resistant, self-sterile, from 02 clone through 3 generations
of selection. Roots selected for size in competition and shape; high
yield, quality performance. Sugarbeet Investigations, P.O.B. 1633, East
Lansing, MI. 48823. (1973).

PI 610417. Beta vulgaris L. subsp. vulgaris

Breeding. IDBBNR 5100; NSL 195508; EL40 BREEDING LINE 6 & 12. A
leaf-spot, blackroot res., self-sterile, from 02 clone through 3 gen. of
selection. First 2 sel. cycles primarily for increased leaf-spot res.
and large root size in competi- tion. Third cycle for leaf-spot res. in
Ohio from lines with high yield and quality perf. in Michigan. Roots
selected for size in competition and shape. Breeder's Seed No. 70p23.
Sugar Beet Investigations, E. Lansing, MI., 1973.

The following were donated by G. E. Coe, USDA, ARS, Field Crops Lab., Lab.
6B, Bldg. 009, BARC-West, Beltsville, Maryland 20705, United States. Received
1986.

PI 610418. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5109; NSL 199880; SP85320-01. This monogm cytopl.
male ster. germplsm came from a wild cult. of Beta maritima obtained
from England. It is an abund. sd prod. Six cross. to sugarbt & 6 cycles
of select. to improve root type and disease resistance to leaf spot
caused by Cerco. betic. & to blk root caused by Aphan. coch. It has

moder. lf spot resist. w/a rating of 4.0 on a scale of 0-9. Mod. blk spt resist. Both pink & grn hypocotyl clr.

PI 610419. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5111; NSL 199882; SP85576-01. This monogerm cytoplasmic male-sterile germplasm has green hypocotyl color and a good leaf spot (*Cercospora beticola*) resistance rating of 2.5 (on a scale of 0 to 9). It also has good resistance to black root disease (*Aphanomyces cochlioides*). In some hybrid combinations its sugar yield approached that of MonoHy E4.

PI 610420. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5113; NSL 199884; SP85590-01. This monogerm cytoplasmic male-sterile germplasm has excellent resistance to leaf spot disease cause by *Cercospora beticola* with a disease index of 1.75 on a scale of 0 to 9. The hypocotyl color is green. It had a good sugar yield in some hybrid combinations.

PI 610421. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5115; NSL 199886; SP85655-01. This is a monogerm cytoplasmic male sterile germplasm with good leaf spot (*Cercospora beticola*) disease resistance index of 2.75 on a scale of 0 to 9. It also has moderate resistance to black root caused by *Aphanomyces cochlioides*. It has pink hypocotyl color and is a vigorous line.

PI 610422. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5117; NSL 199888; SP85657-01. This is a monogerm cytopl. male-sterile germplasm having good resist. to lf spot caused by *Cerco. betic.* & moderate resistance to blk root caused by *Aphan. cochlio.* It had a leaf spot rating of 3.0 on a scale of 0 to 9. It contains both pink and green hypocotyl color and has excellent vigor.

The following were donated by Robert T. Lewellen, USDA, ARS, Crop Improvement and Protection Research, 1639 E. Alisal St., Salinas, California 93905, United States. Received 1986.

PI 610423. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5129; NSL 206273; C310(C5)CMS. CMS of C310(C5).

PI 610424. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5148; NSL 206292; N101-3. From the nematode resistance breeding program of J. S. McFarlane, released lines N101, N102, and N103 were increased in bulk without selection. N101, 102 and 103 were released in 1982.

PI 610425. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5149; NSL 206293; N104-5. N104 and N105 were released in 1982 by J. S. McFarlane.

PI 610426. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5151; NSL 206295; NB1 x NB4. F1 hybrid between MS of NB1 x NB4. This F1 hybrid has been used by University of California for many years for physiological, biochemical, and nutritional research. This F1 hybrid and its parental components were previously placed in storage by J. S. McFarlane, but do not purge the older, original lots until these newer lots are tested for genetic purity.

PI 610427. Beta vulgaris L. subsp. vulgaris

Cultivated. IDBBNR 5157; NSL 206311; NR1 2(B.P.). NR1 and NR2 were increased in bulk. Plants from this increase that had a slight Beta procumbens leaf phenotype were selected and threshed separately. This "B.p. type" occurs only in the bolted stage and is not obvious in the vegetative rosette. This trait appears to be linked to NR.

The following were donated by Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India. Received 1983.

PI 610428 QUAR. Pennisetum glaucum (L.) R. Br.
Breeding. ICMA-1; MS 81A; NSL 184367. PL-12.

PI 610429 QUAR. Pennisetum glaucum (L.) R. Br.
Breeding. ICMB-1; MS 81B; NSL 184367. PL-13.

PI 610430 QUAR. Pennisetum glaucum (L.) R. Br.
Cultivar. "WC-C75"; ICMV 1; NSL 189791. CV-95. Collected in Senegal.

The following were developed by DEKALB Genetics Corporation, United States. Received 06/28/1999.

PI 610431 PVPO. Glycine max (L.) Merr.
Cultivar. "CX414cRR". PVP 9900278.

PI 610432. Glycine max (L.) Merr.
Cultivar. "CX405RR". PVP 9900280.

PI 610433. Glycine max (L.) Merr.
Cultivar. "CX299c". PVP 9900281.

PI 610434. Glycine max (L.) Merr.
Cultivar. "CX207c". PVP 9900282.

PI 610435. Glycine max (L.) Merr.
Cultivar. "CX383RR". PVP 9900283.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 06/28/1999.

PI 610436 PVPO. Glycine max (L.) Merr.
Cultivar. "DP 6926". PVP 9900284.

PI 610437 PVPO. Glycine max (L.) Merr.
Cultivar. "DP 5915 RR". PVP 9900285.

PI 610438 PVPO. Glycine max (L.) Merr.
Cultivar. "DP 5718 RR". PVP 9900286.

PI 610439 PVPO. Glycine max (L.) Merr.
Cultivar. "DP 4748". PVP 9900287.

The following were developed by Phytogen Seed Company, LLC, United States. Received 06/28/1999.

PI 610440 PVPO. *Gossypium hirsutum* L.
Cultivar. "PSC413 "Velos"". PVP 9900288.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 06/28/1999.

PI 610441. *Lactuca sativa* L.
Cultivar. "COMMAND"; PX 601. PVP 9900289.

The following were developed by Novartis Seeds, Inc., United States. Received 06/28/1999.

PI 610442 PVPO. *Glycine max* (L.) Merr.
Cultivar. "S24-L2". PVP 9900314.

PI 610443 PVPO. *Glycine max* (L.) Merr.
Cultivar. "S42-H1". PVP 9900315.

PI 610444 PVPO. *Glycine max* (L.) Merr.
Cultivar. "S14-U4". PVP 9900316.

PI 610445 PVPO. *Glycine max* (L.) Merr.
Cultivar. "S19-T9". PVP 9900317.

PI 610446. *Glycine max* (L.) Merr.
Cultivar. "S20-F8". PVP 9900318.

PI 610447. *Glycine max* (L.) Merr.
Cultivar. "S30-J2". PVP 9900319.

The following were developed by Buttonwillow Cotton Research, LLC, United States. Received 06/28/1999.

PI 610448. *Gossypium hirsutum* L.
Cultivar. "BR9605". PVP 9900321.

PI 610449. *Gossypium hirsutum* L.
Cultivar. "BR9801". PVP 9900322.

The following were developed by HybriTech Seed International, Inc., A Unit of Monsanto Company, United States. Received 06/28/1999.

PI 610450 PVPO. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. "ONTARIO". PVP 9900323. Pedigree -
Sierra/WI88-052(era/Tobari66//Lovrin11/3/Oligoculm/4/Archer/5/W81-171).

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 06/28/1999.

PI 610451 PVPO. *Allium cepa* L.

Cultivar. "PS290311". PVP 9900334.

The following were developed by Charles E. Simpson, Texas A&M University, P. O. Box 292, Stephenville, Texas 76401, United States; Jim Starr, Texas A&M University, Dept. of Plant Pathology & Microbiology, Room 120, Peterson Building, College Station, Texas 77843, United States. Received 06/28/1999.

PI 610452. *Arachis hypogaea* L.

Cultivar. "COAN"; TP 262-3-5. PVP 9900338; CV-68. Pedigree - Florunner x [A. batizocoi x (A. cardenasii x A. diogoi)]2x, with the hybrid backcrossed to Florunner for five cycles, and selections made in the BC5F2, but off type plants were rogued through the BC5F2:5. First peanut cultivar in the world which has a high level root-knot nematode (*Meloidogyne arenaria*) resistance. The resistance genes were transferred from the wild peanut *A. cardenasii*. The plants are approx. 20% smaller than Florunner, but the pod size and shape and seed size and shape are almost identical to Florunner. Maturity is equal to Florunner as are chemical and organoleptic characteristics. Yield up to 225% higher than Florunner under heavy nematode pressure. Shelling characters were identical to Florunner.

The following were collected by Charles Tubering, The Holden Arboretum, 9500 Sperry Road, Kirtland, Ohio 44094-5172, United States; Paul Meyer, The University of Pennsylvania, Morris Arboretum, 9414 Meadowlark Avenue, Philadelphia, Pennsylvania 19118, United States; Jeff Lynch, Longwood Gardens, P.O. Box 501, Kennett Square, Pennsylvania 19348, United States; Kris Bachtell, The Morton Arboretum, 4100 Illinois Route 53, Lisle, Illinois 60532-1293, United States. Donated by Shawn Belt, USDA, ARS, U.S. National Arboretum, National Germplasm Repository, Glenn Dale, Maryland 20769-9157, United States. Received 12/18/1997.

PI 610453. *Lespedeza bicolor* Turcz.

Wild. NA 68841; CBS 082. Collected 09/10/1997 in Jilin, China. Latitude 41° 31' 35" N. Longitude 128° 16' 37" E. Elevation 775 m. Changbai County. Disturbed roadside edge with *Corylus heterophylla*, *Quercus mongolica*. Shrub; green to brown fruit.

The following were collected by Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States. Received 10/07/1998.

PI 610454. *Trifolium microcephalum* Pursh

Wild. 96-1. Collected 07/09/1996 in California, United States. Latitude 39° 30' N. Longitude 123° 30' W. Along edge of wooded area in roadside rest area approximately 7.8 miles South of Laytonville on US 101 Mendocino Co., CA. Occasional. Small. Upright. Low growing.

PI 610455. *Trifolium ciliolatum* Benth.

Wild. 96-2. Collected 07/09/1996 in California, United States. Latitude 39° 30' N. Longitude 123° 30' W. Along edge of wooded area in rest area approximately 7.8 miles South of Laytonville on US 101 Mendocino Co., CA. Occasional. Small. Upright. On mature heads the rachis usually extends upward and exposed above the dry florets which tend to deflex downward.

PI 610456. *Trifolium willdenovii* Spreng.

Wild. 96-3. Collected 07/09/1996 in California, United States. Latitude 39° 30' N. Longitude 123° 30' W. Along edge of wooded area in rest area approximately 7.8 miles South of Laytonville on US 101 Mendocino Co., CA. Rare. Medium sized plant. Upright. On mature dry heads the calyx teeth are prickly and stick fingers when harvesting heads. Calyx tends to be open on dry flowers and seed shatter easily. Long narrow lanceolate leaflets.

PI 610457. *Trifolium obtusiflorum* Hook. & Arn.

Wild. 96-4. Collected 07/09/1996 in California, United States. Latitude 39° 40' N. Longitude 123° 40' W. Along side of US 101 on road cut bank approximately 7.2 miles North of Laytonville Mendocino Co., CA. Abundant in this one area. Large upright plants. Dense stand growing on road cut bank. On mature dry heads the calyx teeth are very prickly and stick fingers when harvesting heads. Also saw *T. microcephalum* at this spot.

PI 610458. *Trifolium glomeratum* L.

Wild. 96-5. Collected 07/10/1996 in California, United States. Latitude 39° 50' N. Longitude 123° 50' W. Passing pull-off along side of CA route 1 about 3.5 to 4 miles W of Leggett traveling toward Rockport, Mendocino Co, CA. Abundant in this one area. Small very low growing plants. Moderate stand of plants in one small area along edge of roadside pull-off. On mature dry plants the heads are arranged like beads up the stem at the nodes.

The following were collected by Dennis P. Sheehy, 69086 Allen Canyon Road, Wallowa, Oregon 97885, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States; Mark E. Majerus, USDA-NRCS, Plant Materials Center, Rt. 2, Box 1189, Bridger, Montana 59014-9718, United States; Susan R. Winslow, USDA-NRCS, Bridger PMC, Route 2, Box 1189, Bridger, Montana 59014-9718, United States. Received 05/25/1999.

PI 610459. *Lespedeza daurica* (Laxm.) Schindl. var. *daurica*

Wild. 98HT-216. Collected 09/06/1998 in Mongolia. Latitude 48° 35' 10" N. Longitude 110° 41' 42" E. Elevation 1036 m. Binder Sum, Henti Aimag, east bank of Onon River; Slope eleven percent, Aspect northwest. Terrain and soils varied with microsite, but were generally fine sand along the river and sandy throughout the area, except where deeper soils had developed under tree overstory. *Salix* dominated diverse vegetation close to the river.

PI 610460. *Lespedeza daurica* (Laxm.) Schindl. var. *daurica*

Wild. 98HV-118. Collected 09/02/1998 in Mongolia. Latitude 49° 36' 25" N. Longitude 104° 26' 40" E. Elevation 762 m. Ingettolgoi Sum, Bulgan Aimag, 20 km NE of Khyalganat; Slope one percent, Aspect northeast. Selenge River Valley, forb-grass type, broad bench above river valley, native area adjacent to wheat fields, dry meadow, sandy, light color, brown soil.

PI 610461. *Lespedeza daurica* (Laxm.) Schindl. var. *daurica*

Wild. 98HT-308. Collected 09/02/1999 in Mongolia. Latitude 48° 8' 48" N. Longitude 109° 45' 6" E. Elevation 1341 m. Omnodeiger Sum, Henti Aimag; Slope fifteen percent, Aspect southeast. Moist meadow with

wet soils along small river. Site is low yielding and not very productive.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Alberto Salas, International Potato Center, Avenida La Molina 1895, PO Box 1558, Lima, Lima 12, Peru. Received 12/14/1998.

PI 610462. *Solanum suaveolens* Kunth & C. D. Bouche
Uncertain. 7203. Collected 02/26/1998 in Puno, Peru. Latitude 14° 13' S. Longitude 69° 12' W. Elevation 1430 m. Providence Sandia, near school building "Centro Base de Education," on southeast outskirts of San Juan de Oro. Growing as a weed along roadside. This member of *Solanum* sect. *Basarthrum* is a close non-tuber bearing outgroup of potatoes; white stellate flowers and fruits present.

PI 610463. *Solanum lycopersicoides* Dunal
Wild. 7244. Collected 04/05/1998 in Tacna, Peru. Latitude 17° 20' S. Longitude 70° 14' W. Elevation 2715 m. Providence Candarave, along Candarave to Tarata road, ca one kilometer west of Aricola. Growing in very dry rocky soil. Corollas yellow, fruits green turning black and yellow.

The following were developed by Robert E. Allan, USDA-ARS, Dept. of Crop & Soil Science, 209 Johnson Hall, Pullman, Washington 99164, United States. Received 06/11/1999.

PI 610464. *Triticum aestivum* L. subsp. *aestivum*
Genetic. Pureline. ARS93272; PS961342. Pedigree - Chugoku 81/5*Nugaines, ARS93272. Winter wheat two gene (Rht1Rht2) semidwarf near-isoline in the soft white winter wheat background of Nugaines (NGN). Rht1 was derived from Chugoku 81 and Rht2 from NGN. Except for plant height, phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, short to midlong; germ midsize; crease midwide; brush short. Compared to NGN, reduced plant height (33%), grain yield (3%), test wt. (3%), kernel wt. (12%), spike no. (9%). Similar to NGN for heading date, kernels/spike and % lodging. Higher (2%) harvest index.

PI 610465. *Triticum aestivum* L. subsp. *aestivum*
Genetic. Pureline. ARS93273; PS961343. Pedigree - Chugoku 81/5*Nugaines, ARS93273. Winter wheat two gene (Rht1Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81 and Rht2 from NGN. Except for plant height, phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, short to midlong; germ midsize; crease midwide; brush short. Compared to NGN, reduced plant height (36%), grain yield (12%), test wt. (3%), kernel wt. (2%), spike no. (10%), kernels/spike (10%); heads 1 d later, higher (11%) harvest index and has less lodging (2% vs 7%) than NGN.

PI 610466. *Triticum aestivum* L. subsp. *aestivum*
Genetic. Pureline. ARS93274; PS961344. Pedigree - Chugoku 81/5*Nugaines, ARS93274. Winter wheat two gene (Rht1Rht2) semidwarf near-isoline in the soft white-winter background of Nugaines (NGN). Rht1 derived from

Chugoku 81 and Rht2 from NGN. Except for plant height, phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, short to midlong; germ midsize; crease midwide; brush short. Compared to NGN, reduced plant height (31%), grain yield (7%), test wt. (4%), kernel wt. (8%), spike no. (12%). Heads 1 d later, higher (9%) harvest index and more kernels/spike (18%). Similar to NGN for % lodging.

PI 610467. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93275; PS961345. Pedigree - Chugoku 81/5*Nugaines, ARS93275. Winter wheat one gene (Rht1) semidwarf near-isoline in Nugaines (Soft white winter) background. Rht1 derived on Chugoku 81. Phenotypically similar to Nugaines (NGN). Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater grain yield (10%), kernel wt. (3%), and kernels/spike (10%). Similar to NGN for plant height, spike no., harvest index and % lodging. Heads 2 d earlier than NGN and has lower test wt. (1%).

PI 610468. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93276; PS961346. Pedigree - Chugoku 81/5*Nugaines, ARS93276. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 was derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower spike no. (2%), harvest index (3%), with slightly higher grain yield (1%) and test wt. (1%). Similar to NGN for heading date, kernel wt., kernels/spike and % lodging. Taller (3%) than NGN.

PI 610469. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93277; PS961347. Pedigree - Chugoku 81/5*Nugaines, ARS93277. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to Nugaines (NGN). Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater grain yield (7%), kernels/spike (24%), and harvest index (2%). Lower test wt. (1%), kernel wt. (5%), and spike no. (15%). Similar to NGN for plant height, heading date and % lodging.

PI 610470. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93278; PS961348. Pedigree - Chugoku 81/5*Nugaines, ARS93278. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize, crease midwide; brush short. Compared to NGN, lower grain yield (3%), kernel wt. (2%), spike no. (11%), and is 1% shorter in height. 13% more kernels/spike than NGN. Similar to NGN for heading date, test wt., harvest index, and % lodging.

PI 610471. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93279; PS961349. Pedigree - Chugoku 81/5*Nugaines, ARS93279. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease

midwide; brush short. Compared to NGN, lower test wt. (1%), spike no. (5%), harvest index (4%) and slightly shorter plant height (1%). 4% more kernels/spike and heads 2 d earlier than NGN. Lodging less (3% vs 7%).

PI 610472. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93280; PS961350. Pedigree - Chugoku 81/5*Nugaines, ARS93280. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to Nugaines (NGN). Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater grain yield (2%), kernels/spike (10%), harvest index (2%). Slightly lower test wt. (1%), kernel wt. (1%), and spike no. (4%). Similar to NGN for plant height and % lodging.

PI 610473. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93281; PS961351. Pedigree - Chugoku 81/5*Nugaines, ARS93281. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (1%), test wt. (1%), kernel wt. (6%), spike no. (9%) and 3% shorter height. Greater kernels/spike (15%) and harvest index (8%) than NGN. Heads 2 d earlier than NGN and similar for % lodging.

PI 610474. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93282; PS961352. Pedigree - Chugoku 81/5*Nugaines, ARS93282. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater kernels/spike (3%), harvest index (4%). Similar to NGN for plant height, grain yield, test wt., kernel wt., spike no., and % lodging. Heads 2 d earlier than NGN.

PI 610475. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93284; PS961354. Pedigree - Chugoku 81/5*Nugaines, ARS93284. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater grain yield (8%), kernel wt. (3%), kernels/spike (11%). Lower test wt. (2%), spike no. (5%), and similar to NGN for harvest index. Taller (3%), heads 1 d earlier NGN and sustains more lodging (14% vs. 7%).

PI 610476. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93285; PS961355. Pedigree - Chugoku 81/5*Nugaines, ARS93285. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater grain yield (6%), kernels/spike (17%). Lower test wt. (2%), spike no. (8%), harvest index (5%) and similar kernel wt. Taller (1%), heads 1 d earlier than NGN and sustains more lodging (10% vs 7%).

PI 610477. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93292; PS961362. Pedigree - Chugoku 81/5*Nugaines, ARS93292. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, furiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater kernels/spike (17%), harvest index (5%). Lower grain yield (7%), test wt. (1%), kernel wt. (6%), spike no. (11%) and similar for % lodging. Heads 2 d earlier and is shorter (7%) than NGN>.

PI 610478. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93294; PS961364. Pedigree - Chugoku 81.5*Nugaines, ARS93294. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (5%), harvest index (5%); greater kernels/spike (4%) and similar for test wt., spike no., kernel wt. and heading date. Taller (4%) and sustains more lodging (14% vs. 7%) than NGN.

PI 610479. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93296; PS91366. Pedigree - Chugoku 81/5*Nugaines, ARS93296. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater kernels/spike (15%), lower grain yield (4%), kernel wt. (2%), spike no. (5%), and harvest index (4%). Similar test wt. and % lodging. Taller (1%) and heads 1 d later than NGN.

PI 610480. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93298; PS961368. Pedigree - Chugoku 81/5*Nugaines, ARS93298. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (8%), kernel wt. (12%), spike no. (4%). Greater kernels/spike (14%) and similar test wt. and harvest index. Shorter (5%), head 1 d earlier than NGN and sustains more lodging (13% vs. 7%).

PI 610481. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93299; PS961369. Pedigree - Chugoku 81/5*Nugaines, ARS93299. Winter wheat one gene (Rht2) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht2 derived from NGN. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, greater kernels/spike (13%), harvest index (2%); lower grain yield (8%), test wt. (1%), kernel wt. (9%), spike no. (12%). Shorter (5%), heads 1 d earlier and sustains more lodging (14% vs. 7%) than NGN.

PI 610482. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93300; PS961370. Pedigree - Chugoku 81/5*Nugaines, ARS93300. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft winter background of Nugaines (NGN). Rht1 derived from Chugoki 81. Phenotypically similar to (NGN). Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong-germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (6%), test wt. (2%), kernel wt. (13%), spike no. (11%). Higher kernels/spike (25%) and similar harvest index. Slightly taller (1%), heads 2 d earlier than NGN and sustains more lodging (12% vs. 7%).

PI 610483. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93303; PS961373. Pedigree - Chugoku 81/5*Nugaines, ARS93303. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoku 81. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (3%), test wt. (2%), kernel wt. (7%), spike no. (3%). Higher kernels/spike (7%) and similar harvest index and plant height to NGN. Heads 1 d earlier and sustains more lodging (12% vs 7%) than NGN>.

PI 610484. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93305; PS961375. Pedigree - Chugoku 81/5*Nugaines, ARS93305. Winter wheat one gene (Rht1) semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Rht1 derived from Chugoki 81. Phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (8%), test wt. (2%), kernel wt. (8%), spike no. (9%) and similar plant ht., kernels/spike, and % lodging. Higher (3%) harvest index and heads 2 d earlier than NGN.

PI 610485. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93307; PS961377. Pedigree - Chugoku 81/5*Nugaines, ARS93307. Winter wheat non-semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Lacks semidwarf genes Rht2 of NGN and Rht1 of Chugoku 81. Except for taller plant ht., phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (24%), spike no. (13%); harvest index (15%); greater kernels/spike (5%); similar test wt. and kernel wt. Taller (25%), heads 3 d earlier and sustains more lodging (25% vs. 7%) than NGN.

PI 610486. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93308; PS961378. Pedigree - Chugoku 81/5*Nugaines, ARS93308. Winter wheat non-semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Lacks semidwarf genes Rht2 of NGN and Rht1 of Chugoki 81. Except for taller plant ht., phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (25%), spike no. (10%); harvest index (10%). Higher kernel wt. (3%); similar for test wt. and kernels/spike. Taller (27%), heads 5 d earlier and sustains more lodging (22% vs. 7%) than NGN.

PI 610487. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. ARS93309; PS961379. Pedigree - Chugoku 81/5*Nugaines, ARS93309. Winter wheat non-semidwarf near-isoline in the soft white winter background of Nugaines (NGN). Lacks semidwarf genes Rht2 of NGN and Rht1 of Chugoku 81. Except for taller plant ht., phenotypically similar to NGN. Spikes white, fusiform, awned. Kernels soft, white, elliptical, midlong; germ midsize; crease midwide; brush short. Compared to NGN, lower grain yield (27%), test wt. (3%), kernel wt. (3%), spike no. (14%), kernels/spike (14%), harvest index (23%). Taller (29%), sustains more lodging (30% vs. 7%) than NGN. Similar in heading date.

The following were developed by Robert T. Lewellen, USDA, ARS, Crop Improvement and Protection Research, 1639 E. Alisal St., Salinas, California 93905, United States. Received 06/07/1999.

PI 610488. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. C26; R926; R826; R726. GP-212. Pedigree - F1 plants between C37 x *Beta vulgaris* ssp. *maritima*. Multigerm, self-sterile line derived from composite crosses between C37 sugarbeet and *Beta vulgaris* ssp. *maritima*. Bvm is principally from collections made by Dr. D. Doney in France, UK and Ireland, that subsequently were selected for resistance to rhizomania at Salinas and crossed in bulk to C37. The UK accessions were in the PI 518298 - 518372 (WB 620-694) series. Irish accessions were in the PI 518381-PI 518416 (WB 703-738) series. French accessions were in the PI 518598 - 518608 (WB 852-862) series.

PI 610489. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. C27; R927; R827; R727. GP-213. Pedigree - Estimated to have approx. 25% *Beta vulgaris* ssp. *maritima* germplasm, 25% C37, and 50% C69. Multigerm, self-sterile line derived from composite crosses among C37 and C69 sugarbeet and *Beta vulgaris* ssp. *maritima*. Bvm mainly from UK, France and Poland. Selected Bvm plants were crossed in bulk to C37 and C69. F1 plants were identified by resistance to rhizomania. May have rhizomania resistance factor Rz from C69 and/or resistance factors from Bvm. PI contributing plants were PI 518426, 518435 and 518440 (UK); PI 535833, 535835 and 535843 (Poland); PIs 540568, 549575, 540588, 540593, 540596, 549598, 540599, 540600, 540601, 540602, 540603, 540604 and 549605 (France).

PI 610490. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. CP01; P913; P813. GP-210. Pedigree - BC4 in C37 sugarbeet background. Initial cross used sugarbeet as the female and WB97 as the male. Multigerm, self-sterile line that segregates for resistance to powdery mildew (*Erysiphe polygoni*). Resistance to powdery mildew is conditioned by a single dominant factor (Pm) derived from WB97 *Beta vulgaris* ssp. *maritima*.

PI 610491. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. CP02; P914; P814. GP-211. Pedigree - BC4 in a C37 sugarbeet background. Initial cross used sugarbeet as the female and WB242 as the male. Multigerm, self-sterile line that segregates for resistance to powdery mildew (*Erysiphe polygoni*). Resistance to powdery mildew is conditioned by a single dominant factor (Pm) derived from WB242 *Beta vulgaris* ssp. *maritima*.

The following were developed by David A. Dierig, USDA, ARS, U.S. Water Conservation Laboratory, 4331 E. Broadway Rd., Phoenix, Arizona 85040, United States; Terry A. Coffelt, USDA, ARS, U.S. Water Conservation Laboratory, 4331 E. Broadway Rd., Phoenix, Arizona 85040-8807, United States; L. Lauver, USDA-ARS, U.S. Water Conservation Lab., 4331 E. Broadway Rd., Phoenix, Arizona 85040-8832, United States; P.M. Tomasi, USDA-ARS, U.S. Water Conservation Lab., 4331 E. Broadway Rd., Phoenix, Arizona 85040-8832, United States; W.E. Rayford, USDA-ARS, National Center for Agricultural Utilization, Peoria, Illinois 61604, United States. Received 06/02/1999.

PI 610492. *Lesquerella fendleri* (A. Gray) S. Watson

Breeding. WCL-YS1; Yellow Seed Coat. GP-29. Pedigree - Developed from two single plant selections for yellow seed coat originating from the wild accession PI 311165. Improvements of *Lesquerella fendleri* are necessary for this potential industrial crop to be successfully grown in cultivation. Many applications of this hydroxy seed-oil require special processing to remove pigmentation from the oil. Seed coat color is associated with the seed-oil pigment. A new germplasm line was developed with yellow seed coat color compared with the normal brown color. This line has less pigmentation in the oil and provides germplasm with high genetic diversity for future improvements.

The following were developed by Margaret E. Smith, Cornell University, Department of Plant Breeding, 252 Emerson Hall, Ithaca, New York 14853-1902, United States; L. Ericson, Cornell University, Dept. of Plant Breeding and Biometry, 252 Emerson Hall, Ithaca, New York 14853, United States. Received 05/26/1999.

PI 610493. *Zea mays* L. subsp. *mays*

Breeding. Inbred. NY5526; 95526. PL-301. Pedigree - Developed by two generations of selfing from an S2 family of the Multiple Borer Resistant (MBR) population developed by the Int. Maize and Wheat Improvement Ctr. (CIMMYT). Source of resistance to both leaf feeding and stalk boring by the European corn borer (*Ostrinia nubilalis*). Medium height inbred with long semi-upright yellowish-green leaves and good standability. Late flowering at Aurora, NY, with mid-silk a few days later than mid-anthesis. Tassels large and highly-branched with yellow anthers; silks red. Ear placement low and the ear is long shanked and girthy, with large lemon yellow dent kernels and a white cob.

PI 610494. *Zea mays* L. subsp. *mays*

Breeding. Inbred. NY6371; 86371. PL-302. Pedigree - Developed by two generations of selfing from an S2 family of the Multiple Borer Resistant (MBR) population developed by the Int. Maize and Wheat Improvement Ctr. (CIMMYT). Source of resistance to both leaf feeding and stalk boring by the European corn borer (*Ostrinia nubilalis*). Medium-tall inbred with long, stiff, nearly horizontal leaves and good standability. Late flowering with mid-silk slightly later than mid-anthesis at Aurora, NY. Large tassels with 8-12 long branches and yellow anthers; silks red. Nice slightly tapered ears with thick white cobs and 14-16 rows of lemon yellow rounded kernels that shell easily.

The following were developed by An Hang, USDA, ARS, National Small Grains Germplasm, Research Facility, Aberdeen, Idaho 83210, United States; George L. Hosfield, USDA, ARS, Michigan State University, Department of Crop & Soil

Science, East Lansing, Michigan 48824-1325, United States; Matt Silbernagel, USDA, ARS, Vegetable Crop Production, IAREC, P.O. Box 30, Prosser, Washington 99350, United States; Phillip Miklas, USDA, ARS, Irrigated Agric. Research & Extension Ctr., 24106 North Bunn Road, Prosser, Washington 99350-9687, United States. Received 06/18/1999.

PI 610495. *Phaseolus vulgaris* L.

Cultivar. "LeBaron". CV-166; PVP 9900435. Pedigree - X88403 / Revolucion // P86297. Very early small red bean with growth habit varying from upright (Type IIa) to floppy (Type IIIa). Maturing 8 to 10 days earlier than Rufus and NW-63. Yield very comparable to other small red commercially grown in the cool areas where the growing season is short (Northern states and Canada). Good canner like Rufus and NW-63, two commercially grown small red dry beans. Carries the single recessive bc-1(2) gene for resistance to bean common mosaic virus (BCMV). The recessive resistance gene protects plants against systemic infection caused by BCMV from pathogroups I, II, III, and IV of the virus. This gene is also thought to condition tolerance to NL-3 strain of bean common mosaic necrosis virus.

The following were collected by Pietro Perrino, Dirigente di Ricerca del C.N.R., Istituto di Genetica Vegetale, c/o Facolta di Agraria, Bari, Apulia 70126, Italy. Donated by A. E. Hall, University of California, Department of Botany & Plant Sciences, Riverside, California 92521, United States. Received 10/31/1997.

PI 610496. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 103236; UCR 5352. Collected in Italy.

PI 610497. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 103264; UCR 5353. Collected in Italy.

PI 610498. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 103442; UCR 5354. Collected in Italy.

PI 610499. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 106823; UCR 5355. Collected in Greece.

PI 610500. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 106826; UCR 5356. Collected in Greece.

PI 610501. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 107016; UCR 5357. Collected in Greece.

PI 610502. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 107571; UCR 5358. Collected in Greece.

PI 610503. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 107632; UCR 5359. Collected in Greece.

PI 610504. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 107634; UCR 5360. Collected in Greece.

PI 610505. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Cultivated. M. G. 110252; UCR 5361. Collected in Italy.

- PI 610506. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 110253; UCR 5362. Collected in Italy.
- PI 610507. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 112027; UCR 5363. Collected in Italy.
- PI 610508. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 112245; UCR 5364. Collected in Italy.
- PI 610509. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 112246; UCR 5365. Collected in Italy.
- PI 610510. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 112247; UCR 5366. Collected in Italy.
- PI 610511. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 112248; UCR 5367. Collected in Italy.
- PI 610512. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 112922; UCR 5368. Collected in Italy.
- PI 610513. *Vigna unguiculata* **subsp. sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113233; UCR 5369. Collected in Italy.
- PI 610514. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113234; UCR 5370. Collected in Italy.
- PI 610515. *Vigna unguiculata* **subsp. sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113235; UCR 5371. Collected in Italy.
- PI 610516. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113236; UCR 5372. Collected in Italy.
- PI 610517. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113237; UCR 5373. Collected in Italy.
- PI 610518. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113238; UCR 5374. Collected in Italy.
- PI 610519. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113239; UCR 5375. Collected in Italy.
- PI 610520. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113240; UCR 5376. Collected in Italy.
- PI 610521. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113241; UCR 5377. Collected in Italy.
- PI 610522. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113242; UCR 5378. Collected in Italy.
- PI 610523. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113243; UCR 5379. Collected in Italy.
- PI 610524. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113245; UCR 5380. Collected in Italy.

- PI 610525. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113246; UCR 5381. Collected in Italy.
- PI 610526. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113247; UCR 5382. Collected in Italy.
- PI 610527. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113248; UCR 5383. Collected in Italy.
- PI 610528. *Vigna unguiculata* **subsp. sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113249; UCR 5384. Collected in Italy.
- PI 610529. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113251; UCR 5385. Collected in Italy.
- PI 610530. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113253; UCR 5386. Collected in Italy.
- PI 610531. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113254; UCR 5387. Collected in Greece.
- PI 610532. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113733; UCR 5388. Collected in Italy.
- PI 610533. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113735; UCR 5389. Collected in Italy.
- PI 610534. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113737; UCR 5390. Collected in Italy.
- PI 610535. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113752; UCR 5391. Collected in Italy.
- PI 610536. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113753; UCR 5392. Collected in Italy.
- PI 610537. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113754; UCR 5393. Collected in Italy.
- PI 610538. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113755; UCR 5394. Collected in Italy.
- PI 610539. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113756; UCR 5395. Collected in Italy.
- PI 610540. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113759; UCR 5396. Collected in Italy.
- PI 610541. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113761; UCR 5397. Collected in Italy.
- PI 610542. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113763; UCR 5398. Collected in Italy.
- PI 610543. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113764; UCR 5399. Collected in Italy.

- PI 610544. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113765; UCR 5400. Collected in Italy.
- PI 610545. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113766; UCR 5401. Collected in Italy.
- PI 610546. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113767; UCR 5402. Collected in Italy.
- PI 610547. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113768; UCR 5403. Collected in Italy.
- PI 610548. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113769; UCR 5404. Collected in Italy.
- PI 610549. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113771; UCR 5405. Collected in Italy.
- PI 610550. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113772; UCR 5406. Collected in Italy.
- PI 610551. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113773; UCR 5407. Collected in Italy.
- PI 610552. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113774; UCR 5408. Collected in Italy.
- PI 610553. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113775; UCR 5409. Collected in Italy.
- PI 610554. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113776; UCR 5410. Collected in Italy.
- PI 610555. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113777; UCR 5411. Collected in Italy.
- PI 610556. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113778; UCR 5412. Collected in Italy.
- PI 610557. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113779; UCR 5413. Collected in Italy.
- PI 610558. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113780; UCR 5414. Collected in Italy.
- PI 610559. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113781; UCR 5415. Collected in Italy.
- PI 610560. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113782; UCR 5416. Collected in Italy.
- PI 610561. *Vigna unguiculata* **subsp. sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113783; UCR 5417. Collected in Italy.
- PI 610562. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113784; UCR 5418. Collected in Italy.

- PI 610563. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113785; UCR 5419. Collected in Italy.
- PI 610564. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113786; UCR 5420. Collected in Italy.
- PI 610565. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113787; UCR 5421. Collected in Italy.
- PI 610566. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113788; UCR 5422. Collected in Italy.
- PI 610567. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113789; UCR 5423. Collected in Italy.
- PI 610568. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113790; UCR 5424. Collected in Italy.
- PI 610569. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113791; UCR 5425. Collected in Italy.
- PI 610570. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113792; UCR 5426. Collected in Italy.
- PI 610571. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113793; UCR 5427. Collected in Italy.
- PI 610572. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113794; UCR 5428. Collected in Italy.
- PI 610573. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113795; UCR 5429. Collected in Italy.
- PI 610574. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113797; UCR 5430. Collected in Italy.
- PI 610575. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113799; UCR 5431. Collected in Italy.
- PI 610576. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113800; UCR 5432. Collected in Italy.
- PI 610577. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113801; UCR 5433. Collected in Italy.
- PI 610578. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113802; UCR 5434. Collected in Italy.
- PI 610579. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113803; UCR 5435. Collected in Italy.
- PI 610580. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113804; UCR 5436. Collected in Italy.
- PI 610581. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113805; UCR 5437. Collected in Italy.

- PI 610582. *Vigna unguiculata* subsp. **sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113806; UCR 5438. Collected in Italy.
- PI 610583. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113807; UCR 5439. Collected in Italy.
- PI 610584. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113808; UCR 5440. Collected in Italy.
- PI 610585. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113809; UCR 5441. Collected in Italy.
- PI 610586. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113810; UCR 5442. Collected in Italy.
- PI 610587. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113811; UCR 5443. Collected in Italy.
- PI 610588. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113812; UCR 5444. Collected in Italy.
- PI 610589. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113813; UCR 5445. Collected in Italy.
- PI 610590. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113814; UCR 5446. Collected in Italy.
- PI 610591. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113816; UCR 5447. Collected in Italy.
- PI 610592. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113817; UCR 5448. Collected in Italy.
- PI 610593. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113818; UCR 5449. Collected in Italy.
- PI 610594. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113819; UCR 5450. Collected in Italy.
- PI 610595. *Vigna unguiculata* subsp. **sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113820; UCR 5451. Collected in Italy.
- PI 610596. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113821; UCR 5452. Collected in Italy.
- PI 610597. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113822; UCR 5453. Collected in Italy.
- PI 610598. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113823; UCR 5454. Collected in Italy.
- PI 610599. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113824; UCR 5455. Collected in Italy.
- PI 610600. *Vigna unguiculata* (L.) Walp. subsp. **unguiculata**
Cultivated. M. G. 113825; UCR 5456. Collected in Italy.

- PI 610601. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113826; UCR 5457. Collected in Italy.
- PI 610602. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113828; UCR 5458. Collected in Italy.
- PI 610603. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113829; UCR 5459. Collected in Italy.
- PI 610604. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113830; UCR 5460. Collected in Italy.
- PI 610605. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113832; UCR 5461. Collected in Italy.
- PI 610606. *Vigna unguiculata* **subsp. sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113835; UCR 5462. Collected in Italy.
- PI 610607. *Vigna unguiculata* **subsp. sesquipedalis** (L.) Verdc.
Cultivated. M. G. 113836; UCR 5463. Collected in Italy.
- PI 610608. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113837; UCR 5464. Collected in Italy.
- PI 610609. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113839; UCR 5465. Collected in Italy.
- PI 610610. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113840; UCR 5466. Collected in Italy.
- PI 610611. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113841; UCR 5467. Collected in Italy.
- PI 610612. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113842; UCR 5468. Collected in Italy.
- PI 610613. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113843; UCR 5469. Collected in Italy.
- PI 610614. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 113844; UCR 5470. Collected in Italy.
- PI 610615. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115046; UCR 5471. Collected in Italy.
- PI 610616. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115106; UCR 5472. Collected in Italy.
- PI 610617. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115107; UCR 5473. Collected in Italy.
- PI 610618. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115199; UCR 5474. Collected in Italy.
- PI 610619. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115200; UCR 5475. Collected in Italy.

- PI 610620. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115202; UCR 5476. Collected in Italy.
- PI 610621. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115203; UCR 5477. Collected in Italy.
- PI 610622. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115204; UCR 5478. Collected in Italy.
- PI 610623. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115205; UCR 5479. Collected in Italy.
- PI 610624. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115208; UCR 5480. Collected in Italy.
- PI 610625. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115209; UCR 5481. Collected in Italy.
- PI 610626. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115210; UCR 5482. Collected in Italy.
- PI 610627. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115211; UCR 5483. Collected in Italy.
- PI 610628. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115212; UCR 5484. Collected in Italy.
- PI 610629. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115213; UCR 5485. Collected in Italy.
- PI 610630. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115214; UCR 5486. Collected in Italy.
- PI 610631. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115215; UCR 5487. Collected in Italy.
- PI 610632. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115216; UCR 5488. Collected in Italy.
- PI 610633. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115217; UCR 5489. Collected in Italy.
- PI 610634. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115218; UCR 5490. Collected in Italy.
- PI 610635. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115219; UCR 5491. Collected in Italy.
- PI 610636. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115220; UCR 5492. Collected in Italy.
- PI 610637. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115221; UCR 5493. Collected in Italy.
- PI 610638. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115222; UCR 5494. Collected in Italy.

- PI 610639. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115223; UCR 5495. Collected in Italy.
- PI 610640. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115224; UCR 5496. Collected in Italy.
- PI 610641. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115225; UCR 5497. Collected in Italy.
- PI 610642. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115226; UCR 5498. Collected in Italy.
- PI 610643. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115227; UCR 5499. Collected in Italy.
- PI 610644. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115228; UCR 5500. Collected in Italy.
- PI 610645. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115229; UCR 5501. Collected in Italy.
- PI 610646. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115230; UCR 5502. Collected in Italy.
- PI 610647. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115231; UCR 5503. Collected in Italy.
- PI 610648. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115232; UCR 5504. Collected in Italy.
- PI 610649. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115237; UCR 5505. Collected in Italy.
- PI 610650. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115238; UCR 5506. Collected in Italy.
- PI 610651. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. M. G. 115524; UCR 5507. Collected in Italy.

The following were collected by P. Barnes-McConnell, Michigan State University, International Agricultural Institute, 200 International Center, East Lansing, Michigan 48824, United States. Donated by A. E. Hall, University of California, Department of Botany & Plant Sciences, Riverside, California 92521, United States. Received 04/01/1994.

- PI 610652. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. UCR 5272; EJURA RED. Collected in Ghana.
- PI 610653. *Vigna unguiculata* (L.) Walp. **subsp. unguiculata**
Cultivated. UCR 5273; DAGARTI. Collected in Ghana.

The following were collected by L. Diatloff, Commonwealth Scientific Industrial Research Organization, 306 Carmody Road, St. Lucia, Queensland 4067, Australia. Donated by A. E. Hall, University of California, Department

of Botany & Plant Sciences, Riverside, California 92521, United States.
Received 06/20/1994.

PI 610654. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
Cultivated. UCR 5274; BIG BUFF (90-98). Collected in Australia.

PI 610655. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
Cultivated. UCR 5275; HOLSTEIN (90-98). Collected in Australia.

The following were donated by A. E. Hall, University of California,
Department of Botany & Plant Sciences, Riverside, California 92521, United
States. Received 08/28/1995.

PI 610656. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
Cultivated. UCR 5278. Collected in Senegal.

The following were collected by Jeff Ehlers, University of California,
Department of Botany & Plant Sciences, Riverside, California 92521-0124,
United States. Donated by A. E. Hall, University of California, Department of
Botany & Plant Sciences, Riverside, California 92521, United States. Received
08/28/1995.

PI 610657. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
Cultivated. UCR 5279. Collected in Ghana.

The following were collected by Dennis P. Sheehy, 69086 Allen Canyon Road,
Walla, Oregon 97885, United States; Douglas A. Johnson, USDA, ARS, Forage
and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300,
United States. Received 06/18/1998.

PI 610658. *Beckmannia syzigachne* (Steud.) Fernald
Uncertain. 96S-38. Collected 08/26/1996 in Mongolia. Latitude 44°
59' 50" N. Longitude 96° 48' 50" E. Elevation 1215 m. Gobi-Altai
Aimag, Tsogt Sum, Bayantoorai Bag, experimental farm area 10 km north of
the Bag; Slope of three percent, Aspect south. Desert steppe. Low
piedmont site with brown fine sandy soils. Crops are being grown under
irrigation.

PI 610659. *Beckmannia syzigachne* (Steud.) Fernald
Uncertain. 96S-89. Collected 09/02/1996 in Mongolia. Latitude 46° 6'
44" N. Longitude 91° 33' 16" E. Elevation 1213 m. Khovd Aimag,
Bulgan Sum, experimental area about 1 km from the sum center. Slope
flat; Aspect flat. Outwash plain in desert steppe that has been fenced
for 30 years as an experimental crop area. Flood irrigation is used.
Soils are coarse, recent river alluvium with coarse sandy brown soils.

PI 610660. *Beckmannia syzigachne* (Steud.) Fernald
Uncertain. 96N-297. Collected 08/31/1996 in Mongolia. Latitude 49°
51' 50" N. Longitude 92° 4' 35" E. Elevation 1078 m. Uvs Aimag,
immediately west of Ulaangom airport runway and between runway and
perimeter fence. Aspect is flat. Soils are sand and gravel. Ecological
zone: Steppe.

PI 610661. *Beckmannia syzigachne* (Steud.) Fernald

Uncertain. 96N-324. Collected 09/02/1996 in Mongolia. Latitude 49° 35' 40" N. Longitude 90° 17' 49" E. Elevation 1590 m. Bayan - Olgii Aimag, 3 km SE of Nogoonnuur and 14 NW of Achit Nuur in a large, open, flat meadow. Aspect is Southeast with slope < 1%. Site has much moisture in early spring and salty soils. Ecological zone: Mountain steppe.

PI 610662. *Beckmannia syzigachne* (Steud.) Fernald

Uncertain. 96N-354. Collected 09/06/1996 in Mongolia. Latitude 48° 22' 40" N. Longitude 91° 39' 47" E. Elevation 1201 m. Hovd Aimag, 21 km south of Har-Us and 42 km north of Dund-Us (Hovd). Desert steppe. Wet area that is part of Hovd Gol bottom area used for forage production. There is a small pond and a slough adjacent to collection area. Area is ~ flat and spoils are dark silts.

The following were collected by Beijing Agricultural University, Department of Horticulture, Beijing, Beijing, China. Received 07/06/1939.

PI 610663. *Ipomoea aquatica* Forssk.

Uncertain. Swamp cabbage; G 29918. Collected in Beijing, China.

The following were developed by Deborah A. Samac, University of Minnesota, Department of Plant Pathology, 1991 Upper Buford Circle, St. Paul, Minnesota 55108, United States; Joann Lamb, USDA, ARS, University of Minnesota, Plant Science Research Unit, St. Paul, Minnesota 55108, United States. Received 06/08/1999.

PI 610664. *Medicago sativa* L. subsp. *sativa*

Breeding. Population. UMN 3176; Regen. ineffectively nodu. alfalfa gp. GP-336. Pedigree - Approx. 25% Ineffective Agate (Reg. no. GP-228, PI 536529), 25% Ineffective Saranac (Reg. no. GP-229), PI 536530) and 50% Regen -SY (Reg. no. GP-242, PI 537440). Ineffectively nodulated regenerating alfalfa germplasm developed to permit introduction of new traits into alfalfa by Agrobacterium-mediated transformation and regeneration of transgenic plants in tissue culture in a genetic background that is incapable of utilizing nitrogen (N) from the atmosphere through symbiotic N₂-fixation. Ineffective Agate and Ineffective Saranac plants were crossed onto 68 clones of a regenerating genotype Regen-SY to produce the SYN1. All SYN1 progeny of both crosses were effectively nodulated. Approx. 210 SYN1 plants were randomly intercrossed to produce SYN2 seed. The SYN2 progeny segregated 2970 nodulated to 280 (8.6%) ineffectively nodulated plants. Approx. 59% (56/95) of the ineffective plants regenerated from leaf tissue. Plants which regenerated and were ineffectively nodulated were intercrossed to produce SYN3 seed (UMN 3176) for distribution. The SYN3 population had 98% ineffectively nodulated and 55% regenerating plants.

The following were collected by Larry K. Holzworth, USDA-NRCS State Office, Federal Bldg., Room 443, 10 E. Babcock, Bozeman, Montana 59715-4704, United States. Developed by M.J. Pater, USDA, SCS, Tucson Plant Materials Center, 3241 N. Romero Road, Tucson, Arizona 85705, United States. Received 07/21/1999.

PI 610665. *Digitaria californica* (Benth.) Henrard

Cultivar. "LOETTA"; 9003705; A-18679. CV-116. Collected 10/1975 in Arizona, United States. Latitude 31° 49' N. Longitude 110° 51' W. Elevation 2982 m. From a native stand on the Santa Rita Experimental Range, Pima County. Lat/lon accurate to Santa Rita Experimental Range. Average annual rainfall 11 inches. Mean annual temp. 63° F. Mean winter temp. 50° F and mean summer temp. 76° F. Pedigree - Indigenous selection collected from natural range of adaptation. Released 08/30/1999. Best performing Arizona cottontop accession for stand establishment, vigor, seed production, forage production, and ability to spread in the 1976 Arid Land Grass Initial Evaluation Planting at the Tucson Plant Materials Center where first comparatively evaluated with 22 accessions of *Digitaria californica*. Also evaluated for ability to become established on retired cropland in 1993 at the Avra Valley Planting Site. Three planting depths were evaluated: 0.25, 0.5, and 1 inch. Showed no significant difference in average number of seedlings emerged per foot at the 0.25 and 0.5 inch planting depths. The 1 inch planting depth showed significantly fewer emerged seedlings in comparison with the 0.25 inch planting depth. Also evaluated in the Southwestern Borderlands Savanna Grassland Ecosystem Restoration Study beginning in 1997. Despite below average summer precipitation, performed well in terms of emergence and establishment in a severely denuded site. Documented as having beneficial qualities in terms of diet for wildlife and no negative impacts on wild or domestic animals.

The following were developed by John M. Clarke, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Res. Centre, Airport Road, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; Ron M. DePauw, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Res. Centre, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; T. N. McCaig, Agriculture Canada, Swift Current Research Station, Swift Current, Saskatchewan S9H 3X2, Canada; R.E. Knox, Agriculture Canada, Research Station, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; M.R. Fernandez, Agriculture Canada, Research Station, Swift Current, Saskatchewan, Canada; Grant McLeod, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Research Centre, #1, Airport Road, Swift Current, Saskatchewan S9H 3X2, Canada; N. Ames, Agriculture and Agri-Food Canada, Research Branch, Cereal Research Centre, Winnipeg, Manitoba R3T 2M9, Canada; B.A. Marchylo, Grain Research Laboratory, Canadian Grain Commission, 1404-303 Main St., Winnipeg, Manitoba R3C 3G8, Canada. Received 05/27/1999.

PI 610666. *Triticum turgidum subsp. durum* (Desf.) Husn.

Cultivar. Pureline. "AC NAVIGATOR". CV-889. Pedigree - Kyle/Westbred 881. Released 1998. Adapted to the durum production area of the southern Canadian prairies. Exhibits high yield with semidwarf stature. Resistant to prevalent races of leaf rust (*Puccinia recondita*), stem rust (*P. graminis*), and common bunt (*Tilletia laevis* and *T. caries*). Susceptible to loose smut (*Ustilago tritici*). Excellent end-use quality including very high yellow pigment content and .

The following were developed by John M. Clarke, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Res. Centre, Airport Road, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; Ron M. DePauw, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Res. Centre, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; T. N. McCaig, Agriculture Canada,

Swift Current Research Station, Swift Current, Saskatchewan S9H 3X2, Canada; J. G. McLeod, Agriculture Canada, Swift Current Research Station, P. O. Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; R.E. Knox, Agriculture Canada, Research Station, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; M.R. Fernandez, Agriculture Canada, Research Station, Swift Current, Saskatchewan, Canada; N. Ames, Agriculture and Agri-Food Canada, Research Branch, Cereal Research Centre, Winnipeg, Manitoba R3T 2M9, Canada; B.A. Marchylo, Grain Research Laboratory, Canadian Grain Commission, 1404-303 Main St., Winnipeg, Manitoba R3C 3G8, Canada. Received 05/27/1999.

PI 610667. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Cultivar. Pureline. "AC PATHFINDER". CV-888. Pedigree - Westbred 881/DT367. Released 1998. Adapted to the durum production area of the southern Canadian prairies. Resistant to prevalent races of leaf rust (*Puccinia recondita*), stem rust (*P. graminis*), and common bunt (*Tilletia laevis* and *T. caries*). Susceptible to loose smut (*Ustilago tritici*). Excellent end-use quality, including moderately high yellow pigment content and very high gluten strength.

The following were collected by USDA, NRCS, Rose Lake Plant Materials Center, 7472 Stoll Road, East Lansing, Michigan 48823-9420, United States. Developed by USDA, ARS, Idaho Agr. Exp. Sta., Idaho, United States; USDA, NRCS, Aberdeen Plant Materials Center, P.O. Box 296, Aberdeen, Idaho 83210-0296, United States. Donated by USDA, NRCS, Aberdeen Plant Materials Center, P.O. Box 296, Aberdeen, Idaho 83210-0296, United States. Received 08/06/1999.

PI 610668. *Salix pentandra* L.

Cultivated. 9005049; Aberdeen Selection. Collected in Michigan, United States. Upper Midwest of U.S. From naturalized stands. Pedigree - Selected from a collection of potential windbreak plants assembled and evaluated at the Aberdeen Plant Materials Center from 1981 through 1996. Selected for beauty, hardiness, appropriate growth form for windbreaks, and natural range of adaptability. 95% survival as compared to an average of 87% survival of 15 "medium to tall tree" accessions. Vigor and uniformity rated above average. No observed problems with insects or diseases which affect the survival or appearance. Moderately dense stem and leaf pattern make this an excellent plant for windbreaks. Recommended for use in interior rows of multiple-row windbreaks, for landscaping, and to provide nesting and roosting habitat for birds. Also works well as a single row or twin-row windbreak in situations where an evergreen is not needed or desired. Range of adaptation very broad because plant is expected to be used under managed conditions where rainfall is high or where water is made available. Tolerant of very cold weather and adapted for use in windbreaks and landscaping in all of the Intermountain West. Expect will also perform well in the northern great plains and upper midwest. Soil adaptation deep or moderately deep loams, sandy loams, gravelly loams, well-drained to somewhat poorly drained soils.

The following were developed by Mark Uebersax, Michigan State University, 135 Food Science Building, East Lansing, Michigan 48824-1224, United States; George L. Hosfield, USDA, ARS, Michigan State University, Department of Crop & Soil Science, East Lansing, Michigan 48824-1325, United States; Jim D. Kelly, Michigan State University, Department of Crop & Soil Science, 370 Plant & Soil Sci. Bldg. MSU, East Lansing, Michigan 48824-1325, United

States; Gregory M. Varner, Dry Edible Bean Research, Advisory Board, 3066 S. Thomas Road, Saginaw, Michigan 48603, United States; J. Taylor, Michigan State University, Dept. of Crop and Soil Sci., East Lansing, Michigan 48824, United States. Received 07/20/1999.

PI 610669. *Phaseolus vulgaris* L.

Cultivar. Pureline. "PHANTOM"; B95204. CV-165. Pedigree - Derived from cross of commercial black bean Raven with the white mold tolerant navy breeding line N90618 from Michigan State University bean breeding program. Exhibits an upright type-II, indeterminate growth habit averaging 50cm in height combined with excellent resistance to lodging. Flowers purple and flowers 50 days after planting. Mid-season variety maturing 95 days after planting, ranging from 83 to 98 days depending on season and location. Matures 5 days earlier than Blackhawk and 2 days later than T-39. Resistant to bean common mosaic virus, rust and to races 7, 65 and 73 of anthracnose. Equivalent to T-39 in tolerance to white mold and to Michigan isolates of root rot but susceptible to common blight. Yielded 23 cwt/acre over four years at 18 locations in Michigan and outyielded Raven by 12%. Seed flat, averaging 21 g/100 seed and is similar to T-39 in size, shape and color. In canning trials, exhibited excellent canning quality equivalent to T-39. Released as a pure variety and is uniform and stable within commercially acceptable limits for seed type and purity of black bean cultivars.

The following were developed by George Graef, University of Nebraska, Department of Agronomy, 319 Keim Hall, East Campus, Lincoln, Nebraska 68583-0915, United States; L.L. Korte, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; D.M. White, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States. Received 06/24/1999.

PI 610670. *Glycine max* (L.) Merr.

Cultivar. Pureline. "NE3297". CV-407. Pedigree - Parker x Asgrow A3935. F5 derived line. Mid-Maturity Group III with indeterminate growth habit, white flowers, tawny pubescence, and brown pods at maturity. Seeds dull yellow with a brown hilum. Matures 3 d earlier than Macon with similar yield, 10 cm taller plant height, similar seed weight and oil content, and 9 g kg⁻¹ higher seed protein content. Susceptible to brown stem rot (*Phialophora gregata*), and phytophthora rot (*Phytophthora sojae*). Shows moderate resistance to iron deficiency chlorosis on high pH soils.

PI 610671. *Glycine max* (L.) Merr.

Cultivar. Pureline. "NE3399". CV-408. Pedigree - Holt x Dairyland DSR304. Mid-Maturity Group III with indeterminate growth habit, white flowers, tawny pubescence and brown pods at maturity. Matures 1.3 d later than Iroquois, with 5% higher yield, similar plant height, seed weight, and seed protein and oil content. Susceptible to brown stem rot (*Phialophora gregata*), and phytophthora rot (*Phytophthora sojae*).

The following were donated by Keith F. Schertz, USDA, ARS, P.O. Box DN, Texas A&M University, College Station, Texas 77841, United States. Received 10/06/1993.

PI 610672. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 7; Chin. Nat. Acc. No. 298; Grif 9460; HEI LONG 11B.

Collected in Heilongjiang, China. Latitude 45° 45' N. Longitude 126° 41' E. Harbin. Lat/lon accurate to Harbin. Translation: Heilong 11B, maintainer.

- PI 610673. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 26; Chin. Nat. Acc. No. 10; Grif 9461; BA YE QI. Collected in China. Zhaomeng, Inner Mongolia. Translation: Eight-leaf uniform. Local variety.
- PI 610674. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 30; Chin. Nat. Acc. No. 57; Grif 9462; DA LI HONG. Collected in Heilongjiang, China. Translation: Big red grain. Local variety.
- PI 610675. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 31; Chin. Nat. Acc. No. 105; Grif 9463; SHUANG XIN HONG. Collected in Liaoning, China. Kalyuan. Translation: Double-red-heart. Local variety.
- PI 610676. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 61; Grif 9464; YUE X SHUANG BC16. Collected in Jilin, China. Latitude 43° 50' N. Longitude 125° 20' E. Changchun. Lat/lon accurate to Changchun. Translation: Jump x Double BC16. Improved variety.
- PI 610677. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 63; Grif 9465; YUE X MA BC16. Collected in Jilin, China. Latitude 43° 50' N. Longitude 125° 20' E. Changchun. Lat/lon accurate to Changchun. Translation: Jump x Martin BC16. Improved variety.
- PI 610678. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 64; Grif 9466; MA X YUE BC16. Collected in Jilin, China. Latitude 43° 50' N. Longitude 125° 20' E. Changchun. Lat/lon accurate to Changchun. Translation: Martin x Jump BC16. Improved variety.
- PI 610679. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 65; Grif 9467; SHUANG AL. Collected in Jilin, China. Latitude 43° 50' N. Longitude 125° 20' E. Changchun. Lat/lon accurate to Changchun. Translation: Double dwarf. Improved variety.
- PI 610680. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 66; Grif 9468; YUE-4-1. Collected in Jilin, China. Latitude 43° 50' N. Longitude 125° 20' E. Changchun. Lat/lon accurate to Changchun. Translation: Jump-4-1. Improved Variety.
- PI 610681. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 67; Grif 9469; MA DING. Collected in Jilin, China. Latitude 43° 50' N. Longitude 125° 20' E. Changchun. Lat/lon accurate to Changchun. Translation: Martin sorghum.
- PI 610682. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 177; IS 19434; Grif 9470; HU NO. 2-B. Collected in China. Translation: B Protect No. 2. Improved variety, maintainer.
- PI 610683. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 181; IS 20608; Grif 9471; YUAN-HSIN NO. 2-B. Collected in China. Improved variety, maintainer.

- PI 610684. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 183; IS 20610; Grif 9472; HSIN LIANG NO. 7. Collected in China. Improved variety, restorer.
- PI 610685. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 187; IS 20844; Grif 9473; GAOLIN KAPLIKOVERJT. Collected in China.
- PI 610686. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 188; IS 20845; Grif 9474; GAOLIN. Collected in China.
- PI 610687. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 192; IS 29635; Grif 9475; ERDULL (TWIN SEEDED). Collected in China.
- PI 610688. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 199; IS 29642; Grif 9476; SUIHUA DA SREYAN. Collected in China.
- PI 610689. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 216; IS 30304; Grif 9477; 1. Collected in China.
- PI 610690. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 221; IS 30309; Grif 9478; 6. Collected in China.
- PI 610691. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 230; IS 30318; Grif 9479; ER NIU XIN. Collected in Shanxi, China. Latitude 38° 31' N. Longitude 112° 56' E. Ding Xiang. Lat/lon accurate to Ding Xiang. Local variety.
- PI 610692. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 232; IS 30320; Grif 9480; DA HUANG JIN. Collected in Shanxi, China. Latitude 37° 10' N. Longitude 112° 8' E. Ping Yao. Lat/lon accurate to Ping Yao. Local variety.
- PI 610693. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 233; IS 30321; Grif 9481; DA HEI MAO. Collected in Shanxi, China. Latitude 38° 42' N. Longitude 112° 45' E. Yuan Ping. Lat/lon accurate to Yuan Ping. Local variety.
- PI 610694. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 235; IS 30323; Grif 9482; DA NIU XIN. Collected in Shanxi, China. Latitude 37° 50' N. Longitude 112° 30' E. Tai Yuan. Lat/lon accurate to Tai Yuan. Local variety.
- PI 610695. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 237; IS 30325; Grif 9483; DA RUAN JIANO. Collected in Shanxi, China. Latitude 39° 12' N. Longitude 113° 16' E. Fan Shi. Lat/lon accurate to Fan Shi. Local variety.
- PI 610696. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 238; IS 30326; Grif 9484; DA GAOLIANG. Collected in Shanxi, China. Latitude 37° 12' N. Longitude 111° 14' E. Zhong Yang. Lat/lon accurate to Zhong Yang. Translation: Big sorghum. Local variety.
- PI 610697. *Sorghum bicolor* (L.) Moench **subsp. bicolor**
Cultivated. 239; IS 30327; Grif 9485; WU DA LANG. Collected in Shanxi,

China. Latitude 37° 40' N. Longitude 112° 44' E. Yuci. Lat/lon accurate to Yuci. Translation: Man's name. Local variety.

- PI 610698. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 241; IS 30329; Grif 9486; DA PITOU. Collected in Shanxi, China. Latitude 38° 42' N. Longitude 113° 11' E. Wu Tai. Lat/lon accurate to Wu Tai.
- PI 610699. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 243; IS 30331; Grif 9487; DA QING YE. Collected in China. Yang Zu. Local variety.
- PI 610700. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 245; IS 30333; Grif 9488; XIAO HUANG JIN. Collected in Shanxi, China. Latitude 37° 10' N. Longitude 112° 8' E. Ping Yao. Lat/lon accurate to Ping Yao. Local variety.
- PI 610701. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 246; IS 30334; Grif 9489; XIZO GUAN DONG HUANG. Collected in China. Latitude 37° 40' N. Longitude 112° 44' E. Yuci. Lat/lon accurate to Yuci. Local variety.
- PI 610702. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 247; IS 30335; Grif 9490; XIANG GUAN DONG HUANG. Collected in Shanxi, China. Latitude 37° 50' N. Longitude 112° 30' E. Tai Yuan. Lat/lon accurate to Tai Yuan. Local variety.
- PI 610703. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 248; IS 30336; Grif 9491; XIAO JING JIAO. Collected in Shanxi, China. Latitude 38° 24' N. Longitude 112° 44' E. Xin Xian. Lat/lon accurate to Xin Xian. Local variety.
- PI 610704. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 253; IS 30341; Grif 9492; NIU XIN CHUI. Collected in Shanxi, China. Won Shui. Local variety.
- PI 610705. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 260; IS 30348; Grif 9493; YI BA QI. Collected in Shanxi, China. Latitude 38° 42' N. Longitude 112° 45' E. Yuan Ping. Lat/lon accurate to Yuan Ping.
- PI 610706. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 261; IS 30349; Grif 9494; ER NIU XIN. Collected in Shanxi, China. Shon Yang. Local variety.
- PI 610707. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 262; IS 30350; Grif 9495; ER NIU XIN. Collected in Shanxi, China. Latitude 38° 24' N. Longitude 112° 44' E. Xin Xian. Lat/lon accurate to Xin Xian. Local variety.
- PI 610708. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 264; IS 30352; Grif 9496; ERIANG WEI. Collected in Shanxi, China. Latitude 38° 32' N. Longitude 112° 59' E. Ding Xiang. Lat/lon accurate to Ding Xiang. Local variety.
- PI 610709. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 268; IS 30358; Grif 9497; ER HUANG LANG JI. Collected in

Shanxi, China. Latitude 38° 43' N. Longitude 113° 15' E. Wu Tai.
Lat/lon accurate to Wu Tai. Local variety.

- PI 610710. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 269; IS 30359; Grif 9498; ER HONG GAOLIANG. Collected in
China. Hual Rend. Local variety.
- PI 610711. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 272; IS 30362; Grif 9499; ER PITOU. Collected in Shanxi,
China. Latitude 38° 43' N. Longitude 113° 15' E. Wu Tai. Lat/lon
accurate to Wu Tai. Local variety.
- PI 610712. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 273; IS 30363; Grif 9500; ER WEI BA GAOLIANG. Collected in
Shanxi, China. Latitude 39° 30' N. Longitude 111° 37' E. Pian
Guan. Lat/lon accurate to Pian Guan. Local variety.
- PI 610713. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 274; IS 30364; Grif 9501; BA YE QING. Collected in Shanxi,
China. Latitude 38° 24' N. Longitude 112° 44' E. Xin Xian.
Lat/lon accurate to Xin Xian. Local variety.
- PI 610714. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 276; IS 30367; Grif 9502; JUI YE HONG. Collected in Shanxi,
China. Latitude 37° 14' N. Longitude 111° 43' E. Fen Yang.
Lat/lon accurate to Fen Yang. Local variety.
- PI 610715. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 280; IS 30372; Grif 9503; DA HUANG GAOLIANG. Collected in
Shanxi, China. Latitude 39° 12' N. Longitude 113° 16' E. Fan
Shi. Lat/lon accurate to Fan Shi. Local variety.
- PI 610716. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 281; IS 30373; Grif 9504; DA HUANG PI. Collected in Shanxi,
China. Latitude 37° 12' N. Longitude 111° 14' E. Zhong Yang.
Lat/lon accurate to Zhong Yang. Local variety.
- PI 610717. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 283; IS 30376; Grif 9505; DA NIU WEI. Collected in Shanxi,
China. Latitude 36° 51' N. Longitude 111° 46' E. Ling Shi.
Lat/lon accurate to Ling Shi. Local variety.
- PI 610718. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 284; IS 30377; Grif 9506; DA LI HONG. Collected in Shanxi,
China. Latitude 38° 44' N. Longitude 112° 45' E. Yuan Ping.
Lat/lon accurate to Yuan Ping. Local variety.
- PI 610719. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 288; IS 30382; Grif 9507; XIAO HONG JIAO. Collected in
Shanxi, China. Latitude 38° 32' N. Longitude 112° 59' E. Ding
Xiang. Lat/lon accurate to Ding Xiang. Local variety.
- PI 610720. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 289; IS 30383; Grif 9508; XIAO HUANG LUO SU JIAO. Collected
in Shanxi, China. Latitude 38° 43' N. Longitude 113° 15' E. Wu
Tai. Lat/lon accurate to Wu Tai. Local variety.

- PI 610721. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 290; IS 30384; Grif 9509; XIAO JIN JIAO. Collected in Shanxi, China. Latitude 38° 24' N. Longitude 112° 44' E. Xin Xian. Lat/lon accurate to Xin Xian. Local variety.
- PI 610722. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 291; IS 30385; Grif 9510; XIAO JIN JIAO. Collected in Shanxi, China. Latitude 38° 32' N. Longitude 112° 59' E. Ding Xian. Lat/lon accurate to Ding Xian. Local variety.
- PI 610723. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 294; IS 30388; Grif 9511; XIAO GAO DI JIAO ZI. Collected in Shanxi, China. Latitude 38° 43' N. Longitude 113° 15' E. Wu Tai. Lat/lon accurate to Wu Tai. Local variety.
- PI 610724. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 300; IS 30395; Grif 9512; QI SI FENG. Collected in Shanxi, China. Latitude 39° 6' N. Longitude 112° 59' E. Dai Xian. Lat/lon accurate to Dai Xian. Local variety.
- PI 610725. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 301; IS 30396; Grif 9513; LIU SHI XIAO JIAO. Collected in Shanxi, China. Latitude 38° 44' N. Longitude 112° 45' E. Yuan Ping. Lat/lon accurate to Yuan Ping. Local variety.
- PI 610726. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 302; IS 30397; Grif 9514; CHANG GAN GAOLIANG. Collected in Shanxi, China. Latitude 39° 26' N. Longitude 111° 29' E. Pian Guan. Lat/lon accurate to Pian Guan. Local variety.
- PI 610727. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 7002; 306; 7190; IS 30401; Grif 9515; GAI GAOLIANG. Collected in Shanxi, China. Latitude 37° 48' N. Longitude 113° 37' E. Ping Ding. Lat/lon accurate to Ping Ding. Translation: White sorghum. Local variety.
- PI 610728. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 308; IS 30403; Grif 9516; GAOLIANG. Collected in Shanxi, China. Latitude 37° 2' N. Longitude 111° 55' E. Jie Xiu. Lat/lon accurate to Jie Xiu. Translation: Sorghum.
- PI 610729. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 312; IS 30407; Grif 9517; HEI KE ER NIU WEI. Collected in Shanxi, China. Latitude 36° 4' N. Longitude 111° 22' E. Jin Zhong. Lat/lon accurate to Jin Zhong. Local variety.
- PI 610730. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 315; IS 30411; Grif 9518; SAN ER SUI. Collected in Shanxi, China. Latitude 37° 16' N. Longitude 111° 47' E. Fen Yang. Lat/lon accurate to Fen Yang. Local variety.
- PI 610731. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 317; IS 30414; Grif 9519; GAOLIANG. Collected in Shanxi, China. Latitude 37° 20' N. Longitude 111° 11' E. Zhong Yang. Lat/lon accurate to Zhong Yang. Translation: Sorghum.

- PI 610732. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 318; IS 30416; Grif 9520; GAOLIANG. Collected in Shanxi, China. Latitude 38° 17' N. Longitude 111° 40' E. Lan Xian.
Lat/lon accurate to Lan Xian. Translation: Sorghum.
- PI 610733. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 320; IS 30419; Grif 9521; LANG WEI JIAO. Collected in Shanxi, China. Latitude 38° 44' N. Longitude 112° 45' E. Yuan Ping. Lat/lon accurate to Yuan Ping. Local variety.
- PI 610734. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 321; IS 30420; Grif 9522; HUANG MAO JIAO. Collected in Shanxi, China. Latitude 38° 44' N. Longitude 112° 45' E. Yuan Ping. Lat/lon accurate to Yuan Ping. Local variety.
- PI 610735. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 323; IS 30422; Grif 9523; LANG WEI BA. Collected in Shanxi, China. Latitude 38° 55' N. Longitude 111° 50' E. Wu Zhai.
Lat/lon accurate to Wu Zhai. Local variety.
- PI 610736. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 324; IS 30424; Grif 9524; ZHENG YIAN SAN. Collected in Shanxi, China. Latitude 38° 22' N. Longitude 111° 56' E. Jingle.
Lat/lon accurate to Jingle. Local variety.
- PI 610737. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 327; IS 30428; Grif 9525; HEI KE ZIPI TOU. Collected in Shanxi, China. Latitude 38° 43' N. Longitude 113° 15' E. Wu Tai.
Lat/lon accurate to Wu Tai. Local variety.
- PI 610738. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 328; IS 30429; Grif 9526; ZHONG GAN GAOLIANG. Collected in Shanxi, China. Latitude 37° 52' N. Longitude 112° 33' E. Tai Yuan. Lat/lon accurate to Tai Yuan. Local variety.
- PI 610739. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 332; IS 30434; Grif 9527; SAN ER SUI. Collected in Shanxi, China. Latitude 37° 41' N. Longitude 112° 44' E. Yuci. Lat/lon accurate to Yuci. Local variety.
- PI 610740. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 337; IS 30441; Grif 9528; GAOLIANG. Collected in Shanxi, China. Latitude 37° 12' N. Longitude 112° 11' E. Ping Yao.
Lat/lon accurate to Ping Yao. Translation: Sorghum.
- PI 610741. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 338; IS 30442; Grif 9529; GAOLIANG. Collected in Shanxi, China. Latitude 36° 9' N. Longitude 110° 37' E. Shan Yang.
Lat/lon accurate to Shan Yang. Translation: Sorghum.
- PI 610742. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 342; IS 30447; Grif 9530; HONG MAO GAOLIANG. Collected in China. Zao Quan. Local variety.
- PI 610743. *Sorghum bicolor* (L.) Moench subsp. *bicolor***
Cultivated. 343; IS 30448; Grif 9531; JIAO ZI. Collected in Shanxi,

China. Latitude 37° 2' N. Longitude 111° 55' E. Jie Xiu. Lat/lon accurate to Jie Xiu. Local variety.

PI 610744. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 345; IS 30450; Grif 9532; LANG WEI BA. Collected in Shanxi, China. Latitude 39° 42' N. Longitude 113° 41' E. Hun Yuan. Lat/lon accurate to Hun Yuan. Local variety.

PI 610745. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 351; IS 30457; Grif 9533; FANG SUI GAOLIANG. Collected in Shanxi, China. Latitude 38° 24' N. Longitude 112° 44' E. Xin Xian. Lat/lon accurate to Xin Xian. Local variety.

PI 610746. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 352; IS 30458; Grif 9534; LANG WEI JIAO. Collected in Shanxi, China. Latitude 38° 24' N. Longitude 112° 44' E. Xin Xian. Lat/lon accurate to Xin Xian. Local variety.

PI 610747. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 356; IS 30462; Grif 9535; YI BAN QI. Collected in Shanxi, China. Latitude 38° 44' N. Longitude 112° 45' E. Yuan Ping. Lat/lon accurate to Yuan Ping. Local variety.

PI 610748. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 359; IS 30465; Grif 9536; TIE SHA MAO. Collected in Shanxi, China. Latitude 36° 25' N. Longitude 113° 11' E. Xiang Yuan. Lat/lon accurate to Xiang Yuan. Local variety.

PI 610749. *Sorghum bicolor* (L.) Moench subsp. *bicolor*

Cultivated. 360; IS 30467; Grif 9537; HEI KE JIAO ZI. Collected in Shanxi, China. Latitude 36° 30' N. Longitude 112° 20' E. Qin Yuan. Lat/lon accurate to Qin Yuan. Local variety.

The following were developed by A. Mujeeb-Kazi, International Maize & Wheat Improvement Center, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; R.L. Villareal, International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Deleg. Cuauhtemoc, Mexico City, Federal District 06600, Mexico; L.A. Gilchrist, International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Deleg. Cuauhtemoc, Mexico City, Federal District 06600, Mexico; R. Delgado, International Maize & Wheat Improvement Center, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico. Received 07/16/1999.

PI 610750. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM90.248. GP-562. Pedigree - Crocl/Ae. tauschii (205)//Kauz. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 142d. Height 90cm. Disease damage 2.1.

PI 610751. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM90.250.1. GP-563. Pedigree - Crocl/Ae. tauschii (205)//Borlaug M95. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 138d. Height 85cm. Disease damage 1.1.

PI 610752. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM90.250.2. GP-564. Pedigree - Crocl/Ae. tauschii

(205)//Borlaug M95. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 138d. Height 85cm. Disease damage 1.1.

PI 610753. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM90.358. GP-565. Pedigree - Seri M82//Crocl/Ae. tauschii (224). Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 132d. Height 100cm. Disease damage 2.1.

PI 610754. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM90.412. GP-566. Pedigree - Crocl/Ae. tauschii (213)//Papago M86. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 138d. Height 100cm. Disease damage 2.1.

PI 610755. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM90.483. GP-567. Pedigree - Altar 84/Ae. tauschii (191)//Opata M85. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 80d. Maturity 132d. Height 90cm. Disease damage 2.1.

PI 610756. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM91.153. GP-568. Pedigree - Yaco*2//Crocl/Ae. tauschii (205)//3/Yaco. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 132d. Height 95cm. Disease damage 1.1.

PI 610757. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM91.191. GP-569. Pedigree - Altar 84/Ae. tauschii (224)//2*Yaco. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 138d. Height 100cm. Disease damage 2.1.

PI 610758. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM91.248. GP-570. Pedigree - Papago M86//Crocl/Ae. tauschii (224)//3/2*Borlaug M95. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 88d. Maturity 142d. Height 100cm. Disease damage 2.1.

PI 610759. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. CIGM92.337. GP-571. Pedigree - Altar 84/Ae. tauschii (191)//Yaco/3/Bagula. Septoria leaf blotch resistant bread wheat germplasm. Anthesis 83d. Maturity 138d. Height 95cm. Disease damage 2.1.

The following were developed by A. Mujeeb-Kazi, International Maize & Wheat Improvement Center, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; R.L. Villareal, International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Deleg. Cuauhtemoc, Mexico City, Federal District 06600, Mexico; R. Delgado, International Maize & Wheat Improvement Center, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; M.D.H.M. William, International Maize & Wheat Improvement Center, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; V. Rosas, International Maize & Wheat Improvement Center, Lisboa 27, Apartado 6-641, Mexico City, Federal District 06600, Mexico; A. Cortes, International Maize & Wheat Improvement Center, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico. Received 07/16/1999.

PI 610760. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Breeding. Pureline. CIGM91.347-1. GP-572. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 133d. 1000 kernel weight 46.2g.

- PI 610761. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-2. GP-573. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 83d. Maturity 131d. 1000 kernel weight 46.0g.
- PI 610762. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-3. GP-574. Pedigree - Alter 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 132d. 1000 kernel weight 46.9g.
- PI 610763. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-4. GP-575. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 132d. 1000 kernel weight 49.6g.
- PI 610764. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-5. GP-576. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 83d. Maturity 131 d. 1000 kernel weight 47.5g.
- PI 610765. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-6. GP-577. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 132d. 1000 kernel weight 48.7g.
- PI 610766. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-1. GP-578. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 132d. 1000 kernel weight 47.1g.
- PI 610767. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-2. GP-579. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 132d. 1000 kernel weight 48.4g.
- PI 610768. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-3. GP-580. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 84d. Maturity 132d. 1000 kernel weight 47.3g.
- PI 610769. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-4. GP-581. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 85d. Maturity 132d. 1000 kernel weight 46.0g.
- PI 610770. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-5. GP-582. Pedigree - Altar 84*8/Seri M82. New chromosome 1B derivative durum wheat germplasm. Anthesis 86d. Maturity 133d. 1000 kernel weight 47.3g.
- PI 610771. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-7. GP-583. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 88d. Maturity 137d. 1000 kernel weight 51.4g.

- PI 610772. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-8. GP-584. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 87d. Maturity 134d. 1000 kernel weight 53.4g.
- PI 610773. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-9. GP-585. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 87d. Maturity 134d. 1000 kernel weight 50.7g.
- PI 610774. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-10. GP-586. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 87d. Maturity 134d. 1000 kernel weight 53.4g.
- PI 610775. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-11. GP-587. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 87d. Maturity 136d. 1000 kernel weight 52.6g.
- PI 610776. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-12. GP-588. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 88d. Maturity 135d. 1000 kernel weight 53.8g.
- PI 610777. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.347-13. GP-589. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 88d. Maturity 135d. 1000 kernel weight 56.4g.
- PI 610778. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-6. GP-590. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 87d. Maturity 134d. 1000 kernel weight 48.5g.
- PI 610779. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-7. GP-591. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 88d. Maturity 135d. 1000 kernel weight 49.3g.
- PI 610780. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-8. GP-592. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 88d. Maturity 135d. 1000 kernel weight 48.7g.
- PI 610781. *Triticum turgidum* subsp. *durum*** (Desf.) Husn.
Breeding. Pureline. CIGM91.349-9. GP-593. Pedigree - Altar 84*8/Seri M82. New chromosome T1BL.1RS substitution derivative durum wheat germplasm. Anthesis 88d. Maturity 135d. 1000 kernel weight 49.5g.

The following were developed by Gerald Seiler, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, University Station, Fargo, North Dakota 58105, United States. Received 06/17/1999.

- PI 610782. *Helianthus annuus* L.**
Breeding. Population. GIG-1616-1. GP-237. Pedigree - P21*2 (*Helianthus annuus*)/ GIG-1616 (*H. giganteus*) F2. Plants mostly branched, plant height 151 cm. Flowering (50%) 75 days after planting, self-compatibility (seed set under bags) 80%, viable pollen staining 90%. 100 seed weight 2.7g, test weight 386 kg/m³, and oil content 314 g/kg. Interspecific hybrid. See pedigree for species.
- PI 610783. *Helianthus annuus* L.**
Breeding. Population. GIG-1616-2. GP-238. Pedigree - P21*2 (*Helianthus annuus*)/ GIG-1616 (*H. giganteus*) F2. Plants non-branched, plant height 114 cm. Flowering (50%) 68 days after planting, self-compatibility (seed set under bags) 78%, viable pollen staining 97%. 100 seed weight 5.7g, test weight 322 kg/m³, and oil content 378 g/kg. Interspecific hybrid. See pedigree for species.
- PI 610784. *Helianthus annuus* L.**
Breeding. Population. HIR-828-1. GP-239. Pedigree - P21*2 (*Helianthus annuus*)/ HIR-828 (*H. hirsutus*) F2. Plants mostly branched, plant height 113 cm. Flowering (50%) 71 days after planting, self-compatibility (seed set under bags) 82%, viable pollen staining 97%. 100 seed weight 8.6 g, test weight 270 kg/m³, and oil content 301 g/kg. Interspecific hybrid. See pedigree for species.
- PI 610785. *Helianthus annuus* L.**
Breeding. Population. HIR-828-2. GP-240. Pedigree - P21*2 (*Helianthus annuus*)/ HIR-828 (*H. hirsutus*) F2. Plants mostly non-branched, plant height 130 cm. Flowering (50%) 74 days after planting, self-compatibility (seed set under bags) 55%, viable pollen staining 98%. 100 seed weight 5.5 g, test weight 309 kg/m³, and oil content 393 g/kg. Interspecific hybrid. See pedigree for species.
- PI 610786. *Helianthus annuus* L.**
Breeding. Population. HIR-828-3. GP-241. Pedigree - P21*2 (*Helianthus annuus*)/ HIR-828 (*H. hirsutus*) F2. Plants mostly branched, plant height 127cm. Flowering (50%) 71 days after planting, self-compatibility (seed set under bags) 51%, viable pollen staining 95%. 100 seed weight 8.3 g, test weight 342 kg/m³, and oil content 346 g/kg. Interspecific hybrid. See pedigree for species.
- PI 610787. *Helianthus annuus* L.**
Breeding. Population. HIR-828-4. GP-242. Pedigree - P21*2 (*Helianthus annuus*)/ HIR-828 (*H. hirsutus*) F2. Plants mostly non-branched, plant height 125 cm. Flowering (50%) 68 days after planting, self-compatibility (seed set under bags) 82%, viable pollen staining 99%. 100 seed weight 7.2 g, test weight 283 kg/m³, and oil content 377 g/kg. Interspecific hybrid. See pedigree for species.
- PI 610788. *Helianthus annuus* L.**
Breeding. Population. STR-1622-1. GP-243. Pedigree - P21*2 (*Helianthus annuus*)/ STR-1622 (*H. strumosus*) F2. Plants mostly non-branched, plant height 118 cm. Flowering (50%) 68 days after planting, self-compatibility (seed set under bags) 6%, viable pollen staining 86%. 100 seed weight 9.0 g, test weight 283 kg/m³, and oil content 347 g/kg. Interspecific hybrid. See pedigree for species.

PI 610789. *Helianthus annuus* L.

Breeding. Population. STR-1622-2. GP-244. Pedigree - P21*2 (*Helianthus annuus*)/ STR-1622 (*H. strumosus*) F2. Plants mostly non-branched, plant height 127cm. Flowering (50%) 67 days after planting, self-compatibility (seed set under bags) 4%, viable pollen staining 98%. 100 seed weight 8.0 g, test weight 322 kg/m³, and oil content 380 g/kg. Interspecific hybrid. See pedigree for species.

PI 610790. *Helianthus annuus* L.

Breeding. Population. TUB-825-1. GP-245. Pedigree - P21*2 (*Helianthus annuus*)/ TUB-825 (*H. tuberosus*) F2. Plants mostly branched, plant height 113 cm. Flowering (50%) 71 days after planting, self-compatibility (seed set under bags) 88%, viable pollen staining 93%. 100 seed weight 4.80g, test weight 341 kg/m³, and oil content 374 g/kg. Interspecific hybrid. See pedigree for species.

PI 610791. *Helianthus annuus* L.

Breeding. Population. TUB-825-2. GP-246. Pedigree - P21*2 (*Helianthus annuus*)/ TUB-825 (*H. tuberosus*) F2. Plants mostly non-branched, plant height 126 cm. Flowering (50%) 74 days after planting, self-compatibility (seed set under bags) 93%, viable pollen staining 99%. 100 seed weight 5.3 g, test weight 296 kg/m³, and oil content 375 g/kg. Interspecific hybrid. See pedigree for species.

The following were collected by Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington 99164-6434, United States; Edward J. Garvey, USDA, ARS, Natl. Germplasm Resources Laboratory, Room 409, Building 003, BARC-West, Beltsville, Maryland 20705-2350, United States; Lufter Xhuvëli, Agricultural University of Tirana, Dept. of Agronomy, Rr."Myslym Shyri", Tirana, Albania. Received 09/1996.

PI 610792. *Poa nemoralis* L.

Wild. Al 126; W6 18666. Collected 09/01/1996 in Albania. Latitude 42° 2' 55" N. Longitude 19° 58' 40" E. Elevation 660 m. Along road between Rreshen and Puke, 4-5 km from village of Puke. Scattered among oak, fern, and Juniper shrubs on rocky-stony hillside. Height 40cm. Panicles loose, 7-10cm long. Infrequent.

PI 610793. *Brachypodium sylvaticum* (Huds.) P. Beauv.

Wild. Al 028; W6 18620. Collected 09/1996 in Albania. Latitude 40° 23' 56" N. Longitude 19° 28' 38" E. Elevation 50 m. Jonufer, S of Vlore, off the Adriatic Bay of Vlore. West facing slope in terraced olive orchard. Height 40-60cm.

The following were donated by Welsh Plant Breeding Station, Genetic Resources Unit, Aberystwyth, Wales, United Kingdom. Received 09/03/1991.

PI 610794. *Lolium multiflorum* Lam.

Wild. ABY-BB 1705.75; W6 9264. Collected in Belgium. Latitude 50° 2' N. Longitude 5° 50' E. Elevation 500 m. Longvilly.

PI 610795. *Lolium perenne* L.

Wild. ABY-BA 9118.72; W6 9301. Collected in France. Latitude 48° 47' N. Longitude 4° 55' E. Elevation 100 m. Sermaize-L-Baine.

- PI 610796. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1666.75; W6 9252. Collected in Italy. Latitude 44° 27'
N. Longitude 7° 47' E. Elevation 364 m. Magliano Alpi.
- PI 610797. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1684.79; W6 9258. Collected in Italy. Latitude 45° 22'
N. Longitude 9° 41' E. Elevation 90 m. Crema.
- PI 610798. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1680.75; W6 9257. Collected in Italy. Latitude 45° 30'
N. Longitude 9° 22' E. Elevation 100 m. Vignate.
- PI 610799. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1665.75; W6 9251. Collected in Italy. Latitude 44° 26'
N. Longitude 7° 42' E. Elevation 450 m. Morozzo.
- PI 610800. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1273.69; W6 9243. Collected in Italy. Latitude 45° 19'
N. Longitude 9° 30' E. Elevation 83 m. Lodi.
- PI 610801. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1702.75; W6 9262. Collected in Italy. Latitude 45° 52'
N. Longitude 9° 50' E. Elevation 500 m. Gorno.
- PI 610802. *Lolium perenne* L.**
Wild. ABY-BA 10111.82; W6 9365. Collected in Norway. Latitude 59°
55' N. Longitude 5° 20' E. Elevation 10 m. Fitjar.
- PI 610803. *Lolium perenne* L.**
Wild. ABY-BA 10109.82; W6 9364. Collected in Norway. Latitude 59°
48' N. Longitude 5° 11' E. Elevation 20 m. Bremnes.
- PI 610804. *Lolium perenne* L.**
Wild. ABY-BA 9969.81; W6 9343. Collected in Romania. Latitude 46°
56' N. Longitude 26° 56' E. Elevation 350 m. Roman.
- PI 610805. *Lolium perenne* L.**
Wild. ABY-BA 9978.81; W6 9348. Collected in Romania. Latitude 47°
9' N. Longitude 27° 38' E. Elevation 150 m. Iasi.
- PI 610806. *Lolium perenne* L.**
Wild. ABY-BA 9988.81; W6 9353. Collected in Romania. Latitude 46°
28' N. Longitude 24° 5' E. Elevation 400 m. Ludus.
- PI 610807. *Lolium perenne* L.**
Wild. ABY-BA 9975.81; W6 9346. Collected in Romania. Latitude 47°
12' N. Longitude 27° 0' E. Elevation 150 m. Tirgu Frumos.
- PI 610808. *Festuca pratensis* subsp. *apennina* (De Not.) Hegi**
Wild. ABY-BF 954.A73; W6 9229. Collected in Switzerland. Latitude
46° 33' N. Longitude 7° 1' E. Elevation 1600 m. Moleson.
- PI 610809. *Dactylis glomerata* L.**
Wild. ABY-BC 6977.79; W6 9153. Collected in Spain. Latitude 42° 7'
N. Longitude 7° 45' W. Elevation 750 m. Sandianes.

- PI 610810. *Dactylis glomerata* L.**
Wild. ABY-BC 6970.79; W6 9152. Collected in Spain. Latitude 42° 32' N. Longitude 7° 30' W. Elevation 500 m. Monforte De Lemos.
- PI 610811. *Dactylis glomerata* L.**
Wild. ABY-BC 6923.79; W6 9146. Collected in Spain. Latitude 42° 32' N. Longitude 8° 6' W. Elevation 740 m. Irijo.
- PI 610812. *Dactylis glomerata* L.**
Wild. ABY-BC 6921.80; W6 9145. Collected in Spain. Latitude 42° 32' N. Longitude 8° 6' W. Elevation 680 m. Irijo.
- PI 610813. *Dactylis glomerata* L.**
Wild. ABY-BC 6907.79; W6 9141. Collected in Spain. Latitude 42° 15' N. Longitude 8° 13' W. Elevation 450 m. Melon.
- PI 610814. *Lolium perenne* L.**
Wild. ABY-BA 9830.80; W6 9335. Collected in Wales, United Kingdom. Latitude 52° 11' N. Longitude 2° 51' W. Elevation 50 m. Dilwyn.
- PI 610815. *Lolium perenne* L.**
Wild. ABY-BA 9826.80; W6 9331. Collected in Wales, United Kingdom. Latitude 52° 4' N. Longitude 3° 7' W. Elevation 375 m. Hay.
- PI 610816. *Lolium perenne* L.**
Wild. ABY-BA 9818.80; W6 9326. Collected in Wales, United Kingdom. Latitude 52° 7' N. Longitude 4° 5' W. Elevation 100 m. Lampeter.
- PI 610817. *Lolium perenne* L.**
Wild. ABY-BA 9819.80; W6 9327. Collected in Wales, United Kingdom. Latitude 52° 2' N. Longitude 4° 19' W. Elevation 220 m. Llandysul.
- PI 610818. *Lolium perenne* L.**
Wild. ABY-BA 9812.80; W6 9321. Collected in Wales, United Kingdom. Latitude 52° 23' N. Longitude 3° 51' W. Elevation 300 m. Devil's Bridge.
- PI 610819. *Lolium perenne* L.**
Wild. ABY-BA 9832.80; W6 9337. Collected in Wales, United Kingdom. Latitude 52° 4' N. Longitude 3° 7' W. Elevation 400 m. Hay.
- PI 610820. *Lolium perenne* L.**
Wild. ABY-BA 9990.A81; W6 9354. Collected in Romania. Latitude 45° 51' N. Longitude 25° 48' E. Elevation 600 m. Sfintu Gheorghe.
- PI 610821. *Lolium perenne* L.**
Wild. ABY-BA 9100.72; W6 9296. Collected in Switzerland. Latitude 46° 17' N. Longitude 7° 22' E. Elevation 1276 m. Saviese.
- PI 610822. *Dactylis glomerata* L.**
Wild. ABY-BC 6943.79; W6 9147. Collected in Spain. Latitude 42° 51' N. Longitude 7° 52' W. Elevation 750 m. Palas De Rey.
- PI 610823. *Dactylis glomerata* L.**
Wild. ABY-BC 6919.79; W6 9144. Collected in Spain. Latitude 42° 32' N. Longitude 8° 6' W. Elevation 650 m. Irijo.

- PI 610824. *Lolium perenne* L.**
Wild. ABY-BA 10410.84; W6 9367. Collected in Wales, United Kingdom.
Latitude 53° 3' N. Longitude 3° 41' W. Elevation 240 m. Llanrwst.
- PI 610825. *Lolium perenne* L.**
Wild. ABY-BA 9108.79; W6 9298. Collected in Switzerland. Latitude
47° 11' N. Longitude 6° 55' E. Elevation 980 m. Les Bois.
- PI 610826. *Dactylis glomerata* L.**
Wild. ABY-BC 6911.80; W6 9142. Collected in Spain. Latitude 42° 26'
N. Longitude 8° 8' W. Elevation 630 m. Boboras.
- PI 610827. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1708.75; W6 9266. Collected in Belgium. Latitude 50°
2' N. Longitude 5° 50' E. Elevation 500 m. Longvilly.
- PI 610828. *Lolium perenne* L.**
Wild. ABY-BA 9815.80; W6 9324. Collected in Wales, United Kingdom.
Latitude 52° 9' N. Longitude 3° 24' W. Elevation 150 m. Builth
wells.
- PI 610829. *Lolium perenne* L.**
Wild. ABY-BA 9813.80; W6 9322. Collected in Wales, United Kingdom.
Latitude 52° 29' N. Longitude 4° 3' W. Borth.
- PI 610830. *Dactylis glomerata* L.**
Wild. ABY-BC 6914.79; W6 9143. Collected in Spain. Latitude 42° 28'
N. Longitude 8° 16' W. Elevation 660 m. Beariz.
- PI 610831. *Lolium multiflorum* Lam.**
Wild. ABY-BB 1659.75; W6 9249. Collected in Italy. Latitude 45° 11'
N. Longitude 7° 43' E. Leini.

The following were donated by Research Centre for Agrobotany, I.P.P.Q.,
H-2766 Tapioszele. Received 11/25/1992.

- PI 610832. *Festuca pratensis* Huds.**
Cultivar. "SZILVASVARAD/11."; IV-41-425; 591; W6 11102.

The following were collected by D.P. Sheehy, Eastern Oregon Agricultural
Research Center, Post Office Box E, Union, Oregon 97833, United States;
Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah
State University, Logan, Utah 84322-6300, United States. Received 05/1995.

- PI 610833. *Bromus inermis* subsp. *pumpellianus* (Scribn.) Wagnon**
Wild. W94102; W6 18250. Collected 09/1994 in Mongolia. Latitude 47°
17' 29" N. Longitude 99° 58' 16" E. Elevation 2439 m. About 115 km
SW of Tsetserleg. Steep, rocky east slope, west of Chuluut River Valley.
Alpine.
- PI 610834. *Calamagrostis epigejos* (L.) Roth**
Wild. W94005; W6 18166; SARU 082. Collected 09/1994 in Mongolia.
Latitude 48° 43' 41" N. Longitude 106° 8' 59" E. Elevation 1273
m. 30 km north of Bornuur along roadside. Mountain steppe.

- PI 610835. *Poa attenuata* subsp. *botryoides*** (Trin. ex Griseb.) Tzvelev
Wild. E94022; W6 17995. Collected 09/1994 in Mongolia. Latitude 47° 4' 6" N. Longitude 109° 17' E. Elevation 1463 m. Near herder winter camp at toe-slope of small range of mountains adjacent to Herlen River. Mountain-grass steppe. Soils shallow, even on toe-slope. Position near camp indicates heavy winter grazing occurs.
- PI 610836. *Agropyron cristatum*** (L.) Gaertn.
Wild. E94105; W6 18059. Collected 09/1994 in Mongolia. Latitude 46° 18' 11" N. Longitude 113° 1' 55" E. Elevation 899 m. Southern edge of grass steppe region in Dornod Aimag, eastern Mongolia. Grass steppe. Soils brown, high gravel content, thin, and low fertility. Aspect east, slope 5%.
- PI 610837. *Agropyron cristatum*** (L.) Gaertn.
Wild. W94129; W6 18273. Collected 09/1994 in Mongolia. Latitude 45° 50' 10" N. Longitude 102° 51' 44" E. Elevation 1738 m. About 53 km SE of Arvayheer. Grass steppe. 2-5% NE slope. Soil gravelly. Thin stand of grasses.
- PI 610838. *Agropyron cristatum*** (L.) Gaertn.
Wild. W94099; W6 18247. Collected 09/1994 in Mongolia. Latitude 47° 17' 29" N. Longitude 99° 58' 16" E. Elevation 2439 m. About 115 km SW of Tsetserleg. Steep, rocky east slope, west of Chuluut River Valley. Alpine.
- PI 610839. *Festuca rubra*** L.
Wild. W94101; W6 18249. Collected 09/1994 in Mongolia. Latitude 47° 17' 29" N. Longitude 99° 58' 16" E. Elevation 2439 m. About 115 km SW of Tsetserleg. Steep, rocky east slope, west of Chuluut River Valley. Alpine.
- PI 610840. *Agropyron cristatum*** (L.) Gaertn.
Wild. W94088; W6 18237. Collected 09/1994 in Mongolia. Latitude 47° 43' 51" N. Longitude 100° 33' 27" E. Elevation 2134 m. River valley of a tributary of Hanuy River. About 75 km NW of Tsetserleg by air. Mountain steppe. East slope 5%.
- PI 610841. *Elymus dahuricus*** Turcz. ex Griseb.
Wild. W94007; W6 18168. Collected 09/1994 in Mongolia. Latitude 49° 3' 6" N. Longitude 106° 5' 16" E. Elevation 1017 m. About 11 km north of Bayangol. Summer grazing area adjacent to winter wheat field. Mountain steppe. SE slope 3-5%, well drained soil.
- PI 610842. *Agropyron cristatum*** (L.) Gaertn.
Wild. W94057; W6 18207. Collected 09/1994 in Mongolia. Latitude 49° 43' 5" N. Longitude 105° 17' 24" E. Elevation 835 m. On Toibiin River about 60 km SW of Dzuunburen by air. Mountain steppe.
- PI 610843. *Festuca venusta*** St.-Yves
Wild. W94087; W6 18236. Collected 09/1994 in Mongolia. Latitude 47° 49' 57" N. Longitude 100° 53' 31" E. Elevation 1835 m. About 65 km NW of Tsetserleg by air. On left bank of Hanuy River. Mountain steppe. Poorly drained.

- PI 610844. *Stipa baicalensis*** Roshev.
Wild. E94112; W6 18063. Collected 09/1994 in Mongolia. Latitude 46° 18' 11" N. Longitude 113° 1' 55" E. Elevation 899 m. Southern edge of grass steppe region in Dornod Aimag, eastern Mongolia. Grass steppe. Soils brown, high gravel content, thin, and low fertility. Aspect east, slope 5%.
- PI 610845. *Elymus dahuricus*** Turcz. ex Griseb.
Wild. W94054; W6 18204. Collected 09/1994 in Mongolia. Latitude 49° 43' 5" N. Longitude 105° 17' 24" E. Elevation 835 m. On Toibiin River about 60 km SW of Dzuunburen by air. Mountain steppe.
- PI 610846. *Agropyron cristatum*** (L.) Gaertn.
Wild. E94211; W6 18128. Collected 09/1994 in Mongolia. Latitude 47° 48' 23" N. Longitude 112° 43' 54" E. Elevation 625 m. Near Hulunbaer Sum west of Choibalsan City and close to Herlen River. Collections made from destabilized dunes at edge of grass steppe and moist meadows along river. Grass steppe (with dunes and marsh).
- PI 610847. *Bromus inermis*** Leyss. **subsp. inermis**
Wild. W94014; W6 18173. Collected 09/1994 in Mongolia. Latitude 49° 8' 53" N. Longitude 106° 1' 56" E. Elevation 1128 m. 15-20 km north of Bayangol on ridge top surrounded by hay fields. Mountain steppe. North-sloping ridge, slope 1-5%. Well drained, non-rocky soil.
- PI 610848. *Poa pratensis*** L.
Wild. W94084; W6 18233. Collected 09/1994 in Mongolia. Latitude 47° 49' 57" N. Longitude 100° 53' 31" E. Elevation 1835 m. About 65 km NW of Tsetserleg by air. On left bank of Hanuy River. Mountain steppe. Poorly drained.
- PI 610849. *Poa attenuata*** Trin.
Wild. W94081; W6 18230. Collected 09/1994 in Mongolia. Latitude 48° 23' 22" N. Longitude 101° 14' 29" E. Elevation 1597 m. About 17 km south of Erdenemandal on Hanuy River. River bank on west side. Mountain steppe. East slope 1-2%. Soil well drained.
- PI 610850. *Elymus sibiricus*** L.
Wild. W94061; W6 18211. Collected 09/1994 in Mongolia. Latitude 49° 33' 9" N. Longitude 105° 9' 51" E. Elevation 1160 m. In high meadow of Toibiin River tributary, about 80 km SW of Dzuunburen by air. Mountain steppe. Slope 4% north.
- PI 610851. *Agropyron cristatum* var. *pectinatum*** (M. Bieb.) Tzvelev Wild.
W94141; W6 18283. Collected 09/1994 in Mongolia. Latitude 45° 35' 36" N. Longitude 104° 5' 59" E. Elevation 1479 m. About 22 km NE of Sayhon-Ovaa by air on rolling steppe. Grass steppe. Soil very sandy. 1% W slope.
- PI 610852. *Alopecurus arundinaceus*** Poir.
Wild. W94048; W6 18198. Collected 09/1994 in Mongolia. Latitude 49° 43' 5" N. Longitude 105° 17' 24" E. Elevation 835 m. On Toibiin River about 60 km SW of Dzuunburen by air. Mountain steppe.
- PI 610853. *Agropyron cristatum*** (L.) Gaertn.
Wild. E94101; W6 18055. Collected 09/1994 in Mongolia. Latitude 46° 13' 27" N. Longitude 112° 58' 57" E. Elevation 953 m. Herders camp

in Dornod Aimag, along shallow wash. Grass steppe. Soils brown, high gravel content. Aspect east, slope 5%.

PI 610854. *Elymus dahuricus* Turcz. ex Griseb.

Wild. W94035; W6 18188. Collected 09/1994 in Mongolia. Latitude 49° 58' 43" N. Longitude 105° 41' 57" E. Elevation 1000 m. About 14 km SW of Dzuunburen by air. In hills south of Selenge River. Site surrounded by hills. Meadow. 5-10% slope creek bottom.

PI 610855. *Bromus inermis* Leyss. subsp. *inermis*

Wild. W94146; W6 18287. Collected 09/1994 in Mongolia. Latitude 47° 24' 26" N. Longitude 106° 26' 33" E. Elevation 1692 m. About 68 km SW of Ulaanbaatar. In dry stream bed 0.5 km from main road on east side. Mountain steppe. 2% W slope.

PI 610856. *Elymus dahuricus* Turcz. ex Griseb.

Wild. W94075; W6 18224. Collected 09/1994 in Mongolia. Latitude 48° 39' 23" N. Longitude 102° 7' 23" E. Elevation 1574 m. About 15 km NW of Hayrhan. Open hillside. Mountain steppe. SE slope 3%.

PI 610857. *Elymus sibiricus* L.

Wild. W94123; W6 18267. Collected 09/1994 in Mongolia. Latitude 47° 23' 7" N. Longitude 102° 34' 4" E. Elevation 1530 m. Meadow on east bank of tributary of Hogshin River, 9 km NE of Hotont. Mountain steppe. Soil gravelly. Heavily grazed.

PI 610858. *Elymus dahuricus* Turcz. ex Griseb.

Wild. W94070; W6 18219. Collected 09/1994 in Mongolia. Latitude 48° 56' N. Longitude 102° 49' 14" E. Elevation 1579 m. About 70 km NW of Bulgan. East edge of wide valley. Near tree line on east. Mountain steppe. West slope 5%.

PI 610859. *Trisetum spicatum* (L.) K. Richt.

Wild. W94026; W6 18181. Collected 09/1994 in Mongolia. Latitude 50° 4' 20" N. Longitude 106° 5' 27" E. Elevation 899 m. West of Orhon River and Shaamar, at point where road tops the west tableland. Mountain steppe. Rolling, 2% east slope. Appears burned over.

PI 610860. *Elymus sibiricus* L.

Wild. W94065; W6 18214. Collected 09/1994 in Mongolia. Latitude 49° 22' 16" N. Longitude 104° 53' 4" E. Elevation 1445 m. About 105 km SW of Dzuunburen by air. In abandoned field. Mountain steppe. East slope 2%.

PI 610861. *Agropyron cristatum* (L.) Gaertn.

Wild. W94024; W6 18179. Collected 09/1994 in Mongolia. Latitude 50° 7' 11" N. Longitude 106° 13' 6" E. Elevation 832 m. About 5 km north of Shaamar and 8 km south of Suhbaatar along west side of highway in meadow. Mountain steppe.

PI 610862. *Elymus sibiricus* L.

Wild. W94148; W6 18289. Collected 09/1994 in Mongolia. Latitude 47° 24' 26" N. Longitude 106° 26' 33" E. Elevation 1692 m. About 68 km SW of Ulaanbaatar. In dry stream bed 0.5 km from main road on east side. Mountain steppe. 2% W slope.

PI 610863. *Puccinellia tenuiflora* (Griseb.) Scribn. & Merr.

Wild. W94142; W6 18284. Collected 09/1994 in Mongolia. Latitude 46°

9' 58" N. Longitude 105° 4' 41" E. Elevation 1478 m. About 21 km NE of Erdenedalay. Grass steppe. 2% S slope.

PI 610864. *Agropyron cristatum* (L.) Gaertn.

Wild. W94034; W6 18187. Collected 09/1994 in Mongolia. Latitude 49° 58' 43" N. Longitude 105° 41' 57" E. Elevation 1000 m. About 14 km SW of Dzuunburen by air. In hills south of Selenge River. Site surrounded by hills. Meadow. 5-10% slope creek bottom.

PI 610865. *Bromus inermis* Leyss. subsp. *inermis*

Wild. W94122; W6 18266. Collected 09/1994 in Mongolia. Latitude 47° 23' 7" N. Longitude 102° 34' 4" E. Elevation 1530 m. Meadow on east bank of tributary of Hogshin River, 9 km NE of Hotont. Mountain steppe. Soil gravelly. Heavily grazed.

PI 610866. *Elymus sibiricus* L.

Wild. W94115; W6 18260. Collected 09/1994 in Mongolia. Latitude 47° 30' 59" N. Longitude 100° 41' 22" E. Elevation 2256 m. Dry creek bottom about 20 km west of Ihtamir on north side of road. Mountain steppe. Dry, gravelly soils. 2% SW slope.

PI 610867. *Stipa capillata* L.

Wild. W94015; W6 18174. Collected 09/1994 in Mongolia. Latitude 49° 8' 53" N. Longitude 106° 1' 56" E. Elevation 1128 m. 15-20 km north of Bayangol on ridge top surrounded by hay fields. Mountain steppe. North-sloping ridge, slope 1-5%. Well drained, non-rocky soil.

PI 610868. *Elymus dahuricus* Turcz. ex Griseb.

Wild. W94028; W6 18183. Collected 09/1994 in Mongolia. Latitude 50° 5' 41" N. Longitude 106° 7' 47" E. Elevation 840 m. River bottom meadow about 5 km NW of Shaamar on Orhon River. Site about 400 m from south wooded area near slough. Mountain steppe.

PI 610869. *Bromus inermis* Leyss. subsp. *inermis*

Wild. E94163; W6 18102. Collected 09/1994 in Mongolia. Latitude 47° 50' N. Longitude 118° 40' E. Elevation 457 m. Approximately 30 km from border with Inner Mongolia, extreme northeastern corner of Dornod Aimag. Vast plain to west of Khalkin Gol River. Grass steppe.

PI 610870. *Puccinellia tenuiflora* (Griseb.) Scribn. & Merr.

Wild. W94058; W6 18208. Collected 09/1994 in Mongolia. Latitude 49° 43' 5" N. Longitude 105° 17' 24" E. Elevation 835 m. On Toibiin River about 60 km SW of Dzuunburen by air. Mountain steppe.

PI 610871. *Agropyron cristatum* (L.) Gaertn.

Wild. W94134; W6 18278. Collected 09/1994 in Mongolia. Latitude 44° 55' 10" N. Longitude 102° 50' 40" E. Elevation 1402 m. About 72 km S of Tugrik by air on W side of dry arroyo. Grass steppe. Water course S. Slope 1%. Soil gravelly. Vegetation sparse.

PI 610872. *Elymus dahuricus* Turcz. ex Griseb.

Wild. W94128; W6 18272. Collected 09/1994 in Mongolia. Latitude 46° 37' 23" N. Longitude 102° 54' 7" E. Elevation 2180 m. About 40 km N of Arvayheer by air. Mountain steppe. 2% NE slope. Poorly drained.

PI 610873. *Trisetum spicatum* (L.) K. Richt.

Wild. W94079; W6 18228. Collected 09/1994 in Mongolia. Latitude 48°

35' 32" N. Longitude 101° 53' 33" E. Elevation 1458 m. About 5 km SW of Hayrhan in wide valley, midway up west side. Mountain steppe. East slope 2%.

PI 610874. *Agropyron cristatum* (L.) Gaertn.

Wild. W94143; W6 18285. Collected 09/1994 in Mongolia. Latitude 46° 9' 58" N. Longitude 105° 4' 41" E. Elevation 1478 m. About 21 km NE of Erdenedalay. Grass steppe. 2% S slope.

PI 610875. *Stipa capillata* L.

Wild. E94002; W6 17984. Collected 09/1994 in Mongolia. Latitude 47° 12' N. Longitude 108° 40' 39" E. Elevation 1448 m. On and surrounding Tariat Research Station near Herlen River, Hentii Aimag. Grass steppe uplands above river floodplain. Previously large areas have been plowed in attempt to grow cereals. Most of the plowed land has been abandoned to weeds. Soils shallow, gravelly, and obvious low fertility.

PI 610876. *Elymus sibiricus* L.

Wild. W94103; W6 18251. Collected 09/1994 in Mongolia. Latitude 47° 17' 29" N. Longitude 99° 58' 16" E. Elevation 2439 m. About 115 km SW of Tsetserleg. Steep, rocky east slope, west of Chuluut River Valley. Alpine.

PI 610877. *Stipa sibirica* (L.) Lam.

Wild. E94041; W6 18007. Collected 09/1994 in Mongolia. Latitude 47° 22' 7" N. Longitude 110° 20' 40" E. Elevation 1256 m. Approximately 75 km west of Onderhan city, Hentii Aimag. Irrigated experimental farm growing vegetables. Germplasm collected from native species growing near cultivated areas. Steppe.

PI 610878. *Agropyron cristatum* (L.) Gaertn.

Wild. E94120; W6 18069. Collected 09/1994 in Mongolia. Latitude 46° 51' 49" N. Longitude 114° 34' 1" E. Elevation 808 m. Central Dornod Aimag, eastern Mongolia. Grass steppe. Soils brown, gravelly, fine silt loams. Aspect southeast, slope 2%.

PI 610879. *Stipa baicalensis* Roshev.

Wild. E94127; W6 18074. Collected 09/1994 in Mongolia. Latitude 46° 51' 49" N. Longitude 114° 34' 1" E. Elevation 808 m. Central Dornod Aimag, eastern Mongolia. Grass steppe. Soils brown, gravelly, fine silt loams. Aspect southeast, slope 2%.

PI 610880. *Poa attenuata* subsp. *botryoides* (Trin. ex Griseb.) Tzvelev

Wild. E94102; W6 18056. Collected 09/1994 in Mongolia. Latitude 46° 13' 27" N. Longitude 112° 58' 57" E. Elevation 953 m. Herders camp in Dornod Aimag, along shallow wash. Grass steppe. Soils brown, high gravel content. Aspect east, slope 5%.

PI 610881. *Poa pratensis* L.

Wild. W94093; W6 18241. Collected 09/1994 in Mongolia. Latitude 47° 41' 56" N. Longitude 100° 23' 41" E. Elevation 2134 m. About 85 km NW of Tsetserleg by air. Creek valley of a tributary of Chuluut River. Mountain steppe. SE slope 3-8%. Scattered rock outcrops. Dry site.

PI 610882. *Bromus inermis* Leyss. subsp. *inermis*

Wild. E94225; W6 18139. Collected 09/1994 in Mongolia. Latitude 47° 30' 20" N. Longitude 111° 59' 57" E. Elevation 808 m. Winter camp in

low range of mountains south of Herlen River. Appears to be highly productive grass steppe, much of bottomland used for cutting hay. Grass steppe. Soils in bottom deep and fertile. Aspect southeast, slope 5%.

- PI 610883. *Puccinellia tenuiflora*** (Griseb.) Scribn. & Merr.
Wild. W94083; W6 18232. Collected 09/1994 in Mongolia. Latitude 48° 11' 19" N. Longitude 101° 5' 25" E. Elevation 1695 m. About 5 km north of Hanuy, south of Erdenemandal. Edge of wet meadow. Mountain steppe. SE slope 2%.
- PI 610884. *Poa pratensis*** L.
Wild. W94050; W6 18200. Collected 09/1994 in Mongolia. Latitude 49° 43' 5" N. Longitude 105° 17' 24" E. Elevation 835 m. On Toibin River about 60 km SW of Dzuunburen by air. Mountain steppe.
- PI 610885. *Poa attenuata* subsp. *botryoides*** (Trin. ex Griseb.) Tzvelev
Wild. E94033; W6 18002. Collected 09/1994 in Mongolia. Latitude 47° 12' 38" N. Longitude 109° 42' 46" E. Elevation 1387 m. Cut-over hayfield on former state fodder farm in eastern Hentii Aimag. Grass steppe (native hayfield). Brown chestnut soils that reflect greater depth and fertility than surrounding non-harvested rangeland. Aspect southeast, Slope 2%.
- PI 610886. *Elymus sibiricus*** L.
Wild. W94038; W6 18191. Collected 09/1994 in Mongolia. Latitude 49° 57' 38" N. Longitude 105° 40' 20" E. Elevation 920 m. About 18 km SW of Dzuunburen by air. Along margin of abandoned field. Meadow. Westerly slope 0%.
- PI 610887. *Calamagrostis purpurea*** (Trin.) Trin.
Wild. W94059; W6 18209; SARU 097. Collected 09/1994 in Mongolia. Latitude 49° 43' 5" N. Longitude 105° 17' 24" E. Elevation 835 m. On Toibin River about 60 km SW of Dzuunburen by air. Mountain steppe.
- PI 610888. *Trisetum spicatum*** (L.) K. Richt.
Wild. W94046; W6 18196. Collected 09/1994 in Mongolia. Latitude 49° 48' 30" N. Longitude 105° 25' 24" E. Elevation 895 m. About 44 km SW of Dzuunburen by air and about 5 km south of Selenge River in a creek bottom. Mountain steppe. Slope 3% west.
- PI 610889. *Elymus dahuricus*** Turcz. ex Griseb.
Wild. W94147; W6 18288. Collected 09/1994 in Mongolia. Latitude 47° 24' 26" N. Longitude 106° 26' 33" E. Elevation 1692 m. About 68 km SW of Ulaanbaatar. In dry stream bed 0.5 km from main road on east side. Mountain steppe. 2% W slope.
- PI 610890. *Stipa capillata*** L.
Wild. E94133; W6 18080. Collected 09/1994 in Mongolia. Latitude 46° 58' 15" N. Longitude 116° 45' 19" E. Elevation 595 m. East central Dornod Aimag, eastern Mongolia. Grass steppe. Similar to other recent sites in same general area. Aspect and slope flat.
- PI 610891. *Calamagrostis purpurea*** (Trin.) Trin.
Wild. W94037; W6 18190; SARU 098. Collected 09/1994 in Mongolia. Latitude 49° 57' 37" N. Longitude 105° 40' 20" E. Elevation 920 m. About 18 km SW of Dzuunburen by air. Along margin of abandoned field. Meadow. Westerly slope 10%.

PI 610892. *Agropyron cristatum* (L.) Gaertn.
Wild. W94127; W6 18271. Collected 09/1994 in Mongolia. Latitude 46° 37' 23" N. Longitude 102° 54' 7" E. Elevation 2180 m. About 40 km N of Arvayheer by air. Mountain steppe. 2% NE slope. Poorly drained.

PI 610893. *Poa attenuata* subsp. *botryoides* (Trin. ex Griseb.) Tzvelev
Wild. E94036; W6 18004. Collected 09/1994 in Mongolia. Latitude 47° 23' 26" N. Longitude 110° 7' 42" E. Elevation 1463 m. Approximately 100 km west of Onderhan City, Hentii Aimag. Toe-slope and lower to middle slope of significant range of hills along Herlen River. Mountain-grass steppe.

PI 610894. *Agropyron cristatum* (L.) Gaertn.
Wild. E94001; W6 17983. Collected 09/1994 in Mongolia. Latitude 47° 12' N. Longitude 108° 40' 39" E. Elevation 1448 m. On and surrounding Tariat Research Station near Herlen River, Hentii Aimag. Grass steppe uplands above river floodplain. Previously large areas have been plowed in attempt to grow cereals. Most of plowed land has been abandoned to weeds. Soils shallow, gravelly, and of obvious low fertility.

PI 610895. *Poa subfastigiata* Trin.
Wild. E94241; W6 18150. Collected 09/1994 in Mongolia. Latitude 47° 13' 47" N. Longitude 109° 0' 18" E. Elevation 960 m. Hentii Aimag, approximately 100 km from Tariat Research Station. Edge of plain along Herlen River where mountains meet plain. Grass-mountain steppe. Soils typical of other sites, brown, shallow. Aspect east, slope 20%.

The following were collected by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 11/02/1993.

PI 610896. *Elymus dahuricus* subsp. *excelsus* (Turcz. ex Griseb.) Tzvelev
Wild. X93048; W6 12966. Collected 08/08/1993 in Xinjiang, China. Latitude 43° 49' N. Longitude 86° 21' E. Elevation 1510 m. 45km southwest of Dafeng, Xinjiang. Plants located on sidehill associated with *Medicago lupulina* (very robust but immature).

PI 610897. *Elymus gmelinii* (Ledeb.) Tzvelev
Wild. X93190; W6 13096. Collected 08/20/1993 in Xinjiang, China. Latitude 43° 46' N. Longitude 89° 27' E. Elevation 1300 m. Silty clay, 48km south of Chitai, very dry rolling foot hills used for winter pastures, Xinjiang.

PI 610898. *Elymus gmelinii* (Ledeb.) Tzvelev
Wild. X93212; W6 13117. Collected 08/21/1993 in Xinjiang, China. Latitude 43° 41' N. Longitude 89° 18' E. Elevation 1870 m. Loam soil, middle pasture, 44km south of Jimsar, east sloping steep hillside pasture near Chuan Zi Jie Village, Xinjiang. Diversity immense.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria

3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610899. *Festuca arundinacea* Schreb.

Wild. M205.CPG94; W6 15934. Collected 07/27/1994 in Morocco. Latitude 31° 16' 8" N. Longitude 7° 57' 38" W. Elevation 1160 m. Near Asni, 2 k north of Asni on road S501. Taroudannt-Marrakech. Grazed, hay. Slope 0-5%, aspect NE. 1/4 shade. Soil hydromorphic red sandy loam on calcareous alluviums, pH 9.5-10.0. Rainfall 460 mm. Moist, seasonally flooded, floodplain. Vegetation closed, seasonal broad-leafed herb veg. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco; Nezha Saidi, National Institute for Agricultural Research, Rabat, Morocco. Received 08/19/1994.

PI 610900. *Festuca arundinacea* Schreb.

Wild. M217.CPG94; 136213; W6 15946. Collected 07/28/1994 in Morocco. Latitude 31° 17' 24" N. Longitude 7° 22' 58" W. Elevation 2200 m. Near Taddert, 15 k south of Taddert on road P31, Marrakech-Ouarzazate. Grazed, hay. Slope 0-5%, aspect NE. Open. Soil gray sandy loam over alluvium schist/granite, hydromorphic, pH 7.0. Rainfall 850 mm. Moist, seasonally flooded, ravine, alluvial fan, stream terrace. Vegetation closed, seasonal broad-leafed herb. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Badia Baya, Morocco. Received 08/19/1994.

PI 610901. *Festuca arundinacea* Schreb.

Wild. MO90.CPG94; W6 15819. Collected 07/18/1994 in Morocco. Latitude 33° 26' 42" N. Longitude 5° 19' 59" W. Elevation 1080 m. Near Azrou, 5 k west of road P21 on road 3383, 13 k southwest of Azrou. Grazed. Slope 0-5%, aspect S. Area open. Soil sand, pH 9.5-10.0, alluvial watercourse on calcareous schist, heavily degraded. Rainfall 700 mm. Seasonally dry, ravine. Veg. closed, seasonal tall grass. Surrounding veg. cereal-pasture agri. Population distribution frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mustapha Bounejmate, Institut National de la Recherche Agrono, Programme Fourrages (INRA), B.P. 415, Rabat, Morocco; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay

Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco.
Received 08/19/1994.

PI 610902. *Festuca arundinacea* Schreb.

Wild. M138.CPG94; W6 15867. Collected 07/21/1994 in Morocco. Latitude 32° 44' 5" N. Longitude 5° 10' 40" W. Elevation 1640 m. Near Boumia, 10 k west of turn off to Boumia on road P33, Zeida-Arhbalou-north of Serdane. Grazed. Slope 0-5%, aspect S. Open. Soil heavy cracking clay on limestone, pH 10. Rainfall 300 mm. Moist, basin. Vegetation closed, seasonal tall grass. Surrounding veg. degraded evergreen open forest with closed lower layers, cereal-range. Population abundant, distribution uniform. Growth habit erect.

PI 610903. *Festuca arundinacea* Schreb.

Wild. M135.CPG94; W6 15864. Collected 07/20/1994 in Morocco. Latitude 32° 39' 7" N. Longitude 4° 45' 45" W. Elevation 1580 m. Near Midelt, 5 k south of Midelt on road 3424 toward Cirque de Jaffar. Grazed. Slope 6-10%, aspect W. Open. Soil clay-sandy loam from limestone, pH 9.5-10.0. Rainfall 250 mm. Moist-seasonally flooded, basin-irrigation ditch. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen steppe scrub, agri. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610904. *Festuca arundinacea* Schreb.

Wild. M129.CPG94; 136125; W6 15858. Collected 07/20/1994 in Morocco. Latitude 32° 44' 37" N. Longitude 4° 54' 40" W. Elevation 1504 m. Near Zaier, 10 k southeast of Zaier on road P21, Azrou-Midelt. Grazed. Slope 0-5%, aspect N. Open. Soil sand-loam, alluvium with free lime from bedrock, pH 9.5-10.0. Rainfall 250 mm. Moist-seasonally flooded, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen steppe scrub. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610905. *Festuca arundinacea* Schreb.

Wild. M131.CPG94; 136127; W6 15860. Collected 07/20/1994 in Morocco. Latitude 32° 42' 20" N. Longitude 4° 46' 47" W. Elevation 1480 m. Near Midelt, 5 k west of Midelt on road P21, Azrou-Midelt. Grazed, hay. Slope 0-5%, aspect S. Open. Soil sandy loam alluvium limestone derived, pH 9.5-10.0. Rainfall 225 mm. Moist-seasonally flooded, stream terrace-basin. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen steppe scrub. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610906. *Festuca arundinacea* Schreb.

Wild. M119.CPG94; W6 15848. Collected 07/20/1994 in Morocco. Latitude 33° 57' 16" N. Longitude 5° 3' 14" W. Elevation 1880 m. Near Ait-Oufeua, 2 k north of Ait-Oufeua on P21, Azrou-Midelt, 52 k northwest of Midelt. Grazed. Slope 6-10%, aspect SE. Area open. Soil loam, clay, heavy hydromorphic on calcareous limestone type bedrock, pH 9.5-10.0. Moist, ravine. Vegetation closed, evergreen tall grass. Surrounding veg. degraded evergreen forest and scrub. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610907. *Festuca arundinacea* Schreb.

Wild. M157.CPG94; W6 15886. Collected 07/21/1994 in Morocco. Latitude 33° 12' 24" N. Longitude 5° 55' 5" W. Elevation 1206 m. Near Aguelmouss, 8 k north of Aguelmouss on road 2516R, 40 k southeast of Oulmes. Grazed.

Slope 0-5%, aspect SW. Area open. Soil sand-loam on granite, pH 7.5. Rainfall 650 mm. Moist, ravine, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. degraded evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610908. *Festuca arundinacea* Schreb.

Wild. M167.CPG94; 136163; W6 15896. Collected 07/25/1994 in Morocco. Latitude 31° 20' 37" N. Longitude 7° 45' 22" W. Elevation 905 m. Near Arhbalow, 4.5 k northwest of Arhbalow on road S513; Marrakech-Setti-Fatma. Grazed. Slope 0-5%, aspect W.1/4 shade. Sand in alluvium on sandstone, some schist, pH 9.0. Rainfall 500 mm. Moist-seasonally flooded, stream terrace. Veg. closed, seasonal tall grass. Surrounding veg. evergreen open forest with closed lower layers. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mustapha Bounejmate, Institut National de la Recherche Agrono, Programme Fourrages (INRA), B.P. 415, Rabat, Morocco; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610909. *Festuca arundinacea* Schreb.

Wild. M151.CPG94; 136147; W6 15880. Collected 07/21/1994 in Morocco. Latitude 32° 41' 4" N. Longitude 5° 32' 9" W. Elevation 1680 m. Near El-Kbab, 6 k south of El-Kbab on P33, Zeida-K. Tabla, 48 k south of Khenifra. Grazed, hay. Slope 0-5%, aspect W. Open. Soil hydromorphic loam clay bog on limestone, pH 10+. Rainfall 550 mm. Moist-seasonally flooded, ravine-basin, spring fed. Vegetation closed, seasonal tall grass. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610910. *Festuca arundinacea* Schreb.

Wild. M112.CPG94; 136108; W6 15841. Collected 07/20/1994 in Morocco. Latitude 33° 7' 34" N. Longitude 5° 2' 47" W. Elevation 1903 m. Near Timahdite (Foum-Kheneg), 11 k south of Timahdite on P21, Azro. Grazed. Slope 0-5%, aspect W. Area open. Soil sod meadow loam on calcareous bedrock, basalt rock on top, pH 9.5. Rainfall 400 mm. Moist, seasonally flooded, stream terrace. Vegetation closed, evergreen broad-leaved herb vegetation. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219,

United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610911. *Dactylis glomerata* L.

Wild. M189.CPG94; W6 15918. Collected 07/27/1994 in Morocco. Latitude 30° 49' 8" N. Longitude 8° 23' 41" W. Elevation 1240 m. Near Taroudannt, 71 k northeast of Taroudant on road S501, to Marrakech, 19 k northeast of intersection with P32. Grazed, protected. Slope 11-40%, aspect W. 1/4 shade. Soil sandy loam on calcareous rock, pH 9.0. Rainfall 350 mm. Seasonally dry, upper-mid slope. Vegetation closed, evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mustapha Bounejmate, Institut National de la Recherche Agrono, Programme Fourrages (INRA), B.P. 415, Rabat, Morocco; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610912. *Festuca arundinacea* Schreb.

Wild. M110.CPG94; 136106; W6 15839. Collected 07/20/1994 in Morocco. Latitude 33° 14' 19" N. Longitude 5° 3' 53" W. Elevation 1810 m. Near Timahdite, north entrance to Timahdite on P21, Azrou-Midelt. Past grazed, now cultivated. Slope 0-5%, aspect N. 1/2 shade. Soil hydromorphic loams on alluvial derived from basalt and calcareous rock, pH 9.5-10.0. Rainfall 500 mm. Moist-seasonally flooded, stream terrace. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610913. *Dactylis glomerata* L.

Wild. M188.CPG94; W6 15917. Collected 07/26/1994 in Morocco. Latitude 30° 58' 22" N. Longitude 8° 46' 19" W. Elevation 3000 m. Near Bou-Laouane, 55 k south and 1 k to west of road 6404 from Bou-Laouane. Grazed. Slope 11-40%, aspect SE. Area open. Soil rocky sandy loam on schist/shale surface rock. Seasonally dry, ridgetop, upper slope. Vegetation open evergreen steppe scrub. Surrounding veg. seasonal tall grass, range livestock agri. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Badia Baya, Morocco. Received 08/19/1994.

PI 610914. *Festuca arundinacea* Schreb.

Wild. MO97.CPG94; W6 15826. Collected 07/19/1994 in Morocco. Latitude 33° 33' 3" N. Longitude 5° 6' 43" W. Elevation 1500 m. Near Ifrane, 3K from center of Ifrane toward El-Hajeb on road S309. Grazed, settlement. Slope 0-5%, aspect W. 1/4 shade. Soil loam on calcareous alluvium bedrock, meadow peat-sod zone, pH 9.5-10.0. Moist, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen forest, picnic area. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610915. *Festuca arundinacea* Schreb.

Wild. M193.CPG94; W6 15922. Collected 07/27/1994 in Morocco. Latitude 30° 58' 43" N. Longitude 8° 13' 54" W. Elevation 1315 m. Near Ijoukak, 8 k south of Ijoukak, on road S501, Taroudannt-Marrakech. Grazed, hay. Slope 0-5%, aspect NE. Area open. Soil sandy loam on alluvium, red calcareous rock/schist, pH 9.5. Rainfall 250-300 mm. Moist, stream terrace, irrigation ditch. Vegetation closed, seasonal tall grass. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610916. *Phalaris aquatica* L.

Wild. T011.CPG94; W6 15985. Collected 06/21/1994 in Tunisia. Latitude 36° 48' 59" N. Longitude 10° 59' 23" E. Elevation 6 m. Near Skalba, 4 k west of Menzer Temine on C45. Grazed. Slope 6-10%, aspect NE. Open. Soil clay, vertisol, hydromorphic, pH 8.5. Rainfall 425 mm. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. agricultural, dryland wheat. Dominant herb/grass sp. couch, bermuda. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Abdelmajid Mezni, Tunisia. Received 08/19/1994.

PI 610917. *Phalaris aquatica* L.

Wild. T102.CPG94; W6 16076. Collected 06/29/1994 in Tunisia. Latitude 36° 39' 5" N. Longitude 8° 41' 20" E. Elevation 315 m. Near Fernana, 1 k west of Fernana on road to Ain Beith. Grazed. Slope 11-40%, aspect E. Area open. Soil heavy cracking vertisols, pH 9.0-9.5. Rainfall 800+ mm. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg.

dryland wheat. Population abundance occasional, distribution patchy.
Growth habit erect.

PI 610918. *Festuca arundinacea* Schreb.

Wild. T101.CPG94; W6 16075. Collected 06/29/1994 in Tunisia. Latitude 36° 39' 5" N. Longitude 8° 41' 20" E. Elevation 315 m. Near Fernana, 1 k west of Fernana on road to Ain Beith. Grazed. Slope 11-40%, aspect E. Area open. Soil heavy cracking vertisols, pH 9.0-9.5. Rainfall 800+ mm. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610919. *Festuca arundinacea* Schreb.

Wild. T046.CPG94; W6 16020. Collected 06/23/1994 in Tunisia. Latitude 36° 56' 40" N. Longitude 8° 47' 29" E. Elevation 12 m. Near Tabarka, 1 k east of Tabarka on P7. Past grazed, now settlement. Slope 0-5%, aspect S. Open. Soil loam, heavy alluvium on top of coastal sands. Moist, alluvial fan. Vegetation closed, seasonal tall grass. Dominant herb/grass sp. couch, bermuda. Assoc. sp. Bromus sp., T. frag. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Abdelmajid Mezni, Tunisia. Received 08/19/1994.

PI 610920. *Festuca arundinacea* Schreb.

Wild. T078.CPG94; W6 16052. Collected 06/27/1994 in Tunisia. Latitude 36° 53' 2" N. Longitude 9° 35' 35" E. Elevation 75 m. Near Tahent, 14.5 k east of sidi Nsir on C64. Grazed. Slope 0-5%, aspect S. Open. Soil clay, pH 8.5. Rainfall 500 mm. Moist, ravine. Protected by wheat fields on both sides. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Dominant herb/grass sp. couch, bermuda. Population abundant, distribution uniform. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610921. *Festuca arundinacea* Schreb.

Wild. T068.CPG94; W6 16042. Collected 06/25/1994 in Tunisia. Latitude 37° 13' 27" N. Longitude 9° 44' 42" E. Elevation 5 m. Near Bizerye, 11.5 k southwest of Bizerte on P11 Hw. Grazed. Slope 0-5%, aspect S. Area

open. Soil heavy clay, pH 9.0. Rainfall 600 mm. Moist, stream terrace, drain into salt lake Ichkeul. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610922. *Phalaris aquatica* L.

Wild. T034.CPG94; W6 16008. Collected 06/22/1994 in Tunisia. Latitude 36° 25' 47" N. Longitude 9° 12' 51" E. Elevation 510 m. Near Dougga, 1 k east of Dougga on road 702. Grazed. Slope 6-10%, aspect E. Area open. Soil clay, vertisol, cracking, pH 8.5-9.0. Rainfall 525 mm. Seasonally inundated, ravine, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. agriculture, dryland wheat. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610923. *Phalaris aquatica* L.

Wild. T020.CPG94; W6 15994. Collected 06/22/1994 in Tunisia. Latitude 36° 29' 24" N. Longitude 9° 9' 50" E. Elevation 580 m. Near Ain Meuti, 10 k west of Teboursouk on C75 road to Bou Salem. Grazed. Slope 6-10%, aspect E. Area open. Soil clay, vertisol, pH 8.5-9.0. Rainfall 575 mm. Moist, mid slope. Vegetation closed, seasonal tall grass. Surrounding veg. agriculture, dryland wheat. Dominant herb/grass species couch, bermuda. Population abundance frequent, distribution patchy. Growth habit erect.

PI 610924. *Lolium perenne* L.

Wild. T017.CPG94; W6 15991. Collected 06/22/1994 in Tunisia. Latitude 36° 28' 40" N. Longitude 9° 10' 48" E. Elevation 476 m. Near Teboursouk, 6 k west of Teboursouk on C75. Grazed. Slope 0-5%, aspect E. Area open. Soil clay, vertisol, pH 8.5-9.0. Rainfall 550 mm. Moist, ravine. Vegetation closed, evergreen tall grass. Surrounding veg. agriculture, dryland wheat. Population abundance rare, distribution patchy. Growth habit semi-erect.

PI 610925. *Lolium perenne* L.

Wild. T035.CPG94; W6 16009. Collected 06/23/1994 in Tunisia. Latitude 36° 44' 21" N. Longitude 9° 1' 50" E. Elevation 189 m. Near Beja, 14 k west of Beja on road C62. Grazed. Slope 0-5%, aspect E. Area open. Soil clay, pH 9.0. Rainfall 625 mm. Seasonally inundated, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. agriculture, dryland wheat. Dominant herb/grass sp. couch, bermuda. Population abundance frequent, distribution patchy. Growth habit semi-erect.

PI 610926. *Lolium perenne* L.

Wild. T067.CPG94; W6 16041. Collected 06/24/1994 in Tunisia. Latitude 37° 13' 35" N. Longitude 9° 41' 52" E. Elevation 22 m. Near Bizerte, 16 k west of Bizerte on C51. Grazed. Slope 0-5%, aspect S. Area open. Soil loam, heavy, pH 9.0-9.5. Rainfall 600 mm. Seasonally inundated, ravine, salt flat area. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Population abundance frequent, distribution patchy. Growth habit semi-erect.

PI 610927. *Lolium perenne* L.

Wild. T058.CPG94; W6 16032. Collected 06/24/1994 in Tunisia. Latitude 37° 7' 15" N. Longitude 9° 15' 55" E. Elevation 99 m. Near Sedjnane, 8 k north of Sedjnane on road 66 to Cap Serrat. Grazed. Slope 0-5%, aspect S. Area open. Soil heavy clay, vertisol, pH 8.5. Rainfall 650 mm. Moist,

stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. agriculture, dryland grain. Population abundance frequent, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610928. *Lolium perenne* L.

Wild. S078.CPG94; W6 16183. Collected 07/07/1994 in Sardinia, Italy. Latitude 40° 6' 13" N. Longitude 9° 18' 59" E. Elevation 1040 m. 11 k southeast of Fonni on road S389, Fonni-Lanusei. Grazed. Slope 11-40%, aspect W. 1/2 shade. Soil loam, granitic rock, pH 6.0. Rainfall 1000 mm. Seasonally dry, mid slope. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit semi-erect.

PI 610929. *Lolium perenne* L.

Wild. S098.CPG94; W6 16203. Collected 07/08/1994 in Sardinia, Italy. Latitude 39° 30' 36" N. Longitude 8° 32' 46" E. Elevation 396 m. 6 k south of Arbus, road SSN 126, Iglesias-Guspini. Grazed. Slope 0-5%, aspect E. 1/4 shade. Soil loam, schist-granitic transition zone, pH 6.5. Rainfall 700 mm. Seasonally dry. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen open forest with closed lower layers. Population abundance occasional, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Leonardo Sulas, Sardinia, Italy. Received 08/19/1994.

PI 610930. *Phalaris aquatica* L.

Wild. S064.CPG94; W6 16169. Collected 07/06/1994 in Sardinia, Italy. Latitude 40° 17' 27" N. Longitude 8° 56' 46" E. Elevation 255 m. 16 k east of Macomer on road SS129 to Muoro, 1 k south on dirt road. Grazed. Slope 0-5%, aspect S. Area open. Soil loam, pH 6.5. Seasonally dry, plateau. Vegetation closed, seasonal short grass. Dominant herb/grass sp. annual grasses, *Asphodelus microcarpa*. Assoc. sp. *Serradella*, clovers. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Simonetta Bullitta, Sardinia, Italy. Received 08/19/1994.

PI 610931. *Lolium perenne* L.

Wild. S041.CPG94; W6 16146. Collected 07/05/1994 in Sardinia, Italy. Latitude 40° 56' 44" N. Longitude 9° 10' 12" E. Elevation 460 m. Near Luras, 3 k north of Calanglanus, north edge of Luras lK. Grazed. Slope 6-10%, aspect E. Area open. 1/4 shade. Soil loam, granitic, shallow, pH 6.0-6.5. Rainfall 1150 mm. Seasonally dry, mid slope, pasture. Vegetation closed, seasonal short grass. Surrounding veg. dryland cereal/forage. Population abundance frequent, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610932. *Lolium perenne* L.

Wild. S007.CPG94; W6 16112. Collected 07/04/1994 in Sardinia, Italy. Latitude 40° 44' 9" N. Longitude 8° 41' 9" E. Elevation 540 m. Near Nulvi, 15.1 k east to Nulvi from Osilo on road SS127, 4 k east of Osilo. Past grazed, now roadway. Slope 11-40%, aspect W. Open. Soil clay. Seasonally dry, lower slope. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat/forage. Dominant tree *Olea* sp. Dom. shrub *Cistus* sp. Dom. grass annuals. Population abundance occasional, distribution patchy. Growth habit semi-erect.

PI 610933. *Festuca arundinacea* Schreb.

Wild. S097.CPG94; W6 16202. Collected 07/08/1994 in Sardinia, Italy. Latitude 39° 30' 36" N. Longitude 8° 32' 46" E. Elevation 396 m. 6 k south of Arbus, road SSN126, Iglesias-Guspini. Grazed. Slope 0-5%, aspect E. 1/4 shade. Soil loam, schist-granitic tran. zone, pH 6.5. Rainfall 700 mm. Moist, seasonally flooded, basin. Vege. closed, seasonal tall grass. Surrounding veg. evergreen open forest with closed lower layers. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Simonetta Bullitta, Sardinia, Italy. Received 08/19/1994.

PI 610934. *Phalaris aquatica* L.

Wild. S037.CPG94; W6 16142. Collected 07/05/1994 in Sardinia, Italy. Latitude 41° 4' 36" N. Longitude 9° 12' 55" E. Elevation 35 m. 26 k northeast of Tempio on road S133 to Bassacutena. Grazed. Slope 0-5%, aspect NE. Open. Soil heavy loam, pH 7.0. Rainfall 900 mm. Seasonally inundated, alluvial fan, spring bog. Vegetation closed, evergreen broad-leafed herb. Surrounding veg. evergreen open forest with closed lower layers. Population abundance rare, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Leonardo Sulas, Sardinia, Italy. Received 08/19/1994.

PI 610935. *Phalaris aquatica* L.

Wild. S054.CPG94; W6 16159. Collected 07/06/1994 in Sardinia, Italy. Latitude 40° 21' 30" N. Longitude 8° 55' 25" E. Elevation 960 m. Viua Pierce, 12 k east of Padru Mannu on road to Bolotana, east of S131 Hw. Grazed. Slope 6-10%, aspect NE. Area open. Soil loam, pH 5.5. Rainfall 1000 mm. Seasonally dry, lower slope, pasture. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen forest. Cattle ranch operation. Population abundance rare, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610936. *Dactylis glomerata* L.

Wild. M194.CPG94; W6 15923. Collected 07/27/1994 in Morocco. Latitude 30° 58' 43" N. Longitude 8° 13' 54" W. Elevation 1315 m. Near Ijoukak, 8 k south of Ijoukak, on road S501, Taroudannt-Marrakech. Grazed, hay. Slope 0-5%, aspect NE. Area open. Soil sandy loam on alluvium, red calcareous rock-schist, pH 9.5. Rainfall 250-300 mm. Moist, stream terrace, irrigation ditch. Vegetation closed, seasonal tall grass. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mustapha Bounejmate, Institut National de la Recherche Agrono, Programme Fourrages (INRA), B.P. 415, Rabat, Morocco; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610937. *Festuca arundinacea* Schreb.

Wild. M116. CPG94; 136112; W6 15845. Collected 07/20/1994 in Morocco. Latitude 33° 7' 34" N. Longitude 5° 2' 47" W. Elevation 1903 m. Near Timahdite, 20 k south of Timahdite, off P21 3 k to east on S322 at lake Aguelmane. Grazed. Slope 0-5%, aspect S. Area open. Soil sod meadow loam on calcareous bedrock, pH 9.5-10.0. Rainfall 600 mm. Moist, basin, lake-shore. Vegetation closed, seasonal tall grass. Surrounding veg. degraded evergreen forest, range-cereal. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext.

Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco; Nezha Saidi, National Institute for Agricultural Research, Rabat, Morocco. Received 08/19/1994.

PI 610938. *Festuca arundinacea* Schreb.

Wild. M221.CPG94; W6 15950. Collected 07/28/1994 in Morocco. Latitude 31° 20' 4" N. Longitude 7° 22' 57" W. Elevation 1775 m. Near Taddert, 2 k south of Taddert on road P31, Marrakech-Ouarzazate. Grazed, hay. Soil gray sandy loam over schist, pH 7.5. Rainfall 800 mm. Moist, stream terrace, meadow. Vegetation closed, seasonal tall grass. Surrounding veg. degraded evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Simonetta Bullitta, Sardinia, Italy. Received 08/19/1994.

PI 610939. *Lolium perenne* L.

Wild. S043.CPG94; W6 16148. Collected 07/05/1994 in Sardinia, Italy. Latitude 40° 56' 12" N. Longitude 9° 3' 20" E. Elevation 550 m. Near Aggius, 3 k north of Aggius on road SS127 to Trinita. Grazed. Slope 0-5%, aspect N. Area open. Soil loam, alluvial, pH 5.0. Rainfall 1000 mm. Seasonally dry, alluvial fan. Vegetation closed, seasonal tall grass. Surrounding veg. closed evergreen scrub with scattered trees. Population abundance frequent, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Badia Baya, Morocco. Received 08/19/1994.

PI 610940. *Festuca arundinacea* Schreb.

Wild. M103. CPG94; 136099; W6 15832. Collected 07/19/1994 in Morocco. Latitude 33° 29' 49" N. Longitude 5° 10' 1" W. Elevation 1560 m. Near Ifrane, 8 k southwest of Ifrane on road S322, 3 k west of P24. Grazed. Slope 11-40%, aspect S. Open. Soil hydromorphic loam on "gris" calcareous bedrock, pH 9.5-10.0. Rainfall 1000 mm. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen forest, pasture-cereal-orchard-mais. Population abundant, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610941. *Festuca mairei* St.-Yves

Wild. M185.CPG94; W6 15914. Collected 07/26/1994 in Morocco. Latitude 30° 58' 9" N. Longitude 8° 45' 17" W. Elevation 2560 m. Near Bou-Laouane, 55 k south of Bou-Laouane along road 6404 at pass Tizi-N-Tabgourt. Grazed. Slope 11-40%, aspect W. Open. Soil hydromorphic loam on shale bedrock, pH 9.0. Rainfall 600-800 mm. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. degraded open evergreen dwarf scrub with closed ground cover. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610942. *Lolium perenne* L.

Wild. S081.CPG94; W6 16186. Collected 07/07/1994 in Sardinia, Italy. Latitude 39° 55' 26" N. Longitude 9° 27' 53" E. Elevation 830 m. 5 k south of Villanova, 1 k west of road S389 on Lake Alto del Flumendosa road. Grazed. Slope 0-5%, aspect S. 1/4 shade. Soil clay, rock schist/shale, pH 6.0. Moist, stream terrace. Vegetation closed, open evergreen scrub with closed ground cover. Surrounding veg. seasonal short grass. Population abundance occasional, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610943. *Festuca arundinacea* Schreb.

Wild. T038.CPG94; W6 16012. Collected 06/23/1994 in Tunisia. Latitude 36° 45' 59" N. Longitude 9° 11' 46" E. Elevation 170 m. Near Beja, 4.5 k north of Beja on MC52. Grazed. Slope 0-5%, aspect S. Open. Soil clay. Seasonally flooded, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Dominant herb/grass sp. couch, bermuda. Assoc. sp. Medics, Lotus c., T. fragiferum, clovers. Population abundant, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Abdelmajid Mezni, Tunisia. Received 08/19/1994.

PI 610944. *Lolium perenne* L.

Wild. T097.CPG94; W6 16071. Collected 06/28/1994 in Tunisia. Latitude 36° 40' 54" N. Longitude 8° 42' 33" E. Elevation 400 m. Near Fernana (Gouadia), 3 k northeast of Fernana toward Beni N'tir on C65. Grazed. Slope 11-40%, aspect SE. Area open. Soil loam-clay, pH 8.0.

Rainfall 1000+ mm. Moist, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Population abundance occasional, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610945. *Phalaris aquatica* L.

Wild. S070. CPG94; W6 16175. Collected 07/07/1994 in Sardinia, Italy. Latitude 40° 4' 7" N. Longitude 8° 56' 13" E. Elevation 440 m. 1 k west of Neoneli, 4 k east of Ardauli on SP15. Grazed. Slope 0-5%, aspect NW. Area open. Soil loam, granitic/trachiti transition, pH 6.0-6.5. Seasonally dry, mid slope, swale meadow. Vegetation closed, seasonal tall grass. Surrounding veg. closed evergreen scrub with scattered trees. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Badia Baya, Morocco. Received 08/19/1994.

PI 610946. *Festuca arundinacea* Schreb.

Wild. MO78. CPG94; W6 15807. Collected 07/18/1994 in Morocco. Latitude 33° 29' 37" N. Longitude 5° 15' 49" W. Elevation 1270 m. Near Azrou, 7 km. northwest of Azrou on road P21, El-Hajeb-Azrou. Grazed. Slope 11-40%, aspect SE. Open. Soil loam on calcareous rock, pH 9.5-10.0. Rainfall 825 mm. Moist, ravine, spring bog. Vegetation closed, seasonal tall grass. Surrounding veg. cereal-pasture-orchard agriculture. Population distribution patchy, abundance frequent. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610947. *Festuca* sp.

Wild. MO13. CPG94; W6 15742. Collected 07/12/1994 in Morocco. Latitude 34° 56' 11" N. Longitude 4° 27' 59" W. Elevation 1506 m. Near Ketama, 13 km. east of Retana on P39 road, Chefchaouen to Al-Hoceima. Grazed. Slope 11-40%, aspect E. Open. Soil clay, heavy/basic, on limestone type rock, pH 9.5-10.0. Rainfall 900 mm. Moist, mid slope, spring bog. Assoc. sp. Juniper sp., Juncus sp. in weep, Lotus c., thistle, clovers, T. stell., T. camp., Medics-Burr. Population distribution patchy, abundance occasional. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610948. *Festuca arundinacea* Schreb.

Wild. M176.CPG94; W6 15905. Collected 07/26/1994 in Morocco. Latitude 31° 10' 54" N. Longitude 8° 47' 28" W. Elevation 730 m. Near Imi-N-Tanute (Bou-Laouane), 3 k south of Bou-Laouane off road 6404. Grazed. Slope 0-5%, aspect N. Open. Soil sandy loam on alluvium terrace from calcareous rock of schist/limestone, pH 10.0. Rainfall 300 mm. Moist, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen steppe forest & scrub. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco; Nezha Saidi, National Institute for Agricultural Research, Rabat, Morocco. Received 08/19/1994.

PI 610949. *Festuca arundinacea* Schreb.

Wild. M229.CPG94; W6 15958. Collected 07/28/1994 in Morocco. Latitude 31° 33' 4" N. Longitude 7° 35' 30" W. Elevation 894 m. Near Taferiate/Ait-Ourir, 9 k east of Ait-Ourir on road P31, Marakech-Ouarzazate. Past grazed, now cultivated/protected. Slope 0-5%, aspect NE. 1/4 shade. Soil red sandy loam on calcareous schist/limestone, pH 9.5-10.0. Rainfall 350 mm. Moist. Vegetation closed, seasonal tall grass. Surrounding veg. degrad. evergreen forest. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610950. *Lolium perenne* L.

Wild. T036.CPG94; W6 16010. Collected 06/23/1994 in Tunisia. Latitude 36° 45' 59" N. Longitude 9° 11' 46" E. Elevation 170 m. Near Beja, 4.5 k north of Beja on MC52. Grazed. Slope 0-5%, aspect S. Open. Soil clay. Seasonally flooded, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Dominant herb/grass sp. couch, bermuda. Assoc. sp. Medicagos, Lotus c., T. fragiferum, clovers. Population abundant, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext.

Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610951. *Festuca arundinacea* Schreb.

Wild. M168.CPG94; W6 15897. Collected 07/25/1994 in Morocco. Latitude 31° 16' 38" N. Longitude 7° 48' 33" W. Elevation 1340 m. Near Arhbalow, 9 k west of Arhbalow on road 6034A, Marrakech-Oukaimeden. Grazed. Slope 0-5%, aspect NE. Open. Soil sandy loam on sandstone, shales, some limestone, pH 9.0. Rainfall 800 mm. Moist, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. degraded evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Abdelmajid Mezni, Tunisia. Received 08/19/1994.

PI 610952. *Festuca arundinacea* Schreb.

Wild. T105.CPG94; 136344; W6 16079. Collected 06/29/1994 in Tunisia. Latitude 36° 39' 29" N. Longitude 8° 36' 39" E. Elevation 408 m. Near Fernana, 9 k west of Fernana at Ain Beith village. Grazed. Slope 0-5%, aspect SE. Area open. Soil clay, pH 8.5-9.0. Rainfall 800+ mm. Moist, alluvial fan. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco. Received 08/19/1994.

PI 610953. *Festuca arundinacea* Schreb.

Wild. M102.CPG94; W6 15921. Collected 07/27/1994 in Morocco. Latitude 30° 54' 11" N. Longitude 8° 18' 38" W. Elevation 1750 m. Near Idni, 5 k south of Idni on S501, Taroudannt-Marrekech road. Grazed. Slope 0-5%, aspect N. Area open. Soil sandy loam on calcareous schist type rock, pH 9.5. Rainfall 300 mm. Moist, ravine, stream terrace, irrigation ditch. Vegetation closed, seasonal tall grass. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Badia Baya, Morocco. Received 08/19/1994.

PI 610954. *Festuca arundinacea* Schreb.

Wild. M105.CPG94; W6 15834. Collected 07/19/1994 in Morocco. Latitude 33° 24' 53" N. Longitude 5° 10' 47" W. Elevation 1780 m. Near Azrou, 9 k south on road P21, Azrou-Midelt. Past grazed, now protected

forest. Slope 0-5%, aspect N. 1/4 shade. Soil loam, rocky basalt on calcareous "gris" bedrock, pH 9.0. Rainfall 900 mm. Seasonally dry, lower slope. Veg. closed, seasonal tall grass. Surrounding veg. evergreen forest. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610955. *Phalaris aquatica* L.

Wild. S005.CPG94; W6 16110. Collected 07/04/1994 in Sardinia, Italy. Latitude 40° 44' 9" N. Longitude 8° 41' 9" E. Elevation 540 m. Near Nulvi, 15.1 k east to Nulvi from Osilo on road SS127, 4 k east of Osilo. Grazed. Slope 11-40%, aspect W. Open. Soil heavy clay. Seasonally dry, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat/forage. Dominant tree sp. *Olea* sp. Dom. shrub *cistus* sp. Dom. herb/grass annual grasses. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Abdelmajid Mezni, Tunisia. Received 08/19/1994.

PI 610956. *Festuca arundinacea* Schreb.

Wild. T084.CPG94; 136323; W6 16058. Collected 06/27/1994 in Tunisia. Latitude 36° 31' 39" N. Longitude 8° 57' 19" E. Elevation 150 m. Near Bou Salem, 10 k southwest of Bou Salem to El-Nerja on C60. Grazed. Slope 0-5%, aspect S. Area open. Soil clay, pH 9.5. Rainfall 425 mm. Moist, floodplain, irrigation zone. Vegetation closed, seasonal tall grass. Surrounding veg. irrigated agri. Dominant herb/grass species couch, bermuda. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Simonetta Bullitta, Sardinia, Italy. Received 08/19/1994.

PI 610957. *Festuca arundinacea* Schreb.

Wild. S032.CPG94; W6 16137. Collected 07/05/1994 in Sardinia, Italy. Latitude 40° 57' 10" N. Longitude 9° 5' 47" E. Elevation 315 m. Near Tempio, 11 north on road S133 to Luogosanto. Grazed. Slope 0-5%, aspect E. Area open. Soil loam, pH 5.5. Rainfall 1000 mm. Moist, stream terrace, meadow. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen open forest with closed lower layers, dryland pasture/forage. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610958. *Lolium perenne* L.

Wild. T042.CPG94; W6 16016. Collected 06/23/1994 in Tunisia. Latitude 36° 53' 42" N. Longitude 9° 11' 13" E. Elevation 175 m. Near Nefza 16 k south of Nefza on C52. Grazed. Slope 6-10%, aspect NE. Area open. Soil clay, pH 8.5-9.0. Rainfall 650 mm. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. dryland wheat. Dominant herb/grass sp. couch, bermuda. Population abundance occasional, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610959. *Phalaris aquatica* L.

Wild. S092.CPG94; W6 16197. Collected in Italy. Latitude 39° 21' 6" N. Longitude 9° 20' 8" E. Elevation 592 m. 5 k north of Burcei on road to Pta. Serpeddi mountain, road north of San Priamo, Cagliari road SSN 125, 33 k NE of Cagliari. Grazed. Slope 11-40%, aspect E. Open. Soil loam, stony, granitic mixed rock, pH 6.5-7.0. Rainfall 850 mm. Seasonally dry, upper slope. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mustapha Bounejmate, Institut National de la Recherche Agrono, Programme Fourrages (INRA), B.P. 415, Rabat, Morocco; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco. Received 08/19/1994.

PI 610960. *Festuca arundinacea* Schreb.

Wild. M160.CPG94; W6 15889. Collected 07/21/1994 in Morocco. Latitude 33° 24' 34" N. Longitude 5° 58' 52" W. Elevation 1340 m. Near Oulmes, 2 k southeast of Oulmes on road 2516B, Oulmes-Khenifra. Grazed. Slope 11-40%, aspect SW. Area open. Soil loam on shale-schist, pH 6.5. Rainfall 775 mm. Moist, ravine, spring steep. Vegetation closed, seasonal tall grass. Surrounding veg. degraded evergreen open forest with closed lower layers. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Saddik Saidi, Morocco; Badia Baya, Morocco. Received 08/19/1994.

PI 610961. *Festuca arundinacea* Schreb.

Wild. MO93.CPG94; 136089; W6 15822. Collected 07/19/1994 in Morocco. Latitude 33° 31' 9" N. Longitude 5° 6' 58" W. Elevation 1510 m. Near Ifrane, entrance to Ifrane from Azrou on P24. Past grazed, now settlement. Slope 0-5%, aspect W. Area open. Soil rocky loam on limestone type bedrock, pH 9.5-10.0. Moist, ravine. Vegetation closed, seasonal tall grass. Surrounding veg. evergreen forest, pasture agriculture. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Claudio Porqueddu, Sassari, Sardinia, Italy. Received 08/19/1994.

PI 610962. *Lolium perenne* L.

Wild. S004.CPG94; W6 16109. Collected 07/04/1994 in Sardinia, Italy. Latitude 40° 43' 39" N. Longitude 8° 38' 19" E. Elevation 320 m. Near Osilo, 8 k east of Sassari on road SS127. Roadway. Slope 11-40%, aspect E. Area open. Soil heavy clay, pH 6.5. Rainfall 540 mm. Seasonally dry, mid slope. Vegetation closed, evergreen broad-leaved herb veg. Surrounding veg. dryland wheat/forage. Dominant herb/grass sp. *T. repens*. Population abundance occasional, distribution patchy. Growth habit semi-erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Mohamed Chakroun, INRAT, Forage Improvement Laboratory, Rue Hadi Karray, Ariana, Tunisia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States. Received 08/19/1994.

PI 610963. *Festuca arundinacea* Schreb.

Wild. T059.CPG94; W6 16033. Collected 06/24/1994 in Tunisia. Latitude 37° 7' 15" N. Longitude 9° 15' 55" E. Elevation 99 m. Near Sedjane, 8 k north of Sedjnane on road 66 to Cap Serrat. Grazed. Slope 0-5%, aspect S. Area open. Soil heavy clay, vertisol, pH 8.5. Rainfall 650 mm. Moist, stream terrace. Vegetation closed, seasonal tall grass. Surrounding veg. agriculture, dryland grain. Population abundance frequent, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219,

United States; Saddik Saidi, Morocco; Mohammed Tazi, Morocco; Nezha Saidi, National Institute for Agricultural Research, Rabat, Morocco. Received 08/19/1994.

PI 610964. *Festuca arundinacea* Schreb.

Wild. M232.CPG94; W6 15961. Collected 07/29/1994 in Morocco. Latitude 31° 24' 17" N. Longitude 7° 49' 29" W. Elevation 785 m. Near Dr. Caid Ourika, 1-4 k north of Dr. Caid Ourika on road S513, Marrakech-Setti Fatma. Past grazed, now cultivated/protected. Slope 0-5%, aspect NE. Area open. Soil red loam on alluvium, pH 8.0. Rainfall 350 mm. Moist, irrigation canal. Vegetation closed, seasonal tall grass. Surrounding veg. irrigated agri., olive, cereal. Population abundance occasional, distribution patchy. Growth habit erect.

The following were collected by Peter Cunningham, Dept. of Agriculture & Rural Affairs, Pastoral Research Institute, P.O. Box 180, Hamilton, Victoria 3300, Australia; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Simonetta Bullitta, Sardinia, Italy. Received 08/19/1994.

PI 610965. *Lolium perenne* L.

Wild. S025.CPG94; W6 16130. Collected 07/05/1994 in Sardinia, Italy. Latitude 40° 58' 3" N. Longitude 8° 59' 43" E. Elevation 245 m. Near Trinita, 10 k from Trinita to east toward Aggius on road SP74, 1 k to north on dirt road. Grazed. Slope 11-40%, aspect NE. 1/4 shade. Soil sand, granitic rock. Moist, stream terrace. Vegetation closed, evergreen scrub with scattered trees. Surrounding veg. dryland cereal/forage/pasture. Population abundance occasional, distribution patchy. Growth habit semi-erect.

The following were collected by Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Alexander Afonin, Vavilov Institute of Plant Industry, 42 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation; Melvin Rumbaugh, R.R. 3, Box 125, Humboldt, Nebraska 68376, United States; Nicolay Portinier, Kamorov Institute of Botany, St. Petersburg, Leningrad, Russian Federation; Jay Hart, 20 Bush Lane, Ithaca, New York 14850, United States; Nicolay Khitrov, Dokvchaev Soil Institute, Pygevsky, per., 7., Moscow, Moscow 109017, Russian Federation. Received 01/1996.

PI 610966. *Agropyron* sp.

Wild. 0254; VIR 097; US 254; W6 17875. Collected 08/18/1995 in Russian Federation. Latitude 45° 16' N. Longitude 36° 57' E. Elevation 60 m. Mt. Blevaka, 2 km. west of Senah/Fanagaria-Greek ruins, southwest of Temryuk. Area grazed. Slope 6-10%, aspect N. Light open. Soil loam, clay, pH 7.2. Seasonally dry, mid-slope, mud volcano. Vegetation open, evergreen dwarf shrub steppe savanna. Dominant tree species Russian Olive, Hornbeam-Oak. Dominant shrub species *Artemisia austriaca*. Dominant herb/grass species *Festuca* sp., *Phleum* sp., occasional annual *Medicagos*. Population distribution patchy, abundance frequent. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

The following were donated by John D. Berdahl, USDA-ARS, Northern Great Plains Research Lab., P.O. Box 459, Mandan, North Dakota 58554, United States. Received 02/08/1990.

- PI 610967. *Pascopyrum smithii*** (Rydb.) Barkworth & D. R. Dewey
Wild. 1030; W6 3273. Collected 1979 in North Dakota, United States.
Elevation 790 m. Golden Valley County. LD: NENE36 139N 106W.
- PI 610968. *Pascopyrum smithii*** (Rydb.) Barkworth & D. R. Dewey
Wild. 1213; W6 3274. Collected 1979 in South Dakota, United States.
Elevation 608 m. Stanley County. LD: SESE36 7N 28E.
- PI 610969. *Pascopyrum smithii*** (Rydb.) Barkworth & D. R. Dewey
Wild. 1368; W6 3279. Collected 1979 in South Dakota, United States.
Elevation 578 m. Potter County. LD: SENE36 119N 73W.
- PI 610970. *Pascopyrum smithii*** (Rydb.) Barkworth & D. R. Dewey
Wild. 1292; W6 3276. Collected 1979 in South Dakota, United States.
Elevation 668 m. Corson County. LD: SWSW36 21N 24E.
- PI 610971. *Pascopyrum smithii*** (Rydb.) Barkworth & D. R. Dewey
Wild. 124; W6 3275. Collected 1979 in North Dakota, United States.
Elevation 674 m. Ward County. LD: SWSE28 155N 83W.

The following were donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/09/1993.

- PI 610972. *Pseudoroegneria spicata*** (Pursh) A. Love
Wild. T-432; W6 14664. Collected in Oregon, United States. Latitude
44° 14' N. Longitude 117° 30' W. 7m northwest Brogan on Willow
Creek Road, Malheur County. Lat/lon accurate to Brogan.
- PI 610973. *Pseudoroegneria spicata*** (Pursh) A. Love
Wild. T-430; W6 14663. Collected in Oregon, United States. Latitude
44° 29' N. Longitude 117° 44' W. 5m west Bridgeport, Baker
County. Lat/lon accurate to Bridgeport.
- PI 610974. *Pseudoroegneria spicata*** (Pursh) A. Love
Wild. T-421; W6 14662. Collected in Oregon, United States. Latitude
44° 24' N. Longitude 118° 57' W. 3m south John Day on highway
395, Grant County. Lat/lon accurate to John Day.
- PI 610975. *Pseudoroegneria spicata*** (Pursh) A. Love
Wild. T-1037; W6 14667. Collected in Oregon, United States. Latitude
45° 21' N. Longitude 117° 13' W. 11.5m northeast Joseph on
highway 82, Wallowa County. Lat/lon accurate to Joseph. Originally
mixed with *Elymus lanceolatus* sp. *wawawaiensis*.
- PI 610976. *Pseudoroegneria spicata*** (Pursh) A. Love
Wild. T-20; W6 14661. Collected in Oregon, United States. Latitude
44° 40' N. Longitude 117° 37' W. Pleasant Valley, Baker County.
Lat/lon accurate to Pleasant Valley.

The following were collected by A.P. Plummer, USDA, Intermountain Forest & Range Exp. Sta., Ephraim, Utah, United States. Donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610977. *Leymus triticoides* (Buckley) Pilg.
Wild. Acc:412; W6 16746. Collected in Utah, United States. Majors flat, San Pete County.

The following were collected by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610978. *Elymus elymoides* (Raf.) Swezey **subsp. *elymoides***
Wild. T-1047; W6 16751. Collected in Utah, United States. Latitude 39° 35' N. Longitude 112° 9' W. Leamington Canyon, Millard Co.
Lat/lon accurate to Leamington Canyon.

The following were collected by USDA, SCS, Plant Materials Center, 14119 Broad Street, Brooksville, Florida 34601, United States. Donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610979. *Elymus wawawaiensis* J. R. Carlson & Barkworth
Wild. T40583; Acc:707; W6 16742. Collected in Washington, United States. Yakima County.

The following were collected by Dave Stout, Washington State University, Regional Plant Introduction Station, Seed Storage, Pullman, Washington 99164-6402, United States; A. M. Davis, USDA, ARS, Regional Plant Introduction Station, 59 Johnson Hall, Pullman, Washington 99164-6402, United States. Donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610980. *Elymus wawawaiensis* J. R. Carlson & Barkworth
Wild. DS104; Acc:256; W6 16740. Collected in Washington, United States. Latitude 46° 33' N. Longitude 117° 10' W. Steptoe Canyon road, Whitman County. Lat/lon accurate to Steptoe Canyon (Valley).

The following were collected by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610981. *Elymus elymoides subsp. brevifolius* (J. G. Sm.) Barkworth
Wild. T-1046; W6 16750. Collected in Alberta, Canada. Latitude 50° 14' 39" N. Longitude 110° 45' 42" W. 1 mile South Bow River Highway 36, ranch entrance.

PI 610982. *Elymus wawawaiensis* J. R. Carlson & Barkworth
Wild. T-11; W6 16739. Collected in Washington, United States. Latitude 46° 24' N. Longitude 117° 2' W. Clarkston, Asotin County, between

Lewiston, ID and Wawawai Park, WA, north side of Snake River, hillside along road. Lat/lon accurate to Clarkston.

The following were collected by Dave Stout, Washington State University, Regional Plant Introduction Station, Seed Storage, Pullman, Washington 99164-6402, United States; A. M. Davis, USDA, ARS, Regional Plant Introduction Station, 59 Johnson Hall, Pullman, Washington 99164-6402, United States. Donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610983. *Elymus wawawaiensis* J. R. Carlson & Barkworth
Wild. no. DS110; Acc:647; W6 16741. Collected in Washington, United States. Latitude 46° 24' N. Longitude 117° 2' W. North end of new Clarkston bridge on Snake River Road, Whitman County. Lat/lon accurate to Clarkston.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States. Donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 610984. *Elymus wawawaiensis* J. R. Carlson & Barkworth
Wild. D-3544; Acc:1017; W6 16743. Collected in Washington, United States. Latitude 46° 37' N. Longitude 117° 49' W. Central Ferry, Garfield County. Lat/lon accurate to Central Ferry.

The following were collected by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/27/1992.

PI 610985. *Elymus bakeri* (E. E. Nelson) A. Love
Cultivated. KJ-69; W6 10209. Collected 1987 in Colorado, United States. Latitude 37° 55' N. Longitude 107° 40' W. On very steep slope above river, 4 miles up Ouray Road towards Ironton, .8 miles past covered tunnel. Lat/lon accurate to Ironton. Seed Increased: MA-36-51--75 (1990), USDA-ARS, Utah State University, Logan, Utah 84322-6300.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/30/1992.

PI 610986. *Pseudoroegneria spicata* (Pursh) A. Love
Wild. D-2836; K-24; W6 10610. Collected in Utah, United States. J.C. Smith Ranch near Strevel. Seed Increased: C-21-66--70 (1991).

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah

State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 10/24/1993.

PI 610987. *Agropyron desertorum* (Fisch. ex Link) Schult.

Wild. JA-27; VIR U-0134797; W6 13302. Collected in Kazakhstan. Latitude 46° 27' N. Longitude 57° 30' E. Elevation 150 m. Clay soil, dry drainage area, 221km southwest of Chelkar. Annual precipitation 180mm. Vegetation dominated by Artemisia shrubs and sparse stand of *Psathyrostachys juncea*.

PI 610988. *Elymus sibiricus* L.

Wild. JA-185; K-45874; VIR U-0134716; W6 14543. Collected in Russian Federation. Latitude 51° 53' N. Longitude 104° 47' E. Southeast of Baikal, Buryat Autonomous Republic, Russia. Lat/lon accurate to Baikal. Wild collection.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 610989. *Elymus macrochaetus* (Nevski) Tzvelev

Wild. DJ-4125; Agafonov #17; W6 10285. Collected 08/10/1985 in Russian Federation. Latitude 43° 15' N. Longitude 76° 57' E. In mountains near Alma Ata, Siberia. Lat/lon accurate to Alma Ata. Spikes green.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/10/1993.

PI 610990. *Elymus trachycaulus* (Link) Gould ex Shinners

Wild. JA-207; K-45827; VIR U-0134670; W6 14565. Collected in Russian Federation. Latitude 61° 53' N. Longitude 104° 47' E. Southeast of Baikal, Buryat Autonomous Republic, Russia. Lat/lon accurate to Baikal. Wild collection.

PI 610991. *Elymus sibiricus* L.

Wild. JA-188; K-45764; VIR U-0134689; W6 14546. Collected in Russian Federation. Latitude 51° 53' N. Longitude 104° 47' E. Southeast of Baikal, Buryat Autonomous Republic, Russia. Lat/lon accurate to Baikal. Wild collection.

PI 610992. *Elymus* sp.

Wild. JA-166; K-42068; VIR U-0134722; W6 14524. Collected in Russian Federation. Amur Region, Far East of Russia. Wild collection.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 610993. *Stipa capillata* L.

Wild. DJ-3884; W6 10409. Collected 08/12/1989 in Russian Federation. Elevation 1020 m. Growing in thorny shrubs on dry rocky slope. On mountainside opposite Cheketeman camp (located on Ilgumen stream at S side of Cheketeman Pass near the 666km marker on Highway M-52, Gorno Altay A.O.). Awns long.

PI 610994. *Elymus sibiricus* L.

Wild. DJ-3874; W6 10342. Collected 08/11/1989 in Russian Federation. Elevation 1250 m. Growing among granite boulders and talus. Near 660km marker on Highway M-52 at top of Cheketeman Pass, Gorno Altay A.O. Siberia. Prevalent. Spikes purple.

PI 610995. *Elymus pendulinus* (Nevski) Tzvelev

Wild. DJ-4012; W6 10341. Collected 08/16/1989 in Russian Federation. Elevation 950 m. Moist ravine. Near 681km marker on Highway M-52 (15km S of Cheketeman camp) toward Aktash and parallel to Katun River (Gorno Altay A.O.). Siberia.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 610996. *Elymus gmelinii* (Ledeb.) Tzvelev

Wild. AJC-257; W6 14581. Collected 08/15/1988 in Russian Federation. Meadows, subalpine, near Topuchee Pass, Altai Mountains, east Siberia. Mixed grass/forb, *Poa pratensis*, *Deschamsia*.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 610997. *Elymus pendulinus* (Nevski) Tzvelev

Wild. DJ-3841; W6 10301. Collected 08/10/1989 in Russian Federation. Latitude 51° 39' N. Longitude 85° 40' E. Elevation 350 m. Along the Katun River near its confluence with the Sema River near Kamlak (Gorno Altay A.O.). Lat/lon accurate to Kamlak. Spikes small, slender. Awns long, straight.

PI 610998. *Elymus mutabilis* (Drobow) Tzvelev
Wild. DJ-4043; W6 10294. Collected 08/21/1989 in Russian Federation.
Elevation 540 m. Moist ravine. Mountainside W of Kamlak Field Station of
Central Siberian Botanical Garden (Gorno Altay A.O.) from 540m at bottom
to 840m at top. Siberia. Short awned, lightly pigmented.

PI 610999. *Elymus mutabilis* (Drobow) Tzvelev
Wild. DJ-3980; W6 10290. Collected 08/15/1989 in Russian Federation.
Elevation 1240 m. Between 660 and 661km markers. South side of
Cheketeman Pass, Gorno Altay A.O. from summit (660km marker on Highway
52 at 1250m) to Cheketeman camp (666km marker at 960m). Siberia. Spikes
purple, erect.

PI 611000. *Elymus macrochaetus* (Nevski) Tzvelev
Wild. DJ-3800; W6 10282. Collected 08/05/1989 in Russian Federation.
Latitude 55° 2' N. Longitude 82° 55' E. Field plots of O. & A.
Agafonov in Central Siberian Botanical Garden, Academy Town,
Novosibirsk, RSFSR. Siberia. Lat/lon accurate to Novosibirsk. Culms to
120cm. Spikes unilateral. Glumes large. Lemma awns short.

PI 611001. *Elymus dentatus* (Hook. f.) Tzvelev
Wild. DJ-3922; W6 10279. Collected 08/12/1989 in Russian Federation.
Elevation 1150 m. Near the 658km marker. N side of Cheketeman Pass,
Gorno Altay A.O., from the summit (660km marker on Highway M-52 at
1250m) to its base (656km marker and 1010m). Siberia. Spikes large,
erect, purplish.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range
Research Unit, Utah State University, Logan, Utah 84322-6300, United States;
Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575
Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A.
Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State
University, Logan, Utah 84322-6300, United States. Donated by Kevin B.
Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory,
Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611002. *Leymus angustus* (Trin.) Pilg.
Wild. AJC-398; W6 14615. Collected 08/22/1988 in Kazakhstan. Latitude
49° 59' N. Longitude 72° 36' E. Along highway, no grazing,
Molo-2, 5km southeast of Molodetskoye, Karaganda Region. Lat/lon
accurate to Molodetskoye.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range
Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United
States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range
Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin
B. Jensen, USDA, ARS, Utah State University, Forage & Range Research
Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 611003. *Stipa capillata* L.
Wild. DJ-3824; W6 10408. Collected 08/08/1989 in Russian Federation.
Latitude 52° 34' N. Longitude 85° 15' E. Elevation 250 m. Rocky
outcrop next to the Katun River. 79km S of Biysk on Highway M-52.
Siberia. Lat/lon accurate to Biysk. Awns very long.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611004. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-402; W6 14617. Collected 08/26/1988 in Russian Federation. Latitude 51° 47' N. Longitude 55° 3' E. Sandy, ungrazed area, Lenin State Farm, 6km east of Kruchkovka, Orenburg Region. Lat/lon accurate to Orenburg.

PI 611005. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-401; W6 14616. Collected 08/26/1988 in Russian Federation. Latitude 51° 47' N. Longitude 55° 3' E. On bank of Ural River, sandy, Kruch-2, 8 miles east of Kruchkovka, Orenburg Region. Lat/lon accurate to Orenburg.

PI 611006. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-403; W6 14618. Collected 08/22/1988 in Kazakhstan. Latitude 49° 59' N. Longitude 72° 36' E. Roadside, no grazing, Aktube-2, 18km northwest of Molodetskoye, Karagande Region. Lat/lon accurate to Molodetskoye.

PI 611007. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-407; W6 14621. Collected 08/26/1988 in Russian Federation. Latitude 51° 47' N. Longitude 55° 3' E. On bank of Ural River, sandy, Kruch-2, 8 miles east of Kruchkovka, Orenburg Region. Lat/lon accurate to Orenburg.

PI 611008. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-405; W6 14619. Collected 08/26/1988 in Russian Federation. Latitude 51° 47' N. Longitude 55° 3' E. On bank of Ural River, sandy, Kruch-2, 8 miles east of Kruchkovka, Orenburg Region. Lat/lon accurate to Orenburg.

PI 611009. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-391; W6 14612. Collected 08/19/1988 in Russian Federation. Latitude 47° 47' N. Longitude 80° 12' E. 600km northeast of Alma Ata along railroad from Novosibirsk to Alma Ata. Lat/lon determined from locality information.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 611010. *Elymus dahuricus* Turcz. ex Griseb.

Wild. DJ-3855; W6 10315. Collected in Russian Federation. Latitude 51° 39' N. Longitude 85° 40' E. Elevation 350 m. Along the Katun

River near its confluence with the Sema River near Kamlak (Gorno Altay A.O.). Siberia. Lat/lon accurate to Kamlak. Typical.

PI 611011. *Elymus dahuricus* subsp. *excelsus* (Turcz. ex Griseb.) Tzvelev Wild. DJ-4087; Agafonov #MES-1-87; W6 10319. Collected 08/12/1987 in Russian Federation. Primorye Kray, RSFSR. Siberia.

PI 611012. *Elymus dahuricus* subsp. *excelsus* (Turcz. ex Griseb.) Tzvelev Uncertain. DJ-3821; W6 10318. Collected 08/08/1989 in Russian Federation. Latitude 53° 1' N. Longitude 54° 43' E. Elevation 200 m. In town square at Troitskoe, a village between Barnaul and Biysk. Lat/lon accurate to Troitskoe. Spikes very large, unilateral.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/29/1992.

PI 611013. *Elymus sibiricus* L.
Wild. AJC-268; W6 10570. Collected 08/15/1988 in Russian Federation. Altai region, Siberia.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 611014. *Elymus sibiricus* L.
Wild. DJ-3944; W6 10343. Collected 08/13/1989 in Russian Federation. Latitude 50° 18' N. Longitude 87° 44' E. Elevation 950 m. Ungrazed area. A side canyon to left of Highway M-52 at 667km marker between Cheketeman Pass and Aktash, 1km beyond Cheketeman camp, Gorno Altay A.O. Siberia. Lat/lon accurate to Aktash. Spikes large.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/27/1992.

PI 611015. *Elymus pendulinus* (Nevski) Tzvelev subsp. *pendulinus*
Cultivated. DT-3160; W6 10212. Collected 08/09/1983 in Xinjiang, China. Elevation 416 m. Side canyon off road to Tian Lake. Seed Increased: MB-86-1--10, (1985), USDA-ARS, Utah State University, Logan, Utah 84322-6300.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611016. *Elymus gmelinii* (Ledeb.) Tzvelev

Wild. AJC-258; W6 14582. Collected 08/14/1988 in Russian Federation. Latitude 51° 35' N. Longitude 85° 35' E. Along Sema River, Cherga, Altai Region. Lat/lon accurate to Cherga. Salinity tolerant.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 10/25/1993.

PI 611017. *Aeluropus littoralis* (Gouan) Parl.

Wild. JA-342; VIR U-0134990; W6 13200. Collected 07/21/1992 in Kazakhstan. Latitude 46° 27' N. Longitude 58° 27' E. Elevation 160 m. Dry alkalai drainage area, 194km south southwest of Chelkar. Annual precipitation 170mm. Vegetation dominated by shrubs (including *Tamarix* and *Salsola* spp.), and sparse stand of *Psathyrostachys juncea*, *Agropyron* spp., and *Festuca* spp. Possible turf type for golf course rough - growing in saline area.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611018. *Elymus gmelinii* (Ledeb.) Tzvelev

Wild. AJC-262; W6 14585. Collected 08/17/1988 in Russian Federation. Latitude 51° 39' N. Longitude 85° 40' E. 2km northwest of Kamlak, Altai Mountains. Lat/lon accurate to Kamlak.

PI 611019. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-381; W6 14608. Collected 08/23/1988 in Russian Federation. Latitude 48° 16' 37" N. Longitude 46° 10' 27" E. Next to Malaya Khobda River, some grazing, Aktu-70, 70km southwest of Akhtubinsk. Lat/lon accurate to Akhtubinsk.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B.

Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/10/1993.

PI 611020. *Elymus sibiricus* L.

Wild. JA-187; VIR U-0134681; K-45920; W6 14545. Collected in Russian Federation. Latitude 51° 53' N. Longitude 103° 3' E. Southeast of Baikal, Buryat Autonomous Republic. Lat/lon accurate to Baikal.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611021. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-393; W6 14614. Collected 08/22/1988 in Kazakhstan. Latitude 49° 59' N. Longitude 72° 36' E. Along roadside, grazed, Aktube-4, 7km northwest of Molodetskoye. Lat/lon accurate to Molodetskoye.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/29/1992.

PI 611022. *Elymus dahuricus* subsp. *excelsus* (Turcz. ex Griseb.) Tzvelev

Wild. AJC-238; W6 10567. Collected 08/1988 in Russian Federation. Latitude 55° 2' N. Longitude 82° 55' E. Near Vladyvostok. Central Siberian Botanical Gardens, Academy of Sciences of USSR Siberian Division, Novosibirsk. Lat/lon accurate to Novosibirsk. Agafonov collection.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611023. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-406; W6 14620. Collected 08/26/1988 in Russian Federation. Latitude 51° 47' N. Longitude 55° 3' E. On bank of Ural River, sandy, Kruch-2, 8 miles east of Kruchkovka, Orenburg Region. Lat/lon accurate to Orenburg.

PI 611024. *Elymus gmelinii* (Ledeb.) Tzvelev

Wild. AJC-260; W6 14583. Collected 08/17/1988 in Russian Federation. Latitude 51° 35' N. Longitude 85° 35' E. Meadow in bottom of valley, 5km south of Cherga, Altai Mountains, Siberia. Lat/lon accurate to Cherga. Mixed grass/forbs.

The following were collected by Melvin D. Rumbaugh, USDA-ARS, Utah State University, Forage & Range Research Lab, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/27/1992.

PI 611025. *Elymus dahuricus* Turcz. ex Griseb.

Cultivated. JR-25; W6 10214. Collected 10/17/1985 in Pakistan. Latitude 35° 55' N. Longitude 74° 18' E. Elevation 2736 m. 30 miles NW of Gilgit, Naltar Valley. Lat/lon accurate to Gilgit. Seed Increased: MB-89-36--55, (1988), USDA-ARS, Utah State University, Logan, Utah 84322-6300.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States; Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 12/14/1993.

PI 611026. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-390; W6 14611. Collected 08/19/1988 in Russian Federation. Latitude 47° 56' N. Longitude 80° 23' E. Along railroad from Novosibirsk to Alma Ata, 10km north of Ayaguz. Lat/lon accurate to Ayaguz.

PI 611027. *Leymus angustus* (Trin.) Pilg.

Wild. AJC-389; W6 14610. Collected 08/19/1988 in Kazakhstan. Latitude 47° 56' N. Longitude 80° 23' E. Along railroad from Novosibirsk to Alma Ata, 10km north of Ayaguz. Lat/lon accurate to Ayaguz.

The following were collected by Alexander Afonin, Vavilov Institute of Plant Industry, 42 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation; Nicolay Portinier, Kamorov Institute of Botany, St. Petersburg, Leningrad, Russian Federation; Nicolay Khitrov, Dokvchaev Soil Institute, Pygevsky, per., 7., Moscow, Moscow 109017, Russian Federation. Received 01/1996.

PI 611028. *Dactylis glomerata* L.

Wild. VIR 319; W6 17759. Collected 09/22/1995 in Russian Federation. Latitude 44° 6' 28" N. Longitude 40° 1' 6" E. Elevation 1500 m. Krasnodarskiy kray. Near plateau Lagonaki. Area grazed. Slope 11-40%. Open. Moist, mid-slope. pH 5.6-5.9. Vegetation closed, seasonal tall and short grass. Dominant herb/grass species *Calamagrostis aruninacea*, *Agrostis tenuis*, *Tussilago farfara*. Population distribution uniform,

abundance frequent. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611029. *Dactylis glomerata* L.

Wild. VIR 314; W6 17757. Collected 09/21/1995 in Russian Federation. Latitude 44° 8' 6" N. Longitude 40° 4' 19" E. Elevation 1230 m. Krasnodarskiy kray. Nearest village Hamyshki. Area cut/grazed. Slope 6-10%. Open. Moist, mid-slope. pH 6.8. Vegetation closed, seasonal short grass. Dominant herb/grass species *Brachipodium* p., *Bromopsis* r., *Phleum* p., *Festuca* r., *Koeleria* c., *Geranium saguineum*, *Centaurea leucophilla*. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611030. *Dactylis glomerata* L.

Wild. VIR 297; W6 17751. Collected 09/19/1995 in Russian Federation. Latitude 44° 28' 43" N. Longitude 39° 56' 10" E. Elevation 200 m. Krasnodarskiy kray. Nearest village Zazulin. Area cut/grazed. Slope 0-5%. Light open. Moist, ridgetop (watershed). pH 5.8. Vegetation closed, seasonal broad-leafed herb vegetation. Dominant herb/grass species *Prunella vulgaris*, *Plantago lanceolata*, *Daucus carota*, *Fillipendula vulgaris*, *Leontodon caucasicus*, *Molinia caerulea*, *Dorycnium herbaceum*. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611031. *Dactylis glomerata* L.

Wild. VIR 300; W6 17752. Collected 09/19/1995 in Russian Federation. Latitude 44° 28' 43" N. Longitude 39° 56' 10" E. Elevation 200 m. Krasnodarskiy kray. Nearest village Zazulin. Area cut/grazed. Slope 0-5%. Light open. Moist, ridgetop (watershed). pH 5.8. Vegetation closed, seasonal broad-leafed herb vegetation. Dominant herb/grass species *Prunella vulgaris*, *Plantago lanceolata*, *Daucus carota*, *Fillipendula vulgaris*, *Leontodon caucasicus*, *Molinia caerulea*, *Dorycnium herbaceum*. Population distribution uniform, abundance occasional. Growth habit spreading. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611032. *Dactylis glomerata* L.

Wild. VIR 329; W6 17762. Collected 09/24/1995 in Russian Federation. Latitude 44° 20' 56" N. Longitude 39° 54' 35" E. Elevation 450 m. Krasnodarskiy kray. Nearest village Krasny, Dagestan. Area cut/grazed. Slope 0-6%. Open. Moist, ravine. pH 5.8-7.4. Vegetation closed, seasonal short grass and broad-leafed herb vegetation. Dominant herb/grass species *Deschampsia* c., *Inula* h., *Plantago* l., *Leontodon caucasicum*, *Agrimonia* e. Population distribution uniform, abundance rare. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

- PI 611033. *Dactylis glomerata* L.**
Wild. VIR D17; W6 17795. Collected 07/12/1995 in Russian Federation.
Latitude 44° 49' N. Longitude 37° 39' E. Elevation 300 m. pH 6.9-7.4.
- PI 611034. *Dactylis glomerata* L.**
Wild. VIR D182; W6 17797. Collected 10/02/1995 in Russian Federation.
Latitude 44° 11' 18" N. Longitude 39° 27' 20" E. Elevation 600 m. pH 6.
- PI 611035. *Dactylis glomerata* L.**
Wild. VIR D171; W6 17796. Collected 09/22/1995 in Russian Federation.
Latitude 44° 3' 48" N. Longitude 40° 1' E. Elevation 1850 m.
- PI 611036. *Lolium perenne* L.**
Wild. VIR D146; W6 17787. Collected 09/05/1995 in Russian Federation.
Latitude 44° 10' 2" N. Longitude 40° 50' 56" E. Elevation 550 m.
Province Maykop, 1.5 km. north of Psebay. Past and current grazing.
Slope 0-5%, aspect SW. Light 1/2 shade. Soil loam/sand with gravel, pH 6.7. Site moist, stream terrace. Vegetation closed, open deciduous forest with closed lower layers. Surrounding vegetation evergreen tall grass and seasonal broad-leafed herb vegetation. Dominant tree species Hornbeam-Oak, *Carpinus* sp. Dominant shrub species *Carpinus* sp., *Q. petraea*, willows, *Ribes*. Dominant herb/grass species *Asperula* sp., *Festuca* d., *Erytregia* sp, *Calamagrostis* sp., *Lolium* p. Population distribution patchy, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).
- PI 611037. *Dactylis glomerata* L.**
Wild. VIR 129; W6 17740. Collected 08/21/1995 in Russian Federation.
Latitude 44° 33' 30" N. Longitude 38° 21' 48" E. Elevation 700 m.
Province Novorossiysk, 10 km. north of Michaelovskiperival. Past logged, now grazed. Slope 0-5%, aspect NW. Light open. Soil sandy-clay, pH 4.5-5.5. Seasonally dry, ridgetop, upper slope. Vegetation closed, evergreen broad-leafed. Surrounding veg. open deciduous forest with closed lower layers. Dominant tree species *Quercus* sp. Dominant shrub species *Carpinus* sp., *Quercus* sp., *Ribes* sp. Dominant herb/grass species *Trifolium* sp., *Festuca pratensis*, *Poa* sp., *Potentilla* sp., *Medicago falcata*, *Onobrychis* sp., *Aster* sp., *Dactylis glomerata*, *Geranium* sp. Population abundance frequent. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).
- PI 611038. *Agropyron* sp.**
Wild. VIR D58A; W6 17815. Collected 07/28/1995 in Russian Federation.
Latitude 44° 5' 59" N. Longitude 43° 12' 43" E. Elevation 800 m.
pH 6.8-6.9.
- PI 611039. *Agropyron* sp.**
Wild. VIR 123; W6 17739. Collected 08/20/1995 in Russian Federation.
Latitude 44° 40' 57" N. Longitude 37° 57' 8" E. Elevation 380 m.
Province Novorossiysk, 3 km. north of Kabardinka. Past logged, now grazed. Slope 11-40%, aspect SW. Light open. Soil clay, pH 6.8-7.0. Seasonally dry, lower-upper slope. vegetation closed, open deciduous forest with closed lower layers. Surrounding vegetation seasonal tall grass. Dominant tree species *Quercus* sp. Dominant shrub species

Carpinus sp., Quercus sp. Dominant herb/grass species Achillea sp., Festuca sp., Agropyron cristatum, Salvia sp., S. ringens, Sanguisorba minor, Plantago sp. Population abundant. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611040. *Dactylis glomerata* L.

Wild. VIR 293; W6 17750. Collected 09/19/1995 in Russian Federation. Latitude 44° 21' 10" N. Longitude 39° 51' 57" E. Elevation 300 m. Krasnodarskiy kray. Nearest village Bezvodnaya. Area cut/grazed. Slope 0-5%. Light open. Moist, ridgetop (watershed). pH 5.8-6.1. Vegetation closed, seasonal short grass. Dominant herb/grass species *Dactylis glomerata*, *Plantago lanceolata*, *Lotus corniculatus*, *Elytrigia repens*. Population distribution uniform, abundance frequent. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611041. *Dactylis glomerata* L.

Wild. VIR 338; W6 17765. Collected 10/03/1995 in Russian Federation. Latitude 44° 3' 7" N. Longitude 39° 50' 42" E. Elevation 1450 m. Krasnodarskiy kray. Nearest village Verhnie Tuby. Slope 6-11%, aspect SW. Open. Moist, upper slope. pH 5.4. Vegetation closed, seasonal tall grass. Dominant herb/grass species *Dactylis glomerata*, *Inula helenium*, *Cirsium caput-medusae*, *Geranium* sp., *Brachypodium silvatica*. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611042. *Dactylis glomerata* L.

Wild. VIR 307; W6 17754. Collected 09/20/1995 in Russian Federation. Latitude 44° 13' 52" N. Longitude 40° 4' 41" E. Elevation 1230 m. Krasnodarskiy kray. Nearest village Temnolesskaya. Area grazed. Slope 0-6%. Light open. Moist, ridgetop. pH 6.2. Vegetation closed, seasonal short grass. Dominant herb/grass species *Brachypodium* sp., *Plantago lanceolata*, *Phleum phleoides*, *Festuca rupicola*. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611043. *Dactylis glomerata* L.

Wild. VIR 324; W6 17761. Collected 09/22/1995 in Russian Federation. Latitude 44° 13' 52" N. Longitude 40° 8' 30" E. Elevation 830 m. Krasnodarskiy kray. Nearest village Dahovskaia. Area cut/grazed. Slope 0-6%. Open. Moist, ridgetop. pH 7.6. Vegetation closed, seasonal short grass. Dominant herb/grass species *Agrostis tenuis*, *Bromopsis riparia*, *Plantago lanceolata*, *Leontodon caucasicum*. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611044. *Lolium perenne* L.

Wild. VIR D150; W6 17791. Collected 09/06/1995 in Russian Federation. Latitude 43° 43' 9" N. Longitude 41° 35' 45" E. Elevation 1200 m.

Province Cherkessk-Karachayeysk Republic, 8 km. south of Marvkha. Past and currently grazed/hayed. Slope 6-10%, aspect SW. Light open. Soil clay, pH 5.0-5.3. Moist to seasonally dry, ridgetop-upper slope. Vegetation closed, evergreen broad-leafed herb vegetation. Surrounding vegetation open deciduous forest with closed lower layers. Dominant tree species *Alnus* i., *Corealus* a. Dominant shrub species *Rhododendron* sp., *Rosa* sp., *Ribes* sp. Dominant herb/grass species *Trifolium* sp., *Lotus* c., *Achellia* sp., dandelion, *Descampsia* c., *Phleum* p., *Dactylis* g., *Agrosits* sp., *Calamagrostis* sp. Population distribution patchy, abundance frequent. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611045. *Dactylis glomerata* L.

Wild. VIR D10; W6 17769. Collected 07/10/1995 in Russian Federation. Latitude 45° 12' 30" N. Longitude 36° 50' E. Elevation 160 m. pH 7.3-7.9.

PI 611046. *Festuca pratensis* Huds.

Wild. VIR D16; W6 17794. Collected 07/12/1995 in Russian Federation. Latitude 44° 49' N. Longitude 37° 39' E. Elevation 300 m. pH 6.9-7.4.

PI 611047. *Dactylis glomerata* L.

Wild. VIR 287; W6 17747. Collected 09/18/1995 in Russian Federation. Latitude 44° 16' 38" N. Longitude 40° 18' 29" E. Elevation 850 m. Krasnodarskiy kray. Nearest village Hadzoh. Area grazed. Slope 6-10%, aspect E. Open. Moist, upper slope. pH 6.1. Vegetation closed, seasonal broad-leafed herb vegetation. Dominant herb/grass species *Leontodon caucasicus*, *Plantago* l., *Fillipendula vulgaris*, *Lotus* c., *Elytrigia repens*. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611048. *Dactylis glomerata* L.

Wild. VIR 322; W6 17760. Collected 09/22/1995 in Russian Federation. Latitude 44° 12' 15" N. Longitude 40° 5' 37" E. Elevation 1200 m. Krasnodarskiy kray. Nearest village Dahovskaia. Area cut/grazed. Slope 0-6%. Open. Moist, mid-slope. pH 6.9. Vegetation closed, seasonal short grass. Dominant herb/grass species *Agrostis gigantea*, *Carex melanostachya*, *Bromopsis riparia*, *Plantago lanceolata*, *Betonica* o., *Leontodon* c. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611049. *Dactylis glomerata* L.

Wild. VIR 281; W6 17745. Collected 09/14/1995 in Russian Federation. Latitude 44° 9' 2" N. Longitude 40° 11' 48" E. Elevation 1100 m. Krasnodarskiy kray. Nearest village Dachovskaya. Area logged. Slope 6-10%, aspect NE. Light 1/4 shade. Soil loam, pH 5.4-5.6. Moist, upper slope. Vegetation closed, deciduous forest primary, closed scrub with scattered trees. Dominant tree species *Carpinus betulus*, *Quercus robur*, *Acer campestre*. Dominant shrub species *Rosa* sp., *Rubus caesius*, *Salix caprea*, *Rhododendron luteum*. Dominant herb/grass species *Deschampsia caespitosa*, *Molinia caerulea*, *Calamagrostis* sp., *Doricinium graecum*, *Trifolium medium*. Population distribution uniform, abundance occasional.

Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611050. *Dactylis glomerata* L.

Wild. VIR 316; W6 17758. Collected 09/22/1995 in Russian Federation. Latitude 44° 2' 59" N. Longitude 40° 1' 59" E. Elevation 1200 m. Krasnodarskiy kray. Plateau Lagonaki. Area grazed. Slope 0-6%. Open. Moist, plateau. Vegetation closed, seasonal short grass. Dominant herb/grass species *Brachipodium pinnatum*, *Bromopsis riparia*, *Festuca rupicola*, *Koeleria cristata*, *Geranium saguineum*, *Plantago lanceolata*. Population distribution uniform, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611051. *Dactylis glomerata* L.

Wild. VIR 137; W6 17742. Collected 08/21/1995 in Russian Federation. Latitude 44° 8' 54" N. Longitude 39° 1' 20" E. Elevation 15 m. Province Novorossiysk, south of Aguaye on beach. Past logged, now settlement. Slope 0-5%, aspect S. Light 1/4 shade. Soil clay, pH 7.5. Seasonally dry, cliff, beach. Vegetation closed, open deciduous forest with closed lower layers. Surrounding vegetation evergreen short grass. Dominant tree species *Quercus* sp., *Castanea* sp. Dominant shrub species *Laurocerasus* sp. Dominant herb/grass species Bermuda grass, *Trifolium* f. *Lotus tenuis*. Population abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611052. *Dactylis glomerata* L.

Wild. VIR 309; W6 17755. Collected 09/21/1995 in Russian Federation. Latitude 44° 10' 12" N. Longitude 39° 56' 12" E. Elevation 1320 m. Krasnodarskiy kray. Nearest village Mezmay. Area cut/grazed. Slope 0-6(10)%, aspect NE. Light open. Moist, ridgetop. pH 5.1. Vegetation closed, seasonal tall grass. Dominant herb/grass species *Dactylis* g., *Calamagrostis epigeios*, *Brachipodium sylvaticum*, *Elytrigia* r., *Galega* o. Population distribution uniform, abundant. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611053. *Dactylis glomerata* L.

Wild. VIR 278B; W6 17743. Collected 09/14/1995 in Russian Federation. Latitude 44° 9' 2" N. Longitude 40° 11' 48" E. Elevation 1100 m. Krasnodarskiy kray. Nearest village Dachovskaya. Area logged. Slope 6-10%, aspect NE. Light 1/4 shade. Soil loam, pH 5.4-5.6. Moist, upper slope. Vegetation closed, deciduous forest primary, closed scrub with scattered trees. Dominant tree species *Carpinus betulus*, *Quercus robur*, *Acer campestre*. Dominant shrub species *Rosa* sp., *Rubus caesius*, *Salix caprea*, *Rhododendron luteum*. Dominant herb/grass species *Deschampsia caespitosa*, *Molina caerulea*, *Calamagrostis* sp., *Doricnium graecum*, *Trifolium medium*. Population distribution uniform, abundance occasional. Growth habit erect. Flower gray. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611054. *Dactylis glomerata* L.

Wild. VIR 337; W6 17764. Collected 10/03/1995 in Russian Federation. Latitude 44° 3' 7" N. Longitude 39° 50' 42" E. Elevation 1450 m. Krasnodarskiy kray. Nearest village Verhnie Tuby. Slope 6-11%, aspect SW. Open. Moist, upper slope. pH 5.4. Vegetation closed, seasonal tall grass. Dominant herb/grass species *Dactylis glomerata*, *Inula helenium*, *Cirsium caput-medusae*, *Geranium* sp., *Brachypodium silvatica*. Population distribution uniform, abundant. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611055. *Dactylis glomerata* L.

Wild. VIR 305; W6 17753. Collected 09/20/1995 in Russian Federation. Latitude 44° 15' 53" N. Longitude 40° 5' 15" E. Elevation 900 m. Krasnodarskiy kray. Nearest village Temnolesskaya. Area logged. Slope 6-10%. 1/4 shade. Moist, mid-slope. pH 5.3. Vegetation closed, deciduous forest primary, closed scrub with scattered trees. Dominant tree species *Carpinus betulus*, *Quercus robur*, *Castanea vulgaris*. Dominant shrub species *Rosa* sp., *Corylus avellana*, *Salix caprea*. Dominant herb/grass species *Calamagrostis* sp., *Dorycnium graecum*, *Trifolium medium*. Population distribution uniform, abundance rare. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611056. *Dactylis glomerata* L.

Wild. VIR 290; W6 17748. Collected 09/18/1995 in Russian Federation. Latitude 44° 22' 15" N. Longitude 40° 22' 52" E. Elevation 550 m. pH 3.7-4.1.

The following were donated by A.T. Whittemore, Missouri Botanical Garden, Biology Department, P.O. Box 299, St. Louis, Missouri 63166-0299, United States. Received 04/30/1992.

PI 611057. *Poa* sp.

Cultivated. W6 10444. Collected in Kazakhstan. Latitude 43° 15' N. Longitude 76° 57' E. Among dry rocks on sunny hillside, just above Alma Ata, Butekovke Canyon. Lat/lon accurate to Alma Ata.

The following were donated by D. Stoyanov, Institute of Introduction & Plant Gen., Sadovo, Plovdiv 4122, Bulgaria. Received 12/26/1990.

PI 611058. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. ISN 47; IDBBNR 9532; Ames 14433; Egyptian-60.

PI 611059. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. ISN 49; IDBBNR 9534; Ames 14435; Ticha.

The following were donated by Shu De Lee, Chinese Academy of Agricultural Sciences, 30 Baishigiao Rd., Beijing, Beijing 100094, China. Received 05/09/1991.

PI 611060. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 9544; Ames 15675; Swiss chard.

The following were donated by Alan Whittmore, USDA/ARS, University of Georgia, Regional Plant Introduction Station, Griffin, Georgia 30223-1797, United States. Received 02/28/1992.

PI 611061. *Beta vulgaris* L. subsp. *vulgaris*

Uncertain. IDBBNR 9553; Ames 19021. Collected 07/20/1991 in Kazakhstan. Latitude 43° 15' N. Longitude 76° 57' E. Private vendor, Alma Ata, Kazakh Republic. Lat/lon accurate to Alma Ata.

The following were donated by Lothar Frese, Federal Center for Breeding, Research on Cultivated Plants (BAZ), Gene Bank, Braunschweig, Lower Saxony D-38116, Germany. Received 01/24/1984.

PI 611062. *Beta vulgaris* L. subsp. *vulgaris*

Uncertain. B55650; IDBBNR 4829; Ames 3097. Collected in Greece. Latitude 38° 38' N. Longitude 22° 43' E. District: Peloponnese, Location: Argos.

The following were donated by Ming H. Yu, USDA, ARS, U.S. Agricultural Research Station, 1636 East Alisal St., Salinas, California 93905, United States. Received 08/20/1985.

PI 611063. *Beta patellaris* Moq.

Wild. WB239; IDBBNR 4692; Ames 4499.

PI 611064. *Beta patellaris* Moq.

Wild. WB 225; SP60-3036-01; IDBBNR 4694; Ames 4502. Pool of SP60-3036-01. 2n = 54.

The following were collected by D. D. Dolan, USDA, ARS, Regional Plant Introduction Station, New York Agricultural Experiment Sta., Geneva, New York 14456, United States. Received 04/25/1983.

PI 611065. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4837; Ames 7796. Collected 01/30/1963 in United States.

The following were collected by Andres Contreras, Universidad Austral de Chile, Inst. Produccion y Sanidad Vegetal, Casilla 567, Valdivia, Los Lagos, Chile. Received 12/19/1991.

PI 611066. *Solanum tuberosum* L.

Cultivated. CON 917; BE-3768; Q 28800. Collected 12/19/1991 in Chile.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands; William Garcia Fernandez, PROINPA (Programa de Investigacion de

la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cesped 923, Cochabamba, Cochabamba, Bolivia; Maria Luisa Ugarte, PROINPA (Programa de Investigacion de la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cesped 923, Cochabamba, Cochabamba, Bolivia. Received 04/21/1993.

PI 611067. *Solanum tuberosum* subsp. *andigenum* (Juz. & Bukasov) Hawkes
Cultivated. SFVU 6748; Q 30491; BE-4652. Collected 03/24/1993 in La Paz, Bolivia. Latitude 15° 32' S. Longitude 69° 1' W. Elevation 3585 m. Camacho. From about 20 km N of Escoma, go E at Cruce de Kariguina, then about 7 km to Canchi Tamampayu. Growing in backyard garden. Stems wilted; flowers and fruits gone; tubers at end of long stolons, deep in the ground, with purple skin.

The following were donated by Nelson Estrada-Ramos, PROINPA, Casilla Postal 4285, Cochabamba, Cochabamba, Bolivia. Received 03/11/1994.

PI 611068. *Solanum tuberosum* L.
Cultivar. "85-87-3"; BE-6048; Q 32921.

The following were donated by Oscar A. Hidalgo, International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 03/05/1996.

PI 611069. *Solanum tuberosum* L.
Breeding. LBR-35; CIP 387015.3; Q 36065. Pedigree - 382171.26(380086.3 x MEX BULK) 7XY.1. Late Blight resistant breeding stock.

The following were donated by M.S. Ramanna, Agricultural University, P.O.B. 386 / 6700 AJ, Lawickse Allee 166, Wageningen, Gelderland, Netherlands. Received 10/28/1996.

PI 611070. *Solanum tuberosum* L.
Breeding. BE67; BE 67; Q 36545. Pedigree - ds1/ds/. (ds1/ds/) 2n-pollen producer.

PI 611071. *Solanum tuberosum* L.
Breeding. EC373; EC 373; Q 36561. Pedigree - Ds-1/DS-1.

Unknown source. Received 05/29/1998.

PI 611072. *Solanum tuberosum* L.
Cultivar. "SA-2482"; CIP 700223; Q 37701.

Unknown source. Received 05/29/1998.

PI 611073. *Solanum tuberosum* L.
Cultivar. CIP 701025; "UGHPAMANGA"; Q 37703.

Unknown source. Received 05/29/1998.

PI 611074. *Solanum x chaucha* Juz. & Bukasov
Landrace. CIP 701568; Q 42830; Q 37704.

Unknown source. Received 05/29/1998.

PI 611075. *Solanum tuberosum* L.
Cultivar. CIP 701830; "GARHUASH HUAYRO"; Q 37705.

Unknown source. Received 05/29/1998.

PI 611076. *Solanum tuberosum* L.
Cultivar. CIP 702477; "PUMA MAQUI"; Q 37707.

Unknown source. Received 05/29/1998.

PI 611077. *Solanum tuberosum* L.
Cultivar. CIP 702514; "CH. BLANCA OJO MORADO"; Q 37708.

Unknown source. Received 05/29/1998.

PI 611078. *Solanum tuberosum* L.
Cultivar. "PAPA CACHO"; CIP 703610; Q 37714.

Unknown source. Received 05/29/1998.

PI 611079. *Solanum tuberosum* L.
Cultivar. CIP 704193; "LUCKY"; Q 37715.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Andrea Clausen, Estacion Experimental Agropecuaria (EEA), Instituto Nacional de Tecnologia Agrop., Casilla de Correo 276, Balcarce, Buenos Aires 7620, Argentina. Received 07/30/1991.

PI 611080. *Solanum microdontum* Bitter
Wild. SCl 4577B; Q 28532. Collected 04/04/1990 in La Rioja, Argentina. Latitude 29° 10' S. Longitude 67° 39' W. Elevation 1790 m. Chilecito. 2 km S of Guanchin Viejo, 3 km NW of Guanchin, near roadside, on SW side. In rich, moist, organic soil, growing with *Mentha*, grasses, by *Juglans regia* plantation. Flowers gone, said by landowner to have white petals, tubers pink outside and steaked pink inside or white outside.

The following were donated by Oscar A. Hidalgo, International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 03/05/1996.

PI 611081. *Solanum x juzepczukii* Bukasov
Cultivar. "HUATAQUI"; CIP 701014; Q 36050. Quechua names for primitive cultivars from Bolivia. From CIP virus free collection.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Konrad Schuler, Institute for Plant Genetics, IPK, Genbank-Aussenstelle Nord, 0-2551, Gross Lusewitz, Germany; Antonio Rivera-Pena, INIFAP, Programa Nacional de la Papa, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands. Received 11/13/1997.

PI 611082. *Solanum x edinense* P. Berthault

Wild. RSSV 983; Q 37339. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 9' N. Longitude 99° 53' W. Elevation 2700 m. Growing 50 m downslope and 300 m N of Rt 134, 35.7 km SW of Toluca (by posted road signs), shortly SW of entrance to Meson Viejo. Growing in pine fir woods. Plants to 1.5 m tall, no flowers or fruits present, six tubers collected from one colony of plants.

Unknown source. Received 04/01/1998.

PI 611083. *Solanum tuberosum* L.

Cultivar. "RATTVIKS ROD"; 3019; Q 37603.

Unknown source. Received 04/01/1998.

PI 611084. *Solanum tuberosum* L.

Cultivar. "BLA DALSLAND"; 3035; Q 37604.

Unknown source. Received 04/01/1998.

PI 611085. *Solanum tuberosum* L.

Cultivar. "TROMOYPOTET"; 3107; Q 37608.

Unknown source. Received 04/01/1998.

PI 611086. *Solanum tuberosum* L.

Cultivar. "JOSSING"; 3394; Q 37642.

Unknown source. Received 04/01/1998.

PI 611087. *Solanum tuberosum* L.

Cultivar. "PRESTKVERN"; 3395; Q 37643.

Unknown source. Received 09/21/1998.

PI 611088. *Solanum tuberosum* L.

Cultivar. "TURN-OVER POTATO"; Q 37854.

The following were donated by INIFAP, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico. Received 12/07/1998.

- PI 611089. *Solanum tuberosum* L.
Breeding. 676014; Q 37944.
- PI 611090. *Solanum tuberosum* L.
Breeding. 750660; Q 37946.
- PI 611091. *Solanum tuberosum* L.
Breeding. 77-69-43; Q 37949.
- PI 611092. *Solanum tuberosum* L.
Breeding. 77-70-91; Q 37950.
- PI 611093. *Solanum tuberosum* L.
Breeding. 78-7-110; Q 37951.
- PI 611094. *Solanum tuberosum* L.
Breeding. 78-199-33; Q 37952.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands; William Garcia Fernandez, PROINPA (Programa de Investigacion de la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cespced 923, Cochabamba, Cochabamba, Bolivia; Maria Luisa Ugarte, PROINPA (Programa de Investigacion de la Papa), IBTA (Instituto de Boliviano Tecnologia Agropecuaria), Calle Man Cespced 923, Cochabamba, Cochabamba, Bolivia. Received 04/21/1993.

- PI 611095. *Solanum tuberosum* subsp. *andigenum* (Juz. & Bukasov) Hawkes
Cultivated. SFVU 6745; BE-4652; Q 30488. Collected 03/24/1993 in La Paz, Bolivia. Latitude 15° 32' S. Longitude 69° 2' W. Elevation 3740 m. Camacho. From 20 km N of Escoma, go east at Cruce de Kariguina, then 3.5 km to Hachatira, a small village. Growing adjacent to and in a vegetable garden. Plants wilted to the ground, stolons long, tubers deep in ground, with skin white speckled with pink, white flesh, said by owner of property to be wild and a persistent weed in the area.

The following were donated by Gino Aguirre, PROINPA, Programa de Investigacion de la Papa, Casilla 405, Cochabamba, Cochabamba, Bolivia. Received 07/27/1993.

- PI 611096. *Solanum x ajanhuiri* Juz. & Bukasov
Landrace. "YARI BLANCO"; Q 30930; BE-4832.

The following were collected by Aaron Rodriguez-Contreras, Universidad de Guadalajara, Instituto de Botanica, Las Agujas, Nextipac, Zapopan, Jalisco CP 45110, Mexico. Received 09/14/1993.

- PI 611097. *Solanum ehrenbergii* (Bitter) Rydb.
Wild. ROD 2564; BE-4893; Q 32560. Collected 08/23/1993 in Guanajuato, Mexico. Latitude 21° 23' N. Longitude 100° 41' W. Elevation 2060 m. La Purisima, municipality of San Diego de la Union, road from Queretaro

city to San Luis Potosi. Mesquite-grassland. Growing along cornfield.
Corolla Stellate, white; fruit globose.

The following were donated by Kazuyoshi Hosaka, Kobe University, Food, Resources Education and Research Center, 1348 Uzurano, Kobe, Hyogo 675-2103, Japan. Received 06/07/1994.

PI 611098. *Solanum phureja* Juz. & Bukasov
Genetic. PHU 460; BE-7106; Q 34944.

The following were donated by Oscar A. Hidalgo, International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 03/05/1996.

PI 611099. *Solanum tuberosum* L.
Breeding. LBR-28; CIP 386206.4; Q 36056. Pedigree - 380474.8 (374080.5 x LT XY BULK)/ BK PRECOZ-84. Late Blight resistant breeding stock.

The following were donated by M.S. Ramanna, Agricultural University, P.O.B. 386 / 6700 AJ, Lawickse Allee 166, Wageningen, Gelderland, Netherlands. Received 10/28/1996.

PI 611100. *Solanum tuberosum* L.
Breeding. CE149; Q 36555. Pedigree - Ds-1/Ds-1. Produces more than 25% 2n pollen, female sterile.

PI 611101. *Solanum tuberosum* L.
Breeding. EC322; Q 36560. Pedigree - Ds-1/DS-1.

PI 611102. *Solanum tuberosum* L.
Breeding. EC326; Q 36564.

Unknown source. Received 07/24/1997.

PI 611103. *Solanum tuberosum* L.
Breeding. 385179.10; Q 37088.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706-1590, United States; Konrad Schuler, Institute for Plant Genetics, IPK, Genbank-Aussenstelle Nord, 0-2551, Gross Lusewitz, Germany; Antonio Rivera-Pena, INIFAP, Programa Nacional de la Papa, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico; Ronald van den Berg, Wageningen Agricultural University, Department of Plant Taxonomy, General Foulksweg 37, Wageningen, Gelderland 6700 ED, Netherlands. Received 11/13/1997.

PI 611104. *Solanum x edinense* P. Berthault
Wild. RSSV 969; Q 37331. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 10' N. Longitude 99° 48' W. Elevation 3330 m. On Rt 10 at Loma Alta, 1.3 km S of La Puerta (on Rt 134), on East side of road, in Parque Nacional Nevado de Toluca, on W-facing lower slopes of volcano. Growing in rich organic soil by roadside, in area of pine and fir woods, adjacent to cultivated potato field, 20 m from *S. x edinense*

collection 670. Stems dead and brown, 12 tubers (red skin, white flesh) collected from two immediately adjacent plants.

PI 611105. *Solanum tuberosum* L.

Cultivated. RSSV 969B; Q 37332. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 10' N. Longitude 99° 48' W. Elevation 3300 m. On Rt 10 at Loma Alta, 1.2 km S of La Puerta (on Rt 134) on E side of road, in Parque Nacional Nevado de Toluca, on W-facing lower slopes of volcano. Growing as an advanced cultivar, collected in a cultivated field as a possible parent in adjacent populations of *S. x edinense* collections 969 and 970. Plants dead to ground, tubers ready to harvest.

PI 611106. *Solanum x edinense* P. Berthault

Wild. RSSV 970; Q 37333. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 10' N. Longitude 99° 48' W. Elevation 3330 m. On Rt 10 at Loma Alta, 1.2 km S of La Puerta (on Rt 134), on east side of road, in Parque Nacional Nevado de Toluca, on W-facing lower slopes of volcano. Growing in rich organic soil under shrub, adjacent to cultivated potato field, in area of pine and fir woods, 20 m from *S. x ediense* collection 969. Stems green but beginning to turn brown, seven tubers (red skin, white flesh) collected from one plant.

PI 611107. *Solanum tuberosum* L.

Cultivated. RSSV 978; Q 37336. Collected 10/20/1997 in Mexico, Mexico. Latitude 19° 4' N. Longitude 99° 50' W. Elevation 3120 m. From El Capulin, a small settlement 21.3 km S of La Puerta (on Rt 134), drive 600 m E to a small farm. Growing in a cultivated potato field, in area of pine fir woods. 15 tubers with red skin and white flesh collected from three plants.

The following were donated by INIFAP, Apdo. Postal 31, Suc. "A", Metepec, Mexico, Mexico. Received 12/07/1998.

PI 611108. *Solanum tuberosum* L.

Cultivar. "MICHOACON"; Q 37943.

PI 611109. *Solanum tuberosum* L.

Breeding. 750489; Q 37945. Late blight resistant Mexican clone. Very late maturing.

PI 611110. *Solanum tuberosum* L.

Cultivar. 77-1A-11; Q 37947.

The following were developed by Melodee L. Fraser, Pure Seed Testing, Inc., P.O. Box 176, 606 Main Street, Rolesville, North Carolina 27571, United States. Received 08/18/1999.

PI 611111. *Poa pratensis* L.

Cultivar. Population. "BRILLIANT"; PST-B2-42. PVP 9900350. Pedigree - Single highly apomictic plant selected from the progeny of Unique Kentucky bluegrass x Rita Kentucky bluegrass and C-727 Kentucky bluegrass. Bright green, low-growing Kentucky bluegrass that exhibits excellent turf quality at mowing heights as low as 1.3 cm. Good resistance to billbugs (*Sphenophorus* spp.) and to powdery mildew (*Erysiphe graminis*). Adapted to temperate climates and is recommended

for turf uses including lawns, sports fields, and golf course fairways and roughs. Particularly well suited for areas that are maintained at mowing heights less than 3.5 cm. May be planted as a monostand, in blends with other turf-type Kentucky bluegrasses, or in mixtures with turf-type perennial ryegrass (*Lolium perenne*) or tall fescue (*Festuca arundinacea*).

The following were developed by Todd Pfeiffer, University of Kentucky, Department of Plant and Soil Sciences, 329 Plant Science Building, Lexington, Kentucky 40546-0312, United States; C.R. Tutt, University of Kentucky, Kentucky Agric. Exp. Station, Princeton, Kentucky, United States; D.L. Pilcher, University of Kentucky, Dept. of Agronomy, Lexington, Kentucky 40546, United States; E.C. Lacefield, University of Kentucky, Dept. of Agronomy, Lexington, Kentucky 40546, United States. Received 08/27/1999.

PI 611112. *Glycine max* (L.) Merr.

Cultivar. Pureline. "7499"; KY91-1214. PVP 9900351; CV-420. Pedigree - Pioneer 9391 x KY84-1616. Indeterminate maturity group IV (relative maturity 4.9). Normal mature height 85 cm, but lodging scores range from 1-2. Flowers purple, tawny pubescence and tan pods. Seeds yellow with black hila and dull seed coat with positive seed peroxidase activity. Seed weight averages 14.5 g 100-1 seeds. Seeds have 410 g kg-1 protein and 210 g kg-1 oil on a dry weight basis. Resistant to southern stem canker (*Diaporthe phaseolorum*).

The following were developed by Lofts Seed, Inc., United States. Received 08/27/1999.

PI 611113 PVPO. *Lolium perenne* L.

Cultivar. "A7 White"; A7 7311; LRF-4113. PVP 9900352.

The following were developed by North Carolina Agricultural Research Service, North Carolina, United States. Received 08/27/1999.

PI 611114 PVPO. *Solanum lycopersicum* L.

Cultivar. "NC 1y". PVP 9900353.

PI 611115 PVPO. *Solanum lycopersicum* L.

Cultivar. "NC 2y". PVP 9900354.

The following were developed by Novartis Seeds, Inc., United States. Received 08/27/1999.

PI 611116. *Zea mays* L. subsp. *mays*

Cultivar. "NP2208". PVP 9900355.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 08/27/1999.

PI 611117 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "PH3GR". PVP 9900357.

PI 611118 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH3GK". PVP 9900358.

The following were developed by Ken Amano, Nichino Ryokka Co., Ltd., Yamanashi, Honshu, Japan. Received 08/27/1999.

PI 611119 PVPO. *Lolium perenne* L.
Cultivar. "YATSUGREEN". PVP 9900360.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 08/27/1999.

PI 611120 PVPO. *Festuca rubra* L. subsp. *rubra*
Cultivar. "BADGER". PVP 9900361.

The following were developed by Seed Research of Oregon, Inc., Corvallis, Oregon, United States. Received 08/27/1999.

PI 611121. *Lolium perenne* L.
Cultivar. "SR 4330". PVP 9900362.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 08/27/1999.

PI 611122 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH2VK". PVP 9900363.

PI 611123 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH2VJ". PVP 9900364.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901-8520, United States; Ronald F. Bara, Rutgers University, New Jersey Agricultural Experiment Station, Cook College, New Brunswick, New Jersey 08901, United States; Dirk A. Smith, New Jersey Agricultural Experiment Station, Plant Science Dept., Cook College, Rutgers Univ., New Brunswick, New Jersey 08903, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, New Brunswick, New Jersey 08903, United States; Steve Tubbs, Turf Merchants, Inc., 33390 Tangent Loop, Tangent, Oregon 97389, United States; Michael Richardson, University of Arkansas, Dept. of Horticulture, 316 Plant Science Bldg., Fayetteville, Arkansas 72701, United States. Received 08/27/1999.

PI 611124. *Festuca arundinacea* Schreb.
Cultivar. "MILLENNIUM"; TMI-RBR. PVP 9900368; CV-84. Pedigree - Selections from old turfs of the United States and populations related to Rebel tall fescue were intercrossed and subjected to many cycles of phenotypic and genotypic selection. Turf-type tall fescue with rich, dark-green color, medium-fine leaf texture, and ability to produce an attractive, medium-dense turf. Performed very well in turf trials established in 1996 and sponsored by the National Turfgrass Evaluation Program. During the 1997 season, tied for first place at the 27

locations. Early spring greenup, good color retention during winter, and improved resistance to large brown patch (*Rhizoctonia solani*) and leaf spot.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 09/01/1999.

PI 611125 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH0WD". PVP 9900356.

The following were developed by Cornell University, Department of Plant Breeding & Biometry, Ithaca, New York 14853, United States. Received 09/01/1999.

PI 611126 PVPO. *Phaseolus vulgaris* L.
Cultivar. "REDKANNER". PVP 9900359.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 09/01/1999.

PI 611127 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH224". PVP 9900365.

The following were developed by Golden Seed Company, Inc., United States. Received 09/01/1999.

PI 611128. *Zea mays* L. subsp. *mays*
Cultivar. "GSC2". PVP 9900369.

PI 611129 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "GSC1". PVP 9900370.

PI 611130 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "GSC3". PVP 9900371.

The following were developed by A. Doug Brede, J.R. Simplot Co., 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 09/01/1999.

PI 611131. *Poa pratensis* L.
Cultivar. "FREEDOM II". PVP 9900372; CV-77. Pedigree - Developed from a highly apomictic, single-plant selection from hybrid cross number 89-1037, made in the field in July 1989 using pollen from Midnight Kentucky bluegrass to pollinate plant of Limousine. Dense, dark green Kentucky bluegrass with improved turf quality performance. In seed production, moderately late maturing, low growing, strongly rhizomatous. Unique from other bluegrasses in its late emergence of foliage from the ground in the spring in seed production fields. Plant grows quite laterally via a strong underground rhizome system but is relatively short in stature and culm height. Lateral growth of rhizomes in one year from a single seedling averages 42 cm. Culm length averages 41 cm and seedheads are a relatively small 6.2 cm in length. Head color slightly

purplish white, turning quickly to pale green as it matures. Apomixis of the variety averages 88% but varies from 85% to 95% and above, depending on growing conditions. Most of the variant plants are small, miniature plants, showing up in the vegetative stage. Virtually none of the variant plants are tall, common types.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 09/01/1999.

PI 611132. *Zea mays* L. subsp. *mays*
Cultivar. "PH2GM". PVP 9900373.

PI 611133 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH2E4". PVP 9900374.

PI 611134 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH1MR". PVP 9900375.

PI 611135 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH1K2". PVP 9900376.

The following were developed by Sure-Grow Seed, Inc., 7265 Highway 9 South, Centre, Alabama 35960, United States. Received 09/01/1999.

PI 611136. *Gossypium hirsutum* L.
Cultivar. "SURE-GROW 348". PVP 9900377.

The following were developed by Frederic L. Kolb, University of Illinois, Department of Crop Sciences, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; N.J. Smith, University of Illinois, Dept. of Crop Sciences, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States. Received 08/03/1999.

PI 611137. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. Pureline. "KASKASKIA"; IL 90-7514. Pedigree -
IL77-2933(IL70-2255/CI13855//McNair48-23) /
IL77-3956(Arthur/Blueboy//TN1571)//Pike/Caldwell. Released 1998.
Duplicate of PI 602969.

The following were developed by Thomas E. Devine, USDA, ARS, Plant Molecular Biology Lab., Building 006, Room 118, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 07/15/1999.

PI 611138. *Glycine max* (L.) Merr.
Cultivar. "BARC-18". Pedigree - Verde X [{"(Wilson 6 X Forrest) X (Perry X (Williams X PI229358))} X Tracy M] Verde X [{"(Wilson 6 X Forrest) X (Perry X (Williams X PI229358))} X BSR 201] Verde X [{"(Wilson 6 X Forrest) X (Perry X (Williams X PI229358))} X Burlison]. Segregating germplasm population released as source material for development of vegetable type cultivars of superior vigor adapted to a variety of local environmental conditions and maturity rates. Segregates for genes for exceptional vigor, height, and lodging resistance, as well as large seed size, green seed coat and green embryo, and maturity.

The following were developed by Donald F. Salmon, Alberta Agriculture, Field Crop Research Centre, 5030-50 Street, Lacombe, Alberta T4L 1W8, Canada; W. Stewart, Alberta Agriculture, Bag Service #47, 5718-56 Avenue, Lacombe, Alberta T0C 1S0, Canada; James H. Helm, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1W8, Canada; Manuel Cortez, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1R1, Canada; Patricia E. Juskiw, Alberta Agriculture, Field Crop Development Centre, 5030-50 St., Lacombe, Alberta T4L 1W8, Canada. Received 08/06/1999.

PI 611139. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "NISKA"; SD 513. CV-287. Pedigree - CQ-CM/Apan//RM508/3/DL69/Hiproly. Released 1999. Six-row semi-dwarf barley with better yield than Kasota and Tukwa. Good grain quality (high test weight and kernel weight). Lodging resistance similar to Tukwa. Maturity 5 days later than Kasota and 2 days later than Tukwa. Moderate field resistance to scald and net blotch.

PI 611140. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "PEREGRINE"; HB504. CV-284. Pedigree - H12-4816/R181//M69.77-SHI.R.KCI.No.87/CEL-5106. Released 1999. Six-row semi-dwarf hulless feed barley with excellent resistance to lodging and neck break. This is the primary weakness of Falcon under matured production where if not swathed properly, there is a yield loss due to head breakage. Under several lodging conditions, yield higher than Falcon. 1 day earlier than Falcon. Resistant to common root rot and stem rust. Moderately susceptible to leaf scald in the field.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/27/1992.

PI 611141. *Elymus antiquus* (Nevski) Tzvelev

Cultivated. D-3779; W6 10208. Collected 09/09/1988 in Xizang, China. Latitude 29° 14' N. Longitude 91° 48' E. Elevation 1079 m. Under poplar trees, S of Nedong 12km. Lat/lon accurate to Nedong. Seed Increased: MB-1-2-21--30 (1991), USDA-ARS, Utah State University, Logan, Utah 84322-6300.

The following were collected by Douglas R. Dewey, USDA-ARS, Forage and Range Research Laboratory, Utah State University, UMC-63, Logan, Utah 84322, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Donated by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 01/16/1992.

PI 611142. *Elymus glaucissimus* (Popov) Tzvelev

Wild. DJ-4119; Agafonov #50; W6 10281. Collected 08/10/1985 in Kazakhstan. Latitude 43° 15' N. Longitude 76° 57' E. In mountains near Alma Ata, (or gmelinii), Siberia. Lat/lon accurate to Alma Ata.

PI 611143. *Elymus* sp.

Wild. DJ-3848; W6 10344. Collected in Russian Federation. Latitude 51° 39' N. Longitude 85° 40' E. Elevation 350 m. Along the Katun River near its confluence with the Sema River near Kamlak (Gorno Altay A.O.). Siberia. Lat/lon accurate to Kamlak. Like an awned *E. trachycaulus*. Glumes large.

The following were donated by Research Centre for Agrobotany, I.P.P.Q., H-2766 Tapioszele. Received 11/25/1992.

PI 611144. *Lolium multiflorum* Lam.

Cultivar. "AVANCE"; 1077; W6 11119.

PI 611145. *Lolium multiflorum* Lam.

Cultivar. "BAZSPECTRA"; IV-52-103; 1078; W6 11120. Collected in Netherlands.

PI 611146. *Lolium multiflorum* Lam.

Cultivar. "BILLION"; IV-52-101; 1079; W6 11121.

The following were collected by Kevin B. Jensen, USDA, ARS, Utah State University, Forage & Range Research Laboratory, Logan, Utah 84322-6300, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 11/02/1993.

PI 611147. *Elymus tschimganicus* (Drobow) Tzvelev

Wild. X93138; W6 13048. Collected 08/14/1993 in Xinjiang, China. Latitude 44° 45' N. Longitude 81° 9' E. Elevation 2150 m. Hillside, north side of Salimu Lake, just inside the Wenchuan County border, Xinjiang. Plant diversity at this site immense.

PI 611148. *Elymus gmelinii* (Ledeb.) Tzvelev

Wild. X93230; W6 13134. Collected 08/24/1993 in Xinjiang, China. Latitude 43° 48' N. Longitude 87° 51' E. Elevation 1600 m. High winter pasture at Tu Juan south of Xiejago Stud Farm, 90km S & E of Urumqi, lowland seepage, upper sites very dry. Bottom lands clay loam, side hills gravelly. Dominant species include *Artemisa borlensis*, *Stipa capillata*, *Festuca ovina*.

The following were collected by Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University, Logan, Utah 84322-6300, United States. Donated by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 611149. *Pseudoroegneria spicata* (Pursh) A. Love

Wild. no. K35; Acc:215; W6 16736. Collected in Washington, United States. Latitude 46° 34' N. Longitude 117° 7' W. 3 miles northwest Colton, Wawawai road, Whitman County. Lat/lon accurate to Colton.

PI 611150. *Pseudoroegneria spicata* (Pursh) A. Love

Wild. no. A30; Acc:1101; W6 16738. Collected in Idaho, United States.

Latitude 45° 32' N. Longitude 116° 19' W. 5 miles north of Lucile, Idaho County. Lat/lon accurate to Lucile.

The following were collected by Thomas A. Jones, USDA, ARS, FRRL, Utah State University, Forage and Range Research Laboratory, Logan, Utah 84322-6300, United States. Received 1995.

PI 611151. *Elymus elymoides* subsp. *brevifolius* (J. G. Sm.) Barkworth
Wild. T-920; W6 16748. Collected in Alberta, Canada. Latitude 49°
59' 21" N. Longitude 112° 30' 27" W. North Turin, Highway 25 x 521.

PI 611152. *Elymus elymoides* subsp. *brevifolius* (J. G. Sm.) Barkworth
Wild. T-926; W6 16749. Collected in Alberta, Canada. Latitude 50°
55' 21" N. Longitude 110° 45' 42" W. 5 mile north, 1 mile west
Highway 886 x Red Deer River.

The following were collected by Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Alexander Afonin, Vavilov Institute of Plant Industry, 42 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation; Melvin Rumbaugh, R.R. 3, Box 125, Humboldt, Nebraska 68376, United States; Nicolay Portinier, Kamorov Institute of Botany, St. Petersburg, Leningrad, Russian Federation; Jay Hart, 20 Bush Lane, Ithaca, New York 14850, United States; Nicolay Khitrov, Dokvchaev Soil Institute, Pygevsky, per., 7., Moscow, Moscow 109017, Russian Federation. Received 01/1996.

PI 611153. *Deschampsia cespitosa* (L.) P. Beauv.
Wild. 0027; VIR 192; US 27; W6 17829. Collected 08/31/1995 in Russian Federation. Latitude 44° 3' 5" N. Longitude 40° 1' 22" E.
Elevation 1900 m. Population distribution uniform, abundance frequent.
Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

The following were collected by D.P. Sheehy, Eastern Oregon Agricultural Research Center, Post Office Box E, Union, Oregon 97833, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 05/1995.

PI 611154. *Stipa capillata* L.
Wild. E94059; W6 18020. Collected 09/1994 in Mongolia. Latitude 45°
58' 9" N. Longitude 111° 6' 5" E. Elevation 1079 m. Northern edge of
desert steppe ecological zone. Desert steppe. Soils alkaline clay.
Aspect northeast, 3% slope.

PI 611155. *Stipa capillata* L.
Wild. E94147; W6 18091. Collected 09/1994 in Mongolia. Latitude 47°
13' 44" N. Longitude 117° 21' 56" E. Elevation 556 m. Eastern Dornod
Aimag, eastern Mongolia. Russian-Mongolian winter camp during 1939
battle with invading Japanese. Grass steppe. Combination of uplands,
stream bottoms, and swamps. Swamp lowlands alkaline. Uplands typical
grass steppe brown, gravelly soils. Aspect southeast, slope 2%.

The following were collected by Richard M. Hannan, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 07/28/1996.

PI 611156. *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl
Wild. B96-175; W6 19363. Collected 07/1996 in Bulgaria. Latitude 41° 41' 52" N. Longitude 24° 41' 28" E. Elevation 1216 m. 1km south of Chepalari, on steep slope. west.

PI 611157. *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl
Wild. B96-185; W6 19369. Collected 07/1996 in Bulgaria. Latitude 41° 39' 4" N. Longitude 24° 33' 51" E. Elevation 1459 m. Rocky area on side of road near village of village, Gela. north.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611158. X *Triticosecale* sp.
Breeding. 6TB3Y; NAT0555; NSGC 7757.

PI 611159. X *Triticosecale* sp.
Breeding. 6TB4B; NAT0558; NSGC 7758.

PI 611160. X *Triticosecale* sp.
Breeding. 6TB4H; NAT0563; NSGC 7759.

PI 611161. X *Triticosecale* sp.
Breeding. 6(T)A5T; NAT0585; NSGC 7760.

PI 611162. X *Triticosecale* sp.
Breeding. 6(T)A3R; NAT0586; NSGC 7761.

PI 611163. X *Triticosecale* sp.
Breeding. 6TA0F; NAT0590; NSGC 7762. Pedigree - Bokolo OT.

PI 611164. X *Triticosecale* sp.
Breeding. 6TA3G; NAT0610; NSGC 7763.

PI 611165. X *Triticosecale* sp.
Breeding. 6TA3H; NAT0611; NSGC 7764.

PI 611166. X *Triticosecale* sp.
Breeding. 6TA5W; NAT0617; NSGC 7765.

PI 611167. X *Triticosecale* sp.
Breeding. 6TA6N; NAT0618; NSGC 7766.

PI 611168. X *Triticosecale* sp.
Breeding. 6TA4C; NAT0621; NSGC 7767.

- PI 611169. X Triticosecale sp.**
Breeding. 6TB9Q; NAT0627; NSGC 7768. Pedigree - Composite 8x/6x.
- PI 611170. X Triticosecale sp.**
Breeding. 6TB9R; NAT0628; NSGC 7769. Pedigree - Composite 8x/6x.
- PI 611171. X Triticosecale sp.**
Breeding. 6TB9T; NAT0630; NSGC 7770. Pedigree - Composite 8x/6x.
- PI 611172. X Triticosecale sp.**
Breeding. 6TB9X; NAT0634; NSGC 7771. Pedigree - Composite 8x/6x.
- PI 611173. X Triticosecale sp.**
Breeding. 6TB9Y; NAT0635; NSGC 7772. Pedigree - Composite 8x/6x.
- PI 611174. X Triticosecale sp.**
Breeding. 6TB9Z; NAT0636; NSGC 7773. Pedigree - Composite 8x/6x.
- PI 611175. X Triticosecale sp.**
Breeding. 6TC0A; NAT0637; NSGC 7774. Pedigree - Composite 8x/6x.
- PI 611176. X Triticosecale sp.**
Breeding. 6TC0N; NAT0647; NSGC 7775. Pedigree - Composite 8x/6x.
- PI 611177. X Triticosecale sp.**
Breeding. 6TC0S; NAT0653; NSGC 7776. Pedigree - Composite 8x/6x.
- PI 611178. X Triticosecale sp.**
Breeding. 6(T)A6H; NAT0659; NSGC 7777.
- PI 611179. X Triticosecale sp.**
Breeding. 6(T)A5R; NAT0661; NSGC 7778.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

- PI 611180. X Triticosecale sp.**
Breeding. M81-7384; NAT0668; 8TA1T; NSGC 7779. Pedigree - Stephens/Blanco (not treated).
- PI 611181. X Triticosecale sp.**
Breeding. M81-7384; NAT0669; 8TA1U; NSGC 7780. Pedigree - Stephens/Blanco (treated).

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611182. X Triticosecale sp.

Breeding. 6TA3Y; NAT0676; NSGC 7781.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611183. X Triticosecale sp.

Breeding. GC3-727EB; M81-6685; 6TAlK-3; NAT0681; NSGC 7782.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611184. X Triticosecale sp.

Breeding. 6TA3T-2; NAT0688; NSGC 7783.

PI 611185. X Triticosecale sp.

Breeding. 6(T)A6Y; NAT0692; NSGC 7784.

PI 611186. X Triticosecale sp.

Breeding. 6(T)A7V; NAT0693; NSGC 7785.

PI 611187. X Triticosecale sp.

Breeding. 6TA4M; NAT0712; NSGC 7786.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611188. X Triticosecale sp.

Breeding. H83-807-1; NAT0720; 6TA2M; NSGC 7787. Pedigree - B650/WDRP-3 rye.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611189. X Triticosecale sp.

Breeding. 6TA1D-6; NAT0723; NSGC 7788. Pedigree - CWT 1977/125/5/11 Newton selection.

PI 611190. X Triticosecale sp.

Breeding. 6(T)C1F; NAT0727; NSGC 7789.

The following were collected by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611191. X Triticosecale sp.

Breeding. NAT0728; 6TB7S; B-507; SA-3; NSGC 7790. Collected in California, United States. Latitude 37° 0' N. Longitude 119° 0' W. Pedigree - IRA/Drira 37.

PI 611192. X Triticosecale sp.

Breeding. NAT0729; 6TB7V; HARE 212; SA-6; NSGC 7791. Collected in California, United States. Latitude 37° 0' N. Longitude 119° 0' W.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611193. X Triticosecale sp.

Breeding. NAT0730; 6TB8A; SA-11; NSGC 7792. Pedigree - TJ/Beagle 'S'//16134-35Y-1Y-1M-1Y-3-B-0Y.

PI 611194. X Triticosecale sp.

Breeding. B-2639-333; NAT0731; 6TB8E; SA-15; NSGC 7793. Pedigree - Juanillo/Panther 'S'.

PI 611195. X Triticosecale sp.

Breeding. B-2670-2239; NAT0732; 6TB8F; SA-16; NSGC 7794. Pedigree - IRA/Beagle 2.

PI 611196. X Triticosecale sp.

Breeding. PANCHE 7287; B-2671-0Y-117; NAT0733; 6TB8H; SA-18; NSGC 7795. Pedigree - Muskox/Juanillo.

PI 611197. X Triticosecale sp.

Breeding. NUTRIA 440; B-2709-2634; 6TB8J; NAT0734; SA-19; NSGC 7796. Pedigree - Merino/Juanillo.

PI 611198. X Triticosecale sp.

Breeding. B-3023-7251-0Y; NAT0735; 6TB8K; SA-20; NSGC 7797. Pedigree - Muskox/Lynx.

PI 611199. X Triticosecale sp.

Breeding. NAT0736; 6TB8L; SA-21; NSGC 7798. Pedigree - FS381/FS477/Toro 'S'/M2A/M1A/61270-B-1M-1Y-4M-0Y.

PI 611200. X Triticosecale sp.

Breeding. NAT0737; 6TB8N; SA-23; NSGC 7799. Pedigree - FWL21/PROL/Cinnamon/YO 'R'/23963-100Y-4M-0Y.

PI 611201. X Triticosecale sp.

Breeding. NAT0738; 6TB8Q; SA-25; NSGC 7800. Pedigree - M2A/M1A.

PI 611202. X Triticosecale sp.

Breeding. NAT0739; 6TB8T; SA-28; NSGC 7801. Pedigree - Tejon/Beagle 'S'/Yoreme/22679-1711.

PI 611203. X Triticosecale sp.

Breeding. NAT0741; 6TB8V; SA-30; NSGC 7802. Pedigree - Delfin 'S'/15490-24-4B-1N-0M.

The following were donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611204. X Triticosecale sp.

Breeding. NAT0743; 6TB8Y; SA-33; NSGC 7803. Developed in South Africa. Pedigree - T.sphaerococcum/Polko//6TA299/TLC.

PI 611205. X Triticosecale sp.

Breeding. NAT0746; 6TB9B-2; SA-36; NSGC 7804. Developed in South Africa. Pedigree - Flamecks 3/Bella//Flameks 3/3/SST 3/Skemer/4/Cape Syn. Rye.

PI 611206. X Triticosecale sp.

Breeding. NAT0747; 6TB9C; SA-37; NSGC 7805. Developed in South Africa. Pedigree - 7th ITSN-102/bread wheat line.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611207. X Triticosecale sp.

Breeding. 710037-6D-3TL-1D-2D-0D; NAT0749; T760002; NSGC 7806. Pedigree - 6TA-204/Armadillo 1524.

PI 611208. X Triticosecale sp.

Breeding. 710037-19D-2TL-1D-2D-0D; NAT0750; T760003; NSGC 7807. Pedigree - 6TA-204/Armadillo 1524.

PI 611209. X Triticosecale sp.

Breeding. 710038-0D-2TL-3D-2D-3D-0D; NAT0752; T760005; NSGC 7808. Pedigree - 6TA-204/PPV-21.

PI 611210. X Triticosecale sp.

Breeding. 710038-10D-4TL-5D-1D-2D-0D; NAT0753; T760007; NSGC 7809. Pedigree - 6TA-204/PPV-21.

- PI 611211. X Triticosecale sp.**
Breeding. 710038-10D-4TL-2D-3D-2D-0D; NAT0754; T760006; NSGC 7810.
Pedigree - 6TA-204/PPV-21.
- PI 611212. X Triticosecale sp.**
Breeding. 710038-10D-4TL-5D-1D-2D-4D; NAT0756; T760009; NSGC 7811.
Pedigree - 6TA-204/PPV-21.
- PI 611213. X Triticosecale sp.**
Breeding. 710038-10D-1TL-8-4D-2D-3D-0D; NAT0757; T760010; NSGC 7812.
Pedigree - 6TA-204/PPV-21.
- PI 611214. X Triticosecale sp.**
Breeding. 710039-3D-1TL-3D-2D-4D-0D; NAT0762; T760018; NSGC 7813.
Pedigree - 6TA-204/Armadillo 133.
- PI 611215. X Triticosecale sp.**
Breeding. 710040-0D-14TL-3D-2D-0D; NAT0763; T760019; NSGC 7814. Pedigree
- 6TA-204/Bruin 46.
- PI 611216. X Triticosecale sp.**
Breeding. 710040-0D-16-TL-4D-4D-2D-0D; NAT0764; T760020; NSGC 7815.
Pedigree - 6TA-204/Bruin 46.
- PI 611217. X Triticosecale sp.**
Breeding. 710040-21D-1TL-3D-3D-0D; NAT0766; T760022; NSGC 7816. Pedigree
- 6TA-204/Bruin 46.
- PI 611218. X Triticosecale sp.**
Breeding. 710042-5D-3TL-1D-1D-0D; NAT0768; T760024; NSGC 7817. Pedigree
- 6TA-204/Bronco 90.
- PI 611219. X Triticosecale sp.**
Breeding. 710045-0D-12TL-1D-3D-4D-0D-0D; NAT0770; T760026; NSGC 7818.
Pedigree - 6TA-204/Armadillo T-909.
- PI 611220. X Triticosecale sp.**
Breeding. 710050-8D-1TL-1D-4D-3D-3D-0D; NAT0775; T760031; NSGC 7819.
Pedigree - Armadillo 1524/6TA-204.
- PI 611221. X Triticosecale sp.**
Breeding. 710050-8D-4TL-3D-3D-3D-0D; NAT0776; T760032; NSGC 7820.
Pedigree - Armadillo 1524/6TA-204.
- PI 611222. X Triticosecale sp.**
Breeding. 710052-11D-1TL-1D-3D-0D; NAT0777; T760034; NSGC 7821. Pedigree
- Armadillo 1524/6TA-204.
- PI 611223. X Triticosecale sp.**
Breeding. 720575-1D-3D-3D-4D-0D; NAT0778; T770009; NSGC 7822. Pedigree -
Badger 121/6TA-204.
- PI 611224. X Triticosecale sp.**
Breeding. 720579-1D-6D-1D-0D; NAT0786; T770010; NSGC 7823. Pedigree -
6TA-203/X2950-4T.

- PI 611225. X Triticosecale sp.**
Breeding. 720579-1D-5D-1D-1D-0D; NAT0787; T770011; NSGC 7824. Pedigree - 6TA-203/X2950-4T.
- PI 611226. X Triticosecale sp.**
Breeding. 720580-1D-4D-4D-4D-0D; NAT0788; T770013; NSGC 7825. Pedigree - 6TA-204//X2950/GT.
- PI 611227. X Triticosecale sp.**
Breeding. 720580-17D-2D-4D-4D-0D; NAT0789; T770014; NSGC 7826. Pedigree - 6TA-204//X2950/GT.
- PI 611228. X Triticosecale sp.**
Breeding. 720595-7D-2D-1D-4D-0D; NAT0790; T770015; NSGC 7827. Pedigree - X3112-2T/6TA-204.
- PI 611229. X Triticosecale sp.**
Breeding. 720595-7D-4D-2D-2D-0D; NAT0791; T770017; NSGC 7828. Pedigree - X3112-2T/6TA-204.
- PI 611230. X Triticosecale sp.**
Breeding. 720600-30D-1D-3D-0D; NAT0792; T770018; NSGC 7829. Pedigree - X1329-1D-1D/6TA-204.
- PI 611231. X Triticosecale sp.**
Breeding. 720600-30D-4D-2D-1D-0D; NAT0793; T770019; NSGC 7830. Pedigree - X1329-1D-1D/6TA-204.
- PI 611232. X Triticosecale sp.**
Breeding. 720622-39D-1D-2D-3D-0D; NAT0794; T770020; NSGC 7831. Pedigree - PPV 13//Beaver/Armadillo 188.
- PI 611233. X Triticosecale sp.**
Breeding. 720683; NAT0795; T770021; NSGC 7832. Pedigree - Castelporziano/Snoopy.
- PI 611234. X Triticosecale sp.**
Breeding. 720688-3TL-3TL-0D-5D-3D-0D; NAT0796; T770023; NSGC 7833. Pedigree - D7064/Snoopy S24//6TA-204.
- PI 611235. X Triticosecale sp.**
Breeding. 720688-3TL-3TL-0D-4D-1D-0D; NAT0797; T770024; NSGC 7834. Pedigree - D7064/Snoopy S24//6TA-204.
- PI 611236. X Triticosecale sp.**
Breeding. 720732; NAT0798; T770025; NSGC 7835. Pedigree - TM/2*TC//Z/BXW/3/PI243741/Snoopy.
- PI 611237. X Triticosecale sp.**
Breeding. 720734; NAT0799; T770026; NSGC 7836. Pedigree - Barrigon Yaqui Enano/5*TC//Snoopy.
- PI 611238. X Triticosecale sp.**
Breeding. 730443-38TL-5D-2D-0D; NAT0801; T780038; NSGC 7837. Pedigree - Castelporziano/PI243741//Crane 'S'/Snoopy.

- PI 611239. X Triticosecale sp.**
Breeding. 730424; NAT0802; T780031; NSGC 7838. Pedigree - SO 'S'/CR 'S'/Snoopy.
- PI 611240. X Triticosecale sp.**
Breeding. 730439; NAT0804; T780036; NSGC 7839. Pedigree - Crane (B) 'S'/Snoopy.
- PI 611241. X Triticosecale sp.**
Breeding. 730443-10TL-8D-1D-0D; NAT0805; T780037; NSGC 7840. Pedigree - Castelporziano/PI243741//Crane 'S'/Snoopy.
- PI 611242. X Triticosecale sp.**
Breeding. 730444; NAT0807; T780039; NSGC 7841. Pedigree - Quilafen/Snoopy.
- PI 611243. X Triticosecale sp.**
Breeding. 730457-35TL-3D-4D-0D; NAT0812; T780044; NSGC 7842. Pedigree - Cinnamon/6TA-204.
- PI 611244. X Triticosecale sp.**
Breeding. 730457-35TL-4D-2D-0D; NAT0813; T780045; NSGC 7843. Pedigree - Cinnamon/6TA-204.
- PI 611245. X Triticosecale sp.**
Breeding. 730457-36TL-4D-2D-4D-0D; NAT0814; T780046; NSGC 7844. Pedigree - Cinnamon/6TA-204.
- PI 611246. X Triticosecale sp.**
Breeding. 730457-42TL-2D-3D-0D; NAT0816; T780048; NSGC 7845. Pedigree - Cinnamon/6TA-204.
- PI 611247. X Triticosecale sp.**
Breeding. 730457-55TL-3D-3D-0D; NAT0817; T780049; NSGC 7846. Pedigree - Cinnamon/6TA-204.
- PI 611248. X Triticosecale sp.**
Breeding. 730458-1TL-10D-1D-0D; NAT0818; T780050; NSGC 7847. Pedigree - 6TA-204/Cinnamon.
- PI 611249. X Triticosecale sp.**
Breeding. 740616-166D-1D-3D-0D; NAT0819; T790004; NSGC 7848. Pedigree - Albatross/Snoopy//6TA-204.
- PI 611250. X Triticosecale sp.**
Breeding. 740616-166D-1D-4D-0D; NAT0820; T790005; NSGC 7849. Pedigree - Albatross/Snoopy//6TA-204.
- PI 611251. X Triticosecale sp.**
Breeding. 740616-166D-4D-3D-0D; NAT0821; T790006; NSGC 7850. Pedigree - Albatross/Snoopy//6TA-204.
- PI 611252. X Triticosecale sp.**
Breeding. 740620-10D-1D-0D-0D; NAT0822; T790008; NSGC 7851. Pedigree - Cinnamon/UC8825.

- PI 611253. X Triticosecale sp.**
Breeding. 740622-25D-1D-0D; NAT0823; T790009; NSGC 7852. Pedigree - 6TA-204/Cinnamon.
- PI 611254. X Triticosecale sp.**
Breeding. 740622-56D-3D-0D; NAT0825; T790011; NSGC 7853. Pedigree - 6TA-204/Cinnamon.
- PI 611255. X Triticosecale sp.**
Breeding. 740624-77D-3D-0D; NAT0826; T790012; NSGC 7854. Pedigree - 6TA-204/UC8825.
- PI 611256. X Triticosecale sp.**
Breeding. 740624-166D-5D-0D; NAT0827; T790013; NSGC 7855. Pedigree - 6TA-204/UC8825.
- PI 611257. X Triticosecale sp.**
Breeding. 750010-8D-3D-1D-0D; NAT0830; T800007; NSGC 7856. Pedigree - Leeds//PI243741/Snoopy/3/Crane 'S'/Snoopy.
- PI 611258. X Triticosecale sp.**
Breeding. X1648-8N-3M-0Y-2B-0Y; NAT0832; IA; NSGC 7857. Pedigree - Inia F66/Armadillo.
- PI 611259. X Triticosecale sp.**
Breeding. X2142-1N-3M-7N-5M-1TL-5D-2TL; NAT0833; T800009; IRA; NSGC 7858. Pedigree - Inia F66/Rye*2//Armadillo.
- PI 611260. X Triticosecale sp.**
Breeding. X2802-F-12M-1N-2M-0Y; NAT0838; T800015; NSGC 7859. Pedigree - Maya 2/Armadillo.
- PI 611261. X Triticosecale sp.**
Breeding. X2802-38N-2M-6N-6M-0TL-3D; NAT0839; T800017; NSGC 7860. Pedigree - Maya 2/Armadillo.
- PI 611262. X Triticosecale sp.**
Breeding. X2190-5T-1D-3TL-3TL-3TL-0D; NAT0841; T800021; NSGC 7861. Pedigree - UM940 'S'/TCLMY65/PER-DIEDS-CNIT.
- PI 611263. X Triticosecale sp.**
Breeding. X2197-2T-4D-3TL-3TL-4TL-0D; NAT0842; T800022; NSGC 7862. Pedigree - F3 Bulk/Armadillo 'S'.
- PI 611264. X Triticosecale sp.**
Breeding. X3128-3T-1D-2T-1W-0W-0D; NAT0846; T800027; NSGC 7863. Pedigree - UM940 'S'/TEL Bulk//Armadillo.
- PI 611265. X Triticosecale sp.**
Breeding. X3226-11D-1Y-1M-0Y; NAT0848; T800029; NSGC 7864. Pedigree - UM940 'S'/Armadillo 'S'.
- PI 611266. X Triticosecale sp.**
Breeding. X3226-11D-1Y-1M-0Y; NAT0849; T800029; NSGC 7865. Pedigree - UM940 'S'/Armadillo 'S'.

- PI 611267. X Triticosecale sp.**
Breeding. X7249-20Y-4Y-3M-0Y; NAT0850; T800031; NSGC 7866. Pedigree - M2A/IRA.
- PI 611268. X Triticosecale sp.**
Breeding. X8386-D-2Y-0M-100Y-103B-106Y; NAT0851; T800032; NSGC 7867. Pedigree - M2A/Camel.
- PI 611269. X Triticosecale sp.**
Breeding. X11239-B-1M-100Y-0Y; NAT0852; T800033; NSGC 7868. Pedigree - OCTO/HEXA//IGA.
- PI 611270. X Triticosecale sp.**
Breeding. X13895-B-100Y-100B-105Y-0Y; NAT0856; T800037; NSGC 7869. Pedigree - Tejon/IRA.
- PI 611271. X Triticosecale sp.**
Breeding. X14920; NAT0857; T800038; NSGC 7870. Pedigree - IA/Koala//Calidad.
- PI 611272. X Triticosecale sp.**
Breeding. X15490-3Y-0M; NAT0858; T800039; NSGC 7871. Pedigree - M2A/Beagle.
- PI 611273. X Triticosecale sp.**
Breeding. X308EL-10TL-2TL-3TL-4TL-4D-0D; BEAVER 8394; NAT0859; T800040; NSGC 7872.
- PI 611274. X Triticosecale sp.**
Breeding. X308EL-2D-3TL-4TL-1TL-4D-0D; BEAVER 8397; NAT0860; T800041; NSGC 7873.
- PI 611275. X Triticosecale sp.**
Breeding. X308EL-Y-3D-1TL-3TL-3TL-0D; ARMADILLO 8364 DWARF; NAT0861; T800043; NSGC 7874.
- PI 611276. X Triticosecale sp.**
Breeding. X308EL-4D-3TL-4TL-4TL-4D-0D; BEAVER 8392; NAT0863; T800045; NSGC 7875.
- PI 611277. X Triticosecale sp.**
Breeding. X308EL-Y-1D-2TL-3TL-4TL-0D; BEAVER 8344; NAT0864; T800046; NSGC 7876.
- PI 611278. X Triticosecale sp.**
Cultivar. "YOCO"; X1648; NAT0865; T740006; NSGC 7877. Pedigree - Inia F66/Armadillo.
- PI 611279. X Triticosecale sp.**
Breeding. F.S.N. 77; NAT0869; T810001; NSGC 7878.
- PI 611280. X Triticosecale sp.**
Breeding. NAT0870; T810002; NSGC 7879. Pedigree - Anza/Tcl Morocco.
- PI 611281. X Triticosecale sp.**
Breeding. W826-87W-0W-0D; NAT0873; T810006; NSGC 7880. Pedigree - G.S.59727/6TA-204.

- PI 611282. X Triticosecale sp.**
Breeding. M.A.; NAT0875; T810008; NSGC 7881. Pedigree - Maya/Armadillo.
- PI 611283. X Triticosecale sp.**
Breeding. NAT0877; T810010; NSGC 7882. Pedigree - JFR/CIMMYT//MEX.BULK.
- PI 611284. X Triticosecale sp.**
Breeding. NAT0878; T810011; NSGC 7883. Pedigree - FWI121/Prolific.
- PI 611285. X Triticosecale sp.**
Breeding. NAT0879; T810012; NSGC 7884. Pedigree - Chapala/Snoopy.
- PI 611286. X Triticosecale sp.**
Breeding. NAT0880; T810013; NSGC 7885. Pedigree - FS/2457.
- PI 611287. X Triticosecale sp.**
Breeding. 730421; NAT0881; T780027; NSGC 7886. Pedigree - Crane/Snoopy.
- PI 611288. X Triticosecale sp.**
Breeding. NAT0882; T810015; NSGC 7887. Pedigree - Camel/Pato selection//454.
- PI 611289. X Triticosecale sp.**
Breeding. T104; NAT0891; T810027; NSGC 7888. Pedigree - ITA/Leone.
- PI 611290. X Triticosecale sp.**
Breeding. T105; NAT0892; T810028; NSGC 7889. Pedigree - ITA/Leone.
- PI 611291. X Triticosecale sp.**
Breeding. X75-785W; NAT0895; T810031; NSGC 7890.
- PI 611292. X Triticosecale sp.**
Breeding. X75-794W; NAT0896; T810032; NSGC 7891.
- PI 611293. X Triticosecale sp.**
Breeding. X75-796W; NAT0897; T810033; NSGC 7892.
- PI 611294. X Triticosecale sp.**
Breeding. X75-800W; NAT0898; T810035; NSGC 7893.
- PI 611295. X Triticosecale sp.**
Breeding. X75-832P; NAT0899; T810036; NSGC 7894.
- PI 611296. X Triticosecale sp.**
Breeding. X21295; JUANILLO 39; NAT0901; T780052; NSGC 7895. Pedigree - Drira//Kiss/Armadillo 'S'.
- PI 611297. X Triticosecale sp.**
Cultivar. "TOPO"; X15893; NAT0902; T780054; NSGC 7896. Pedigree - Drira/Michigan Amber.
- PI 611298. X Triticosecale sp.**
Breeding. II77-122-2; NAT0903; T810038; NSGC 7897.
- PI 611299. X Triticosecale sp.**
Breeding. II77-129-1; NAT0907; T810043; NSGC 7898.

- PI 611300. X Triticosecale sp.**
Breeding. X2802-F-12M-1N-1M-1Y-0Y; MAPACHE 'R'; NAT0909; T750008; NSGC 7899. Pedigree - Maya 2/Armadillo.
- PI 611301. X Triticosecale sp.**
Breeding. X2802-39N-3M-6N-4M-0Y; NAVOJOA 'S'; NAT0911; T880004; NSGC 7900. Pedigree - M2A = Maya 2/Armadillo.
- PI 611302. X Triticosecale sp.**
Breeding. X17066-1Y-1M-0Y; NAT0912; T810048; NSGC 7901. Pedigree - M1A/Pitic 62.
- PI 611303. X Triticosecale sp.**
Breeding. X11799-7M-2Y-1M-0Y; NAT0913; T810049; NSGC 7902. Pedigree - M1A/IGA.
- PI 611304. X Triticosecale sp.**
Cultivar. "BONITO"; X14920-0N; NAT0914; T780003; NSGC 7903. Pedigree - IA-T/Koala//Calidad.
- PI 611305. X Triticosecale sp.**
Breeding. X22427-101Y-2M-6Y-1M-4Y-0M; BEAGUELITA 'S'; NAT0915; T820036; NSGC 7904. Pedigree - Beagle/3/Beagle//ITA/Leo.
- PI 611306. X Triticosecale sp.**
Cultivar. "OCELOT"; X12677-56Y-1Y-3M-0Y; NAT0916; T780006; NSGC 7905. Pedigree - M2A/IA-T.
- PI 611307. X Triticosecale sp.**
Breeding. X44403-2R-1C-3B; NAT0917; T810050; NSGC 7906. Pedigree - M2A/IRA 15//RM/3/H277.67/2*UM2.
- PI 611308. X Triticosecale sp.**
Breeding. X15490; DELFIN 99; NAT0923; T780017; NSGC 7907. Pedigree - M2A/Beagle.
- PI 611309. X Triticosecale sp.**
Breeding. X15490; DELFIN 69; NAT0924; T780014; NSGC 7908. Pedigree - M2A/Beagle.
- PI 611310. X Triticosecale sp.**
Breeding. X15893; TOPO 120; NAT0925; T780020; NSGC 7909. Pedigree - Drira/Michigan Amber.
- PI 611311. X Triticosecale sp.**
Breeding. X17077-2M-0Y; NAT0926; T820028; NSGC 7910. Pedigree - Camel/Ciano//Gallo.
- PI 611312. X Triticosecale sp.**
Breeding. X21295; JUANILLO 97; NAT0927; T780023; NSGC 7911. Pedigree - Drira//Kiss/Armadillo 'S'.
- PI 611313. X Triticosecale sp.**
Breeding. X21295; JUANILLO 168; NAT0928; T780024; NSGC 7912. Pedigree - Drira//Kiss/Armadillo 'S'.

- PI 611314. X Triticosecale sp.**
Breeding. X22427-101Y-2M-3Y-2Y-0M; BEAGUELITA 'S'; NAT0929; T820035;
NSGC 7913. Pedigree - Beagle/3/Beagle//ITA/Leo.
- PI 611315. X Triticosecale sp.**
Breeding. X22725-1M-2Y-1M-2Y-0M; NAT0930; T880005; NSGC 7914. Pedigree -
Yecora F70/Wrens Abruzzi//M2A.
- PI 611316. X Triticosecale sp.**
Breeding. X36518-309H-1Y-0M; NAT0934; T820032; NSGC 7915. Pedigree -
Panda 'R'/Arabian (M2A).
- PI 611317. X Triticosecale sp.**
Breeding. X15673-A-1Y-2Y-8M-0Y; NAT0936; T820033; NSGC 7916. Pedigree -
Beagle 'S'/M2A//Cinnamon.
- PI 611318. X Triticosecale sp.**
Breeding. X21298-2N-0M; NAT0937; T820034; NSGC 7917. Pedigree -
Drira/FAS204.
- PI 611319. X Triticosecale sp.**
Breeding. X22427-101Y-2M-6Y-1M-4Y-0M; NAT0938; T820036; NSGC 7918.
Pedigree - Beagle/3/Beagle//ITA/Leo.
- PI 611320. X Triticosecale sp.**
Breeding. X27947-22M-1Y-0M; NAT0939; T820037; NSGC 7919. Pedigree -
M2A/M1A.
- PI 611321. X Triticosecale sp.**
Breeding. NAT0940; T820038; NSGC 7920. Pedigree - Maya/Armadillo.
- PI 611322. X Triticosecale sp.**
Breeding. NAT0941; T820039; NSGC 7921. Pedigree - Chapala/Snoopy.
- PI 611323. X Triticosecale sp.**
Breeding. X2142-1N-3M-7N-5M-1TL-4D-4D; NAT0942; T820040; NSGC 7922.
Pedigree - Inia F66/Rye*2//Armadillo.
- PI 611324. X Triticosecale sp.**
Breeding. II7869S; NAT0947; T820046; 113; NSGC 7923. Pedigree -
French/129.
- PI 611325. X Triticosecale sp.**
Breeding. II7877S-133; NAT0949; T820050; NSGC 7924. Pedigree -
French/SN220.
- PI 611326. X Triticosecale sp.**
Breeding. II7878S-133; NAT0950; T820051; NSGC 7925. Pedigree -
French/Siskiyou.
- PI 611327. X Triticosecale sp.**
Breeding. II7881S; NAT0951; T820052; NSGC 7926. Pedigree - SN220/113.
- PI 611328. X Triticosecale sp.**
Breeding. II7882S; NAT0952; T820053; NSGC 7927. Pedigree - SN249/113.

- PI 611329. X Triticosecale sp.**
Breeding. II78145; NAT0962; T820070; 165A; NSGC 7928.
- PI 611330. X Triticosecale sp.**
Breeding. II78157; NAT0964; T820072; NSGC 7929. Pedigree - F2/UM36.
- PI 611331. X Triticosecale sp.**
Breeding. II78163; NAT0966; T820074; 275S; NSGC 7930.
- PI 611332. X Triticosecale sp.**
Breeding. NAT0973; T880006; NSGC 7931. Pedigree - Cinnamon/Ciano/3/Beagle/Merino 'S'.
- PI 611333. X Triticosecale sp.**
Breeding. NAT0974; T850020; NSGC 7932. Pedigree - Beagle 'S'/M2A//Cinnamon.
- PI 611334. X Triticosecale sp.**
Cultivar. "ERONGA 83"; NAT0975; T850010; NSGC 7933. Pedigree - Drira//Kiss/Armadillo.
- PI 611335. X Triticosecale sp.**
Breeding. B2824; PLATYPUSS 'S'; NAT0976; T850024; NSGC 7934. Pedigree - Beagle/Anteater.
- PI 611336. X Triticosecale sp.**
Breeding. FARO 'S'; NAT0977; T850012; NSGC 7935.
- PI 611337. X Triticosecale sp.**
Breeding. NAT0985; T880015; NSGC 7936. Pedigree - Sunseed/C193-5.
- PI 611338. X Triticosecale sp.**
Cultivar. "ARABIAN"; NAT0988; T890138; NSGC 7937. Pedigree - Maya 2/Armadillo.
- PI 611339. X Triticosecale sp.**
Cultivar. "BORBA"; NAT0989; T890139; NSGC 7938.
- PI 611340. X Triticosecale sp.**
Breeding. TT8802; STIER 'S'; NAT0991; T890140; NSGC 7939. Pedigree - Brochis/Snoopy//Beagle/3/CID93098/WRC31//Octo Bulk/Cinnamon.
- PI 611341. X Triticosecale sp.**
Breeding. TT8703; RHINO 'S'; NAT0992; T890141; NSGC 7940. Pedigree - Grizzly//Aifong 3/Dove.
- PI 611342. X Triticosecale sp.**
Cultivar. "ORADA"; NAT0994; T890143; NSGC 7941.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611343. X Triticosecale sp.

Breeding. M83-6039; B86-3964 EMS; NAT1005; NSGC 7942. Pedigree - B163/A876//B164/A876 Rht3 Mut M6.

PI 611344. X Triticosecale sp.

Breeding. M83-6039; B86-2570 EMS; NAT1008; NSGC 7943. Pedigree - B163/A876//B164/A876 Rht3 Mut M6.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611345. X Triticosecale sp.

Breeding. ALAMO 'S' 83; CHIVA 'S'; X24551; NAT1063; T850014; NSGC 7944. Pedigree - M2A/M1A.

PI 611346. X Triticosecale sp.

Breeding. STIER 'S'; B6712-166-6Y-5Y-2M-501Y-0Y; NAT1064; NSGC 7945. Pedigree - Brochis/Snoopy//Beagle/3/CID93098/WRC31//Octo Bulk/Cinnamon.

PI 611347. X Triticosecale sp.

Breeding. STIER 'S'; B6712-166-6Y-1Y-3M-1Y-6M-1Y-0M; NAT1065; NSGC 7946. Pedigree - Brochis/Snoopy//Beagle/3/CID93098/WRC31//Octo Bulk/Cinnamon.

PI 611348. X Triticosecale sp.

Breeding. STIER 'S'; B6712-166-6Y-2Y-2M-1Y-5M-1Y-0M; NAT1066; NSGC 7947. Pedigree - Brochis/Snoopy//Beagle/3/CID93098/WRC31//Octo Bulk/Cinnamon.

PI 611349. X Triticosecale sp.

Breeding. STIER 'S'; B6712-167-7Y-3Y-2M-1Y-2M-1Y-0M; NAT1067; NSGC 7948. Pedigree - Brochis/Snoopy//Beagle/3/CID93098/WRC31//Octo Bulk Cinnamon.

PI 611350. X Triticosecale sp.

Breeding. FARO 16; NAT1070; T890026; NSGC 7949.

PI 611351. X Triticosecale sp.

Breeding. CTM9419-7Y-0B-0Y-16M-0Y; NAT1071; NSGC 7950. Pedigree - D7069//PI243741/Sepoy/3/Anza/PI243741/6/Cocorit/UC 90 C3 Triple Dwarf/5/Tobari 66/8156/CC/3/Inia/4/Sepoy.

PI 611352. X Triticosecale sp.

Breeding. CT3906-016Y-027M-0Y-9M-0Y; NAT1072; NSGC 7951. Pedigree - Carman/Yogui 'S'.

PI 611353. X Triticosecale sp.

Breeding. GNU 'S'; B6912-069-18Y-1Y-1M-1Y-2M-0Y; NAT1073; NSGC 7952. Pedigree - Octo//Drira/X1530-A-12M-5N-1M-0Y/3/Brochis/Stephens.

PI 611354. X Triticosecale sp.

Breeding. GNU 'S'; B6912-081-29Y-3Y-1M-2Y-4M-3Y-0M; NAT1074; NSGC 7953. Pedigree - Octo//Drira/X1530-A-12M-5N-1M-0Y/3/Brochis/Stephens.

- PI 611355. X Triticosecale sp.**
Breeding. URON 'S'; B6811-247-5Y-1Y-2M-1Y-2M-0Y; NAT1075; NSGC 7954.
Pedigree - Octo/Hare//Brochis/Snoopy.
- PI 611356. X Triticosecale sp.**
Breeding. RHINO 'S'; CIT1367-2Y-2Y-1M-0Y-2M-0Y; NAT1077; NSGC 7955.
Pedigree - Grizzly//Aifong 3/Dove.
- PI 611357. X Triticosecale sp.**
Breeding. B7011-294-7Y-1Y-1M-2Y-2M-2Y-0M; NAT1079; NSGC 7956. Pedigree - DF 'S'/Octo Navojoa//Hork 'S'/SPY rye.
- PI 611358. X Triticosecale sp.**
Breeding. B7011-294-7Y-2Y-2M-1Y-1M-0Y; NAT1080; NSGC 7957. Pedigree - DF 'S'/Octo Navojoa//Hork 'S'/SPY rye.
- PI 611359. X Triticosecale sp.**
Breeding. CT4161-0M-0Y-0M-1Y-8M-2Y-0M; NAT1090; NSGC 7958. Pedigree - Zebu 'S'/FS381//Yogui 'S'.
- PI 611360. X Triticosecale sp.**
Breeding. B7812-306-2Y-36-2M-1Y-2M-1Y-0M; NAT1096; NSGC 7959. Pedigree - Camel 'S'/Pato//Kiss dwarf/3/Beagle 'S'/4/Beagle 'S'/5/Anteater 'S'.
- PI 611361. X Triticosecale sp.**
Breeding. CT4699-0M-0Y-0M-16Y-0B-2Y-0M; NAT1097; NSGC 7960. Pedigree - DUR WT/Balbo//Bok 'S'.
- PI 611362. X Triticosecale sp.**
Breeding. B6069-870-6Y-1Y-2M-1Y-2M-2Y-0M; NAT1099; NSGC 7961. Pedigree - M2A*2/Cinnamon 'S'//Beagle 'S'/3/Merino 'S'.
- PI 611363. X Triticosecale sp.**
Breeding. X55025-0AP-1AP-0AP-2M-1Y-0M; NAT1100; NSGC 7962. Pedigree - TA76/163B//Lynx 'S'.
- PI 611364. X Triticosecale sp.**
Breeding. ARRNEB; B7974-102-1Y-2Y-2M-0Y; NAT1101; NSGC 7963.
- PI 611365. X Triticosecale sp.**
Breeding. CIVET 'S'; B2658-0B; NAT1102; NSGC 7964. Pedigree - Muskox//Drira/Kangaroo.
- PI 611366. X Triticosecale sp.**
Breeding. KODIAK 'S'; X63181-C-3Y-2M-2Y-3Y-2M-0Y-0M-0Y; NAT1107; NSGC 7965. Pedigree - Lemming/3/CID93877/M2A//Rahum/Castor.
- PI 611367. X Triticosecale sp.**
Breeding. CIT1093-1Y-3Y-2M-3Y-500M; NAT1110; NSGC 7966. Pedigree - Bok 'S'/Glenlea.
- PI 611368. X Triticosecale sp.**
Breeding. CTM8805-0M-030Y-0B-0Y-23M-0Y; NAT1111; NSGC 7967. Pedigree - M2A/RM 'S'//Tigre 'S'/3/Tapir 'S'//PND 'S'/RM 'S'.

- PI 611369. X Triticosecale sp.**
Breeding. CTM8861-0M-025Y-0B-0Y-16M-0Y; NAT1112; NSGC 7968. Pedigree - Tapir 'S'/Toro 'S'//Toro 'S'/Liebre 'S'.
- PI 611370. X Triticosecale sp.**
Breeding. CTM6091-014Y-041M-0Y-3M-0Y; NAT1113; NSGC 7969. Pedigree - TCL95/M2A//M2A/3/Echidna 'S'.
- PI 611371. X Triticosecale sp.**
Breeding. CT5136-B-1M-1Y-5M-3Y-1M-0Y; NAT1114; NSGC 7970. Pedigree - PFT7717/M2A/Bunny 'S'/3/Bok 'S'/Lemming 'S'.
- PI 611372. X Triticosecale sp.**
Breeding. CT5250-L-3M-4Y-1M-2Y-2M-0Y; NAT1115; NSGC 7971. Pedigree - Lechon 'S'//Lemming 'S'/3/Tapir 'S'//Panda 'S'/RM 'S'.
- PI 611373. X Triticosecale sp.**
Breeding. CT1829-0M-0Y-0M-6Y-2M-0Y; NAT1116; NSGC 7972. Pedigree - Tapir 'S'/4/E3/Armadillo 'S'//M2A/3/Addax 'S'.
- PI 611374. X Triticosecale sp.**
Breeding. X66202-36Y-1M-3Y-1M-1Y-2M-0Y; NAT1117; NSGC 7973. Pedigree - IRA/IGA//IRA/Panda 'R'/RM.
- PI 611375. X Triticosecale sp.**
Breeding. CT2695-F-1Y-2M-2Y-1M-2Y-1M-0Y; NAT1118; NSGC 7974. Pedigree - Panda 'S'/Yoreme//Panther 'S'/3/Lemming 'S'/Toro 'S'.
- PI 611376. X Triticosecale sp.**
Breeding. CIT2221-1Y-2Y-2M-2Y-6M-0Y; NAT1119; NSGC 7975. Pedigree - Mouse 'S'3/KSK46//PEL72380/Arthur 71/4/Topo 123.
- PI 611377. X Triticosecale sp.**
Breeding. CIT988-3Y-1Y-2M-3Y-2M-1Y-0B; NAT1120; NSGC 7976. Pedigree - M2A//Zezontli 'S'/Sajame 'S'.
- PI 611378. X Triticosecale sp.**
Breeding. CIT1751-1M-1Y-1M-1Y-1M-0Y; NAT1121; NSGC 7977. Pedigree - Lechon 'S'/Parula 'S'.
- PI 611379. X Triticosecale sp.**
Breeding. CTM8990-0M-026Y-0B-0Y-6M-2Y-0M; NAT1122; NSGC 7978. Pedigree - Mochis 'S'//Ciano 'S'/Gallo/3/PI265466/4/Panda 'S'/RM 'S'/5/Panda 'S'/Arabian//IA/Addax 'S'.
- PI 611380. X Triticosecale sp.**
Breeding. CT3247-07Y-028M-0Y-6M-1Y-0M; NAT1123; NSGC 7979. Pedigree - Lechon 'S'//Panda 'S'/Mastiff 'S'.
- PI 611381. X Triticosecale sp.**
Breeding. CTM6612-06Y-018M-0Y-6M-2Y-0M; NAT1124; NSGC 7980. Pedigree - IA/BUSH//Tesmo 'S'.
- PI 611382. X Triticosecale sp.**
Breeding. CTM6845-07Y-020M-0Y-6M-1Y-0M; NAT1125; NSGC 7981. Pedigree - Panda 'S'/Mapache 'S'//Pantera 1.

- PI 611383. X Triticosecale sp.**
Breeding. CT1809-019Y-037M-0Y-7M-2Y-0M; NAT1127; NSGC 7982. Pedigree - Panda 'S'/Bacum 'S'//Alamo S83.
- PI 611384. X Triticosecale sp.**
Breeding. CT1826-011Y-038M-0Y-2M-3Y-0M; NAT1128; NSGC 7983. Pedigree - Tapir 'S'/PFT7717.
- PI 611385. X Triticosecale sp.**
Breeding. CT5078-014Y-031M-0Y-1M-1Y-0M; NAT1129; NSGC 7984. Pedigree - Anza/PI243741//USA IVS.718/SPY.
- PI 611386. X Triticosecale sp.**
Breeding. CTM6641-011Y-041M-0Y-05M-2Y-0M; NAT1130; NSGC 7985. Pedigree - Yoreme 75//IA/BUSH/3/Mono 'S'.
- PI 611387. X Triticosecale sp.**
Breeding. CTM6734-023Y-035M-0Y-3M-1Y-0M; NAT1131; NSGC 7986. Pedigree - IRA/Nuri 'S'//M2A/3/Tapir 'S'.
- PI 611388. X Triticosecale sp.**
Breeding. CT5160-J-3M-2Y-1M-1Y-1M-2Y-0M; NAT1132; NSGC 7987. Pedigree - Panther 'S'/3/M2A/Lince 'S'//M2A/4/Lemming 'S'/Teddy 'S'.
- PI 611389. X Triticosecale sp.**
Breeding. CT5168-C-2M-1Y-2M-2Y-1M-1Y-0M; NAT1133; NSGC 7988. Pedigree - Tigre 'S'/4/Armadillo 'S' 105/Beagle 'S'//2*M2A/3/Yoreme 75/5/Lemming 'S'/3/Arabian 'S'/M1A//M2A.
- PI 611390. X Triticosecale sp.**
Breeding. CT5260-A-1M-3Y-3M-1Y-1M-1Y-0M; NAT1135; NSGC 7989. Pedigree - Mouse 'S'/SPO 'S'/3/Tapir 'S'//Panda 'S'/Arabian 'S'.
- PI 611391. X Triticosecale sp.**
Breeding. CT5415-A-2M-4Y-2M-1Y-2M-2Y-0M; NAT1136; NSGC 7990. Pedigree - Chorizo 'S'/POL 'S'/5/E3/Armadillo 'S'//M2A/3/Addax 'S'/4/Panda 'S'/Yoreme.
- PI 611392. X Triticosecale sp.**
Breeding. CT5610-B-1M-2Y-2M-1Y-2M-1Y-0M; NAT1137; NSGC 7991. Pedigree - Panda 'S'/Castor 'S'//Quokka 'S'/3/Toro 'S'//Panda 'S'/Arabian 'S'.
- PI 611393. X Triticosecale sp.**
Breeding. CT1828-0M-0Y-0M-4Y-0B-1Y-0M; NAT1138; NSGC 7992. Pedigree - Tapir 'S'/Toro 'S'.
- PI 611394. X Triticosecale sp.**
Breeding. CT598-1Y-2M-2Y-1M-2Y-2M-2Y-0M; NAT1139; NSGC 7993. Pedigree - POL 'S'//Panda 'S'/Mapache 'S'.
- PI 611395. X Triticosecale sp.**
Breeding. CT1822-25Y-3M-1Y-4M-2Y-1M-1Y-0M; NAT1141; NSGC 7994. Pedigree - Tapir 'S'/Grizzly 'S'.
- PI 611396. X Triticosecale sp.**
Breeding. SWT714-1Y-1Y-2M-6Y-0M; NAT1142; NSGC 7995. Pedigree - 1323.E1.E1.E6.EB/PFT7717.

- PI 611397. X Triticosecale sp.**
Breeding. CIT993-8Y-1Y-1M-501Y-4M-2Y-0M; NAT1143; NSGC 7996. Pedigree - PFT7717/5/Huelquen//II50.72/N10/3/Bolillo 'S'/4/Maya 'S'/Utique 'S'.
- PI 611398. X Triticosecale sp.**
Breeding. CIT1312-3Y-2Y-1M-3Y-3M-1Y-0B; NAT1144; NSGC 7997. Pedigree - Coorong//AU/DDVE 'S'.
- PI 611399. X Triticosecale sp.**
Breeding. CIT495-3B-1Y-1Y-2M-1Y-5M-0Y; NAT1146; NSGC 7998. Pedigree - T107.18/M2A/Mapache 'S'/3/Pewee 'S'.
- PI 611400. X Triticosecale sp.**
Breeding. NAT1311; T890134; NSGC 7999. Pedigree - Musala 'S'/BTA 'S'.
- PI 611401. X Triticosecale sp.**
Breeding. STIER 'S'; NAT1312; B6712; NSGC 8000. Pedigree - Brochis/Snoopy//Beagle/3/CID93098/WRC31//Octo Bulk/Cinnamon.
- PI 611402. X Triticosecale sp.**
Breeding. B6811-073-22Y-3Y-2M-1Y-0M-0B; URON 'S'; NAT1314; T890035; NSGC 8001. Pedigree - Octo/Hare//Brochis/Snoopy.
- PI 611403. X Triticosecale sp.**
Breeding. B8411; NAT1317; NSGC 8002. Pedigree - Hare 'S'/2*Musala 'S'.
- PI 611404. X Triticosecale sp.**
Breeding. NAT1318; 79Q133001004; NSGC 8003. Pedigree - ME2A*2/Beagle 'S'//Panda 'S' 203.
- PI 611405. X Triticosecale sp.**
Breeding. X27407; NAT1320; NSGC 8004. Pedigree - Beagle 'S'/Addax 'S'.
- PI 611406. X Triticosecale sp.**
Breeding. CT327; NAT1325; NSGC 8005. Pedigree - Puma 'S'/Alamo 'S' 83.
- PI 611407. X Triticosecale sp.**
Breeding. HIPPO 'S'; X62468; NAT1327; NSGC 8006. Pedigree - Panda/Shepherd/3/Tigre//CID89273/Arabian.
- PI 611408. X Triticosecale sp.**
Breeding. X66075; NAT1328; NSGC 8007. Pedigree - Lechon 'S'/Teddy 'S'.
- PI 611409. X Triticosecale sp.**
Breeding. NAT1330; T890137; NSGC 8008. Pedigree - Panda 'S'/RM 'S'/3/Yoreme 75//IRA/Camel 'S'.

The following were developed by Donald F. Salmon, Alberta Agriculture, Field Crop Research Centre, 5030-50 Street, Lacombe, Alberta T4L 1W8, Canada. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

- PI 611410. X Triticosecale sp.**
Breeding. 85L012001; NAT1331; NSGC 8009.

- PI 611411. X Triticosecale sp.**
Breeding. 85L013001; NAT1332; NSGC 8010.
- PI 611412. X Triticosecale sp.**
Breeding. 7632-BL5D; NAT1333; NSGC 8011.
- PI 611413. X Triticosecale sp.**
Breeding. 7632-JR5A; NAT1335; NSGC 8012.
- PI 611414. X Triticosecale sp.**
Breeding. 7431A-68E4; NAT1336; NSGC 8013.
- PI 611415. X Triticosecale sp.**
Breeding. 79P102001; NAT1337; NSGC 8014.

The following were developed by Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

- PI 611416. X Triticosecale sp.**
Breeding. 8A468; NAT1559; NSGC 8015. Pedigree - 72A15/2D142-1.
- PI 611417. X Triticosecale sp.**
Breeding. 8A536; NAT1575; NSGC 8016. Pedigree - 6T15/UC90 C2 (547-7).
- PI 611418. X Triticosecale sp.**
Breeding. 6A590; NAT1603; NSGC 8017. Pedigree - ISN49/Toluca.
- PI 611419. X Triticosecale sp.**
Breeding. 6A628; NAT1633; NSGC 8018. Pedigree - Stewart 63/Prolific (70-1).
- PI 611420. X Triticosecale sp.**
Breeding. 6A629; NAT1634; NSGC 8019. Pedigree - Stewart 63/Prolific (348-6).
- PI 611421. X Triticosecale sp.**
Breeding. 6A640; NAT1644; NSGC 8020. Pedigree - Tetra Thatcher/2D-289 (381-3).
- PI 611422. X Triticosecale sp.**
Breeding. 6A642; NAT1646; NSGC 8021. Pedigree - Tetra Prelude/2D-289 (1008-3).
- PI 611423. X Triticosecale sp.**
Breeding. 6A701; NAT1673; NSGC 8022. Pedigree - Jori/Snoopy.
- PI 611424. X Triticosecale sp.**
Breeding. 6A1130; NAT1707; NSGC 8023. Pedigree - 4B-289/UC-90 (P.Kraker).
- PI 611425. X Triticosecale sp.**
Breeding. 8A1144; NAT1713; NSGC 8024. Pedigree - 1036/WRC (1482, J.Thomas).

The following were donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Received 12/01/1992.

PI 611426. X Triticosecale sp.

Breeding. II81-212; NAT1715; 8A1374; NSGC 8025. Developed in Australia.
Pedigree - K875/Snoopy.

PI 611427. X Triticosecale sp.

Breeding. X77-3395-2; NAT1717; 6A1400; NSGC 8026. Developed in Australia.

PI 611428. X Triticosecale sp.

Breeding. X77-340-8; NAT1718; 6A1402; NSGC 8027. Developed in Australia.

PI 611429. X Triticosecale sp.

Breeding. X77-353-1; NAT1719; 6A1403; NSGC 8028. Developed in Australia.

PI 611430. X Triticosecale sp.

Breeding. X77-387-18; NAT1721; 6A1406; NSGC 8029. Developed in Australia.

PI 611431. X Triticosecale sp.

Breeding. X77-426-2; NAT1722; 6A1409; NSGC 8030. Developed in Australia.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Received 12/01/1992.

PI 611432. X Triticosecale sp.

Breeding. H79-67-4; NAT1726; 8A1427; NSGC 8031. Pedigree - TsTs
3D/Blanco.

PI 611433. X Triticosecale sp.

Breeding. H79-247-6; NAT1730; 8A1441; NSGC 8032. Pedigree - Daws/Snoopy.

PI 611434. X Triticosecale sp.

Breeding. H79-225-4; NAT1731; 8A1443; NSGC 8033. Pedigree - Chinese
Spring/Kodiak.

PI 611435. X Triticosecale sp.

Breeding. H79-73-2; NAT1732; 8A1444; NSGC 8034. Pedigree - Daws/rye.

PI 611436. X Triticosecale sp.

Breeding. H79-42-3; NAT1733; 8A1446; NSGC 8035. Pedigree - Pitic
62/Kodiak.

PI 611437. X Triticosecale sp.
Breeding. NAT1737; 6A1462; NSGC 8036. Pedigree - M80-208-3/M80-209-1.

PI 611438. X Triticosecale sp.
Breeding. NAT1738; 6A1463; NSGC 8037. Pedigree - H80-5-3/H80-5-8.

PI 611439. X Triticosecale sp.
Breeding. NAT1739; 6A1464; NSGC 8038. Pedigree - H80-39-6/H80-6-1.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611440. X Triticosecale sp.
Breeding. ANGORA 'S'; X2802-9N-2M-3N-1M-3Y-1M-1Y-0M; NAT2262; NSGC 8039.
Pedigree - Maya 2/Armadillo.

PI 611441. X Triticosecale sp.
Breeding. CINNAMON 'S'; X2802-68N-3M-2N-1M-2Y-1M-1Y-0M; NAT2279; NSGC 8040. Pedigree - M2A = Maya 2/Armadillo.

PI 611442. X Triticosecale sp.
Breeding. X8535-A-1Y-3M-0Y; NAT2295; NSGC 8041. Pedigree - M2A/Camel.

PI 611443. X Triticosecale sp.
Breeding. X8717-E-1Y-9M-0Y; NAT2297; NSGC 8042. Pedigree - M2A/IRA.

PI 611444. X Triticosecale sp.
Breeding. X2144-12N-3M-2N-2M-0Y-6B-0Y; NAT2299; NSGC 8043. Pedigree - M1//Inia/Turkey 60.

PI 611445. X Triticosecale sp.
Breeding. X8429-A-2Y-1M-0Y; NAT2307; NSGC 8044. Pedigree - IGA/IRA.

PI 611446. X Triticosecale sp.
Breeding. BEAGLE 510; X1530-A-12M-5Y-1M-1Y-100M-0Y; NAT2317; NSGC 8045.

PI 611447. X Triticosecale sp.
Breeding. COYOTE 'S'; X7956-5M-1Y-2M-0Y; NAT2319; NSGC 8046.

PI 611448. X Triticosecale sp.
Breeding. FS282; FS282-1N-0M-1Y-0M; NAT2323; NSGC 8047.

PI 611449. X Triticosecale sp.
Breeding. X7903-9M-2Y-0M; NAT2334; NSGC 8048. Pedigree - Bush/Cinnamon.

PI 611450. X Triticosecale sp.
Breeding. H521-71A-1B-1Y-1B-0Y; NAT2338; NSGC 8049. Pedigree - TCL E2/Armadillo 'S'//TCL E3/2*Armadillo 'S'.

PI 611451. X Triticosecale sp.
Cultivar. "CORTO"; 73UM8831; NAT2343; NSGC 8050.

- PI 611452. X Triticosecale sp.**
Breeding. D710482-35W-0W; NAT2347; NSGC 8051. Pedigree - 6TA-204/Bronco 90.
- PI 611453. X Triticosecale sp.**
Breeding. ADDAX 'S'; X7224-10M-1Y-3M; NAT2391; NSGC 8052. Pedigree - Octo OC/Agrotriticum.
- PI 611454. X Triticosecale sp.**
Breeding. BEAGLE 'S' 505; X1530; NAT2394; NSGC 8053.
- PI 611455. X Triticosecale sp.**
Breeding. X8326-D-1Y-2M-2Y-0Y; NAT2410; NSGC 8054. Pedigree - IRA/Camel.
- PI 611456. X Triticosecale sp.**
Breeding. X11286-C-4M-4Y-0Y; NAT2422; NSGC 8055. Pedigree - M2A/IGA//IA/Koala.
- PI 611457. X Triticosecale sp.**
Breeding. X9214-A-2Y-10M-2Y-0Y; NAT2425; NSGC 8056. Pedigree - FW121/Prol//Cinnamon/3/Camel.
- PI 611458. X Triticosecale sp.**
Breeding. HUAMANTLA SEL 32; T-1274; NAT2429; NSGC 8057.
- PI 611459. X Triticosecale sp.**
Breeding. X286-35Y-0W-2Y-0W; NAT2434; NSGC 8058. Pedigree - 8A-95 Rosner//Hari/Armadillo.
- PI 611460. X Triticosecale sp.**
Breeding. X12593-B-1Y-3Y-5M-0Y; NAT2464; NSGC 8059. Pedigree - M2A/IRA.
- PI 611461. X Triticosecale sp.**
Breeding. X14082-A-1Y-4Y-1M-0Y; NAT2495; NSGC 8060. Pedigree - Cinnamon/Potam 70//IA.
- PI 611462. X Triticosecale sp.**
Breeding. X16020-2Y-1B-2N-0M; NAT2501; NSGC 8061. Pedigree - Drira/IA.
- PI 611463. X Triticosecale sp.**
Breeding. TL 24; NAT2541; T-1663; NSGC 8062.
- PI 611464. X Triticosecale sp.**
Breeding. X11065-C-2M-1Y-0Y; NAT2552; NSGC 8063. Pedigree - IA/Bulk E2.
- PI 611465. X Triticosecale sp.**
Breeding. BONITO 'S'; X14920-8Y-1Y-0Y; NAT2574; NSGC 8064. Pedigree - IA-T/Koala//Calidad.
- PI 611466. X Triticosecale sp.**
Breeding. SHEPHERD 112; X15754-A-1Y-1M-2Y-3M-0Y; NAT2590; NSGC 8065. Pedigree - Maya 2/Armadillo.
- PI 611467. X Triticosecale sp.**
Breeding. X22551-100Y-3Y-0M; NAT2608; NSGC 8066. Pedigree - Beagle 'S'/3/Beagle 'S'//ITA/Leo.

PI 611468. X Triticosecale sp.

Breeding. X25664-A-1Y-4R-1Y-1B-0Y; NAT2665; NSGC 8067. Pedigree - Beagle 'S'/Penjamo 62//Navojoa 'S'.

PI 611469. X Triticosecale sp.

Breeding. MOUSE 'S'; X32709-6Y-1B-1Y-0B; NAT2676; NSGC 8068. Pedigree - Camel/Kalyansona//Kalyansona.

The following were collected by P. Hanelt, Institut für Pflanzengenetik, und Kulturpflanzenforschung, Corrensstraße 3, Gatersleben, Saxony-Anhalt D-06466, Germany; J. Kruse, Botanical Institute, Tbilisi, Georgia. Received 12/24/1991.

PI 611470. Triticum aestivum subsp. macha (Dekapr. & A. M. Menabde) Mackey

Landrace. TRI 13601; SN-262a; H Tri 13601/87; NSGC 394. Collected 07/26/1982 in Georgia. Latitude 42° 39' 36" N. Longitude 42° 46' 52" E. Elevation 500 m. Cchuteli, east of Cageri, Rayon Cageri, Lecchuai; college experimental field. Lat/lon accurate to Cageri.

The following were developed by Agricultural Research Institute, Martonvasar, Fejer, Hungary. Donated by Institute for Plant Production & Qualification, Research Centre for Agrobotany, Tapioszele, Pest H-2766, Hungary. Received 10/26/1995.

PI 611471. Hordeum vulgare L. subsp. vulgare

Cultivar. "MARTONVASARI 54"; 42746; RCAT010025; MV 54.

PI 611472. Hordeum vulgare L. subsp. vulgare

Cultivar. "MARTONVASARI 50"; 42745; RCAT010024; MV 50.

PI 611473. Hordeum vulgare L. subsp. vulgare

Cultivar. "MARTONVASARI 35"; 46014; RCAT010181; MV 35.

The following were donated by Institute for Plant Production & Qualification, Research Centre for Agrobotany, Tapioszele, Pest H-2766, Hungary. Received 10/26/1995.

PI 611474. Avena sativa L.

Landrace. 44320; RCAT013430; Nyiregyhazi TF. Collected in Hungary. Latitude 47° 0' N. Longitude 20° 0' E.

The following were developed by Chinese Academy of Agricultural Sciences, Inst. of Crop Breeding & Cultivation, Beijing, Beijing, China. Donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 09/28/1998.

PI 611475. X Triticosecale sp.

Breeding. OH1621; NSGC 6570. Forage-type spring triticales.

The following were collected by Chinese Academy of Agricultural Sciences, Institute of Crop Germplasm Resources, Crop Introduction Laboratory, Beijing, Beijing 100081, China. Donated by Richard Wang, USDA-ARS, Forage & Range

Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 09/21/1998.

PI 611476. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "JIN ZHOU NO. 1"; NSGC 7361. Collected in China. Latitude 35° 0' N. Longitude 105° 0' E. Tolerant to scab.

PI 611477. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "MIAN YOUNG NO. 1"; NSGC 7363. Collected in China. Latitude 35° 0' N. Longitude 105° 0' E. Tolerant to scab.

The following were collected by Korean Academy of Agricultural Sciences, Pyongyang, Pyongyang, Korea, North. Donated by Randy Ireson, American Friends Service Committee, 388 Browning Av. SE, Salem, Oregon 97302, United States. Received 05/26/1998.

PI 611478. *Hordeum vulgare* L. subsp. *vulgare*

Cultivated. Unpa No. 3; NSGC 7364. Collected in Korea, North. Latitude 40° 0' N. Longitude 127° 0' E.

PI 611479. *Hordeum vulgare* L. subsp. *vulgare*

Cultivated. 13; NSGC 7368. Collected in Korea, North. Latitude 40° 0' N. Longitude 127° 0' E.

PI 611480. *Hordeum vulgare* L. subsp. *vulgare*

Cultivated. 20; NSGC 7369. Collected in Korea, North. Latitude 40° 0' N. Longitude 127° 0' E.

PI 611481. *Hordeum vulgare* L. subsp. *vulgare*

Cultivated. Ryongang; NSGC 7370. Collected in Korea, North. Latitude 40° 0' N. Longitude 127° 0' E.

The following were developed by Zhejiang Agricultural University, Hangzhou, Zhejiang, China. Donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States. Received 09/21/1998.

PI 611482. *Hordeum vulgare* L. subsp. *vulgare*

Breeding. YANG ZHOU NO. 711; NSGC 7372.

The following were collected by Zhejiang Agricultural University, Hangzhou, Zhejiang, China. Donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States. Received 09/21/1998.

PI 611483. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "ZHE PI NO. 4"; NSGC 7373. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E. Scab tolerant.

PI 611484. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "ZHENONG NO. 7"; NSGC 7374. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E. Scab tolerant.

PI 611485. *Hordeum vulgare* L. subsp. *vulgare*

Landrace. Huai An San Ye Huan; NSGC 7375. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E.

PI 611486. *Hordeum vulgare* L. subsp. *vulgare*

Landrace. Lin Hai Le Mai; NSGC 7376. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E.

PI 611487. *Hordeum vulgare* L. subsp. *vulgare*

Landrace. I Wu; NSGC 7377. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E.

PI 611488. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "FU MAI NO. 10"; NSGC 7378. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E. Yellow mosaic virus resistant.

The following were developed by Zhejiang Agricultural University, Hangzhou, Zhejiang, China. Donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States. Received 09/21/1998.

PI 611489. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "XIU MAI NO. 3"; NSGC 7379.

The following were collected by Zhejiang Agricultural University, Hangzhou, Zhejiang, China. Donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States. Received 09/21/1998.

PI 611490. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "ZHENONG NO. 3"; NSGC 7380. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E. Scab tolerant.

PI 611491. *Hordeum vulgare* L. subsp. *vulgare*

Landrace. Ai Jiau Or Lin Le Mai; NSGC 7381. Collected in Zhejiang, China. Latitude 29° 0' N. Longitude 120° 0' E.

The following were developed by Zhejiang Agricultural University, Hangzhou, Zhejiang, China. Donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States. Received 09/21/1998.

PI 611492. *Hordeum vulgare* L. subsp. *vulgare*

Breeding. GAMMA RAY SEL. 48; NSGC 7383.

The following were collected by Zhejiang Agricultural University, Hangzhou, Zhejiang, China. Donated by Chia-Tsang Liu, University of Idaho, Ag. Coop. Extension, 1214 Joseph St., Moscow, Idaho 83843, United States. Received 09/21/1998.

PI 611493. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "SHI IN NO. 2"; NSGC 7384. Collected in Zhejiang, China.
Latitude 29° 0' N. Longitude 120° 0' E.

PI 611494. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "KAN NO. 2"; NSGC 7385. Collected in Zhejiang, China.
Collected in Japan.

The following were collected by Korean Academy of Agricultural Sciences, Pyongyang, Pyongyang, Korea, North. Donated by Randy Ireson, American Friends Service Committee, 388 Browning Av. SE, Salem, Oregon 97302, United States. Received 11/09/1998.

PI 611495. *Hordeum vulgare* L. subsp. *vulgare*
Cultivated. Gyekory; NSGC 7387. Collected in Korea, North. Latitude 40° 0' N. Longitude 127° 0' E.

PI 611496. *Hordeum vulgare* L. subsp. *vulgare*
Cultivated. Pungnyen; NSGC 7388. Collected in Korea, North. Latitude 40° 0' N. Longitude 127° 0' E.

The following were donated by Andrey A. Pomortsev, Russian Academy of Sciences, N.I. Vavilov Institute of General Genetics, Gubkin Str. 3, Moscow, Moscow 117809, Russian Federation. Received 03/03/1999.

PI 611497. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "AGUL"; Ck 1-7; NSGC 7481. Developed in Russian Federation.
Pedigree - Gateway/Chervonec.

PI 611498. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "AGUL II"; Ck 8-14; NSGC 7482. Developed in Russian Federation.
Pedigree - Keystone/Agul//Agul.

PI 611499. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "AIKHAL"; Ck 25-29; NSGC 7483. Developed in Azerbaijan.

PI 611500. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "AMURSKII MESTNYII"; Ck 40-45; NSGC 7484. Developed in Russian Federation.
Pedigree - selection from Amur landrace.

PI 611501. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "ARMAVIRSKII 593"; Ck 56-58; NSGC 7485. Developed in Russian Federation.

PI 611502. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "ARKHANGEL'SKII MESTNYI"; NSGC 7486. Developed in Russian Federation.

PI 611503. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "AKHALTESLI MESTNYI"; Ck 80-89; NSGC 7487. Developed in Georgia.

PI 611504. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. "BAISHESHEK"; Ck 90-99; NSGC 7488. Developed in Uzbekistan.

- PI 611505. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "BELOGORSKII"; Ck 100-105; NSGC 7489. Developed in Russian Federation. Pedigree - Chervonec/Keystone.
- PI 611506. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "BEZENCHUKSKII"; Ck 116-119; NSGC 7490. Developed in Russian Federation.
- PI 611507. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "BOETS"; Ck 120-126; NSGC 7491. Developed in Russian Federation.
- PI 611508. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VAIROGS"; Ck 131-132; NSGC 7492. Developed in Latvia.
Pedigree - selection from Priekulu landrace.
- PI 611509. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VERKHNYACHSKII 6"; Ck 148-157; NSGC 7493. Developed in Ukraine. Pedigree - selection from Kiev landrace.
- PI 611510. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VERKHNYACHSKII 8"; Ck 158-165; NSGC 7494. Developed in Ukraine. Pedigree - selection from Uman landrace.
- PI 611511. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VESTNIK"; Ck 166-175; NSGC 7495. Developed in Ukraine.
Pedigree - Medicum 42-76/2*Odesskij 36.
- PI 611512. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VIKING"; Ck 176-178; NSGC 7496. Developed in Russian Federation. Pedigree - domen/Ingrid.
- PI 611513. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VINNITSKII 3"; Ck 188-194; NSGC 7497. Developed in Ukraine.
Pedigree - selection from Kneifel.
- PI 611514. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VINNITSKII 6"; Ck 195-203; NSGC 7498. Developed in Ukraine.
Pedigree - Balder/Ilineckij 5.
- PI 611515. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VINNITSKII 7"; Ck 204-208; NSGC 7499. Developed in Ukraine.
Pedigree - Herta/Ilineckij 43.
- PI 611516. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "VINNITSKII 128"; Ck 209-215; NSGC 7500. Developed in Ukraine.
Pedigree - selection from Ilineskij.
- PI 611517. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "GOLOZERNYI 1"; Ck 239-241; NSGC 7501. Developed in Russian Federation. Pedigree - K920/Odesskij 9//K900/Kolchoznyj-Golozernyj.
- PI 611518. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DAG ARPASY"; Ck 248-256; NSGC 7502. Developed in Azerbaijan.
Pedigree - selection from Agarpa landrace.

- PI 611519. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DARVIN"; Ck 266; NSGC 7503. Developed in Russian Federation.
- PI 611520. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DZHAU BAPUST"; Ck 269-275; NSGC 7504. Developed in Tajikistan. Pedigree - selection from Tajikistan landrace.
- PI 611521. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DZHAU KABUTAK"; Ck 276-288; NSGC 7505. Developed in Tajikistan. Pedigree - selection from Tajikistan landrace.
- PI 611522. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DZHAU SAFEDAK"; Ck 289-298; NSGC 7506. Developed in Tajikistan. Pedigree - selection from Tajikistan landrace.
- PI 611523. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DZHYUGYAI"; Ck 309-314; NSGC 7587. Developed in Lithuania. Pedigree - selection from Lithuanian landrace.
- PI 611524. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DESNYANSKII 8"; Ck 315-318; NSGC 7588. Developed in Ukraine. Pedigree - Carlsberg II/Chernigovskij 5.
- PI 611525. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DZINTARS"; Ck 319-323; NSGC 7509. Developed in Latvia. Pedigree - selection from Vaidav landrace.
- PI 611526. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DNEPROVSKII 425"; Ck 324-333; NSGC 7510. Developed in Ukraine. Pedigree - Lisa/Donetskij 650.
- PI 611527. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DNEPROVSKII 435"; Ck 334-343; NSGC 7511. Developed in Ukraine. Pedigree - Mari/Elsa//Juzhnyj/3/Juzhnyj/4/Nutans 7/5/Juzhnyj/Dneprovskij 18.
- PI 611528. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DOKUCHACVSKII 1"; Ck 344-350; NSGC 7512. Developed in Russian Federation. Pedigree - Loosdorfer Hanna*2/Nutans 187.
- PI 611529. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DONETSKII 6"; Ck 365-370; NSGC 7513. Developed in Ukraine.
- PI 611530. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DONETSKII 9"; Ck 379-385; NSGC 7514. Developed in Ukraine.
- PI 611531. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DONETSKII 591"; Ck 386-394; NSGC 7515. Developed in Ukraine.
- PI 611532. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DONETSKII 650"; Ck 395-404; NSGC 7516. Developed in Ukraine.
- PI 611533. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "DRUZHBA"; Ck 405-414; NSGC 7517. Developed in Ukraine. Pedigree - Trumpf/Ametyst.

- PI 611534. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ZHODINSKII 5"; Ck 415-420; NSGC 7518. Developed in Belarus.
Pedigree - Mazurka/KM-1192.
- PI 611535. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ENISEI"; Ck 472-477; NSGC 7519. Developed in Russian
Federation. Pedigree - Chervonec/Vantage//Fox.
- PI 611536. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "JOGEVA"; Ck 487-490; NSGC 7520. Developed in Estonia.
Pedigree - Maja/Hanna Rimpau.
- PI 611537. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "IL'INETSII 5"; Ck 491-497; NSGC 7521. Developed in Ukraine.
Pedigree - selection from Maja.
- PI 611538. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "IL'MEN"; Ck 498-506; NSGC 7522. Developed in Russian
Federation. Pedigree - Perga/Krasnoufimskij 95.
- PI 611539. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "IR'YAR"; Ck 507-511; NSGC 7523. Developed in Belarus.
- PI 611540. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KASKAD"; Ck 536-541; NSGC 7524. Developed in Russian
Federation. Pedigree - Trumpf/Temp.
- PI 611541. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KEDR"; Ck 549-554; NSGC 7525. Developed in Russian
Federation. Pedigree - Viner/Birgitta.
- PI 611542. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KRASNOYARSKII 1"; Ck 588-596; NSGC 7526. Developed in Russian
Federation.
- PI 611543. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KRASNOYARSKII 80"; Ck 597-605; NSGC 7527. Developed in
Russian Federation. Pedigree - S-80/Una.
- PI 611544. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KRYMSKII 17"; Ck 606-615; NSGC 7528. Developed in Ukraine.
Pedigree - selection from Nutans 17.
- PI 611545. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KRYMSKII 65"; Ck 616-618; NSGC 7529. Developed in Ukraine.
Pedigree - selection from Crimean landrace.
- PI 611546. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KRINICHNYI"; Ck 627-636; NSGC 7530. Developed in Belarus.
Pedigree - selection from Midas.
- PI 611547. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "LENINAKANSKII 6151"; Ck 647-656; NSGC 7531. Developed in
Armenia. Pedigree - selection from Transcaucasus landrace.
- PI 611548. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "LUTSKII"; Ck 666-671; NSGC 7532. Developed in Ukraine.

- PI 611549. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "MALAKHIT"; Ck 690-698; NSGC 7533. Developed in Russian Federation. Pedigree - Krasnoufimskij 95/Pendo.
- PI 611550. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "MIINA"; Ck 718-725; NSGC 7534. Developed in Estonia.
- PI 611551. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "MOSKOVSKII 3"; Ck 740-749; NSGC 7535. Developed in Russian Federation. Pedigree - Vuni/Topaz.
- PI 611552. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NARYN 27"; Ck 774-782; NSGC 7536. Developed in Kyrgyzstan. Pedigree - Nutans 45/Nutans 4353.
- PI 611553. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NEVAN"; Ck 791-798; NSGC 7537. Developed in Russian Federation. Pedigree - Tammi//Narodnyj 9/Nepolegajuschij/3/Olli + Nachchivandany.
- PI 611554. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NEPOLEGAYUSHCHII"; Ck 817-822; NSGC 7538. Developed in Russian Federation. Pedigree - Zalarinec/Karaganda.
- PI 611555. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NOVOOMSKII"; Ck 823-825; NSGC 7539. Developed in Russian Federation. Pedigree - Nutans 9034/3/Juzhnyj//Nepolegajushchij/Juzhnyj/4/Omskij 13709.
- PI 611556. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NOSOVSKII 2"; Ck 826; NSGC 7540. Developed in Ukraine. Pedigree - selection from Ukrainian landrace.
- PI 611557. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NUTANS 27"; Ck 852-861; NSGC 7541. Developed in Uzbekistan. Pedigree - selection from landrace from Samar-Pugac.
- PI 611558. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NUTANS 45"; Ck 862-870; NSGC 7542. Developed in Uzbekistan. Pedigree - selection from landrace from Gruzni.
- PI 611559. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NUTANS 32-28"; Ck 920-923; NSGC 7543. Developed in Uzbekistan.
- PI 611560. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NUTANS 8/71"; Ck 924-933; NSGC 7544. Developed in Ukraine. Pedigree - selection from Hanna landrace from Moravia.
- PI 611561. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "NYURBINSKII"; Ck 934-942; NSGC 7545. Developed in Russian Federation.
- PI 611562. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "OBSKOI"; Ck 943-951; NSGC 7546. Developed in Russian Federation. Pedigree - mutant in K-58.

- PI 611563. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ODESSKII 18"; Ck 959-962; NSGC 7547. Developed in Ukraine.
Pedigree - selection from Odeskij 9.
- PI 611564. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ODESSKII 69"; Ck 966-973; NSGC 7548. Developed in Ukraine.
Pedigree - Medicum 139-7/Juzhnyj.
- PI 611565. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ODESSKII 111"; Ck 989-998; NSGC 7549. Developed in Ukraine.
Pedigree - Doneckij 6/Elgina.
- PI 611566. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "OLIMPIETS"; Ck 999-1008; NSGC 7550. Developed in Russian
Federation.
- PI 611567. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "OMSKII 80"; Ck 1009-1018; NSGC 7551. Developed in Russian
Federation. Pedigree - Palliser/Omskij 13709.
- PI 611568. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "OMSKII 10664"; Ck 1025; NSGC 7552. Developed in Russian
Federation. Pedigree - selection from Siberian landrace.
- PI 611569. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "OMSKII 11464"; Ck 1026; NSGC 7553. Developed in Russian
Federation. Pedigree - selection from Obrazec Sev. kazachstana.
- PI 611570. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ONOKHOISKII 566"; Ck 1035-1038; NSGC 7554. Developed in
Russian Federation.
- PI 611571. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ORENBURGSKII 35"; Ck 1039-1048; NSGC 7555. Developed in
Russian Federation. Pedigree - selection from Persikum 64.
- PI 611572. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "OTLICHNIK 5"; Ck 1049-1057; NSGC 7556. Developed in Russian
Federation. Pedigree - selection from Sarkansk landrace.
- PI 611573. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PALLIDUM 32"; Ck 1077-1080; NSGC 7557. Developed in Ukraine.
Pedigree - selection from landrace.
- PI 611574. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PALLIDUM 45"; Ck 1091-1100; NSGC 7558. Developed in Russian
Federation. Pedigree - selection from landrace from Trans Volga Region.
- PI 611575. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PALLIDUM 394"; Ck 1101-1110; NSGC 7559. Developed in Russian
Federation. Pedigree - K-4997 (VIR)/Chervonec.
- PI 611576. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PERVENETS"; Ck 1111-1115; NSGC 7560. Developed in Ukraine.
Pedigree - CI13664/2*Odesskij 36.

- PI 611577. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "POLYARNYI 14"; Ck 1131-1140; NSGC 7561. Developed in Russian Federation. Pedigree - selection from Karelija landrace.
- PI 611578. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PRIKUMSKII 14"; Ck 1151-1159; NSGC 7562. Developed in Russian Federation. Pedigree - Spartan 2/Nutans 0529.
- PI 611579. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PRIKUMSKII 22"; Ck 1160-1168; NSGC 7563. Developed in Russian Federation. Pedigree - Glabrierektrum G-14094/Medicum G9943.
- PI 611580. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PRIEKUL'SKII I"; Ck 1169-1179; NSGC 7564. Developed in Latvia.
- PI 611581. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "PRIMORSKII 89"; Ck 1179-1188; NSGC 7565. Developed in Russian Federation. Pedigree - K-19660/Ussurijskij 8.
- PI 611582. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "RASSVET"; Ck 1195-1201; NSGC 7566. Developed in Russian Federation. Pedigree - Gateway/Chervonec.
- PI 611583. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ROSTOVSKII 27"; Ck 1217-1220; NSGC 7567. Developed in Russian Federation. Pedigree - selection from landrace.
- PI 611584. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "SEVERNII"; Ck 1241-1247; NSGC 7568. Developed in Russian Federation. Pedigree - Maja/Bonus//Varde.
- PI 611585. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "SYSOL'SKII 95"; Ck 1248-1257; NSGC 7569. Developed in Russian Federation. Pedigree - selection from Komi landrace.
- PI 611586. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "SPARTAN II"; Ck 1266-1270; NSGC 7570. Developed in Russian Federation.
- PI 611587. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "TALOVSKII"; Ck 1282-1290; NSGC 7571. Developed in Russian Federation.
- PI 611588. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "TEMP"; Ck 1296-1305; NSGC 7572. Developed in Russian Federation. Pedigree - mutant in Krasnodarskij 35.
- PI 611589. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "TOROS"; Ck 1306-1315; NSGC 7573. Developed in Russian Federation. Pedigree - Carlsberg II/Ackermanns.
- PI 611590. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "TULUNSKII 283"; Ck 1338-1342; NSGC 7574. Developed in Russian Federation. Pedigree - selection from K-3482 (DNK).

- PI 611591. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "UZBEKSKII"; Ck 1343-1345; NSGC 7575. Developed in Uzbekistan.
Pedigree - selection from K-18733.
- PI 611592. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KHARDZHAU"; Ck 1374-1379; NSGC 7576. Developed in Tajikistan.
- PI 611593. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "KHAR'KOVSKII 67"; Ck 1387-1392; NSGC 7577. Developed in Ukraine.
- PI 611594. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "TSELINNYI 5"; Ck 1420-1429; NSGC 7578. Developed in Kazakhstan.
- PI 611595. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "TSIVIL'SKII"; Ck 1430-1437; NSGC 7579. Developed in Russian Federation.
- PI 611596. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "CHERKASSKII 240"; Ck 1445-1453; NSGC 7580. Developed in Ukraine.
- PI 611597. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "CHERNIGOVSKII"; Ck 1454-1460; NSGC 7581. Developed in Ukraine. Pedigree - selection from Viner.
- PI 611598. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "CHERNIGOVSKII 7"; Ck 1461-1465; NSGC 7582. Developed in Ukraine. Pedigree - selection from Chernigovskij 5.
- PI 611599. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "CHISHIMSKII 16"; Ck 1476-1485; NSGC 7583. Developed in Russian Federation. Pedigree - selection from landrace Mishkinskij.
- PI 611600. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "ESME"; Ck 1486-1495; NSGC 7584. Developed in Estonia.
Pedigree - Foma/Hijlkema 1148.
- PI 611601. *Hordeum vulgare* L. subsp. *vulgare***
Cultivar. "YUZHNYI"; Ck 1512-1519; NSGC 7585. Developed in Ukraine.

The following were collected by Chinese Academy of Agricultural Sciences, Institute of Crop Germplasm Resources, Crop Introduction Laboratory, Beijing, Beijing 100081, China. Donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 04/30/1996.

- PI 611602. *Triticum aestivum* L. subsp. *aestivum***
Cultivar. "ZHAO SHUI 52"; Jing 3667; NSGC 7588. Collected in China.
Latitude 35° 0' N. Longitude 105° 0' E. High protein.
- PI 611603. *Triticum aestivum* L. subsp. *aestivum***
Cultivar. "ZHONG MAI 2"; Jing 3535; NSGC 7593. Collected in China.
Latitude 35° 0' N. Longitude 105° 0' E. High yield.

The following were developed by Chinese Academy of Agricultural Sciences, Institute of Crop Germplasm Resources, Crop Introduction Laboratory, Beijing, Beijing 100081, China. Donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 04/30/1996.

PI 611604. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "JING 411"; Jing 4583; NSGC 7594. Pedigree - Fengkang 2/74 Chang 1. High yield.

The following were collected by Chinese Academy of Agricultural Sciences, Institute of Crop Germplasm Resources, Crop Introduction Laboratory, Beijing, Beijing 100081, China. Donated by Richard Wang, USDA-ARS, Forage & Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 04/30/1996.

PI 611605. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "ZHONG ZHO 8903"; Jing 4547; NSGC 7597. Collected in China. Latitude 35° 0' N. Longitude 105° 0' E. Early maturity.

PI 611606. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "CHI 79-115"; Jing 4170; NSGC 7599. Collected in China. Latitude 35° 0' N. Longitude 105° 0' E. Early maturity.

The following were developed by Siberian Sci. Res. Inst. of Plant Production, Novosibirskiy Rajon, Krasnodsk, Novosibirsk 633128, Russian Federation. Donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611607. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "ANALOG A-4"; NSGC 7619.

The following were developed by K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Moscow 127550, Russian Federation. Donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611608. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "BIORA"; NSGC 7620. Pedigree - Moskovskaya 35/Leningradka (65-h-10-BT)//Jara/Kinelskaya (250-h-23).

The following were donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611609. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "ENITA"; NSGC 7621. Developed in Russian Federation. Pedigree - Linia 1833-76-h-427/Mironovskaya-Yarovaya. Agricultural institute of central Nechernosemnyi region.

PI 611610. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "GARTUS 598"; NSGC 7622. Developed in Russian Federation. Pedigree - Rodina/mutated line. Agricultural institute of central Nechernosemnyi region.

The following were developed by K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Moscow 127550, Russian Federation. Donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611611. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "IVOLGA"; NSGC 7623. Pedigree - Buryatskaya 79/Mironovskaya Yarovaya. Released 1988.

The following were donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611612. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "KINEL'SKAYA 60"; NSGC 7624. Developed in Russian Federation. Pedigree - Kinelskaya 40/Nadadores 63. Kinel'skaya breeding station.

PI 611613. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "LADA"; NSGC 7625. Developed in Russian Federation. Pedigree - Obrij/30h70//Moskovskaya 35. Agricultural institute of central Nechernosemnyi region.

The following were developed by Moscow Botanic Garden, Ministry of Agriculture, State Plant Quarantine & Inspection, Moscow, Moscow, Russian Federation. Donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611614. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "PPG 38/1"; NSGC 7626. Pedigree - Graecum 114/Sharbati-Sonora.

The following were developed by Viatka Regional Experiment Station, Viatka, Kirov, Russian Federation. Donated by Tatiana Danilova, K. Timiryazev Agricultural Academy, Dept. of Plant Breeding & Seed Growing, Timiryazevskaya ul., 49, Moscow, Russian Federation. Received 04/09/1999.

PI 611615. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "VESHENKA"; NSGC 7627. Pedigree - selection from Mironovskaya 808.

The following were collected by G. Ray Smith, Texas A&M University, Research & Extension Center, P.O. Box E, Overton, Texas 75684-0290, United States; Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage

Breeding and Genetics, Gainesville, Florida 32611-0500, United States.
Received 05/10/1993.

PI 611616. *Trifolium alpestre* L.

Wild. 90-143; G 31055. Collected 07/22/1990 in Bulgaria. Latitude 41° 55' N. Longitude 24° 10' E. Elevation 1150 m. Near Tennis courts at Orbita Tourist Resort 8 km W of Batak, Bulgaria. Thin mountain valley soil, grasses, sloping. Frequency of sample: Rarely seen Comments: Highest altitude for *T. alpestre* collected to date in Bulgaria.

PI 611617. *Trifolium montanum* L.

Wild. 90-140; G 31058. Collected 07/25/1990 in Bulgaria. Latitude 41° 55' N. Longitude 24° 25' E. Elevation 970 m. 5 km S of Batak on road from Batak to Fotinovo, Bulgaria. Rocky mountain road cut, mixed forbes, mountainous. Frequency of sample: Rarely seen Comments: We looked for seed, couldn't find any, but pulled all heads, put a head and leaf in envelope.

PI 611618. *Trifolium fragiferum* L.

Wild. 90-130; G 31066. Collected in Bulgaria. Latitude 42° 15' N. Longitude 27° 45' E. Elevation 270 m. 5 km S of Izgrev, by spring on road, from Malko Tarnovo to Micurin, Bulgaria. Hilly area, thin brown loam, mixed grassea by spring, sloping. Frequency of sample: Occasionally Comments: Only growing in wet area near mountain springs.

PI 611619. *Trifolium pratense* L.

Wild. 90-122; G 31071. Collected 07/22/1990 in Bulgaria. Latitude 42° 0' N. Longitude 27° 30' E. Elevation 430 m. Hillside across the road from motel on outskirts of Malko Tarnovo, Bulgaria. Limestone based brown clay loam, mountain meadow on edge of oak wood, steep slope. Frequency of sample: Rare Comments: An open high meadow with steep slope. Areas of meadow are solid stand of *T. medium*. Also in meadow were *T. pratense*, *T. heldreichianum*, and *T. ochroleucum*.

PI 611620. *Trifolium ochroleucum* Huds.

Wild. 90-121; G 31072. Collected 07/22/1990 in Bulgaria. Latitude 42° 0' N. Longitude 27° 30' E. Elevation 430 m. Hillside across the road from motel on outskirts of Malko Tarnovo, Bulgaria. Limestone based brown clay loam, mountain meadow on edge of oak wood, steep slope. Frequency of sample: Frequently seen Comments: An open high meadow. Areas of meadow are solid stand of *T. medium*. Also in meadow were *T. pratense*, *T. heldreichianum*, and *T. ochroleucum*.

PI 611621. *Trifolium ochroleucum* Huds.

Wild. 90-117; G 31078. Collected 07/22/1990 in Bulgaria. Latitude 42° 10' N. Longitude 27° 25' E. Elevation 250 m. About 3 km NW of Varovnik on road to Malko Tarnovo, Bulgaria. Rocky clay, mixed grasses and edge of oak scrub, mountain slopes. Frequency of sample: Frequently seen Comments: none.

PI 611622. *Trifolium repens* L.

Wild. 90-83; G 31098. Collected 07/20/1990 in Burgas, Bulgaria. Latitude 42° 0' N. Longitude 26° 15' E. Elevation 400 m. 5 km S of Driptcheve on road to Toplovograd, Burgas, Bulgaria. Granite rock and clay, mixed grass, scrub, medium slope. Frequency of sample: Rarely seen Comments: none.

PI 611623. *Trifolium heldreichianum* (Gibelli & Belli) Hausskn.
Wild. 90-72; G 31101. Collected 07/19/1990 in Khaskovo, Bulgaria.
Latitude 41° 40' N. Longitude 26° 0' E. Elevation 350 m. 2 km SE
of Dubovec on road from Ivaylovgrad to Malk Gradiste, Khaskovo,
Bulgaria. Cracking clay, edge of oak scrub, rolling hills but flat area.
Frequency of sample: Occasionally seen. Comments: Only one nice large
plant. An unusual site. Near the road were annuals *T. echinatum*, *T.*
diffusum, *T. vesiculom*, but within 20 meters along edge of wooded area
[were] perennials of [*T.*] *alpestre*, *heldreichianum*, and *ochroleucum*.

PI 611624. *Trifolium alpestre* L.
Wild. 90-53; G 31107. Collected 07/18/1990 in Khaskovo, Bulgaria.
Latitude 41° 35' N. Longitude 25° 50' E. Elevation 710 m. Along
road from Momchilgrad to Ivaylovgrad, Khaskovo, Bulgaria. Flat and some
slope, mixed forbes and grasses, edge of woodland. Frequency of sample:
Occasionally seen Comments: none.

PI 611625. *Trifolium repens* L.
Breeding. 90-17; G 31113. Collected 07/16/1990 in Bulgaria. Comments:
Pubescent *T. repens* collected from J. Guteva's plot area.

PI 611626. *Trifolium alpestre* L.
Wild. 90-06; G 31124. Collected 07/16/1990 in Plovdiv, Bulgaria.
Latitude 41° 55' N. Longitude 24° 50' E. Elevation 1000 m. 9-10
km south of Asenovgrad, Plovdiv, Bulgaria. Rocky thin soil, mixed
shrubs, mountainous, 5-10% slope. Frequency of sample: Occasionally seen
Comments: Growing near clumps of shrubs or along edge of treeline.

The following were collected by Gary A. Pederson, USDA, ARS, Waste Management
and Forage, Research Unit, Mississippi State, Mississippi 39762-5367, United
States; Kenneth H. Quesenberry, University of Florida, Department of Agronomy,
Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States.
Received 11/29/1993.

PI 611627. *Trifolium alpestre* L.
Wild. 93-13A; G 31144. Collected 01/08/1993 in Plovdiv, Bulgaria.
Latitude 42° 4' N. Longitude 24° 14' E. Elevation 600 m. 7-8 km north of
Bratsigovo, Plovdiv, Bulgaria. Growing along the edge of and under scrub
oaks, hilly, Ph 6.75, 53% sand, 40% silt, 7% clay, sandy loam-loam.
Frequency of sample: Frequently seen.

PI 611628. *Trifolium alpestre* L.
Wild. 93-91; G 31149. Collected 08/09/1993 in Sofia, Bulgaria. Latitude
42° 14' N. Longitude 22° 39' E. Elevation 1260 m. 5-8 km northwest of
Boboshevo, Sofia, Bulgaria. Edge of forest along road bank, mountainous,
Ph 6.08, 50% sand, 27% silt, 23% clay, sandy clay loam-loam. Frequency of
sample: Frequently seen Comments: none.

PI 611629. *Trifolium alpestre* L.
Wild. 93-102; G 31150. Collected 08/11/1993 in Sofia, Bulgaria. Latitude
42° 38' N. Longitude 23° 14' E. Elevation 1380 m. Near Hotel Kopitoto on
Mt. Vitoshka overlooking Sophia, Sofia, Bulgaria. Open meadow with grasses,
mountainous, Ph 5.80, 67% sand, 23% silt, 10% clay, sandy loam. Frequency
of sample: Frequently seen Comments: none.

PI 611630. *Trifolium caucasicum* Tausch
Wild. 93-73; G 31163. Collected 08/05/1993 in Sofia, Bulgaria. Latitude 41° 22' N. Longitude 23° 11' E. Elevation 760 m. 5 km southwest of Petric at Belitsa tourist complex, Sofia, Bulgaria. Chestnut woodland, mountainous, Ph 6.96, 50% sand, 33% silt, 17% clay, loam. Frequency of sample: Rarely seen Comments: Similar to *T. ochroleucum* with very long calyx tooth.

PI 611631. *Trifolium hybridum* L.
Uncertain. 93-50; G 31182. Collected 08/04/1993 in Bulgaria. Latitude 41° 59' N. Longitude 23° 31' E. Elevation 1050 m. 7 km northwest of Belica, Bulgaria. In wood behind monument, oak scrub, in gully on mountainside Ph 5.80, 47% sand, 40% silt, 13% clay, loam. Frequency of sample: Frequently seen Comments: none.

PI 611632. *Trifolium medium* L.
Uncertain. 93-32; G 31193. Collected 08/02/1993 in Bulgaria. Latitude 41° 39' N. Longitude 24° 41' E. Elevation 1570 m. Near Pamporovo tourist complex near Pamporovo, Bulgaria. Bus station, trees, grasses, forbes, sloping hillside, Ph 8.37, 33% sand, 27% silt, 40% clay, clay loam-clay. Frequency of sample: Abundant Comments: Several plants with large leaves and very pubescent.

PI 611633. *Trifolium montanum* L.
Wild. 93-41; G 31199. Collected 08/04/1993 in Plovdiv, Bulgaria. Latitude 42° 2' N. Longitude 23° 54' E. Elevation 1140 m. 8-10 km west of Velingrad on road to Jundola, Plovdiv, Bulgaria. Grasses and forbes, open mountain meadows, Ph 5.91, 50% sand 15% silt, 35% clay, sandy clay loam. Frequency of sample: Occasionally seen Comments: none.

PI 611634. *Trifolium ochroleucum* Huds.
Wild. 93-18; G 31203. Collected 08/02/1993 in Plovdiv, Bulgaria. Latitude 41° 59' N. Longitude 24° 51' E. Elevation 736 m. 9-10 km south of Asenovgrad near Backovski, Plovdiv, Bulgaria. Shrubby high plateau with grasses and forbes, sloping, Ph 6.85, 37% sand, 26% silt, 37% clay, clay loam. Frequency of sample: Occasionally seen Comments: Yellow seed.

PI 611635. *Trifolium pannonicum* Jacq.
Wild. 93-28; G 31208. Collected 08/02/1993 in Bulgaria. Latitude 41° 39' N. Longitude 24° 42' E. Elevation 1540 m. Pamporovo Ski Resort near Pamporovo, Bulgaria. Grasses and legumes surrounded by forest, mountain meadow, Ph 5.95, 67% sand, 27% silt, 6% clay, sandy loam. Frequency of sample: Frequently seen. Comments: Heads on peduncle.

The following were collected by Gary A. Pederson, USDA, ARS, Waste Management and Forage, Research Unit, Mississippi State, Mississippi 39762-5367, United States; Yana K. Guteva, Institute of Introduction and Plant Genetic Resources, Sadovo, Plovdiv 4122, Bulgaria; Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States. Received 11/29/1993.

PI 611636. *Trifolium badium* Schreb.
Wild. 90 E-R; 93-111; G 31247. Collected 11/08/1993 in Bulgaria. Latitude 41° 50' N. Longitude 24° 9' E. Elevation 1350 m. West of Beglika-Tochkov Tcharik in Rhodope mountains, Bulgaria. Lat/lon accurate to Beglika. Mountains. Frequency of sample: unknown. Comments: Few seeds.

The following were collected by Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States. Received 12/20/1993.

PI 611637. *Trifolium fragiferum* L.

Uncertain. 90-23; G 31248. Collected 07/17/1990 in Bulgaria. Latitude 42° 0' N. Longitude 25° 20' E. Elevation 260 m. Along road from Sadovo to Kardzali, Bulgaria. Sloping open field clay, some rocks, mixed grasses. Frequency of sample: Frequent Comments: 93-24B was combined with 93-23 (both numbers were *T. pratense* collected at the same site).

The following were collected by Norman L. Taylor, University of Kentucky, Department of Agronomy, N-122 Agric. Sci. Bldg.-N, Lexington, Kentucky 40546-0019, United States; Bill Harnach, Box 28, Scattley, California, United States; Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States. Received 02/12/1996.

PI 611638. *Trifolium beckwithii* W. H. Brewer ex S. Watson

Wild. Population. 2-95; Beckwith's Clover; S-202-2; W6 17659. Collected 06/26/1995 in California, United States. Latitude 39° 40' N. Longitude 120° 25' W. Elevation 1500 m. Located approximately 56 km North of Truckee, CA off of Highway 89, on Calpine Rd., in Sierra Valley. Calpine Quad Map (T21 N, R 14 E SW 1/4 of SW 1/4 sec. 16). A very common clover of wet areas in the Sierra Valley. Locally abundant along streams and in vernal areas. Collection made from a sand bar area on an intermittent stream (Collector notes). Soil: Lakebed deposits; Drainage (1-well, 4-poor):3. Flower Color: corolla light pink to purple; Relative abundance: abundant.

PI 611639. *Trifolium lemmonii* S. Watson

Wild. Population. 1-95; Lemmon's Clover; S-261-1; W6 17660. Collected 07/15/1995 in California, United States. Latitude 39° 38' N. Longitude 120° 26' W. Elevation 1524 m. Located approximately 48 km North of Truckee, CA, off of Highway 89, in Sierra Valley. Semi-open areas in stands of Jeffery pine (*Pinus jefferyi*) with sagebrush (*Artemisia tridentata*). Soil: lakebed deposits derived from granitic and volcanic rocks; Drainage (1-well, 4-poor):3. Flower Color: corolla white or lit pink, 5 foliate lvs make id ea; Rel. abundance: occasional; Collector Note: At one time species considered rare in California, but now listed as uncommon. Herbarium specimen available upon request from Bill Harnach.

PI 611640. *Trifolium longipes* subsp. *hansenii* (Greene) J. M. Gillett

Wild. Population. 5-95; S-96-4; W6 17661. Collected 07/15/1995 in California, United States. Latitude 39° 40' N. Longitude 120° 25' W. Elevation 1500 m. Located approximately 56 km North of Truckee, CA off of Highway 89, on Calpine Rd., in Sierra Valley. Calpine Quad Map (T21 N, R 14 E SW 1/4 of SW 1/4 sec. 16). In Sierra Valley, commonly found in the vernal mesic sagebrush flats and in open areas within stands of Jeffery pine (Collector notes). Soil: lakebed deposits; Drainage (1-well, 4-poor): 3. Flower Color: corolla white; Relative abundance: frequent.

The following were collected by Stephanie Greene, USDA, ARS, National Temperate Forage Legume, Germplasm Resources Unit, Prosser, Washington 99350-9687, United States. Received 08/15/1995.

PI 611641. *Trifolium thompsonii* C. V. Morton

Wild. Population. 13; Thompson Clover; W6 17665. Collected 07/28/1995 in Washington, United States. Latitude 47° 34' 52" N. Longitude 120° 17' 57" W. Elevation 1000 m. From Wenatchee, 14.5 km N on Rt 97N, turn left on Swakane Valley Road, stay on N fork of road for 4-5 km. Take right turn (at hay barn), travel approx. 5.0 km, site on both sides of road. Rocky Reach Dam Quad Map (T 24 N, R 20 E, Sec 11). Physical site: NE facing upper-slope, 11-40% slope, 1/4 shade, seasonally dry, burned in 1988, currently not grazed or logged, loam soil. Flower Color: maroon; Distribution patchy, although within patches, population abundance was frequent; Habit: upright; Area sampled: 15,000 sq. m.; Collector note: 2 flowers were sampled from each plant.

The following were collected by Renee Denton, USDA FS, Forest Science Laboratory, 2081 E. Sierra Avenue, Fresno, California 93710, United States; Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States. Received 08/30/1995.

PI 611642. *Trifolium bolanderi* A. Gray

Wild. Population. 3; W6 18296. Collected 08/30/1995 in California, United States. Latitude 37° 31' N. Longitude 119° 16' W. Elevation 2130 m. T05S R25E, Section 6; Shuteye Peak NE USGS 7.5 quadrangle map, Sierra National Forest, Madera County, California. Relative Abundance: frequent; Associated Species: clover meadow. Relative Abundance: frequent.

PI 611643. *Trifolium bolanderi* A. Gray

Wild. Population. 9; W6 18297. Collected 08/30/1995 in California, United States. Latitude 37° 29' N. Longitude 119° 19' W. Elevation 2110 m. T05S R24E, Section 15 & 22; Shuteye Peak NE USGS 7.5 quadrangle map, Jackass Area Meadow, Sierra National Forest, Madera County, California.

PI 611644. *Trifolium bolanderi* A. Gray

Wild. Population. 12 & 13; W6 18298. Collected 09/02/1995 in California, United States. Latitude 37° 25' N. Longitude 119° 29' W. Elevation 2220 m. T06S R23E, Section 8 & 9; Shuteye Peak NW USGS 7.5 quadrangle map, Cold Springs Meadow and Summit, Sierra National Forest, Madera County, California. Collector Notes: Species spread over 10 acres. Relative Abundance: frequent.

PI 611645. *Trifolium bolanderi* A. Gray

Wild. Population. 14; W6 18299. Collected 08/30/1995 in California, United States. Latitude 37° 38' N. Longitude 119° 26' W. Elevation 2100 m. T05S R23E, Section 26; Shuteye Peak NW USGS 7.5 quadrangle map, Muggler FFA Camp, Sierra National Forest, Madera County, California. Relative Abundance: frequent. Relative Abundance: frequent.

The following were collected by Renee Denton, USDA FS, Forest Science Laboratory, 2081 E. Sierra Avenue, Fresno, California 93710, United States. Received 08/15/1995.

PI 611646. *Trifolium bolanderi* A. Gray

Wild. Population. 24 & 36; W6 18300. Collected 08/15/1995 in California, United States. Latitude 37° N. Longitude 119° 1' W. Elevation 2130 m. T11S R27E, Section 4; Huntington Lake SE USGS 7.5 quadrangle map, Tale & Tule Corral Meadow and Powderline Meadow, Sierra National Forest, Fresno County, California. Relative Abundance: frequent. Relative Abundance: frequent.

The following were collected by Renee Denton, USDA FS, Forest Science Laboratory, 2081 E. Sierra Avenue, Fresno, California 93710, United States; Kenneth H. Quesenberry, University of Florida, Department of Agronomy, Forage Breeding and Genetics, Gainesville, Florida 32611-0500, United States. Received 08/15/1995.

PI 611647. *Trifolium bolanderi* A. Gray

Wild. Population. 25; W6 18301. Collected 08/15/1995 in California, United States. Latitude 37° N. Longitude 119° 2' W. Elevation 2130 m. T11S R27E, Section 5; Huntington Lake SE USGS 7.5 quadrangle map, House Meadow, Sierra National Forest, Fresno County, California. Relative Abundance: frequent.

The following were collected by Alexander Afonin, Vavilov Institute of Plant Industry, 42 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation; Nicolay Portinier, Kamorov Institute of Botany, St. Petersburg, Leningrad, Russian Federation; Nicolay Khitrov, Dokvchaev Soil Institute, Pygevsky, per., 7., Moscow, Moscow 109017, Russian Federation. Received 01/1996.

PI 611648. *Trifolium diffusum* Ehrh.

Wild. 0158; 012; W6 18311. Collected 08/18/1995 in Russian Federation. Latitude 45° 16' 43" N. Longitude 36° 57' 57" E. Elevation 10 m. Province Temrjuk/Novorossiysk, village Senah/Fanagaria, Greek ruins. Southwest of Temrjuk. Past settlement, now grazed. Slope 0-5%, aspect NE. Light open. Soil sand, transition vertisols, heavy clays, pH 7.6. Seasonally dry, beach terrace, mud volcanic foot slopes. Vegetation open, evergreen dwarf shrub steppe savanna. Variable site, from sea level/terraces to mud volcano, 1-2 km² area. Species collected earlier at site 7. Plants look similar to *T. lappaceum*. Site defined at beach location (terrace). Visited earlier by Russian team. Dominant tree species Hornbeam-Oak, Russian Olive. Dominant shrub species *Artemisia austriaca*. Dominant herb/grass species *Elytrigia elongatum*, *Agropyron cristatum*, bermuda grass, puncture vine, many forbs, wild chicory, and mustard. Population distribution patchy, abundance occasional. Growth habit erect. No flower, heads dry. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611649. *Trifolium caucasicum* Tausch

Wild. 0159; 013; W6 18312. Collected 11/07/1995 in Russian Federation. Latitude 45° 15' 30" N. Longitude 37° 13' E. Elevation 116 m. Province Temrjuk/Novorossiysk, village Starotitaroskiya. Southwest of Temrjuk, 15 km. Past and current grazing. Slope 6-10%, aspect SE. Open light. Soil loam, colluvial clays, colluvial sediments, pH 5.6-5.8

(0-30cm), 4.1-4.0 (30-100 cm). Seasonally dry, upper slope. Vegetation open, evergreen dwarf scrub with scattered trees. Dominant tree species Hornbeam-Oak. Dominant shrub species *Artemisia* a., Rosaceae. Dominant herb/grass species *Phragmites*, *Aster* sp., *Elytrigia* sp., *Festuca* sp., *Lotus corniculatus*, *T. campestre*. Population distribution patchy, abundance occasional. Growth habit erect. Dry heads. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611650. *Trifolium alpestre* L.

Wild. 0176; 030; W6 18320. Collected 07/19/1995 in Russian Federation. Latitude 44° 24' 13" N. Longitude 40° 33' 2" E. Elevation 671 m. Province Maykop. 1 km south of village of Benokovo. Past and current grazing. Slope 0-5%, aspect flat. Light open. Soil clay, colluvial clays, pH 5.5-6.0-7.4, increases with depth. Seasonally dry, ridgetop. Vegetation closed, evergreen short grass. Surrounding vegetation open deciduous forest with closed lower layers. Dominant tree species Hornbeam-Oak. Dominant shrub species *Carpinus* c., *Q. petraea*. Dominant herb/grass species *Asperula* sp. *Festuca* d. Population distribution patchy, abundance occasional. Growth habit semi-erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611651. *Trifolium montanum* L.

Wild. 031; 0177; W6 18321. Collected 07/21/1995 in Russian Federation. Latitude 44° 12' 20" N. Longitude 40° 37' 12" E. Elevation 840 m. Province Maykop, 5 km. south of Bagovskaya. Area grazed. Slope 41-60%, aspect SE. Light open. Soil highly organic sod, pH 5.3-7.5. Moist to seasonally dry, lower-upper slope. Vegetation closed, evergreen short grass. Surrounding veg. open deciduous forest with closed lower layers. Dominant tree species Hornbeam-Oak. Dominant shrub species *Carpinus* c., *Q. petraea*. Population distribution patchy, abundance frequent. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611652. *Trifolium alpestre* L.

Wild. 0179; 033; W6 18322. Collected 07/22/1995 in Russian Federation. Latitude 44° 9' 32" N. Longitude 40° 49' 24" E. Elevation 701 m. Province Maykop, 1 km south of Psebay. Past and current grazing. Slope 11-40%, aspect S. Light open. Soil loam, gravel, pH 5.8-6.3, parent rock glacial. Seasonally dry, upper slope. Vegetation closed, evergreen short grass. Surrounding veg. open deciduous forest with closed lower layers. Dominant tree species *Quercus* sp., *Q. robur*. Dominant shrub species *Carpinus* c., *Q. petraea*. Dominant herb/grass species *Asperula* sp, *Festuca* sp. Population distribution patchy, abundance frequent. Growth habit prostrate. Flower purple. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611653. *Trifolium caucasicum* Tausch

Wild. 0230; 082; W6 18358. Collected 08/10/1995 in Krasnodar, Russian Federation. Latitude 44° 47' 37" N. Longitude 38° 33' 28" E. Elevation 210 m. Province Krasnodar, southwest of Krasnodar, village

Azovskaya. Past cultivated, now grazed. Slope 0-5%, aspect W. Light open. Soil loam, clay, pH 5.0-5.5. Seasonally dry, mid slope. Vegetation closed, seasonal broad-leafed herb vegetation. Surrounding veg. open deciduous forest with closed lower layers. Dominant tree species *Fagus* sp. and *Quercus* sp. Dominant shrub species *Ribes* sp., *Prunus* sp., *Caprinus* sp., *Crataegus* sp. Population distribution patchy, abundance occasional. Growth habit erect. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611654. *Trifolium caucasicum* Tausch

Wild. M118; 118; W6 18384. Collected in Russian Federation. Latitude 44° 40' 57" N. Longitude 37° 57' 8" E. Elevation 380 m. Province Novorossiysk, 3 km north of Kabardinka. Past logged, now grazed. Slope 11-40%, aspect SW. Light open. Soil clay, parent rock platey limestones, pH 7.5-8.0. Seasonally dry, lower to upper slope. Vegetation closed, open deciduous forest with closed lower layers. Surrounding vegetation seasonal tall grass. Dominant tree species *Quercus* sp. Dominant shrub species *Carpinus* sp., *Quercus* sp. Dominant herb/grass species *Achillea* sp., *Festuca* sp., *Agropyron cristatum*, *Phleom* sp., *Salvia* sp., *Sanguisorba minor*, *Plantago* sp. Population abundance frequent. Growth habit erect. Flower cream. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

PI 611655. *Trifolium alpestre* L.

Wild. 0125; 257; W6 18481. Collected 09/07/1995 in Karelia, Russian Federation. Latitude 43° 28' 28" N. Longitude 41° 40' 54" E. Elevation 1800 m. Province Teberda, Karachayevo-Cherkesskaya Republic, 8 km west of Teberda. Past logged, now grazed. Slope 41-60%, aspect S. Light 3/4 shade to shaded. Soil loam, granitic derived. Seasonally dry, lower to mid slope. Vegetation closed, evergreen open forest with closed lower layers. Surrounding vegetation same. Dominant tree species *Pinus syl.*, *hamata* on south slope, *Abies n.*, *Picea o.* on north slope. Dominant shrub species *Juniperus oblonga*, *Rosa* sp., *Ribes* sp. Dominant herb/grass species *Achillea* sp., *Trifolium* sp., *Coronilla* sp., *Lotus c.*, *Deschampsia c.*, *Festuca* sp., *Agrostis* sp., *Calamagrostis* sp. Population distribution patchy, abundance frequent. Growth habit erect. Flower purple. Extensive regional climate data available in spreadsheet format or image maps in raster format suitable for GIS analysis. Contact Dr. Stephanie L. Greene (sgreene@ars-grin.gov).

The following were collected by T.A. Campbell, USDA-ARS, Germplasm Quality and Enhancement Lab, Building 001, Room 339, Beltsville, Maryland 20705, United States; John D. Berdahl, USDA-ARS, Northern Great Plains Research Lab., P.O. Box 459, Mandan, North Dakota 58554, United States; Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States; Larry K. Holzworth, USDA-NRCS State Office, Federal Bldg., Room 443, 10 E. Babcock, Bozeman, Montana 59715-4704, United States. Received 12/1997.

PI 611656. *Trifolium repens* L.

Wild. X97-026; W6 20178. Collected 08/1997 in Xinjiang, China. Latitude 43° 15' 18" N. Longitude 81° 7' 56" E. Elevation 2190 m. Hongnahai Village, 8 km north of Zhaosu County. High mountain meadow, moderately

rolling landscape, silt loam soil, native grassland cut for hay and grazed during winter, dense vegetation cover. Slope is 2% with a southeast aspect.

PI 611657. *Trifolium repens* L.

Wild. X97-034; W6 20180. Collected 08/1997 in Xinjiang, China. Latitude 43° 12' 39" N. Longitude 81° 6' 8" E. Elevation 2220 m. 6 km north of Zhaosu County. Winter pasture of Hong Ta Farm located along pasture road on a disturbed site. Clay loam soil. Not saline. Will be cut for hay and grazed in winter. Slope is 1% with south aspect.

PI 611658. *Trifolium repens* L.

Wild. X97-040; W6 20182. Collected 08/1997 in Xinjiang, China. Latitude 43° 8' 30" N. Longitude 80° 50' 53" E. Elevation 2160 m. 16 km north of Farm No. 77, 38 km west of Zhaosu County. Mountain meadow, single cutting of hay and not grazed in winter. Silt loam soil. High frequency of forbs. *Trifolium repens* along roadway. Slope is 5% with north aspect.

PI 611659. *Trifolium repens* L.

Wild. X97-044; W6 20183. Collected 08/1997 in Xinjiang, China. Latitude 43° 9' 24" N. Longitude 80° 51' 8" E. Elevation 1830 m. 20 km north of Farm No. 77, 38 km west of Zhaosu County. Mountain meadow, flat area, 100 m from stream and along a roadway. Single cutting of hay and not grazed in winter. Slope is 1% with southeast aspect.

PI 611660. *Trifolium repens* L.

Wild. X97-062; W6 20188. Collected 08/1997 in Xinjiang, China. Latitude 42° 59' 58" N. Longitude 81° 6' 39" E. Elevation 1650 m. 10 km south of Zhaosu County. Meadow on valley floor. Silt loam soil. Grazed very lightly. Cut for hay. Slope is 1% with north aspect.

PI 611661. *Trifolium repens* L.

Wild. X97-065; W6 20189. Collected 08/1997 in Xinjiang, China. Latitude 42° 44' 36" N. Longitude 81° 2' 14" E. Elevation 1980 m. 45 km south of Zhaosu County. Ungrazed meadow, will be cut for hay; near road. Dry site with silt loam soil. Slope is 1% with southwest aspect.

PI 611662. *Trifolium repens* L.

Wild. X97-146; W6 20207. Collected 08/1997 in Xinjiang, China. Latitude 43° 27' 28" N. Longitude 81° 5' 31" E. Elevation 2160 m. 58 km south of Yili City. Hillside with lush vegetation, moderately grazed, will be cut for hay. Silt loam soil. Slope is 25% with north aspect.

The following were collected by Norman L. Taylor, University of Kentucky, Department of Agronomy, N-122 Agric. Sci. Bldg.-N, Lexington, Kentucky 40546-0019, United States; Leonard Lauriault, New Mexico State University, Agr. Science Center at Tucumcari, 6502 Quay Rd. AM.5, Tucumcari, New Mexico 88401, United States. Received 11/1997.

PI 611663. *Trifolium brandegeei* S. Watson

Wild. S-265-1; W6 20587; W6 22237. Collected 08/04/1997 in New Mexico, United States. Latitude 35° 41' N. Longitude 105° 56' W. Elevation 3500 m. Taos County. Near Taos Ski Area, 15-20 miles north of Santa Fe. T-2TN, R-14E Section 18. Lat/lon accurate to Santa Fe. Along rocky trail to Williams Lake. In Shady to open locations, spruce-fir zone, associated vegetation: *Pedicularis racemosa*, *Mertensia franciscana*,

Lonicera involucrata, *Swertia radiata*, *Fragaria americana*. Stoney sand, good drainage. Low growing but upright. Red flower. Scattered population.

The following were collected by Stephanie Greene, USDA, ARS, National Temperate Forage Legume, Germplasm Resources Unit, Prosser, Washington 99350-9687, United States; Marina Gritsenko, USDA, ARS, Washington State University, Route 2, Box 2953A, Prosser, Washington 99350-9687, United States; Andrew Bell, USDA, ARS, Irrigated Agricultural Research, and Education Center, Prosser, Washington 99350-9687, United States. Received 09/29/1998.

PI 611664. *Trifolium eriocephalum* Nutt.

Wild. 98SG-6; W6 20876. Collected 08/12/1998 in Oregon, United States. Latitude 45° 26' 27" N. Longitude 118° 13' 40" E. Elevation 1250 m. 20.8 km north of La Grande, Oregon, east on Forest Service Primary Route 31, approximately 11.2 km, at intersection of Forest Service Secondary Route 3109. Formerly logged/cleared and grazed. Slope 0-5%, aspect: north, 1/2 shade. Seasonally dry ridge top. Patchy population distribution but frequent. Erect growth. Along forest grass edge.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611665. X *Triticosecale* sp.

Breeding. NAT0539; 6TB3J; NSGC 8243.

PI 611666. X *Triticosecale* sp.

Breeding. NAT0540; 6TB3K; NSGC 8244.

PI 611667. X *Triticosecale* sp.

Breeding. NAT0541; 6TB3L; NSGC 8245.

PI 611668. X *Triticosecale* sp.

Breeding. NAT0542; 6TB3M; NSGC 8246.

PI 611669. X *Triticosecale* sp.

Breeding. NAT0543; 6TB3N; NSGC 8247.

PI 611670. X *Triticosecale* sp.

Breeding. NAT0544; 6TB3P; NSGC 8248.

PI 611671. X *Triticosecale* sp.

Breeding. NAT0545; 6TB3Q; NSGC 8249.

PI 611672. X *Triticosecale* sp.

Breeding. NAT0547; 6TB3S; NSGC 8250.

PI 611673. X *Triticosecale* sp.

Breeding. NAT0548; 6TB3T; NSGC 8251.

PI 611674. X *Triticosecale* sp.

Breeding. NAT0549; 6TB3U; NSGC 8252.

- PI 611675. X Triticosecale sp.**
Breeding. NAT0550; 6TB3V; NSGC 8253.
- PI 611676. X Triticosecale sp.**
Breeding. NAT0551; 6TB3W; NSGC 8254.
- PI 611677. X Triticosecale sp.**
Breeding. NAT0552; 6TB3X; NSGC 8255.
- PI 611678. X Triticosecale sp.**
Breeding. NAT0553; 6TB3X-1; NSGC 8256.
- PI 611679. X Triticosecale sp.**
Breeding. NAT0554; 6TB3X-2; NSGC 8257.
- PI 611680. X Triticosecale sp.**
Breeding. NAT0556; 6TB3Z; NSGC 8258.
- PI 611681. X Triticosecale sp.**
Breeding. NAT0557; 6TB4A; NSGC 8259.
- PI 611682. X Triticosecale sp.**
Breeding. NAT0559; 6TB4D; NSGC 8260.
- PI 611683. X Triticosecale sp.**
Breeding. NAT0560; 6TB4E; NSGC 8261.
- PI 611684. X Triticosecale sp.**
Breeding. NAT0561; 6TB4F; NSGC 8262.
- PI 611685. X Triticosecale sp.**
Breeding. NAT0562; 6TB4M; NSGC 8263.
- PI 611686. X Triticosecale sp.**
Breeding. NAT0567; 6TB4M; NSGC 8264.
- PI 611687. X Triticosecale sp.**
Breeding. NAT0568; 6TB4N; NSGC 8265.
- PI 611688. X Triticosecale sp.**
Breeding. NAT0569; 6TB4P; NSGC 8266.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

- PI 611689. X Triticosecale sp.**
Breeding. M84-6191; NAT0570; 6TB6X; NSGC 8267.
- PI 611690. X Triticosecale sp.**
Breeding. M84-6192; NAT0571; 6TB6Y; NSGC 8268.

PI 611691. X Triticosecale sp.

Breeding. M84-6193; NAT0572; 6TB6Z; NSGC 8269.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611692. X Triticosecale sp.

Breeding. NAT0573; 6(T)B619; 6(T)A6J; NSGC 8270.

PI 611693. X Triticosecale sp.

Breeding. NAT0574; 6TA1A; NSGC 8271. Pedigree - selection from Cobra.

PI 611694. X Triticosecale sp.

Breeding. NAT0575; 6TB200B; 6TA3N; NSGC 8272.

PI 611695. X Triticosecale sp.

Breeding. NAT0576; 6TA4P; NSGC 8273.

PI 611696. X Triticosecale sp.

Breeding. NAT0577; 6TA2C; NSGC 8274.

The following were developed by Tadeusz Wolski, Plant Breeders "Danko", Laski, Radom, Poland. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611697. X Triticosecale sp.

Breeding. LT-763/77; NAT0578; 6TA0L; NSGC 8275.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611698. X Triticosecale sp.

Breeding. NAT0579; 6TA4E; NSGC 8276.

PI 611699. X Triticosecale sp.

Breeding. NAT0580; 6TA4E-1; NSGC 8277.

PI 611700. X Triticosecale sp.

Breeding. NAT0581; 6TA4N-1; NSGC 8278.

PI 611701. X Triticosecale sp.

Breeding. NAT0582; 6TA4N-2; NSGC 8279.

PI 611702. X Triticosecale sp.

Breeding. NAT0583; 6TA4D; NSGC 8280.

- PI 611703. X Triticosecale sp.**
Breeding. NAT0587; 6(T)A5S; NSGC 8281.
- PI 611704. X Triticosecale sp.**
Breeding. NAT0588; 6(T)A5Q; NSGC 8282.
- PI 611705. X Triticosecale sp.**
Breeding. NAT0592; 6TA0R; 274/358; NSGC 8283.
- PI 611706. X Triticosecale sp.**
Breeding. NAT0593; 6TA5E; NSGC 8284.
- PI 611707. X Triticosecale sp.**
Breeding. NAT0594; 6TA876V; 6TA3L; NSGC 8285.
- PI 611708. X Triticosecale sp.**
Breeding. NAT0596; 6TA4F; NSGC 8286.
- PI 611709. X Triticosecale sp.**
Breeding. NAT0597; 6TA1D; CWT1977/125/5/11; NSGC 8287. Pedigree - selection from Newton.
- PI 611710. X Triticosecale sp.**
Breeding. NAT0598; 6TA2Y; NSGC 8288.

The following were developed by Tadeusz Wolski, Plant Breeders "Danko", Laski, Radom, Poland. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

- PI 611711. X Triticosecale sp.**
Breeding. LT630/81 Short; NAT0599; 6TA0J; NSGC 8289.

The following were developed by B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

- PI 611712. X Triticosecale sp.**
Breeding. NAT0600; 6TA3J; NSGC 8290.
- PI 611713. X Triticosecale sp.**
Breeding. NAT0602; 6TA4K; NSGC 8291.
- PI 611714. X Triticosecale sp.**
Breeding. NAT0603; 6TA2D; NSGC 8292. Pedigree - B631G//BF866/AD206.

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Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611715. X Triticosecale sp.

Breeding. H83-9-5; NAT0604; 8TA2F; NSGC 8293. Pedigree - B2191/A876/WDRP-3Rye.

PI 611716. X Triticosecale sp.

Breeding. H82-22-2; NAT0606; 8TA2J; NSGC 8294. Pedigree - Davis/Snoopy//A876/3/TKdw.rye.

PI 611717. X Triticosecale sp.

Breeding. H82-40-3; NAT0607; 8TA2K; NSGC 8295. Pedigree - EMS A876/Madeg.

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PI 611718. X Triticosecale sp.

Breeding. NAT0609; 6TA5D; NSGC 8296.

PI 611719. X Triticosecale sp.

Breeding. NAT0612; 6TA3S; NSGC 8297.

PI 611720. X Triticosecale sp.

Breeding. NAT0613; 6TA4L; NSGC 8298.

PI 611721. X Triticosecale sp.

Breeding. NAT0615; 6TA4R; NSGC 8299.

PI 611722. X Triticosecale sp.

Breeding. NAT0616; 6TA0Q; SWT741; NSGC 8300.

The following were developed by Val T. Sapro, Alabama Agric. & Mechanical Univ., Dept of Plant & Soil Science, P.O. Box 67, Normal, Alabama 35762, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611723. X Triticosecale sp.

Breeding. AM 3684; NAT0619; 6TA0V; NSGC 8301.

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PI 611724. X Triticosecale sp.
Breeding. NAT0622; 6TA3Z; NSGC 8302.

The following were developed by Tadeusz Wolski, Plant Breeders "Danko", Laski, Radom, Poland. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611725. X Triticosecale sp.
Breeding. LT 1439/82; NAT0623; 6TA0H; NSGC 8303.

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PI 611726. X Triticosecale sp.
Breeding. NAT0629; 6TB9S; NSGC 8304. Pedigree - Composite 8x/6x.

PI 611727. X Triticosecale sp.
Breeding. NAT0631; 6TB9U; NSGC 8305. Pedigree - Composite 8x/6x.

PI 611728. X Triticosecale sp.
Breeding. NAT0632; 6TB9V; NSGC 8306. Pedigree - Composite 8x/6x.

PI 611729. X Triticosecale sp.
Breeding. NAT0633; 6TB9W; NSGC 8307. Pedigree - Composite 8x/6x.

PI 611730. X Triticosecale sp.
Breeding. NAT0638; 6TC0B; NSGC 8308. Pedigree - Composite 8x/6x.

PI 611731. X Triticosecale sp.
Breeding. NAT0639; 6TC0C; NSGC 8309. Pedigree - Composite 8x/6x.

PI 611732. X Triticosecale sp.
Breeding. NAT0640; 6TC0D; NSGC 8310. Pedigree - Composite 8x/6x.

PI 611733. X Triticosecale sp.
Breeding. NAT0641; 6TC0F; NSGC 8311. Pedigree - Composite 8x/6x.

PI 611734. X Triticosecale sp.
Breeding. NAT0642; 6TC0H; NSGC 8312. Pedigree - Composite 8x/6x.

PI 611735. X Triticosecale sp.
Breeding. NAT0643; 6TC0J; NSGC 8313. Pedigree - Composite 8x/6x.

PI 611736. X Triticosecale sp.
Breeding. NAT0644; 6TC0K; NSGC 8314. Pedigree - Composite 8x/6x.

PI 611737. X Triticosecale sp.
Breeding. NAT0645; 6TC0L; NSGC 8315. Pedigree - Composite 8x/6x.

- PI 611738. X Triticosecale sp.**
Breeding. NAT0646; 6TCOM; NSGC 8316. Pedigree - Composite 8x/6x.
- PI 611739. X Triticosecale sp.**
Breeding. NAT0648; 6TCOP-1; NSGC 8317. Pedigree - Composite 8x/6x.
- PI 611740. X Triticosecale sp.**
Breeding. NAT0649; 6TCOP; NSGC 8318. Pedigree - Composite 8x/6x.
- PI 611741. X Triticosecale sp.**
Breeding. NAT0652; 6TCOR; NSGC 8319. Pedigree - Composite 8x/6x.
- PI 611742. X Triticosecale sp.**
Breeding. NAT0656; 6TCOV; NSGC 8320. Pedigree - Composite 8x/6x.
- PI 611743. X Triticosecale sp.**
Breeding. NAT0658; 6TA4Q-1; NSGC 8321.
- PI 611744. X Triticosecale sp.**
Breeding. NAT0660; 6TA1B; NSGC 8322. Pedigree - selection from Cobra.
- PI 611745. X Triticosecale sp.**
Breeding. NAT0666; 6TA3P-1; NSGC 8323.
- PI 611746. X Triticosecale sp.**
Breeding. NAT0667; 6TA3P-2; NSGC 8324.

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- PI 611747. X Triticosecale sp.**
Breeding. M81-7383; NAT0670; 8TA1R; NSGC 8325. Pedigree - Druchamp/Blanco.
- PI 611748. X Triticosecale sp.**
Breeding. M81-8506; NAT0671; 8TA1V; NSGC 8326. Pedigree - Chinese Spring/Kodiak.

The following were developed by Tadeusz Wolski, Plant Breeders "Danko", Laski, Radom, Poland. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

- PI 611749. X Triticosecale sp.**
Breeding. LT 123/79; NAT0673; 6TA0M; NSGC 8327.

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University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611750. X Triticosecale sp.
Breeding. NAT0677; 6(T)A6U; NSGC 8328.

PI 611751. X Triticosecale sp.
Breeding. NAT0678; 6TA0N-4; NSGC 8329. Pedigree - selection from Clervid.

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PI 611752. X Triticosecale sp.
Breeding. M81-6685; NAT0679; 6TA1K-1; GC3-727EB; NSGC 8330.

PI 611753. X Triticosecale sp.
Breeding. M81-6685; NAT0680; 6TA1K-2; GC3-727EB; NSGC 8331.

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PI 611754. X Triticosecale sp.
Breeding. NAT0682; 6TA7W-1; NSGC 8332. Pedigree - selection from Calm.

PI 611755. X Triticosecale sp.
Breeding. NAT0683; 6TA7W-2; NSGC 8333. Pedigree - selection from Calm.

PI 611756. X Triticosecale sp.
Breeding. NAT0684; 6TA7V-1; NSGC 8334.

PI 611757. X Triticosecale sp.
Breeding. NAT0685; 6TA7V-2; NSGC 8335.

PI 611758. X Triticosecale sp.
Breeding. NAT0687; 6TA3T-1; NSGC 8336.

PI 611759. X Triticosecale sp.
Breeding. NAT0689; 6TA3U; NSGC 8337.

PI 611760. X Triticosecale sp.
Breeding. NAT0690; 8TA5L; NSGC 8338.

PI 611761. X Triticosecale sp.
Breeding. NAT0691; 6TA4U; NSGC 8339.

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PI 611762. X Triticosecale sp.

Breeding. M81-8453; NAT0695; 8TA1M; NSGC 8340. Pedigree - Atlas/Cougar.

PI 611763. X Triticosecale sp.

Breeding. M81-7189; NAT0696; 8TA1Q; NSGC 8341. Pedigree - Early Blackhull/Daak Zlote.

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PI 611764. X Triticosecale sp.

Breeding. NAT0699; 6TA1C-1; NSGC 8342.

PI 611765. X Triticosecale sp.

Breeding. NAT0700; 6TA1C-2; NSGC 8343.

PI 611766. X Triticosecale sp.

Breeding. NAT0701; 6TA3M-4; NSGC 8344. Pedigree - 6TA876 EMS.

PI 611767. X Triticosecale sp.

Breeding. NAT0702; 6TA3M-5; NSGC 8345. Pedigree - 6TA876 EMS.

PI 611768. X Triticosecale sp.

Breeding. NAT0703; 6TA3M-6; NSGC 8346. Pedigree - 6TA876 EMS.

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PI 611769. X Triticosecale sp.

Cultivar. "XIN MAI 16"; NAT0704; 8TA1Z; NSGC 8347. Developed in China.

PI 611770. X Triticosecale sp.

Cultivar. "XIN MAI 18"; NAT0705; 8TA2A; NSGC 8348. Developed in China.

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- PI 611771. X Triticosecale sp.**
Breeding. NAT0711; 6(T)A6W; NSGC 8349.
- PI 611772. X Triticosecale sp.**
Breeding. NAT0714; 6TA0G-2; NSGC 8350. Pedigree - selection from Tomzsi.
- PI 611773. X Triticosecale sp.**
Breeding. NAT0715; 6TA0G-3; NSGC 8351. Pedigree - selection from Tomzsi.
- PI 611774. X Triticosecale sp.**
Breeding. NAT0716; 6TA0G-4; NSGC 8352. Pedigree - selection from Tomzsi.
- PI 611775. X Triticosecale sp.**
Breeding. NAT0717; 6TA0G-5; NSGC 8353. Pedigree - selection from Tomzsi.
- PI 611776. X Triticosecale sp.**
Breeding. NAT0718; 6TA0G-6; NSGC 8354. Pedigree - selection from Tomzsi.
- PI 611777. X Triticosecale sp.**
Breeding. NAT0719; 6TA0G-8; NSGC 8355. Pedigree - selection from Tomzsi.

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- PI 611778. X Triticosecale sp.**
Breeding. H83-807-1; NAT0721; 6TA2M-5; NSGC 8356. Pedigree - B650/WDRP-3rye.

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- PI 611779. X Triticosecale sp.**
Breeding. NAT0724; 6TA1D-2; CWT 1977-125-5-11 Newton Selection; NSGC 8357.
- PI 611780. X Triticosecale sp.**
Breeding. NAT0725; 6TA1D-8; CWT 1977-125-5-11 Newton Selection; NSGC 8358.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; B. Charles Jenkins, Jenkins Foundation for Research, Salinas, California, United States. Received 12/01/1992.

PI 611781. X Triticosecale sp.

Breeding. NAT0740; 6TB8U; SA-29; NSGC 8359. Pedigree -
Beagle//M2A/Camel//37262-2-3812.

PI 611782. X Triticosecale sp.

Breeding. NAT0744; 6TB9A; SA-35; NSGC 8360. Pedigree - Flamecks
2/Chinese Spring//Cape rye.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611783. X Triticosecale sp.

Breeding. 710037-10D-2TL-4D-2D-1D-0D; NAT0751; NSGC 8361. Pedigree -
6TA-204/Armadillo 1524.

PI 611784. X Triticosecale sp.

Breeding. 710038-10D-4TL-2D-3D-2D-4D-0D; T760008; NAT0755; NSGC 8362.
Pedigree - 6TA-204/PPV-21.

PI 611785. X Triticosecale sp.

Breeding. 710038-112D-1TL-7D-1D-2D-1D-0D; T760011; NAT0758; NSGC 8363.
Pedigree - 6TA-204/PPV-21.

PI 611786. X Triticosecale sp.

Breeding. 710039-0D-4TL-4D-1D-2D-0D; T760013; NAT0759; NSGC 8364.
Pedigree - 6TA-204/Armadillo 133.

PI 611787. X Triticosecale sp.

Breeding. 710045-65D-3TL-3D-1D-3D-0D; T760028; NAT0772; NSGC 8365.
Pedigree - 6TA-204/Armadillo T-909.

PI 611788. X Triticosecale sp.

Breeding. 710050-8D-1TL-1D-4D-3D-0D; T760030; NAT0774; NSGC 8366.
Pedigree - Armadillo 1524/6TA-204.

PI 611789. X Triticosecale sp.

Breeding. 730447; T780040; NAT0808; NSGC 8367. Pedigree - Ganso
'S'/Durumbuck//Tremez Molle Enano//TME-TC/LAK/3/Snoopy.

PI 611790. X Triticosecale sp.

Breeding. 730449; T780042; NAT0810; NSGC 8368. Pedigree -
Leeds//PI243741/Snoopy.

PI 611791. X Triticosecale sp.

Breeding. 730457-7TL-2D-0D; T780043; NAT0811; NSGC 8369. Pedigree -
Cinnamon/6TA-204.

PI 611792. X Triticosecale sp.

Breeding. 740622-25D-4D-0D; T790010; NAT0824; NSGC 8370. Pedigree -
6TA-204/Cinnamon.

- PI 611793. X Triticosecale sp.**
Breeding. 740636-4TL-3D-0D; T790015; NAT0828; NSGC 8371. Pedigree - UC8825//Quilafen/Snoopy.
- PI 611794. X Triticosecale sp.**
Breeding. X2950-1TL-2D-1TL-1D-4D-4D-0D; T800023; NAT0843; NSGC 8372. Pedigree - UM 940 'S'/2*Armadillo 'S'.
- PI 611795. X Triticosecale sp.**
Breeding. X2955-1TL-4D-2TL-2TL-2TL-0D; T800024; NAT0844; NSGC 8373. Pedigree - UM 940 'S'/3/Armadillo 'S'//TCLMY64/UM 940.
- PI 611796. X Triticosecale sp.**
Breeding. X3083-0D-1TL-4D-2D-0D; T800025; NAT0845; NSGC 8374. Pedigree - UM 940 'S'/TELLERE-PET-PER-DISCDS-CRIT//Armadillo 'S'.
- PI 611797. X Triticosecale sp.**
Breeding. W826-5W-0W-0D; T810005; NAT0872; NSGC 8375. Pedigree - GS59727/6TA-204.
- PI 611798. X Triticosecale sp.**
Breeding. X15733-0M-0D-PC291; T820041; NAT0943; NSGC 8376. Pedigree - M2A/Armadillo 'S'//Beagle.
- PI 611799. X Triticosecale sp.**
Breeding. II7896S; T8200059; NAT0955; NSGC 8377. Pedigree - TCL4 Winter/42.
- PI 611800. X Triticosecale sp.**
Breeding. II78113; T820062; NAT0958; NSGC 8378. Pedigree - TCL4 Winter/SN220.

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- PI 611801. X Triticosecale sp.**
Breeding. M86-7687; NAT0999; NSGC 8379. Pedigree - B163/A876//B164/A876 Rht3 MUT M6; selection from M83-6039.
- PI 611802. X Triticosecale sp.**
Breeding. B86-2461; NAT1000; NSGC 8380. Pedigree - EMS M83-6039; B163/A876//B164/A876 Rht3 MUT M6.
- PI 611803. X Triticosecale sp.**
Breeding. B86-2596; NAT1001; NSGC 8381. Pedigree - EMS M83-6039; B163/A876//B164/A876 Rht3 MUT M6.
- PI 611804. X Triticosecale sp.**
Breeding. B86-2667; NAT1002; NSGC 8382. Pedigree - EMS M86-6039; B163/A876//B164/A876 Rht3 MUT M6.

- PI 611805. X Triticosecale sp.**
Breeding. B86-2795; NAT1003; NSGC 8383. Pedigree - EMS M83-6039;
B163/A876//B164/A876 Rht3 MUT M6.
- PI 611806. X Triticosecale sp.**
Breeding. B86-2929; NAT1004; NSGC 8384. Pedigree - EMS M83-6039;
B163/A876//B164/A876.
- PI 611807. X Triticosecale sp.**
Breeding. M86-7688; NAT1009; NSGC 8385. Pedigree - EMS M83-6126;
A876//B163/A876 Parent Trtd W/EMS M2.
- PI 611808. X Triticosecale sp.**
Breeding. B86-3392; NAT1010; NSGC 8386. Pedigree - EMS M83-6126.
- PI 611809. X Triticosecale sp.**
Breeding. B86-3335; NAT1011; NSGC 8387. Pedigree - EMS M83-6126.
- PI 611810. X Triticosecale sp.**
Breeding. H7089-30; NAT1012; NSGC 8388. Pedigree - selection from
B86-1968; A876/B164//M75-8064.
- PI 611811. X Triticosecale sp.**
Breeding. H7089-52; NAT1013; NSGC 8389. Pedigree - EMS M83-6039;
selection from B86-2621.
- PI 611812. X Triticosecale sp.**
Breeding. H7090-44; NAT1014; NSGC 8390. Pedigree - selection from
M86-7724; B164/YT75229//Dwf Madeg rye CT4191.79.
- PI 611813. X Triticosecale sp.**
Breeding. H7090-10; NAT1015; NSGC 8391. Pedigree - EMS M83-6039;
selection from M86-7610.
- PI 611814. X Triticosecale sp.**
Breeding. H7090-28; NAT1016; NSGC 8392. Pedigree - EMS M83-6126;
selection from M86-7633.
- PI 611815. X Triticosecale sp.**
Breeding. H7090-64; NAT1017; NSGC 8393. Pedigree - selection from
B86-3335.
- PI 611816. X Triticosecale sp.**
Breeding. M86-7687; NAT1018; NSGC 8394. Pedigree - selection from
M83-6039; no EMS.
- PI 611817. X Triticosecale sp.**
Breeding. M86-7538; NAT1019; NSGC 8395. Pedigree - EMS M83-6039.
- PI 611818. X Triticosecale sp.**
Breeding. M86-7539; NAT1020; NSGC 8396. Pedigree - EMS M83-6039.
- PI 611819. X Triticosecale sp.**
Breeding. M86-7554; NAT1021; NSGC 8397. Pedigree - EMS M83-6039.
- PI 611820. X Triticosecale sp.**
Breeding. M86-7610; NAT1022; NSGC 8398. Pedigree - EMS M83-6039.

- PI 611821. X Triticosecale sp.**
Breeding. M86-7688; NAT1023; NSGC 8399. Pedigree - selection from M83-6126; no EMS.
- PI 611822. X Triticosecale sp.**
Breeding. M86-7624; NAT1024; NSGC 8400. Pedigree - EMS M83-6126.
- PI 611823. X Triticosecale sp.**
Breeding. B86-3335; H7089-1-64-1; NAT1025; NSGC 8401. Pedigree - EMS M83-6126.
- PI 611824. X Triticosecale sp.**
Breeding. B86-3335; H7089-1-64-3; NAT1026; NSGC 8402. Pedigree - EMS M83-6126.
- PI 611825. X Triticosecale sp.**
Breeding. B86-3335; H7089-1-64-16; NAT1027; NSGC 8403. Pedigree - EMS M83-6126.
- PI 611826. X Triticosecale sp.**
Breeding. B86-3335; H7089-1-64-24; NAT1028; NSGC 8404. Pedigree - EMS M83-6126.
- PI 611827. X Triticosecale sp.**
Breeding. B86-3392; H7089-1-66-1; NAT1029; NSGC 8405. Pedigree - EMS M83-6126.
- PI 611828. X Triticosecale sp.**
Breeding. B86-3392; H7089-1-66-3; NAT1030; NSGC 8406. Pedigree - EMS M83-6126.
- PI 611829. X Triticosecale sp.**
Breeding. B86-3392; H7089-1-66-4; NAT1031; NSGC 8407. Pedigree - EMS M83-6126.
- PI 611830. X Triticosecale sp.**
Breeding. B86-3392; H7089-1-66-6; NAT1032; NSGC 8408. Pedigree - EMS M83-6126.
- PI 611831. X Triticosecale sp.**
Breeding. B86-3398; H7089-1-67-20; NAT1033; NSGC 8409. Pedigree - EMS M83-6126.
- PI 611832. X Triticosecale sp.**
Breeding. M86-7619; H7090-1-20-2; NAT1034; NSGC 8410. Pedigree - EMS M83-6126.
- PI 611833. X Triticosecale sp.**
Breeding. M86-7621; H7090-1-22-4; NAT1035; NSGC 8411. Pedigree - EMS M83-6126.
- PI 611834. X Triticosecale sp.**
Breeding. H7090-1-72-1; NAT1036; NSGC 8412. Pedigree - selection from M83-6039; no EMS.

- PI 611835. X Triticosecale sp.**
Breeding. B86-2570; H7089-1-46-3; NAT1037; NSGC 8413. Pedigree - EMS
M83-6039.
- PI 611836. X Triticosecale sp.**
Breeding. B86-2590; H7089-1-46-20; NAT1038; NSGC 8414. Pedigree - EMS
M83-6039.
- PI 611837. X Triticosecale sp.**
Breeding. B86-3128; H7089-1-58-2; NAT1039; NSGC 8415. Pedigree - EMS
M83-6039.
- PI 611838. X Triticosecale sp.**
Breeding. B86-2795; H7089-1-58-16; NAT1041; NSGC 8416. Pedigree - EMS
M83-6039.
- PI 611839. X Triticosecale sp.**
Breeding. B86-3472; H7090-1-68-6; NAT1043; NSGC 8417. Pedigree - EMS
M83-6039.
- PI 611840. X Triticosecale sp.**
Breeding. M86-7539; H7090-1-3-3; NAT1044; NSGC 8418. Pedigree - EMS
M83-6039.
- PI 611841. X Triticosecale sp.**
Breeding. M86-7616; H7090-1-16-1; NAT1045; NSGC 8419. Pedigree - EMS
M83-6039.
- PI 611842. X Triticosecale sp.**
Breeding. H7087-1-37-1; NAT1046; NSGC 8420. Pedigree -
Daws/Antelope//A876/3/Lasko/4/Daws/SPY//A876.
- PI 611843. X Triticosecale sp.**
Breeding. H7087-1-66-1; NAT1048; NSGC 8421. Pedigree -
LT902.80/3/B163/A876//B164/A876.
- PI 611844. X Triticosecale sp.**
Breeding. H7087-1-72-2; NAT1049; NSGC 8422. Pedigree -
Elliolt-16/VT15229/3/Daws/SPY//B164.
- PI 611845. X Triticosecale sp.**
Breeding. H7087-1-75-4; NAT1050; NSGC 8423. Pedigree -
A876//B163/A876/3/Daws/Antelope//A876.
- PI 611846. X Triticosecale sp.**
Breeding. H7088-1-4-4; NAT1052; NSGC 8424. Pedigree -
274/320/3/B163/A876//B164/A876 F5.
- PI 611847. X Triticosecale sp.**
Breeding. H7089-1-9-5; NAT1056; NSGC 8425. Pedigree -
Daws/SPY/3/B219/A876//LT944.79.
- PI 611848. X Triticosecale sp.**
Breeding. H7089-1-9-5; NAT1057; NSGC 8426. Pedigree -
Daws/SPY/3/B219/A876//LT944.79.

PI 611849. X Triticosecale sp.

Breeding. KD-30-5; NAT1058; NSGC 8427. Pedigree - Daws/Snoopy//VT75229.

The following were developed by K.D. Krolow, Institut fur Angewandte Genetik, Albrecht-Thaer Weg G, Berlin, Berlin, Germany. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Received 12/01/1992.

PI 611850. X Triticosecale sp.

Breeding. NAT1421; 8A221; NSGC 8428. Pedigree - New york 01/Brandt's Marienroggen.

The following were developed by V.E. Pissarev, Agricultural Research Institute, Central District, Nemchinovska, Moscow, Russian Federation. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Received 12/01/1992.

PI 611851. X Triticosecale sp.

Breeding. NAT1439; 6A271; NSGC 8429. Pedigree - T.durum/spring Petkus rye.

The following were developed by Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611852. X Triticosecale sp.

Breeding. NAT1506; 6A390; NSGC 8430. Pedigree - Stewart 63/Prolific.

PI 611853. X Triticosecale sp.

Breeding. NAT1550; 6A453; NSGC 8431. Pedigree - 72ISN87/Centeno.

PI 611854. X Triticosecale sp.

Breeding. NAT1556; 8A462; NSGC 8432. Pedigree - 72Q12/2D79-4 C1.

PI 611855. X Triticosecale sp.

Breeding. NAT1569; 6A502; NSGC 8433. Pedigree - IDSN87/2D142-1.

PI 611856. X Triticosecale sp.

Breeding. NAT1577; 8A545; NSGC 8434. Pedigree - 6B734/LTR C2 (591-1).

PI 611857. X Triticosecale sp.

Breeding. NAT1588; 10A567; NSGC 8435. Pedigree - 8B463/UC90 (675-16).

PI 611858. X Triticosecale sp.

Breeding. NAT1636; 6A631; NSGC 8436. Pedigree - Stewart 63/Prolific (378-5).

PI 611859. X Triticosecale sp.

Breeding. NAT1639; 6A635; NSGC 8437. Pedigree - Stewart 63/2D-289 (130-1).

PI 611860. X Triticosecale sp.

Breeding. NAT1640; 6A636; NSGC 8438. Pedigree - Stewart 63/2D-289 (326-5).

The following were donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Received 12/01/1992.

PI 611861. X Triticosecale sp.

Cultivar. "TF 2"; NAT1708; 6A1132; NSGC 8439. Developed in Romania.

The following were developed by Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611862. X Triticosecale sp.

Breeding. NAT1710; 8A1141; NSGC 8440. Pedigree - 2038/WRC 1483.

The following were developed by Robert J. Metzger, USDA, ARS, Oregon State University, Dept. of Crop Science, Corvallis, Oregon 97331, United States. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States; Edward N. Larter, University of Manitoba, Dept. of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada. Received 12/01/1992.

PI 611863. X Triticosecale sp.

Breeding. H79-9-8; NAT1725; 8A1426; NSGC 8441. Pedigree - TsTs3D/Blanco.

PI 611864. X Triticosecale sp.

Breeding. H79-67-6; NAT1727; 8A1428; NSGC 8442. Pedigree - TsTs3D/Blanco.

PI 611865. X Triticosecale sp.

Breeding. H79-70-1; NAT1728; 10A1433; NSGC 8443. Pedigree - Chinese Spring/Kodiak.

PI 611866. X Triticosecale sp.

Breeding. H79-259-10; NAT1729; 8A1434; NSGC 8444. Pedigree - Daws/Blanco.

PI 611867. X Triticosecale sp.

Breeding. H79-202-7; NAT1734; 8A1448; NSGC 8445. Pedigree - Atlas 66/R1443.

PI 611868. X Triticosecale sp.

Breeding. NAT1743; 6A1476; NSGC 8446. Pedigree - H80-5-5/H80-5-3.

The following were developed by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Donated by Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 12/01/1992.

PI 611869. X Triticosecale sp.

Breeding. X8828-1-1Y-5M-0Y; NAT2313; NSGC 8447. Pedigree - 2*Koala.

PI 611870. X Triticosecale sp.

Breeding. CASTOR 'S'; X7233-32M-2Y-1M-0Y; NAT2337; NSGC 8448. Pedigree - Manitoba/Carsten VIII.

PI 611871. X Triticosecale sp.

Breeding. CARIBOU 'S'; X10473-C-1Y-1M-1Y-0Y; NAT2372; NSGC 8449. Pedigree - M2A//Semidwarf 648-5/8156.

PI 611872. X Triticosecale sp.

Breeding. X12055-A-1M-2Y-0Y; NAT2382; NSGC 8450. Pedigree - IRA/M2A 200.

PI 611873. X Triticosecale sp.

Breeding. W286-225Y-0W-7Y-0W; NAT2445; NSGC 8451. Pedigree - 8A95/Rosner//HARI/Armadillo.

PI 611874. X Triticosecale sp.

Breeding. TCC X; 168T-0T; NAT2449; NSGC 8452.

PI 611875. X Triticosecale sp.

Breeding. X12545-102Y-101B-103Y-0Y; NAT2468; NSGC 8453. Pedigree - M2A/Cinnamon.

PI 611876. X Triticosecale sp.

Breeding. BOK 'S'; X15673-A-1Y-2Y-1M-0Y; NAT2585; NSGC 8454. Pedigree - Beagle//M2A/Cinnamon.

The following were developed by Barry M. Cunfer, University of Georgia, Dept. of Plant Pathology, Georgia Station, Griffin, Georgia 30223-1797, United States; Ronald D. Barnett, University of Florida, North Florida Res. & Ed. Center, 155 Research Road, Quincy, Florida 32351-5677, United States; Jerry W. Johnson, University of Georgia, Department of Crop and Soil Sciences, 1109 Experiment Street, Griffin, Georgia 30223-1197, United States; G.D. Buntin, University of Georgia, Department of Entomology, Georgia Station, Griffin, Georgia, United States; John J. Roberts, University of Georgia, Dept. of Plant Pathology, Griffin Campus, Griffin, Georgia 30223-1797, United States. Received 10/26/1999.

PI 611877. Triticum aestivum L. subsp. aestivum

Breeding. GA84202; NSGC 8455. GP-691. Pedigree - IPM2093/FL74265 = Novi Sad 138/VPM/Moisson/4/Predgozaia 2/3/Blueboy II/Coker 68-8//Fulbarn. Released 2000. Soft red winter wheat. Medium to late season maturity. Resistant to *Stagonospora nodorum* (*Septoria nodorum*). Resistant to powdery mildew (seedling and adult, Georgia isolates). Resistant to leaf rust (seedling and adult), Georgia isolates, and adult in Colonia, Uruguay). Postulated leaf rust resistance genes *Lr17*, *Lr26*, plus others.

Resistant to Biotypes E, M, and O of Hessian fly. Resistant to stripe rust (adult plant response in Colonia, Uruguay).

PI 611878. *Triticum aestivum* L. subsp. *aestivum*

Breeding. GA85240; NSGC 8456. GP-692. Pedigree - Hunter/FL74265//IN71761/Coker 80-13 ; FL74265 = Predgozaia 2/3/Blueboy II/Coker 68-8//Fulbarn. Released 2000. Soft red winter wheat. Medium maturity. Resistant to *Stagonospora nodorum* (*Septoria nodorum*). Resistant to powdery mildew (seedling and adult, Georgia isolates). Resistant to leaf rust (seedling and adult, Georgia isolates). Moderately resistant to Biotypes E, M, O of Hessian fly.

PI 611879. *Triticum aestivum* L. subsp. *aestivum*

Breeding. GA85410AB; NSGC 8457. GP-693. Pedigree - Hunter/2*GA74-33 = Hunter//2*(Holley/McNair 701). Released 2000. Soft red winter wheat. Medium maturity. Resistant to *Stagonospora nodorum* (*Septoria nodorum*). Resistant to all current races of powdery mildew except cultures with virulence to pm1 and pm8. Resistant to leaf rust (seedling and adult, Georgia isolates, adult plant response in Colonia, Uruguay). Postulated leaf rust resistance genes Lr10, Lr26, plus others. Resistant to Biotypes E, M, and O of Hessian fly. Resistant to stripe rust (adult plant response in Colonia, Uruguay).

PI 611880. *Triticum aestivum* L. subsp. *aestivum*

Breeding. GA861460; NSGC 8458. GP-694. Pedigree - P9323/Georgia 100 = P9323/3/Omega 78/Stacy//Stacy/Tyler. Released 2000. Soft red winter wheat. Medium maturity. Resistant to *Stagonospora nodorum* (*Septoria nodorum*). Resistant to leaf rust (seedling and adult, Georgia isolates). Postulated leaf rust resistance genes Lr10, Lr26, plus others. Moderately resistant to Biotypes E, M, and O of Hessian fly.

The following were developed by Robert K. Bacon, University of Arkansas, Dept. of Crop, Soil, and Env. Science, 115 Plant Science Bldg., Fayetteville, Arkansas 72701, United States. Received 08/16/1999.

PI 611881. *Triticum aestivum* L. subsp. *aestivum*

Breeding. AR494B-2-2; NSGC 8459. Pedigree - Pioneer 2550/Keiser. Soft red winter wheat. Broad adaptation in soft red winter wheat region.

PI 611882. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. AR584A-3-1; NSGC 8460. Pedigree - FL302//Coker 833/Hunter. Soft red winter wheat. Resistance to leaf rust, *Septoria tritici*, and soil borne virus.

The following were developed by William J. Sando, USDA-Bureau of Plant Industry, Division of Cereal Crops & Diseases, Washington, District of Columbia, United States. Received 03/01/1998.

PI 611883. *X Elytricum* sp.

Breeding. Sando Selection 16; SS 16; NSGC 8462. Pedigree - Chinese/*Agropyron elongatum*//Harvest Queen/Purplestraw. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611884. X Elytritricale sp.

Breeding. Sando Selection 32; SS 32; NSGC 8463. Pedigree - Chinese/rye//Chinese/Agropyron elongatum//Rising Sun/Purplestraw/Leapland. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611885. X Elytricum sp.

Breeding. Sando Selection 49; SS 49; NSGC 8464. Pedigree - Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Red Rock. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611886. X Elytricum sp.

Breeding. Sando Selection 51; SS 51; NSGC 8465. Pedigree - Chinese/Agropyron elongatum//Harvest Queen/Purplestraw. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611887. X Elytricum sp.

Breeding. Sando Selection 56; SS 56; NSGC 8466. Pedigree - Chinese/Agropyron elongatum//Arlando/Leapland/Comet. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611888. X Elytricum sp.

Breeding. Sando Selection 60; SS 60; NSGC 8467. Pedigree - T.vulgare Sac 75(38)//Sol/Agropyron elongatum//Leapland/Purplestraw. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611889. X Elytritricale sp.

Breeding. Sando Selection 68; SS 68; NSGC 8468. Pedigree - Chinese/rye//Chinese/Agropyron elongatum//Forward/Prairie. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611890. X Elytricum sp.

Breeding. Sando Selection 85; SS 85; NSGC 8469. Pedigree - T.vulgare/Agropyron elongatum = Wal09-4(38)-3-10. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611891. X Elytricum sp.

Breeding. Sando Selection 103; SS 103; NSGC 8470. Pedigree - Chinese/Agropyron elongatum//Federation/Kinney/Prelude/Forward. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611892. X Elytricum sp.

Breeding. Sando Selection 104; SS 104; NSGC 8471. Pedigree - Sol/Agropyron elongatum -L5-10-8-4-8-13//Leapland. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611893. X Elytricum sp.

Breeding. Sando Selection 113; SS 113; NSGC 8472. Pedigree - T.vulgare/Agropyron elongatum =Wal09-4(38)-3-10//T.vulgare?. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611894. X Elytricum sp.

Breeding. Sando Selection 118; SS 118; NSGC 8473. Pedigree - T.vulgare/Agropyron elongatum =Wal09-4(38)-3-10//T.vulgare?. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611895. X Elytricum sp.

Breeding. Sando Selection 133; SS 133; NSGC 8474. Pedigree - Redhart 5//T.vulgare/Agropyron elongatum Wa.112-6-5B-1. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611896. X Elytritricale sp.

Breeding. Sando Selection 136; SS 136; NSGC 8475. Pedigree - Chinese/rye//Chinese/Agropyron elongatum//Lutescens & Hostianum Kan/Carala. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611897. X Elytricum sp.

Breeding. Sando Selection 160; SS 160; NSGC 8476. Pedigree - T.vulgare/Agropyron elongatum OB20(44)//Nittany/Malakof. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611898. X Elytritricale sp.

Breeding. Sando Selection 176; SS 176; NSGC 8477. Pedigree - Chinese/rye//Chinese/Agropyron elongatum//Forward. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611899. X Elytricum sp.

Breeding. Sando Selection 237; SS 237; NSGC 8478. Pedigree - T.vulgare Cage 73B(35)//Chinese/Agropyron elongatum//Federation/Kinney/Prelude. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

- PI 611900. X Elytricum sp.**
Breeding. Sando Selection 241; SS 241; NSGC 8479. Pedigree - T.vulgare Sac 75B(38)//Sol/Agropyron elongatum//Leapland. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611901. X Elytritolops sp.**
Breeding. Sando Selection 244; SS 244; NSGC 8480. Pedigree - Arlando/T.timopheevii//Hope/Baart//T.vulgare/Agropyron elongatum Suneson//Aegilops crassa. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611902. X Elytricum sp.**
Breeding. Sando Selection 247; SS 247; NSGC 8481. Pedigree - Rising Sun/Agropyron elongatum//Illini Chief/Premier/Redhart 5. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611903. X Elytriticale sp.**
Breeding. Sando Selection 253; SS 253; NSGC 8482. Pedigree - T.vulgare/Webster R.R.147(38)//Purplestraw//Chinese/rye//Chinese/Agropyron elongatum//Forward/Prairie. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611904. X Elytricum sp.**
Breeding. Sando Selection 259; SS 259; NSGC 8483. Pedigree - T.vulgare/Agropyron elongatum P315(50)//T.vulgare. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611905. X Elytriticale sp.**
Breeding. Sando Selection 315; SS 315; NSGC 8484. Pedigree - Chinese/Agropyron elongatum//R.R.209(34) T.vulgare/Comet/Red Rock//Chinese/rye//Chinese. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611906. X Elytriticale sp.**
Breeding. Sando Selection 318; SS 318; NSGC 8485. Pedigree - T.vulgare Sac 75(38)//Sol/Agropyron elongatum//Leapland/Meister wheat-rye amphiploid. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611907. X Elytriticale sp.**
Breeding. Sando Selection 333; SS 333; NSGC 8486. Pedigree - Chinese/rye//Chinese/Agropyron elongatum//Forward/Prairie/Minturki. One

of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611908. X *Elytriticale* sp.

Breeding. Sando Selection 336; SS 336; NSGC 8487. Pedigree - Chinese/rye//Chinese/*Agropyron elongatum*//Forward/Prairie/Minturki. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611909. X *Elytriticale* sp.

Breeding. Sando Selection 346; SS 346; NSGC 8488. Pedigree - Chinese/rye//Chinese/Wa.113-4 etc//*T.vulgare*/*Agropyron elongatum*//Wa.112-2 etc//*T.vulgare*/*Agropyron elongatum*. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611910. X *Elytricum* sp.

Breeding. Sando Selection 352; SS 352; NSGC 8489. Pedigree - Rising Sun/*Agropyron elongatum*//Illini Chief/Purplestraw/Premier/Carala. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611911. X *Elytricum* sp.

Breeding. Sando Selection 364; SS 364; NSGC 8490. Pedigree - Chinese/*Agropyron elongatum*//Federation/Kinney/Prelude//Carala*2. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611912. X *Elytricum* sp.

Breeding. Sando Selection 365; SS 365; NSGC 8491. Pedigree - Rising Sun/*Agropyron elongatum*//Illini Chief/Purplestraw/Premier. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611913. X *Elytricum* sp.

Breeding. Sando Selection 369; SS 369; NSGC 8492. Pedigree - Rising Sun/*Agropyron elongatum*//Illini Chief/Purplestraw/Premier. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611914. X *Elytricum* sp.

Breeding. Sando Selection 426; SS 426; NSGC 8493. Pedigree - Chinese/*Agropyron elongatum*//Comet/Red Rock/Carala. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611915. X *Elytricum* sp.

Breeding. Sando Selection 480; SS 480; NSGC 8494. Pedigree - *T.civcerstormum*//Chinese/*Agropyron elongatum*//Arlando/Leapland/Clarks

Comet. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611916. Triticum hybrid

Breeding. Sando Selection 482; SS 482; NSGC 8495. Pedigree - Fulhio/Yaroslav emmer//Leapland/Minhardi. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611917. Triticum hybrid

Breeding. Sando Selection 483; SS 483; NSGC 8496. Pedigree - Fulhio/Yaroslav emmer//Arlando/Pilot. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611918. X Elytricum sp.

Breeding. Sando Selection 485; SS 485; NSGC 8497. Pedigree - Sol/Agropyron elongatum//Leapland. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611919. X Elytritilops sp.

Breeding. Sando Selection 495; SS 495; NSGC 8498. Pedigree - T.vulgare Mck49-6025/Agropyron elongatum//Aegilops ventricosa/T.turgidum Alaska 40309 amphidiploid. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611920. X Elytricum sp.

Breeding. Sando Selection 508; SS 508; NSGC 8499. Pedigree - Butler/Redhart 5//wheat/Agropyron elongatum Sac33(51). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611921. X Elytricum sp.

Breeding. Sando Selection 516; SS 516; NSGC 8500. Pedigree - T.vulgare Sac75(38)//Sol/Agropyron elongatum//Leapland/Harvest Queen. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611922. X Elytricum sp.

Breeding. Sando Selection 522; SS 522; NSGC 8501. Pedigree - T.vulgare//Sol/Agropyron elongatum//Leapland/Michigan Amber/Fulhio. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611923. X Elytricum sp.

Breeding. Sando Selection 524; SS 524; NSGC 8502. Pedigree - T.vulgare/Agropyron elongatum Mck7344(51)//Sando

R.R.3741(47)//Reliance/Mercury//Valley. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611924. X Elytricum sp.

Breeding. Sando Selection 528; SS 528; NSGC 8503. Pedigree - T.vulgare/Agropyron elongatum Sando Sac37-2(51)//Nebred. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611925. X Elytricum sp.

Breeding. Sando Selection 535; SS 535; NSGC 8504. Pedigree - T.vulgare/Agropyron elongatum Mck7344(51)V//Pawnee. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611926. X Elytriticale sp.

Breeding. Sando Selection 537; SS 537; NSGC 8505. Pedigree - Chinese/rye//Chinese//Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Carala. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611927. X Elytricum sp.

Breeding. Sando Selection 568; SS 568; NSGC 8506. Pedigree - Quano//Chinese/Agropyron elongatum//Federation/Kinney/Prelude. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611928. X Elytricum sp.

Breeding. Sando Selection 576; SS 576; NSGC 8507. Pedigree - Blackhull//T.vulgare/Agropyron elongatum Mck6586VR//Sando timopheevii hybrid//Reliance/Mercury//Steinwedel. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611929. X Elytricum sp.

Breeding. Sando Selection 610; SS 610; NSGC 8508. Pedigree - Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Carala*2. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

PI 611930. X Elytricum sp.

Breeding. Sando Selection 619; SS 619; NSGC 8509. Pedigree - Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Carala. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.

- PI 611931. X Elytricum sp.**
Breeding. Sando Selection 626; SS 626; NSGC 8510. Pedigree - Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Red Rock/Carala. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611932. X Elytricum sp.**
Breeding. Sando Selection 670; SS 670; NSGC 8511. Pedigree - Sando46(51) T.vulgare/Agropyron elongatum Suneson 118cVR//White Wonder. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611933. X Elytricum sp.**
Breeding. Sando Selection 702; SS 702; NSGC 8512. Pedigree - Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Carala*2/3/Chinese/Agropyron elongatum//Federation/Kinney/Prelude//Carala*2 P16-1(53). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611934. X Elytricum sp.**
Breeding. Sando Selection 718; SS 718; NSGC 8513. Pedigree - Carala/bearded T.vulgare Sac75(38)//Sol/Agropyron elongatum//Leapland/Redhart 5 P32-2(53). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611935. X Elytricum sp.**
Breeding. Sando Selection 723; SS 723; NSGC 8514. Pedigree - Sanford//T.vulgare/Agropyron elongatum Mck49-6115VR//Kenya PI177180 P39-1(53). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611936. Triticum aestivum L. subsp. aestivum**
Breeding. Sando Selection 744; SS 744; NSGC 8515. Pedigree - Arlando/Fronoso P142-1(53). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611937. X Elytricum sp.**
Breeding. Sando Selection 750; SS 750; NSGC 8516. Pedigree - Harvest Queen//Chinese/Agropyron elongatum//RR209(34)/Comet//Hussar/Leapland P160-1(53). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between Triticum, Agropyron (Elytrigia), Aegilops, and Secale. Winter habit.
- PI 611938. X Elytritricale sp.**
Breeding. Sando Selection 765; SS 765; NSGC 8517. Pedigree - Bledsoe/rye amphidiploid(56)//H.N. vulgare P542(50) Br122(56). One of a series of

selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611939. X *Elytriticale* sp.

Breeding. Sando Selection 767; SS 767; NSGC 8518. Pedigree - *T.vulgare* Sac75(38)//*Sol/Agropyron elongatum*//Leapland/Meister amphidiploid wheat/rye(56) Br215(56). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611940. X *Elytricum* sp.

Breeding. Sando Selection 791; SS 791; NSGC 8519. Pedigree - *T.vulgare* Sac75(38)//*Sol/Agropyron elongatum*//Leapland/Michigan Amber//Harvest Queen P18-2(54). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611941. X *Elytricum* sp.

Breeding. Sando Selection 811; SS 811; NSGC 8520. Pedigree - Carala/*T.vulgare* Ab52(38)/*T.vulgare* Sac75(38)//*Sol/Agropyron elongatum*//Leapland/Redhart P170-2(54). One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

PI 611942. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Sando Selection 821; SS 821; NSGC 8521. Pedigree - GK fr. Cross 39333= Baart/61WHGK *T.vulgare*//Valley. One of a series of selections (PI 604860-605350; 611883-611942) derived from intra-generic and inter-generic crosses between *Triticum*, *Agropyron* (*Elytrigia*), *Aegilops*, and *Secale*. Winter habit.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 10/04/1999.

PI 611943. *Malus orientalis* Uglitzk.

Wild. 99TU-02-01; GMAL 4509. Collected 09/15/1999 in Artvin, Turkey. Latitude 41° 17' 33" N. Longitude 41° 30' 37" E. Elevation 750 m. Village of Murgul.

PI 611944. *Malus orientalis* Uglitzk.

Wild. 99TU-08-01; GMAL 4512. Collected 09/16/1999 in Artvin, Turkey. Latitude 41° 13' 8" N. Longitude 42° 22' 53" E. Elevation 1470 m. Village of Savsat.

PI 611945. *Malus orientalis* Uglitzk.

Wild. 99TU-08-02; GMAL 4513. Collected 09/16/1999 in Artvin, Turkey. Latitude 40° 13' 8" N. Longitude 42° 22' 53" E. Elevation 1470 m. Village of Savsat.

PI 611946. *Malus orientalis* Uglitzk.

Wild. 99TU-08-03; GMAL 4514. Collected 09/16/1999 in Artvin, Turkey.

Latitude 40° 13' 8" N. Longitude 42° 22' 53" E. Elevation 1470 m.
Village of Savsat.

PI 611947. *Malus orientalis* Uglitzk.

Wild. 99TU-10-01; GMAL 4515. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 23' 26" N. Longitude 40° 32' 25" E. Elevation 1380
m. Village of Camlikoz.

PI 611948. *Malus orientalis* Uglitzk.

Wild. 99TU-10-02; GMAL 4516. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 23' 26" N. Longitude 40° 32' 25" E. Elevation 1380
m. Village of Camlikoz.

PI 611949. *Malus orientalis* Uglitzk.

Wild. 99TU-11-01; GMAL 4517. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 25' 23" N. Longitude 40° 27' 53" E. Elevation 1580
m. Village of Yazurdu.

PI 611950. *Malus orientalis* Uglitzk.

Wild. 99TU-11-02; GMAL 4518. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 25' 23" N. Longitude 40° 27' 53" E. Elevation 1580
m. Village of Yazurdu.

PI 611951. *Malus orientalis* Uglitzk.

Wild. 99TU-11-03; GMAL 4519. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 25' 23" N. Longitude 40° 27' 53" E. Elevation 1580
m. Village of Yazurdu.

PI 611952. *Malus orientalis* Uglitzk.

Wild. 99TU-11-04; GMAL 4520. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 25' 23" N. Longitude 40° 27' 53" E. Elevation 1570
m. Village of Yazurdu.

PI 611953. *Malus orientalis* Uglitzk.

Wild. 99TU-11-05; GMAL 4521. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 25' 23" N. Longitude 40° 27' 53" E. Elevation 1570
m. Village of Yazurdu.

PI 611954. *Malus orientalis* Uglitzk.

Wild. 99TU-11-06; GMAL 4522. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 25' 23" N. Longitude 40° 27' 53" E. Elevation 1570
m. Village of Yazurdu.

PI 611955. *Malus orientalis* Uglitzk.

Wild. 99TU-12-01; GMAL 4523. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 26' 42" N. Longitude 40° 27' 39" E. Elevation 1700
m. Village of Yazurdu.

PI 611956. *Malus orientalis* Uglitzk.

Wild. 99TU-13-01; GMAL 4524. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 20' 39" N. Longitude 40° 24' 12" E. Elevation 1730
m. Village of Dagtoria.

PI 611957. *Malus orientalis* Uglitzk.

Wild. 99TU-13-02; GMAL 4525. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 20' 39" N. Longitude 40° 24' 12" E. Elevation 1730
m. Village of Dagtoria.

- PI 611958. *Malus orientalis*** Uglitzk.
Wild. 99TU-13-03; GMAL 4526. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 20' 39" N. Longitude 40° 24' 12" E. Elevation 1730
m. Village of Dagtoria.
- PI 611959. *Malus orientalis*** Uglitzk.
Wild. 99TU-13-04; GMAL 4527. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 20' 39" N. Longitude 40° 24' 12" E. Elevation 1730
m. Village of Dagtoria.
- PI 611960. *Malus orientalis*** Uglitzk.
Wild. 99TU-13-05; GMAL 4528. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 20' 39" N. Longitude 40° 24' 12" E. Elevation 1650
m. Village of Dagtoria.
- PI 611961. *Malus orientalis*** Uglitzk.
Wild. 99TU-13-06; GMAL 4529. Collected 09/18/1999 in Bayburt, Turkey.
Latitude 40° 20' 39" N. Longitude 40° 24' 12" E. Elevation 1650
m. Village of Dagtoria.
- PI 611962. *Malus orientalis*** Uglitzk.
Wild. 99TU-14-01; GMAL 4530. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 27' 59" N. Longitude 40° 2' 44" E. Elevation 1770
m. Village of Sorkunlu.
- PI 611963. *Malus orientalis*** Uglitzk.
Wild. 99TU-15-01; GMAL 4531. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 27' 54" N. Longitude 40° 1' 45" E. Elevation 1950
m. Village of Sorkunlu.
- PI 611964. *Malus orientalis*** Uglitzk.
Wild. 99TU-15-02; GMAL 4532. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 27' 54" N. Longitude 40° 1' 45" E. Elevation 1930
m. Village of Sorkunlu.
- PI 611965. *Malus orientalis*** Uglitzk.
Wild. 99TU-15-03; GMAL 4533. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 27' 54" N. Longitude 40° 1' 45" E. Elevation 1690
m. Village of Sorkunlu.
- PI 611966. *Malus orientalis*** Uglitzk.
Wild. 99TU-15-04; GMAL 4534. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 27' 54" N. Longitude 40° 1' 45" E. Elevation 1950
m. Village of Sorkunlu.
- PI 611967. *Malus orientalis*** Uglitzk.
Wild. 99TU-16-01; GMAL 4535. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 22' 59" N. Longitude 39° 41' 42" E. Elevation
1550 m. Village of Keci Kaya.
- PI 611968. *Malus orientalis*** Uglitzk.
Wild. 99TU-18-01; GMAL 4537. Collected 09/19/1999 in Gumushane, Turkey.
Latitude 40° 12' 33" N. Longitude 39° 10' 14" E. Elevation
1470 m. Village of Alacahan.

- PI 611969. *Malus orientalis* Uglitzk.**
Wild. 99TU-20-01; GMAL 4539. Collected 09/21/1999 in Tokat, Turkey.
Latitude 40° 32' 53" N. Longitude 36° 37' 42" E. Elevation 1030
m. Village of Avlunar.
- PI 611970. *Malus orientalis* Uglitzk.**
Wild. 99TU-23-01; GMAL 4541. Collected 09/22/1999 in Tokat, Turkey.
Latitude 40° 14' 40" N. Longitude 36° 25' 29" E. Elevation 1320
m. Village of Alan.
- PI 611971. *Malus orientalis* Uglitzk.**
Wild. 99TU-23-02; GMAL 4542. Collected 09/22/1999 in Tokat, Turkey.
Latitude 40° 14' 40" N. Longitude 36° 25' 29" E. Elevation 1320
m. Village of Alan.
- PI 611972. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-01; GMAL 4544. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611973. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-02; GMAL 4545. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611974. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-03; GMAL 4546. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611975. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-04; GMAL 4547. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611976. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-05; GMAL 4548. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611977. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-06; GMAL 4549. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611978. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-07; GMAL 4550. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611979. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-08; GMAL 4551. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.
- PI 611980. *Malus orientalis* Uglitzk.**
Wild. 99TU-25-09; GMAL 4552. Collected 09/23/1999 in Amasya, Turkey.

Latitude 40° 56' 3" N. Longitude 35° 23' 6" E. Elevation 1320 m.
Village of Merzifon.

PI 611981. *Malus orientalis* Uglitzk.

Wild. 99TU-26-01; GMAL 4553. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 55' N. Longitude 35° 21' 27" E. Elevation 1300 m.
Village of Merzifon.

PI 611982. *Malus orientalis* Uglitzk.

Wild. 99TU-26-02; GMAL 4554. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 55' N. Longitude 35° 21' 27" E. Elevation 1300 m.
Village of Merzifon.

PI 611983. *Malus orientalis* Uglitzk.

Wild. 99TU-26-03; GMAL 4555. Collected 09/23/1999 in Amasya, Turkey.
Latitude 40° 55' N. Longitude 35° 21' 27" E. Elevation 1300 m.
Village of Merzifon.

PI 611984. *Malus orientalis* Uglitzk.

Wild. 99TU-27-01; GMAL 4556. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 34" N. Longitude 33° 35' 9" E. Elevation 1120
m. Village of Agli.

PI 611985. *Malus orientalis* Uglitzk.

Wild. 99TU-28-01; GMAL 4557. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 50" N. Longitude 33° 21' 2" E. Elevation 1180
m. Village of Dana Koy.

PI 611986. *Malus orientalis* Uglitzk.

Wild. 99TU-29-01; GMAL 4558. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 42' 22" N. Longitude 33° 27' 15" E. Elevation
1080 m. Village of Sabuncular.

PI 611987. *Malus orientalis* Uglitzk.

Wild. 99TU-30-01; GMAL 4559. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 41' 48" N. Longitude 33° 31' 57" E. Elevation
1140 m. Village of Yamacik.

PI 611988. *Malus orientalis* Uglitzk.

Wild. 99TU-32-01; GMAL 4561. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 5" N. Longitude 33° 6' 57" E. Elevation 750
m. Village of Yeni Ilica.

PI 611989. *Malus orientalis* Uglitzk.

Wild. 99TU-32-02; GMAL 4562. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 5" N. Longitude 33° 6' 57" E. Elevation 750
m. Village of Yeni Ilica.

PI 611990. *Malus orientalis* Uglitzk.

Wild. 99TU-32-03; GMAL 4563. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 5" N. Longitude 33° 6' 57" E. Elevation 750
m. Village of Yeni Ilica.

PI 611991. *Malus orientalis* Uglitzk.

Wild. 99TU-32-04; GMAL 4564. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 5" N. Longitude 33° 6' 57" E. Elevation 750
m. Village of Yeni Ilica.

- PI 611992. *Malus orientalis* Uglitzk.**
Wild. 99TU-32-05; GMAL 4565. Collected 09/24/1999 in Kastamonu, Turkey.
Latitude 41° 39' 5" N. Longitude 33° 6' 57" E. Elevation 750
m. Village of Yeni Ilica.
- PI 611993. *Malus orientalis* Uglitzk.**
Wild. 99TU-33-01; GMAL 4566. Collected 09/25/1999 in Kastamonu, Turkey.
Latitude 41° 45' 4" N. Longitude 33° 41' 34" E. Elevation 1080
m. Village of Camil Koyu.
- PI 611994. *Malus orientalis* Uglitzk.**
Wild. 99TU-33-02; GMAL 4567. Collected 09/25/1999 in Kastamonu, Turkey.
Latitude 41° 45' 23" N. Longitude 33° 41' 34" E. Elevation
1080 m. Village of Camil Koyu.
- PI 611995. *Malus orientalis* Uglitzk.**
Wild. 99TU-34-01; GMAL 4568. Collected 09/25/1999 in Kastamonu, Turkey.
Latitude 41° 47' 23" N. Longitude 33° 39' 51" E. Elevation
1040 m. Village of Catak.
- PI 611996. *Malus orientalis* Uglitzk.**
Wild. 99TU-35-01; GMAL 4569. Collected 09/25/1999 in Kastamonu, Turkey
Latitude 41° 49' 8" N. Longitude 33° 40' 39" E. Elevation 990.
m. Village of Karaman.

The following were donated by Jerzy Puchalski, Polish Academy of Sciences,
Botanical Garden, Center for Biological Diversity Conservation, Warsaw,
Warszawa 02-973, Poland. Received 06/14/1999.

- PI 611997. *Secale cereale* L. subsp. *cereale***
Landrace. 1; NSGC 8523. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 611998. *Secale cereale* L. subsp. *cereale***
Landrace. 1486/67; NSGC 8524. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 611999. *Secale cereale* L. subsp. *cereale***
Landrace. 15525/67; NSGC 8525. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612000. *Secale cereale* L. subsp. *cereale***
Landrace. 15544/67; NSGC 8526. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612001. *Secale cereale* L. subsp. *cereale***
Landrace. 15555/67; NSGC 8527. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612002. *Secale cereale* L. subsp. *cereale***
Landrace. 15563/67; NSGC 8528. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612003. *Secale cereale* L. subsp. *cereale***
Landrace. 15579/67; NSGC 8529. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612004. *Secale cereale* L. subsp. *cereale***
Landrace. 15588/67; NSGC 8530. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612005. *Secale cereale* L. subsp. *cereale***
Landrace. 15600/67; NSGC 8531. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612006. *Secale cereale* L. subsp. *cereale***
Landrace. 2; NSGC 8532. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612007. *Secale cereale* L. subsp. *cereale***
Landrace. 20; NSGC 8533. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612008. *Secale cereale* L. subsp. *cereale***
Landrace. 22; NSGC 8534. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612009. *Secale cereale* L. subsp. *cereale***
Landrace. 24; NSGC 8535. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612010. *Secale cereale* L. subsp. *cereale***
Landrace. 25/1977; NSGC 8536. Collected in Portugal. Latitude 39°
30' N. Longitude 8° 0' W.
- PI 612011. *Secale cereale* L. subsp. *cereale***
Landrace. 26285/68; NSGC 8537. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612012. *Secale cereale* L. subsp. *cereale***
Landrace. 26317/68; NSGC 8538. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612013. *Secale cereale* L. subsp. *cereale***
Landrace. 26329/68; NSGC 8539. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612014. *Secale cereale* L. subsp. *cereale***
Landrace. 26334/68; NSGC 8540. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612015. *Secale cereale* L. subsp. *cereale***
Landrace. 26354/68; NSGC 8541. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612016. *Secale cereale* L. subsp. *cereale***
Landrace. 26360/68; NSGC 8542. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612017. *Secale cereale* L. subsp. *cereale***
Landrace. 26366/68; NSGC 8543. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612018. *Secale cereale* L. subsp. *cereale***
Landrace. 26375/68; NSGC 8544. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612019. *Secale cereale* L. subsp. *cereale***
Landrace. 26379/68; NSGC 8545. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612020. *Secale cereale* L. subsp. *cereale***
Landrace. 26402/68; NSGC 8546. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612021. *Secale cereale* L. subsp. *cereale***
Landrace. 26421/68; NSGC 8547. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612022. *Secale cereale* L. subsp. *cereale***
Landrace. 26434/68; NSGC 8548. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612023. *Secale cereale* L. subsp. *cereale***
Landrace. 26444/68; NSGC 8549. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612024. *Secale cereale* L. subsp. *cereale***
Landrace. 26451/68; NSGC 8550. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612025. *Secale cereale* L. subsp. *cereale***
Landrace. 26485/68; NSGC 8551. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612026. *Secale cereale* L. subsp. *cereale***
Landrace. 26499/68; NSGC 8552. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612027. *Secale cereale* L. subsp. *cereale***
Landrace. 26518/68; NSGC 8553. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612028. *Secale cereale* L. subsp. *cereale***
Landrace. 26711/68; NSGC 8554. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612029. *Secale cereale* L. subsp. *cereale***
Landrace. 26786/68; NSGC 8555. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612030. *Secale cereale* L. subsp. *cereale***
Landrace. 27; NSGC 8556. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.

- PI 612031. *Secale cereale* L. subsp. *cereale***
Landrace. 29; NSGC 8557. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612032. *Secale cereale* L. subsp. *cereale***
Landrace. 31775/70; NSGC 8558. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612033. *Secale cereale* L. subsp. *cereale***
Landrace. 31817/70; NSGC 8559. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612034. *Secale cereale* L. subsp. *cereale***
Landrace. 31867/70; NSGC 8560. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612035. *Secale cereale* L. subsp. *cereale***
Landrace. 31873/70; NSGC 8561. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612036. *Secale cereale* L. subsp. *cereale***
Landrace. 31898/70; NSGC 8562. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612037. *Secale cereale* L. subsp. *cereale***
Landrace. 31903/70; NSGC 8563. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612038. *Secale cereale* L. subsp. *cereale***
Landrace. 31911/70; NSGC 8564. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612039. *Secale cereale* L. subsp. *cereale***
Landrace. 31919/70; NSGC 8565. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612040. *Secale cereale* L. subsp. *cereale***
Landrace. 31936/70; NSGC 8566. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612041. *Secale cereale* L. subsp. *cereale***
Landrace. 31951/70; NSGC 8567. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612042. *Secale cereale* L. subsp. *cereale***
Landrace. 31957/70; NSGC 8568. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612043. *Secale cereale* L. subsp. *cereale***
Landrace. 31969/70; NSGC 8569. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612044. *Secale cereale* L. subsp. *cereale***
Landrace. 31991/70; NSGC 8570. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612045. *Secale cereale* L. subsp. *cereale***
Landrace. 32008/70; NSGC 8571. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612046. *Secale cereale* L. subsp. *cereale***
Landrace. 32012/70; NSGC 8572. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612047. *Secale cereale* L. subsp. *cereale***
Landrace. 32016/70; NSGC 8573. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612048. *Secale cereale* L. subsp. *cereale***
Landrace. 32022/70; NSGC 8574. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612049. *Secale cereale* L. subsp. *cereale***
Landrace. 32030/70; NSGC 8575. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612050. *Secale cereale* L. subsp. *cereale***
Landrace. 32032/70; NSGC 8576. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612051. *Secale cereale* L. subsp. *cereale***
Landrace. 32040/70; NSGC 8577. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612052. *Secale cereale* L. subsp. *cereale***
Landrace. 32044/70; NSGC 8578. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612053. *Secale cereale* L. subsp. *cereale***
Landrace. 32049/70; NSGC 8579. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612054. *Secale cereale* L. subsp. *cereale***
Landrace. 32075/70; NSGC 8580. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612055. *Secale cereale* L. subsp. *cereale***
Landrace. 32109/70; NSGC 8581. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612056. *Secale cereale* L. subsp. *cereale***
Landrace. 32128/70; NSGC 8582. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612057. *Secale cereale* L. subsp. *cereale***
Landrace. 32160/70; NSGC 8583. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612058. *Secale cereale* L. subsp. *cereale***
Landrace. 32174/70; NSGC 8584. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612059. *Secale cereale* L. subsp. *cereale***
Landrace. 32193/70; NSGC 8585. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612060. *Secale cereale* L. subsp. *cereale***
Landrace. 32233/70; NSGC 8586. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612061. *Secale cereale* L. subsp. *cereale***
Landrace. 32244/70; NSGC 8587. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612062. *Secale cereale* L. subsp. *cereale***
Landrace. 32256/70; NSGC 8588. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612063. *Secale cereale* L. subsp. *cereale***
Landrace. 32259/70; NSGC 8589. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612064. *Secale cereale* L. subsp. *cereale***
Landrace. 32270/70; NSGC 8590. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612065. *Secale cereale* L. subsp. *cereale***
Landrace. 32276/70; NSGC 8591. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612066. *Secale cereale* L. subsp. *cereale***
Landrace. 32282/70; NSGC 8592. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612067. *Secale cereale* L. subsp. *cereale***
Landrace. 32613/71; NSGC 8593. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612068. *Secale cereale* L. subsp. *cereale***
Landrace. 32624/71; NSGC 8594. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612069. *Secale cereale* L. subsp. *cereale***
Landrace. 32672/71; NSGC 8595. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612070. *Secale cereale* L. subsp. *cereale***
Landrace. 32677/71; NSGC 8596. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612071. *Secale cereale* L. subsp. *cereale***
Landrace. 32689/71; NSGC 8597. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612072. *Secale cereale* L. subsp. *cereale***
Landrace. 32694/71; NSGC 8598. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612073. *Secale cereale* L. subsp. *cereale***
Landrace. 32702/71; NSGC 8599. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612074. *Secale cereale* L. subsp. *cereale***
Landrace. 32720/71; NSGC 8600. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612075. *Secale cereale* L. subsp. *cereale***
Landrace. 32749/71; NSGC 8601. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612076. *Secale cereale* L. subsp. *cereale***
Landrace. 32751/71; NSGC 8602. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612077. *Secale cereale* L. subsp. *cereale***
Landrace. 32756/71; NSGC 8603. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612078. *Secale cereale* L. subsp. *cereale***
Landrace. 32781/71; NSGC 8604. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612079. *Secale cereale* L. subsp. *cereale***
Landrace. 32789/71; NSGC 8605. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612080. *Secale cereale* L. subsp. *cereale***
Landrace. 32792/71; NSGC 8606. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612081. *Secale cereale* L. subsp. *cereale***
Landrace. 32795/71; NSGC 8607. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612082. *Secale cereale* L. subsp. *cereale***
Landrace. 32801/71; NSGC 8608. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612083. *Secale cereale* L. subsp. *cereale***
Landrace. 32822/71; NSGC 8609. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612084. *Secale cereale* L. subsp. *cereale***
Landrace. 32826/71; NSGC 8610. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612085. *Secale cereale* L. subsp. *cereale***
Landrace. 32835/71; NSGC 8611. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612086. *Secale cereale* L. subsp. *cereale***
Landrace. 32861/71; NSGC 8612. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612087. *Secale cereale* L. subsp. *cereale***
Landrace. 32872/71; NSGC 8613. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612088. *Secale cereale* L. subsp. *cereale***
Landrace. 32908/71; NSGC 8614. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612089. *Secale cereale* L. subsp. *cereale***
Landrace. 32923/71; NSGC 8615. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612090. *Secale cereale* L. subsp. *cereale***
Landrace. 32935/71; NSGC 8616. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612091. *Secale cereale* L. subsp. *cereale***
Landrace. 33043/71; NSGC 8617. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612092. *Secale cereale* L. subsp. *cereale***
Landrace. 33078/71; NSGC 8618. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612093. *Secale cereale* L. subsp. *cereale***
Landrace. 33084/71; NSGC 8619. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612094. *Secale cereale* L. subsp. *cereale***
Landrace. 33234/71; NSGC 8620. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612095. *Secale cereale* L. subsp. *cereale***
Landrace. 33252/71; NSGC 8621. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612096. *Secale cereale* L. subsp. *cereale***
Landrace. 33267/71; NSGC 8622. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612097. *Secale cereale* L. subsp. *cereale***
Landrace. 33285/71; NSGC 8623. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612098. *Secale cereale* L. subsp. *cereale***
Landrace. 33299/71; NSGC 8624. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612099. *Secale cereale* L. subsp. *cereale***
Landrace. 33307/71; NSGC 8625. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612100. *Secale cereale* L. subsp. *cereale***
Landrace. 33457/71; NSGC 8626. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.

- PI 612101. *Secale cereale* L. subsp. *cereale***
Landrace. 33497/71; NSGC 8627. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612102. *Secale cereale* L. subsp. *cereale***
Landrace. 33542/71; NSGC 8628. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612103. *Secale cereale* L. subsp. *cereale***
Landrace. 52; NSGC 8629. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612104. *Secale cereale* L. subsp. *cereale***
Landrace. 5548/66; NSGC 8630. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612105. *Secale cereale* L. subsp. *cereale***
Landrace. 5552/66; NSGC 8631. Collected in Turkey. Latitude 39° 0'
N. Longitude 35° 0' E.
- PI 612106. *Secale cereale* L. subsp. *cereale***
Landrace. 583/1978; NSGC 8632. Collected in Portugal. Latitude 39°
30' N. Longitude 8° 0' W.
- PI 612107. *Secale cereale* L. subsp. *cereale***
Landrace. 63; NSGC 8633. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612108. *Secale cereale* L. subsp. *cereale***
Landrace. 65/1977; NSGC 8634. Collected in Portugal. Latitude 39°
30' N. Longitude 8° 0' W.
- PI 612109. *Secale cereale* L. subsp. *cereale***
Landrace. 72; NSGC 8635. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612110. *Secale cereale* L. subsp. *cereale***
Landrace. 72/1977; NSGC 8636. Collected in Portugal. Latitude 39°
30' N. Longitude 8° 0' W.
- PI 612111. *Secale cereale* L. subsp. *cereale***
Landrace. 75; NSGC 8637. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612112. *Secale cereale* L. subsp. *cereale***
Landrace. 10; NSGC 8638. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612113. *Secale cereale* L. subsp. *cereale***
Landrace. 14; NSGC 8639. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.
- PI 612114. *Secale cereale* L. subsp. *cereale***
Landrace. 28; NSGC 8640. Collected in Turkey. Latitude 39° 0' N.
Longitude 35° 0' E.

The following were developed by Novartis Seeds, Inc., United States. Received 11/23/1999.

PI 612115 PVPO. *Pisum sativum* L.
Cultivar. "DAKOTA". PVP 200000001.

The following were developed by Holden's Foundation Seeds, Inc., United States. Received 11/23/1999.

PI 612116 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH253". PVP 200000002.

PI 612117 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH267". PVP 200000003.

The following were developed by Pioneer Hi-Bred International, Inc., Vernon, Texas 76384, United States. Received 11/23/1999.

PI 612118. *Brassica napus* L.
Cultivar. "45A03". PVP 200000004.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 11/23/1999.

PI 612119. *Brassica napus* L.
Cultivar. "45A50". PVP 200000005.

PI 612120. *Brassica napus* L.
Cultivar. "46A40". PVP 200000006.

PI 612121. *Brassica napus* L.
Cultivar. "46A41". PVP 200000007.

PI 612122. *Brassica napus* L.
Cultivar. "46A52". PVP 200000008.

PI 612123. *Brassica napus* L.
Cultivar. "46A73". PVP 200000009.

PI 612124 PVPO. *Brassica napus* L.
Cultivar. "46A76". PVP 200000010.

The following were developed by Abbott & Cobb, Inc., United States. Received 11/23/1999.

PI 612125 PVPO. *Cucumis melo* L.
Cultivar. "WS24". PVP 200000012.

The following were developed by Central Valley Seeds, Inc., United States. Received 11/23/1999.

PI 612126 PVPO. *Lactuca sativa* L.

Cultivar. "GREEN FOREST". PVP 200000013; Utility Patent 6649815.

The following were developed by Peterson AgriBioTech, United States. Received 11/23/1999.

PI 612127 PVPO. *Medicago sativa* L.

Cultivar. "WL 442". PVP 200000014.

The following were developed by Cargill, Inc., Minneapolis, Minnesota 55440, United States. Received 11/23/1999.

PI 612128 PVPO. *Brassica napus* L.

Cultivar. "IMC203RR". PVP 200000015.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 11/23/1999.

PI 612129. *Lactuca sativa* L.

Cultivar. "NAVIGATOR". PVP 200000016.

The following were developed by Rijk Zwaan Zaadteelt en Zaadhandel B.V., Meo Voto Beheer BV, De Lier, South Holland, Netherlands. Received 11/23/1999.

PI 612130. *Lactuca sativa* L.

Cultivar. "VETONAS". PVP 200000017.

PI 612131 PVPO. *Lactuca sativa* L.

Cultivar. "FORTUNAS". PVP 200000018.

The following were developed by Mission Ranches, United States. Received 11/23/1999.

PI 612132 PVPO. *Lactuca sativa* L.

Cultivar. "RED THUNDER". PVP 200000019.

PI 612133 PVPO. *Lactuca sativa* L.

Cultivar. "LONEOAK". PVP 200000020.

PI 612134 PVPO. *Lactuca sativa* L.

Cultivar. "OROVERDE". PVP 200000021.

PI 612135 PVPO. *Lactuca sativa* L.

Cultivar. "CALYPSO"; AVALON. PVP 200000022.

The following were developed by Novartis Seeds, Inc., United States. Received 11/23/1999.

PI 612136 PVPO. *Pisum sativum* L.

Cultivar. "HP1475-1-4-1"; FP2090. PVP 200000023.

PI 612137 PVPO. *Pisum sativum* L.

Cultivar. "HP141860-2-1"; FP2154. PVP 200000024.

The following were developed by Takii & Company, LTD., Seed Growers and Merchants, P.O. Box 7, Kyoto Central, 180 Umekoji-i, Kyoto, Kyoto, Japan. Received 11/23/1999.

PI 612138 PVPO. *Erysimum cheiri* (L.) Crantz

Cultivar. "CHARITY CREAM YELLOW". PVP 200000026.

PI 612139 PVPO. *Erysimum cheiri* (L.) Crantz

Cultivar. "CHARITY ROSE RED". PVP 200000027.

PI 612140 PVPO. *Erysimum cheiri* (L.) Crantz

Cultivar. "CHARITY SCARLET". PVP 200000028.

PI 612141 PVPO. *Erysimum cheiri* (L.) Crantz

Cultivar. "CHARITY YELLOW". PVP 200000029.

The following were developed by Jorge Dubcovsky, University of California, Department of Plant Sciences, One Shields Avenue, Davis, California 95616-8515, United States; Calvin O. Qualset, University of California, Genetic Resources Conservation Program, Division of Agriculture & Nat'l Resources, Davis, California 95616-8602, United States. Received 11/23/1999.

PI 612142. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "KERN". PVP 200000047. Pedigree - Tadorna/Inia 66//Yecora Rojo/3/Klasic. Hard red spring wheat. Short-statured cultivar with a mid-season heading date (6 days later than Yecora Rojo). It has a mid-dense spike, fully awned with a straight peduncle. Glumes are white, glabrous with short awns and occasionally show a distinctive blackening (pseudo-black chaff). Good adaptation to California rain-fed environments and adequate levels of resistance to leaf rust. Susceptible to stripe rust races that appeared in California after 2002. Kern has intermediate grain protein content, excellent flour yield, intermediate to low flour water absorption, good mixing properties, and loaf volume and an overall good breadmaking quality. High molecular weight glutenin subunits (HMW-GS) are Glu-A1: 1, Glu-B1: 13+16, Glu-D1: 5+10. Kern was tested extensively in the UC Regional trials between 2000-2003.

The following were developed by Novartis Seeds, Inc., United States. Received 11/23/1999.

PI 612143 PVPO. *Phaseolus vulgaris* L.

Cultivar. "CASTANO"; sb4218. PVP 200000048.

PI 612144 PVPO. *Phaseolus vulgaris* L.

Cultivar. "MERCURY". PVP 200000049.

The following were donated by Seed Research Specialists, California, United States. Received 1962.

PI 612145. *Citrullus lanatus* (Thunb.) Matsum. & Nakai **var. lanatus**
Cultivar. DIXIE QUEEN.

The following were developed by Jeff Tyler, Delta and Pine Land Company, P.O. Box 157, 100 Main Street, Scott, Mississippi 38772, United States; Lawrence D. Young, USDA, ARS, MSA Crop Genetics & Prod. Res. Unit, P.O. Box 345, Stoneville, Mississippi 38776-0345, United States. Received 11/23/1999.

PI 612146. *Glycine max* (L.) Merr.
Cultivar. Pureline. "BOLIVAR". PVP 200000051; CV-456. Pedigree - Asgrow 5979 X Delta & Pine Land 3589. Released 06/1999. Maturity Group V. Flowers purple, tawny pubescence, tan pods at maturity, and dull yellow seed with black hila. Seed protein and oil were 425 g/kg and 197 g/kg in the 1998 USDA Uniform Tests. Segregating for reaction to southern stem canker (*Diaporthe phaseolorum*). Resistant to Race 3 of the soybean cyst nematode *Heterodera glycines*. Maintains adequate plant height in early season plantings on clayey soils, an environment that tends to suppress growth. Shown high seed yield and adaptation to the clayey soils of the lower Mississippi River valley and east Mississippi.

The following were developed by Johnny's Selected Seeds, Foss Hill Road, Albion, Maine 04910, United States. Received 11/23/1999.

PI 612147 PVPO. *Beta vulgaris* L.
Cultivar. "BRIGHT YELLOW". PVP 200000052.

The following were developed by Novartis Seeds, Inc., United States. Received 11/23/1999.

PI 612148 PVPO. *Pisum sativum* L.
Cultivar. "GALLANT". PVP 200000053.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 07/22/1999.

PI 612149. *Helianthus annuus* L.
Cultivar. "63C40".

The following were developed by Rijk Zwaan Zaadteelt en Zaadhandel B.V., Meo Voto Beheer BV, De Lier, South Holland, Netherlands. Received 11/23/1999.

PI 612150 PVPO. *Lactuca sativa* L.
Cultivar. "MENDOZA". PVP 9900343.

The following were developed by Novartis Seeds, Inc., United States. Received 11/23/1999.

PI 612151. *Cucumis melo* L.
Cultivar. "90-906". PVP 9900344.

PI 612152. *Cucumis melo* L.
Cultivar. "90-905". PVP 9900345.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 11/23/1999.

PI 612153 PVPO. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. Pureline. "26R61". PVP 9900346. Pedigree - Omega
78/S76/4/Arthur 71/3/Stadler//Redcoat/Wisc. 1/5/Coker 747/6/2555sib.

PI 612154 PVPO. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. Pureline. "26R46". PVP 9900347. Pedigree -
FL7927-G14//2555*3/Coker 80-28.

The following were developed by Paragon Seed, Inc., United States. Received 11/23/1999.

PI 612155 PVPO. *Lactuca sativa* L.
Cultivar. "NORTH STAR". PVP 9900348.

The following were developed by Sure-Grow Seed, Inc., 7265 Highway 9 South, Centre, Alabama 35960, United States. Received 11/23/1999.

PI 612156. *Gossypium hirsutum* L.
Cultivar. "SURE-GROW 622". PVP 9900349.

The following were developed by Gina Rowan, University of Georgia, Miller Plant Science Building Rm. 3111, Athens, Georgia 30602, United States; Dan Phillips, University of Georgia, Department of Plant Pathology, Georgia Experiment Station, Experiment, Georgia 30223, United States; Richard S. Hussey, University of Georgia, College of Agric. and Envirn. Sciences, Department of Plant Pathology, Athens, Georgia 30602-7274, United States; H. Roger Boerma, University of Georgia, Department of Crop & Soil Science, 3111 Plant Sciences Building, Athens, Georgia 30602-7272, United States; E. Dale Wood, University of Georgia, Dept. of Crop & Soil Sciences, Athens, Georgia 30602, United States; S.L. Finnerty, University of Georgia, Dept. of Plant Pathology, Athens, Georgia 30602, United States; J.T. Griner, University of Georgia, Dept. of Crop & Soil Sciences, Athens, Georgia 30602, United States. Received 11/23/1999.

PI 612157. *Glycine max* (L.) Merr.
Cultivar. Pureline. "PRICHARD"; G90-1551. PVP 9900378; CV-429. Pedigree - Co82-622 x Howard. Maturity group VIII (relative maturity 8.5), determinate growth habit, white flowers, gray pubescence, and tan pod walls. Seeds yellow with shiny seed coats and buff hila. Resistant to southern stem canker (*Diaporthe phaseolorum*) and bacterial pustule (*Xanthomonas campestris*). Resistance to the southern (*Meloidogyne incognita*) root-knot nematode. Resistant to races 3, 9, and 14 of the soybean cyst nematode (*Heterodera glycines*) and to the G1 strain of soybean mosaic virus.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 11/23/1999.

PI 612158 PVPO. Zea mays L. subsp. mays
Cultivar. "PH2NO". PVP 9900379.

PI 612159 PVPO. Zea mays L. subsp. mays
Cultivar. "PH3PO". PVP 9900381.

PI 612160 PVPO. Zea mays L. subsp. mays
Cultivar. "PH2MW". PVP 9900382.

PI 612161 PVPO. Zea mays L. subsp. mays
Cultivar. "PH226". PVP 9900383.

PI 612162 PVPO. Zea mays L. subsp. mays
Cultivar. "PH1B8". PVP 9900384.

PI 612163 PVPO. Zea mays L. subsp. mays
Cultivar. "PH2KN". PVP 9900385.

The following were developed by Novartis Seeds, Inc., United States. Received 11/23/1999.

PI 612164 PVPO. Pisum sativum L.
Cultivar. "SP847-2"; EP9009. PVP 9900429.

PI 612165 PVPO. Pisum sativum L.
Cultivar. "HP904-12-4"; FP2070. PVP 9900430.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 11/23/1999.

PI 612166 PVPO. Zea mays L. subsp. mays
Cultivar. "PH1WO". PVP 9900432.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 11/23/1999.

PI 612167 PVPO. Phaseolus vulgaris L.
Cultivar. "CONQUISTADOR". PVP 9900433.

PI 612168 PVPO. Phaseolus vulgaris L.
Cultivar. "HERCULES". PVP 9900434.

The following were collected by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China; Hongliang L. Sun, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China. Donated by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China. Received 08/18/1999.

PI 612169. *Amaranthus cruentus* L.

Cultivated. Tibet Yellow; Tibet; Ames 25450. Collected 08/1999 in Xizang, China. Lasa area. Pedigree - Possibly the same as Tibet 050 (PI 590992). Light colored grain.

PI 612170. *Amaranthus cruentus* L.

Cultivated. V67; Ames 25451. Collected 08/1999 in Hubei, China. Black grain, and forage production.

PI 612171. *Amaranthus cruentus* L.

Cultivated. V69; Ames 25452. Collected 08/1999 in Hubei, China. Light colored grain, medium growth period (112 days), fairly high plant stature (214 cm), medium inflorescence length (68.0 cm), low branch number (19.4), quite leafy (44.4 leaves), high biomass weight (964 g/plant), large seed size (0.67 g/1000 grains), and very high grain yield (49.2 g/plant). Recommended to be used as grain/forage due to its high grain yield and biomass weight.

The following were donated by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China. Received 08/18/1999.

PI 612172. *Amaranthus cruentus* L.

Cultivated. Wanan; Ames 25453. Collected 08/1999 in Jiangxi, China. Wanan County. Black grain.

The following were developed by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China; Hongliang L. Sun, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China; Yunsheng Li, Chifeng Institute of Agricultural Sciences, Chifeng, Nei Monggol 024031, China. Donated by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China. Received 08/18/1999.

PI 612173. *Amaranthus hypochondriacus* L.

Breeding. Chixian 1; Ames 25454. Pedigree - *A. hybridus* X *A. hypochondriacus* RRC 1023. Light colored grain.

PI 612174. *Amaranthus hypochondriacus* L.

Breeding. Chixian 2; Ames 25455. Pedigree - *Amaranthus hybridus* X *A. hypochondriacus* RRC 1024. Yellow grain.

PI 612175. *Amaranthus hypochondriacus* L.

Breeding. Chixian 3; Ames 25456. Pedigree - *A. hybridus* X *A. hypochondriacus* RRC 1023, or *A. hybridus* X Nonglu amaranth (a local Chifeng, Inner Mongolia type with green infl. and light colored grain). Black grain.

The following were collected by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China; Hongliang L. Sun, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China. Donated

by Shaoxian X. Yue, Chinese Academy of Agricultural Sciences, 501, Building 21, 30 Baishigiao Road, Beijing, Beijing 100081, China. Received 08/18/1999.

PI 612176. *Amaranthus hypochondriacus* L.

Cultivated. Finland; Ames 25457. Collected 08/1999 in Finland. Black grain.

PI 612177. *Amaranthus hypochondriacus* L.

Cultivated. Sadiano; Sadi; Ames 25458. Collected 08/1999 in Sichuan, China. Latitude 30° 59' N. Longitude 104° 24' E. Lianshan area. Black grain.

The following were collected by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Donated by J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Received 11/30/1999.

PI 612178. *Glycine canescens* F. J. Herm.

Wild. G 2999; IL 1373; SY9910882. Collected 08/22/1996 in Northern Territory, Australia. Latitude 25° 58' S. Longitude 133° 7' E. Elevation 560 m. Mt. Sir Henry, 9.7 km west of Stuart Highway.

PI 612179. *Glycine canescens* F. J. Herm.

Wild. G 3000; IL 1374; SY9910883. Collected 08/23/1996 in Northern Territory, Australia. Latitude 25° 52' S. Longitude 133° 23' E. Elevation 520 m. 9.2 km east of Kulgera towards Finke.

PI 612180. *Glycine canescens* F. J. Herm.

Wild. G 3001; IL 1375; SY9910884. Collected 08/23/1996 in Northern Territory, Australia. Latitude 25° 59' S. Longitude 133° 47' E. Elevation 470 m. 58 km south of Kulgera, 2 km north of SA/NT border and Tieyon Station.

PI 612181. *Glycine canescens* F. J. Herm.

Wild. G 3002; IL 1376; SY9910885. Collected 08/23/1996 in Northern Territory, Australia. Latitude 25° 53' S. Longitude 133° 36' E. Elevation 465 m. 38 km E of Kulgera 26.4 km N of SA/NT border, second arm of Hamilton River.

PI 612182. *Glycine canescens* F. J. Herm.

Wild. G 3003; IL 1377; SY9910886. Collected 08/24/1996 in Northern Territory, Australia. Latitude 23° 41' S. Longitude 133° 43' E. Elevation 600 m. Simpsons Gap, on bank of creek near car park. Bank of creek.

PI 612183. *Glycine canescens* F. J. Herm.

Wild. G 3005; IL 1378; SY9910887. Collected 08/24/1996 in Northern Territory, Australia. Latitude 23° 49' S. Longitude 133° 24' E. Elevation 650 m. Hugh River, 8 km west of Alice Springs along Namajira Drive.

- PI 612184. *Glycine canescens*** F. J. Herm.
Wild. G 3006; IL 1379; SY9910888. Collected 08/24/1996 in Northern Territory, Australia. Latitude 23° 47' S. Longitude 133° 4' E.
Elevation 650 m. Ellery Creek Big Hole, 2 km north of Namajira Drive.
- PI 612185. *Glycine canescens*** F. J. Herm.
Wild. G 3007; IL 1380; SY9910889. Collected 08/24/1996 in Northern Territory, Australia. Latitude 23° 46' S. Longitude 132° 59' E.
Elevation 750 m. Serpentine Gorge, right in gorge and along walking track.
- PI 612186. *Glycine canescens*** F. J. Herm.
Wild. G 3008; IL 1381; SY9910890. Collected 08/24/1996 in Northern Territory, Australia. Latitude 23° 38' S. Longitude 132° 43' E.
Elevation 700 m. Ormiston Gorge.
- PI 612187. *Glycine canescens*** F. J. Herm.
Wild. G 3009; IL 1382; SY9910891. Collected 08/25/1996 in Northern Territory, Australia. Latitude 23° 41' S. Longitude 132° 40' E.
Elevation 630 m. Glen Helen Gorge, along creek bank and west slope near Gorge. Along creek bank and west slope.
- PI 612188. *Glycine canescens*** F. J. Herm.
Wild. G 3010; IL 1383; SY9910892. Collected 08/25/1996 in Northern Territory, Australia. Latitude 23° 34' S. Longitude 132° 31' E.
Elevation 700 m. Red Bank Gorge.
- PI 612189. *Glycine canescens*** F. J. Herm.
Wild. G 3011; IL 1384; SY9910893. Collected 08/25/1996 in Northern Territory, Australia. Latitude 24° 3' S. Longitude 132° 43' E.
Elevation 600 m. Cycad Amphitheatre, Palm Valley.
- PI 612190. *Glycine canescens*** F. J. Herm.
Wild. G 3012; IL 1385; SY9910894. Collected 08/26/1996 in Northern Territory, Australia. Latitude 23° 44' S. Longitude 133° 57' E.
Elevation 580 m. Emily Gap, growing along Emily Creek 100m south of Gap. Growing along creek.
- PI 612191. *Glycine canescens*** F. J. Herm.
Wild. G 3013; IL 1386; SY9910895. Collected 08/27/1996 in Northern Territory, Australia. Latitude 24° 38' S. Longitude 132° 19' E.
Elevation 540 m. 2 km Southwest of Wallara Ranch, 95.5 km west of Stuart Highway.
- PI 612192. *Glycine canescens*** F. J. Herm.
Wild. G 3014; IL 1387; SY9910896. Collected 08/27/1996 in Northern Territory, Australia. Latitude 24° 21' S. Longitude 131° 41' E.
Elevation 700 m. Kathleen Springs 23.3 km east of Kings Canyon Resort.
- PI 612193. *Glycine canescens*** F. J. Herm.
Wild. G 3015; IL 1388; SY9910897. Collected 08/28/1996 in Northern Territory, Australia. Latitude 24° 15' S. Longitude 131° 30' E.
Elevation 660 m. 700m along Kings Creek walk, 10 km east of Kings Canyon Resort.
- PI 612194. *Glycine canescens*** F. J. Herm.
Wild. G 3016; IL 1389; SY9910898. Collected 08/28/1996 in Northern

Territory, Australia. Latitude 24° 24' S. Longitude 131° 47' E.
Elevation 640 m. Stokes Creek, 42 km east of Kings Canyon Resort.

- PI 612195. *Glycine canescens*** F. J. Herm.
Wild. G 3017; IL 1390; SY9910899. Collected 08/29/1996 in Northern Territory, Australia. Latitude 23° 40' S. Longitude 133° 32' E. Elevation 720 m. Fish Hole Water, Jay Creek, plants found on way in and at the hole.
- PI 612196. *Glycine canescens*** F. J. Herm.
Wild. G 3018; IL 1391; SY9910900. Collected 08/29/1996 in Northern Territory, Australia. Latitude 23° 36' S. Longitude 133° 34' E. Elevation 720 m. Hamilton Downs, 12.8 km from Tanami Track.
- PI 612197. *Glycine falcata*** Benth.
Wild. G 3019; IL 1392; SY9910901. Collected 08/29/1996 in Northern Territory, Australia. Latitude 23° 25' S. Longitude 133° 13' E. Elevation 640 m. Amburla Creek, Tanami Track, 69.2 km west of Stuart Highway.
- PI 612198. *Glycine canescens*** F. J. Herm.
Wild. G 3020; IL 1393; SY9910902. Collected 08/29/1996 in Northern Territory, Australia. Latitude 23° 25' S. Longitude 133° 13' E. Elevation 640 m. Amburla Creek, Tanami Track, 69.2 km west of Stuart Highway.
- PI 612199. *Glycine canescens*** F. J. Herm.
Wild. G 3021; IL 1394; SY9910903. Collected 08/30/1996 in Northern Territory, Australia. Latitude 23° 47' S. Longitude 133° 54' E. Elevation 530 m. Colonel Rose Drive, 2.8 km from Stuart Highway.
- PI 612200. *Glycine canescens*** F. J. Herm.
Wild. G 3022; IL 1395; SY9910904. Collected 08/30/1996 in Northern Territory, Australia. Latitude 23° 38' S. Longitude 133° 53' E. Elevation 700 m. Greiss Bluff, 1 km ENE of Wigley Waterhole.
- PI 612201. *Glycine canescens*** F. J. Herm.
Wild. G 3023; IL 1396; SY9910905. Collected 08/30/1996 in Northern Territory, Australia. Latitude 23° 33' S. Longitude 133° 46' E. Elevation 750 m. 0.6 km south of Tanami Track, 0.5 km north of Mt. Forster.
- PI 612202. *Glycine canescens*** F. J. Herm.
Wild. G 3026; IL 1397; SY9910906. Collected 08/31/1996 in Northern Territory, Australia. Latitude 23° 14' S. Longitude 134° 1' E. Elevation 760 m. Harry Creek, south of Utnalenama Range.
- PI 612203. *Glycine canescens*** F. J. Herm.
Wild. G 3027; IL 1398; SY9910907. Collected 08/31/1996 in Northern Territory, Australia. Latitude 23° 17' S. Longitude 134° 24' E. Elevation 680 m. Depot Creek, 1.8 km from 'The Garden Gate', 69.1 km east of Stuart Highway.
- PI 612204. *Glycine canescens*** F. J. Herm.
Wild. G 3028; IL 1399; SY9910908. Collected 08/31/1996 in Northern Territory, Australia. Latitude 23° 23' S. Longitude 134° 45' E. Elevation 600 m. Hale River, 'Claraville Station', Arltunga Road.

- PI 612205. *Glycine canescens*** F. J. Herm.
Wild. G 3029; IL 1400; SY9910909. Collected 08/31/1996 in Northern Territory, Australia. Latitude 23° 28' S. Longitude 134° 43' E.
Elevation 650 m. 2 km SE of Arltunga Bore on track to Ruby Gap and "Atnarpa Station".
- PI 612206. *Glycine canescens*** F. J. Herm.
Wild. G 3030; IL 1401; SY9910910. Collected 08/31/1996 in Northern Territory, Australia. Latitude 23° 30' S. Longitude 134° 36' E.
Elevation 710 m. South edge of Paddy's Plain on Arltunga Road, 13 km SW of Arltunga Bore.
- PI 612207. *Glycine canescens*** F. J. Herm.
Wild. G 3031; IL 1402; SY9910911. Collected 09/01/1996 in Northern Territory, Australia. Latitude 23° 38' S. Longitude 134° 28' E.
Elevation 490 m. N'Dhala Gorge, 12.5 km SW of Ross River Homestead.
- PI 612208. *Glycine canescens*** F. J. Herm.
Wild. G 3032; IL 1403; SY9910912. Collected 09/01/1996 in Northern Territory, Australia. Latitude 23° 31' S. Longitude 134° 24' E.
Elevation 560 m. Trepkina Gorge, both ends.
- PI 612209. *Glycine canescens*** F. J. Herm.
Wild. G 3033; IL 1404; SY9910913. Collected 09/01/1996 in Northern Territory, Australia. Latitude 23° 41' S. Longitude 134° 15' E.
Elevation 550 m. 3 km east of Corook Rock, Ross Highway, 54 km east of Alice Springs.
- PI 612210. *Glycine canescens*** F. J. Herm.
Wild. G 3035; IL 1405; SY9910914. Collected 09/03/1996 in Northern Territory, Australia. Latitude 22° 28' S. Longitude 133° 16' E.
Elevation 650 m. Woodforde River, 8.7 km west of Stuart Highway on road to 'Pine Hill Station'.
- PI 612211. *Glycine canescens*** F. J. Herm.
Wild. G 3036; IL 1406; SY9910915. Collected 09/03/1996 in Northern Territory, Australia. Latitude 22° 28' S. Longitude 133° 4' E.
Elevation 600 m. Hanson River, 30 km west on Stuart Highway, 2 km east of 'Pine Hill Station'.
- PI 612212. *Glycine canescens*** F. J. Herm.
Wild. IL 1407; G 3037; SY9910916. Collected 09/04/1996 in Northern Territory, Australia. Latitude 21° 45' S. Longitude 133° 41' E.
Elevation 490 m. 6.9 km south of 'Stirling Station' turn on Stuart Highway.
- PI 612213. *Glycine canescens*** F. J. Herm.
Wild. G 3038; IL 1408; SY9910917. Collected 09/05/1996 in Northern Territory, Australia. Latitude 20° 31' S. Longitude 134° 37' E.
Elevation 450 m. Kurundi Creek, 43.5 km east of Stuart Highway towards 'Kurundi Station'.
- PI 612214. *Glycine canescens*** F. J. Herm.
Wild. G 3039; IL 1409; SY9910918. Collected 09/05/1996 in Northern Territory, Australia. Latitude 20° 31' S. Longitude 134° 40' E.
Elevation 420 m. 'Kurundi Station, 50 km east of Stuart Highway.

- PI 612215. *Glycine canescens*** F. J. Herm.
Wild. G 3040; IL 1410; SY9910919. Collected 09/06/1996 in Northern Territory, Australia. Latitude 22° 16' S. Longitude 134° 27' E.
Elevation 570 m. Apron of Mt. Skinner, Bangtail Bore, 6.2 km southwest of Utopia H/S.
- PI 612216. *Glycine canescens*** F. J. Herm.
Wild. G 3042; IL 1411; SY9910920. Collected 09/07/1996 in Northern Territory, Australia. Latitude 22° 58' S. Longitude 134° 14' E.
Elevation 690 m. Gillen Creek, Alcoota station, 42 km from Plenty Highway from Sandover turnoff.
- PI 612217. *Glycine canescens*** F. J. Herm.
Wild. G 3043; IL 1412; SY9910921. Collected 09/07/1996 in Northern Territory, Australia. Latitude 22° 52' S. Longitude 134° 27' E.
Elevation 660 m. Ongewa Creek, Alcoota Station, 20 km north of Plenty Highway.
- PI 612218. *Glycine canescens*** F. J. Herm.
Wild. G 3044; IL 1413; SY9910922. Collected 09/07/1996 in Northern Territory, Australia. Latitude 23° 0' S. Longitude 134° 21' E.
Elevation 680 m. Annamurra Creek, Alcoota Station, Plenty Highway, 83.8 km from Sandover turnoff.
- PI 612219. *Glycine canescens*** F. J. Herm.
Wild. G 3045; IL 1414; SY9910923. Collected 09/08/1996 in Northern Territory, Australia. Latitude 22° 57' S. Longitude 135° 1' E.
Elevation 560 m. Eastern Chief Creek, Plenty Highway, 11 km east of Harts Range.
- PI 612220. *Glycine canescens*** F. J. Herm.
Wild. G 3046; IL 1415; SY9910924. Collected 09/08/1996 in Northern Territory, Australia. Latitude 22° 59' S. Longitude 134° 53' E.
Elevation 580 m. Ulgarna Creek, Plenty Highway, 3.5 km west of Harts Range Police Station.
- PI 612221. *Glycine canescens*** F. J. Herm.
Wild. G 3047; IL 1416; SY9910925. Collected 09/08/1996 in Northern Territory, Australia. Latitude 23° 2' S. Longitude 134° 34' E.
Elevation 670 m. 11.5 km west of Mt. Riddock Station Gate, Plenty Highway.
- PI 612222. *Glycine canescens*** F. J. Herm.
Wild. G 3048; IL 1417; SY9910926. Collected 09/08/1996 in Northern Territory, Australia. Latitude 22° 58' S. Longitude 134° 4' E.
Elevation 680 m. Mueller Creek, Plenty Highway, 51 km east of Stuart Highway.

The following were collected by P.K. Latz, CSIRO, Canberra, Austr. Capital Terr., Australia. Donated by J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Received 11/30/1999.

PI 612223. *Glycine canescens* F. J. Herm.

Wild. G 3050; IL 1418; SY9910927. Collected 05/18/1996 in Northern Territory, Australia. Latitude 21° 26' S. Longitude 133° 44' E. Stirling Swamp.

The following were collected by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Donated by J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Received 11/30/1999.

PI 612224. *Glycine* sp.

Wild. G 3004; IL 1419; SY9910928. Collected 08/24/1996 in Northern Territory, Australia. Latitude 23° 43' S. Longitude 133° 28' E. Elevation 700 m. Standley Chasm between car park and Chasm.

The following were collected by T.S. Henshall. Donated by J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Received 11/30/1999.

PI 612225. *Glycine tomentella* Hayata

Wild. G 3049; IL 1420; SY9910929. Collected 09/20/1978 in Northern Territory, Australia. Latitude 19° 18' S. Longitude 129° 36' E. Supplejack Station, 40 km west of Homestead.

The following were collected by J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; L. Craven, CSIRO, Division of Plant Industry, General Post Office Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Donated by J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; Theodore Hymowitz, University Illinois, Department of Crop Sciences, 1102 South Goodwin Avenue, Urbana, Illinois 61801, United States. Received 11/30/1999.

PI 612226. *Glycine falcata* Benth.

Wild. G 2644; IL 1421; SY9910930. Collected 05/17/1987 in Queensland, Australia. Latitude 20° 44' S. Longitude 143° 1' E. Elevation 210 m. 13.1 km west of Richmond, north side of railway line.

PI 612227. *Glycine falcata* Benth.

Wild. G 2645; IL 1422; SY9910931. Collected 05/17/1987 in Queensland, Australia. Latitude 20° 44' S. Longitude 142° 40' E. Elevation 160 m. 50.4 km west of Richmond near Maxwellton.

PI 612228. *Glycine falcata* Benth.

Wild. G 2646; IL 1423; SY9910932. Collected 05/17/1987 in Queensland, Australia. Latitude 20° 39' S. Longitude 141° 51' E. Elevation 130 m. 11.6 km east of Julia Creek.

- PI 612229. *Glycine falcata* Benth.**
Wild. G 2647; IL 1424; SY9910933. Collected 05/17/1987 in Queensland, Australia. Latitude 20° 40' S. Longitude 141° 29' E. Elevation 123 m. 28.1 km west of Julia Creek.
- PI 612230. *Glycine falcata* Benth.**
Wild. G 2648; IL 1425; SY9910934. Collected 05/17/1987 in Queensland, Australia. Latitude 20° 40' S. Longitude 140° 53' E. Elevation 150 m. 40.2 km east of Cloncurry.
- PI 612231. *Glycine falcata* Benth.**
Wild. G 2649; IL 1426; SY9910935. Collected 05/18/1987 in Queensland, Australia. Latitude 21° 12' S. Longitude 140° 14' E. Elevation 300 m. 72.1 km SW of Cloncurry, 1.3 km north of Devoncourt.
- PI 612232. *Glycine falcata* Benth.**
Wild. G 2650; IL 1427; SY9910936. Collected 05/18/1987 in Queensland, Australia. Latitude 21° 21' S. Longitude 137° 59' E. Elevation 340 m. 97.5 km SW of Cloncurry towards Duchess.
- PI 612233. *Glycine falcata* Benth.**
Wild. G 2651; IL 1428; SY9910937. Collected 05/19/1987 in Queensland, Australia. Latitude 20° 12' S. Longitude 138° 54' E. Elevation 293 m. 86.5 km west of Mt. Isa.
- PI 612234. *Glycine falcata* Benth.**
Wild. G 2654; IL 1429; SY9910938. Collected 05/20/1987 in Queensland, Australia. Latitude 19° 37' S. Longitude 138° 38' E. Elevation 264 m. Douglas Creek, 2 km south of Undilla, near Camooweal.
- PI 612235. *Glycine falcata* Benth.**
Wild. G 2655; IL 1430; SY9910939. Collected 05/21/1987 in Queensland, Australia. Latitude 18° 43' S. Longitude 138° 31' E. Elevation 136 m. 3.3 km from Adele's Grove, on Lawn Hill National Park Road.
- PI 612236. *Glycine falcata* Benth.**
Wild. G 2656; IL 1431; SY9910940. Collected 05/22/1987 in Northern Territory, Australia. Latitude 19° 55' S. Longitude 137° 59' E. Elevation 240 m. 31.1 km west of Camooweal, just in Northern Territory.
- PI 612237. *Glycine falcata* Benth.**
Wild. G 2657; IL 1432; SY9910941. Collected 05/22/1987 in Northern Territory, Australia. Latitude 19° 20' S. Longitude 136° 3' E. Elevation 230 m. 51.7 km north of Barkly Roadhouse, 2.2 km south of Alroy turn.
- PI 612238. *Glycine falcata* Benth.**
Wild. 01046; IL 1433; G 2658; SY9910942. Collected 05/23/1987 in Northern Territory, Australia. Latitude 17° 33' S. Longitude 133° 34' E. Elevation 210 m. Northern end of Airstrip, Elliott.
- PI 612239. *Glycine falcata* Benth.**
Wild. G 2659; IL 1434; SY9910943. Collected 05/23/1987 in Northern Territory, Australia. Latitude 17° 17' S. Longitude 133° 27' E. Elevation 210 m. 16.3 km north of Newcastle Waters turn.

The following were collected by Asian Vegetable Research and Development Center, P.O. Box 42, Shanhua, Tainan, Taiwan. Donated by S. Shanmugasundaram, Asian Vegetable Research & Dev. Center, P.O. Box 42, Shunhua, Tainan, Taiwan. Received 11/30/1999.

PI 612240. *Neonotonia wightii* (Wight & Arn.) J. A. Lackey
Wild. G 5156; L Acc 351; SY9910944. Collected in Taiwan. Probably *Neonotonia wightii*.

PI 612241. *Neonotonia wightii* (Wight & Arn.) J. A. Lackey
Wild. G 5158; L Acc 352; SY9910945. Collected in Taiwan. Probably *Neonotonia wightii*.

The following were developed by C.D. Hanbury, Agriculture Western Australia, 3 Baron-Hay Court, South Perth, Western Australia 6151, Australia; K.H.M. Siddique, Agriculture Western Australia, Plant Research and Development Service, 3 Baron-Way Court, South Perth, Western Australia 6151, Australia. Received 11/08/1999.

PI 612242. *Lathyrus cicera* L.

Cultivar. Pureline. "CHALUS"; ATC 80490. CV-175. Pedigree - Selection from IFLA 1279 from ICARDA, Aleppo. Syria. Yields on average 5% more than Lath-BC in 15 trial sites across southern Australia. At dry sites within Western Australia, average yield equivalent to or greater than *Pisum sativum* cv. Dundale. Flowers 4-6 days earlier than Lath-BC and about 20 days later than Dundale. Finishes flowering before Dundale and has rapid seed filling. Maturity reached at approx. same time as Dundale. Not susceptible to black spot disease (*Mycosphaerella pinoides*). Bean Yellow Mosaic Virus has been observed to infect but no other diseases have been recorded in Australia. The ODAP concentration in the seed has been shown to be consistently very low (0.09%), in comparison to Lath-BC (0.16%). Average seed weight 66 mg, compared to 55 mg for Lath-BC. Protein levels approx. 27% with lysine content 6.1% g/16g N. Feeding studies with grain show that pigs have equivalent growth to a standard soybean based diet. Preliminary work with poultry, sheep and cattle indicate good performance as a protein source.

The following were developed by K.H.M. Siddique, Agriculture Western Australia, Plant Research and Development Service, 3 Baron-Way Court, South Perth, Western Australia 6151, Australia. Received 11/08/1999.

PI 612243. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. Pureline. "CUMRA"; ILL590. CV-10. Pedigree - Derived from propagation of a single plant from accession ILL590 from ICARDA, Aleppo, Syria. ILL 590 is a selection from PI 339319 collected near Yowk Kirko, Turkey. Outyielded current cultivars in many low rainfall areas (<350 mm) with terminal stress in southern Australia. On average, produces 10% less yield than Digger in Western Australia, but 10% greater yield at sites with low yield potential. Grows taller than Digger and Northfield, and flowers earlier than all cultivars tested in the trials (flowering begins about 86 days after sowing compared to 93 days for Digger). Slightly more susceptible to *Ascochyta* blight (*Ascochyta lentis*) than Digger. Plants erect and compact with a slender stem. Anthocyanin pigmentation in the stem is absent/weak. Leaflets long (20 mm), yellow

green (light) in color, and alternate with an elongated oval shape. Approx. 11.9 leaflets/leaf. Rachis length long (40mm) with long tendrils (29mm). Usually three flowers/peduncle that are white with blue veins. Pods bivalve, rhomboid with two ovules. Seed biconvex, plain, with uniform reddish-brown testa and red cotyledons. Seed quality similar to Digger, but seed size large (4.03 g/100 seeds).

The following were developed by Tanveer N. Khan, Department of Agriculture, Division of Plant Industries, Crop Industries Branch, South Perth, Western Australia 6151, Australia; K.H.M. Siddique, Agriculture Western Australia, Plant Research and Development Service, 3 Baron-Way Court, South Perth, Western Australia 6151, Australia. Received 11/08/1999.

PI 612244. *Cicer arietinum* L.

Cultivar. Pureline. "SONA"; ICCV 88202. CV-176. Pedigree - ICCX 770004-BP-4P-1P-1P-1P-BP. Produces 10-15% greater seed yield than Tyson. Best seed quality among all commercial cultivars in Australia. Plant has early branch habit, semi-erect and medium in height (641 mm). Primary branches erect and average about four/plant. Stem woody and anthocyanin pigmentation is absent to weak. Leaves large (15 mm long by 8 mm wide) and light/medium green in color. Plant produces purplish pink (0.2% white) flowers and medium/long peduncle. Pods medium/large, short beak, medium green in color, and average 1.70 ovules/pod. Seeds medium/large (17 to 20 g/100 seeds), have an angular shape and medium ribbing. Seed color at ripening light green, and the coat color at maturity is light yellow fading to cream/yellow with age. Flowers approx. 92 days after sowing in Western Australia compared to 107 and 109 days for Tyson and Doen, respectively. Some resistance to *Fusarium wilt*, but is moderately susceptible to *Ascochyta blight* (*Ascochyta rabiei*).

The following were developed by K.H.M. Siddique, Agriculture Western Australia, Plant Research and Development Service, 3 Baron-Way Court, South Perth, Western Australia 6151, Australia. Received 11/08/1999.

PI 612245. *Lens culinaris* Medik. *subsp. culinaris*

Cultivar. Pureline. "CASSAB"; ILL7200. CV-11. Pedigree - Derived from propagation of single plant selection from accession ILL7200 from ICARDA, Aleppo, Syria. Outyielded all current cultivars at most locations in southern Australia. Flowers earlier than all cvs. tested in the trials, beginning at about 90 days after sowing, compared to 93 days for Digger. On average, produces 10-15% greater yield than Digger in Western Australia. Similar height and quality to Digger. Shows moderate field resistance to fungal diseases (*Ascochyta lentis*) which is similar to Digger. Plant type erect, tall and compact with a slender stem. Stem anthocyanins absent or weak. Leaflets medium green, medium length (13.5mm), alternate and have oval shape. Approx. 13.4 leaflets per leaf. Rachis length medium (34mm) and tendril length short-medium (13.5mm). Usually three flowers per peduncle that are white with purple veins. Pods bivalve, rhomboid with two ovules. Seed biconvex with uniform reddish-brown testa, red cotyledons, and a large seed size (3.92 g/100 seeds).

The following were developed by Tanveer N. Khan, Department of Agriculture, Division of Plant Industries, Crop Industries Branch, South Perth, Western

Australia 6151, Australia; K.H.M. Siddique, Agriculture Western Australia, Plant Research and Development Service, 3 Baron-Way Court, South Perth, Western Australia 6151, Australia. Received 11/08/1999.

PI 612246. *Cicer arietinum* L.

Cultivar. Pureline. "HEERA"; ICC 14880. CV-177. Pedigree - Single plant selection from accession ICC 14880 from ICRISAT, Hyderabad India. Yields greater than Tyson (10-15%) in the medium (350-450mm) and low rainfall (<350mm) areas of Western Australia, with a greater yield potential in areas of medium rainfall. Plant has early branch habit, is semi-erect and medium to tall in height (65mm). Primary branches erect and average about four per plant. Stem woody and the anthocyanin pigmentation absent to weak. Leaves large (23 mm long by 7.5 mm wide) and light/medium green in color. Plant produces purplish pink (0.7% white) flowers and medium/long peduncle. Pods medium/large, short beak, medium green color, average 1.55 ovules per pod. Seeds medium/large (17 to 20g/100 seeds), have an angular shape and medium ribbing. Seed color at ripening dark green, and coat color at maturity dark beige. Intensity of color fades with age. Starts to flower approx. 95 days after sowing in WA compared to 107 and 109 days for Tyson and Dooen, respectively. Susceptible to Ascochyta blight (*Ascochyta rabiei*).

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 05/18/1989.

PI 612247. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. M89-15; W6 32. Collected 04/19/1989 in Morocco. Latitude 34° 5' N. Longitude 4° 57' W. Fes. Market place. Seed small.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington 99164-6434, United States; Calvin R. Sperling, USDA, ARS, Natl. Germplasm Resources Laboratory, Room 402, Building 003, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 09/15/1989.

PI 612248. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. 050689-0304; W6 2019. Collected 06/05/1989 in Mardin, Turkey. Latitude 37° 33' N. Longitude 41° 1' E. Elevation 1050 m. Scattered oak scrub. Thin rocky soil. Rocky limestone. W and N facing slopes. 5.8km E of Dereici on road from Savur to Midyat. Cotyledon small, red. Mottled variable. Population sampled.

PI 612249. *Lens culinaris* subsp. *orientalis* (Boiss.) Ponert

Wild. 150689-0101; Lo 0213; W6 2125. Collected 06/15/1989 in Malatya, Turkey. Latitude 38° 23' N. Longitude 37° 36' E. Elevation 1710 m. Plants occasional among rocks. Steep rocky slopes (40% slope). Malatya-Kayseri road, 73km from Malatya, just before village of Yukariulupinar. Seeds sieved from soil.

The following were donated by Miho Mihov, Institute for Wheat and Sunflower, "Dobroudja" 9520, General Toschevo, Tolbukhin 9520, Bulgaria. Received 12/11/1991.

- PI 612250. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 89-51-2; W6 8429. Pedigree - F3 generation of IWS accession numbers 337/HC1414. Red chief/Naslada.
- PI 612251. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 88-58-2; W6 8435. Pedigree - F4 generation of IWS accession numbers HC1414/610/81. Naslada/Russian Line.
- PI 612252. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 87-23-1-1; W6 8440. Pedigree - F5 generation of IWS accession numbers 48/HC972. Obr.chiflik7/Jana.
- PI 612253. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 86-52-2-1; W6 8444. Pedigree - F6 generation of IWS accession numbers 337/23a. Red chief/Line 23a.
- PI 612254. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 85-2-1-2; W6 8445. Pedigree - F7 generation of IWS accession numbers HC1414/972. Naslada/Jana.
- PI 612255. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 90-22; W6 10051. Pedigree - 1121 Chile/Precoz, F2 generation. Seeds were produced in the greenhouse.
- PI 612256. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 88-47-1-1; W6 10055. Pedigree - Mizia/Red Chief, F4 generation. Seeds were produced in the field.
- PI 612257. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. SH 85-35-1-8-3-1; W6 10058. Pedigree - Naslada/Tadj.95/50Gy, F7 generation. Seeds were produced in the field.

The following were collected by Richard M. Hannan, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 08/24/1992.

- PI 612258. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. B92-113; No. 2; W6 10802. Collected 07/02/1992 in Russian Federation. Latitude 40° 25' 8" N. Longitude 69° 56' 20" E. Tadjhikskaja.
- PI 612259. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. B92-120; No. 15; W6 10804. Collected 07/02/1992 in Bulgaria. Afghanistan-1, Institute for Introduction/Sadovo.
- PI 612260. *Lens culinaris* Medik. subsp. *culinaris***
Cultivated. B92-121; No. 16; W6 10805. Collected 07/02/1992 in Czechoslovakia. Ozima ruzova. Not Found - RW.

PI 612261. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. B92-123; No. 18; W6 10807. Collected 07/02/1992 in Russian Federation. Azerbaydzhan.

PI 612262. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. B92-136; No. 48; W6 10819. Collected 07/02/1992 in Ruse, Bulgaria. Latitude 43° 50' N. Longitude 25° 57' E. Obrastzov chiflik-7. Lat/lon accurate to Obrastzov Chiflik.

PI 612263. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. B92-209; No. 316; W6 10891. Collected 07/02/1992 in Czechoslovakia. Ocula. Not Found - RW.

The following were donated by Ludmila Krokmal, Kharkov Agrarian University, Kharkov, Kharkiv, Ukraine. Received 01/30/1993.

PI 612264. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. Krokmal #10; W6 11352. Large seeded lentil introduced into the Ukraine from Czechoslovakia.

The following were collected by Mohammad El Hadi, Washington State University, Crops and Soils Dept., Johnson Hall, Pullman, Washington 99164, United States. Received 05/21/1993.

PI 612265. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. W6 11576. Collected 04/29/1993 in Morocco. Latitude 31° 30' N. Longitude 8° 5' W. Marrakech. Market.

The following were donated by Institute of Introduction and Plant Genetic Resources, K. Malkov Agric. Exp. Stat., Sadovo, Plovdiv 4122, Bulgaria. Received 01/01/1987.

PI 612266. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "LARISA"; W6 12009.

PI 612267. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "N 208"; W6 12010.

PI 612268. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "N 208a"; W6 12011.

PI 612269. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "N 276"; W6 12013.

PI 612270. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "N 276a"; W6 12014.

PI 612271. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "N 378"; W6 12016.

PI 612272. *Lens culinaris* Medik. subsp. *culinaris*
Cultivar. "N 419"; W6 12017.

PI 612273. *Lens culinaris* Medik. **subsp. culinaris**
Cultivar. "N 74"; W6 12019.

PI 612274. *Lens culinaris* Medik. **subsp. culinaris**
Cultivar. "SADOVO 1"; W6 12020.

The following were donated by V.E. Wilson, Agricultural Research Service --
USDA, Western Regional PI Station, Washington State University, Pullman,
Washington 99164, United States. Received 01/01/1976.

PI 612275. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Aleppo 1; W6 14909. Collected in Syria. Latitude 36° 14'
N. Longitude 37° 10' E. Aleppo.

PI 612276. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Aleppo 2; W6 14910. Collected in Syria. Latitude 36° 14'
N. Longitude 37° 10' E. Aleppo.

PI 612277. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Sulmiah 5; W6 14913. Collected in Syria. Sulmiah. Not Found
- RW.

PI 612278. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Reeha 6; W6 14914. Collected in Syria. Reeha. Not Found -
RW.

PI 612279. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Edlab 7; W6 14915. Collected in Syria. Edlab. Not Found -
RW.

PI 612280. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. El-Sueyda 8; W6 14916. Collected in Syria. El-Sueyda. Not
Found - RW.

PI 612281. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Huran 9; W6 14917. Collected in Syria. Huran. Not Found -
RW.

PI 612282. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Harem 10; W6 14918. Collected in Syria. Latitude 36° 12'
N. Longitude 36° 31' E. Harem.

PI 612283. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. El-Ghab 11; W6 14919. Collected in Syria. Latitude 35°
30' N. Longitude 36° 18' E. El-Ghab. Lat/lon accurate to El-Ghab.

PI 612284. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Safeeta 12; W6 14920. Collected in Syria. Safeeta. Location
uncertain - RW.

PI 612285. *Lens culinaris* Medik. **subsp. culinaris**
Cultivated. Homs 14; W6 14922. Collected in Syria. Latitude 34° 44'
N. Longitude 36° 43' E. Homs. Lat/lon accurate to Homs.

PI 612286. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. Domma 15; W6 14923. Collected in Syria. Dooma. Not Found -
RW.

PI 612287. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. Van Wilson 16; W6 14924. Collected in Syria.

The following were donated by K.H. Evans, USDA Regional Pulse Improvement
Project, Tehran, Tehran, Iran. Received 03/01/1979.

PI 612288. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. RPIP 33-032-10199; W6 14925. Collected in Chile.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State
University, Regional Plant Introduction Station, Pullman, Washington
99164-6402, United States; Brett K. Kaiser, Calle Marquede Viana, 24, 5a,
Madrid, Madrid, Spain. Received 05/16/1994.

PI 612289. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. BKK&WJK-1; W6 15593. Collected 03/29/1994 in Zamora, Spain.
Latitude 41° 30' N. Longitude 5° 45' W. Zamora. Seed originally
came from Armuna area, Salamanca Province.

The following were donated by International Board for Plant Genetic
Resources, AGPG, FAO, Via della terme de Caracalla, Rome, Latium 00100,
Italy. Received 05/27/1994.

PI 612290. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2730(4); W6 15655. Collected in Pakistan.

PI 612291. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2735(4); W6 15656. Collected in Pakistan.

PI 612292. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2745(3); W6 15659. Collected in Pakistan.

PI 612293. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2748(4); W6 15661. Collected in Pakistan.

PI 612294. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2749(8); W6 15662. Collected in Pakistan.

PI 612295. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2751(8); W6 15663. Collected in Pakistan.

PI 612296. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2758(5); W6 15668. Collected in Pakistan.

PI 612297. *Lens culinaris* Medik. subsp. *culinaris*
Cultivated. 2795(3); W6 15670. Collected in Pakistan.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State
University, Regional Plant Introduction Station, Pullman, Washington

99164-6402, United States; Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington
99164-6434, United States. Donated by Ismail Kusmenoglu, Central Research Inst. of Field Crops, Ministry of Agriculture, P.O. Box 226, Ulus, Ankara 06042, Turkey. Received 1994.

PI 612298. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. WJK94-T29; W6 16238; Sazak 91. Collected 06/1994 in Turkey. A large red cotyledon line developed by the Transitional Zone Research Institute, Eskisehir, Turkey.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington
99164-6402, United States; Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington
99164-6434, United States. Received 1994.

PI 612299. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. WJK94-T50; W6 16259. Collected 06/02/1994 in Turkey. Latitude 37° 55' N. Longitude 40° 14' E. Elevation 690 m. In farmer's field about 6-7 km NW of the village of Karacoli near Diyarbakir. Lat/lon accurate to Diyarbakir.

PI 612300. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. WJK94-T51; W6 16260. Collected 06/02/1994 in Turkey. Latitude 37° 55' N. Longitude 40° 14' E. Elevation 690 m. In farmer's field about 6-7 km NW of the village of Karacoli near Diyarbakir. Lat/lon accurate to Diyarbakir.

PI 612301. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "Jordan 3"; W6 17066. Collected 05/20/1995 in Jordan. Elevation 700 m. Mushaqar. Not Found - RW. Yellow cotyledon cultivar.

PI 612302. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "Jordan 1"; W6 17081. Collected 05/21/1995 in Jordan. Latitude 32° 37' N. Longitude 35° 53' E. Elevation 520 m. Maru. Collected seed from the Ministry of Agriculture Research Statio. Yellow cotyledone type.

PI 612303. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "Jordan 2"; W6 17082. Collected 05/21/1995 in Jordan. Latitude 32° 37' N. Longitude 35° 53' E. Elevation 520 m. Maru. Collected seed from the Ministry of Agriculture Research Statio. Red cotyledon type.

The following were donated by Institute of Introduction and Plant Genetic Resources, K. Malkov Agric. Exp. Stat., Sadovo, Plovdiv 4122, Bulgaria. Received 1995.

PI 612304. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "NPO-2"; W6 17272.

PI 612305. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "84205001"; W6 17274.

PI 612306. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "Zimna lesta"; W6 17276.

PI 612307. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "86E286"; W6 17277.

The following were developed by Dept. of Scientific & Industrial Res., Crops Research Division, Christchurch, South Island, New Zealand. Donated by Harold Blain, Washington/Idaho Dry Pea, and Lentil Commission, Moscow, Idaho 83843, United States; Fred J. Muehlbauer, USDA, ARS, Washington State University, Grain Legume Genetics & Phys. Res. Unit, Pullman, Washington 99164-6434, United States. Received 1995.

PI 612308. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. W6 17279. Red cotyledon.

The following were collected by Higmat Demiri, Agricultural Research Institute, Lushnja, Albania. Donated by George A. White, USDA-ARS, Beltsville Agricultural Research Ctr., Bldg. 001, 3rd Floor, Barc-West, Beltsville, Maryland 20705, United States. Received 11/1994.

PI 612309. *Lens culinaris* Medik. subsp. *culinaris*

Cultivar. "VENDREZHA"; W6 19086. Collected 11/1994 in Albania. Latitude 40° 56' 57" N. Longitude 19° 41' 2" E. Elevation 18 m. From city of Lushnje.

The following were donated by National Agricultural Research Centre, Pakistan Agricultural Research Council, P.O. National Health Laboratories, Islamabad, Pakistan; Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 02/10/1997.

PI 612310. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. W6 19112. It is a small seeded type with orange cotyledons. From lentil line Number 6.

PI 612311. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. W6 19113. It is a small seeded type with orange cotyledons. From lentil line Number 17.

The following were donated by Adrian Russell, Crop & Food Research, Lincoln, Private Bag 4704, Christchurch, South Island, New Zealand; Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 07/1997.

PI 612312. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. "Titore"; SD96-18; W6 19133.

The following were collected by Luigi Guarino, IBPGR, c/o Agric. Research Institute, P.O. Box 2016, Nicosia, Cyprus. Donated by Paul Quek, International Plant Genetics Resources Institute, Regional Office for Asia, the Pacific and Oceania, c/o IDRC, 7th Storey, RELC Building, Singapore. Received 11/21/1994.

PI 612313. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. 15019; W6 19138. Collected 11/1994 in Saudi Arabia.

PI 612314. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. 15021; W6 19139. Collected 11/1994 in Saudi Arabia.

PI 612315. *Lens culinaris* Medik. subsp. *culinaris*

Cultivated. 15058; W6 19140. Collected 11/1994 in Saudi Arabia.

The following were collected by James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States; J. Scott Cameron, Washington State University, Research & Extension Unit, 1919 NE 78th St., Vancouver, Washington 98665, United States; Arturo Lavin, Instituto de Investigaciones Agropecuarias, Subestacion Experimental Cauquenes, Camino A Parral-KM 3,5, Cauquenes, Chile. Developed by Washington State University, SW Washington Research Unit, 1919 NE 78th St., Vancouver, Washington 98665, United States. Donated by J. Scott Cameron, Washington State University, Research & Extension Unit, 1919 NE 78th St., Vancouver, Washington 98665, United States. Received 02/25/1992.

PI 612316. *Fragaria chiloensis* f. *patagonica* Staudt

Breeding. *F. chiloensis* 2 Mar Brava 1A; CFRA 1088; 2 BRA 1A. Collected 1992 in Chile. Latitude 41° 50' S. Longitude 73° 38' W. Elevation 0 m. Mar Brava. Pedigree - Collected from the wild in Chile. Additional collection information forthcoming.

The following were collected by James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States; J. Scott Cameron, Washington State University, Research & Extension Unit, 1919 NE 78th St., Vancouver, Washington 98665, United States; Arturo Lavin, Instituto de Investigaciones Agropecuarias, Subestacion Experimental Cauquenes, Camino A Parral-KM 3,5, Cauquenes, Chile. Developed by Washington State University, SW Washington Research Unit, 1919 NE 78th St., Vancouver, Washington 98665, United States. Donated by J. Scott Cameron, Washington State University, Research & Extension Unit, 1919 NE 78th St., Vancouver, Washington 98665, United States; Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 02/25/1992.

PI 612317. *Fragaria chiloensis* f. *patagonica* Staudt

Breeding. *F. chiloensis* 2 La Tapera 4B Elite #1; CFRA 1092; 2 TAP 4B. Collected 1992 in Chile. Latitude 44° 39' S. Longitude 71° 42' W. Elevation 0 m. La Tapera. Pedigree - Collected from the wild in Chile. Additional collection information forthcoming.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Hancock. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 04/23/1996.

PI 612318. *Fragaria chiloensis* (L.) Mill.

Wild. NAH 3; *F. chiloensis*; CFRA 1480. Collected 04/01/1996 in Tungurahua, Ecuador. Latitude 1° 17' S. Longitude 78° 38' W. Elevation 3000 m. 2 km east of Huachi Grande. Commercial field of Manuel and Victor Salinas's neighbor. Volcanic ash, very dry - as Popenoe 1921 described annual rainfall, plants are not irrigated. Field has been Huachi strawberry for 100-250 years. Plants spaced about 1 plant per 0.3 square meter. Pedigree - collected from the wild in Tungurahua, Ecuador.

The following were collected by Jerry A. Payne, Wildlife Biology Department, Rt. 5, Box 180, Forsyth, Georgia 31029, United States. Donated by James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States. Received 11/15/1995.

PI 612319. *Fragaria virginiana* Mill.

Wild. JP 95-9-1; *F. virginiana*; CFRA 1451. Collected 09/12/1995 in Georgia, United States. Pedigree - collected from the wild in Georgia.

The following were collected by Jerry A. Payne, Wildlife Biology Department, Rt. 5, Box 180, Forsyth, Georgia 31029, United States. Donated by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States; James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States. Received 11/15/1995.

PI 612320. *Fragaria virginiana* Mill.

Wild. JP 95-9-6; *F. virginiana*; CFRA 1455. Collected 09/12/1995 in Georgia, United States. Pedigree - collected from the wild in Georgia.

The following were collected by James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States; Karen A. Williams, USDA, ARS, Natl. Germplasm Resources Laboratory, Building 003, Room 402, BARC-West, Beltsville, Maryland 20705-2350, United States; Jerry A. Payne, Wildlife Biology Department, Rt. 5, Box 180, Forsyth, Georgia 31029, United States. Donated by James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States. Received 08/29/1996.

PI 612321. *Fragaria virginiana* Mill.

Wild. *F. virginiana* NC 96-19-1; NC 96-19-1; CFRA 1515. Collected 07/10/1996 in Alabama, United States. Latitude 32° 32' 21" N. Longitude 85° 28' 26" W. County road 159, 0.5 mile north of county road 010, just south of Martin Marietta quarry, Lee county. Mixed open woodland and roadsides. Sandy loam surface soil. *Fragaria virginiana* abundant. *V. stamineum* scattered. Longleaf pine, *P. taeda* on site, along with scattered *J. virginiana*. *Crataegus uniflora* was the only hawthorn present. Pedigree - collected from the wild in Alabama. USDA Sponsored plant collecting expedition, 1996.

PI 612322. *Fragaria virginiana* Mill.

Wild. *F. virginiana* NC 96-22-1; NC 96-22-1; CFRA 1524. Collected 07/10/1996 in Alabama, United States. Latitude 33° 0' 32" N. Longitude 85° 21' 54" W. Along U.S. 431, 0.9 mile north of Lafayette, Chambers county, Alabama. Roadsides and woods edge. Site very dry at present and plants wilted. Pedigree - collected from the wild in Alabama. USDA Sponsored plant collecting expedition, 1996.

PI 612323. *Fragaria virginiana* Mill.

Wild. *F. virginiana* NC 96-35-2; NC 96-35-2; CFRA 1557. Collected 07/14/1996 in Alabama, United States. Latitude 32° 43' 55" N. Longitude 87° 59' 44" W. On the right side of the road for about 200 yards up county road 148. County road 148 turns left off of highway 20, 2.3 miles east of Boligee, Greene county, Alabama. Roadside and ditch. One shrubby form of fragrant sumac noted also. Pedigree - collected from the wild in Alabama. USDA Sponsored plant collecting expedition, 1996.

PI 612324. *Fragaria virginiana* Mill.

Wild. *F. virginiana* NC 96-48-1; NC 96-48-1; CFRA 1580. Collected 07/21/1996 in South Carolina, United States. Latitude 34° 40' 51" N. Longitude 81° 14' 47" W. Trail to Caney Creek Falls in Chester State Park. The park is on SC 72, just west of Chester, Chester county, South Carolina. Heavy shade in the last low area along trail before reaching the dam of the lake. The site has year round moisture. *Vaccinium arboreum* (sparkleberry), *Viburnum prunifolium* (black haw), *Rosa carolina* and *Rhus aromatica*. Pedigree - collected from the wild in South Carolina. USDA Sponsored plant collecting expedition, 1996.

The following were collected by James R. Ballington, North Carolina State University, Department of Horticultural Sciences, Box 7609, Raleigh, North Carolina 27695-7609, United States. Received 06/27/1996.

PI 612325. *Fragaria virginiana* Mill.

Wild. *F. virginiana*; NC 96-5-3; CFRA 1620. Collected 05/14/1996 in North Carolina, United States. Latitude 34° 56' 29" N. Longitude 77° 14' 21" W. Roadside on the right, headed north on highway US 17; 1.3 miles south of Chadwick, Jones county, North Carolina. Scattered near woods edge and in disturbed roadside. Primarily pine overstory. Pedigree - collected from the wild in North Carolina. USDA Sponsored plant collecting expedition, 1996.

The following were developed by C.L. Roberts, New Mexico State University, Department of Agronomy and Horticulture, Las Cruces, New Mexico 88003, United States; Roy G. Cantrell, New Mexico State University, Agronomy and Horticulture Dept., P.O. Box 30003, Las Cruces, New Mexico 88003, United States; C. Waddell, New Mexico State University, Dept. of Agronomy and Horticulture, Las Cruces, New Mexico 88003-8003, United States. Received 11/19/1999.

PI 612326. *Gossypium hirsutum* L.

Cultivar. Pureline. "Acala 1517-99"; B8073. CV-115; PVP 200000181. Pedigree - B742/E1141. Growth habit indeterminate and foliage dense. Plant height at maturity approx. 105 cm. Bolls ovate and averaged 2.6 g of lint. Fiber length excellent, averaging 31 mm for 2.5% span length.

Tolerance to Verticillium wilt (*Verticillium dahliae*) high. Resistant to races 1, 2, and 10 of bacterial blight (*Xanthomonas campestris*) based on artificial field inoculation experiments. Lint percent averaged 40.2% in hand-picked samples.

The following were developed by Dick Davis, New Mexico State University, Dept of Agronomy, P.O. Box 30003, Las Cruces, New Mexico 88003-0003, United States; Roy G. Cantrell, New Mexico State University, Agronomy and Horticulture Dept., P.O. Box 30003, Las Cruces, New Mexico 88003, United States. Received 11/29/1999.

PI 612327. *Gossypium hirsutum* L.

Genetic. Pureline. "NM24016". GS-1. Pedigree - H12156/2/77-505/Russian 5904. Inbred line derived from a *Gossypium hirsutum* X *G. barbadense* complex hybrid population. Introgression from *G. hirsutum* and *G. barbadense* was deliberate with the goal of achieving maximum stabilized expression of combinations of traits from both parental species. Approx. 63 percent of the genome sampled with DNA markers were similar to *G. hirsutum* and 37% similar to *G. barbadense*. Cream petals, yellow pollen, and no petal spot characterize the flowers. The pistil length approx. 3.6 mm. Bolls elongated with an average of 3.3 locules and a dimpled surface. Calyx tooth shape acuminate to obtuse and similar to typical *G. hirsutum*. Ginned seed fuzzy. Fiber length, measured by 2.5% span length on the Uster Fibrograph 730 averaged 33.1 mm. Fiber strength, as measured by a 3.2-mm gauge stelometer, averaged 234.4 kN m kg-1.

The following were developed by LBNR, Austria. Donated by Bundesanstalt fur Zuchtungsforchung, an Kulturpflanzen (BAZ) - Genebank, Bundesallee 50, Braunschweig, Lower Saxony D-38116, Germany. Received 12/10/1999.

PI 612328. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. BIKORES; IDBBNR 10469; BGRCNR 65458; W6 22050. Garden Beet.

The following were donated by Bundesanstalt fur Zuchtungsforchung, an Kulturpflanzen (BAZ) - Genebank, Bundesallee 50, Braunschweig, Lower Saxony D-38116, Germany. Received 12/10/1999.

PI 612329. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. REGALA; IDBBNR 10470; BGRCNR 65461; W6 22051. Developed in Netherlands. Garden Beet.

PI 612330. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. REPLATA; IDBBNR 10471; BGRCNR 65462; W6 22052. Developed in Netherlands. Garden Beet.

PI 612331. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. DETROIT VUURBAL; IDBBNR 10472; BGRCNR 65467; W6 22053. Developed in Netherlands. Garden Beet.

PI 612332. *Beta vulgaris* L. subsp. *vulgaris*

Cultivar. EGYPTISCHE EGY; IDBBNR 10473; BGRCNR 65468; W6 22054. Developed in Netherlands. Garden Beet.

- PI 612333. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. MARNER ROTUNDA; IDBBNR 10474; BGRCNR 65469; W6 22055.
Developed in Germany. Garden Beet.
- PI 612334. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. ROdBETA SLOWBOLT; IDBBNR 10476; BGRCNR 65471; W6 22056.
Developed in Sweden. Garden Beet.
- PI 612335. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. JUWAKUGEL; IDBBNR 10480; BGRCNR 65476; W6 22057. Developed in
Germany. Garden Beet.
- PI 612336. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. ALBINO WHITE; IDBBNR 10496; BGRCNR 65510; W6 22065. Developed
in Canada. Garden Beet.
- PI 612337. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. KOGEL; IDBBNR 10482; BGRCNR 65482; W6 22059. Developed in
Netherlands. Garden Beet.
- PI 612338. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. DETROIT TYPE; IDBBNR 10487; BGRCNR 65494; W6 22060. Developed
in Denmark. Garden Beet.
- PI 612339. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. ALBINA VEREDUNA; IDBBNR 10490; BGRCNR 65501; W6 22061.
Developed in Netherlands. Garden Beet.
- PI 612340. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. BOLTARDY; IDBBNR 10491; BGRCNR 65503; W6 22062. Developed in
Netherlands. Garden Beet.
- PI 612341. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. KOGEL; IDBBNR 10493; BGRCNR 65505; W6 22063. Developed in
Netherlands. Garden Beet.
- PI 612342. *Beta vulgaris* L. subsp. *vulgaris***
Cultivar. ROTE KUGEL SPERLINGS BLUTA; IDBBNR 10495; BGRCNR 65509; W6
22064. Developed in Germany. Garden Beet.

The following were developed by Maurice Snook, USDA-ARS, Tobacco Quality and Safety Lab, P.O. Box 5677, Richard Russell Research Cntr, Athens, Georgia 30605, United States; Neil W. Widstrom, USDA, ARS, Crop genetics & Breeding Research Unit, Coastal Plains Experiment Station, Tifton, Georgia 31793-0748, United States; Brian T. Scully, University of Florida, Everglades Experiment Center, P.O. Box 8003, Belle Glade, Florida 33430, United States; Greg Nuessly, University of Florida, Everglades REC, 3200 E. Palm Beach Rd., Bell Glade, Florida 33430, United States; R. Beiriger, Everglades Research and Education Center, EFAS, University of Florida, 3200 Old Palm Beach Rd., Belle Grande, Florida 33430-8003, United States. Donated by Brian T. Scully, University of Florida, Everglades Experiment Center, P.O. Box 8003, Belle Glade, Florida 33430, United States. Received 10/26/1999.

- PI 612343. *Zea mays* L. subsp. *mays***
Breeding. Population. Shrunken Zapalote Chico; ZC sh2; ZAP. Chico shrunken; Zapalote Chico sh2. GP-361. Pedigree - Developed from simple

backcross procedure for a recessive gene. Zapalote Chico 2451 was the recurrent parent for the backcross. Sweet corn population developed to have improved resistance to the fall armyworm (*Spodoptera frugiperda*). The *sh2* and *a1* genes at positions 149.2 and 149.0 on 3L were introgressed into Zapalote Chico 2451 from Tifton, GA. Resistance based on chemical antibiosis and conferred by the flavone glycoside maysin and its chemical analogues. Maysin is primarily expressed in emerging silk and specifically conveys resistance to Lepidoptera insects entering through the silk channel. Maysin levels in the fresh silk averages 0.97%, and exceeded the 0.2% level commonly considered adequate for resistance.

The following were developed by Richard L. Bernard, USDA-ARS, University of Illinois, Department of Agronomy, Urbana, Illinois 61801, United States. Donated by Cecil Nickels, University of Illinois, Dept. of Agronomy, Urbana, Illinois 61801, United States. Received 01/21/2000.

PI 612344. *Glycine max* (L.) Merr.

Breeding. Pureline. L78-4094; SY0001001. Pedigree - Beeson X (Clark 2 X PI 84946-2). Brown Stem Rot resistant (Rbs1).

The following were developed by Levelland Delinting, Inc., United States. Received 12/14/1999.

PI 612345. *Gossypium hirsutum* L.

Cultivar. "ALL-TEX". PVP 200000054.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 12/14/1999.

PI 612346. *Lactuca sativa* L.

Cultivar. "WINTER QUEEN". PVP 200000055.

PI 612347. *Lactuca sativa* L.

Cultivar. "CAPTAIN COS". PVP 200000056.

The following were developed by Novartis Seeds, Inc., United States. Received 12/14/1999.

PI 612348 PVPO. *Phaseolus vulgaris* L.

Cultivar. "CAPRICORN". PVP 200000057.

The following were developed by Pogue Seed Company, Inc., United States. Received 12/14/1999.

PI 612349 PVPO. *Pennisetum ciliare* (L.) Link

Cultivar. "PS-560". PVP 200000058.

PI 612350 PVPO. *Pennisetum ciliare* (L.) Link

Cultivar. "PS-135". PVP 200000059.

PI 612351 PVPO. Pennisetum ciliare (L.) Link
Cultivar. "PS-XPN". PVP 200000060.

PI 612352 PVPO. Pennisetum ciliare (L.) Link
Cultivar. "PS-OT2". PVP 200000062.

The following were developed by Jarit (Aust) Pty. Ltd., Australia. Received 12/14/1999.

PI 612353 PVPO. Allium cepa L.
Cultivar. "5C RED". PVP 200000063.

The following were developed by W. James Grichar, Texas A&M University, Texas A&M Agric. Res. Station, P. O. Box 755, Yoakum, Texas 77995, United States; Mark A. Hussey, Texas A&M University, Department of Soil & Crop Sciences, Room 430, Heep Center, College Station, Texas 77843-2474, United States; G. Ray Smith, Texas A&M University, Research & Extension Center, P.O. Box E, Overton, Texas 75684-0290, United States; William R. Ocumpaugh, Texas A&M University, Texas Agricultural Exp. Station, 3507 Highway 59 E, Beeville, Texas 78102-9410, United States; James C. Read, Texas A&M University, Texas Agricultural Experiment Station, Research and Extension Center, Dallas, Texas 75252-6502, United States; W.D. Pitman, Rosepine Research Station, Louisiana State University Agric. Center, Rosepine, Louisiana 70659, United States; Texas Agricultural Experiment Station, Texas, United States; S.W. Coleman, USDA-ARS, Subtropical Agric. Res. Stn., Brooksville, Florida 34601, United States; D.H. Bade, Texas Coop. Ext., College Station, Texas 77843, United States; W.E. Pinchak, Texas Agricultural Experiment Station, Vernon, Texas, United States; J.P. Muir, Texas Agricultural Experiment Station, Stephenville, Texas, United States; R.A. Lane, Sam Houston State University, Huntsville, Texas, United States. Received 12/14/1999.

PI 612354. Medicago polymorpha L.
Cultivar. "ARMADILLO". PVP 200000064; CV-218. Pedigree - Result of 2 cycles of selection from a collection from naturalized stand collected from Pasture 18 at Tex. Agric. Res. Stn at Beeville, TX. Selection consisted of roguing out inferior plant types in spaced plants. Winter annual legume with high hard seed content, good freeze tolerance; proven to persist for years in pastures in Central and South Texas. Germinates with excellent vigor in fall with rains, grows throughout winter and matures and dies in April. Indeterminate flowering, seed sets over several weeks. Seeds set in burrs (about 5 seeds per burr) with spines about 1.4 to 1.6 mm long. Typically has seed mass of about 0.23 to 0.33 g per 100 sd. Forage yield normally about 4500 kg ha⁻¹ when grown as monoculture. Dry matter yields in perennial grass stand usually much less, but usually sufficient to replace most of N-fertilizer required in pasture systems in Central and South Tex.

The following were developed by Johnston Seed Company, United States. Received 12/14/1999.

PI 612355 PVPO. Cynodon dactylon (L.) Pers.
Cultivar. "WRANGLER". PVP 200000065.

The following were developed by Phytogen Seed Company, LLC, United States.
Received 12/14/1999.

PI 612356 PVPO. *Gossypium hirsutum* L.
Cultivar. "PSC413". PVP 9900288.

The following were developed by Novartis Seeds, Inc., United States. Received
12/14/1999.

PI 612357. *Zea mays* L. subsp. *mays*
Cultivar. "NP2138". PVP 9900405.

The following were donated by James N. Cummins, New York State Agric. Exp.
Station, Department of Horticultural Sciences, Geneva, New York 14456-0462,
United States. Received 06/09/1988.

PI 612358. *Malus domestica* Borkh.
Uncertain. GMAL 2833; Maruba.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell
University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United
States. Received 09/14/1998.

PI 612359. *Malus orientalis* Uglitzk.
Wild. RUS 98 02-01; GMAL 4467. Collected 07/25/1998 in Caucasus, Former
Soviet Union. Latitude 44° 55' 12" N. Longitude 38° E. Elevation
100 m. 5 km. south of Krymsk, near an ancient Greek village of Alevra.
Slight SE facing slope. The population area covered about 1 km.
Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*,
Prunus spinosa. Rainfall: 640 mm. annually. Leaves and seeds collected.

PI 612360. *Malus orientalis* Uglitzk.
Wild. RUS 98 02-02; GMAL 4468. Collected 07/25/1998 in Caucasus, Former
Soviet Union. Latitude 44° 55' 12" N. Longitude 38° E. Elevation
100 m. 5 km. south of Krymsk, near an ancient Greek village of Alevra.
Slight SE facing slope. The population area covered about 1 km.
Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*,
Prunus spinosa. Rainfall: 640 mm. annually. Leaves and seeds collected.

PI 612361. *Malus orientalis* Uglitzk.
Wild. RUS 98 02-03; GMAL 4469. Collected 07/25/1998 in Caucasus, Former
Soviet Union. Latitude 44° 55' 12" N. Longitude 38° E. Elevation
100 m. 5 km. south of Krymsk, near an ancient Greek village of Alevra.
Slight SE facing slope. The population area covered about 1 km.
Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*,
Prunus spinosa. Rainfall: 640 mm. annually. Leaves and seeds collected.

PI 612362. *Malus orientalis* Uglitzk.
Wild. RUS 98 02-04; GMAL 4470. Collected 07/25/1998 in Caucasus, Former
Soviet Union. Latitude 44° 55' 12" N. Longitude 38° E. Elevation
100 m. 5 km. south of Krymsk, near an ancient Greek village of Alevra.
Slight SE facing slope. The population area covered about 1 km.
Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*,
Prunus spinosa. Rainfall: 640 mm. annually. Leaves and seeds collected.

- PI 612363. *Malus orientalis* Uglitzk.**
Wild. RUS 98 02-05; GMAL 4471. Collected 07/25/1998 in Caucasus, Former Soviet Union. Latitude 44° 55' 12" N. Longitude 38° E. Elevation 100 m. 5 km. south of Krymsk, near an ancient Greek village of Alevra. Slight SE facing slope. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 640 mm. annually. Leaves and seeds collected.
- PI 612364. *Malus orientalis* Uglitzk.**
Wild. RUS 98 02-06; GMAL 4472. Collected 07/25/1998 in Caucasus, Former Soviet Union. Latitude 44° 55' 12" N. Longitude 38° E. Elevation 100 m. 5 km. south of Krymsk, near an ancient Greek village of Alevra. Slight SE facing slope. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 640 mm. annually. Leaves and seeds collected.
- PI 612365. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-01; GMAL 4473. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. 3 km. southwest of Shuntuk, 1 km. from nearest commercial apples. Slight NW facing slope along the edge of an open field. Trees were 35 to 80 years old. The population covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612366. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-02; GMAL 4474. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. 3 km. southwest of Shuntuk, 1 km. from nearest commercial apples. Slight NW facing slope along the edge of an open field. Trees were 35 to 80 years old. The population covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612367. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-03; GMAL 4475. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. Leaves and seeds collected.
- PI 612368. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-04; GMAL 4476. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. Leaves and seeds collected.
- PI 612369. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-05; GMAL 4477. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. Leaves and seeds collected.
- PI 612370. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-06; GMAL 4478. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. Leaves and seeds collected.
- PI 612371. *Malus orientalis* Uglitzk.**
Wild. RUS 98 03-07; GMAL 4479. Collected 07/26/1998 in Caucasus, Former

Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. Leaves and seeds collected.

PI 612372. *Malus orientalis* Uglitzk.

Wild. RUS 98 03-08; GMAL 4480. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 25' 48" N. Longitude 40° 9' E. Elevation 400 m. Leaves and seeds collected.

PI 612373. *Malus orientalis* Uglitzk.

Wild. RUS 98 04-01; GMAL 4481. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 24' 36" N. Longitude 40° 7' 12" E. Elevation 500 m. 7 km. southwest of Shuntuk, in the "Horse mound" area. Trees were 35 to 100 years old. The population area covered about 3 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

PI 612374. *Malus orientalis* Uglitzk.

Wild. RUS 98 04-02; GMAL 4482. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 24' 36" N. Longitude 40° 7' 12" E. Elevation 500 m. 7 km. southwest of Shuntuk, in the "Horse mound" area. Trees were 35 to 100 years old. The population area covered about 3 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

PI 612375. *Malus orientalis* Uglitzk.

Wild. RUS 98 04-03; GMAL 4483. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 24' 36" N. Longitude 40° 7' 12" E. Elevation 500 m. 7 km. southwest of Shuntuk, in the "Horse mound" area. Trees were 35 to 100 years old. The population area covered about 3 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

PI 612376. *Malus orientalis* Uglitzk.

Wild. RUS 98 04-04; GMAL 4484. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 24' 36" N. Longitude 40° 7' 12" E. Elevation 500 m. 7 km. southwest of Shuntuk, in the "Horse mound" area. Trees were 35 to 100 years old. The population area covered about 3 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

PI 612377. *Malus orientalis* Uglitzk.

Wild. RUS 98 04-05; GMAL 4485. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 24' 36" N. Longitude 40° 7' 12" E. Elevation 500 m. 7 km. southwest of Shuntuk, in the "Horse mound" area. Trees were 35 to 100 years old. The population area covered about 3 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

PI 612378. *Malus orientalis* Uglitzk.

Wild. RUS 98 04-06; GMAL 4486. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 24' 36" N. Longitude 40° 7' 12" E. Elevation 500 m. 7 km. southwest of Shuntuk, in the "Horse mound" area. Trees were 35 to 100 years old. The population area covered about 3 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

- PI 612379. *Malus orientalis*** Uglitzk.
Wild. RUS 98 05-01; GMAL 4487. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 27' N. Longitude 40° 12' 36" E. Elevation 300 m. 3 km. east of Shuntuk, along the Bileyi river with the limestone cliffs on the opposite bank of the river. Trees were 35 to 80 years old. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612380. *Malus orientalis*** Uglitzk.
Wild. RUS 98 05-02; GMAL 4488. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 27' N. Longitude 40° 12' 36" E. Elevation 300 m. 3 km. east of Shuntuk, along the Bileyi river with the limestone cliffs on the opposite bank of the river. Trees were 35 to 80 years old. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612381. *Malus orientalis*** Uglitzk.
Wild. RUS 98 05-03; GMAL 4489. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 27' N. Longitude 40° 12' 36" E. Elevation 300 m. 3 km. east of Shuntuk, along the Bileyi river with the limestone cliffs on the opposite bank of the river. Trees were 35 to 80 years old. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612382. *Malus orientalis*** Uglitzk.
Wild. RUS 98 05-04; GMAL 4490. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 27' N. Longitude 40° 12' 36" E. Elevation 300 m. 3 km. east of Shuntuk, along the Bileyi river with the limestone cliffs on the opposite bank of the river. Trees were 35 to 80 years old. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612383. *Malus orientalis*** Uglitzk.
Wild. RUS 98 05-05; GMAL 4491. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 27' N. Longitude 40° 12' 36" E. Elevation 300 m. 3 km. east of Shuntuk, along the Bileyi river with the limestone cliffs on the opposite bank of the river. Trees were 35 to 80 years old. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612384. *Malus orientalis*** Uglitzk.
Wild. RUS 98 05-06; GMAL 4492. Collected 07/26/1998 in Caucasus, Former Soviet Union. Latitude 44° 27' N. Longitude 40° 12' 36" E. Elevation 300 m. 3 km. east of Shuntuk, along the Bileyi river with the limestone cliffs on the opposite bank of the river. Trees were 35 to 80 years old. The population area covered about 1 km. Associated species: *Cornus mas*, *Pyrus sylvestris*, *Crataegus monogyna*, *Prunus spinosa*. Rainfall: 800-1000 mm. annually. Leaves and seeds collected.
- PI 612385. *Malus orientalis*** Uglitzk.
Wild. RUS 98 07-01; GMAL 4493. Collected 07/27/1998 in Caucasus, Former Soviet Union. Latitude 44° 13' 48" N. Longitude 40° 10' 48" E. Elevation

700 m. 25 km. south of Shuntuk, along mountain road. Associated species:
Cornus mas, Pyrus sylvestris, Crataegus monogyna, Prunus spinosa.
Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

PI 612386. Malus orientalis Uglitzk.

Wild. RUS 98 07-02; GMAL 4494. Collected 07/27/1998 in Caucasus, Former
Soviet Union. Latitude 44° 13' 48" N. Longitude 40° 10' 48" E. Elevation
700 m. 25 km. south of Shuntuk, along mountain road. Associated species:
Cornus mas, Pyrus sylvestris, Crataegus monogyna, Prunus spinosa.
Rainfall: 800-1000 mm. annually. Leaves and seeds collected.

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Solanum clarum (607863)
Solanum commersonii (607470)
Solanum demissum (607840-607841, 607849, 607868-607869, 607871, 607873, 607877-607879)
Solanum ehrenbergii (611097)
Solanum hintonii (607880)
Solanum iopetalum (607850-607851, 607854, 607859, 607865-607867, 607870, 607872, 607874-607876)
Solanum longiconicum (607471)
Solanum lycopersicoides (610463)
Solanum lycopersicum (611114-611115)
Solanum marinasense (607884)
Solanum medians (607894-607895)
Solanum megistacrolobum (607468)
Solanum megistacrolobum subsp. *toralapanum* (607882)
Solanum melongena (606709-606716)
Solanum microdontum (611080)
Solanum morelliforme (607858)
Solanum oxycarpum (607852-607853, 607855-607857, 607860-607862)
Solanum phureja (611098)
Solanum raphanifolium (607883, 607888)
Solanum santolallae (607887)
Solanum schenckii (607864)
Solanum sp. (607893)
Solanum stenotomum (607472)
Solanum stoloniferum (607842-607843, 607847)
Solanum suaveolens (610462)
Solanum tuberosum (607473, 607475-607502, 611066, 611068-611073, 611075-611079, 611083-611094, 611099-611103, 611105, 611107-611110)
Solanum tuberosum subsp. *andigenum* (607886, 611067, 611095)
Solanum verrucosum (607844-607846, 607848)
Solanum x *ajanhui* (611096)
Solanum x *chaucha* (611074)
Solanum x *edinense* (607474, 611082, 611104, 611106)
Solanum x *juzepczukii* (611081)
Sorbaria hybrid (607439)
Sorghum bicolor subsp. *bicolor* (606744-606747, 606788, 607900-607901, 607931-607932, 608862-610186, 610672-610749)
Sorghum sp. (607402-607409)
Spinacia oleracea (608762)

Spinacia tetrandra (608712)
Spinacia turkestanica (608713)
Spiraea alba (607440)
Stipa baicalensis (610844, 610879)
Stipa capillata (610867, 610875, 610890, 610993, 611003, 611154-611155)
Stipa sibirica (610877)
Tagetes patula (608580)
Tanacetum cinerariifolium (607441)
Tanacetum poteriifolium (607442)
Tanacetum vulgare (607443)
Trifolium alexandrinum (606771-606775)
Trifolium alpestre (611616, 611624, 611626-611629, 611650, 611652, 611655)
Trifolium badium (611636)
Trifolium beckwithii (611638)
Trifolium bolanderi (611642-611647)
Trifolium brandegeei (611663)
Trifolium caucasicum (611630, 611649, 611653-611654)
Trifolium ciliolatum (610455)
Trifolium diffusum (611648)
Trifolium eriocephalum (611664)
Trifolium fragiferum (611618, 611637)
Trifolium glomeratum (610458)
Trifolium heldreichianum (611623)
Trifolium hybridum (611631)
Trifolium lemmonii (611639)
Trifolium longipes subsp. *hansenii* (611640)
Trifolium medium (611632)
Trifolium microcephalum (610454)
Trifolium montanum (611617, 611633, 611651)
Trifolium obtusiflorum (610457)
Trifolium ochroleucum (611620-611621, 611634)
Trifolium pannonicum (611635)
Trifolium pratense (608374, 611619)
Trifolium repens (606770, 611622, 611625, 611656-611662)
Trifolium thompsonii (611641)
Trifolium willdenovii (610456)
Trisetum spicatum (610859, 610873, 610888)
Triticum aestivum subsp. *aestivum* (606717, 606726, 606754, 606765-606766,
606779-606780, 606786-606787, 607548-607549, 607557, 607569-607570,
607579, 607839, 608000-608001, 608007, 608016, 608031-608032, 608040,
608049, 608358-608373, 608582, 608672, 608714-608715, 608723, 608755,
608789, 608793-608796, 610188, 610202, 610212, 610260-610261, 610450,
610464-610487, 610750-610759, 611137, 611476-611477, 611602-611615,
611877-611882, 611936, 611942, 612142, 612153-612154)
Triticum aestivum subsp. *compactum* (606764)
Triticum aestivum subsp. *macha* (611470)
Triticum aestivum subsp. *spelta* (608792)
Triticum hybrid (611916-611917)
Triticum turgidum subsp. *durum* (607530-607531, 608002, 608756, 608790,
610666-610667, 610760-610781)
Triticum turgidum subsp. *polonicum* (608017)
Vaccaria hispanica subsp. *hispanica* (607444)
Viburnum opulus var. *americanum* (608013-608015)
Vigna unguiculata (606718-606721, 606724-606725, 606785, 607605-607624,
608035)
Vigna unguiculata subsp. *sesquipedalis* (606722-606723, 610513, 610515, 610528,
610561, 610582, 610595, 610606-610607)

Vigna unguiculata subsp. *unguiculata* (610496-610512, 610514, 610516-610527, 610529-610560, 610562-610581, 610583-610594, 610596-610605, 610608-610657)
Vitis monticola (608660)
Vitis sp. (608659)
X *Elytricum* sp. (611883, 611885-611888, 611890-611895, 611897, 611899-611900, 611902, 611904, 611910-611915, 611918, 611920-611925, 611927-611935, 611937, 611940-611941)
X *Elytriticale* sp. (611884, 611889, 611896, 611898, 611903, 611905-611909, 611926, 611938-611939)
X *Elytritolops* sp. (611901, 611919)
X *Triticosecale* sp. (608011, 610200-610201, 610224-610227, 611158-611469, 611475, 611665-611876)
Zea mays subsp. *mays* (606768-606769, 606795-606796, 607381-607384, 607386-607401, 607448-607450, 607512-607527, 607542-607547, 607551-607556, 607588-607604, 608452-608561, 608567, 608569-608573, 608588-608594, 608599-608657, 608764-608784, 608805-608806, 608821, 610187, 610213-610223, 610493-610494, 611116-611118, 611122-611123, 611125, 611127-611130, 611132-611135, 612116-612117, 612158-612163, 612166, 612343, 612357)
Zoysia japonica (607832-607833)
Zoysia matrella (607829-607831)