

U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN NO. 176.

B. T. GALLOWAY, *Chief of Bureau.*

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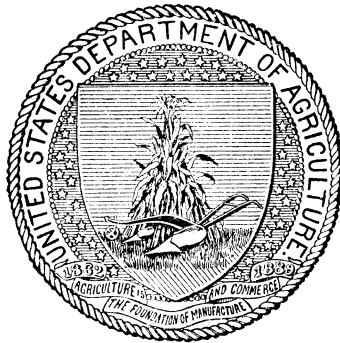
# SEEDS AND PLANTS IMPORTED

DURING THE PERIOD FROM JULY 1  
TO SEPTEMBER 30, 1909:

INVENTORY No. 20; Nos. 25718 to 26047.

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ISSUED APRIL 23, 1910.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1910.

## BULLETINS OF THE BUREAU OF PLANT INDUSTRY.

The scientific and technical publications of the Bureau of Plant Industry, which was organized July 1, 1901, are issued in a single series of bulletins, a list of which follows.

Attention is directed to the fact that the publications in this series are not for general distribution. The Superintendent of Documents, Government Printing Office, Washington, D. C., is authorized by law to sell them at cost, and to him all applications for these bulletins should be made, accompanied by a postal money order for the required amount or by cash. Numbers omitted from this list can not be furnished.

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[Continued on page 3 of cover.]

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B. T. GALLOWAY, *Chief of Bureau.*

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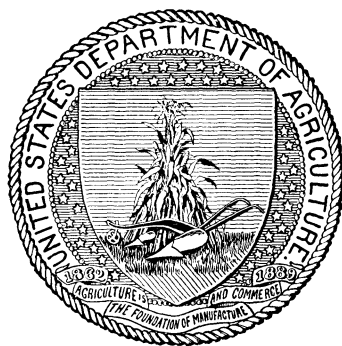
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## BUREAU OF PLANT INDUSTRY.

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*Editor*, J. E. ROCKWELL.  
*Chief Clerk*, JAMES E. JONES.

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### FOREIGN SEED AND PLANT INTRODUCTION.

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Edward Goucher and P. J. Wester, *Assistant Propagators*.

## LETTER OF TRANSMITTAL

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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF PLANT INDUSTRY,  
OFFICE OF THE CHIEF,  
*Washington, D. C., December 24, 1909.*

SIR: I have the honor to transmit herewith, and to recommend for publication as Bulletin No. 176 of the series of this Bureau, the accompanying manuscript, entitled "Seeds and Plants Imported during the Period from July 1 to September 30, 1909: Inventory No. 20; Nos. 25718 to 26047."

This manuscript has been submitted by the Agricultural Explorer in Charge of Foreign Seed and Plant Introduction with a view to publication.

Respectfully,

B. T. GALLOWAY,  
*Chief of Bureau.*

Hon. JAMES WILSON,  
*Secretary of Agriculture.*



## CONTENTS.

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	Page.
Introductory statement.....	7
Inventory.....	9
Publication of new names.....	31
Index of common and scientific names.....	33
176	5





## SEEDS AND PLANTS IMPORTED DURING THE PERIOD FROM JULY 1 TO SEPTEMBER 30, 1909: INVENTORY NO. 20; NOS. 25718 TO 26047.

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### INTRODUCTORY STATEMENT.

This inventory, covering the first quarter of the fiscal year from July 1 to September 30, 1909, contains 329 introductions. The first quarter has always been light, so far as the number of introductions is concerned. This quarter's introductions have been unusually so, owing to the fact that no explorers were in the field and changes in the office force interfered with regular correspondence; further, to the fact that only those introductions deemed of special interest are being included, those considered of minor importance being recorded in the office files only.

Of unusual interest in this inventory might be mentioned the following introductions:

Numbers 25858 and 25859 cover the seeds of the rattan palms which supply the valuable material for the manufacture of cane-seated chairs, street-car seats, baskets, etc., and whose cultivation as a tropical crop seems to have been given very little attention. The ability of these climbing palms to thrive in dense jungles is believed to be worthy the attention of tropical planters in the Western Hemisphere.

An importation of seeds of the "Queensland nut," *Macadamia ternifolia* (No. 25845), calls attention to the possibilities of cultivating this plant in parts of California and southern Florida. Trees are now growing in southern California which have borne nuts for the past two seasons. The *Macadamia* is being cultivated in Queensland and New South Wales, and, according to our information, the nuts are very well liked in Sydney, where they retail for as much as a shilling a pound.

In order to aid in the experiments with the horse bean, *Vicia faba*, which are being carried on by the Office of Forage-Crop Investigations, a collection of this important winter legume, adapted to the mild winters of the Southwestern States, has been gathered together from India, Egypt, Holland, Hungary, China, Kashmir, and Spain, and it is hoped that more definite information can be secured regarding the adaptability of this crop to our southwestern country.

The "Monketaan" stock melon (No. 25934) comes to us recommended by Mr. Lounsbury and Mr. Thornton, of the Department of

Agriculture of Cape Colony, as a plant worthy of being given unusual attention. According to their statements, this melon, which is of the nature of a watermelon, is quite distinct from the well-known Tsama melon, which grows on the west side of the Kalihari desert. This is found on the east side of the desert and is remarkable for the high yield of melons to the acre. As many as 150 tons have been produced to the acre, 75 tons being not at all unusual.

The interest in new varieties of mangos has become general enough in Florida to warrant our calling particular attention to the "Pahutan" mango (No. 25940), introduced by Mr. William S. Lyon from the Philippines. Although not as large a fruit or as small seeded as some of the East Indian mangos, it fruits early and is enormously prolific (which some of the East Indian varieties are not). According to Mr. Lyon its sweetness and juiciness are unapproached by any other of the many Filipino mangos he has eaten. Its thick skin will probably make it a good shipper.

The oriental *Myrica nagi* has been introduced under No. 25908. This extremely interesting fruit plant, whose dark wine-colored fruits are exceedingly ornamental, has not been given the attention which it deserves. There seem to be a number of varieties of this fruit, and, although it is a slow-growing tree and late coming into bearing, it is deserving of a trial in California and northern Florida.

The great value of a variety of cherry which is hardier in fruit bud than other cherries is conceded by the horticulturists of the North western States. Those who are breeding or experimenting with cherries will therefore be interested in the introduction of *Prunus tomentosa* (No. 25880), which has been especially recommended by Professor Macoun, of the Experimental Farm at Ottawa, Canada. Trees of this species have been placed in the Upper Mississippi Valley Plant Introduction Garden at Ames, Iowa, for further trial and propagation.

Of especial interest and problematic value is a collection of peach, apricot, and cherry seeds from the Himalayas (Nos. 25894 to 25896). The Indian bael fruit (Nos. 25879, 25889, 25890, and 25912) is one which may prove valuable for making sherbets and for the flavoring of soft drinks. A collection of varieties of tropical corn, representing some of the best work done by the Harvard Experiment Station in Cuba; a collection of oats from Algeria, Palestine, Sweden, and Turkey for the oat breeders; and a wild olive, *Olea foveolata* (No. 25846), from the East London district of Cape Colony, are also worthy of special mention.

DAVID FAIRCHILD,  
*Agricultural Explorer in Charge.*

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,  
*Washington, D. C., December 24, 1909.*

# INVENTORY.

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## 25718 to 25722.

From Cartago, Costa Rica. Presented by Mr. C. Wercklé. Received July 2, 1909.  
Seeds of the following; descriptive notes by Mr. Wercklé.

**25718.** *ANACARDIUM OCCIDENTALE* L.

**Cashew.**

"These seeds are from the best and largest varieties I could find; red, yellow, and tawn color, the latter are the best. They are from the large grove of Don Rafael Yglesias, in the Cazalar."

**25719.** *CUCURBITA MOSCHATA* Duch.

"*Pipian*. Most prolific pumpkin of the Pacific coast. Full; white fleshed."

**25720.** *CARICA PAPAYA* L.

**Papaw.**

"Good, very large variety."

**25721.** *CARICA PELTATA* Hook. & Arn.

"*Suara*. Fruit very small, globular, full (no cavity), sweet, and fragrant. For crossing. Eaten with the seeds as Granadilla. Ovary full, on account of formation of cellular tissue on the funiculus the funiculi of the center of the placenta are very long. Pulp soft, skin very thin."

*Distribution*.—A native of Central America, found on the coast of Nicaragua and Costa Rica.

**25722.** *CARICA PAPAYA* ♀ × *peltata* ♂

"Small, sweet, fragrant fruits, not full or solid as the *Suara*."

## 25723 and 25724.

From Baroda, India. Presented by Mr. B. F. Cavanagh, superintendent, State Gardens. Received July 3, 1909.

Seeds of the following:

**25723.** *TERMINALIA BELLERICA* (Gaertn.) Roxb.

See S. P. I. No. 25541 for description.

**25724.** *PHYLLANTHUS EMBLICA* L.

"A small deciduous tree of the family Euphorbiaceæ, found in China, Japan, India, and elsewhere. The unripe fruit, formerly official in medicine, is known commercially as emblic myrobalans and with the leaves and bark is used in tanning. The leaves have been found to contain 18 per cent tannin and the bark 12.6 per cent. Introduced for trial in the Southern States." (*W. W. Stockberger*.)

*Distribution*.—A large tree, native of tropical India, China, and the Malay Archipelago.

## 25725 to 25728.

From Baroda, India. Presented by Mr. B. F. Cavanagh, superintendent, State Gardens. Received July 6, 1909.

21522—Bul. 176—10—2

**25725 to 25728—Continued.**

Seeds of the following:

**25725.** STIZOLOBIUM sp.

**25726 to 25728.** DOLICHOS LABLAB L.

**Bonavist bean.**

**25726.** Black. **25728.** Small red.

**25727.** Large red.

**25729. PHASEOLUS LUNATUS L.**

From Antigua, Leeward Islands, West Indies. Presented by Mr. S. Jackson, curator, Government Botanic Station. Received July 3, 1909.

"Barbuda bean."

**25730 and 25731. AVENA spp.**

**Oat.**

From Jerusalem, Palestine. Presented by Mr. E. F. Beaumont. Received July 6, 1909.

Seeds of the following:

**25730.** AVENA STERILIS L.

**25731.** AVENA SATIVA L.

Grown from Jaffa seed.

**25732. STIZOLOBIUM sp.**

From Lawang, Java. Presented by Mr. M. Buysman. Received July 10, 1909. Black seeded.

**25733. MEDICAGO SATIVA L.**

**Alfalfa.**

From Bridgeport, Kans. Grown on the farm of Mr. Carl Wheeler. Numbered for convenience in recording distribution, July 12, 1909.

"A plant selected for leafiness and seed production from same field which produced S. P. I. No. 19508. Grown at the Department greenhouse under Agros. No. 20." (*J. M. Westgate.*)

**25736. ZEA MAYS L.**

**Corn.**

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture. Received July 16, 1909.

"*Hickory King.* A strain now being developed in South Africa." (*Davy.*)

**25738. SACCHARUM OFFICINARUM L.**

**Sugar cane.**

From Buitenzorg, Java. Presented by Dr. M. Treub, director, Department of Agriculture. Received July 2, 1909.

"Arrows of one of our best varieties of sugar cane (G. Z. No. 247). Rather a large percentage of these seeds do not germinate." (*Treub.*)

**25740. PANICUM PALMAEFOLIUM Koen.**

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture. Received July 19, 1909.

"I do not consider this one of our best grasses, but it is a useful sort in shady places, in comparatively warm districts, and in forest glades." (*Davy.*)

*Distribution.*—A native of tropical Africa, and extending to the Cape.

**25742 to 25752.**

From Bavaria, Germany. Presented by G. & S. Heil, Tückelhausen, near Würzburg, Bavaria, through Mr. Charles J. Brand. Received June, 1909.

Seeds of the following:

- 25742 and 25743.** HORDEUM DISTICHON NUTANS Schubl. **Barley.**  
**25742.** *Heil's Hanna No. 4.*  
**25743.** *Heil's Hanna No. 2.*
- 25744 and 25745.** HORDEUM DISTICHON L. **Barley.**  
**25744.** *Original Franconian No. 1.*  
**25745.** *Heil's Improved Franconian.*
- 25746 and 25747.** HORDEUM DISTICHON NUTANS Schubl. **Barley**  
**25746.** *Heil's Hanna No. 1.*  
**25747.** *Heil's Hanna No. 3.*
- 25748.** TRITICUM AESTIVUM L. **Wheat.**  
*Rimpau's Red Schlanstetter Summer.*
- 25749 and 25750.** AVENA SATIVA L. **Oat.**  
**25749.** *Svalöfs Ligowo.*  
**25750.** *Beseler No. 2.*
- 25751.** TRIFOLIUM PRATENSE L. **Red clover.**  
 German.
- 25752.** BETA VULGARIS L. **Sugar beet.**  
*Remlingen.*

**25753. STIZOLOBIUM sp.**

From Calcutta, India. Procured by Mr. William H. Michael, American consul-general, who purchased the seed from Mr. S. P. Chatterjee, seedsman. Received July 23, 1909.

Mottled brown and black.

**25754. CITRULLUS VULGARIS Schrad. Watermelon.**

From Tamsui (Daitotei), Formosa, Japan. Presented by Mr. Carl F. Deichman, American consul. Received July 26, 1909.

"Seeds of a watermelon growing in the island of Formosa, which has a fairly good flavor and I believe with proper cultivation could be much improved in quality. The meat of the melon is a very pretty shade of yellow, from lemon to light-orange color, and the size averages about 12 inches in diameter. It would, no doubt, be quite acceptable in the larger restaurants of New York, where there is always a demand for something out of the ordinary. It is not rare here." (*Deichman.*)

**25755 to 25757. STIZOLOBIUM spp.**

From Reduit, Mauritius. Presented by Dr. P. Boname, director, Agricultural Station. Received July 26, 1909.

Seeds of the following:

- 25755.** Black.  
 "This is the most extensively cultivated and seems to be the most vigorous." (*Boname.*)
- 25756.** Greenish yellow.
- 25757.** Yellowish, mottled with brown.

**25758 to 25774. ZEA MAYS L.****Corn.**

From Ecuador. Presented by Mr. H. R. Dietrich, American consul-general, Guayaquil, Ecuador. Received July 10, 1909.

Seeds of the following; descriptive notes by Mr. Dietrich.

- 25758.** "Maiz amarillo grueso de Chillo (thick, yellow Chillo maize). Grown near Quito, Ecuador, at an elevation of about 8,500 feet, in rich, black, loamy soil. Does well with moderate moisture and is considered to produce better than any other variety grown in Ecuador."
- 25759.** "Maiz blanco (white maize). Grown near Quito, Ecuador. Not quite as productive as some other varieties. It is claimed a good grade of meal may be made from it."
- 25760.** "Maiz morocho blanco (white 'twin' maize). Grown on the hacienda 'Montezerin,' parish of Guayllabamba, near Quito, Ecuador. Elevation, 7,500 feet; moderately warm climate; sandy loam soil, very moist on account of heavy rains. Produces fairly well."
- 25761.** "Maiz morocho grueso de Chillo, blanco (thick 'twin' Chillo maize, white). Grown near Quito, Ecuador. Large, white, and hard; grown at an elevation of 8,500 feet. Rich, black soil; moderate rainfall; produces well."
- 25762.** "Maiz morocho blanco is a type of the hard maize and is distinctive by the better quality of its chemical composition. It acquires greater proportions than other kinds and is as productive as the best varieties grown in Ecuador, but is somewhat slow in its growth and more dependent upon the conditions of the soil than other varieties. From this, it is claimed, comes the variety belonging to the hotter climates. This variety is grown in a different locality in Ecuador than numbers 25760, 25761, and 25763."
- 25763.** "Maiz morocho amarillo is a type of the hard maize and is distinctive by the better quality of its chemical composition. It acquires greater proportions than other kinds and is as productive as the best varieties grown in Ecuador, but is somewhat slow in its growth and more dependent upon the conditions of the soil than other varieties. From this, it is claimed, comes the variety belonging to the hotter climates. This variety is grown in a different locality in Ecuador than numbers 25760 to 25762."
- 25764.** "Maiz amarillo (yellow maize). Grown at Tumbaco, east of Quito, Ecuador, at an elevation of 8,000 feet. Soil, sandy loam; average rainfall; produces well."
- 25765.** "Maiz amarillo (yellow maize). Grown on the hacienda Tina, parish of Conocoto, near Quito, Ecuador, at an elevation of 9,000 feet, in black soil. Does well with moderate rainfall."
- 25766.** "Maiz delgado amarillo (thin, yellow maize). From parish of Quinche, near Quito, Ecuador. Grows in mixed or black sandy soil at an elevation of about 8,000 feet when abundant rain falls."
- 25767.** "Maiz delgado pintado (thin, painted maize). From parish Pomasqui, near Quito, Ecuador. Elevation 8,000 feet; sandy soil; average rainfall; produces well."
- 25768.** "Maiz del indio (the Indian's maize). Grown on the table-lands in the interior of Ecuador."
- 25769.** "Maiz Cangil. Grown on the table-lands in the interior of Ecuador."
- 25770.** "Maiz amarillo de Chillo (yellow Chillo maize). Grown on the table-lands in the interior of Ecuador."

**25758 to 25774—Continued.**

**25771.** "Maiz negro (black maize). Grown on the table-lands in the interior of Ecuador."

**25772.** "Maiz amarillo comun (common yellow maize). Grown on the table-lands in the interior of Ecuador."

**25773.** "Maiz Chulpi. Grown on the table-lands in the interior of Ecuador."

**25774.** "Mixed corn grown on the low land near Guayaquil. Used for all purposes for which corn may be used."

**25775. JATROPHA sp.**

From Vera Cruz, Mexico. Presented by Mr. William W. Canada, American consul. Received July 23, 1909.

"This seed came from a tree that grows wild in the lowlands of this district, is very abundant, and apparently also very rich in oil. The local name is *Duraznillo*, and its commercial value, if any, is unknown here." (*Canada*.)

**25776. LAWSONIA INERMIS L.**

From Ancon, Canal Zone, Panama. Presented by Mr. H. F. Schultz, horticulturist. Received July 23, 1909.

"This plant has proved very valuable here as an ornamental and flowering shrub. The individually small and rather insignificant yellow flowers form a compact, and yet graceful, panicle and are produced in great masses between the small fine foliage. The plant often produces flowers the first year and abundantly after that. The fragrance is very strong, somewhat resembling that of *Cestrum nocturnum*, and, like the latter, is exhaled even more strongly in the evenings, from which characteristic it has obtained its local name *Dama del noche*.

"Although I do not know whether this plant has ever been used for the manufacture of perfume I should think that it would be suitable for that purpose in frost-free regions of the United States." (*Schultz*.)

"Known as henna, is a shrub long cultivated in the Orient, especially in Egypt and Arabia, where it is used for a variety of purposes. The flowers serve as a perfumery material by virtue of a volatile oil which they contain, having an odor said to closely resemble that of the tea rose. Besides their use in applications to wounds, sores, etc., the leaves are used in some regions to color the finger nails red. The root is astringent." (*R. H. True*.)

*Distribution*.—Probably a native of the northern part of Africa and western Asia; generally cultivated throughout the warmer parts of Asia and Africa.

**25777. ZIZYPHUS JUJUBA (L.) Lam.**

From Paris, France. Purchased from Vilmorin-Andrieux & Co. Received July 27, 1909.

Procured as a stock for *Zizyphus sativa*, Chinese date. See S. P. I. Nos. 23439 to 23446 for description.

**25778 to 25781. GLYCINE HISPIDA (Moench) Maxim. Soy bean.**

From Buitenzorg, Java. Presented by Dr. M. Treub, director, Department of Agriculture. Received July 19, 1909.

Seeds of the following:

**25778.** Black.

**25780.** Yellow.

**25779.** Yellow.

**25781.** Brown.

**25782 and 25783. ALBIZZIA spp.**

From Buitenzorg, Java. Presented by Dr. M. Treub, director, Department of Agriculture. Received July 24, 1909.

Seeds of the following:

**25782. ALBIZZIA STIPULATA Boiv.**

A large, deciduous, fast-growing tree, whose wood is used for manufacturing cart wheels, wooden bells, cabinetwork, and furniture, as well as for fuel; the branches are used for fodder, and the trunk yields a gum, which is used for sizing paper. It is a native of India and the Malay Archipelago, and widely distributed in tropical and subtropical Asia.

**25783. ALBIZZIA MOLUCCANA Miq.**

A tree with large compound leaves, and bearing flowers in small globular heads. The stamens are long and form an ornamental ball around the head of the flowers. The pods are long and strap shaped. It is a native of the Molucca Islands.

**25784. AVENA STERILIS L.****Oat.**

From Mustapha-Alger, Algeria. Presented by Dr. L. Trabut, Government Botanic Gardens. Received July 26, 1909.

"Variety *sub-sativa*. A cultivated oat developed by utilizing the spontaneous mutations of *Avena sterilis*." (Trabut.)

**25785 to 25788.**

From Amani, Hafen Tanga, German East Africa. Presented by Dr. A. Zimmermann, Royal Agricultural Institute. Received July 24, 1909.

Seeds of the following:

**25785 to 25787. VIGNA UNGUICULATA (L.) Walp.****Cowpea.**

**25785.** Reddish brown.

**25786.** Brown, speckled with black.

**25787.** Mottled brown.

**25788. PENNISETUM AMERICANUM (L.) Schum.****Pearl millet.****25797 and 25798.**

From Buenos Aires, Argentina. Presented by Dr. Carlos Thays, director, Botanical Garden. Received July 19, 1909.

Seeds of the following:

**25797. ASPIDOSPERMA QUEBRACHO-BLANCO Schlecht. Quebracho-blanco.**

"An evergreen tree of the family Apocynaceæ, native of Argentina. The leaves are said to contain 27 per cent tannin. The bark, variously estimated as containing from 2 to 11 per cent tannin, has been used in leather making. The bark contains also 6 alkaloids, one of which, aspidiospermine, is regarded as of most importance as a drug." (W. W. Stockberger.)

*Distribution*.—A large tree, native of the valley of La Plata River in Argentina.

**25798. SCHINUS HUIGAN Molina.**

"This tree, of the family Anacardiaceæ, is a native of South America, and is closely related to the 'pepper tree' cultivated in California. It has been said to yield 19 to 20 per cent tannin, and according to Siewert the leaves are used in South America as a tanning material." (W. W. Stockberger.)

*Distribution*.—A native of South America, being found in Brazil, Argentina, Uruguay, Chile, and Peru.



**25799 to 25802.**

From Saigon, Cochin China. Presented by Mr. Jacob E. Conner, American consul. Received July 30, 1909.

Seeds of the following:

**25799.** CANANGA ODORATA (Lam.) Hook. f. & Thom. **Ilang ilang.**

See S. P. I. No. 22744 for description.

*Distribution.*—A native of Java and the Philippine Islands, and cultivated in India and other tropical countries.

**25800.** CRINUM ASIATICUM L.

"I consider this one of the most ornamental plants I know for a lawn or a large jardinière." (Conner.)

*Distribution.*—Native and cultivated throughout tropical India and Ceylon.

**25801.** DIPTEROCARPUS DYERI Pierre.

"*Dau song nang.*"

*Distribution.*—A large tree of the valley of the Donnai River, in the region around Saigon, Cochin China.

**25802.** DIPTEROCARPUS PUNCTULATUS Pierre.

"*Dau do.*"

*Distribution.*—Same as No. 25801.

**25803.** CAESALPINIA NUGA (L.) Ait.

From Luzon, Philippine Islands. Presented by Mr. William S. Lyon, Manila, P. I. Received July 30, 1909.

"A very attractive and sweet-scented, flowered, scandent shrub." (Lyon.) See S. P. I. No. 20944 for previous introduction and description.

*Distribution.*—A native of the southern part of Asia, and extending through the Malay Archipelago and Polynesian Islands to Australia.

**25804 to 25807.** MEDICAGO SATIVA L. **Alfalfa.**

From Mitchell, S. Dak. Presented by Prof. W. A. Wheeler, through Mr. Charles J. Brand. Received July 31, 1909.

Seeds of the following:

**25804.** "(South Dakota No. 162.) *Grimm* alfalfa, crop of 1908. Originally grown at Kùlsheim, near Tauberbischofsheim, Baden, Germany. (See S. P. I. No. 24767.) Brought to Carver County, Minn., in 1857, and grown there since 1858. Present sample grown at Mitchell, S. Dak., in 1908, from seed secured in Carver County, Minn., in 1904, and grown at Highmore, S. Dak., 1905 to 1906. Highmore seed taken to Mitchell, S. Dak., in 1907, where it has since been grown. The 1907 crop of this same strain, grown at Mitchell, S. Dak., is under experiment under P. L. H. Nos. 3329 and 3331." (Brand.)

**25805.** "(South Dakota No. 164.) Acclimatized *Turkestan* alfalfa, crop of 1908. Originally imported from Tashkent, Turkestan, in 1898, under S. P. I. No. 991. Grown at Brookings, S. Dak., from 1898 to 1904. Brookings seed taken to Highmore, S. Dak., and grown there from 1905 to 1906. Highmore seed taken to Mitchell, S. Dak., and grown there since 1907. The 1907 crop of this number is under experiment under P. L. H. No. 3330." (Brand.)

**25804 to 25807—Continued.**

**25806.** “(South Dakota No. 167.) Of unknown origin. Purchased from a seed dealer at Hartford, S. Dak., in 1894, and grown near Baltic, S. Dak., from 1894 to 1904. Baltic seed grown at Highmore, S. Dak., from 1904 to 1906. Highmore seed grown at Mitchell, S. Dak., from 1907 to the present time. Seed of the 1906 crop is under experiment under S. P. I. No. 19969 and P. L. H. No. 3251. The 1907 seed is under experiment under S. P. I. No. 22946 and P. L. H. No. 3332. The present sample and S. P. I. No. 25537 are of the 1908 crop. (The so-called *Baltic alfalfa*.)” (*Brand.*)

**25807.** “(South Dakota No. 240.) Acclimatized *Turkestan alfalfa*, crop of 1908. This sample was grown from the same parent seed as No. 25805, South Dakota No. 164. This strain of *Turkestan* presents one of the most striking examples of acclimatization yet encountered. Seed of the original importation, S. P. I. No. 991, was grown at Highmore, S. Dak., from 1899 until 1906. Highmore seed was taken to Mitchell, S. Dak., in 1901, where it has since been grown. The present sample and S. P. I. No. 25607 are of the 1908 seed crop, grown at Mitchell. The 1906 seed crop, grown at Highmore, is under experiment under P. L. H. No. 3252.” (*Brand.*)

**25816. TACCA PINNATIFIDA Forst.**

From Quilimane, Zambesia, Portuguese East Africa. Presented by Mr. O. W. Barrett, Director of Agriculture, Lourenço Marquez, Mozambique, Portuguese East Africa. Received July 31, 1909.

“Semicultivated plant having 3 to 5 *Amorphophallus*-like leaves from a cluster of smooth, thin-skinned, roundish corms and a corymbose cluster of greenish flowers on the summit of a naked, yellowish, erect stipe (some 3 to 4 feet high, about twice height of leaves). Corms edible. The natives use it in a variety of ways—like potatoes and dry it in the form of a coarse flour. Habitat, gardens (and vicinity) of natives in Zambesia district. Native name, *I'lide*.” (*Barrett.*)

*Distribution.*—Widely distributed in Africa, India, Australia, and the Pacific islands.

**25817. BAROSMA CRENULATA (L.) Hook.****Buchu.**

From Cape Town, South Africa. Presented by Mr. Charles P. Lounsbury, government entomologist, Department of Agriculture. Received August 2, 1909.

“*Buchu* succeeds best if sown in time and treated in the same way as nursery transplants. It naturally grows in amongst large rocks, so that the roots go into the ground at the side of the rocks or large stones; this keeps the roots cool, and the ground holds moisture longer. *Buchu* stands here at 1,500 to 4,000 feet elevation.” (*Lounsbury.*)

“This is a shrub about 3 feet high bearing short-petioled, opposite leaves, which vary in form from narrowly oval to lanceolate, with crenate margins and with the surface marked by pellucid oil glands. The leaves form a drug, official in many lands, in America under the name of *buchu leaves*, valued for their diaphoretic, diuretic, and tonic properties. They contain from 1 to 2 per cent of a volatile oil. The plant occurs uncultivated in the vicinity of Cape Town, South Africa.” (*R. H. True.*)

**25822 to 25831.****Gourd.**

From Nice, France. Presented by Hon. Dulany Hunter, consul-general. Received August 3, 1909.

Seeds of the following:

**25822 to 25824.** *LAGENARIA VULGARIS* Ser.

**25822.** Ornamental, spiral shaped, climbing.

**25823.** Ornamental, bottle shaped, climbing.

**25824.** Bottle shaped.

**25822 to 25831—Continued.****25825.** *LUFFA CYLINDRICA* (L.) Roemer.

Ornamental, sponge, climbing.

**25826 to 25830.** *LAGENARIA VULGARIS* Ser.**25826.** Ornamental, stick shaped, grim.**25827.** Ornamental, pointed end, climbing.**25828.** Ornamental, siphon shaped, climbing.**25829.** Ornamental, climbing. From Corsica, Bachouela.**25830.** Ornamental.**25831.** *UCURBITA PEPO* L.

"The 'Festival des Gougourdcns' is held here in the spring, and these seeds are from gourds which are exhibited there. The nurseryman states that the seeds should be planted in a flowerpot and not transferred until the plant is about to throw out a few leaves; that the soil should be well manured, but not too abundantly, as in that case the gourd does not become sufficiently dry to be used for holding liquids. When the plants are large enough they are tied to trellis work so they can be exposed to the sun. They need comparatively little water, and the fruit should be protected from heavy dews by being kept covered at night. The seeds are planted in the spring, and the fruit, which dries on the plant, is ready to be gathered by the end of September or early in October. The peasants at Cimiez produce pipes and other articles of odd shapes by wrapping parts of the gourd before it has ripened with soft pieces of cloth, and are thus enabled to bend them into the form they wish to produce. In this way the covered parts do not develop freely, and, remaining soft, can be bent into the desired shape." (*Hunter*.)

**25841 to 25844. ALLIUM CEPA** L.**Onion.**

From Teneriffe, Canary Islands. Presented by Mr. Solomon Berliner, American consul. Received August 5, 1909.

Seeds of the following:

**25841.** *Bermuda Red.***25843.** *Bermuda White.***25842.** *Wildpret's Golden.***25844.** *Crystal-War.***25845. MACADAMIA TERNIFOLIA** F. Muell.

From Wellington Point, Queensland, Australia. Presented by Mr. J. Pink. Received August 2, 1909.

For description, see S. P. I. No. 18382.

*Distribution.*—A small tree, native of the eastern part of Australia, being found in the valleys of the rivers in the southeastern part of Queensland, and in New South Wales.

**25846. OLEA FOVEOLATA** E. Meyer.

From East London district, Cape Colony, South Africa. Presented by Mr. Charles P. Lounsbury, government entomologist, Department of Agriculture, who procured the seeds from Mr. Henry G. Flanagan, F. L. S., of "Prospect," Komgha district, for whom they were collected by a Mr. Oliver. Received August 9, 1909.

"The district where these seeds were collected has a warm, temperate climate with about 30 inches of rainfall, chiefly in the summer months." (*Lounsbury*.)

*Distribution.*—A tall shrub, native of the woods of the southern part of Africa.

**25847. PROTEA GRANDIFLORA Thunb.**

From Grahamstown, Cape Colony, South Africa. Presented by Mr. J. Medley Wood, director, Botanic Gardens. Received July 31, 1909.

A shrub or small tree, 3 to 10 feet high, with oblong, sessile, shining leaves, and large, white flower heads, which resemble a globe artichoke in appearance.

**25848. SCHLEICHERA TRIJUGA Willd.****Kussum.**

From Dhamtari, Raipur, India. Presented by A. E. Lowrie, esq., Deputy Conservator of Forests. Received August 12, 1909.

"This seed ought to be sown in fairly rich sandy loam, in boxes, to begin with. When the young plants are about 9 inches high they should be planted out in a well-drained sandy soil." (*Lowrie*.)

"This Indian tree, known as the lac tree or Ceylon oak, is one of the sources of shellac. The wingless female of the lac insect (*Tachardia lacca* Kerr) with its piercing mouth parts punctures the bark of the young, tender twigs, from which the shellac flows down the stems and hardens. The seeds yield a fatty oil, the so-called 'Macassar' oil, which contains free hydrocyanic acid, as well as the glycerides of oleic, palmitic, and arachidic acids. The wood, which is much used, is hard and durable and takes a polish. The sapwood is white, the heartwood is reddish brown." (*R. H. True*.)

*Distribution*.—A large tree, native throughout central and southern India, and extending through the Malay Archipelago to the Philippines.

**25849 to 25856. AVENA SATIVA L.****Oat.**

From Madrid, Spain. Presented by Mr. A. Ramirez, El Hogar Español. Received August 13, 1909.

Seeds of the following:

- 25849.** Open, white, panicle.
- 25850.** Large, white.
- 25851.** Common.
- 25852.** Large, white, panicle.
- 25853.** Black, open, panicle.
- 25854.** Black.
- 25855.** Black oat with pendent panicle.
- 25856.** Yellow.

**25857. VIGNA UNGUICULATA (L.) Walp.****Cowpea.**

From Venice, Italy. Presented by Dr. Angelo Sullam, of Portotolle, Taglia di Po, Italy, through Mr. Haven Metcalf. Received August 14, 1909.

*Black-Eye*.

**25858 to 25860.**

From the Philippine Islands. Presented by Mr. William S. Lyon, Manila. Received August 16, 1909.

Plants of the following:

- 25858 and 25859.** CALAMUS sp.
- 25858.** From Batanes Islands.
- 25859.** From Palawan Island.

"*Palasan*".

"All the good rattans I know are strictly equatorial and not to be thought of in any of our occidental possessions other than the Canal Zone. I have crossed

**25858 to 25860—Continued.****25858 and 25859—Continued.**

the Isthmus twice. The yellow clay still impresses my memory with its stickiness and with its similarity to the yellow clays of Mount Canlaon (Negros), where I think perhaps I have seen the most riotous growth of *Palasan*—our best rattan. As I remember it, the rainfall on the Isthmus is probably about 2,400 to 2,500 mm. (94 to 98 inches). If it is less than 2,000 mm. (about 79 inches), I think rattans would not do much, although at Perak the precipitation is less and they raise some good, long-jointed canes.

"For environment the rattans want jungle and plenty of it. My remembrance of the zone is that the hills were unbroken jungle. Calamus must have a thick mass of medium-sized vegetation to scramble over.

"There is a single feature of Calamus culture which differentiates it positively from every other sylvan product with which I am acquainted. It is (if there be any such thing) an exception to the law of selection. All are fit to survive under conditions where all other species except those fortuitously well placed would succumb. No amount of crowding or shading seems to choke off a young rattan. Its progress is tedious under adverse conditions, but it struggles up till it gets light and then nothing but the bolo or cutlass can hold it back. In planting practice, this gives it a supreme advantage over most plants. Further, it eliminates the bugbear and expense of jungle clearing, a matter which is to be heavily reckoned. I am not prepared to give a thesis on rattan culture, but close observation of its behavior in our smooth bamboo (cana boho), which makes a thicket impervious to any animal except a wild pig and which is voracious enough to choke out every other kind of vegetable life except Calamus, inspires me with exceptional credulity to believe it can be grown more nearly as a purely spontaneous crop than any economic product known, not excepting common timber trees.

"I am not advocating complete neglect; removal of a fallen limb or a rank herbaceous weed, or an occasional slash with a bolo, would probably accelerate growth, but it is not an essential factor to success. The best commercial rattans, both Calamus and *Damonorpas*, are spiny as hedgehogs and immune from the raids of even deer. Best of all, they are renascent from the butt, and the same land and same planting may be cut over in six or seven years for a second time. There are two very serious drawbacks to a very general adoption of rattan planting for profit. One, their shy fruiting habits and consequent scarcity of seed; the other, slow development.

"The fruits are eaten by birds, and seeds can only be obtained where they are concealed from the birds. All the species, I fancy, are, as seeds, of fugitive vitality. This is not only my own limited experience, but is evidently that of European seedsmen—those who are specialists in palm seeds, and who rarely offer them for sale. As most of the species until they reach the sprawling age are remarkably ornamental, far more so than most palms, I can only explain their absence from catalogues of tropical ornamentals upon these grounds.

"I can give you no idea of the time required to yield a crop. I only know that the crop is slow, very slow. The renewal crop is rapid. I have seen canes on cut-over lands which had been stripped four years before. I think in five or six years at most, and on poor lands, a second crop can be depended upon. A seedling crop, perhaps, in 10 years." (*Lyon.*)

**25860. LIVISTONA WHITFORDII BECCARI.**

"This is far more compact, bushy, and ornamental than *Livistona rotundifolia*." (*Lyon.*)

*Distribution.*—A native of the province of Tayabas in the island of Luzon.

**25861. MANGIFERA INDICA L.****Mango.**

From Trinidad, British West Indies. Presented by Mr. F. Evans, acting superintendent, Botanic Gardens. Received August 18, 1909.

Seeds.

*Julie.* See S. P. I. No. 21515 for previous introduction and description.

**25862. CITRUS NOBILIS Lour.**

From Saigon, Cochinchina. Presented by Mr. Jacob E. Conner, American consul. Received August 14, 1909.

Seeds.

"A very fine, flat, green-skinned mandarin orange, a little larger than the ordinary ones of this type. The flesh is quite reddish in color, and the flavor is a combination of that of the ordinary flat and the round loose-skin oranges." (*Conner.*)

**25863 to 25866.**

From Nairobi, British East Africa. Presented by Mr. and Mrs. C. E. Akeley, Chicago, Ill., through Mr. Charles J. Brand. Received August 17, 1909.

Seeds of the following economic plants, grown by the Wakamba tribe of natives:

**25863. PENNISETUM AMERICANUM (L.) SCHUM.**

**Pearl millet.**

Cat-tail millet, called by the Wakamba tribe *Mwee*.

**25864. ELEusine CORACANA (L.) Gaertn.**

**Ragi millet.**

*Wimbi*.

**25865. CAJAN INDICUM Spreng.**

A species of bean. Mr. Akeley states that this is a bean of rapid growth which the natives use for wood.

**25866. ZEA MAYS L.**

**Corn.**

A variety of Indian corn grown by the Wakamba tribe.

**25867. CITRULLUS VULGARIS Schrad.****Watermelon.**

From Merw, Russian Turkestan. Presented by Capt. M. L. Cummins, Sixteenth Infantry, U. S. Army, Fort Crook, Nebr. Received August 13, 1909.

"The melon is orange colored and not reddish inside, and in my opinion was the best I have ever eaten. The seeds came from a melon I had in Merw in the south-central part of Turkestan." (*Cummins.*)

**25868 to 25869.**

From Lourenço Marquez, Portuguese East Africa. Presented by Mr. O. W. Barrett, Director of Agriculture. Received August 14, 1909.

**25868. (Undetermined.)**

"(No. 29, June 28, 1909.) From Nhamacurra, Quilimane, Portuguese East Africa. Native name (Chizena) 'Mucupile.' A forest plant growing in sandy soil. Rhizome (attaining a weight of several pounds), irregular in shape; starch content moderate. Height 2 to 4 feet." (*Barrett.*)

**25869. GLADIOLUS sp.**

"(No. 28, June 28, 1909.) From Nhamacurra, Quilimane, Portuguese East Africa. Native name (Chizena) 'Tumbanimasa.' A plant of the low moist lands of the Zambezi Valley. Flower pale yellow, medium size, opening nearly downward. Bulb, pale-brown coat, yellow inside. Height 2 to 3 feet." (*Barrett.*)

**25870. STIZOLOBIUM sp.**

From Barbados, British West Indies. Presented by Mr. Francis Watts, Commissioner of Agriculture, through Mr. John R. Bovell, superintendent. Received August 4, 1909.

"Bengal bean."

**25871. TRIFOLIUM PRATENSE L.****Red clover.**

From Huntsville, Ala. Purchased from Mr. Clarendon Davis. Received August 6, 1909.

"Seed of red clover, which has proved disease resistant at Huntsville, where red clover usually suffers severely. This strain was developed from surviving plants." (*J. M. Westgate.*)

**25874. PASSIFLORA EDULIS Sims.****Passion fruit.**

From Sydney, Australia. Presented by Van Dyk & Lindsay, importers, 209 Washington street, New York, N. Y. Received August 20, 1909.

See S. P. I. No. 12899 for description.

*Distribution.*—A native of Brazil, and cultivated in other tropical countries.

**25876. PHASEOLUS LUNATUS L.**

Presented by Mr. O. W. Barrett, Director of Agriculture, Lourenço Marquez, Portuguese East Africa. Received August 21, 1909.

"(No. 30, July 24, 1909.) A slender-stem, climbing, bean-like plant received from Mr. Henry Brown, of Mlanje, Nyasaland, and stated by him to have been brought from the Kongo basin. Grown at Lourenço Marquez. Flowers in short racemes, whitish." (*Barrett.*)

**25879. BELOU MARMELOS (L.) W. F. Wight.****Bael.**

From Lahore, Punjab, India. Presented by Mr. W. R. Mustoe, superintendent, Government Archaeological Gardens. Received July 31, 1909.

See S. P. I. No. 24450 for description.

**25880. PRUNUS TOMENTOSA Thunb.**

From Ottawa, Canada. Presented by Mr. W. T. Macoun, horticulturist, Central Experimental Farm. Received at the Upper Mississippi Plant Introduction Garden, Ames, Iowa, July 29, 1909.

"(Ames Ac. No. 458, 1909.) 'This cherry appears to be hardier in fruit bud than any other cherry we have at the Experimental Farm, and as it makes good preserves and is fair eating I think it quite an acquisition.' (*Macoun.*) For more complete description, see Annual Report, W. T. Macoun, horticulturist, Central Experimental Farm, Ottawa, Canada. 1908 : 106." (*S. A. Beach.*)

*Distribution.*—A shrub or small tree, occurring in the northwestern part of India, northern China, Manchuria, and Japan.

**25884 to 25887.**

From Cochin China. Secured by Mr. Xavier Salomon, chief, Botanical Garden, Saigon, and presented by Mr. Jacob E. Conner, American consul. Received August 24, 1909.

**25884 to 25887—Continued.**

Plants of the following:

**25884 to 25886.** From Cape St. Jacques.

**25884.** CINNAMOMUM LOUREIRII Nees.

"This species is supposed to be one of the most valuable sources of some of the best cinnamon that comes to our market." (*R. H. True.*)

*Distribution.*—A native of the mountains of Cochin China and of Japan.

**25885.** ATALANTIA sp.

**25886.** TETRACRONIA CYMOSA Pierre.

*Distribution.*—A shrub or small tree, native of the mountains in the vicinity of Binh Dinh, French Indo-China.

**25887.** GARCINIA MANGOSTANA L.

**Mangosteen.**

From Saigon. "This delicious fruit is about the size of a mandarin orange, round and slightly flattened at each end, with a smooth, thick rind, rich red-purple in color, with here and there a bright, hardened drop of the yellow juice which marks some injury to the rind when it was young. As these mangosteens are sold in the Dutch East Indies—heaped up on fruit baskets or made up into long, regular bunches, with thin strips of braided bamboo—they are as strikingly handsome as anything of the kind could well be, but it is only when the fruit is opened that its real beauty is seen. The rind is thick and tough, and in order to get at the pulp inside it requires a circular cut with a sharp knife to lift the top half off like a cap, exposing the white segments, five, six, or seven in number, lying loose in the cup. The cut surface of the rind is of a most delicate pink color and is studded with small yellow points formed by the drops of exuding juice. As you lift out of this cup, one by one, the delicate segments, which are the size and shape of those of a mandarin orange, the light-pink sides of the cup and the veins of white and yellow embedded in it are visible. The separate segments are between snow-white and ivory in color and are covered with a delicate network of fibers, and the side of each segment where it presses against its neighbor is translucent and slightly tinged with pale green. As one poises the dainty bit of snowy fruit on his fork and looks at the empty pink cup from which it has been taken, he hardly knows whether the delicate flavor or the beautiful coloring of the fruit pleases him the more, and he invariably stops to admire the rapidly deepening color of the cut rind as it changes on exposure to the air from light pink to deep brown. The texture of the mangosteen pulp much resembles that of a well-ripened plum, only it is so delicate that it melts in your mouth like a bit of ice cream. The flavor is quite indescribably delicious and resembles nothing you know of, and yet reminds you, with a long after-taste, of all sorts of creams and ices. There is nothing to mar the perfection of this fruit, unless it be that the juice from the rind forms an indelible stain on a white napkin. Even the seeds are often partly or wholly lacking, and, when present, are generally so thin and small that they are really no trouble to get rid of. Where cheap and abundant, as in Java, one eats these fruits by the half peck, and is never tired of them. They produce no feeling of satiety, such as the banana and the mango do, for there is little substance to the delicate pulp." (*David Fairchild.*)

**25888 to 25890.**

From India. Presented by Mrs. Effie Pyle Fisher, Igatpuri, through Miss Audrey Goss. Received August 25, 1909.



**25888 to 25890—Continued.**

Seeds of the following:

**25888.** *FERONIA ELEPHANTUM* Correa.

"This is the wood-apple of India and Ceylon, a deciduous tree with pinnate leaves, bearing a fruit about the size of an orange, but with a very thick, woody rind.

"The pulp of the fruit is acid and aromatic and is sometimes eaten by the natives of India; it is also used to prepare a jelly much resembling that made from black currants, but this jelly is said to have a very astringent taste.

"This plant is allied to the bael fruit of India, *Belou marmelos*, and is being grown to hybridize with that species, and also for trial as a stock upon which to graft it." (*W. T. Swingle.*)

*Distribution.*—A medium-sized tree, found in the sub-Himalayan forests. from the Ravi eastward, and throughout the greater part of the plains of India, being more frequent in the moist tracts of Bombay, Madras, Bengal, and Burma than in northern India.

**25889.** *BELOU MARMELOS* (L.) W. F. Wight.

**Bael.**

Both of the above are from the state gardens, Baroda.

**25890.** *BELOU MARMELOS* (L.) W. F. Wight.

**Bael.**

From Mr. George Hodson, florist and seedsman, Bangalore.

See S. P. I. No. 24450 for description of *Belou marmelos*.

**25891 to 25893.**

From Ootacamund, India. Presented by Rev. G. N. Thomssen, American Baptist Telugu Mission, Bapatia, South India. Received August 20, 1909.

Seeds of the following:

**25891.** *RHODOMYRTUS TOMENTOSA* (Ait.) Wight.

The Downy myrtle, or Hill gooseberry, is a handsome evergreen shrub, with broad glossy leaves, pink flowers larger than those of a peach and lasting for several weeks, and dark-purple berries about the size of a cherry and tasting like a raspberry. The fruits are eaten raw, and used for making jam and jelly. (*Adapted from Bailey.*)

*Distribution.*—An evergreen shrub, native of the southeastern part of Asia, extending from India through China, the Malay Archipelago, and the Philippines to Japan.

**25892.** *PHYSALIS PERUVIANA* L.

From plants of ten years' select cultivation of the South African Cape gooseberry in India.

*Distribution.*—A native of Peru and cultivated throughout the Tropics.

**25893.** (Unidentified.)

White straw flowers growing wild on the Nilgiris.

**25894 to 25897.**

From Simla, India. Presented by Mr. E. Cotes, Indian News Agency, through Mr. Frank N. Meyer. Received August 27, 1909.

Seeds of the following:

**25894.** *AMYGDALUS PERSICA* L.

**Peach.**

**25895.** *PRUNUS ARMENIACA* L.

**Apricot.**

**25894 to 25897—Continued.****25896.** PRUNUS PUDDUM Roxb.**Cherry.**

*Distribution.*—A tree, native of the northern part of India, extending from the Indus to Sikkim, usually at an elevation of between 2,500 and 7,000 feet.

**25897.** PYRUS sp.**Pear.**

“These seeds were collected from wild Himalayan fruit trees, growing at an elevation of 7,000 feet about Simla.” (*Cotes.*)

**25898 to 25901. VICIA FABA L.****Horse bean.**

From United Provinces, India. Presented by Mr. T. F. Main, Deputy Director of Agriculture, Poona, Bombay Presidency. Received August 27, 1909.

“The three last numbers seem to be of one variety collected from different villages, while the first is quite different.” (*Main.*)

**25902 and 25903. VICIA FABA L.****Horse bean.**

From Egypt. Presented by Mr. George P. Foaden, secretary, Khedivial Agricultural Society, Cairo. Received August 28, 1909.

Seeds of the following; notes by Mr. Foaden.

**25902.** *Saidi.* Planted in Upper Egypt under basin irrigation.**25903.** *Beheri.* Planted in Lower Egypt under canal irrigation.

These are the same variety, but recognized by the cultivators as being cultivated under two different systems of irrigation.

**25904 to 25907. VICIA FABA L.****Horse bean.**

From Friesland Province, Holland. Presented by Dr. M. Greshoff, Koloniaal Museum, Haarlem, Holland. Received August 6, 1909.

**25908. MYRICA NAGI Thunb.**

From Tangsi, China. Procured by Rev. Alexander Kennedy, at the request of Mr. Frank N. Meyer. Received August 21, 1909.

See S. P. I. Nos. 22977 and 22904 to 22906 for descriptions.

“These seeds are for stocks; better varieties are to be grafted on to them later. The plants are exceedingly hard to transplant. The trees thrive wherever the loquat does.” (*Meyer.*)

**25909. MIMUSOPS KAUKI L.****“Adam’s-apple.”**

From Lawang, Java. Presented by Mr. M. Buysman, Hortus tenggerensis. Received August 26, 1909.

A large tree, native of India, the Malay Archipelago, and Australia. The fruit resembles *Zizyphus jujuba* in flavor, and is edible. The wood is red, fine grained, and easy to work.

**25910. VIGNA UNGUICULATA (L.) Walp.****Cowpea.**

From Entebbe, Uganda, British East Africa. Presented by the Botanical, Forestry, and Scientific Department. Received August 26, 1909.

Brown. There seem to be several varieties in this lot.

**25911 and 25912.**

From Lal Bagh, Bangalore, India. Presented by Mr. G. A. Gammie, Imperial Cotton Specialist, Kirkee, India, at the request of Mr. J. Mollison, Inspector-General of Agriculture in India. Received August 30, 1909.

**25911 and 25912—Continued.**

Seeds of the following:

**25911.** *FERONIA ELEPHANTUM* Correa. **Wood-apple.**

See No. 25888 for description.

**25912.** *BELOU MARMELOS* (L.) W. F. Wight. **Bael.**

"The bael fruit is highly prized by natives of this country and is an article of food with them, especially in Upper India. A very nice cooling drink is made from its pulp in the hot season, also a nice jam is prepared out of it. The unripe and the ripe fruit and its rind, root, leaves, and flowers are used medicinally. Sherbet made from the ripe fruit is very valuable in cholera and bowel complaints." (*Gammie.*)

**25913 to 25920.**

From Hangchow, China. Presented by Rev. W. S. Sweet, Wayland Academy, Baptist Missionary Union, Eastern China Mission. Received August 2, 1909.

Seeds of the following; notes by Mr. Sweet.

**25913 and 25914.** *VICIA FABA* L. **Broad bean.**

**25913.** Green.

**25914.** Brown.

Vine 2 feet long. Used as human and animal food and also for firewood. Ripe from April to May.

**25915.** *DOLICHOS LABLAB* L.

**Bonavist bean.**

White. Known as the crested bean; vine 4 to 6 feet; used as human food and for firewood; ripe in September.

**25916.** *PHASEOLUS ANGULARIS* (Willd.) W. F. Wight.

**Adzuki bean.**

Red. Used for food; vine small and fine, 6 inches high; ripe in September.

**25917.** *PISUM SATIVUM* L.

Tall vine; ripe from May to June; used for forage.

**25918.** *VIGNA SESQUIPEDALIS* (L.) W. F. Wight.

Black. Tall vine.

**25919 and 25920.** *GLYCINE HISPIDA* (Moench) Maxim.

**Soy bean.**

**25919.** Yellow. Vine 1 foot high; ripe from November to December.

The cheese made from this bean forms a large element of food here; if adapted to American taste a profitable business could be established in the States.

**25920.** Black. Ripe from June to August; used the same as No. 25919.

**25921 to 25925.**

From Leh, Ladakh, Kashmir, British India. Presented by Mr. Rassul Galwan. Received August 27, 1909.

Seeds of the following; notes by Mr. Galwan.

**25921.** *TRITICUM AESTIVUM* L.

**Wheat.**

Before this seed is sown the field is put under water till the ground is wet a half foot deep. Then wait ten to twenty days, till the ground is fairly dry and the seed can be sown. The ground must be neither too wet nor too dry. Before the seed is sown manure is spread about one-half inch thick over the ground. The first water is given when the wheat is about 2 inches high, the ground being soaked about one-half foot deep. After it becomes dry again a second watering is given. It is better to wait a little too long than to water too quickly.

**25921 to 25925—Continued.**

Up to the third watering care must be used, after that the wheat is strong and water can be given at any time it is dry. The more water given the better the crop.

**25922. HORDEUM sp.****Hull-less barley.**

The method of sowing this is the same as for wheat, the only difference being that this can be sown late, as it ripens in two to three months. Flour is made from it, but the bread is not as good as the bread made from wheat flour. Most people use it, therefore, as Suttoo, which is made as follows: First, wash the barley in cold water, after waiting one day put in the sunshine and let dry. Then fry in an iron pot until brown, then take to a mill and have it ground into flour, which is eaten with Ladaki tea; some eat it with water, some mix it with butter, sugar, and tea, for there is no need to cook it again. If hot things can not be had, it can be eaten with cold water.

**25923. VICIA FABA L.****Horse bean.**

Brownish black.

**25924. LATHYRUS SATIVUS L.**

This is sown with wheat. It can be sown in places a little cold, and there is no need to use any manure. The sowing methods are the same as those used in sowing wheat. The seed is sown about the 10th of May and ripens in about three months. At the sowing time the seed needs more moisture than wheat or it will not grow well.

**25925. PISUM ARVENSE L.****Field pea.**

This is sown in hot places, and does best in sandy soil. It is sown here about the 20th or the 25th of April, and ripens in about three months. The method of sowing is the same as that of wheat, except that no manure is put on the field. If manured the plants grow very large but without beans. The stalks are good to feed to animals. Before sowing, the ground should be wetter than when wheat is sown or the beans will not do well.

**25926 and 25927.**

From Igatpuri, India. Presented by Mrs. Effie Pyle Fisher, through Miss Audrey Goss. Received August 31, 1909.

Seeds of the following:

**25926. FERONIA ELEPHANTUM Correa.**

See No. 25888 for description.

**25927. ANONA RETICULATA L.****Custard-apple.**

See S. P. I. No. 5210 for description.

**25928. COLCHICUM sp.**

From Alpine heights of Geovjé Dag, above Hassanbeyli, Amanus Mountains.

Presented by Mrs. F. A. Shepard, Aintab, Turkey. Received August 19, 1909.

"A wild colchicum having large, pink, very showy blossoms in September. Fruit ripens in May." (*Shepard.*)

**25929 to 25931. CUCUMIS MELO L.****Muskmelon.**

From Columbia, Mo. Presented by Mr. G. C. Broadhead. Received August 21, 1909.

**25929 to 25931—Continued.**

Seeds of the following:

**25929.** 1903 crop.

**25931.** 1909 crop.

**25930.** 1908 crop.

“Between 1825 and 1835 the Rev. Albert Holladay, of Virginia, was Presbyterian missionary to Persia. He brought to America seeds of a cantaloupe. My father raised this melon in Virginia, and in 1836 brought seed to St. Charles County, Mo., where he raised it until his death in 1853. Relatives and friends have since raised it. I have for thirty years, also my brother William, living at Clayton, St. Louis County. The melon raised in Virginia and in Missouri for ten or twenty years was smaller and sweeter than that raised since. It seems the first was not much over 4 inches in diameter and good to the outer rind. The melon now is as much as 6 inches in diameter and has at least a one-half of an inch of rind. When ripe it pulls off easily and generally has a red gum at stem where it breaks. A good melon of this kind is still better than most others and we call it the ‘Persian cantaloupe.’” (*Broadhead.*)

**25932. MEDICAGO SATIVA L.****Alfalfa.**

From Aintab, Turkey. Presented by Mrs. F. A. Shepard. Received September 3, 1909.

“This seed was collected in the arid regions about Aintab, about 3,500 feet above the sea and 100 miles inland. There is scarcely any rain for five months in the year. The plant is not planted for pasturage, but grows upon wild lands, where sheep and goats browse.” (*Shepard.*)

**25934. CITRULLUS VULGARIS Schrad.****Watermelon.**

From Robertson, Cape Colony, South Africa. Presented by Mr. Charles P. Lounsbury, government entomologist, Cape of Good Hope, Department of Agriculture, Cape Town, who procured the seeds from Mr. E. A. Visser, manager of the Experiment Station at Robertson. Received September 4, 1909.

*Monketaan.*

“Mr. Visser says this plant yielded melons at the rate of 75 tons an acre on the station grounds without any special care, and that the melons keep well and are excellent stock food. They weigh about 30 pounds each and have a firm, sweetish, somewhat tough pulp. The rind is mottled pale and dark green like common watermelons, as a rule, but is sometimes whitish in this strain. The seeds do not separate readily and no one seems to be trying to save more than he needs for himself, so there is little chance of buying a supply unless it is ordered a year ahead. Mr. Jack, who was director in the department here and is now farming, is trying in vain to get seed for 100 acres, which at least indicates that the merits of the crop appeal to him. Mr. Thornton, our agriculturist, tells me the plant has long grown to the west of Kuruman on the east side of the Kalihari desert. (The small Tsama melon sent to the United States grows on the west side.) He thinks it was probably cultivated there by natives in bygone days, but now it grows wild. Some years ago he got down seeds and had them planted near Graaff Reinet. Farmers of the district soon appreciated the value of the melon and took to its cultivation as a stock food. It is said on good authority to have yielded as high as 150 tons an acre around there, the ground becoming almost obscured by the fruits. The strain introduced to the Robertson station is from Graaff Reinet way, not direct from the desert, and Thornton thinks there is a possibility that it is not quite true to type; but if it is not, it is an improvement on the original he thinks.

**25934—Continued.**

"It seems to me that this or other of the South African melons should be more worth cultivating in arid parts of the West than the thornless prickly pear. Of course the melons want water, but much of what they get they store away for months." (*Lounsbury.*)

"One of our experimenters of the *Monketaan* melon has just reported that the return per acre of melons amounted to 103 tons, and it was found that on an average there were two melons to every square yard of land. This melon, according to the analysis we have already had made, is high in feeding value and promises to take a leading part in some of our stock districts." (*Extract from letter of Mr. R. W. Thornton, government agriculturist, Cape Town Department of Agriculture, August 24, 1909.*)

**25935. VICIA VILLOSA Roth.****Hairy vetch.**

From Moscow, Russia. Purchased from Immer & Son, through Prof. N. E. Hansen, Agricultural Experiment Station, Brookings, S. Dak., while traveling as an agricultural explorer for this Department. Received September 7, 1909.

**25936. ROSA sp.****Rose.**

From Ogden, Utah. Presented by Miss Pearle Cramer, United States Department of Agriculture, Forest Service. Received September 7, 1909.

Yellow. "This rose, so far as I have been able to ascertain, is native only to Utah where it grows in great profusion." (*Cramer.*)

**25937. ORYZA SATIVA L.****Rice.**

From Tsangsheng, Kwangtung Province, near Canton, China. Presented by Mr. Stuart J. Fuller, American vice consul-general-in-charge, Hongkong, for whom it was procured by Mr. Leo Bergholz, American consul-general at Canton. Received September 9, 1909.

"*Szemiü*, the translation of which means 'Best quality refined.' The Chinese rice merchant states that the exportation of this rice in any quantity or in samples is forbidden by the Chinese Government." (*Amos P. Wilder, American consul-general, Hongkong, China.*)

**25938 to 25940. MANGIFERA INDICA L.****Mango.**

From Philippine Islands. Procured by Mr. William S. Lyon, Gardens of Nagtajan, Manila, P. I. Received September 8, 1909.

Seeds of the following standard varieties:

**25938. Carabao.**

See S. P. I. Nos. 24927 and 25659 for previous introductions.

**25939. Pico.**

See S. P. I. No. 24170 for previous introduction.

**25940. Pahutan.** "From my viewpoint this is the best, *not* horticulturally, other than being a vigorous grower, early fruiter, and enormously prolific. Its very serious defects—small size, scanty flesh, and excessively large seed—are from my point of view fully offset by a smoothness, sweetness, juiciness, and flavor unapproached by any other. I have eaten the famous *Alphonso* mango in Calcutta and do not consider it ace high with *pahutan*. *Pahutan* further has a very thick rind. This, while still further diminishing its scanty flesh, probably adds to its shipping qualities." (*Lyon.*)

**25941. ELEPHANTORRHIZA ELEPHANTINA (Burch.) Skeels.**

*Acacia elephantina* Burch., Trav., vol. 2, p. 236. 1824.

*Acacia elephantorrhiza* (Burch.) D. C., Prod., vol. 2, p. 457. 1825.

*Elephantorrhiza burchellii* Benth., Hook Journ. Bot., vol. 4, p. 344. 1842.

Although Burchell is given as the authority in De Candolle's Prodrômus for the specific name *elephantorrhiza*, the name he really used and under which he gave an excellent botanical diagnosis is that here recognized.

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, director, Transvaal Department of Agriculture. Received September 10, 1909.

Seeds.

"All grazing animals, wild and domestic, are exceeding fond of this plant. It has long, succulent roots and an underground stem. It does not shoot until rather late in the summer, seldom before December, and its stems are killed again by the first frosts of May. The seed-pods are still green when the frost comes, and the seeds not ripe, but they are so well protected by the strong, leatherlike pod, that the frost can not hurt them, and they ripen in the pod long after the stem that bore them has been killed by the frost. The roots are used for tanning leather." (*Mrs. Barber, in Harvey, Flora Capensis, vol. 2, p. 277.*)

*Distribution*.—South Africa. Common in grassy places between the Klipplaat and Zwartkey rivers in Cape Colony. It occurs also in the Cradock and Queenstown districts in Cape Colony, and is reported from the "Zooloo Country." Originally described from near "Klaawater" in the southern part of Orange River Colony.

**25942. BERBERIS SANGUINEA Franch.**

From Nancy, France. Purchased from V. Lemoine & Sons. Received September 14, 1909.

"This is a little-known species from China and appears to be closely allied to *Berberis nepalensis*. The blooms are said to be deeper orange-red than any other species. These plants are imported for hybridizing purposes." (*W. Van Fleet.*)

*Distribution*.—A native of dry stream beds in the province of Szechwan, China.

**25950 to 25953. VICIA FABA L.**

From Valencia, Spain. Presented by Mr. Charles S. Winans, American consul. Received September 8, 1909.

Seeds of each of the following:

**25950 to 25952.**

**Broad bean.**

**25950.** *Caliente*. Light brown.

**25951.** *Panesca*. Purplish brown.

**25952.** *Murciana*. Dark purple.

**25953.**

**Horse bean.**

*Favon*. Purplish black.

**25956 and 25957.**

From Amanus Mountains, Turkey in Asia. Presented by Mrs. F. D. Shepard, Adana. Received September 9, 1909.

Seeds of each of the following:

**25956.** AVENA SATIVA L.

**Oat.**

**25957.** VICIA ERVILIA (L.) Willd.

**Bitter vetch.**

**25959 to 25962. ZEA MAYS L.****Corn.**

From Central Soledad, Cienfuegos, Cuba. Presented by Mr. Robert M. Grey, Harvard Botanical Experiment Station. Received September 21, 1909.

Seeds of the following; notes by Mr. Grey.

**25959.** *Harvard selected flint.* This is our surest cropper, best keeper, and, being free from surface starch, less subject to attack from weevils and ants.

**25960.** *Selected white flint Cuban.* This is used as a sweet or table corn, is early, and a small-cob variety.

**25961.** *Hybrid purple cob (Cuban dent × Cuban flint).*

**25962.** *Cuban dent.*

These two last are the varieties commonly cultivated here and are very productive.

The above have been under selection for six years. The husk of all closes tight at the apex, a great prevention and safeguard against insects.

**25963. VICIA FABA L.****Horse bean.**

From Magyaróvár, Hungary. Presented by The Plant Culture Experiment Station, requested from Prof. A. Cserhati. Received September 22, 1909.

"These seeds are planted in the spring and mature in about one hundred days. The plants grow from 35 to 40 centimeters high. The beans are ground up and make a very nutritive food for stock. The fodder is of hardly any value." (*Gyárfás.*)

**25964. GOSSYPIMUM HIRSUTUM L.****Cotton.**

From Nyasaland Protectorate, British Central Africa. Presented by Mr. J. Stewart J. McCall, Director of Agriculture, Zomba. Received September 27, 1909.

"Seed of Upland cotton which received the first prize at the recent show at Blantyre. I think you will consider it a very high-class hirsutum cotton, and it is very gratifying as we received 6d. to 7d. per pound for it at the Manchester market." (*McCall.*)

**25965. VIGNA UNGUICULATA (L.) Walp.****Cowpea.**

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture. Received September 10, 1909.

"Kafir bean." This lot apparently contains several different varieties.

**26047. GARCINIA MANGOSTANA L.****Mangosteen.**

From Port of Spain, Trinidad, British West Indies. Presented by Mr. F. Evans, botanical department, Department of Agriculture. Received fall of 1909.

Seeds. See No. 25887 for description.

"The mangosteen will be an unusually good shipper, as tropical fruits go. The small crate of fruits from which these seeds were taken, shipped by Mr. Evans on the 28th of September, was delayed for more than a week in New York and reached Washington on the 19th of October. Even after holding these fruits for five days after arrival in Washington—i. e., twenty-six days from the time they were picked—they were still in an edible condition, although naturally they had lost a good deal of their delicacy and the pulp had begun to adhere to the thick rind. One remarkable feature about these fruits lies in the fact that as they decay the rind hardens until it becomes almost as hard as a rock. I believe it may not be necessary to crate these in shipment on this account. A single rotten fruit may not infect others, as in the case of mangos or other soft-skinned fruits; in fact, as tropical fruits go, it seems to be an ideal shipper." (*David Fairchild.*)



## PUBLICATION OF NEW NAMES.

It has been thought desirable to call attention to the new names which it is occasionally found necessary to publish in the inventory by giving a list of such names as they occur. This list will therefore appear in future issues on the page of the inventory preceding the index.

The following name is published in this issue:

**25941.** *ELEPHANTORRHIZA ELEPHANTINA* (Burch.) Skeels.

The names given below have been published in preceding issues of the inventory:

**21750.** *ALBIZZIA ADIANTHIFOLIA* (Schum.) W. F. Wight.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 12.

**21797.** *SESBAN BISPINOSA* (Jacq.) Steud.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 15.

**21820.** *XIPHAGROSTIS CONDENSATUS* (Hack.) W. F. Wight.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 17.

The correct name for the above is *Miscanthus condensatus* Hack.; the genus *Xipha-grostis* [Contributions from the U. S. National Herbarium, vol. 9, 1905, pp. 399-400] having been based on a misconception of the type of *Miscanthus* as established by Andersson in 1856. That author indicated in a note that he did not consider the first species, *M. capensis*, as typical of the genus, and the second species, *M. japonicus*, should accordingly be recognized as the type. The usual application of the generic name *Miscanthus* therefore remains unchanged.

**21824.** *PHASEOLUS ANGULARIS* (Willd.) W. F. Wight.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 17.

**21893.** *CHRYSANTHEMUM STIPULACEUM* (Moench) W. F. Wight.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 21.

**22349.** *PHRAGMITES VULGARIS LONGIVALVIS* (Steud.) W. F. Wight.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 46.

**22390.** *GARCINIA TINCTORIA* (DC.) W. F. Wight.

Bulletin 137 (Inventory No. 14), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 50.

**22813. PINELLIA COCHINCHINENSE** (Blume) W. F. Wight.

Bulletin 142 (Inventory No. 15), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 35.

**22957. BELOU MARMELOS** (L.) W. F. Wight.

Bulletin 142 (Inventory No. 15), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 48.

**23219. FIRMIANA SIMPLEX** (L.) W. F. Wight.

Bulletin 142 (Inventory No. 15), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 67.

**23428. MYRCIARIA EDULIS** (Vell.) Skeels.

Bulletin 148 (Inventory No. 16), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 14.

**23472. PHYLLANTHUS ACIDA** (L.) Skeels.

Bulletin 148 (Inventory No. 16), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 17.

**23897. CRYPTOCARYA RUBRA** (Mol.) Skeels.

Bulletin 153 (Inventory No. 17), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 15.

**23963. BRASSICA PEKINENSIS** (Lour.) Skeels.

Bulletin 153 (Inventory No. 17), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 21.

**24087. CALLISTEMMA CHINENSIS** (L.) Skeels.

Bulletin 153 (Inventory No. 17), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 27.

**24591. BELOU GLUTINOSA** (Blanco) Skeels.

Bulletin 162 (Inventory No. 18), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 26.

**24631. GOURLIEA SPINOSA** (Mol.) Skeels.

Bulletin 162 (Inventory No. 18), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 31.

**25546. CLAUCENA LANSIUM** (Lour.) Skeels.

Bulletin 168 (Inventory No. 19), Bureau of Plant Industry, U. S. Dept. of Agriculture, 1909, p. 31.

## INDEX OF COMMON AND SCIENTIFIC NAMES.

Adam's-apple. See *Mimusops kauki*.

*Albizzia moluccana*, 25783.

*stipulata*, 25782.

Alfalfa, Baltic, 25806.

Grimm, 25804.

(Kansas), 25733.

Turkestan, 25805, 25807.

(Turkey), 25932.

*Allium cepa*, 25841 to 25844.

*Amygdalus persica*, 25894.

*Anacardium occidentale*, 25718.

*Anona reticulata*, 25927.

Apricot (India), 25895.

*Aspidosperma quebracho-blanco*, 25797.

*Atalantia* sp., 25885.

*Avena sativa*, 25731, 25749, 25750, 25849 to

25856, 25956.

*sterilis*, 25730, 25784.

Bael. See *Belou marmelos*.

Barley, Franconian, 25744.

Improved, 25745.

Hanna, 25742, 25743, 25746, 25747.

hull-less (Kashmir), 25922.

*Barosma crenulata*, 25817.

Bean, Adzuki. See *Phaseolus angularis*.

"Barbuda," 25729.

bonavist. See *Dolichos lablab*.

broad, 25913, 25914, 25950 to 25952.

horse, 25898 to 25907, 25923, 25953, 25963.

Beet, sugar, Remlingen, 25752.

*Belou marmelos*, 25879, 25889, 25890, 25912.

*Beta vulgaris*, 25752.

Buchu. See *Barosma crenulata*.

*Caesalpinia nuga*, 25803.

*Caján indicum*, 25865.

*Calamus* sp., 25858, 25859.

*Cananga odorata*, 25799.

Cape gooseberry. See *Physalis peruviana*.

*Carica papaya*, 25720.

*peltata*, 25721.

Cashew. See *Anacardium occidentale*.

Cherry (Canada), 25880.

(India), 25896.

*Cinnamomum loureirii*, 25884.

Cinnamon (Cochin China), 25884.

*Citrullus vulgaris*, 25754, 25867, 25934.

*Citrus nobilis*, 25862.

Clover, red (disease resistant), 25871.

German, 25751.

See also *Trifolium pratense*.

*Colchicum* sp., 25928.

Corn (Africa), 25736, 25866.

(Costa Rica), 25660.

(Cuba), 25959 to 25962.

(Ecuador), 25758 to 25774.

Hickory King, 25736.

Cotton (Nyasaland), 25964.

Cowpea (Africa), 25785 to 25788, 25965.

Black-Eye, 25857.

brown, 25910.

See also *Vigna unguiculata*.

*Crinum asiaticum*, 25800.

*Cucumis melo*, 25929 to 25931.

*Cucurbita moschata*, 25719.

*pepo*, 25831.

Custard-apple. See *Anona reticulata*.

*Dipterocarpus dyeri*, 25801.

*punctulatus*, 25802.

*Dolichos lablab*, 25726 to 25728, 25915.

Downy myrtle. See *Rhodomyrtus tomentosa*.

"Duraznillo." See *Jatropha* sp.

*Elephantorrhiza elephantina*, 25941.

*Eleusine coracana*, 25864.

*Feronia elephantum*, 25888, 25911, 25926.

Field pea. See *Pisum* spp.

*Garcinia mangostana*, 25887, 26047.

*Gladiolus* sp., 25869.

*Glycine hispida*, 25778 to 25781, 25919, 25920.

Gourd (France), 25822 to 25831.

Hill gooseberry. See *Rhodomyrtus tomentosa*.

*Hordeum* sp., 25922.

*distichon*, 25744, 25745.

*nuttans*, 25742, 25743,

25746, 25747.

Ilang ilang. See *Cananga odorata*.

*Jatropha* sp., 25775.

Kussum. See *Schleichera trijuga*.

*Lagenaria vulgaris*, 25822 to 25824, 25826 to 25830.

*Lathyrus sativus*, 25924.

*Lawsonia inermis*, 25776.

*Livistona whitfordii*, 25860.

*Luffa cylindrica*, 25825.

*Macadamia ternifolia*, 25845.

Mandarin (Cochin China), 25862.

*Mangifera indica*, 25861, 25938 to 25940.

Mango, Carabao, 25938.

Julie, 25861.

Pahutan, 25940.

Pico, 25939.

Mangosteen (Cochin China), 25887.

(Trinidad), 26047.

*Medicago sativa*, 25733, 25804 to 25807, 25932.

Millet, pearl. See *Pennisetum americanum*.

ragi. See *Eleusine coracana*.

*Mimusops kauki*, 25909.

Muskmelon, Persian, 25929 to 25931.

*Myrica nagi*, 25908.

Oat (Algeria), 25784.

Beseler No. 2, 25750.

(Palestine), 25730, 25731.

(Spain), 25849 to 25856.

Svalöfs Ligowo, 25749.

(Turkey), 25956.

*Olea foveolata*, 25846.

Onion, Bermuda Red, 25841.

White, 25843.

(Canary Islands), 25841 to 25844.

Crystal-Wax, 25844.

Wildpret's Golden, 25842.

*Oryza sativa*, 25937.

*Panicum palmaefolium*, 25740.

Papaw (Costa Rica), 25720 to 25722.

*Passiflora edulis*, 25874.

Passion fruit. See *Passiflora edulis*.

Pea, field. See *Pisum* spp.

Peach (India), 25894.

Pear (India), 25897.

*Pennisetum americanum*, 25788, 25863.

*Phaseolus angularis*, 25916.

*lunatus*, 25729, 25876.

*Phyllanthus emblica*, 25724.

*Physalis peruviana*, 25892.

*Pisum arvense*, 25925.

*sativum*, 25917.

*Protea grandiflora*, 25847.

*Prunus armeniaca*, 25895.

*puddum*, 25896.

*tomentosa*, 25880.

*Pyrus* sp., 25897.

Quebracho-blanco. See *Aspidosperma quebracho-blanco*.

Rattan (Batanes Islands), 25858.

Palasan, 25859.

*Rhodomyrtus tomentosa*, 25891.

Rice, Szemiu, 25937.

*Rosa* sp., 25936.

Rose, yellow, 25936.

*Saccharum officinarum*, 25738.

*Schinus huigan*, 25798.

*Schleichera trijuga*, 25848.

Soy bean, black, 25778, 25920.

brown, 25781.

(Java), 25778 to 25781.

yellow, 25779, 25780, 25919.

*Stizolobium* sp., 25725, 25732, 25753, 25755 to 25757, 25870.

Sugar cane (Java), 25738.

*Tacca pinnatifida*, 25816.

*Terminalia bellerica*, 25723.

*Tetracronia cymosa*, 25886.

*Trifolium pratense*, 25751, 25871.

*Triticum aestivum*, 25748, 25921.

Undetermined, 25868, 25893.

Vetch, bitter. See *Vicia ervilia*.

hairy. See *Vicia villosa*.

*Vicia ervilia*, 25957.

*faba*, 25898 to 25907, 25913, 25914,

25923, 25950 to 25953, 25963.

*villosa*, 25872, 25875, 25935.

*Vigna sesquipedalis*, 25918.

*unguiculata*, 25785 to 25787, 25857, 25910, 25965.

Watermelon (Formosa), 25754.

Monketaan, 25934.

(Turkestan), 25867.

Wheat (Kashmir), 25921.

Rimpau's Red Schlanstetter Summer, 25748.

*Zea mays*, 25736, 25758 to 25774, 25866, 25959 to 25962.

*Zizyphus jujuba*, 25777.

[Continued from page 2 of cover.]

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