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Plant Materials Introduced
January 1 to December 31, 2000
(Nos. 612387 to 615161)



Forward

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For questions about data organization and proper plant identification, contact the editor: R.A. Norris, dbmubn@ars-grin.gov

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The following were collected by Mike Foster, Texas A&M Agricultural Research Station, P.O. Box 1549, Pecos, Texas 79772, United States. Received 12/20/1999.

PI 612387. *Amaranthus blitoides* S. Watson

Wild. Ames 25791. Collected 11/29/1999 in Texas, United States. Latitude 31 deg. 22' 48'' N. Longitude 103 deg. 37' 46'' W. Elevation 819 m. Texas A&M Agricultural Research Station, 7 miles northwest of Pecos, Reeves County. Green chile research plots (no herbicides were used). Hoban silty clay loam soil. Associated vegetation: *Solanum elaeagnifolium*.

The following were developed by P. Stephen Baenziger, University of Nebraska, Department of Agronomy, 330 Keim Hall, Lincoln, Nebraska 68583-0915, United States. Received 12/03/1999.

PI 612388. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. NE93405; NSGC 8641. Pedigree - NE85707/Thunderbird = Warrior*5/Agent//Kavkaz/4/NE63218/KY58/3/nth/2*cmth//Ponca/2*Cheyenne/5/Thunderbird = sister line of Cougar, NE93496. Hard red winter wheat. A Thunderbird derivative with a long coleoptile, good winterhardiness, good test weight, large kernels, and very strong straw strength. White-chaffed, awned. Medium early in maturity and medium tall in plant height (probably has a semi-dwarfing gene that does not affect coleoptile length). Best performance area seems to be the higher moisture areas of Nebraska, similar to Thunderbird. Moderately resistant to stem rust (contains Sr5 and SR31 or SR24); moderately susceptible to leaf rust; and susceptible to Hessian fly, BYDV, SBMV, and WSMV. Carries the 1B/1R translocation, but has very good end-use quality.

PI 612389. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. NE93427; NSGC 8642. Pedigree - Bezostaja/Centurk 78//Arthur/Centurk 78/3/Bennett/4/Norkan. Hard red winter wheat. White-chaffed, awned. A Norkan derivative with a medium length coleoptile, medium winterhardiness, good test weight, medium kernels, and moderately strong straw strength. Medium early in maturity and medium tall in plant height (probably a taller semi-dwarf). Best adapted to the higher rainfall areas of southeastern and southcentral Nebraska near the Kansas border, an area where few previous releases are well adapted. Moderately resistant to stem rust (contains Sr5, Sr6, Sr24) and SBMV; moderately susceptible to leaf rust; and susceptible to Hessian fly, BYDV, and WSMV.

PI 612390. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. NE94482; NSGC 8643. Pedigree - Arapahoe/Abilene//NE86488 = Arapahoe/Abilene/4/Colt/3/Warrior*5/Agent//Kavkaz = sister line of Millennium, NE94479. Hard red winter wheat. White-chaffed, awned. Good winterhardiness, average test weight, medium kernels, and moderately strong straw strength. Medium in maturity and medium tall in plant height (probably a taller semi-dwarf).

The following were developed by James A. LaMondia, Connecticut AES, Valley Laboratory, Cook Hill Road, Box 248, Windsor, Connecticut 06095, United States. Received 11/26/1999.

PI 612391. *Nicotiana tabacum* L.

Cultivar. Inbred. "METACOMET". CV-120. Pedigree - 0-30 shade x VA81 flue-cured - inbred selection F2 to F12. Shade tobacco with resistance to the tobacco cyst nematode (*Globodera tabacum tabacum*) and tobacco mosaic virus. Nematode resistance conferred by the VA81 parent. Mosaic virus resistance derives from *Nicotiana glutinosa*. Nematode resistance expressed as reduced nematode development and reproduction. Nematode populations reduced by approx. 70% after production.

PI 612392. *Nicotiana tabacum* L.

Cultivar. Inbred. "POQUONOCK". CV-121. Pedigree - 0-30 shade x VA81 flue-cured -backcrossed twice to 0-30, twice to 0-40 shade, crossed to a selfed inbred (F3) OF 0-30 X VA81, and selfed to homogeneity (F6). Shade tobacco with resistance to the tobacco cyst nematode (*Globodera tabacum tabacum*) and tobacco mosaic virus. Nematode resistance conferred by the VA81 parent. Mosaic virus resistance derives from *Nicotiana glutinosa*. Nematode resistance expressed as reduced nematode development and reproduction. Nematode populations reduced by approx. 70% after production.

The following were developed by Eduardo Espitia, INIFAP, CIFAP, Experimental Valle De Mexico, Apartado Postal No. 10, KM 38.5 CARR. Mex-VER/VIA Texcoco, Chapingo, Federal District, Mexico; Eduardo Villasenor, INIFAP, CIFAP, Experimental Valle De Mexico, Apartado Postal No. 10, KM 38.5 CARR. Mex-VER/VIA Texcoco, Chapingo, Federal District, Mexico; C. Marquez-Gutierrez, INIFAP, CIFAP, Experimental Valle De Mexico, Apartado Postal No. 10, KM 38.5 CARR. Mex-VER/VIA Texcoco, Chapingo, Mexico 56230, Mexico. Received 12/03/1999.

PI 612393. *Avena sativa* L.

Cultivar. Pureline. "KARMA". CV-365. Pedigree - 8232-CI-9291-CROSS/COLLI . High grain yield with average plant height of 115 cm, and maturation of 116 days. Average groat protein of 16.6%, 1000-kernel weight of 20.6 g, and groat percentage of 73.2%. Moderately resistant to races NA5 and NA27 of stem rust (*Puccinia graminis*) and prevalent races of crown rust (*Puccinia coronata*) in Mexico.

PI 612394. *Avena sativa* L.

Cultivar. Pureline. "CEVAMEX". CV-366. Pedigree - From a composite population including the F2 of 54 single crosses. High grain and forage yield obtained by mass gravimetric selection, with average plant height of 136 cm, and maturation of 126 days. Average groat protein of 16.6%, 1000-kernel weight of 30.1 g, and groat percentage of 67.6%. Moderately resistant to stem rust (*Puccinia graminis*) race NA26 and prevalent races of crown rust (*Puccinia coronata*) in Mexico.

The following were developed by T. L. Harvey, Kansas State University, Waters Hall, Department of Entomology, Manhattan, Kansas 66506, United States; Ken Kofoid, Kansas State University, Fort Hays Experiment Station, 1232 240th Avenue, Hays, Kansas 67601-9228, United States. Received 11/29/1999.

- PI 612395. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 99A; MALE STERILE; GP-571cmsA1. GP-571cms.
Pedigree - KS 57B ms3/4/KS 56B ms3/3/KS 65 A//KP6BR al/Sarvasi.
Male-sterile of KS 99B (PI 612396).
- PI 612396. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 99B; MAINTAINER. GP-571. Pedigree - KS 57B
ms3/4/KS 56B ms3/3/KS 65 A//KP6BR al/Sarvasi. Biotype E greenbug
(*Schizaphis graminum*) resistant seed parent. Seed white, black glumes,
no pigmented testa, and is awned. Plant color purple, 3-dwarf height,
and flowers in approx. 69 days from planting.
- PI 612397. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 100A; MALE STERILE; GP-572cmsA1. GP-572cms.
Pedigree - KS 56B ms3/4/KS 65B/3/KS 65 A//KP6BR al/Sarvasi. Male-sterile
of KS 100B (PI 612398).
- PI 612398. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 100B; MAINTAINER. GP-572. Pedigree - KS 56B
ms3/4/KS 65B/3/KS 65 A//KP6BR al/Sarvasi. Biotype E greenbug (*Schizaphis*
graminum) resistant seed parent. Seed white, black glumes, no pigmented
testa, and is awnless. Plant color purple, 3-dwarf height, and flowers
in approx. 62 days from planting.
- PI 612399. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 101A; MALE STERILE; GP-573cmsA1. GP-573cms.
Pedigree - OK 24B ms3/4/KS 57B ms3/3/KS 65 A//KP6BR al/Sarvasi.
Male-sterile of KS 101B (PI 612400).
- PI 612400. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 101B; MAINTAINER. GP-573. Pedigree - OK 24B
ms3/4/KS 57B ms3/3/KS 65 A//KP6BR al/Sarvasi. Biotype E greenbug
(*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no
pigmented testa, and is awned. Plant color purple, short, 3-dwarf
height, and flowers in approx. 66 days from planting.
- PI 612401. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 102A; MALE STERILE; GP-574cmsA1. GP-574cms.
Pedigree - KS 56B ms3/4/NP2B ms3/3/KS 65 A//KP6BR al/Sarvasi.
Male-sterile of KS 102B (PI 612402).
- PI 612402. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 102B; MAINTAINER. GP-574. Pedigree - KS 56B
ms3/4/NP2B ms3/3/KS 65 A//KPP6BR al/Sarvasi. Biotype E greenbug
(*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no
pigmented testa, and is awnless. Plant color purple, short, 3-dwarf
height, and flowers in approx. 64 days after planting.
- PI 612403. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 103A; MALE STERILE; GP-575cmsA1. GP-575cms.
Pedigree - NP2B ms3/3/KS 65 A//KP6BR al/Sarvasi/4/KS 57B. Male-sterile
of KS 103B (PI 612404).
- PI 612404. *Sorghum bicolor* (L.) Moench**
Breeding. Pureline. KS 103B; MAINTAINER. GP-575. Pedigree - NP2B
ms3/3/KS 65 A//KP6BR al/Sarvasi/4/KS 57B. Biotype E greenbug (*Schizaphis*
graminum) resistant seed parent. Seed red, black glumes, no pigmented

testa, and is awnless. Plant color purple, 3-dwarf height, and flowers in approx. 68 days from planting.

PI 612405. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 104A; MALE STERILE; GP-576cmsA1. GP-576cms.
Pedigree - NP2B ms3/3/KS 65 A//KP6BR al/Sarvasi. Male-sterile of KS 104B (PI 612406).

PI 612406. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 104B; MAINTAINER. GP-576. Pedigree - NP2B ms3/3/KS 65 A//KP6BR al/Sarvasi. Biotype E greenbug (*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no pigmented testa, and is awnless. Plant color purple, 3-dwarf height, and flowers in approx. 70 days from planting.

PI 612407. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 105A; MALE STERILE; GP-577cmsA1. GP-577cms.
Pedigree - KS 56B ms3//N 4692B/Sarvasi. Male-sterile of KS 105B (PI 612408).

PI 612408. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 105B; MAINTAINER. GP-577. Pedigree - KS 56B ms3//N 4692B/Sarvasi. Biotype E greenbug (*Schizaphis graminum*) resistant seed parent. Seed white, black glumes, no pigmented testa, and is awned. Plant color purple, 2-dwarf height, and flowers in approx. 68 days from planting.

PI 612409. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 106A; MALE STERILE; GP-578cmsA1. GP-578cms.
Pedigree - NP2B ms3/3/KS 65 A//KP6BR al/Sarvasi/4/KS 56B/QL 3. Male-sterile of KS 106B (PI 612410).

PI 612410. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 106B; MAINTAINER. GP-578. Pedigree - NP2B ms3/3/KS 65 A//KP6BR al/Sarvasi/4/KS 56B/QL 3. Biotype E greenbug (*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no pigmented testa, and is awned. Plant color purple, 3-dwarf height, and flowers in approx. 66 days from planting.

PI 612411. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 107A; MALE STERILE; GP-579cmsA1. GP-579cms.
Pedigree - KS 57B ms3/3/KS 65 A//KP6BR al/Sarvasi. Male-sterile of KS 107B (PI 612412).

PI 612412. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 107B; MAINTAINER. GP-579. Pedigree - KS 57B ms3/3/KS 65 A//KP6BR al/Sarvasi. Biotype E greenbug (*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no pigmented testa, and is awned. Plant color purple, short, 3-dwarf height, and flowers in approx. 66 days from planting.

PI 612413. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 108R. GP-580. Pedigree - KP9B ms3/PI 550607. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed white, black glumes, no pigmented testa, and is awned. Plant color purple, 3-dwarf height, and flowers in approx. 69 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male

sterility system.

PI 612414. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 109R. GP-581. Pedigree - KP9B ms3/PI 550607 KP9B ms3/PI 550607. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed white, black glumes, no pigmented testa, and is awned. Plant color purple, 3-dwarf height, and flowers in approx. 67 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male sterility system.

PI 612415. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 110R. GP-582. Pedigree - TX 430R/PI 550610. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no pigmented testa, and is awnless. Plant color purple, tall, 3-dwarf height, and flowers in approx. 74 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male sterility system.

PI 612416. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 111R. GP-583. Pedigree - TX 636R/8602//KP9B ms3/PI 550607. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no pigmented testa, and is awnless. Plant color purple, short, 3-dwarf height, and flowers in approx. 68 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male sterility system.

PI 612417. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 112R. GP-584. Pedigree - TX 636R/8602//KP9B ms3/PI 550607. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed red, black glumes, no pigmented testa, and is awnless. Plant color purple, short, 3-dwarf height, and flowers in approx. 73 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male sterility system.

PI 612418. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 113R. GP-585. Pedigree - Selection from tan plant ms3/greenbug resistant sources PI 550607, PI 550610, and Cargill 607E. Resistant selections were random mated, screened, and then inbred. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed white, straw colored glumes, no pigmented testa, and is awned. Plant color tan, 3-dwarf height, and flowers in approx. 73 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male sterility system.

PI 612419. Sorghum bicolor (L.) Moench

Breeding. Pureline. KS 114R. GP-586. Pedigree - Selection from tan plant ms3/greenbug resistant sources PI 550607, PI 550610, and Cargill 607E. Resistant selections were random mated, screened, and then inbred. Biotype 1 greenbug (*Schizaphis graminum*) resistant seed parent. Seed white, sienna glumes, no pigmented testa, and is awnless. Plant color tan, 3-dwarf height, and flowers in approx. 76 days from planting. Restores fertility to hybrids with the A1 cytoplasmic-genic male sterility system.

The following were developed by James S. Quick, Colorado State University, Department of Agronomy, Fort Collins, Colorado 80523, United States; Frank

Peairs, Colorado State University, Department of Entomology, Fort Collins, Colorado 800523-115, United States; J.B. Rudolph, Colorado State University, Dept. of Entomology, Fort Collins, Colorado 80523, United States; Klaus Lorenz, Colorado State University, Dept. of Food Science and Human Nutrition, Fort Collins, Colorado 80523, United States; J.R. Stromberger, Colorado State University, Dept. of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States; Scott Haley, Colorado State University, Soil and Crop Sciences Dept., Fort Collins, Colorado 80523, United States; J.J. Johnson, Colorado State University, Dept. of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States; S. Clayshulte, Colorado State University, Dept. of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States; B. Clifford, Colorado State University, Dept. of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States. Received 12/28/1999.

PI 612420. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "PROWERS 99". CV-896; PVP 200000315. Pedigree - Modified bulk procedure following single plant selection for improved resistance to Russian wheat aphid within the cultivar Prowers (CO850060/PI 372129//5*Lamar). Awned, white-chaffed, medium tall hard red winter wheat. Similar to Prowers in all respects except has improved resistance to Russian wheat aphid.

The following were developed by Kenneth J. Frey, Iowa State University, Department of Agronomy, Ames, Iowa 50011-1010, United States; G. Patrick, Iowa State University, 1223 Agronomy Hall, Ames, Iowa 50011, United States; Jim Holland, Iowa State University, Department of Agronomy, Ames, Iowa 50011-1010, United States; Ronald Skrdla, Iowa State University, Department of Agronomy, Ames, Iowa 50011, United States. Donated by Sam Weaver, The Quaker Oats Company, 617 West Main Street, Barrington, Illinois 60010, United States. Received 12/09/1999.

PI 612421. *Avena sativa* L.

Breeding. Pureline. IAN979-5-1-22; NSGC 8644. Pedigree - MO-07929/IL85-6183-1. High beta-glucan levels.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 01/11/2000.

PI 612422 PVPO. *Lactuca sativa* L.

Cultivar. "PSR 2209". PVP 200000066.

PI 612423 PVPO. *Lactuca sativa* L.

Cultivar. "PSR 0140". PVP 200000067.

PI 612424 PVPO. *Lactuca sativa* L.

Cultivar. "PSR 3726". PVP 200000068.

PI 612425 PVPO. *Lactuca sativa* L.

Cultivar. "PSR 3865". PVP 200000069.

PI 612426 PVPO. *Lactuca sativa* L.

Cultivar. "MOHAWK"; PSR 6386. PVP 200000070.

PI 612427 PVPO. *Lactuca sativa* L.

Cultivar. "CONQUISTADOR". PVP 200000071.

PI 612428 PVPO. Lactuca sativa L.
Cultivar. "PSR 5179". PVP 200000072.

PI 612429 PVPO. Lactuca sativa L.
Cultivar. "PSR 7328". PVP 200000073.

PI 612430 PVPO. Lactuca sativa L.
Cultivar. "PSR 3879". PVP 200000074.

PI 612431 PVPO. Lactuca sativa L.
Cultivar. "WOLVERINE". PVP 200000075.

The following were developed by Akira Yonemaru, United States. Received 01/11/2000.

PI 612432 PVPO. Capsicum annuum L.
Cultivar. "HA-501". PVP 200000076.

The following were developed by Texas Agricultural Experiment Station, Texas, United States. Received 01/11/2000.

PI 612433 PVPO. Allium cepa L.
Cultivar. "LEGEND". PVP 200000098.

The following were developed by Advanta Seeds Pacific, Inc., Oregon, United States. Received 01/11/2000.

PI 612434 PVPO. Festuca lemanii T. Bastard
Cultivar. "AHF009". PVP 200000099.

PI 612435 PVPO. Festuca arundinacea Schreb.
Cultivar. "SR 8250". PVP 200000100.

PI 612436 PVPO. Lolium perenne L.
Cultivar. "PROWLER". PVP 200000101.

PI 612437 PVPO. Festuca ovina L.
Cultivar. "SCALDIS II". PVP 200000102.

PI 612438 PVPO. Festuca rubra L. subsp. rubra
Cultivar. "ASCO87". PVP 200000103.

The following were developed by Arkansas Agr. Exp. Sta., University of Arkansas, Arkansas, United States. Received 01/11/2000.

PI 612439 PVPO. Oryza sativa L.
Cultivar. "WELLS". PVP 200000077.

The following were developed by Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Research Centre, Canada. Received 01/11/2000.

PI 612440 PVPO. *Lathyrus sativus* L.
Cultivar. "AC Greenfix". PVP 20000105.

The following were developed by Busch Agricultural Resources, Inc., 3515 East County Road 52, Fort Collins, Colorado 80524, United States. Received 01/11/2000.

PI 612441 PVPO. *Hordeum vulgare* L.
Cultivar. "6B94-8253". PVP 200000106.

PI 612442 PVPO. *Hordeum vulgare* L.
Cultivar. "6B95-2482". PVP 200000107.

The following were developed by Hornbeck Seed Company, Inc., United States. Received 01/11/2000.

PI 612443 PVPO. *Glycine max* (L.) Merr.
Cultivar. "HBK 5991". PVP 200000108.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 01/11/2000.

PI 612444 PVPO. *Glycine max* (L.) Merr.
Cultivar. "93B46". PVP 200000109.

PI 612445 PVPO. *Glycine max* (L.) Merr.
Cultivar. "93B26". PVP 200000110.

PI 612446 PVPO. *Glycine max* (L.) Merr.
Cultivar. "92B36". PVP 200000111.

PI 612447 PVPO. *Glycine max* (L.) Merr.
Cultivar. "96B32". PVP 200000112.

PI 612448 PVPO. *Glycine max* (L.) Merr.
Cultivar. "96B21". PVP 200000113.

PI 612449 PVPO. *Glycine max* (L.) Merr.
Cultivar. "95B95". PVP 200000114.

The following were collected by John Bamberg, USDA, ARS, Potato Introduction Station, Peninsula Experiment Station, Sturgeon Bay, Wisconsin 54235, United States; Joseph J. Pavek, USDA, ARS, University of Idaho, Research & Extension Center, Aberdeen, Idaho 83210, United States; Charles Fernandez, University of Wisconsin, Potato Introduction Station, Peninsula Experiment Station, Sturgeon Bay, Wisconsin 54235, United States; Stepan Kiru, N.I. Vavilov Institute of Plant Industry, Department of Tuber Crops, 44 Herzen Street, St. Petersburg, Leningrad 190000, Russian Federation. Received 08/19/1999.

PI 612450. *Solanum jamesii* Torr.
Wild. BKPF 75. Collected 08/19/1999 in Colorado, United States. Latitude 37 deg. 8' 42'' N. Longitude 108 deg. 30' 31'' W. Elevation 1830 m. Montezuma County. Near Cortez. Mesa Verde National Park. Junction of

Spruce and Navajo canyons. An area of several acres. Deep black soil in flat grassy alluvial plain. Many thousands of plants covering the ground and growing among grass in open and among sage. Very vigorous and healthy, many flowering. To about 12". Collected dozens of tubers, mostly mother tubers.

PI 612451. *Solanum jamesii* Torr.

Wild. BKPF 76. Collected 08/21/1999 in New Mexico, United States. Latitude 36 deg. 1' 36'' N. Longitude 107 deg. 52' 24'' W. Elevation 1940 m. San Juan County. Navajo Reservation. Near Crownpoint. Chaco Culture National Historical Park. Sandy soil. Among grass and sage. Very many plants, some flowering. No fruit evident. Collected many tubers from scattered plants.

PI 612452. *Solanum jamesii* Torr.

Wild. BKPF 77. Collected 08/21/1999 in New Mexico, United States. Latitude 35 deg. 55' 48'' N. Longitude 107 deg. 6' 6'' W. Elevation 1950 m. Sandoval County. Between Torreon and Cuba on Rt 197. At 0.7 miles W of powerline, just over 11 miles W of Cuba. Growing in sandy soil under low hanging juniper branches, below outcrop of large round boulders. First time observed a clump of what appeared to be many seedlings growing together--perhaps from a single buried berry. Collected about 40 seedlings.

PI 612453. *Solanum jamesii* Torr.

Wild. BKPF 78. Collected 08/22/1999 in New Mexico, United States. Latitude 35 deg. 2' 18'' N. Longitude 108 deg. 20' 12'' W. Elevation 2190 m. Cibola County. Near Grants. El Morro National Monument. Campsite environs. Sandy reddish soil. Some under trees and among brush, some in open. Plants everywhere. Many small but some flowering. Collected 19 plants.

PI 612454. *Solanum jamesii* Torr.

Wild. BKPF 79. Collected 08/22/1999 in Arizona, United States. Latitude 35 deg. 58' 42'' N. Longitude 111 deg. 56' 24'' W. Elevation 2230 m. Coconino County. Grand Canyon National Park, S Rim. Across road from Buggeln picnic area down wooded slope to "Buggeln Tank". Near a spring on a raised berm. Among grass and under rabbit brush in opening in Ponderosa forest. Yellower color than observed elsewhere this year. Some flowering, no berries. Collected 20 plants.

PI 612455. *Solanum jamesii* Torr.

Wild. BKPF 80. Collected 08/23/1999 in Arizona, United States. Latitude 35 deg. 16' 0'' N. Longitude 112 deg. 4' 24'' W. Elevation 2140 m. Coconino County. E on 40 from Williams, to north shore of (intermittently dry) Davenport Lake. At a driveway. In disturbed bare reddish clay-sand-gravel soil. Especially where disturbed along the powerline where (apparently) cable or pipeline had been buried. Or, in lakebed among grass and rabbit brush. Very large, thick leaves (to 8") with dark blue-green color on plants growing in full sun. Larger plants flowering. Many more small, yellow spindly plants in dry lakebed among grass.

PI 612456. *Solanum jamesii* Torr.

Wild. BKPF 81. Collected 08/24/1999 in New Mexico, United States. Latitude 34 deg. 4' 36'' N. Longitude 107 deg. 27' 6'' W. Elevation 2552 m. Socorro County. Near Magdalena. On 60 12.2 mile W of Magdalena at

roadside picnic area, N side of road. Moist sand under junipers and pines and in open grassy areas, pure gravel along roadside. Plants not quite as abundant as in 1998, but some flowering and fruiting with mature fruit. Collected 200 fruit.

The following were donated by Young-seok Kwon, Pusan Branch Station, Horticultural Experiment Station, 20 Kangdong-dong, Kangseogu, Pusan 618-300, Korea, South. Received 05/15/1995.

PI 612457. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Shindewha 2ho"; Kw-1; Grif 12477.

PI 612458. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Ukdewha"; Kw-2; Grif 12478.

PI 612459. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Gabo"; Kw-3; Grif 12479.

PI 612460. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Shindungtewha"; Kw-4; Grif 12480.

PI 612461. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Chunseo"; Kw-5; Grif 12481.

PI 612462. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Kiwon"; Kw-6; Grif 12482.

PI 612463. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Booyeon"; Kw-7; Grif 12483.

PI 612464. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Dewhangsoobak"; Kw-8; Grif 12484.

PI 612465. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Chunryoug"; Km-9; Grif 12485.

PI 612466. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Nongwoomanri"; Kw-10; Grif 12486.

PI 612467. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Shindewha 3"; Kw-11; Grif 12487.

PI 612468. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Handuel"; Kw-12; Grif 12488.

PI 612469. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Shinyang"; Kw-13; Grif 12489.

PI 612470. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Kumsang"; Kw-15; Grif 12490.

PI 612471. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Lucky"; Kw-16; Grif 12491.

PI 612472. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Bingquare"; Kw-17; Grif 12492.

PI 612473. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Chilbo"; Kw-18; Grif 12493.

PI 612474. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Seokwang"; Kw-19; Grif 12494.

PI 612475. *Citrullus lanatus* (Thunb.) Matsum. & Nakai var. *lanatus*
"Shinbookuk"; Kw-20; Grif 12495.

The following were developed by Lloyd May, USDA, ARS, Coastal Plains Soil, Water, and Plant Res., 2200 Pocket Road, Florence, South Carolina 29506-9706, United States. Received 12/22/1999.

PI 612476. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97006. Pedigree - PD 3-14/MD 14-B. High yield potential. Excellent fiber quality.

PI 612477. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97019. Pedigree - PD 5472/GA 88-133. High yield potential. Excellent fiber quality.

PI 612478. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97021. Pedigree - PD 5472/HB 92-44. High yield potential. Excellent fiber quality.

PI 612479. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97047. Pedigree - PD 5377/MD 14-B. High yield potential. Excellent fiber quality.

PI 612480. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97072. Pedigree - PD 5582/MD 14-B. High yield potential. Excellent fiber quality.

PI 612481. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97100. Pedigree - PD 5256/SG501. High yield potential. Excellent fiber quality.

PI 612482. *Gossypium hirsutum* L.
Breeding. Pureline. PD 97101. Pedigree - PD 5256/SG501. High yield potential. Excellent fiber quality.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901, United States. Received 12/27/1999.

PI 612483. *Festuca rubra* L. subsp. *rubra*
Cultivar. Population. "PATHFINDER"; LTP-3951; Lot Z1-9-1225. PVP 200000348. Pedigree - Selected from old turfs of the United States and Europe. Progenies of intercrossing the best performing plants were subjected to varying cycles of phenotypic and genotypic selection. Medium-low growing, turf-type strong creeping red fescue able to produce an attractive, fine-textured turf of medium density and medium dark green color. Extensive rhizomes give good spreading ability and the ability to recover from injury.

The following were collected by Edward J. Garvey, USDA, ARS, Natl. Germplasm Resources Laboratory, Room 409, Building 003, BARC-West, Beltsville, Maryland 20705-2350, United States; Qing Wang, Nanjing Botanical Garden, Mem. Sun Yat-Sen, P.O. Box 1435, Nanjing, Jiangsu 210014, China; Jerry Stites, Longwood Gardens, P.O. Box 501, Kennett Square, Pennsylvania 19348, United States. Received 10/09/1999.

PI 612484. *Capsicum annuum* L.

Cultivated. TS 99-015; NA 69954. Collected 10/09/1999 in Sichuan, China. Latitude 31 deg. 39' 48'' N. Longitude 102 deg. 48' 6'' E. Dan Ba City, From a market, vendors were Tibetan women, Peppers have been grown here for many years. 11 Fruits bright red when ripe, variable in length (6-10cm long, 1-2 1/2 cm in diameter at stem tapered at tip).

The following were collected by Shawn Belt, USDA, ARS, U.S. National Arboretum, National Germplasm Repository, Glenn Dale, Maryland 20769-9157, United States; Edward J. Garvey, USDA, ARS, Natl. Germplasm Resources Laboratory, Room 409, Building 003, BARC-West, Beltsville, Maryland 20705-2350, United States; Qing Wang, Nanjing Botanical Garden, Mem. Sun Yat-Sen, P.O. Box 1435, Nanjing, Jiangsu 210014, China; Jerry Stites, Longwood Gardens, P.O. Box 501, Kennett Square, Pennsylvania 19348, United States. Received 10/09/1999.

PI 612485. *Capsicum annuum* L.

Cultivated. TS 99-016; Chaotian jiao pepper, 'Face the sky'; NA 69955. Collected 10/09/1999 in Sichuan, China. Latitude 31 deg. 39' 48'' N. Longitude 102 deg. 48' 6'' E. Dan Bu City, From a market, vendors were Tibetan women. This variety is old. Fruit was 1.5 -2 cm wide and 3-4 cm long (not tapered at end).

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; 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 09/28/1995.

PI 612486. *Fragaria virginiana* Mill.

Wild. *F. virginiana* NC 95-19-1; NC 95-19-1; CFRA 1408. Collected 07/11/1995 in Mississippi, United States. Latitude 34 deg. 0' 27'' N. Longitude 88 deg. 34' 17'' W. Elevation 0 m. Mississippi, Monroe county. Hwy 278 1.8 mi from Lake Monroe Rd to Wrenwood Rd. L on Wrenwood (an unpaved rd to Presbyterian Church Camp). Site 0.75 mi off road to the right, behind caretakers home. Cedar glade with occasional *F. virginiana*, mostly in heavy shade, but with several colonies extending out into open areas. Pedigree - collected from the wild in Mississippi.

The following were donated by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States. Received 12/01/1999.

PI 612487. *Fragaria chiloensis* subsp. *pacifica* Staudt

Wild. CFRA 688; CFRA 1689. Pedigree - Collected from the wild in British Columbia, Canada. Female; short day; large fruit; winter hardy in Ontario, but not Michigan; very resistant to leaf scorch and spot; representative of subsp. *pacifica* from the upper Pacific Northwest (British Columbia).

PI 612488. *Fragaria chiloensis* subsp. *pacifica* Staudt

Wild. CFRA 1267; CFRA 1690. Pedigree - Collected from the wild in British Columbia, Canada. Hermaphrodite; short day; large orange fruit; winter hardy in Ontario, but not Michigan; elite representative of subsp. *pacifica* from upper Pacific Northwest (British Columbia).

The following were collected by Bruce H. Barritt, Washington State University, Tree Fruit Research & Extension Ctr., 1100 N. Western Avenue, Wenatchee, Washington 98801, 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. Received 12/01/1999.

PI 612489. *Fragaria chiloensis* subsp. *lucida* (E. Vilm. ex Gay) Staudt

Wild. HM1; CFRA 1691. Collected 08/1997 in Oregon, United States. Latitude 43 deg. 55' 54'' N. Longitude 124 deg. 6' 39'' W. Elevation 10 m. Jessie M. Honeyman Memorial State Park a couple of miles south of Florence, Oregon. Pedigree - Collected from the wild in Oregon. Female; short day; unusually high fruit number; representative of subsp. *lucida* from the lower Pacific Northwest (Oregon).

The following were collected by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States. Received 12/01/1999.

PI 612490. *Fragaria chiloensis* subsp. *pacifica* Staudt

Wild. Scotts Creek (Franklin Point); Scott's Creek (Franklin Point); SC; CFRA 1692. Collected 07/21/1975 in California, United States. Latitude 37 deg. 8' 59'' N. Longitude 122 deg. 21' 34'' W. Elevation 0 m. Central, coastal California at Franklin Point, about two miles north of Scott Creek Beach. Loose, white sand dunes overlooking the ocean (about 100 feet away). Some succulents and grasses, although was mostly strawberry. Pedigree - Collected from the wild in California. Female; short day; large; red fruited; highest yield potential of any North American clone analyzed to date; found on dunes, so probably has high salt and drought tolerance, as well as low nutrient needs; elite representative of subsp. *pacifica* from central California.

The following were collected by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States; Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Stan Hokanson, USDA, ARS, Fruit Laboratory, Building 010A, Room 210, BARC-West, Beltsville, Maryland 20705, 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. Received 12/01/1999.

PI 612491. *Fragaria virginiana* subsp. *glauca* (S. Watson) Staudt

Wild. BT3; BH3; CA 1226; CFRA 1693. Collected 07/27/1997 in Utah, United States. Latitude 41 deg. 6' 23'' N. Longitude 111 deg. 30' 1'' W. Elevation 2712 m. Big Cottonwood Creek Canyon, Utah. Loose decomposed granite soil. Found in fir forest opening. Associated with Indian Paint Brush (*Castilleja* sp.), *Geranium* sp., grasses, and Virginia Bluebells (*Mertensia* sp.). Pedigree - Collected from the wild in Utah. Female; repeat flowering; red fruited; probably winter hardy as found at 2000m elevation; representative of subsp. *glauca* from the Rocky Mountains (Utah). Probably represents the clone used by Brighurst (CFRA 338) to produce day-neutral cultivars.

The following were collected by Adam Dale, Ontario Ministry of Agriculture & Food, Horticultural Experiment Station, Box 587, Simcoe, Ontario N3Y 4N5, Canada. Donated by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States. Received 12/01/1999.

PI 612492. *Fragaria virginiana* Mill. subsp. *virginiana*

Wild. Eagle 14; CFRA 1694. Collected 05/28/1988 in Ontario, Canada. Latitude 42 deg. 34' N. Longitude 81 deg. 34' W. Elevation 0 m. Picnic area on Highway 3 just east of Eagle, Elgin county, Ontario. Mown grassland at edge of wood. Grass mown periodically. Pedigree - Collected from the wild in Ontario, Canada. Partial hermaphrodite; weak, cyclic flowering; resistant to mildew and scorch; representative of subsp. *virginiana* from south central Canada (Ontario).

PI 612493. *Fragaria virginiana* Mill. subsp. *virginiana*

Wild. Fredrick 9; CFRA 1695. Collected 07/20/1988 in Ontario, Canada. Latitude 49 deg. 4' N. Longitude 81 deg. 8' W. Elevation 0 m. Fredrick, Cochrane district, Ontario. Second picnic area on highway 11 west of Cochrane. Open grassy areas in pine woodland. Soils: peat and clay. Pedigree - Collected from the wild in Ontario, Canada. Male; cyclic flowering; winter hardy; resistant to mildew and scorch; representative of subsp. *virginiana* from south central Canada (Ontario).

The following were collected by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, 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. Received 12/01/1999.

PI 612494. *Fragaria virginiana* Mill.

Wild. LH 5-1; BH2; CFRA 1696. Collected 08/02/1989 in South Dakota, United States. Latitude 44 deg. 33' 10'' N. Longitude 103 deg. 39' 24'' W. Elevation 1555 m. Whitetail Gulch in Black Hills National Forest, Pennington county, South Dakota. Corner of county road 318 and forest road 182. Grazed forest meadow with *Pinus contorta*, *Picea glauca*, *Populus termuloides* and grasses. Aspect northwest. Pedigree - Collected from the wild in South Dakota. Female; cyclic flowering; probably winter hardy as found at 1550m elevation; representative of an apparent hybrid between eastern subsp. *virginiana* and western subsp. *glauca* on the

eastern edge of the Rocky Mountains (Black Hills of South Dakota).

PI 612495. *Fragaria virginiana* Mill.

Wild. LH 50-1; LH 50-4; CFRA 1697. Developed in United States. Collected 08/16/1989 in Montana, United States. Latitude 46 deg. 50' 28'' N. Longitude 110 deg. 41' 40'' W. Elevation 2255 m. Kings Hill Pass in the Lewis and Clark National Forest. At interface of montane *Pinus contorta* and subalpine *Picea engelmannii* and *Pinus albicaulis* communities. Pedigree - Collected from the wild in Montana. Apparent hybrid between *F. virginiana* subsp. *glauca* and *F. virginiana* subsp. *virginiana*. Hermaphrodite; cyclic flowering; extremely large, numerous fruit; probably cold winter hardy as found at 2255m elevation; representative of an apparent hybrid between subsp. *glauca* and subsp. *virginiana* on the eastern edge of the Rocky Mountains (Lewis and Clark National Forest, Montana).

The following were collected by Patricia Holloway, University of Alaska, Georgeson Botanical Garden, 309 O'Neil, Fairbanks, Alaska 99775, 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. Received 12/01/1999.

PI 612496. *Fragaria virginiana* subsp. *glauca* (S. Watson) Staudt

Wild. MN 8688; RH 43; CFRA 1698. Collected 1985 in Alaska, United States. Latitude 64 deg. 2' N. Longitude 145 deg. 44' W. Elevation 0 m. Found near Delta Junction, Alaska. Pedigree - Collected from the wild in Alaska. Partial hermaphrodite; cyclic flowering; resistant to black root rot; representative of subsp. *glauca* from the upper northwestern part of *Fragaria virginiana*'s range (Alaska).

The following were collected by Adam Dale, Ontario Ministry of Agriculture & Food, Horticultural Experiment Station, Box 587, Simcoe, Ontario N3Y 4N5, Canada. Donated by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States. Received 12/01/1999.

PI 612497. *Fragaria virginiana* Mill. subsp. *virginiana*

Wild. Montreal River 10; CFRA 1699. Collected 07/23/1988 in Ontario, Canada. Latitude 47 deg. 14' N. Longitude 84 deg. 39' W. Elevation 0 m. On highway 17 at Montreal River Harbour, Algoma district, Ontario. Open disturbed habitat between road and woodland. Very sandy, gravelly soil, very dry. Pedigree - Collected from the wild in Ontario, Canada. Hermaphrodite; short day; unusually large fruit; resistant to mildew and scorch; representative of subsp. *virginiana* from south-central Canada (Ontario).

The following were collected by Margaret M. Stahler, USDA/NRSC, 2316 S. 6th St., Suite C, Klamath Falls, Oregon 97601, 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. Received 12/01/1999.

PI 612498. *Fragaria virginiana* Mill. subsp. *virginiana*

Wild. MS 31-19; RH 23; CFRA 1700. Collected 07/27/1986 in Minnesota,

United States. Latitude 48 deg. 27' N. Longitude 93 deg. 10' W.
Elevation 0 m. Koochiching county, Minnesota. Northern dry mesic forest (C.F. Curtis) with *Populus tremuloides*, *Betula papyrifera* (sp.?), *Picea glauca*, *Picea mariana* and *Pinus strobus*. Pedigree - Collected from the wild in Minnesota. Partial hermaphrodite; cyclic flowering; large fruit; resistant to black root rot, scorch and spot; representative of subsp. *virginiana* from the upper midwest (Minnesota).

PI 612499. *Fragaria virginiana* Mill. subsp. *virginiana*

Wild. MS 05-06; RH 30; CFRA 1701. Collected 06/21/1986 in Minnesota, United States. Latitude 47 deg. 43' 49'' N. Longitude 90 deg. 26' 24'' W. Elevation 0 m. Cut Face Creek (Good Harbor Creek), Cook county, Minnesota. *Populus tremuloides*, *Cornus* sp. and *Picea mariana*. Pedigree - Collected from the wild in Minnesota. Partial hermaphrodite; cyclic flowering; resistant to black root rot, scorch and spot; representative of subsp. *virginiana* from the upper midwest (Minnesota).

The following were collected by James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, 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. Received 12/01/1999.

PI 612500. *Fragaria virginiana* subsp. *glauca* (S. Watson) Staudt

Wild. RH 45; N8418; CFRA 1702. Collected 08/1984 in Alberta, Canada. Latitude 52 deg. 13' N. Longitude 117 deg. 10' W. Elevation 2200 m. Found near Columbia Icefield (Sunwapta Pass). Pedigree - Collected from the wild in Alberta, Canada. Partial hermaphrodite; weak cyclic flowering; probably extremely cold hardy due to location; resistant to black root rot, scorch and spot; representative of subsp. *glauca* from southwestern Canada (Alberta).

The following were collected by James F. Hancock, Michigan State University, Department of Horticulture, Plant and Soil Science A 342, East Lansing, Michigan 48824-1325, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States. Donated by Adam Dale, Ontario Ministry of Agriculture & Food, Horticultural Experiment Station, Box 587, Simcoe, Ontario N3Y 4N5, Canada. Received 01/11/2000.

PI 612501. *Fragaria virginiana* subsp. *glauca* (S. Watson) Staudt

Wild. LH 30-1; LH 30-4; CFRA 1703. Collected 08/09/1989 in Montana, United States. Latitude 46 deg. 44' 42'' N. Longitude 114 deg. 11' 26'' W. Elevation 1060 m. Developed in United States. Pedigree - Collected from the wild in Montana. Hermaphrodite; cyclic flowering; large fruited; heat tolerant; representative of subsp. *glauca* from the central Rocky Mountains, Montana.

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 612502. *Vigna unguiculata* (L.) Walp.

Wild. WJK-PRC-104; W6 4562; Grif 12331. Collected 06/07/1990 in Guangdong, China. Elevation 15 m. Farmer's field, about 25km north of Qingyuan, Guangdong Province. Grown at edge of peanut planting. White or cream-seeded with black hylum. Pods 6-10cm long.

PI 612503. *Vigna unguiculata* (L.) Walp.

Cultivated. W6 6220; Grif 12333. Collected 05/30/1990 in Sichuan, China. Latitude 29 deg. 34' 0'' N. Longitude 103 deg. 44' 0'' E. Collected from a farmer in Leshan City, Quan Miao County, about 10km from Leshan, Sichuan Province. Lat/lon accurate to Leshan. Mixed with W6 4519.

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 11/19/1994.

PI 612504. *Vigna unguiculata* (L.) Walp.

15082; Grif 12384. Collected 1988 in Saudi Arabia.

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 612505. *Vigna unguiculata* (L.) Walp.

GMN 49; Grif 12387. Collected 05/17/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 45' S. Longitude 23 deg. 57' E. Elevation 780 m. INERA Station.

PI 612506. *Vigna unguiculata* (L.) Walp.

GMN 51; Grif 12389. Collected 05/17/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 45' S. Longitude 23 deg. 57' E. Elevation 780 m. INERA Station.

PI 612507. *Vigna unguiculata* (L.) Walp.

GMN 52; Grif 12390. Collected 05/17/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 45' S. Longitude 23 deg. 57' E. Elevation 780 m. INERA Station.

PI 612508. *Vigna unguiculata* (L.) Walp.

GMN 53; Grif 12391. Collected 05/17/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 45' S. Longitude 23 deg. 57' E. Elevation 780 m. INERA Station.

PI 612509. *Vigna unguiculata* (L.) Walp.

GMN 55; Grif 12393. Collected 05/17/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 45' S. Longitude 23 deg. 57' E. Elevation 780 m. INERA Station.

PI 612510. *Vigna unguiculata* (L.) Walp.

GMN 77; Grif 12394. Collected 05/18/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 8' S. Longitude 24 deg. 11' E. Elevation 860 m. Lubanga.

- PI 612511. *Vigna unguiculata* (L.) Walp.
GMN 115; Grif 12396. Collected 05/27/1989 in Kasai-Occidental, Zaire.
Latitude 5 deg. 30' S. Longitude 22 deg. 8' E. Elevation 590 m. Kalume.
- PI 612512. *Vigna unguiculata* (L.) Walp.
GMN 124; Grif 12399. Collected 05/30/1989 in Kasai-Occidental, Zaire.
Latitude 7 deg. 11' S. Longitude 22 deg. 33' E. Elevation 900 m. Marche
De Luiza.
- PI 612513. *Vigna unguiculata* (L.) Walp.
GMN 128; Grif 12400. Collected 05/31/1989 in Kasai-Occidental, Zaire.
Latitude 6 deg. 3' S. Longitude 28 deg. 8' E. Elevation 700 m. Ngomba.
- PI 612514. *Vigna unguiculata* (L.) Walp.
GMN 134; Grif 12401. Collected 05/31/1989 in Kasai-Occidental, Zaire.
Latitude 5 deg. 57' S. Longitude 22 deg. 6' E. Elevation 670 m. Matamba.
- PI 612515. *Vigna unguiculata* (L.) Walp.
GMN 137; Grif 12402. Collected 06/02/1989 in Kasai-Occidental, Zaire.
Latitude 4 deg. 54' S. Longitude 21 deg. 46' E. Elevation 600 m. Marche
De Mweka.
- PI 612516. *Vigna unguiculata* (L.) Walp.
GMN 188; Grif 12405. Collected 06/11/1989 in Shaba, Zaire. Latitude 10
deg. 38' S. Longitude 25 deg. 49' E. Elevation 700 m.
- PI 612517. *Vigna unguiculata* (L.) Walp.
GMN 225; Grif 12407. Collected 06/13/1989 in Shaba, Zaire. Latitude 10
deg. 44' S. Longitude 25 deg. 27' E. Elevation 900 m. Marche De Kolwezi.
- PI 612518. *Vigna unguiculata* (L.) Walp.
GMN 287; Grif 12412. Collected 06/25/1989 in Shaba, Zaire. Latitude 8
deg. 6' S. Longitude 26 deg. 25' E. Elevation 800 m. Kinkonta.
- PI 612519. *Vigna unguiculata* (L.) Walp.
GMN 293; Grif 12413. Collected 06/25/1989 in Shaba, Zaire.
- PI 612520. *Vigna unguiculata* (L.) Walp.
GMN 296; Grif 12414. Collected 06/26/1989 in Shaba, Zaire. Latitude 7
deg. 21' S. Longitude 26 deg. 11' E. Elevation 800 m.
- PI 612521. *Vigna unguiculata* (L.) Walp.
GMN 303; Grif 12415. Collected 06/26/1989 in Shaba, Zaire. Latitude 7
deg. 22' S. Longitude 25 deg. 49' E. Elevation 950 m. Kamungu.
- PI 612522. *Vigna unguiculata* (L.) Walp.
GMN 308; Grif 12416. Collected 06/22/1989 in Shaba, Zaire. Latitude 7
deg. 22' S. Longitude 25 deg. 49' E. Elevation 950 m. Nyembo.

The following were donated by Guoxuan Li, Washington State University,
Department of Plant Pathology, Johnson Hall, Pullman, Washington 99164,
United States. Received 12/13/1990.

- PI 612523. *Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.
GL-12; W6 6358; Grif 12296. Collected in Xinjiang, China.

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 612524. *Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.
Cultivated. WJK-PRC-84; W6 4542; Grif 12329. Collected 06/06/1990 in Yunnan, China. Elevation 1900 m. Market in Kunming, Yunnan Province. Possibly yardlong (0.914m) bean *Vigna unguiculata*. Grown locally.

The following were donated by N. Quat Ng, International Institute of Tropical Agriculture, Oyo Road, PMB 5320, Ibadan, Oyo, Nigeria. Received 09/28/1992.

PI 612525. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13730; NVU 29; Grif 12089. Collected in Togo.

PI 612526. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13736; NVU 48; Grif 12095. Collected in Togo.

PI 612527. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13740; NVU 56; Grif 12099. Collected in Togo.

PI 612528. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13747; CuCx 105-22E; Grif 12106. Collected in Brazil.

PI 612529. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13748; CuCx 149-019; Grif 12107. Collected in Brazil.

PI 612530. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13751; CuCx 158-019; Grif 12110. Collected in Brazil.

PI 612531. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13752; CuCx 160-019; Grif 12111. Collected in Brazil.

PI 612532. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13754; CuCx 161-15E; Grif 12113. Collected in Brazil.

PI 612533. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13755; CuCx 161-17E; Grif 12114. Collected in Brazil.

PI 612534. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13756; CuCx 164-9F; Grif 12115. Collected in Brazil.

PI 612535. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13757; CuCx 163-18F; Grif 12116. Collected in Brazil.

PI 612536. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13760; CuCx 166-089; Grif 12119. Collected in Brazil.

PI 612537. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13762; CuCx 167-7E; Grif 12121. Collected in Brazil.

PI 612538. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*
TVu 13763; CuCx 167-43F; Grif 12122. Collected in Brazil.

PI 612539. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
TVu 13766; CuCx 171-01E; Grif 12125. Collected in Brazil.

PI 612540. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
TVu 13767; CuCx 171-09E; Grif 12126. Collected in Brazil.

PI 612541. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
TVu 13768; CuCx 171-6E; Grif 12127. Collected in Brazil.

PI 612542. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
TVu 13769; CuCx 171-012E; Grif 12128. Collected in Brazil.

PI 612543. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
TVu 13770; CuCx 171-13E; Grif 12129. Collected in Brazil.

PI 612544. *Vigna unguiculata* (L.) Walp. subsp. unguiculata
TVu 13772; CuCx 171-28E; Grif 12131. Collected in Brazil.

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 01/24/2000.

PI 612545. *Triticum aestivum* L. subsp. aestivum
Genetic. Pureline. WQL6K107-BHWX2-2a; NSGC 8645. GP-689. Pedigree - PI 606717/Kanto 107. Soft, homozygous waxy wheat. Combines waxy alleles at all three homoeologous loci (Wx-Alb, Wx-B1b, Wx-D1b). As a fully waxy line it lacks the Waxy gene product, granule bound starch synthase (GBSS, EC24.1.21), and less than 1% amylose. It carries the soft, wild-type hardness allele (Ha) with the puroindoline genotype, Pina-D1a and Pinb-D1a, derived from Kanto 107. Red grain color (one or more R genes).

PI 612546. *Triticum aestivum* L. subsp. aestivum
Genetic. Pureline. WQL6K107-BHWX14-7; NSGC 8646. GP-690. Pedigree - PI 606717/Kanto 107. Hard, homozygous waxy wheat. Combines waxy alleles at all three homoeologous loci (Wx-Alb, Wx-B1b, Wx-D1b). As a fully waxy line it lacks the Waxy gene product, granule bound starch synthase (GBSS, EC24.1.21), and less than 1% amylose. It carries the hard allele (ha) with the puroindoline genotype, Pina-D1a and Pinb-D1b. Red grain color (one or more R genes).

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; Robert E. Allan, USDA-ARS, Dept. of Crop & Soil Science, 209 Johnson Hall, Pullman, Washington 99164, United States. Received 01/24/2000.

PI 612547. *Triticum aestivum* L. subsp. aestivum
Genetic. Pureline. WQL2GAM329S; NSGC 8647. GS-127. Pedigree - selection from PI 268329, Gamenya. Soft white spring wheat nil derived from Gamenya (PI 268329), soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612548.

PI 612548. *Triticum aestivum* L. subsp. aestivum

Genetic. Pureline. WQL2GAM329H; NSGC 8648. GS-128. Pedigree - selection from PI 268329, Gamenya. Hard white spring wheat nil derived from Gamenya (PI 268329), hard allele of Hardness gene, Pina-D1b, Pinb-D1a. Near-isogenic with PI 612547.

PI 612549. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL2GAM503S; NSGC 8649. GS-129. Pedigree - selection from PI 274503, Gamenya. Soft white spring wheat nil derived from Gamenya (PI 274503), soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612550.

PI 612550. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL2GAM503H; NSGC 8650. GS-130. Pedigree - selection from PI 274503, Gamenya. Hard white spring wheat nil derived from Gamenya (PI 274503), hard allele of Hardness gene, Pina-D1b, Pinb-D1a. Near-isogenic with PI 612549.

PI 612551. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL2GAM909S; NSGC 8651. GS-131. Pedigree - selection from PI 290909, Gamenya. Soft white spring wheat nil derived from Gamenya (PI 290909), soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612552.

PI 612552. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL2GAM909H; NSGC 8652. GS-132. Pedigree - selection from PI 290909, Gamenya. Hard white spring wheat nil derived from Gamenya (PI 290909), hard allele of Hardness gene, Pina-D1b, Pinb-D1a. Near-isogenic with PI 612551.

PI 612553. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL3H-F077S; NSGC 8653. GS-133. Pedigree - Heron/7*Falcon = selection from AUS90077. Soft white spring wheat nil derived from Heron/7*Falcon selection (AUS90077), soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612554.

PI 612554. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL3H-F077H; NSGC 8654. GS-134. Pedigree - Heron/7*Falcon = selection from AUS90077. Hard white spring wheat nil derived from Heron/7*Falcon selection (AUS90077), hard allele of Hardness gene, Pina-D1b, Pina-D1a. Near-isogenic with PI 612553.

PI 612555. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL3H-F254S; NSGC 8655. GS-135. Pedigree - Heron/7*Falcon = selection from AUS90254. Soft white spring wheat nil derived from Heron/7*Falcon selection (AUS90254), soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612556.

PI 612556. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL3H-F254H; NSGC 8656. GS-136. Pedigree - Heron/7*Falcon = selection from AUS90254. Hard white spring wheat nil derived from Heron/7*Falcon selection (AUS90254), hard allele of Hardness gene, Pina-D1b, Pinb-D1a. Near-isogenic with PI 612555.

PI 612557. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL4EB-P655H; NSGC 8657. GS-137. Pedigree - Paha*2//Early Blackhull sel./5*Paha. Hard red winter club wheat nil derived from Paha*2//EB/5*Paha, hard allele of Hardness gene, Pina-D1a,

Pinb-D1b. Near-isogenic with PI 612558-612562.

PI 612558. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL4EB-P656H; NSGC 8658. GS-138. Pedigree - Paha*2//Early Blackhull sel./5*Paha. Hard white winter club wheat nil derived from Paha*2//EB/5*Paha, hard allele of Hardness gene, Pina-D1a, Pinb-D1b. Near-isogenic with PI 612557-612562.

PI 612559. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL4EB-P651S; NSGC 8659. GS-139. Pedigree - Paha*2//Early Blackhull sel./5*Paha. Soft white winter club wheat nil derived from Paha*2//EB/5*Paha, soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612557-612562.

PI 612560. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL4EB-P653S; NSGC 8660. GS-140. Pedigree - Paha*2//Early Blackhull sel./5*Paha. Soft red winter club wheat nil derived from Paha*2//EB/5*Paha, soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612557-612562.

PI 612561. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL4EB-P678S; NSGC 8661. GS-141. Pedigree - Paha*2//Early Blackhull sel./5*Paha. Soft white winter club wheat nil derived from Paha*2//EB/5*Paha, soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612557-612562.

PI 612562. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL4EB-P661S; NSGC 8662. GS-142. Pedigree - Paha*2//Early Blackhull sel./5*Paha. Soft white winter club wheat nil derived from Paha*2//EB/5*Paha, soft allele of Hardness gene, Pina-D1a, Pinb-D1b. Near-isogenic with PI 612557-612561.

PI 612563. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. EARLY BLACKHULL SELECTION; WQL4EB680H; NSGC 8663. GS-143. Pedigree - selection from Early Blackhull, CI8856. Hard red winter wheat parent (EB) used to derive the hard soft wheat nils, PI 612557-612562.

PI 612564. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL5EBD-NV60-1142H; NSGC 8664. GS-144. Pedigree - Early Blackhull Derivative/5*Nugaines. Hard white winter wheat nil derived from EB derivative/5*Nugaines selection, hard allele of Hardness gene, Pina-D1a, Pinb-D1b. Near-isogenic with PI 612565-612567.

PI 612565. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL5EBD-NV75-1153H; NSGC 8665. GS-145. Pedigree - Early Blackhull Derivative/5*Nugaines. Hard white winter wheat nil derived from EB derivative/5*Nugaines selection, hard allele of Hardness gene, Pina-D1a, Pinb-D1b. Near-isogenic with PI 612564-612567.

PI 612566. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL5EBD-NV68-1145S; NSGC 8666. GS-146. Pedigree - Early Blackhull Derivative/5*Nugaines. Soft white winter wheat nil derived from EB derivative/5*Nugaines selection, soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612564-612567.

PI 612567. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL5EBD-NV112-1166S; NSGC 8667. GS-147. Pedigree - Early Blackhull Derivative/5*Nugaines. Soft white winter wheat nil derived from EB derivative/5*Nugaines selection, soft allele of Hardness gene, Pina-D1a, Pinb-D1a. Near-isogenic with PI 612564-612566.

PI 612568. *Triticum aestivum* L. subsp. *aestivum*

Genetic. Pureline. WQL5EBD-1112H; EARLY BLACKHULL DERIVATIVE; NSGC 8668. GS-148. Pedigree - selection from Early Blackhull. Hard red winter wheat parent (EB derivative/5*Nugaines selection) used to derived the hard and soft wheat nils, PI 612564-612567.

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; 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 09/28/1995.

PI 612569. *Fragaria virginiana* Mill.

Wild. NC 95-21-1; *F. virginiana* NC 95-21-1; CFRA 1414. Collected 07/12/1995 in Mississippi, United States. Latitude 33 deg. 51' 19'' N. Longitude 88 deg. 32' 21'' W. Elevation 0 m. Mississippi, Pontotoc county. Trace State Park (just outside Tupelo). Along roadside in grassy areas. Found in shade under trees. Scattered and morphologically diverse popl. Pedigree - collected from the wild in Mississippi. Update on 1995 *F. virginiana* Collections in the Southeastern USA James R. Ballington and Jerry A. Payne South Carolina was extremely frustrating, by the middle of the week we had only verified the existence of one location for *Fragaria virginiana* in the Coastal Plain. Three accessions were located in the Edgefield District of Sumter National Forest and four in Greenwood State Park. *Fragaria virginiana* from the one verified Coastal Plain location is currently growing in a garden near Lexington, SC. Twelve accessions of *Vaccinium* spp., four of *Gaylussacia frondosa*, and one of *Rubus argutus* were also collected. In southeastern Louisiana and in Mississippi, *Fragaria virginiana* was not abundant either, and no accessions were found south of Starkville, MS. Specific previous sites were visited near Hattisburg and Laurel, MS, but *F. virginiana* was no longer present. A total 33 accessions of *F. virginiana* were collected from east central and northeastern Mississippi. Occurring in.

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 612570. *Fragaria virginiana* Mill.

Wild. JP 95-1; *F. virginiana*; CFRA 1435. Collected 08/31/1995 in Florida, United States. Pedigree - collected from the wild in Florida.

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 08/28/1995.

PI 612571. Unident-Fabaceae sp.

Wild. E94108; Ames 22614. Collected 09/08/1994 in Mongolia. Latitude 46 deg. 18' 11'' N. Longitude 113 deg. 1' 55'' E. Elevation 899 m. Southern edge of grass steppe region in Dornod Aimag, eastern Mongolia. Grass steppe. Typical brown soils, high gravel content, thin, and low fertility. Aspect east, slope 5%. Seeds black.

PI 612572. Unident-Fabaceae sp.

Wild. E94126; Ames 22615. Collected 09/09/1994 in Mongolia. Latitude 46 deg. 51' 49'' N. Longitude 114 deg. 34' 1'' E. Elevation 808 m. Eastern Mongolia in central Dornod Aimag. Grass steppe. Soils brown, gravelly, fine silt loams. Aspect SE, slope 2%. Seeds black.

PI 612573. Unident-Fabaceae sp.

Wild. E94183; Ames 22617. Collected 09/13/1994 in Mongolia. Latitude 47 deg. 37' 11'' N. Longitude 116 deg. 16' 26'' E. Elevation 427 m. East of site E94-034 but in similar country. Grass steppe. Soils are the same. Aspect north, slope 1%. In 1998-99 this accession was grown in a greenhouse in Ames, Iowa. Plants perennial, and erect. Flowers, in a raceme, were purple with white wings, legumes bear two black seeds on opposite sides of a constricted seam. Observed by David M. Brenner, North Central Regional Plant Introduction Station. Genus could not be determined by Dr. Ernest Small in Ottawa, Canada (Nov 1999).

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 05/24/1999.

PI 612574. Unident-Fabaceae sp.

Wild. 98HT-88; Ames 25337. Collected 09/01/1998 in Mongolia. Latitude 48 deg. 23' 52'' N. Longitude 110 deg. 12' 5'' E. Elevation 1036 m. Ulaanchulun, Batchirrit Sum, Henti Aimag. Within & adjacent to ancient rock-walled fortress enclosing ~40 hectares of hill slope and upper edge of meadow. 2 small streams drain the enclosed area. Gravelly, eroded granitic soils. Recent fire through area. 1-15% slope with S aspect. Seeds black.

PI 612575. Unident-Fabaceae sp.

Wild. 98HT-292; Ames 25338. Collected 09/10/1998 in Mongolia. Latitude 48 deg. 20' 6'' N. Longitude 110 deg. 7' 35'' E. Elevation 1219 m. Batchirrit Sum, Henti Aimag. Near a granite rock bluff with scattered trees at the bluff base. Soils are sandy and gravelly and formed from eroded granite. 16% slope with a southeastern aspect. Seeds black.

The following were developed by Tom L. Harvey, Kansas State University, Fort Hays Branch Ag. Experiment Station, 1232 240th Avenue, Hays, Kansas 67601-9228, United States; Rollin G. Sears, Kansas State University, Department of Agronomy, Throckmorton Hall, Manhattan, Kansas 66506-5501, United States; T.J. Martin, Kansas State University, Agric. Research

Center-Hays, 1232 240th Avenue, Hays, Kansas 67601, United States; Jimmie H. Hatchett, USDA-ARS, Dept of Entomology, Waters Hall, Manhattan, Kansas 66506-4004, United States; Dallas L. Seifers, Kansas State University, Agriculture Research Center-Hays, 1232 240th Avenue, Hays, Kansas 67601-9228, United States; M.D. Witt, Kansas State University, Southwest Res. & Ext. Center, Garden City, Kansas, United States; A.J. Schlegel, Kansas State University, Agric. Res. Ctr.-Hays, Hays, Kansas 67601, United States; P.J. McCluskey, Kansas State University, Dept. of Grain Sciences and Industry, Manhattan, Kansas 66506, United States. Received 01/14/2000.

PI 612576. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "TREGO"; KS95HW62-6. CV-897. Pedigree - KS87H325/Rio Blanco. Hard white seed variety. Has Scout winterhardiness, medium-late semi-dwarf with white chaff and is non-shattering. Sprouting tolerance equal to parent Rio Blanco. Top performing entry in KSU western Kansas breeding nurseries from 1996 - 1999. Effective resistance to leaf rust (*Puccinia recondita*), stem rust (*P. graminis*), wheat soilborne mosaic virus, wheat streak mosaic virus and Hessian fly (*Mayetiola destructor*). Test weight and flour yield good, mixing strength medium strong, and dough characters good with acceptable water absorption and good loaf volume. Null at one locus for reduced amylose.

The following were developed by T.J. Martin, Kansas State University, Agric. Research Center-Hays, 1232 240th Avenue, Hays, Kansas 67601, United States. Received 01/14/2000.

PI 612577. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "HEYNE"; KS85W663-42. PVP 200000154. Pedigree - KS82W422/SWM754308/KS831182/KS82W422. Hard white variety with winter growth habit. Red chaff, semi-dwarf stature, and medium maturity (similar to 2137). Good tolerance to aluminum toxicity caused by low soil pH, and excellent general disease resistance. Effective levels of resistance to leaf rust (*Puccinia recondita*), stem rust (*P. graminis*), speckled leaf blotch (*Stepoia tritici*), and glume blotch (*Phaeosphaeria nodorum*), tan spot (*Pyrenophora trichostoma*), wheat soilborne mosaic virus, and wheat streak mosaic virus. Winterhardiness is only fair (similar to Jagger). Fall and spring growth patterns similar to Jagger. Milling and baking properties excellent, similar to Jagger.

PI 612578. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "BETTY"; KS84063-2W. PVP 200000155. Pedigree - Jagger reselection. White seed reselection from the hard red winter wheat Jagger. Differs from Jagger in the following characteristics; white chaff, taller, more winter hardy and initiates growth later in the spring. 3-4 days later in maturity, and lower level of tolerance to wheat streak mosaic virus. Performance best in central and north central Kansas, where performed comparable to Jagger. Reaction to other diseases and insects similar to Jagger as well as milling and baking properties.

The following were developed by S. Landry, United States. Received 1975.

PI 612579. *Oryza sativa* L.

Cultivar. "GOLDEN STEVE"; NSL 90533. PVP 7200040.

The following were developed by Rice Researchers, Inc., United States.
Received 1975.

PI 612580. *Oryza sativa* L.
Cultivar. "TSURI MAI"; NSL 90538. PVP 7400075.

PI 612581. *Oryza sativa* L.
Cultivar. "KOKUBELLE"; NSL 90539. PVP 7400077.

The following were developed by J.E. Grundman, United States. Received 1976.

PI 612582. *Oryza sativa* L.
Cultivar. "MAXWELL"; NSL 92340. PVP 7300073.

PI 612583. *Oryza sativa* L.
Cultivar. "TERSO"; NSL 92341. PVP 7400006.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 02/09/2000.

PI 612584 PVPO. *Glycine max* (L.) Merr.
Cultivar. "92B62". PVP 200000117.

PI 612585 PVPO. *Glycine max* (L.) Merr.
Cultivar. "92B37". PVP 200000118.

PI 612586 PVPO. *Glycine max* (L.) Merr.
Cultivar. "92B56". PVP 200000119.

PI 612587 PVPO. *Glycine max* (L.) Merr.
Cultivar. "92B75". PVP 200000120.

The following were developed by Holden's Foundation Seeds, Inc., United States. Received 02/09/2000.

PI 612588 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH287". PVP 200000121.

PI 612589 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH244". PVP 200000122.

PI 612590 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH245". PVP 200000123.

PI 612591 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH279". PVP 200000124.

PI 612592 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "LH293". PVP 200000125.

The following were developed by Turf Merchants, Inc., United States. Received 02/09/2000.

PI 612593 PVPO. *Festuca rubra* subsp. *fallax* (Thuill.) Nyman
Cultivar. "INTRIGUE". PVP 200000126.

The following were developed by Steve St. Martin, Ohio State University, Department of Horticulture & Crop Science, 202 Kottman Hall, Columbus, Ohio 43210-1086, United States; R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States; Ron Fioritto, Ohio State University, Ohio Agricultural Research & Development Center, Dept. of Horticulture & Crop Science, Wooster, Ohio 44691, United States; Giles Mills, USDA, ARS, Plant Germplasm Quarantine Office, Building 580, BARC-East, Beltsville, Maryland 20705-2350, United States; A.F. Schmitthenner, Ohio State University, Dept. of Plant Pathology, Columbus, Ohio 43210, United States; Anne E. Dorrance, Ohio State University, OARDC - Department of Plant Pathology, 1680 Madison Avenue, Wooster, Ohio 44691-4096, United States; S.A. McIntyre, USDA, ARS, Ohio State University, Dept. of Horticulture and Crop Science, Columbus, Ohio 43210-1086, United States. Received 02/09/2000.

PI 612594. *Glycine max* (L.) Merr.

Cultivar. Pureline. "KOTTMAN". CV-425; PVP 200000127. Pedigree - HS88-7363 x HS88-4988. Maturity group III (relative maturity 3.7). Indeterminate stem, white flowers, light tawny pubescence, tan pods, and dull yellow seedcoats with black hila. Carries both the Rps1k and Rps3 genes for resistance to *Phytophthora* rot (*Phytophthora sojae*). Released because of high yield and resistance to *Phytophthora*.

The following were developed by Mark A. Brick, Colorado State University, Department of Soil and Crop Sciences, Fort Collins, Colorado 80521, United States; H.F. Schwartz, Colorado State University, Dept. of Plant Pathology and Weed Science, Fort Collins, Colorado 80523, United States; J.B. Ogg, Colorado State University, Dept. of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States; J.J. Johnson, Colorado State University, Dept. of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States; F. Judson, Fruita Research Station, 1910 L Road, Fruita, Colorado 81521, United States. Received 02/09/2000.

PI 612595. *Phaseolus vulgaris* L.

Cultivar. "MONTROSE"; CO 51715. CV-178; PVP 200000128. Pedigree - BelNeb2 x GH 196. Released 02/01/1999. Pinto bean selected for high yield, medium maturity, resistance to rust, and common bacterial blight (*Xanthomonas campestris*). Combines mid-season maturity (92 to 95 d in Colorado), high yield potential, resistance to the prevalent races of rust in Colorado and the US, and resistance to bean common mosaic virus (BCMV). Genes conferring rust resistance are Ur-5 and Ur-11 based on testing by R. Stavely, USDA, ARS, Beltsville, MD. Carries the recessive resistance allele bc 1(2) for resistance to pathogroups I, II, III and V of BCMV. Prostrate Type III growth habit similar to most commercial pinto bean cultivars grown in the US. Seed has traditional pinto size, shape, and bright cream background coloration. Seed weight averaged 36.7 g 100 seed⁻¹.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 02/09/2000.

PI 612596 PVPO. *Lactuca sativa* L.

Cultivar. "TARRAGONA". PVP 200000129.

PI 612597 PVPO. Phaseolus vulgaris L.
Cultivar. "FURY". PVP 200000130.

PI 612598 PVPO. Pisum sativum L.
Cultivar. "XP 8500577". PVP 200000131.

PI 612599 PVPO. Pisum sativum L.
Cultivar. "VOLARE". PVP 200000132.

PI 612600 PVPO. Phaseolus vulgaris L.
Cultivar. "HURRICANE". PVP 200000133.

The following were developed by AgraTech Seeds Inc.. Received 02/09/2000.

PI 612601 PVPO. Arachis hypogaea L.
Cultivar. "AGRATECH 1-1". PVP 200000134.

The following were developed by AgraTech Seeds, Inc., Seed Testing Lab., United States. Received 02/09/2000.

PI 612602 PVPO. Arachis hypogaea L.
Cultivar. "AGRATECH 201". PVP 200000135.

PI 612603 PVPO. Arachis hypogaea L.
Cultivar. "AGRATECH VC-2". PVP 200000136.

The following were developed by Pure Line Seeds, Inc., P.O. Box 8866, Moscow, Idaho 83843, United States. Received 02/09/2000.

PI 612604 PVPO. Pisum sativum L.
Cultivar. "TAMMANY". PVP 200000137.

The following were developed by Luther Talbert, Montana State University, Plant Sciences & Plant Pathology, 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; 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, 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, Dept. of Plant, Soil, & Env. Sciences, Bozeman, Montana 59717, United States; R.N. Stougaard, Northwestern Agric. Res. Ctr., Kalispell, Montana 59901, United States; Michael Giroux, Montana State University, Dept of Plant, Soil and Env. Sci., PO Box 173120, Bozeman, Montana 59717-3120, United States; Ken Kephart, Montana State University, MSU Southern Ag. Research Center, 748 Railroad Highway, Huntley, Montana 59037, United States; D. Habernicht, Montana State University, Plant Sciences Dept., Bozeman, Montana 59717, United States; W.E. Grey, Montana State University, Bozeman, Montana 59717, United States. Received 02/09/2000.

PI 612605. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. "MTHW9420". CV-892; PVP 200000138. Pedigree - MT8182 / MT8289. Mid-early maturity with an average heading date of June 28. Semi-dwarf, with average height of 73 cm. Yield average, 4549 kg ha⁻¹. Grain protein percentage 133 g kg⁻¹. Straw and chaff white, glumes white, and a lax, awned head. Flag leaf erect. Kernels ovate with a medium length, and have a brush of medium length. Kernels have medium V-shaped crease with angular cheeks. Susceptible to the wheat stem sawfly (*Cephus cinctus*) and to the Russian wheat aphid (*Diuraphis noxia*). Resistant to stem rust (*Puccinia graminis*). Moderately susceptible to leaf rust (*Puccinia triticina*). Milling and baking quality acceptable. Flour yield averaged 685 g kg⁻¹.

The following were developed by Agro Seed Research, United States. Received 02/09/2000.

PI 612606 PVPO. *Pisum sativum* L.

Cultivar. "CELLO". PVP 200000139.

The following were collected by H. T. Erickson, Purdue University, Dept. of Horticulture, West Lafayette, Indiana, United States. Received 10/1978.

PI 612607. *Vigna unguiculata* (L.) Walp. subsp. *unguiculata*

Uncertain. Feijao de Corda; 15. Collected 07/19/1978 in Brazil. Market, Belem, Para. Pedigree - Selection from PI 441918. Seed round, off-white.

The following were developed by H. William Crittenden, University of Delaware, Department of Agronomy, Newark, Delaware, United States. Received 02/10/2000.

PI 612608. *Glycine max* (L.) Merr.

Cultivar. "Celest". Pedigree - PI 80837 x Delmar.

The following were donated by Andrew James, CSIRO, Cunningham Laboratory, 306 Carmody Road, St Lucia, Queensland 4067, Australia. Received 02/20/1999.

PI 612609. *Glycine max* (L.) Merr.

Cultivated. "Melrose"; SY0004001.

The following were donated by Randy Ireson, American Friends Service Committee, 388 Browning Av. SE, Salem, Oregon 97302, United States. Received 11/05/1998.

PI 612610. *Glycine max* (L.) Merr.

Cultivated. "Musan-1"; SY0005001.

PI 612611. *Glycine max* (L.) Merr.

Cultivated. "Browngilgun"; SY0005002.

PI 612612. *Glycine max* (L.) Merr.

Cultivated. "Ryong song"; SY0005003.

- PI 612612 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "Ryong song"; SY0005003.
- PI 612612 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. "(Ryong song)"; SY0005003.
- PI 612613. *Glycine max* (L.) Merr.
Cultivated. "Yangdok"; SY0005004.
- PI 612614. *Glycine max* (L.) Merr.
Cultivated. "Gumgang"; SY0005005.
- PI 612615. *Glycine max* (L.) Merr.
Cultivated. "Bochon"; SY0005006.
- PI 612616. *Glycine max* (L.) Merr.
Cultivated. "Nyongbyon"; SY0005007.
- PI 612617. *Glycine max* (L.) Merr.
Cultivated. "Kapsan"; SY0005008.
- PI 612617 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "Kapsan"; SY0005008.
- PI 612617 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. "(Kapsan)"; SY0005008.

The following were donated by Philipp W. Simon, USDA, ARS, Vegetable Crops Research Unit, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 02/03/2000.

- PI 612618. *Glycine max* (L.) Merr.
Cultivated. POL234715; SY0006001.
- PI 612619. *Glycine max* (L.) Merr.
Cultivated. POL234716; SY0006002.
- PI 612620. *Glycine max* (L.) Merr.
Cultivated. POL234717; SY0006003.
- PI 612621. *Glycine max* (L.) Merr.
Cultivated. POL234718; SY0006004.
- PI 612622. *Glycine max* (L.) Merr.
Cultivated. POL234719; SY0006005.

The following were donated by M. Schultz, Seed Bank, 143 Charles, Monroe, Washington 98272-2302, United States. Received 03/07/1990.

- PI 612623. *Lactuca sativa* L.
Cultivar. "MARAVILLIA DEVERANO-VONNY"; W6 3486. Small crinkly head with red/bronze. Gray seed.
- PI 612624. *Lactuca sativa* L.

Cultivar. "BOLOGNA"; W6 3487.

PI 612625. *Lactuca sativa* L.
Cultivar. "BABYLON"; W6 3488.

PI 612626. *Lactuca sativa* L.
Cultivar. "REINE DES JUILLETS"; W6 3489.

PI 612627. *Lactuca sativa* L.
Cultivar. "SUSAN'S RED BIBB"; W6 3491.

PI 612628. *Lactuca sativa* L.
Cultivar. "BROWN GOLDING"; W6 3492.

PI 612629. *Lactuca sativa* L.
Cultivar. "APOLLO"; W6 3681.

PI 612630. *Lactuca sativa* L.
Cultivar. "RAFETTO RED"; W6 3712.

PI 612631. *Lactuca sativa* L.
Cultivar. "BALLON"; W6 3682.

PI 612632. *Lactuca sativa* L.
Cultivar. "BATAVIA BORD ROUGE"; W6 3683.

PI 612633. *Lactuca sativa* L.
Cultivar. "BIONDO LISCE"; W6 3684.

PI 612634. *Lactuca sativa* L.
Cultivar. "BLONDE DU CAZARD"; W6 3685.

PI 612635. *Lactuca sativa* L.
Cultivar. "BRAUNER TROTZKOPF"; W6 3686.

PI 612636. *Lactuca sativa* L.
Cultivar. "BRUNE D'HIVER"; W6 3688.

PI 612637. *Lactuca sativa* L.
Cultivar. "COBHAM GREEN"; White Boston; W6 3690.

PI 612638. *Lactuca sativa* L.
Cultivar. "CORNELL #4"; W6 3691.

PI 612639. *Lactuca sativa* L.
Cultivar. "CZECHOSLOVAKIAN RED BIBB"; W6 3692.

PI 612640. *Lactuca sativa* L.
Cultivar. "ESTIVA REGINA DEI GHAICCI"; W6 3693.

PI 612641. *Lactuca sativa* L.
Cultivar. "FLAME"; W6 3695.

PI 612642. *Lactuca sativa* L.
Cultivar. "FRENCH ANTINA"; W6 3696.

PI 612643. *Lactuca sativa* L.

- Cultivar. "FRENCH MANTILLA"; W6 3697.
- PI 612644. *Lactuca sativa* L.**
Cultivar. "FRENCH RED"; W6 3698.
- PI 612645. *Lactuca sativa* L.**
Cultivar. "GOOSE"; W6 3699.
- PI 612646. *Lactuca sativa* L.**
Cultivar. "LANDIS WINTER"; W6 3703.
- PI 612647. *Lactuca sativa* L.**
Cultivar. "NANCY"; W6 3707.
- PI 612648. *Lactuca sativa* L.**
Cultivar. "NO NAME"; W6 3708.
- PI 612649. *Lactuca sativa* L.**
Cultivar. "ORFEO KAGRANER SOMMER"; W6 3709.
- PI 612650. *Lactuca sativa* L.**
Cultivar. "ROMEA"; W6 3719.
- PI 612651. *Lactuca sativa* L.**
Cultivar. "ROSSA D'AMERIQUE"; W6 3720.
- PI 612652. *Lactuca sativa* L.**
Cultivar. "ROUGETTE DUMIDI"; W6 3722.
- PI 612653. *Lactuca sativa* L.**
Cultivar. "RUBEN'S RED"; W6 3723.
- PI 612654. *Lactuca sativa* L.**
Cultivar. "SALAD VIETNAM"; W6 3724.
- PI 612655. *Lactuca sativa* L.**
Cultivar. "SANDRINA WINTER"; W6 3725.
- PI 612656. *Lactuca sativa* L.**
Cultivar. "SANGUINE AMELIORE"; W6 3727.
- PI 612657. *Lactuca sativa* L.**
Cultivar. "SELMA LOLLO"; W6 3728.
- PI 612658. *Lactuca sativa* L.**
Cultivar. "ST. BLAISE"; W6 3729.
- PI 612659. *Lactuca sativa* L.**
Cultivar. "SUMMER BABY BIBB"; W6 3731.
- PI 612660. *Lactuca sativa* L.**
Cultivar. "SWEETIE"; W6 3796.
- PI 612661. *Lactuca sativa* L.**
Cultivar. "VAL D'ORGE"; W6 3797.
- PI 612662. *Lactuca sativa* L.**

Cultivar. "VALPRIZE"; W6 3799.

PI 612663. *Lactuca sativa* L.

Cultivar. "VERPIA"; W6 3800.

PI 612664. *Lactuca sativa* L.

Cultivar. "SHANGHAI 20"; W6 9042. Collected in China.

PI 612665. *Lactuca sativa* L.

Cultivar. "YANSHUO"; W6 9043. Collected in China.

PI 612666. *Lactuca sativa* L.

Cultivar. "BECKER"; W6 9860.

PI 612667. *Lactuca sativa* L.

Cultivar. "RED MAGNET"; W6 3713.

PI 612668. *Lactuca sativa* L.

Cultivar. "RED MONTPELIER"; W6 3714.

PI 612669. *Lactuca sativa* L.

Cultivar. "ROMANA BIONDA DEGLI ORTOLANI"; W6 3716.

PI 612670. *Lactuca sativa* L.

Cultivar. "ROMANCE"; W6 3718.

The following were developed by Mike Grisham, USDA-ARS, Sugarcane Research Unit, P.O. Box 470, Houma, Louisiana 70361, United States; William H. White, USDA, ARS, Sugarcane Research Unit, Houma, Louisiana 70361, United States; Benjamin L. Legendre, USDA, ARS, U.S. Sugarcane Field Laboratory, P.O. Box 470, Houma, Louisiana 70361, United States; Jimmie D. Miller, USDA, ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; D.D. Garrison, USDA, ARS, SRRC, Sugarcane Research Unit, Houma, Louisiana 70360, United States; E.O. Dufrene, USDA, ARS, SRRC, St. Gabriel Res. Sta.h, U.S. Sugarcane Research Unit, St. Gabriel, Louisiana, United States. Received 09/02/1998.

PI 612671. *Saccharum* sp.

Cultivar. "HoCP 91-555"; M01239; Q 37785. CV-112. Pedigree - CP83-644 X LCP82-94. Released 1999. Early maturing, high sucrose with high population of small-sized, green stalks that turn maroon when exposed to sunlight. Erect growth habit and suited to mechanical harvesting. Comparable to LCP85-384, the principle cultivar grown in Louisiana in yields of total recoverable sugar and tons cane per hectare in the first-ratoon crop but exceeded CP70-321, the second principle cultivar in yield of recoverable sugar and tons cane per hectare in the plant-cane crop and second-ratoon crop. Resistant to sugarcane mosaic virus (strains A, B, and D) and sorghum mosaic virus (strains H, I, and M). Resistant to smut (*Ustilago scitaminea*) and rust (*Puccinia melanocephala*) but susceptible to leaf scald (*Xanthomonas albilineans*) and ratoon stunting disease (*Clavibacter xyli*). Susceptible to sugarcane borer (*Diatraea saccharalis*). Released for production on both light and heavy-textured soils.

The following were developed by B. Glaz, USDA, ARS, Sugarcane Field Station,

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; Jimmie D. Miller, USDA, ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; J.M. Shine, Jr., Florida Sugar Cane League, Inc., Clewiston, Florida 33440, United States; Jack C. Comstock, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; J.E. Follis, Florida Sugar Cane League, Inc., P.O. Box 1208, Clewiston, Florida 33440, United States. Received 10/21/1997.

PI 612672. *Saccharum* sp.

Cultivar. "CP 89-1509"; M01168; Q 37252; Q 30808. CV-111. Pedigree - Selected from a polycross with CP 80-1827 as the female parent. Male parent is unknown. Ten percent higher average cane yields on sand than CP 70-1133 and essentially equal to the cane yield of CP 73-1547. Sugar content 4% higher than CP 70-1133 and 7% higher than CP 73-1547. Sugar yields 26% higher than CP 70-1133 but only 9% higher than CP 73-1547. Adequate resistance for commercial production in Florida to sugarcane mosaic virus, leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), and rust (*Puccinia melanocephala*). Lower incidence of sugarcane yellow leaf virus than other commercial cultivars. Susceptible to ratoon stunting disease (*Clavibacter xyli*). Fiber content 10.16% compared to 10.37% for CP 70-1133 and 9.44% for CP 73-1547.

Unknown source. Received 1996.

PI 612673. *Ipomoea batatas* (L.) Lam.
Q 21990; Hwangmi.

The following were donated by Australian Department of Agriculture, Institute of Plant Sciences, Burnley Gardens, Swan Street, Burnley, Victoria 3121, Australia. Received 02/09/1993.

PI 612674. *Ipomoea batatas* (L.) Lam.
IPS 152; BE-4494; SP-094; Q 29651.

The following were donated by International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 03/20/1995.

PI 612675. *Ipomoea batatas* (L.) Lam.
"Kawogo"; CIP 440165; 7028 USA; BE-7445; Q 35664.

Unknown source. Received 10/16/1995.

PI 612676. *Ipomoea batatas* (L.) Lam.
"Yizi 138"; ZS 609; BE-7677; Q 35789. High yield, high quality, wide adaptability.

Unknown source. Received 10/16/1995.

PI 612677. *Ipomoea batatas* (L.) Lam.
"Hebei 351"; ZS 618; BE-7677; Q 35790. High yield, nature flowering, wide adaptability.

Unknown source. Received 10/16/1995.

PI 612678. *Ipomoea batatas* (L.) Lam.
"Honghong 1"; ZS 679; BE-7677; Q 35793. High yield, tolerant to drought, easy sprouting.

Unknown source. Received 03/02/1998.

PI 612679. *Ipomoea batatas* (L.) Lam.
Cultivar. "WT-125"; Q 37462.

Unknown source. Received 03/02/1998.

PI 612680. *Ipomoea batatas* (L.) Lam.
Cultivar. "WT-262"; Q 37466.

Unknown source. Received 03/02/1998.

PI 612681. *Ipomoea batatas* (L.) Lam.
Cultivar. "WT-320"; Q 37468.

Unknown source. Received 03/02/1998.

PI 612682. *Ipomoea batatas* (L.) Lam.
Cultivar. "WT-335"; Q 37470.

Unknown source. Received 03/02/1998.

PI 612683. *Ipomoea batatas* (L.) Lam.
Cultivar. "WT-399"; Q 37471.

Unknown source. Received 03/02/1998.

PI 612684. *Ipomoea batatas* (L.) Lam.
Cultivar. "WT-532"; Q 37473.

Unknown source. Received 03/02/1998.

PI 612685. *Ipomoea batatas* (L.) Lam.
Cultivar. "LM 87.045"; CIP 187004.2; Q 37475.

Unknown source. Received 03/02/1998.

PI 612686. *Ipomoea batatas* (L.) Lam.
Cultivar. "LM 88.014"; CIP 188001.2; Q 37476.

Unknown source. Received 03/02/1998.

PI 612687. *Ipomoea batatas* (L.) Lam.
Cultivar. "SANTO AMARO"; CIP 400011; Q 37478.

Unknown source. Received 03/02/1998.

PI 612688. *Ipomoea batatas* (L.) Lam.
Cultivar. "ANARANJADO INTE"; CIP 420001; Q 37480.

Unknown source. Received 03/02/1998.

PI 612689. *Ipomoea batatas* (L.) Lam.
Cultivar. CIP 420024; Q 37482.

Unknown source. Received 03/02/1998.

PI 612690. *Ipomoea batatas* (L.) Lam.
Cultivar. "CAMOTE YUCA"; CIP 420025; Q 37483.

Unknown source. Received 03/02/1998.

PI 612691. *Ipomoea batatas* (L.) Lam.
Cultivar. "CAMOTE TALLO"; CIP 420026; Q 37484.

Unknown source. Received 03/02/1998.

PI 612692. *Ipomoea batatas* (L.) Lam.
Cultivar. "PAPILLA MALA HIEBRA"; CIP 420030; Q 37485.

Unknown source. Received 03/02/1998.

PI 612693. *Ipomoea batatas* (L.) Lam.
Cultivar. "COSTENO"; CIP 420033; Q 37486.

Unknown source. Received 03/02/1998.

PI 612694. *Ipomoea batatas* (L.) Lam.
Cultivar. "Camote Rosita"; CIP 420048; Q 37487.

Unknown source. Received 03/02/1998.

PI 612695. *Ipomoea batatas* (L.) Lam.
Cultivar. "Huachano"; CIP 420065; Q 37488.

Unknown source. Received 03/02/1998.

PI 612696. *Ipomoea batatas* (L.) Lam.

Cultivar. "HELENA"; CIP 420068; Q 37489.

Unknown source. Received 03/02/1998.

PI 612697. *Ipomoea batatas* (L.) Lam.
Cultivar. "TIS 8441"; CIP 440073; Q 37490.

Unknown source. Received 03/02/1998.

PI 612698. *Ipomoea batatas* (L.) Lam.
Cultivar. "NC 262"; CIP 440088; Q 37491.

Unknown source. Received 03/02/1998.

PI 612699. *Ipomoea batatas* (L.) Lam.
Cultivar. "TSURUNASH-GENJI"; CIP 440127; Q 37492.

Unknown source. Received 03/02/1998.

PI 612700. *Ipomoea batatas* (L.) Lam.
Cultivar. "CN 1448-49"; CIP 440181; Q 37493.

Unknown source. Received 03/02/1998.

PI 612701. *Ipomoea batatas* (L.) Lam.
Cultivar. "MAN LOBOR"; CIP 440198; Q 37494.

Unknown source. Received 03/02/1998.

PI 612702. *Ipomoea batatas* (L.) Lam.
Cultivar. "CN 1747-88"; CIP 440234; Q 37495.

The following were developed by Stan J. Kays, University of Georgia, Department of Horticulture, 1111 Plant Science, Athens, Georgia 30602, United States; Janice Bohac, USDA, ARS, U.S. Vegetable Laboratory, 2875 Savannah Highway, Charleston, South Carolina 29407, United States; Philip D. Dukes, USDA, ARS, U.S. Vegetable Laboratory, 2875 Savannah Highway, Charleston, South Carolina 29414, United States; Wayne J. McLaurin, University of Georgia, Department of Horticulture, 217 Hoke Smith Building, Athens, Georgia 30602-4356, United States; Yan Wang, University of Georgia, Department of Horticulture, 1111 Plant Sciences Building, Athens, Georgia 30602, United States; D.M. Jackson, USDA, ARS, U.S. Vegetable Laboratory, 2875 Savannah Highway, Charleston, South Carolina 29407, United States. Received 02/11/2000.

PI 612703. *Ipomoea batatas* (L.) Lam. var. *batatas*
Breeding. "GA90-16". Pedigree - Open pollinated seedling from a polycross nursery in 1990. Female parent was HiDry. A cooked product with taste and aroma similar to white potato. Grows well under not, humid conditions. Good resistance to flea beetles (*Systema elongata* and

S. blanda), the southern rootknot nematode (*Meloidogyne incognita*), and fusarium wilt or stem rot (*Fusarium oxysporum* f. sp. *batatas*). Much lower flavor intensity, similar to other staple crops (e.g., cassava, potato, rice). Excellent potential for developing commercial cultivars with low flavor impact. Annual prostrate, vining plant. Alternate, ovate leaves, tip abruptly pointed acute to acuminate, base truncate to weakly cordate, margins entire with occasional irregular angled teeth, veins green to purple with greater anthocyanin toward the base and on the abaxial side, blade intermediate to dark green with anthocyanin largely restricted to veins, leaf length to width ratio typically 1.03, leaf size intermediate and variable, substantial leaf shedding especially late in season. Petioles green to purple, length varying.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901, United States; W.A. Meyer, Rutgers University, Cook College, Plant Sciences Dept., P.O. Box 231, 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; Leah A. Brilman, Seed Research of Oregon, Inc., 27630 Llewellyn Road, Corvallis, Oregon 97333, 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 612704. *Lolium perenne* L.

Cultivar. "SR 4500"; SRX NJPR; NJ96; CLOL 1. SR 4500; . Pedigree - Comprised of six ryegrass lines (A95-167, -171, -175, -188, -211, -292). Perennial ryegrass derived from germplasm plants received in the Fall of 1996 from Rutgers University. Comprised of six high turf performance perennial ryegrass lines (A95-167,-171,-175,-188,-211,-292), one with no dollar spot observed. Screened in 1997 and 1998 for stem rust resistance in Oregon (none of them high but the best selected), seed yield and uniformity.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by Guo Hua Hu, Hong Xinglong Research Institute, Agricultural Center, Heilongjiang Academy of Agricultural Reclamation Sciences, Youyi County, Heilongjiang 155811, China. Received 04/25/1999.

PI 612705. *Glycine max* (L.) Merr.

Cultivar. "He Feng 9"; SY0008001. Collected in Ohio, United States.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by Feng Ji Tang, Bayan Town, Bayan County, Heilongjiang 151800, China. Received 04/25/1999.

PI 612706. *Glycine max* (L.) Merr.

Cultivar. "Bayan 32"; SY0009001. Collected in Heilongjiang, China. Farmer selection. Received in 1996 and 1999.

PI 612706 A. *Glycine max* (L.) Merr.

Cultivated. Pureline. "Bayan 32"; SY0009001. Collected in Heilongjiang,

China.

- PI 612706 B. Glycine max** (L.) Merr.
Cultivated. Pureline. "(Bayan 32)"; SY0009001. Collected in Heilongjiang, China.
- PI 612707. Glycine max** (L.) Merr.
Cultivar. "Bei 8709"; SY0009002. Collected in Heilongjiang, China.
Received in 1996 and 1999.
- PI 612707 A. Glycine max** (L.) Merr.
Cultivated. Pureline. "Bei 8709"; SY0009002. Collected in Heilongjiang, China.
- PI 612707 B. Glycine max** (L.) Merr.
Cultivated. Pureline. "(Bei 8709)"; SY0009002. Collected in Heilongjiang, China.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by Guang Yu Sun, Soybean Investigations, Land Reclamation and Ag. Sci., 156 Anaing Stree, Jiamusi, Heilongjiang 154007, China. Received 04/25/1999.

- PI 612708. Glycine max** (L.) Merr.
Cultivar. "K 89-9081"; SY0010001. Collected in Heilongjiang, China.
Received in 1996 and 1999.
- PI 612708 A. Glycine max** (L.) Merr.
Cultivated. Pureline. "K 89-9081"; SY0010001. Collected in Heilongjiang, China.
- PI 612708 B. Glycine max** (L.) Merr.
Cultivated. Pureline. "(K 89-9081)"; SY0010001. Collected in Heilongjiang, China.
- PI 612708 C. Glycine max** (L.) Merr.
Cultivated. Pureline. "(K 89-9081)"; SY0010001. Collected in Heilongjiang, China.
- PI 612708 D. Glycine max** (L.) Merr.
Cultivated. Pureline. "(K 89-9081)"; SY0010001. Collected in Heilongjiang, China.
- PI 612709. Glycine max** (L.) Merr.
Cultivar. "K 87-104"; SY0010002. Collected in Heilongjiang, China.
Received in 1996 and 1999.
- PI 612709 A. Glycine max** (L.) Merr.
Cultivated. Pureline. "K 87-104"; SY0010002. Collected in Heilongjiang, China.
- PI 612709 B. Glycine max** (L.) Merr.
Cultivated. Pureline. "(K 87-104)"; SY0010002. Collected in Heilongjiang, China.
- PI 612709 C. Glycine max** (L.) Merr.

Cultivated. Pureline. "(K 87-104)"; SY0010002. Collected in Heilongjiang, China.

PI 612710. *Glycine max* (L.) Merr.
Cultivar. "K 93-600"; SY0010003. Collected in Ohio, United States.
Received in 1996 and 1999.

PI 612711. *Glycine max* (L.) Merr.
Cultivar. "K 93-89"; SY0010004. Collected in Heilongjiang, China.
Received in 1996 and 1999.

PI 612711 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "K 93-89"; SY0010004. Collected in Heilongjiang, China.

PI 612711 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. "(K 93-89)"; SY0010004. Collected in Heilongjiang, China.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by Zhongtang Liu, Hejiang Agricultural Institute, No. 83 Anqing Road, Jiamusi, Heilongjiang 154007, China. Received 04/25/1999.

PI 612712. *Glycine max* (L.) Merr.
Cultivar. "He feng 93-111"; SY0011001. Collected in Ohio, United States.
Very tall Dt2 (King of Soy).

PI 612713. *Glycine max* (L.) Merr.
Cultivar. "He feng 910"; SY0011002. Collected in Heilongjiang, China.
Virus and Frog eye resistant.

PI 612713 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "He feng 910"; SY0011002. Collected in Heilongjiang, China.

PI 612713 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. "(He feng 910)"; SY0011002. Collected in Heilongjiang, China.

PI 612714. *Glycine max* (L.) Merr.
Cultivar. "He feng 1538"; SY0011003. Collected in Heilongjiang, China.
Early line.

PI 612714 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "He feng 1538"; SY0011003. Collected in Heilongjiang, China.

PI 612714 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. "(He feng 1538)"; SY0011003. Collected in Heilongjiang, China.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by Zhang Guiru, Soybean Institute, Heilongjiang Academy of Agricultural Science, 50

Xuefu Road, China. Received 04/25/1999.

PI 612715. Glycine max (L.) Merr.

Cultivar. "Hei nong 40"; SY0012001. Collected in Ohio, United States.
na Dt2. Received in 1996 and 1999.

PI 612716. Glycine max (L.) Merr.

Cultivar. "Harbin 93-6349"; SY0012002. Collected in Ohio, United States.
Dt2 (unreleased line). Received in 1996 and 1999.

PI 612717. Glycine max (L.) Merr.

Cultivar. "Harbin 94-2508"; SY0012003. Collected in Ohio, United States.

PI 612718. Glycine max (L.) Merr.

Cultivar. "Harbin 92-1062"; SY0012004. Collected in Ohio, United States.
na Dt2 (unreleased line). Received in 1996 and 1999.

PI 612719. Glycine max (L.) Merr.

Cultivar. "Harbin 91-6065"; SY0012005. Collected in Ohio, United States.
Dt2 (unreleased line). Received in 1996 and 1999.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University,
1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by L.C. Lin,
Yenping, Fujian, China. Received 04/25/1999.

PI 612720. Glycine max (L.) Merr.

Cultivar. "Jilin 26"; SY0013001. Collected in Jilin, China. Received in
1996 and 1999.

PI 612720 A. Glycine max (L.) Merr.

Cultivated. Pureline. "Jilin 26"; SY0013001. Collected in Jilin, China.

PI 612720 B. Glycine max (L.) Merr.

Cultivated. Pureline. "(Jilin 26)"; SY0013001. Collected in Jilin, China
.

PI 612721. Glycine max (L.) Merr.

Cultivar. "Jilin 33"; SY0013002. Collected in Jilin, China. Received in
1996 and 1999.

PI 612721 A. Glycine max (L.) Merr.

Cultivated. Pureline. "Jilin 33"; SY0013002. Collected in Jilin, China.

PI 612721 B. Glycine max (L.) Merr.

Cultivated. Pureline. "(Jilin 33)"; SY0013002. Collected in Jilin, China
.

PI 612722. Glycine max (L.) Merr.

Cultivar. "Jilin 34"; SY0013003. Collected in Ohio, United States.
Received in 1996 and 1999.

PI 612723. Glycine max (L.) Merr.

Cultivar. "Jilin 35"; SY0013004. Collected in Ohio, United States.
Received in 1996 and 1999.

PI 612724. Glycine max (L.) Merr.

Cultivar. "Jilin 36"; SY0013005. Collected in Jilin, China. Received in 1996 and 1999.

PI 612724 A. Glycine max (L.) Merr.

Cultivated. Pureline. "Jilin 36"; SY0013005. Collected in Jilin, China.

PI 612724 B. Glycine max (L.) Merr.

Cultivated. Pureline. "(Jilin 36)"; SY0013005. Collected in Jilin, China

PI 612725. Glycine max (L.) Merr.

Cultivar. "Jilin 37"; SY0013006. Collected in Ohio, United States. Received in 1966 and 1999.

PI 612726. Glycine max (L.) Merr.

Cultivar. "Jilin 8966-25"; SY0013007. Collected in Ohio, United States. Received in 1996 and 1999.

PI 612727. Glycine max (L.) Merr.

Cultivar. "Jilin 8966-35"; SY0013008. Collected in Ohio, United States. Received in 1996 and 1999.

PI 612728. Glycine max (L.) Merr.

Cultivar. "Jilin 8978-6"; SY0013009. Collected in Ohio, United States. Received in 1996 and 1999.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States. Donated by Sho Qui Hua, Chinese Academy of Agric. Science, Dept. of Crop Breeding & Cultivation, Beijing, China. Received 04/25/1999.

PI 612729. Glycine max (L.) Merr.

Cultivar. "Zhong huong 9"; SY0014001. Collected in Ohio, United States. 100 day. Summer, tall. Received in 1996 and 1999.

PI 612730. Glycine max (L.) Merr.

Cultivar. "Zhong huong 10"; SY0014002. Collected in Ohio, United States. 105 day. Summer, short. Received in 1996 and 1999.

PI 612731. Glycine max (L.) Merr.

Cultivar. "Ke fong 6"; SY0014003. Collected in Ohio, United States. 100-105 day. Summer and Spring, tall. Received in 1996 and 1999.

PI 612732. Glycine max (L.) Merr.

Cultivar. "Zhao shu 18"; SY0014004. Collected in Ohio, United States. 95 day. Summer, short. Received in 1996 and 1999.

The following were collected by Shuming Wang, Jilin Academy of Agricultural Sciences, Gongzhuling, Jilin, China. Donated by Brian Diers, Michigan State University, Dept. of Crop and Soil Sciences, East Lansing, Michigan 48824, United States. Received 02/18/2000.

PI 612733. Glycine max (L.) Merr.

Cultivar. "Jiqing No. 1"; SY0017001. Collected in Jilin, China.

- PI 612734. *Glycine max* (L.) Merr.
Cultivar. "Jihe No. 45"; SY0017002. Collected in Jilin, China.
- PI 612735. *Glycine max* (L.) Merr.
Cultivar. "Jiunong No. 21"; SY0017003. Collected in Jilin, China.
- PI 612736. *Glycine max* (L.) Merr.
Cultivar. "Yi No. 3"; SY0017004. Collected in Jilin, China.
- PI 612737. *Glycine max* (L.) Merr.
Cultivar. "Hefeng No. 21"; SY0017005. Collected in Jilin, China.
- PI 612738. *Glycine max* (L.) Merr.
Cultivar. "67803"; SY0017006. Collected in Jilin, China.
- PI 612739. *Glycine max* (L.) Merr.
Cultivar. "67562"; SY0017007. Collected in Jilin, China.
- PI 612740. *Glycine max* (L.) Merr.
Cultivar. "CM048"; SY0017008. Collected in Jilin, China.
- PI 612741. *Glycine max* (L.) Merr.
Cultivar. "Jifeng No. 1"; SY0017009. Collected in Jilin, China.
- PI 612742. *Glycine max* (L.) Merr.
Cultivar. "Jifeng No. 2"; SY0017010. Collected in Jilin, China.
- PI 612743. *Glycine max* (L.) Merr.
Cultivar. "Bianjing"; SY0017011. Collected in Jilin, China.
- PI 612744. *Glycine max* (L.) Merr.
Cultivar. "89445"; SY0017012. Collected in Jilin, China.
- PI 612745. *Glycine max* (L.) Merr.
Cultivar. "Bonwand"; SY0017013. Collected in Jilin, China.
- PI 612746. *Glycine max* (L.) Merr.
Cultivar. "Fushuali"; SY0017014. Collected in Jilin, China.
- PI 612747. *Glycine max* (L.) Merr.
Cultivar. "Xuan-3"; SY0017015. Collected in Jilin, China.
- PI 612748. *Glycine max* (L.) Merr.
Cultivar. "Xuan-1"; SY0017016. Collected in Jilin, China.
- PI 612749. *Glycine max* (L.) Merr.
Cultivar. "Xuan-2"; SY0017017. Collected in Jilin, China.
- PI 612750. *Glycine max* (L.) Merr.
Cultivar. "BPR 2502"; SY0017018. Collected in Jilin, China.
- PI 612751. *Glycine max* (L.) Merr.
Cultivar. "Hegi 342"; SY0017019. Collected in Jilin, China.

The following were collected by R.L. Cooper, USDA-ARS, Ohio State University,
1680 Madison, Wooster, Ohio 44691-4096, United States. Received 04/25/1999.

- PI 612752. *Glycine max* (L.) Merr.
Cultivar. "ZY 352"; SY0015001. Collected in China.
- PI 612753. *Glycine max* (L.) Merr.
Cultivar. SY0015002; ZY 645. Collected in China.
- PI 612753 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. SY0015002; ZY 645. Collected in China.
- PI 612753 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. SY0015002; (ZY 645). Collected in China.
- PI 612754. *Glycine max* (L.) Merr.
Cultivar. SY0015003; (ZY 645). Collected in China.
- PI 612755. *Glycine max* (L.) Merr.
Cultivar. SY0015004; (ZY 645). Collected in China.
- PI 612756. *Glycine max* (L.) Merr.
Cultivar. "ZY 111"; SY0015005. Collected in China.
- PI 612757. *Glycine max* (L.) Merr.
Cultivar. "ZY 12"; SY0015006. Collected in China.
- PI 612758. *Glycine max* (L.) Merr.
Cultivar. "ZY 113"; SY0015007. Collected in China.
- PI 612758 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "ZY 113"; SY0015007. Collected in China.
- PI 612758 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. "(ZY 113)"; SY0015007. Collected in China.
- PI 612759. *Glycine max* (L.) Merr.
Cultivar. SY0015008; (ZY 113). Collected in China.
- PI 612759 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. SY0015008; (ZY 113). Collected in China.
- PI 612759 B. *Glycine max* (L.) Merr.
Cultivated. Pureline. SY0015008; (ZY 113). Collected in China.
- PI 612759 C. *Glycine max* (L.) Merr.
Cultivated. Pureline. SY0015008; (ZY 113). Collected in China.
- PI 612759 D. *Glycine max* (L.) Merr.
Cultivated. Pureline. SY0015008; (ZY 113). Collected in China.
- PI 612760. *Glycine max* (L.) Merr.
Cultivar. "50392"; SY0016001. Collected in China. Large seeded.
- PI 612761. *Glycine max* (L.) Merr.
Cultivar. "50131"; SY0016002. Collected in China. Large seeded.
- PI 612761 A. *Glycine max* (L.) Merr.
Cultivated. Pureline. "50131"; SY0016002. Collected in China.

PI 612761. *Glycine max* (L.) Merr.

Cultivated. Pureline. "(50131)"; SY0016002. Collected in China.

PI 612762. *Glycine max* (L.) Merr.

Cultivar. "50461"; SY0016003. Collected in China. Small seeded.

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, 495 Borlaug Hall, 1991 Upper Buford Cir., St. Paul, Minnesota 55108, United States. Received 02/17/2000.

PI 612763. *Glycine max* (L.) Merr.

Cultivar. Pureline. "MN1801"; M91-1137; SY0007003. CV-415; PVP 200000145. Pedigree - Kasota x Kenwood. Relative maturity of 1.8. Indeterminate growth habit, purple flowers, gray pubescence and brown pods. Seeds have yellow seed coats, buff hila and a shiny seed coat luster. Averages about 94 cm tall. Seeds average about 15.8 grams per 100 seeds. Protein and oil content from 1996-1998 URT data was 42.1% and 20.5%, respectively. Carries the Rps1c gene for resistance to phytophthora root rot (*Phytophthora sojae*).

PI 612764. *Glycine max* (L.) Merr.

Cultivar. Pureline. "MN0901"; M91-821; SY0007004. CV-414; PVP 200000146. Pedigree - M83-766 x Leslie. Relative maturity of 0.9. Indeterminate growth habit, white flowers, gray pubescence and brown pods. Seeds have yellow seed coats, yellow hila and a shiny seed coat luster. Averages about 82 cm tall. Seeds average about 17.0 grains per 100 seeds. Protein and oil content from 1996-1998 URT data was 40.5% and 21.3%, respectively. Has the Rps1 gene for resistance to phytophthora root rot (*Phytophthora sojae*).

The following were donated by USDA, ARS, Colorado Agric. Exp. Station, Fort Collins, Colorado, United States. Received 1977.

PI 612765. *Beta vulgaris* L. subsp. *vulgaris*

Breeding. IDBBNR 4249; NSL 95222; A77-51. Collected in Chile. Crop year 1977. Immed. parent 73/5-1-24-L1. Product of selection and breeding for resistance to yellow wilt.

The following were donated by J. C. Theurer, Sugarbeet Investigations, Crops Res. Lab., Utah State Univ., Logan, Utah 84322, United States. Received 1983.

PI 612766. *Beta vulgaris* L. subsp. *vulgaris*

Uncertain. IDBBNR 4458; NSL 183343; AT3985A.

PI 612767. *Beta vulgaris* L.

Uncertain. IDBBNR 5001; NSL 183344; AT3986A.

PI 612768. *Beta vulgaris* L. subsp. *vulgaris*

Uncertain. IDBBNR 4464; NSL 183352; AT3993-5.

PI 612769. *Beta vulgaris* L. subsp. *vulgaris*

Uncertain. IDBBNR 4469; NSL 183357; AT3994-3.

The following were donated by Richard Yu, USDA, ARS, Sugarbeet Production Research, 1639 Alisal St., Salinas, California 93905, United States. Received 1985.

PI 612770. *Beta vulgaris* L.

Breeding. IDBBNR 5098; #70P23; NSL 195506; EL40 BREEDING LINE 32 & 29. Leafspot-blkroot resistance, self-sterile, from 02 clone thru 3 generation of selection. 1st 2 selection cycles were primarily for increased leafspot resistance and large root size in competition. 3rd cycle of selection was for leafspot resistance in Ohio from lines with high yield and quality performance in Michigan. Roots selected for size in competition and shape.

The following were collected by Country Club de Villa, Av. Hernando de Lavalle s/n Urb., Chorrillos, Lima 18, Peru, Lima, Peru. Received 12/23/1998.

PI 612771. *Paspalum vaginatum* Sw.

Uncertain. #12 Fwy ccde Villa; 12; Q 37956. Collected 12/23/1998 in Peru

Unknown source. Received 03/01/2000.

PI 612772 QUAR. *Sorghum bicolor* (L.) Moench

Cultivated. SG 5195; 97/710. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612773 QUAR. *Sorghum bicolor* (L.) Moench

Cultivated. SG 5252; 97/804. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612774 QUAR. *Sorghum bicolor* (L.) Moench

Cultivated. SG 5261; 97/818. Collected 1997 in Mali.

The following were donated by Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India. Received 03/01/2000.

PI 612775 QUAR. *Sorghum bicolor* (L.) Moench

Cultivated. IS 40037; 97/853. Collected 1997 in Mali.

PI 612776 QUAR. *Sorghum bicolor* (L.) Moench

Cultivated. IS 40153; 97/864. Collected 1997 in Mali.

PI 612777 QUAR. *Sorghum bicolor* (L.) Moench

Cultivated. IS 40154; 97/865. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612778 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CIRAD-14; 97/901. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612779 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CIRAD-36; 97/923. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612780 QUAR. Sorghum bicolor (L.) Moench
Cultivated. "Sequetana"; CZ-12; 97/993. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612781 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-203; 97/1008. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612782 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-205; 97/1010. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612783 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-206; 97/1011. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612784 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-210; 97/1015. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612785 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-211; 97/1016. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612786 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-212; 97/1017. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612787 QUAR. Sorghum bicolor (L.) Moench

Cultivated. CZ-215; 97/1020. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612788 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-232; 97/1037. Collected 1997 in Mali.

Unknown source. Received 03/01/2000.

PI 612789 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-235; 97/1040.

Unknown source. Received 03/01/2000.

PI 612790 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-255; 97/1060.

Unknown source. Received 03/01/2000.

PI 612791 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-256; 97/1061.

Unknown source. Received 03/01/2000.

PI 612792 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-260; 97/1065.

Unknown source. Received 03/01/2000.

PI 612793 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-266; 97/1071.

Unknown source. Received 03/01/2000.

PI 612794 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-269; 97/1074.

Unknown source. Received 03/01/2000.

PI 612795 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-263; 97/1068.

Unknown source. Received 03/01/2000.

PI 612796 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-321; 97/1126.

Unknown source. Received 03/01/2000.

PI 612797 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-374; 97/1179.

Unknown source. Received 03/01/2000.

PI 612798 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-382; 97/1187.

Unknown source. Received 03/01/2000.

PI 612799 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-383; 97/1188.

Unknown source. Received 03/01/2000.

PI 612800 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-407; 97/1212.

Unknown source. Received 03/01/2000.

PI 612801 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-447; 97/1252.

Unknown source. Received 03/01/2000.

PI 612802 QUAR. Sorghum bicolor (L.) Moench
Cultivated. CZ-456; 97/1261.

Unknown source. Received 03/01/2000.

PI 612803 QUAR. Sorghum bicolor (L.) Moench
Cultivated. 90PR5238; 97/1282.

Unknown source. Received 03/01/2000.

PI 612804 QUAR. Sorghum bicolor (L.) Moench
Cultivated. 94PR2410; 97/1285.

Unknown source. Received 03/01/2000.

PI 612805 QUAR. Sorghum bicolor (L.) Moench
Cultivated. 92PR3146; 97/1310.

Unknown source. Received 03/01/2000.

PI 612806 QUAR. Sorghum bicolor (L.) Moench

Cultivated. SG 6720; 97/1533.

Unknown source. Received 03/01/2000.

PI 612807 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6721; 97/1534.

Unknown source. Received 03/01/2000.

PI 612808 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6755; 97/1568.

Unknown source. Received 03/01/2000.

PI 612809 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6758; 97/1571.

Unknown source. Received 03/01/2000.

PI 612810 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6780; 97/1593.

Unknown source. Received 03/01/2000.

PI 612811 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6763; 97/1576.

Unknown source. Received 03/01/2000.

PI 612812 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6781; 97/1594.

Unknown source. Received 03/01/2000.

PI 612813 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6829; 97/1640.

Unknown source. Received 03/01/2000.

PI 612814 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6839; 97/1650.

Unknown source. Received 03/01/2000.

PI 612815 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6840; 97/1651.

Unknown source. Received 03/01/2000.

PI 612816 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6843; 97/1654.

Unknown source. Received 03/01/2000.

PI 612817 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6881; 97/1692.

Unknown source. Received 03/01/2000.

PI 612818 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6882; 97/1693.

Unknown source. Received 03/01/2000.

PI 612819 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6883; 97/1694.

Unknown source. Received 03/01/2000.

PI 612820 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6885; 97/1696.

Unknown source. Received 03/01/2000.

PI 612821 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6887; 97/1698.

Unknown source. Received 03/01/2000.

PI 612822 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6891; 97/1702.

Unknown source. Received 03/01/2000.

PI 612823 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6892; 97/1703.

Unknown source. Received 03/01/2000.

PI 612824 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6893; 97/1704.

Unknown source. Received 03/01/2000.

PI 612825 QUAR. Sorghum bicolor (L.) Moench

Cultivated. SG 6901; 97/1712.

Unknown source. Received 03/01/2000.

PI 612826 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6915; 97/1726.

Unknown source. Received 03/01/2000.

PI 612827 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6939; 97/1750.

Unknown source. Received 03/01/2000.

PI 612828 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6940; 97/1751.

Unknown source. Received 03/01/2000.

PI 612829 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6949; 97/1760.

Unknown source. Received 03/01/2000.

PI 612830 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6956; 97/1767.

Unknown source. Received 03/01/2000.

PI 612831 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6973; 97/1784.

Unknown source. Received 03/01/2000.

PI 612832 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6974; 97/1785.

Unknown source. Received 03/01/2000.

PI 612833 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6982; 97/1793.

Unknown source. Received 03/01/2000.

PI 612834 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 6983; 97/1794.

Unknown source. Received 03/01/2000.

PI 612835 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7015; 97/1826.

Unknown source. Received 03/01/2000.

PI 612836 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7042; 97/1853.

Unknown source. Received 03/01/2000.

PI 612837 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7047; 97/1858.

Unknown source. Received 03/01/2000.

PI 612838 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7048; 97/1859.

Unknown source. Received 03/01/2000.

PI 612839 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7051; 97/1862.

Unknown source. Received 03/01/2000.

PI 612840 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7057; 97/1868.

Unknown source. Received 03/01/2000.

PI 612841 QUAR. Sorghum bicolor (L.) Moench
Cultivated. SG 7059; 97/1870.

The following were donated by USDA, ARS, Tropical Agric. Research Station,
P.O. Box 70, Mayaguez, Puerto Rico. Received 1966.

PI 612842. Sorghum bicolor (L.) Moench
Cultivated. IS 3879; 97/2067; NSL 50478; 65I 1236.

PI 612843. Sorghum bicolor (L.) Moench
Cultivated. IS 3905; 97/2094; NSL 50916; 65I 1674.

PI 612844. Sorghum bicolor (L.) Moench
Cultivated. IS 3907; 97/2096; NSL 86947; 74I 10752.

Unknown source. Received 03/01/2000.

PI 612845 QUAR. *Sorghum bicolor* (L.) Moench
Cultivated. SG 4999; 97/2432.

The following were developed by Harry C. Minor, University of Missouri-Columbia, Department of Agronomy, 214 Waters Hall, Columbia, Missouri 65211, United States; Charlie L. Rife, Kansas State University, Department of Agronomy, 2004 Throckmorton Plant Science Center, Manhattan, Kansas 66506-5501, United States; Lenis A. Nelson, University of Nebraska-Lincoln, Institute of Agric. and Nat. Resources, Panhandle Res. & Extension Center, Scottsbluff, Nebraska 69361, United States; Dick L. Auld, Texas Tech University, Department of Plant and Soil Sciences, P.O. Box 42122, Lubbock, Texas 79409-2122, United States; David D. Baltensperger, University of Nebraska, Panhandle Res. & Ext. Center, 4502 Avenue I, Scottsbluff, Nebraska 69361-4939, United States; Duane L. Johnson, Colorado State University, Department of Soil and Crop Sciences, PC 117, Fort Collins, Colorado 80523, United States; W.F. Heer, Kansas State University, Kansas Agric. Exp. Station, Department of Agronomy, Manhattan, Kansas, United States; H.D. Sunderman, Northwest Res.-Ext. Center, Kansas State Univ., Hutchinson, Kansas 67501, United States; D. Bordovsky, Texas A&M University, Ag. Res.-Ext. Ctr., Vernon, Texas 76384, United States. Donated by Charlie L. Rife, Kansas State University, Department of Agronomy, 2004 Throckmorton Plant Science Center, Manhattan, Kansas 66506-5501, United States. Received 02/14/2000.

PI 612846. *Brassica napus* L.

Cultivar. Pureline. "Wichita"; KS3580. CV-19. Pedigree - Indore/sipal//Liraglu/3/Jet Neuf. Winter growth habit with good winter hardiness in the Great Plains. Canola quality seed. Early maturity. Better than average heat tolerance.

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 612847. *Amaranthus cruentus* L.

Cultivated. A75-72; RRC 109A; RRC 78S-109A; Ames 2044. Collected 09/01/1977 in Indonesia. Bogor. All-green vegetable type, with green foliage and flowers. Seeds dark brown. The RRC CLASS TYPE is: African Vegetable.

PI 612848. *Amaranthus spinosus* L.

Wild. A75-72; RRC 109B; RRC 78S-109B; Ames 2045. Collected 09/01/1977 in Indonesia. Bogor. Pedigree - The seeds of RRC 109 included a mixture of four species plus hybrids, and are separated into five accessions. Stipular spines. Seeds dark brown. Leaves and flowers green. The RRC CLASS TYPE is: weed.

The following were developed by David Brenner, Iowa State University, Regional Plant Introduction Station, Room G208, Agronomy Building, Ames, Iowa 50011-1170, United States. Received 01/07/2000.

PI 612849. *Amaranthus hybrid*

Wild. DB 99103; Separation from RRC 109B; Separation from Ames 2045;

Ames 25969. Pedigree - Cross between *A. dubius* and *A. spinosus*. Segregated from Ames 2045 in 1999, greenhouse planting number 103. Harvested from 23 plants that had the floral traits of *A. dubius* and the stipular spines of *A. spinosus*. Both of these species are present in the original seed lot and are presumed to have crossed. Seed set poor. It might segregate in subsequent generations.

PI 612850. *Amaranthus dubius* Mart. ex Thell.

Wild. DB 99104; Separation from RRC 109B; Separation from Ames 2045; Ames 25970. Segregated from Ames 2045 in 1999, greenhouse planting number 104. Harvested from 23 plants of *A. dubius* in a mixed species seed lot of Ames 2045. Blades green with purple center spot, and white "V" markings.

PI 612851. *Amaranthus retroflexus* L.

Wild. DB 99105; Separation from RRC 109B; Separation from Ames 2045; Ames 25971. Segregated from Ames 2045 in 1999, greenhouse planting number 105. Harvested from 133 plants of *A. retroflexus* in a mixed species seed lot of Ames 2045. Wild type plants with pubescent stems, green leaves, and white tepals.

The following were donated by Jonathan Yentis, Burns, Philp & Company LTD., 2301 S.E. Tones Drive, Ankeny, Iowa 50021-8888, United States; Tucson Botanical Center Native Seed/Search, 2509 North Campbell Avenue, #325, Tucson, Arizona 85719, United States. Received 01/30/1998.

PI 612852. *Chenopodium ambrosioides* L.

Cultivated. Red Type; Ames 24596. The upper stems are red as observed by David M. Brenner in a greenhouse in Ames, Iowa.

PI 612853. *Chenopodium ambrosioides* L.

Cultivated. Green Type; Ames 24597. The upper stems are green as observed by David M. Brenner in a greenhouse in Ames, Iowa.

The following were collected by David Brenner, Iowa State University, Regional Plant Introduction Station, Room G208, Agronomy Building, Ames, Iowa 50011-1170, United States. Received 01/06/2000.

PI 612854. *Amaranthus blitoides* S. Watson

Wild. DB 99702; Ames 25963. Collected 11/02/1999 in Utah, United States. Latitude 40 deg. 45' 0'' N. Longitude 111 deg. 49' 0'' W. Elevation 1341 m. Within 2 blocks of Little America Hotel, 500 South Main Street, Salt Lake City, Salt Lake County. Unpaved parking lots and pavement cracks. Plants prostrate.

PI 612855. *Amaranthus fimbriatus* (Torr.) Benth. ex S. Watson

Wild. DB 99706; Ames 25964. Collected 11/05/1999 in Arizona, United States. Latitude 33 deg. 25' N. Longitude 112 deg. W. Elevation 345 m. Near Sumner Suites Hotel, 1413 West Rio Salado Parkway (at Priest Drive), Tempe, Maricopa County. Waste ground. Associated vegetation: *Amaranthus palmeri* (DB 99705). Female tepals reflexed and broad, blades narrow. Plants dead at time of harvest, 50 cm tall.

PI 612856. *Amaranthus palmeri* S. Watson

Wild. DB 99705; Ames 25965. Collected 11/05/1999 in Arizona, United

States. Latitude 33 deg. 25' 0'' N. Longitude 112 deg. W. Elevation 345 m. Near Sumner Suites Hotel, 1413 West Rio Salado Parkway (at Priest Drive), Tempe, Maricopa County. Waste ground. Associated vegetation: *Amaranthus fimbriatus* (DB 99706). Dioecious plants, erect, 50 to 100 cm tall. Female plants have more or less spiny floral bracts. Stems can be red.

PI 612857. *Amaranthus retroflexus* L.

Wild. DB 99703; Ames 25966. Collected 11/02/1999 in Utah, United States. Latitude 40 deg. 45' 0'' N. Longitude 111 deg. 49' 0'' W. Elevation 1341 m. Within 2 blocks of Little America Hotel, 500 South Main Street, Salt Lake City, Salt Lake County. Construction site fences and other waste ground. Plants erect, approximately 50 cm tall. Inflorescences green with an unusual reddish tint.

PI 612858. *Chenopodium berlandieri* Moq.

Wild. DB 99704; Ames 25967. Collected 11/03/1999 in Utah, United States. Latitude 41 deg. 15' 0'' N. Longitude 111 deg. 50' 0'' W. Elevation 1554 m. Northeast of campground entrance, Anderson Cove Campground, Pineview Reservoir, Cache National Forest, Weber County. Seasonally inundated lake shore on an inlet by a stream. Sandy soil. Plants already killed by frost at time of harvest, 45 cm tall.

PI 612859. *Chenopodium glaucum* L.

Wild. DB 99701; Ames 25968. Collected 11/08/1999 in Iowa, United States. Latitude 42 deg. 1' 0'' N. Longitude 93 deg. 39' 0'' W. Elevation 305 m. North of Entomology Building, North Central Regional Plant Introduction Station, southwest corner of intersection between State Avenue and Mortensen Road, Ames, Story County. Gravel parking lot. Plants up to 30 cm tall.

PI 612860. *Amaranthus blitum* L.

Wild. DB 97228; Ames 25976. Collected 08/14/1997 in District of Columbia, United States. Latitude 38 deg. 56' 0'' N. Longitude 77 deg. 3' 0'' W. Elevation 30 m. Near a chain-link fence, lower northeast parking lot, National Zoological Park, Washington. Edge of a sidewalk. The base of the stem is red, there are many branches from near the base, the petiole is faintly red, the blades are green and emarginate, the flowers are green and both axial and terminal.

The following were collected by T.C. Andres, Cornell University, Department of Vegetable Crops, Ithaca, New York 14850, United States; J.J. Wyland. Donated by T.C. Andres, Cornell University, Department of Vegetable Crops, Ithaca, New York 14850, United States. Received 06/09/1988.

PI 612861. *Cucurbita pepo* L.

Cultivated. Separation from PI 532385; Ames 25996. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0'' W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

PI 612862. *Cucurbita pepo* L.

Cultivated. Separation from PI 532385; Ames 25997. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0''

W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

PI 612863. Cucurbita pepo L.

Cultivated. Separation from PI 532385; Ames 25998. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0'' W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

PI 612864. Cucurbita pepo L.

Cultivated. Separation from PI 532385; Ames 25999. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0'' W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

PI 612865. Cucurbita pepo L.

Cultivated. Separation from PI 532385; Ames 26000. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0'' W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

PI 612866. Cucurbita pepo L.

Cultivated. Separation from PI 532385; Ames 26001. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0'' W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

PI 612867. Cucurbita pepo L.

Cultivated. Separation from PI 532385; Ames 26002. Collected 11/20/1985 in Hidalgo, Mexico. Latitude 20 deg. 9' 0'' N. Longitude 98 deg. 16' 0'' W. Elevation 2200 m. Santa Maria Asuncion, 13 km northeast of Tulancingo de Bravo on highway Mex. 130 to Huachinango. Ellipsoid, obloid, to oblong, ribbed, finely green reticulated 7.5 to 19.5 cm long, 11.5-20 cm wide. Rind usually hard. Flesh orange.

The following were collected by Gregory B. Martin, Cornell University, Dept. of Plant Breeding and Biometry, 252 Emerson Hall, Ithaca, New York 14853-1902, United States; T.C. Andres, Cornell University, Department of Vegetable Crops, Ithaca, New York 14850, United States; M. Nee, New York Botanical Gardens, New York, New York, United States. Donated by T.C. Andres, Cornell University, Department of Vegetable Crops, Ithaca, New York 14850, United States. Received 06/09/1988.

PI 612868. Cucurbita pepo L.

Cultivated. Separation from PI 532388; Ames 26003. Collected 12/18/1985 in Oaxaca, Mexico. Latitude 16 deg. 57' 0'' N. Longitude 96 deg. 13' 0''

W. Elevation 1350 m. San Bartolo Albarradas, Distrito Tlacolula, Municipal Albarradas. Disturbed area in thorn scrub. Fruits flattened globose to cylindrical, pale green to green with darker green splotches, most ribbed, 15-16 cm long, 20.5-21 cm wide. Flesh cream colored.

The following were developed by Jagdish Kumar, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India; B.V. Rao, Int. Crops Res. Inst. for the Semi-Arid Tropics, Genetic Resources and Enhancement Program, Patancheru P.O., Andhra Pradesh 502 324, India. Received 03/10/2000.

PI 612869. *Cicer arietinum* L.

Breeding. Pureline. ICCV 96029; SUPER EARLY; ICCX-910253. GP-214. Pedigree - ICCV 2, a short-duration kabuli variety and ICCV 93929, a short-duration, cold tolerant and double podded desi line. Chickpea developed and released as germplasm by ICRISAT as the earliest flowering chickpea in the world. Super early which takes about 23-27 days from sowing to first flowering and matures in about 75 days (17.6 deg. N, 500 m amsl) whereas the control, world's shortest duration variety, ICCV2, flowers in about 30-35 days. Also a double podded line, a character known to have yield advantage in short-season and drought-prone environments. Shows better early growth vigor compared to either of the parents. Grows to about 41 cms. Superior early growth vigor is useful in better utilization of soil moisture in early growth stages in the post-rainy season when the chickpea crop is normally grown. Early flowering and maturity may help extend cultivation to even more short-season environments.

The following were developed by W. Erskine, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria; A. Sarker, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria; K. Makkouk, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria; S. Kumari, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria. Received 03/10/2000.

PI 612870. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 74; IL 74. GP-208. Collected in Chile. Landrace from Chile. Resistant to fababean necrotic yellow virus and bean leaf roll virus. Flowers in 138 days in Syria, 25 cm tall, testa pink without a pattern, red cotyledons, and 100 seeds weight 2.7 g.

PI 612871. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 75; IL 75. GP-209. Collected in Chile. Landrace from Chile. Resistant to bean leaf roll virus, fababean necrotic yellow virus, and soybean dwarf virus. Flowers in 140 days, 26 cm tall, seeds brown, testa without a pattern, red cotyledons, and 100 seeds weight 2.4 g.

PI 612872. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 85. GP-210. Collected in Tajikistan. Resistant to fababean necrotic yellow virus and bean leaf roll virus. Flowers in 135 days, 31 cm tall, pink testa which are dotted with a brown pattern, red cotyledons, and 100 seds weight 2.1 g.

PI 612873. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 213. GP-211. Collected in Afghanistan.
Resistant to fababean necrotic yellow virus and bean leaf roll virus.
Flowers in 138 days, 30 cm tall, testa brown and without a pattern,
cotyledons red, and 100 seeds weight 2.2 g.

PI 612874. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 214. GP-212. Collected in Afghanistan.
Resistant to fababean necrotic yellow virus and bean leaf roll virus.
Flowers in 151 days, seeds have brown testa which are marbled with a
gray pattern, cotyledons red, and 100 seeds weight 2.3 g.

PI 612875. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 6816. GP-213. Pedigree - ILL 3527 (India) / ILL
5071 (Ethiopia). Resistant to fababean necrotic yellow virus and bean
leaf roll virus. Testa gray which are dotted with a black pattern,
cotyledons red, and 100 seeds weight 2.0 g.

The following were developed by W. Erskine, Int. Center for Agricultural
Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria; B. Bayaa, University
of Aleppo, Aleppo, Syria; A. Sarker, Int. Center for Agricultural Research in
the Dry Areas, P.O. Box 5466, Aleppo, Syria. Received 03/10/2000.

PI 612876. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 422; L 422. GP-7. Collected in Chile. Pedigree
- Originates from Chile with ID no. L 422. Resistant to vascular wilt
(*Fusarium oxysporum*). Flowers in 135 days, plant height 31 cm and brown
seeds. No testa pattern, yellow cotyledons, and a seed weight of 5.3
g/100 seeds.

PI 612877. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 813; L 813. GP-8. Collected in Egypt. Pedigree
- Originates from Egypt with ID no. L 813. Resistant to vascular wilt
(*Fusarium oxysporum*). Flowers in 115 days, has a plant height of 37 cm
and brown seeds. No testa pattern, red cotyledons, and a seed weight of
3.7 g/100 seeds.

PI 612878. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 1220; L 1220. GP-9. Collected in Iran. Pedigree
- Originates from Iran with ID no. L 1220. Resistant to vascular wilt
(*Fusarium oxysporum*). Flowers in 138 days, plant height 31 cm and brown
seeds. No testa pattern, yellow cotyledons, and a good weight of 3.6
g/100 seeds.

PI 612879. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 1462; L 1462. GP-10. Collected in Iran.
Pedigree - Originates from Iran with ID no. L 1462. Resistant to
vascular wilt (*Fusarium oxysporum*). Flowers in 130 days, plant height 30
cm and pink seeds. No testa pattern, yellow cotyledons, and a seed
weight of 4.2 g/100 seeds.

PI 612880. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 2313; L 2313. GP-11. Collected in Chile.
Pedigree - Originates from Chile with ID no. L 2313. Resistant to
vascular wilt (*Fusarium oxysporum*). Flowers in 132 days, plant height 29
cm, brown seeds with no testa pattern. Red cotyledons and seed weight of
2.3 g/100 seed.

PI 612881. *Lens culinaris* Medik. subsp. *culinaris*

Breeding. Pureline. ILL 2684; L 2684. GP-12. Collected in Iran.
Pedigree - Originates from Iran with ID no. L 2684. Resistant to vascular wilt (*Fusarium oxysporum*). Flowers in 120 days, plant height 25 cm and brown, dotted seeds. Red cotyledons and seed weight of 2.3 g/100 seeds.

The following were developed by Ken P. Vogel, USDA, ARS, University of Nebraska, Dept. of Agronomy, Lincoln, Nebraska 68583-0937, United States. Received 02/14/2000.

PI 612882. *Medicago sativa* L. subsp. *sativa*

Breeding. Population. A-110. Pedigree - One of five Ranger parent strains. Ranger alfalfa was the first registered cultivars (J. Amer. Soc. Agron. 37:649). It was a landmark cultivar and was widely grown in the U.S. Ranger was produced by the synthesis of 5 parent lines, A-110, A-111, A-116, A-117, A-119.

PI 612883. *Medicago sativa* L. subsp. *sativa*

Breeding. Population. A-111. Pedigree - One of five Ranger parent strains. Ranger alfalfa was the first registered cultivar (J. Amer. Soc. Agron. 37:649). It was a landmark cultivar and was widely grown in the U.S. Ranger was produced by the synthesis of 5 parent lines, A-110, A-111, A-116, A-117, A-119.

PI 612884. *Medicago sativa* L. subsp. *sativa*

Breeding. Population. A-116. Pedigree - One of five Ranger parent strains. Ranger alfalfa was the first registered cultivar (J. Amer. Soc. Agron. 37:649). It was a landmark cultivar and was widely grown in the U.S. Ranger was produced by the synthesis of 5 parent lines, A-110, A-111, A-116, A-117, A-119.

PI 612885. *Medicago sativa* L. subsp. *sativa*

Breeding. Population. A-117. Pedigree - One of five Ranger parent strains. Ranger alfalfa was the first registered cultivar (J. Amer. Soc. Agron. 37:649). It was a landmark cultivar and was widely grown in the U.S. Ranger was produced by the synthesis of 5 parent lines, A-110, A-111, A-116, A-117, A-119.

PI 612886. *Medicago sativa* L. subsp. *sativa*

Breeding. Population. A-119. Pedigree - One of five Ranger parent strains. Ranger alfalfa was the first registered cultivar (J. Amer. Soc. Agron. 37:649). It was a landmark cultivar and was widely grown in the U.S. Ranger was produced by the synthesis of 5 parent lines, A-110, A-111, A-116, A-117, A-119.

The following were developed by H.M. Tysdal. Donated by USDA, ARS, Plant Science Research Division, Beltsville, Maryland 20705, United States. Received 1962.

PI 612887. *Medicago sativa* L. subsp. *sativa*

Cultivar. "RANGER"; W6 7130; NSL 15635. CV-1. Pedigree - Synthetic variety developed by compositing 5 strains: A-100, A-111, A-116, A-117, and A-119. Strain origin was inbred lines subsequently outcrossed among

other selected lines from Cossack (45%), Turkistan (45%), and Ladak (10%). Adapted to the northern states. Winterhardy. Variegated flower color with some yellow flowers. Resistant to bacterial wilt (*Corynebacterium insidiosum*). Susceptible to leaf spot diseases (*Pseudopeziza medicaginis* and *P. jonesii*) and leafhopper (*Empoasca fabae*). Seed production equal to Grimm, Cossack, and Baltic varieties.

The following were developed by W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States. Donated by University of Nebraska, Nebraska Agr. Exp. Sta., Lincoln, Nebraska, United States. Received 1967.

PI 612888. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 30; REG NO GP 16; NSL 53695. GP-16. Pedigree - 11-clone synthetic with germplasm tracing to Buffalo, Grimm, Kansas Common, Ladak, Turkistan, selections from *M. falcata* and *glutinosa*, and 4 *M. sativa* introductions: PI's 107298, 204889, 206278 (all 3 from Turkey) and 243224 (from Iran). Variable resistance to bacterial wilt, growth habit and other characteristics. High resistance to potato leafhopper yellowing. Forage yield similar to Ranger.

PI 612889. *Medicago sativa* L. subsp. *sativa*

Cultivar. "DAWSON"; REG NO 29; NSL 54067. CV-29. Pedigree - 8-clone synthetic composed of 6 clones from North Central polycross progenies that trace to Baltic, Cossack, Kansas Common, Ladak, and Turkistan; and 2 clones from the parental strains of Ranger. Flower colors are purple, blue, and variagated. Between Ranger and Vernal in winterhardiness, growth habit and recovery after cutting. Similar to Ranger in protein and carotene contents at 1/10 bloom stage. Adapted to regions where Ranger is grown. Higly resistant to pea aphids and spotted alfalfa aphids. Intermediate reaction to potato leafhopper and common leafspot diseases.

PI 612890. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 16; REG NO GP 15; NSL 70351. GP-15. Pedigree - 4-clone synthetic segregating for resistance to *Stemphylium* leafspot, rust and potato leafhopper. Parentage traces to Atlantic, Hardigan, Kansas Common, Ladak, Ranger and Turkistan. Variable growth habit and other characteristics. Slightly higher carotene and protein contents than Ranger. Forage yield similar to Ranger. Resistant to bacterial wilt (equal to Ranger). Low resistance to *Leptosphaerulina* leafspot. Susceptible to spotted alfalfa aphid and pea aphid.

The following were developed by George R. Manglitz, University of Nebraska, Rm. 305-C, Plant Industry Bldg., Lincoln, Nebraska 68583, United States; W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States; R.L. Ogden. Donated by University of Nebraska, Nebraska Agr. Exp. Sta., Lincoln, Nebraska, United States. Received 1978.

PI 612891. *Medicago sativa* L. subsp. *sativa*

Cultivar. "BAKER"; NSL 104550. CV-87; PVP 7800024. Pedigree - 7-clone synthetic. Parentage includes Atlantic, Baltic, Cossack, Grimm, Kansas Common, Ladak, Nebraska Common, Ranger, Turkestan, Vernal; *M. falcata* and *M. sativa* var. *glutinosa* M.B. selections; PIs 107298, 206278, and 234205. Winterhardy persistent cultivar. Spring and fall growth habits

and rate of recovery after cutting similar to Vernal. Flowers are purple, variegated and blue. Adapted to north central U.S. Used for short and long term hay production. Forage yields equal or superior to Vernal. Seed yields similar to Vernal in Idaho. Forage quality similar to Dawson. Resistant to pea aphid, spotted alfalfa aphid, and bacterial wilt. Moderately resistant to downy mildew and potato leafhopper yellowing. Low resistance to anthracnose. Susceptibl.

The following were developed by George R. Manglitz, University of Nebraska, Rm. 305-C, Plant Industry Bldg., Lincoln, Nebraska 68583, United States; W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States; R.L. Ogden. Donated by W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1980.

PI 612892. *Medicago sativa* L. subsp. *sativa*

Cultivar. "PERRY"; NSL 114283. CV-97; PVP 8000156. Pedigree - Nebraska field selections from Team and Weevlchek were crossed with parental clones of experimental Nebraska synthetics (Atlantic, Baltic, Cossack, Dawson, Grimm, Kansas Common, Ladak, Lahontan, Nebraska Common, Ranger, etc.). Winterhardy cultivar adapted for forage production in the north central U.S. Forage yield equal or superior to Dawson, Kanza and Vernal. Seed yield similar to Ranger. Resistant to bacterial wilt and pea aphid. Moderate resistance to downy mildew, potato leafhopper yellowing, and biotypes of spotted alfalfa aphid collected in Nebraska. Low resistance to anthracnose and tolerant to alfalfa weevil. Susceptible to *Phytophthora* root rot. Reaction to stem nematode unknown.

The following were developed by W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1983.

PI 612893. *Medicago sativa* L. subsp. *sativa*

Breeding. A169; CA 1975; NSL 182333. GP-160. Pedigree - Synthetic originated in 1940 from 4 hybrids involving *M. falcata*, *M. glutinosa*, a Turkish selection and PI 107298 (a creeping-rooted introduction from Turkey). Winterhardy, broad-crowned, and creeping-rooted line. Persistence under continuous grazing was superior to many cultivars. Forage yields similar to Buffalo, Ranger and Vernal.

PI 612894. *Medicago sativa* L. subsp. *sativa*

Breeding. A224; CA 1975; NSL 182334. GP-161. Pedigree - 4-clone synthetic with parentage tacing to *M. falcata*, *M. glutinosa*, PI 107298, Cossack, Grimm, Kansas Common, Ladak and Turkistan. Winterhardy. Rhizomatous growth type. Percentage of plants resistant to bacterial wilt was 51. Persistence under continuous grazing was superior to many cultivars and forage yields similar to Buffalo, Ranger and Vernal.

PI 612895. *Medicago sativa* L. subsp. *sativa*

Breeding. A603; W6 7151; NSL 182335. GP-162. Pedigree - 5-clone synthetic with 1 clone selected in Kansas and 4 clones in Oklahoma. Origin of germplasm not completely described. Winterhardy. Broad-crowned and creeping-rooted. Percentage of plants resistant to bacterial wilt was 19. Stands and hay yields similar to Ranger and Vernal.

PI 612896. *Medicago sativa* L. subsp. *sativa*

Breeding. A604; W6 7152; NSL 182336. GP-163. Pedigree - 10-clone synthetic with 4 clones selected in Kansas, 2 in Nebraska and 4 in Oklahoma. Origin of the clones not completely described. Winterhardy. Broad-crowned and creeping-rooted. Percentage of plants resistant to bacterial wilt was 36. Stands and hay yields similar to Ranger and Vernal.

PI 612897. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 31; W6 7153; NSL 182337. GP-164. Pedigree - 7-clone synthetic. Clones selected for high general combining ability for forage yield and creeping-root trait. Winterhardy. Broad-crowned and creeping-rooted. Stands and hay yield similar to Ranger and Vernal. Percentage of plants resistant to bacterial wilt (*Corynebacterium insidiosum*) was 27.

PI 612898. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 33; W6 7154; NSL 182338. GP-165. Pedigree - 12-clone synthetic. Clones selected for high general combining ability for forage yield and creeping-root trait. Winterhardy. Broad-crowned and creeping-rooted. Stands and hay yield similar to Ranger and Vernal. Percentage of plants resistant to bacterial wilt (*Corynebacterium insidiosum*) was 45.

PI 612899. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 46; WA 1979; NSL 182339. GP-166. Pedigree - From natural interpollination of A169, A224, polycross progeny of 7 broad-crowned rhizomatous or creeping-rooted clones and Vernal in an alfalfa-bromegrass test pasture. Winterhardy. Broad-crowned and root-proliferating or creeping-rooted. Stands and hay yield similar to Ranger and Vernal. Percentage of plants resistant to bacterial wilt (*Corynebacterium insidiosum*) was 48.

PI 612900. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 47; NSL 182340. GP-167. Pedigree - From natural interpollination among 50 creeping-rooted plants in an alfalfa-bromegrass nursery. Origin of plants similar to N.S. 31 and N.S. 33. Winterhardy. Broad-crowned and creeping-rooted. Stands and hay yield similar to Ranger and Vernal. Percentage of plants resistant to bacterial wilt (*Corynebacterium insidiosum*) was 39.

The following were developed by George R. Manglitz, University of Nebraska, Rm. 305-C, Plant Industry Bldg., Lincoln, Nebraska 68583, United States; W. R. Kehr, USDA-ARS, University of Nebraska, 332 Keim Hall, Lincoln, Nebraska, United States. Donated by W. R. Kehr, USDA-ARS, University of Nebraska, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1983.

PI 612901. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 76 P2PA1; CA 1978; NSL 182341. GP-178. Pedigree - Developed by interpollination among 76 plants (38 from Team and 38 from Weevlchek) selected for resistance to foliar diseases, potato leafhopper yellowing and virus symptoms. Winterhardy. Potato leafhopper yellowing rated 3.7 on a scale of 1 (resistant) to 9 (susceptible). Percentage of plants resistant to pea sphid was 58, to spotted alfalfa aphid 14 and to *Phytophthora* root rot 20. 2-year average forage yield was 108% of 4 check cultivars. Seed yield was 117% of Dawson and Saranac and 130% of Vernal at Fresno, California.

PI 612902. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 86; IDAHO 1980; NSL 182342. GP-179. Pedigree - Developed from hand-crossing 63 plants with resistance to foliar diseases, anthracnose, potato leafhopper yellowing and above-average height and vigor. Germplasm sources were Baker, N.S. 75, N.S. 79, Kanza and MSB-2. Winterhardy. Potato leafhopper yellowing rated at 3.3 on a scale of 1 (resistant) to 9 (susceptible). Percentage of plants resistant to pea aphids was 54 and to spotted alfalfa aphids 10. 2-year average forage yield was 104% of 4 check cultivars. Seed yield was 115% of Dawson and Vernal and 98% of Saranac at Caldwell, Idaho.

PI 612903. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 93; NSL 182343. GP-182. Pedigree - Developed from BIC-7 by 2 cycles of phenotype recurrent selection for forage yield. Winterhardy. 2-year average forage yield was 109% of 6 check cultivars. Percentage of plants resistant to pea aphids was 6 and to spotted alfalfa aphid biotypes endemic to Nebraska 4.

PI 612904. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 94; NSL 182344. GP-183. Pedigree - Developed from NC-83-1 by 2 cycles of phenotypic recurrent selection for forage yield. Winterhardy. 2-year average forage yield was 12% greater than 6 check cultivars. Percentage of plants resistant to pea aphids was 20 and to spotted alfalfa aphid biotypes endemic to Nebraska 26.

PI 612905. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 95; NSL 182345. GP-184. Pedigree - Developed from NC-83-2 by 2 cycles of phenotypic recurrent selection for forage yield. Winterhardy. 2-year average forage yield was 12% greater than 6 check cultivars. Percentage of plants resistant to pea aphid was 18 and to spotted alfalfa aphid biotypes endemic to Nebraska 23.

PI 612906. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 83; NSL 182346. GP-172. Pedigree - Developed by hand-crossing at random among 54 plants (1 to 3 plants each from 29 Plant Introductions) that were above average in vigor and erect fall growth habit. Winterhardy. 2-year average forage yield was 95% of 4 check cultivars. Rate of recovery after cutting was 2.0 on a scale of 1 (fastest) to 9 (slowest). Fall growth habit was 3.5 on a scale of 1 (erect) to 9 (prostrate). Percentage of plants resistant to pea aphid was 28. Susceptible to spotted alfalfa aphid biotypes endemic to Nebraska.

PI 612907. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 84; NSL 182347. GP-173. Pedigree - Developed by hand-crossing each of the 54 parental plants of N.S. 83 with 5 plants selected for *Phytophthora* root rot resistance from 3 broadbased synthetics (N.S. 77, N.S. 78, N.S. 79 SN2AN3). Winterhardy. 2-year average forage yield was 94% of 4 check cultivars. Rate of recovery after cutting was 2.5 on a scale of 1 (fastest) to 9 (slowest). Fall growth habit was 4.2 on a scale of 1 (erect) to 9 (prostrate). Percentage of plants resistant to pea aphid was 34 and to spotted alfalfa aphid biotypes endemic to Nebraska 5.

PI 612908. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 85; IDAHO 1980; NSL 182348. GP-174. Pedigree - Developed

by interpollination among 20 plants from each of 37 Plant Introductions selected for high vigor and stand. Winterhardy. 2-year average forage yield was 94% of 4 check cultivars. Rate of recovery after cutting was 2.2 on a scale of 1 (fastest) to 9 (slowest). Fall growth habit similar to Dawson and Vernal. Percentage of plants resistant to pea aphid was 18 and to spotted alfalfa aphid biotypes endemic to Nebraska 2.

PI 612909. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 89; NSL 182349. GP-175. Pedigree - Developed by hand-crossing Paine with 3 broadbased Nebraska synthetics (N.S. 78 SN2AN2, N.S. 79 SN2, N.S. 82 P2) with resistance to stem nematode, anthracnose and Phytophthora root rot. Winterhardy. 2-year average forage yield was 96% of 4 check cultivars. Rate of recovery after cutting was 3.8 on a scale of 1 (fastest) to 9 (slowest). Fall growth habit similar to Dawson and Vernal. Percentage of plants resistant to pea aphid was 58 and to spotted alfalfa aphid biotypes endemic to Nebraska 26.

PI 612910. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 90; NSL 182350. GP-176. Pedigree - Developed by hand-crossing Paine with 3 broadbased Nebraska synthetics (N.S. 78 SN2AN2, N.S. 79 SN2, N.S. 82 P2) with resistance to stem nematode, anthracnose and Phytophthora root rot. Winterhardy. 2-year average forage yield was 99% of 4 check cultivars. Rate of recovery after cutting was 4.2 on a scale of 1 (fastest) to 9 (slowest). Fall growth habit was similar to Dawson and Vernal. Percentage of plants resistant to pea aphid was 70 and to spotted alfalfa aphid biotypes endemic to Nebraska 49.

PI 612911. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 91; NSL 182351. GP-177. Pedigree - Developed by hand-crossing Paine with 3 broadbased Nebraska synthetics (N.S. 78 SN2AN2, N.S. 79 SN2, N.S. 82 P2) with resistance to stem nematode, anthracnose and Phytophthora root rot. Winterhardy. 2-year average forage yield was 104% of 4 check cultivars. Rate of recovery after cutting was 3.8 on a scale of 1 (fastest) to 9 (slowest). Fall growth habit was similar to Dawson and Vernal. Percentage of plants resistant to pea aphid was 60 and to spotted alfalfa aphid biotypes endemic to Nebraska 44.

The following were developed by W. R. Kehr, USDA-ARS, University of Nebraska, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1983.

PI 612912. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 62; CA 1969; NSL 182352. GP-185. Pedigree - 12-clone synthetic developed from yellow-flowered Vernal plants. Winterhardy. Intended for use as yellow-flowered genetic marker germplasm. 2-year average forage yields were 94% of Vernal. Seed yield was 96% of Vernal at Fresno, California. Percentage of plants resistant to bacterial wilt was 52.

PI 612913. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 66; CA 1972; NSL 182353. GP-186. Pedigree - 10-clone synthetic developed from yellow-flowered Vernal plants selected for high seed yields. Winterhardy. Intended for use as yellow-flowered genetic marker germplasm. 2-year average forage yield was 99% of Vernal.

PI 612914. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 67; CA 1970; NSL 182354. GP-187. Pedigree - 14 S1-clone synthetic developed from yellow-flowered Vernal plants. Winterhardy. Intended for use a yellow-flowered genetic marker germplasm. 2-year average forage yield was similar to Vernal. Seed yield was 98% of Vernal in Fresno, California. Percentage of plants resistant to bacterial wilt is 54.

PI 612915. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 80; CA 1972; NSL 182355. GP-188. Pedigree - 9 S2-clone synthetic developed from yellow-flowered Vernal plants. Winterhardy. Intended for use as yellow-flowered genetic markder germplasm.

The following were developed by George R. Manglitz, University of Nebraska, Rm. 305-C, Plant Industry Bldg., Lincoln, Nebraska 68583, United States; W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States; Donald K. Barnes, USDA, ARS, University of Minnesota, Dept. of Agronomy & Plant Genetics, St. Paul, Minnesota 55108, United States; F.I. Frosheiser. Donated by W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1983.

PI 612916. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 72 P2; CA 1975; NSL 182358. GP-168. Pedigree - Developed by diallel hand-crossing 5 clones selected after 3 or 4 cycles of phenotypic selection for pest resistance and vigor in winterhardy germplasm. Winterhardy. Percentage of plants resistant to Phytophthora root rot was 28 and to bacterial wilt 60. No data available for reaction to pea aphid or spotted alfalfa aphid. 2-year average forage yield was 110% of 4 check cultivars. Seed yield similar to Vernal.

PI 612917. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 75 P2; NSL 182359. GP-169. Pedigree - Developed by interpollination among 60 plants (20 each from 3 broad-based synthetics with pest resistance and vigor in winterhardy germplasm). Winterhardy. Percentage of plants resistant to Phytophthora root rot was 60, to bacterial wilt 63, to pea aphid 75 and to spotted alfalfa aphid 52. 2-year avgerage forage yield similar to 4 check cultivars. Seed yield similar to Dawson and Saranac and 8% higher than Vernal.

PI 612918. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 78 P2; CA 1976; NSL 182360. GP-170. Pedigree - Broaded based germplams pool developed by interpollination by bees in a natural isolation of 4200 plants (100 plants from 42 sources with high forage yield and pest resistance). Winterhardy. Percentage of plants resistant to Phytophthora root rot was 50, to bacterial wilt 50, to pea aphid 43 and to spotted alfalfa aphid 12. 2-year average forage yield was 109% of 4 check cultivars. Seed yield equal to Dawson and 16% higher than Saranac and Vernal in Fresno, California.

PI 612919. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 81 P2PA1SAA1; CA 1981; NSL 182361. GP-171. Pedigree - Developed by interpollination among 99 Phythophtora root rot resistant plants (33 each from 3 broadbased synthetics with pest resistance and vigor in winterhardy germplasm). Winterhardy. Percentage of plants

resistant to *Phytophthora* root rot was 52, to bacterial wilt 47, to pea aphid 69 and to spotted alfalfa aphid 21. 2-year average forage yield was similar to 4 check cultivars. Seed yield similar to Vernal.

The following were developed by George R. Manglitz, University of Nebraska, Rm. 305-C, Plant Industry Bldg., Lincoln, Nebraska 68583, United States; B. D. Thyr, USDA/ARS, University of Nevada, Room 323A, Reno, Nevada 89557, United States; B. Hartman, Agricultural Research Service -- USDA, University of Nevada, Room 323A, Reno, Nevada 89512, United States; W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States; O.J. Hunt. Donated by W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1983.

PI 612920. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 77 SN2AN2; NSL 182362. GP-180. Pedigree - Developed by hand-crossing Team (22 plants) and Weevlcchek (22 plants) each with 6 plants (parents of N.S. 72, 73, 74 and 75) selected for pest resistance and vigor in winter hardy germplasm. Winterhardy. Percentage of plants resistant to stem nematode was 73, to anthracnose 68, to pea aphids 44 and to spotted alfalfa aphid biotypes endemic to Nebraska 8. 2-year average forage yield was 105% of 4 check cultivars. Seed yield was 127% of Dawson and Saranac and 140% of Vernal at Fresno, California.

PI 612921. *Medicago sativa* L. subsp. *sativa*

Breeding. N.S. 79 SN2AN2; NSL 182363. GP-181. Pedigree - A broad-based synthetic developed from 3 or 4 cycles of phenotypic selection for pest resistance and vigor in winter hardy germplasm. Winterhardy. Percentage of plants resistant to stem nematode was 27, to anthracnose 40, to pea aphids 58 and to spotted alfalfa aphid biotypes endemic to Nebraska 51. 2-year average forage yield was 102% of 4 check cultivars.

The following were developed by George R. Manglitz, University of Nebraska, Rm. 305-C, Plant Industry Bldg., Lincoln, Nebraska 68583, United States; Melvin D. Rumbaugh, USDA-ARS, Utah State University, Forage & Range Research Lab, Logan, Utah 84322-6300, United States; Arvid A. Boe, Dept of Plant & Soil Sciences, University of Idaho, Moscow, Idaho 83843, United States; W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States; Donald K. Barnes, USDA, ARS, University of Minnesota, Dept. of Agronomy & Plant Genetics, St. Paul, Minnesota 55108, United States; F.I. Frosheiser; G. Semeniuk. Donated by W. R. Kehr, USDA-ARS, University of Nebraskaus, 332 Keim Hall, Lincoln, Nebraska, United States. Received 1984.

PI 612922. *Medicago sativa* L. subsp. *sativa*

Breeding. DANEB I BW1; NSL 187774. GP-158. Developed from Daneb I by 1 cycle of phenotypic recurrent selection for resist. to bacterial wilt. % of plants resist to bacterial wilt was 80.

The following were donated by USDA-ARS/Washington Agric. Exp. Station, Pullman, Washington, United States. Received 1971.

PI 612923. *Pisum sativum* L.

PH-14-119; NSL 80228. GP-10. Pedigree - An F7 selection. Parentage is C-165 crossed with P.I. 140295. Info. from Crop Sci. 12(3):399 (1972) -- resistant to pea root rot complex (caused by *Fusarium solani*) and

Pythium spp. Consistently sets pods under conditions of root rot infestation that kills standard commercial varieties. Single and double podded (4 - 8 pods/plant). White flowered. Flowers in the 12 - 13th node. Cultivated.

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 1980.

PI 612924. *Pisum sativum* L.

792022; NSL 114284. GP-21. Pedigree - Parentage is PH-114-119 X Afila. Info. from Crop Sci 21(2):352 (1981) -- combines modified tendrill gene, dominant genes for resistance to Races 1 and 2 of *Fusarium oxysporum* and resistance to root rot caused by *F. solani pisi* and *Pythium ultimum*. 70 cm tall at maturity. Strong tendrill habit and reduced foliage (should resist lodging and vine rot). Wrinkle-seeded canner. White flowers. Green cotyledons. Blooms on the 14th to 15th node. Cultivated.

The following were donated by USDA, ARS, Horticultural Station, P.O. Box 1250, Cheyenne, Wyoming, United States. Received 1963.

PI 612925. *Pisum sativum* L.

Cultivar. NSL 28102; DELWICHE COMMANDO.

The following were donated by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 05/18/1989.

PI 612926. *Sesamum* sp.

Wild. 8; Grif 854. Collected in Morocco.

PI 612927. *Sesamum* sp.

Wild. 18; Grif 856. Collected in Morocco. Market in Fes, Morocco.

The following were donated by Johnny C. Wynne, North Carolina Agric. Research Service, North Carolina State University, Box 7643, Raleigh, North Carolina 27695-7643, United States. Received 10/02/1998.

PI 612928 PVPO. *Nicotiana tabacum* L.

Cultivar. NC 92-2770-40. PVP 9900002. Male parent of hybrid tobacco NCTG 72 (NSL 382093, PVP 9900001).

Unknown source. Received 03/15/2000.

PI 612929 QUAR. *Pennisetum orientale* Rich.

Uncertain. Konemgar. Collected 10/06/1979 in Turkmenistan.

The following were developed by Steve St. Martin, Ohio State University, Department of Horticulture & Crop Science, 202 Kottman Hall, Columbus, Ohio 43210-1086, United States; R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States; Ron Fioritto, Ohio State

University, Ohio Agricultural Research & Development Center, Dept. of Horticulture & Crop Science, Wooster, Ohio 44691, United States; A.F. Schmitthenner, Ohio State University, Dept. of Plant Pathology, Columbus, Ohio 43210, United States. Received 02/11/2000.

PI 612930. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Tiffin". CV-419. Pedigree - Haroson x Chapman. Indeterminate stem habit, purple flowers, gray pubescence, brown pods, and shiny yellow seed coats with imperfect black hila. Maturity Group II (2.7), generally adapted as a full-season cultivar from 41 deg. to 43 deg. N latitude. Average mature plant height 76 cm. Average lodging score 1.8. Protein and oil analyses 411 gKg-1 protein and 204 gKg-1 oil content. 100 seed weight 15.5 g. Carries the Rps1-c and Rps3-c genes for race specific resistance to phytophthora rot.

PI 612931. *Glycine max* (L.) Merr.

Cultivar. Pureline. "HF93-083". CV-418. Pedigree - HS84-6224 x Chapman. Indeterminate stem habit, purple flowers, gray pubescence, brown pods, and shiny yellow seed coats with imperfect black hila. Maturity Group II (2.8), generally adapted as a full-season cultivar from 41 deg. to 43 deg N latitude. Average mature plant height 84 cm with an average lodging score of 1.8. Seed composition 414 gKg-1 protein and 206 gKg-1 oil. Carries the Rps1-c and Rps3-a genes for race-specific resistance to phytophthora rot.

PI 612932. *Glycine max* (L.) Merr.

Cultivar. Pureline. "HF93-035". CV-417. Pedigree - HM8632 x A86-204022. Indeterminate stem habit, purple flowers, gray pubescence, brown pods, and shiny yellow seed coats with imperfect black hila. Maturity Group III (3.0), generally adapted as a full-season cultivar from 40 deg. to 42 deg N latitude. Average mature plant height 81 cm with an average lodging score of 1.8. Seed protein and oil content 409 gKg-1 protein and 212 gKg-1 oil. Seed weight 20.0 g 100-seed. Carries the Rps3-a gene for race specific resistance to phytophthora rot.

The following were developed by David Brenner, Iowa State University, Regional Plant Introduction Station, Room G208, Agronomy Building, Ames, Iowa 50011-1170, United States. Received 01/13/2000.

PI 612933. *Amaranthus hypochondriacus* L.

Landrace. DB 97276; Separation from UC255; Separation from Ames 23365; Ames 25972. Pedigree - Segregated because the source accession had mixed species. Segregated from Ames 23365 as 97ncai01 during a regeneration grow-out #276 in the 1997 greenhouse. 21 of these plants were segregated from a population size of 68 plants. Plants are of a white seeded grain type. Stems have red stripes, blades are red, flowers are green.

PI 612934. *Amaranthus hybridus* L.

Cultivated. Separation from HH 64; DB 974; Separation from PI 511740; Ames 25973. Segregated from PI 511740 as 97ncai02 during regeneration grow-out #199 in the 1997 greenhouse. Intended for taxonomic comparison. Five of these plants were segregated for study and harvested. There were 19 of this type among the 80 plants of PI 511740 grown. Plants are of a weedy form that has about six branches at the base. Stems have red stripes, petioles are red, blades are obtuse and rhombic, early blades are speckled. Flowers are green, with bracts 4 mm long, seeds are black.

The following were developed by Asgrow Seed Company LLC, United States.
Received 03/21/2000.

PI 612935 PVPO. *Glycine max* (L.) Merr.
Cultivar. "A5404". PVP 200000078.

PI 612936 PVPO. *Glycine max* (L.) Merr.
Cultivar. "A2804". PVP 200000079.

PI 612937 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG5001". PVP 200000080.

PI 612938 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG1301". PVP 200000081.

PI 612939 PVPO. *Glycine max* (L.) Merr.
Cultivar. "A2104". PVP 200000082.

PI 612940 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG1101". PVP 200000083.

PI 612941 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG4902". PVP 200000084.

PI 612942. *Glycine max* (L.) Merr.
Cultivar. "AG3003". PVP 200000085.

PI 612943 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG3702". PVP 200000086.

PI 612944 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG3303". PVP 200000087.

PI 612945 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG4101". PVP 200000088.

PI 612946 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG4402". PVP 200000089.

PI 612947 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG5701". PVP 200000090.

PI 612948 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG2001". PVP 200000091.

PI 612949 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG1601". PVP 200000092.

PI 612950 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG2602". PVP 200000093.

PI 612951 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG2601". PVP 200000094.

PI 612952 PVPO. *Glycine max* (L.) Merr.

Cultivar. "AG6201". PVP 200000095.

PI 612953 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG6701". PVP 200000096.

PI 612954 PVPO. *Glycine max* (L.) Merr.
Cultivar. "AG0801". PVP 200000097.

The following were developed by Marlin Edwards, Green Giant Co., 201 N. 4th Street, Lesueur, Minnesota 56058, United States. Received 03/21/2000.

PI 612955 PVPO. *Capsicum annuum* L.
Cultivar. "MEDUSA". PVP 200000140.

The following were developed by University of Georgia Research Foundation, Inc., Georgia, United States. Received 03/21/2000.

PI 612956 PVPO. *Triticum aestivum* L.
Cultivar. "89482E7". PVP 200000141.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 03/21/2000.

PI 612957 PVPO. *Poa pratensis* L.
Cultivar. "APOLLO"; B3-180. PVP 200000147.

The following were developed by Carl A. Griffey, Virginia Polytechnic Institute & State University, Dept. of Crop, Soil, & Environmental Sciences, 334-A Smyth Hall, Blacksburg, Virginia 24061-0404, United States; Thomas M. Starling, Virginia Polytechnic Inst. & State Univ., Virginia Agric. Exp. Station, Department of Agronomy, Blacksburg, Virginia, United States; A.M. Price, VPI & SU, Crop & Soil Environmental Sciences, Blacksburg, Virginia, United States; W.L. Sisson, VPI & SU, Crop & Soil Environmental Sciences, Blacksburg, Virginia, United States; D.E. Brann, VPI & SU, Crop & Soil Environmental Sciences, Blacksburg, Virginia, United States; Modon Das, Virginia Polytechnic Institute, and State University, Department of Crop and Soil Environmental Science, Blacksburg, Virginia 24061, United States; Wendy Rohrer, Virginia Tech, Crop & Soil Environmental Sciences, 419A Smyth Hall, Blacksburg, Virginia 24061-0404, United States; T.H. Pridgen, Virginia Polytechnic Inst. and State Univ., Crop and Soil Environmental Sciences Dept., Blacksburg, Virginia 24061-040, United States; M.E. Vaughn, Virginia Polytechnic Inst. and State Univ., Crop and Soil Environmental Sciences Dept., Blacksburg, Virginia 14061-0404, United States. Received 03/21/2000.

PI 612958. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. Pureline. "ROANE"; VA 93-54-429. CV-899; PVP 200000148.
Pedigree - VA 71-54-147/Coker 68-15//IN65309C1-18-2-3-2. Full-season, high yielding, apically awnletted soft red winter wheat. Head emergence 125 d. Height 88 cm and good straw strength. Winter hardiness good. Average grain volume weight (770 kg m⁻³) is very high. Acceptable milling and baking qualities. Resistant to barley yellow dwarf virus. Resistant to most prevalent field populations of powdery mildew (*Blumeria graminis*). While possesses gene Lr11 and seedlings are

susceptible to many races of leaf rust (*Puccinia recondita*), data from field tests indicate does possesses some adult-plant resistance. Lacks any of the known genes for resistance to stem rust (*P. graminis*). Moderately susceptible to soil-borne mosaic and wheat spindle streak mosaic viruses. Moderate resistance to leaf blotch (*Septoria tritici*) and glume blotch (*Stagonospora nodorum*). Tolerant to *Fusarium* head blight. Resistant to Hessian fly (*Mayetiola destructor*) biotypes GP, B, and.

The following were developed by University of Georgia Research Foundation, Inc., Georgia, United States. Received 03/21/2000.

PI 612959 PVPO. *Gossypium hirsutum* L.
Cultivar. "GA 161". PVP 200000149.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 03/21/2000.

PI 612960 PVPO. *Glycine max* (L.) Merr.
Cultivar. "93B66". PVP 200000150.

The following were donated by Herman Gorz, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68583, United States; Rudorf, Koln-Vogelsang, Germany. Received 01/30/1992.

PI 612961. *Melilotus albus* Medik.
Genetic. J450; Strain 128/59; Ames 21600. Coumarin free.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 03/21/2000.

PI 612962 PVPO. *Glycine max* (L.) Merr.
Cultivar. "92B63". PVP 200000151.

PI 612963 PVPO. *Glycine max* (L.) Merr.
Cultivar. "90B73". PVP 200000152.

PI 612964 PVPO. *Glycine max* (L.) Merr.
Cultivar. "90A07". PVP 200000153.

The following were developed by South Dakota Agric. Exp. Station, Highmore, South Dakota, United States. Received 03/21/2000.

PI 612965 PVPO. *Triticum aestivum* L.
Cultivar. "EMBER". PVP 200000158.

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; R. Dill-Macky, University of Minnesota, St. Paul, Minnesota 55108, United States; J.A. Anderson, University of Minnesota, Department of Agronomy & Plant Genetics, 411 Borlaug Hall, St. Paul, Minnesota 55108, United States. Received 03/21/2000.

PI 612966. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "McVEY"; MN93413. CV-894; PVP 200000159. Pedigree - Ning8331/MN87029//MN89068. Late maturing, high yielding, medium height hard red spring wheat. High resistance to scab (*Fusarium graminearum*). High grain yield. Lower grain volume weight and percent grain protein than the high quality check variety Grandin. Resistant to stem rust (*Puccinia graminis*) and moderately resistant to moderately susceptible to leaf rust (*Puccinia triticina*). Expresses a resistant reaction to scab spread in the spike when a central spikelet is inoculated in the greenhouse.

The following were developed by Research and Development Institute, Inc., United States. Received 03/21/2000.

PI 612967 PVPO. *Carthamus tinctorius* L.

Cultivar. "MONTOLA 2003". PVP 200000160.

The following were developed by Advanta USA, Inc., United States. Received 03/21/2000.

PI 612968 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "ZS4199". PVP 200000161.

PI 612969 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "ZS2199". PVP 200000162.

PI 612970 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "ZS3699". PVP 200000163.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 03/21/2000.

PI 612971 PVPO. *Festuca arundinacea* Schreb.

Cultivar. "ZPS-5LZ". PVP 200000164.

The following were developed by FFR Cooperative, United States. Received 03/21/2000.

PI 612972 PVPO. *Triticum aestivum* L.

Cultivar. "566W". PVP 200000165.

The following were developed by Louisiana Agricultural Experiment Station, Baton Rouge, Louisiana, United States. Received 03/21/2000.

PI 612973 PVPO. Avena sativa L.
Cultivar. "LA604". PVP 200000166.

The following were developed by Phytogen Seed Company, LLC, United States.
Received 03/21/2000.

PI 612974 PVPO. Gossypium hirsutum L.
Cultivar. "PSC 355". PVP 200000167.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449,
Hubbard, Oregon 97032, United States. Received 03/21/2000.

PI 612975 PVPO. Poa pratensis L.
Cultivar. "SERENE". PVP 200000170.

The following were developed by South Dakota Agric. Exp. Station, Highmore,
South Dakota, United States. Received 03/21/2000.

PI 612976 PVPO. Glycine max (L.) Merr.
Cultivar. "TURNER". PVP 200000171.

The following were developed by Cornell University, New York Agric. Exp.
Station, Ithaca, New York, United States. Received 03/21/2000.

PI 612977 PVPO. Cucurbita pepo L.
Cultivar. "NY97-389". PVP 200000172.

The following were developed by Pybas Vegetable Seed Co., Inc., United States
. Received 03/21/2000.

PI 612978 PVPO. Lactuca sativa L.
Cultivar. "BLACKJACK". PVP 200000173.

The following were developed by Pickseed West, Inc., P.O. Box 888, 33149
Highway 99E, Tangent, Oregon 97389, United States. Received 03/21/2000.

PI 612979 PVPO. Lolium perenne L.
Cultivar. "TRANSIST". PVP 200000174.

The following were developed by Pioneer Hi-Bred International, Inc, United
States. Received 03/21/2000.

PI 612980 PVPO. Gossypium hirsutum L.
Cultivar. "GC-120". PVP 200000175.

PI 612981 PVPO. Gossypium hirsutum L.
Cultivar. "GC-204". PVP 200000176.

PI 612982 PVPO. Gossypium hirsutum L.
Cultivar. "GC-271". PVP 200000177.

PI 612983 PVPO. *Gossypium hirsutum* L.
Cultivar. "GC-251". PVP 200000178.

The following were developed by Jeff Pedersen, USDA, ARS, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68583-0937, United States ; J.J. Toy, USDA-ARS, Univ. of Nebraska-Lincoln, Dept. of Agronomy, Lincoln, Nebraska 68583-0937, United States. Received 02/07/2000.

PI 612984. *Sorghum bicolor* (L.) Moench

Breeding. Pureline. N313. GP-587. Pedigree - zera zera ms3 x IA28. Released 07/1999. Fertility restorer in A1 cytoplasm. Plant color purple, white seeds, normal endosperm, no pigmented testa, awnless, and juicy stems. At Mead, NE, 6 days later in maturity and 7 cm shorter than BWheatland. In hybrid combination, grain yields equivalent to AWheatland x RT x 430. Source of IA28 derived materials suited for production of high quality grain for feed or food in the northern portion of the U.S. sorghum production area.

PI 612985. *Sorghum bicolor* (L.) Moench

Breeding. Pureline. N314. GP-588. Pedigree - tIA28 x SDS3953. Released 07/1999. Fertility restorer in A1 cytoplasm. Plant color tan, white seeds, normal endosperm, no pigmented testa, awnless, and juicy stems. At Mead, NE, 12 days later in maturity and 18 cm shorter than BWheatland. In hybrid combination, grain yields equivalent to AWheatland x RT x 430. Source of IA28 derived materials suited for production of high quality grain for feed or food in the northern portion of the U.S. sorghum production area.

PI 612986. *Sorghum bicolor* (L.) Moench

Breeding. Pureline. N315. GP-589. Pedigree - tIA28 x SDS3953. Released 07/1999. Fertility restorer in A1 cytoplasm. Plant color tan, white seeds, normal endosperm, no pigmented testa, awnless, and juicy stems. At Mead, NE, 10 days later in maturity and 12 cm shorter than BWheatland. In hybrid combination, grain yields equivalent to AWheatland x RT x 430. Excellent panicle exertion. Source of IA28 derived materials suited for the production of high quality grain for feed or food in the northern portion of the U.S. sorghum production area.

PI 612987. *Sorghum bicolor* (L.) Moench

Genetic. Pureline. N316. GS-96. Pedigree - BMartin mslms1/*4 BWheatland. Released 07/1999. Segregated for male-sterility at the expected frequency of 3 fertile: 1 sterile. Test crosses among 5 genetic stocks verified they were non-allelic.

PI 612988. *Sorghum bicolor* (L.) Moench

Genetic. Pureline. N317. GS-97. Pedigree - BMartin ms2ms2/*4 BWheatland. Released 07/1999. Segregated for male-sterility at the expected frequency of 3 fertile: 1 sterile. Test crosses among 5 genetic stocks verified they were non-allelic.

PI 612989. *Sorghum bicolor* (L.) Moench

Genetic. Pureline. N318. GS-98. Pedigree - BMartin ms3ms3/*4 BWheatland. Released 07/1999. Segregated for male-sterility at the expected frequency of 3 fertile: 1 sterile. Test crosses among 5 genetic stocks verified they were non-allelic.

- PI 612990. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N319. GS-99. Pedigree - BMartin ms7ms7/*4 BWheatland. Released 07/1999. Segregated at slightly higher frequency than expected (659 fertile: 257 sterile). Test crosses among 5 genetic stocks verified they were non-allelic.
- PI 612991. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N320. GS-100. Pedigree - BMartin ala1/*4 BWheatland. Released 07/1999. Segregated for male sterility at a lower frequency than expected (707 fertile: 97 sterile). Test crosses among 5 genetic stocks verified they were non-allelic.
- PI 612992. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N321. GS-101. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612993. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N322. GS-102. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612994. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N323. GS-103. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612995. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N324. GS-104. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612996. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N325. GS-105. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612997. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N326. GS-106. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612998. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N327. GS-107. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 612999. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N328. GS-108. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and tan necrotic plant color. Resembles BTx630, but has normal endosperm.

- PI 613000. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N329. GS-109. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613001. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N330. GS-110. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and tan necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613002. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N331. GS-111. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613003. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N332. GS-112. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613004. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N333. GS-113. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613005. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N334. GS-114. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613006. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N335. GS-115. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed white and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613007. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N336. GS-116. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and purple necrotic plant color. Resembles BTx398, but has normal endosperm.
- PI 613008. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N337. GS-117. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613009. *Sorghum bicolor* (L.) Moench**
Genetic. Pureline. N338. GS-118. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and purple necrotic plant color. Resembles BTx630, but has normal endosperm.
- PI 613010. *Sorghum bicolor* (L.) Moench**

Genetic. Pureline. N339. GS-119. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and purple necrotic plant color. Resembles BTx630, but has normal endosperm.

PI 613011. *Sorghum bicolor* (L.) Moench

Genetic. Pureline. N340. GS-120. Pedigree - S8 segregate of a single S3 family from: BTx398 ms3ms3/BTx630/BTx630. Released 07/1999. Seed red and purple necrotic plant color. Resembles BTx630, but has normal endosperm.

The following were donated by Alan Whittemore, USDA/ARS, University of Georgia, Regional Plant Introduction Station, Griffin, Georgia 30223-1797, United States; Issik Dendrarium, Aktogai, Kazakhstan. Received 03/04/1992.

PI 613012. *Ampelopsis hybrid*

Cultivated. Ames 18932. Pedigree - Parents likely include *A. brevipedunculata*, *A. aconitifolia*, and *A. cordata*. Population extremely variable for leaf shape, pubescence, and fruit color.

The following were collected by Manuel Cardoso Alves, Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal; Jaime Ventura Forte, Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal. Donated by Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal. Received 06/02/1998.

PI 613013. *Antirrhinum majus* subsp. *cirrherum* (Ficalho) Franco

Wild. Index Seminum 1159; Ames 24674. Collected 07/22/1997 in Coimbra, Portugal. Latitude 40 deg. 8' 0'' N. Longitude 8 deg. 51' 0'' W. Gala, in the vicinity of Figueira da Foz.

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 613014. *Antirrhinum molle* L.

Wild. NU 46486; Ames 24202.

The following were donated by J.L. Hudson, Seedsman, Star Route 2, Box 337, La Honda, California 94020-9733, United States. Received 04/04/2000.

PI 613015. *Achyranthes bidentata* Blume

Cultivated. ACHY-6; Ames 26014; Ox-Knee; Niu-Xi. Developed in China. Slender spikes of small flowers. Broad oval leaves. Large greenish-purple stems with joints resembling an ox's knee. Germinates in 1 to 2 weeks at 70 degrees. Used in Chinese medicine as a "blood invigorator". Also has effects on the uterus, and is used during labor.

The following were donated by Willowood Arboretum, Morris County Park Commission, 53 East Hanover Avenue, P.O. Box 1295, Morristown, New Jersey 07962-1295, United States. Received 06/06/1994.

PI 613016. *Aronia melanocarpa* (Michx.) Elliott

Wild. Index Seminum 5; Ames 22079. Collected in Massachusetts, United States. Latitude 42 deg. 29' 15'' N. Longitude 72 deg. 11' 15'' W. Elevation 329 m. Petersham.

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

PI 613017. *Calendula arvensis* L.

Wild. CAL 40/88; Ames 21122. Collected in Morocco. South from Ersaoniao.

The following were donated by Robert Kleiman, USDA, ARS, National Center for Agric., Utilization Research, Peoria, Illinois 61604, United States; Thompson & Morgan Ltd., London Road, Ipswich, England IP2 0BA, United Kingdom. Received 01/30/1992.

PI 613018. *Calendula officinalis* L.

Cultivar. "Orange Sunshine"; NU 40514; Ames 18462.

The following were donated by Quenton Jones, Crops Research Division - USDA-ARS, New Crops Research Branch, Plant Industry Station, Beltsville, Maryland 20705-2350, United States; Thompson & Morgan Ltd., London Road, Ipswich, England IP2 0BA, United Kingdom; USDA, ARS-Midwest Area, National Center for Agricultural Utilization Research, 1815 North University Street, Peoria, Illinois 61604, United States. Received 01/29/1998.

PI 613019. *Calendula officinalis* L.

Cultivar. "Pacific Cream Beauty"; NU 40516; Ames 24243.

The following were donated by Waller Flowerseed Company, P.O. Box 935, 4th and Obispo Streets, Guadalupe, California 93434, United States. Received 04/04/1962.

PI 613020. *Calendula officinalis* L.

Cultivar. "Pacific Beauty Type W-F Formula Blend"; CO-6; NSL 15439.

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

PI 613021. *Calendula suffruticosa* subsp. *fulgida* (Raf.) Ohle

Wild. CAL 62/90; Ames 21135. Collected in Sicily, Italy. Latitude 38 deg. 1' 0'' N. Longitude 12 deg. 29' 0'' E. Mount Erice near Trapani.

The following were collected by Charles Tubesing, The Holden Arboretum, 9500 Sperry Road, Kirtland, Ohio 44094-5172, United States; Rick J. Lewandowski, Morris Arboretum, The University of Pennsylvania, 9414 Meadowbrook Road, Philadelphia, Pennsylvania 19118, United States; Edward J. Garvey, USDA, ARS, National Germplasm Repository, U.S. National Arboretum, Washington, District of Columbia 20002, United States; Kris Bachtell, The Morton Arboretum, 4100 Illinois Route 53, Lisle, Illinois 60532-1293, United States. Donated by

Edward J. Garvey, USDA, ARS, National Germplasm Repository, U.S. National Arboretum, Washington, District of Columbia 20002, United States. Received 01/12/1995.

PI 613022. *Cornus bretschneideri* L. Henry

Wild. BJK-062; Ames 22260. Collected 09/18/1994 in Beijing, China. Latitude 40 deg. 32' 14'' N. Longitude 115 deg. 47' 16'' E. Elevation 1210 m. Da Zhaung Ke (Old Village), Song Shan Forest Preserve, Yanqing County. Growing in full sun in soil trapped between boulders; in wet season plant is standing in water, otherwise the site is rather dry. Deciduous, multi-stemmed, upright arching shrub, 3 to 4 meters tall. Leaves ovate to ovate lanceolate, 2.5 to 3.5 cm long with a tapered apex. Stems to approximately five years old are bright red. Pedicels of inflorescences are bright red, bearing fruit that are black, green and white.

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

PI 613023. *Dianthus chinensis* L.

Uncertain. DIA 7/88; Ames 21154. Collected in Hwanghae Puk, Korea, North. Latitude 38 deg. 20' 30'' N. Longitude 126 deg. 7' 36'' E. Rinzan.

The following were collected by Geza Kosa, A Magyar Tudomanyos Akademia, Okologiai es Botanikai Kutatointezetenek, Botanikus Kertje, Vacratot, Pest H-2163, Hungary. Donated by Botanical Garden, Institute of Ecology and Botany, of the Hungarian Academy of Sciences, Vacratot, Pest H-2163, Hungary. Received 06/02/1998.

PI 613024. *Gypsophila muralis* L.

Wild. Index Seminum 181; Ames 24663. Collected 1997 in Hajdu-Bihar, Hungary. Latitude 47 deg. 44' 0'' N. Longitude 21 deg. 6' 0'' E. Near Ujszentmargita. National Park at the northeast part of the Great Hungarian Plain, Hortobagy. Forest steppes and loess grassland.

The following were donated by Ogród Botaniczny Uniwersytetu Im. A. Mickiewicza, ul. Dabrowskiego 165, Poznan, Poznan 60-594, Poland. Received 09/28/1993.

PI 613025. *Gypsophila repens* L.

Cultivated. 550; Ames 21510.

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 613026. *Lavatera cachemiriana* Cambess.

Wild. 3655; NU 46584; Ames 24393.

The following were donated by Institut fur Pflanzengenetik und Kulturpflanzenforschung, Genebank, Corrensstrasse 3, Gatersleben,

Saxony-Anhalt D-06466, Germany; University of Lisbon, Botanical Garden, Lisbon, Lisboa 1600, Portugal. Received 02/05/1997.

PI 613027. *Malva sylvestris* L.

Cultivated. MALVA 70/79; Ames 23645.

The following were collected by Manuel Cardoso Alves, Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal; Jaime Ventura Forte, Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal. Donated by Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal. Received 06/02/1998.

PI 613028. *Malva sylvestris* L.

Wild. Index Seminum 915; Ames 24695. Collected 06/22/1997 in Coimbra, Portugal. Latitude 40 deg. 4' 0'' N. Longitude 8 deg. 27' 0'' W. Povoada Pega, in the vicinity of Condeixa.

The following were donated by Gonçalo Sampaio, Instituto de Botânica, Universidade do Porto, 1191 Rua do Campo Alegre, Porto, Porto 4100, Portugal. Received 08/13/1992.

PI 613029. *Malva tournefortiana* L.

Wild. Index Seminum 301; Ames 19351. Collected in Vila Real, Portugal. Latitude 41 deg. 11' 0'' N. Longitude 7 deg. 33' 0'' W. Bateiras-Pinhão, Trás-os-Montes Province.

The following were collected by Normand Cornéliier, Montreal Botanic Garden, 4101 Rue Sherbrooke Est., Montreal, Quebec H1X 2B2, Canada; C. Picotte, Montreal Botanic Garden, Svc. Loisirs Développement Communautaire, 4101 Rue Sherbrooke Est., Montreal, Quebec H1X 2B2, Canada; Lucille Savoie. Donated by Montreal Botanic Garden, 4101 Rue Sherbrooke Est., Montreal, Quebec H1X 2B2, Canada. Received 03/16/1990.

PI 613030. *Parthenocissus vitacea* (Knerr) Hitchc.

Wild. Index Seminum 410; Ames 13139. Collected 09/14/1989 in Quebec, Canada. Saint-Charles-des-Grondines, Co. Portneuf.

The following were collected by D. Blazkova; R. Neuhausl; Z. Neuhauslova. Donated by Botanical Institute, Czechoslovak Academy of Science, Prague, Central Bohemia D-252 43, Czech Republic. Received 03/16/1990.

PI 613031. *Parthenocissus tricuspidata* (Siebold & Zucc.) Planch.

Wild. Index Seminum 504; Ames 13198. Collected in Pyongyang, Korea, North. Latitude 39 deg. 0' N. Longitude 125 deg. 40' E. Elevation 230 m. Province of Pyongyang City, Lyŏnaksan near northwest part of the city.

The following were collected by Mark P. Widrlechner, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States. Received 09/05/1984.

PI 613032. *Rhus copallinum* L.

Wild. Ames 3052. Collected 1984 in Indiana, United States. Elevation 317 m. NW 1/4 of NE 1/4, Section 32, Jamestown Township, T38N, R13E, Steuben County. Seed from single clone with dark green, lustrous leaves.

The following were donated by Botanical Garden, Institute of Ecology and Botany, of the Hungarian Academy of Sciences, Vacratot, Pest H-2163, Hungary. Received 09/20/1990.

PI 613033. *Sorbaria tomentosa* (Lindl.) Rehder
Cultivated. Index Seminum 2478; Ames 14222.

The following were collected by University of Alberta, Devonian Botanic Garden and Field Laboratory, Department of Botany, Edmonton, Alberta T6G 2E1, Canada. Received 04/29/1996.

PI 613034. *Spiraea betulifolia* Pall.
Wild. Index Seminum 344; Ames 22838. Collected 04/1996 in British Columbia, Canada. Latitude 51 deg. 46' N. Longitude 120 deg. 1' W. Elevation 590 m. Clearwater-Wells Gray area, side bank at Wells Gray main road, 14 km from Clearwater junction. Lower oroboreal zone.

The following were collected by Charles Tubesing, The Holden Arboretum, 9500 Sperry Road, Kirtland, Ohio 44094-5172, United States; Rick J. Lewandowski, Morris Arboretum, The University of Pennsylvania, 9414 Meadowbrook Road, Philadelphia, Pennsylvania 19118, United States; Edward J. Garvey, USDA, ARS, National Germplasm Repository, U.S. National Arboretum, Washington, District of Columbia 20002, 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; Edward J. Garvey, USDA, ARS, National Germplasm Repository, U.S. National Arboretum, Washington, District of Columbia 20002, United States. Received 01/12/1995.

PI 613035. *Spiraea trilobata* L.
Wild. BJJG-010; NA 64519; Ames 22275. Collected 09/14/1994 in Beijing, China. Latitude 40 deg. 36' 47'' N. Longitude 117 deg. 22' 54'' E. Elevation 635 m. Yong Xiu Gou, (Valley with Beautiful Clouds), Wuling Shan Preserve, Miyun County. Growing in rocks near the stream. Deciduous, multi-stemmed shrub with upright billowing habit. 2 meters tall and 3 to 4 meters wide. Older stems gray and one year old stems light brown to amber. Blue green foliage above, light green on the undersurface. Some late season foliar damage.

The following were donated by Botanical Garden, Institute of Ecology and Botany, of the Hungarian Academy of Sciences, Vacratot, Pest H-2163, Hungary. Received 05/22/1989.

PI 613036. *Symphoricarpos albus* (L.) S. F. Blake
Cultivated. Index Seminum 1042; Ames 10319. Collected in Hungary. Latitude 47 deg. 42' 0'' N. Longitude 19 deg. 15' 0'' E. Elevation 130 m. Growing in Botanical Garden located in a northern extension of the Great Hungarian Plains, 7 km east from the Danube River. On alluvial clay, loam, and light sand of the Szod-Rakos streamlet valley.

The following were donated by Agriculture Canada, Research Branch, Research Station, Unit 100-101 Route 100, Morden, Manitoba R6M 1Y5, Canada. Received 04/02/1990.

PI 613037. *Symphoricarpos occidentalis* Hook.

Wild. Index Seminum 19; Ames 13496. Collected in Manitoba, Canada.
Latitude 50 deg. 20' N. Longitude 99 deg. 0' W.

The following were donated by Norges Landbrukshogskole, Aas, Akershus, Norway . Received 03/07/1984.

PI 613038. *Tripterygium regelii* Sprague & Takeda

Cultivated. Index Seminum 102; Ames 2886. Collected in Norway. As.

The following were collected by H.S. Gentry, Crops Research Division - USDA-ARS, Horticultural Crops Research Branch, Plant Introduction Section, Beltsville, Maryland 20705-2350, United States. Received 03/22/2000.

PI 613039. *Zinnia bicolor* (DC.) Hemsl.

Wild. 22052; Separation from PI 319385; Ames 26012. Collected 1966 in Chihuahua, Mexico. Elevation 1829 m. Along road to Huachochic, 72 miles west of Parral. Grama grassland. Yellow-orange rays with a red spot at the base.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 06/01/1989.

PI 613040. *Trifolium stellatum* L.

Wild. WJK 26; W6 2761; Grif 12630. Collected 05/1989 in Syria. Latitude 36 deg. 17' N. Longitude 37 deg. 2' E. Elevation 400 m. Wheat field near large cement factory about 10km northeast of Aleppo.

The following were donated by USDA, ARS, Plant Science Research Division, Beltsville, Maryland 20705, United States. Received 1961.

PI 613041. *Trifolium incarnatum* L.

Cultivar. "CHIEF"; FC 35389. CV-2.

The following were donated by University of Georgia, Georgia Agr. Exp. Sta., Athens, Georgia 30602, United States. Received 1961.

PI 613042. *Trifolium incarnatum* L.

Cultivar. THORNTON.

The following were donated by Talladega Seed Grws, Alaska, United States. Received 1961.

PI 613043. *Trifolium incarnatum* L.

Cultivar. TALLADEGA.

The following were donated by Autauga Reseeding Clover, Prattville, Alabama, United States. Received 1961.

PI 613044. *Trifolium incarnatum* L.
Cultivar. AUTAUGA.

The following were donated by Auburn University, Alabama Agr. Exp. Sta., Auburn, Alabama, United States. Received 1961.

PI 613045. *Trifolium incarnatum* L.
Cultivar. AUBURN.

The following were donated by University of Georgia, Georgia Agr. Exp. Sta., Athens, Georgia 30602, United States. Received 1963.

PI 613046. *Trifolium incarnatum* L.
Cultivar. ALLEN.

PI 613047. *Trifolium incarnatum* L.
Cultivar. HARDY.

The following were donated by USDA, ARS Plant Industry Station, Crops Research Division, Beltsville, Maryland 20705-2350, United States. Received 1964.

PI 613048. *Trifolium incarnatum* L.
Cultivar. FC 36871; KENTUCKY SELECTION.

The following were donated by Norman L. Taylor, University of Kentucky, Department of Agronomy, N-122 Agric. Sci. Bldg.-N, Lexington, Kentucky 40546-0019, United States. Received 1985.

PI 613049. *Trifolium incarnatum* L.
Breeding. KY C-1. GP-60.

The following were donated by G. Ray Smith, Texas A&M University, Research & Extension Center, P.O. Box E, Overton, Texas 75684, United States. Received 1986.

PI 613050. *Trifolium incarnatum* L.
Breeding. CHI-1. GP-62.

The following were collected by USDA, ARS, U.S. National Arboretum, Woody Landscape Plant Germplasm Repository, Glenn Dale, Maryland 20769, United States. Donated by Elizabeth A. Hinkle, USDA, ARS, U.S. National Arboretum, National Germplasm Repository, Glenn Dale, Maryland 20769-9157, United States . Received 01/31/2000.

PI 613051. *Malus baccata* (L.) Borkh.

Wild. KSW 3699; NA 56637; GMAL 4570. Collected 08/15/1985 in Cholla Puk, Korea, South. Latitude 35 deg. 35' 35'' N. Longitude 126 deg. 32' 0'' E. Elevation 40 m. Cholla-Bukto, Puan Gun, Sannae Myon, Tochong-ri, Mohang - on west side of Mohang. Dense thicket along and in stream bed of rocky stream; locally common. Small irregular multi-stemmed decid tree ca 3 m. tall with spreading crown. Trunk with many stout gray spines, bark lustrous, pale gray. Foliage thick, clean, handsome. Leaves lustrous med. green above, paler beneath. Petioles often pink or red. Fruit glossy, yellow blushed bright red, 9 mm. long, 11 mm. diameter, pedicles red.

The following were collected by Tiecheng Cui, Xian Botanic Garden, Cuihua South Rd., Xian City, Shaanxi 710061, China. Donated by Elizabeth A. Hinkle, USDA, ARS, U.S. National Arboretum, National Germplasm Repository, Glenn Dale, Maryland 20769-9157, United States. Received 06/1995.

PI 613052. *Malus baccata* (L.) Borkh.

Wild. CUI 3042; NA 3042; NA 67477. Collected 09/28/1994 in Shaanxi, China. Elevation 2200 m. Lannihu 123 km., Ningxi Forestry Bureau, Ningshaan County.

The following were collected by Peter Bristol, The Holden Arboretum, 9500 Sperry Road, Kirtland, Ohio 44060-5172, United States; William Thomas, Longwood Gardens, P.O. Box 501, Kennett Square, Pennsylvania 19348, United States. Donated by Elizabeth A. Hinkle, USDA, ARS, U.S. National Arboretum, National Germplasm Repository, Glenn Dale, Maryland 20769-9157, United States . Received 01/31/2000.

PI 613053. *Malus baccata* (L.) Borkh.

Wild. NA 61698; GMAL 4572. Collected 09/28/1989 in Kangwon, Korea, South . Latitude 37 deg. 23' 20'' N. Longitude 128 deg. 3' 25'' E. Elevation 350 m. Kang-won Do, Chiak San. Collection tree growing on streamside. Growing with *Pinus densiflora*, *Robinia*, *Morus*. Fruit dark red, fairly showy. Bark brownish gray, some exfoliation. Multi-stemmed, 6-7 m tall. Largest DBH, 15 cm.

PI 613054. *Malus baccata* (L.) Borkh.

Wild. NA 61740; GMAL 4573. Collected 10/04/1989 in Kyongsang Puk, Korea, South. Latitude 36 deg. 56' 45'' N. Longitude 128 deg. 25' 50'' E. Elevation 380 m. Kyongsang Pukto, Rte. 31. By edge of stream with *Rhamnus*, *Staphylea*, *Salix*, *Pinus densiflora*. Leaves glossy dark green. Fruit glossy dark red.

The following were developed by E. Villalobos, Grain and Seed Research Center, University of Costa Rica, School of Agronomy, San Jose, Costa Rica; F. Camacho, Grain and Seed Research Center, University of Costa Rica, School of Agronomy, San Jose, Costa Rica. Received 04/07/2000.

PI 613055. *Glycine max* (L.) Merr.

Cultivar. "CIGRAS-06". Pedigree - Padre (PI 518665) x Duocrop. Semideterminate that could be classified as Maturity Group X. When grown under decreasing photoperiods (August through December), flowers and matures 50 and 108 days after sowing, respectively, one week later than

Jupiter and IAC-8 (Maturity Group IX). Adapts well in low tropics. Compared with IAC-8, Brazilian cv. most widely produced in Costa Rica, at four locations, was 15% higher in seed yield. When evaluated in Nicaragua, was 44% higher in seed yield and matured 33 days earlier than GEA-CH86, the most commonly cultivated soybean variety in Nicaragua. Flowers white, tawny pubescence, tan pods at maturity, and yellow seeds with black hila. Average plant height of 112 cm and average height to first pod of 31 cm. Average lodging resistance score of 1.7 in a 1-5 scale. Has 20.1% oil and 38.9% seed protein and is fairly resistant to most common soybean diseases in Costa Rica.

PI 613056. *Glycine max* (L.) Merr.

Cultivar. "CIGRAS-51". Pedigree - (Padre X Duocrop) X (IAC-8 X Kanto-101). Semideterminate that lacks lipoxigenases 2 and 3 and that could be classified as Maturity Group IX or X. When grown under decreasing photoperiod (August through December), flowers and matures 46 and 100 days after sowing, respectively, 4 days later than IAC-8. Adapts well to low tropics. Compared with IAC-8, 12% higher in seed yield in Guanacaste, and 18% higher in seed yield in San Carlos and Upala. Flowers white, tawny pubescence, dark brown pods at maturity, and dull yellow seeds with gray hila. Shown an average plant height of 94 cm and an average height to first pod of 20 cm. Resistant to lodging and is fairly resistant to most common soybean diseases in Costa Rica.

The following were developed by Mike Stephenson, USDA-ARS, Georgia Coastal Plain Exp Sta, PO Box 748, Tifton, Georgia 31793, United States; Albert Johnson, Clemson University, Pee Dee Res. & Edu. Center, Route 1, Box 531, Florence, South Carolina 29501-9603, United States; R. F. Severson, USDA, ARS, Phytochemical Research, Russel Agr. Research Center, Athens, Georgia 30613, United States; Verne A. Sisson, North Carolina State University, Crop Science Department, Oxford Tobacco Research Station, Oxford, North Carolina 27565, United States; D.M. Jackson, USDA, ARS, U.S. Vegetable Laboratory, 2875 Savannah Highway, Charleston, South Carolina 29407, United States; J.G. Carnell, Clemson University, Pee Dee Res. and Educ. Center, Florence, South Carolina 29506, United States. Received 04/07/2000.

PI 613057. *Nicotiana tabacum* L.

Breeding. Pureline. CU 165. GP-54. Pedigree - McNair 944/Dawma//McHair 944. Flue-cured line with high resistance to the tobacco budworm (*Heliothis virescens*). The leaf chemical factors responsible for resistance have recently been identified as diterpene glycosides.

PI 613058. *Nicotiana tabacum* L.

Breeding. Pureline. CU 1097. GP-55. Pedigree - Selection for aphid resistance from Tobacco Introduction (TI) 1341. Resistance to the tobacco aphid (*Myzus nicotianae*). Contains high levels of duvatrienols and sucrose esters.

The following were developed by Elizabeth A. Lee, University of Guelph, Department of Plant Agriculture, Crop Science Building, Guelph, Ontario N1G 2W1, Canada. Received 10/26/1999.

PI 613059. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynA CO. Pedigree - Synthesized from 20 short-seasons sources: (EMCT-6(op), EMCT-2(op), Haapala175, Pride5,

United108, Ox303, (CO168 x CO24), Golden Glow, Rutherford(op), (Col13 x W103), Manitoba cold resistant synthetic Schindelmeiser F2, CG6, Pioneer experimental-1, KAS H1, (A498 x W103), MC101, W9, (Manitoba cold resistant synthetic x Northwestern Dent), (Northwestern Dent x Schindelmeiser). 2600 CHU population adapted for short-seasoned environments.

PI 613060. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynA(S) C7. Pedigree - Synthesized from 20 short-seasons sources: (EMCT-6(op), EMCT-2(op), Haapala175, Pride5, United108, Ox303, (CO168 x CO24), Golden Glow, Rutherford (op), Col13 x W103), Manitoba cold resistant synthetic, MC101, W9, (Manitoba cold resistant synthetic x Northwestern Dent), (Northwestern Dent x Schindelmeiser). 2600 CHU population adapted for short-seasoned environments.

PI 613061. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynA (HS) C18. Pedigree - Synthesized from 20 short-seasons sources: (EMCT-6(op), EMCT-2(op), Haapala175, Pride5, United108, Ox303, (CO168 x CO24), Golden Glow, Rutherford(op), (Col13 x W103), Manitoba cold resistant synthetic, Schindelmeiser F2, CG6, Pioneer experimental-1, KAS H1, (A498 x W103), MC101, W9, (Manitoba cold resistant synthetic x Northwestern Dent), (Northwestern Dent x Schindelmeiser). 2600 CHU population adapted for short-seasoned environments.

PI 613062. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynA(RRS) C7. Pedigree - Synthesized from 20 short-seasons sources: (EMCT-6(op), EMCT-2(op), Haapala175, Pride5, United108, Ox303, (CO168 x CO24), Golden Glow, (Rutherford(op), (Col13 x W103), Manitoba cold resistant synthetic, Schindelmeiser F2, CG6, Pioneer experimental-1, KAS H1, (A498 x W103), Mc101, W9, (Manitoba cold resistant synthetic x Northwestern Dent), (Northwestern Dent x Schindelmeiser). 2600 CHU population adapted for short-seasoned environments.

PI 613063. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynB(S) C7. Pedigree - Synthesized from F2 of crosses between high altitude races from Colombian Andes (Rocamex V7, Blanco Rubi, and Cundinamarca 410) and W103, V3, CO113, ND203, A498, and CO106. 2600 CHU population. Early but later than CG-SynA(S) and less tolerant to high populations.

PI 613064. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynB(HS) C18. Pedigree - Synthesized from F2 of crosses between high altitude races from Colombian Andes (Rocamex V7, Blanco Rubi, and Cundinamarca 410) and W103, V3, CO113, ND203, A498, and CO106. 2600 CHU population. Early, but later than CG-SynA(S) and less tolerant to high population.

PI 613065. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynC(S) C3. Pedigree - Cycle 0 was from the 5th recombination of a population developed at Penn State Univ. in 1961 by crossing some 1400 accessions from the world collection with Golden Cross Bantam sweet corn. 2700 CHU population adapted to short-seasoned environments. Tillers heavily.

PI 613066. Zea mays L. subsp. mays

Breeding. Population. CG-Wigor CO. Pedigree - Wigor is an early European dent variety, which may have originated from the population Wisconsin 25 (LWK personal communication). Excellent GCA. 2550 CHU population adapted to short-seasoned environments. Excellent general combining ability.

PI 613067. Zea mays L. subsp. mays

Breeding. Population. CG-Wigor(S)C3. Pedigree - Wigor is an early European dent variety, which may have originated from the population Wisconsin 25 (LWK personal communication). Excellent GCA. 2550 CHU population adapted to short-seasoned environments. Excellent general combining ability.

PI 613068. Zea mays L. subsp. mays

Breeding. Population. CG-Wigor(RRS) C7. Pedigree - Wigor is an early European dent variety, which may have originated from the population Wisconsin 25 (LWK personal communication). Excellent GCA. 2550 CHU population adapted to short-seasoned environments. Excellent general combining ability.

PI 613069. Zea mays L. subsp. mays

Breeding. Population. CG-HOPE Elite A (RRS) C6. Pedigree - Population represents the highest performing level of the A set of populations in the Hierarchical Open-ended Population Enrichment (HOPE) breeding system. 2650 CHU population adapted to short-seasoned environments.

PI 613070. Zea mays L. subsp. mays

Breeding. Population. CG-HOPE Elite B (RRS) C6. Pedigree - Population represents the highest performing level of the B set of populations in the Hierarchical Open-ended Population Enrichment (HOPE) breeding system. 2650 CHU population adapted to short-seasoned environments.

PI 613071. Zea mays L. subsp. mays

Breeding. Population. CG-Stiff Stalk CO. Pedigree - Synthesized from 18 elite inbreds (A665, A632, A634, A635, A664, A669, B14A, B37, B73, CH591-23, CH586-12, CH591-36, CM105, CM174, H84, MS153, N28, SD24) from the BSSS heterotic pattern. CO263 used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613072. Zea mays L. subsp. mays

Breeding. Population. CG-Stiff Stalk (RRS) C5. Pedigree - Synthesized from 18 elite inbreds (A665, A632, A634, A635, A664, A669, B14A, B37, B73, CH591-23, CH586-12, CH591-36, CM105, CM174, H84, MS153, N28, SD24) from the BSSS heterotic pattern. CO263 used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613073. Zea mays L. subsp. mays

Breeding. Population. CG-Stiff Stalk(S) C5. Pedigree - Synthesized from 18 elite inbreds (A665, A632, A634, A635, A664, A669, B14A, B37, B73, CH591-23, CH586-12, CH591-36, CM105, Cml174, H84, MS153, N28, SD24) from the BSSS heterotic pattern. CO263 was used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613074. Zea mays L. subsp. mays

Breeding. Population. CG-Stiff Stalk (Combined S & RRS) C4. Pedigree - Synthesized from 18 elite inbreds (A665, A632, A634, A635, A664, A669, B14A, B37, B73, CH591-23, CH586-12, Ch591-36, CM105, CM174, H84, MS153,

N28, SD24) from the BSSS heterotic pattern. CO263 was used as the source of earliness. 2700 CHU population adapted to short-seasoned environments

PI 613075. Zea mays L. subsp. mays

Breeding. Population. CG-Lancaster CO. Pedigree - Synthesized from 26 elite inbreds (A619, A661, A662, A663, A666, A667, A668, CH24, CH661-17, CH663-8, MS71, Oh545, Oh551, Pa762, SD23, SDp310, Va26, Va35, W64Aht, W117Hht, W153RHt, W406, CH671-7, CH671-28, H99, Mol7Ht) and 1 hybrid, Mol7Ht x WI53RHt, from the Lancaster heterotic pattern. Ox553 used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613076. Zea mays L. subsp. mays

Breeding. Population. CG-Lancaster (RRS) C5. Pedigree - Synthesized from 26 elite inbreds (A619, A661, A662, A663, A666, A667, A668, CH24, CH661-17, CH663-8, MS71, Oh545, Oh551, Pa762, SD23, SDp310, Va26, Va35, W64Aht, W117Hht, W153RHt, W406, CH671-7, CH671-28, H99, Mol7Ht) and 1 hybrid, Mol7Ht x W153RHt, from the Lancaster heterotic pattern. Ox553 used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613077. Zea mays L. subsp. mays

Breeding. Population. CG-Lancaster (S) C5. Pedigree - Synthesized from 26 elite inbreds (A619, A661, A662, A663, A666, A667, A668, CH24, CH661-17, CH663-8, MS71, Oh545, Oh551, Pa762, SD23, SDp310, Va26, Va35, W64Aht, W117Hht, W153RHt, W406, CH671-7, CH671-28, H99, Mol7Ht) and 1 hybrid, Mol7Ht x WI53RHt, from the Lancaster heterotic pattern. Ox553 used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613078. Zea mays L. subsp. mays

Breeding. Population. CG-Lancaster (combined S & RRS) C4. Pedigree - Synthesized from 26 elite inbreds (A619, A661, A662, A663, A666, A667, A668, CH24, CH661-17, CH663-8, MS71, Oh545, Oh551, Pa762, SD23, SDp310, Va26, Va35, W64Aht, W117Hht, W153RHt, W406, CH671-7, CH671-28, H99, Mol7Ht) and 1 hybrid, Mol7Ht x WI53RHt, from the Lancaster heterotic pattern. Ox553 used as the source of earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613079. Zea mays L. subsp. mays

Breeding. Population. CG-CBI (RRS) C5. Pedigree - Synthesized from 6 inbreds (F120, CG6, [CO113]CO113 x (R x BR)-1) CO113-3-1-1], Przy Bioia (1468), Malapolanka(1488), Bodenii 1-2-2 (1500)) selected on the basis of reduced susceptibility to first brood corn borer and complementary to CG-CBII IRRS). 2900 CHU population adapted to short-seasoned environments.

PI 613080. Zea mays L. subsp. mays

Breeding. Population. CG-CBII (RRS) C5. Pedigree - Synthesized from 11 inbreds (CM169, CM139, RB262, RC150, CG11, CG13, A385, CM40-3, A498, Wigor-2-1-2, 3W-775-127-sib-7-6-1) selected on the basis of reduced susceptibility to first brood corn borer and complementary to CG-CBI (RRS). 2700 CHU population adapted to short-seasoned environments.

PI 613081. Zea mays L. subsp. mays

Breeding. Population. CG-Cross Canada Gene Pool CO. Pedigree -

Synthesized from 12 commercial hybrids that exhibited drought tolerance: PAG SX 111, Pioneer 3949, Pioneer 3859, Pioneer 3978, Pioneer 3975A, Pioneer 3950, Pickseed 2599, Pickseed 2550, Martyn 8061, First Line 1626, First Line 1636 (OX713), RothwellOX715. After CO, the population was divided into an A and B side for RRS; CO265 was the tester used to determine A side. 2750 CHU population adapted to short-seasoned environments.

PI 613082. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-Cross Canada Gene Pool A (RRS) C3. Pedigree - Synthesized from 12 commercial hybrids that exhibited drought tolerance: PAG SX 111, Pioneer 3949, Pioneer 3859, Pioneer 3978, Pioneer 3975A, Pioneer 3950, Pickseed 2599, Pickseed 2550, Martyn 8061, First Line 1626, First Line 1636 (OX713), RothwellOX715. After CO, the population was divided into an A and B side for RRS; CO265 was the tester used to determine A side. 2560 CHU population adapted to short-seasoned environments.

PI 613083. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-Cross Canada Gene Pool B (RRS) C3. Pedigree - Synthesized from 12 commercial hybrids that exhibited drought tolerance: PAG SX 111, Pioneer 3949, Pioneer 3859, Pioneer 3978, Pioneer 3975A, Pioneer 3950, Pickseed 2599, Pickseed 2550, Martyn 8061, First Line 1626, First Line 1636 (OX713), Rothwell OX715. After CO, the population was divided into an A and B side for RRS; CO265 was the tester used to determine A side. 2750 CHU population adapted to short-seasoned environments.

PI 613084. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynGA CO. Pedigree - Synthesized from 15 elite Guelph inbreds (CG) and one advanced line (94ET13). CG33, CG36, CG39, CG55, CG56, CG58, CG59, CG61, CG62, CG66, CG69, CG76, CG82, CG83, CG85. 2650 CHU population adapted to short-seasoned environments.

PI 613085. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-SynGB CO. Pedigree - Synthesized from 14 elite Guelph inbreds (CG). CG40, CG42, CG44, CG57, CG63, CG64, CG65, CG67, CG68, CG70, CG71, CG72, CG80, CG87. 2650 CHU population adapted to short-seasoned environments.

PI 613086. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-Schindelmsieser(S) C4. Pedigree - Open-pollinated flint population from Germany that has been adapted for Guelph, Ontario, Canada, maturity. 2700 CHU population adapted to short-seasoned environments. Flint population has good first brood corn borer resistance. Poor stalk quality.

PI 613087. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-[OhS4(S) (C1) x CG-SynA-NL]. Pedigree - OhS4(S) (C1) developed from BS4 at the Ohio Agric. Res. and Development Ctr. Crossed onto CG-SynA-NL, sib-mated for several generations and mass selected for earliness. CG-SynA-NL is an early version of CG-SynA developed initially by mass selection for earliness for 7 cycles at New Liskeard ON (1900 CHU). Later cycles used modified ear-to-row selection. 2650 CHU population adapted to short-seasoned environments with good agronomic performance.

PI 613088. Zea mays L. subsp. mays

Breeding. Population. CG-[OhS3(S) (C1) x CG-SynA-NL]. Pedigree - OhS3(S) (C1) was developed from BS3 at the Ohio Agricultural Res. and Development Ctr. It was crossed onto CG-SynA-NL, sib-mated for several generations and mass selected for earliness. CG-SynA-NL is an early version of CG-SynA developed initially by mass selection for earliness for 7 cycles at New Liskeard ON (1900 CHU). Later cycles used modified ear-to-row selection. 2650 CHU population adapted to short-seasoned environments with good agronomic performance.

PI 613089. Zea mays L. subsp. mays

Breeding. Population. CG-[BS2 x CG-SynA-NL]. Pedigree - BS2 was developed at Iowa State Univ. from ETO Composite, a Colombian composite, and 6 early Corn Belt inbreds. It was crossed onto CG-SynA-NL, sib-mated for several generations and mass selected for earliness. CG-SynA-NL is an early version of CG-SynA developed initially by mass selection for earliness for 7 cycles at New Liskeard ON (1900 CHU). Later cycles used modified ear-to-row selection. 2650 CHU population adapted to short-seasoned environments with good agronomic performance.

PI 613090. Zea mays L. subsp. mays

Breeding. Population. CG-[BS16 x CG-SynA-NL]. Pedigree - BS16 was developed at Iowa State Univ. by mass selection for adaptation in ETO Composite, a Colombian composite. It was crossed onto CG-SynA-NL, sib-mated for several generations and mass selected for earliness. CG-SynA-NL is an early version of CG-SynA developed initially by mass selection for earliness for 7 cycles at New Liskeard ON (1900 CHU). Later cycles used modified ear-to-row selection. 2650 CHU population adapted to short-seasoned environments with good agronomic performance.

PI 613091. Zea mays L. subsp. mays

Breeding. Population. CG-[Mexican Dent x CG-SynA-NL]. Pedigree - F1 (Mexican Dent x CG-SynA-NL) x BC1 (CG-SynA-NL recurrent parent) and mass selected for earliness. Results in approx. 37.5% exotic germplasm. 2650 CHU population adapted to short-seasoned environments.

PI 613092. Zea mays L. subsp. mays

Breeding. Population. CG-[Cateto Flint x CG-SynA-NL]. Pedigree - F1 (Cateto Flint x CG-SynA-NL) x BC1 (CG-SynA-NL recurrent parent) and mass selected for earliness. Results in approx. 37.5% exotic germplasm. 2650 CHU population adapted to short-seasoned environments.

PI 613093. Zea mays L. subsp. mays

Breeding. Population. CG-Coroico Flour. Pedigree - Originally developed by Cargill and released publicly as Cargill North Temperate Zone Coroico (PI 451692). The CG version underwent 4 generations of sib-matings for earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613094. Zea mays L. subsp. mays

Breeding. Population. CG-Cuzco Flour. Pedigree - Originally developed by Cargill and released publicly as Cargill North Temperate Zone Coroico (PI 451692). The CG version underwent 4 generations of sibbing for earliness. 2650 CHU population adapted to short-seasoned environments.

PI 613095. Zea mays L. subsp. mays

Breeding. Population. CG-Cateto Flint. Pedigree - Originally developed by Cargill and released publicly as Cargill North Temperate Zone Cateto

(PI 451694). The CG version underwent 8 generations of sibbing for earliness. 2700 CHU population adapted to short-seasoned environments.

PI 613096. *Zea mays* L. subsp. *mays*

Breeding. Population. CG-Caribbean Flint. Pedigree - Originally developed by Cargill and released publicly as Cargill North Temperate Zone Caribbean Flint-Dent (PI 451690). The CG version underwent 8 generations of sib-matings for earliness. 2600 CHU population adapted to short-seasoned environments.

The following were developed by Jardin Botanique Universite Louis Pasteur, 28 Rue Goethe, Strasbourg, Bas-Rhin F-67083, France. Received 04/07/2000.

PI 613097. *Achyranthes aspera* L.

Cultivated. Index Seminum 71; Ames 26018.

The following were developed by P. T. Nordquist, University of Nebraska, West Central Research & Ext. Center, Route 4, Box 46A, North Platte, Nebraska 69101, United States; Jimmie H. Hatchett, USDA-ARS, Dept of Entomology, Waters Hall, Manhattan, Kansas 66506-4004, United States; Robert A. Graybosch, USDA-ARS, University of Nebraska, Dept. of Agronomy, 344 Keim Hall, Lincoln, Nebraska 68583, United States; P. Stephen Baenziger, University of Nebraska, Department of Agronomy, 330 Keim Hall, Lincoln, Nebraska 68583-0915, United States; David D. Baltensperger, University of Nebraska, Panhandle Res. & Ext. Center, 4502 Avenue I, 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; John E. Watkins, University of Nebraska, Dept. of Plant Pathology, Lincoln, Nebraska 68583, United States; C. James Peterson, Oregon State University, Crop & Soil Science Dept., 107 Crop Science Bldg., Corvallis, Oregon 97331-3002, United States; Lenis A. Nelson, University of Nebraska, Department of Agronomy, 342 Keim Hall - E. Campus, Lincoln, Nebraska 68583, United States; D.R. Shelton, Wheat Marketing Center, Inc., 1200 N.W. Naito Parkway, Suit 230, Portland, Oregon 97209, United States; R.W. Elmore, University of Nebraska, Dept. of Agronomy, Lincoln, Nebraska 68583, United States; R.N. Klein, University of Nebraska, Dept. of Agronomy, USDA-ARS, Lincoln, Nebraska 68583, United States. Received 04/10/2000.

PI 613098. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "COUGAR"; NE93496; NSGC 8670. CV-900. Pedigree - NE85707/Thunderbird = Warrior*5/Agent//Kavkaz/4/NE63218/Kenya 58/3/Newthatch/2*CTMH//Ponca/*2 Cheyenne/5/Thunderbird (CTMH = Cheyenne/Tenmarq/Mediterranean/Hope). Hard red winter wheat. Medium-early maturity. Winterhardiness good to very good. Awneled, white-glumed. Very long coleoptile (similar to Scout 66) with exceptional straw strength. Excellent test weight.

The following were developed by P. Stephen Baenziger, University of Nebraska, Department of Agronomy, 330 Keim Hall, Lincoln, Nebraska 68583-0915, United States. Received 04/10/2000.

PI 613099. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "MILLENNIUM"; NE94479; NSGC 8671. Pedigree - Arapahoe/Abilene//NE86488 = Arapahoe/Abilene/4/Colt/3/Warrior*5/Agent//Kavkaz. Hard red winter wheat. Awned, white-glumed. Superior adaptation to dryland wheat production systems in Nebraska (except southeastern Nebraska) and similar growing areas in South Dakota and adjacent states.

The following were developed by Asgrow Seed Company, Kalamazoo, Michigan, United States. Received 1974.

PI 613100. *Pisum sativum* L.

Cultivar. "MINI"; NSL 86533. PVP 7100040.

The following were developed by David J. Andrews, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68503, United States. Received 03/07/2000.

PI 613101. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-1A1; 293A1. Pedigree - ICMB 81 (ICRISAT) x KS79-2068B (Fort Hays Exp. Sta., KSU). Cytoplasm from Tift 23DA1. D2 dwarf early synchronus tillering inbred, 76-95 cm high. Flowers 56-64 d after mid-June planting in Lincoln, NE. Anthers yellow, small, non-dehiscent. Seeds ovate, dull gray, approx. 11g/1000.

PI 613102. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-1A4; 293A4. Pedigree - ICMB 81 (ICRISAT) x KS79-2068B (Fort Hays Exp. Sta., KSU). Cytoplasm from Tift 23DA4. D2 dwarf early synchronous tillering inbred 76-95 cm high. Flowers 56-64 d after mid-June planting in Lincoln, NE. Anthers pale yellow, small non-dehiscent. Seeds ovate, dull gray, approx. 11g/1000.

PI 613103. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-1B; 293B. Pedigree - ICMB 81 (ICRISAT) x KS79-2068B (Fort Hays Exp. Sta., KSU). D2 dwarf early synchronous tillering inbred, 76-95 cm high. Flowers 56-64 d after mid-June planting in Lincoln, NE. Anthers yellow. Seeds ovate, dull gray, 11g/1000.

PI 613104. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-2A1; 59022A1. Pedigree - ICMB 81 (ICRISAT) x KS79-2068B (Fort Hays Exp. Sta., KSU). Cytoplasm from Tift 23DA1. Very dwarf early synchronous tillering inbred, 66-78 cm tall. Flowres 58-65 d after mid-June planting in Lincoln, NE. Anthers yellow. Seeds ovate bright gray, approx. 10g/1000.

PI 613105. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-2A4; 59022A4. Pedigree - ICMB 81 (ICRISAT) x KS79-2068B (Fort Hays Exp. Sta., KSU). Cytoplasm from Tift 23DA4. Very dwarf early synchronous tillering inbred, 66-78 cm tall. Flowers 58-65 d after mid-June planting in Lincoln, NE. Anthers yellow, small non-dehiscent. Seeds ovate, bright gray, approx. 10g/1000.

PI 613106. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-2B; 59022B. Pedigree - ICMB 81 (ICRISAT) x KS79-2068B (Fort Hays Exp. Sta., KSU). Very dwarf early synchronous tillering inbred, 66-78 cm tall. Flowers 58-65 d after mid-June planting

in Lincoln, NE. Anthers yellow. Seeds ovate, bright gray, approx. 10g/1000.

PI 613107. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-3A1; 378-2A1. Pedigree - 5141B (IARI, New Delhi, India) x KS 79-2068B (Fort Hays Exp. Sta., KSU). Cytoplasm from Tift 23DA1. Maturity medium, leafy dwarf synchronous tillering inbred, semi-erect. Leaves 82-108 cm tall. Flowers 69-76 d after mid-June planting in Lincoln, NE. Anthers yellow, small, non-dehiscent. Seeds ovate, small, gray, 6.3g/1000.

PI 613108. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-3A4; 378-2A4. Pedigree - 5141 B (IARI, New Delhi, India) x KS79-2068B (Fort Hays Exp. Sta., KSU). Cytoplasm from Tift 23DA4. Maturity medium, dwarf synchronous tillering inbred, semi-erect leaves, 82-108 cm tall. Flowers 69-76 d after mid-June planting in Lincoln, NE. Anthers small, yellow, non-dehiscent. Seeds small, gray, 6.3g/1000.

PI 613109. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-3B; 378-2B. Pedigree - 5141B (IARI, New Delhi, India) x KS79-2068B (Fort Hays Exp. Sta., KSU). Maturity medium, leafy dwarf synchronous tillering inbred semi-erect leaves, 82-108 cm tall. Flowers 69-76 d after mid-June planting in Lincoln, NE. Anthers yellow. Seeds ovate, small, gray, 6.3g/1000.

PI 613110. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-4A1; 413A1. Pedigree - 26B (reselection of 79-2226B from Fort Hays Exp. Sta., KSU) and 678 (line from Uganda population). Cytoplasm from Tift 23DA1. Maturity medium, dwarf synchronous tillering inbred 66-80 cm tall, stiff stalk. Flowers 68-75 d after mid-June planting in Lincoln, NE. Anthers yellow, small, indehiscent. Seeds ovate, gray, 8.2g/1000.

PI 613111. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-4A4; 413A4. Pedigree - 26B (reselection from line 79-226B from Fort Hays Exp. Sta., KSU) and 67B (line from Uganda population). Cytoplasm from Tift 23DA4. Maturity medium, dwarf synchronous tillering inbred, 66-80 cm tall, stiff stalk. Flowers 68-75 d after mid-June planting in Lincoln, NE. Anthers yellow, small and indehiscent. Seeds ovate, gray, 8.2g/1000.

PI 613112. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-4B; 413B. Pedigree - 26B (Reselection at ICRISAT from line 79-2226B from Fort Hays Exp. Sta., KSU) x 67B (line from Uganda population, also selected at ICRISAT, India). Maturity medium, dwarf synchronous tillering inbred 66-80 cm tall, stiff stalk. Flowers 68-75 d after mid-June planting in Lincoln, NE. Anthers yellow. Seeds, ovate, gray, 8.2g/1000.

PI 613113. Pennisetum glaucum (L.) R. Br.

Breeding. Inbred. NM-5A1; 59052B. Pedigree - KS79-2068B (From Fort Hays Exp. Sta., KSU) and (Tift 23DB x Tift 23DB1E1) (F1 of two B lines from Tifton, GA). Cytoplasm from Tift 23DA1. Maturity medium, dwarf leafy synchronous tillering inbred, semi-erect leaves 72-88 cm tall. Flowers 69-78 d after mid-June in Lincoln, NE. Stalk stiff, anthers purple, small indehiscent. Seeds ovate, gray, 9.0g/1000.

PI 613114. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-5A4; 59052A4. Pedigree - KS79-2068B (from Fort Hays Exp. Sta., KSU) x (Tift 23DB x Tift 23DB1E1). (F1 of two B lines from Tifton, GA). Cytoplasm from Tift 23DA4. Maturity medium, dwarf, leafy synchronous tillering inbred, semi-erect leaves 72-99 cm tall. Flowers 69-78 d after planting in Lincoln, NE. Stiff stalk, anthers purple, small indehiscent. Seeds ov.

PI 613115. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-5B; 59052B. Pedigree - KS79-2068B (Fort Hays Exp. Sta., KSU) and (Tift 23DB x Tift 23B1E1) (F1 of two B lines from Tifton, GA). Maturity medium, dwarf leafy, synchronous tillering inbred semi-erect leaves 72-88 cm tall. Flowers 69-78 d after planting in Lincoln, NE. Stiff stalk. Anthers purple. Seed ovate, gray, 9.0g/1000.

PI 613116. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-6R1; 086R1. Pedigree - 84105-1222-1 (derived from segregating germplasm from A.J. Casady, KSU) believed from Uganda population crossed to Tift dwarf stock. Maturity early, dwarf near synchronous tillering upright inbred, 78-92 cm tall. Flowers 57-63 d after mid-June planting in Lincoln, NE. Stiff peduncle and stalk. Anthers yellow, profuse pollen shed. Seeds light gray, elongated, 8.0g/1000. Restores male fertility on A1 cms hybrids.

PI 613117. *Pennisetum glaucum* (L.) R. Br.

Breeding. Inbred. NM-7R1R5; 58001R. Pedigree - ICMB 81 (a B line from ICRISAT) x (843B x PT732-9RF-MS), an F1 between 843B (a reselection of KS 79 2068B from KSU) and PT 732, a stiff stalk line from Tamil Nadu University, India. Maturity medium-late, dwarf synchronous tillering inbred 72-98 cm tall. Flowers 72-79 d after mid-June planting. Stiff stalk, candle shaped heads, upright habit. Anthers yellow, profuse pollen shed. Seeds ovate, light gray, 7.3g/1000. Restores male fertility on both A1 and A5 cms hybrids.

The following were developed by Richard Percy, USDA, ARS, Maricopa Agricultural Research Ctr., 37860 W. Smith-Enke Rd., Maricopa, Arizona 85339, United States. Received 03/16/2000.

PI 613118. *Gossypium barbadense* L.

Breeding. Pureline. P62L°. GP-708. Pedigree - Donor parent carried the okra-leaf trait in the PS-5 cultivar background. Recurrent backcross parent experimental line P62. Short statured, early maturing American Pima cotton that expresses the okra-leaf trait. The okra-leaf trait has been demonstrated to confer earlier plant maturity and a partial resistance to the silverleaf whitefly (*Bemisia tabaci*). Extra-long staple (ELS) fiber. Fiber length 36.6 mm, a strength of 34.2 g tex-1, and a micronaire of 4.5 when measured on single instruments. Produces 47% of total yield 162 days after planting, or 9% more than recurrent parent P62.

PI 613119. *Gossypium barbadense* L.

Breeding. Pureline. PS-6ne. GP-709. Pedigree - Backcross donor parent was an experimental line carrying the nectariless trait in a PS-5 cultivar background. The recurrent backcross parent was cultivar PS-6. American Pima cotton that expresses the nectariless trait. The

nectariless trait confers partial resistance to the pink bollworm (*Pectinophora gossypiella*). Extra long staple (ELS) fiber. Fiber length of 36.1 mm, a strength of 37.1 g/tex-1, and a micronaire of 4.0, when measured on single instruments. Produces 36% of total yield 162 days after planting, or 10% more than its PS-6 recurrent parent.

PI 613120. *Gossypium barbadense* L.

Breeding. Pureline. PS-6neL°. GP-710. Pedigree - Backcross donor parent was an experimental line carrying the nectariless and okra-leaf traits in a PS-5 cultivar background. The recurrent backcross parent was cultivar PS-6. Early maturing American Pima cotton that expresses the okra-leaf and nectariless traits. The okra-leaf trait has been demonstrated to confer earlier plant maturity and a partial resistance to the silverleaf whitefly (*Bemisia tabaci*). The nectariless trait confers partial resistance to the pink bollworm (*Pectinophora gossypiella*). Fiber length of 33.5 mm, a strength of 31.5 g tex-1, and a micronaire of 4.2, when measured on single instruments. Produces 44% of total yield 162 days after planting, or 18% more than its recurrent PS-6 parent.

PI 613121. *Gossypium barbadense* L.

Breeding. Pureline. P62neL°. GP-711. Pedigree - Backcross donor parent was a line carrying the nectariless and okra-leaf traits in the PS-5 cultivar background. The recurrent backcross parent was the experimental line P62. Short statured, early maturing American Pima cotton that expresses the okra-leaf and nectariless traits. The okra-leaf trait confers earlier plant maturity and a partial resistance to silverleaf whitefly (*Bemisia tabaci*). The nectariless trait confers partial resistance to the pink bollworm (*Pectinophora gossypiella*). The fiber length of 35.6 mm, a strength of 33.8 g tex-1, and a micronaire of 3.7, when measured on single instruments. Produces 58% total yield 162 days after planting, or 20% more than its recurrent P62 parent.

PI 613122. *Gossypium barbadense* L.

Breeding. Pureline. P62ne. GP-712. Pedigree - Backcross donor parent was an experimental line carrying the nectariless trait in the PS-5 cultivar background. The recurrent backcross parent was the experimental line P62. Short statured, earlier maturing American Pima cotton. Possesses the nectariless trait that confers partial resistance to the pink bollworm (*Pectinophora gossypiella*). Extra-long staple (ELS) fiber. Fiber length 35.6 mm, a strength of 35.6 g tex-1, and a micronaire of 4.5 when measured by single instruments. Does not differ from P62 parent in maturity; producing approx. 41% of total yield in 162 days.

PI 613123. *Gossypium barbadense* L.

Breeding. Pureline. PS-6L°. GP-713. Pedigree - Backcross donor parent was an experimental line carrying the nectariless trait in a PS-5 cultivar background. The recurrent backcross parent was the cultivar PS-6. Early maturing American Pima cotton that expresses the okra-leaf trait. The okra-leaf trait confers earlier plant maturity and a partial resistance to the silverleaf whitefly (*Bemisia tabaci*). Extra long staple (ELS) fiber. Fiber length of 35.0 mm, a strength of 34.3 g tex-1, and a micronaire of 4.5 when measured on single instruments. Produces 43% of total yield 162 days after planting, or 17% more than its recurrent parent, PS-6.

The following were developed by Jose Fernandez-Martinez, Instituto de Agricultura Sostenible (CSIC), Apartado 4084, Cordoba, Cordoba 14080, Spain; Leonardo Velasco, Instituto de Agricultura Sostenible (CSIC), Apartado 4084, E-14080, Cordoba, Cordoba 14080, Spain; Antonio De Haro-Bailon, Instituto Agricultura Sostenible (CSIC), Consejo Superior Invest. Cientificas, Alameda Del Obispo S/N, Cordoba, Cordoba 14080, Spain; M. Del Rio, Instituto de Agricultura Sostenible (CSIC), Apartado 4084, E-14080, Cordoba, Cordoba, Spain; J. Dominguez, CIFA-Junta de Andalucia, Departamento de Mejora y Agronomia, Apartado 4240, Cordoba, Cordoba, Spain. Donated by Leonardo Velasco, Instituto de Agricultura Sostenible (CSIC), Apartado 4084, E-14080, Cordoba, Cordoba 14080, Spain. Received 01/21/2000.

PI 613124. Brassica carinata A. Braun

Genetic. N2-7399. GS-8. Pedigree - Developed from the line C-101 by chemical mutagenesis with ethylmethane sulfonate (EMS). Low erucic acid Ethiopian mustard genetic stock M2-derived M5 line selected for low erucic acid content of 89 ± 13 g kg⁻¹ (mean \pm SD) compared with an erucic acid content of 391 ± 20 g kg⁻¹ for C-101. Seed oil content 341 ± 29 g kg⁻¹ compared with $355 \pm$ g kg⁻¹ for C-101. Total seed glucosinolate content $99.2 \pm$ g-1 compared with $127.1 \pm$ g-1 for C-101. Thousand-seed weight averaged 4.2 ± 0.3 g compared with 3.9 ± 0.4 for C-101. Both genetic stock and C-101 yellow seeded.

PI 613125. Brassica carinata A. Braun

Genetic. N2-3093. GS-9. Pedigree - Developed from the line C-101 by chemical mutagenesis with ethylmethane sulfonate (EMS). Ethiopian mustard genetic stock M2-derived M5 line selected for medium erucic acid content of 182 ± 14 g kg⁻¹ (mean \pm SD) compared with an erucic acid content of 391 ± 20 g kg⁻¹ for C-101. Seed oil content 361 ± 24 kg-1 compared to 355 ± 41 g kg-1 for C-101. Total seed glucosinolate content $131.6 \pm$ g-1 compared to $127.1 \pm$ g-1 for C-101. Thousand-seed weight averaged 3.2 ± 0.3 g compared with 3.9 ± 0.4 g for C-101. Both genetic stock and line C-101 yellow seeded.

PI 613126. Brassica carinata A. Braun

Genetic. N2-9041. GS-10. Pedigree - Developed from line C-101 by chemical mutagenesis with ethylmethane sulfonate (EMS). Ethiopian mustard genetic stock M2-derived M5 line selected for medium erucic acid content of 189 ± 14 g kg⁻¹ (mean \pm SD) compared with an erucic acid content of 391 ± 20 g kg⁻¹ for C-101. Seed oil content 330 ± 20 g kg⁻¹ compared with 355 ± 41 g kg⁻¹ for C-101. Total seed glucosinolate content $196.0 \pm$ g-1 compared with $127.1 \pm$ for C-101. Thousand-seed weight averaged 5.3 ± 0.4 g compared with $3.9 \pm$ for C-101. Both the genetic stock and C-101 yellow seeded.

PI 613127. Brassica carinata A. Braun

Genetic. N2-6230. GS-11. Pedigree - Developed from the line C-101 by chemical mutagenesis with ethylmethane sulfonate (EMS). Ethiopian mustard genetic stock M2-derived M5 line selected for a high erucic acid content of 548 ± 18 kg-1 (mean \pm SD) compared with an erucic acid content of 391 ± 20 g kg⁻¹ for C-101. Seed oil content 352 ± 35 g kg⁻¹ compared with 355 ± 41 g kg⁻¹ for C-101. Total seed glucosinolate content $189.0 \pm$ g-1 compared with $127.1 \pm$ g-1 for C-101. Thousand-seed weight averaged 4.8 ± 0.3 g compared with 3.9 ± 0.4 g for C-101. Both the genetic stock and C-101 yellow seeded.

PI 613128. Brassica carinata A. Braun

Genetic. 25X-1. GS-12. Pedigree - *B. napus* cultivar Duplo, *B. juncea* line Zem-1, and *B. carinata* line C-101. Zero erucic acid Ethiopian mustard genetic stock selected among progeny from interspecific crosses of selected lines of Ethiopian mustard, rapeseed (*B. napus*) and Indian mustard (*B. juncea*). Characterized by seed oil with essentially no erucic acid (mean \pm SD of 0.8 ± 0.2 g kg⁻¹) compared with 391 ± 20 g kg⁻¹ of erucic acid for C-101. Seed yellow with a thousand seed weight of 3.8 g, a seed oil content of 303 g Kg⁻¹ and a seed glucosinolate content of 121.4 g⁻¹, compared with a thousand-seed weight of 3.9 ± 0.4 g, seed oil content of 355 \pm 41 g kg⁻¹ and total seed glucosinolate content of $127.1 \pm$ g⁻¹ for C-101.

The following were developed by Paul Pfahler, University of Florida, 304 Newell Hall, Department of Agronomy, Gainesville, Florida 32611, United States; Ron D. Barnett, University of Florida, North Florida Res. & Ed. Center, R.#3, Box 4370, Quincy, Florida 32351-9500, United States; Ann R. Blount, University of Florida, North Florida Research and, Education Center, Quincy, Florida 32351, United States. Received 03/31/2000.

PI 613129. *Secale cereale* L. subsp. *cereale*

Breeding. Population. FL-NSC. GP-2. Pedigree - More than 15 generations of phenotypic recurrent selection after a cross of a short culm line of unknown parentage and a normal height cultivar (Florida 401). Very early spring heterogeneous and heterozygous diploid population with a culm or straw length of 73 cm (normal height parent - 143 cm). Adapted to the southeastern U.S. with commercially unacceptable forage and grain yields. Moderately resistant to foliar (fungal) diseases prevalent in the southeastern U.S. Seed weight approx. 2.30 g/100 seeds.

The following were developed by S.N. Acharya, Agriculture and Agri-Food Canada Research Centre, P.O. Box 3000, Main, Lethbridge, Alberta T1J 481, Canada; H.C. Huang, Agriculture and Agri-Food Canada, Lethbridge Research Center, P.O. Box 3000, Lethbridge, Alberta T1J 4B1, Canada. Received 03/31/2000.

PI 613130. *Medicago sativa* L. subsp. *sativa*

Cultivar. Population. "AC LONGVIEW"; LRS 93-1. CV-198. Pedigree - Synthetic cultivar with parental clones derived from crosses between verticillium wilt resistant plants from nine American bacterial wilt resistant cultivars (5444, A872, Anchor, Arrow, Beaver, Edge, Endure, Excalibur and Rambler) and three bacterial wilt and Verticillium wilt-resistant cultivars (Barrier, AC Blue J and an experimental population LRC95CR-1). Highly resistant to Verticillium wilt (*Verticillium albo-atrum*) and bacterial wilt (*Clavibacter michiganense*). Out yielded Beaver (check) 9% and 12% in dryland and irrigated locations, respectively. Well suited for hay production, dehydration and silage in areas of western Canada, including British Columbia, where Verticillium or bacterial wilt reduces alfalfa yield and stand life. Produces good amount of seed both under dryland and irrigated conditions of western Canada.

The following were developed by David A. Dierig, USDA, ARS, U.S. Water Conservation Laboratory, 4331 E. Broadway, Phoenix, Arizona 85040-8807, United States; Gail Dahlquist, USDA, ARS, U.S. Water Conservation Laboratory,

4331 East Broadway Road, Phoenix, Arizona 85040, United States; P.M. Tomasi, USDA-ARS, U.S. Water Conservation Lab., 4331 E. Broadway Rd., Phoenix, Arizona 85040-8832, United States. Received 03/17/2000.

PI 613131. *Lesquerella fendleri* (A. Gray) S. Watson

Breeding. Population. WCL-LY2; high oil. GP-31. Pedigree - Mass selection with seed originating from WCL-LY1. Improved oil content, lesquerolic acid yield, and seed yields. Seed oil 294 g kg⁻¹ at Maricopa and 267 g kg⁻¹ at Tucson compared to WCL-L01 and the check line, 264 and 244 g kg⁻¹ at Maricopa, and 248 and 240 g kg⁻¹ at Tucson. Lesquerolic acid 541 g kg⁻¹ at Maricopa and 531 g kg⁻¹ at Tucson. Significantly different from WCL-LH1, 539 g kg⁻¹, and the check line 535 g kg⁻¹ at Maricopa, but not at Tucson. Lesquerolic acid yield was 145 g kg⁻¹ at Maricopa and 142 g kg⁻¹ at Tucson compared with WCL-LY1, 139 g kg⁻¹ and 132 g kg⁻¹, respectively. Check lines were 132 g kg⁻¹, and 127 g kg⁻¹, respectively.

The following were developed by Michael Shannon, USDA, ARS, U. S. Salinity Laboratory, 450 W. Big Springs Road, Riverside, California 92507-4617, United States; David A. Dierig, USDA, ARS, U.S. Water Conservation Laboratory, 4331 E. Broadway, Phoenix, Arizona 85040-8807, United States; C.M. Grieve, USDA-ARS, George E. Brown, Jr. Salinity Laboratory, 450 W. Big Springs Road, Riverside, California 92507-4617, United States. Received 03/17/2000.

PI 613132. *Lesquerella fendleri* (A. Gray) S. Watson

Breeding. Population. WCL-SL1; salt tolerant. GP-32. Pedigree - Developed through intermating of single plant selections from saline treatments in outdoor sand tanks with electrical conductivity values of 24 and 21 dS m⁻¹ in the 1997 to 1998 growing season at Riverside, CA. Improved salt tolerance compared to unselected lines. Significantly higher rates of survival following salination than unselected lines in treatments up to 24 dS m⁻¹. 81% of plants surviving in 21 dS m⁻¹ treatments versus 29 and 46% for control lines. The 24 dS m⁻¹ treatment had 20% survival versus 0 and 5%, respectively for control lines. Plants significantly taller, 28 cm versus 18 and 11 cm for control lines across all salinity levels. Seed yields in all salinity treatments except 21 and 24 dS m⁻¹, were between 2 and 5 times greater than controls. Seed yields across all salinity levels were 1.02 g per plant compared to 0.41 and 0.25 g, respectively, for the control lines. Optimal seed yields were obtained at levels between 11 and 15 dS m⁻¹.

The following were developed by J.F. Payne, Agriculture Canada, Research Branch, P.O. Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; Grant McLeod, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Research Centre, #1, Airport Road, Swift Current, Saskatchewan S9H 3X2, Canada; Y.T. Gan, Agriculture and Agri-Food Canada, Semiarid Prairie Agricultural Research Centre, Research Branch, Swift Current, Saskatchewan S9H 3X2, Canada. Received 04/01/2000.

PI 613133. *Secale cereale* L. subsp. *cereale*

Cultivar. Population. "AC REMINGTON"; RT 172; 8591SD. CV-18. Pedigree - Derived from composite of the following crosses:
8093A/Musketeer, 8093F/Musketeer, 8093G/Musketeer, 8093H/
Musketeer, 8093A/Prima, 8093F/Prima, 8093G/Prima, 8093H/Prima. Released 1998. Semidwarf winter rye with 20 to 25% shorter straw and improved

lodging resistance compared to tall cultivars. Good winter survival and well adapted to the Canadian Prairies. Improved grain yield, test weight, kernel weight and Hagberg Falling Number comparable to those of the semidwarf cultivar AC Rifle. Plant height, heading, maturity and ergot infection similar to those of AC Rifle.

The following were collected by Leslie Brenek, USDA, NRCS-NPMC, Soil Conservation, 310 South LaGrange Street, Hallettville, Texas, United States. Donated by John Lloyd-Reilley, USDA, NRCS-NPMC, Kika de la Garza Plant Materials Center, 3409 N. FM1355, Kingsville, Texas 78363, United States. Received 04/27/2000.

PI 613134. *Elymus canadensis* L.

Wild. 9043285; W6 22351. Collected 06/21/1984 in Texas, United States. Latitude 29 deg. 18' 15'' N. Longitude 97 deg. 4' 30'' W. Elevation 81 m. Lavara, Texas. Elmendor-Denhawken soil type. Zone PE-44. Selected from a collection of 60 *Elymus canadensis* accessions assembled and evaluated at Kika de la Garza Plant Materials Center since October of 1986. All accessions collected were native to Texas. This accessions was selected as a superior strain for its vigorous vegetative growth, total biomass, pesistance, drought resistance, heat tolerance, and high seed production.

The following were developed by Florida Agr. Exp. Sta.. Received 05/01/2000.

PI 613135 PVPO. *Arachis hypogaea* L.

Cultivar. "C-99R"; UF 94320. PVP 200000182.

The following were developed by Novartis Seeds, Inc., United States. Received 05/01/2000.

PI 613136 PVPO. *Phaseolus vulgaris* L.

Cultivar. "ROG912". PVP 200000184.

PI 613137 PVPO. *Phaseolus vulgaris* L.

Cultivar. "ROG922". PVP 200000185.

The following were developed by Advanta Seeds UK Limited, United Kingdom. Received 05/01/2000.

PI 613138 PVPO. *Pisum sativum* L.

Cultivar. "SCUBA". PVP 200000186.

The following were developed by O&A Enterprises, Inc., United States. Received 05/01/2000.

PI 613139 PVPO. *Gossypium hirsutum* L.

Cultivar. "DP 6207 Acala". PVP 200000192.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 05/01/2000.

PI 613140 PVPO. *Medicago sativa* L.
Cultivar. "57NO2". PVP 200000193.

The following were developed by Asmus Soren Petersen, Germany. Received 05/01/2000.

PI 613141 PVPO. *Raphanus sativus* var. *oleiformis* Pers.
Cultivar. "COLONEL". PVP 200000194.

The following were developed by Turf Merchants, Inc., United States. Received 05/01/2000.

PI 613142 PVPO. *Festuca brevipila* R. Tracey
Cultivar. "MINOTAUR". PVP 200000195.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 05/01/2000.

PI 613143 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH5CT". PVP 200000197.

PI 613144 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH5D6". PVP 200000198.

The following were developed by Turf Merchants, Inc., United States. Received 05/01/2000.

PI 613145 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "FINESSA". PVP 200000200.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 05/01/2000.

PI 613146 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "DOMINION". PVP 200000201.

The following were developed by Kenneth E. Hughes, United States. Received 05/01/2000.

PI 613147 PVPO. *Arachis hypogaea* L.
Cultivar. "HUGHES RUNNER". PVP 200000203.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 05/01/2000.

PI 613148 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH54H". PVP 200000204.

PI 613149 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "PH8V0". PVP 200000205.

PI 613150 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PHJ8R". PVP 200000206.

PI 613151 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH3DT". PVP 200000207.

PI 613152 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH2JR". PVP 200000208.

PI 613153 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PHOKT". PVP 200000209.

PI 613154 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH48V". PVP 200000210.

The following were developed by Stephen M. Dofing, University of Alaska, Agricultural Experiment Station, Palmer Research Center, Palmer, Alaska 99645, United States. Received 04/28/2000.

PI 613155. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. Pureline. "FINASKA"; NSGC 8672. Pedigree - Double-haploid line from the cross Jo1632/Jo1599 (breeding lines from the Boreal Plant Breeding Institute, Jokioinen, Finland). Six-rowed, rough-awned, spring feed barley. Possesses a combination of high grain yield, early maturity, lodging resistance, and good feed quality.

The following were developed by S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; Carlos Gustavo Martinez Rueda, Universidad Autonoma del Estado de Mexico, Facultad de Ciencias Agricolas, Manual Doblado 13, Pilares Metepec, Mexico CP. 52179, Mexico; Mohamed Mergoum, International Maize and Wheat Improvement Center, CIMMYT-Turkey, P.K. 39, Emek, Ankara, Turkey; G. Estrada Campuzano, Universidad Autonoma del Estado de Mexico, Univ. of Mexico State, Facultad de Ciencias Agricolas, Toluca, Mexico, Mexico; A. Hede, International Maize and Wheat Improvement Center, CIMMYT Int., Lisboa 27, Mexico, Mexico 06600, Mexico; A. Balbuena Melgarejo, Universidad Autonoma del Estado de Mexico, University of Mexico State, Facultad de Ciencias Agricolas, Toluca, Mexico, Mexico. Received 05/03/2000.

PI 613156 QUAR. X *Triticosecale* sp.
Cultivar. Pureline. "CERRILLO-TCL99". CV-22. Pedigree - FAHAD 4/FARAS 1 CTM89.179-5Y-OM-2Y-OM-6Y-OM-2B-OY-OUAEM. Complete hexaploid spring triticale. Average yield 6.54 and 2.80 t ha⁻¹ in Obregon irrigated and dry conditions, respectively. In Mexico State dry zones, the yield was 2.06 t ha⁻¹ compared to 7.11 t ha⁻¹ achieved under high rainfall conditions. Under similar conditions, exhibited test weight of 680 and 610 kg m⁻¹. Tall, medium-late. Resistant to yellow rust (*Puccinia striiformis*), leaf rust (*Puccinia recondita*), septoria (*Septoria* spp) and stem rust (*Puccinia graminis*). Moderately susceptible to *Fusarium* spp. head blight and to sprouting. Grain color medium dark. At maturity, white awns and medium long spikes.

The following were developed by S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico ; Mohamed Mergoum, International Maize and Wheat Improvement Center, CIMMYT-Turkey, P.K. 39, Emek, Ankara, Turkey; A. Hernandez Sierra, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico; A. Zuloaga Albarran, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico. Received 05/03/2000.

PI 613157 QUAR. X Triticosecale sp.

Cultivar. Pureline. "SUPREMO TCL-2000". CV-23. Pedigree - BULL_10/MANATI_1 CTY90.169-25Y-OM-8Y-OM-2B-OY. Complete hexaploid triticate. In Obregon, average yield 6.55 and 3.05 t ha⁻¹ under irrigated and dry conditions, respectively. Under rainfed environments of Mexico State, showed average yield of 3.59 t ha⁻¹. Good resistance to yellow rust (*Puccinia striiformis*), leaf rust (*Puccinia recondita*), septoria (*Septoria* spp) and stem rust (*Puccinia graminis*). Moderately tolerant to Scab head blight (*Fusarium* spp) and moderately susceptible to sprouting. In Mexico State, exhibited relatively good test weight of 611 kg m⁻¹ and in Obregon exhibited higher test weight of 770 kg m⁻¹ under irrigation and 720 kg m⁻¹ under dry conditions. Medium tall and medium late.

The following were developed by G. Varughese, International Maize & Wheat Improvement Center, c/o Ministerio da Agricultura e Pescas, Apartado 21203, Lisbon, Lisboa 1131, Portugal; S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico ; Mohamed Mergoum, International Maize and Wheat Improvement Center, CIMMYT-Turkey, P.K. 39, Emek, Ankara, Turkey; A. Hernandez Sierra, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico; A. Zuloaga Albarran, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico; O. Abdalla, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico. Received 05/03/2000.

PI 613158 QUAR. X Triticosecale sp.

Cultivar. Pureline. "MILENIO TCL-3". CV-19. Pedigree - RHINO_3/BULL_1-1 CTB88.1317-25B-OY-3M-1Y-OM-1B-OY. Complete hexaploid tritiale. Average yields 7.10 and 3.15 t ha⁻¹ under Obregon irrigated and dry conditions, respectively. In dry conditions of Mexico State, average yield 3.12 t ha⁻¹. Resistant to yellow rust (*Puccinia striiformis*), leaf rust (*Puccinia recondita*), septoria (*Septoria* spp) and stem rust (*Puccinia graminis*). Moderately susceptible to Scab head blight (*Fusarium* spp) and sprouting. In Mexico State, exhibited a relatively medium test weight of 588 kg m⁻³. Under similar environments, relatively tall and is medium late. White awned, lax spikes, and dark grain color.

The following were developed by S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico ; Carlos Gustavo Martinez Rueda, Universidad Autonoma del Estado de Mexico, Facultad de Ciencias Agricolas, Manual Doblado 13, Pilares Metepec, Mexico CP. 52179, Mexico; Mohamed Mergoum, International Maize and Wheat Improvement Center, CIMMYT-Turkey, P.K. 39, Emek, Ankara, Turkey; G. Estrada Campuzano, Universidad Autonoma del Estado de Mexico, Univ. of Mexico State, Facultad de Ciencias Agricolas, Toluca, Mexico, Mexico; A. Hede, International Maize and Wheat Improvement Center, CIMMYT Int., Lisboa 27, Mexico, Mexico 06600, Mexico; A. Balbuena Melgarejo, Universidad Autonoma del Estado de Mexico, University of Mexico State, Facultad de Ciencias Agricolas, Toluca, Mexico, Mexico. Received 05/03/2000.

PI 613159 QUAR. X Triticosecale sp.

Cultivar. Pureline. "QUEBRANTAHUESOS-TCL99". CV-18. Pedigree - ZEBRA 79/LYNX*2//FAHAD1 CTY90.1406-1M-1Y-OM-4Y-OM-2B-OY-OUAEM. Complete hexaploid spring triticale. Grain yield ranged from 6.56 to 2.74 t ha⁻¹ in Obregon, and from 7.22 and 2.27 t ha⁻¹ in Mexico State, respectively under irrigated and dry conditions. Under similar conditions, test weight averaged between 650 and 595 kg m⁻¹ in Mexico State and in Obregon between 750 and 730 kg m⁻¹. Tall and medium late with medium resistance to the yellow rust (*Puccinia striiformis*) and is resistant to leaf rust (*Puccinia recondita*), septoria (*Septoria* spp) and stem rust (*Puccinia graminis*). Moderately susceptible to *Fusarium* spp head scab and sprouting. White awned, medium lax spikes and medium dark grain.

The following were developed by G. Varughese, International Maize & Wheat Improvement Center, c/o Ministerio da Agricultura e Pescas, Apartado 21203, Lisbon, Lisboa 1131, Portugal; S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico ; Carlos Gustavo Martinez Rueda, Universidad Autonoma del Estado de Mexico, Facultad de Ciencias Agricolas, Manual Doblado 13, Pilares Metepec, Mexico CP. 52179, Mexico; Mohamed Mergoum, International Maize and Wheat Improvement Center, CIMMYT-Turkey, P.K. 39, Emek, Ankara, Turkey; G. Estrada Campuzano, Universidad Autonoma del Estado de Mexico, Univ. of Mexico State, Facultad de Ciencias Agricolas, Toluca, Mexico, Mexico; A. Hede, International Maize and Wheat Improvement Center, CIMMYT Int., Lisboa 27, Mexico, Mexico 06600, Mexico; A. Balbuena Melgarejo, Universidad Autonoma del Estado de Mexico, University of Mexico State, Facultad de Ciencias Agricolas, Toluca, Mexico, Mexico; O. Abdalla, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico. Received 05/03/2000.

PI 613160 QUAR. X Triticosecale sp.

Cultivar. Pureline. "MARAVILLA-TCL99". CV-21. Pedigree - DAGRO/IBEX//CIVET#2 SWT87.246-1B-3Y-2B-4RES-OB-1Y-OPAP-3Y-OB OUAEM. Complete hexaploid triticale. Yield in Obregon varied from 6.13 and 2.83 t ha⁻¹ under irrigated and drought conditions, respectively. Under Mexico State conditions, yielded 2.22 t ha⁻¹ under drought and 7.81 t ha⁻¹ under high rainfall. Test weight ranged from 580 to 640 kg m⁻³ in Mexico State and from 620 to 740 kg m⁻³ in Obregon. Tall and medium

late. Moderately resistant to race of yellow rust (*Puccinia striiformis*) and is resistant to leaf rust (*Puccinia recondita*), septoria (*Septoria* spp) and stem rust (*Puccinia graminis*). Moderately susceptible to head scab (*Fusarium* spp) and sprouting and has medium dark grain with long, white and fully awned spikes.

The following were developed by G. Varughese, International Maize & Wheat Improvement Center, c/o Ministerio da Agricultura e Pescas, Apartado 21203, Lisbon, Lisboa 1131, Portugal; S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; Mohamed Mergoum, International Maize and Wheat Improvement Center, CIMMYT-Turkey, P.K. 39, Emek, Ankara, Turkey; A. Hernandez Sierra, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico; A. Zuloaga Albarran, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico; O. Abdalla, Instituto de Investigacion y Capacitacion Agropecuaria, Agricola y Forestal del Estado de Mexico, Conjunto SEDAGRO, Metepec, Mexico, Mexico 52140, Mexico. Received 05/03/2000.

PI 613161 QUAR. X Triticosecale sp.

Cultivar. Pureline. "SIGLO TCL-21". CV-20. Pedigree - CARACAL = (STIL/YAV79//CENT.MAROC54/3/ARDI_1/4/ TAPIR/YOGUI_1//2*MUSX) CTM87.1801-2Y-OM-11RES-7M-1Y-OPAP-4Y-OB. Complete hexaploid triticale. In Obregon, average yield of 6.35 and 3.45 t ha⁻¹ under irrigated and dry conditions, respectively. Under rainfed environments of Mexico State, average yield over five testing sites 3.88 t ha⁻¹. Resistant to the new race of yellow rust (*Puccinia striiformis*), leaf rust (*Puccinia recondita*), septoria (*Septoria* spp) and stem rust (*Puccinia graminis*). Moderately susceptible to Scab head blight (*Fusarium* spp) and sprouting. Exhibited high test weights in Mexico State and Obregon. Medium height, medium late, and medium dark grain with white and fully awned spikes.

The following were developed by Dick L. Auld, Texas Tech University, Department of Plant and Soil Sciences, P.O. Box 42122, Lubbock, Texas 79409-2122, United States; Roy G. Cantrell, New Mexico State University, Agronomy and Horticulture Dept., P.O. Box 30003, Las Cruces, New Mexico 88003, United States; E. Bechere, Texas Tech University, Dept. of Plant and Soil Science, Lubbock, Texas 79409-2122, United States; M.D. Ethridge, Texas Tech University, International Textile Center, Lubbock, Texas 79409-5888, United States; W.D. Becker, Texas Tech University, Dept. of Plant and Soil Science, Lubbock, Texas 79409-2122, United States; E. Hequet, Texas Tech University, International Textile Center, Lubbock, Texas 79409-5888, United States. Received 04/07/2000.

PI 613162. Gossypium hirsutum L.

Breeding. TTU 202-1107-B. GP-705. Pedigree - M4:5 Paymaster 200. Increased fiber length as well as good fiber bundle strength and fineness. Average upper half mean fiber length 31.8 mm, 8-9% longer than the original cv Paymaster HS 200. 5% higher average fiber strength than Paymaster HS 200, but similar micronaire and uniformity. Maturity and fineness of fiber similar to Paymaster HS 200. Lint yield averaged 92-94% of Paymaster HS 200, but 5-7% more than Paymaster HS 26. Limited

variation for micronaire (± 0.6), strength (± 2.6 g/tex), length (± 0.5 mm), and length uniformity ($\pm 3\%$) among the eight M4:5 lines. Possesses only minor morphological differences from the parental cv Paymaster HS 200. Under irrigated conditions, flowers approx. one node earlier than the 3 comparative commercial cvs. Averages 130 mm in height compared to 88 cm for Paymaster HS 200. Plants have either cream or yellow pollen. Stems glabrous, while the parent cv has pubescent stems.

PI 613163. *Gossypium hirsutum* L.

Breeding. TTU 271-2155C. GP-706. Pedigree - M4:5 Paymaster 200. Increased fiber length as well as good fiber bundle strength and fineness. Average upper half mean fiber length of 31.5 mm, which is 8-9% longer than the original cv Paymaster HS 200. 5% higher average fiber strength than Paymaster HS 200, but similar micronaire and uniformity. Maturity and fineness of fiber similar to Paymaster HS 200. Lint yields average 92-94% of Paymaster HS 200 but 5-7% more than Paymaster HS 26. Limited variation for micronaire (± 0.6), strength (± 2.6 g/tex), length (± 0.5 mm), and length uniformity ($\pm 3\%$) among the eight M4:5 lines. Possesses only minor morphological differences from the parental cv Paymaster HS 200. Under irrigated conditions, flowers approx. one node earlier than 3 comparative commercial cvs. Average 130 cm in height compared to 88 cm for Paymaster HS 200. This mutant line and Paymaster HS 200 both have cream-colored pollen.

The following were developed by Jerry Bergman, Montana State University, Eastern Agricultural Research Center, P.O. Box 1350, Hwy 200, 1 mile North, Sidney, Montana 59270, United States; Raymond L. Ditterline, Montana State University, Department of Plant and Soil Science, P.O. Box 173120, Bozeman, Montana 59717-0312, United States; J.G. Scheetz, USDA-NRCS, National Plant Materials Center, Route 1, Box 1189, Bridger, Montana 59014-9718, United States; Joyce L. Eckhoff, Montana State University, Eastern Agric. Research Center, 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; Mark E. Majerus, USDA-NRCS, Plant Materials Center, Rt. 2, Box 1189, Bridger, Montana 59014-9718, United States; Larry K. Holzworth, USDA-NRCS State Office, Federal Bldg., Room 443, 10 E. Babcock, Bozeman, Montana 59715-4704, United States; S.D. Cash, Montana State University, P.O. Box 173120, 313 Leon Johnson Hall, Bozeman, Montana 59715-3120, United States; L.S. Strang, Northwestern Agr. Res. Center, 4370 Montana 35, Kalispell, Montana 59901, United States; K.R. Blunt, Montana State University, Dept. of Animal and Range Science, Bozeman, Montana 59717, United States; J. Vavrovsky, Central Agr. Res. Center, HC90 Box 20, Moccasin, Montana, United States; R.L. Dunn, Blue Moon Bulbs, Bozeman, Montana 59715, United States. Received 04/05/2000.

PI 613164. *Medicago sativa* L.

Cultivar. Population. "SHAW". CV-199. Pedigree - Recurrent selection within BlazerXL for pest resistance. Dormant variety. Fall dormancy similar to 5246. Flower color 62% purple, 38% variegated and a trace of white, yellow and cream. High resistance to *Aphanomyces* (race 1) and northern root-knot nematode. Resistance to *Phytophthora* root rot, pea aphid, spotted aphid. Moderate resistance to *Verticillium* wilt, anthracnose, and stem nematode.

The following were developed by Ming H. Yu, USDA, ARS, U.S. Agricultural Research Station, 1636 East Alisal St., Salinas, California 93905, United States. Received 03/29/2000.

PI 613165. *Beta vulgaris* L.

Breeding. M6-1. GP-216. Pedigree - From pooled homozygous root-knot nematode resistant S2 progeny plants from plant No. 15R. The 15R was derived from a cross of the diploid, self-fertile, resistant plant 1610 and a diploid self-incompatible, biennial sugarbeet line C39R. Multigerm, self-compatible, green-hyocotyl, and largely biennial sugarbeet line with resistance to root-knot nematode (*Meloidogyne* spp.). Resistant to multiple species of nematode, including *M. incognita*, *M. javanica*, *M. arenaria*, *M. hapla*, *M. chitwoodi*, and *M. fallax*, based on J2 inoculation studies in the greenhouse.

The following were developed by Shree P. Singh, University of Idaho, Kimberly Research & Extension, 3793 North 3600 East, Kimberly, Idaho 83341-5076, United States; Henry Teran, International Center for Tropical Agriculture, Apartado Aereo 6713, Cali, Valle, Colombia; J. Ariel Gutierrez, Universidad Nacional de Colombia, A.A. 237, Palmira, Colombia. Received 03/30/2000.

PI 613166. *Phaseolus vulgaris* L.

Breeding. Pureline. SEA 5. GP-206. Pedigree - Developed from population TR 7790 = BAT 477 / San Cristobal 83 // Guanajuato 31 / Rio Tibagi. Small, cream-colored seeds and indeterminate type II growth habit. High yielding, drought tolerant, insensitive to photoperiod. Resistant to *Fusarium* root rot, and has the I gene resistance to bean common mosaic. Susceptible to anthracnose, common bacterial blight, and rust.

PI 613167. *Phaseolus vulgaris* L.

Breeding. Pureline. SEA 13. GP-207. Pedigree - Derived from the population TR 7791 = BAT 477 / San Cristobal 83 // BAT 93 / Jalo EEP 558. Similar seed characteristics, growth habit, and resistance to bean common mosaic and *Fusarium* root rot as SEA 5. But 5-10 d earlier maturing than SEA 5 and is intermediate to anthracnose. Susceptible to common bacterial blight and rust. Slightly lower drought tolerance than SEA 5.

The following were developed by Shree P. Singh, University of Idaho, Kimberly Research & Extension, 3793 North 3600 East, Kimberly, Idaho 83341-5076, United States; Francisco J. Morales, International Center for Tropical Agriculture, Apartado Aereo 6713, Cali, Valle, Colombia; Henry Teran, International Center for Tropical Agriculture, Apartado Aereo 6713, Cali, Valle, Colombia. Received 03/30/2000.

PI 613168. *Phaseolus vulgaris* L.

Breeding. Pureline. GMR 1. GP-199. Pedigree - Derived from multi-parent population GV 10627 = Turbo III /3/XAN 132 / Garrapato // DOR 303 / RXAH 18274C. Resistant to greenhouse inoculations to infection, plant dwarfing, leaf chlorosis, and pod deformation caused by bean golden mosaic. Has the RAPD marker OR2530/570 linked with the *bgm-1* gene present in A 429 and Garrapato and SCAR marker SW12 700 linked with the gene(s) at a QTL found in Porrillo Sintetico and DOR 364 for resistance to leaf chlorosis. Indeterminate growth habit, purple flowers, and small black seeds. Carries the I gene for bean common mosaic. Intermediate

resistance to angular leaf spot and common bacterial blight.

PI 613169. Phaseolus vulgaris L.

Breeding. Pureline. GMR 5. GP-200. Pedigree - Derived from a single-cross population GV 10626 = Royal Red / Garrapato. Resistant to infection, plant dwarfing, leaf chlorosis, and pod deformation caused by bean golden mosaic (BGM) and bean common mosaic (BCM). Has the bgm-1 and I genes for BGM and BCM resistance, respectively. Intermediate to angular leaf spot. Indeterminate growth habit, white flowers, and medium-sized cream-colored seeds.

The following were developed by Shree P. Singh, University of Idaho, Kimberly Research & Extension, 3793 North 3600 East, Kimberly, Idaho 83341-5076, United States; Henry Teran, International Center for Tropical Agriculture, Apartado Aereo 6713, Cali, Valle, Colombia; Carlos German Munoz, University of Puerto Rico, Dept. of Agronomy & Soils, Mayaguez, Puerto Rico; Juan Carolos Takegami, University of Puerto Rico, Dept. of Agronomy & Soils, Mayaguez, Puerto Rico. Received 03/30/2000.

PI 613170. Phaseolus vulgaris L.

Breeding. Pureline. A 801. GP-201. Pedigree - Derived from population GX 9792 = EMP 250 /4/ A769/3/ A 429 / XAN 252 // V8025/ UI 114. High yielding, broadly adapted, and has the I gene for bean common mosaic. Resistant to angular leaf spot, anthracnose, bean rust, and fusarium root rot. Intermediate to bean golden mosaic, common bacterial blight and leafhopper. Indeterminate type II growth habit. Flowers lilac. In.

PI 613171. Phaseolus vulgaris L.

Breeding. Pureline. A 804. GP-202. Pedigree - Derived from population GX 9792 = EMP 250 /4/ A769/3/ Z 429 / XAN 252 // V8025 / UI 114. High yielding, broadly adapted and has the I gene for bean common mosaic. Resistant to angular leaf spot, anthracnose, bean rust, and fusarium root rot. Intermediate to bean golden mosaic, common bacterial blight and leafhopper. Indeterminate type II Growth habit. Flowers white. Insensitive to long photoperiod, matures in 90-110 days, and small seeds with cream-striped color, typical of Carioca market class.

The following were developed by Shree P. Singh, University of Idaho, Kimberly Research & Extension, 3793 North 3600 East, Kimberly, Idaho 83341-5076, United States; Henry Teran, International Center for Tropical Agriculture, Apartado Aereo 6713, Cali, Valle, Colombia; Carlos German Munoz, University of Puerto Rico, Dept. of Agronomy & Soils, Mayaguez, Puerto Rico. Received 03/30/2000.

PI 613172. Phaseolus vulgaris L.

Breeding. Pureline. VAX 1. GP-203. Pedigree - Developed from a common x tepary bean population: PVPA 9576 = /A 769/3/ A 775//ICA Pijao/G 40001, using embryo rescue for the first two crosses. High yielding, widely adapted, and indeterminate type III growth habit. Small seeded and cream-striped color. Has the I gene for bean common mosaic resistance. Highly tolerant to low fertile soils, water stress, and fusarium root rot and is angular leaf spot and anthracnose. Resistant to common bacterial blight and insensitive to long photoperiod but requires more than >90 days to mature in North America.

PI 613173. Phaseolus vulgaris L.

Breeding. Pureline. VAX 3. GP-204. Pedigree - Derived from population BC 11222 = PVPA 9576-1 / XAN 309. Indeterminate upright type II growth habit. Small-seeded and shiny red color. Has the I gene for bean common mosaic resistance. Resistant to common bacterial blight and insensitive to long photoperiod but requires more than >90 days to mature in North America.

PI 613174. Phaseolus vulgaris L.

Breeding. Pureline. VAX 4. GP-205. Pedigree - Derived from the population BC 11219 = PVPA 9576-1 / XAN 263. Indeterminate upright type II growth habit. Small-seeded and cream color. Has I gene for bean common mosaic resistance. Resistant to common bacterial blight and insensitive to long photoperiod but requires more than >90 days to mature in North America.

The following were developed by R.E. Knox, Agriculture Canada, Research Station, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada. Received 04/14/2000.

PI 613175. Triticum aestivum L. subsp. aestivum

Breeding. Pureline. P8901-AP1A2B1B. Pedigree - Laura / RL5801 // 5*Laura . White chaff and is a hard red spring wheat which carries the genes Lr21 for seedling and Lr 34 for adult resistance to leaf rust (*Puccinia triticina*) races prevalent in the Northern Great Plains. Seedling and field reactions to leaf rust showed near-complete resistance i.e. mostly necrotic flecks with a few very small sporulating pustules. Awnless conventional height line with intermediate straw strength and maturity.

PI 613176. Triticum aestivum L. subsp. aestivum

Breeding. Pureline. P8901-AQ1A2B1B. Pedigree - Laura / RL5801 // 5*Laura . Dark chaff and is a hard red spring wheat which carries the genes Lr21 for seedling and Lr34 for adult resistance to leaf rust (*Puccinia triticina*) races prevalent in the Northern Great Plains. Seedling and Field reactions to leaf rust showed near-complete resistance i.e. mostly necrotic flecks with a few very small sporulating pustules. An awnless conventional height line with intermediate straw strength and maturity. Susceptible to loose smut (*Ustilago tritici*) and common bunt (*Tilletia caries*, *T. laevis*).

The following were developed by Mary C. Verhoeven, Oregon State University, Crop & Soil Sci Dept, Room 107, Crop Science Building, Corvallis, Oregon 97331-3002, United States; Craig F. Morris, USDA-ARS, Western Wheat Quality Lab., E-202 FSHN Facility East, Pullman, Washington 99164-6394, United States ; Warren E. Kronstad, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States; S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico; M. Kruk, Wheat Marketing Center, Portland, Oregon 97209, United States; C. James Peterson, Oregon State University, Crop & Soil Science Dept., 107 Crop Science Bldg., Corvallis, Oregon 97331-3002, United States. Received 05/05/2000.

PI 613177. Triticum aestivum L. subsp. aestivum

Cultivar. Pureline. "WINSOME"; CM38212-I-7Y-2M-1Y-3M-2Y-0M; OR4870453; NSGC 8673. Pedigree - Hork sib/Yamhill//Kalyansona/Bluebird. Released

2000. Hard white spring wheat. Medium-late maturing semidwarf. Released for its adaptation to high yielding environments in the Pacific Northwest and end-use qualities suitable for Asian noodle applications. The first Hard White Spring wheat cultivar released by Oregon State University. Superior leaf rust and lodging resistance and superior milling characteristics as compared with the hard white spring cultivar IDO 377s.

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 04/07/2000.

PI 613178. Phaseolus vulgaris L.

Cultivar. Pureline. "AC POLARIS"; L95E101. CV-183. Pedigree - 83B352/5/GN Star*2/3/Redkloud/Kentwood//Swan Valley/4/GN Star*2/3/Redkloud/Kentwood://Swan Valley/6/Beryl. High-yielding great northern dry bean with white seed coat, suited to the narrow-row (drilling) production system used in non-traditional areas of western Canada. Type IIb, indeterminate growth habit, with minimal vines with a seed weight (over 12 sites, at 14% moisture) of 303g 100 seed-1, compared with US 1140 at 309g 100 seed-1. Resistant to strains 1 and 15 of Bean Common Mosaic Virus. Moderately resistant to white mold (*Sclerotia sclerotiorum*). Susceptible to common blight (*Xanthomonas campestris*), and halo blight (*Pseudomonas syringae*).

The following were developed by Dennis R. West, University of Tennessee, Department of Plant and Soil Science, P.O. Box 1071, Knoxville, Tennessee 37901-1071, United States. Received 04/10/2000.

PI 613179. Zea mays L. subsp. mays

Breeding. Inbred. T173. Pedigree - {[(Mo17/Ga209//Mo17)-F2/Mo17]-S3} / [(Mo17/Mp339//Mo17)-S3]-S9. Heat units to pollen shed were 1540, compared to 1440 for Mo17. Plants vigorous and similar to Mo17 in height, leaf, and stalk characteristics. Tassel has a central spike with 5-8 lateral branches, yellow anthers, and better pollen production than Mo17. Distinct lateral red stripe at base of each spikelet on the tassel. Silks usually emerge one day after onset of pollen shed, and are yellow-green, turning red after emerging. Plants produce 5-6 partially erect, medium green leaves above the ear leaf. May be a few sun-red brace roots from the lowest above ground node. Ears large with 10-12 rows of kernels, and there is a wide sulci at the stalk end of most ears. Kernels medium to large and slightly harder than a full dent. Kernels white with a slight off-white cast, and cobs white. Combining ability good to excellent in crosses with white conversions of Iowa Stiff Stalk Synthetic related lines.

The following were donated by Guillermo Covas, Facultad de Agron. de la Univ. Nacional de La Pampa, Emilio Mitre 31, Santa Rosa, La Pampa 6300, Argentina. Received 10/29/1993.

PI 613180. *Amaranthus standleyanus* Parodi ex Covas

Wild. LP 24; Ames 21665. Collected 04/1993 in La Pampa, Argentina. Intendente Alvear, La Pampa, Argentina. Wild plants. In the greenhouse, winter 1997, were erect and un-branched. Tepals bend outward at the middle, and are narrow below and wide above, mucronate.

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; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, 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 08/21/1985.

PI 613181. *Vaccinium membranaceum* Douglas ex Torr.

Wild. V. membranaceum; BL-94-1; Blue Huckleberry, Mountain Huckleberry. Collected 08/12/1985 in Washington, United States. Latitude 47 deg. 40' N. Longitude 123 deg. 0' W. Elevation 1040 m. Olympic Nat'l Forest, open woodland, northeast aspect. Pedigree - Collected from the wild in Washington.

The following were collected by D.C. Ogle, USDA, ARS, Forage and Range Research, Utah State University, Logan, Utah 84322-6300, United States. Donated by Calvin R. Sperling, USDA, ARS, Natl. Germplasm Resources Laboratory, Room 402, Building 003, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 10/30/1991.

PI 613182. *Vaccinium macrocarpon* Aiton

Wild. American Cranberry, Large Cranberry. Collected 10/19/1991 in Tennessee, United States. Latitude 36 deg. 31' N. Longitude 81 deg. 58' W. Elevation 1120 m. Side of Holston Mts. above Shady Valley, Johnson county, Tennessee. Habitat saturated stream bank at lower edge of secondary seep. Edged by dry deciduous woods. Carex sp., Scirpus cyperinus, Pinus strobus, Lyonia ligustrina, Rosa sp., Dulichium arundinaceum, et al. Pedigree - Collected from the wild in Tennessee.

The following were collected by Jeannie Allen, USDA, ARS, 7000 Storch Lane, Seabrook, Maryland 20706, United States. Received 10/23/1991.

PI 613183. *Vaccinium macrocarpon* Aiton

Wild. Site III; American Cranberry, Large Cranberry. Collected 10/17/1991 in Virginia, United States. Latitude 36 deg. 45' N. Longitude 80 deg. 50' W. Elevation 927 m. Beamer Farm, Fancy Gap, downhill from house. Pedigree - Collected from the wild in Virginia. Site intermediate between a bog and a fen. (This accession was part of the PL,SD breakout - 1992).

PI 613184. *Vaccinium macrocarpon* Aiton

Wild. Allen 11; American Cranberry, Large Cranberry. Collected 10/29/1991 in Maryland, United States. Elevation 813 m. Pedigree - Collected from the wild in Maryland. Small streams flowing throughout site. (This accession was part of the PL,SD 'breakout' - 1992).

PI 613185. *Vaccinium macrocarpon* Aiton

Wild. Allen 12; American Cranberry, Large Cranberry. Collected 10/29/1991 in Maryland, United States. Elevation 893 m. Pedigree - Collected from the wild in Maryland. Associated with sphagnum, solidago uliginosa. (This accession was part of the PL,SD 'breakout' - 1992).

PI 613186. *Vaccinium oxycoccos* L.

Wild. Allen 19; Cranberry, Small-fruited Cranberry. Collected 10/30/1991 in West Virginia, United States. Latitude 39 deg. 4' N. Longitude 79 deg. 18' W. Elevation 1270 m. 50A area minerotrophic fen, low species diversity, Tucker Co Bear Rocks Bog, Dolly Sods., Monongahela National Forest. Pedigree - Collected from the wild in West Virginia. *V. oxycoccos* abundant, plants diminutive. (This accession was part of the PL,SD 'breakout' - 1992).

The following were collected by Elden J. Stang, University of Wisconsin, Dept. Horticulture, 1575 Linden Dr., Madison, Wisconsin 53706, United States. Received 04/23/1992.

PI 613187. *Vaccinium myrtillus* L.

Wild. C35; *V. myrtillus*. Collected 1987 in Turku ja Pori, Finland. Latitude 60 deg. 25' N. Longitude 22 deg. 30' E. Elevation 0 m. Piikkio. Collected from extensive wild stands in the forests on the experiment station grounds. Pedigree - Collected from the wild in Finland.

The following were collected by Henrietta Chambers, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/17/1992.

PI 613188. *Vaccinium ovalifolium* Sm.

Wild. Collected 08/06/1992 in Alaska, United States. Latitude 57 deg. 3' 11'' N. Longitude 135 deg. 19' 9'' W. Elevation 5 m. Sitka, Alaska - woods along creek, Sheldon Jackson College. Alder, Sitka Spruce, Hemlock forest. Pedigree - Collected from the wild in Alaska. Fruits blue.

PI 613189. *Vaccinium parvifolium* Sm.

Wild. Collected 08/01/1992 in Alaska, United States. Latitude 57 deg. 3' 11'' N. Longitude 135 deg. 19' 9'' W. Elevation 5 m. Sitka, Alaska - near waterfront below Sheldon Jackson Coll. Brush, roadside bank. Pedigree - Collected from the wild in Alaska. Fruits red.

The following were donated by Mark Ehlenfeldt, USDA-ARS, Rutgers Blueberry and Cranberry Research Center, 125A Lake Oswego Road, Chatsworth, New Jersey 08019, United States. Received 09/14/1992.

PI 613190. *Vaccinium neilgherrense* Wight

Wild. Collected 1967 in India. Pedigree - collected from the wild in India.

PI 613191. *Vaccinium myrtillus* L.

Wild. Myrtle Whortleberry. Collected 1967 in United States. Pedigree - collected from the wild.

PI 613192. *Vaccinium myrtillus* L.

Wild. Myrtle Whortleberry. Collected in Slovenia. Pedigree - collected from the wild in Slovenia.

The following were developed by Elwyn M. Meader, 43 Meaderboro Rd., Rochester, New Hampshire 03867-4235, United States. Received 12/17/1992.

PI 613193. *Vaccinium hybrid*

Breeding. F2 *V. stamineum* x *V. vitis-idaea*. Pedigree - (*V. stamineum* x *V. vitis-idaea*) x open pollinated by sibs. Must be cross-pollinated to set seed.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; Barbara Fick, Oregon State University, Extension Service, Marion County, 3180 Center NE, Room 1361, Salem, Oregon 97301, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/12/1993.

PI 613194. *Vaccinium arboreum* Marshall

Wild. Farkleberry, Sparkleberry. Collected 10/1992 in Missouri, United States. Latitude 37 deg. 39' N. Longitude 90 deg. 41' W. Elevation 0 m. T34N R3E, Sec. 15, NE 1/4 and Sec. 16, NW 1/4. Elephant Rocks State Park, Iron County, Missouri. Fully exposed location. Growing out of crevices in Elephant Rocks (granite). Pedigree - collected from the wild in Missouri. Elephant Rocks are an exposed 1.6-2.0 ha area of granite rising 30 m above surrounding landscape. Large population of plants, predominant species in the rocky area and population extended into the understory of the surrounding forest at the base of the rocks. Fruit ripen at this site from late August until a hard freeze. Green fruit have been seen in late October at this site. Fruit collected in early October 1992. Fruiting plants ranging from 1.2-4.6 m tall. Both shrub and small tree habit; trunks up to 10 cm in diameter. Leaves were glossy and dark green. Fruit ranging from dark blue to black. Fruit size from 0.4-1.0 cm in diameter. Location in crevices suggest drought tolerance; during an extreme drought in 1991, oaks (*Quercus alba* and *Q. macrocarpa*) in the area appeared to be dying from drought while the *V. arboreum* appeared unaffected. No visible winter injury or insect damage. Minimal disease problems; *Ophiodothella* spp. which doesn't appear to affect the plant and some.

The following were developed by Lawrence D. Young, USDA, ARS, West Tennessee Experiment Station, 605 Airways Blvd., Jackson, Tennessee 38301, United States. Received 05/25/2000.

PI 613195. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Fowler"; J94-7. CV-421. Pedigree - Hartwig x Holladay. Resistant to soybean cyst nematode (*Heterodera glycines*) races 2, 3, 5 and 14. Matures with Maturity Group V cultivars. Determinate plant type, white flowers, tawny pubescence, and tan pod walls. Seeds shiny with black hila. Susceptible to stem canker (*Diaporthe phaseolorum* var. *meridionalis*) and root-knot nematodes (*Meloidogyne arenaria* and *M. incognita*).

The following were developed by Paul Pfahler, University of Florida, 304 Newell Hall, Department of Agronomy, Gainesville, Florida 32611, United States. Received 05/25/2000.

PI 613196. *Secale cereale* L. subsp. *cereale*

Breeding. Population. FL Tetraploid Spring Rye Germplasm; Autotetraploid of spring rye cultivars. Pedigree - After chromosome doubling of a number of adapted diploid cultivars with colchicine, more than 20 generations of phenotypic recurrent selection for seed number (fertility), forage production and grain yield were conducted. Heterogeneous and heterozygous population of autotetraploid spring rye with all features associated with chromosome doubling. These features are associated with larger cell size which is expressed as increased pollen diameter, higher seed weight and larger plant size. Adapted to the southeastern U.S. Moderately resistant to foliar (fungal) diseases prevalent in the southeastern U.S. Straw length is about 150 cm and seed weight is approx. 2.61 g/100 seeds.

The following were donated by Great Western Sugar Company, Longmont, Colorado, United States. Received 1963.

PI 613197. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4135; NSL 28030; GW 18-43. No further background information available.

PI 613198. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4136; NSL 28031; GW 034-450W. No further background information available.

PI 613199. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4137; NSL 28032; GW 049-41R. No further background information available.

PI 613200. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4138; NSL 28033; GW 059-47A. No further background information available.

PI 613201. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4139; NSL 28034; GW 064-LOT 8303R. No further background information available.

PI 613202. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4140; NSL 28035; GW 065-46C. No further background information available.

PI 613203. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4141; NSL 28036; GW 085-46R. No further background information available.

PI 613204. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4142; NSL 28037; GW 087-45R. No further background information available.

PI 613205. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4143; NSL 28038; C110-61L. No further background information available.

- PI 613206. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4144; NSL 28039; B 176. No further background information available.
- PI 613207. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4145; NSL 28040; GW 201. No further background information available.
- PI 613208. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4147; NSL 28042; B 250. No further background information available.
- PI 613209. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4148; NSL 28043; B 279. No further background information available.
- PI 613210. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4149; NSL 28044; GW 304-50A. No further background information available.
- PI 613211. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4150; NSL 28045; C305-48L. No further background information available.
- PI 613212. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4151; NSL 28046; B 313. No further background information available.
- PI 613213. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4152; NSL 28047; B 318. No further background information available.
- PI 613214. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4153; NSL 28048; B 323. No further background information available.
- PI 613215. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4154; NSL 28049; B 324. No further background information available.
- PI 613216. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4155; NSL 28050; B 325. No further background information available.
- PI 613217. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4156; NSL 28051; B 326. No further background information available.
- PI 613218. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4157; NSL 28052; B 327. No further background information available.
- PI 613219. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4158; NSL 28053; B 328. No further background information available.

- PI 613220. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4159; NSL 28054; GW 329. No further background information available.
- PI 613221. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4160; NSL 28055; B 330. No further background information available.
- PI 613222. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4161; NSL 28056; B 331. No further background information available.
- PI 613223. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4162; NSL 28057; B 332. No further background information available.
- PI 613224. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4163; NSL 28058; B 337. No further background information available.
- PI 613225. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4164; NSL 28059; GW 359-56A. No further background information available.
- PI 613226. *Beta vulgaris* L.
IDBBNR 4930; NSL 28060; B 376. Lit. reference -- Data Sheet available from Great Western.
- PI 613227. *Beta vulgaris* L.
IDBBNR 4931; NSL 28061; C 377. Lit. refer. - Data Sheet from Great Western.
- PI 613228. *Beta vulgaris* L.
IDBBNR 4932; NSL 28062; B 379. Lit. refer. - Data Sheet from Great Western.
- PI 613229. *Beta vulgaris* L.
IDBBNR 4933; NSL 28063; B 380. Lit. refer. - Great Western Data Sheet.
- PI 613230. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4165; NSL 28064; GW 389. No further background information available.
- PI 613231. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4166; NSL 28065; B 390.
- PI 613232. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4167; NSL 28066; C410. No further background information available.
- PI 613233. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4168; NSL 28067; C411. No further background information available.
- PI 613234. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4169; NSL 28068; GW 413. No further background information available.

- PI 613235. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4170; NSL 28069; GW 443. No further background information available.
- PI 613236. *Beta vulgaris* L.**
IDBBNR 4934; NSL 28070; C 455. Lit. refer. - Proc. Am. Soc. Sugar Beet Tech. VI: 202-207, 1950. V:175-178, 1948. Data Sheet from Great Western.
- PI 613237. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4171; NSL 28071; GW 674-56C. No further background information available.
- PI 613238. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4172; NSL 28072; GW 810-60R. No further background information available.
- PI 613239. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4174; NSL 28074; A 0097. No further background information available.
- PI 613240. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4175; NSL 28075; A 0102. No further background information available.
- PI 613241. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4176; NSL 28076; A 0118. No further background information available.
- PI 613242. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4177; NSL 28077; A 0141. No further background information available.
- PI 613243. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4178; NSL 28078; A145. No further background information available.
- PI 613244. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4179; NSL 28079; A 0147. No further background information available.
- PI 613245. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4180; NSL 28080; A 0149. No further background information available.
- PI 613246. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4181; NSL 28081; A 0163. No further background information available.
- PI 613247. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4182; NSL 28082; A 0165. No further background information available.
- PI 613248. *Beta vulgaris* L. subsp. *vulgaris***
IDBBNR 4183; NSL 28083; A 0200. No further background information available.

- PI 613249. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4184; NSL 28084; A 0201. No further background information available.
- PI 613250. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4185; NSL 28085; A 0219-62R. No further background information available.
- PI 613251. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4186; NSL 28086; A 0220. No further background information available.
- PI 613252. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4187; NSL 28087; A 0221. No further background information available.
- PI 613253. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4188; NSL 28088; A 0227. No further background information available.
- PI 613254. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4189; NSL 28089; A 0266-60L. No further background information available.
- PI 613255. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4190; NSL 28090; A 0277. No further background information available.
- PI 613256. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4191; NSL 28091; A 0325. No further background information available.
- PI 613257. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4192; NSL 28092; A 1104-50. No further background information available.
- PI 613258. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4193; NSL 28093; A 1128. No further background information available.
- PI 613259. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4194; NSL 28094; A 1140-52L. No further background information available.
- PI 613260. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4195; NSL 28095; A 1146-52L. No further background information available.
- PI 613261. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4197; NSL 28097; A 1253. No further background information available.
- PI 613262. *Beta vulgaris* L. **subsp. vulgaris**
IDBBNR 4198; NSL 28098; A 1254. No further background information available.
- PI 613263. *Beta vulgaris* L. **subsp. vulgaris**

IDBBNR 4200; NSL 34009; B 042. Data from Great Western Data Sheet 8/25/64. "Broadbase, mostly Old Type. Sel. for LSR - GR. 3642 material which mostly Old Type."

PI 613264. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4201; NSL 34010; GW 035. Data from Great Western Data Sheet 8/25/64. "Early Great Western commercial. Tolerant to *Cercospora*, broadbase, mostly Old Type."

PI 613265. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4202; NSL 34011; GW 066. Data from Great Western Data Sheet 9/25/64. "Early Great Western commercial. Leaf spot resistant, XGR 3719, stemming from Old Type."

PI 613266. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4203; NSL 34012; A 0010. Data from Great Western Data Sheet 9/25/64. Eagle Hill No. 6037. No further background information available.

PI 613267. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4204; NSL 34013; A 0011. Data from Great Western Sugar Co. Data Sheet 9/25/64. "Eagle Hill No. 6037 ex. Danish Sugar Beet Seed Co. 1938"

PI 613268. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4205; NSL 34014; A 0035. Data from Great Western Sugar Data Sheet 9/25/64. "Zapatil Commercial 'High Sugar' rec'd 1939".

PI 613269. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4206; NSL 34015; A 0050. Data from the Great Western Data Sheet 9/25/64. Original Dobrovice.

PI 613270. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4207; NSL 34016; A 0051. Data from Great Western Data Sheet 9/25/64. No further background information available.

PI 613271. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4208; NSL 34017; A 0144. Data on the Great Western Sugar Co. Data Sheet 9/25/64. ex Hilleshog-1952 (#E4384) Sweden.

PI 613272. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4209; NSL 34019; A 1490. Data available on Great Western Sugar Co. Data Sheet 9/25/64. Red root. Col. H. E. Brewbaker - Iran, 1963. Probably single plant.

PI 613273. *Beta macrorhiza* Steven

IDBBNR 4680; NSL 34021; A 1326. From Great Western Data Sheet 9/25/64. Increase of 2 accessions, one from Sizov in Kiev, Russia, the other from H. Bogh in Denmark. Hard seed.

PI 613274. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4211; NSL 42899; UDYCZ B. Data available from Great Western Sugar Company. Country of origin is Poland.

PI 613275. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4212; NSL 42900; VERKHNYATSKAYA B23. Country of origin - Russia Was reproduced in Longmont, CO in 1965.

PI 613276. *Beta vulgaris* L. subsp. *vulgaris*

IDBBNR 4213; NSL 42901; BNIJSKAYA 541. Country of origin - Russia No further background information available.

The following were donated by USDA, ARS, Georgia Agric. Exp. Sta., Athens, Georgia, United States. Received 1961.

PI 613277. *Pisum sativum* L.

H-277-19-A; NSL 4682; ROMACK. Disease resistant winter pea. Well adapted to Southeast. Literature reference -- Weiner, J. L. & Warnock, C. H., "New Winter Wonder Pea", Southern Seedsmen. Progressive Farmer (GA, AL, FL):611, October 1953. Georgia Experiment Station Leaflet No. 1, September 1954.

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; K. Sayre, International Maize and Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Mexico 06600, Mexico; O. Banuelos, International Maize and Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Mexico 06600, Mexico. Received 05/30/2000.

PI 613278 QUAR. *Triticum aestivum* L.

Breeding. CIGM86.953-SH19. GP-639. Pedigree - Dverd2/Ae. tauschii (221). Waterlogging tolerant synthetic wheat germplasm. Chlorosis 6.3%. Anthesis 100 d. Height 84 cm. 1000 kernel weight 49.3 g.

PI 613279 QUAR. *Triticum aestivum* L.

Breeding. CIGM90.863-SH64. GP-640. Pedigree - Botno/Ae. tauschii (617). Waterlogging tolerant synthetic wheat germplasm. Chlorosis 6.7%. Anthesis 104d. Height 102 cm. 1000 kernel weight 44.7 g.

PI 613280 QUAR. *Triticum aestivum* L.

Breeding. CIGM89.567-SH54. GP-641. Pedigree - Ceta/Ae. tauschii (895). Waterlogging tolerant synthetic wheat germplasm. Chlorosis 8.8%. Anthesis 104 d. Height 93 cm. 1000 kernel weight 37.6 g.

PI 613281 QUAR. *Triticum aestivum* L.

Breeding. CIGM92.1723-SH82. GP-642. Pedigree - 68.111/Rgb-U//Ward/3/Ae. tauschii (454). Waterlogging tolerant synthetic wheat germplasm. Chlorosis 9.2%. Anthesis 98 d. Height 92 cm. 1000 kernel weight 42.4 g.

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 and 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, Losboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico. Received 05/30/2000.

PI 613282 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.330-1. GP-619. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 89 cm. Anthesis 84 d. Physiological maturity 130 d.

PI 613283 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.333-1. GP-620. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 94 cm. Anthesis 85 d. Physiological maturity 130 d.

PI 613284 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.340-1. GP-621. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 100 cm. Anthesis 86 d. Physiological maturity 133 d.

PI 613285 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.345-1. GP-622. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 89 cm. Anthesis 82 d. Physiological maturity 127 d.

PI 613286 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.345-2. GP-623. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 93 cm. Anthesis 83 d. Physiological maturity 127 d.

PI 613287 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.345-3. GP-624. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 99 cm. Anthesis 86 d. Physiological maturity 133 d.

PI 613288 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.345-4. GP-625. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 93 cm. Anthesis 85 d. Physiological maturity 131 d.

PI 613289 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.345-5. GP-626. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 99 cm. Anthesis 87 d. Physiological maturity 133 d.

PI 613290 QUAR. *Triticum aestivum* L.

Breeding. CIGM91.345-6. GP-627. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 103 cm. Anthesis 88 d. Physiological maturity 136 d.

- PI 613291 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.345-7. GP-628. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 98 cm. Anthesis 90 d. Physiological maturity 135 d.
- PI 613292 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.328-1. GP-629. Pedigree - Seri/Pvn//8*Seri. Near isogenic line with homozygous chromosome 1B substitution for T1BL.1RS wheat-rye chromosome translocation. Plant height 97 cm. Anthesis 88 d. Physiological maturity 133 d.
- PI 613293 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.330-2. GP-630. Pedigree - Seri/Pvn//8*Seri. Plant height 94 cm. Anthesis 89 d. Physiological maturity 135 d.
- PI 613294 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.340-2. GP-631. Pedigree - Seri/Pvn//8*Seri. Plant height 94 cm. Anthesis 88 d. Physiological maturity 133 d.
- PI 613295 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.340-3. GP-632. Pedigree - Seri/Pvn//8*Seri. Plant height 91 cm. Anthesis 90 d. Physiological maturity 134 d.
- PI 613296 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.344-1. GP-633. Pedigree - Seri/Pvn//8*Seri. Plant height 97 cm. Anthesis 86 d. Physiological maturity 130 d.
- PI 613297 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.345-8. GP-634. Pedigree - Seri/Pvn//8*Seri. Plant height 102 cm. Anthesis 87 d. Physiological maturity 132 d.
- PI 613298 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.346-1. GP-635. Pedigree - Seri/Pvn//8*Seri. Plant height 94 cm. Anthesis 87 d. Physiological maturity 131 d.
- PI 613299 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.346-2. GP-636. Pedigree - Seri/Pvn//8*Seri. Plant height 93 cm. Anthesis 86 d. Physiological maturity 132 d.
- PI 613300 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.614-1. GP-637. Pedigree - Seri/Pvn//8*Seri. Plant height 94 cm. Anthesis 87 d. Physiological maturity 134 d.
- PI 613301 QUAR. *Triticum aestivum* L.**
Breeding. CIGM91.614-2. GP-638. Pedigree - Seri/Pvn//8*Seri. Plant height 96 cm. Anthesis 88 d. Physiological maturity 135 d.

The following were developed by S. Rajaram, International Maize & Wheat Improvement Center, Wheat Program, Lisboa 27, Mexico City, Federal District 06600, Mexico. Received 05/30/2000.

- PI 613302 QUAR. *Triticum aestivum* L.**
Breeding. CIGM93.183. Pedigree - Ceta/Ae. tauschii(174).
- PI 613303 QUAR. *Triticum aestivum* L.**

Breeding. CIGM87.2765. Pedigree - Altar 84/Ae. tauschii(188).

PI 613304 QUAR. Triticum aestivum L.
Breeding. CIGM87.2767. Pedigree - Altar 84/Ae. tauschii(192).

PI 613305 QUAR. Triticum aestivum L.
Breeding. CIGM90.561. Pedigree - Yuk/Ae. tauschii(217).

PI 613306 QUAR. Triticum aestivum L.
Breeding. CIGM88.1239. Pedigree - Yav2/Tez//Ae. tauschii(249).

PI 613307 QUAR. Triticum aestivum L.
Breeding. CIGM88.1344. Pedigree - Doy 1/Ae. tauschii(447).

PI 613308 QUAR. Triticum aestivum L.
Breeding. CIGM92.1727. Pedigree - Doy 1/Ae. tauschii(458).

PI 613309 QUAR. Triticum aestivum L.
Breeding. CIGM90.845. Pedigree - Sca/Ae. tauschii(518).

PI 613310 QUAR. Triticum aestivum L.
Breeding. CIGM90.846. Pedigree - Yar/Ae. tauschii(518).

PI 613311 QUAR. Triticum aestivum L.
Breeding. CIGM90.590. Pedigree - 68.111/Rgb-u//Ward/3/Fgo/4/Rabi/5/Ae. tauschii(629).

PI 613312 QUAR. Triticum aestivum L.
Breeding. CIGM90.257-1. Pedigree - Croc 1/Ae. tauschii(205)//Flycatcher.

PI 613313 QUAR. Triticum aestivum L.
Breeding. CIGM91.61-1. Pedigree - Croc 1/Ae. tauschii(224)//Kauz.

PI 613314 QUAR. Triticum aestivum L.
Breeding. CIGM90-462. Pedigree - Altar 84/Ae. tauschii(221)//Yaco.

PI 613315 QUAR. Triticum aestivum L.
Breeding. CIGM90.248-1. Pedigree - Croc 1/Ae. tauschii(205)//Kauz.

PI 613316 QUAR. Triticum aestivum L.
Breeding. CIGM90.250-2. Pedigree - Croc 1/Ae. tauschii(205)//Borlaug 95.

PI 613317 QUAR. Triticum aestivum L.
Breeding. CIGM90.412. Pedigree - Croc 1/Ae. tauschii(213)//Papago M86.

PI 613318 QUAR. Triticum aestivum L.
Breeding. CASS97B00040S. Pedigree - Gan/Ae. tauschii(236)//Doy 1/Ae. tauschii(447).

PI 613319 QUAR. Triticum aestivum L.
Breeding. CASS97B00041S. Pedigree - Gan/Ae. tauschii(236)//Ceta/ Ae. tauschii(895).

PI 613320 QUAR. Triticum aestivum L.
Breeding. CASS97B00046S. Pedigree - Scoop 1/Ae. tauschii(434)//Ceta/ Ae. tauschii(895).

- PI 613321 QUAR. *Triticum aestivum* L.**
Breeding. CASS97B00054S. Pedigree - Doy 1/Ae. tauschii(447)//Ceta/ Ae. tauschii(895).
- PI 613322 QUAR. *Triticum aestivum* L.**
Breeding. CASS97B00063S. Pedigree - 68.111/Rgn-u//Ward/3/Fgo/4/Ae. tauschii(629)/6/Ceta/ Ae. tauschii(895).
- PI 613323 QUAR. *Triticum aestivum* L.**
Breeding. CIGM90.1291. Pedigree - Altar/Ae. tauschii(224)//2*Yaco.
- PI 613324 QUAR. *Triticum aestivum* L.**
Breeding. CIGM97B00024S-3DH. Pedigree - Sabuf//Altar/Ae. tauschii(224)/3/Yaco/Croc_1/Ae. tauschii(205).
- PI 613325 QUAR. *Triticum aestivum* L.**
Breeding. CASS94Y00121S. Pedigree - Bcn//Sora/Ae. tauschii(323).
- PI 613326 QUAR. *Triticum aestivum* L.**
Breeding. CASS97B00016S-1DH. Pedigree - Opata/3/Sora//Ae. tauschii(323).
- PI 613327 QUAR. *Triticum aestivum* L.**
Breeding. CASS97B00010S-1DH. Pedigree - Bcn/4/68.111/Rgb-u/Ward/3/Ae. tauschii(325).
- PI 613328 QUAR. *Triticum aestivum* L.**
Breeding. CASS97B00030S-3DH. Pedigree - Bcn//Doy/Ae. tauschii(447).
- PI 613329 QUAR. *Triticum aestivum* L.**
Breeding. CASS94Y00160S. Pedigree - Bcn/4/Rabi//GS/Cra/3/Ae. tauschii(895).

The following were developed by Solomon Kibite, Agriculture Canada, Research Station, Bag Service 5000, Lacombe, Alberta T0C 1S0, Canada. Received 05/15/2000.

- PI 613330. *Avena sativa* L.**
Breeding. Pureline. LAO-525-S-01. GP-57. Pedigree - Jasper/OT257. Developed using 4 F2 plants originating from reciprocal crosses involving Jasper and OT257. This line has Jasper cytoplasm. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-525-T-01) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 67.6, days to mature 113.5. Height 77 cm. Lodge 0%. Yield 5242.0 kg ha⁻¹. Test wt. 47.5 kg bL⁻¹. Kernel wt. 34.2 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).
- PI 613331. *Avena sativa* L.**
Breeding. Pureline. LAO-525-T-01. GP-58. Pedigree - Jasper/OT257. Developed using 4 F2 plants originating from reciprocal crosses involving Jasper and OT257. This line has Jasper cytoplasm. Released 1999. Tall of near-isogenic pair (dwarf line - LAO-525-S-01) of spring

type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 63.0, days to mature 106.8. Height 109 cm. Lodge 17%. Yield 6595.5 kg ha⁻¹. Test wt. 51.9 kg bL-1. Kernal wt. 40.9 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613332. *Avena sativa* L.

Breeding. Pureline. LAO-525-S-02. GP-59. Pedigree - Jasper/OT257. Developed using 4 F₂ plants originating from reciprocal crosses involving Jasper and OT257. This line has Jasper cytoplasm. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-525-T-02) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to heading 67.8. Days to mature 111.4. Height 66 cm. Lodge 0%. Yield 4615.2 Kg ha⁻¹. Test wt. 42.9 Kg bL-1. Kernel wt. 29.3 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613333. *Avena sativa* L.

Breeding. Pureline. LAO-525-T-02. GP-60. Pedigree - Jasper/OT257. Developed using 4 F₂ plants originating from reciprocal crosses involving Jasper and OT257. This line has Jasper cytoplasm. Released 1999. Tall of near-isogenic pair (dwarf line - LAO-525-S-02) spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV) and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613334. *Avena sativa* L.

Breeding. Pureline. LAO-525-S-03. GP-61. Pedigree - Jasper/OT257. Developed using 4 F₂ plants originating from reciprocal crosses involving Jasper and OT257. This line has Jasper cytoplasm. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-525-T-03) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 64.3, days to mature 109.1. Height 80 cm. Lodge 1%. Yield 6100.5 kg ha⁻¹. Test wt. 46.6 kg bL-1. Kernel wt. 33.5 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613335. *Avena sativa* L.

Breeding. Pureline. LAO-525-T-03. GP-62. Pedigree - Jasper/OT257. Developed using 4 F₂ plants originating from reciprocal crosses involving Jasper and OT257. This line has Jasper cytoplasm. Released

1999. Tall of near-isogenic pair (dwarf line - LAO-525-S-03) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 60.5, days to mature 107.6. Height 119 cm. Lodge 19%. Yield 6552.6 kg ha⁻¹. Test wt. 50.8 kg bL-1). Kernel wt. 39.2 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613336. *Avena sativa* L.

Breeding. Pureline. LAO-524-S-02. GP-63. Pedigree - OT257/Jasper. Developed using 4 F₂ plants originating from reciprocal crosses involving Jasper and OT257. This line has OT257 cytoplasm. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-524-T-02) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 64.1, days to mature 107.9. Height 72 cm. Lodge 0%. Yield 5595.1 kg ha⁻¹. Text wt. 47.4 kg bL-1. Kernel wt. 34.8 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613337. *Avena sativa* L.

Breeding. Pureline. LAO-524-T-02. GP-64. Pedigree - OT257/Jasper. Developed using 4 F₂ plants originating from reciprocal crosses involving Jasper and OT257. This line has OT257 cytoplasm. Released 1999. Tall of near-isogenic pair (dwarf line - LAO-524-S-02) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 57.1, days to mature 103.9. Height 109 cm. Lodge 16%. Yield 6591.2 kg ha⁻¹. Test wt. 52.3 kg bL-1. Kernel wt. 42.3. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613338. *Avena sativa* L.

Breeding. Pureline. LAO-521-S-02. GP-65. Pedigree - OT526/OT257. Developed from 2 F₂ plants obtained by crossing OT257 and OT536. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-521-T-02) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 64.1, days to mature 109.4. Height 66 cm. Lodge 0%. Yield 5698.1 kg ha⁻¹. Test wt. 46.3 kg bL-1. Kernel wt 34.1 mg. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613339. *Avena sativa* L.

Breeding. Pureline. LAO-521-T-02. GP-66. Pedigree - OT526/OT257.

Developed using 2 F2 plants obtained by crossing OT257 and OT536. Released 1999. Tall of near-isogenic pair (dwarf line - LAO-521-S-02) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 56.8m days to mature 107.8. Height 99 cm. Lodge 15%. Yield 6833.6 kg ha⁻¹. Test wt. 51.8 kg bL-1). Kernel wt.42.9 mg. Resistant to Victoria blight (*Bipolaris victoricae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613340. *Avena sativa* L.

Breeding. Pureline. LAO-521-S-03. GP-67. Pedigree - OT526/OT257. Developed using 2 F2 plants obtained by crossing OT257 and OT536. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-521-T-03) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 62.5, days to mature 109.6. Height 71 cm. Lodge 0%. Yield 5369.5 kg ha⁻¹. Test wt. 45.5 kg bL-1. Kernel wt. 39.2 mg. Resistant to Victoria blight (*Bipolaris victoricae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613341. *Avena sativa* L.

Breeding. Pureline. LAO-521-T-03. GP-68. Pedigree - OT526/OT257. Developed from 2 F2 plants obtained by crossing OT257 and OT536. Released 1999. Tall of near-isogenic pair (dwarf line - LAO-521-S-03) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 55.6, days to mature 102.4. Height 108 cm. Lodge 16%. Yield 6727.6 kg ha⁻¹. Test wt. 51.0 kg bL-1. Kernal weight 45.4 mg. Resistant to Victoria blight (*Bipolaris victoricae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613342. *Avena sativa* L.

Breeding. Pureline. LAO-517-S-01. GP-69. Pedigree - OT257/N326-7. Produced from a single F2 plant in a cross of OT257/N326-7. Released 1999. Dwarf of near-isogenic pair (tall line - LAO-517-T-01) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 63.5, days to mature 105.8. Height 63 cm. Lodge 0%. Yield 3698.0 kg ha⁻¹. Test wt. 40.0 kg bL-1. Kernal wt. 29.1 mg. Resistant to Victoria blight (*Bipolaris victoricae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

PI 613343. *Avena sativa* L.

Breeding. Pureline. LAO-517-T-01. GP-70. Pedigree - OT257/N326-7. Produced from a single F2 plant in a cross of OT257/N326-7. Released

1999. Tall of near-isogenic pair (dwarf line - LAO-517-S-01) of spring type oat line. Pair is near-isogenic except for the alleles conferring dwarf (Dw6/Dw6) and normal height (dw6/dw6) genotypes. Does not have vernalization requirements. Days to head 55.5, days to mature 103.0. Height 98 cm. Lodge 20%. Yield 5071.7 kg ha⁻¹. Test wt. 46.1 kg bL⁻¹. Kernel wt. 33.7. Resistant to Victoria blight (*Bipolaris victoriae*). Moderately susceptible to smut (*Ustilago avenae* and *U. kolleri*). Moderately susceptible to barley yellow dwarf virus (BYDV), and susceptible to the oat crown rust (*Puccinia coronata*) and oat stem rust (*P. graminis*).

The following were developed by 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 05/01/2000.

PI 613344. *Gossypium hirsutum* L.

Breeding. Pureline. NM970513. GP-714. Pedigree - Acala 1517-95/NM24052. Inbred germplasm line developed as a source of high fiber strength or fiber tenacity. Plant height approx. 95 cm at maturity and growth habit indeterminate and spreading. Bolls ovate and average 2.21 g of lint. Fiber strength averages 282.6 kN m kg⁻¹. Fiber strength was measured on a plot-basis as mean of two breaks on a 3.2 mm gauge stelometer. Fiber length, short fiber index and micronaire not significantly different from Acala 1517-95. Fiber elongation lower than Acala 1517-95 (5.9 versus 6.8). Lint yield about 85% of parent cv., Acala 1517-95. Handpicked lint percent averages 38.3 with a seed index of 10.1g.

The following were developed by An H. Hang, Washington State University, Irrigated Agriculture Res. & Ext. Center, Route 2, Box 2953-A, Prosser, Washington 99350-9687, United States; An Hang, USDA, ARS, National Small Grains Germplasm, Research Facility, Aberdeen, Idaho 83210, 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 05/01/2000.

PI 613345. *Phaseolus vulgaris* L.

Breeding. Pureline. USWA-12. GP-215. Pedigree - GN-WM-85-45 / 88BR-1794-B. Very large seeded great northern with indeterminate, upright vine with long tendrils, Type II-B growth habit. I gene resistance to bean common mosaic virus (BCMV) and complete curly top resistance (CTV). Pods set from low to high on plant. Late season bean maturing 3-4 days later than Starlight. Yields comparable to Starlight but seed size larger.

PI 613346. *Phaseolus vulgaris* L.

Breeding. Pureline. USWA-13. GP-216. Pedigree - 88BR-1798-B / GN-WM-85-45. Type II-B growth habit, maturity and yields close to UI-59 and Alpine. Seed size larger than most of the commercial great northern. Seed plump and has attractive bright white color. Dominant I gene resistance to BCMV but occasionally shows trace of CTV in the field, indicating possible variability for this character, or it may have only one of the two dominant resistance factors.

The following were developed by Bob Briggs, Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Donated by Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Received 05/07/1999.

PI 613347. *Zea mays* L. subsp. *mays*

Breeding. Population. C.999393-2505; C.999393; F433N01; GS43(R)C1; Ames 25271.

The following were developed by Ron Good, Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Donated by Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Received 05/07/1999.

PI 613348. *Zea mays* L. subsp. *mays*

Breeding. Population. C.999411-3505; C.999411; F122N02; GS52(R)C2; Ames 25272.

PI 613349. *Zea mays* L. subsp. *mays*

Breeding. Population. C.999446-4505; C.999446; F402N02; GS40(R)C2; Ames 25273.

The following were developed by Bert Hornbrook, Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Donated by Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Received 05/07/1999.

PI 613350. *Zea mays* L. subsp. *mays*

Breeding. Population. C.999463-5505; C.999463; D024N03; GS42(R)C3; Ames 25274.

The following were developed by Jim Linder, Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Donated by Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason Street, Fort Collins, Colorado 80521-4500, United States; Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Received 05/07/1999.

PI 613351. *Zea mays* L. subsp. *mays*

Breeding. Population. C.999487-8505; C.999487; D020N03; GS22(R)C3; Ames 25275.

The following were developed by Ron Good, Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Donated by Steve A. Eberhart, USDA, ARS, National Seed Storage Laboratory, 1111 South Mason

Street, Fort Collins, Colorado 80521-4500, United States; Novartis Seeds, 1301 W. Washington Street, Bloomington, Illinois 61701, United States. Received 05/07/1999.

PI 613352. *Zea mays* L. subsp. *mays*

Breeding. Population. C.GAC4657; D102N04; GS10(R)C4; Ames 25276.

The following were donated by K. B. Singh, Int. Center For Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria. Received 01/01/1992.

PI 613353. *Cicer arietinum* L.

Breeding. FLIP 85-58; W6 12918. Used in the USDA, ARS Chickpea breeding program at Pullman, WA. to develop Ascochyta blight resistant Chickpea cultivars for the Chickpea industry in the Pacific Northwest. FLIP 85-58 was the blight resistant line used in development of two large-seeded kabuli cultivars Dwelley and Sanford.

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; J. G. McLeod, Agriculture Canada, Swift Current Research Station, P. O. Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; W.H. Pfeiffer, International Maize & Wheat Improvement Centre, Lisboa 27, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico. Received 05/31/2000.

PI 613354. X *Triticosecale* sp.

Cultivar. Pureline. "AC ULTIMA"; T 150 9330A-062. CV-24. Pedigree - Drago/Ibex//Civet#2. A complete hexaploid triticale which derives from the progeny of the spring x winter cross. Yields from 5.1 to 9.2 t ha⁻¹ of grain on Brown and Black soils of the Canadian Prairies, respectively. Matures in 105 d, height 101 cm, and kernel weight 45.4 mg. Test weight 70.5 kg hL⁻¹ and lodging resistance score of 1.7 (1.0 - all plants vertical, 9.0 - all plants horizontal). Represents a significant improvement in Hagberg Falling Number (155s). Very resistant to prevalent races of stem rust, leaf rust and common bunt. Moderately resistant to common root rot.

The following were donated by Paul F. Knowles, 5703 Nakat Way, Blaine, Washington 98230, United States. Received 03/06/1989.

PI 613355. *Carthamus tinctorius* L.

Cultivated. 81/3/BS; W6 737. Carry the gene for short stature. Remarks donor used to identify this accession: short internodes.

PI 613356. *Carthamus tinctorius* L.

Cultivated. 81/U2/BS; W6 739. Carry the gene for short stature. Remarks donor used to identify this accession: short internodes.

PI 613357. *Carthamus tinctorius* L.

Cultivated. 81/U8/BS; W6 740. Carry the gene for short stature. Remarks donor used to identify this accession: short internodes.

- PI 613358. *Carthamus tinctorius* L.
Cultivated. 81/60/10p; W6 741. Carry the gene for short stature. Remarks donor used to identify this accession: short, most plants tall in the row.
- PI 613359. *Carthamus tinctorius* L.
Cultivated. 81/U23/BOp; W6 742. Carry the gene for short stature. Remarks donor used to identify this accession: Debela dwarf.
- PI 613360. *Carthamus tinctorius* L.
Cultivated. 80/111/BOp; W6 743. Carry the gene for short stature. Remarks donor used to identify this accession: Debela dwarf.
- PI 613361. *Carthamus tinctorius* L.
Cultivated. 80/24/BS; W6 744. Carry the gene for short stature. Remarks donor used to identify this accession: weak dwarf, l.
- PI 613362. *Carthamus tinctorius* L.
Cultivated. 80/10/60p; W6 745. Carry the gene for short stature. Remarks donor used to identify this accession: minute, taller than most minutes.
- PI 613363. *Carthamus tinctorius* L.
Cultivated. 80/12/S & Op; W6 746. Carry the gene for short stature. Remarks donor used to identify this accession: minute.
- PI 613364. *Carthamus tinctorius* L.
Cultivated. 80/12/20p; W6 747. Carry the gene for short stature. Remarks donor used to identify this accession: minute.
- PI 613365. *Carthamus tinctorius* L.
Cultivated. 80/12/BOp; W6 749. Carry the gene for short stature. Remarks donor used to identify this accession: minute.
- PI 613366. *Carthamus tinctorius* L.
Cultivated. 81/U15/BS; W6 750. Carry the gene for short stature. Remarks donor used to identify this accession: intermediate height.
- PI 613367. *Carthamus tinctorius* L.
Cultivated. 81/122/BS; W6 751. Carry the gene for short stature. Remarks donor used to identify this accession: intermediate height, black seed.
- PI 613368. *Carthamus tinctorius* L.
Cultivated. 81/171/BS; W6 752. Carry the gene for short stature. Remarks donor used to identify this accession: intermediate height, Urie's 154-1 .
- PI 613369. *Carthamus tinctorius* L.
Cultivated. 81/308/BS; W6 753. Carry the gene for short stature. Remarks donor used to identify this accession: intermediate height, white pappus, bushy type.
- PI 613370. *Carthamus tinctorius* L.
Cultivated. 80/88/BS; W6 754. Carry the gene for short stature. Remarks donor used to identify this accession: Mexiacn Dwarf.
- PI 613371. *Carthamus tinctorius* L.
Cultivated. 82/16/BOp; W6 755. Carry the gene for short stature, Mexican

Dwarf present in this accessions which has one recessive gene governing shortness.

PI 613372. *Carthamus tinctorius* L.

Cultivated. 82/17/BOp; W6 756. Carry the gene for short stature, Mexican Dwarf present in this accessions which has one recessive gene governing shortness. Remarks donor used to identify this accession: Iran X Mex Dwf F5 selection, short, early type.

PI 613373. *Carthamus tinctorius* L.

Cultivated. 82/21/BOp; W6 757. Carry the gene for short stature, Mexican Dwarf present in this accessions which has one recessive gene governing shortness Remarks donor used to identify this accession: Iran X Mex Dwf F5 selection, short, early type.

PI 613374. *Carthamus tinctorius* L.

Cultivated. 82/27BOp; W6 758. Carry the gene for short stature, Mexican Dwarf present in this accessions which has one recessive gene governing shortness. Remarks donor used to identify this accession: Iran X Mex Dwf F5 selection, short, early type.

PI 613375. *Carthamus tinctorius* L.

Cultivated. 80/200/3S; W6 759.

PI 613376. *Carthamus tinctorius* L.

Cultivated. 80/272/4S; W6 760. Vary in expression of branching. Remarks donor used to identify this accession: bushy #1.

PI 613377. *Carthamus tinctorius* L.

Cultivated. 80/281/281/10p; W6 761. Vary in expression of branching. Remarks donor used to identify this accession: bushy #2.

PI 613378. *Carthamus tinctorius* L.

Cultivated. 81/367/BS; W6 762. Vary in expression of branching. Remarks donor used to identify this accession: bushy.

PI 613379. *Carthamus tinctorius* L.

Cultivated. 81/317/BS; W6 763. Vary in expression of branching. Remarks donor used to identify this accession: appressed branches, large head, good type.

PI 613380. *Carthamus tinctorius* L.

Cultivated. 81/318/BOp; W6 764. Vary in expression of branching. Remarks donor used to identify this accession: appressed branches.

PI 613381. *Carthamus tinctorius* L.

Cultivated. 81/335/BS; W6 765. Vary in expression of branching. Remarks donor used to identify this accession: appressed branches, thinner hull.

PI 613382. *Carthamus tinctorius* L.

Cultivated. 81/U26BS; W6 766. Vary in expression of branching. Remarks donor used to identify this accession: appressed branches.

PI 613383. *Carthamus tinctorius* L.

Cultivated. 81/341/BS; W6 767. Vary in expression of branching. Remarks donor used to identify this accession: decumbent branches.

- PI 613384. *Carthamus tinctorius* L.
Cultivated. 81/U41/BS; W6 769. Vary in expression of branching. Remarks donor used to identify this accession: decumbent branches, brittle stems
- PI 613385. *Carthamus tinctorius* L.
Cultivated. 81/343/BS; W6 770. Vary in expression of branching. Remarks donor used to identify this accession: spreading (decdecapap).
- PI 613386. *Carthamus tinctorius* L.
Cultivated. 81/U40/4S; W6 771. Vary in expression of branching. Remarks donor used to identify this accession: horizontal branches.
- PI 613387. *Carthamus tinctorius* L.
Cultivated. 81/U38/BS; W6 772. Vary in expression of branching. Remarks donor used to identify this accession: sprawling.
- PI 613388. *Carthamus tinctorius* L.
Cultivated. 81/386/19S; W6 774. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: light brown seed.
- PI 613389. *Carthamus tinctorius* L.
Cultivated. 81/393/30p; W6 775. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: brown seed.
- PI 613390. *Carthamus tinctorius* L.
Cultivated. 80/468/BS; W6 776. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: brwon, striped seed.
- PI 613391. *Carthamus tinctorius* L.
Cultivated. 80/463/BS; W6 777. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: purple, striped seed.
- PI 613392. *Carthamus tinctorius* L.
Cultivated. 80/482/3S; W6 778. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: medium to very dark brown seed.
- PI 613393. *Carthamus tinctorius* L.
Cultivated. 80/484/BOp; W6 779. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: dark grey seed.
- PI 613394. *Carthamus tinctorius* L.
Cultivated. 81/388/10p; W6 780. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: purple seed.
- PI 613395. *Carthamus tinctorius* L.
Cultivated. 81/390/BS; W6 781. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: purple seed with dark crown.

- PI 613396. *Carthamus tinctorius* L.**
Cultivated. 81/389/BS; W6 782. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: seed purple to black.
- PI 613397. *Carthamus tinctorius* L.**
Cultivated. 81/392/1S; W6 783. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: black seed.
- PI 613398. *Carthamus tinctorius* L.**
Cultivated. 81/39310p; W6 784. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: black seed.
- PI 613399. *Carthamus tinctorius* L.**
Cultivated. 81/394/14S; W6 785. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: speckled seed.
- PI 613400. *Carthamus tinctorius* L.**
Cultivated. 80/503/1S; W6 786. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: variable seed color.
- PI 613401. *Carthamus tinctorius* L.**
Cultivated. 80/182/BS; W6 788. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: partial hull.
- PI 613402. *Carthamus tinctorius* L.**
Cultivated. 81/524/10p; W6 789. Vary in seed expression, mostly in the color or nature of the hull. Remarks donor used to identify this accession: thin hull(thth).
- PI 613403. *Carthamus tinctorius* L.**
Cultivated. 81/349/BS; W6 790. Have brittle stems that break easily and cleanly when bent. They have genotype brbr. Remarks donor used to identify this accession: brittle stem.
- PI 613404. *Carthamus tinctorius* L.**
Cultivated. 81/354/BS; W6 792. Have brittle stems that break easily and cleanly when bent. They have genotype brbr. Remarks donor used to identify this accession: brittle stem, decumbent.
- PI 613405. *Carthamus tinctorius* L.**
Cultivated. 81/365/20p; W6 793. Have brittle stems that break easily and cleanly when bent. They have genotype brbr. Remarks donor used to identify this accession: brittle stem, thin hull (thth).
- PI 613406. *Carthamus tinctorius* L.**
Cultivated. 80/221/2S; W6 794. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: light green leaves.
- PI 613407. *Carthamus tinctorius* L.**
Cultivated. 80/371/BS; W6 795. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: very light green leaves,

uniform.

PI 613408. *Carthamus tinctorius* L.

Cultivated. 81/369/BS; W6 797. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: yellow green leaves, B1 when ripe.

PI 613409. *Carthamus tinctorius* L.

Cultivated. 81/U43/BS; W6 798. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: light green leaves, turning dark green.

PI 613410. *Carthamus tinctorius* L.

Cultivated. 81/U44/10p; W6 799. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: light green branches.

PI 613411. *Carthamus tinctorius* L.

Cultivated. 81/U44/10p; W6 800. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: dark green branches.

PI 613412. *Carthamus tinctorius* L.

Cultivated. 81/U45/BS; W6 801. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: light green leaves, turning dark.

PI 613413. *Carthamus tinctorius* L.

Cultivated. 81/U48/BS; W6 802. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: black leaves when mature.

PI 613414. *Carthamus tinctorius* L.

Cultivated. 81/371/BS; W6 803. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: rinkle leaf.

PI 613415. *Carthamus tinctorius* L.

Cultivated. 81/277/10p; W6 804. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: non-shattering.

PI 613416. *Carthamus tinctorius* L.

Cultivated. 81/U81/BS; W6 805. Vary in leaf expression, mostly in color. Remarks donor used to identify this accession: heavy pubescence, gray seed.

PI 613417. *Carthamus tinctorius* L.

Cultivated. 80/313/BS; W6 806.

PI 613418. *Carthamus tinctorius* L.

Cultivated. 80/472/BS; W6 807. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set very little seed when selfed. Remarks donor used to identify this accession: pigmentless flower.

PI 613419. *Carthamus tinctorius* L.

Cultivated. 81/U80/BS; W6 808. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set very little seed when selfed. Remarks donor used to identify this accession:

pigmentless flower.

PI 613420. *Carthamus tinctorius* L.

Cultivated. 80/420/10p; W6 809. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: cream flower.

PI 613421. *Carthamus tinctorius* L.

Cultivated. 81/U59/BS; W6 810. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: cream flower.

PI 613422. *Carthamus tinctorius* L.

Cultivated. 81/U57/BS; W6 811. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: light yellow flower, lobes with 0 ips crinkled leaves.

PI 613423. *Carthamus tinctorius* L.

Cultivated. 80/406/BS; W6 812. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: red tips to light yellow flowers.

PI 613424. *Carthamus tinctorius* L.

Cultivated. 80/408/BS; W6 815. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: mixed red, yellow, light orange flowers, long seeds.

PI 613425. *Carthamus tinctorius* L.

Cultivated. 81/U61/BOp; W6 816. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: pink flowers.

PI 613426. *Carthamus tinctorius* L.

Cultivated. 80/417/BS; W6 818. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: intense red flowers.

PI 613427. *Carthamus tinctorius* L.

Cultivated. 81/U52/BS; W6 819. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: intense red flowers.

PI 613428. *Carthamus tinctorius* L.

Cultivated. 81/372/BOP; W6 821. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set vevry little seed when selfed. Remarks donor used to identify this accession: closed flower, intense red.

PI 613429. *Carthamus tinctorius* L.

Cultivated. 81/U74/BS; W6 825. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set very little seed when selfed. Remarks donor used to identify this accession: closed flower, abundant seed.

PI 613430. *Carthamus tinctorius* L.

Cultivated. 81/U75/BS; W6 826. Vary mostly in flower color. Closed flower types may have ornamental purposes, but most of them set very little seed when selfed. Remarks donor used to identify this accession: partly closed flower.

PI 613431. *Carthamus tinctorius* L.

Cultivated. 81/398/BOP; W6 830. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613432. *Carthamus tinctorius* L.

Cultivated. 81/405/1Op; W6 833. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613433. *Carthamus tinctorius* L.

Cultivated. 81/405/20p; W6 834. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613434. *Carthamus tinctorius* L.

Cultivated. 81/406/BS; W6 835. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613435. *Carthamus tinctorius* L.

Cultivated. 81/407/1S; W6 836. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613436. *Carthamus tinctorius* L.

Cultivated. 81/U82/BS; W6 837. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613437. *Carthamus tinctorius* L.

Cultivated. 81/U84/30p; W6 839. Autotetraploides, most setting very little seed when selfed. Remarks donor used to identify this accession: autotetraploids.

PI 613438. *Carthamus tinctorius* L.

Cultivated. 81/409/BS; W6 842. Derivative of a natural cross of an autotetraploid type to an unknown wild species. Remarks donor used to identify this accession: autotetraploids X unknown wild species.

PI 613439. *Carthamus tinctorius* L.

Cultivated. 81/411/2S; W6 843. Derivative of a natural cross of an autotetraploid type to an unknown wild species. Remarks donor used to identify this accession: autotetraploids X unknown wild species.

PI 613440. *Carthamus tinctorius* L.

Cultivated. 81/411/4S; W6 844. Derivative of a natural cross of an autotetraploid type to an unknown wild species. Remarks donor used to identify this accession: autotetraploids X unknown wild species.

PI 613441. *Carthamus tinctorius* L.

Cultivated. 81/570/BS; W6 846. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: UC-1.

PI 613442. *Carthamus tinctorius* L.

Cultivated. 81/503/BS; W6 847. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: short UC-1.

PI 613443. *Carthamus tinctorius* L.

Cultivated. 81/504/BS; W6 848. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: short UC-1.

PI 613444. *Carthamus tinctorius* L.

Cultivated. 80/208/2S; W6 849. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession:.

PI 613445. *Carthamus tinctorius* L.

Cultivated. 81/507/BS; W6 850. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: US-10 selection.

PI 613446. *Carthamus tinctorius* L.

Cultivated. 81/508/1S; W6 851. Collected in Iran. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Iranian.

PI 613447. *Carthamus tinctorius* L.

Cultivated. 81/509/BS; W6 852. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: flower yellow when fresh.

PI 613448. *Carthamus tinctorius* L.

Cultivated. 81/510/BS; W6 853. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: long bracts.

PI 613449. *Carthamus tinctorius* L.

Cultivated. 81/513/BS; W6 854. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: (Iran X N10)US-10)) Gila, is like Gila.

PI 613450. *Carthamus tinctorius* L.

Cultivated. 81/514/BS; W6 855. Collected in Turkey. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Turkey.

PI 613451. *Carthamus tinctorius* L.

Cultivated. 81/516/BS; W6 856. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this

accession: UC-83.

PI 613452. *Carthamus tinctorius* L.

Cultivated. 80/251/2S; W6 857. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Frio-1, partial hull, small seed.

PI 613453. *Carthamus tinctorius* L.

Cultivated. 80/253/1S; W6 858. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Frio-3 X Israel, heavy pappus.

PI 613454. *Carthamus tinctorius* L.

Cultivated. 81/518/BS; W6 859. Collected in Israel. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Israel, large head.

PI 613455. *Carthamus tinctorius* L.

Cultivated. 81/519/4S; W6 860. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: (Israel)US-10 F3 Gila, like Gila.

PI 613456. *Carthamus tinctorius* L.

Cultivated. 81/520/BS; W6 861. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Israel.

PI 613457. *Carthamus tinctorius* L.

Cultivated. 81/651/1S; W6 862. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic, apressed branches, striped.

PI 613458. *Carthamus tinctorius* L.

Cultivated. 80/250/2S; W6 863. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: US-10.

PI 613459. *Carthamus tinctorius* L.

Cultivated. 80/131/BS; W6 866. Collected in Portugal. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal.

PI 613460. *Carthamus tinctorius* L.

Cultivated. 80/178/1S; W6 867. Collected in Iran. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Spain.

PI 613461. *Carthamus tinctorius* L.

Cultivated. 80/207/2S; W6 868. Collected in Iran. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Iran.

PI 613462. *Carthamus tinctorius* L.

Cultivated. 81/550/BS; W6 869. Collected in Portugal. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal.

- PI 613463. *Carthamus tinctorius* L.**
Cultivated. 81/552/3S; W6 870. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X intermediate oleic.
- PI 613464. *Carthamus tinctorius* L.**
Cultivated. 81/604/2S; W6 871. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X Spain.
- PI 613465. *Carthamus tinctorius* L.**
Cultivated. 81/605/BS; W6 872. Collected in Spain. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Spain.
- PI 613466. *Carthamus tinctorius* L.**
Cultivated. 81/609/6S; W6 873. Collected in Morocco. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco.
- PI 613467. *Carthamus tinctorius* L.**
Cultivated. 82/45/BOP; W6 874. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X Gila F5 seed.
- PI 613468. *Carthamus tinctorius* L.**
Cultivated. 82/51/10p; W6 875. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X UC-1 seed.
- PI 613469. *Carthamus tinctorius* L.**
Cultivated. 82/53/20p; W6 876. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X UC-1 seed.
- PI 613470. *Carthamus tinctorius* L.**
Cultivated. 82/53/40p; W6 877. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X UC-1 seed.
- PI 613471. *Carthamus tinctorius* L.**
Cultivated. 82/55/10p; W6 878. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X UC-1 seed.
- PI 613472. *Carthamus tinctorius* L.**
Cultivated. 82/55/20p; W6 879. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X UC-1 seed.
- PI 613473. *Carthamus tinctorius* L.**
Cultivated. 82/55/30p; W6 880. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X UC-1 seed.
- PI 613474. *Carthamus tinctorius* L.**
Cultivated. 82/56/10p; W6 881. Have high levels of iodine value and/or

high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613475. *Carthamus tinctorius* L.

Cultivated. 82/56/20p; W6 882. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613476. *Carthamus tinctorius* L.

Cultivated. 82/56/40p; W6 883. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613477. *Carthamus tinctorius* L.

Cultivated. 82/57/20p; W6 884. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613478. *Carthamus tinctorius* L.

Cultivated. 82/57/40p; W6 885. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613479. *Carthamus tinctorius* L.

Cultivated. 82/57/60p; W6 886. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613480. *Carthamus tinctorius* L.

Cultivated. 82/58/40p; W6 887. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613481. *Carthamus tinctorius* L.

Cultivated. 82/58/50p; W6 888. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613482. *Carthamus tinctorius* L.

Cultivated. 82/61/20p; W6 889. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613483. *Carthamus tinctorius* L.

Cultivated. 82/61/40p; W6 890. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Morocco X Portugal F5 seed.

PI 613484. *Carthamus tinctorius* L.

Cultivated. 82/62/20p; W6 891. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Partial hull X Portugal F5 seed.

PI 613485. *Carthamus tinctorius* L.

Cultivated. 82/62/30p; W6 892. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Partial hull X Portugal F5 seed.

- PI 613486. *Carthamus tinctorius* L.**
Cultivated. 82/63/10p; W6 893. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Partial hull X Portugal F5 seed.
- PI 613487. *Carthamus tinctorius* L.**
Cultivated. 82/63/20p; W6 894. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Partial hull X Portugal F5 seed.
- PI 613488. *Carthamus tinctorius* L.**
Cultivated. 82/63/40p; W6 895. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Partial hull X Portugal F5 seed.
- PI 613489. *Carthamus tinctorius* L.**
Cultivated. 82/63/50p; W6 896. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Partial hull X Portugal F5 seed.
- PI 613490. *Carthamus tinctorius* L.**
Cultivated. 82/65/10p; W6 897. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613491. *Carthamus tinctorius* L.**
Cultivated. 82/66/20p; W6 898. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613492. *Carthamus tinctorius* L.**
Cultivated. 82/66/30p; W6 899. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613493. *Carthamus tinctorius* L.**
Cultivated. 82/66/40p; W6 900. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613494. *Carthamus tinctorius* L.**
Cultivated. 82/66/60p; W6 901. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613495. *Carthamus tinctorius* L.**
Cultivated. 82/66/80p; W6 903. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613496. *Carthamus tinctorius* L.**
Cultivated. 82/67/20p; W6 904. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.
- PI 613497. *Carthamus tinctorius* L.**

Cultivated. 82/67/30p; W6 905. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: Portugal X high stearic.

PI 613498. *Carthamus tinctorius* L.

Cultivated. 80/426/BS; W6 906. Have high levels of iodine value and/or high fatty acid composition. Remarks donor used to identify this accession: resistant to Fusarium wilt.

PI 613499. *Carthamus tinctorius* L.

Cultivated. 80/427/BS; W6 907.

PI 613500. *Carthamus tinctorius* L.

Cultivated. 80/563-4/Op; W6 909. Mixture of male-sterile type: male-sterile(msms) and male-fertile(Msms), propagated by crossing msms and Msms. Remarks donor used to identify this accession: male-sterile, UC-149.

PI 613501. *Carthamus tinctorius* L.

Cultivated. 80/567-8/BS; W6 911. Collected in Sudan. Remarks donor used to identify this accession: Sudan, UC-151, Phytophthora root rot resistant.

PI 613502. *Carthamus tinctorius* L.

Cultivated. 80/587-8/BS; W6 921. Remarks donor used to identify this accession: Turkey, UC-161, Phytophthora root rot resistant.

PI 613503. *Carthamus tinctorius* L.

Cultivated. 80/591/BS; W6 923. Remarks donor used to identify this accession: India, UC-163, Phytophthora root rot resistant.

PI 613504. *Carthamus tinctorius* L.

Cultivated. 80/597-8/BS; W6 926. Remarks donor used to identify this accession: Carlson B, resistant to thrips.

PI 613505. *Carthamus tinctorius* L.

Cultivated. 80/597-600/BS; W6 927. Remarks donor used to identify this accession: Carlson C, resistant to thrips.

PI 613506. *Carthamus tinctorius* L.

Cultivated. 80/601-2/BS; W6 928. Remarks donor used to identify this accession: Carlson D, resistant to thrips.

PI 613507. *Carthamus tinctorius* L.

Cultivated. 80/603-4/BS; W6 929. Remarks donor used to identify this accession: Carlson E, resistant to thrips.

PI 613508. *Carthamus tinctorius* L.

Cultivated. 80/605-6/BS; W6 930. Remarks donor used to identify this accession: Carlson F, resistant to thrips.

PI 613509. *Carthamus tinctorius* L.

Cultivated. 80/607-8/BS; W6 931. Remarks donor used to identify this accession: Carlson G, resistant to thrips.

PI 613510. *Carthamus tinctorius* L.

Cultivated. 80/609-10/BS; W6 932. Remarks donor used to identify this

accession: Carlson H, resistant to thrips.

PI 613511. *Carthamus tinctorius* L.

Cultivated. 80/611-2/BS; W6 933. Remarks donor used to identify this accession: Carlson I, Leed, resistant to thrips.

PI 613512. *Carthamus tinctorius* L.

Cultivated. 80/613-4/BS; W6 934. Remarks donor used to identify this accession: Carlson L, resistant to thrips.

PI 613513. *Carthamus tinctorius* L.

Cultivated. 80/613-4/Bop; W6 935. Remarks donor used to identify this accession: Carlson L, resistant to thrips.

PI 613514. *Carthamus tinctorius* L.

Cultivated. 80/620/bs; W6 936. Collected in Australia. Remarks donor used to identify this accession: Intro. Austral. Sigma 23, resistant to thrips.

PI 613515. *Carthamus tinctorius* L.

Cultivated. 80/621/BS; W6 937. Collected in Australia. Remarks donor used to identify this accession: Intro. Austral. Sigma 24.

PI 613516. *Carthamus tinctorius* L.

Cultivated. 80/622/BS; W6 938. Collected in Australia. Remarks donor used to identify this accession: Intro. Austral. Sigma 40.

PI 613517. *Carthamus tinctorius* L.

Cultivated. 80/623/BS; W6 939. Collected in Australia. Remarks donor used to identify this accession: Intro. Austral. Sigma 44.

PI 613518. *Carthamus tinctorius* L.

Cultivated. 80/624/BS; W6 940. Remarks donor used to identify this accession: Intro. Austral. Sigma 49.

PI 613519. *Carthamus tinctorius* L.

Cultivated. 80/625/BS; W6 941. Collected in Iran. Remarks donor used to identify this accession: Iran UCD Access. 80-12, early type.

PI 613520. *Carthamus tinctorius* L.

Cultivated. 80/627/BS; W6 942. Collected in Iran. Remarks donor used to identify this accession: Iran UCD Access. 80-14, early type.

PI 613521. *Carthamus tinctorius* L.

Cultivated. 80/628/BS; W6 943. Collected in Turkey. Remarks donor used to identify this accession: Turkey Access. 80-15.

PI 613522. *Carthamus tinctorius* L.

Cultivated. 80/629/BS; W6 944. Collected in Turkey. Remarks donor used to identify this accession: Turkey Access. 80-16.

PI 613523. *Carthamus tinctorius* L.

Cultivated. 80/630/BS; W6 945. Collected in Turkey. Remarks donor used to identify this accession: Turkey Access. 80-17.

PI 613524. *Carthamus tinctorius* L.

Cultivated. 80/631/BS; W6 946. Collected in Turkey. Remarks donor used

to identify this accession: Turkey Access. 80-18.

PI 613525. *Carthamus tinctorius* L.

Cultivated. 80/632/BS; W6 947. Collected in Turkey. Remarks donor used to identify this accession: Turkey Access. 80-19.

PI 613526. *Carthamus tinctorius* L.

Cultivated. 80/633/BS; W6 948. Collected in Turkey. Remarks donor used to identify this accession: Turkey Access. 80-20.

PI 613527. *Carthamus tinctorius* L.

Cultivated. 80/634/BS; W6 949. Collected in China. Remarks donor used to identify this accession: China Access. 79-84 heads shatter.

PI 613528. *Carthamus tinctorius* L.

Cultivated. 80/635/1S; W6 950. Collected in China. Remarks donor used to identify this accession: China Access. 79-85.

PI 613529. *Carthamus tinctorius* L.

Cultivated. 80/636/BS; W6 951. Collected in China. Remarks donor used to identify this accession: China Access. 79-86.

PI 613530. *Carthamus tinctorius* L.

Cultivated. 80/637/BS; W6 952. Collected in China. Remarks donor used to identify this accession: China Access. 79-87, from Sinkiang.

PI 613531. *Carthamus tinctorius* L.

Cultivated. 80/638/BS; W6 953. Collected in China. Remarks donor used to identify this accession: China Access. 79-88, from Yunnan.

PI 613532. *Carthamus tinctorius* L.

Cultivated. 80/639/BS; W6 954. Collected in China. Remarks donor used to identify this accession: China Access. 80-10.

PI 613533. *Carthamus tinctorius* L.

Cultivated. 80/640/BS; W6 955. Collected in China. Remarks donor used to identify this accession: China Access. 80-11.

PI 613534. *Carthamus tinctorius* L.

Cultivated. 81/517/BS; W6 956. Collected in Azores, Portugal. Remarks donor used to identify this accession: Azores introduction, a distinct type.

The following were developed by S.H. Samudio, Jacklin Seed Company, 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States; A. Doug Brede, J.R. Simplot Co., 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States; S.H. Samudio, J.R. Simplot Co., 5300 West Riverbend Avenue, Post Falls, Idaho 83854-9499, United States. Received 05/10/2000.

PI 613535. *Lolium perenne* L.

Cultivar. Population. "CADDIESHACK". CV-205. Pedigree - Modified advanced generation synthetic from 20 elite progenies selected and bred from the perennial ryegrass variety Accent. Differs from Accent by significantly darker color, shorter spike and spikelet length, shorter flag leaf height, and fewer florets per spike. Attractive, high density turf with medium-fine leaf texture. Exhibits improved wear tolerance and

turf density during spring, summer and fall. Demonstrates improved resistance to dollar spot (*Lanzia* and *Moellerodiscus* spp.), large brown patch (*Rhizoctonia solani*), red thread (*Laetisaria fuciformis*), leaf spot (*Drechslera siccans*), leaf rust (*Puccinia* spp.), and gray leaf spot (*Pyricularia grisea*).

The following were developed by George H. Liang, Kansas State University, Department of Agronomy, Waters Hall, Manhattan, Kansas 66506, United States; Ken Kofoid, Kansas State University, Fort Hays Experiment Station, 1232 240th Avenue, Hays, Kansas 67601-9228, United States; Mitchell R. Tuinstra, Kansas State University, Department of Agronomy, 3007 Throckmorton Hall, Manhattan, Kansas 66506, United States; R.L. Vanderlip, Kansas State University, Dept. of Agronomy, Manhattan, Kansas 66506-5501, United States; C. Hicks, Kansas State University, Dept. of Agronomy, Manhattan, Kansas 66506-5501, United States. Received 05/06/2000.

PI 613536. *Sorghum bicolor* (L.) Moench

Breeding. Pureline. PL-1; KS 115. GP-590. Pedigree - Specific pedigree is unknown but records indicate that a large-seeded photoperiod-sensitive, korgi-type sorghum introduction was crossed with KS 18 B (White Martin x Short Kaura). Very distinctive, durra-caudatum sorghum line that produces large, yellow-endosperm seeds (55 g 1000 seed-1) on plants with partially recurved peduncles. Plant color purple, short awns, and produces very large glumes covered with downy hairs. Generally flowers in 75 d in Kansas. Grows to approx. 1.2 m in height, but expresses a strongly prostrate and highly variable growth habit. When crossed to most A-lines, restores fertility but pollen shed is often poor.

The following were developed by Jorge A. Mosjidis, Auburn University, Department of Agronomy & Soils, 202 Funchess Hall, Auburn, Alabama 36849-5412, United States. Received 05/15/2000.

PI 613537. *Lespedeza cuneata* (Dum. Cours.) G. Don

Cultivar. Population. "AU Grazer". CV-15. Pedigree - Synthetic made up of six populations developed from selection in a population made up of 81 inbreds and populations. Superior survival ability under grazing. Averages 50% higher number of stems (an indication of survival ability) than the leading cultivar Serala. Plants have fine and pliable stems with abundant secondary and tertiary branching.

The following were developed by Marvin L. Risius, Pennsylvania State University, Department of Agronomy, 116 ASI Bldg., University Park, Pennsylvania 16802, United States. Received 06/12/2000.

PI 613538. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "PA8649-95". Pedigree - Harrison/3/Cebada Capa/Wong//Awnleted Hudson sel/4/Hanover/Jefferson//Barsoy. Winter, six-rowed, rough awned, hulled feed barley with medium height (90 cm) and medium maturity. Plants semi-prostrate and deep green in the fall. Heads semi-nodding at maturity. Stem neck straight and slightly curved at maturity. Exhibits moderate field resistance to causal organisms of leaf rust (*Puccinia hordei*) prevalent in Pennsylvania. Kernel lemmas slightly wrinkled. Rachilla hairs long. Lemmas yellow at maturity with

few teeth on lateral and marginal nerves.

The following were developed by Paul 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 06/01/2000.

PI 613539. *Lotus corniculatus* L.

Genetic. RG-BFT. GS-1. Pedigree - Two grams of AG-S4 seed was irradiated with 20 kR of gamma radiation. A random 1200-plant population (AG-S4-IR) was grown from irradiated seeds under greenhouse conditions. After self-pollination, seeds from two pods per plant were collected and designated IR-S1. A second random 1200-plant population was grown from the IR-S1. A single rapid flowering clone was identified (RG-S1). Seeds of RG-S1 were germinated to produce 28 RG-S2 plants whose composite populations of seeds (RG-S3) is AG-S4. Rapid reproductive regenerating and photoperiod insensitive autogamous birdsfoot trefoil genetic stock was developed from a single rapid-flowering clone resulting from irradiated seeds AG-S4 autogamous birdsfoot trefoil. Flowers after receiving approx. 1000 accumulated head units when grown under 10 hr light period with a light intensity averaging 410 mol m⁻² s⁻¹. There are no other known genetic sources of birdsfoot trefoil that flower under these conditions. Because it is photoperiod insensitive, it is also suitable for basic research involving flowering response. All plants are autogamous and do not require hand manipulations to produce seeds. Crosses readily and bi-directionally with other birdsfoot trefoil genotypes. Although when used as a female parent must be emasculated, and has a lower successful pod set percentage than when used as a male parent.

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 613540. *Vigna unguiculata* (L.) Walp.

1265; Grif 12375. 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 613541. *Vigna unguiculata* (L.) Walp.

GMN 9; Grif 12385. Collected 05/14/1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 29' S. Longitude 23 deg. 33' E. Elevation 800 m. Lukalaba.

PI 613542. *Vigna unguiculata* (L.) Walp.

GMN 21; Grif 12386. Collected 1989 in Kasai-Oriental, Zaire. Latitude 6 deg. 11' S. Longitude 23 deg. 41' E. Elevation 860 m. Luputa.

PI 613543. *Vigna unguiculata* (L.) Walp.

GMN 54; Grif 12392. Collected 05/17/1989 in Kasai-Oriental, Zaire.
Latitude 6 deg. 45' S. Longitude 23 deg. 57' E. Elevation 780 m. INERA
Station.

PI 613544. *Vigna unguiculata* (L.) Walp.

GMN 80; Grif 12395. Collected 05/19/1989 in Kasai-Oriental, Zaire.
Latitude 6 deg. 10' S. Longitude 24 deg. 27' E. Elevation 950 m. Marche
De Kabinda.

PI 613545. *Vigna unguiculata* (L.) Walp.

GMN 117; Grif 12397. Collected 05/27/1989 in Kasai-Occidental, Zaire.
Latitude 6 deg. 41' S. Longitude 22 deg. 25' E. Elevation 600 m. Kashama
Kalembe.

PI 613546. *Vigna unguiculata* (L.) Walp.

GMN 122; Grif 12398. Collected 05/30/1989 in Kasai-Occidental, Zaire.
Latitude 7 deg. 33' S. Longitude 22 deg. 33' E. Elevation 850 m.
Mukelenge Mashita.

PI 613547. *Vigna unguiculata* (L.) Walp.

GMN 143; Grif 12403. Collected 05/08/1989 in Kasai-Occidental, Zaire.
Latitude 4 deg. 55' S. Longitude 21 deg. 40' E. Elevation 510 m.
Tenamashobe.

The following were 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 613548. *Vigna unguiculata* (L.) Walp.

GMN 222; Grif 12406. Collected 06/13/1989 in Shaba, Zaire. Latitude 10
deg. 44' S. Longitude 25 deg. 27' E. Elevation 980 m. Marche Kolwezi.

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 613549. *Vigna unguiculata* (L.) Walp.

GMN 237; Grif 12408. Collected 06/14/1989 in Shaba, Zaire. Latitude 10
deg. 39' S. Longitude 24 deg. 27' E. Elevation 800 m. Marche De
Mutshatsha.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State
University, Regional Plant Introduction Station, Pullman, Washington
99164-6402, United States. Received 06/01/1992.

PI 613550. *Vigna unguiculata* (L.) Walp.

Cultivated. E93-6; W6 10479; Grif 13966. Collected in Egypt. Market,
Nubaria area of the north Delta area. Both black-eye and brown-eye
types.

The following were collected by Miho Mihov, Institute for Wheat and

Sunflower, "Dobroudja" 9520, General Toschevo, Tolbukhin 9520, Bulgaria; Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Donated by Miho Mihov, Institute for Wheat and Sunflower, "Dobroudja" 9520, General Toschevo, Tolbukhin 9520, Bulgaria. Received 06/30/1995.

PI 613551. *Vigna unguiculata* (L.) Walp.

W6 17239; Grif 13967. Collected 1995 in Bulgaria. Collected from vegetable market in Dobrich. Collected 06/24/1995 in Bulgaria. Collected from vegetable market in Dobrich. Pods harvested young and used like snap beans. Seeds mainly brown in color.

The following were collected by Roshan Klein, Richland, Washington, United States. Donated by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 1996.

PI 613552. *Vigna unguiculata* (L.) Walp.

W6 17435; Grif 13968. Collected 09/1995 in Xinjiang, China. Collected in bazaar (market) in Kashgar. Mixture of seed sizes and seed colors.

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 613553. *Vigna unguiculata* (L.) Walp.

Cultivated. Al 149; Grif 14002. Collected 09/04/1996 in Albania. Latitude 40 deg. 0' 0'' N. Longitude 20 deg. 0' 0'' E. Elevation 110 m. Agricultural Research Institute at Lushnje. Local variety.

The following were donated by N. Quat Ng, International Institute of Tropical Agriculture, Oyo Road, PMB 5320, Ibadan, Oyo, Nigeria. Received 09/28/1992.

PI 613554. *Vigna unguiculata* (L.) Walp. *subsp. unguiculata*

TVu 13719; NVU 9; Grif 12078. Collected in Togo.

PI 613555. *Vigna unguiculata* (L.) Walp. *subsp. unguiculata*

TVu 13720; NVU 10; Grif 12079. Collected in Togo.

PI 613556. *Vigna unguiculata* (L.) Walp. *subsp. unguiculata*

TVu 13722; NVU 12; Grif 12081. Collected in Togo.

PI 613557. *Vigna unguiculata* (L.) Walp. *subsp. unguiculata*

TVu 13727; NVU 22; Grif 12086. Collected in Togo.

The following were collected by Academy of Agricultural Sciences, Korea, North. Donated by Randy Ireson, American Friends Service Committee, 388 Browning Av. SE, Salem, Oregon 97302, United States. Received 06/13/2000.

- PI 613558. *Glycine max* (L.) Merr.**
Cultivated. Hapnong #1; SY 23001. Collected in Korea, North.
- PI 613559. *Glycine max* (L.) Merr.**
Cultivated. Sae P'o #4; SY 23002. Collected in Korea, North.
- PI 613560. *Glycine max* (L.) Merr.**
Cultivated. Ka Chi Kong; SY 23003. Collected in Korea, North.
- PI 613561. *Glycine max* (L.) Merr.**
Cultivated. Nui 2 Hu; SY 23004. Collected in Korea, North.
- PI 613562. *Glycine max* (L.) Merr.**
Cultivated. Nui 2 Hu; SY 23005. Collected in Korea, North.

The following were developed by David A. Dyer, USDA-NRCS, Plant Materials Center, 21001 North Elliot Road, Lockeford, California 95237-0068, United States. Received 06/11/2000.

- PI 613563. *Elymus glaucus* Buckley**
Cultivar. "Mariposa"; 9032907; W6 22534. Collected 1982 in California, United States. Elevation 183 m. Collected from a native stand near Mariposa, California. Not bred but selected for over performance and uniformity. Has been evaluated for foliage size, abundance and uniformity, vigor, resistance to disease and drought. Can be distinguished from other populations tested by combination of (1) greater foliage size and abundance, (2) excellent vigor, (3) excellent resistance to disease, (4) excellent resistance to drought, (5) good seed amount and fill.

The following were collected by Joseph Postman, USDA, ARS, National Plant Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/27/1993.

- PI 613564. *Vaccinium ovalifolium* Sm.**
Wild. Seward-3; CVAC 1118. Collected 08/04/1993 in Alaska, United States. Latitude 60 deg. 8' N. Longitude 149 deg. 25' W. Elevation 30 m. Trail to Gold Finn Lake, 6 miles north of Seward. Spruce forest. Pedigree - Collected from the wild in Alaska. Fruit from several plants. productive plants (photos 2-4,2-5). Collector's #: Seward-3.
- PI 613565. *Vaccinium uliginosum* L.**
Wild. Leila-1; CVAC 1126. Collected 08/11/1993 in Alaska, United States. Latitude 61 deg. 55' N. Longitude 147 deg. 20' W. Elevation 915 m. Milepost 118 Glenn Hwy, E side of road, west side of Leila Lake. Boggy, scattered spruce trees, much willow and other shrubs. Pedigree - Collected from the wild in Alaska.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Herb Hoover, University of Minnesota, St. Paul, Minnesota, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970

Folwell Avenue, St. Paul, Minnesota 55108-6007, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 08/31/1993.

PI 613566. *Vaccinium parvifolium* Sm.

Wild. CVAC 1173. Collected 08/08/1993 in Washington, United States. Latitude 47 deg. 45' N. Longitude 122 deg. 56' W. Elevation 457 m. T26N R2W SE1/4 Sec. 4 & NW1/4 Sec. 9; Olympic Nat'l Forest 3.2 km w/sw of US 101 on FR 2620. Site along road. Some fruit collected from fairly old clearcut along road. Moist coastal forest. Site wandered along road. Some fruit collected from fairly old clearcut along road. Moist coastal forest.

PI 613567. *Vaccinium parvifolium* Sm.

Wild. CVAC 1174. Collected 08/13/1993 in Washington, United States. Latitude 47 deg. 40' N. Longitude 121 deg. 15' W. Elevation 740 m. T26N R13E Sec. 28; Mt. Baker-Snoqualmie Nat'l Forest, FR 6099 approx. 1.6 km from US 2 near Stevens Pass. Along hairpin turns in road. Moist coastal forest. Site was moist, coastal, forest area.

The following were collected by Clive Simms, Woodhurst, 6 Stamford Rd., Essendine, Stamford, Stamford, England PE9 4LQ, United Kingdom. Received 09/06/1994.

PI 613568. *Vaccinium myrtillus* L.

Wild. CVAC 1188. Collected 08/1994 in England, United Kingdom. Latitude 55 deg. 30' N. Longitude 1 deg. 30' W. Elevation 0 m. Kielder Water, Northumberland County. Pedigree - collected from the wild in England.

The following were collected by Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 04/25/1995.

PI 613569. *Vaccinium calycinum* Sm.

Cultivated. CVAC 1191. Collected 04/25/1995 in Oregon, United States. Collected from the NCGR-Corvallis. Pedigree - "Selfed" cross of CVAC 278 at NCGR-Corvallis. CVAC 278.001 was listed as Identification Questionable. On April 24, 1995 Kim Hummer tentatively identified it as *Vaccinium calycium*.

The following were collected by Wes Messinger, Oregon State University, Dept. Horticulture, Corvallis, Oregon 97331, United States. Received 03/24/1995.

PI 613570. *Vaccinium floribundum* Kunth

Wild. WM 392; CVAC 1192. Collected 02/26/1995 in Bolivia. Pedigree - collected from the wild in Bolivia.

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; 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 08/31/1995.

PI 613571. *Vaccinium corymbosum* L.

Wild. *V. corymbosum* (4x); NC 95-5-1; CVAC 1203. Collected 06/13/1995 in South Carolina, United States. Latitude 34 deg. 19' 16'' N. Longitude 79 deg. 17' 8'' W. Elevation 0 m. Florence County, Woods Bay State Park. Right on city road 73 from US 378 to Olanta, SC. South (left) on US 301 in Olanta to city rd 152. Right on rd into the park, 1 mi from US 301. Edges of openings and clearings. Nature trail along the bay. Pedigree - Collected from the wild in South Carolina.

PI 613572. *Vaccinium virgatum* Aiton

Wild. *V. virgatum* [*V. amoenum*]; NC 95-6-1; CVAC 1204. Collected 06/13/1995 in South Carolina, United States. Latitude 33 deg. 56' 49'' N. Longitude 79 deg. 58' 39'' W. Elevation 0 m. Richland County. Vicinity of Congaree Swamp National Monument. Pine flatwoods (abandoned, overgrown old fields with a hardwood understory). Slopes and swampland within the nat'l monument, w/ occasional openings throughout. Pedigree - Collected from the wild in South Carolina.

PI 613573. *Vaccinium pallidum* Aiton

Wild. *V. pallidum*; NC 95-10-1; CVAC 1207. Collected 06/15/1995 in South Carolina, United States. Latitude 34 deg. 3' 5'' N. Longitude 82 deg. 19' 4'' W. Elevation 0 m. Abbeville County, Sumter National Forest, Parsons Mountain. Roadside in understory along slopes of Parson's Mtn. Extensive colonies of *V. pallidum*. Only occasional genotypes were productive of fruit. One clone w/ fairly large fruit covered 2000 sq. ft. Pedigree - Collected from the wild in South Carolina.

The following were collected by Morris X. Smith, 78 Chitwood, Toledo, Oregon 97391, United States. Received 10/19/1995.

PI 613574. *Vaccinium ovatum* Pursh

Cultivated. CVAC 1212. Collected 10/1995 in Oregon, United States. Elevation 0 m. Lincoln county, Chitwood. 6-7 large fruited, highly productive plants growing on collector's property. Selected from abandoned commercial plot nearby. Original plot established in 1930's from selections made throughout coastal range.

The following were collected by Catherine Wright, Alaska Plant Materials Ctr., HCO2, Box 7440, Palmer, Alaska 99645, United States; Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Donated by Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/08/1996.

PI 613575. *Vaccinium uliginosum* L.

Wild. KHCW 96-29-06; CVAC 1275. Collected 08/05/1996 in Alaska, United States. Latitude 61 deg. 10' N. Longitude 150 deg. 5' W. Elevation 30 m. Klatt Bog, Anchorage. Open bog. Associated plants: *Alnus*, *Festuca*, *Potentilla palustris*, *P. fruticosa*, *Picea sitchensis*, *Betula papyrifera*, *B. nana*, *Salix*, *Myrica gale*, *Ledum palustris*, *Vaccinium vitis-idaea*, *Hordeum jubatum*. Pedigree - Collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

The following were donated by Will Bonsall, Scatterseed Project, Box 1167, Farmington, Maine 04938, United States. Received 06/16/2000.

PI 613576 QUAR. *Zea mays* L. subsp. *mays*

Uncertain. ZM-99-01. Collected in India. Purchased from a market.

The following were developed by Enza Zaden B.V., Postbox 7, Paktuinen 21, Enkhuizen, North Holland 1600 AA, Netherlands. Received 06/16/2000.

PI 613577 PVPO. *Lactuca sativa* L.

Cultivar. "ERUPTION". PVP 200000142.

PI 613578 PVPO. *Lactuca sativa* L.

Cultivar. "CRISSY". PVP 200000143.

The following were developed by David Hole, Utah State University, Plants, Soils, & Biometeorology Dept., UMC 4820 Agsci 334, Logan, Utah 84322-4820, United States. Received 06/16/2000.

PI 613579. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "BRIGHAM"; UT90B772-2120; UT002120. PVP 200000168. Pedigree - Woodvale//Primus/SD67-297/3/Steptoe/4/UT Short1. Six-row, midseason, erect-growing, spring feed barley. Spike slightly tapered, erect (lax-to-dense), with essentially no overlap of lateral kernels, and rachis edges covered with short hairs. Leaves waxy and slightly waxy heads. Glumes medium length and essentially covered (sparse on the edges) with long hairs, and have medium-length, semi-rough glume awns. Lemma awns widely long, flaring, and semi-rough, and stigmas are heavily feathered. Seed covered, mid-long, slightly wrinkled with long rachilla hairs and slight crease at base. Aleurone color white and 1000-kernel weight averages 41 g. Most spikes marked by a closed collar at the base. Recommended for irrigation or where annual precipitation is 400 mm or more. In six years (1993-1998, n=96) of Utah irrigated tests, average yield (6881 kg ha⁻¹) exceeded (P<0.05) that of Steptoe (6654 kg ha⁻¹) and Bracken (6212 kg ha⁻¹).

The following were developed by Western Plant Breeders, Inc., Phoenix, Arizona, United States. Received 06/16/2000.

PI 613580 PVPO. *Hordeum vulgare* L.

Cultivar. "XENA". PVP 200000179.

PI 613581 PVPO. *Triticum aestivum* L.

Cultivar. "PRISTINE". PVP 200000180.

The following were developed by Shree P. Singh, University of Idaho, Kimberly Research & Extension, 3793 North 3600 East, Kimberly, Idaho 83341-5076, United States. Received 06/16/2000.

PI 613582. *Phaseolus vulgaris* L.

Cultivar. Pureline. "UI 259". PVP 200000187. Pedigree - NW 59/2/UI 36/6917. Indeterminate growth habit Type III, red colored seeds weighing

35 g 100 seed-1, and matures in 91 d in Idaho. Possesses the bc-2 2 gene for bean common mosaic resistance. Excellent canning quality. Resistant to bean rust in North Dakota. However, susceptible to bean rust in Colorado, Maryland, Michigan, and Nebraska. Highly tolerant of soil zinc deficiency at Kimberly, ID.

PI 613583. *Phaseolus vulgaris* L.

Cultivar. Pureline. "UI 320". PVP 200000188. Pedigree - Emerson/2/PI 226856/UI 76/4/R 544/UI 61/2/Aurora/3/US 1140. Indeterminate growth habit Type III. Pinto colored seeds weighing 43 g 100 seed-1. Resistant to all bean common mosaic virus (BCM) strains, but gives a systemic necrosis reaction when inoculated with the NL-3 strain of BCM necrosis virus. Resistant to bean rust race 53 in Idaho, Colorado, Michigan, Nebraska, and North Dakota. Highly tolerant to soil zinc deficiency at Kimberly, ID.

PI 613584. *Phaseolus vulgaris* L.

Cultivar. Pureline. "UI 465". PVP 200000189. Pedigree - Emerson/2/PI 226856/UI 76/4/R 544/UI 61/2/Aurora/3/US 1140. Indeterminate growth habit Type III. In Idaho, matures in an average of 89 days after planting. Seed coat color dull white, weighing 37 g 100 seed-1. Resistant to all bean common mosaic virus (BCM) isolates, but shows a systemic necrosis reaction when inoculated with pathogenicity groups 3 and 6 of BCM necrosis virus. Thus, possesses unprotected I gene. Resistant to bean rust race 53 in Idaho, Colorado, Michigan, Nebraska, and North Dakota. Highly tolerant to soil zinc deficiency and showed tolerance to water stress at Kimberly, ID.

The following were developed by Western Plant Breeders, Inc., Phoenix, Arizona, United States. Received 06/16/2000.

PI 613585 PVPO. *Triticum aestivum* L.

Cultivar. "HANK". PVP 200000191.

The following were developed by NDSU Research Foundation, North Dakota, United States. Received 06/16/2000.

PI 613586 PVPO. *Triticum aestivum* L.

Cultivar. "REEDER". PVP 200000211.

PI 613587 PVPO. *Triticum aestivum* L.

Cultivar. "PARSHALL". PVP 200000212.

The following were developed by Louisiana Agricultural Experiment Station, Baton Rouge, Louisiana, United States. Received 06/16/2000.

PI 613588 PVPO. *Gossypium hirsutum* L.

Cultivar. "PM 1218 BG/RR". PVP 200000213.

The following were developed by Rijk Zwaan Zaadteelt en Zaadhandel B.V., Meo Voto Beheer BV, De Lier, South Holland, Netherlands. Received 06/16/2000.

PI 613589 PVPO. *Lactuca sativa* L.

Cultivar. "ADAL". PVP 200000214.

PI 613590 PVPO. Lactuca sativa L.
Cultivar. "TORONTO". PVP 200000215.

PI 613591 PVPO. Lactuca sativa L.
Cultivar. "REMIAC". PVP 200000216.

PI 613592 PVPO. Lactuca sativa L.
Cultivar. "FIORETTE". PVP 200000217.

PI 613593 PVPO. Lactuca sativa L.
Cultivar. "BEYNAC". PVP 200000218.

PI 613594 PVPO. Lactuca sativa L.
Cultivar. "CHEROKEE". PVP 200000219.

PI 613595 PVPO. Lactuca sativa L.
Cultivar. "CALVIAC". PVP 200000220.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 06/16/2000.

PI 613596 PVPO. Zea mays L. subsp. mays
Cultivar. "PH51H". PVP 200000221.

PI 613597 PVPO. Zea mays L. subsp. mays
Cultivar. "PH4PV". PVP 200000222.

PI 613598 PVPO. Zea mays L. subsp. mays
Cultivar. "PH1GD". PVP 200000223.

PI 613599 PVPO. Zea mays L. subsp. mays
Cultivar. "PH5OP". PVP 200000224.

The following were developed by North Carolina Agricultural Research Service, North Carolina, United States. Received 06/16/2000.

PI 613600 PVPO. Arachis hypogaea L.
Cultivar. "PERRY". PVP 200000225.

The following were developed by Monsanto Company, United States. Received 06/16/2000.

PI 613601 PVPO. Triticum aestivum L.
Cultivar. "NORPRO". PVP 200000226.

PI 613602 PVPO. Triticum aestivum L.
Cultivar. "NATCHEZ". PVP 200000227.

The following were developed by Donald C. Rasmusson, University of Minnesota, Dept. of Agronomy & Plant Genetics, 411 Borlaug Hall, St. Paul, Minnesota 55108, United States; E. Schiefelbein, University of Minnesota, Dept. of

Agronomy and Plant Genetics, St. Paul, Minnesota 55108, United States; Jochum Wiersma, University of Minnesota, Northwest Experiment Station, 108 Agricultural Research Center, Crookston, Minnesota 56716, United States; R. Dill-Macky, University of Minnesota, St. Paul, Minnesota 55108, United States; Kevin Smith, University of Minnesota, Dept of Agronomy & Plant Genetics, 411 Borlaug Hall, St. Paul, Minnesota 55108, United States. Received 06/16/2000.

PI 613603. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "LACEY"; M98; NSGC 8678. PVP 200000228. Pedigree - M44/Excel//M46/M44/3/M44/Excel//Stander. Released 2000. Six-rowed spring barley adapted to the barley-growing area of the upper midwest of the U.S and possibly in neighboring regions of Canada. Intended to replace the varieties Robust and Stander. Malting quality traits appear to be similar to Robust, the industry six-rowed quality standard. Possesses the ND B112 gene for resistance to spot blotch. Carries the Rpg1 (T) gene for resistance to stem rust. Susceptible to smut and Fusarium head blight.

The following were developed by Cebeco Zaden B.V., Rotterdam, South Holland, Netherlands. Received 06/16/2000.

PI 613604 PVPO. *Pisum sativum* L.

Cultivar. "RODEO". PVP 200000229.

PI 613605 PVPO. *Pisum sativum* L.

Cultivar. "BIG DADDY". PVP 200000230.

PI 613606 PVPO. *Hordeum vulgare* L.

Cultivar. "JERSEY". PVP 200000231.

The following were developed by Novartis Seeds, Inc., United States. Received 06/16/2000.

PI 613607 PVPO. *Glycine max* (L.) Merr.

Cultivar. "S32-Z3". PVP 200000233.

PI 613608 PVPO. *Glycine max* (L.) Merr.

Cultivar. "S25-J5". PVP 200000234.

PI 613609 PVPO. *Glycine max* (L.) Merr.

Cultivar. "S38-T8". PVP 200000235.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 06/16/2000.

PI 613610 PVPO. *Sorghum bicolor* (L.) Moench

Cultivar. "PHE3OQFE". PVP 200000236.

PI 613611 PVPO. *Sorghum bicolor* (L.) Moench

Cultivar. "PHKUOBBE". PVP 200000237.

PI 613612 PVPO. *Sorghum bicolor* (L.) Moench

Cultivar. "PHD8OQFE". PVP 200000238.

PI 613613 PVPO. Sorghum bicolor (L.) Moench
Cultivar. "PHI8OMB". PVP 200000239.

PI 613614 PVPO. Sorghum bicolor (L.) Moench
Cultivar. "PHWI5BBI". PVP 200000240.

PI 613615 PVPO. Zea mays L. **subsp. mays**
Cultivar. "PH3HH". PVP 200000241.

PI 613616 PVPO. Zea mays L. **subsp. mays**
Cultivar. "PH1BC". PVP 200000242.

PI 613617 PVPO. Zea mays L. **subsp. mays**
Cultivar. "PH2EJ". PVP 200000243.

The following were developed by Western Plant Breeders, Inc., Phoenix, Arizona, United States. Received 06/16/2000.

PI 613618 PVPO. Hordeum vulgare L.
Cultivar. "MERESSE". PVP 200000246.

The following were developed by Elias M. Elias, North Dakota State University, Department of Plant Sciences, P.O. Box 5051, Fargo, North Dakota 58104-5051, United States. Received 06/16/2000.

PI 613619. Triticum turgidum subsp. durum (Desf.) Husn.
Cultivar. "PLAZA". PVP 200000247. Pedigree - Plenty / D8291. High yielding, large kernels, strong gluten, average protein, and day length-sensitive durum wheat. Plants semidwarf and medium to late in maturity. Spikes mid-long, awned, oblong, mid-dense, and erect. Kernels amber in color and large sized (35.4 mg). Strong gluten and 131 g kg⁻¹ semolina protein. Grain volume 750.9 kg m⁻². Resistant to stem rust (*Puccinia graminis*) and leaf rust (*P. recondita*).

PI 613620. Triticum turgidum subsp. durum (Desf.) Husn.
Cultivar. "LEBSOCK". PVP 200000248. High yielding, large kernels, strong gluten, average protein, day length-sensitive and very high test weight durum wheat. Plants medium in height and maturity. Spikes mid-long, oblong, awned, mid-dense, and erect. Kernels amber in color and large-sized (37 mg). Strong gluten and 136 g kg⁻¹ semolina protein. Grain volume 781.8 kg m⁻³. Resistant to stem rust (*Puccinia graminis*) and leaf rust (*P. recondita*).

The following were developed by Yates Vegetable Seeds, Australia. Received 06/16/2000.

PI 613621 PVPO. Lactuca sativa L.
Cultivar. "OUTBACK". PVP 200000249.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 06/16/2000.

PI 613622 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH3PG". PVP 200000250.

PI 613623 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH4TW". PVP 200000251.

The following were developed by Stoneville Pedigreed Seed Company,
Stoneville, Mississippi, United States. Received 06/16/2000.

PI 613624 PVPO. *Gossypium hirsutum* L.
Cultivar. "ST 4691B". PVP 200000252.

PI 613625 PVPO. *Gossypium hirsutum* L.
Cultivar. "ST 4892BR". PVP 200000253.

The following were developed by Pioneer Hi-Bred International, Inc, United
States. Received 06/16/2000.

PI 613626 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "PH4TV". PVP 200000254.

PI 613627 PVPO. *Helianthus annuus* L.
Cultivar. "63A30". PVP 200000256.

PI 613628 PVPO. *Helianthus annuus* L.
Cultivar. "PHA319". PVP 200000257.

The following were donated by Walter J. Kaiser, USDA, ARS, Washington State
University, Regional Plant Introduction Station, Pullman, Washington
99164-6402, United States. Received 01/30/1989.

PI 613629. *Trigonella foenum-graecum* L.
M89-4; W6 343. Collected 04/17/1989 in Morocco. Latitude 33 deg. 4' N.
Longitude 7 deg. 36' W. Market place in Settat, Settat Province.

PI 613630. *Trigonella foenum-graecum* L.
M89-28; W6 346. Collected 04/19/1989 in Morocco. Latitude 33 deg. 53'
N. Longitude 5 deg. 37' W. Market place in city of Fes.

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 613631. *Trigonella foenum-graecum* L.
PAK 36; WKP 36; W6 12050; W6 2691. Collected 04/03/1986 in Pakistan.
Purchased in the Friday (Jomah) market, Islamabad.

The following were donated by Martin Steen, Seed Laboratory, Crop and Soil
Science, Washington State University, Pullman, Washington 99164-6420, United
States. Received 03/07/1990.

PI 613632. *Trigonella foenum-graecum* L.

W6 3511. Collected in Australia. Collected in a market in Australia.
Seed came from a vial used for display for over 30 years.

The following were donated by Curtis R. Henning, HC 10, Box 505, Ritzville,
Washington 99169, United States. Received 09/18/1989.

PI 613633. *Trigonella foenum-graecum* L.

Uncertain. W6 1937. Collected 1989 in Australia.

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 10/10/1991.

PI 613634. *Astragalus* sp.

Wild. DJ-3953; W6 8201. Collected 08/14/1989 in Russian Federation.
Elevation 740 m. Next to Tchuya River near the 724km marker on Highway
M-52 toward Aktash, Gorno Altay A.O. Single plant. Very large cone-like
densely pubescent inflorescence.

PI 613635. *Astragalus glycyphyllos* L.

Wild. DJ-3786; W6 8198. Collected 08/05/1989 in Russian Federation.
Elevation 200 m. In shaded birch-pine woods near hotel in Academy Town,
Novosibirsk. Coarse prostrate stems to 60cm. Leaves large with large
opposite leaflets. Pods sickle-shaped to 3cm.

The following were donated by N.I. Vavilov Institute of Plant Industry, 44
Herzen Street, Leningrad, Leningrad 190000, Russian Federation. Received
07/24/1990.

PI 613636. *Astragalus falcatus* Lam.

Cultivated. VIR-37781; W6 4769. Collected in Stavropol, Russian
Federation. Stavropol Territory.

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. Received
01/21/1992.

PI 613637. *Astragalus adsurgens* Pall.

Cultivated. X910066; W6 9542. Collected 09/02/1991 in China. Donated by
Wensu Grassland Station, 19km NW of Aksu, Gansu Province. Plants 1.5m
tall, coarse stemmed. Not very palatable when green, but accepted by all
classes of livestock as hay. Early maturing. Flowers blue-purple.
Possible duplicate of previous U.S. PI accession.

The following were collected by N.I. Vavilov Research Institute of Plant
Industry, 44 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000,
Russian Federation. Received 1998.

PI 613638. *Astragalus falcatus* Lam.

Wild. VIR 35212; W6 2840. Collected 01/16/1990 in Stavropol, Russian Federation. Stavropol region, Russian.

The following were developed by Dept. of Scientific & Industrial Res., Grasslands Division, Palmerston North, North Island, New Zealand. Donated by C. E. Townsend, USDA, ARS, Crops Research Laboratory, 1701 Center Avenue, Fort Collins, Colorado 80526, United States. Received 02/12/1991.

PI 613639. *Astragalus cicer* L.

Wild. AL3593; W6 6613. Collected 1989 in Armenia. Idevan, Armenia, USSR. 1989 Caucasus Expedition SPN 7621, Site 76.

PI 613640. *Astragalus falcatus* Lam.

Wild. AL3596; W6 6616. Collected 1989 in Armenia. Ankavan, Armenian, USSR. 1989 Caucasus Expedition SPN 7243, Site 56.

PI 613641. *Astragalus falcatus* Lam.

Wild. AL3599; W6 6619. Collected 1989 in Armenia. Sevan, Armenia, USSR. 1989 Caucasus Expedition SPN 7612, Site 53.

PI 613642. *Astragalus glycyphyllos* L.

Wild. AL3601; W6 6621. Collected 1989 in Armenia. Foratan, Armenia, USSR. 1989 Caucasus Expedition SPN 7568, Site 47.

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 613643. *Astragalus tibetanus* Benth. ex Bunge

Wild. X93025; W6 12943. Collected 08/07/1993 in Xinjiang, China. Latitude 43 deg. 52' N. Longitude 86 deg. 21' E. Elevation 1600 m. Diverse natural pasture used for hay cutting, gently rolling hills, 44km southwest of Dafeng, Xinjiang.

The following were donated by Thomas A. Lumkin, Washington State University, Crops & Soils Dept., Johnson Hall, Room 263, Pullman, Washington 99164-6420, United States. Received 02/05/1990.

PI 613644. *Astragalus adsurgens* Pall.

W6 3073. Collected in Nei Monggol, China.

The following were collected by J. Arguelles, Crops Research Division - USDA-ARS, New Crops Research Branch, Plant Industry Station, Beltsville, Maryland 20705-2350, United States. Donated by United States Plant Introduction Station - Glenn Dale, Glenn Dale, Maryland, United States. Received 02/03/1986.

PI 613645. *Sesbania sesban* (L.) Merr.

Uncertain. PQ A572; Gentry #48; NSL 200541; A-3117. Collected 02/1986 in

Sonora, Mexico. San Bernardo.

The following were collected by Dan L. Barney, University of Idaho, Research and Extension Center, 2105 N. Boyer, Sandpoint, Idaho 83864-9454, United States. Received 11/28/1995.

PI 613646. *Vaccinium membranaceum* Douglas ex Torr.

Wild. VAME 002; CVAC 1213. Collected 07/22/1993 in Idaho, United States. Latitude 48 deg. 42' 18'' N. Longitude 116 deg. 50' 6'' W. Elevation 745 m. 3 miles south of Lionhead Campground on the east side of Priest Lake in Bonner County, Idaho. Seeds taken from extensive colony along the lake shore. Pedigree - collected from the wild in Idaho.

The following were collected by Bruce Bartlett, USDA, ARS, National Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/28/1995.

PI 613647. *Vaccinium parvifolium* Sm.

Wild. CVAC 1214. Collected 08/22/1995 in Washington, United States. Latitude 47 deg. 50' N. Longitude 121 deg. 52' W. Elevation 100 m. Near Sultan, Snohomish county, Washington. Along side of gravel road near public campsite. Within 5-10 ft of established gravel road in public campsite. Other vegetation: Salal, Douglas Fir, Western Red Cedar, *Vaccinium* ssp., (huckleberry), other *Rubus* ssp. Pedigree - collected from the wild in Washington.

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; 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 613648. *Vaccinium elliottii* Chapm.

Wild. NC 95-8-1; CVAC 1215. Collected 06/14/1995 in South Carolina, United States. Latitude 33 deg. 45' 19'' N. Longitude 82 deg. 12' 13'' W. Elevation 100 m. South Carolina, McCormick County, Modoc, Hamilton Beach State Park. Overgrown old fields in the piedmont, essentially all dry uplands, Pine overstory. Fifty feet above lake shore. Pedigree - collected from the wild in South Carolina.

PI 613649. *Vaccinium stamineum* L.

Wild. NC 95-8-2; CVAC 1216. Collected 06/14/1995 in South Carolina, United States. Latitude 33 deg. 45' 19'' N. Longitude 82 deg. 12' 13'' W. Elevation 100 m. South Carolina, McCormick County, Modoc, Hamilton Beach State Park. Overgrown old fields in the piedmont, essentially all dry uplands, Pine overstory. Fifty feet above lake shore. Pedigree - collected from the wild in South Carolina.

PI 613650. *Vaccinium elliottii* Chapm.

Wild. NC 95-8-4; CVAC 1217. Collected 06/14/1995 in South Carolina, United States. Latitude 33 deg. 45' 19'' N. Longitude 82 deg. 12' 13'' W. Elevation 100 m. South Carolina, McCormick County, Modoc, Hamilton

Beach State Park. Overgrown old fields in the piedmont, essentially all dry uplands, Pine overstory. Fifty feet above lake shore. Pedigree - collected from the wild in South Carolina.

PI 613651. *Vaccinium arboreum* Marshall

Wild. NC 95-13-2; CVAC 1218. Collected 07/07/1995 in Mississippi, United States. Latitude 34 deg. 11' 22'' N. Longitude 88 deg. 57' 55'' W. Mississippi, Forrest County, Ragland Hills. Hwy 98, 10.9 mi east of I-59. Mixed pine and hardwood forest, both mesic and dry to alluvial woods above Leaf River. Alluvial woods area logged and completely overgrown with grasses and broadleaf weeds. Pedigree - collected from the wild in Mississippi.

PI 613652. *Vaccinium darrowii* Camp

Wild. NC 95-15-1; CVAC 1219. Collected 07/08/1995 in Mississippi, United States. Latitude 31 deg. 3' 56'' N. Longitude 88 deg. 34' 14'' W. Mississippi, Perry County, DeSoto National Forest. FS Rd 305 @ intersection with FS Rd 367, 2.3 mi west of MS 29. Longleaf pine savannah, control-burned, upland site. *Gaylussacia dumosa*, *Rubus trivialis*, *R. flagellaris* present. Pedigree - collected from the wild in Mississippi.

PI 613653. *Vaccinium myrsinites* Lam.

Wild. NC 95-15-2; CVAC 1220. Collected 07/08/1995 in Mississippi, United States. Latitude 31 deg. 3' 56'' N. Longitude 88 deg. 34' 14'' W. Mississippi, Perry County, DeSoto National Forest. FS Rd 305 @ intersection with FS Rd 367, 2.3 mi west of MS 29. Longleaf pine savannah, control-burned, upland site. *Gaylussacia dumosa*, *Rubus trivialis*, *R. flagellaris* present. Pedigree - collected from the wild in Mississippi.

PI 613654. *Vaccinium myrsinites* Lam.

Wild. NC 95-15-3; CVAC 1221. Collected 07/08/1995 in Mississippi, United States. Latitude 31 deg. 3' 56'' N. Longitude 88 deg. 34' 14'' W. Mississippi, Perry County, DeSoto National Forest. FS Rd 305 @ intersection with FS Rd 367, 2.3 mi west of MS 29. Longleaf pine savannah, control-burned, upland site. *Gaylussacia dumosa*, *Rubus trivialis*, *R. flagellaris* present. Pedigree - collected from the wild in Mississippi.

PI 613655. *Vaccinium elliottii* Chapm.

Wild. NC 95-22-2; CVAC 1222. Collected 07/13/1995 in Mississippi, United States. Latitude 34 deg. 15' 37'' N. Longitude 88 deg. 53' 9'' W. Mississippi, Tishomingo County, Tishomingo State Park. Upper piedmont vegetation on ridges and in deep shady ravines; closely resembling the Apalachians where rock outcrops occur. Pedigree - collected from the wild in Mississippi.

PI 613656. *Vaccinium elliottii* Chapm.

Wild. NC 95-22-6; CVAC 1223. Collected 07/13/1995 in Mississippi, United States. Latitude 34 deg. 15' 37'' N. Longitude 88 deg. 53' 9'' W. Mississippi, Tishomingo County, Tishomingo State Park. Upper piedmont vegetation on ridges and in deep shady ravines; closely resembling the Apalachians where rock outcrops occur. Pedigree - collected from the wild in Mississippi.

PI 613657. *Vaccinium corymbosum* L.

Wild. NC 95-23-1; CVAC 1224. Collected 07/14/1995 in Mississippi, United States. Latitude 34 deg. 36' 25'' N. Longitude 88 deg. 12' 17'' W. Mississippi, Lafayette County, Holly Springs National Forest. FS Rd 841, 1.1 mi south of jct with Cty Rd 244 (244 turns off Hwy7 between Oxford and Holly Springs). Open woodland in the National Forest, control-burned 3 yrs ago. Dry uplands. Pedigree - collected from the wild in Mississippi.

PI 613658. *Vaccinium corymbosum* L.

Wild. NC 95-23-2; CVAC 1225. Collected 07/14/1995 in Mississippi, United States. Latitude 34 deg. 36' 25'' N. Longitude 88 deg. 12' 17'' W. Mississippi, Lafayette County, Holly Springs National Forest. FS Rd 841, 1.1 mi south of jct with Cty Rd 244 (244 turns off Hwy7 between Oxford and Holly Springs). Open woodland in the National Forest, control-burned 3 yrs ago. Dry uplands. Pedigree - collected from the wild in Mississippi.

PI 613659. *Vaccinium corymbosum* L.

Wild. NC 95-23-5; CVAC 1226. Collected 07/14/1995 in Mississippi, United States. Latitude 34 deg. 36' 25'' N. Longitude 88 deg. 12' 17'' W. Mississippi, Lafayette County, Holly Springs National Forest. FS Rd 841, 1.1 mi south of jct with Cty Rd 244 (244 turns off Hwy7 between Oxford and Holly Springs). Open woodland in the National Forest, control-burned 3 yrs ago. Dry uplands. Pedigree - collected from the wild in Mississippi.

PI 613660. *Vaccinium hybrid*

Wild. NC 95-24-1; CVAC 1227. Collected 07/14/1995 in Mississippi, United States. Latitude 34 deg. 29' 51'' N. Longitude 89 deg. 23' 58'' W. Mississippi, Montgomery County. Approx 5 mi NE of French Camp on Cty Rd 413 and 0.1 mi off 413 on cut-off to the left in a recent clearcut. Scattered *Vaccinium* species plants near a power line row on the right in the clearcut. Pedigree - collected from the wild in Mississippi.

PI 613661. *Vaccinium darrowii* Camp

Wild. NC 95-25-1; CVAC 1228. Collected 07/17/1995 in Louisiana, United States. Latitude 33 deg. 20' 50'' N. Longitude 89 deg. 27' 43'' W. Louisiana, Washington Parish, LSU Lee Memorial Forrest, Sheridan. Clearcut. Pedigree - collected from the wild in Louisiana.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States; Herbert Hoover, PO Box 194, Milford, Minnesota, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613662. *Vaccinium parvifolium* Sm.

Wild. LIG-2; CVAC 1229. Collected 08/08/1993 in Washington, United States. Latitude 47 deg. 45' 28'' N. Longitude 122 deg. 57' 39'' W. Elevation 792 m. Olympic National Forest. 13.2 km (8.2 mi) west/southwest of US 101 on FR 2620 where FR 2620, FR 2650 and FR 50 join. T26N R2W Sec 8. Jefferson County. Upland site. Do to clear cuts,

generally exposed site. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613663. *Vaccinium ovalifolium* Sm.

Wild. LIG-9; CVAC 1230. Collected 08/09/1993 in Washington, United States. Latitude 48 deg. 6' 0'' N. Longitude 123 deg. 58' 45'' W. Elevation 610 m. Olympic National Forest. Along FR 3040. T30N R10W Sec 15. Clallam County. Very steep hillside, clearcut. Collected on south (uphill) side of road. Moist site. Pedigree - collected from the wild in Washington.

PI 613664. *Vaccinium parvifolium* Sm.

Wild. LIG-9; CVAC 1231. Collected 08/09/1993 in Washington, United States. Latitude 48 deg. 6' 0'' N. Longitude 123 deg. 58' 45'' W. Elevation 610 m. Olympic National Forest. Along FR 3040. T30N R10W Sec 15. Clallam County. Very steep hillside, clearcut. Collected on south (uphill) side of road. Moist site. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Ted Mackey, Horticultural Crops Research Laboratory, 3420 Orchard St., Corvallis, Oregon 97330, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States; Richard E. Harrison, Sweet Briar Development, 1767 San Juan Road, Aromas, California 95004, United States; Herbert Hoover, PO Box 194, Milford, Minnesota, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613665. *Vaccinium ovalifolium* Sm.

Wild. LIG-10A; CVAC 1232. Collected 08/09/1993 in Washington, United States. Latitude 48 deg. 5' 40'' N. Longitude 124 deg. 2' 25'' W. Elevation 915 m. Olympic National Forest. 17 km southwest on FR 3040 from WA 112. T30N R10W Sec 18. Clallam County. Collected alongside road. Associated species: *Abies amabilis*. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970

Folwell Avenue, St. Paul, Minnesota 55108-6007, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613666. *Vaccinium ovalifolium* Sm.

Wild. LIG-12; CVAC 1233. Collected 08/10/1993 in Washington, United States. Latitude 48 deg. 45' 45'' N. Longitude 121 deg. 40' 30'' W. Elevation 550 m. Mt. Baker-Snoqualmie National Forest. In vicinity of Baker Lake. WA 20 to FR 11 then approx 5.5 km north on FR 1130, 0.16 km past bridge over Boulder Creek. T38N R9E Sec 19. Whatcom County. Vegetation tended to be thick. Some parts of site in shaded road area where trees grew over road but tended to be well lit. Moist area. Typical coastal forest. Pedigree - collected from the wild in Washington.

PI 613667. *Vaccinium parvifolium* Sm.

Wild. LIG-12; CVAC 1234. Collected 08/10/1993 in Washington, United States. Latitude 48 deg. 45' 45'' N. Longitude 121 deg. 40' 30'' W. Elevation 550 m. Mt. Baker-Snoqualmie National Forest. In vicinity of Baker Lake. WA 20 to FR 11 then approx 5.5 km north on FR 1130, 0.16 km past bridge over Boulder Creek. T38N R9E Sec 19. Whatcom County. Vegetation tended to be thick. Some parts of site in shaded road area where trees grew over road but tended to be well lit. Moist area. Typical coastal forest. Pedigree - collected from the wild in Washington.

PI 613668. *Vaccinium scoparium* Leiberg

Wild. LIG-22; CVAC 1235. Collected 08/12/1993 in Washington, United States. Latitude 48 deg. 38' 30'' N. Longitude 120 deg. 23' 50'' W. Elevation 1720 m. Okanogan National Forest. FR 5225 to Fr 200, at 'T' on ridge top go right (south east) .32 km to Goats Peak Trailhead. T36N R20E Sec 6. Washington County. Fairly dry. *Pseudotsuga menziesii*, *Picea* sp., *Pinus contorta*. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States; Richard E. Harrison, Sweet Briar Development, 1767 San Juan Road, Aromas, California 95004, United States; Herbert Hoover, PO Box 194, Milford, Minnesota, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613669. *Vaccinium membranaceum* Douglas ex Torr.

Wild. LIG-23; CVAC 1236. Collected 08/13/1993 in Washington, United States. Latitude 47 deg. 40' 0'' N. Longitude 121 deg. 5' 25'' W. Elevation 1525 m. Wenatchee National Forest. T26N R14E/R13E Sec 11 and Sec 14. Washington County. In open fields to the north of Steven's Pass. Open shrubby area on south facing slope. Subalpine 'meadow'. Associated species: Indian Paint Brush, *Ribes* sp. (*R. lacustre* ?), *Fragaria virginiana*. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613670. *Vaccinium ovalifolium* Sm.

Wild. LIG-25; CVAC 1237. Collected 08/13/1993 in Washington, United States. Latitude 47 deg. 47' 15'' N. Longitude 121 deg. 2' 30'' W. Elevation 1005 m. Wenatchee National Forest. FR 6700 0.8-1.6 km northwest of US 2. T26N R14E Sec 1. Washington County. Associated with *Acer circinatum*, *Pseudotsuga menziesii*, *Alnus* sp. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States; Richard E. Harrison, Sweet Briar Development, 1767 San Juan Road, Aromas, California 95004, United States; Herbert Hoover, PO Box 194, Milford, Minnesota, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613671. *Vaccinium deliciosum* Piper

Wild. LIG-27; CVAC 1238. Collected 08/13/1993 in Washington, United States. Latitude 47 deg. 48' 0'' N. Longitude 121 deg. 4' 35'' W. Elevation 1205 m. Wenatchee National Forest. Travel towards US 2 from site LIG-24 along FR 6700 to base of ridge. Bog area on south side of road. Very organic, moist soils. Associated with *Spirea* spp., *Picea* spp. Pedigree - collected from the wild in Washington.

PI 613672. *Vaccinium ovalifolium* Sm.

Wild. LIG-33; CVAC 1239. Collected 08/15/1993 in Washington, United States. Latitude 46 deg. 42' 10'' N. Longitude 121 deg. 44' 50'' W. Elevation 930 m. Gifford Pinchot National Forest. Continue up FR 5260 from site LIG-32, old clearcut on east side of road. Washington County. T14N R8E Sec 13. Old clear cut. In more open areas, especially around old tree stumps, *R. ursinus* growing well. Associated with *Alnus* ssp. Pedigree - collected from the wild in Washington.

PI 613673. *Vaccinium membranaceum* Douglas ex Torr.

Wild. LIG-34; CVAC 1240. Collected 08/15/1993 in Washington, United States. Latitude 46 deg. 42' 30'' N. Longitude 121 deg. 44' 0'' W. Elevation 1175 m. Gifford Pinchot National Forest. End of FR 5260. T14N R8E Sec 13 and Sec 12, T14N R9E Sec 18. Washington County. Associated with *Abies amabilis*, *V. ovalifolium* Exposed hilltop. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small

Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613674. *Vaccinium membranaceum* Douglas ex Torr.

Wild. LIG-35; CVAC 1241. Collected 08/16/1993 in Washington, United States. Latitude 46 deg. 39' 25'' N. Longitude 121 deg. 21' 55'' W. Elevation 1295 m. Wenatchee National Forest. From US 12, at Dog Lake NFS Campground on unmarked trail around south side of lake. T14N R11E Sec 36. Lewis County. High elevation, moist, associated with *Ribes* sp. (*R. viscosissimum* ?) and *Sambucus cerulea*. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States; Richard E. Harrison, Sweet Briar Development, 1767 San Juan Road, Aromas, California 95004, United States; Herbert Hoover, PO Box 194, Milford, Minnesota, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613675. *Vaccinium membranaceum* Douglas ex Torr.

Wild. LIG-41; CVAC 1242. Collected 08/18/1993 in Washington, United States. Latitude 46 deg. 5' 35'' N. Longitude 121 deg. 46' 5'' W. Elevation 0 m. Gifford Pinchot National Forest. FR 30 to FR 24, south 1.3 km to Sawtooth Huckleberry Fields (Mt. Adams Huckleberry Fields). Skamania County. Several square kilometers of mostly *V. membranaceum*. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Ted Mackey, Horticultural Crops Research Laboratory, 3420 Orchard St., Corvallis, Oregon 97330, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States; Richard E. Harrison, Sweet Briar Development, 1767 San Juan Road, Aromas, California 95004, United States; Herbert Hoover, PO Box 194, Milford, Minnesota, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613676. *Vaccinium ovalifolium* Sm.

Wild. LIG-10B; CVAC 1243. Collected 08/09/1993 in Washington, United States. Latitude 48 deg. 5' 40'' N. Longitude 124 deg. 2' 25'' W. Elevation 915 m. Olympic National Forest. 17 km southwest on FR 3040 from WA 112. T30N R10W Sec 18. Clallam County. Collected alongside road.

Associated species: *Abies amabilis*. Pedigree - collected from the wild in Washington.

The following were collected by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Rick Harrison, University of Minnesota, Department of Horticultural Science, 1970 Folwell Avenue, St. Paul, Minnesota 55108-6007, United States. Donated by Chad Finn, USDA, ARS, NW Center for Small Fruits Research, 3420 NW Orchard Street, Corvallis, Oregon 97339, United States. Received 03/01/1995.

PI 613677. *Vaccinium ovalifolium* Sm.

Wild. LIG-10C; CVAC 1244. Collected 08/09/1993 in Washington, United States. Latitude 48 deg. 5' 40'' N. Longitude 124 deg. 2' 25'' W. Elevation 915 m. Olympic National Forest. 17 km southwest on FR 3040 from WA 112. T30N R10W Sec 18. Clallam County. Collected alongside road. Associated species: *Abies amabilis*. Pedigree - collected from the wild in Washington.

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 06/06/1996.

PI 613678. *Vaccinium stamineum* L.

Wild. NC 96-2-3; CVAC 1245. Collected 05/13/1996 in North Carolina, United States. Latitude 34 deg. 15' 34'' N. Longitude 78 deg. 28' 39'' W. Elevation 22 m. Columbus County, North Carolina. Lake Waccaman State Park. About 15m above the edge of Lake Waccaman in deep sand scrub. Pedigree - collected from the wild in North Carolina.

The following were collected by Catherine Wright, Alaska Plant Materials Ctr., HCO2, Box 7440, Palmer, Alaska 99645, United States; Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Donated by Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/08/1996.

PI 613679. *Vaccinium uliginosum* L.

Wild. KHCW 96-04-01; CVAC 1246. Collected 07/30/1996 in Alaska, United States. Latitude 60 deg. 29' 29'' N. Longitude 145 deg. 52' 14'' W. Elevation 10 m. Whitshed Road Extended, about 8 miles southwest of Cordova. Exposed Peat bog, a few scattered scrub spruce. Associated plants: *Vaccinium uliginosum*, *Spiranthes romanzoa*, *Carex*, *Vaccinium oxycoccus*, *V. vitis-idaea*, *Rubus spectabilis*, *Drosera rotundifolia*, *Cornus canadensis*, *Salix* and *Alnus*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996. Typical *Fragaria chiloensis* subsp. *pacifica* with spreading hairs on pedioles. Fruit past ripe on 29 August 1996. One flower in bloom.

PI 613680. *Vaccinium vitis-idaea* L.

Wild. KHCW 96-04-02; CVAC 1247. Collected 07/30/1996 in Alaska, United States. Latitude 60 deg. 29' 29'' N. Longitude 145 deg. 52' 14'' W. Elevation 10 m. Whitshed Road Extended, about 8 miles southwest of

Cordova. Exposed Peat bog, a few scattered scrub spruce. Associated plants: *Vaccinium uliginosum*, *Spiranthes romanzoa*, *Carex*, *Vaccinium oxycoccus*, *V. vitis-idaea*, *Rubus spectabilis*, *Drosera rotundifolia*, *Cornus canadensis*, *Salix* and *Alnus*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613681. *Vaccinium oxycoccus* L.

Wild. KHCW 96-04-03; CVAC 1248. Collected 07/30/1996 in Alaska, United States. Latitude 60 deg. 29' 29'' N. Longitude 145 deg. 52' 14'' W. Elevation 10 m. Whitshed Road Extended, about 8 miles southwest of Cordova. Exposed Peat bog, a few scattered scrub spruce. Associated plants: *Vaccinium uliginosum*, *Spiranthes romanzoa*, *Carex*, *Vaccinium oxycoccus*, *V. vitis-idaea*, *Rubus spectabilis*, *Drosera rotundifolia*, *Cornus canadensis*, *Salix* and *Alnus*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613682. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-05-01; CVAC 1249. Collected 07/30/1996 in Alaska, United States. Latitude 60 deg. 29' 29'' N. Longitude 145 deg. 52' 30'' W. Elevation 10 m. One mile on trail after end of Whitshed road. About 8 miles southwest of Cordova. Peat tussics. Associated plants: *Spiranthes calthifolium*, *Menziesia romanzoffiana*, *Geum ferruginea*, *Petasites frigidus*, *Festuca*, *Alnus*, *Tsuga mertensiana*, *Betula nana*, *Tofieldia coccinea*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613683. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-09-01; CVAC 1250. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 30' N. Longitude 145 deg. 20' W. Elevation 20 m. McKinley Cabin Lake Trail about 1 mile north of Copper River Road towards McKinley Lake. Plants growing on either side of the trail in shade. Associated plants: *Cornus*, *Echinopanax*, *Menziesia*, *Tsuga mertensiana*, *Picea sitchensis*, *Lycopodium annotinum*, foam flower and *Dryopteris dilatata*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613684. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-09-02; CVAC 1251. Collected 07/30/1996 in Alaska, United States. Latitude 60 deg. 30' N. Longitude 145 deg. 20' W. Elevation 20 m. McKinley Cabin Lake Trail about 1 mile north of Copper River Road towards McKinley Lake. Shaded by hemlock and spruce. Associated plants: *Cornus*, *Echinopanax*, *Menziesia*, *Tsuga mertensiana*, *Picea sitchensis*, *Lycopodium annotinum*, foam flower and *Dryopteris dilatata*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613685. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-09-06; CVAC 1252. Collected 07/30/1996 in Alaska, United States. Latitude 60 deg. 30' N. Longitude 145 deg. 20' W. Elevation 20 m. McKinley Cabin Lake Trail about 1 mile north of Copper River Road towards McKinley Lake. Plants growing about halfway to lake. Shaded by hemlock and spruce. Associated plants: *Cornus*, *Echinopanax*, *Menziesia*, *Tsuga mertensiana*, *Picea sitchensis*, *Lycopodium annotinum*, foam flower and *Dryopteris dilatata*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613686. *Vaccinium oxycoccus* L.

Wild. KHCW 96-11-01; CVAC 1253. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 29' N. Longitude 145 deg. 25' W. Elevation 15 m. About 0.5 mile from Copper River Road on Pipeline Lakes Trail. Muskeeg, direct sun, sphagnum bog. Associated plants: *Empetrum nigrum*, *Drosera rotundifolia*, *Elymus arenarius*, *Fritillaria camschatcensis*, *Vaccinium uliginosum*, *Caltha leptosepala*, *Andromeda polifolia*, *Spiranthes romanzoffiana*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613687. *Vaccinium vitis-idaea* L.

Wild. KHCW 96-12-01A; *V. vitis-idaea* Muskeeg KHCW 96-12-01A; CVAC 1254. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 29' N. Longitude 145 deg. 28' W. Elevation 15 m. About 0.5 mile from Copper River Road on Muskeeg Meander Trail. Associated plants: *Salix alaxensis*, *Picea sitchensis*, *Festuca Rubus spectabilis*, *Cornus canadensis*, *Gentian*, *Epilobium angustifolium*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613688. *Vaccinium oxycoccos* L.

Wild. KHCW 96-12-02; CVAC 1255. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 29' N. Longitude 145 deg. 28' W. Elevation 15 m. About 0.5 mile from Copper River Road on Muskeeg Meander Trail. Associated plants: *Salix alaxensis*, *Picea sitchensis*, *Festuca Rubus spectabilis*, *Cornus canadensis*, *Gentian*, *Epilobium angustifolium*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613689. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-13-03; CVAC 1256. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 30' N. Longitude 145 deg. 30' W. Elevation 15 m. Near the parking lot by Cabin Lake. About 10 miles east of Cordova. Open edge of woods. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613690. *Vaccinium vitis-idaea* L.

Wild. KHCW 96-13-05; CVAC 1257. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 30' N. Longitude 145 deg. 30' W. Elevation 15 m. Near the parking lot by Cabin Lake. About 10 miles east of Cordova. Open edge of woods. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613691. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-13-07; CVAC 1258. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 30' N. Longitude 145 deg. 30' W. Elevation 15 m. Near the parking lot by Cabin Lake. About 10 miles east of Cordova. Open edge of woods. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613692. *Vaccinium vitis-idaea* L.

Wild. CVAC 1259. Collected 08/02/1996 in Alaska, United States. Latitude 57 deg. 28' N. Longitude 152 deg. 20' W. Elevation 30 m. About one mile south east of the Loran Coast Guard Station near the Pasagshak State Recreation Site, Kodiak Island. Boggy area near edge of road. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613693. *Vaccinium uliginosum* L.

Wild. KHCW 96-19-01; CVAC 1260. Collected 08/02/1996 in Alaska, United States. Latitude 57 deg. 28' N. Longitude 152 deg. 18' W. Elevation 30 m. About two miles south east of the Loran Coast Guard Station near the Pasagshak State Recreation Site, Kodiak Island. Boggy area near edge of road. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613694. *Vaccinium uliginosum* L.

Wild. KHCW 96-19-01; CVAC 1261. Collected 08/02/1996 in Alaska, United States. Latitude 57 deg. 28' N. Longitude 152 deg. 18' W. Elevation 30 m. About two miles south east of the Loran Coast Guard Station near the Pasagshak State Recreation Site, Kodiak Island. Boggy area near edge of road. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613695. *Vaccinium vitis-idaea* L.

Wild. KHCW 96-21-01; CVAC 1262. Collected 08/03/1996 in Alaska, United States. Latitude 57 deg. 35' N. Longitude 152 deg. 41' W. Elevation 802 m. Pillar Mountain, about 5 miles west of Kodiak, Kodiak Island. Boggy basins at the top of mountain. Associated plants: *Empetrum nigrum*, *Aconitum delphinifolium*, *Epilobium angustifolium*, *Campanula*, *Polygonum*, *Aquilegia*, *Cornus canadensis*, *Geranium*, *Solidago*, *Potentilla villosa*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613696. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-22-01; CVAC 1263. Collected 08/03/1996 in Alaska, United States. Latitude 57 deg. 40' N. Longitude 152 deg. 25' W. Elevation 30 m. Southeast shore of Island Lake about 2 miles north of Kodiak, Kodiak Island. Open woods at end of road. Plants growing in understory of spruce. Associated Plants: *Picea sitchensis*, *Alnus*, *Epilobium angustifolium*, *Rumex arcticus*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613697. *Vaccinium oxycoccos* L.

Wild. KHCW 96-23-03A; KHCW 96-23-03; *V. oxycoccos* Soldotna KHCW 96-23-03A; CVAC 1264. Collected 08/04/1996 in Alaska, United States. Latitude 60 deg. 25' N. Longitude 151 deg. 5' W. Elevation 30 m. Plants were collected from nature trails around the Kenai National Wildlife Refuge Headquarters, Skihill Road Soldotna, Kenai Peninsula. Sphagnum bog by nature trail near lake. Associated Plants: *Betula nana*, *Ledum palustris* subsp. *groenlandicum*, *Andromeda polifolis*, *Geacaulon lividum*, *Empetrum nigrum*, *Vaccinium vitis-idaea*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613698. *Vaccinium oxycoccos* L.

Wild. KHCW 96-23-03B; KHCW 96-23-03; *V. oxycoccos* Soldotna KHCW 96-23-03B; CVAC 1265. Collected 08/04/1996 in Alaska, United States. Latitude 60 deg. 25' N. Longitude 151 deg. 5' W. Elevation 30 m. Plants were collected from nature trails around the Kenai National Wildlife Refuge Headquarters, Skihill Road Soldotna, Kenai Peninsula. Sphagnum bog by nature trail near lake. Associated Plants: *Betula nana*, *Ledum palustris* subsp. *groenlandicum*, *Andromeda polifolis*, *Geacaulon lividum*, *Empetrum nigrum*, *Vaccinium vitis-idaea*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613699. *Vaccinium vitis-idaea* L.

Wild. KHCW 96-23-04A; KHCW 96-23-04; *V. vitis-idaea* Soldotna KHCW 96-23-04A; CVAC 1266. Collected 08/04/1996 in Alaska, United States. Latitude 60 deg. 25' N. Longitude 151 deg. 5' W. Elevation 30 m. Plants were collected from nature trails around the Kenai National Wildlife Refuge Headquarters, Skihill Road Soldotna, Kenai Penninsula. Sphagnum bog by nature trail near lake. Associated Plants: *Betula nana*, *Ledum palustris* subsp. *groenlandicum*, *Andromeda polifolis*, *Geacaulon lividum*, *Empetrum nigrum*, *Vaccinium vitis-idaea*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613700. *Vaccinium vitis-idaea* L.

Wild. KHCW 96-23-04B; KHCW 96-23-04; *V. vitis-idaea* Soldotna KHCW 96-23-04B; CVAC 1267. Collected 08/04/1996 in Alaska, United States. Latitude 60 deg. 25' N. Longitude 151 deg. 5' W. Elevation 30 m. Plants were collected from nature trails around the Kenai National Wildlife Refuge Headquarters, Skihill Road Soldotna, Kenai Penninsula. Sphagnum bog by nature trail near lake. Associated Plants: *Betula nana*, *Ledum palustris* subsp. *groenlandicum*, *Andromeda polifolis*, *Geacaulon lividum*, *Empetrum nigrum*, *Vaccinium vitis-idaea*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613701. *Vaccinium uliginosum* L.

Wild. KHCW 96-23-05; CVAC 1268. Collected 08/04/1996 in Alaska, United States. Latitude 60 deg. 25' N. Longitude 151 deg. 5' W. Elevation 30 m. Plants were collected from nature trails around the Kenai National Wildlife Refuge Headquarters, Skihill Road Soldotna, Kenai Penninsula. Sphagnum bog by nature trail near lake. Associated Plants: *Betula nana*, *Ledum palustris* subsp. *groenlandicum*, *Andromeda polifolis*, *Geacaulon lividum*, *Empetrum nigrum*, *Vaccinium vitis-idaea*. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613702. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-26-03; CVAC 1269. Collected 08/05/1996 in Alaska, United States. Latitude 60 deg. 9' N. Longitude 149 deg. 10' W. Elevation 100 m. Eight miles north of Seward on Golden Finn Trail, on west side of road, about 0.5 mile from the Seward Highway. Open woods. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613703. *Vaccinium ovalifolium* Sm.

Wild. KHCW 96-27-03; CVAC 1270. Collected 08/05/1996 in Alaska, United States. Latitude 60 deg. 45' N. Longitude 148 deg. 40' W. Elevation 75 m. About 1 mile south of Whittier, towards Whittier Creek, near camping area. Fruit collected on hill behind road to 'Salmon Run.'. Open woods, edges of roads. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613704. *Vaccinium uliginosum* L.

Wild. KHCW 96-27-05; CVAC 1271. Collected 08/05/1996 in Alaska, United States. Latitude 60 deg. 45' N. Longitude 148 deg. 40' W. Elevation 75 m. About 1 mile south of Whittier, towards Whittier Creek, near camping area. Fruit collected on hill behind road to 'Salmon Run.'. Open woods, edges of roads. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613705. *Vaccinium oxycoccos* L.

Wild. KHCW 96-27-06; CVAC 1272. Collected 08/05/1996 in Alaska, United States. Latitude 60 deg. 45' N. Longitude 148 deg. 40' W. Elevation 75 m. About 1 mile south of Whittier, towards Whittier Creek, near camping area. Fruit collected on hill behind road to 'Salmon Run.'. Open woods, edges of roads. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613706. *Vaccinium uliginosum* L.

Wild. KHCW 96-28-02; CVAC 1273. Collected 08/05/1996 in Alaska, United States. Latitude 60 deg. 55' N. Longitude 149 deg. 0' W. Elevation 75 m. Moose Meadows bog at the end of Alberg Street Girdwood, Alaska. Sphagnum bog, open sun, scattered spruce. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

PI 613707. *Vaccinium oxycoccos* L.

Wild. KHCW 96-28-04; CVAC 1274. Collected 08/05/1996 in Alaska, United States. Latitude 60 deg. 55' N. Longitude 149 deg. 0' W. Elevation 75 m. Moose Meadows bog at the end of Alberg Street Girdwood, Alaska. Sphagnum bog, open sun, scattered spruce. Pedigree - collected from the wild in Alaska. USDA Sponsored plant collecting expedition, 1996.

The following were collected by T. Van Bruggen, University of South Dakota, Dept. of Biology, Vermillion, South Dakota 57069, United States. Donated by C. Lay, South Dakota State University, Plant Science Dept., P.O. Box 2207-A, Brookings, South Dakota 57007, United States. Received 10/17/1983.

PI 613708. *Helianthus annuus* L.

Wild. TVB-32; ANN-1768; Ames 2713. Collected 10/01/1982 in South Dakota, United States. Latitude 42 deg. 49' 0'' N. Longitude 96 deg. 41' 40'' W. SW 1/4 of SE 1/4, Section 13, R-50W, T-90N, Union County. Bank of Missouri River.

PI 613709. *Helianthus annuus* L.

Wild. TVB-73; ANN-1796; Ames 2743. Collected 10/14/1982 in South Dakota, United States. Latitude 42 deg. 49' 0'' N. Longitude 96 deg. 41' 40'' W. SW 1/4, Section 29, R-50W, T-91N, Union County. Bank of Missouri River.

The following were donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613710. *Helianthus annuus* L.

Wild. ANN-19; Ames 6124. Collected 09/1972 in South Dakota, United States. Latitude 44 deg. 23' 15'' N. Longitude 97 deg. 33' 0'' W. De Smet.

PI 613711. *Helianthus annuus* L.

Wild. ANN-20; Ames 6125. Collected 09/1972 in South Dakota, United States. Latitude 44 deg. 3' 13'' N. Longitude 98 deg. 16' 31'' W. Woonsocket.

PI 613712. *Helianthus annuus* L.

Wild. ANN-68; Ames 6163. Collected 09/1972 in Wyoming, United States. Latitude 42 deg. 45' 45'' N. Longitude 104 deg. 27' 6'' W. Lusk.

- PI 613713. *Helianthus annuus* L.**
Wild. ANN-76; Ames 6170. Collected 09/1972 in Wyoming, United States.
Latitude 41 deg. 47' 10'' N. Longitude 104 deg. 15' 51'' W. Hawk
Springs.
- PI 613714. *Helianthus annuus* L.**
Wild. ANN-83; Ames 6175. Collected 09/1972 in Colorado, United States.
Latitude 40 deg. 52' 17'' N. Longitude 104 deg. 13' 29'' W. Grover.
- PI 613715. *Helianthus annuus* L.**
Wild. ANN-85; Ames 6176. Collected 09/1972 in Colorado, United States.
Latitude 40 deg. 38' 5'' N. Longitude 104 deg. 19' 35'' W. Briggsdale.
- PI 613716. *Helianthus annuus* L.**
Wild. ANN-86; Ames 6177. Collected 09/1972 in Colorado, United States.
Latitude 40 deg. 38' 5'' N. Longitude 104 deg. 19' 35'' W. Briggsdale.
- PI 613717. *Helianthus annuus* L.**
Wild. ANN-92; Ames 6182. Collected 09/1972 in Colorado, United States.
Latitude 39 deg. 44' 27'' N. Longitude 103 deg. 35' 28'' W. Last Chance.
- PI 613718. *Helianthus annuus* L.**
Wild. ANN-95; Ames 6184. Collected 09/1972 in Colorado, United States.
Latitude 39 deg. 15' 50'' N. Longitude 113 deg. 41' 30'' W. Limon.
- PI 613719. *Helianthus annuus* L.**
Wild. ANN-98; Ames 6186. Collected 09/1972 in Colorado, United States.
Latitude 38 deg. 8' 10'' N. Longitude 103 deg. 28' 10'' W. Hugo.
- PI 613720. *Helianthus annuus* L.**
Wild. ANN-113; Ames 6198. Collected 09/1972 in Kansas, United States.
Latitude 37 deg. 58' 18'' N. Longitude 100 deg. 52' 20'' W. Garden City.
- PI 613721. *Helianthus annuus* L.**
Wild. ANN-174; Ames 6233. Collected 09/1972 in South Dakota, United
States. Latitude 45 deg. 0' 42'' N. Longitude 99 deg. 57' 19'' W.
Gettysburg, Wallworth County.
- PI 613722. *Helianthus annuus* L.**
Wild. ANN-172; Ames 6235. Collected 09/1972 in South Dakota, United
States. Latitude 44 deg. 42' 29'' N. Longitude 100 deg. 3' 34'' W.
Onida.
- PI 613723. *Helianthus annuus* L.**
Wild. ANN-185; Ames 6242. Collected 09/1972 in North Dakota, United
States. Latitude 46 deg. 12' 1'' N. Longitude 97 deg. 57' 45'' W. Crete,
Sargent County.
- PI 613724. *Helianthus annuus* L.**
Wild. ANN-188; Ames 6244. Collected 09/1972 in North Dakota, United
States. Latitude 46 deg. 4' 27'' N. Longitude 97 deg. 23' 2'' W. Cayuga,
Sargent County.
- PI 613725. *Helianthus annuus* L.**
Wild. ANN-190; Ames 6245. Collected 09/1972 in North Dakota, United
States. Latitude 46 deg. 6' 28'' N. Longitude 97 deg. 38' 10'' W.
Forman, Sargent County.

The following were collected by G. Nabhan, Desert Botanic Gardens, 1201 W. Galvin Parkway, Phoenix, Arizona 85008, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613726. *Helianthus annuus* L.

Wild. GN-1134; ANN-1246; Ames 6854. Collected 11/04/1979 in Arizona, United States. Latitude 35 deg. 47' 0'' N. Longitude 110 deg. 30' 10'' W. Hopi Indian Reservation 2nd Mesa, 1.5 miles south of 2nd Mesa store on highway to Winslow, Navajo County.

The following were collected by C.E. Rogers. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613727. *Helianthus annuus* L.

Wild. ANN-1114; Ames 6911. Collected 09/08/1979 in Arkansas, United States. Latitude 36 deg. 24' 4'' N. Longitude 93 deg. 44' 16'' W. Highway 23, south edge of Eureka Springs.

The following were collected by C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613728. *Helianthus annuus* L.

Wild. ANN-1155; Ames 6950. Collected 09/11/1979 in Texas, United States. Latitude 27 deg. 24' 27'' N. Longitude 97 deg. 49' 53'' W. 1 mile south of Ricardo on Highway 77.

The following were collected by N. Bochkaryov, VNIIMK, 17 Filatova St., Krasnodar, Krasnodar 350038, Russian Federation; C.R. Gunn, Plant Science Research Division, USDA-ARS, Plant Industry Station, Beltsville, Maryland 20705-2350, United States; A. N. Lukyanenko, Plant Breeding Station, Krymsr-4, Krasnodar, Krasnodar, Russian Federation. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613729. *Helianthus annuus* L.

Wild. 24; ANN-954; Ames 7033. Collected 08/28/1979 in Illinois, United States. Latitude 37 deg. 43' 38'' N. Longitude 89 deg. 13' 0'' W. Carbondale at I.C. railroad yard, Jackson County. Scattered colonies.

The following were collected by B.H. Beard, USDA-ARS, Agronomy & Range Science, University of California, Davis, California 95616, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613730. *Helianthus annuus* L.

Wild. BHB-002; ANN-987; Ames 7061. Collected 09/17/1979 in Arizona, United States. Latitude 32 deg. 43' 31'' N. Longitude 114 deg. 37' 25''

W. Along Alternate I-8 and Avenue 5E, east of Yuma, Yuma County.
Population in harvested wheat field.

PI 613731. Helianthus annuus L.

Wild. BHB-008; ANN-993; Ames 7066. Collected 09/17/1979 in Arizona, United States. Latitude 32 deg. 43' 31'' N. Longitude 114 deg. 37' 25'' W. Along Highway 95, 2 miles south of Yuma, Yuma County.

PI 613732. Helianthus annuus L.

Wild. BHB-010; ANN-995; Ames 7068. Collected 09/18/1979 in California, United States. Latitude 32 deg. 44' 22'' N. Longitude 114 deg. 38' 2'' W. Along old Highway 80, about 5 miles east of Winterhaven, Imperial County.

PI 613733. Helianthus annuus L.

Wild. BHB-013; ANN-998; Ames 7070. Collected 09/18/1979 in California, United States. Latitude 33 deg. 2' 0'' N. Longitude 115 deg. 25' 0'' W. Along Highway 86, about 1 mile south of Holly Sugar, Imperial County.

PI 613734. Helianthus annuus L.

Wild. BHB-020; ANN-1005; Ames 7077. Collected 09/19/1979 in California, United States. Latitude 33 deg. 44' 0'' N. Longitude 116 deg. 3' 0'' W. Near junction 79 and I-15 at Rancho California, Riverside County.

PI 613735. Helianthus annuus L.

Wild. BHB-022; ANN-1007; Ames 7079. Collected 09/19/1979 in California, United States. Latitude 33 deg. 54' 2'' N. Longitude 117 deg. 15' 20'' W. South end of March Air Force Base, along I-15 E, Riverside County.

PI 613736. Helianthus annuus L.

Wild. BHB-031; ANN-1016; Ames 7088. Collected 09/20/1979 in California, United States. Latitude 35 deg. 22' 24'' N. Longitude 119 deg. 1' 4'' W. Along Highway 46, near junction of 46 and I-5, north of Bakersfield, Kern County.

PI 613737. Helianthus annuus L.

Wild. BHB-040; ANN-1025; Ames 7097. Collected 09/20/1979 in California, United States. Latitude 36 deg. 18' 3'' N. Longitude 119 deg. 46' 55'' W. Along Highway 41, about 4 miles north of Lemoore, Kings County.

PI 613738. Helianthus annuus L.

Wild. BHB-044; ANN-1029; Ames 7101. Collected 09/20/1979 in California, United States. Latitude 36 deg. 44' 52'' N. Longitude 119 deg. 46' 17'' W. Along Jensen Road, about 5 miles west of Fresno, Fresno County.

PI 613739. Helianthus annuus L.

Wild. BHB-048; ANN-1033; Ames 7105. Collected 09/21/1979 in California, United States. Latitude 37 deg. 18' 8'' N. Longitude 120 deg. 28' 55'' W. Along Highway 99, near Hunter Road, about 10 miles north of Merced, Merced County.

The following were collected by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613740. Helianthus annuus L.

Wild. ANN-1063; Ames 7147. Collected 09/06/1979 in Minnesota, United States. Latitude 46 deg. 52' 26'' N. Longitude 96 deg. 46' 2'' W. Moorhead.

The following were collected by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States; L. Cuk. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613741. Helianthus annuus L.

Wild. ANN-1436; Ames 7216. Collected 09/20/1980 in California, United States. Latitude 33 deg. 4' 43'' N. Longitude 116 deg. 36' 4'' W. 13 miles west of Julian. Roadside ditch, along fence row.

The following were collected by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; L. Cuk. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613742. Helianthus annuus L.

Wild. ANN-1656; Ames 7419. Collected 08/22/1980 in North Dakota, United States. Latitude 46 deg. 52' 0'' N. Longitude 96 deg. 47' 0'' W. West of Fargo.

PI 613743. Helianthus annuus L.

Wild. ANN-1659; Ames 7421. Collected 08/21/1980 in North Dakota, United States. Latitude 46 deg. 52' 38'' N. Longitude 96 deg. 47' 22'' W. 5 miles west of Fargo.

The following were collected by Pat Duhigg, Seed Tec. International, P.O. Box 5692, 1330 40th St. N.W., Fargo, North Dakota 58105, United States; L. Cuk. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613744. Helianthus annuus L.

Wild. ANN-1660; Ames 7422. Collected 08/15/1980 in Minnesota, United States. Latitude 44 deg. 58' 48'' N. Longitude 93 deg. 15' 49'' W. Southwest of Minneapolis.

PI 613745. Helianthus annuus L.

Wild. ANN-1661; Ames 7423. Collected 08/15/1980 in Minnesota, United States. Latitude 45 deg. 1' 2'' N. Longitude 93 deg. 17' 50'' W. Northwest of Minneapolis.

The following were collected by C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613746. Helianthus annuus L.

Wild. ANN-1694; Ames 7443. Collected 06/16/1981 in Texas, United States. Latitude 31 deg. 1' 28'' N. Longitude 100 deg. 32' 42'' W. Along Highway 277, 12 miles south of Christoval.

PI 613747. *Helianthus annuus* L.

Wild. ANN-1707; Ames 7456. Collected 06/1981 in Texas, United States. Latitude 31 deg. 27' 49'' N. Longitude 100 deg. 26' 12'' W. Along Highway 82, 15 miles north of San Angelo.

The following were collected by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States; C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613748. *Helianthus annuus* L.

Wild. ANN-1742; Ames 7461. Collected 09/16/1982 in Oklahoma, United States. Latitude 35 deg. 28' 17'' N. Longitude 98 deg. 21' 19'' W. Along Highway 281, 3.2 miles south of Hinton. Roadside ditch cut, sandy soil.

The following were donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613749. *Helianthus annuus* L.

Wild. ANN-194; Ames 6246. Collected 09/1972 in South Dakota, United States. Latitude 45 deg. 0' 42'' N. Longitude 99 deg. 57' 19'' W. Gettysburg.

PI 613750. *Helianthus annuus* L.

Wild. ANN-203; Ames 6252. Collected 09/1972 in North Dakota, United States. Latitude 46 deg. 52' 45'' N. Longitude 102 deg. 47' 21'' W. Dickinson.

PI 613751. *Helianthus annuus* L.

Wild. ANN-207; Ames 6253. Collected 09/1972 in North Dakota, United States. Latitude 48 deg. 13' 57'' N. Longitude 101 deg. 17' 45'' W. Minot.

The following were collected by T. E. Thompson, USDA Southwestern Great Plains Research, Center, Bushland, Texas, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613752. *Helianthus annuus* L.

Wild. ANN-648; Ames 6557. Collected 08/1975 in Tennessee, United States. Latitude 35 deg. 57' 38'' N. Longitude 83 deg. 55' 15'' W. South or east of Knoxville. Seed received from L.Lewis, Fargo.

The following were collected by N. Bochkaryov, VNIIMK, 17 Filatova St., Krasnodar, Krasnodar 350038, Russian Federation; A. N. Lukyanenko, Plant Breeding Station, Krymsr-4, Krasnodar, Krasnodar, Russian Federation; Kent D.

Perkins; Robert Leffel; Angus Gholson. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613753. *Helianthus debilis* subsp. *cucumerifolius* (Torr. & A. Gray) Heiser Wild. KDP-685; DEB-1218; Ames 6834. Collected 09/25/1979 in Florida, United States. Latitude 30 deg. 42' 0'' N. Longitude 84 deg. 55' 0'' W. Northwest corner of junction of Apalachee Correctional Institute Dairy Road with U.S. 90, 1.9 miles east of FL 271 (north) at Sneads, S26, T4N, R7W, Jackson County. Site overgrown with *Ipomoea quamaclit* and weeds; few plants at SE corner of fence bordering dairy pasture (also one plant on a ditch bank). Yellow ray flowers, disc flowers brownish-purple; decumbent to almost erect herb.

The following were collected by C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613754. *Helianthus debilis* subsp. *silvestris* Heiser Wild. DEB-1133; Ames 6928. Collected 09/09/1979 in Texas, United States. Latitude 32 deg. 18' 0'' N. Longitude 94 deg. 30' 0'' W. 7 miles north of Tatum on Highway 43.

The following were collected by T. E. Thompson, USDA Southwestern Great Plains Research, Center, Bushland, Texas, United States; C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613755. *Helianthus hybrid* Wild. ANNxPAR-456; Ames 6400. Collected 09/17/1976 in Texas, United States. Latitude 30 deg. 53' 0'' N. Longitude 102 deg. 52' 0'' W. Near Comanche Creek, 10 miles north of Ft. Stockton on Highway 18. Received as *H. annuus* X *H. paradoxus*.

The following were collected by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States; L. Cuk. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613756. *Helianthus hybrid* Wild. ANNxPET-1378; Ames 6812. Collected 09/16/1980 in Texas, United States. Latitude 34 deg. 30' 0'' N. Longitude 102 deg. 52' 0'' W. 11.5 miles west, 1 mile north of Bovina. Sandy roadside ditch along edge of cultivated field. Received as *H. annuus* X *H. petiolaris*.

The following were collected by Gerald Seiler, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, University Station, Fargo, North Dakota 58105, United States. Received 09/16/1994.

PI 613757. *Helianthus maximilianii* Schrad.

Wild. MAX-2288; Ames 22197. Collected 09/04/1994 in Manitoba, Canada. Latitude 51 deg. 32' 1'' N. Longitude 100 deg. 0' 29'' W. Elevation 295 m. 2.4 km north of Fork River, Highway 20 N. Brown, loam to clay, silt soil, level area of roadside ditch, topography - plain (level), moderate soil nutrient content, no salinity, well drained, tillage affected by stoniness. Located along margin of field. Scattered population in roadside ditch, swampy ditch, higher slope. Low population variability, effective population size - about 100 plants. More typical *H. maximilianii*, narrow leaves, smaller heads, plants 1 m tall. Past peak flowering, many heads black, seed set appears good. No apparent insect or disease damage. Associated wild species: *Equisetum*, *Cirsium*, *Solidago*, *Crepis*.

The following were collected by G. Nabhan, Desert Botanic Gardens, 1201 W. Galvin Parkway, Phoenix, Arizona 85008, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613758. *Helianthus niveus* subsp. *tephrodes* (A. Gray) Heiser

Wild. GN1120; NIV-1243; Ames 6852. Collected 1979 in Mexico. Latitude 32 deg. 15' 0'' N. Longitude 114 deg. 30' 0'' W. Mexico Sonora in sand dunes of Gran Desierto. Sand dunes.

The following were collected by Cynthia Stauffer, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011, United States; Gerald Seiler, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, University Station, Fargo, North Dakota 58105, United States; Radovan Marinkovic, Institute of Field and Vegetable Crops, M. Gorkog 30, 21000, Novi Sad, Serbia, Yugoslavia; Surendra Duhoon, National Bureau of Plant Genetic Resources, I.A.R.I. Campus, PUSA, New Delhi, Delhi 110012, India. Donated by Gerald Seiler, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, University Station, Fargo, North Dakota 58105, United States. Received 10/17/1991.

PI 613759. *Helianthus nuttallii* Torr. & A. Gray subsp. *nuttallii*

Wild. NUT 2154; Ames 17979. Collected 09/09/1991 in Colorado, United States. Latitude 40 deg. 25' N. Longitude 104 deg. 30' W. 11.2 km west of Kersey, Highway 34 W, Weld County. Sandy-loam soil at edge of stream in roadside ditch. Seed collected from 40 plants. Population limited to about 150 m along small stream from irrigation ditch. Plants more typical of *H. nuttallii*, ca. 2.5 m tall, otherwise typical. Plants just past peak flowering. No apparent rust. *Helianthus annuus* mixed in population.

The following were collected by Pat Duhigg, Seed Tec. International, P.O. Box 5692, 1330 40th St. N.W., Fargo, North Dakota 58105, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613760. *Helianthus petiolaris* Nutt.

Wild. PET-1655; Ames 7418. Collected 08/20/1980 in Texas, United States. Latitude 34 deg. 13' 0'' N. Longitude 102 deg. 43' 0'' W. Western Texas (possibly Muleshoe).

The following were collected by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613761. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1040; Ames 7112. Collected 09/06/1979 in North Dakota, United States. Latitude 47 deg. 44' 0'' N. Longitude 97 deg. 34' 6'' W. Northwood.

The following were collected by Jerry F. Miller, USDA, ARS, Northern Crop Science Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; L. Cuk. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613762. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1648; Ames 7412. Collected 08/22/1980 in North Dakota, United States. Latitude 47 deg. 44' 0'' N. Longitude 97 deg. 34' 6'' W. Northwood. Sandy soil.

PI 613763. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1649; Ames 7413. Collected 08/22/1980 in North Dakota, United States. Latitude 47 deg. 44' 0'' N. Longitude 97 deg. 34' 6'' W. Northwood.

PI 613764. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1652; Ames 7415. Collected 08/21/1980 in North Dakota, United States. Latitude 46 deg. 52' 30'' N. Longitude 96 deg. 47' 48'' W. 4-H camp in Fargo. Sandy soil, on slope in open woods.

The following were collected by C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States. Received 07/07/1986.

PI 613765. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1695; Ames 7444. Collected 06/16/1981 in Texas, United States. Latitude 32 deg. 44' 6'' N. Longitude 101 deg. 57' 30'' W. By gin, west side of Highway 87, about 5 miles south of Lamesa; 1.4 miles north of Communicatio.

PI 613766. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1700; Ames 7449. Collected 06/18/1981 in Texas, United States. Latitude 32 deg. 23' 42'' N. Longitude 100 deg. 51' 54'' W. Along Highway 208 and I20, west of Colorado City.

The following were collected by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas 79012, United States; C. E. Rogers, USDA, ARS, Conservation & Prod. Res Lab, PO Drawer 10, Bushland, Texas 79012, United States. Donated by Gerald Seiler, USDA-ARS, Conservation & Production Research Lab., P.O. Drawer 10, Bushland, Texas

79012, United States. Received 07/07/1986.

PI 613767. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1739; Ames 7458. Collected 08/07/1982 in Oklahoma, United States. Latitude 36 deg. 40' 6'' N. Longitude 97 deg. 48' 18'' W. Along Highway 60, 4 miles east of Pond Creek. Sandy roadside ditch along fence row.

PI 613768. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1740; Ames 7459. Collected 09/15/1982 in Oklahoma, United States. Latitude 33 deg. 47' 36'' N. Longitude 97 deg. 8' 30'' W. West side of Highway 77N, 1 mile south of Thackerville. Population in fence row.

PI 613769. *Helianthus petiolaris* Nutt. subsp. *petiolaris*

Wild. PET-1741; Ames 7460. Collected 09/15/1982 in Oklahoma, United States. Latitude 33 deg. 47' 36'' N. Longitude 97 deg. 8' 30'' W. West side of Highway 77, 1.5 miles south of Thackerville. Population in fence row.

The following were collected by Mary Brothers, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States; Irvin Larsen, USDA, ARS, Iowa State University, Regional Plant Introduction Station, Ames, Iowa 50011-1170, United States. Received 11/05/1999.

PI 613770. *Helianthus annuus* L.

Wild. 2; Ames 25667. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 24' 56'' N. Longitude 96 deg. 19' 53'' W. Near 2065 Glen Ellen Road, 0.7 miles east of Old Lakeport Road (County Highway K29), Woodbury County. Roadside ditch at the beginning of a flood plain. Well drained soil. Tall H. annuus. Average plant height 206.5 cm.

PI 613771. *Helianthus annuus* L.

Wild. 4; Ames 25668. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 14' 1'' N. Longitude 96 deg. 16' 13'' W. West side of Cass Road, 0.3 mile north of intersection with 330th Street (County Highway K45), 2.4 miles west of Sloan, Woodbury County. Roadside ditch along edge of soybean field. Flat area. Tall H. annuus. Average plant height 264 cm.

PI 613772. *Helianthus annuus* L.

Wild. 5; Ames 25669. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 13' 45'' N. Longitude 96 deg. 11' 37'' W. Northwest corner of intersection between Eastland and Highway 141, ~2 miles east of Sloan, just north of Woodbury/Monona County line, Woodbury County. Roadside ditch along a corn field. Tall H. annuus, fairly typical. Average plant height 294 cm.

PI 613773. *Helianthus annuus* L.

Wild. 7; Ames 25670. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 6' 51'' N. Longitude 96 deg. 13' 3'' W. Just west of cemetery on 170th Street, 0.7 miles west of intersection with County Highway K42, Monona County. Marshy area along margin of corn planted for wildlife purposes. Very tall, typical H. annuus. Way past flowering; a lot of seed has shattered. Average plant height 328.5 cm.

PI 613774. *Helianthus annuus* L.

Wild. 8; Ames 25671. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 10' 7'' N. Longitude 96 deg. 3' 34'' W. West side of Larch, 1 mile north of intersection with County Highway E16, Monona County. Roadside ditch along margins of corn field. Typical *H. annuus*, tall. Past flowering. Average plant height 258.5 cm.

PI 613775. *Helianthus annuus* L.

Wild. 9; Ames 25672. Collected 10/13/1999 in Iowa, United States. Latitude 42 deg. 0' 13'' N. Longitude 96 deg. 8' 15'' W. Southeast corner of intersection between 240th Street and Elm, southwest of Onawa, Monona County. Bank of roadside ditch. Tall. Way past flowering. Average plant height 298 cm.

PI 613776. *Helianthus annuus* L.

Wild. 10; Ames 25673. Collected 10/13/1999 in Iowa, United States. Latitude 42 deg. 0' 31'' N. Longitude 96 deg. 1' 41'' W. North side of 240th Street, 0.6 mile east of intersection with Locust Avenue, Monona County. Roadside ditch along margin of corn field. Associated vegetation: *Helianthus grosseserratus* (collection 11). Typical, tall. Past flowering. Average plant height 308 cm.

PI 613777. *Helianthus annuus* L.

Wild. 12; Ames 25674. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 54' 49'' N. Longitude 96 deg. 4' 54'' W. Along railroad tracks parallel to Holly Road, 0.25 mile north of intersection with 310th Street, just south of Blencoe, Monona County. Bank of ditch along railroad tracks. Associated vegetation: *Helianthus grosseserratus* (not collected). Typical, well past flowering. Average plant height 241 cm.

PI 613778. *Helianthus annuus* L.

Wild. 13; Ames 25675. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 50' 6'' N. Longitude 96 deg. 3' 55'' W. Along east side of railroad tracks, just east of intersection between County Highway K45 and 120th Street, Harrison County. Bank of ditch along east side of railroad tracks. Typical, well past flowering. Average plant height 292 cm.

PI 613779. *Helianthus annuus* L.

Wild. 14; Ames 25676. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 41' 4'' N. Longitude 95 deg. 57' 47'' W. West side of Hamlin, 1.1 miles north of intersection with 235th Street, Harrison County. Roadside ditch along margin of corn field. Associated vegetation: *Helianthus grosseserratus* (not collected). Typical of what has been observed so far. Well past flowering. Some plants still have green stems. Latest *H. annuus* seen thus far. Average plant height 260.5 cm.

PI 613780. *Helianthus annuus* L.

Wild. 15; Ames 25677. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 36' 12'' N. Longitude 95 deg. 57' 33'' W. South side of 280th Street, just east of Interstate 29 overpass, Harrison County. Deep roadside ditch along margin of harvested soybean field. Some water in ditch. Typical *H. annuus*. Average plant height 306.5 cm.

PI 613781. *Helianthus annuus* L.

Wild. 16; Ames 25678. Collected 10/13/1999 in Nebraska, United States. Latitude 41 deg. 32' 0'' N. Longitude 95 deg. 59' 57'' W. Just north of Brown's Ditch by the boat ramp, near oxbow lake in DeSoto National Wildlife Refuge, Washington County. Weedy area near oxbow lake. Some stems still green. A little later than most populations. Some plants still flowering. Average plant height 244.5 cm.

PI 613782. *Helianthus annuus* L.

Wild. 17; Ames 25679. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 29' 29'' N. Longitude 95 deg. 55' 39'' W. Just east of bridge, south side of Highway 362, 0.5 mile from intersection with 140th Street, Pottawattamie County. Roadside ditch along margin of harvested soybean field. On a slope. Typical *H. annuus*. Past flowering. Average plant height 284 cm.

PI 613783. *Helianthus annuus* L.

Wild. 18; Ames 25680. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 21' 10'' N. Longitude 95 deg. 54' 28'' W. Ditch between 145th Street and Interstate 680, 1.6 miles east of 130th Street, Pottawattamie County. Roadside ditch. Associated vegetation: *H. tuberosus* (Collection 19). Past flowering. Much shorter than those previously collected. Average plant height 126 cm.

PI 613784. *Helianthus annuus* L.

Wild. 20; Ames 25681. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 2' 27'' N. Longitude 95 deg. 50' 33'' W. Along west side of 180th Street, 0.7 mile north of intersection with Jardine, Mills County. Roadside ditch along margin of corn field. Associated vegetation: *Helianthus tuberosus* (not collected). Typical, tall. Past flowering. Most leaves gone. Average plant height 365 cm.

PI 613785. *Helianthus annuus* L.

Wild. 21; Ames 25682. Collected 10/13/1999 in Iowa, United States. Latitude 40 deg. 53' 50'' N. Longitude 95 deg. 47' 38'' W. West side of 210th Avenue, 0.1 mile from intersection with 102nd Street, Fremont County. Roadside ditch along margin of harvested soybean field. Plants typical as to what has been seen so far. Past flowering. Average plant height 291.5 cm.

PI 613786. *Helianthus annuus* L.

Wild. 22; Ames 25683. Collected 10/14/1999 in Iowa, United States. Latitude 40 deg. 39' 48'' N. Longitude 95 deg. 45' 17'' W. East side of railroad tracks, west of 225th Avenue, 0.3 mile north of intersection with 275th Street, Fremont County. Along railroad tracks. Typical *H. annuus*. Past flowering and somewhat shorter than most. Average plant height 164 cm.

PI 613787. *Helianthus annuus* L.

Wild. 23; Ames 25684. Collected 10/14/1999 in Iowa, United States. Latitude 40 deg. 48' 36'' N. Longitude 95 deg. 48' 14'' W. West side of 200th Avenue, 0.1 mile south of intersection with 162nd Street, Fremont County. Narrow band of roadside ditch along margin of harvested soybean field. Typical, past flowering. Again, not as tall. Average plant height 172 cm.

PI 613788. *Helianthus annuus* L.

Wild. 24; Ames 25685. Collected 10/14/1999 in Missouri, United States.

Latitude 40 deg. 11' 14'' N. Longitude 95 deg. 22' 16'' W. West side of spur of Highway 111, at and just north of T intersection in Highway 111, just south of Craig, Holt County. Roadside ditch. Typical, past flowering. Tall. Average plant height 288 cm.

PI 613789. *Helianthus annuus* L.

Wild. 25; Ames 25686. Collected 10/14/1999 in Missouri, United States. Latitude 40 deg. 2' 32'' N. Longitude 95 deg. 20' 15'' W. East side of Ember Road, 0.8 mile south of Highway 159, approximately 1 mile north of Missouri River, Holt County. Along drainage ditch. Tall, past flowering, but still a few green leaves and a couple of flowers (not many). Average plant height 197 cm.

PI 613790. *Helianthus annuus* L.

Wild. 26; Ames 25687. Collected 10/14/1999 in Missouri, United States. Latitude 39 deg. 59' 19'' N. Longitude 95 deg. 13' 12'' W. South side of 290th Street, 1.1 miles east of Highway 111 and Forest City, Holt County. Roadside ditch along margin of corn field. Past flowering. Average plant height 242 cm.

PI 613791. *Helianthus annuus* L.

Wild. 27; Ames 25688. Collected 10/14/1999 in Missouri, United States. Latitude 39 deg. 54' 40'' N. Longitude 94 deg. 58' 37'' W. Just west of bridge, 3.6 miles east of T intersection with U Avenue on Highway 401, just west of Nodaway, Holt County. Weedy area and bank of ditch around harvested soybean field. Collected from bank of ditch only. Typical, past flowering. Average height 233.5 cm.

PI 613792. *Helianthus grosseserratus* Mart.

Wild. 6; Ames 25689. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 13' 45'' N. Longitude 96 deg. 11' 37'' W. Northwest corner of intersection between Eastland and Highway 141, ~2 miles east of Sloan, just north of Woodbury/Monona County line, Woodbury County. Roadside ditch along a corn field. Average plant height 191.5 cm.

PI 613793. *Helianthus grosseserratus* Mart.

Wild. 11; Ames 25690. Collected 10/13/1999 in Iowa, United States. Latitude 42 deg. 0' 31'' N. Longitude 96 deg. 1' 41'' W. North side of 240th Street, 0.6 mile east of intersection with Locust Avenue, Monona County. Roadside ditch along margin of corn field. Population extends along entire bank of ditch. Associated vegetation: *Helianthus annuus* (collection 10). Typical, plants still green. Rust present on leaves. Average plant height 219.5 cm.

PI 613794. *Helianthus maximiliani* Schrad.

Wild. 1; Ames 25691. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 27' 4'' N. Longitude 96 deg. 11' 39'' W. Corner of 170th Street and Eastland Avenue, 1.5 miles south of Highway 20 and 1.6 miles south of Lawton, Woodbury County. Along roadside ditch among rolling hills. Higher elevation. Well drained soil. Associated vegetation: brome grass, goldenrod, ragweed, and a few *Helianthus annuus* (**PI 613795. *Helianthus tuberosus* L.**

Wild. 3; Ames 25692. Collected 10/12/1999 in Iowa, United States. Latitude 42 deg. 22' 10'' N. Longitude 96 deg. 22' 44'' W. South side of 225th Street, less than 0.1 mile from intersection with Allison, Woodbury County. Roadside ditch. Associated vegetation: grass, wild rose, and milkweed. Long, skinny, white tubers and smaller, round

tubers present. Leaves opposite. Average plant height 211.0 cm.

PI 613796. *Helianthus tuberosus* L.

Wild. 19; Ames 25693. Collected 10/13/1999 in Iowa, United States. Latitude 41 deg. 21' 10'' N. Longitude 95 deg. 54' 28'' W. Ditch between 145th Street and Interstate 680, 1.6 miles east of 130th Street, Pottawattamie County. Roadside ditch. Associated vegetation: *H. annuus* (collection 18). Small tubers present, leaves opposite. Average plant height 110 cm.

The following were donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 08/29/1984.

PI 613797. *Malus micromalus* Makino
GMAL 275.e1. Pedigree - GMAL 275.e.

PI 613798. *Malus micromalus* Makino
GMAL 277.d1. Pedigree - GMAL 277.d.

PI 613799. *Malus micromalus* Makino
GMAL 277.k1. Pedigree - GMAL 277.k.

PI 613800. *Malus micromalus* Makino
GMAL 278.d1. Pedigree - GMAL 278.d.

PI 613801. *Malus micromalus* Makino
GMAL 278.e1. Pedigree - GMAL 278.e.

The following were donated by Bruce J. Parlman, USDA-ARS Fruit Laboratory, Plant Germplasm Quarantine Office, Building 465, BARC-East, Beltsville, Maryland 20705-2350, United States; Hortus Botanicus Nationalis, Laboratorium Dendroflorae, Salaspils, Latvia. Received 06/19/1984.

PI 613802. *Malus prunifolia* (Willd.) Borkh.
GMAL 362.e1; Rinkii #382; Rinkii. Pedigree - GMAL 362.e.

PI 613803. *Malus prunifolia* (Willd.) Borkh.
GMAL 362.f1; Rinkii #382; Rinkii. Pedigree - GMAL 362.f.

PI 613804. *Malus mandshurica* (Maxim.) Kom.
GMAL 364.a1; #379. Pedigree - GMAL 364.a.

PI 613805. *Malus mandshurica* (Maxim.) Kom.
GMAL 364.g1; #379. Pedigree - GMAL 364.g.

PI 613806. *Malus toringo* (Siebold) Siebold ex de Vriese
GMAL 365.j1. Pedigree - GMAL 365.j.

The following were donated by C. Ferris Miller, Chollipo Arboretum, 344-16 Yonhui-dong, Sodaemun-kuSosan Gun, Seoul, Seoul 120-113, Korea, South; USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 06/24/1985.

- PI 613807. *Malus baccata* (L.) Borkh.
GMAL 392.a1. Pedigree - GMAL 392.a.
- PI 613808. *Malus baccata* (L.) Borkh.
GMAL 392.d1. Pedigree - GMAL 392.d.
- PI 613809. *Malus baccata* (L.) Borkh.
GMAL 393.c1. Pedigree - GMAL 393.c.
- PI 613810. *Malus baccata* (L.) Borkh.
GMAL 393.d1. Pedigree - GMAL 393.d.
- PI 613811. *Malus hupehensis* (Pamp.) Rehder
GMAL 395.c1. Pedigree - GMAL 395.c.
- PI 613812. *Malus sargentii* Rehder
GMAL 397.g1. Pedigree - GMAL 397.g.
- PI 613813. *Malus sargentii* Rehder
GMAL 397.l1. Pedigree - GMAL 397.l.

The following were developed by C.H. Ragland, Agricultural Experiment Station, State College, Mississippi, United States. Donated by Roger D. Way, Cornell University, New York State Agric. Exp. Station, Department of Horticulture, Geneva, New York 14456-0462, United States. Received 06/24/1985.

- PI 613814. *Malus domestica* Borkh.
Cultivar. GMAL 429; San Jacinto. Pedigree - Unknown; discovered about 1895. Fruit size medium to large, 70-80 mm. Skin 70-100% red, striped, attractive. Shape conic. Flesh semifirm, nearly white. Flavor subacid, eating quality fair. Harvest season early September, 4 weeks before Delicious. Tree medium productive. Fruits hang after ripe. Diploid (Plant Breed. Abstr. 1217). Resembles Red June. R.D. Way, 1993. Originated: Dr. Ragland.

The following were developed by Anna Morris Daniels, Abilene, Texas, United States. Donated by Roger D. Way, Cornell University, New York State Agric. Exp. Station, Department of Horticulture, Geneva, New York 14456-0462, United States. Received 06/24/1985.

- PI 613815. *Malus domestica* Borkh.
Cultivar. GMAL 544; Jonalicious. Pedigree - Unknown; seedling discovered 1933; introduced 1960; plant patent 1777, Dec. 9, 1958; assigned to Stark Bros. Nursery, Louisiane, MO. Fruit large, about 3 1/2 in. in diam., round. Skin thick, tough, smooth, dots conspicuous, ground color yellow, later blushed a bright, nearly solid red. Flesh juicy, tinged yellow, texture firm, tender, crisp, subacid, aroma distinct quality good. Keeps well for about 120 days in ordinary storage. Ripens just after Jonathan, end of Sept. in midwest resembles Jonathan. Tree vigorous, upright, size medium, hardy, productive. Resembles Jonathan food quality. High quality.

The following were donated by Roger D. Way, Cornell University, New York

State Agric. Exp. Station, Department of Horticulture, Geneva, New York
14456-0462, United States. Received 06/24/1985.

PI 613816. *Malus domestica* Borkh.

Cultivar. GMAL 728; Early Joe. Pedigree - Unknown. About 1800, seed from Salisbury, Connecticut, sown in Orchard of Heman Chapin, East Bloomfield, Ontario County, New York. Fruit size small to medium, 50-65 mm. Skin 60-100% red, striped, attractive. shape oblate. Flesh semifirm, cream colored. Flavor subacid, sometimes perfume flavored. eating quality good. Harvest season late August. Tree upright habit. Medium productivity, strongly biennial. Early, small, red. Was resistant.

PI 613817. *Malus domestica* Borkh.

Cultivar. GMAL 1256; Malinda. Pedigree - Introduced in Minnesota in 1860. Fruit size medium, 65-70mm. Skin green ground color, 5-20% orange blush, unattractive. Shape conic. Flesh firm, cream-colored. Flavor subacid, eating quality fair. Harvest season late, late October, 3 weeks after Delicious. No commercial usefulness. Tree productive, strongly biennial cropping. R.D. Way, 1991.

The following were developed by Albert F. Etter. Donated by Roger D. Way, Cornell University, New York State Agric. Exp. Station, Department of Horticulture, Geneva, New York 14456-0462, United States. Received 06/24/1985.

PI 613818. *Malus domestica* Borkh.

Cultivar. GMAL 1306; Wickson. Pedigree - Yellow Newtown x Spitzenburg; selected 1944; introduced 1944. Fruit crab, size small, 40-55 mm. Skin 70-90% red, striped. Shape round-conic. Flesh firm. Flavor acid, slightly astringent; eating quality poor. Harvest season late October, 2 weeks after Delicious. Tree productive, annual cropping. Diploid (J.Am.Soc.Hort.Sci. 103:690. 1978), erroneously listed as Crimson Beauty; worthless. R.D. Way, 1993.

The following were developed by T.C. Maxwell Nursery, Geneva, New York, United States. Donated by Roger D. Way, Cornell University, New York State Agric. Exp. Station, Department of Horticulture, Geneva, New York 14456-0462, United States. Received 06/24/1985.

PI 613819. *Malus domestica* Borkh.

Cultivar. GMAL 1349; Geneva Ontario. Pedigree - Ontario bud mutation; not introduced; discovered about 1946. Fruit and tree indistinguishable from Ontario except fruit much larger, 90-105 mm; chimera type 2-4-4. Diploid-tetraploid chimera of Ontario.

The following were donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 10/15/1985.

PI 613820. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 1460.x1. Pedigree - GMAL 1460.x.

The following were collected by T.B. Lee, Seoul National University,

Department of Forestry, College of Agriculture, Seoul, Kyonggi, Korea, South. Donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 03/07/1986.

PI 613821. *Malus x asiatica* Nakai

GMAL 1487.b1. Collected in Korea, South. Pedigree - GMAL 1487.b.

The following were donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 03/07/1986.

PI 613822. *Malus micromalus* Makino

GMAL 1497.b1. Pedigree - GMAL 1497.b.

PI 613823. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 1502.a1; No. 2. Pedigree - GMAL 1502.a.

PI 613824. *Malus prunifolia* (Willd.) Borkh.

GMAL 1522.a1. Collected in Korea, South. Pedigree - GMAL 1522.a.

PI 613825. *Malus prunifolia* (Willd.) Borkh.

GMAL 1522.d1. Collected in Korea, South. Pedigree - GMAL 1522.d.

PI 613826. *Malus coronaria* (L.) Mill.

GMAL 1527.f1. Pedigree - GMAL 1527.f.

The following were donated by Bruce J. Parlman, USDA-ARS Fruit Laboratory, Plant Germplasm Quarantine Office, Building 465, BARC-East, Beltsville, Maryland 20705-2350, United States; Turnab Agric. Research Institute, Peshawar, North-West Frontier, Pakistan; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 08/31/1977.

PI 613827. *Malus domestica* Borkh.

Cultivar. A 69803; Q 21033; T21033H; GMAL 1631; Amri.

The following were donated by Vasil Cociu, Lab. for Fruit Tree Genetics & Breeding, Research Instit. for Fruit Growing, Trustul Pomiculturii, Pitesti-Maracineni, Arges 0300, Romania. Received 04/09/1981.

PI 613828. *Malus domestica* Borkh.

Cultivar. C 06766; GMAL 1649; Q 22413; Delicios de Voinesti.

PI 613829. *Malus domestica* Borkh.

Uncertain. C 06766; GMAL 1655; Q 22414; F2-33-27.

The following were donated by Bruce J. Parlman, USDA-ARS Fruit Laboratory, Plant Germplasm Quarantine Office, Building 465, BARC-East, Beltsville, Maryland 20705-2350, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/1974.

PI 613830. *Malus domestica* Borkh.

Cultivated. T20059I; Q 20059; GMAL 1663; Inducoa No. II. Provisional Release - Not Available.

The following were donated by Vasil Cociu, Lab. for Fruit Tree Genetics & Breeding, Research Instit. for Fruit Growing, Trustul Pomiculturii, Pitesti-Maracineni, Arges 0300, Romania. Received 03/18/1982.

PI 613831. *Malus domestica* Borkh.

Cultivar. C 08823; GMAL 1683; Q 22887; Rosu de Cluj.

The following were donated by Ephraim Slor, Agricultural Research Organization, The Volcani Center, Beit Dagan, Central, Israel; Bruce J. Parlman, USDA-ARS Fruit Laboratory, Plant Germplasm Quarantine Office, Building 465, BARC-East, Beltsville, Maryland 20705-2350, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 02/06/1979.

PI 613832. *Malus domestica* Borkh.

Cultivar. C 01769; Q 21550; T21550P; GMAL 1701; Slor.

The following were donated by South African Plant Improvement Org., P.O. Box 86, Ceres, Cape Province 6835, South Africa; Bruce J. Parlman, USDA-ARS Fruit Laboratory, Plant Germplasm Quarantine Office, Building 465, BARC-East, Beltsville, Maryland 20705-2350, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 08/28/1980.

PI 613833. *Malus domestica* Borkh.

Cultivar. C 05210; T22067G; GMAL 1816; Goldsmith. Pedigree - Thought to be chance seedling of Granny Smith x Golden Delicious. Intro. 1975. Provisional Release - Not Available. Fruit is similar to Granny Smith, except ripens 2 weeks earlier, large, conical, skin color green to buff yellow. Texture fine, firm, flesh color cream, quality fair, storage life 6-8 months, somewhat shorter than Granny Smith. Tree very vigorous, very precocious, bloom late.

The following were donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States; Cheng Suozhan, Chinese Academy of Agric. Sciences, Institute of Pomology, Zhengzhou, Henan, China. Received 12/1986.

PI 613834. *Malus hupehensis* (Pamp.) Rehder

GMAL 1878.il. Collected in China. Pedigree - GMAL 1878.i.

PI 613835. *Malus x asiatica* Nakai

GMAL 1879.a1. Collected in China. Pedigree - GMAL 1879.a.

PI 613836. *Malus spectabilis* (Aiton) Borkh.

GMAL 1880.il. Collected in China. Pedigree - GMAL 1880.i.

PI 613837. *Malus toringo* (Siebold) Siebold ex de Vriese

GMAL 1881.a1. Collected in China. Pedigree - GMAL 1881.a.

PI 613838. *Malus toringo* (Siebold) Siebold ex de Vriese
GMAL 1881.e1. Collected in China. Pedigree - GMAL 1881.e.

The following were donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 01/08/1987.

PI 613839. *Malus micromalus* Makino
GMAL 1882.c1. Collected in China. Pedigree - GMAL 1882.c.

The following were donated by Cheng Suozhan, Chinese Academy of Agric. Sciences, Institute of Pomology, Zhengzhou, Henan, China. Received 01/08/1987.

PI 613840. *Malus micromalus* Makino
GMAL 1882.d1. Collected in China. Pedigree - GMAL 1882.d.

The following were donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States; Cheng Suozhan, Chinese Academy of Agric. Sciences, Institute of Pomology, Zhengzhou, Henan, China. Received 01/08/1987.

PI 613841. *Malus baccata* (L.) Borkh.
GMAL 1883.a1. Collected in China. Pedigree - GMAL 1883.a.

PI 613842. *Malus baccata* (L.) Borkh.
GMAL 1883.n1. Collected in China. Pedigree - GMAL 1883.n.

The following were donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 01/08/1987.

PI 613843. *Malus baccata* (L.) Borkh.
GMAL 1884.a1. Collected in China. Pedigree - GMAL 1884.a.

The following were donated by Cheng Suozhan, Chinese Academy of Agric. Sciences, Institute of Pomology, Zhengzhou, Henan, China. Received 01/08/1987.

PI 613844. *Malus baccata* (L.) Borkh.
GMAL 1884.k1. Collected in China. Pedigree - GMAL 1884.k.

The following were donated by Bruce J. Parlman, USDA-ARS Fruit Laboratory, Plant Germplasm Quarantine Office, Building 465, BARC-East, Beltsville, Maryland 20705-2350, United States; Hortus Botanicus Fominianus, Universitatis Kioviensis, Rue De Komintern, Kiev, Kiev 252032, Ukraine. Received 07/11/1986.

PI 613845. *Malus prunifolia* (Willd.) Borkh.
GMAL 1890.b1. Pedigree - GMAL 1890.b.

The following were donated by T. Sanada, Fruit Tree Research Station, Ministry of Agric., Forestry and Fishing, Division of Fruit Breeding, Yatabe, Tsukuba, Ibaraki 305, Japan. Received 04/08/1987.

PI 613846. *Malus prunifolia* (Willd.) Borkh.
GMAL 2174.bl; Ringo Asami. Pedigree - GMAL 2174.b.

PI 613847. *Malus prunifolia* (Willd.) Borkh.
GMAL 2174.ml; Ringo Asami. Pedigree - GMAL 2174.m.

PI 613848. *Malus prunifolia* (Willd.) Borkh.
GMAL 2175.bl; Inuringo. Pedigree - GMAL 2175.b.

PI 613849. *Malus prunifolia* (Willd.) Borkh.
GMAL 2175.pl; Inuringo. Pedigree - GMAL 2175.p.

The following were donated by V.L. Vitkovskij, N.I. Vavilov Research Institute of Plant Industry, 44 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation. Received 05/01/1987.

PI 613850. *Malus sieversii* (Ledeb.) M. Roem.
GMAL 2250.bl. Pedigree - GMAL 2250.b.

PI 613851. *Malus sieversii* var. *turkmenorum* (Juz. & Popov) Ponomar.
GMAL 2251.bl. Pedigree - GMAL 2251.b.

PI 613852. *Malus sieversii* var. *turkmenorum* (Juz. & Popov) Ponomar.
GMAL 2251.fl. Pedigree - GMAL 2251.f.

PI 613853. *Malus orientalis* Uglitzk.
GMAL 2269.bl. Pedigree - GMAL 2269.b.

PI 613854. *Malus sieversii* var. *kirghisorum* (Al. Fed. & Fed.) Ponomar.
GMAL 2288.al. Pedigree - GMAL 2288.a.

PI 613855. *Malus sieversii* var. *kirghisorum* (Al. Fed. & Fed.) Ponomar.
GMAL 2288.bl. Pedigree - GMAL 2288.b.

PI 613856. *Malus sieversii* (Ledeb.) M. Roem.
GMAL 2289.al. Pedigree - GMAL 2289.a.

PI 613857. *Malus sieversii* (Ledeb.) M. Roem.
GMAL 2289.bl. Pedigree - GMAL 2289.b.

The following were donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 10/01/1987.

PI 613858. *Malus toringo* (Siebold) Siebold ex de Vriese
GMAL 2494.a. Collected in Japan. Pedigree - GMAL 2494.01.

PI 613859. *Malus toringo* (Siebold) Siebold ex de Vriese
GMAL 2501.a. Collected in Japan. Pedigree - GMAL 2501.01.

The following were collected by T.B. Lee, Seoul National University, Department of Forestry, College of Agriculture, Seoul, Kyonggi, Korea, South. Donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 10/01/1987.

PI 613860. *Malus toringo* (Siebold) Siebold ex de Vriese
GMAL 2507.f1. Collected in Korea, South. Pedigree - GMAL 2507.f.

The following were donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 10/01/1987.

PI 613861. *Malus fusca* (Raf.) C. K. Schneid.
GMAL 2515.b1. Pedigree - GMAL 2515.b.

PI 613862. *Malus sargentii* Rehder
GMAL 2518.b1; Rosea. Pedigree - GMAL 2518.b.

The following were donated by Toma Dimitrovski, Faculty of Agriculture and Forestry, University of Skopje, Skopje, Macedonia. Received 02/15/1972.

PI 613863. *Malus domestica* Borkh.
GMAL 2520.a1. Pedigree - GMAL .a.

PI 613864. *Malus domestica* Borkh.
GMAL 2520.b1. Pedigree - GMAL 2520.b.

PI 613865. *Malus domestica* Borkh.
GMAL 2521.a1. Pedigree - GMAL 2521.a.

PI 613866. *Malus domestica* Borkh.
GMAL 2522.a1. Pedigree - GMAL 2522.a.

PI 613867. *Malus domestica* Borkh.
GMAL 2522.b1. Pedigree - GMAL 2522.b.

PI 613868. *Malus domestica* Borkh.
GMAL 2523.b1. Pedigree - GMAL 2523.b.

PI 613869. *Malus domestica* Borkh.
GMAL 2525.b1. Pedigree - GMAL 2525.b.

PI 613870. *Malus domestica* Borkh.
GMAL 2526.a1. Pedigree - GMAL 2526.a.

PI 613871. *Malus domestica* Borkh.
GMAL 2527.a1. Pedigree - GMAL 2527.a.

The following were donated by USDA, ARS, National Arctic Germplasm Resources Unit, Alaska Plant Materials Center, Palmer, Alaska 99645, United States. Received 10/01/1987.

- PI 613872. *Malus ioensis* (A. W. Wood) Britton
GMAL 2531.a1. Pedigree - GMAL 2531.a.
- PI 613873. *Malus ioensis* (A. W. Wood) Britton
GMAL 2531.b1. Pedigree - GMAL 2531.b.
- PI 613874. *Malus sargentii* Rehder
GMAL 2533.a. Pedigree - GMAL 2533.01.
- PI 613875. *Malus hupehensis* (Pamp.) Rehder
GMAL 2540.f1. Pedigree - GMAL 2540.f.
- PI 613876. *Malus sargentii* Rehder
GMAL 2544.b. Pedigree - GMAL 2544.01.
- PI 613877. *Malus baccata* (L.) Borkh.
GMAL 2545.h1. Pedigree - GMAL 2545.h.

The following were collected by Elizabeth Dickson, NYS Agricultural Experiment Station, Horticultural Sciences, Hedrick Hall, Geneva, New York 14456-0462, United States. Donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1987.

- PI 613878. *Malus angustifolia* (Aiton) Michx.
GMAL 2547.f1. Collected 08/26/1987 in North Carolina, United States. Transylvania Co., in pasture 0.2 mi. from Hwy 64 on Co. Rd. 1392 (Cherryville Rd.), old Hwy 64. Pedigree - GMAL 2547.f.
- PI 613879. *Malus angustifolia* (Aiton) Michx.
GMAL 2548.d1. Collected 08/26/1987 in North Carolina, United States. Madison Co., same as Dickson 583. Pedigree - GMAL 2548.d.
- PI 613880. *Malus angustifolia* (Aiton) Michx.
GMAL 2550.e1. Collected 08/27/1987 in South Carolina, United States. Berkeley Co., near Holly Hill; 0.7 mi. SE of Berkeley-Orangeburg Co. line on Rt 176. West side of road. Pedigree - GMAL 2550.e.
- PI 613881. *Malus angustifolia* (Aiton) Michx.
GMAL 2553.c1. Collected 08/21/1987 in North Carolina, United States. Bladen Co., 3.5 mi. S. on Hwy 701 from junction with Hwy 87 at Elizabethtown W. of road, sandy soil. Pedigree - GMAL 2553.c.
- PI 613882. *Malus angustifolia* (Aiton) Michx.
GMAL 2563.g1. Collected 08/26/1987 in North Carolina, United States. Madison Co. 0.8 mi. E. from Petersburg on Hwy 213, S. side of road. Pedigree - GMAL 2563.g.
- PI 613883. *Malus angustifolia* (Aiton) Michx.
GMAL 2574.a1. Collected 08/23/1987 in Florida, United States. Wakulla Co., same site as E. Dickson 547. Pedigree - GMAL 2574.a.
- PI 613884. *Malus angustifolia* (Aiton) Michx.
GMAL 2576.g1. Collected 08/23/1987 in Florida, United States. Wakulla Co., same site as E. Dickson 547. Pedigree - GMAL 2576.g.

PI 613885. *Malus coronaria* (L.) Mill.

GMAL 2590.f. Collected 10/10/1987 in New York, United States. Tompkins Co., across from Early Bird Farm on Rt. 13, S. of Ithaca, E. side of road, 100 ft. from roadside. Pedigree - GMAL 2590.03.

The following were collected by Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1987.

PI 613886. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 2591.a1. Collected 09/23/1987 in Oregon, United States. Ona Beach State Park, Rt. 101 CIR 10 km S. of Newport, Oregon, Lincoln Co. Pedigree - GMAL 2591.a.

The following were donated by Washington State University, Irrigated Agric. Research Ext Center, Po Box 30, Prosser, Washington 99350, United States. Received 02/15/1988.

PI 613887. *Malus domestica* Borkh.

Cultivar. GMAL 2798; White Winter Pearmain. Pedigree - In a lot of grafts ("during days of saddle-bag transportat- ion") two varieties,.. lost their labels, were propagated & respectively called Red and White Winter Pearmain; the former Esopus Spitzenberg; latter believed old eastern variety. Fruit below medium to nearly large, uniform in size and shape. Shape roundish ovate or roundish conic. Flesh lightly tinged.

The following were collected by Michael Medalen, Box 1547, Petersburg, Arkansas 99833, United States. Received 03/04/1988.

PI 613888. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 2805.a1. Collected in United States. Petersburg, Alaska, along the shore. Pedigree - GMAL 2805.a.

The following were donated by Michael Medalen, Box 1547, Petersburg, Arkansas 99833, United States. Received 03/04/1988.

PI 613889. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 2805.e1. Collected in United States. Petersburg, Alaska, along the shore. Pedigree - GMAL 2805.e.

The following were collected by Elizabeth Dickson, NYS Agricultural Experiment Station, Horticultural Sciences, Hedrick Hall, Geneva, New York 14456-0462, United States. Donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 04/01/1988.

PI 613890. *Malus coronaria* (L.) Mill.

GMAL 2826.f. Collected 10/10/1987 in New York, United States. Tompkins Co., 100 yds W. of Turkey Hill Rd./Mont Pleasant intersection on Mont Pleasant Rd., S. side, hedge- row. Pedigree - GMAL 2826.01.

PI 613891. *Malus coronaria* (L.) Mill.

GMAL 2954.f1. Collected 08/26/1988 in Ontario, Canada. Elgin Co., 0.1 mi. W. from Hwy 35 on Co. Rd. 56, Concession VII just past Orville Cemetery, N. roadside, disturbed area. Pedigree - GMAL 2954.f.

PI 613892. *Malus ioensis* (A. W. Wood) Britton

GMAL 2967.d1. Collected 09/10/1988 in Illinois, United States. Champaign Co., on state Rt 150, 1.5 mi. E. of I30, near Urbana. Grove of 100+ trees between railroad tracks and south roadside. Pedigree - GMAL 2967.d.

PI 613893. *Malus ioensis* (A. W. Wood) Britton

GMAL 2970.e1. Collected 09/15/1988 in Nebraska, United States. Richardson Co., S. of Rulo, about 0.7 mi. from intersection with bridge over Missouri River on road to Iowa Indian Reservation, west roadside. Pedigree - GMAL 2970.e.

PI 613894. *Malus ioensis* (A. W. Wood) Britton

GMAL 2971.f1. Collected 09/15/1988 in Missouri, United States. Buchanan Co., Missouri Western State College campus, Biology study area. 100+ individuals scattered throughout secondary woods, *Gleditsia*, *Alnus*, *rubra*. Pedigree - GMAL 2971.f.

The following were collected by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1988.

PI 613895. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 2983.b1. Collected 07/11/1988 in California, United States. Adjacent to Kellogg road to beach ca. 100 m from beach with *Lonicera*, *Salix*, marsh grass; ground dry but probably moist to wet much of the year. Pedigree - GMAL 2983.b.

The following were donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1988.

PI 613896. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 2992.b1. Pedigree - GMAL 2992.b.

The following were collected by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1988.

PI 613897. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 2996.c1. Collected 10/11/1988 in Oregon, United States. Along west ? (right-hand side driving from Falls City) of road, deep inside forest under canopy. Pedigree - GMAL 2996.c.

PI 613898. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3015.h1. Collected 10/12/1988 in California, United States. In sphagnum bog (east side edge) just south of Big Lagoon, Humboldt Co., CA; could only find this small cluster of *M. fusca* but didn't explore

south end of bog. Pedigree - GMAL 3015.h.

PI 613899. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3017.a. Collected 10/13/1988 in Oregon, United States. Off dirt road (in swampy area), approx. 20 m from Hwy 101 just N. of bridge to Bolou Is. (near Reedsport, Douglas Co., CA); one other *M. fusca* nearby. No young plants observed; others plants include sedges, Rhamaus, skunk cabbage. Pedigree - GMAL 3017.01.

PI 613900. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3018.a1. Collected 10/13/1988 in Oregon, United States. Road to Heceta Beach, ca. 1/4 mi. from Hwy 101 on N. side of road w/ Rhododendron, Beech, Pine, Salal, Cystus, Lane Co Oregon. This habitat is being developed as subdivision. Pedigree - GMAL 3018.a.

PI 613901. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3029.c1. Collected 10/13/1988 in Oregon, United States. Ellmaker State Park, Lincoln Co., Oregon on Hwy 20 near edge of grass at top of bank above creek, with prunus, Crataegus. Pedigree - GMAL 3029.c.

PI 613902. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3036.i1. Collected 10/14/1988 in Oregon, United States. South side of road to Nehalem Bay (ca. 0.2 mi. from cemetery) State Park, Tillamook Co., Oregon with California Huckleberry, Spiraea, Salil, *M. fusca* dominant! Area across road on N. is being developed; largest pop. of *M. fusca* seen. Pedigree - GMAL 3036.i.

PI 613903. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3038.d1. Collected 10/14/1988 in Oregon, United States. Along stream where the road to Ecola State Park branches from 5th St., Clatsop Co., Oregon. Pedigree - GMAL 3038.d.

PI 613904. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3044.b1. Collected 10/14/1988 in Washington, United States. S. side Hwy 101 about 200 m west of Seaview, Pacific Co., Washington. Pedigree - GMAL 3044.b.

The following were collected by Elizabeth Dickson, NYS Agricultural Experiment Station, Horticultural Sciences, Hedrick Hall, Geneva, New York 14456-0462, United States. Donated by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1988.

PI 613905. *Malus coronaria* (L.) Mill.

GMAL 3051.j1. Collected 09/10/1988 in Illinois, United States. Piatt Co., Monticello, near street in park; close to the Courthouse. Pedigree - GMAL 3051.j.

PI 613906. *Malus ioensis* (A. W. Wood) Britton

GMAL 3052.g1. Collected 09/10/1988 in Illinois, United States. Piatt Co., Allerton Park, S.E. of Monticello on walking path that originates near the S.E. entrance. Pedigree - GMAL 3052.g.

PI 613907. *Malus coronaria* (L.) Mill.

GMAL 3069.a1. Collected 08/30/1988 in Michigan, United States. Berrien Co., 0.1 mi. W. of Creek Rd. on Stafford Rd., 4 trees at fence row; S.

roadside. Pedigree - GMAL 3069.a.

PI 613908. *Malus ioensis* (A. W. Wood) Britton

GMAL 3079.j1. Collected 09/11/1988 in Illinois, United States. Peoria Co., 0.4 mi. S. of Hwy 8 intersection on Maher Rd., E. roadside.
Pedigree - GMAL 3079.j.

The following were collected by Norman F. Weeden, Cornell University, New York State Agric. Exp. Station, Department of Horticultural Sciences, Geneva, New York 14456-0462, United States. Received 11/01/1988.

PI 613909. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3097.a. Collected 11/20/1988 in Washington, United States. 0.4 m W. of 101 North on road to Copalis Crossing; along road at edge of meadow (just W. of Humptulips). *Malus x domestica* (1 tree) nearby; closest to 88153b, ca. 30 yds. Pedigree - GMAL 3097.01.

PI 613910. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3102.a. Collected 11/20/1988 in Washington, United States. About 50 m west of Hwy 101 N. on old logging road (between hwy and clear cut area) 0.4 mi south of Olympic National Park, Jefferson Co., Washington. Pedigree - GMAL 3102.01.

PI 613911. *Malus fusca* (Raf.) C. K. Schneid.

GMAL 3106.a. Collected 11/20/1988 in Washington, United States. Near south end of Olympic National Park along secondary road considerable amount of *Malus fusca* in area. Pedigree - GMAL 3106.01.

The following were donated by Herb S. Aldwinckle, Cornell University, New York State Agric. Exp. Station, Department of Plant Pathology, Geneva, New York 14456-0462, United States. Received 12/15/1988.

PI 613912. *Malus sikkimensis* (Wenz.) Koehne ex C. K. Schneid.

GMAL 3115.a1. Collected in China. Pedigree - GMAL 3115.a.

PI 613913. *Malus ombrophila* Hand.-Mazz.

GMAL 3123.c1. Collected in China. Pedigree - GMAL 3123.c.

PI 613914. *Malus ombrophila* Hand.-Mazz.

GMAL 3123.d1. Collected in China. Pedigree - GMAL 3123.d.

PI 613915. *Malus ombrophila* Hand.-Mazz.

GMAL 3123.e1. Collected in China. Pedigree - GMAL 3123.e.

PI 613916. *Malus ombrophila* Hand.-Mazz.

GMAL 3123.f. Collected in China. Pedigree - GMAL 3123.01.

PI 613917. *Malus ombrophila* Hand.-Mazz.

GMAL 3124.a1. Collected in China. Pedigree - GMAL 3124.a.

PI 613918. *Malus ombrophila* Hand.-Mazz.

GMAL 3124.b1. Collected in China. Pedigree - GMAL 3124.b.

PI 613919. *Malus ombrophila* Hand.-Mazz.

GMAL 3124.c1. Collected in China. Pedigree - GMAL 3124.c.

PI 613920. *Malus ombrophila* Hand.-Mazz.
GMAL 3125.b1. Collected in China. Pedigree - GMAL 3125.b.

The following were donated by Zhen Long Yan, Beijing Botanical Garden,
Institute of Botany, Academia Sinica, Beijing, Beijing, China. Received
10/02/1989.

PI 613921. *Malus x asiatica* Nakai
GMAL 3224.il. Pedigree - GMAL 3224.i.

PI 613922. *Malus x asiatica* Nakai
GMAL 3225.f. Pedigree - GMAL 3225.01.

PI 613923. *Malus prunifolia* (Willd.) Borkh.
GMAL 3227.c. Pedigree - GMAL 3227.01.

PI 613924. *Malus spectabilis* (Aiton) Borkh.
GMAL 3228.il. Pedigree - GMAL 3228.i.

PI 613925. *Malus toringoides* (Rehder) Hughes
GMAL 3230.j1. Pedigree - GMAL 3230.j.

PI 613926. *Malus prunifolia* (Willd.) Borkh.
GMAL 3231.h1. Pedigree - GMAL 3231.h.

PI 613927. *Malus prunifolia* (Willd.) Borkh.
GMAL 3232.g1. Pedigree - GMAL 3232.g.

PI 613928. *Malus prunifolia* (Willd.) Borkh.
GMAL 3233.a. Pedigree - GMAL 3233.01.

PI 613929. *Malus baccata* (L.) Borkh.
GMAL 3235.b1. Pedigree - GMAL 3235.b.

PI 613930. *Malus prunifolia* (Willd.) Borkh.
GMAL 3236.e1. Pedigree - GMAL 3236.e.

PI 613931. *Malus hupehensis* (Pamp.) Rehder
GMAL 3237.a. Pedigree - GMAL 3237.01.

PI 613932. *Malus toringo* (Siebold) Siebold ex de Vriese
GMAL 3239.f1. Pedigree - GMAL 3239.f.

PI 613933. *Malus hupehensis* (Pamp.) Rehder
GMAL 3240.a. Pedigree - GMAL 3240.01.

PI 613934. *Malus prunifolia* (Willd.) Borkh.
GMAL 3241.e1. Pedigree - GMAL 3241.e.

The following were donated by Suzanne Hurtt, USDA, ARS, Plant Germplasm
Quarantine Office, Building 580, BARC-East, Beltsville, Maryland 20705-2350,
United States. Received 04/04/1995.

PI 613935. *Malus domestica* Borkh.

Cultivar. "Granerly"; T25380F; GMAL 3591. Collected in South Africa.

PI 613936. Malus sp.

Wild. "VII-252"; T26706; GMAL 3592; VII - 252. Collected in Nepal.

PI 613937. Malus domestica Borkh.

Cultivar. "Shtreifling"; Q27140; GMAL 3593. Collected in Russian Federation.

PI 613938. Malus domestica Borkh.

Cultivar. "Malt Bagaevskii"; Q27145; GMAL 3594. Collected in Russian Federation.

The following were donated by Dan Thompson, Agriculture Canada, Center for Plant Health, Saanichton Plant Quarantine Station, Sidney, British Columbia V8L 1H3, Canada. Received 04/04/1995.

PI 613939. Malus domestica Borkh.

Cultivar. "Novaspy"; 1529-05AZ; GMAL 3595. Collected 1995 in Canada.

The following were donated by Jules Janick, Purdue University, Department of Horticulture, and Landscape Architecture, West Lafayette, Indiana 47907-1165, United States. Received 02/28/1996.

PI 613940. Malus sp.

Wild. GMAL 4004; Coop 39.

PI 613941. Malus sp.

Wild. GMAL 4005; Coop 41.

PI 613942. Malus sp.

Wild. GMAL 4006; Coop 42.

PI 613943. Malus sp.

Wild. GMAL 4007; Coop 43.

PI 613944. Malus sp.

Wild. GMAL 4008; Coop 44.

The following were donated by USDA, ARS, Plant Introduction Station, 11601 Old Pond Rd, Glenn Dale, Maryland 20769, United States. Received 02/28/1996.

PI 613945. Malus toringo (Siebold) Siebold ex de Vriese

Wild. "M. sieboldii KSW 3696"; NA 56635; GMAL 4009; KSW 3696.

The following were donated by Dan Thompson, Agriculture Canada, Center for Plant Health, Saanichton Plant Quarantine Station, Sidney, British Columbia V8L 1H3, Canada. Received 09/11/1997.

PI 613946. Malus sp.

Rep 2-23-15; Q 1139-03; GMAL 4336; Macfree.

PI 613947. Malus sp.

Rep 1-10-14; Q 1303-04; GMAL 4337; J-TE-F.

The following were donated by Theo C.J. Grootendorst, Southmeadow Fruit Gardens, 10603 Cleveland Ave., P.O. Box 211, Baroda, Michigan 49101, United States. Received 03/02/1998.

PI 613948. *Malus domestica* Borkh.

Cultivar. "Kandil Sinap"; GMAL 4440. Collected in Ukraine. Pedigree - Probably arose early 1800's. Size large (64:89mm.); shape tall, truncate-conic, concave, ribbed at eye; skin pale yellow almost entirely flushed and striped red; flesh tender, crisp, snow-white; flavor sweet, slightly vinous, perfumed; season mid to very late. Tree grows in a pronounced narrow, pyramidal dwarfish-form. Keeps until February. It has been noted that origin may be Turkey.

The following were donated by N.I. Vavilov Institute of Plant Industry, 44 Herzen Street, Leningrad, Leningrad 190000, Russian Federation; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 04/01/1988.

PI 613949. *Malus domestica* Borkh.

Cultivar. "Shtreifling"; F; Q 27140; GMAL 4501. Collected in Former Soviet Union.

PI 613950. *Malus domestica* Borkh.

Cultivar. "Mal't Bagaevskii"; L; Q 27145; GMAL 4502. Collected in Former Soviet Union.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; Gaylord Mink, Washington State University, Irrigated Agricultural Res. & Ext. Ctr., Route 2, Box 2953-A, Prosser, Washington 99350, United States; Dickson. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 10/01/1993.

PI 613951. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ93-21-01; KAZ 93-21-01; BE-4925; Q 32661; GMAL 4574. Collected 09/11/1993 in Kazakhstan. Latitude 45 deg. 23' N. Longitude 80 deg. 25' E. Elevation 1780 m. Collected in Forestry Camp #16, Topolevka Forestry Area, Taldy-Kurgan region, Soldier's Gorge, Dzhungarsky Alatau, city of Sarkand near Topolevka, Kazakhstan. Rocky soil, 45% W facing slope, 750-800 mm rainfall. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/21/1995.

PI 613952. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 18-18; Q 35784A; GMAL 4575. Collected 09/12/1995 in

Kazakhstan. Latitude 42 deg. 53' 18'' N. Longitude 69 deg. 52' 52'' E. Elevation 910 m. Karatau Province. Boraldy River Forest area. 5 km. north of Boraldy Forest Camp which is 80 km. north of Chimkent. Xerophytic. Very stony soil, dry. Slope incline: 1%, 15 degrees, north. Rainfall: less than 300 mm. Dominant tree sp: *Crataegus*; Associated: *M. sieversii*. Dominant shrub sp: *Amygdalus*; Associated: *Cerasus*. Assoc. herbaceous: *Rheum*, *Tulipa*. Vigor good. Non-fruiting. Xerophytic conditions, soil very stoney, dry drainage. 1 percent incline plateau landform, rainfall < 300 mm., dominant species *Crataegus*, *Pontica*. Population abundance 250, distribution scattered. Area size 400 x 400 m., tree size informity small, disease uniformity clean. Sucer propagation none, % fruiting 60, number of trees sampled 34/8, fruit unfirmity: very diverse.

PI 613953. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-07; Q 36406A; GMAL 4576. Collected 09/02/1996 in Kazakhstan. Latitude 47 deg. 15' 51'' N. Longitude 81 deg. 34' 45'' E. Elevation 840 m. Semipalitinsk Region - Tarbagatai Mountain region. 4 km. NE of Alekseyevka, 20 km. north of Urdzhar. Collected middle of south valley (site 10, 1995) on south side, 50 ft. from field edge, may be same as one elite collected in 1995. Soil: silt, little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Associated: *Crataegus*. Dominant shrub sp: *Rosa*; Assoc: *Lonicera*. Dominant herbaceous: *Humulus*; Assoc: *Circium*. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

PI 613954. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-11; Q 36409C; GMAL 4577. Collected 09/02/1996 in Kazakhstan. Latitude 47 deg. 16' 4'' N. Longitude 81 deg. 34' 50'' E. Elevation 880 m. Semipalitinsk Region - Tarbagatai Mountain region. 4 km. NE of Alekseyevka, 20 km north of Urdzhar. Collected near site 03-10. Soil: silt, little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Associated: *Crataegus*. Dominant shrub sp: *Rosa*; Assoc: *Lonicera*. Dominant herbaceous: *Humulus*; Assoc: *Circium*. Rainfall 400 mm. Provisional Release - Not Available. Elite scion material.

PI 613955. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-12; Q 36410C; GMAL 4578. Collected 09/02/1996 in Kazakhstan. Latitude 47 deg. 16' 4'' N. Longitude 81 deg. 34' 57'' E. Semipalitinsk Region - Tarbagatai Mountain region. 4 km NE of Alekseyevka, 20 km. north of Urdzhar. Collected near streams near site 05 (1995) on west end of site 10 (1995). Soil: silt, little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc: *Crataegus*. Dominant shrub sp: *Rosa*; Assoc: *Lonicera*. Dominant herbaceous: *Humulus*; Assoc: *Circium*. Rainfall 400 mm. Provisional Release - Not Available. Elite scion material.

PI 613956. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-13; Q 36411C; GMAL 4579. Collected 09/02/1996 in Kazakhstan. Latitude 47 deg. 15' 9'' N. Longitude 81 deg. 34' 14'' E. Elevation 800 m. Semipalitinsk Region - Tarbagatai Mountain region. 4 km. NE of Alekseyevka, 20 km. north of Urdzhan. Collected on west facing slope in site 05 (1995) just up the incline from the road. Soil: silt, little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc: *Crataegus*. Dominant shrub sp: *Rosa*; Assoc: *Lonicera*. Dominant herbaceous: *Humulus*; Assoc: *Circium*.

Rainfall 400 mm. Provisional Release - Not Available. Elite scion material.

PI 613957. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-14; Q 36412A; GMAL 4580. Collected 09/03/1996 in Kazakhstan. Latitude 47 deg. 16' 5'' N. Longitude 81 deg. 35' 34'' E. Elevation 800 m. Semipalitinsk Region - Tarbagatai Mountain region. 4 km. NE of Alekseyevka, 20 km. north of Urdzhar. Collected along road in center of site 09 (1995) may have been collected as an elite in 1995. Soil: silt, little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc: *Crataegus*. Dominant shrub sp: *Rosa*; Assoc: *Lonicera*. Dominant herbaceous: *Humulus*; Assoc: *Cirsium*. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

PI 613958. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 07-07; Q 36423B; GMAL 4581. Collected 09/09/1996 in Kazakhstan. Latitude 45 deg. 24' 17'' N. Longitude 80 deg. 24' 25'' E. Elevation 1220 m. 15 km. east of Topelevka - Djungarsky Range. 3 km. southeast of Topelevka Forestry Camp. Collections made in radius around camp. Collected near GMAL 4256. Fertile. Dominant tree sp: *M. sieversii*; Assoc: *Betula*, *Crataegus*, *Acer*, *Quercus*, *Tilia*, *Populus*, *Betula*. Dom. Shrub sp: *Berberis*, *Lonicera*; Assoc: *Cotoneaster*, *Rubus*, *Berberis*, *Ribes*. Dom. Herb: *Fragaria*, Grasses, *Humulus*; Assoc: *Dianthus*. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Elizabeth E. Dickson, The University of Calgary, Herbarium, Dept. of Biological Sciences, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 09/21/1995.

PI 613959. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 17-14; Q 35782A; GMAL 4335. Collected 09/09/1995 in Kazakhstan. Pedigree - GMAL 3681.01. Wild. Clone of tree from which GMAL 3681 seed were collected.

The following were donated by Maxine Thompson, Oregon State University, Department of Horticulture, Cordley Hall 2042, Corvallis, Oregon 97331-2911, United States. Received 12/13/1988.

PI 613960. *Malus domestica* Borkh.

Cultivar. 880570; "Quetta Ambri (880570)"; T&B 880570; T27407A; GMAL 4441; Q 27407. Collected in Pakistan. Provisional Release - Not Available.

PI 613961. *Malus domestica* Borkh.

Cultivar. 880590; "Naskushu (880590)"; T&B 880590; T27409A; Q 27409; GMAL 4442. Collected in Pakistan. Provisional Release - Not Available.

PI 613962. *Malus domestica* Borkh.

Cultivar. 880626; "Bongkushu (880626)"; T&B 880626; T27414E; Q 27414; GMAL 4443; Bongkshu (880626). Collected in Pakistan. Provisional Release - Not Available.

The following were developed by O. Rigitano; M. Ojima; F.A.C. Dall'Orto. Donated by A. P. Camilo, Estacao Expt. de Cacador, EMPASC, Caixa Postal D-1, CEP 89500, Cacador, Santa Catarina, Brazil; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 05/16/1990.

PI 613963. Malus domestica Borkh.

Cultivar. "Dulcina"; BE-2926; IAC 8-35; Q 28078; GMAL 4503. Pedigree - Primazia/Valinhense. Provisional Release - Not Available. Blooms 2-3 weeks before Golden Delicious, ripens at same time. Fruits dark red. Requires about 650 chilling hours for natural dormancy breaking. Released in 1975.

The following were donated by A. P. Camilo, Estacao Expt. de Cacador, EMPASC, Caixa Postal D-1, CEP 89500, Cacador, Santa Catarina, Brazil; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 05/16/1990.

PI 613964. Malus domestica Borkh.

Cultivar. "Princesa"; BE-2926; Q 28082; GMAL 4504. Provisional Release - Not Available. Blooms quite early, about 3-4 weeks earlier and ripens 8 weeks before Golden Delicious and 4 weeks before Gala. Fruits red striped over a yellowish ground color, very attractive, resemble Delicious in shape and size. Yield high in Southern Brazil. Released by EMPASC in 1986. Very susceptible to scab and powdery mildew.

The following were donated by Instituto Agronomico de Campinas, Av. Barao de Itapura, 1481, Caixa Postal 28, 13020-902, Campinas, Sao Paulo, Brazil; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 07/23/1990.

PI 613965. Malus domestica Borkh.

Cultivar. "Marquesa"; IAC 570-38; BE-3026; Q 28141; GMAL 4505. Pedigree - Seedling selection from Golden Delicious/Valinhense = Rainha (IAC 8-31). Provisional Release - Not Available. Tree medium vigor, semi-compact, numerous branches, productive (40 kg fruit for 5-6 year old trees). Chilling requirement low - less than 120 hours below 7.2 deg. C Fruits medium-sized, slightly irregular, red striated on yellow-green background, attractive, very waxy. Flavor good, aromatic. Cross pollinated but selfing possible.

PI 613966. Malus domestica Borkh.

Cultivar. "Galicia"; IAC 276-2; BE-3026; Q 28142; GMAL 4506. Pedigree - From Gala/Anna seedling. Provisional Release - Not Available. Tree semi-vigorous, branches and leaves abundant, productive. Flowers early, requires early pollinator. Seeds per fruit 6 to 8. Chilling requirement less than 120 hours below 7.2 deg C. Fruits small, 80-100g, elongated, irregular, similar to Anna. Fruit color pink striated, yellow background, juicy, flavorful, crisp, firm. Cross pollinated.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; Gaylord Mink, Washington State University, Irrigated Agricultural Res. & Ext. Ctr., Route 2, Box 2953-A, Prosser, Washington 99350, United States; Dickson. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 10/01/1993.

PI 613967. *Malus sieversii* (Ledeb.) M. Roem.

Wild. FORM 35 (33-01); 33-01; T32663A; Q 32663; GMAL 4444. Collected 09/17/1993 in Kazakhstan. Latitude 43 deg. 30' N. Longitude 77 deg. 41' E. Elevation 930 m. Collected at State Farm (Dr. Smuryghin), Malovdnoe Village, Kazakhstan. Provisional Release - Not Available.

PI 613968. *Malus sieversii* var. *kirghisorum* (Al. Fed. & Fed.) Ponomar.

Wild. FORM 43 (34-01); 34-01; BE-4925; Q 32664; T32664C; GMAL 4445. Collected 09/17/1993 in Kazakhstan. Latitude 43 deg. 30' N. Longitude 77 deg. 41' E. Elevation 930 m. Collected at State Farm (Dr. Smuryghin), Malovdnoe Village, Kazakhstan. Provisional Release - Not Available.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; Gaylord Mink, Washington State University, Irrigated Agricultural Res. & Ext. Ctr., Route 2, Box 2953-A, Prosser, Washington 99350, United States; Dickson. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 10/01/1993.

PI 613969. *Malus hybrid*

Wild. FORM 181 (35-01); BE-4925; Q 32665A; GMAL 4582. Collected 09/17/1993 in Kazakhstan. Latitude 43 deg. 30' N. Longitude 77 deg. 41' E. Elevation 930 m. Collected at State Farm (Dr. Smuryghin), Malovdnoe Village, Kazakhstan. Pedigree - *Malus sieversii*/*Malus kirghisorum*. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Elizabeth E. Dickson, The University of Calgary, Herbarium, Dept. of Biological Sciences, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/21/1995.

PI 613970. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 05-06; Q 35571A; GMAL 4326. Collected 08/29/1995 in Kazakhstan. Latitude 47 deg. 14' 39'' N. Longitude 81 deg. 34' 14'' E. Elevation 870 m. Semipalitsinsk Region (Tarbagatai Mountain Range). Village of Alekseyevka. 4 km. Northeast of Alekseyevka, 20 km. North of Urdzhar. Flat area near stream. Collected in South end of West Valley. Coordinates in Urdzhar: 47-05-01, 81-37-49. Temp: max. +41, min. -40.

Stoney gravelly loam soil. Good drainage. 400 mm rainfall. Dominant tree sp.: *Populus*. Dominant shrub sp.: *Crataegus*, *Rosa*; Associated-*Viburnum*. Random pop. as close as 20 m. to stream. Many new small trees growing. Pedigree - GMAL 3607.01. Provisional Release - Not Available. Clone of tree from which GMAL 3607 seed were collected.

PI 613971. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 06-01; Q 35772A; GMAL 4327. Collected 08/29/1995 in Kazakhstan. Latitude 47 deg. 16' 12'' N. Longitude 81 deg. 34' 25'' E. Elevation 990 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar. 7 km. Northeast of Alekseyevka. Landform mostly hillside. Collected in North end of West Valley, upstream 3 km. from site 05 (GMAL's 3604-3607, GMAL's 3760-3789). Silt to clay loam soil. Aspect: Mostly East. Dominant tree sp.: *M. sieversii*; Associated-*Populus*, *Pyrus*, *Acer*. Dominant shrub sp.: *Rosa*; Assoc.-*Lonicera*, *Amygdalus*, *Rubus*. Dominant herbaceous: Grasses; Assoc.-*Potentilla*, *Fragaria*. Pedigree - GMAL 3608.01. Provisional Release - Not Available. Wild. Additional habitat data: Nearest *M. domestica* 5 km. Collection tree height 3 meters. DBH 7 cm. multiple trunk. Habit type: I spar. Clone of tree from which GMAL 3608 seed were collected.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Elizabeth E. Dickson, The University of Calgary, Herbarium, Dept. of Biological Sciences, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 09/21/1995.

PI 613972. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 06-08; Q 35773A; GMAL 4328. Collected 08/29/1995 in Kazakhstan. Latitude 47 deg. 16' 12'' N. Longitude 81 deg. 34' 25'' E. Elevation 990 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar. 7 km. Northeast of Alekseyevka. Landform mostly hillside. Collected in North end of West Valley, upstream 3 km. from site 05 (GMAL's 3604-3607, GMAL's 3760-3789). Silt to clay loam soil. Aspect: West. Dominant tree sp.: *M. sieversii*; Associated-*Populus*, *Pyrus*, *Acer*. Dominant shrub sp.: *Rosa*; Assoc.-*Lonicera*, *Amygdalus*, *Rubus*. Dominant herbaceous: Grasses; Assoc.-*Potentilla*, *Fragaria*. Pedigree - GMAL 3614.01. Provisional Release - Not Available. Wild. Additional habitat data: Habit type: II semispur. Leaves very clean from disease; nice shape tree. Clone of tree from which GMAL 3614 seed were collected.

PI 613973. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 07-02; Q 35774A; GMAL 4329. Collected 08/30/1995 in Kazakhstan. Latitude 47 deg. 16' 14'' N. Longitude 81 deg. 34' 45'' E. Elevation 960 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar, 6 km. NE of Alekseyevka. Slopes of East-West Valley. Collected on north slope of North Valley. Between & East of sites 05 & 06 (GMAL's 3604-3615, GMAL's 3760-3789). Slope incline: 15 degrees. Aspect: North. Rainfall: 400 mm. Dominant tree sp.: *M. sieversii*; Assoc.-*Crataegus*. Dominant shrub sp.: *Rosa*;

Associated-Amygdalus. Dominant herbaceous: Aster. Pedigree - GMAL 3616.01. Provisional Release - Not Available. Wild. Additional habitat data: Fruit bruises easily, very attractive; # 3 on the 07-01P population sample. Clone of tree from which GMAL 3616 seed were collected.

PI 613974. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 07-05; Q 35775A; GMAL 4330. Collected 08/30/1995 in Kazakhstan. Latitude 47 deg. 16' 14'' N. Longitude 81 deg. 34' 45'' E. Elevation 960 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar, 6 km. NE of Alekseyevka. Slopes of East-West Valley. Collected on north slope of North Valley. Between & East of sites 05 & 06 (GMAL's 3604-3615, GMAL's 3760-3789). Slope incline: 5-20. Aspect: South and North. Rainfall: 400 mm. Dominant tree sp.: *M. sieversii*; Assoc.-*Crataegus*. Dominant shrub sp.: *Rosa*; Associated-Amygdalus. Dominant herbaceous: Aster. Pedigree - GMAL 3619.01. Provisional Release - Not Available. Wild. Best tasting one so far collected. Clone of tree from which GMAL 3619 seed were collected.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Elizabeth E. Dickson, The University of Calgary, Herbarium, Dept. of Biological Sciences, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/21/1995.

PI 613975. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 08-04; Q35776A; GMAL 4446. Collected 09/12/1995 in Kazakhstan. Latitude 47 deg. 15' 20'' N. Longitude 81 deg. 34' 20'' E. Elevation 920 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar. 5 km. Northeast of Alekseyevka. Collected mainly on west slopes in center of West Valley. Equidistant between sites 05 & 06 (GMAL's 3604-3615, GMAL's 3760-3789). Silt to clay loam soil. Aspect: North. Landform mostly hillside. Dominant tree sp.: *M. sieversii*. Dominant shrub sp.: *Rosa*; Associated-*Lonicera*, *Rubus*. Dominant herbaceous: *Malva*; Assoc.-*Fragaria*. Provisional Release - No Available. Elite scion material. Wild. Additional habitat data: Tree ht. 3.5 m, habit type III standard, crop load very heavy. Leaves clean (from disease), shape very large-triploid like. General notes: juicy, winter keeper, looks like domesticated apples.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Elizabeth E. Dickson, The University of Calgary, Herbarium, Dept. of Biological Sciences, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada. Donated by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 09/21/1995.

PI 613976. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 08-06; Q 35777A; GMAL 4331. Collected 08/30/1995 in

Kazakhstan. Latitude 47 deg. 15' 20'' N. Longitude 81 deg. 34' 20'' E. Elevation 920 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar. 5 km. Northeast of Alekseyevka. Collected mainly on west slopes in center of West Valley. Equidistant between sites 05 & 06 (GMAL's 3604-3615, GMAL's 3760-3789). Silt to clay loam soil. Aspect: West. Landform mostly hillside. Dominant tree sp.: *M. sieversii*. Dominant shrub sp.: *Rosa*; Associated-*Lonicera*, *Rubus*. Dominant herbaceous: *Malva*; Assoc.-*Fragaria*. Pedigree - GMAL 3625.01. Provisional Release - Not Available. Wild. Clone of tree from which GMAL 3625 seed were collected.

PI 613977. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 10-01L; Q 35778A; GMAL 4332. Collected 08/31/1995 in Kazakhstan. Latitude 47 deg. 15' 52'' N. Longitude 81 deg. 35' 5'' E. Elevation 1000 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar, 3-4 km. Northeast of Alekseyevka. Collected on east ridge of South Valley. Aspect: West. Dominant tree sp.: *M. sieversii*. Dominant shrub sp.: *Amygdalus*; Associated-*Rosa*. Dominant herbaceous: *Aster*; Assoc.-*Xanthium*. Pedigree - GMAL 3643.01. Provisional Release - Not Available. Wild. Additional habitat data: DBH 10 cm. Habit type: I spar. Medium vigor. Heavy crop load. General health good. No scab. No insects. Colsest to 'McIntosh' group of those sampled. Clone of tree from which GMAL 3643 seed were collected.

PI 613978. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 10-04F; Q 35779A; GMAL 4333. Collected 08/31/1995 in Kazakhstan. Latitude 47 deg. 15' 52'' N. Longitude 81 deg. 35' 5'' E. Elevation 1000 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar, 3-4 km. Northeast of Alekseyevka. Collected in South Valley, on slopes or edges. Slope incline: 10 degrees. Aspect: North. Dominant tree sp.: *M. sieversii*. Dominant shrub sp.: *Amygdalus*; Associated-*Rosa*. Dominant herbaceous: *Aster*; Assoc.-*Xanthium*. Pedigree - GMAL 3636.01. Provisional release - Not Available. Wild. Additional habitat data: Collection tree height 2.5 meters. DBH 6 cm. Leaves clean, no insects. Commercial size, winter type, sweet. Clone of tree from which GMAL 3636 were collected.

PI 613979. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 10-05F; Q 35780A; GMAL 4334. Collected 08/31/1995 in Kazakhstan. Latitude 47 deg. 15' 52'' N. Longitude 81 deg. 35' 5'' E. Elevation 1000 m. Semipalitinsk Region (Tarbagatai Mountain Range). 20 km. North of Urdzhar, 3-4 km. Northeast of Alekseyevka. Collected from west end between Middle and South Valley, on a ridge. Slope incline: 3 degrees. Aspect: Northwest. Dominant tree sp.: *M. sieversii*. Dominant shrub sp.: *Amygdalus*; Associated-*Rosa*. Dominant herbaceous: *Aster*; Assoc.-*Xanthium*. Pedigree - GMAL 3637.01. Provisional Release - Not Available. Wild. Additional habitat data: Collection tree height 2.5 meters. DBH 7 cm. Moderate scab, no insects present. Largest apple found. Clone of tree from which GMAL 3637 seed were collected.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States; James Luby, University of Minnesota, Department of Horticultural Science, 342 Alderman Hall, St. Paul, Minnesota 55108, United States; Elizabeth E. Dickson, The University of Calgary, Herbarium, Dept. of Biological Sciences, 2500 University Drive NW, Calgary, Alberta T2N 1N4,

Canada. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/21/1995.

PI 613980. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 12-02; Q35781B; GMAL 4447. Collected 09/12/1995 in Kazakhstan. Latitude 45 deg. 23' 46'' N. Longitude 80 deg. 24' 28'' E. Elevation 1450 m. Topolevka village. 15 km. East of Topolevka - Djungarsky Range. 1.5 km. Southeast of Topolevka Forestry Camp. Elevation: 1220-1450 m. Aspect: Northwest. Dominant tree sp.: *M. sieversii*; Assoc.-*Acer*, *Quercus*, *Tilia*, *Populus*, *Rhamnus*. Dominant shrub sp.: *Lonicera*; Assoc.-*Berberis*, *Cotoneaster*, *Rubus*. Dominant herbaceous: Grasses; Assoc.-*Fragaria*, *Chelidonium*, *Urtica*. Provisional Release - Not Available. Elite scion material. Wild. Additional habitat data: Tree ht. 3.5 m, DBH 8 cm., habit type I spur-nice. Crop load very heavy. Leaves: very clean (from disease). Scab: quite clean. Insects: some codling moth, eggs visible in seed. General notes: Largest fruit in Djungarsky so far, sets fruit in clusters, has clonal offshoots, same as 12-01P #11. 09/03/95.

PI 613981. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 95 18-07; Q35783B; GMAL 4448. Collected 09/12/1995 in Kazakhstan. Latitude 42 deg. 53' 18'' N. Longitude 69 deg. 52' 52'' E. Elevation 910 m. Karatau Province. Boraldy River Forest area. 5 km. North of Boraldy Forest Camp which is 80 km. North of Chimkent. Xerophytic. Very stony soil, dry. Slope incline: 10 degrees, N-NW. Rainfall: less than 300 mm. Dominant tree sp: *Crataegus*; Associated-*M. Sieversii*. Dominant shrub sp: *Amygdalus*; Assoc-*Cerasus*. Associated herbaceous: *Rheum*, *Tulipa*. Provisional Release - Not Available. Elite scion material. Additional habitat data: Leaves: very clean (from disease). Disease: very clean. Insects: very clean. General notes: No fruit on tree. Germplasm sample for drought resistance. 09/10/95. Landform slightly inclined plateau, rainfall < 300 mm. Trees sampled 34/8, fruit uniformity very diverse.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/25/1996.

PI 613982. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-02; Q36403A; GMAL 4449. Collected 09/01/1996 in Kazakhstan. Latitude 47 deg. 16' 4'' N. Longitude 81 deg. 34' 59'' E. Elevation 820 m. Semipalitinsk Region-Tarbagatai Mt. region. 4 km northeast of Alekseyevka, 20 km north of Urdzhar. Collected on the south side of site 10, middle valley (1995), 150 yds. west of East end valley, 50 ft. up from field. Soil: Silt, Little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc-*Crataegus*. Dominant shrub sp: *Rosa*; Assoc-*Lonicera*. Dominant herbaceous: *Humulus*; Assoc-*Circium*. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

PI 613983. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-04; Q36404C; GMAL 4450. Collected 09/01/1996 in Kazakhstan. Latitude 47 deg. 16' 14'' N. Longitude 81 deg. 34' 45'' E. Elevation 860 m. Semipalitinsk Region-Tarbagatai Mt. region. 4 km northeast of Alekseyevka, 20 km north of Urdzhar. Collected in site

07(1995). East end of valley on north side. Soil: Silt, Little rock, good drainage. Variable incline, south, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc-Crataegus. Dominant shrub sp: *Rosa*; Assoc-Lonicera. Dominant herbaceous: *Humulus*; Assoc-Circium. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

PI 613984. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-05; Q36405C; GMAL 4451. Collected 09/01/1996 in Kazakhstan. Latitude 47 deg. 16' 4'' N. Longitude 81 deg. 34' 45'' E. Elevation 840 m. Semipalitinsk Region-Tarbagatai Mt. region. 4 km NE of Alekseyevka, 20 km north of Urdzhar. Collected at site 10(1995) middle valley where it merges with site 08(1995) near river on west side, collected near creek. Soil: Silt, Little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc-Crataegus. Dominant shrub sp: *Rosa*; Assoc-Lonicera. Dominant herbaceous: *Humulus*; Assoc-Circium. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

PI 613985. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-08; Q36407B; GMAL 4452. Collected 09/02/1996 in Kazakhstan. Latitude 47 deg. 15' 51'' N. Longitude 81 deg. 34' 45'' E. Elevation 840 m. Semipalitinsk Region-Tarbagatai Mt. region. 4 km Northeast of Alekseyevka, 20 km north of Urdzhar. Collected 75 ft. west of 03-07. Soil: Silt, Little rock, good drainage. Variable incline, north, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc-Crataegus. Dominant shrub sp: *Rosa*; Assoc-Lonicera. Dominant herbaceous: *Humulus*; Assoc-Circium. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

PI 613986. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-09; Q36408C; GMAL 4453. Collected 09/02/1996 in Kazakhstan. Latitude 47 deg. 16' 4'' N. Longitude 81 deg. 34' 57'' E. Elevation 900 m. Semipalitinsk Region-Tarbagatai Mt. region. 4 km NE of Alekseyevka, 20 km north of Urdzhar. Collected at east end of South valley (site 10 1995) just 10 ft. from field on west-facing slope. Soil: Silt, Little rock, good drainage. Variable incline, west, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc-Crataegus. Dominant shrub sp: *Rosa*; Assoc-Lonicera. Dominant herbaceous: *Humulus*; Assoc-Circium. Rainfall 400mm. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States; USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/25/1996.

PI 613987. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 03-15; Q 36413A; GMAL 4454. Collected 09/03/1996 in Kazakhstan. Latitude 47 deg. 16' 5'' N. Longitude 81 deg. 35' 30'' E. Elevation 1030 m. Semipalitinsk Region-Tarbagatai Mt. region. 4 km northeast of Alekseyevka, 20 km north of Urdzhar. Near 03-14, 1/2km north of 03-14. Soil: Silt, Little rock, good drainage. Variable incline, open, ridges on valleys. Dominant tree sp: *M. sieversii*; Assoc-Crataegus. Dominant shrub sp: *Rosa*; Assoc-Lonicera. Dominant

herbaceous: Humulus; Assoc-Cirsium. Rainfall 400mm. Provisional Release
- Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/25/1996.

PI 613988. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 05-04; Q36414C; GMAL 4455. Collected 09/05/1996 in Kazakhstan. Latitude 45 deg. 41' 1'' N. Longitude 81 deg. 51' 45'' E. Elevation 1190 m. Andreyevka District-Djungarsky Mt. range. 5 miles northwest of Konstantinova. Drainage good, Incline 10-40 degrees, northwest, very open. Cultivation to southeast-forested ridge on northwest, rainfall 700mm. Dominant tree sp: Malus, Betula, Populus. Dominant Shrub sp: Rosa. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 09/25/1996.

PI 613989. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 06-02; Q 36416; GMAL 4507. Collected 09/06/1996 in Kazakhstan. Latitude 45 deg. 31' 20'' N. Longitude 80 deg. 43' 40'' E. Elevation 1230 m. 9 km southeast of Lepinsk, 2 km southeast of Lepsinsk Forestry Camp. Incline 20%. Excellent drainage, mostly N-NE, rainfall 700mm. Dominant Tree sp: Malus sieversii: Assoc-Populus tremula. Dominant shrub sp: Rubus caesius: Assoc-Lonicera. Dominant Herbaceous: Urtica; Assoc-Cirsium. Pedigree - PI 600603.01. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Donated by USDA, ARS, Fruit Laboratory, Plant Germplasm Quarantine Office, Beltsville, Maryland 20705-2350, United States. Received 09/25/1996.

PI 613990. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 06-03; Q36417A; GMAL 4456. Collected 09/06/1996 in Kazakhstan. Latitude 45 deg. 31' 2'' N. Longitude 80 deg. 43' 40'' E. Elevation 1230 m. 9 km southeast of Lepinsk, 2 km southeast of Lepsinsk Forestry Camp. Incline 20%. Excellent drainage, mostly N-Ne, rainfall 700mm. Dominant Tree sp: Malus sieversii: Assoc-Populus tremula. Dominant shrub sp: Rubus caesius: Assoc-Lonicera. Dominant Herbaceous: Urtica; Assoc-Cirsium. Provisional Release - Not Available. Elite scion material.

PI 613991. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 07-03; Q36419C; GMAL 4457. Collected 09/08/1996 in Kazakhstan. Latitude 45 deg. 24' 26'' N. Longitude 80 deg. 26' 22'' E. Elevation 1460 m. 15km east of Topelevka-Djungarsky Range. 3 km southeast of Topelevka Forestry Camp. Collections made in radius around camp. Incline 10%, northwest. Fertile. Dominant tree sp: Malus sieversii; Assoc.-Betula, Crataegus, Acer, Quercus, Tilia, Populus,

Betula. Dom. Shrub Sp: Berberis, Lonicera: Assoc.-Cotoneaster, Rubus, Berberis, Ribes. Dom. herb.:Fragaria,Grasses,Humulus:Assoc.-Dianthus. Provisional Release - Not Available. Elite scion material.

PI 613992. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 07-04; Q36420A; GMAL 4458. Collected 09/08/1996 in Kazakhstan. Latitude 45 deg. 24' 1'' N. Longitude 80 deg. 26' 27'' E. Elevation 1540 m. 15 km southeast of Topelevka-Djungarski Range. 3km of Topelevka Forestry Camp. Collected further east of camp at higher elevations. Dominant tree sp: M. sieversii; Assoc-Betula, Crataegus, Acer, Quercus, Tilia, Populus, Rhamnus. Dom. shrub sp: Berberis, Lonicera; Assoc-Cotoneaster, Rubus, Ribes. Dom. herb:Fragaria, Grasses, Humulus; Assoc-Dianthus, Fragaria, Chelidonium. Provisional Release - Not Available. Elite scion material.

PI 613993. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 07-05; Q36421B; GMAL 4459. Collected 09/08/1996 in Kazakhstan. Latitude 45 deg. 24' 1'' N. Longitude 80 deg. 26' 27'' E. Elevation 1580 m. 15 km southeast of Topelevka-Djungarski Range. 3km of Topelevka Forestry Camp. Collected further east of camp at higher elevations. Dominant tree sp: M. sieversii; Assoc-Betula, Crataegus, Acer, Quercus, Tilia, Populus, Rhamnus. Dom. shrub sp: Berberis, Lonicera; Assoc-Cotoneaster, Rubus, Ribes. Dom. herb:Fragaria, Grasses, Humulus; Assoc-Dianthus, Fragaria, Chelidonium. Provisional Release - Not Available. Elite scion material.

PI 613994. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 07-06; Q36422C; GMAL 4460. Collected 09/08/1996 in Kazakhstan. Latitude 45 deg. 24' 12'' N. Longitude 80 deg. 24' 22'' E. Elevation 1500 m. 15km east of Topelevka-Djungarsky Range. 3 km southeast of Topelevka Forestry Camp. Collections made in radius around camp. Aspect west. Fertile. Dominant tree sp: Malus sierversii; Assoc.-Betula, Crataegus, Acer, Quercus, Tilia, Populus, Betula. Dom. Shrub Sp: Berberis, Lonicera: Assoc.-Cotoneaster, Rubus, Berberis, Ribes. Dom. herb.:Fragaria,Grasses,Humulus:Assoc.-Dianthus. Provisional Release - Not Available. Elite scion material.

PI 613995. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 07-09; Q36424C; GMAL 4461. Collected 09/09/1996 in Kazakhstan. Latitude 45 deg. 24' 37'' N. Longitude 80 deg. 24' 19'' E. Elevation 1240 m. 15km east of Topelevka-Djungarsky Range. 3 km southeast of Topelevka Forestry Camp. Collections made in radius around camp. Aspect southeast. Fertile. Dominant tree sp: Malus sierversii; Assoc.-Betula, Crataegus, Acer, Quercus, Tilia, Populus, Betula. Dom. Shrub Sp: Berberis, Lonicera: Assoc.-Cotoneaster, Rubus, Berberis, Ribes. Dom. herb.:Fragaria,Grasses,Humulus:Assoc.-Dianthus. Provisional Release - Not Available. Elite scion material.

The following were collected by Philip L. Forsline, USDA, ARS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 09/25/1996.

PI 613996. Malus sieversii (Ledeb.) M. Roem.

Wild. KAZ 96 08-13; Q36427B; GMAL 4462. Collected 09/14/1996 in Kazakhstan. Latitude 42 deg. 39' 57'' N. Longitude 70 deg. 14' 50'' E. Elevation 780 m. Kok Bulak (Black Spring) Forestry Camp. 35 km southeast

of Boraldy Camp visited in 1995. Collections made in and around camp-north, east, south of camp. Variable and open, stream bed and hillsides. Rainfall 275mm. Dominant tree sp: *Crataegus*; Assoc.-*Malus*, *Vitis*, *Morus Rhamnus*. Dominant shrub sp: *Amygdalus*, *Pyrus*, *Rosa*. Dominant herbaceous: Grasses. Provisional Release - Not Available. Elite scion material.

PI 613997. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 08-15; Q36428C; GMAL 4463. Collected 09/14/1996 in Kazakhstan. Latitude 42 deg. 40' 8'' N. Longitude 70 deg. 15' 4'' E. Elevation 840 m. Kok Bulak (Black Spring) Forestry Camp. 35 km southeast of Boraldy Camp visited in 1995. Collections made in and around camp-north, east, south of camp. Variable and open, stream bed and hillsides. Rainfall 275mm. Dominant tree sp: *Crataegus*; Assoc.-*Malus*, *Vitis*, *Morus Rhamnus*. Dominant shrub sp: *Amygdalus*, *Pyrus*, *Rosa*. Dominant herbaceous: Grasses. Provisional Release - Not Available. Elite scion material.

PI 613998. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 08-16; Q36429C; GMAL 4464. Collected 09/14/1996 in Kazakhstan. Kok Bulak (Black Spring) Forestry Camp. 35 km southeast of Boraldy Camp visited in 1995. Collections made in and around camp-north, east, south of camp. Variable and open, stream bed and hillsides. Rainfall 275mm. Dominant tree sp: *Crataegus*; Assoc.-*Malus*, *Vitis*, *Morus Rhamnus*. Dominant shrub sp: *Amygdalus*, *Pyrus*, *Rosa*. Dominant herbaceous: Grasses. Provisional Release - Not Available. Elite scion material.

PI 613999. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 08-17; Q36430B; GMAL 4465. Collected 09/14/1996 in Kazakhstan. Latitude 42 deg. 39' 45'' N. Longitude 70 deg. 15' 13'' E. Elevation 930 m. Kok Bulak (Black Spring) Forestry Camp. 35 km southeast of Boraldy Camp visited in 1995. Collections made in and around camp-north, east, south of camp. Variable and open, stream bed and hillsides. Rainfall 275mm. Dominant tree sp: *Crataegus*; Assoc.-*Malus*, *Vitis*, *Morus Rhamnus*. Dominant shrub sp: *Amygdalus*, *Pyrus*, *Rosa*. Dominant herbaceous: Grasses. Provisional Release - Not Available. Elite scion material.

PI 614000. *Malus sieversii* (Ledeb.) M. Roem.

Wild. KAZ 96 09-02; Q36431C; GMAL 4466. Collected 09/15/1996 in Kazakhstan. Latitude 42 deg. 19' 42'' N. Longitude 70 deg. 22' 8'' E. Elevation 1010 m. Talasky, Alatau. Located in "reserve" Aksu Jabagli. Collected near river. Soil: fine, stoney. Incline 5%, north, open. Rainfall 320mm. Dominant tree sp: *Malus*; Assoc.-*Prunus*. Provisional Release - Not Available. Elite scion material.

The following were collected by W. Hardy Eshbaugh, Miami University, Department of Botany, College of Arts and Science, Oxford, Ohio 45056, United States. Donated by Paul W. Bosland, New Mexico State University, Department of Agronomy & Horticulture, Box 30003 - Dept. 3Q, Las Cruces, New Mexico 88003, United States. Received 01/31/1992.

PI 614001. *Capsicum pubescens* Ruiz & Pav.

Uncertain. E1787; NMCA 80001; TS9 1. Collected 1982 in La Paz, Bolivia. Market.

The following were collected by George Stallings, USDA-ARS, Root Disease & Bio Control Unit, 367 Johnson Hall, WSU, Pullman, Washington 99164-6430, United States. Received 03/27/1989.

PI 614002. *Chenopodium quinoa* Willd.

Landrace. Ames 10334. Collected 04/08/1986 in Cochabamba, Bolivia. Latitude 17 deg. 0' 0'' S. Longitude 68 deg. 0' 0'' W. Elevation 3636 m. An area south of Lake Titicaca. Elevation above 12,000 feet. The stems have slight red at the nodes, the petioles, blades, and flowers are green. Male sterility was present at an intermediate level. These observations are from a greenhouse planting in 1997 by David Brenner, in Ames, Iowa.

The following were collected by Academy of Agricultural Sciences, Korea, North. Donated by Randy Ireson, American Friends Service Committee, 388 Browning Av. SE, Salem, Oregon 97302, United States. Received 07/14/2000.

PI 614003 QUAR. *Zea mays* L. subsp. *mays*

Uncertain. Baek Saek (White) Jae Lae. Collected in Korea, North.

PI 614004 QUAR. *Zea mays* L. subsp. *mays*

Uncertain. Hwang Saek (Yellow) Jae Lae. Collected in Korea, North.

PI 614005 QUAR. *Zea mays* L. subsp. *mays*

Uncertain. Hwang Saek (Yellow Ma Ch'i-SinKye. Collected in Korea, North.

PI 614006 QUAR. *Zea mays* L. subsp. *mays*

Uncertain. Hwang Saek (Yellow) MaCh'i-KangGye. Collected in Korea, North

The following were developed by Michael M. Kenty, USDA, ARS, Soybean Production Research, P.O. Box 196, Stoneville, Mississippi 38776, United States; Thomas C. Kilen, USDA, ARS, Soybean Production Research, P.O. Box 196, Stoneville, Mississippi 38776, United States; Lawrence D. Young, USDA, ARS, MSA Crop Genetics & Prod. Res. Unit, P.O. Box 345, Stoneville, Mississippi 38776-0345, United States. Received 07/05/2000.

PI 614007. *Glycine max* (L.) Merr.

Breeding. DMK93-9048. GP-276. Pedigree - D86-3429 x Braxton. Maturity group VII soybean line developed to provide breeders with a potential parent to develop multiple pest resistant cultivars. Highly resistant to foliar feeding by the soybean looper (*Pseudoplusia includens*), southern stem canker disease (*Diaporthe phaseolorum* v. *meridionalis*), and southern (*Meloidogyne incognita*) root-knot nematode. Determinate stem termination, white flowers, gray pubescence and tan pod wall. Seeds yellow with buff hila, averaging 152 mg per seed. Protein and oil average 462 and 200 grams per kilogram.

The following were developed by Steven E. Ullrich, Washington State University, Department of Crop & Soil Sciences, Pullman, Washington 99164-6420, United States. Received 07/05/2000.

PI 614008. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "BEAR"; WA 11045-87. Pedigree - Scout/WS8893-78. Released 1997. Two-row spring hulless feed/food barley. Mid-season maturity and medium plant height. Straw moderately stiff, kernels hulless with colorless aleurone. Spikes lax and slightly nodding with long rough awns. Limited disease reaction data is available but is susceptible to barley stripe rust (*Puccinia striiformis*) and loose smut (*Ustilago nuda*). Feed quality rated excellent compared with covered and other hulless types based on swine trials.

PI 614009. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. "WASHFORD"; WA 7999-88. Pedigree - Belford/Columbia. Released 1997. Six-row spring hooded feed barley with intended use of primarily hay (forage). Mid-season maturity and mid-tall in height. Outyields and is more lodging resistant than Belford for which it is intended to replace. Limited disease reaction data is available, but is susceptible to loose smut (*Ustilago nuda*) and barley stripe rust (*Puccinia striiformis*). Kernels covered with colorless aleurone and short rachilla hairs.

The following were developed by A. Mujeeb-Kazi, International Maize & Wheat Improvement Center, Apartado Postal 6-641, Mexico City, Federal District 06600, Mexico; R. Delgado, International Maize and 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; S. Cano, International Maize and Wheat Improvement Center, Lisboa 27, Apartado Postal 6-641, D.F., Mexico, Mexico. Received 07/24/2000.

PI 614010 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.746-1. GP-655. Pedigree - Yaco/Glennson M81//8*Yaco. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614011 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.747-1. GP-656. Pedigree - Yaco/Glennson M81//8*Yaco. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614012 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.748-1. GP-657. Pedigree - Ciano T79/Glennson M81//8*Ciano T79. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614013 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.749-1. GP-658. Pedigree - Ciano T79/Glennson M81//8*Ciano T79. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614014 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.758-1. GP-659. Pedigree - Opata M85/Glennson M81//8*Opata M85. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614015 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.759-1. GP-660. Pedigree - Opata M85/Glennson M81//8*Opata M85. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614016 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.762-1. GP-661. Pedigree - Ocoroni F86/Glennson M81/8*Ocoroni F86. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614017 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.762-2. GP-662. Pedigree - Ocoroni F86/Glennson M81/8*Ocoroni F86. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614018 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.764-1. GP-663. Pedigree - Esmeralda M86/Glennson M81//8*Esmeralda M86. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614019 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.765-1. GP-664. Pedigree - Esmeralda M86/Glennson M81//8*Esmeralda M86. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614020 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.742-1. GP-665. Pedigree - Yecora F70/Seri M82//8*Yecora F70. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614021 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.743-1. GP-666. Pedigree - Yecora F70/Seri M82//8*Yecora F70. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614022 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.744-1. GP-667. Pedigree - Agatha/6*Yecora//Seri M82/3/8*Agatha/6*Y4. 1B derivative from a 1B bread

wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614023 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.745-1. GP-668. Pedigree - Agatha/6*Yecora//Seri M82/3/8*Aga/6*Y4. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614024 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.754-1. GP-669. Pedigree - Mirlo/BuckBuck//Seri M82/3/8*Mirlo/BuckBuck. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614025 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.755-1. GP-670. Pedigree - Mirlo/BuckBuck//Seri M82/3/8*Mirlo/BuckBuck. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614026 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.756-1. GP-671. Pedigree - Pfau/Seri M82//8*Pfau. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614027 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.757-1. GP-672. Pedigree - Pfau/Seri M82//8*Pfau. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614028 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.766-1. GP-673. Pedigree - BuckBuck//Maya/Moncho/3/Seri M82/4/8*BuckBuck//Maya/Moncho. 1B derivative from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614029 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.766-2. GP-674. Pedigree - BuckBuck//Maya/Moncho/3/Seri M82/4/8*BuckBuck//Maya/Moncho. T1BL.1RS isogenic line produced from a 1B bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistance genes Lr26, Sr31, Yr9 and Pm8.

PI 614030 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.737-1. GP-675. Pedigree - Glennson M81/Ciano T79//8*Glennson M81. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further

elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614031 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.738-1. GP-676. Pedigree - Glennson M81/Ciano T79//8*Glennson M81. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614032 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.741-1. GP-677. Pedigree - Bagula/Ciano T79//8*Bagula. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614033 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM95.2589-1. GP-678. Pedigree - Bagula/Ciano T79//8*Bagula. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614034 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.760-1. GP-679. Pedigree - Bobwhite/Ciano T79//8*Bobwhite. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614035 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.761-1. GP-680. Pedigree - Bobwhite/Ciano T79//8*Bobwhite. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614036 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.739-1. GP-681. Pedigree - Spinebill/Pavon 76//8*Spinebill. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614037 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.740-1. GP-682. Pedigree - Spinebill/Pavon 76//8*Spinebill. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614038 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.750-1. GP-683. Pedigree - Fink/Pavon 76//8*Fink. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614039 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.751-1. GP-684. Pedigree - Fink/Pavon 76//8*Fink. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar.

Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614040 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.752-1. GP-685. Pedigree - Kauz/Pavon 76//8* Kauz. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614041 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.753-1. GP-686. Pedigree - Kauz/Pavon 76//8* Kauz. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614042 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.769-1. GP-687. Pedigree - Veery 10/Pavon 76//8*Veery 10. 1B isogenic line produced from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome.

PI 614043 QUAR. *Triticum aestivum* L.

Breeding. Pureline. CIGM98.768-1. GP-688. Pedigree - Veery 10/Pavon 76//8*Veery 10. T1BL.1RS derivative from a T1BL.1RS bread wheat cultivar. Developed to enhance existing diversity and further elucidate the contribution of T1BL.1RS translocation chromosome. Assumed to possess biotic stress resistant genes Lr26, Sr31, Yr9 and Pm8.

PI 614044 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Breeding. Pureline. CIGM98.771-1. GP-643. Pedigree - Laru//Cndo/Veery/3/7*Laru. Chromosome 1B derived line from Laru durum wheat.

PI 614045 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Breeding. Pureline. CIGM98.770-1. GP-644. Pedigree - Laru//Cndo/Veery/3/7*Laru. T1BL.1RS isogenic line derived from Laru durum wheat. Possesses disease resistance genes Lr26, Sr31, Yr9, and Pm8 located on the rye chromosome arm.

PI 614046 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Breeding. Pureline. CIGM98.772-1. GP-645. Pedigree - Croc1//Cndo/Veery/3/7*Croc1. Chromosome 1B derived line from Croc1 durum wheat.

PI 614047 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Breeding. Pureline. CIGM98.773-1. GP-646. Pedigree - Croc1//Cndo/Veery/3/7*Croc1. T1BL.1RS isogenic line derived from Croc1 durum wheat. Possesses disease resistance genes Lr26, Sr31, Yr9, and Pm8 located on the rye chromosome arm.

PI 614048 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.

Breeding. Pureline. CIGM98.774-1. GP-647. Pedigree - Dvergand2//Cndo/Veery/3/7*Dv. Chromosome 1B derived line from Dvergand2 durum wheat.

- PI 614049 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.775-1. GP-648. Pedigree -
Dvergand2//Cndo/Veery/3/7*Dv. T1BL.1RS isogenic line derived from
Dvergand2 durum wheat. Possesses disease resistance genes Lr26, Sr31,
Yr9, and Pm8 located on the rye chromosome arm.
- PI 614050 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.776-1. GP-649. Pedigree -
Pardo//Cndo/Veery/3/7*Pardo. Chromosome 1B derived line from Pardo durum
wheat.
- PI 614051 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.777-1. GP-650. Pedigree -
Pardo//Cndo/Veery/3/7*Pardo. T1BL.1RS isogenic line derived from Pardo
durum wheat. Possesses disease resistance genes Lr26, Sr31, Yr9, and Pm8
located on the rye chromosome arm.
- PI 614052 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.778-1. GP-651. Pedigree -
Gutros//Cndo/Veery/3/7*Gutros. Chromosome 1B derived line from Gutros
durum wheat.
- PI 614053 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.779-1. GP-652. Pedigree -
Gutros//Cndo/Veery/3/7*Gutros. T1BL.1RS isogenic line derived from
Gutros durum wheat. Possesses disease resistance genes Lr26, Sr31,
Yr9, and Pm8 located on the rye chromosome arm.
- PI 614054 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.780-1. GP-653. Pedigree -
Bia//Cndo/Veery/3/7*Bia. Chromosome 1B derived line from Bia durum
wheat.
- PI 614055 QUAR. *Triticum turgidum* subsp. *durum* (Desf.) Husn.**
Breeding. Pureline. CIGM98.781-1. GP-654. Pedigree -
Bia//Cndo/Veery/3/7*Bia. T1BL.1RS isogenic line derived from Bia durum
wheat. Possesses disease resistance genes Lr26, Sr31, Yr9, and Pm8
located on the rye chromosome arm.

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 Plant 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 Plant Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 10/24/1996.

- PI 614056. *Vaccinium uliginosum* L.**
Wild. 96031; CVAC 1276. Collected in China. Latitude 52 deg. 41' N.

Longitude 123 deg. 10' E. Elevation 538 m. 10 km south of Amur Jagedaqi, Mo He Bureau. open, wet burnt-over plain in Da xing an ling. Pedigree - collected from the wild in Heilongjiang, China.

PI 614057. *Vaccinium uliginosum* L.

Wild. 96033-A; CVAC 1277. Collected in Heilongjiang, China. Latitude 53 deg. 25' N. Longitude 122 deg. 16' E. Elevation 438 m. collected near Mo He Jagedaqi, Mo He Bureau. Pedigree - collected from the wild in Heilongjiang, Chinabought from four vendors in market.

PI 614058. *Vaccinium uliginosum* L.

Wild. 96066-A; CVAC 1278. Collected in China. Latitude 41 deg. 59' N. Longitude 127 deg. 36' E. Elevation 640 m. 1 km from Jeng Bei Station Songjiang He Forest Bureau. valley in foothills of Changbai Mountains. Pedigree - collected from the wild in Jilin, China.

PI 614059. *Vaccinium uliginosum* L.

Wild. 96037-A; CVAC 1279. Collected in China. Latitude 53 deg. 37' N. Longitude 122 deg. 16' E. Elevation 369 m. estimated 20 km north of Mo He Jagedaqi, Mo He Bureau. low, wet area in open flat plain trees were burned in 1987. Pedigree - collected from the wild in Heilongjiang, China.

PI 614060. *Vaccinium uliginosum* L.

Wild. 96038; CVAC 1280. Collected in China. Latitude 52 deg. 58' N. Longitude 122 deg. 32' E. Elevation 369 m. collected 8 km from Mo He Jagedaqi, Mo He Bureau. hills surrounding plain Da xing an ling. Pedigree - collected from the wild in Heilongjiang, Chinabought from peddler in Mo He Forest Nursery.

PI 614061. *Vaccinium uliginosum* L.

Wild. 96017-A; CVAC 1281. Collected in China. Latitude 52 deg. 12' N. Longitude 124 deg. 5' E. Elevation 450 m. 50 km northeast of Hu Zhong, Jagedaqi (Hu Zhong Bureau). broad valley between low rounded hills open, flat, wet valley floor. Pedigree - collected from the wild in Heilongjiang, China.

PI 614062. *Vaccinium uliginosum* L.

Wild. 96016; CVAC 1282. Collected in China. Latitude 50 deg. 5' N. Longitude 124 deg. 0' E. Elevation 340 m. 19 km south of Jagedaqi Jagedaqi Forest Preserve. river valley - low hills Larix seed orchard. Pedigree - collected from the wild in Heilongjiang, China.

PI 614063. *Vaccinium uliginosum* L.

Wild. 96041; CVAC 1283. Collected in China. Latitude 51 deg. 40' N. Longitude 124 deg. 23' E. Elevation 500 m. 20 km west of Xin Ling. hills - Da xing an ling. Pedigree - collected from the wild in Heilongjiang, Chinabought from market.

PI 614064. *Vaccinium uliginosum* L.

Wild. 96027; CVAC 1284. Collected in China. Latitude 52 deg. 5' N. Longitude 123 deg. 19' E. Elevation 500 m. Jagedaqi, Hu Zhong Bureau southwest of Hu Zhong Town from Hu Zhong Town to Hu Zhong Natural Preserve. hills (Da xing an ling) edge of forest along road. Pedigree - collected from the wild in Heilongjiang, China.

PI 614065. *Vaccinium uliginosum* L.

Wild. 96032; CVAC 1285. Collected in China. Latitude 52 deg. 47' N. Longitude 123 deg. 10' E. Elevation 538 m. Jagedaqui, Mo He Bureau collected near the town of Amur. open, wet, burned-over plain. Pedigree - collected from the wild in Heilongjiang, Chinabought from five vendors in Amur.

PI 614066. *Vaccinium uliginosum* L.

Wild. 96012-B; CVAC 1286. Collected in China. Latitude 50 deg. 18' N. Longitude 124 deg. 7' E. Elevation 338 m. collected 30 km east of Jagedaqui. wet, grassy, meadow, flatlands. Pedigree - collected from the wild in Heilongjiang, Chinafruit bought from peddler.

PI 614067. *Vaccinium vitis-idaea* L.

Wild. 96020; CVAC 1287. Collected in China. Latitude 52 deg. 12' N. Longitude 124 deg. 5' E. Elevation 450 m. 50 km northeast of Hu Zhong Jagedaqui Hu Zhong Bureau. broad river valley between low hills (Da xing an ling) northwest slope, wooded wet. Pedigree - collected from the wild in Heilongjiang, China.

PI 614068. *Vaccinium vitis-idaea* L.

Wild. 96033-B; CVAC 1288. Collected in China. Latitude 53 deg. 25' N. Longitude 122 deg. 16' E. Elevation 438 m. 74 km north of Mo He Jagedaqui, Mo He Bureau. hilly - Da xing an ling under open *Pinus sylvestris* var. *mongolica* forest. Pedigree - collected from the wild in Heilongjiang, China.

PI 614069. *Vaccinium vitis-idaea* L.

Wild. 96022; CVAC 1289. Collected in China. Latitude 51 deg. 54' N. Longitude 123 deg. 3' E. Elevation 923 m. Jagedaqui, Hu Zhong Bureau southwest of Hu Zhong Town. hilly wet, heavily vegetated slope above road in shade. Pedigree - collected from the wild in Heilongjiang, China.

The following were collected 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 614070. *Vaccinium koreanum* Nakai

Wild. 96129; CVAC 1290. Collected 09/1996 in Liaoning, China. Pedigree - collected from the wild in Liaoning, China.

The following were collected by Carl Amason, P.O. Box 164, Calion, Arizona 71724, United States; James Glen Melcher, PO Box 883, Tioga, Louisiana 71477, United States. Donated by James Glen Melcher, PO Box 883, Tioga, Louisiana 71477, United States. Received 11/22/1996.

PI 614071. *Vaccinium fuscatum* Aiton

Wild. CVAC 1291. Collected 10/1996 in Arkansas, United States. Latitude 33 deg. 19' N. Longitude 92 deg. 35' W. Elevation 0 m. Between El Dorado and Calion, Union county. Growing in wet soil. Pedigree - Collected from the wild in Arkansas. Ballington considers this specimen not a pure *V. arkensanum*. Received as *V. arkensanum* Ashe. Rhodora 33:195 1931. Vanderkloet lumps this species into *corymbosum*.

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 08/29/1996.

PI 614072. *Vaccinium pallidum* Aiton

Wild. NC 96-24-4; CVAC 1292. Collected 07/11/1996 in Alabama, United States. Latitude 33 deg. 1' 47'' N. Longitude 85 deg. 41' 52'' W. Right roadside along German's Ferry Road for approximately 400 yards. Road is on the right just across Emuckfaw Creek on Highway 22, 5.7 miles east of New Site, Tallapoosa county, Alabama. On shoulder of road and in a ditch. *Fragaria virginiana*, scattered *Vaccinium elliottii*, and occasional *Vaccinium pallidum*. Pedigree - collected from the wild in Alabama. USDA Sponsored plant collecting expedition, 1996.

PI 614073. *Vaccinium myrsinites* Lam.

Wild. NC 96-31-2; CVAC 1293. Collected 07/12/1996 in Alabama, United States. Latitude 31 deg. 55' 43'' N. Longitude 85 deg. 54' 49'' W. Roadsides and woods edges along county road 7 at Tick Hill Cemetery, 8 miles north of U.S. 29. Very dry sandy uplands (where topsoil remains). Much of the vegetation typical for the southern U.S. inner coastal plain. *Quercus stellata* var. *margareta* (running post oak) found on top of the hill. Ironstone layer in soil profile. Pedigree - collected from the wild in Alabama. USDA Sponsored plant collecting expedition, 1996.

PI 614074. *Vaccinium arboreum* Marshall

Wild. NC 96-37-1; CVAC 1294. Collected 07/16/1996 in Alabama, United States. Latitude 32 deg. 54' 57'' N. Longitude 87 deg. 22' 47'' W. U.S. Forest Service Rd. 732, 1.3 miles off highway 25, on the left. F.S. Rd. 732 is 21.2 miles northeast of Greensboro, Alabama. Roadside on top of a ridge in open longleaf pine forest. Pedigree - collected from the wild in Alabama. A very attractive, glaucous-leaved and fruited form, with fairly large (still immature) fruit. Plant suckering over a wide area (on both sides of the Forest Service road).

USDA Sponsored plant collecting expedition, 1996.

The following were developed by T.H. McFarlin. Donated by Nick Vorsa, Rutgers University, Blueberry & Cranberry, Research Station, Chatsworth, New Jersey 08109, United States. Received 05/09/1996.

PI 614075. *Vaccinium macrocarpon* Aiton

Cultivar. "McFarlin"; US93-3; CVAC 1295. Pedigree - selected from the wild in Massachusetts. Fruit: midseason, berries large, 65-95 cupcount, round-oblong with flower end conical, lacking uniformity in size and shape. Color red becoming dark red when very ripe, flesh tender, extra fine in flavor, variable in keeping and shipping quality.

The following were developed by James P. Howes. Donated by Nick Vorsa, Rutgers University, Blueberry & Cranberry, Research Station, Chatsworth, New Jersey 08109, United States. Received 05/09/1996.

PI 614076. *Vaccinium macrocarpon* Aiton

Cultivar. "Howes"; CVAC 1296. Pedigree - Selected from the wild in Massachusetts. The standard late cultivar in Massachusetts and New

Jersey. Fruit 80-140 cupcount, colors very well in storage.

The following were developed by H.F. Bain. Donated by Nick Vorsa, Rutgers University, Blueberry & Cranberry, Research Station, Chatsworth, New Jersey 08109, United States. Received 05/09/1996.

PI 614077. *Vaccinium macrocarpon* Aiton

Cultivar. "Pilgrim"; US88-25; CVAC 1297. Pedigree - Prolific x McFarlin. Resistant to leafhopper, long oval, skin purplish-red with yellow undercolor, prolific bearer, late-ripening, keeping quality good.

PI 614078. *Vaccinium macrocarpon* Aiton

Cultivar. "Stevens"; US93-198; CVAC 1298. Pedigree - McFarlin x Potter. Fruit large, cupcount 50-60, shape round-oval, skin color deep red, flesh firm, keeping quality good, medium-late ripening.

PI 614079. *Vaccinium macrocarpon* Aiton

Cultivar. "Wilcox"; US88-34; CVAC 1299. Pedigree - Howes x Searles. Fruit size medium, shape oval, skin deep red, keeping quality fair very early ripening. Appears resistant to false blossom disease.

The following were collected by Qinghua Zhang, Institute of Forest Ecology and Environment, Chinese Academy of Forestry, Wan Shou Shan, Beijing, Beijing 100091, China. Received 01/03/1997.

PI 614080. *Vaccinium koreanum* Nakai

Wild. CVAC 1300. Collected 07/23/1996 in China. Pedigree - Collected from the wild in China.

The following were collected by Kim Hummer, USDA, ARS, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, Oregon 97333-2521, United States. Received 08/08/1996.

PI 614081. *Vaccinium vitis-idaea* L.

Wild. *V. oxycoccos* Muskeeg KHCW 96-12-01B; KHCW 96-12-01B; CVAC 1301. Collected 07/31/1996 in Alaska, United States. Latitude 60 deg. 29' N. Longitude 145 deg. 28' W. Elevation 15 m. About 0.5 mile from Copper River Road on Muskeeg Meander Trail. Muskeeg, direct sun, sphagnum bog. Pedigree - selection of wild *V. vitis-idaea*.

The following were developed by F.V. Coville. Donated by Mark Ehlenfeldt, USDA-ARS, Rutgers Blueberry and Cranberry Research Center, 125A Lake Oswego Road, Chatsworth, New Jersey 08019, United States. Received 01/24/1997.

PI 614082. *Vaccinium corymbosum* L.

Cultivar. "Wolcott"; CVAC 1302. Pedigree - Weymouth x (Stanley x Crabbe 4).

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 ; A.G.S. Reddy, Int. Crops Res. Inst. for the Semi-Arid Tropics, Asia Center, Patancheru, Andhra Pradesh 502324, India; H.D. Upadhyaya, Int. Crops Res.

Inst. for the Semi-Arid Tropics, Genetic Enhancement Division, Patancheru, Andhra Pradesh 502 324, India; V.K. Mehan, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; N. Yellaiah, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India. Received 07/27/2000.

PI 614083. *Arachis hypogaea* L.

Breeding. Pureline. ICGV 91278. GP-98. Pedigree - JL 24 / UF 71513-1. Spanish type peanut germplasm. Growth habit erect, sequential branching and elliptical medium size leaves. Leaf color green. Pods small size two seeded, slight beak, moderate constriction, and slight reticulation. Seeds have tan colored testa and weight 40 to 41 g 100 seeds-1. Oil content 465 g kg-1. Protein content 272 g kg-1.

PI 614084. *Arachis hypogaea* L.

Breeding. Pureline. ICGV 91283. GP-99. Pedigree - U4-7-5 / JL 24. Spanish type peanut germplasm. Growth habit erect, sequential branching and elliptical medium size leaves. Leaf color light-green. Pods small size two seeded, moderate beak, moderate constriction and moderate reticulation. Seeds have tan colored testa and weigh 40 to 41 g 100 seeds-1. Oil content 487 g kg-1. Protein content 238 g kg-1.

PI 614085. *Arachis hypogaea* L.

Breeding. Pureline. ICGV 91284. GP-100. Pedigree - J 11 x ICGV 86184. Spanish type peanut germplasm. Growth habit erect, sequential branching and elliptical medium size leaves. Leaf color green. Pods small size two seeded, slight beak, moderate constriction, and slight reticulation. Seeds have tan colored testa and weigh 33 g 100 seeds-1. Oil content 470 g kg-1. Protein content 223 g kg-1.

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 ; A.G.S. Reddy, Int. Crops Res. Inst. for the Semi-Arid Tropics, Asia Center, Patancheru, Andhra Pradesh 502324, India; H.D. Upadhyaya, Int. Crops Res. Inst. for the Semi-Arid Tropics, Genetic Enhancement Division, Patancheru, Andhra Pradesh 502 324, India; N. Yellaiah, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India; S. Panda, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India. Received 07/27/2000.

PI 614086. *Arachis hypogaea* L.

Breeding. Pureline. ICGV 94361. GP-101. Pedigree - (ICGV 86124 x ICG(FDRS)10). Spanish type peanut germplasm. Growth habit erect, sequential branching and elliptical medium-sized dark-green leaves. Matures in 90-95 days after planting. Pods mainly two seeded, small in size with slight constriction, slight reticulation and without beaks. Seeds have tan colored testa, weight 38 g 100 seeds-1 and contain 470 g kg-1 oil and 217 g kg-1 protein.

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 ; A.G.S. Reddy, Int. Crops Res. Inst. for the Semi-Arid Tropics, Asia Center, Patancheru, Andhra Pradesh 502324, India; H.D. Upadhyaya, Int. Crops Res. Inst. for the Semi-Arid Tropics, Genetic Enhancement Division, Patancheru, Andhra Pradesh 502 324, India; N. Yellaiah, Int. Crops Res. Inst. for the

Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India. Received 07/27/2000.

PI 614087. *Arachis hypogaea* L.

Breeding. Pureline. ICGV 93470. GP-102. Pedigree - ICGV 86015 / ICGV 86155. Spanish type peanut germplasm. Growth habit erect, sequential branching and elliptical medium sized dark-green leaves. Matures in about 95-100 days after planting. Pods mainly two seeded, small in size with slight beak, moderate constriction and slight reticulation. Seeds have tan colored testa and weigh 47 g 100 seed-100 and contain 463 g kg-1 g oil and 238 kg-1 protein.

The following were developed by Dennis Thomas, University of Illinois, Department of Agronomy, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; Cecil D. Nickell, University of Illinois, Department of Crop Science, 1102 S. Goodwin Av., 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; Brian W. Diers, University of Illinois, Dept. of Crop Science, 1102 S. Goodwin Ave., Urbana, Illinois 61801, United States. Received 07/17/2000.

PI 614088. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Loda"; LN95-5414. CV-423. Pedigree - Jack x IA3003. Indeterminate line classified as Group II maturity (relative maturity 2.1) maturing the same as IA2036, 1 d later than IA 2021 and 3 d earlier than Dwight. Flowers purple, gray pubescence, brown pods at maturity, and dull yellow seeds with gray hila. May have up to 2% other types. Susceptible to phytophthora rot (Races 1, 5, 7, 25, and 30), brown stem rot (*Phialophora gregata*), and sudden death syndrome (*Fusarium solani*). When evaluated against SCN in the greenhouse, resistant to Races 2, 3, and 4 and moderately resistant to Races 1, 5, and 14.

The following were developed by James H. Helm, Alberta Agriculture, Food and Rural Development, Field Crop Development Centre, Lacombe, Alberta T4L 1W8, Canada. Received 07/17/2000.

PI 614089. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "TROCHU"; BT 558. Pedigree - Noble//D169/DL70///Mari-Coho/Nackta//TR219. Six-row feed barley. Aleurone yellow, smooth awns, long rachis with long hair. High yielding and has high test weight and kernel weight. In the field, intermediate reaction to scald and net blotch. Well adapted to western Canada. High percent plump seed.

PI 614090. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "VIVAR"; SD 516. Pedigree - Leduc//DL69/DL70///Noble/CM67-U.Saak1800/Pro-CM67-DL70. Six-row semi-dwarf feed barley. High yielding, with high test weight and kernel weight. High percentage plump, kernels. Aleurone yellow and rough awns. Rachilla long and short hairs. In the field, intermediate reaction to scald and net blotch. Well adapted to western Canada.

The following were developed by B. Glaz, USDA, ARS, Sugarcane Field Station,

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; Jimmie D. Miller, USDA, ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; Jack C. Comstock, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; J.E. Follis, Florida Sugar Cane League, Inc., P.O. Box 1208, Clewiston, Florida 33440, United States. Donated by Jimmie D. Miller, USDA, ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States. Received 07/19/2000.

PI 614091. *Saccharum* sp.

Breeding. "CP 92-1213"; MIA 35100. CV-113. Pedigree - 73-239 / CP 85-1498. Evaluated in 21 replicated yield tests on organic soils where the sugar sucrose content was equal and the cane yield was slightly higher than the standard. In 5 replicated yield tests on sand soils, yield was inferior and it is not recommended for planting on sand soils. Stalks have been reported to be brittle during harvest after lodging. Shows field resistance in Florida to eye spot (*Bipolaris sacchari*), rust (*Puccinia melanocephala*), smut (*Ustilago scitaminea*), and sugarcane mosaic virus strain E. Inoculated tests indicate moderately susceptible to ratoon stunting disease (*Clavibacter xyli*). Moderately resistant to leaf scald (*Xanthomonas albilineans*). Fiber content of 10.23%.

PI 614092. *Saccharum* sp.

Cultivar. "CP 92-1641"; M01225; Q 37519. CV-114. Pedigree - CP 80-1827 / CP 84-1322. Evaluated in 21 replicated tests on organic soils where the sucrose yield was only 94% of that of the check and a theoretical economic index on organic soils predicted 4.8% higher returns than the check. Evaluated in 5 replicated yield tests on sand soils where the sucrose yield was 5% higher than that of the check and a theoretical economic index on sand soils predicted 13% higher returns. Shows field resistance in Florida to eye spot (*Bipolaris sacchari*), rust (*Puccinia melanocephala*), smut (*Ustilago scitaminea*), leaf scald (*Xanthomonas albilineans*), and sugarcane mosaic virus, strain E. Fiber content 10.24%.

The following were developed by B. Glaz, USDA, ARS, Sugarcane Field Station, 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; Jack C. Comstock, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; James D. Miller, USDA-ARS, Dept. of Plant Pathology, North Dakota State University, Fargo, North Dakota, United States; J.E. Follis, Florida Sugar Cane League, Inc., P.O. Box 1208, Clewiston, Florida 33440, United States. Donated by Jimmie D. Miller, USDA, ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States. Received 07/19/2000.

PI 614093. *Saccharum* sp.

Breeding. "CP 92-1666"; Q 37520; MIA 35093. CV-115. Pedigree - CP 82-1592 / CP 84-1322. Evaluated in 21 yield tests on organic soils. Sucrose yield 12% higher than the check. Shows field resistance in Florida to eye spot (*Bipolaris sacchari*), and rust (*Ustilago scitaminea*), but no plants naturally infected have been found. In inoculated tests, shows no mosaic infection. However, two stools naturally infested with sugarcane mosaic virus, strain E, were found. Moderately resistant to ratoon stunting disease (*Clavibacter xyli*), and leaf scald (*Xanthomonas*

albilineans). Fiber content of 9.91%.

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 05/08/2000.

PI 614094. Phaseolus vulgaris L.

Cultivar. Pureline. "JAGUAR"; B95556. CV-180. Pedigree - B90211/N90616. Upright indeterminate growth habit averaging 50 cm in height combined with excellent resistance to lodging. Flowers purple and flowers in 48 days after planting. Mid-season variety maturity 91 days after planting, ranging from 83-98 days. Resistant to bean common mosaic virus, rust and to races 7, 65 and 73 of anthracnose, to which T-39 is susceptible. Equivalent to T-39 in tolerance to white mold and to Michigan isolates of root rot, but is susceptible to common blight. Flat seed averaging 21 g/100 seed and is similar to T-39 in size, shape and color. In canning trails, exhibited excellent canning quality better than T-39. Yields over 26 cwt/acre over five years at 26 locations in Michigan and equivalent to T-39 and Phantom.

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; Jim D. Kelly, Michigan State University, Department of Crop & Soil Science, 370 Plant & Soil Sci. Bldg. MSU, East Lansing, Michigan 48824-1325, United States; Francisco J. Ibarra-Perez, National Research Institute for Forestry and Agriculture, CIRNOC-INIFAP-SARH, Valle del Guadiana Experimental Station, Durango, Durango 34000, Mexico; R. Rosales-Serna, National Research Institute for Forestry and Agriculture, Bean/Cowpea-CRSP, Durango Experimental Station, Durango, Durango CP 34000, Mexico; A. Castillo-Rosales, National Research Institute for Forestry and Agriculture, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico; B. Cazares-Enriquez, National Research Institute for Forestry and Agriculture, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico; P. Fernandez-Hernandez, National Research Institute for Forestry and Agriculture, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico. Received 05/08/2000.

PI 614095. Phaseolus vulgaris L.

Cultivar. Pureline. "NEGRO ALTIPLANO BLACK BEAN"; NG91207. CV-184. Pedigree - Negro Durango//BAT260/Negro Queretaro. Averages 48 cm in height and exhibits a short vine type IIIa indeterminate growth habit, with excellent pod distribution in the canopy. Flowers purple and blooms 47 d after planting. Day-neutral, mid-season, cultivar, maturing 95 days after planting. Matures 20 d earlier than most black-seeded landraces from the highlands of Mexico. Carries the single dominant hypersensitive I gene resistance to Bean Common Mosaic Virus (BCMV). In Central Mexico, has not shown symptoms of anthracnose and rust in the field in spite of

the large number of physiological races of both pathogens detected in the region. Tolerant to common bacterial blight and root rots. Seed size medium, black, averages 22 g 100 seed⁻¹ (range 19-24 g 100 seed⁻¹). Seed flat and elliptical in shape and smaller in size than most highland landraces in the shiny black class. Averages 1253 kg ha⁻¹ under rainfed conditions and outyielded Negro San Luis and Negro Queretaro by 17 and 19%, respectively.

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. Received 05/08/2000.

PI 614096. Phaseolus vulgaris L.

Cultivar. Pureline. "NEGRO SAHUATOBA BLACK BEAN"; NG91190. Pedigree - BAT 308/XAN 87. Averages 48 cm in height and exhibits a short vine type IIIa indeterminate growth habit with excellent pod distribution in the canopy. Flowers purple and blooms 51 d after planting. Daylength neutral, mid-season cultivar maturing 98 days after planting. Matures 12 d earlier than most black shiny seeded landraces from the highlands of Mexico. Carries the single dominant hypersensitive I gene resistance to Bean Common Mosaic Virus (BCMV) in Central Mexico. Has not shown symptoms of anthracnose or rust in the field in spite of the large number of physiological races detected in the region. Tolerant to common bacterial blight and root rots. Small opaque black seed that averages 21g 100 seed⁻¹. Seed flat and elliptical in shape and smaller in size to most highland landraces in the shiny black class. Averages 1162 kg ha⁻¹ and outyielded the main landraces in the region, Negro San Luis and Negro Queretaro by 14 and 17%, respectively.

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; Jim D. Kelly, Michigan State University, Department of Crop & Soil Science, 370 Plant & Soil Sci. Bldg. MSU, East Lansing, Michigan 48824-1325, United States; Francisco J. Ibarra-Perez, National Research Institute for Forestry and Agriculture, CIRNOC-INIFAP-SARH, Valle del Guadiana Experimental Station, Durango, Durango 34000, Mexico; R. Rosales-Serna, National Research Institute for Forestry and Agriculture, Bean/Cowpea-CRSP, Durango Experimental Station, Durango, Durango CP 34000, Mexico; A. Castillo-Rosales, National Research Institute for Forestry and Agriculture, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico; P. Fernandez-Hernandez, National Research Institute for Forestry and Agriculture, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico. Received 05/08/2000.

PI 614097. Phaseolus vulgaris L.

Cultivar. Pureline. "PINTO MESTIZO"; PT91325. CV-185. Pedigree - Bayo Victoria / Olathe. Averages 40 cm in height and exhibits a short vine type III indeterminate growth habit, with pod distribution in the lower half of the canopy. Flowers white and blooms 40 d after planting. Short-season, maturing 89 days after planting. Matures earlier than most landrace pinto cultivars and 7 d earlier than Pinto Villa, the most widely grown pinto cultivar in the region. Resistant to all prevalent races of anthracnose except race 1472, found in localized areas of the

Mexican highlands. Resistant to rust in the field in spite of the large number of physiological races detected in the region. Tolerant to common bacterial blight and root rots. Medium pinto seed size averaging 42 g 100 seed⁻¹ (range 38-44 g 100 seed⁻¹). Seed has elliptical non-uniform shape with an average protein content of 21% similar to most pinto cultivars. Averages 1399 kg ha⁻¹ and out yielded Pinto Nacional the main landrace in the region by 30%. At irrigated locations, averaged 2213 kg ha⁻¹ with a.

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. Received 05/08/2000.

PI 614098. Phaseolus vulgaris L.

Cultivar. Pureline. "PINTO BAYACORA"; PT91080. Pedigree - Pinto Nacional 1 / Pinto Sierra. Averages 42 cm in height and exhibit a short vine type III indeterminate growth habit, with pod distribution in the lower half of the plant canopy. Flowers white and blooms 38 d after planting. Short-season day neutral cultivar, maturing 89 days after planting. Matures earlier than most pinto landraces and 10 d earlier than Pinto Villa, the most widely grown pinto cultivar in the region. In the semiarid Highlands of Mexico, has not shown symptoms of anthracnose and rust in spite of the abundant variability shown by these pathogens in the region. Susceptible to common bacterial blight and tolerant to root rots. Medium pinto seed size that averages 34.5 g 100 seed⁻¹ (range 31 to 36 g 100 seed⁻¹). Seed attractive elliptical shape with a desirable pinto bean mottle pattern. Cooking time is significantly shorter than that of all other bred or landraces cultivars in the pinto seed class. Averages 1337 kg ha⁻¹ and outyielded Pinto Nacional the main landrace in the region by 29%.

The following were developed by Florida Agr. Exp. Sta.. Received 07/28/2000.

PI 614099 PVPO. Lolium multiflorum Lam.

Cultivar. "JUMBO". PVP 200000196.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 07/28/2000.

PI 614100 PVPO. Gossypium hirsutum L.

Cultivar. "DeltaPEARL". PVP 200000261.

PI 614101 PVPO. Gossypium hirsutum L.

Cultivar. "DP 420 RR". PVP 200000262.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 07/28/2000.

PI 614102 PVPO. Lactuca sativa L.

Cultivar. "PSR 4569". PVP 200000266.

The following were developed by R.J. Peterson Enterprises, Inc.. Received 07/28/2000.

PI 614103 PVPO. Festuca arundinacea Schreb.
Cultivar. "Shenandoah II". PVP 200000267.

The following were developed by Paragon Seed, Inc., United States. Received 07/28/2000.

PI 614104 PVPO. Lactuca sativa L.
Cultivar. "Trojan". PVP 200000269.

The following were developed by Limagrain Canada Seeds Inc.. Received 07/28/2000.

PI 614105 PVPO. Brassica napus L.
Cultivar. "LG 3455". PVP 200000270.

PI 614106 PVPO. Brassica napus L.
Cultivar. "LG 3311". PVP 200000271.

PI 614107 PVPO. Brassica napus L.
Cultivar. "LG 3235". PVP 200000272.

PI 614108 PVPO. Brassica napus L.
Cultivar. "LG 3525". PVP 200000273.

PI 614109 PVPO. Brassica napus L.
Cultivar. "PR5338". PVP 200000274.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 07/28/2000.

PI 614110 PVPO. Triticum aestivum L.
Cultivar. "26R24". PVP 200000275.

The following were developed by Rijk Zwaan Zaadteelt en Zaadhandel B.V., Meo Voto Beheer BV, De Lier, South Holland, Netherlands. Received 07/28/2000.

PI 614111 PVPO. Lactuca sativa L.
Cultivar. "Ronda". PVP 200000276.

The following were developed by Sakata Seed Corporation, Japan. Received 07/28/2000.

PI 614112 PVPO. Callistephus chinensis (L.) Nees
Cultivar. "Serenade Blue-Tipped White". PVP 200000277.

PI 614113 PVPO. Callistephus chinensis (L.) Nees
Cultivar. "Serenade Carmine". PVP 200000278.

PI 614114 PVPO. Callistephus chinensis (L.) Nees

Cultivar. "Serenade Light Blue". PVP 200000279.

PI 614115 PVPO. *Callistephus chinensis* (L.) Nees
Cultivar. "Serenade Rose Tipped White". PVP 200000280.

PI 614116 PVPO. *Callistephus chinensis* (L.) Nees
Cultivar. "Serenade Rose". PVP 200000281.

PI 614117 PVPO. *Callistephus chinensis* (L.) Nees
Cultivar. "Serenade Scarlet". PVP 200000282.

The following were developed by Hardeman Grain & Seed, Inc.. Received 07/28/2000.

PI 614118 PVPO. *Triticum aestivum* L.
Cultivar. "HG-9". PVP 200000283.

The following were developed by Stoneville Pedigreed Seed Company, Stoneville, Mississippi, United States. Received 07/28/2000.

PI 614119 PVPO. *Gossypium hirsutum* L.
Cultivar. "ST 468". PVP 200000284.

The following were developed by DEKALB Genetics Corporation, United States. Received 07/28/2000.

PI 614120 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "GF6150". PVP 200000285.

PI 614121 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "89AHD11". PVP 200000286.

PI 614122 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "WDHQ11". PVP 200000287.

PI 614123 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "86ISI26". PVP 200000288.

PI 614124 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "86ISI27". PVP 200000289.

PI 614125 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "22DHQ3". PVP 200000290.

PI 614126 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "87ATD2". PVP 200000291.

PI 614127 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "17DHD16". PVP 200000292.

PI 614128 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "01HGI4". PVP 200000293.

PI 614129 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "01IUL6". PVP 200000294.

PI 614130 PVPO. Zea mays L. subsp. mays
Cultivar. "17INI30". PVP 200000295.

PI 614131 PVPO. Zea mays L. subsp. mays
Cultivar. "17QFB1". PVP 200000296.

PI 614132 PVPO. Zea mays L. subsp. mays
Cultivar. "94INK1A". PVP 200000297.

PI 614133 PVPO. Zea mays L. subsp. mays
Cultivar. "83DNQ2". PVP 200000298.

PI 614134 PVPO. Zea mays L. subsp. mays
Cultivar. "4SCQ3". PVP 200000299.

PI 614135 PVPO. Zea mays L. subsp. mays
Cultivar. "F307W". PVP 200000300.

The following were developed by Arizona Plant Breeders, Inc., Arizona, United States. Received 07/28/2000.

PI 614136 PVPO. Triticum turgidum subsp. durum (Desf.) Husn.
Cultivar. "MATT". PVP 200000301.

The following were developed by DEKALB Genetics Corporation, United States. Received 07/28/2000.

PI 614137 PVPO. Zea mays L. subsp. mays
Cultivar. "91INI12". PVP 200000302.

PI 614138 PVPO. Zea mays L. subsp. mays
Cultivar. "91ISI5". PVP 200000303.

PI 614139 PVPO. Zea mays L. subsp. mays
Cultivar. "01HFI3". PVP 200000304.

PI 614140 PVPO. Zea mays L. subsp. mays
Cultivar. "16IUL2". PVP 200000305.

The following were donated by Sunseeds Genetics Inc., Hollister, California 95024, United States. Received 03/15/1992.

PI 614141. Pisum sativum L.
Cultivar. W6 12642; G 29080; GREEN ARROW.

The following were developed by Craig A. Abel, USDA, ARS, North Central Regional Plant Introduction Station, Iowa State University, Ames, Iowa 50011-1010, United States. Received 03/26/1999.

PI 614142. Zea mays L. subsp. mays
Breeding. Partinbred. A98-1000Y; GEMS-0001; Ames 25223. Pedigree - (PI

503806 x B94)\\B94 S1. Released 06/21/2000.

The following were developed by DEN HARTIGH BV, Netherlands. Received 08/02/2000.

PI 614143. *Solanum tuberosum* L.
Cultivar. "OSCAR". PVP 9600131.

PI 614144. *Solanum tuberosum* L.
Cultivar. "SOLIDE". PVP 9600132.

The following were developed by Monsanto Company, United States. Received 08/02/2000.

PI 614145. *Solanum tuberosum* L.
Cultivar. "NL10-RBK". PVP 9600150.

The following were developed by NDSU Research Foundation, North Dakota, United States. Received 08/02/2000.

PI 614146. *Solanum tuberosum* L.
Cultivar. "NorDonna". PVP 9600243.

The following were developed by Frito Lay, Inc., 4295 Tenderfoot Road, Rhinelander, Wisconsin 54501, United States. Received 08/02/2000.

PI 614147. *Solanum tuberosum* L.
Cultivar. "FL 1833". PVP 9700006.

The following were developed by UNIPLANTA Saatzucht KG, Germany. Received 08/02/2000.

PI 614148. *Solanum tuberosum* L.
Cultivar. "PANDA". PVP 9700021.

The following were developed by NDSU Research Foundation, North Dakota, United States. Received 08/02/2000.

PI 614149. *Solanum tuberosum* L.
Cultivar. "NorValley". PVP 9700030.

The following were developed by HZPC Holland BV, Netherlands. Received 08/02/2000.

PI 614150. *Solanum tuberosum* L.
Cultivar. "MORNING GOLD". PVP 9700104.

PI 614151. *Solanum tuberosum* L.
Cultivar. "ASTERIX". PVP 9700105.

PI 614152. *Solanum tuberosum* L.

Cultivar. "ADORA". PVP 9700112.

The following were developed by Steve St. Martin, Ohio State University, Department of Horticulture & Crop Science, 202 Kottman Hall, Columbus, Ohio 43210-1086, United States; R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States; Ron Fioritto, Ohio State University, Ohio Agricultural Research & Development Center, Dept. of Horticulture & Crop Science, Wooster, Ohio 44691, United States; A.F. Schmitthenner, Ohio State University, Dept. of Plant Pathology, Columbus, Ohio 43210, United States; R.J. Martin, USDA, ARS, Ohio State University, Dept. of Food Science and Technology, Columbus, Ohio 43210, United States; A. Calip-Dubois, Ohio State University, Dept. of Horticulture & Crop Science, Columbus, Ohio 43210, United States. Received 08/08/2000.

PI 614153. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Croton 3.9". CV-422. Pedigree - HC80-1944 x Asgrow 3127. Tall, drought tolerant, indeterminate soybean developed specifically for adaptation to drought prone environments where shorter indeterminate cultivars fail to produce adequate height for good yields. Not recommended for high yield environments (>4000 kg/ha) where lodging may limit yield potential because of greater plant height.

The following were developed by Steve St. Martin, Ohio State University, Department of Horticulture & Crop Science, 202 Kottman Hall, Columbus, Ohio 43210-1086, United States; R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States; Ron Fioritto, Ohio State University, Ohio Agricultural Research & Development Center, Dept. of Horticulture & Crop Science, Wooster, Ohio 44691, United States; Giles Mills, USDA, ARS, Plant Germplasm Quarantine Office, Building 580, BARC-East, Beltsville, Maryland 20705-2350, United States; A.F. Schmitthenner, Ohio State University, Dept. of Plant Pathology, Columbus, Ohio 43210, United States. Received 08/08/2000.

PI 614154. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Darby". CV-424. Pedigree - GR8936 x Edison. Maturity group III (relative maturity 3.4). Indeterminate stem, white flowers, tawny pubescence, tan pods, and dull yellow seedcoats with black hila. Seedcoat peroxidase activity low. Carries the Rps1k gene for resistance to *Phytophthora* rot (*Phytophthora sojae*). High yield in Ohio tests in relation to other cultivars of similar maturity.

PI 614155. *Glycine max* (L.) Merr.

Cultivar. Pureline. "HS93-4118". CV-426. Pedigree - IA 2007 x DSR 304. Maturity group IV (relative maturity 4.1). Indeterminate stem, white flowers, light tawny pubescence, brown pods, and dull yellow seedcoats with black hila. Seedcoat peroxidase activity low. Carries the Rps1c gene for resistance to *Phytophthora* rot (*Phytophthora sojae*). High yield in relation to other cultivars of similar maturity.

The following were donated by Coker's Pedigreed Seed Co., P.O. Box 340, Hartsville, South Carolina 29550, United States. Received 1978.

PI 614156. *Glycine max* (L.) Merr.

Cultivar. "Hampton". CV-47. Pedigree - Derived as a reselection from Coker Hampton. Adapted South. Intermediate plant type. Medium to medium-tall. Erect. Excellent resistance lodging. Pod color gray pubescence or hair on brown pod. Medium late maturity. Bright yellow seed color. Uniform light hilum or eye. Occasional dark hilum or brown seed appear (varietal trait). Outstanding shatter resistance. Excellent yield and quality. High oil content (21 - 22%). Medium seed size. Cultivated. Literature reference -- Seedsman's Digest, April 1962.

The following were collected by Umesh Srivastava, NBPGR, New Delhi, Delhi, India; James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 03/04/1993.

PI 614157. Cucumis melo L. subsp. melo

Landrace. USM 001 A; Ames 20414. Collected 10/16/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614158. Cucumis melo L. subsp. melo

Landrace. USM 001 B; Ames 20415. Collected 10/19/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614159. Cucumis melo L. subsp. melo

Landrace. USM 001 C; Ames 20416. Collected 10/19/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614160. Cucumis melo L. subsp. melo

Landrace. USM 002; Ames 20417. Collected 10/16/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614161. Cucumis melo L. subsp. melo

Landrace. USM 004; Ames 20418. Collected 10/16/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614162. Cucumis melo L. subsp. melo

Landrace. USM 005 A; Ames 20419. Collected 10/16/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614163. Cucumis melo L. subsp. melo

Landrace. USM 005 B; Ames 20420. Collected 10/16/1992 in Rajasthan, India. Near Nettra, Jodhpur district. Field during the rainy season.

PI 614164. Cucumis melo L. subsp. melo

Landrace. USM 006 A1; Ames 20421. Collected 10/16/1992 in Rajasthan, India. Near Khedapa, Jodhpur district. During the rainy season.

PI 614165. Cucumis melo L. subsp. melo

Landrace. USM 006 A2; Ames 20422. Collected 10/19/1992 in Rajasthan, India. Near Sriramisar, Jodhpur district. During the rainy season.

PI 614166. Cucumis melo L. subsp. melo

Landrace. USM 006 B; Ames 20423. Collected 10/19/1992 in Rajasthan, India. Near Khedapa, Jodhpur district. During the rainy season.

- PI 614167. *Cucumis melo* L. subsp. *melo***
Landrace. USM 006 C; Ames 20424. Collected 10/19/1992 in Rajasthan, India. Near Khedapa, Jodhpur district. During the rainy season.
- PI 614168. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Landrace. USM 007; Ames 20425. Collected 10/16/1992 in Rajasthan, India. Near Khedapa, Jodhpur district. During the rainy season.
- PI 614169. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Landrace. USM 008; Ames 20426. Collected 10/16/1992 in Rajasthan, India. Near Khedapa, Jodhpur district. During the rainy season.
- PI 614170. *Cucumis melo* L. subsp. *melo***
Wild. USM 010; Ames 20427. Collected 10/16/1992 in Rajasthan, India. Near Khimsar, Nagaur district. Field-tree and hedgerow during the rainy season.
- PI 614171. *Cucumis melo* L. subsp. *melo***
Wild. USM 011; Ames 20428. Collected 10/16/1992 in Rajasthan, India. Near Khimsar, Nagaur district. Field-tree and hedgerow during the rainy season.
- PI 614172. *Cucumis melo* L. subsp. *melo***
Wild. USM 012; Ames 20429. Collected 10/16/1992 in Rajasthan, India. Near Khimsar, Nagaur district. Field-tree and hedgerow during the rainy season.
- PI 614173. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Wild. USM 013; Ames 20430. Collected 10/16/1992 in Rajasthan, India. Near Khimsar, Nagaur district. Field-tree and hedgerow during the rainy season.
- PI 614174. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Wild. USM 014; Ames 20431. Collected 10/16/1992 in Rajasthan, India. Near Khimsar, Nagaur district. Field-tree and hedgerow during the rainy season.
- PI 614175. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Wild. USM 015; Ames 20432. Collected 10/16/1992 in Rajasthan, India. Near Khimsar, Nagaur district. Field-tree and hedgerow during the rainy season.
- PI 614176. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 016; Ames 20433. Collected 10/16/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.
- PI 614177. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 017 A; Ames 20434. Collected 10/16/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.
- PI 614178. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 017 B; Ames 20435. Collected 10/19/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.
- PI 614179. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 018; Ames 20436. Collected 10/16/1992 in Rajasthan,

India. South of Nagaur, Nagaur district. During the rainy season.

PI 614180. Cucumis melo L. subsp. melo

Cultivated. USM 019; Ames 20437. Collected 10/16/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.

PI 614181. Cucumis melo L. subsp. melo

Cultivated. USM 020 A; Ames 20438. Collected 10/16/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.

PI 614182. Cucumis melo L. subsp. melo

Cultivated. USM 020 B; Ames 20439. Collected 10/19/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.

PI 614183. Cucumis melo L. subsp. melo

Cultivated. USM 021; Ames 20440. Collected 10/16/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.

PI 614184. Cucumis melo L. subsp. melo

Cultivated. USM 022; Ames 20441. Collected 10/16/1992 in Rajasthan, India. South of Nagaur, Nagaur district. During the rainy season.

PI 614185. Cucumis melo L. subsp. melo

Cultivated. USM 024 A; Ames 20442. Collected 10/16/1992 in Rajasthan, India. Near Nagaur, Nagaur district. During the rainy season.

PI 614186. Cucumis melo L. subsp. melo

Cultivated. USM 024 B; Ames 20443. Collected 10/19/1992 in Rajasthan, India. Near Nagaur, Nagaur district. During the rainy season.

PI 614187. Cucumis melo L. subsp. melo

Cultivated. USM 025; Ames 20444. Collected 10/16/1992 in Rajasthan, India. Near Nagaur, Nagaur district. During the rainy season.

PI 614188. Cucumis melo L. subsp. melo

Wild. USM 027; Ames 20445. Collected 10/18/1992 in Rajasthan, India. Near Napasar, Bikaner district. Sand dune during the rainy season. Three sites - must clarify which were from sand dunes and which from market!.

PI 614189. Cucumis melo L. subsp. melo

Wild. USM 028; Ames 20446. Collected 10/18/1992 in Rajasthan, India. Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614190. Cucumis melo L. subsp. melo

Wild. USM 029; Ames 20447. Collected 10/18/1992 in Rajasthan, India. Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614191. Cucumis melo L. subsp. melo

Wild. USM 030; Ames 20448. Collected 10/18/1992 in Rajasthan, India. Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614192. Cucumis melo L. subsp. melo

Wild. USM 031; Ames 20449. Collected 10/18/1992 in Rajasthan, India. Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614193. Cucumis melo L. subsp. melo

Wild. USM 032; Ames 20450. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614194. Cucumis melo L. subsp. melo

Wild. USM 033; Ames 20451. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614195. Cucumis melo L. subsp. melo

Wild. USM 034; Ames 20452. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614196. Cucumis melo L. subsp. melo

Wild. USM 035; Ames 20453. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614197. Cucumis melo L. subsp. melo

Wild. USM 036; Ames 20454. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614198. Cucumis melo L. subsp. melo

Wild. USM 037; Ames 20455. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614199. Cucumis melo L. subsp. melo

Wild. USM 038; Ames 20456. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614200. Cucumis melo L. subsp. melo

Wild. USM 039; Ames 20457. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614201. Cucumis melo L. subsp. melo

Wild. USM 040; Ames 20458. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614202. Cucumis melo L. subsp. melo

Wild. USM 041; Ames 20459. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614203. Cucumis melo L. subsp. melo

Wild. USM 042 A; Ames 20460. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614204. Cucumis melo L. subsp. melo

Wild. USM 042 B; Ames 20461. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614205. Cucumis melo L. subsp. melo

Wild. USM 043 A; Ames 20462. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614206. Cucumis melo L. subsp. melo

Wild. USM 043 B; Ames 20463. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614207. Cucumis melo L. subsp. melo

Wild. USM 044; Ames 20464. Collected 10/18/1992 in Rajasthan, India.

Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614208. Cucumis melo L. subsp. melo

Wild. USM 045; Ames 20465. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614209. Cucumis melo L. subsp. melo

Wild. USM 046; Ames 20466. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614210. Cucumis melo L. subsp. melo

Wild. USM 047; Ames 20467. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614211. Cucumis melo L. subsp. melo

Wild. USM 048; Ames 20468. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614212. Cucumis melo L. subsp. melo

Wild. USM 049; Ames 20469. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614213. Cucumis melo L. subsp. melo

Wild. USM 050; Ames 20470. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614214. Cucumis melo L. subsp. melo

Wild. USM 051; Ames 20471. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614215. Cucumis melo L. subsp. melo

Wild. USM 052; Ames 20472. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614216. Cucumis melo L. subsp. melo

Wild. USM 053; Ames 20473. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614217. Cucumis melo L. subsp. melo

Wild. USM 054; Ames 20474. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614218. Cucumis melo L. subsp. melo

Wild. USM 055; Ames 20475. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614219. Cucumis melo L. subsp. melo

Wild. USM 056; Ames 20476. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614220. Cucumis melo L. subsp. melo

Wild. USM 057; Ames 20477. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

PI 614221. Cucumis melo L. subsp. melo

Wild. USM 058; Ames 20478. Collected 10/18/1992 in Rajasthan, India.
Near Napasar, Bikaner district. Sand dune during the rainy season.

- PI 614222. *Cucumis melo* L. subsp. *melo***
Wild. USM 059; Ames 20479. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614223. *Cucumis melo* L. subsp. *melo***
Wild. USM 060; Ames 20480. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614224. *Cucumis melo* L. subsp. *melo***
Wild. USM 061; Ames 20481. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614225. *Cucumis melo* L. subsp. *melo***
Wild. USM 062; Ames 20482. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614226. *Cucumis melo* L. subsp. *melo***
Wild. USM 063; Ames 20483. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614227. *Cucumis melo* L. subsp. *melo***
Wild. USM 064; Ames 20484. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614228. *Cucumis melo* L. subsp. *melo***
Wild. USM 065; Ames 20485. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614229. *Cucumis melo* L. subsp. *melo***
Wild. USM 066; Ames 20486. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614230. *Cucumis melo* L. subsp. *melo***
Wild. USM 067; Ames 20487. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614231. *Cucumis melo* L. subsp. *melo***
Wild. USM 068; Ames 20488. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614232. *Cucumis melo* L. subsp. *melo***
Wild. USM 069; Ames 20489. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614233. *Cucumis melo* L. subsp. *melo***
Wild. USM 070; Ames 20490. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614234. *Cucumis melo* L. subsp. *melo***
Wild. USM 071; Ames 20491. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614235. *Cucumis melo* L. subsp. *melo***
Wild. USM 072; Ames 20492. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.

- PI 614236. *Cucumis melo* L. subsp. *melo***
Wild. USM 073; Ames 20493. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614237. *Cucumis melo* L. subsp. *melo***
Wild. USM 074 A; Ames 20494. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614238. *Cucumis melo* L. subsp. *melo***
Wild. USM 074 B; Ames 20495. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614239. *Cucumis melo* L. subsp. *melo***
Wild. USM 075; Ames 20496. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614240. *Cucumis melo* L. subsp. *melo***
Wild. USM 076 A; Ames 20497. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614241. *Cucumis melo* L. subsp. *melo***
Wild. USM 077; Ames 20499. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614242. *Cucumis melo* L. subsp. *melo***
Wild. USM 078 A; Ames 20500. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614243. *Cucumis melo* L. subsp. *melo***
Wild. USM 078 B; Ames 20501. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614244. *Cucumis melo* L. subsp. *melo***
Wild. USM 079; Ames 20502. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614245. *Cucumis melo* L. subsp. *melo***
Wild. USM 080; Ames 20503. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614246. *Cucumis melo* L. subsp. *melo***
Wild. USM 081; Ames 20504. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614247. *Cucumis melo* L. subsp. *melo***
Wild. USM 082; Ames 20505. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614248. *Cucumis melo* L. subsp. *melo***
Wild. USM 083; Ames 20506. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614249. *Cucumis melo* L. subsp. *melo***
Wild. USM 084 A; Ames 20507. Collected 10/18/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.
- PI 614250. *Cucumis melo* L. subsp. *melo***

Wild. USM 084 B2; Ames 20509. Collected 10/19/1992 in Rajasthan, India.
Near Sriramsar, Bikaner district. Sand dune during the rainy season.

PI 614251. Cucumis melo L. subsp. melo

Wild. USM 085; Ames 20510. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614252. Cucumis melo L. subsp. melo

Wild. USM 086; Ames 20511. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614253. Cucumis melo L. subsp. melo

Wild. USM 087; Ames 20512. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614254. Cucumis melo L. subsp. melo

Wild. USM 088 A; Ames 20513. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614255. Cucumis melo L. subsp. melo

Wild. USM 088 B; Ames 20514. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614256. Cucumis melo L. subsp. melo

Wild. USM 089; Ames 20515. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614257. Cucumis melo L. subsp. melo

Wild. USM 090; Ames 20516. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614258. Cucumis melo L. subsp. melo

Wild. USM 091; Ames 20517. Collected 10/19/1992 in Rajasthan, India.
Near Pugal Road, Bikaner district. Sand dune during the rainy season.

PI 614259. Cucumis melo L. subsp. melo

Landrace. USM 092; Ames 20518. Collected 10/19/1992 in Rajasthan, India.
Near Motigargh, Bikaner district. Field during the rainy season.

PI 614260. Cucumis melo L. subsp. melo

Landrace. USM 093; Ames 20519. Collected 10/19/1992 in Rajasthan, India.
Near Motigargh, Bikaner district. Field during the rainy season.

PI 614261. Cucumis melo L. subsp. melo

Landrace. USM 095; Ames 20521. Collected 10/19/1992 in Rajasthan, India.
Near Motigargh, Bikaner district. Field during the rainy season.

PI 614262. Cucumis melo L. subsp. melo

Landrace. USM 096 A; Ames 20522. Collected 10/19/1992 in Rajasthan,
India. Near Motigargh, Bikaner district. Field during the rainy season.
"hairy" fruit.

PI 614263. Cucumis melo L. subsp. melo

Landrace. USM 096 B; Ames 20523. Collected 10/19/1992 in Rajasthan,
India. Near Motigargh, Bikaner district. Field during the rainy season.
"hairy" fruit.

- PI 614264. *Cucumis melo* L. subsp. *melo***
Landrace. USM 097; Ames 20524. Collected 10/19/1992 in Rajasthan, India. Near Motigargh, Bikaner district. Field during the rainy season.
- PI 614265. *Cucumis melo* L. subsp. *melo***
Landrace. USM 099 A; Ames 20525. Collected 10/19/1992 in Rajasthan, India. Near Motigargh, Bikaner district. Field during the rainy season.
- PI 614266. *Cucumis melo* L. subsp. *melo***
Landrace. USM 099 B; Ames 20526. Collected 10/19/1992 in Rajasthan, India. Near Motigargh, Bikaner district. Field during the rainy season.
- PI 614267. *Cucumis melo* L. subsp. *melo***
Landrace. USM 101; Ames 20527. Collected 10/19/1992 in Rajasthan, India. Near Motigargh, Bikaner district. Field during the rainy season.
- PI 614268. *Cucumis melo* L. subsp. *melo***
Landrace. USM 102; Ames 20528. Collected 10/19/1992 in Rajasthan, India. Near Motigargh, Bikaner district. Field during the rainy season.
- PI 614269. *Cucumis melo* L. subsp. *melo***
Landrace. USM 105; Ames 20529. Collected 10/19/1992 in Rajasthan, India. Near Maraksar?, Suratgargh district. During the rainy season.
- PI 614270. *Cucumis melo* var. *flexuosus* (L.) Naudin**
Landrace. USM 112; Ames 20532. Collected 10/19/1992 in Rajasthan, India. Near Cchhappankaddu, Suratgarh district. During the rainy season.
- PI 614271. *Cucumis melo* var. *flexuosus* (L.) Naudin**
Cultivated. USM 117; Ames 20533. Collected 10/20/1992 in Rajasthan, India. Near Suratgargh, Ganganagar district. During the rainy season.
- PI 614272. *Cucumis melo* var. *flexuosus* (L.) Naudin**
Cultivated. USM 118; Ames 20534. Collected 10/20/1992 in Rajasthan, India. Near Suratgargh, Ganganagar district. During the rainy season.
- PI 614273. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 132; Ames 20546. Collected 10/21/1992 in Rajasthan, India . Near Sriganganagar, Ganganagar district. During the rainy season. No record in our book (JES&JDM).
- PI 614274. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 133; Ames 20547. Collected 10/21/1992 in Rajasthan, India . Near Sriganganagar, Ganganagar district. During the rainy season. No record in our book (JES&JDM).
- PI 614275. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 134; Ames 20548. Collected 10/21/1992 in Rajasthan, India . Near Sriganganagar, Ganganagar district. During the rainy season. No record in our book (JES&JDM).
- PI 614276. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 135; Ames 20549. Collected 10/21/1992 in Rajasthan, India . Near Sriganganagar, Ganganagar district. During the rainy season. No record in our book (JES&JDM).
- PI 614277. *Cucumis melo* L. subsp. *melo***

Uncertain. USM 136; Ames 20550. Collected 10/21/1992 in Rajasthan, India . Near Pallu, Ganganagar district. During the rainy season. No record in our book (JES&JDM).

PI 614278. Cucumis melo L. subsp. melo

Landrace. USM 138; Ames 20552. Collected 10/21/1992 in Rajasthan, India. Near 16 km before Jaitsu (going from Suratgargh towards Pallu), Ganganagar district. Field during the rainy season.

PI 614279. Cucumis melo subsp. agrestis (Naudin) Pangalo

Landrace. USM 143; Ames 20555. Collected 10/21/1992 in Rajasthan, India. Near Jaitsu on Arjunsar Pallu Road, Ganganagar district. Field during the rainy season.

PI 614280. Cucumis melo L. subsp. melo

Landrace. USM 144; Ames 20556. Collected 10/21/1992 in Rajasthan, India. Near Jaitsu on Arjunsar Pallu Road, Ganganagar district. Field during the rainy season.

PI 614281. Cucumis melo L. subsp. melo

Landrace. USM 145; Ames 20557. Collected 10/21/1992 in Rajasthan, India. Near Jaitsu on Arjunsar Pallu Road, Ganganagar district. Field during the rainy season.

PI 614282. Cucumis melo L. subsp. melo

Landrace. USM 146; Ames 20558. Collected 10/21/1992 in Rajasthan, India. Near Jaitsu on Arjunsar Pallu Road, Ganganagar district. Field during the rainy season.

PI 614283. Cucumis melo L. subsp. melo

Landrace. USM 147; Ames 20559. Collected 10/21/1992 in Rajasthan, India. Near Jaitsu on Arjunsar Pallu Road, Ganganagar district. Field during the rainy season.

PI 614284. Cucumis melo L. subsp. melo

Cultivated. USM 148; Ames 20560. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.

PI 614285. Cucumis melo L. subsp. melo

Cultivated. USM 149; Ames 20561. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.

PI 614286. Cucumis melo L. subsp. melo

Cultivated. USM 150; Ames 20562. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.

PI 614287. Cucumis melo L. subsp. melo

Cultivated. USM 151; Ames 20563. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.

PI 614288. Cucumis melo L. subsp. melo

Cultivated. USM 152; Ames 20564. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.

PI 614289. Cucumis melo L. subsp. melo

Cultivated. USM 153; Ames 20565. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.

- PI 614290. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 154 A; Ames 20566. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.
- PI 614291. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 154 B; Ames 20567. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.
- PI 614292. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 155; Ames 20568. Collected 10/21/1992 in Rajasthan, India. Near Pallu, Ganganagar district. During the rainy season.
- PI 614293. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 156; Ames 20569. Collected 10/21/1992 in Rajasthan, India. Near Sawar, Churu district. During the rainy season.
- PI 614294. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 157; Ames 20570. Collected 10/21/1992 in Rajasthan, India. Near Sawar, Churu district. During the rainy season.
- PI 614295. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 158; Ames 20571. Collected 10/21/1992 in Rajasthan, India. Near Sawar, Churu district. During the rainy season.
- PI 614296. *Cucumis melo* L. subsp. *melo***
Landrace. USM 159; Ames 20572. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.
- PI 614297. *Cucumis melo* L. subsp. *melo***
Landrace. USM 160; Ames 20573. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.
- PI 614298. *Cucumis melo* L. subsp. *melo***
Landrace. USM 161; Ames 20574. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.
- PI 614299. *Cucumis melo* L. subsp. *melo***
Landrace. USM 162; Ames 20575. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.
- PI 614300. *Cucumis melo* L. subsp. *melo***
Landrace. USM 163; Ames 20576. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.
- PI 614301. *Cucumis melo* L. subsp. *melo***
Landrace. USM 164; Ames 20577. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.
- PI 614302. *Cucumis melo* L. subsp. *melo***
Landrace. USM 165; Ames 20578. Collected 10/21/1992 in Rajasthan, India.

Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614303. *Cucumis melo* L. subsp. *melo*

Landrace. USM 166; Ames 20579. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614304. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 167; Ames 20580. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614305. *Cucumis melo* L. subsp. *melo*

Landrace. USM 168; Ames 20581. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614306. *Cucumis melo* L. subsp. *melo*

Landrace. USM 169; Ames 20582. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614307. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 170; Ames 20583. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614308. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 171; Ames 20584. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614309. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 172; Ames 20585. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614310. *Cucumis melo* L. subsp. *melo*

Landrace. USM 173; Ames 20586. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614311. *Cucumis melo* L. subsp. *melo*

Landrace. USM 174; Ames 20587. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614312. *Cucumis melo* L. subsp. *melo*

Landrace. USM 176; Ames 20588. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614313. *Cucumis melo* L. subsp. *melo*

Landrace. USM 177; Ames 20589. Collected 10/21/1992 in Rajasthan, India. Near Malsar (20 km before Sardarshahr), Churu district. Field during the rainy season.

PI 614314. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 179; Ames 20591. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614315. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 180; Ames 20592. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614316. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 181; Ames 20593. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614317. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 183 A; Ames 20594. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614318. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 183 B; Ames 20595. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614319. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 184; Ames 20596. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614320. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 185; Ames 20597. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614321. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 186; Ames 20598. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614322. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 187; Ames 20599. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614323. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 188; Ames 20600. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614324. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 189; Ames 20601. Collected 10/21/1992 in Rajasthan, India. Market in Sardarshahr, near Adsar, Churu district. During the rainy season. Grown in Adsar, but collected in Sardarshahr.

PI 614325. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 190; Ames 20602. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614326. *Cucumis melo* L. subsp. *melo*

Landrace. USM 191; Ames 20603. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614327. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 192; Ames 20604. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614328. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 194 A; Ames 20606. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614329. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 194 B; Ames 20607. Collected 10/19/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614330. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 195; Ames 20608. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614331. *Cucumis melo* L. subsp. *melo*

Landrace. USM 196; Ames 20609. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614332. *Cucumis melo* L. subsp. *melo*

Landrace. USM 197; Ames 20610. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614333. *Cucumis melo* L. subsp. *melo*

Landrace. USM 198; Ames 20611. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614334. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 199 A; Ames 20612. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614335. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 199 B; Ames 20613. Collected 10/19/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614336. *Cucumis melo* L. subsp. *melo*

Landrace. USM 200; Ames 20614. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614337. *Cucumis melo* L. subsp. *melo*

Landrace. USM 201; Ames 20615. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614338. *Cucumis melo* L. subsp. *melo*

Landrace. USM 202; Ames 20616. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614339. *Cucumis melo* L. subsp. *melo*

Landrace. USM 203; Ames 20617. Collected 10/21/1992 in Rajasthan, India.

West of Bandnau, Churu district. Field during the rainy season.

PI 614340. *Cucumis melo* L. subsp. *melo*

Landrace. USM 204; Ames 20618. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614341. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 205; Ames 20619. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614342. *Cucumis melo* L. subsp. *melo*

Landrace. USM 206; Ames 20620. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614343. *Cucumis melo* L. subsp. *melo*

Landrace. USM 207; Ames 20621. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614344. *Cucumis melo* L. subsp. *melo*

Landrace. USM 208; Ames 20622. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614345. *Cucumis melo* L. subsp. *melo*

Landrace. USM 209; Ames 20623. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614346. *Cucumis melo* L. subsp. *melo*

Landrace. USM 210; Ames 20624. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614347. *Cucumis melo* L. subsp. *melo*

Landrace. USM 211; Ames 20625. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614348. *Cucumis melo* L. subsp. *melo*

Landrace. USM 212; Ames 20626. Collected 10/21/1992 in Rajasthan, India. West of Bandnau, Churu district. Field during the rainy season.

PI 614349. *Cucumis melo* L. subsp. *melo*

Uncertain. USM 213; Ames 20627. Collected 10/22/1992 in Rajasthan, India . Near Bhopalsar, east of Bikaner, Dungargargh-Ratangargh Road (NH-11), Churu district. During the rainy season.

PI 614350. *Cucumis melo* L. subsp. *melo*

Uncertain. USM 214; Ames 20628. Collected 10/22/1992 in Rajasthan, India . Near Bhopalsar, east of Bikaner, Dungargargh-Ratangargh Road (NH-11), Churu district. During the rainy season.

PI 614351. *Cucumis melo* L. subsp. *melo*

Uncertain. USM 215; Ames 20629. Collected 10/22/1992 in Rajasthan, India . Near Bhopalsar, east of Bikaner, Dungargargh-Ratangargh Road (NH-11), Churu district. During the rainy season.

PI 614352. *Cucumis melo* L. subsp. *melo*

Uncertain. USM 216; Ames 20630. Collected 10/22/1992 in Rajasthan, India . Near Bhopalsar, east of Bikaner, Dungargargh-Ratangargh Road (NH-11), Churu district. During the rainy season.

PI 614353. *Cucumis melo* L. subsp. *melo*

Uncertain. USM 217; Ames 20631. Collected 10/22/1992 in Rajasthan, India . Near Bhopalsar, east of Bikaner, Dungargargh-Ratangargh Road (NH-11), Churu district. During the rainy season.

PI 614354. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 223; Ames 20634. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614355. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 224; Ames 20635. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614356. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 226; Ames 20636. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614357. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 227; Ames 20637. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614358. *Cucumis melo* L. subsp. *melo*

Landrace. USM 228; Ames 20638. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614359. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 229; Ames 20639. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614360. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 230; Ames 20640. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614361. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 231; Ames 20641. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614362. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 232 A; Ames 20642. Collected 10/22/1992 in Rajasthan, India. North side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614363. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 233; Ames 20643. Collected 10/22/1992 in Rajasthan, India. South side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614364. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 234; Ames 20644. Collected 10/22/1992 in Rajasthan, India. South side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614365. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 235; Ames 20645. Collected 10/22/1992 in Rajasthan, India. South side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614366. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 236 B; Ames 20646. Collected 10/19/1992 in Rajasthan, India. South side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614367. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 238; Ames 20648. Collected 10/22/1992 in Rajasthan, India. South side of NH 11, near Tidiasar, 10 km southeast of Ratangargh (between Ratan and ROL?), Churu district. Field during the rainy season.

PI 614368. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. USM 240; Ames 20650. Collected 10/22/1992 in Rajasthan, India. Near Laxmangargh, Sikar district. Farm during the rainy season.

PI 614369. *Cucumis melo* L.

Cultivated. USM 241; Ames 20652. Collected 10/22/1992 in Rajasthan, India. Near Laxmangargh, Sikar district. During the rainy season.

PI 614370. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. USM 242; Ames 20653. Collected 10/22/1992 in Rajasthan, India. Near Laxmangargh, Sikar district. During the rainy season.

PI 614371. *Cucumis melo* L.

Landrace. USM 243; Ames 20654. Collected 10/22/1992 in Rajasthan, India. Radhakishanpur, near Narnaul, Sikar district. During the rainy season. LANDRACE = 003.

PI 614372. *Cucumis melo* L.

Landrace. USM 244; Ariwa; Ames 20655. Collected 10/22/1992 in Rajasthan, India. Near Purohit Kie Dhandi, 3 km east of Sikar, Sikar district. Farm during the rainy season. Close to var. *flexuosus*, but less furrowed, smoother skin, and mottled skin color. Fruit length approx 2 ft. (60 cm); looks like a big cucumber; very prolific; "disease-free"; locally known as 'Ariwa' LANDRACE = 004.

PI 614373. *Cucumis melo* L.

Landrace. USM 246; Ames 20656. Collected 10/22/1992 in Rajasthan, India. Near Nauri Ki Dhandi, Chomun District, Sikar district. Farm during the rainy season. Close to var. *flexuosus*, but less furrowed, smoother skin, and mottled skin color. High yielding; dark green skin, approx. length 15 in (40 cm) LANDRACE = 005.

PI 614374. *Cucumis melo* L. subsp. *melo*

Landrace. USM 247; Ames 20657. Collected 10/22/1992 in Rajasthan, India. Near Nauri Ki Dhandi, Chomun District, Sikar district. Farm during the rainy season.

PI 614375. *Cucumis melo* var. *flexuosus* (L.) Naudin

Landrace. USM 248 A; Ames 20658. Collected 10/22/1992 in Rajasthan, India. Near Rajawas, 20 km North of Jaipur on NH-11, Sikar district. Farm during the rainy season. 'Barsati' (rainy season); 1st harvest approx. 45 days after planting; pick every 3-4 days; harvest for 4 months; spacing approx 30 cm within and between rows; length approx 8 in; diam. approx. 2 in. LANDRACE = 006.

PI 614376. *Cucumis melo* L.

Landrace. USM 248 B; Ames 20659. Collected 10/22/1992 in Rajasthan, India. Near Rajawas, 20 km North of Jaipur on NH-11, Sikar district. Farm during the rainy season. 'Barsati' (rainy season); 1st harvest approx. 45 days after planting; pick every 3-4 days; harvest for 4 months; spacing approx 30 cm within and between rows; length approx 8 in; diam. approx. 2 in. LANDRACE = 006.

PI 614377. *Cucumis melo* L.

Landrace. USM 249; Ames 20660. Collected 10/22/1992 in Rajasthan, India. Near Rajawas, 20 km North of Jaipur on NH-11, Sikar district. Farm during the rainy season.

PI 614378. *Cucumis melo* L.

Landrace. USM 251; Ames 20662. Collected 10/23/1992 in Rajasthan, India. Near Ramgarh, Jaipur district. During the rainy season. LANDRACE = 008.

PI 614379. *Cucumis melo* L.

Landrace. USM 254; Ames 20665. Collected 10/23/1992 in Rajasthan, India. Near Khor, Amer, Jaipur district. During the rainy season. LANDRACE = 011.

PI 614380. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 257; Ames 20668. Collected 10/23/1992 in Rajasthan, India. Near Jaipur, Jaipur district. During the rainy season.

PI 614381. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 258; Ames 20669. Collected 10/23/1992 in Rajasthan, India. Near Jaipur, Jaipur district. During the rainy season.

PI 614382. *Cucumis melo* L. subsp. *melo*

Landrace. USM 259; Ames 20670. Collected 10/23/1992 in Rajasthan, India. Near Chaksu, 66 km South of Jaipur, Jaipur district. Farm during the rainy season.

PI 614383. *Cucumis melo* L.

Landrace. USM 260; Ames 20671. Collected 10/23/1992 in Rajasthan, India. Near Chaksu, 66 km South of Jaipur, Jaipur district. Farm during the rainy season. smooth skin, fine spines (no warts); grown by farmer's family for 70+ years (since childhood) LANDRACE = 013.

PI 614384. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. USM 263; Ames 20673. Collected 10/23/1992 in Rajasthan, India. Near Niwai, Tonk district. During the rainy season.

PI 614385. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. USM 264; Ames 20674. Collected 10/23/1992 in Rajasthan, India. Near Niwai, Tonk district. During the rainy season.

- PI 614386. *Cucumis melo* L. subsp. *melo***
Landrace. USM 271; Ames 20681. Collected 10/24/1992 in Rajasthan, India.
Near Boi ka kheda, Tonk district. During the rainy season.
- PI 614387. *Cucumis melo* var. *flexuosus* (L.) Naudin**
Landrace. USM 273; Ames 20682. Collected 10/24/1992 in Rajasthan, India.
Near Boi ka kheda, Tonk district. During the rainy season.
- PI 614388. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 279; Ames 20684. Collected 10/24/1992 in Rajasthan, India
. Near Jojrokakheda, 10 miles north of Chittargargh, Tonk district.
During the rainy season. mixture of species!.
- PI 614389. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 281; Ames 20686. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614390. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 283; Ames 20687. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614391. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 284; Ames 20688. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614392. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 285; Ames 20689. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614393. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 286; Ames 20690. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614394. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 287; Ames 20691. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614395. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 288 A; Ames 20692. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614396. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 288 B; Ames 20693. Collected 10/19/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.
- PI 614397. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo**
Cultivated. USM 289; Ames 20694. Collected 10/24/1992 in Rajasthan,
India. Near Thooparia, Tonk district. During the rainy season. small
fruits, noted to be momordica type when collected.

- PI 614398. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 290; Ames 20695. Collected 10/24/1992 in Rajasthan, India. Near Thooparia, Tonk district. During the rainy season. small fruits, noted to be momordica type when collected.
- PI 614399. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 291; Ames 20696. Collected 10/24/1992 in Rajasthan, India. Near Thooparia, Tonk district. During the rainy season. small fruits, noted to be momordica type when collected.
- PI 614400. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 292; Ames 20697. Collected 10/24/1992 in Rajasthan, India . Near Lalji Ka Kheda, Tonk district. During the rainy season. mostly large fruit.
- PI 614401. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 293; Ames 20698. Collected 10/24/1992 in Rajasthan, India . Near Lalji Ka Kheda, Tonk district. During the rainy season. mostly large fruit.
- PI 614402. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 294; Ames 20699. Collected 10/24/1992 in Rajasthan, India . Near Lalji Ka Kheda, Tonk district. During the rainy season. mostly large fruit.
- PI 614403. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 295; Ames 20700. Collected 10/24/1992 in Rajasthan, India . Near Lalji Ka Kheda, Tonk district. During the rainy season. mostly large fruit.
- PI 614404. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 296; Ames 20701. Collected 10/24/1992 in Rajasthan, India . Near Kir Ki Chowki, Udaipur district. During the rainy season. long variety, approx. 25 cm.
- PI 614405. *Cucumis melo* L. subsp. *melo***
Uncertain. USM 297; Ames 20702. Collected 10/24/1992 in Rajasthan, India . Near Kir Ki Chowki, Udaipur district. During the rainy season. long variety, approx. 25 cm.
- PI 614406. *Cucumis melo* L. subsp. *melo***
Landrace. USM 301; Ames 20704. Collected 10/24/1992 in Rajasthan, India. Near Bekaria, on the road from Adaipur to Mt. Abu, Udaipur district. During the rainy season.
- PI 614407. *Cucumis melo* L.**
Landrace. USM 331; Ames 20734. Collected 10/25/1992 in Rajasthan, India. Near Bageri Abu, Abu Road, Sirohi district. During the rainy season. rare LANDRACE = 048.
- PI 614408. *Cucumis melo* L. subsp. *melo***
Landrace. USM 336 A; Ames 20738. Collected 10/25/1992 in Rajasthan, India. Near Bageri Abu, Abu Road - Mandu Road, Sirohi district. During the rainy season.
- PI 614409. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo

Cultivated. USM 341; Ames 20743. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614410. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 342; Ames 20744. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614411. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 343; Ames 20745. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614412. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 344; Ames 20746. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614413. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 345; Ames 20747. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614414. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 346; Ames 20748. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614415. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 347; Ames 20749. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614416. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 348; Ames 20750. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614417. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 349; Ames 20751. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614418. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 350; Ames 20752. Collected 10/26/1992 in Rajasthan, India. Near Sheoganj, Sirohi district. During the rainy season. large basketful of the small-fruited types.

PI 614419. *Cucumis melo* L.

Landrace. USM 362; Ames 20763. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season. larger than USM 352 through USM 361 LANDRACE = 064.

PI 614420. *Cucumis melo* L.

Landrace. USM 363; Ames 20764. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy

season. larger than USM 352 through USM 361 LANDRACE = 065.

PI 614421. Cucumis melo L.

Landrace. USM 365; Ames 20765. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season. larger than USM 352 through USM 361 LANDRACE = 067.

PI 614422. Cucumis melo L.

Landrace. USM 366; Ames 20766. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season. larger than USM 352 through USM 361 LANDRACE = 068.

PI 614423. Cucumis melo L.

Landrace. USM 367; Ames 20767. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season. larger than USM 352 through USM 361 LANDRACE = 069.

PI 614424. Cucumis melo L.

Landrace. USM 368; Ames 20768. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season. larger than USM 352 through USM 361 LANDRACE = 070.

PI 614425. Cucumis melo L.

Landrace. USM 369; Ames 20769. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season. larger than USM 352 through USM 361 LANDRACE = 071.

PI 614426. Cucumis melo subsp. agrestis (Naudin) Pangalo

Cultivated. USM 370; Ames 20770. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.

PI 614427. Cucumis melo subsp. agrestis (Naudin) Pangalo

Cultivated. USM 372; Ames 20771. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.

PI 614428. Cucumis melo subsp. agrestis (Naudin) Pangalo

Cultivated. USM 373; Ames 20772. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.

PI 614429. Cucumis melo subsp. agrestis (Naudin) Pangalo

Cultivated. USM 375; Ames 20773. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.

PI 614430. Cucumis melo subsp. agrestis (Naudin) Pangalo

Cultivated. USM 376; Ames 20774. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.

PI 614431. Cucumis melo subsp. agrestis (Naudin) Pangalo

Cultivated. USM 377; Ames 20775. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.

- PI 614432. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 378; Ames 20776. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.
- PI 614433. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 379; Ames 20777. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.
- PI 614434. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 380; Ames 20778. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.
- PI 614435. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 381; Ames 20779. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.
- PI 614436. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 382; Ames 20780. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.
- PI 614437. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Cultivated. USM 383; Ames 20781. Collected 10/26/1992 in Rajasthan, India. Market Pali, near Kira Ki Dhandi, Pali district. During the rainy season.
- PI 614438. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. USM 384; Ames 20782. Collected 10/27/1992 in Gujarat, India. Near Rajkot, Sardhar Road, Rajkot district. During the rainy season. NBPGR #: DCB 1879 (Oct. 12, 1991).
- PI 614439. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. USM 385; Ames 20783. Collected 10/27/1992 in Gujarat, India. Near Amreli, Lathi Road, Amreli district. During the rainy season. NBPGR #: DCB 1880 (Oct. 13, 1991).
- PI 614440. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. USM 386; Ames 20784. Collected 10/27/1992 in Gujarat, India. Near Shakpur, Amreli district. During the rainy season. NBPGR #: DCB 1881 (Oct. 13, 1991).
- PI 614441. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. USM 387; Ames 20785. Collected 10/27/1992 in Gujarat, India. Near Takuda, Rajkot district. During the rainy season. NBPGR #: DCB 1882 (Oct. 15, 1991).
- PI 614442. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. USM 388; Ames 20786. Collected 10/27/1992 in Gujarat, India. Near Ratiya, Junagadh district. During the rainy season. NBPGR #: DCB 1883 (Oct. 17, 1991).
- PI 614443. *Cucumis melo* L. subsp. *melo***
Cultivated. USM 389; Ames 20787. Collected 10/27/1992 in Rajasthan,

India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614444. Cucumis melo L. subsp. melo

Cultivated. USM 390; Ames 20788. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614445. Cucumis melo L. subsp. melo

Cultivated. USM 391; Ames 20789. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614446. Cucumis melo L. subsp. melo

Cultivated. USM 392; Ames 20790. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614447. Cucumis melo L. subsp. melo

Cultivated. USM 393; Ames 20791. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614448. Cucumis melo L. subsp. melo

Cultivated. USM 394; Ames 20792. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614449. Cucumis melo L. subsp. melo

Cultivated. USM 395; Ames 20793. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614450. Cucumis melo L. subsp. melo

Cultivated. USM 396; Ames 20794. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614451. Cucumis melo L. subsp. melo

Cultivated. USM 397; Ames 20795. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614452. Cucumis melo L. subsp. melo

Cultivated. USM 398; Ames 20796. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614453. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 399; Ames 20797. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614454. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 400; Ames 20798. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614455. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 401; Ames 20799. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614456. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 403; Ames 20801. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614457. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 404; Ames 20802. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614458. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. USM 406; Ames 20804. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Mavli Road, Marwar district. During the rainy season. USM 389 through USM 398 were larger fruit than USM 399 through USM 406.

PI 614459. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 419; Ames 20817. Collected 10/27/1992 in Rajasthan, India. Jodhpur, near Charbhujia, Marwar district. During the rainy season. melon?.

PI 614460. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 421; Ames 20819. Collected 10/27/1992 in Rajasthan, India. Bharat Seed Store, near Jodhpur, Jodhpur district. During the rainy season.

PI 614461. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 422; Ames 20820. Collected 10/27/1992 in Rajasthan, India. Bharat Seed Store, near Jodhpur, Jodhpur district. During the rainy season. variety 'Madhu'; two envelopes of seed received in US.

PI 614462. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 423; Ames 20821. Collected 10/27/1992 in Rajasthan, India. Bharat Seed Store, near Jodhpur, Jodhpur district. During the rainy season. variety 'Local'.

The following were collected by M. Koppar, Nat. Bureau of Plant Genetic Resources, Germplasm Exploration Div., Indian Council of Ag. Res., New Delhi, Delhi 110 012, India; James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 03/04/1993.

PI 614463. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 426; Ames 20822. Collected 10/30/1992 in Madhya Pradesh, India. Near Satapur Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614464. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 427; Ames 20823. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614465. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 428; Ames 20824. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614466. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 429; Ames 20825. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614467. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 430; Ames 20826. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614468. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 431; Ames 20827. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614469. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 432; Ames 20828. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at

immature stage but are not bitter at mature stage when they are picked.

PI 614470. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo
Cultivated. KSM 434; Ames 20830. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614471. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo
Cultivated. KSM 435; Ames 20831. Collected 10/30/1992 in Madhya Pradesh, India. Near Khajuraho, Chhattarpur district. During the rainy season. stored for later use, transverse slices are dried and later fried in oil for breakfast with tea; some plants produce very bitter fruit at immature stage but are not bitter at mature stage when they are picked.

PI 614472. *Cucumis melo* L. subsp. *melo*
Cultivated. KSM 439; Ames 20833. Collected 10/30/1992 in Madhya Pradesh, India. Near Chhattarpur, Chhattarpur district. During the rainy season.

PI 614473. *Cucumis melo* L. subsp. *melo*
Cultivated. KSM 440; Ames 20834. Collected 10/30/1992 in Madhya Pradesh, India. Near Chhattarpur, Chhattarpur district. During the rainy season. variety 'Kharbuja'.

PI 614474. *Cucumis melo* var. *flexuosus* (L.) Naudin
Cultivated. KSM 442; Ames 20836. Collected 10/30/1992 in Madhya Pradesh, India. Near Chhattarpur, Chhattarpur district. During the rainy season. Royal Seeds Corp., 92, Infra Karket, Old Subzi Mandi, Delhi - 11- 007.

PI 614475. *Cucumis melo* L. subsp. *melo*
Cultivated. KSM 444; Ames 20838. Collected 10/30/1992 in Madhya Pradesh, India. Near Chhattarpur, Chhattarpur district. During the rainy season. from Uttar Pradesh, Lucknow, Kanpur (along Ganges River).

PI 614476. *Cucumis melo* L. subsp. *melo*
Cultivated. KSM 445; Ames 20839. Collected 10/30/1992 in Madhya Pradesh, India. Near Chhattarpur, Chhattarpur district. During the rainy season. from Uttar Pradesh, Lucknow, Kanpur (along Ganges River), same area as KSM 444.

PI 614477. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo
Landrace. KSM 447; Ames 20841. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614478. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo
Landrace. KSM 448; Ames 20842. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614479. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo
Landrace. KSM 449; Ames 20843. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614480. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 452; Ames 20845. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614481. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 453; Ames 20846. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614482. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 454; Ames 20847. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614483. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 455; Ames 20848. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614484. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 456; Ames 20849. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614485. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 457; Ames 20850. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614486. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 458; Ames 20851. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614487. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 459; Ames 20852. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614488. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 460; Ames 20853. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614489. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 463; Ames 20856. Collected 10/31/1992 in Madhya Pradesh, India. Near Akalpur, Bhopal district. During the rainy season. collected from irrigated wheat field.

PI 614490. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 468; Ames 20860. Collected 10/31/1992 in Madhya Pradesh, India. Near Mahua Khedi, Bhopal district. During the rainy season. Phut (cracks) type.

PI 614491. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 469; Ames 20861. Collected 10/31/1992 in Madhya Pradesh, India. Near Tajpura, Bhopal district. During the rainy season. 1 fruit.

- PI 614492. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Landrace. KSM 470; Ames 20862. Collected 10/31/1992 in Madhya Pradesh, India. Near Tajpura, Bhopal district. During the rainy season. 3 fruit.
- PI 614493. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. KSM 476; Ames 20865. Collected 10/31/1992 in Madhya Pradesh, India. Near Tajpura, Bhopal district. Fencerow during the rainy season. from fence row, 2 fruit.
- PI 614494. *Cucumis melo* subsp. *agrestis*** (Naudin) Pangalo
Wild. KSM 477; Ames 20866. Collected 10/31/1992 in Madhya Pradesh, India. Near Tajpura, Bhopal district. Fencerow during the rainy season.
- PI 614495. *Cucumis melo* var. *flexuosus*** (L.) Naudin
Cultivated. KSM 482; Ames 20870. Collected 10/31/1992 in Madhya Pradesh, India. Near Piparia Hongsharobad district. During the rainy season. variety 'Tender Green' from Vinayak Seeds.
- PI 614496. *Cucumis melo* var. *flexuosus*** (L.) Naudin
Cultivated. KSM 488; Ames 20876. Collected 11/01/1992 in Madhya Pradesh, India. Near Sehore, Sehore district. During the rainy season. variety 'Long Green' from Ankur Seeds, 131 Indra Market, Delhi.
- PI 614497. *Cucumis melo* var. *flexuosus*** (L.) Naudin
Cultivated. KSM 495; Ames 20883. Collected 11/01/1992 in Madhya Pradesh, India. Near Ashtok, Sehore district. During the rainy season. Chandra Seeds, Sadar Bazar, Lucknow, Uttar Pradesh; PH 51421; Lot #C-101-A.
- PI 614498. *Cucumis melo* var. *flexuosus*** (L.) Naudin
Cultivated. KSM 496; Ames 20884. Collected 11/01/1992 in Madhya Pradesh, India. Near Ashtok, Sehore district. During the rainy season. variety 'Kakri Desi-PB', lot # DSRP-001, Durga Seeds Corp., Indra Market, Old Subzi Mandi, Delhi - 110087.
- PI 614499. *Cucumis melo* L.**
Cultivated. KSM 498; Ames 20886. Collected 11/02/1992 in Madhya Pradesh, India. Near Barawah, West Nimar district. During the summer. variety 'Poona Khira White'; sown: April-May, harvest June-; D.J. Damani & Sons, Shivajinagar, Pune, 411005.
- PI 614500. *Cucumis melo* L. subsp. *melo***
Cultivated. KSM 500; Ames 20888. Collected 11/02/1992 in Madhya Pradesh, India. Near Barawah, West Nimar district. During the rainy season. open-pollinated variety 'Green Long Special'; sown: April, harvest June-; Faizabad Seed Co. (Regd.), Niyawan Road, , Faizabad 224 001, Uttat Pradesh.
- PI 614501. *Cucumis melo* var. *flexuosus*** (L.) Naudin
Cultivated. KSM 501; Ames 20889. Collected 11/02/1992 in Madhya Pradesh, India. Near Barawah, West Nimar district. During the spring. variety 'Kakri' (Tar); Punjab Beej Co., Chowk Barfkhana Pullangash, Delhi 110 007; sown Oct-Nov.
- PI 614502. *Cucumis melo* L. subsp. *melo***
Uncertain. KSM 502; Ames 20890. Collected 11/02/1992 in Madhya Pradesh, India. Near Barawah, West Nimar district. During the rainy season.

variety 'Green Long'; sown: April-May, harvest June-; Kisham Seed Corp., Faizabad; two envelopes of seed received.

PI 614503. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 503; Ames 20891. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. fruit sample.

PI 614504. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 504; Ames 20892. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. fruit sample.

PI 614505. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 505; Ames 20893. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. fruit sample.

PI 614506. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 506; Ames 20894. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. fruit sample.

PI 614507. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 508; Ames 20895. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. seeds cleaned by farmer, "Phut"; very sweet, surface has slight vein tracts, turns from completely green to completely yellow at maturity.

PI 614508. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 509; Ames 20896. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. variety "Phut" but does not crack at maturity, smooth skin, does not become soft before ripening.

PI 614509. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 510; Ames 20897. Collected 11/02/1992 in Madhya Pradesh, India. Near Kothi, East Nimar Khandawa district. During the rainy season. variety "Phut" that does crack at maturity, small seed cavity, sweet at maturity.

PI 614510. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. KSM 512; Ames 20899. Collected 11/02/1992 in Madhya Pradesh, India. Near Bhikangon, Khargon district. During the spring. sow Jan-Feb, harvest March-April; Saini Seed House, A-245 New Subji Mundi, Ayadpur, Delhi 110033.

PI 614511. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. KSM 513; Ames 20900. Collected 11/02/1992 in Madhya Pradesh, India. Near Bhikangon, Khargon district. During the rainy season. variety 'Kakri Desi special'; Pahuja Seeds Pvt. Ltd., C-26 Indra Market, Delhi, 110007.

PI 614512. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 517; Ames 20904. Collected 11/02/1992 in Madhya Pradesh, India. Near Gopalpura, East Nimar district. During the rainy season.

landrace; "very sweet".

PI 614513. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 520; Ames 20905. Collected 11/02/1992 in Madhya Pradesh, India. Near Gopalpura, East Nimar district. During the rainy season. Phut.

PI 614514. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 523; Ames 20908. Collected 11/02/1992 in Madhya Pradesh, India. Near Gopalpura, East Nimar district. During the rainy season. orange flesh; same source as KSM 517.

PI 614515. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 524; Ames 20909. Collected 11/02/1992 in Madhya Pradesh, India. Near Gopalpura, East Nimar district. During the rainy season.

PI 614516. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 525; Ames 20910. Collected 11/02/1992 in Madhya Pradesh, India. Near Gopalpura, East Nimar district. During the rainy season.

PI 614517. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 526; Ames 20911. Collected 11/03/1992 in Madhya Pradesh, India. Near Kalapata, Dhar district. Farm during the rainy season. local type, Phut; completely yellow at maturity; green immature; very sweet, soft.

PI 614518. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 528; Ames 20913. Collected 11/03/1992 in Madhya Pradesh, India. Near Kalapata, Dhar district. Farm during the rainy season. peel and use as cooked vegetable, also longitudinal slices dried for rehydrating in boiling water; seeds photosensitive, seeds lie until monsoon season, need short days for female flowers.

PI 614519. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 529; Ames 20914. Collected 11/03/1992 in Madhya Pradesh, India. Near Kalapata, Dhar district. Farm during the rainy season. peel and use as cooked vegetable, also longitudinal slices dried for rehydrating in boiling water; seeds photosensitive, seeds lie until monsoon season, need short days for female flowers.

PI 614520. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 530; Ames 20915. Collected 11/03/1992 in Madhya Pradesh, India. Near Kalapata, Dhar district. Farm during the rainy season. peel and use as cooked vegetable, also longitudinal slices dried for rehydrating in boiling water; seeds photosensitive, seeds lie until monsoon season, need short days for female flowers.

PI 614521. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 531; Ames 20916. Collected 11/03/1992 in Madhya Pradesh, India. Near Kalapata, Dhar district. Farm during the rainy season. peel and use as cooked vegetable, also longitudinal slices dried for rehydrating in boiling water; seeds photosensitive, seeds lie until monsoon season, need short days for female flowers.

PI 614522. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 534; Ames 20918. Collected 11/03/1992 in Madhya Pradesh, India. Near Golana, 9 km north of Sardarpur, Dhar district. During the

rainy season. seeds covered with white ash (said to have insecticidal properties); 'Phut' ; plants spaced 1 to 2 ft.; 8 - 10 inches in diameter; highly variable for shape and color; used immature.

PI 614523. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 536; Ames 20920. Collected 11/03/1992 in Madhya Pradesh, India. Near Golana, 9 km north of Sardarpur, Dhar district. During the rainy season. single fruit; *C. melo utilissimus* is grown in summer, seeds are harvested and given to local seed dealer who keeps half of the seeds (for protection from insects).

PI 614524. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 537; Ames 20921. Collected 11/03/1992 in Madhya Pradesh, India. Near Golana, 9 km north of Sardarpur, Dhar district. During the rainy season. single fruit; *C. melo utilissimus* is grown in summer, seeds are harvested and given to local seed dealer who keeps half of the seeds (for protection from insects).

PI 614525. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 543; Ames 20923. Collected 11/04/1992 in Madhya Pradesh, India. Near Sodpur, Dhar district. During the rainy season. one fruit.

PI 614526. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 544; Ames 20924. Collected 11/04/1992 in Madhya Pradesh, India. Near Sodpur, Dhar district. During the rainy season. one fruit.

PI 614527. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 547; Ames 20927. Collected 11/04/1992 in Madhya Pradesh, India. Near Kagdipura, Dhar district. During the rainy season. melon portion of mixture with *sativus* (KSM 548) 'Phut' on over-ripening, but does not crack when ripe for eating.

PI 614528. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 552; Ames 20929. Collected 11/04/1992 in Madhya Pradesh, India. Near Kagdipura, Dhar district. During the rainy season.

PI 614529. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 554 A; Ames 20930. Collected 11/04/1992 in Madhya Pradesh, India. Near Sarai, Dhar district. Farm(?) during the rainy season. single fruit; oblate/elliptical fruit shape.

PI 614530. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 555; Ames 20932. Collected 11/04/1992 in Madhya Pradesh, India. Near Sarai, Dhar district. Farm(?) during the rainy season. single fruit.

PI 614531. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 556; Ames 20933. Collected 11/04/1992 in Madhya Pradesh, India. Near Sarai, Dhar district. Farm(?) during the rainy season. single fruit.

PI 614532. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 557; Ames 20934. Collected 11/04/1992 in Madhya Pradesh, India. Near Sarai, Dhar district. Farm(?) during the rainy season. single fruit.

PI 614533. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 558; Ames 20935. Collected 11/04/1992 in Madhya Pradesh, India. Near Sarai, Dhar district. Farm(?) during the rainy season. single fruit.

PI 614534. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 559; Ames 20936. Collected 11/04/1992 in Madhya Pradesh, India. Near Sarai, Dhar district. Farm(?) during the rainy season. single fruit.

PI 614535. *Cucumis melo* L. subsp. *melo*

Cultivated. KSM 562; Ames 20939. Collected 11/04/1992 in Madhya Pradesh, India. Near Dhamnood, Dhar district. During the summer. 18 x 4-6 inches; eaten at maturity; sow March, harvest June.

PI 614536. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 563; Ames 20940. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. used as vegetable when immature and fresh when mature.

PI 614537. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 564; Ames 20941. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. used as vegetable when immature and fresh when mature.

PI 614538. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 565; Ames 20942. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. used as vegetable when immature and fresh when mature.

PI 614539. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 566; Ames 20943. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. used as vegetable when immature and fresh when mature.

PI 614540. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 568; Ames 20944. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. used as vegetable when immature and fresh when mature.

PI 614541. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 570; Ames 20946. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. seeds; 90 day maturity.

PI 614542. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 571; Ames 20947. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. 10 x 6 inches; Phut at maturity; sweet and tasty, "local people like too much;" 90 days to maturity.

PI 614543. *Cucumis melo* var. *flexuosus* (L.) Naudin

Landrace. KSM 572; Ames 20948. Collected 11/04/1992 in Madhya Pradesh, India. Near Manawar, Dhar district. During the rainy season. 6-8 x 2-2.5 inches; used only immature for salad or vegetable LANDRACE = 106.

PI 614544. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 574; Ames 20950. Collected 11/04/1992 in Madhya Pradesh, India. Near Kuhad, Dhar district. During the rainy season. 10 x 6 inches at maturity; green immature; at maturity inside turns yellow and outside becomes pale yellowish-green blocky shape; immature fruit used in salad; mature skin and seeds are removed and fruit eaten fresh.

PI 614545. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 575; Ames 20951. Collected 11/04/1992 in Madhya Pradesh, India. Near Kuhad, Dhar district. During the rainy season. 6 x 3 inches at maturity; green immature; at maturity inside turns yellow and outside becomes pale yellowish-green blocky shape; immature fruit used in salad; mature skin and seeds are removed and fruit eaten fresh.

PI 614546. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 576; Ames 20952. Collected 11/04/1992 in Madhya Pradesh, India. Near Kherava Jagiri, Dhar district. During the rainy season. Phut; 10 x 6 inches; said to be the same as KSM 574.

PI 614547. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 577; Ames 20953. Collected 11/04/1992 in Madhya Pradesh, India. Near Kherava Jagiri, Dhar district. During the rainy season. Phut; said to be identical to KSM 576 larger seed size; said to be the same as KSM 574.

PI 614548. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 578; Ames 20954. Collected 11/04/1992 in Madhya Pradesh, India. Near Kherava Jagiri, Dhar district. During the rainy season. seeds not as small as in most *agrestis* (*callosus*) collections to date, could be *momordica* with small fruit size intermediate type.

PI 614549. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 579; Ames 20955. Collected 11/04/1992 in Madhya Pradesh, India. Near Kherava Jagiri, Dhar district. During the rainy season. variable for seed size; known as 'small melon'; quite sweet at maturity; exterior turns rusty-brown; green with spots when mature.

PI 614550. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Uncertain. KSM 583; Ames 20959. Collected 11/05/1992 in Madhya Pradesh, India. Near Bagri, Dhar district. During the rainy season. single fruit

PI 614551. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Uncertain. KSM 584; Ames 20960. Collected 11/05/1992 in Madhya Pradesh, India. Near Bagri, Dhar district. During the rainy season. single fruit

PI 614552. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Uncertain. KSM 585; Ames 20961. Collected 11/05/1992 in Madhya Pradesh, India. Near Bagri, Dhar district. During the rainy season. single fruit

PI 614553. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Uncertain. KSM 586; Ames 20962. Collected 11/05/1992 in Madhya Pradesh, India. Near Bagri, Dhar district. During the rainy season. single fruit

PI 614554. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Uncertain. KSM 587; Ames 20963. Collected 11/05/1992 in Madhya Pradesh, India. Near Bagri, Dhar district. During the rainy season. single fruit

PI 614555. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. KSM 590; Ames 20966. Collected 11/05/1992 in Madhya Pradesh, India. Near Dhar, Dhar district. During the summer. Kishan Seed Corp., Faizabad, Uttar Pradesh.

PI 614556. *Cucumis melo* L. subsp. *melo*

Cultivated. KSM 591; Ames 20967. Collected 11/05/1992 in Madhya Pradesh, India. Near Dhar, Dhar district. During the rainy season. 18 x 6-8 inches; quite sweet; yellow skin at maturity.

PI 614557. *Cucumis melo* var. *flexuosus* (L.) Naudin

Cultivated. KSM 594; Ames 20969. Collected 11/05/1992 in Madhya Pradesh, India. Near Ratlam, Ratlam district. During the spring. open-pollinated variety 'Tar Desi Rajdahni Special'; sow November-December, harvest January-February; Rjhajdhani.

PI 614558. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 595; Ames 20970. Collected 11/05/1992 in Madhya Pradesh, India. Near Bidbada, Ratlam district. During the rainy season. two fruits; elliptical/pyriform; light green with spots.

PI 614559. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 597; Ames 20972. Collected 11/05/1992 in Madhya Pradesh, India. Near Bidbada, Ratlam district. During the rainy season. Mostly snapmelon in a mixture of snapmelon and cucumber seeds; seed quality is not good, many damaged (apparently by insects).

PI 614560. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 598; Ames 20973. Collected 11/05/1992 in Madhya Pradesh, India. Near Bidbada, Ratlam district. During the rainy season. Mostly snapmelon in a mixture of snapmelon and cucumber seeds; seed quality poor-many damaged (apparently by insects).

PI 614561. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 599; Ames 20974. Collected 11/05/1992 in Madhya Pradesh, India. Near Bidbada, Ratlam district. During the rainy season. Mostly snapmelon in a mixture of snapmelon and cucumber seeds; seed quality is not good, many damaged (apparently by insects).

PI 614562. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 600; Ames 20975. Collected 11/05/1992 in Madhya Pradesh, India. Near Bidbada, Ratlam district. During the rainy season. Mostly snapmelon in a mixture of snapmelon and cucumber seeds; seed quality is not good, many damaged (apparently by insects).

PI 614563. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 601; Ames 20976. Collected 11/06/1992 in Madhya Pradesh, India. Near Ranagaon Road, Ratlam district. Farm(?) during the rainy season. sweet, eaten fresh; fruit round and rust colored at maturity.

PI 614564. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 602; Ames 20977. Collected 11/06/1992 in Madhya Pradesh, India. Near Ranagaon Road, Ratlam district. Farm(?) during the rainy

season. Phut; fruit big and cracks at maturity; yellow at maturity; two envelopes of seed received in US.

PI 614565. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 603; Ames 20978. Collected 11/06/1992 in Madhya Pradesh, India. Near Rajpur, Khargon district. During the rainy season. fruit brown with cream stripe.

PI 614566. *Cucumis melo* L. subsp. *melo*

Cultivated. KSM 604; Ames 20979. Collected 11/06/1992 in Madhya Pradesh, India. Near Rajpur, Khargon district. During the rainy season. not Phut type; used immature as salad and as vegetable.

PI 614567. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 606; Ames 20981. Collected 11/06/1992 in Madhya Pradesh, India. Near Segaoon (Barwani), Khargon district. During the rainy season. Phut, cracks at maturity; 8-12 x 3-6 inches; immature: green skin; mature: orange-yellow; immature fruit used for s and vegetable; mature fruit used only for seed.

PI 614568. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 607; Ames 20982. Collected 11/06/1992 in Madhya Pradesh, India. Near Segaoon (Barwani), Khargon district. During the rainy season. not Phut, does not crack at maturity; 2-3 long x 1.5-2 inches diameter at maturity; mature: orange-yellow with stri sweet in taste; immature fruit used as salad; mature used as fruit.

PI 614569. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 610; Ames 20984. Collected 11/06/1992 in Madhya Pradesh, India. Near Anjad, 11 km from Pati, southwest of Barwani, Khargon district. During the rainy season. Phut type, cracks at maturity; 12 x 8-10 inches; immature: green skin, used as salad and vegetable; mature: yellow skin, used as fruit.

PI 614570. *Cucumis melo* L. subsp. *melo*

Uncertain. KSM 614; Ames 20986. Collected 11/06/1992 in Madhya Pradesh, India. Near Oasada, Khargon district. During the rainy season. round: 3x3 inches; immature: green, used as salad but not as vegetable; mature: yellow, eaten as fruit.

PI 614571. *Cucumis melo* L. subsp. *melo*

Uncertain. KSM 615; Ames 20987. Collected 11/06/1992 in Madhya Pradesh, India. Near Oasada, Khargon district. During the rainy season. Phut, cracks at maturity; 12-14 x 6-8 inches; immature: green; mature: yellow,

PI 614572. *Cucumis melo* L. subsp. *melo*

Uncertain. KSM 616; Ames 20988. Collected 11/06/1992 in Madhya Pradesh, India. Near Oasada, Khargon district. During the rainy season. possible mixture of melo and sativus.

PI 614573. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 617; Ames 20989. Collected 11/06/1992 in Madhya Pradesh, India. Near Arjumbaroda, Dore district. During the rainy season. backyard garden.

PI 614574. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 618; Ames 20990. Collected 11/06/1992 in Madhya Pradesh, India. Near Arjumbaroda, Dore district. During the rainy season. backyard garden.

PI 614575. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Landrace. KSM 619; Ames 20991. Collected 11/06/1992 in Madhya Pradesh, India. Near Arjumbaroda, Dore district. During the rainy season. backyard garden.

PI 614576. *Cucumis melo* var. *flexuosus* (L.) Naudin

Landrace. KSM 620; Ames 20992. Collected 11/06/1992 in Madhya Pradesh, India. Near Arjumbaroda, Dore district. During the summer. 20 x 1-2 inches; used only as salad; may also be sown in September.

PI 614577. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 621; Ames 20993. Collected 11/06/1992 in Madhya Pradesh, India. Near Arjumbaroda, Dore district. During the rainy season. Phut at maturity; 12 x 6-8 inches; immature: green, salad; mature: yellow, used as fruit.

PI 614578. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 623; Ames 20995. Collected 11/06/1992 in Madhya Pradesh, India. Near Kshipra, Dewas district. During the rainy season. Phut; 8-10 x 6 inches; immature: green, salad, some use as vegetable; mature: yellow, used as fruit.

PI 614579. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 624; Ames 20996. Collected 11/06/1992 in Madhya Pradesh, India. Market in Dewas, Dewas district, near Khalaghat, Agar-Bomba Road, Indore district. During the rainy season.

PI 614580. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 625; Ames 20997. Collected 11/06/1992 in Madhya Pradesh, India. Market in Dewas, Dewas district, near Khalaghat, Agar-Bomba Road, Indore district. During the rainy season.

PI 614581. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo

Cultivated. KSM 626; Ames 20998. Collected 11/06/1992 in Madhya Pradesh, India. Market in Dewas, Dewas district, near Khalaghat, Agar-Bomba Road, Indore district. During the rainy season.

PI 614582. *Cucumis melo* L. subsp. *melo*

Cultivated. KSM 629; Ames 21001. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and *agrestis* type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614583. *Cucumis melo* L. subsp. *melo*

Cultivated. KSM 630; Ames 21002. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and *agrestis* type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614584. *Cucumis melo* L. subsp. *melo*

Cultivated. KSM 631; Ames 21003. Collected 11/06/1992 in Madhya Pradesh,

India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614585. Cucumis melo L. subsp. melo

Cultivated. KSM 632; Ames 21004. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614586. Cucumis melo L. subsp. melo

Cultivated. KSM 633; Ames 21005. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614587. Cucumis melo L. subsp. melo

Cultivated. KSM 634; Ames 21006. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614588. Cucumis melo L. subsp. melo

Cultivated. KSM 635; Ames 21007. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614589. Cucumis melo L. subsp. melo

Cultivated. KSM 636; Ames 21008. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614590. Cucumis melo L. subsp. melo

Cultivated. KSM 637; Ames 21009. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614591. Cucumis melo L. subsp. melo

Cultivated. KSM 638; Ames 21010. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.
Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614592. Cucumis melo L. subsp. melo

Cultivated. KSM 639; Ames 21011. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season.

Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614593. Cucumis melo L. subsp. melo

Cultivated. KSM 640; Ames 21012. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614594. Cucumis melo L. subsp. melo

Cultivated. KSM 641; Ames 21013. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614595. Cucumis melo L. subsp. melo

Cultivated. KSM 642; Ames 21014. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614596. Cucumis melo L. subsp. melo

Cultivated. KSM 643; Ames 21015. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

PI 614597. Cucumis melo L. subsp. melo

Cultivated. KSM 644; Ames 21016. Collected 11/06/1992 in Madhya Pradesh, India. Near Sonkutch, Dewas district. During the rainy season. Intermediate between momordica and agrestis type; villager purchased fruit from farmers in surrounding area, could not state which fruit came from which village.

The following were collected by Umesh Srivastava, NBPGR, New Delhi, Delhi, India; James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 03/04/1993.

PI 614598. Cucumis melo L.

Landrace. USM 662; Ames 21033. Collected 11/09/1992 in Uttar Pradesh, India. Market Mussoorie, near Jabarkhet (4 km east of Mussoorie), Dehra Dun district. During the rainy season.

The following were collected by M. Koppar, Nat. Bureau of Plant Genetic Resources, Germplasm Exploration Div., Indian Council of Ag. Res., New Delhi, Delhi 110 012, India; James D. McCreight, USDA, ARS, Agricultural Research

Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 03/04/1993.

PI 614599. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 596; Ames 21472. Collected 11/05/1992 in Madhya Pradesh, India. Near Bidbada, Ratlam district. During the rainy season. Mostly cucumber in a mixture of snapmelon and cucumber seeds; seed quality is not good, many damaged (apparently by insects). LANDRACE = 132.

PI 614600. *Cucumis melo* L. subsp. *melo*

Landrace. KSM 507; Ames 21478. Collected 11/02/1992 in Madhya Pradesh, India. Kothi, East Nimar Khandawa.

The following were collected by Umesh Srivastava, NBPGR, New Delhi, Delhi, India; James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 12/15/1993.

PI 614601. *Cucumis melo* L. subsp. *melo*

Cultivated. USM 245; Ames 21759. Collected 10/22/1992 in Rajasthan, India. Thorshar, Sikar. Farm during the rainy season.

PI 614602. *Cucumis melo* L.

Landrace. USM 270; Ames 23708; Separation from Ames 20680. Collected 10/24/1992 in Rajasthan, India. Near Boi ka kheda, Tonk district. During the rainy season. Separation from Ames 20680.

PI 614603. *Cucumis melo* L.

Uncertain. USM 646; Separation from PI 606050; Ames 25151. Collected 11/09/1992 in Uttar Pradesh, India. Subzi Mundi, near Dehra Dun, Dehra Dun district. During the rainy season. Pedigree - Separation from PI 606050. Separation from PI 606050.

The following were collected by M. Koppar, Nat. Bureau of Plant Genetic Resources, Germplasm Exploration Div., Indian Council of Ag. Res., New Delhi, Delhi 110 012, India; James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 03/04/1993.

PI 614604. *Cucumis sativus* L.

Uncertain. KSM 502; Duplicate of PI 606539; Separation from Ames 20890; Ames 26075. Collected 11/02/1992 in Madhya Pradesh, India. Near Barawah, West Nimar district. During the rainy season. Pedigree - Separation from Ames 20890, *Cucumis melo*. Original lot still resides under Ames 20890.

The following were collected by Harold E. Bockelman, USDA, ARS, National Small Grains Collection, 1691 S 2700 W, Aberdeen, Idaho 83210, United States; Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Roman Boguslavsky, National Centre for Plant Genetic Resources of Ukraine, Lab. for Introduction & Storage of Plant Genetic Resources, Yurjev Institute of Plant Production, Kharkiv, Kharkiv 310060, Ukraine; Vladislav Korzhenevsky, State Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267, Ukraine. Received 08/16/1999.

PI 614605. *Aegilops biuncialis* Vis.

Wild. UKR-99-001; NSGC 8190. Collected 07/27/1999 in Krym, Ukraine. Latitude 44 deg. 30' 39'' N. Longitude 34 deg. 14' 0'' E. Elevation 300 m. near and around Nikita Botanical Gardens, Yalta. south slope, rocky.

PI 614606. *Aegilops biuncialis* Vis.

Wild. UKR-99-021; NSGC 8195. Collected 07/28/1999 in Krym, Ukraine. Latitude 44 deg. 24' 40'' N. Longitude 34 deg. 0' 16'' E. Elevation 195 m. near Simeiz along road A-294. south slope, rocky, dry, highly diverse, calcareous.

PI 614607. *Aegilops biuncialis* Vis.

Wild. UKR-99-037; NSGC 8199. Collected 07/28/1999 in Krym, Ukraine. Latitude 44 deg. 24' 16'' N. Longitude 33 deg. 49' 30'' E. Elevation 230 m. near Black Sea and Sanatome along road A-294. south slope, rocky, dry

PI 614608. *Aegilops biuncialis* Vis.

Wild. UKR-99-147a; NSGC 8223. Collected 08/01/1999 in Krym, Ukraine. Latitude 44 deg. 44' 38'' N. Longitude 34 deg. 28' 34'' E. Elevation 120 m. going east towards Malorichers near road A-294. moderate to steep south slope, rocky.

PI 614609. *Aegilops biuncialis* Vis.

Wild. UKR-99-171a; NSGC 8228. Collected 08/01/1999 in Krym, Ukraine. Latitude 44 deg. 48' 5'' N. Longitude 34 deg. 41' 35'' E. Elevation 40 m. south of Pryvitne near road A-294. mostly flat, dry, rocky, near sea.

PI 614610. *Aegilops biuncialis* Vis.

Wild. UKR-99-178a; NSGC 8230. Collected 08/01/1999 in Krym, Ukraine. Latitude 44 deg. 50' 56'' N. Longitude 34 deg. 51' 43'' E. Elevation 220 m. off of road A-294. south and west slopes, very steep, dry, rocky, brushy, black oak scrub.

PI 614611. *Aegilops biuncialis* Vis.

Wild. UKR-99-204a; NSGC 8232. Collected 08/02/1999 in Krym, Ukraine. Latitude 44 deg. 55' 26'' N. Longitude 35 deg. 13' 56'' E. Elevation 320 m. along trail in Karadag Nature Reserve between Koktebel' and Kurortne and south of road A-294. east slope, steep, rocky, basaltic cliffs dropping to the sea.

PI 614612. *Aegilops biuncialis* Vis.

Wild. UKR-99-258; NSGC 8241. Collected 08/03/1999 in Krym, Ukraine. Latitude 45 deg. 28' 18'' N. Longitude 35 deg. 51' 18'' E. Elevation 20 m. near Mysove on small peninsula. north slope, moderately steep, on cliff above Sea of Azov.

PI 614613. *Aegilops cylindrica* Host

Wild. UKR-99-002; NSGC 8191. Collected 07/27/1999 in Krym, Ukraine.
Latitude 44 deg. 30' 39'' N. Longitude 34 deg. 14' 0'' E. Elevation 300
m. near and around Nikita Botanical Gardens, Yalta. south slope, rocky.

The following were collected by Vladislav Korzhenevsky, State Nikitsky
Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267,
Ukraine. Received 08/16/1999.

PI 614614. *Aegilops cylindrica* Host

Wild. UKR-99-038; NSGC 8200. Collected 1999 in Krym, Ukraine. Latitude
44 deg. 24' 16'' N. Longitude 33 deg. 49' 30'' E. Elevation 230 m. near
Black Sea and Sanatome along road A-294. south slope, rocky, dry.

The following were collected by Harold E. Bockelman, USDA, ARS, National
Small Grains Collection, 1691 S 2700 W, Aberdeen, Idaho 83210, United States;
Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant
Introduction Station, Pullman, Washington 99164-6402, United States; Roman
Boguslavsky, National Centre for Plant Genetic Resources of Ukraine, Lab. for
Introduction & Storage of Plant Genetic Resources, Yurjev Institute of Plant
Production, Kharkiv, Kharkiv 310060, Ukraine; Vladislav Korzhenevsky, State
Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym
334267, Ukraine. Received 08/16/1999.

PI 614615. *Aegilops cylindrica* Host

Wild. UKR-99-061; NSGC 8202. Collected 07/29/1999 in Krym, Ukraine.
Latitude 44 deg. 34' 13'' N. Longitude 33 deg. 56' 37'' E. Elevation 300
m. off road A-296 near Aromat. flat, rocky, dry.

PI 614616. *Aegilops cylindrica* Host

Wild. UKR-99-065; NSGC 8204. Collected 07/29/1999 in Krym, Ukraine.
Latitude 44 deg. 44' 28'' N. Longitude 33 deg. 55' 13'' E. Elevation 465
m. near monastery and cave dwellings (hora Chufutkale) near Bakhchysarai
. steep south slope, rocky, calcareous.

PI 614617. *Aegilops cylindrica* Host

Wild. UKR-99-070; NSGC 8206. Collected 07/30/1999 in Krym, Ukraine.
Latitude 44 deg. 32' 19'' N. Longitude 33 deg. 35' 59'' E. Elevation 190
m. along road A-294 to Sevastopol. flat, disturbed site.

PI 614618. *Aegilops cylindrica* Host

Wild. UKR-99-093; NSGC 8212. Collected 07/30/1999 in Krym, Ukraine.
Latitude 44 deg. 30' 49'' N. Longitude 33 deg. 29' 32'' E. Elevation 220
m. near coast and south of Sevastopol. flat, roadside, disturbed, old
orchard area.

PI 614619. *Aegilops cylindrica* Host

Wild. UKR-99-112b; NSGC 8217. Collected 07/31/1999 in Krym, Ukraine.
Latitude 44 deg. 30' 42'' N. Longitude 33 deg. 50' 5'' E. Elevation 420
m. Baydar Valley, near Peredove. south slope, grazed, rocky.

The following were collected by Vladislav Korzhenevsky, State Nikitsky
Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267,

Ukraine. Received 08/16/1999.

PI 614620. *Aegilops cylindrica* Host

Wild. UKR-99-130; NSGC 8219. Collected 1999 in Krym, Ukraine. Latitude 44 deg. 28' 4'' N. Longitude 33 deg. 45' 32'' E. Elevation 280 m. near Pavliyka. flat area.

The following were collected by Harold E. Bockelman, USDA, ARS, National Small Grains Collection, 1691 S 2700 W, Aberdeen, Idaho 83210, United States; Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Roman Boguslavsky, National Centre for Plant Genetic Resources of Ukraine, Lab. for Introduction & Storage of Plant Genetic Resources, Yurjev Institute of Plant Production, Kharkiv, Kharkiv 310060, Ukraine; Vladislav Korzhenevsky, State Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267, Ukraine. Received 08/16/1999.

PI 614621. *Aegilops cylindrica* Host

Wild. UKR-99-157; NSGC 8226. Collected 08/01/1999 in Krym, Ukraine. Latitude 44 deg. 47' 32'' N. Longitude 34 deg. 37' 24'' E. Elevation 300 m. near Pryvitne off road A-294. moderate south slope.

PI 614622. *Aegilops cylindrica* Host

Wild. UKR-99-222; NSGC 8235. Collected 08/02/1999 in Krym, Ukraine. Latitude 44 deg. 55' 1'' N. Longitude 35 deg. 13' 14'' E. Elevation 170 m. along trail in Karadag Nature Reserve between Koktebel' and Kurortne and south of road A-294. steep north slope, scrub brush.

PI 614623. *Aegilops cylindrica* Host

Wild. UKR-99-226; NSGC 8236. Collected 08/02/1999 in Krym, Ukraine. Latitude 45 deg. 2' 20'' N. Longitude 35 deg. 16' 57'' E. Elevation 100 m. west of Feodosiia off road A-294. gentle north slope, disturbed area surrounded by arable land in steppe, brown clay soil.

PI 614624. *Aegilops cylindrica* Host

Wild. UKR-99-147c; NSGC 8522. Collected 08/01/1999 in Krym, Ukraine. Latitude 44 deg. 44' 38'' N. Longitude 34 deg. 28' 34'' E. Elevation 120 m. going east towards Malorichers near road A-294. moderate to steep south slope, rocky.

PI 614625. *Aegilops geniculata* Roth

Wild. UKR-99-111; NSGC 8215. Collected 07/31/1999 in Krym, Ukraine. Latitude 44 deg. 30' 42'' N. Longitude 33 deg. 50' 5'' E. Elevation 420 m. Baydar Valley, near Peredove. south slope, grazed, rocky.

PI 614626. *Aegilops geniculata* Roth

Wild. UKR-99-136; NSGC 8222. Collected 07/31/1999 in Krym, Ukraine. Latitude 44 deg. 25' 58'' N. Longitude 33 deg. 47' 19'' E. Elevation 370 m. near Orlype. moderately steep south slope, rocky.

PI 614627. *Aegilops kotschy* Boiss.

Wild. UKR-99-076; NSGC 8209. Collected 07/30/1999 in Krym, Ukraine. Latitude 44 deg. 30' 56'' N. Longitude 33 deg. 33' 24'' E. Elevation 260 m. along road to Sevastopol. south slope, rocky, very dry.

PI 614628. *Aegilops kotschy* Boiss.

Wild. UKR-99-148; NSGC 8225. Collected 08/01/1999 in Krym, Ukraine.
Latitude 44 deg. 44' 38'' N. Longitude 34 deg. 28' 34'' E. Elevation 120
m. going east towards Malorichers. moderate to steep south slope, rocky.

PI 614629. *Aegilops kotschy* Boiss.

Wild. UKR-99-210; NSGC 8234. Collected 08/02/1999 in Krym, Ukraine.
Latitude 44 deg. 55' 17'' N. Longitude 35 deg. 13' 55'' E. Elevation 280
m. along trail in Karadag Nature Reserve between Koktebel' and Kurortne
and south of road A-294. opening in woods.

PI 614630. *Aegilops triuncialis* L.

Wild. UKR-99-003; NSGC 8192. Collected 07/27/1999 in Krym, Ukraine.
Latitude 44 deg. 30' 39'' N. Longitude 34 deg. 14' 0'' E. Elevation 300
m. near and around Nikita Botanical Gardens, Yalta. south slope, rocky.

The following were collected by Vladislav Korzhenevsky, State Nikitsky
Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267,
Ukraine. Received 08/16/1999.

PI 614631. *Aegilops triuncialis* L.

Wild. UKR-99-022; NSGC 8196. Collected 1999 in Krym, Ukraine. Latitude
44 deg. 24' 40'' N. Longitude 34 deg. 0' 16'' E. Elevation 195 m. near
Simeiz along road A-294. south slope, rocky, dry, highly diverse,
calcareous.

The following were collected by Harold E. Bockelman, USDA, ARS, National
Small Grains Collection, 1691 S 2700 W, Aberdeen, Idaho 83210, United States;
Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant
Introduction Station, Pullman, Washington 99164-6402, United States; Roman
Boguslavsky, National Centre for Plant Genetic Resources of Ukraine, Lab. for
Introduction & Storage of Plant Genetic Resources, Yurjev Institute of Plant
Production, Kharkiv, Kharkiv 310060, Ukraine; Vladislav Korzhenevsky, State
Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym
334267, Ukraine. Received 08/16/1999.

PI 614632. *Aegilops triuncialis* L.

Wild. UKR-99-112a; NSGC 8216. Collected 07/31/1999 in Krym, Ukraine.
Latitude 44 deg. 30' 42'' N. Longitude 33 deg. 50' 5'' E. Elevation 420
m. Baydar Valley, near Peredove. south slope, grazed, rocky.

PI 614633. *Aegilops triuncialis* L.

Wild. UKR-99-171b; NSGC 8229. Collected 08/01/1999 in Krym, Ukraine.
Latitude 44 deg. 48' 5'' N. Longitude 34 deg. 41' 35'' E. Elevation 40
m. south of Pryvitne near road A-294. mostly flat, dry, rocky, near sea.

PI 614634. *Aegilops triuncialis* L.

Wild. UKR-99-178b; NSGC 8231. Collected 08/01/1999 in Krym, Ukraine.
Latitude 44 deg. 50' 56'' N. Longitude 34 deg. 51' 43'' E. Elevation 220
m. off of road A-294. south and west slopes, very steep, dry, rocky,
brushy, black oak scrub.

PI 614635. *Aegilops triuncialis* L.

Wild. UKR-99-204b; NSGC 8233. Collected 08/02/1999 in Krym, Ukraine.
Latitude 44 deg. 55' 26'' N. Longitude 35 deg. 13' 56'' E. Elevation 320
m. along trail in Karadag Nature Reserve between Koktebel' and Kurortne

and south of road A-294. east slope, steep, rocky, basaltic cliffs dropping to the sea.

PI 614636. *Avena sterilis* L.

Wild. UKR-99-004; NSGC 8193. Collected 07/27/1999 in Krym, Ukraine. Latitude 44 deg. 30' 39'' N. Longitude 34 deg. 14' 0'' E. Elevation 300 m. near and around Nikita Botanical Gardens, Yalta. south slope, rocky.

PI 614637. *Avena sterilis* L.

Wild. UKR-99-023; NSGC 8197. Collected 07/28/1999 in Krym, Ukraine. Latitude 44 deg. 24' 40'' N. Longitude 34 deg. 0' 16'' E. Elevation 195 m. near Simeiz along road A-294. south slope, rocky, dry, highly diverse, calcareous.

The following were collected by Vladislav Korzhenevsky, State Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267, Ukraine. Received 08/16/1999.

PI 614638. *Avena sterilis* L.

Wild. UKR-99-039; NSGC 8201. Collected 1999 in Krym, Ukraine. Latitude 44 deg. 24' 16'' N. Longitude 33 deg. 49' 30'' E. Elevation 230 m. near Black Sea and Sanatome along road A-294. south slope, rocky, dry.

PI 614639. *Avena sterilis* L.

Wild. UKR-99-072; NSGC 8207. Collected 1999 in Krym, Ukraine. Latitude 44 deg. 32' 19'' N. Longitude 33 deg. 35' 59'' E. Elevation 190 m. along road A-294 to Sevastopol. flat, disturbed site.

PI 614640. *Avena sterilis* L.

Wild. UKR-99-131; NSGC 8220. Collected 1999 in Krym, Ukraine. Latitude 44 deg. 28' 4'' N. Longitude 33 deg. 45' 32'' E. Elevation 280 m. near Pavliyka. flat area.

The following were collected by Harold E. Bockelman, USDA, ARS, National Small Grains Collection, 1691 S 2700 W, Aberdeen, Idaho 83210, United States; Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Roman Boguslavsky, National Centre for Plant Genetic Resources of Ukraine, Lab. for Introduction & Storage of Plant Genetic Resources, Yurjev Institute of Plant Production, Kharkiv, Kharkiv 310060, Ukraine; Vladislav Korzhenevsky, State Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267, Ukraine. Received 08/16/1999.

PI 614641. *Avena sterilis* L.

Wild. UKR-99-094; NSGC 8242. Collected 07/30/1999 in Krym, Ukraine. Latitude 44 deg. 30' 49'' N. Longitude 33 deg. 29' 32'' E. Elevation 220 m. near coast and south of Sevastopol. flat, roadside, disturbed, old orchard area.

PI 614642. *Hordeum bulbosum* L.

Wild. UKR-99-010; NSGC 8194. Collected 07/27/1999 in Krym, Ukraine. Latitude 44 deg. 30' 39'' N. Longitude 34 deg. 14' 0'' E. Elevation 300 m. near and around Nikita Botanical Gardens, Yalta. south slope, rocky.

PI 614643. *Hordeum bulbosum* L.

Wild. UKR-99-028; NSGC 8198. Collected 07/28/1999 in Krym, Ukraine. Latitude 44 deg. 24' 40'' N. Longitude 34 deg. 0' 16'' E. Elevation 195 m. near Simeiz along road A-294. south slope, rocky, dry, highly diverse, calcareous.

PI 614644. *Hordeum bulbosum* L.

Wild. UKR-99-085; NSGC 8210. Collected 07/30/1999 in Krym, Ukraine. Latitude 44 deg. 30' 56'' N. Longitude 33 deg. 33' 24'' E. Elevation 260 m. along road to Sevastopol. south slope, rocky, very dry.

PI 614645. *Hordeum bulbosum* L.

Wild. UKR-99-163; NSGC 8227. Collected 08/01/1999 in Krym, Ukraine. Latitude 44 deg. 47' 32'' N. Longitude 34 deg. 37' 24'' E. Elevation 300 m. near Pryvitne off road A-294. moderate south slope.

PI 614646. *Hordeum marinum* subsp. *gussoneanum* (Parl.) Thell.

Wild. UKR-99-240; NSGC 8238. Collected 08/03/1999 in Krym, Ukraine. Latitude 45 deg. 25' 30'' N. Longitude 36 deg. 28' 19'' E. Elevation 80 m. north of Kerch. nearly flat to rolling hills, open, mud volcano area, salty with pH approximately 9.5.

PI 614647. *Secale sylvestre* Host

Wild. UKR-99-250; NSGC 8239. Collected 08/03/1999 in Krym, Ukraine. Latitude 45 deg. 23' 27'' N. Longitude 36 deg. 3' 26'' E. Elevation 1 m. near Novovidradne, north Crimean coast, Sea of Azov. mostly flat, seaside beach, sandy.

PI 614648. *Secale sylvestre* Host

Wild. UKR-99-253; NSGC 8240. Collected 08/03/1999 in Krym, Ukraine. Latitude 45 deg. 22' 9'' N. Longitude 36 deg. 0' 4'' E. Elevation 2 m. near Nyzhniozamorske. mostly flat, seaside beach on Sea of Azov.

PI 614649. *Triticum monococcum* subsp. *aegilopoides* (Link) Thell.

Wild. UKR-99-075; NSGC 8208. Collected 07/30/1999 in Krym, Ukraine. Latitude 44 deg. 32' 19'' N. Longitude 33 deg. 35' 59'' E. Elevation 190 m. along road A-294 to Sevastopol. flat, disturbed site.

PI 614650. *Triticum monococcum* subsp. *aegilopoides* (Link) Thell.

Wild. UKR-99-092; NSGC 8211. Collected 07/30/1999 in Krym, Ukraine. Latitude 44 deg. 30' 56'' N. Longitude 33 deg. 33' 24'' E. Elevation 260 m. along road to Sevastopol. south slope, rocky, very dry.

The following were collected by Vladislav Korzhenevsky, State Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267, Ukraine. Received 08/16/1999.

PI 614651. *Triticum monococcum* subsp. *aegilopoides* (Link) Thell.

Wild. UKR-99-103; NSGC 8213. Collected 1999 in Krym, Ukraine. Latitude 44 deg. 30' 49'' N. Longitude 33 deg. 29' 32'' E. Elevation 220 m. near coast and south of Sevastopol. flat, roadside, disturbed, old orchard area.

The following were collected by Harold E. Bockelman, USDA, ARS, National Small Grains Collection, 1691 S 2700 W, Aberdeen, Idaho 83210, United States; Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant

Introduction Station, Pullman, Washington 99164-6402, United States; Roman Boguslavsky, National Centre for Plant Genetic Resources of Ukraine, Lab. for Introduction & Storage of Plant Genetic Resources, Yurjev Institute of Plant Production, Kharkiv, Kharkiv 310060, Ukraine; Vladislav Korzhenevsky, State Nikitsky Botanical Gardens, Department of Flora & Vegetation, Yalta, Krym 334267, Ukraine. Received 08/16/1999.

PI 614652. *Triticum monococcum* subsp. *aegilopoides* (Link) Thell.
Wild. UKR-99-231; NSGC 8237. Collected 08/02/1999 in Krym, Ukraine.
Latitude 45 deg. 2' 20'' N. Longitude 35 deg. 16' 57'' E. Elevation 100 m. west of Feodosiia off road A-294. gentle north slope, disturbed area surrounded by arable land in steppe, brown clay soil.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 09/17/1997.

PI 614653. *Hordeum vulgare* L. subsp. *vulgare*
Cultivated. B97-35; NSGC 6514. Collected 06/21/1997 in Bulgaria.
Latitude 42 deg. 1' 49'' N. Longitude 27 deg. 58' 34'' E. Elevation 65 m. near Bulgarian-Turkish border. open abandoned field that had been cultivated in the past.

The following were developed by EMBRAPA, Passo Fundo, Rio Grande do Sul, Brazil. Donated by A. Linhares, EMBRAPA, Centro Nacional de Pesquisa de Trigo, Caixa Postal 569, Passo Fundo, Rio Grande do Sul, Brazil. Received 01/07/1993.

PI 614654. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. "PF 859255"; NSGC 2013. Pedigree - Londrina*6/Kavkaz//Londrina*6/Agent/3/Londrina*6/Kavkaz//Londrina*6/Weihenstephan M1.

The following were developed by HybriTech Seed International, Inc., A Unit of Monsanto Company, United States. Received 1988.

PI 614655. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. "PACER". PVP 8800054.

The following were developed by C. Eklund, R.#2, Roseau, Minnesota 56751, United States. Received 1977.

PI 614656. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. "EKLUND". PVP 7600040. Pedigree - selection from Minter. Released 1976.

The following were developed by DeKalb Agresearch, Inc., 1831 Woodrow, Wichita, Kansas 67203, United States. Received 1977.

PI 614657. *Triticum aestivum* L. subsp. *aestivum*
Cultivar. "R158". PVP 7600068.

The following were developed by Northrup, King & Company, 1500 Jackson N.E., Minneapolis, Minnesota 55413, United States. Received 1989.

PI 614658. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. "NUDURA". PVP 9000011.

The following were developed by David Hole, Utah State University, Plants, Soils, & Biometeorology Dept., UMC 4820 Agsci 334, Logan, Utah 84322-4820, United States. Received 08/08/2000.

PI 614659. *Hordeum vulgare* L. subsp. *vulgare*
Cultivar. Pureline. "MILLENNIUM"; UT94B1058-4603; UT004603. PVP 200000169. Pedigree - WA Sel 3564/Unitan//UT Short2 *2. Six-row, midseason, erect-growing, spring feed barley. Head tapering, erect (lax-to-dense) with some overlap of lateral kernels at the tip of the head, and rachis edges covered with hairs. Leaves and heads waxy. Glumes long with extremely long, rough awns and covered with long hairs. Erect (non-flaring), long, rough lemma awns. Stigmas heavily feathered. Seed covered, midlong, semi-wrinkled, with long rachilla hairs, and a depression at the base. Aleurone color white and 1000-kernel weight averages 39 g. Most spikes marked by a closed collar at the base. Recommended for growing primarily under irrigation or where annual precipitation is 400 mm or more. In three years (1996-1998, n=44) of Utah irrigated tests, average yield (7567 kg ha⁻¹) exceeded (P<0.05) that of Steptoe (6680 kg ha⁻¹) and Bracken (6288 kg ha⁻¹).

The following were developed by Svalof Weibull AB, Svalow, Malmohus, Sweden. Received 08/08/2000.

PI 614660 PVPO. *Pisum sativum* L.
Cultivar. "SW Universal". PVP 200000199.

The following were developed by Wisconsin Agricultural Experiment Station, Madison, Wisconsin, United States. Received 08/08/2000.

PI 614661 PVPO. *Avena sativa* L.
Cultivar. "Vista". PVP 200000202.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 11/17/2000.

PI 614662 PVPO. *Dactylis glomerata* L.
Cultivar. "MEGABITE". PVP 200000336.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 08/08/2000.

PI 614663 PVPO. *Helianthus annuus* L.
Cultivar. "PHB339". PVP 200000259.

PI 614664 PVPO. *Helianthus annuus* L.

Cultivar. "PHB247". PVP 200000260.

The following were developed by Mejoramiento Genetico SA DE CV, France.
Received 08/08/2000.

PI 614665 PVPO. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. "Sofia 2000-C". PVP 200000306.

PI 614666 PVPO. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. "Silvia 2000-C". PVP 200000307.

The following were developed by Basic Vegetable Products, 9302 E. Lacey Blvd., Hanford, California 93230, United States. Received 08/08/2000.

PI 614667 PVPO. *Apium graveolens* var. *dulce* (Mill.) Pers.
Cultivar. "Lobo". PVP 200000308.

The following were developed by Cascade International Seed Company, 8483 W. Stayton Rd., Aumsville, Oregon 97325, United States. Received 08/08/2000.

PI 614668 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "Stag". PVP 200000309.

The following were developed by Cascade International Seed Company, Jonathan Green & Sons, Inc., United States. Received 08/08/2000.

PI 614669 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "Teton". PVP 200000310.

The following were developed by World Wide Wheat, L.L.C., United States.
Received 08/08/2000.

PI 614670 PVPO. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. "Platinum". PVP 200000311.

PI 614671 PVPO. *Triticum turgidum* subsp. *durum* (Desf.) Husn.
Cultivar. "Crown". PVP 200000312.

The following were developed by Abbott & Cobb, Inc., United States. Received 08/08/2000.

PI 614672 PVPO. *Cucumis melo* L.
Cultivar. "XLT-86". PVP 200000313.

The following were developed by R.C. Palmer, Unknown. Received 06/15/1998.

PI 614673. *Glycine max* (L.) Merr.
Genetic. Pureline. T218H; SY 9821001. Pedigree - 218M. y18(Urbana)
Nearly lethal, yellow leaves.

PI 614674. *Glycine max* (L.) Merr.

Genetic. Pureline. T362H; SY 9821002. Pedigree - Somaclonal mutant in Jilin 3 (PI 427099). y18(Ames 2) Nearly lethal, yellow leaves.

The following were donated by Charles M. Taliaferro, Oklahoma State University, Plant and Soil Science Department, 368 Agricultural Hall, Stillwater, Oklahoma 74078-6028, United States; Modah Das, Oklahoma State University, 369 Ag Hall, Stillwater, Oklahoma 74078, United States. Received 12/16/1998.

PI 614675. *Cynodon* sp.

Wild. Collection No.1; 1; Q 37954; Grif 14380.

PI 614676. *Cynodon* sp.

Wild. Collection No.2; 2; Q 37955; Grif 14381.

The following were collected by Jeff V. Krans, Mississippi State University, Department of Plant & Soil Sciences, Box 9555, Mississippi State, Mississippi 39762, United States. Received 08/13/1999.

PI 614677. *Anthoxanthum odoratum* L.

Cultivar. 19; Q 40393. Collected in Australia.

The following were collected by Ronny R. Duncan, University of Georgia, Georgia Agricultural Exp. Station, Department of Crop and Soil Sciences, Griffin, Georgia 30223-1797, United States. Received 08/05/1999.

PI 614678. *Paspalum vaginatum* Sw.

Cultivar. Durban County Club; Q 40388. Collected in South Africa.

PI 614679. *Paspalum vaginatum* Sw.

Cultivar. E-1; Q 40480. Collected in Bahamas.

The following were donated by Ronny R. Duncan, University of Georgia, Georgia Agricultural Exp. Station, Department of Crop and Soil Sciences, Griffin, Georgia 30223-1797, United States. Received 09/09/1999.

PI 614680. *Paspalum vaginatum* Sw.

Cultivar. Q 40522.

The following were collected by Jeff V. Krans, Mississippi State University, Department of Plant & Soil Sciences, Box 9555, Mississippi State, Mississippi 39762, United States. Received 08/13/1999.

PI 614681. *Zoysia* sp.

Cultivar. 2; Q 40431. Collected in Australia.

PI 614682. *Zoysia* sp.

Cultivar. 10; Q 40432. Collected in Australia.

The following were collected by Jesus Valdez Reyna, Mexico. Donated by Hugh

Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/13/1987.

PI 614683. *Cucurbita pepo* var. *fraterna* (L. H. Bailey) Filov
Wild. HDW 5531; FR003; Ames 7926. Collected 01/10/1987 in Tamaulipas, Mexico. Along roadside at Valdo el Moro, ~ 60 km east of Ciudad Victoria on Highway 70, Victoria County. All fruits green and white striped maturing to orange; bitter.

The following were donated by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/13/1987.

PI 614684. *Cucurbita pepo* var. *texana* (Scheele) Filov
Wild. 5847; HDW 3163; TE001; Ames 7928. Collected 08/1977 in Texas, United States. Along west bank of the Aransas River bottom, 0.8 miles north of feeding posts, ~6 miles northeast of St. Paul, Big LI Ranch, San Patricio County. Major drainage = Aransas. 21 fruits of varying shape, number of plants unknown.

PI 614685. *Cucurbita pepo* var. *texana* (Scheele) Filov
Wild. HDW 3180; TE002; Ames 7929. Collected 08/1977 in Texas, United States. North Clarkson Pasture, near Medio Creek, northeast side of FM2441, ~5 miles north-northwest of Woodsboro. Refugio; major drainage = Mission River. Sample of 5, relatively uniform, more or less spherical (no terminal constriction). Number of plants, maybe 1.

PI 614686. *Cucurbita pepo* var. *texana* (Scheele) Filov
Wild. 6111; HDW 3162; TE0003; Ames 7930. Collected 08/1977 in Texas, United States. San Antonio River bottom, west bank at River Ranch, 2 miles north of the main ranch buildings, 7 miles southeast of Junction 239 and 183 (77a), Goliad County. Major drainage = San Antonio. Fruits ovate to spherical - not pyriform. Number of plants not known.

The following were collected by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/13/1987.

PI 614687. *Cucurbita pepo* var. *texana* (Scheele) Filov
Wild. HDW 3173; TE004; Ames 7931. Collected 1977 in Texas, United States. Elevation 100 m. High bank of Guadalupe River, near bridge at Independence Park, Gonzales County. Major drainage = Guadalupe. Fruit from a single plant; spherical with no constrictions. Although brown, fruits may be from last year.

Unknown source. Received 10/13/1987.

PI 614688. *Cucurbita pepo* var. *texana* (Scheele) Filov
Wild. HDW 3170; TE005; Ames 7932. Collected 03/12/1978 in Texas, United States. Elevation 100 m. Along Colorado River at home of Larry Hatfield (student), 4-5 miles west of La Grange. Major drainage = Colorado. Number of plants unknown; some progeny in collection of 55 packets. From different parts of Colorado drainage and from different plants.

The following were collected by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/13/1987.

PI 614689. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. HDW 5299; TE036; Ames 7933. Collected 08/02/1984 in Texas, United States. Elevation 100 m. Along the Navasota River at Camp Cooley Ranch, Robertson County. Cluster of plants in deep sand on first river terrace, near woodland road, ~400 meters from the big tank ("bottoms pasture").

The following were collected by Norman Dronen. Donated by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/13/1987.

PI 614690. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. HDW 5533; TE042; Ames 7934. Collected 10/1986 in Texas, United States. Elevation 100 m. Hunting lease of Norman Dronen, along Bedias Creek, Madison County. Tributary of the Trinity River, major drainage = Trinity. Essentially a recollection of TE039 (Not in NPGS); number of plants = 4.

The following were donated by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/13/1987.

PI 614691. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. HDW 5544; TE043; Ames 7935. Collected 05/1987 in Texas, United States. Elevation 100 m. Brought in by John Doebley from Nail's Creek State Park, Lee County. Along levee of pond; major drainage = Brazos (Yegua). Fruit = 6; number of parent plants unknown.

The following were collected by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States; R.G. Snyder, Mississippi State University, PO Box 231, Truck Crops Branch Experiment Station, Crystal Springs, Mississippi 39059, United States; J.D. Byrd, Mississippi State University, Extension Weed Specialist, Department of Plant and Soil Sciences, Mississippi State, Mississippi 39762, United States. Donated by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States. Received 02/12/1996.

PI 614692. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. 292; Ames 22729. Collected 11/07/1994 in Mississippi, United States. Latitude 32 deg. 27' N. Longitude 91 deg. 25' W. Elevation 27 m. Southeast of Eagle Lake and west of State Highway 465, around 10 miles west of U.S. Highway 61, Warren County. A few meters uphill from swampy woods, at edge of woods, along dirt road with plowed field on other side. Tangled with other vines including *Campsis radicans*. Green striped fruits hanging from dead vines. Growing 6 meters up into trees. Fruits pyriform with short wide necks. Flesh non-bitter.

The following were collected by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States; R.G. Snyder,

Mississippi State University, PO Box 231, Truck Crops Branch Experiment Station, Crystal Springs, Mississippi 39059, United States; J.D. Byrd, Mississippi State University, Extension Weed Specialist, Department of Plant and Soil Sciences, Mississippi State, Mississippi 39762, United States; Charles T. Bryson, USDA, Southern Weed Science Lab., P.O. Box 350, Stoneville, Mississippi 38776, United States. Donated by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States. Received 02/12/1996.

PI 614693. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. 294; Ames 22730. Collected 11/07/1994 in Mississippi, United States. Latitude 33 deg. 26' 0'' N. Longitude 90 deg. 51' 0'' W. Elevation 36 m. 2.2 miles northeast of Stoneville, around 10 miles east of Greenville, Washington County. Harvested cotton field. Large and small green striped to faded fruits, ranging from pyriform to spherical or transversely ellipsoid in shape. Flesh non-bitter. Mostly scattered on ground. A serious weed problem in cotton and soybean fields.

PI 614694. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. 293; Ames 22731. Collected 11/07/1994 in Mississippi, United States. Latitude 32 deg. 38' N. Longitude 91 deg. 25' W. Elevation 29 m. Southeast of Fittler, around 5 miles west of U.S. Highway 61 and south of State Highway 1, Issaquena County. Harvested cotton field. Faded green fruits, narrow pyriform shape with short narrow necks at stem end. Flesh non-bitter. Mostly scattered on ground. A serious weed problem. One young vine was still green with some slight virus symptoms and mildew.

The following were collected by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States; R.G. Snyder, Mississippi State University, PO Box 231, Truck Crops Branch Experiment Station, Crystal Springs, Mississippi 39059, United States; J.D. Byrd, Mississippi State University, Extension Weed Specialist, Department of Plant and Soil Sciences, Mississippi State, Mississippi 39762, United States. Donated by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States. Received 02/12/1996.

PI 614695. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. 290; Ames 22732. Collected 11/07/1994 in Mississippi, United States. Latitude 31 deg. 59' 45'' N. Longitude 90 deg. 58' 36'' W. Elevation 51 m. Less than 1 mile north of Port Gibson, 1 mile west of U.S. Highway 61, near Bayou Pierre, Claiborne County. Cow pasture. Grassy and weedy with amaranths. Just slightly uphill from flood plain and swampy oak forest. Near to where a pile of hay had been brought in from elsewhere. Six fruits (3 faded green and 3 nearly dried) together on a dead vine on the ground. Fruits uniformly pyriform, faintly striped. Flesh non-bitter.

The following were collected by J.D. Byrd, Mississippi State University, Extension Weed Specialist, Department of Plant and Soil Sciences, Mississippi State, Mississippi 39762, United States. Donated by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States. Received 02/12/1996.

PI 614696. *Cucurbita pepo* var. *texana* (Scheele) Filov

Wild. Ames 22733. Collected 11/17/1994 in Mississippi, United States. Latitude 33 deg. 27' N. Longitude 90 deg. 41' W. Elevation 38 m. 0.2 miles west of Indianola, north of U.S. Highway 82, Sunflower County. Weedy in a cotton field. Fruit green striped to faded, pyriform. Flesh non-bitter.

The following were collected by Charles T. Bryson, USDA, Southern Weed Science Lab., P.O. Box 350, Stoneville, Mississippi 38776, United States. Donated by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States. Received 02/12/1996.

PI 614697. Cucurbita pepo var. texana (Scheele) Filov

Wild. 14688; Ames 22734. Collected 11/14/1994 in Mississippi, United States. Latitude 33 deg. 27' N. Longitude 90 deg. 40' W. Elevation 38 m. 0.1 mile west of Indianola, 0.1 mile north of U.S. Highway 82, Sunflower County. Open, fallow area near cotton field. Sandy soil.

PI 614698. Cucurbita pepo var. texana (Scheele) Filov

Wild. 14712; Ames 22735. Collected 02/14/1995 in Mississippi, United States. Around 2 miles northeast of Glenn Allen, southwest of junction between Highways MS 1 and Yazoo Refuge Road, T14N, R8W, SE 1/4 of SE 1/4, Section 6, Washington County. Soybean field.

The following were collected by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States; R.G. Snyder, Mississippi State University, PO Box 231, Truck Crops Branch Experiment Station, Crystal Springs, Mississippi 39059, United States; J.D. Byrd, Mississippi State University, Extension Weed Specialist, Department of Plant and Soil Sciences, Mississippi State, Mississippi 39762, United States. Donated by Thomas C. Andres, The Cucurbit Network, 5440 Netherland Avenue, D24, Bronx, New York 10471, United States. Received 02/12/1996.

PI 614699. Cucurbita pepo var. texana (Scheele) Filov

Wild. 292; Ames 22736. Collected 11/07/1994 in Mississippi, United States. Latitude 32 deg. 27' N. Longitude 91 deg. 25' W. Elevation 27 m. Southeast of Eagle Lake and west of State Highway 465, around 10 miles west of U.S. Highway 61, Warren County. A few meters uphill from swampy woods, at edge of woods, along dirt road with plowed field on other side. Tangled with other vines including *Campsis radicans*. Green striped fruits hanging from dead vines. Growing 6 meters up into trees. Fruits uniformly obloid to transversely ellipsoid. Flesh non-bitter.

PI 614700. Cucurbita pepo var. texana (Scheele) Filov

Wild. 292; Ames 22737. Collected 11/07/1994 in Mississippi, United States. Latitude 32 deg. 27' N. Longitude 91 deg. 25' W. Elevation 27 m. Southeast of Eagle Lake and west of State Highway 465, around 10 miles west of U.S. Highway 61, Warren County. A few meters uphill from swampy woods, at edge of woods, along dirt road with plowed field on other side. Tangled with other vines including *Campsis radicans*. Green striped fruits hanging from dead vines. Growing 6 meters up into trees. Fruits pyriform with long narrow necks or without necks. Flesh non-bitter.

PI 614701. Cucurbita pepo var. texana (Scheele) Filov

Wild. 292; Ames 22738. Collected 11/07/1994 in Mississippi, United

States. Latitude 32 deg. 27' N. Longitude 91 deg. 25' W. Elevation 27 m. Southeast of Eagle Lake and west of State Highway 465, around 10 miles west of U.S. Highway 61, Warren County. A few meters uphill from swampy woods, at edge of woods, along dirt road with plowed field on other side. Tangled with other vines including *Campsis radicans*. Green striped fruits hanging from dead vines. Growing 6 meters up into trees. Fruits uniformly obloid to transversely ellipsoid. Flesh non-bitter.

The following were developed by Joe W. Burton, USDA-ARS, North Carolina State University, Department of Crop Science, Raleigh, North Carolina 27695-7631, United States. Donated by Myron Fountain, NC Foundation Seed Producers, 8220 Riley Hill Rd, Zebulon, North Carolina 27597-8773, United States. Received 08/14/2000.

PI 614702. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Soyola"; SY 29001. Selected for low linolenic acid.

The following were collected by David Spooner, USDA, ARS, Department of Horticulture, 1575 Linden Drive, 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 614703. *Solanum yungasense* Hawkes

Wild. SFVU 6739; BE-4652; Q 30486. Collected 03/20/1993 in La Paz, Bolivia. Latitude 16 deg. 24' 0'' S. Longitude 67 deg. 38' 0'' W. Elevation 1243 m. Nor Yungas. Puente Villa, about 1.5 km downstream (east) of Rio Tamampaya, after hanging bridge in Puente Villa, on floodplain of river. Growing in a coffee and banana plantation, among grasses. Most plants young, but one plant found with cream yellow-white stellate corollas, no fruits found.

The following were donated by Chuck Brown, USDA, ARS, WSU Irrigated Ag. Extension Center, 24106 N. Bunn Road, Prosser, Washington 99350, United States. Received 08/12/1996.

PI 614704. *Solanum x edinense* P. Berthault

Genetic. EDN-1; Q 36354.

The following were collected by David Spooner, USDA, ARS, Department of Horticulture, 1575 Linden Drive, 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 614705. *Solanum x edinense* P. Berthault

Wild. RSSV 980; Q 37338. Collected 10/27/1997 in Mexico, Mexico.
Latitude 19 deg. 11' 3'' N. Longitude 99 deg. 51' 22'' W. Elevation 3100
m. S side of Rt. 134, 6.8 km SW of La Puerta, at km 25.7 km SW of Toluca
(by posted road markers). Growing among garbage piles and on adjacent
slope, in area of pine fir forest. Flowers purple, pentagonal, 18
tubers (white skin and flesh) collected from four plants.

The following were collected by David Spooner, USDA, ARS, Department of
Horticulture, 1575 Linden Drive, Madison, Wisconsin 53706-1590, United States
; Konrad Schuler, Institute for Plant Genetics, IPK, Genbank-Aussenstelle
Nord, 0-2551, Gross Lusewitz, Germany; Antoni Rivera Pena, Apartado Postal
No. 487, Edo. De Mexico, Toluca, 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 614706. *Solanum x edinense* P. Berthault

Wild. RSSV 995; Q 37341. Collected 10/27/1997 in Mexico, Mexico.
Latitude 19 deg. 10' 46'' N. Longitude 99 deg. 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 Toluca, E-facing slope of volcano. Growing in
sandy soil under shrubs. Flowers absent, fruits spherical and fully
formed but without seeds. 21 tubers (red skin) collected from one
colony.

Unknown source. Received 04/01/1998.

PI 614707. *Solanum tuberosum* L.

Cultivar. "LEKSANDS VIT"; 3013; Q 37602.

Unknown source. Received 04/01/1998.

PI 614708. *Solanum tuberosum* L.

Cultivar. "LANGE RODE"; 3048; Q 37605.

Unknown source. Received 04/01/1998.

PI 614709. *Solanum tuberosum* L.

Cultivar. "VALTTI"; 3070; Q 37607.

Unknown source. Received 04/01/1998.

PI 614710. *Solanum tuberosum* L.

Cultivar. "EVA"; 3125; Q 37609.

Unknown source. Received 04/01/1998.

PI 614711. *Solanum tuberosum* L.

Cultivar. "LANG SVENSKE"; 3168; Q 37612.

Unknown source. Received 04/01/1998.

PI 614712. Solanum tuberosum L.
Cultivar. "KIVA"; 3198; Q 37616.

Unknown source. Received 04/01/1998.

PI 614713. Solanum tuberosum L.
Cultivar. "ROSA"; 3199; Q 37617.

Unknown source. Received 04/01/1998.

PI 614714. Solanum tuberosum L.
Cultivar. "SEMLO"; 3200; Q 37618.

Unknown source. Received 04/01/1998.

PI 614715. Solanum tuberosum L.
Cultivar. "TERTUS"; 3201; Q 37619.

Unknown source. Received 04/01/1998.

PI 614716. Solanum tuberosum L.
Cultivar. "TAMMISTON AIKAINEN"; 3223; Q 37624.

Unknown source. Received 04/01/1998.

PI 614717. Solanum tuberosum L.
Cultivar. "VESTAR"; 3224; Q 37625.

Unknown source. Received 04/01/1998.

PI 614718. Solanum tuberosum L.
Cultivar. "STINA"; 3228; Q 37627.

Unknown source. Received 04/01/1998.

PI 614719. Solanum tuberosum L.
Cultivar. "SABINA"; 3229; Q 37628.

Unknown source. Received 04/01/1998.

PI 614720. Solanum tuberosum L.
Cultivar. "KOTO"; 3255; Q 37630.

Unknown source. Received 04/01/1998.

PI 614721. *Solanum tuberosum* L.
Cultivar. "VETO"; 3256; Q 37631.

Unknown source. Received 04/01/1998.

PI 614722. *Solanum tuberosum* L.
Cultivar. "OCTAVIA"; 3258; Q 37633.

Unknown source. Received 04/01/1998.

PI 614723. *Solanum tuberosum* L.
Cultivar. "MINEA"; 3259; Q 37634.

Unknown source. Received 04/01/1998.

PI 614724. *Solanum tuberosum* L.
Cultivar. "KOTTPOTATIS"; 3300; Q 37638.

Unknown source. Received 04/01/1998.

PI 614725. *Solanum tuberosum* L.
Cultivar. "ELIN"; 3390; Q 37640.

Unknown source. Received 04/01/1998.

PI 614726. *Solanum tuberosum* L.
Cultivar. "SILLA"; 3392; Q 37641.

The following were donated by Texas A&M University, Texas Agricultural Exp. Station, College Station, Texas 77841, United States. Received 1961.

PI 614727. *Cenchrus ciliaris* L.
Uncertain. NSL 6785; BLUE.

The following were donated by USDA, SCS, Texas Agricultural Experiment Station, College Station, Texas, United States. Received 1963.

PI 614728. *Chloris gayana* Kunth
Uncertain. NSL 22692; G 77. Collected in Australia.

The following were developed by Robert K. Bacon, University of Arkansas, Department of Agronomy, 115 Plant Science Bldg., Fayetteville, Arkansas 72701, United States. Received 08/15/2000.

PI 614729. *Triticum aestivum* L. subsp. *aestivum*
Breeding. Pureline. AR656-5-1; NSGC 8674. Pedigree -
Corin/3/FL302//Coker 833/Hunter. Soft red winter wheat. High yielding,
low tillering with a high number of kernels per spike. Resistant to soil
borne mosaic virus. Good resistance to *Septoria tritici*.

PI 614730. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. AR647-1-6; NSGC 8675. Pedigree - Cardinal//Coker 9227/Keiser. Soft red winter wheat. Good test weight with lax spike type and long peduncle. Poor powdery mildew resistance.

The following were developed 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 Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 1991.

PI 614731. *Cicer arietinum* L.

Cultivated. FLIP 84-92C; W6 22601. Pedigree - PI 564774(ILC-72) X W6 22580(ILC-215). Resistant to ascochyta blight.

The following were developed by Sam C. Anand, University of Missouri, Department of Agronomy, 210 Waters Hall, Columbia, Missouri 65211, United States; Jake Fisher, University of Missouri, Delta Research Center, P.O. Box 160, Portageville, Missouri 63873, United States; Teresa Newman, University of Missouri, Delta Research Center, P.O. Box 160, Portageville, Missouri 63873, United States. Received 07/27/2000.

PI 614732. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Anand"; S94-1956. CV-428. Pedigree - Holladay x Hartwig. Determinate soybean variety in mid-maturity group V. Flowers purple and tawny pubescence. Seeds yellow with black hila. Resistant to raes 2, 3, 5, and 14 of the soybean cyst nematode *Heterodera glycines*. Susceptible to southern root-knot nematode (*Medoidgyne incognita*) and peanut root-knot nematode (*M. arenaria*). Moderately resistant to stem canker (*Diaporthe phaseolorum*).

The following were developed by Stephen A. Harrison, Louisiana State University, Department of Agronomy, 221 Sturgis Hall, Baton Rouge, Louisiana 70803-2110, United States; Phil L. Bruckner, Montana State University, Department of Plant Science, Leon Johnson Hall, Bozeman, Montana 59717-0312, United States; Ron D. Barnett, University of Florida, North Florida Res. & Ed. Center, R.#3, Box 4370, Quincy, Florida 32351-9500, United States; H.J. Mascagni, Louisiana State University, Louisiana Agric. Exp. Station, Baton Rouge, Louisiana 70803-2110, United States; S.H. Moore, Louisiana State University, Louisiana Agric. Exp. Station, Dept. of Agronomy, Baton Rouge, Louisiana 70803-2110, United States. Received 08/01/2000.

PI 614733. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "LA422". CV-898; PVP 200000321. Pedigree - FL302/IN76529A5-4. Common soft red winter wheat with semi-upright juvenile growth habit and short vernalization requirement. Medium height with recurved peduncle and an awned, middense, tapering head. Seed red, ovate with short brush and rounded cheek. Resistant to PLMQ, MCJL, TCDL, LBBQ, TCBQ, TLGG, and PNML races of leaf rust as determined by the USDA Cereal Disease Lab. Moderate to good resistance to powdery mildew and susceptible to Hessian Fly. Best adapted to the warm, humid regions of

the Gulf Coast.

The following were developed by Michael Jones, Ohio State University, Department of EEO Biology, 1735 Neil Avenue, Columbus, Ohio 43210-1293, United States. Received 08/07/2000.

PI 614734. *Zea mays* L. subsp. *mays*

Breeding. Inbred. Oh1VI. Pedigree - Derived from Virgin Island population PI 504148. Developed as a germplasm source for resistance to Maize Chlorotic Dwarf Virus (MCDV) transmitted by the leafhopper *Graminella nigrifrons*. The most resistant line tested in comparative tests with other MCDV resistant/tolerant lines. Mean ear lengths and plant heights at the base of the flag leaf 16.7 cm and 141.5 cm respectively. Plants have pink silks and mean days to mid-silk averaged 98 days. Ears average 16-18 rows of orange flinty seeds, have white cob and prone to ear molds. Plants highly susceptible to smut (*Ustilago maydis*).

The following were developed by Neil W. Widstrom, USDA, ARS, Insect Biology & Population Mgmt. Res. Lab, Coastal Plains Experiment Station, Tifton, Georgia 31793-0748, United States. Received 08/16/2000.

PI 614735. *Zea mays* L. subsp. *mays*

Breeding. Population. EPM6. Pedigree - Original population = bulk of equal numbers of seed from three crosses of PI 340856 with G12#in, GT114 and ZC2451(P)C3, and ZC2451(P) x GT114. Result of six cycles of S1 recurrent selection for high maysin. Source of antibiosis resistance to the corn earworm, because of high concentration (1.6-1.9% on a dry weight basis) of maysin in silks (8-9 times the amount necessary to have an impact on insect development). Ears with red cobs and purple kernels of flinty or popcorn type. Reaches pollen shed and silking at 52-55 days after planting. Maysin content highly heritable and the trait is easily transferred to elite lines.

PI 614736. *Zea mays* L. subsp. *mays*

Breeding. Population. SIM6. Pedigree - Original population = bulk of equal numbers of seed from chain crosses among seven single crosses involving the inbreds Ab618, Akd24, GT112, GT114, H30 and Tx501. Result of six cycles of S1 recurrent selection of high maysin. Source of antibiosis resistance to the corn earworm, because of high concentration (1.5-1.9% on a dry weight basis) of maysin in silks (8-9 times the amount necessary to have an impact on insect development). Yellow dent kernels with red cobs and reaches pollen shed and silking at 59-62 days after planting. Maysin content highly heritable and the trait is easily transferred to elite lines. Population is agronomically typical of southern inbreds.

The following were donated by S.C. Gupta, Int. Crops Res. Inst. for the Semi-Arid Tropics, Western and Central Africa Region, IITA Office, Sabo Bakin Zuwo Road, Kano, Kano, Nigeria. Received 09/07/2000.

PI 614737 QUAR. *Pennisetum glaucum* (L.) R. Br.

Cultivated. DMR 12.

PI 614738 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 15.

PI 614739 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 22.

PI 614740 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 36-1.

PI 614741 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 36-2.

PI 614742 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 36-4.

PI 614743 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 43.

PI 614744 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 65.

PI 614745 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 68.

PI 614746 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. DMR 72.

PI 614747 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA1.

PI 614748 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB1.

PI 614749 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA2.

PI 614750 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB2.

PI 614751 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA3.

PI 614752 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB3.

PI 614753 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA4.

PI 614754 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB4.

PI 614755 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA5.

PI 614756 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB5.

- PI 614757 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA6.
- PI 614758 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB5.
- PI 614759 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA7.
- PI 614760 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB7.
- PI 614761 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA8.
- PI 614762 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB8.
- PI 614763 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA9.
- PI 614764 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB9.
- PI 614765 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA10.
- PI 614766 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB10.
- PI 614767 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA11.
- PI 614768 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB11.
- PI 614769 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MA12.
- PI 614770 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. LCIC-MB12.
- PI 614771 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. Ex Boono.
- PI 614772 QUAR. *Pennisetum glaucum* (L.) R. Br.
Cultivated. Dam Gombe-3.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 09/20/2000.

- PI 614773 PVPO. *Glycine max* (L.) Merr.
Cultivar. "DPX 5514 RR". PVP 200000316.
- PI 614774 PVPO. *Glycine max* (L.) Merr.
Cultivar. "DPX 5877". PVP 200000317.

PI 614775 PVPO. *Glycine max* (L.) Merr.
Cultivar. "DPX 4910 S". PVP 200000318.

The following were developed by Pickseed West, Inc., P.O. Box 888, 33149 Highway 99E, Tangent, Oregon 97389, United States. Received 09/20/2000.

PI 614776 PVPO. *Poa pratensis* L.
Cultivar. "Langara". PVP 200000319.

PI 614777 PVPO. *Lolium perenne* L.
Cultivar. "FIESTA 3". PVP 200000320.

The following were developed by Dermot P. Coyne, University of Nebraska, Department of Horticulture, 386 Plant Sciences Hall, Lincoln, Nebraska 68583-0724, United States. Received 06/27/2000.

PI 614778. *Phaseolus vulgaris* L.
Cultivar. Pureline. "CHASE"; W6 22535. Pedigree - Parental lines/cultivars used in crosses were as follows: GN Nebr. #1 Sel. 27, Tacaragua, and Pinto UI 111. High yielding with a compact, moderately open plant canopy, and type III plant habit, with seed ranging from 30 to 40 g/100 seed, and medium maturity (86-94 days). Possesses multiple disease resistance to rust (*Uromyces appendiculatus*), and to the bacterial pathogens causing common blight (*Xanthomonas campestris*), halo blight (*Pseudomonas syringae* pv. *phaseolicola*), and brown spot (*Pseudomonas syringae* pv. *syringae*). Moderate avoidance to the white mold (*Sclerotinia sclerotiorum*) disease due to compact, open, and fairly porous plant canopy. Susceptible to BCMW. Seed maintains shape and good texture after canning.

PI 614779. *Phaseolus vulgaris* L.
Cultivar. Pureline. "WEIHING"; W6 22543. Pedigree - Parental lines/cultivars used in crosses as follows: GN Nebr. #1 Sel. 27, Tacaragua, Aurora, Pinto 12689 (CO), Pinto UI 111, GN 1140, GN Emerson, Bulgarian White, Pinto Ouray, A222 and A 51-1 (CIAT). High yielding with a moderate upright growth habit (type IIa), large bright white seed (29 to 40 g/100 seed), and medium maturity (90-95 days). Possesses multiple disease resistance to rust (*Uromyces appendiculatus*) (Ur-3 and 6 genes), BCMV (I gene), and to the bacterial pathogens causing common blight (*Xanthomonas campestris* pv. *phaseoli*), halo blight (*Pseudomonas syringae* pv. *phaseolicola*), and brown spot (*Pseudomonas syringae* pv. *syringae*). Moderate avoidance to the white mold (*Sclerotinia sclerotiorum*) disease due to upright and porous plant canopy.

The following were developed by Monsanto Company, United States. Received 09/20/2000.

PI 614780 PVPO. *Triticum aestivum* L.
Cultivar. "W91-233-21". PVP 200000324.

The following were developed by Abbott and Cobb, Inc., United States. Received 09/20/2000.

PI 614781 PVPO. Cucumis melo L.
Cultivar. "M98". PVP 200000325.

The following were developed by Sunbeam Extract Co., United States. Received 09/20/2000.

PI 614782 PVPO. Triticum aestivum L.
Cultivar. "BRAVO". PVP 200000326.

The following were developed by Pioneer Hi-Bred International, Inc., United States. Received 09/20/2000.

PI 614783 PVPO. Triticum aestivum L.
Cultivar. "25R37". PVP 200000327.

PI 614784 PVPO. Triticum aestivum L.
Cultivar. "25R49". PVP 200000328.

PI 614785 PVPO. Triticum aestivum L.
Cultivar. "25R44". PVP 200000329.

PI 614786 PVPO. Triticum aestivum L.
Cultivar. "25R75". PVP 200000330.

The following were developed by Cascade International Seed Co., Oregon, United States. Received 09/20/2000.

PI 614787 PVPO. Dactylis glomerata L.
Cultivar. "QUANTUM". PVP 200000331.

The following were developed by Delta and Pine Land Company, Scott, Mississippi, United States. Received 09/20/2000.

PI 614788 PVPO. Gossypium hirsutum L.
Cultivar. "DP 565". PVP 200000332.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 09/20/2000.

PI 614789 PVPO. Cynodon dactylon (L.) Pers.
Cultivar. "PST-R69C". PVP 200000333.

The following were developed by Shamrock Seed Co., Inc., California, United States. Received 09/20/2000.

PI 614790 PVPO. Lactuca sativa L.
Cultivar. "ANTHEM". PVP 200000334.

PI 614791 PVPO. Lactuca sativa L.
Cultivar. "ALLEGIANCE". PVP 200000335.

The following were developed by Pioneer Hi-Bred International, Inc., United States. Received 09/20/2000.

PI 614792 PVPO. Brassica napus L.
Cultivar. "44A53". PVP 200000337.

PI 614793 PVPO. Brassica napus L.
Cultivar. "45A54". PVP 200000338.

The following were donated by Peter Beetham, Plant Research Institute, Dept. of Agric. and Rural Affairs, Burnley Gardens, Swan Street, Burnley, Victoria 3121, Australia. Received 10/07/1991.

PI 614794. Ipomoea batatas (L.) Lam. var. batatas
Cultivar. "TAIUANI"; U6; BE-3654; Q 28718. Collected in Tonga.

Unknown source. Received 10/16/1995.

PI 614795. Ipomoea batatas (L.) Lam.
"Guangshu 7"; ZS 821; BE-7677; Q 35798. High yield.

Unknown source. Received 10/16/1995.

PI 614796. Ipomoea batatas (L.) Lam.
"Zhan 64-285"; ZS 861; BE-7677; Q 35800. High yield, tolerant to drought and excess fertility.

The following were donated by Oscar A. Hidalgo, International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 04/23/1996.

PI 614797. Ipomoea batatas (L.) Lam.
Cultivar. "TIS 70683"; CIP 440079; Q 36153.

Unknown source. Received 03/02/1998.

PI 614798. Ipomoea batatas (L.) Lam.
Cultivar. "WT-237"; Q 37465.

Unknown source. Received 03/02/1998.

PI 614799. Ipomoea batatas (L.) Lam.
Cultivar. "WT-314"; Q 37467.

The following were donated by International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 02/22/1999.

PI 614800. Ipomoea batatas (L.) Lam.
Cultivar. "KOKEI NO14"; CIP 440240; Q 39687.

PI 614801. *Ipomoea batatas* (L.) Lam.
Cultivar. "MUGANDE"; CIP 440163; Q 39688.

PI 614802. *Ipomoea batatas* (L.) Lam.
Cultivar. "TAINUNG NO64"; CIP 440189; Q 39689.

The following were collected by Douglas A. Johnson, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States. Received 09/21/2000.

PI 614803 QUAR. *Pennisetum flaccidum* Griseb.
Uncertain. 095. Collected 08/31/2000 in China. Sichuan, Maerkang.

PI 614804 QUAR. *Pennisetum flaccidum* Griseb.
Uncertain. 122. Collected 09/02/2000 in China. Sichuan, Luhuo.

The following were developed by Neil W. Widstrom, USDA, ARS, Insect Biology & Population Mgmt. Res. Lab, Coastal Plains Experiment Station, Tifton, Georgia 31793-0748, United States. Received 08/09/2000.

PI 614805. *Zea mays* L. subsp. *mays*
Breeding. "GT-HID9". Pedigree - Obtained from nine cycles of selection in a random mated Coker 77B, a southern hybrid. Twenty percent of eighty ear-rows were selected for recombination in each cycle. Excellent source of high in vitro dry matter digestibility (IVDMD) in southern adapted germplasm. Digestibility more than 1% higher than the original population. Result of nine cycles of restricted recurrent phenotypic selection for IVDMD and forage yield. Cobs white, kernels yellow, and plants varying in maturity from AES1000 to AES1200. Plant average 2m in height with ears approx. 1m high.

The following were developed by Steve St. Martin, Ohio State University, Department of Horticulture & Crop Science, 202 Kottman Hall, Columbus, Ohio 43210-1086, United States; R.L. Cooper, USDA-ARS, Ohio State University, 1680 Madison, Wooster, Ohio 44691-4096, United States; Ron Fioritto, Ohio State University, Ohio Agricultural Research & Development Center, Dept. of Horticulture & Crop Science, Wooster, Ohio 44691, United States; A.F. Schmitthenner, Ohio State University, Dept. of Plant Pathology, Columbus, Ohio 43210, United States; Anne E. Dorrance, Ohio State University, OARDC - Department of Plant Pathology, 1680 Madison Avenue, Wooster, Ohio 44691-4096, United States; T. Mendiola, USDA, ARS, Ohio Agric. Res. and Development Ctr. (OARDC), Dept. of Hort. and Crop Sci., Wooster, Ohio 44691, United States. Received 10/04/2000.

PI 614806. *Glycine max* (L.) Merr.
Cultivar. Pureline. "Troll". CV-430. Pedigree - Sprite 87 x HC80-1756. Determinate semidwarf (dt1e1) of mid-group IV maturity, developed specifically for high yield environments (>3300kg/ha) where lodging can be a yield limiting factor in taller indeterminate cultivars. Like all semidwarf cultivars, should be solid-seeded in 17- to 25-cm row spacing at a seeding rate of 750,000 seeds/ha of 90%+ germ. Flowers white, tawny pubescence, brown pods and dull yellow seed with black hilum. Above average seed size (16.5 gm/100 seeds) high in oil (21.6%).

Carries the Rps1-k gene for resistance to Phytophthora root rot.

PI 614807. Glycine max (L.) Merr.

Cultivar. Pureline. "Stout". CV-431. Pedigree - Sprite 87 x HC85-6577. Determinate semidwarf (dt1e1) of mid-group IV maturity, developed specifically for high yield environments (>3300kg/ha) where lodging can be a yield limiting factor in taller indeterminate cultivars. Like all semidwarf cultivars should be solid-seeded in 17- to 25-cm row spacing at a seeding rate of 750,000 seeds/ha of 90%+ germ. Flowers white, tawny pubescence, tan pods and dull yellow seed with black hilum. Above average seed size (15.1 gm/100 seeds) high in oil (21.2%). Carries the Rps1-a gene for resistance to Phytophthora root rot.

PI 614808. Glycine max (L.) Merr.

Cultivar. Pureline. "Strong". CV-432. Pedigree - Sprite 87 x HC85-6577. Determinate semidwarf (dt1e1) of mid-group IV maturity, developed specifically for high yield environments (>3300kg/ha) where lodging can be a yield limiting factor in taller indeterminate cultivars. Like all semidwarf cultivars, should be solid-seeded in 17- to 25-cm row spacing at a seeding rate of 750,000 seeds/ha of 90%+ germ. Flowers white, tawny pubescence, tan pods and dull yellow seed with black hilum. Above average seed size (15.1 gm/100 seeds) high in oil (21.2%). Carries the Rps1-a gene for resistance to Phytophthora root rot.

The following were donated by J. Ochs, Eureka Farm, Lacrosse, Washington, United States. Received 10/03/2000.

PI 614809. Vicia faba L.

Cultivar. "Herz Freya"; W6 22701.

PI 614810. Vicia faba L.

Cultivar. "Diana"; W6 22702.

The following were developed by Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States. Received 10/02/2000.

PI 614811. X Festulolium loliaceum (Huds.) P. Fourn.

Cultivar. Population. "SPRING GREEN". Pedigree - 50% Kemal, 18% Elmet, 15% Prior, and 17% Tandem. Increased freezing tolerance compared to its parent cultivars. In field trails at several locations, this has resulted in increased forage yield or persistence relative to each of its commercially available parents.

The following were donated by Rosemary Chng, International Plant Genetic Resources Institute, Seed Handling Unit, National University of Singapore, Dept. of Botany, Singapore. Received 06/01/1994.

PI 614812. Lagenaria breviflora (Benth.) Roberty

Wild. Moss 965; Ames 22078. Collected in Zambia.

The following were developed by David Hole, Utah State University, Plants, Soils, & Biometeorology Dept., UMC 4820 Agsci 334, Logan, Utah 84322-4820, United States. Received 10/06/2000.

PI 614813. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "GOLDEN SPIKE"; UT1944-158; UT944158. PVP 200100033. Pedigree - Arbon/Hansel/4/Hansel/3/Citr 14106/Columbia/2/McCall. Awned, brown-chaffed, hard white winter wheat. Erect, twisted flag leaf, an elliptical seed with mid-wide mid-deep seed crease and a fawn phenol reaction. Heading date similar to Hansel, is 15 cm shorter than Hansel, typically growing to a height of 78 cm in dryland crop-fallow environments. Exhibits excellent resistance to current prevalent races of dwarf bunt (*Tilletia controversa*) and common bunt (*Tilletia tritici*). Moderately resistant to snow molds. Susceptible to strip rust (*Puccinia graminis*) and is moderately susceptible to damage by Russian wheat aphid (*Diuraphis noxia*) and cereal leaf beetle (*Oulema melanopa*).

The following were developed by David D. Baltensperger, University of Nebraska, Panhandle Res. & Ext. Center, 4502 Avenue I, Scottsbluff, Nebraska 69361-4939, United States. Received 10/19/2000.

PI 614814. *Setaria italica* (L.) P. Beauv.

Genetic. N-Si-1. Pedigree - Selection from crosses of P.I. populations adapted to western Nebraska. Source of three pigment (plant color, anther color, and seed coat color) and three morphological (bristle development, earhead density and seed shape) genetic markers.

PI 614815. *Setaria italica* (L.) P. Beauv.

Genetic. N-Si-2. Pedigree - Selection from crosses of P.I. populations adapted to western Nebraska. Source of three pigment (plant color, anther color, and seed coat color) and three morphological (bristle development, earhead density and seed shape) genetic markers.

PI 614816. *Setaria italica* (L.) P. Beauv.

Genetic. N-Si-3. Pedigree - Selection from crosses of P.I. populations adapted to western Nebraska. Source of three pigment (plant color, anther color, and seed coat color) and three morphological (bristle development, earhead density and seed shape) genetic markers.

PI 614817. *Setaria italica* (L.) P. Beauv.

Genetic. N-Si-4. Pedigree - Selection from crosses of P.I. populations adapted to western Nebraska. Source of three pigment (plant color, anther color, and seed coat color) and three morphological (bristle development, earhead density and seed shape) genetic markers.

PI 614818. *Setaria italica* (L.) P. Beauv.

Genetic. N-Si-5. Pedigree - Selection from crosses of P.I. populations adapted to western Nebraska. Source of three pigment (plant color, anther color, and seed coat color) and three morphological (bristle development, earhead density and seed shape) genetic markers.

The following were developed by W. Paul Williams, USDA-ARS-CHPRRU, Box 9555, 344 Dorman Hall, Mississippi State, Mississippi 39762, United States. Received 10/04/2000.

PI 614819. *Zea mays* L. subsp. *mays*

Breeding. Inbred. Mp715. Pedigree - Developed from Tuxpan by selfing for eight generations while selecting for resistance to aflatoxin accumulation. Selected for reduced aflatoxin accumulation in the grain following inoculation of developing ears with an *Aspergillus flavus* spore suspension. Exhibits a high level of resistance to aflatoxin as a line and in crosses with other lines. Late-maturing with dark yellow kernels and white cobs.

PI 614820. *Zea mays* L. subsp. *mays*

Breeding. Inbred. Mp716. Pedigree - Developed by selfing within a cross between Mp708 and Mp78:518 (an unreleased line derived from Antigua Gpo. 2 and Republica Dominica Gpo. 1). Selected for resistance to leaf feeding by southwestern corn borer (*Diatraea grandiosella*) and fall armyworm (*Spodoptera frugiperda*). Plants were artificially infested during the whorl stage of growth with insect larvae and damage was visually rated 14 days later. Exhibits resistance to both insects. Plants approx. 2 meters tall. Kernels yellow. Cobs white. Maturity classification AES 1100.

The following were collected by Alan W. Meerow, USDA, ARS, National Germplasm Repository, 13601 Old Cutler Road, Miami, Florida 33158, United States. Received 04/21/1999.

PI 614821. *Dietes iridioides* (L.) Sweet ex Klatt

Cultivar. "Amatola"; MIA 35549. Collected 04/21/1999 in South Africa.

The following were developed by Lynn W. Gallagher, University of California, Dept of Agronomy & Range Science, One Shields Ave., Davis, California 95616, United States. Received 11/06/2000.

PI 614822. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "UC 933"; UCD 92-10585; NSGC 8676. Pedigree - Smal/Sunbar 401/3/Gus/Kombyne/Smal ; Smal = Steptoe/2*Diamant/3/Minn Dwarf 64.98-8/Briggs/4/Asse. Six-row spring feed barley. Awned. Short-statured with good resistance to lodging. Moderately resistant to BYDV, stripe rust, leaf rust, scald, and net blotch.

The following were donated by B. V. Ford-Lloyd, The University of Birmingham, School of Biological Sciences, P.O. Box 363, Birmingham, England B15 2TT, United Kingdom; Devon L. Doney, USDA, ARS, Northern Crops Research Laboratory, P.O. Box 5677, 331 Walster Hall, Fargo, North Dakota 58105, United States. Received 04/05/1988.

PI 614823. *Beta vulgaris* L.

Uncertain. B186; IDBBNR 9507; Ames 8290.

The following were donated by N.I. Vavilov All-Russian Scientific Research, Institute of Plant Genetic Resources, 44 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation. Received 07/20/1992.

PI 614824. *Beta vulgaris* L.

Uncertain. WIR 1701; IDBBNR 9562; Ames 19163; Jaltuskovskaja 116.

Collected in Russian Federation.

The following were donated by J. C. Theurer, Sugarbeet Investigations, Crops Res. Lab., Utah State Univ., Logan, Utah 84322, United States. Received 1983.

PI 614825. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4457; NSL 183342; AT3984A. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 614826. *Beta vulgaris* L.

Cultivated. IDBBNR 5002; NSL 183345; AT3987A.

PI 614827. *Beta vulgaris* L. subsp. *vulgaris*

Cultivated. IDBBNR 4463; NSL 183351; AT3993-4. Crops Res. Lab, UT St. Univ., Logan, UT 84322 No further background information available.

PI 614828. *Beta vulgaris* L.

Cultivated. IDBBNR 5004; NSL 183358; AT3994-4.

PI 614829. *Beta vulgaris* L.

Cultivated. IDBBNR 5023; NSL 183390; 552.

The following were developed by Brian T. Scully, University of Florida, Everglades Experiment Center, P.O. Box 8003, Belle Glade, Florida 33430, United States. Received 10/27/2000.

PI 614830. *Zea mays* L. subsp. *mays*

Breeding. Population. NE-EDR sh2. Pedigree - Backcross conversion of a sul population known as NE-EDR sul. The NE-EDR sul recurrent parent resulted from 10 generations of selection from a composite of 9 sul North American hybrids and 13 lines of Hawaiian and/or tropical origin. The backcross scheme proceeded through BC5 and was followed by 3 isolated open-pollinations. Developed from exotic disease resistant (EDR) source as part of a cooperative research program involving FL, HI, IL, NY and WI under the auspice of Regional Hatch Project NE-124. Yellow endosperm sh2 germplasm with variability in maturity and plant morphology. Resistance to common rust (*Puccinia sorghii*) and northern corn leaf blight (*Exserohilum turcium*) derived from tropical materials with polygenic resistance.

The following were developed by Theodore C. Helms, North Dakota State University, Crop & Weed Science Department, 333 Walster Hall, Fargo, North Dakota 58105-5051, United States. Received 10/05/2000.

PI 614831. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Barnes"; ND95-931. PVP 200100032. Pedigree - (Maple Amber X Evans-1-1-10) X Pioneer 9061. Has the Rps6 allele which confers resistance to phytophthora root rot. Flower color purple, gray pubescence, brown pod color, dull yellow seed coat, buff hila, and high peroxidase seed coat activity. Maturity 0.3 and high-yielding. Moderately resistant to iron chlorosis on high pH soils.

The following were developed by George Graef, University of Nebraska,

Department of Agronomy, 319 Keim Hall, East Campus, Lincoln, Nebraska
68583-0915, United States. Received 10/05/2000.

PI 614832. *Glycine max* (L.) Merr.

Cultivar. Pureline. "NE3400". Pedigree - F6-derived line from the MSBP1 population, an intermated population using ms2 male sterility to facilitate intermating. Late Maturity Group III (relative maturity 3.4) with indeterminate growth habit, purple flowers, gray pubescence, and tan pods at maturity. Seeds yellow with dull seed coat luster and a buff hilum. Seed size averages 165 mg seed-1 with 418 g kg-1 protein and 205 g kg-1 oil content. Average plant height 84 cm.

PI 614833. *Glycine max* (L.) Merr.

Cultivar. Pureline. "NE1900". Pedigree - F6-derived line from the MSBP1 population, an intermated population using ms2 male sterility to facilitate intermating. Late maturity group I (relative maturity 1.9) with indeterminate growth habit, white flowers, gray pubescence, and brown pods at maturity. Seeds yellow with dull seed coat luster and a yellow hilum. Seed size averages 163 mg seed-1 with 406 g kg-1 protein and 202 g kg-1 oil content. Average plant height 86 cm.

The following were developed by Rulon S. Albrechtsen, Utah State University, Plant Science Department, Logan, Utah 84322-4820, United States. Received 10/30/2000.

PI 614834. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "RICK"; UT77W1054-1774. CV-904. Pedigree - Bannock/7/Columbia/6/Delmar//5/Hussar/Turkey Red//Ridit/3/Oro/Ridit/4/Norin10/Brevor. White-glumed, white-straw, medium maturing, semi-dwarf hard red spring wheat. Spike awned, oblong, middense, shatter resistant, and inclined at maturity. Glumes white, glabrous, midlong, midwide, with oblique to elevated shoulders. Beaks midwide, acute, and medium length. Kernels red, midlong, hard and ovate to elliptical, mid-sized germ and a shallow crease, with somewhat angular cheeks, brush is mid-sized and short. Recommended for production under irrigation and on dryland where annual precipitation 400 mm or more. In Utah irrigated tests, grain yield averaged 4087 kg ha-1. Headed 180 d after January 1, 86 cm tall, with 7% lodging. 772 kg m-3 test weight, and 13.0% protein. Milling and baking properties satisfactory.

PI 614835. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "WYNNE"; UT74S25-776; UT25776. CV-905. Pedigree - Roque 66 / Fremont. Maturity medium, semidwarf hard red spring wheat with white straw. Spike awned, oblong, middense, shatter, resistant and somewhat nodding at maturity. Glumes white, glabrous, long, midwide, with oblique to square shoulders. Beaks midwide, acute, and medium length. Kernels red, medium-short, hard and ovate, mid-sized germ and a shallow crease, with rounded cheeks, brush is mid-to-large and short. Recommended for production under irrigation or where annual precipitation is 500 mm or more. In Utah irrigated tests, grain yield averaged 4389 kg ha-1. Headed 174 d after January 1, 82 cm tall, with 3% lodging, 762 kg m-3 test weight, and 13.4% protein. Milling and baking properties satisfactory.

The following were developed by Edward J. Souza, University of Idaho,

Aberdeen Research & Extension Center, P.O. Box AA, Aberdeen, Idaho 83210, United States. Received 10/31/2000.

PI 614836. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. A90415W-E-Or-13. Pedigree - Manning*2/PI 94460. Bronze chaffed hard white winter wheat adapted to the intermountain west of the U.S. Resistant to the Russian wheat aphid, stripe rust, and dwarf bunt. Good milling and baking quality and excellent alkali noodle quality.

PI 614837. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. A90416W-21. Pedigree - Manning*2/PI 48650. Bronze chaffed hard red winter wheat adapted to the intermountain west of the U.S. Resistant to the Russian wheat aphid, stripe rust, and dwarf bunt. Good milling quality and bread baking characteristics.

PI 614838. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. A92051W-D-2. Pedigree - Manning *3/PI 47545. Bronze chaff hard white wheat adapted to rainfed production of the intermountain west of the U.S. Resistant to the Russian wheat aphid, stripe rust, and dwarf bunt. Good milling and baking quality and excellent alkali noodle quality.

PI 614839. *Triticum aestivum* L. subsp. *aestivum*

Breeding. Pureline. "JUBILEE". Pedigree - ID0184/ID0159//Tonichi sib/2*Sterling. Soft white spring wheat. Semi-dwarf with white chaff and awned head. Resistant to stripe rust races common in the Pacific Northwest of the U.S. Adapted to irrigated production. High flour yield and above average pastry quality.

PI 614840. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "LOLO"; ID0533. Pedigree - Oasis/ID0377. Hard white spring wheat. White chaffed, awned plant with semi-dwarf stature. Resistant to Pacific Northwest races of stripe rust. Susceptible to Hessian fly and Russian wheat aphid. Moderate gluten strength and low polyphenyl oxidase activity within aleurone.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 11/17/2000.

PI 614841 PVPO. *Triticum aestivum* L.

Cultivar. "26R38". PVP 200000339.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 11/17/2000.

PI 614842 PVPO. *Lactuca sativa* L.

Cultivar. "ICON". PVP 200000340.

PI 614843 PVPO. *Lactuca sativa* L.

Cultivar. "ENTERPRISE". PVP 200000341.

The following were developed by Texas Agricultural Experiment Station, Texas, United States. Received 11/17/2000.

PI 614844 PVPO. *Lolium multiflorum* Lam.
Cultivar. "TURF 92". PVP 200000342.

The following were developed by Peter Franck, Germany. Received 11/17/2000.

PI 614845 PVPO. *Triticum aestivum* L.
Cultivar. "PATRIOT". PVP 200000343. Winter wheat.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 11/17/2000.

PI 614846 PVPO. *Lactuca sativa* L.
Cultivar. "SUN FIRE". PVP 200000344.

The following were developed by Cascade International Seed Company, Jonathan Green & Sons, Inc., United States. Received 11/17/2000.

PI 614847 PVPO. *Dactylis glomerata* L.
Cultivar. "MAMMOTH". PVP 200000345.

The following were developed by Novartis Seeds, Inc., United States. Received 11/17/2000.

PI 614848 PVPO. *Citrullus lanatus* (Thunb.) Matsum. & Nakai
Cultivar. "90-4228". PVP 200000346.

The following were developed by Seed Research of Oregon, Inc., Corvallis, Oregon, United States. Received 11/17/2000.

PI 614849 PVPO. *Agrostis stolonifera* L.
Cultivar. "BRIGHTON". PVP 200000347.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901, United States. Received 11/17/2000.

PI 614850. *Festuca longifolia* Thuill.
Cultivar. Population. "OXFORD"; LTF-HF-95; Lot Z1-9-1230. PVP 200000349.
Pedigree - Selected from old turfs of U.S. and the European cultivars Biljart, Scaldis, and Waldina were evaluated, intercrossed, and subjected to many cycles of phenotypic and genotypic selection for improved turf performance, seed yield, stress tolerance, and pest resistance. Hard low-growing, turf-type hard fescue with a medium-dark green color, fine leaves, and the ability to produce an attractive, persistent, dense turf under low maintenance. Performed well in the latest NTEP tests.

The following were developed by Lebanon Seaboard Corporation, United States. Received 11/17/2000.

PI 614851 PVPO. *Poa pratensis* L.
Cultivar. "CHAMPAGNE". PVP 200000350.

The following were developed by New Mexico State University Agricultural Experiment Station, Las Cruces, New Mexico 88003, United States. Received 11/17/2000.

PI 614852 PVPO. *Allium cepa* L.
Cultivar. "NuMex Snowball". PVP 200000351.

PI 614853 PVPO. *Allium cepa* L.
Cultivar. "NuMex Chaco". PVP 200000352.

The following were developed by The Regents of the University of California, 1111 Franklin Street, Oakland, California 94607, United States. Received 11/17/2000.

PI 614854 PVPO. *Medicago sativa* L.
Cultivar. "UC-Impalo-WF". PVP 200000353.

The following were developed by Novartis Seeds, Inc., United States. Received 11/17/2000.

PI 614855 PVPO. *Cucurbita pepo* L.
Cultivar. "90-3627". PVP 200000354.

The following were developed by The J.C. Robinson Seed Company, Waterloo, Nebraska, United States. Received 11/17/2000.

PI 614856 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "M42618". PVP 200100001.

PI 614857 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "NR401". PVP 200100002.

The following were developed by Jenks Seed Connection, Inc., United States. Received 11/17/2000.

PI 614858 PVPO. *Lolium perenne* L.
Cultivar. "ELFKIN". PVP 200100003.

The following were developed by The Regents of the University of Arizona, Tucson, Arkansas, United States. Received 11/17/2000.

PI 614859 PVPO. *Gossypium barbadense* L.
Cultivar. "DP 744 Pima". PVP 200100004.

The following were developed by Florida Vegetable Exchange, Florida, United States. Received 11/17/2000.

PI 614860 PVPO. *Lactuca sativa* L.
Cultivar. "SNAPPY". PVP 200100005.

PI 614861 PVPO. *Lactuca sativa* L.
Cultivar. "TERRAPIN". PVP 200100006.

The following were developed by The J.C. Robinson Seed Company, Waterloo, Nebraska, United States. Received 11/17/2000.

PI 614862 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "8WL0009Bt". PVP 200100012.

PI 614863 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "8WL0021Bt". PVP 200100013.

PI 614864 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "JCR503". PVP 200100014.

The following were developed by Abbott & Cobb, Inc., United States; Bryant J. Long, United States. Received 11/17/2000.

PI 614865 PVPO. *Zea mays* L. subsp. *mays*
Cultivar. "ACX 812". PVP 200100015.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 11/17/2000.

PI 614866 PVPO. *Poa pratensis* L.
Cultivar. "NORTH STAR". PVP 200100016.

The following were developed by Progeny Advanced Genetics, Inc., Salinas, California, United States. Received 11/17/2000.

PI 614867 PVPO. *Lactuca sativa* L.
Cultivar. "Sumida 626-S". PVP 200100017.

The following were developed by Buck Semillas S.A., Buenos Aires, Argentina. Received 11/17/2000.

PI 614868 PVPO. *Triticum aestivum* L.
Cultivar. "CAUDILLO". PVP 200100018.

The following were developed by Seminis Vegetable Seeds, Inc., Gard, France. Received 11/17/2000.

PI 614869 PVPO. *Lactuca sativa* L.
Cultivar. "GATOR". PVP 200100019.

The following were developed by Pioneer Hi-Bred International, Inc, United

States. Received 11/17/2000.

PI 614870 PVPO. Zea mays L. subsp. mays
Cultivar. "PH26N". PVP 200100020.

PI 614871 PVPO. Zea mays L. subsp. mays
Cultivar. "PH3AV". PVP 200100022.

PI 614872 PVPO. Zea mays L. subsp. mays
Cultivar. "PH36E". PVP 200100023.

The following were developed by Crites-Moscow Growers, Inc., 212 8th, P.O. Box 8912, Moscow, Idaho 83843, United States. Received 11/17/2000.

PI 614873 PVPO. Pisum sativum L.
Cultivar. "TYNE". PVP 200100024.

The following were developed by Agrigenetics, Inc., Seed Research Division, United States. Received 11/17/2000.

PI 614874 PVPO. Zea mays L. subsp. mays
Cultivar. "7SH382". PVP 200100025.

PI 614875 PVPO. Zea mays L. subsp. mays
Cultivar. "6RC172". PVP 200100026.

The following were developed by Texas Agricultural Experiment Station, Texas, United States. Received 11/17/2000.

PI 614876 PVPO. Triticum aestivum L.
Cultivar. "TAM 400". PVP 200100027.

The following were developed by Marlin Edwards, Green Giant Co., 201 N. 4th Street, Lesueur, Minnesota 56058, United States. Received 11/17/2000.

PI 614877 PVPO. Capsicum annuum L.
Cultivar. "EXPLOSIVE BLAST". PVP 200100028.

PI 614878 PVPO. Capsicum annuum L.
Cultivar. "EXPLOSIVE EMBER". PVP 200100029.

PI 614879 PVPO. Capsicum annuum L.
Cultivar. "EXPLOSIVE IGNITE". PVP 200100030.

The following were collected by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 10/1979.

PI 614880. Chenopodium quinoa Willd.
Cultivated. QQ065; NSL 106393. Collected 1978 in Los Lagos, Chile.
Latitude 42 deg. 30' S. Longitude 73 deg. 55' 0'' W. Chiloe. The stems have pink bases, the petioles are faintly red, the blades are green, the

flowers are pink. The blade edges are very dentate. As observed by David Brenner in a greenhouse in Ames, Iowa in 1996.

PI 614881. *Chenopodium quinoa* Willd.

Landrace. QQ95; NSL 106394. Collected 1978 in Jujuy, Argentina. Latitude 23 deg. 13' S. Longitude 65 deg. 20' W. Humahuaca. The stems have pink bases and green stripes. There are many branches all along the stems, with narrow branch angles so that the stems are erect. The petioles are faintly red, the flowers are green or red. There are many leaves within the inflorescence. Observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614882. *Chenopodium quinoa* Willd.

Landrace. QQ67; NSL 106395. Collected 1978 in La Araucania, Chile. Latitude 38 deg. 45' S. Longitude 72 deg. 36' W. Temuco. The bases of the stems are pink, the petioles are green, the flowers are yellow-white. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614883. *Chenopodium quinoa* Willd.

Landrace. QQ101; NSL 106396. Collected 1978 in Jujuy, Argentina. Latitude 22 deg. 6' S. Longitude 65 deg. 37' W. Yavi. The stems have either pink bases with green stripes, or they are red striped. The petioles are either green or weakly red. The flowers are pink. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614884. *Chenopodium quinoa* Willd.

Landrace. QQ87; NSL 106397. Collected 1978 in Jujuy, Argentina. Latitude 23 deg. 25' S. Longitude 66 deg. 29' W. Susques. The stems have pink bases and green stripes. The petioles and flowers are green. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614885. *Chenopodium quinoa* Willd.

Landrace. QQ57; NSL 106398. Collected 1978 in Bio-Bio, Chile. Latitude 36 deg. 36' S. Longitude 72 deg. 7' W. Chillan, (Faro Ranch). The stems have red bases with green stripes. The petioles are green. The flowers are pink. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614886. *Chenopodium quinoa* Willd.

Landrace. QQ74; NSL 106399. Collected 1978 in Maule, Chile. Latitude 35 deg. 26' 0'' S. Longitude 71 deg. 40' 0'' W. Talco. The stems have pink bases, further up they are orange with green stripes. The petioles and flowers are orange. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614887. *Chenopodium quinoa* Willd.

Landrace. QQ63; NSL 106400. Collected 1978 in Bio-Bio, Chile. Latitude 37 deg. 48' S. Longitude 73 deg. 24' W. Canete. The stems have green stripes, the petioles and blades are green. The flowers are green with faint pink coloring. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614888. *Chenopodium quinoa* Willd.

Landrace. QQ61; NSL 106401. Collected 1978 in Bio-Bio, Chile. Latitude 37 deg. 48' S. Longitude 73 deg. 24' W. Canete. The stems are red with green stripes visible through the red. The petioles have faint red, the

blades are green. The flowers are red. The red parts are an attractive dark purple shade. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

PI 614889. *Chenopodium quinoa* Willd.

Landrace. QQ59; NSL 106402. Collected 1978 in Bio-Bio, Chile. Latitude 37 deg. 48' S. Longitude 73 deg. 24' W. Canete. The stems are orange with green stripes. The petioles and blades are green. The flowers are orange. As observed by David Brenner in a green house planting, 1996, Ames, Iowa.

The following were developed by Richard C. Johnson, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 11/28/2000.

PI 614890. *Festuca arundinacea* Schreb.

Cultivated. Kentucky 31 Delta High; W6 22708. Collected 06/28/1990 in Kentucky, United States. Latitude 38 deg. 3' N. Longitude 84 deg. 30' W. Elevation 292 m. Derived from 2 cycles of selection from PI 561430 (Kentucky 31 Endophyte free). Selections were made for high carbon isotope discrimination as described in Johnson, R.C., and Li Yangyang. 1999. Water Relations, forage production, and photosynthesis in tall fescue divergently selected for carbon isotope discrimination. Crop Sci. 39:1663-1670.

PI 614891. *Festuca arundinacea* Schreb.

Cultivated. Kentucky 31 Delta Low; W6 22709. Collected 06/28/1990 in Kentucky, United States. Latitude 38 deg. 3' N. Longitude 84 deg. 30' W. Elevation 292 m. Derived from 2 cycles of selection from PI 561430 (Kentucky 31 Endophyte free). Selections were made for Low carbon isotope discrimination as described in Johnson, R.C., and Li Yangyang. 1999. Water Relations, forage production, and photosynthesis in tall fescue divergently selected for carbon isotope discrimination. Crop Sci. 39:1663-1670.

The following were developed by D.J. Vanderhave, Postbus 1, Kapelle, Netherlands. Received 1978.

PI 614892. *Festuca longifolia* Thuill.

Cultivar. "SCALDIS"; NSL 96955. PVP 7500014.

The following were developed by C. Reed Funk, Rutgers University, Cook College, Plant Sciences Department, New Brunswick, New Jersey 08901, United States; A.M. Radko, United States Golf Association, Green Section, Highland Park, New Jersey 08904, United States; E.W. Brown; Richard H. Hurley, Lofts Seed, Inc., 347 Elizabeth Avenue, Suite 101, Somerset, New Jersey 08873, United States. Donated by B. Curtis, Lofts Pedigreed Seed Co., Bound Brook, New Jersey, United States. Received 1979.

PI 614893. *Poa pratensis* L.

Cultivar. "RAM I"; NSL 101861. CV-16; PVP 7800069. Pedigree - Selected from a single, highly apomictic plant found on a putting green of the Webhannet Gold Club, Kennebunk Beach, Maine. Moderately low-growing, turf-type with medium texture and rich, dark green color. Good tolerance

of close mowing, good spring greenup and resistance to annual bluegrass invasion. Moderately resistant to leaf spot and crown rot disease, and stem rust. Good resistance to stripe smut and most races of powdery mildew. Moderately susceptible to leaf rust. Above average tolerance to herbicide tricalcium arsenate.

The following were developed by Craig A. Abel, USDA, ARS, Southern Insect Management Research Unit, 141 Experiment Station Road, Stoneville, Mississippi 38776, United States. Received 12/12/2000.

PI 614894. *Glycine max* (L.) Merr.

Breeding. Pureline. DT98-2448. Pedigree - D88-5684 x DP3589. Mid-maturity group V. Less defoliation from the soybean looper (*Pseudoplusia includens*). Per cent defoliation for leaf feeding damage by velvetbean caterpillar (*Anticarsia gemmatalis* (53%) similar to resistance source PI 229358 (50%) and much less than that of susceptible Bedford (93%) and TracyM (93%). Seed yield on heavy clay soil at Stoneville, MS, 3440.6 kg/ha which was significantly less than that of UARK-5798 (3830.4) and P9594 (3978.2).

The following were collected by Manuel Cardoso Alves, Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal; Jaime Ventura Forte, Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal. Donated by Jardim Botânico da Universidade de Coimbra, Arcos do Jardim, Coimbra, Coimbra 3049, Portugal. Received 06/02/1998.

PI 614895. *Chenopodium murale* L.

Wild. Index Seminum 290; Ames 24678. Collected 07/28/1997 in Santarem, Portugal. Latitude 39 deg. 30' 0'' N. Longitude 8 deg. 42' 0'' W. Covao do Feto, in the vicinity of Serra de Santo Antonio. Stems with red stripes, farinose on the undersides of the blades, mildly aromatic, blades toothed. The sepals are keeled. As observed by David Brenner in a greenhouse in Ames, Iowa 2000.

PI 614896. *Chenopodium vulvaria* L.

Wild. Index Seminum 293; Ames 24679. Collected 07/28/1997 in Santarem, Portugal. Latitude 39 deg. 30' 0'' N. Longitude 8 deg. 42' 0'' W. Covao do Feto, in the vicinity of Serra de Santo Antonio. The foliage is very bad smelling, like rotten fish. As observed by David Brenner in a greenhouse in Ames, Iowa 2000.

The following were developed by M. Rahman, Bangladesh Agr. Res. Inst., Ishurdi, Bangladesh; M.A. Afzal, Bangladesh Agricultural Research Institute, Pulses Research Centre, Joydebpur, Gazipur, Bangladesh; Md. Abu Bakr, Bangladesh Agricultural Research Institute, Pulses Research Centre, Gazipur, Bangladesh; M. Motior Rahman, Bangladesh Agricultural Research Institute, Pulses Research Center, Gazipur, Bangladesh. Received 03/09/2000.

PI 614897. *Vigna radiata* (L.) R. Wilczek

Cultivar. Pureline. BARIMUNG-3. CV-182. Pedigree - Sonamung (Bangladeshi local cultivar) x BARI Mung-2 (released variety from PRC, BARI in 1987). Photo insensitive and high-yielding with low disease incidence. Tolerance to YMV disease. Erect and trifoliate. Leaves moderately

pubescent and terminal leaf ovate. Petiole length intermediate and greenish-purple. Racemes situated above the canopy. Corolla of the flower yellow with a light green calyx. Mature plants attain a height of 50-55 cm. Flowering occurs in 30-34 days, and physiological maturity reached 60-65 days after emergence, which is 10 days earlier than the local cultivar. Pods number 9-11. After maturity pods turn black. Seeds drum-shaped and greenish brown. Seed weight 29 g/1000 seed. Average yield 1.3 t/ha, outyielding the local check by 25%.

The following were developed by M.M. Rahman, Pulses Research Center, BARI, Regional Agric. Res. Sta., Ishurdi, Pabna, Bangladesh; M. Rahman, Bangladesh Agr. Res. Inst., Ishurdi, Bangladesh; A. Sarker, Int. Center for Agricultural Research in the Dry Areas, P.O. Box 5466, Aleppo, Syria; M.A. Afzal, Bangladesh Agricultural Research Institute, Pulses Research Centre, Joydebpur, Gazipur, Bangladesh; Md. Abu Bakr, Bangladesh Agricultural Research Institute, Pulses Research Centre, Gazipur, Bangladesh; M. Motior Rahman, Bangladesh Agricultural Research Institute, Pulses Research Center, Gazipur, Bangladesh. Received 03/09/2000.

PI 614898. *Vigna radiata* (L.) R. Wilczek

Cultivar. Pureline. BARIMUNG-4. CV-181. Pedigree - Sonamung (local variety) x Barimung-2 (released variety from PRC, BARI in 1984). Grows erect to height of 52-57 cm. Flowers 34-36 days after emergence and reaches physiological maturity within 60-65 days after emergence. Leaves trifoliolate, alternate, and green. Leaf pubescence present. Petiole length short and purple green. Corolla yellowish green. Raceme position above the canopy. Mature pods tan. Seeds drum-shaped and light green. 100-seed weight of about 2.9 g. Resistant to mungbean yellow mosaic virus (MYMV) and cercospora leaf spot (CLS). During initial evaluation, the families or lines were screened for combined resistance using the spreader - row technique. Highly susceptible lines for YMV (IMN86) and CLS (M9) were planted after every five families or lines to create artificial diseases pressure. Rated 0 on 0 to 5 rating scale for both diseases throughout evaluation across location.

The following were developed by Ming H. Yu, USDA, ARS, U.S. Agricultural Research Station, 1636 East Alisal St., Salinas, California 93905, United States. Received 11/27/2000.

PI 614899. *Beta vulgaris* subsp. *maritima* (L.) Arcang.

Breeding. Population. M1-2. Pedigree - Produced from inter-pollination of the selected Mi-1 (PI 593237) beet plants that carried a high level of resistance to root-knot nematode in isolation chambers. Multigerm, partially self-compatible, varies in bolting habit, plant type, and pigmentation. Roots mostly in fanged formation. Highly resistant to, if not homozygous, root-knot nematode (*Meloidogyne* spp.). Resistant to multiple species of nematode, including *M. incognita*, *M. javanica*, *M. arenaria*, *M. hapla*, *M. chitwoodi*, and *M. fallax*. Useful for root-knot nematode resistance research in sugarbeet.

The following were developed by Steven D. Linscombe, Louisiana State University, LSU Rice Experiment Station, 1373 Caffey Road, Rayne, Louisiana 70578, United States. Received 11/17/2000.

PI 614900. *Oryza sativa* L.

Cultivar. Pureline. "EARL"; LA 9602074; NSGC 8677. Pedigree - Mercury/Rico 1//Bengal. Early, high yielding, conventional height medium-grain rice variety. More susceptible to lodging than Bengal and somewhat more resistant than Lafitte. Displays adaptation throughout the southern United States rice producing regions.

The following were collected by Sarah Ward, Colorado State University, Department of Soil and Crop Sciences, Fort Collins, Colorado 80523, United States. Received 03/01/1994.

PI 614901. *Chenopodium quinoa* Willd.

Landrace. CQ 101; Ames 21909. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3870 m. Near Kahuasi. Field. Original plant green with brown seeds. S1 progeny segregate for seed color (brown, yellow, white). High saponin.

PI 614902. *Chenopodium quinoa* Willd.

Landrace. CQ 102; Ames 21910. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3870 m. Near Kahuasi. Field. Pinkish plant with white seeds. High saponin.

PI 614903. *Chenopodium quinoa* Willd.

Landrace. CQ 103; Ames 21911. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3870 m. Near Kahuasi. Field. Red plant with white seeds. High saponin.

PI 614904. *Chenopodium quinoa* Willd.

Landrace. CQ 104; Ames 21912. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3870 m. Near Kahuasi. Field. Large, branched green plant with white seeds. High saponin.

PI 614905. *Chenopodium quinoa* Willd.

Landrace. CQ 105; Ames 21913. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Weedy branching plant with black seeds. Possible hybrid wi.

PI 614906. *Chenopodium quinoa* Willd.

Landrace. CQ 106; Ames 21914. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Pink plant with white seeds. High saponin.

PI 614907. *Chenopodium quinoa* Willd.

Landrace. CQ 107; Ames 21915. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Green branching plant with white seeds. High saponin.

PI 614908. *Chenopodium quinoa* Willd.

Landrace. CQ 108; Ames 21916. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Slightly pinkish plant with white seeds. High saponin.

PI 614909. *Chenopodium quinoa* Willd.

Landrace. CQ 109; Ames 21917. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Green plant, white seeds. High saponin.

PI 614910. *Chenopodium quinoa* Willd.

Landrace. CQ 110; Ames 21918. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Red plant, white seeds. High saponin.

PI 614911. *Chenopodium quinoa* Willd.

Landrace. CQ 111; Ames 21919. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Green plant, white seeds. High saponin.

PI 614912. *Chenopodium quinoa* Willd.

Landrace. CQ 112; Ames 21920. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3890 m. Near Lekepalta. Field. Green plant with crimson sepals, white seeds. Medium saponin.

PI 614913. *Chenopodium quinoa* Willd.

Landrace. CQ 113; Ames 21921. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Purple plant, white seeds. High saponin.

PI 614914. *Chenopodium quinoa* Willd.

Landrace. CQ 114; Ames 21922. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Green plant, white seeds. High saponin.

PI 614915. *Chenopodium quinoa* Willd.

Landrace. CQ 115; Ames 21923. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Light purple plant with white seeds, pink sepals. High saponin.

PI 614916. *Chenopodium quinoa* Willd.

Landrace. CQ 116; Ames 21924. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Very large branching plant with white seeds, pink sepals. High saponin.

PI 614917. *Chenopodium quinoa* Willd.

Landrace. CQ 117; Ames 21925. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Green plant with reddish stem, white seeds. High saponin.

PI 614918. *Chenopodium quinoa* Willd.

Landrace. CQ 118; Ames 21926. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Dark red plant, white seeds with pinkish tinge. High saponin.

PI 614919. *Chenopodium quinoa* Willd.

Landrace. CQ 119; Ames 21927. Collected 03/29/1992 in Oruro, Bolivia.

Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Branched green plant, white seeds. High saponin.

PI 614920. *Chenopodium quinoa* Willd.

Landrace. CQ 120; Ames 21928. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3780 m. Unidentified location south of Oruro. Field. Red plant, white seeds. High saponin.

PI 614921. *Chenopodium quinoa* Willd.

Uncertain. CQ 121; Ames 21929. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Unnamed selection, white seeds. Low saponin.

PI 614922. *Chenopodium quinoa* Willd.

Cultivar. CQ 122; "Sayana"; Ames 21930. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Red plant, white seeds. Low saponin.

PI 614923. *Chenopodium quinoa* Willd.

Cultivar. CQ 123; "Jamiri"; Ames 21931. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Green plant, white seeds. Low saponin.

PI 614924. *Chenopodium quinoa* Willd.

Uncertain. CQ 124; Ames 21932. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Unnamed mass selection. Green plant, white seeds. Low saponin.

PI 614925. *Chenopodium quinoa* Willd.

Uncertain. CQ 125; Ames 21933. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Unnamed mass selection. Green plant, red seeds. Low saponin.

PI 614926. *Chenopodium quinoa* Willd.

Uncertain. CQ 126; Ames 21934. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Off-type in mass selection. Green plant, brown seeds. High saponin.

PI 614927. *Chenopodium quinoa* Willd.

Landrace. CQ 127; Ames 21935. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Land-race selection. Green plant, yellow seeds (progeny segregate for yellow and white seeds). High saponin.

PI 614928. *Chenopodium quinoa* Willd.

Landrace. CQ 128; Ames 21936. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Land-race collection. Light red plant, white seeds. Low saponin.

PI 614929. *Chenopodium quinoa* Willd.

Landrace. CQ 129; Ames 21937. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Land-race collection. Green plant, white seeds. Medium saponin.

PI 614930. *Chenopodium quinoa* Willd.

Landrace. CQ 130; Ames 21938. Collected 03/29/1992 in La Paz, Bolivia. Latitude 17 deg. 14' 0'' S. Longitude 67 deg. 55' 0'' W. Elevation 3700 m. Instituto Boliviano de Tecnologia, Patacamaya. Research station. Land-race collection. Green plant, red seeds. Low saponin.

PI 614931. *Chenopodium quinoa* Willd.

Landrace. CQ 131; Ames 21939. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3200 m. Unidentified location near Oruro. Farmer's field. Green plant, white seeds. High saponin.

PI 614932. *Chenopodium quinoa* Willd.

Landrace. CQ 132; Ames 21940. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3200 m. Unidentified location near Oruro. Farmer's field. Green plant, white seeds. High saponin.

PI 614933. *Chenopodium quinoa* Willd.

Landrace. CQ 133; Ames 21941. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3200 m. Unidentified location near Oruro. Farmer's field. Green plant, white seeds. High saponin.

PI 614934. *Chenopodium quinoa* Willd.

Landrace. CQ 134; Ames 21942. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3200 m. Unidentified location near Oruro. Farmer's field. Red plant, white seeds. High saponin.

PI 614935. *Chenopodium quinoa* Willd.

Landrace. CQ 135; Ames 21943. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3200 m. Unidentified location near Oruro. Farmer's field. Purple plant, white seeds. High saponin.

PI 614936. *Chenopodium quinoa* Willd.

Landrace. CQ 136; Ames 21944. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3200 m. Unidentified location near Oruro. Farmer's field. Light red plant, white seeds. High saponin.

PI 614937. *Chenopodium quinoa* Willd.

Landrace. CQ 138; Ames 21945. Collected 03/29/1992 in Oruro, Bolivia. Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3800 m. Outskirts of Oruro. Farmer's field. Green plant with red stem, small light brown seeds. Low saponin.

PI 614938. *Chenopodium quinoa* Willd.

Landrace. CQ 139; Ames 21946. Collected 03/29/1992 in Oruro, Bolivia.

Latitude 17 deg. S. Longitude 68 deg. W. Elevation 3800 m. Outskirts of Oruro. Farmer's field. Red plant, branching, with brown seeds. High saponin.

The following were developed by Antonin Dreiseitl, Agricultural Research Institute, Ltd., Havlickova 2787, Kromeriz, South Moravia 767 01, Czech Republic; Petr Svacina, Plant Select, Ltd., Hrubcice 111, Bedihost, South Moravia CZ-79821, Czech Republic. Received 11/30/2000.

PI 614939. *Hordeum vulgare* L. subsp. *vulgare*

Cultivar. Pureline. "HERIS"; NSGC 8679. Pedigree - Ametyst/Palestine 10/Diamant/Alsa/H.St.49248/Hassan/Karat/Favorit/Favorit/Forrajera/Rika/Diamant/C-292/Ribari/Celechovicky Hanacky/I-25/Valticky/Ab-1105/Diamant/Favorit/Union/Kneifel/Carlsberg II/Union/Opavsky/Saale/Ricardo/Diamant/Monte Cristo/Valticky/Ekonom/Riso 6018/Ametyst/Opavsky/B-2145/Opavsky/Saalegerste/Estate. Released 1998. Two-rowed hulled spring barley. Heris possesses a combination of the resistance gene Rph7 against leaf rust (*Puccinia hordei* Otth) and mlo against powdery mildew (*Erysiphe graminis* DC.f.sp. *hordei* Em.Marchal).

The following were developed by C. Wayne Smith, Texas A&M University, Department of Soil and Crop Sciences, College Station, Texas 77841, United States. Received 11/08/2000.

PI 614940. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 90K-3. GP-717. Pedigree - PD 9232//TAMU 79XX-7//TAMU 3181. Average rating for fusarium wilt (*Fusarium oxysporum*) was 32, compared with 30 for the resistant control and 84 for the susceptible control in the Auburn University Nat. Fusarium Wilt Nursery, during 1993 and 1994. Compared favorably with Deltapine 50 when evaluated under irrigated conditions at College Station, TX, during 1992 through 1994, averaging 95% of the lint yield of Deltapine 50 and 10% higher fiber bundle strength.

PI 614941. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 88G-104; Tamcot 8104. GP-716. Pedigree - Deltapine 90/CS-8606. Combines high yield potential and excellent fiber properties. Adapted to central and south Texas. Mid to full-season, picker-type upland cotton with a growth habit intermediate to Deltapine 50 and Deltapine 90. Open bolls resist shattering but are not stormproof and fluff adequately for picker harvest. Smooth leaves, averaging 2 trichomes cm⁻². Resistant to the silverleaf whitefly (*Bemisia argentifolii*) and moderately susceptible to "Bronze Wilt". Reaches 60% open bolls 7 days later than Deltapine 50. Micronaire reading averages 4.1. Upper half mean length averages 28 mm. Fiber bundle strength averages 277 kN m kg⁻¹.

PI 614942. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 90K-31. GP-718. Pedigree - Breeding line 3183/UArk-1//PD6186. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yields tend to be lower than Deltapine 50 and Stoneville 453, but equal to Tamcot 2111 and Tamcot HQ 95. Fibers generally exhibit lower micronaire readings. Fiber bundle strength ranged from 20% greater than Deltapine 50 to 33% higher than Tamcot HQ

95 during 1992 through 1994. Averaged 30 mm across 14 location years.

PI 614943. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91A-8. GP-719. Pedigree - PD 6186/Tamcot 2111. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield potential lower than commercial cultivars adapted to central and south Texas during 1992 through 1994. Averaged 309 kN m kg⁻¹, 19% higher fiber bundle strength than Stoneville 132 and Deltapine 50. Micronaire readings averaged from 4.6 to 5.2 and HVI upper half mean length of fibers averaged 28 mm.

PI 614944. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91A-59. GP-720. Pedigree - B86-307 (Ls isolate of Delcot 390)/Tamcot 2111. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield potential was equal to Stoneville 132. Gin turnout averaged 39%. Averaged 317 kN m kg⁻¹, ranging from 11 to 26% higher fiber bundle strength than Stoneville 132 across 4 location years. Micronaire readings averaged 4.7 and HVI upper half mean length of fibers averaged 27 mm.

PI 614945. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91A-107. GP-721. Pedigree - Tamcot CAB-CS//Tamcot CAMD-E/Arkugo#4. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield potential equal to Stoneville 132. Gin turnout averaged 38%. Averaged 346 kN m kg⁻¹, 34% higher fiber bundle strength than Stoneville 132. Micronaire readings averaged 4.7 and HVI upper half mean length of fibers averaged 27 mm.

PI 614946. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91C-34. GP-722. Pedigree - Del Cerro/Tam 1080. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield potential is inferior to Stoneville 132. Gin turnout averaged 34%. Averaged 365 kN m kg⁻¹, 30 to 43% higher fiber bundle strength than Stoneville 132. Micronaire readings averaged 4.0 and HVI upper half mean length of fibers averaged 31 mm.

PI 614947. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91C-52. GP-723. Pedigree - Del Cerro/Tam 1080. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield is inferior to Stoneville 132. Gin turnout averaged 35%. Averaged 333 kN m kg⁻¹, 22 to 29% higher fiber bundle strength than Stoneville 132. Micronaire readings averaged 4.4 and HVI upper half mean length of fibers averaged 31 mm.

PI 614948. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91D-3. GP-724. Pedigree - CA 3018/TAM 1080. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield averaged 87% of Stoneville 132. Gin turnout averaged 37%. Averaged 368 kN m kg⁻¹, 35% to 37% higher fiber bundle strength than Stoneville 132. Micronaire readings averaged 4.1 and HVI upper half mean length of fibers averaged 29 mm.

PI 614949. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91D-13. GP-725. Pedigree - Tamcot CAB-CS/TAM 0155. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield inferior to Stoneville 132 and Deltapine 50. Gin turnout averaged 33%. Averaged 320 kN m kg⁻¹, 15 to 43% higher fiber bundle strength than Deltapine 50. Micronaire readings averaged 3.7 and HVI upper half mean length of fibers averaged 32 mm.

PI 614950. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91D-49. GP-726. Pedigree - CS 8606/TAM 1033. Individual F2:3 plants were selected on the basis of apparent agronomic fitness and high volume instrument fiber properties. Lint yield potential was competitive with Stoneville 132. Gin turnout averaged 35%. Averaged 334 kN m kg⁻¹, 23 to 31% higher fiber bundle strength than Stoneville 132. Micronaire readings averaged 3.9 and HVI upper half mean length of fibers averaged 31 mm.

PI 614951. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91A-104fg. GP-727. Pedigree - PD 6186/TAM 2055. Normal phenotype except that the bracts roll inward and curl away from the flower bud or developing boll, a trait referred to as "frego bract." Yield potential competitive with Stoneville 132 when fleahoppers (*Pseudatomoscelis seriatus*) are controlled. Lower gin turnout than Stoneville 132 but higher fiber bundle strength. Other fiber quality traits are comparable.

PI 614952. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 91C-95Ls. GP-728. Pedigree - B86-188/TAM 1080. Leaves have more narrow lobes and/or greater indentation between major lobes than normal leaves of upland cotton, a trait referred to as "sub okra" leaf shape. Compared with normal leaves, the sub okra leaf shape reduces leaf area by about 8%. Lint yield potential is comparable to that of Stoneville 132, a popular commercial cultivar in central Texas during the mid 1990s. Lower gin turnout but finer, longer and stronger fibers than Stoneville 132.

PI 614953. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 90O-24L. GP-729. Pedigree - TAM 2167/Gumbo. "Okra" leaf shape. This leaf shape has much more narrow lobes and indentations between lobes that reach almost to the base of the leaf. Compared with normal leaves, the okra trait reduces leaf area by about 23%. Lint yield was equivalent to Deltapine 50, a popular commercial cultivar in central and south Texas, when evaluated across four locations in 1992 through 1995. Higher gin turnout, lower micronaire, and equivalent fiber length and strength.

PI 614954. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 90C-19s. GP-730. Pedigree - CA 3005/TAM 2055. Averages six trichomes/cm² of abaxial leaf surface compared with eight/cm² for Deltapine 50 and over 100 trichomes/cm² for Stoneville 453. The absence of trichomes is the primary mechanism of resistance to the SLW in this germplasm line. Averaged 14 eggs and immatures per cm² of abaxial leaf surface compared with 18 for Deltapine 50 and 30 for Stoneville 453. When evaluated as a host for adult longevity and fecundity, total eggs/female life time was reduced compared with

Stoneville 907 as a host. Data from the University of California indicated that TAM 90C-19s harbored fewer adults, nymphs, and eggs than Acala SJ-2. Resistant to fusarium wilt. Yields equivalent to Deltapine 50 and exhibits superior fiber bundle strength.

PI 614955. *Gossypium hirsutum* L.

Breeding. Pureline. TAM 90J-57s. GP-731. Pedigree - PD 6186/breeding line. Averages six trichomes/cm² of abaxial leaf surface compared with eight/cm² for Deltapine 50 and over 100 trichomes/cm² for Stoneville 453. Evidence to date suggest that the absence of trichomes is the primary mechanism of resistance to the SLW in this germplasm line. Across 5 sampling dates in 1992, averaged 8 eggs and immatures per cm² of abaxial leaf surface compared with 18 for Deltapine 50 and 30 for Stoneville 453. Shorter but stronger fibers than Deltapine 50.

The following were donated by Joshua Tao, 8922 Diamond Lake Lane, Houston, Texas 77083, United States. Received 09/05/1996.

PI 614956. *Oryza sativa* L.

Cultivar. Pureline. "GP-2"; SQ96-2; NSGC 6143. Developed in China.

PI 614957. *Oryza sativa* L.

Cultivar. Pureline. "IR58025 B"; SQ96-8; NSGC 6149. Developed in China.

PI 614958. *Oryza sativa* L.

Cultivar. Pureline. "GUI 99"; SQ96-12; NSGC 6153. Developed in China.

PI 614959. *Oryza sativa* L.

Cultivar. Pureline. "R 312"; SQ96-13; NSGC 6154. Developed in China.

PI 614960. *Oryza sativa* L.

Cultivar. Pureline. "Z 535"; SQ96-17; NSGC 6158. Developed in China.

PI 614961. *Oryza sativa* L.

Cultivar. Pureline. "R 147"; SQ96-19; NSGC 6160. Developed in China.

PI 614962. *Oryza sativa* L.

Cultivar. Pureline. "XIANGZHAOXIAN NO. 15"; SQ96-20; NSGC 6161. Developed in China.

The following were donated by China National Rice Research Institute, Hangzhou, Zhejiang, China. Received 09/05/1996.

PI 614963. *Oryza sativa* L.

Cultivar. Pureline. "HUNANRUANMI"; SQ96-22; NSGC 6163. Developed in China.

PI 614964. *Oryza sativa* L.

Cultivar. Pureline. "ZHONGZAO NO. 1"; SQ96-29; NSGC 6170. Developed in China.

PI 614965. *Oryza sativa* L.

Cultivar. Pureline. "ZHONGYU NO. 6"; SQ96-31; NSGC 6172. Developed in China.

- PI 614966. *Oryza sativa* L.
Cultivar. Pureline. "ZHENSHAN 97"; SQ96-32; NSGC 6173. Developed in China.
- PI 614967. *Oryza sativa* L.
Cultivar. Pureline. "XIUSHUI 11"; SQ96-34; NSGC 6175. Developed in China.
- PI 614968. *Oryza sativa* L.
Cultivar. Pureline. "ZHONGYOUZAO NO. 3"; SQ96-38; NSGC 6179. Developed in China.
- PI 614969. *Oryza sativa* L.
Cultivar. Pureline. "CHAO 25"; SQ96-41; NSGC 6182. Developed in China.
- PI 614970. *Oryza sativa* L.
Cultivar. Pureline. "XIANGHU NO. 2"; SQ96-45; NSGC 6186. Developed in China.
- PI 614971. *Oryza sativa* L.
Cultivar. Pureline. "NINGHUI 18"; SQ96-47; NSGC 6188. Developed in China.
- PI 614972. *Oryza sativa* L.
Cultivar. Pureline. "QINGLIN NO. 9"; SQ96-52; NSGC 6193. Developed in China.
- PI 614973. *Oryza sativa* L.
Cultivar. Pureline. "ERXI NO. 149"; SQ96-53; NSGC 6194. Developed in China.
- PI 614974. *Oryza sativa* L.
Cultivar. Pureline. "TAIZHOU 1950"; SQ96-57; NSGC 6198. Developed in China.
- PI 614975. *Oryza sativa* L.
Cultivar. Pureline. "TAIZHONGXIAN 255"; SQ96-58; NSGC 6199. Developed in China.
- PI 614976. *Oryza sativa* L.
Cultivar. Pureline. "XINAN 72"; SQ96-61; NSGC 6202. Developed in China.
- PI 614977. *Oryza sativa* L.
Cultivar. Pureline. "YANGZI 95"; SQ96-64; NSGC 6205. Developed in China.
- PI 614978. *Oryza sativa* L.
Cultivar. Pureline. "71198"; SQ96-67; NSGC 6208. Developed in China.
- PI 614979. *Oryza sativa* L.
Cultivar. Pureline. "WUNONG NO. 2"; SQ96-68; NSGC 6209. Developed in China.
- PI 614980. *Oryza sativa* L.
Cultivar. Pureline. "ZHONGYU NO. 1"; SQ96-69; NSGC 6210. Developed in China.
- PI 614981. *Oryza sativa* L.

Cultivar. Pureline. "XIANGZAOXIAN NO. 1"; SQ96-70; NSGC 6211. Developed in China.

The following were donated by Chengdu Institute of Biology, Academia Sinica, P.O. Box 416, Chengdu, Sichuan, China. Received 09/05/1996.

PI 614982. *Oryza sativa* L.

Cultivar. Pureline. "MINGHUI 63"; SQ96-72; NSGC 6213. Developed in China.

PI 614983. *Oryza sativa* L.

Cultivar. Pureline. "DALIDAO"; SQ96-73; NSGC 6214. Developed in China.

PI 614984. *Oryza sativa* L.

Cultivar. Pureline. "ZHANG 32"; SQ96-74; NSGC 6215. Developed in China.

PI 614985. *Oryza sativa* L.

Cultivar. Pureline. "MPH 502"; SQ96-76; NSGC 6217. Developed in China.

PI 614986. *Oryza sativa* L.

Cultivar. Pureline. "HRI 6201"; SQ96-77; NSGC 6218. Developed in China.

PI 614987. *Oryza sativa* L.

Cultivar. Pureline. "TIEJING NO. 4"; SQ96-78; NSGC 6219. Developed in China.

PI 614988. *Oryza sativa* L.

Cultivar. Pureline. "ZANUO NO. 1"; SQ96-84; NSGC 6225. Developed in China.

PI 614989. *Oryza sativa* L.

Cultivar. Pureline. "KECHENGNUO NO. 4"; SQ96-85; NSGC 6226. Developed in China.

PI 614990. *Oryza sativa* L.

Cultivar. Pureline. "JINNUO NO. 6"; SQ96-87; NSGC 6228. Developed in China.

PI 614991. *Oryza sativa* L.

Cultivar. Pureline. "DIAN NO. 01"; SQ96-88; NSGC 6229. Developed in China.

PI 614992. *Oryza sativa* L.

Cultivar. Pureline. "89-1"; SQ96-89; NSGC 6230. Developed in China.

PI 614993. *Oryza sativa* L.

Cultivar. Pureline. "89-5"; SQ96-90; NSGC 6231. Developed in China.

PI 614994. *Oryza sativa* L.

Cultivar. Pureline. "AIJIAONANTE"; SQ96-91; NSGC 6232. Developed in China.

PI 614995. *Oryza sativa* L.

Cultivar. Pureline. "YOU NO. 51"; SQ96-93; NSGC 6234. Developed in China.

- PI 614996. *Oryza sativa* L.**
Cultivar. Pureline. "FU NO. 83"; SQ96-94; NSGC 6235. Developed in China.
- PI 614997. *Oryza sativa* L.**
Cultivar. Pureline. "DIANDUN 501"; SQ96-97; NSGC 6238. Developed in China.
- PI 614998. *Oryza sativa* L.**
Cultivar. Pureline. "CHUNZHI NO. 11"; SQ96-98; NSGC 6239. Developed in China.
- PI 614999. *Oryza sativa* L.**
Cultivar. Pureline. "TIE 90-1"; SQ96-99; NSGC 6240. Developed in China.
- PI 615000. *Oryza sativa* L.**
Cultivar. Pureline. "SHENG 9"; SQ96-105; NSGC 6246. Developed in China.
- PI 615001. *Oryza sativa* L.**
Cultivar. Pureline. "SHENG 10"; SQ96-106; NSGC 6247. Developed in China.
- PI 615002. *Oryza sativa* L.**
Cultivar. Pureline. "SHENG 11"; SQ96-107; NSGC 6248. Developed in China.
- PI 615003. *Oryza sativa* L.**
Cultivar. Pureline. "SHENG 12"; SQ96-108; NSGC 6249. Developed in China.
- PI 615004. *Oryza sativa* L.**
Cultivar. Pureline. "H 323"; SQ96-110; NSGC 6251. Developed in China.
- PI 615005. *Oryza sativa* L.**
Cultivar. Pureline. "02428"; SQ96-111; NSGC 6252. Developed in China.
- PI 615006. *Oryza sativa* L.**
Cultivar. Pureline. "86-70"; SQ96-112; NSGC 6253. Developed in China.
- PI 615007. *Oryza sativa* L.**
Cultivar. Pureline. "92-9"; SQ96-113; NSGC 6254. Developed in China.

The following were donated by Ren Guangjun, Sichuan Academy of Agric. Sciences, Crop Institute, Chengdu, Sichuan 610066, China. Received 09/05/1996.

- PI 615008. *Oryza sativa* L.**
Cultivar. Pureline. "CDR 22"; SQ96-114; NSGC 6255. Developed in China.
- PI 615009. *Oryza sativa* L.**
Cultivar. Pureline. "CDR 448"; SQ96-115; NSGC 6256. Developed in China.
- PI 615010. *Oryza sativa* L.**
Cultivar. Pureline. "CDR 210"; SQ96-116; NSGC 6257. Developed in China.

The following were donated by Sichuan Agricultural University, Rice Research Institute, Wenjiang, Sichuan 611130, China. Received 09/05/1996.

- PI 615011. *Oryza sativa* L.**

Cultivar. Pureline. Guineandao; SQ96-119; NSGC 6260. Collected in Guinea

PI 615012. *Oryza sativa* L.

Breeding. Pureline. 2071-621-2; SQ96-158; NSGC 6299. Developed in Liberia.

PI 615013. *Oryza sativa* L.

Cultivar. Pureline. "GUICHAO NO. 2"; SQ96-160; NSGC 6301. Developed in China.

PI 615014. *Oryza sativa* L.

Cultivar. Pureline. "SHUFENG 109"; SQ96-163; NSGC 6304. Developed in China.

PI 615015. *Oryza sativa* L.

Cultivar. Pureline. "SHUFENG 121"; SQ96-164; NSGC 6305. Developed in China.

PI 615016. *Oryza sativa* L.

Cultivar. Pureline. "SHUFENG 122"; SQ96-165; NSGC 6306. Developed in China.

PI 615017. *Oryza sativa* L.

Cultivar. Pureline. "SHUFENG 117"; SQ96-166; NSGC 6307. Developed in China.

The following were donated by Joshua Tao, 8922 Diamond Lake Lane, Houston, Texas 77083, United States. Received 09/05/1996.

PI 615018. *Oryza sativa* L.

Breeding. Pureline. GL 1; SQ96-168; NSGC 6309. Developed in China.

PI 615019. *Oryza sativa* L.

Breeding. Pureline. 460; SQ96-171; NSGC 6312. Developed in China.

PI 615020. *Oryza sativa* L.

Breeding. Pureline. 2410; SQ96-173; NSGC 6314. Developed in China.

PI 615021. *Oryza sativa* L.

Breeding. Pureline. 4429-2; SQ96-175; NSGC 6316. Developed in China.

PI 615022. *Oryza sativa* L.

Breeding. Pureline. 4484; SQ96-177; NSGC 6318. Developed in China.

PI 615023. *Oryza sativa* L.

Breeding. Pureline. 4575; SQ96-178; NSGC 6319. Developed in China.

PI 615024. *Oryza sativa* L.

Breeding. Pureline. 4576; SQ96-179; NSGC 6320. Developed in China.

PI 615025. *Oryza sativa* L.

Breeding. Pureline. 4579; SQ96-180; NSGC 6321. Developed in China.

PI 615026. *Oryza sativa* L.

Breeding. Pureline. 4580; SQ96-181; NSGC 6322. Developed in China.

- PI 615027. *Oryza sativa* L.
Breeding. Pureline. 4581; SQ96-182; NSGC 6323. Developed in China.
- PI 615028. *Oryza sativa* L.
Breeding. Pureline. 4582; SQ96-183; NSGC 6324. Developed in China.
- PI 615029. *Oryza sativa* L.
Breeding. Pureline. 4583; SQ96-184; NSGC 6325. Developed in China.
- PI 615030. *Oryza sativa* L.
Breeding. Pureline. 4591; SQ96-186; NSGC 6327. Developed in China.
- PI 615031. *Oryza sativa* L.
Breeding. Pureline. 4593; SQ96-188; NSGC 6329. Developed in China.
- PI 615032. *Oryza sativa* L.
Breeding. Pureline. 4594; SQ96-189; NSGC 6330. Developed in China.
- PI 615033. *Oryza sativa* L.
Breeding. Pureline. 4595; SQ96-190; NSGC 6331. Developed in China.
- PI 615034. *Oryza sativa* L.
Breeding. Pureline. 4596; SQ96-191; NSGC 6332. Developed in China.
- PI 615035. *Oryza sativa* L.
Breeding. Pureline. 4597; SQ96-192; NSGC 6333. Developed in China.
- PI 615036. *Oryza sativa* L.
Breeding. Pureline. 4607; SQ96-193; NSGC 6334. Developed in China.
- PI 615037. *Oryza sativa* L.
Breeding. Pureline. 4610; SQ96-194; NSGC 6335. Developed in China.
- PI 615038. *Oryza sativa* L.
Breeding. Pureline. 4611; SQ96-195; NSGC 6336. Developed in China.
- PI 615039. *Oryza sativa* L.
Breeding. Pureline. 4612; SQ96-196; NSGC 6337. Developed in China.
- PI 615040. *Oryza sativa* L.
Breeding. Pureline. 4632; SQ96-197; NSGC 6338. Developed in China.
- PI 615041. *Oryza sativa* L.
Breeding. Pureline. 4633; SQ96-198; NSGC 6339. Developed in China.
- PI 615042. *Oryza sativa* L.
Breeding. Pureline. 4634; SQ96-199; NSGC 6340. Developed in China.
- PI 615043. *Oryza sativa* L.
Breeding. Pureline. 4635; SQ96-200; NSGC 6341. Developed in China.
- PI 615044. *Oryza sativa* L.
Breeding. Pureline. 4637; SQ96-201; NSGC 6342. Developed in China.
- PI 615045. *Oryza sativa* L.
Breeding. Pureline. 4638; SQ96-202; NSGC 6343. Developed in China.

PI 615046. *Oryza sativa* L.
Breeding. Pureline. 4640; SQ96-203; NSGC 6344. Developed in China.

PI 615047. *Oryza sativa* L.
Breeding. Pureline. 4641-1; SQ96-204; NSGC 6345. Developed in China.

PI 615048. *Oryza sativa* L.
Breeding. Pureline. 4641-2; SQ96-205; NSGC 6346. Developed in China.

PI 615049. *Oryza sativa* L.
Breeding. Pureline. 4642; SQ96-206; NSGC 6347. Developed in China.

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 615050. *Lactuca sativa* L.
Cultivated. W6 10440. Collected 07/20/1991 in Kazakhstan. Private vendor, Alma Ata Market. Curled-leafed lettuce.

PI 615051. *Lactuca sativa* L.
Cultivated. W6 10441. Collected in Kazakhstan. Private vendor, Alma Ata Market. Leafy salad type.

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 615052. *Lactuca sativa* L.
Cultivated. B92-71; "Winter Butterhead"; W6 10788. Collected 06/30/1992 in Bulgaria. Dobrich market.

PI 615053. *Lactuca sativa* L.
Cultivar. B92-73; "JUNSKA"; W6 10789. Collected 06/30/1992 in Bulgaria. Dobrich market. Cos type.

The following were donated by Tong Daxiang, Institute of Crop Germplasm Resources, Chinese Academy of Agricultural Sciences, 30 Bai Shi Qiao Road, Beijing, Beijing, China. Received 02/02/1993.

PI 615054. *Lactuca sativa* L.
Cultivated. EX. NO. 00012; W6 11330; Nei meng hong sheng cai.

PI 615055. *Lactuca sativa* L.
Cultivated. EX. NO. 00025; W6 11331; Bai jian ye wo ju.

The following were donated by M. Schultz, Seed Bank, 143 Charles, Monroe, Washington 98272-2302, United States. Received 03/07/1990.

PI 615056. *Lactuca sativa* L.

Cultivar. "MARY'S"; W6 3493.

PI 615057. *Lactuca sativa* L.

Cultivar. "BEN SHEMEN"; W6 3494.

PI 615058. *Lactuca sativa* L.

Cultivar. "FEVILLE DECHENE"; W6 3694.

PI 615059. *Lactuca sativa* L.

Cultivar. "ROSSA FRUILANA"; W6 3792.

The following were donated by Pauline Mullins, The Organic Plant Institute, Peaceable Kingdom Foundation, P.O. Box 313, Washington-On-Brazos, Texas 77880, United States. Received 11/30/1996.

PI 615060. *Lactuca sativa* L.

Cultivated. "Ziegler's Heirloom"; W6 19000. Collected 1991 in Germany. Bibb lettuce. Very cold hardy variety and has great flavor.

The following were donated by M. Schultz, Seed Bank, 143 Charles, Monroe, Washington 98272-2302, United States. Received 03/09/1990.

PI 615061. *Lactuca sativa* L.

Cultivar. "COCARDE RED OAKLEAF"; W6 3747.

PI 615062. *Lactuca sativa* L.

Cultivar. "FRENCH RED HEAD"; W6 3758.

PI 615063. *Lactuca sativa* L.

Cultivar. "JOHN BIBB"; W6 3764.

PI 615064. *Lactuca sativa* L.

Cultivar. "JSS8532"; W6 3765.

PI 615065. *Lactuca sativa* L.

Cultivar. "GREENWAVE"; W6 3700.

PI 615066. *Lactuca sativa* L.

Cultivar. "RED HEAD"; W6 3782.

PI 615067. *Lactuca sativa* L.

Cultivar. "INDIANA AMISH"; W6 3490.

PI 615068. *Lactuca sativa* L.

Cultivar. "BISCIA ROSSA"; W6 3742.

PI 615069. *Lactuca sativa* L.

Cultivar. "KINEMONTEPAS"; W6 3701.

PI 615070. *Lactuca sativa* L.

Cultivar. "ROSSA DI TRENTO"; W6 3791.

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 615071. *Lactuca sativa* L.

Cultivated. Al 011; W6 18615. Collected 08/24/1996 in Albania. Latitude 40 deg. 38' 0'' N. Longitude 19 deg. 31' 0'' E. Elevation 20 m. South of Fier, Novosele, home of M. Beqo, relatives of Lufter Xhuveli. Shared from stored seed supply from home garden. Plant 80cm tall. Leaves curly, light green. Flowers yellow. Common landrace.

The following were donated by M. Schultz, Seed Bank, 143 Charles, Monroe, Washington 98272-2302, United States. Received 03/08/1990.

PI 615072. *Lactuca sativa* L.

Cultivar. "MIGNONETTE BRONZE"; W6 3706.

The following were developed by Daryl T. Bowman, North Carolina State University, Department of Crop Science, Box 8604, Raleigh, North Carolina 27695-8604, United States. Received 11/22/2000.

PI 615073. *Gossypium hirsutum* L.

Breeding. Pureline. NC 72. GP-715. Pedigree - DES 119/KC311//DELTAPINE 90. Averages 1352 kg ha⁻¹ lint yield in North Carolina, 42.6% lint, 83.8 cm height, 29.7 mm fiber length, 5.6% fiber elongation, 83.6% uniformity index, 328.3 KNmKg⁻¹ fiber strength, 4.2 micronaire, 36 kg yarn (skein) strength, a fibeness reading of 143 mtex for fiber, seed index of 9.7 g per 100 seed, and a maturity similar to Deltapine 51. Fair resistance (52) to fusarium wilt (*Fusarium oxysporum*). Has T3 level of pubescence, nectaries, normal leaf shape, and exhibits a semi-cluster fruiting pattern.

The following were developed by S.N. Acharya, Agriculture and Agri-Food Canada Research Centre, P.O. Box 3000, Main, Lethbridge, Alberta T1J 481, Canada. Received 11/27/2000.

PI 615074. *Astragalus cicer* L.

Cultivar. Population. "AC Oxley II"; LRC95-93-1. Pedigree - Synthetic cultivar developed from Oxley cultivar. Improved seedling vigor and forage yield. Soft hollow-stems and pinnately-compound leaves with 19-25 leaflets. Seedling growth and regrowth after cutting is faster than Oxley. Better winterhardiness than any forage legume cultivar. Forage stands show no susceptibility to diseases while seed stands may show susceptibility to sclerotinia (*Sclerotinia sclerotiorum*). White to pale yellow flowers are borne on racemes. Flowering occurs over a long period of time. Some plants bloom from June to the first frost. Seeds larger, 4.34 g 1000⁻¹ seeds compared to 3.83 g for Oxley. Intended for use as a pasture and silage legume in pure and mixed stands. Yielded 123% and 111% of Oxley check under dryland and irrigated conditions in western Canada, respectively.

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; Walter Graves, University of California Cooperative Ext. Service (retired), 7665 Volclay Drive, San Diego, California 92119-1219, United States; Jose Delgadillo, Mexico. Received 11/21/2000.

PI 615075. *Trifolium wigginsii* J. M. Gillett

Wild. Population. 3; 5-271-5; 5-271-4; W6 23107. Collected 10/18/2000 in Baja Norte, Mexico. Latitude 31 deg. 0' 43'' N. Longitude 115 deg. 28' 38'' W. Elevation 2455 m. Village of Sierra de San Pedro Martir, near Vallecitos Meadow, Baja CA, Norte, Mexico. "Level open meadows of mixed coniferous forests, heavily grazed yarrow, potentilla, and carex, all low growing" (Collector Note, N.L. Taylor); Exposure: open, Slope: none, Aspect: slightly West. Plants growing in rhizomatous clumps, scattered clumps of plants, abundance: frequent, flower color: white purple, "Heavily grazed meadow" (Collector Notes N.L. Taylor).

The following were developed by Cascade International Seed Company, 8483 W. Stayton Rd., Aumsville, Oregon 97325, United States. Received 12/26/2000.

PI 615076 PVPO. *Poa pratensis* L.

Cultivar. "PARKLAND". PVP 200000314.

The following were developed by Pioneer Hi-Bred International, Inc, United States. Received 12/26/2000.

PI 615077 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "PHOR8". PVP 200100021.

The following were developed by Novartis Seeds, Inc., United States. Received 12/26/2000.

PI 615078 PVPO. *Zea mays* L. subsp. *mays*

Cultivar. "NP2052". PVP 200100031.

The following were developed by Yugen Kaisha Nihon Noken, Japan. Received 12/26/2000.

PI 615079 PVPO. *Capsicum annuum* L.

Cultivar. "KAPUCHIN". PVP 200100034.

The following were developed by Seminis Vegetable Seeds, Inc., Woodland, California, United States. Received 12/26/2000.

PI 615080 PVPO. *Phaseolus vulgaris* L.

Cultivar. "EBRO". PVP 200100036.

PI 615081 PVPO. *Phaseolus vulgaris* L.

Cultivar. "TAPIA". PVP 200100037.

The following were developed by SeedTec International, Inc., Woodland,

California, United States. Received 12/26/2000.

PI 615082 PVPO. *Carthamus tinctorius* L.
Cultivar. "S-780". PVP 200100038.

The following were developed by North Carolina State University, North Carolina Agr. Exp. Sta., Raleigh, North Carolina, United States. Received 12/26/2000.

PI 615083 PVPO. *Nicotiana tabacum* L.
Cultivar. "VECTOR BURLEY 21-41". PVP 200100039.

The following were developed by Pure Seed Testing, Inc., P.O. Box 449, Hubbard, Oregon 97032, United States. Received 12/26/2000.

PI 615084 PVPO. *Festuca arundinacea* Schreb.
Cultivar. "OnCue". PVP 200100040.

The following were developed by J.R. Simplot Company, United States. Received 12/26/2000.

PI 615085 PVPO. *Poa pratensis* L.
Cultivar. "CHICAGO II". PVP 200100042.

The following were developed by Henry M. Munger, Cornell University, Department of Plant Breeding, 252 Emerson Hall, Ithaca, New York 14853, United States. Received 05/10/1982.

PI 615086. *Cucurbita pepo* L.
Uncertain. Ames 2804; G19203. Pedigree - Hybrid F7, PI 186959 (Tur.) x Yankee Hybrid F7. Supposed to have outstanding resistance to CMV and powdery mildew.

The following were donated by USDA, ARS, NERPIS, Cornell University, Plant Genetic Resources Unit, Geneva, New York 14456-0462, United States. Received 05/10/1982.

PI 615087. *Cucurbita pepo* L.
Uncertain. Ames 2805; PQ016174. Collected in Unknown. Seed received as transfer from NE9.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; James Robinson, Route 1, Box 115, Mt. Savage, Maryland 21545, United States. Received 12/16/1985.

PI 615088. *Cucurbita pepo* L.
Cultivar. "Amish Field Pie Pumpkin"; Ames 4725.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Louise C. Florance,

P.O. Box 4058, Salinas, California 93912, United States. Received 12/16/1985.

PI 615089. Cucurbita pepo L.

Cultivar. "Austrian Bush"; Ames 4726.

The following were donated by Curtis S. Showell, 13318 Muskrat Town Road, Bishopville, Maryland 21813, United States; Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/16/1985.

PI 615090. Cucurbita pepo L.

Cultivar. "Connecticut Sweet Pie Pumpkin"; Ames 4727.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Tom Knoche, 860 Oakleaf Road, Sardinia, Ohio 45171, United States. Received 12/16/1985.

PI 615091. Cucurbita pepo L.

Cultivar. "Bloomfield Pumpkin"; Ames 4728.

PI 615092. Cucurbita pepo L.

Cultivar. "Chesnut"; Ames 4729.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; John Stevens, P.O. Box 274, Mt. Gilead, Ohio 43338, United States. Received 12/16/1985.

PI 615093. Cucurbita pepo L.

Cultivar. "Fordhook"; Ames 4730.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Nichols Garden Nursery, 1190 North Pacific Highway NE, Albany, Oregon 97321-4580, United States. Received 12/16/1985.

PI 615094. Cucurbita pepo L.

Cultivar. "French White Bush"; Ames 4731.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; R.A. Butt, Victoria, Australia. Received 12/16/1985.

PI 615095. Cucurbita pepo L.

Cultivar. "Gem"; Ames 4732.

The following were developed by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/16/1985.

PI 615096. Cucurbita pepo L.

Cultivar. "Idaho Gem Pumpkin"; Ames 4734.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Tessa Gowans, Abundant Life Seed Foundation, P.O. Box 772, Port Townsend, Washington 98368, United States. Received 12/16/1985.

PI 615097. Cucurbita pepo L.

Cultivar. "Japanese Pie Pumpkin"; Ames 4735.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Marvin Klitzke, 200 N. Grand Street, Eugene, Oregon 97402, United States. Received 12/16/1985.

PI 615098. Cucurbita pepo L.

Cultivar. "Kahcona"; Ames 4736.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Tom Knoche, 860 Oakleaf Road, Sardinia, Ohio 45171, United States. Received 12/16/1985.

PI 615099. Cucurbita pepo L.

Cultivar. "King of the Mammoths"; Ames 4737.

PI 615100. Cucurbita pepo L.

Cultivar. "Lebanon"; Ames 4739.

The following were donated by Curtis S. Showell, 13318 Muskrat Town Road, Bishopville, Maryland 21813, United States; Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/16/1985.

PI 615101. Cucurbita pepo L.

Cultivar. "Maryland Pie Pumpkin"; Ames 4741.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Tom Knoche, 860 Oakleaf Road, Sardinia, Ohio 45171, United States. Received 12/16/1985.

PI 615102. Cucurbita pepo L.

Cultivar. "Naked Seed"; Ames 4742.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Lars-Olov Rosenstrom, Sesam, Egilsv 27, 161 53, Bromma, Sweden. Received 12/16/1985.

PI 615103. Cucurbita pepo L.

Cultivar. "Oland"; Ames 4743.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Tom Knoche, 860 Oakleaf Road, Sardinia, Ohio 45171, United States. Received 12/16/1985.

PI 615104. Cucurbita pepo L.

Cultivar. "Prostate"; Ames 4744.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Richard Grazzini, Self Sufficient Seeds, Barr Hollow Road, Woodward, Pennsylvania 16882, United States. Received 12/16/1985.

PI 615105. Cucurbita pepo L.

Cultivar. "Round Zucchini"; Ames 4745.

The following were donated by Curtis S. Showell, 13318 Muskrat Town Road, Bishopville, Maryland 21813, United States; Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/16/1985.

PI 615106. Cucurbita pepo L.

Cultivar. "Showell"; Ames 4746.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Gary Nabhan, Native Seeds/SEARCH, 3950 W. New York Drive, Tucson, Arizona 85745, United States. Received 12/16/1985.

PI 615107. Cucurbita pepo L.

Cultivar. "Tarahumara Indian"; Ames 4748.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Louise C. Florance, P.O. Box 4058, Salinas, California 93912, United States. Received 12/16/1985.

PI 615108. Cucurbita pepo L.

Cultivar. "Tender and True Marrow"; Ames 4749.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Alexander & Brown Co., Perth, Scotland, United Kingdom. Received 12/16/1985.

PI 615109. Cucurbita pepo L.

Cultivar. "Trailing Green Marrow"; Ames 4750.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Paul Kline, 8140 Zenith Court, Brooklyn Park, Minnesota 55443, United States; Donna Kline, 8140 Zenith Court, Brooklyn Park, Minnesota 55443, United States. Received 12/16/1985.

PI 615110. Cucurbita pepo L.

Cultivar. "Uncle Herman Pumpkin"; Ames 4751.

The following were developed by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/16/1985.

PI 615111. Cucurbita pepo L.

Cultivar. "White Acorn"; Ames 4752.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Louise Bastable, 24 Acorn Street, Middleton, Massachusetts, United States. Received 12/16/1985.

PI 615112. Cucurbita pepo L.

Cultivar. "White Egyptian Zucchini"; Ames 4753.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Tom Knoche, 860 Oakleaf Road, Sardinia, Ohio 45171, United States. Received 12/16/1985.

PI 615113. Cucurbita pepo L.

Cultivar. "Wilbur Field"; Ames 4754.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Porter & Son, Seedsmen, P.O. Box 104, Stephenville, Texas 76401, United States. Received 12/16/1985.

PI 615114. Cucurbita pepo L.

Cultivar. "Golden Bush Scallop"; Ames 4755.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States; Vermont Bean Seed Company, Garden Lane, Fair Haven, Vermont 05743-0250, United States. Received 12/16/1985.

PI 615115. Cucurbita pepo L.

Cultivar. "Yellow Scallop"; Ames 4756.

The following were donated by Curtis S. Showell, 13318 Muskrat Town Road, Bishopville, Maryland 21813, United States; Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/16/1985.

PI 615116. Cucurbita pepo L.

Cultivar. "Zikusa"; Ames 4758.

The following were collected by Gary Nabhan, Native Seeds/SEARCH, 3950 W. New York Drive, Tucson, Arizona 85745, United States. Received 03/20/1986.

PI 615117. Cucurbita pepo L.

Cultivar. GN84-83; Calabaza mayera; Ames 4996. Collected 09/05/1984 in Chihuahua, Mexico. El Seis, Chihuahua.

PI 615118. Cucurbita pepo L.

Uncertain. GN84-84; Ames 4997. Collected 09/05/1984 in Chihuahua, Mexico . El Seis near Madera, Chihuahua.

The following were collected by Hugh H. Iltis, University of Wisconsin, Herbarium and Department of Botany, Madison, Wisconsin 53706, United States. Donated by Hugh H. Iltis, University of Wisconsin, Herbarium and Department of Botany, Madison, Wisconsin 53706, United States; M. Nee, New York Botanical Gardens, New York, New York, United States. Received 03/15/1988.

PI 615119. Cucurbita pepo L.

Cultivated. Ames 8087; Spaghetti squash. Collected 12/1986 in Wisconsin, United States. Madison, Dane County. Commercial fruits.

The following were collected by Hugh Wilson, Texas A&M University, Department of Biology, College Station, Texas 77843-3258, United States. Received 09/06/1989.

PI 615120. Cucurbita pepo L.

Cultivated. P 5383; CPE 387; Guiches (Guichayota); Ames 10705. Collected 01/06/1986 in Guerrero, Mexico. Elevation 1524 m. Sample from Aquilpa, 30 km W of Tlapa on road to Chilpancingo. Processing area next to ford. Single fruit collection with 5381 (*C. moschata*); family typical pepo.

PI 615121. Cucurbita pepo L.

Cultivated. P 5385; CPE 389; Guiches (Guichayota); Ames 10707. Collected 01/06/1986 in Guerrero, Mexico. Elevation 1524 m. Sample from Aquilpa, 30 km W of Tlapa on road to Chilpancingo. From lady living near processing area near ford. Single fruit collection from second stop in town with 5384 and 5386.

PI 615122. Cucurbita pepo L.

Cultivated. P 5386; CPE 390; Guiches (Guichayota); Ames 10708. Collected 01/06/1986 in Guerrero, Mexico. Elevation 1524 m. Sample from Aquilpa 30 km W of Tlapa on road to Chilpancingo. From lady living near processing area near ford. Single fruit collection from second stop in town with 5384 and 5385.

PI 615123. Cucurbita pepo L.

Cultivated. P 5390; CPE 391; Huitzayota; Ames 10709. Collected 01/06/1986 in Guerrero, Mexico. Elevation 1982 m. Mixed (combined seed from several fruit) sample from farm 6 km W of JCT with rt. to Olinala -road to Ayotzinapa and Tlapa/Chilpancingo road (km 128). Planted several different rows with mixta and moschata. Mixed sample (seed from several fruit).

PI 615124. Cucurbita pepo L.

Cultivated. P 5391; CPE 392; Huitzayota; Ames 10710. Collected 01/06/1986 in Guerrero, Mexico. Elevation 1982 m. Sample from farm 6 km W of rd to Olinala at JCT of road to Ayotzinapa and Tlapa/Chilpancingo road (km 128). Planted different rows of mixta and moschata. Single fruit sample.

PI 615125. Cucurbita pepo L.

Cultivated. P 5392; CPE 393; Huitzayota; Ames 10711. Collected 01/06/1986 in Guerrero, Mexico. Elevation 1982 m. Sample from farm near Ayotzinapa, 6 km W of JCT with rt to Olinala, at jct of road to Ayzinapa and Tlapa/Chilpancingo road (128 km). Planted different rows with mixta and moschata. Single fruit sample.

PI 615126. Cucurbita pepo L.

Uncertain. P 5399; CPE 395; Ames 10713. Collected 01/06/1986 in Guerrero, Mexico. Elevation 2012 m. From farm along Tlapa/Chilpancingo road at Zoquipa, 2 km E of Chilacachoapa and 38 km E of Chilpancingo road. Collection of 3 fruits from lady; she selects next year's seed from largest fruits (did not want to sell largest).

PI 615127. Cucurbita pepo L.

Cultivated. P 5435; CPE 396; Tzolito; Ames 10714. Collected 01/10/1986 in Chiapas, Mexico. Elevation 2150 m. Series of fruits obtained from small farm near Balum Canal, ca. 15 k NE of San Cristobal de Las Casas, between Tenejapa and Romerillo. Series of 7 fruits taken from farm; small, multi-colored, atypical pepo; sown in March, harvested June.

PI 615128. Cucurbita pepo L.

Cultivated. P 5436; CPE 397; Tzul; Ames 10715. Collected 01/10/1986 in Chiapas, Mexico. Elevation 2400 m. Obtained by Edel Bye from vender during town meeting at Romerillo (NE of San Cristobal). Two fruits, large, green-mottled; sown in March, harvested June/July; use flesh with sugar.

PI 615129. Cucurbita pepo L.

Cultivated. P 5437; CPE 398; Tzol; Ames 10716. Collected 01/10/1986 in Chiapas, Mexico. Elevation 2256 m. From grower in San Jaun Chamula (NW of San Cristobal de las Casas). Locally grown. Three fruits from grower; they select seed for sowing from the larger fruit of the harvest. Sown in April, harvested June/July.

PI 615130. Cucurbita pepo L.

Cultivated. P 5439; CPE 399; Tzolito; Ames 10717. Collected 01/11/1986 in Chiapas, Mexico. Elevation 2165 m. From farm just above Huston (or Huxtos or Huistan) on HWY 199, ca. 15 k NE of JCT with 190. Five fruits. Used only for seeds (roasted or ground for "pipian"), sown in February with harvest in July/August.

PI 615131. Cucurbita pepo L.

Cultivated. P 5441; CPE 400; Tzol; Ames 10718. Collected 01/11/1986 in Chiapas, Mexico. Elevation 1768 m. From Cholol, near Ozchuc on HWY 199. Grown with *C. ficifolia* ('meil') and *C. moschata* ('chumb'). Sample taken from seed set aside to plant in 1985; old seed, but a mass sample.

PI 615132. Cucurbita pepo L.

Uncertain. P 5444; CPE 401; Ames 10719. Collected 01/11/1986 in Chiapas, Mexico. Elevation 2287 m. From Chilil on HWY 199 not far from JCT with HWY 190. Only two fruits available, others (larger) were retained as source of seed for next year's planting.

The following were developed by Saatzucht Gleisdorf, Ges. m. b. H. & Co. KG., Am Tieberhof 33, Gleisdorf, Styria 8200, Austria. Donated by Oswald Baumgartner, Saatzucht Gleisdorf, Gesellschaft m.b.H., u.Co., KG, AM

Tieberhof 33, Gleisdorf, Styria A-8200, Austria. Received 04/20/1990.

PI 615133. Cucurbita pepo L.

Cultivated. "Gleisdorfer Olkurbis"; Ames 13213. Vine type, hull-less seeds.

The following were collected by F.V. Nuez, Escuela Tecnica Sup. de Ing. Agronomos, Catedra de Genetica, Univers. Politecnica Camino de Vera S/N, Valencia, Valencia 46022, Spain. Donated by International Board for Plant Genetic Resources, AGPG, FAO, Via della terme de Caracalla, Rome, Latium 00100, Italy. Received 08/18/1987.

PI 615134. Cucurbita pepo L.

Landrace. CA-CU-46; Calabacino; Ames 13363. Collected 04/18/1987 in Canary Islands, Spain. Latitude 28 deg. 10' N. Longitude 15 deg. 37' W. El Palmar, Las Palmas Province. Sown March, harvested May-June. Fruits elongated, whitish.

PI 615135. Cucurbita pepo L.

Landrace. CA-CU-79; Calabacino; Ames 13364. Collected 04/18/1987 in Canary Islands, Spain. Latitude 28 deg. 1' N. Longitude 15 deg. 32' W. Elevation 340 m. Las Melenguinas, Las Palmas Province.

PI 615136. Cucurbita pepo L.

Landrace. CA-CU-88; Calabacino; Ames 13365. Collected 04/18/1987 in Canary Islands, Spain. Latitude 28 deg. 10' N. Longitude 15 deg. 37' W. El Palmar, Las Palmas Province. Fruits rounded-elongated-oval. White fly pest.

PI 615137. Cucurbita pepo L.

Landrace. CM-CU-32; Calabacin; Ames 13367. Collected 03/11/1985 in Cuenca, Spain. Latitude 40 deg. 10' N. Longitude 2 deg. 10' W. Elevation 958 m. Manana, Cuenca Province. Hilly, level site, brown and red sand clay soil, medium stoniness, poor drainage, farmland. Sown May, harvested September. Fruits elongated, white. Used as food.

PI 615138. Cucurbita pepo L.

Landrace. CM-CU-40; Calabacin; Ames 13368. Collected 03/13/1985 in Cuenca, Spain. Latitude 40 deg. 8' N. Longitude 2 deg. 3' W. Elevation 1000 m. La Hor de Huecar, Cuenca Province. Mountainous, level site, brown silt soil, good drainage, farmland. Sown April-May, harvested August-September. Fruits white, small, very soft. Used for food.

PI 615139. Cucurbita pepo L.

Landrace. MU-CU-16; Calabacin largo; Ames 13369. Collected 09/22/1984 in Murcia, Spain. Latitude 37 deg. 45' N. Longitude 1 deg. 27' W. Elevation 220 m. Totana, Murcia Province. Plain level, level site, brown loam clay soil, low stoniness, moderate drainage. Sown February, harvested September-November. Used as food.

The following were developed by N.P.S. Dhillon, Punjab Agricultural University, Vegetable Research Station, Jalandhar, Punjab 144001, India. Received 07/01/1991.

PI 615140. Cucurbita pepo L.

Uncertain. 14-6-7; Ames 15934. Highly resistant to Red Pumpkin Beetle (*Aulacophora foveicollis*).

The following were donated by Alan Whittemore, USDA/ARS, University of Georgia, Regional Plant Introduction Station, Griffin, Georgia 30223-1797, United States. Received 02/28/1992.

PI 615141. *Cucurbita pepo* L.

Uncertain. Ames 19040. Collected 07/20/1991 in Kazakhstan. Government Store, Alma Ata, Kazakh Republic.

PI 615142. *Cucurbita pepo* L.

Uncertain. Ames 19041. Collected 07/20/1991 in Kazakhstan. Government Store, Alma Ata, Kazakh Republic.

PI 615143. *Cucurbita pepo* L.

Uncertain. Ames 19042. Collected 07/20/1991 in Kazakhstan. Government Store, Alma Ata, Kazakh Republic.

The following were donated by N.I. Vavilov All-Russian Scientific Research, Institute of Plant Genetic Resources, 44 Bolshaya Morskaya Street, St. Petersburg, Leningrad 190000, Russian Federation. Received 07/20/1992.

PI 615144. *Cucurbita pepo* L.

Cultivar. WIR 2710; Ames 19232; Baskirskaja 245. Collected 1990 in Bashkortostan, Russian Federation. Bashkiriya.

PI 615145. *Cucurbita pepo* L.

Cultivar. WIR 2731; Ames 19233; Ukrainskaja Mnogoplodnaja. Collected 1988 in Ukraine.

PI 615146. *Cucurbita pepo* L.

Cultivar. WIR 4010; Ames 19234; Luc. Collected 1989 in Ukraine.

PI 615147. *Cucurbita pepo* L.

Cultivar. WIR 2907; Ames 19235; Belyje 13. Collected 1990 in Moscow, Russian Federation.

PI 615148. *Cucurbita pepo* L.

Cultivar. WIR 3642; Ames 19236; Sote 38. Collected 1988 in Moldova.

The following were collected by Umesh Srivastava, NBPGR, New Delhi, Delhi, India; James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States; Jack E. Staub, USDA, ARS, University of Wisconsin, Department of Horticulture, Madison, Wisconsin 53706, United States. Donated by James D. McCreight, USDA, ARS, Agricultural Research Station, 1636 E. Alisal Street, Salinas, California 93905, United States. Received 01/13/1993.

PI 615149. *Cucurbita pepo* L.

Cultivated. USM-104; Chappankaddu; Ames 20123. Collected 10/19/1992 in Rajasthan, India. Maraksar?, Suratgarh, Rajasthan.

PI 615150. *Cucurbita pepo* L.

Cultivated. USM-114; Chappankaddu; Ames 20124. Collected 10/19/1992 in Rajasthan, India. Chappankaddu, Suratgarh, Rajasthan. Rainy season.

PI 615151. Cucurbita pepo L.

Cultivated. USM-120; Chappankaddu; Ames 20125. Collected 10/20/1992 in Rajasthan, India. Market, Suratgarh, Ganganagar, Rajasthan. Rainy season.

The following were donated by Mark Anthony, Little Chicago Popcorn Co., 11010 S. 419E, Muncie, Indiana 47302, United States. Received 02/19/1993.

PI 615152. Cucurbita pepo L.

Cultivated. Little Chicago Miniature Pumpkin; Ames 20181. Composite of 7 strains (including 2 gourd influenced); white, yellow, orange, etc.; all developed locally.

The following were donated by Glenn Drowns, Sand Hill Preservation Center, 1878 230th Street, Calamus, Iowa 52729, United States. Received 12/02/1993.

PI 615153. Cucurbita pepo L.

Cultivar. "Mandan"; Ames 21713.

The following were collected by Pokhara Horticultural Research Station, Zone District Kaski, Nepal. Donated by David Spooner, USDA, ARS, Department of Horticulture, 1575 Linden Drive, Madison, Wisconsin 53706-1590, United States. Received 03/20/1995.

PI 615154. Cucurbita pepo L.

Cultivated. 7000; Ames 22387. Collected 03/20/1995 in Nepal.

The following were donated by Andre Comeau, Agriculture Canada, 2915 Courcelles, Sainte-Foy, Quebec G1V 2J3, Canada. Received 02/26/1998.

PI 615155. Cucurbita pepo L.

Cultivated. Ames 24519. Collected 1998 in Krasnodar, Russian Federation. Good vigor; gives 2 or 3 fruits of 8 pounds each; seeds are green skinned, large; seed yield is not much above 1 cup per fruit.

The following were developed by Kenneth F. Grafton, North Dakota State University, Plant Sciences Department, P.O. Box 5051 SU Station, Fargo, North Dakota 58105-5051, United States. Received 12/10/2000.

PI 615156. Phaseolus vulgaris L.

Cultivar. Pureline. "ARTHUR". Pedigree - N85027/4/81-049-01/82-147-21//Neptune/81-077-06/03/N85007. Navy bean with erect, narrow profile growth habit with pods distributed throughout the canopy. Plant height averages 63.1 cm, which is taller than many commercial navy bean cultivars. Mid-season maturity (98 days in ND) but possesses uniform, rapid dry down shape, and is 18.8 g 100 seed-1 in weight. Carries the Ur-3 allele for rust (*Uromyces phaseoli*) and the dominant I gene for resistance to bean common mosaic virus. Shows limited damage to feeding injury cause by potato leafhopper (*Empoasca*

fabae) and may avoid white mold (*Sclerotinia sclerotiorum*).

The following were developed by H.H. Mundel, Agriculture and Agri-Food Canada, Research Centre, Box 3000, Lethbridge, Alberta T1J 4B1, Canada. Received 12/10/2000.

PI 615157. *Phaseolus vulgaris* L.

Cultivar. Pureline. "AC ARGONAUT"; L95A035; 90071A. Pedigree - Redkloud/Kentwood/3/Redkloud/Kentwood//Swan Valley/4/Beryl. High-yielding navy dry bean. Suited to production in western Canada. Higher yields (3000 kg/ha) over the official check cultivar, Envoy (2200 kg/ha). Matures in 101 d, which is 2 d earlier than Enjoy. Type IIa, semi-determinate growth habit, with semi-erect stem and branches and with some long vines (4), in contrast to the erect type I determinate growth habit of Envoy. Darker green leaf color than Envoy. Pod distribution is high on the plant and not scattered as it is for Envoy. Seed (at 14% moisture), averaging 22.0 g 100-1 over 7 sites, is greater in mass than that of Envoy (16.4 g 100-1). Flower color white, same as Envoy. Resistant to strains 1 and 15 of Bean Common Mosaic Virus and is resistant to prevalent races of rust collected in the field in Colorado in 2000. Susceptible to white mold, bean common bacterial blight, anthracnose, and root rot (*Fusarium* spp.).

PI 615158. *Phaseolus vulgaris* L.

Cultivar. Pureline. "AC BLACK DIAMOND"; 94CT382; L96F101. Pedigree - LE93-7/XAN51//LE93-8/DOR391. High-yielding large-seeded, shiny black dry bean. Well adapted to the Canadian prairies, yielding significantly more than the higher yielding of two check cultivars, UI 906, at 122% in narrow-rows and 106% in wide-rows. Moderately susceptible to white mold and resistant to Bean Common Mosaic Virus.

PI 615159. *Phaseolus vulgaris* L.

Cultivar. Pureline. "AC SCARLET"; 94CT182; L96D114. Pedigree - LE93-5/3/XAN87/UI36//BAC16/PVA800A. High-yielding small red dry bean. Well adapted to the eastern Canadian prairies, yielding significantly more than the check cultivar, NW 63, at 125%. Moderately susceptible to white mold, and susceptible to common bacterial blight, rust, fusarium and BCMV.

The following were developed by Scott Haley, Colorado State University, Soil and Crop Sciences Dept., Fort Collins, Colorado 80523, United States. Received 12/10/2000.

PI 615160. *Triticum aestivum* L. subsp. *aestivum*

Cultivar. Pureline. "CO960293-2". Pedigree - PI 222668/TAM 107// (Novi Sad 14/Novi Sad 603//Newton/3/Probrand 835, CO850034). Awne, white-glumed, medium-late maturity, semidwarf winter wheat. Carries a previously unidentified source of resistance to wheat streak mosaic virus (WSMV) and resistance to the Russian wheat aphid (RWA; *Diuraphis noxia*). Preliminary data suggest that the WSMV resistance is temperature-sensitive, similar to the *Wsm1* gene found in CI 17884. Allelism tests with CI 17884 indicate independent segregation of the two sources of WSMV resistance. No information is currently available on inheritance of RWA resistance.

The following were donated by Gad Ron, Greenfield Lawn Ind. Ltd.,
Kefar-Yehzekel, Israel. Received 05/23/1996.

PI 615161. *Cynodon transvaalensis* Burt Davy

Cultivar. "DANIELA"; Q 36318; Grif 14037. Originally destined to be
autoclaved. After GRIN records search, retained.

Species Index

Achyranthes aspera (613097)
Achyranthes bidentata (613015)
Aegilops biuncialis (614605-614612)
Aegilops cylindrica (614613-614624)
Aegilops geniculata (614625-614626)
Aegilops kotschyi (614627-614629)
Aegilops triuncialis (614630-614635)
Agrostis stolonifera (614849)
Allium cepa (612433, 614852-614853)
Amaranthus blitoides (612387, 612854)
Amaranthus blitum (612860)
Amaranthus cruentus (612847)
Amaranthus dubius (612850)
Amaranthus fimbriatus (612855)
Amaranthus hybrid (612849)
Amaranthus hybridus (612934)
Amaranthus hypochondriacus (612933)
Amaranthus palmeri (612856)
Amaranthus retroflexus (612851, 612857)
Amaranthus spinosus (612848)
Amaranthus standleyanus (613180)
Ampelopsis hybrid (613012)
Anthoxanthum odoratum (614677)
Antirrhinum majus subsp. cirrhigerum (613013)
Antirrhinum molle (613014)
Apium graveolens var. dulce (614667)
Arachis hypogaea (612601-612603, 613135, 613147, 613600, 614083-614087)
Aronia melanocarpa (613016)
Astragalus adsurgens (613637, 613644)
Astragalus cicer (613639, 615074)
Astragalus falcatus (613636, 613638, 613640-613641)
Astragalus glycyphyllos (613635, 613642)
Astragalus sp. (613634)
Astragalus tibetanus (613643)
Avena sativa (612393-612394, 612421, 612973, 613330-613343, 614661)
Avena sterilis (614636-614641)
Beta macrorhiza (613273)
Beta vulgaris (612767, 612770, 613165, 613226-613229, 613236, 614823-614824,
614826, 614828-614829)
Beta vulgaris subsp. maritima (614899)
Beta vulgaris subsp. vulgaris (612765-612766, 612768-612769, 613197-613225,
613230-613235, 613237-613272, 613274-613276, 614825, 614827)
Brassica carinata (613124-613128)
Brassica napus (612846, 614105-614109, 614792-614793)
Calendula arvensis (613017)
Calendula officinalis (613018-613020)
Calendula suffruticosa subsp. fulgida (613021)
Callistephus chinensis (614112-614117)
Capsicum annuum (612432, 612484-612485, 612955, 614877-614879, 615079)
Capsicum pubescens (614001)
Carthamus tinctorius (612967, 613355-613534, 615082)
Cenchrus ciliaris (614727)
Chenopodium ambrosioides (612852-612853)

Chenopodium berlandieri (612858)
Chenopodium glaucum (612859)
Chenopodium murale (614895)
Chenopodium quinoa (614002, 614880-614889, 614901-614938)
Chenopodium vulvaria (614896)
Chloris gayana (614728)
Cicer arietinum (612869, 613353, 614731)
Citrullus lanatus (614848)
Citrullus lanatus var. *lanatus* (612457-612475)
Cornus bretschnneideri (613022)
Cucumis melo (614369, 614371-614373, 614376-614379, 614383, 614407,
614419-614425, 614499, 614598, 614602-614603, 614672, 614781)
Cucumis melo subsp. *agrestis* (614168-614169, 614173-614175, 614279, 614304,
614307-614309, 614323, 614325, 614327-614330, 614334-614335, 614341,
614354-614357, 614359-614368, 614389-614399, 614409-614418,
614426-614442, 614456-614458, 614463-614471, 614477-614489,
614491-614494, 614512, 614514-614516, 614518-614521, 614523,
614525-614526, 614529-614534, 614536-614541, 614548-614554, 614558,
614563, 614565, 614573-614575, 614579-614581)
Cucumis melo subsp. *melo* (614157-614167, 614170-614172, 614176-614269,
614273-614278, 614280-614303, 614305-614306, 614310-614322, 614324,
614326, 614331-614333, 614336-614340, 614342-614353, 614358, 614374,
614380-614382, 614386, 614388, 614400-614406, 614408, 614443-614455,
614459-614462, 614472-614473, 614475-614476, 614490, 614500,
614502-614509, 614513, 614517, 614522, 614524, 614527-614528, 614535,
614542, 614544-614547, 614556, 614559-614562, 614564, 614566-614572,
614577-614578, 614582-614597, 614599-614601)
Cucumis melo var. *flexuosus* (614270-614272, 614370, 614375, 614384-614385,
614387, 614474, 614495-614498, 614501, 614510-614511, 614543, 614555,
614557, 614576)
Cucumis sativus (614604)
Cucurbita pepo (612861-612868, 612977, 614855, 615086-615155)
Cucurbita pepo var. *fraterna* (614683)
Cucurbita pepo var. *texana* (614684-614701)
Cynodon dactylon (614789)
Cynodon sp. (614675-614676)
Cynodon transvaalensis (615161)
Dactylis glomerata (614662, 614787, 614847)
Dianthus chinensis (613023)
Diets iridioides (614821)
Elymus canadensis (613134)
Elymus glaucus (613563)
Festuca arundinacea (612435, 612971, 613145-613146, 614103, 614668-614669,
614890-614891, 615084)
Festuca brevipila (613142)
Festuca lemanii (612434)
Festuca longifolia (614850, 614892)
Festuca ovina (612437)
Festuca rubra subsp. *fallax* (612593)
Festuca rubra subsp. *rubra* (612438, 612483)
Fragaria chiloensis subsp. *lucida* (612489)
Fragaria chiloensis subsp. *pacifica* (612487-612488, 612490)
Fragaria virginiana (612486, 612494-612495, 612569-612570)
Fragaria virginiana subsp. *glaucula* (612491, 612496, 612500-612501)
Fragaria virginiana subsp. *virginiana* (612492-612493, 612497-612499)
Glycine max (612443-612449, 612584-612587, 612594, 612608-612622,
612705-612764, 612930-612932, 612935-612954, 612960, 612962-612964,

612976, 613055-613056, 613195, 613558-613562, 613607-613609, 614007,
614088, 614153-614156, 614673-614674, 614702, 614732, 614773-614775,
614806-614808, 614831-614833, 614894)
Gossypium barbadense (613118-613123, 614859)
Gossypium hirsutum (612476-612482, 612959, 612974, 612980-612983, 613139,
613162-613163, 613344, 613588, 613624-613625, 614100-614101, 614119,
614788, 614940-614955, 615073)
Gypsophila muralis (613024)
Gypsophila repens (613025)
Helianthus annuus (613627-613628, 613708-613752, 613770-613791, 614663-614664
)
Helianthus debilis subsp. *cucumerifolius* (613753)
Helianthus debilis subsp. *silvestris* (613754)
Helianthus grosseserratus (613792-613793)
Helianthus hybrid (613755-613756)
Helianthus maximiliani (613757, 613794)
Helianthus niveus subsp. *tephrodes* (613758)
Helianthus nuttallii subsp. *nuttallii* (613759)
Helianthus petiolaris (613760)
Helianthus petiolaris subsp. *petiolaris* (613761-613769)
Helianthus tuberosus (613795-613796)
Hordeum bulbosum (614642-614645)
Hordeum marinum subsp. *gussoneanum* (614646)
Hordeum vulgare (612441-612442, 613580, 613606, 613618)
Hordeum vulgare subsp. *vulgare* (613155, 613538, 613579, 613603, 614008-614009
, 614089-614090, 614653, 614659, 614822, 614939)
Ipomoea batatas (612673-612702, 614795-614802)
Ipomoea batatas var. *batatas* (612703, 614794)
Lactuca sativa (612422-612431, 612596, 612623-612670, 612978, 613577-613578,
613589-613595, 613621, 614102, 614104, 614111, 614790-614791,
614842-614843, 614846, 614860-614861, 614867, 614869, 615050-615072)
Lagenaria breviflora (614812)
Lathyrus sativus (612440)
Lavatera cachemiriana (613026)
Lens culinaris subsp. *culinaris* (612870-612881)
Lespedeza cuneata (613537)
Lesquerella fendleri (613131-613132)
Lolium multiflorum (614099, 614844)
Lolium perenne (612436, 612704, 612979, 613535, 614777, 614858)
Lotus corniculatus (613539)
Malus angustifolia (613878-613884)
Malus baccata (613051-613054, 613807-613810, 613841-613844, 613877, 613929)
Malus coronaria (613826, 613885, 613890-613891, 613905, 613907)
Malus domestica (613814-613819, 613827-613833, 613863-613871, 613887, 613935,
613937-613939, 613948-613950, 613960-613966)
Malus fusca (613820, 613823, 613861, 613886, 613888-613889, 613895-613904,
613909-613911)
Malus hupehensis (613811, 613834, 613875, 613931, 613933)
Malus hybrid (613969)
Malus ioensis (613872-613873, 613892-613894, 613906, 613908)
Malus mandshurica (613804-613805)
Malus micromalus (613797-613801, 613822, 613839-613840)
Malus ombrophila (613913-613920)
Malus orientalis (613853)
Malus prunifolia (613802-613803, 613824-613825, 613845-613849, 613923,
613926-613928, 613930, 613934)
Malus sargentii (613812-613813, 613862, 613874, 613876)

Malus sieversii (613850, 613856-613857, 613951-613959, 613967, 613970-614000)
Malus sieversii var. *kirghisorum* (613854-613855, 613968)
Malus sieversii var. *turkmenorum* (613851-613852)
Malus sikkimensis (613912)
Malus sp. (613936, 613940-613944, 613946-613947)
Malus spectabilis (613836, 613924)
Malus toringo (613806, 613837-613838, 613858-613860, 613932, 613945)
Malus toringoides (613925)
Malus x asiatica (613821, 613835, 613921-613922)
Malva sylvestris (613027-613028)
Malva tournefortiana (613029)
Medicago sativa (613140, 613164, 614854)
Medicago sativa subsp. *sativa* (612882-612922, 613130)
Melilotus albus (612961)
Nicotiana tabacum (612391-612392, 612928, 613057-613058, 615083)
Oryza sativa (612439, 612579-612583, 614900, 614956-615049)
Parthenocissus tricuspidata (613031)
Parthenocissus vitacea (613030)
Paspalum vaginatum (612771, 614678-614680)
Pennisetum flaccidum (614803-614804)
Pennisetum glaucum (613101-613117, 614737-614772)
Pennisetum orientale (612929)
Phaseolus vulgaris (612595, 612597, 612600, 613136-613137, 613166-613174,
613178, 613345-613346, 613582-613584, 614094-614098, 614778-614779,
615080-615081, 615156-615159)
Pisum sativum (612598-612599, 612604, 612606, 612923-612925, 613100, 613138,
613277, 613604-613605, 614141, 614660, 614873)
Poa pratensis (612957, 612975, 614776, 614851, 614866, 614893, 615076, 615085
)
Raphanus sativus var. *oleiformis* (613141)
Rhus copallinum (613032)
Saccharum sp. (612671-612672, 614091-614093)
Secale cereale subsp. *cereale* (613129, 613133, 613196)
Secale sylvestre (614647-614648)
Sesamum sp. (612926-612927)
Sesbania sesban (613645)
Setaria italica (614814-614818)
Solanum jamesii (612450-612456)
Solanum tuberosum (614143-614152, 614707-614726)
Solanum x edinense (614704-614706)
Solanum yungasense (614703)
Sorbaria tomentosa (613033)
Sorghum bicolor (612395-612419, 612772-612845, 612984-613011, 613536,
613610-613614)
Spiraea betulifolia (613034)
Spiraea trilobata (613035)
Symphoricarpos albus (613036)
Symphoricarpos occidentalis (613037)
Trifolium incarnatum (613041-613050)
Trifolium stellatum (613040)
Trifolium wigginsii (615075)
Trigonella foenum-graecum (613629-613633)
Tripterygium regelii (613038)
Triticum aestivum (612956, 612965, 612972, 613278-613329, 613581,
613585-613587, 613601-613602, 614010-614043, 614110, 614118, 614780,
614782-614786, 614841, 614845, 614868, 614876)
Triticum aestivum subsp. *aestivum* (612388-612390, 612420, 612545-612568,

612576-612578, 612605, 612958, 612966, 613098-613099, 613175-613177,
614654-614657, 614729-614730, 614733, 614813, 614834-614840, 615160)
Triticum monococcum subsp. *aegilopoides* (614649-614652)
Triticum turgidum subsp. *durum* (613619-613620, 614044-614055, 614136, 614658,
614665-614666, 614670-614671)
Unident-Fabaceae sp. (612571-612575)
Vaccinium arboreum (613194, 613651, 614074)
Vaccinium calycinum (613569)
Vaccinium corymbosum (613571, 613657-613659, 614082)
Vaccinium darrowii (613652, 613661)
Vaccinium deliciosum (613671)
Vaccinium elliottii (613648, 613650, 613655-613656)
Vaccinium floribundum (613570)
Vaccinium fuscatum (614071)
Vaccinium hybrid (613193, 613660)
Vaccinium koreanum (614070, 614080)
Vaccinium macrocarpon (613182-613185, 614075-614079)
Vaccinium membranaceum (613181, 613646, 613669, 613673-613675)
Vaccinium myrsinites (613653-613654, 614073)
Vaccinium myrtillus (613187, 613191-613192, 613568)
Vaccinium neilgherrense (613190)
Vaccinium ovalifolium (613188, 613564, 613663, 613665-613666, 613670, 613672,
613676-613677, 613682-613685, 613689, 613691, 613696, 613702-613703)
Vaccinium ovatum (613574)
Vaccinium oxycoccos (613186, 613681, 613686, 613688, 613697-613698, 613705,
613707)
Vaccinium pallidum (613573, 614072)
Vaccinium parvifolium (613189, 613566-613567, 613647, 613662, 613664, 613667)
Vaccinium scoparium (613668)
Vaccinium stamineum (613649, 613678)
Vaccinium uliginosum (613565, 613575, 613679, 613693-613694, 613701, 613704,
613706, 614056-614066)
Vaccinium virgatum (613572)
Vaccinium vitis-idaea (613680, 613687, 613690, 613692, 613695, 613699-613700,
614067-614069, 614081)
Vicia faba (614809-614810)
Vigna radiata (614897-614898)
Vigna unguiculata (612502-612522, 613540-613553)
Vigna unguiculata subsp. *sesquipedalis* (612523-612524)
Vigna unguiculata subsp. *unguiculata* (612525-612544, 612607, 613554-613557)
X *Festulolium loliaceum* (614811)
X *Triticosecale* sp. (613156-613161, 613354)
Zea mays subsp. *mays* (612588-612592, 612968-612970, 613059-613096,
613143-613144, 613148-613154, 613179, 613347-613352, 613576,
613596-613599, 613615-613617, 613622-613623, 613626, 614003-614006,
614120-614135, 614137-614140, 614142, 614734-614736, 614805,
614819-614820, 614830, 614856-614857, 614862-614865, 614870-614872,
614874-614875, 615077-615078)
Zinnia bicolor (613039)
Zoysia sp. (614681-614682)