

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
KNOX CITY, TEXAS

NOTICE OF RELEASE OF POTTER COUNTY GERmplasm SPIKE DROPSEED
SELECTED CLASS OF NATURAL GERmplasm

The Natural Resources Conservation Service, U.S. Department of Agriculture announces the release of a selected ecotype of spike dropseed, *Sporobolus contractus* A.S. Hitchc.

As a selected release this plant will be referred to as Potter County Germplasm spike dropseed. It has been assigned the NRCS accession number 9042838. Potter County Germplasm is released as a selected class of certified seed (natural track).

This alternative release procedure is justified because there are presently no commercial varieties of spike dropseed available.

Collection Site Information: Potter County Germplasm was originally collected in 1984 from native plants located in the Canadian River bottomland approximately 18 miles north of Amarillo, TX (N. Lat. 35° 28' 30", W Long 101° 48' 30") in Potter County Texas. Elevation at the collection site is approximately 2975 feet; the soil at the collection site is classified as Lincoln Soils, frequently flooded. Average precipitation for the area is around 20 inches. Other plants growing in association included sand dropseed, little bluestem, switchgrass and yellow Indiangrass. The collection site is located in MLRA 78A - Rolling Plains, Northern Part.

Description: Potter County Germplasm is a perennial, warm-season, native bunchgrass. Spike dropseed occurs from western Texas up through Colorado and across through southeastern California and down across Sonora, Mexico. Plants are in small clumps usually 40-115 cm tall with a densely contracted and spikelike panicle. Panicle may be 15-50 cm long and .5-.7 cm wide. Leaf sheaths are rounded glabrous on back, usually with long white hairs on the collar. Leaf blades are 4-35 mm long, flat or becoming involute, 3-8 mm wide and tapering toward the tip. Plants reproduce from seed. Chromosome number reported as $2n=36$.

Method of Breeding and/or Selection: Potter County Germplasm was evaluation against 21 other accessions of the same species. It was selected as the top accession based on survivability, vigor and overall plant performance. At the Plant Materials Center in 1997 one harvest yielded 76 pounds of seed/acre and in 1998 two harvests yielded 102 pounds of seed/acre total.

Environmental Impact Assessment: Potter County Germplasm spike dropseed is a selection of naturally occurring germplasm and has been unaltered from its original collection. Potter County Germplasm did not meet the assessment of a plant which could become invasive based on guidelines adopted by the NRCS Plant Materials Program as outlined in the National Plant Materials Manual.

Conservation Use: Potter County Germplasm may be used in pure stands or as a component in seed mixtures for range seeding. Spike dropseed reseeds itself readily on ranges following overgrazing or drought. It may be used for stabilizing sandy soils that have high erosion potential. Its forage value is fairly palatable to all livestock. Wildlife can utilize the plants for food and ground nesting cover.

Anticipated Area of Adaptation: Potter County Germplasm's anticipated areas of adaptation is MLRAs 42, 77, 78, 80A,B, and the northern areas of 81A,B, in west and southwestern Texas and western Oklahoma. Spike dropseed is adapted to a wide range of soil types but will perform best on sandy loam soils, loamy fine sands and silty soils.

Availability of Plant Materials: Generation 0 seed (equivalent to Breeder seed) will be maintained by the USDA-NRCS Plant Materials Center at Knox City, Texas and is available in limited quantities to interested parties for increase purposes.

References:

Gould, F. W 1975. The Grasses of Texas. TAMU Press, College Station.

USDA-SCS Soil Survey, Potter County Texas, 1980.

Prepared by:

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Signatures for release of :

Potter County Germplasm spike dropseed (*Sporobolus contractus*)

Name

Date

John P. Burt, State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Temple, Texas

Name

Date

Director, Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

Attachment 1: Summary of Initial and Advanced Evaluation of *Sporobolus contractus*, spike dropseed

Initial Evaluation Summary

Accession - Origin	Foliage	Fol.Ht.	Seed Amt	Seed Fill	%Stand	Vigor
9035007	5	30	5	5	50	5.5
9042790	5.33	24	5	5	46.66	5.13
9042841	4.5		5	5	93.33	4.38
9029534	6	17	5.5	5	78.33	4.5
9035653 - Dickens Co., TX	4.33	37	5	5	90	4.13
9042858	4.5		5	5	83.33	4.38
9035895	5		4	5	88.33	4.75
9035902	4.5		6	5	86.66	4
9035852	4.33	21	5	5	66.66	4.38
9035813	5		5	5	83.33	4.75
9042857	5		5	5	73.33	4.5
9042819	4.5		5	5	95	4.25
9042782 - Gaines Co., TX	4.33	30	4	4	83.33	5.25
9042838 - Potter Co., TX	3.5		4	5	98.33	3.38
9042917 - Culberson Co., TX	5	17	3	3.5	76.66	4.13
9035928	5.5		5	5	90	3.75
9042804	4.66	27	5	5	81.66	4.88
9042908	5.33	24	5.5	5	86.66	4.75

3 -Year Summary of AE Selections of *Sporobolus contractus*, spike dropseed

Accession	% Survival	Vigor Rating: 1=best to 9=poor
9042838 - Potter Co., TX	77.8	4.97
9042917 - Culberson Co., TX	63.9	5.05
9035653 - Dickens Co., TX	44.4	6.05
9042782 - Gaines Co., TX	27.8	5.62

Initial Seed Increase Production Figures of Potter County Germplasm, spike dropseed

Production Year	Area Planted	Production	Converted Lbs./ac.
1999	.20 ac.	58 lbs.	232 lbs.
1998	.20 ac.	46 lbs.	230 lbs.
1997	.20 ac.	34 lbs.	170 lbs.
1994 - 1996	Seed collected from AE planting for initial increase		