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Evaluation of the USDA Soybean Germplasm Collection: Maturity Groups 000-IV (PI 578371-PI 612761)

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Abstract

E.K. Peregrine, G.L. Sprau, C.R. Cremeens, R.L. Nelson, J.H. Orf, and D.A. Thomas. 2008. Evaluation of the USDA Soybean Germplasm Collection: Maturity Groups 000-IV (PI 578371-PI 612761). U.S. Department of Agriculture, Technical Bulletin No. 1919, 155 pp.

This publication contains information on the origin, descriptive characteristics, agronomic performance, and seed composition of soybean (*Glycine max* (L.) Merrill) germplasm accessions in maturity groups 000-IV from the USDA Soybean Germplasm Collection that were primarily introduced into the United States between 1993 and 2000. The accessions included in this publication were evaluated in 2001 and 2002 in Rosemount, MN (Lat. 45° 02′ N, for MG 000-I) and Urbana, IL (Lat. 40° 00′ N, for MG I-IV).

Keywords: agronomic characteristics, fatty acids, *Glycine max*, origin, seed composition, seed yield, soybean oil, soybean protein.

While supplies last, single copies of this publication may be obtained from USDA Soybean Germplasm Collection, 1101 West Peabody Drive, University of Illinois, Urbana, IL, 61801.

Copies of this publication may be purchased in various formats (microfiche, photocopy, CD, print on demand) from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, (800) 553-6847, www.ntis.gov.

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Introduction

This publication contains information on the origin, descriptive characteristics, agronomic performance, and seed composition data of soybean (*Glycine max* (L.) Merr.) germplasm accessions initially classified in maturity groups 000 through IV in the range from PI 578371 to PI 612761, plus some accessions that were omitted from earlier publications. Also included are cultivars in the same maturity groups, developed at public institutions in the United States and Canada, and released by 2001. These data are also available electronically through the Germplasm Resources Information Network (GRIN) at http://www.ars-grin.gov/npgs/ or from the Database Management Unit, USDA-ARS, BARC West, Beltsville, MD 20705. This is one of a series of technical bulletins that report on evaluation of the USDA Soybean Germplasm Collection. Other evaluation publications can be obtained from the Curator, USDA Soybean Germplasm Collection, USDA-ARS, 1101 West Peabody Drive, University of Illinois, Urbana, IL 61801.

The accessions included in this publication were evaluated in 2001 and 2002 in Rosemount, Minnesota (Lat. 45° 02′ N, for MG 000-I) and Urbana, Illinois (Lat. 40° 00′ N, for MG I-IV). Accessions are listed with the evaluation in which they were planted, regardless of which maturity group they were placed in following evaluation. All tests were replicated once per year. Specific comments about each evaluation follow.

MG 000 - I evaluation (Minnesota)

Planting dates were June 8, 2001, and May 28, 2002. Plots were 3.6 m long with 4 rows 76 cm apart. Plots were trimmed to 2.4 m after maturity and the middle two rows harvested. Because of the difference in planting date, plants matured an average of six days later in 2001 than in 2002. Growing conditions in 2001 were hot and dry, while 2002 was wet most of the growing season. As a result, seed size and yield in 2002 was generally greater than in 2001.

MG I - IV evaluation (Illinois)

Planting dates were May 4, 2001, and May 27, 2002. Plots were 4 m long with 4 rows 76 cm apart. They were trimmed to 2.4 m after maturity and the middle two rows harvested. Accessions initially classified as maturity group I were stunted by herbicide damage and were not harvested in 2002.

Seed composition was analyzed at the USDA Northern Center for Agricultural Utilization Research in Peoria, IL. Fatty acid composition was obtained by gas-liquid chromatography of the methyl esters (Christie 1989, Bannon et al. 1982). Oil and protein for samples with yellow seed coats was analyzed using the near infrared method for whole-grain analysis (AACC Method 39-21). Protein concentrations for samples with colored or heavily mottled seed coats were obtained using the improved

Kjeldahl method (AACC Method 46-16) and oil by the Butt Extraction method (AOCS Official Method Ac 3-44).

Data categories and abbreviations

The maturity groups of some accessions were changed based on evaluation data, but accessions are listed with the evaluation in which they were planted. Each evaluation was blocked by maturity group but the data are presented in cultivar name or PI number order.

Numeric values are the mean of observations from 2 years, except chemical data from the Urbana, IL, location for maturity group I are for 2001 only. Where only one observation was used, that value is followed by a caret (^). Chemical data obtained using the Kjeldahl procedure and Butt extraction are followed by a "*". An asterisk (*) following a mean indicates that the difference between the values for the two replications exceeded a specified limit. The limits for each trait are as follows:

Flowering Date >14 days Maturity Date >14 days Lodging >1 unit Height >15 cm Stem termination >1 unit Shattering >1 unit Seed quality >1 unit Seed mottling >1 unit $>4.0 \text{ cg sd}^{-1}$ Seed weight $>1.0 \text{ Mg ha}^{-1}$ Yield

This approach was implemented because of the possibility of misinterpreting the mean of only two observations when the difference between the individual values was large.

Missing data are indicated by a single dash (-).

Table 1

PI number

Serial numbers assigned by the Plant Exchange Office, National Germplasm Resources Laboratory, USDA-ARS, BARC-West, Beltsville, MD 20705.

Accession identifier

Accession names and identification numbers are reported as received. No attempt was made to change transliterations or translations done by others. When heterogeneous introductions were received, two or more sublines

were preserved and are distinguished by letter (A, B, C, etc.) suffixed to the PI number. Any name or number received with the original sample is enclosed in parentheses for sublines with other than the "A" designation.

Region and Country of origin

This is the region (province, state, or prefecture) and country where the accession originated based on the best information received from the country of acquisition or accession name. In some cases, the region listed may be the source of the seeds and not the origin of the accession.

Country of acquisition

This is the country from which the seeds were actually obtained.

Year of introduction or release

This is the year in which cultivars from the United States or Canada were officially released, or the year in which introductions were assigned PI numbers.

Maturity group

Maturity group is the classification of relative maturity based on data collected at Urbana, IL, and in some cases modified by data from Rosemount, MN.

Table 2

Stem termination:

D = determinate (stem termination score < 2.0)

N = indeterminate (stem termination score ≥ 2.5)

S = semi-determinate (stem termination score ≥ 2.0 and < 2.5)

Flower color

B = blue

P = purple

Dp = dark purple

W = white

Pubescence color

T = tawny

Lt = light tawny

G = gray

Ng = near gray

Pubescence form

A = appressed on leaf surface

E = erect on leaf surface

Sa = semiappressed on leaf surface

Va = very appressed on leaf surface

Pubescence density

G = glabrous

N = normal density

Sp = sparse

Ssp = semisparse (slightly reduced density, most noticeable on the pulvinus)

Sdn = semidense

Pod color

Bl = black

Br = brown

Dbr = dark brown

Lbr = light brown

Tn = Tan

Seedcoat luster

B = bloom

Lb = light bloom

D = dull

I = intermediate (between shiny and dull)

S = shiny

Seedcoat and hilum color

Bf = buff

Bl = black

Brbl = variable from brown to black

Br = brown

G = gray

Ggn = gray green

Gn = green

Gnbr = green brown

Ib = imperfect black

Ig = imperfect gray

Rbf = red buff

Rbr = red brown

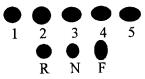
Tn = tan

Y = yellow

Dark or light shades of these colors are indicated by prefixing the abbreviations with D or L (e.g., Lbr = light brown).

Seed shape

Side view: 1 (round) to 5 (very elongated)



End view: R (Round), N (Normal), F (Flat)

Other traits

4sd = many four-seeded pods

Abh = imperfect abscission of hilum

Dab = delayed abscissions of leaves

Def = defective seedcoat (irregular splitting of the seedcoat)

Flk = brown flecks on black seedcoat

Gnc = green cotyledon

Net = splitting of the outer layer of the seedcoat, which produces a netted appearance on the sides of the seeds

Sad = saddle-shaped dark pigment on seedcoat encompassing the hilum

Sph = spread hilum (slight, regular extension of hilum pigment beyond hilum boundary)

St = black, curved stripes on seedcoat

Vhil = variable hilum color

Vsc = variable seedcoat color

Lft5 = 5 leaflets frequent

Na = narrow leaflet

Sw = semi-wild

Slight or some expression of any of these "Other traits" is indicated by prefixing the abbreviation with S (e.g., Sna = Slight narrow leaf).

Also see "Mottling" in Table 3.

Table 3

Flowering

Date when 50% of the plants have at least one flower (month-day).

Maturity

Date when 95% of the pods have reached final color (month-day).

Lodging

Scored 1 (erect) to 5 (prostrate).

Height

Length of stem from ground to stem tip, in centimeters, at maturity.

Stem termination

Scored 1 (very determinate) to 5 (very indeterminate).

Shattering

Early: Scored at harvest

Late: Scored on border rows two weeks after maturity Score based on percentage of open pods as follows:

1 = no shattering 2 = 1 to 10 percent 3 = 10 to 25 percent 4 = 25 to 50 percent 5 = >50 percent

Seed quality

Scored 1 (good) to 5 (very poor), considering wrinkling, defective seedcoat, greenish or diseased seeds.

Mottling

Score based on percentage of seedcoat with dark pigment as follows:

1 = no mottling2 = 1 to 10%

3 = 10 to 25%

4 = 25 to 50%

5 = >50%

A double dash (--) indicates that the seedcoat was normally dark pigmented and thus mottling cannot be scored.

Seed weight

Centigrams per seed based on a 100-seed sample.

Seed yield

Megagrams per hectare.

Table 4

Seed composition:

Protein and oil: percentage of dry weight of seed.

Fatty acids (palmitic, stearic, oleic, linoleic, linolenic): Percentage of total fatty acids.

Literature Cited

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Table 1.1 Identification and origin information for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| PI No. | Accession identifier | Region of origin | Country of origin | Country of acquisition | Year introduced or released | • |
|---------|----------------------|---------------------|-------------------------|------------------------|-----------------------------------|-------|
| FI No. | identifier | or origin | origin | acquisition | of feleased | group |
| | Alpha | Minnesota | United States | United States | | I |
| | Barnes | North Dakota | United States | United States | 2000 | 0 |
| | Council | North Dakota | United States | United States | 1994 | 0 |
| | Daksoy | North Dakota | United States | United States | 1998 | 00 |
| | Danatto | North Dakota | United States | United States | 1996 | 0 |
| | Faribault | Minnesota | United States | United States | 1994 | I |
| | Freeborn | Minnesota | United States | United States | 1995 | I |
| | Glacier | Minnesota | United States | United States | 1995 | 00 |
| | Granite | Minnesota | United States | United States | 1995 | I |
| | Harlon | Ontario | Canada | Canada | 1974 | I |
| | Hendricks | Minnesota | United States | United States | 1994 | 0 |
| | Jim | North Dakota | United States | United States | 1998 | 00 |
| | Maple Presto | Ontario | Canada | Canada | 1979 | 000 |
| | MN0201 | Minnesota | United States | United States | 2001 | 0 |
| | MN0301 | Minnesota | United States | United States | 1998 | 0 |
| | MN0302 | Minnesota | United States | United States | 2001 | 0 |
| | MN0901 | Minnesota | United States | United States | 2000 | 0 |
| | MN0902CN | Minnesota | United States | United States | 2001 | 0 |
| | MN1301 | Minnesota | United States | United States | 1998 | I |
| | MN1302 | Minnesota | United States | United States | 2001 | I |
| | MN1401 | Minnesota | United States | United States | | I |
| | MN1801 | Minnesota | United States | United States | | I |
| | NE1900 | Nebraska | United States | United States | | I |
| | Norpro | North Dakota | United States | United States | | 0 |
| | OAC Vision | Ontario | Canada | Canada | 1991 | 000 |
| | Sargent | North Dakota | United States | United States | | 0 |
| | Stride | South Dakota | United States | United States | | I |
| | Sturdy | Minnesota | United States | United States | | II |
| | Surge | South Dakota | United States | United States | | 0 |
| | Titan | Michigan | United States | United States | | Ī |
| | Toyopro | Minnesota | United States | United States | | 0 |
| | Traill | North Dakota | United States | United States | | 0 |
| | UM3 | Minnesota | United States | United States | | 0 |
| | Walsh | North Dakota | United States | United States | | 0 |
| 342619 | | Primorye | Russia | Russia | 1969 | 0 |
| 3426191 | | Primorye | Russia | Russia | 1969 | 0 |
| 468904 | | Jilin | China | China | 1982 | 0 |
| 468906 | | Jilin | China | China | 1982 | 0 |
| 468907 | | Jilin | China | China | 1982 | I |
| 468908 | | Jilin | China | China | 1982 | 000 |
| 468909 | | Jilin | China | China | 1982 | 0 |
| 468910 | | Jilin | China | China | 1982 | 0 |
| 468911 | | Jilin | China | China | 1982 | 00 |
| 468912 | | Jilin | China | China | 1982 | 00 |
| 468913 | | Jilin | China | China | 1982 | 000 |
| 483459 | | Jilin | China | China | 1984 | I |
| | A Huang pau tsu | unknown | Taiwan | Taiwan | 1986 | 00 |
| 20.1031 | Paul Paul 150 | GIRIIO WII | - 41 11 411 | 1 41 17 411 | 1700 | |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | Stem term. | Flowe color | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|--------------|-------------------|------------|-------------|----|----------|---------|--------------|------------------|----|----------------|----------------|---------------|
| Alpha | I | N | P | Т | Е | N | Tn | I | Y | Y | | 2N |
| Barnes | 0 | N | P | G | Ē | N | Br | Ī | Y | Y | | 3N |
| Council | 0 | N | P | G | E | N | Br | Ī | Y | Y | | 2N |
| Daksoy | 00 | N | P | G | E | N | Tn | D | Y | Y | | 3N |
| Danatto | 0 | N | P | G | E | N | Tn | I | Y | Y | | 2N |
| Faribault | Ĭ | N | W | G | E | N | Tn | D | Y | Bf | | 2N |
| Freeborn | Ī | N | W | T | E | N | Br | D | Y | Bl | | 2N |
| Glacier | 00 | N | P | T | E | N | Br | I | Y | Y | | 2N |
| Granite | I | N | P | G | E | N | Br | D | Y | G | | 2N |
| Harlon | I | N | W | G | Ē | N | Br | D | Y | Y | | 2N |
| Hendricks | 0 | N | P | G | Ē | N | Br | D | Y | Y | | 2N |
| Jim | 00 | N | P | G | Ē | N | Br | I | Y | Y | | 3N |
| Maple Presto | 000 | N | P | T | E | Ssp | Br | Ī | Ŷ | Tn | | 2N |
| MN0201 | 0 | N | P | T | E | N | Br | Ī | Ŷ | Y | | 2N |
| MN0301 | 0 | N | P | G | E | N | Br | Ī | Ŷ | Y | | 2N |
| MN0302 | 0 | N | P | G | E | N | Tn | Ī | Ŷ | Bf | | 3N |
| MN0901 | 0 | N | W | G | E | N | Br | Ī | Ŷ | Y | | 3N |
| MN0902CN | 0 | N | W | T | E | N | Br | Ī | Ŷ | Y | | 2N |
| MN1301 | Ĭ | N | W | G | E | N | Br | D | Ŷ | Y | | 3N |
| MN1302 | Ī | N | P | G | E | N | Br | I | Ŷ | Bf | | 3N |
| MN1401 | Ī | N | P | T | E | N | Tn | D | Ŷ | Bl | | 3N |
| MN1801 | Ī | N | P | G | E | N | Br | I | Ŷ | Bf | | 2N |
| NE1900 | Ī | N | W | G | E | N | Br | D | Y | Y | | 2N |
| Norpro | 0 | N | P | G | E | N | Br | D | Ŷ | Y | | 3N |
| OAC Vision | 000 | N | P | T | Ē | N | Br | D | Ŷ | Tn | | 3N |
| Sargent | 0 | N | W | G | E | N | Br | I | Y | Y | | 3N |
| Stride | Ĭ | N | P | G | E | N | Br | I | Y | Ib | | 3N |
| Sturdy | II | N | P | G | E | N | Br | S | Y | Ib | | 2N |
| Surge | 0 | N | P | G | E | N | Br | I | Y | Ib | | 3N |
| Titan | Ĭ | N | P | T | E | N | Br | D | Y | Bl | | 3N |
| Toyopro | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| Traill | 0 | N | P | T | E | N | Br | I | Y | Y | | 2N |
| UM3 | 0 | S | W | T | E | N | Tn | I | Y | Y | | 2N |
| Walsh | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 342619A | 0 | N | P | T | A | N | Br | В | Bl | Bl | Flk,Sw | 4N |
| 342619B | 0 | N | P | T | A | N | Br | В | B1 | Bl | Flk,Sw | 4N |
| 468904 | 0 | N | P | T | Va | Ssp | Br | I | Bl | Bl | 4sd,Na,Sw | 4N |
| 468906 | 0 | N | P | T | Va | Ssp | Br | I | Bl | Bl | Na,Sw | 4N |
| 468907 | I | N | W | T | Sa | N N | Br | В | Bl | Bl | 4sd,Flk,Sw | 2N |
| 468908 | 000 | N | W | T | E | N | Br | В | Bl | Bl | Na,Sw | 3N |
| 468909 | 0 | N | P | T | A | Ssp | Br | I | Bl | Bl | Na,Sw | 4N |
| 468910 | 0 | N | P | Lt | E | N | Br | В | Bl | Bl | Na,Sw Na,Sw | 3N |
| 468911 | 00 | N | P | T | A | N | Br | I | Bl | Bl | Na,Sw | 4N |
| 468912 | 00 | N | P | T | Va | Ssp | Br | В | Bl | Bl | 4sd,Na,Sw | 3N |
| 468913 | 000 | N | P | Ng | v a A | N N | Br | I | Br | Br | Sw | 4N |
| 483459 | I | N | P | T | A | Sp | Br | I | Bl | Bl | Flk,Sw | 4N |
| rostsy | 00 | N | P | G | E | Sp N | Br | I | Y | Y | 1 1K,5 W | 2N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering Maturity | | | | Stem | Shattering | Seed | | | |
|--------------|--------------------|--------|---------|------|-------------|------------|---------|----------|---------|---------|
| | date | | | _ | termination | | - | Mottling | _ | |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| Alpha | 714^ | 1001^ | 3.0^ | 61^ | 3.0^ | 2.0^ | 1.5^ | 1.0^ | 17.7^ | 1.40^ |
| Barnes | 714^ | 910^ | 2.0^ | 74^ | 2.0^ | 2.0^ | 2.5^ | 1.0^ | 12.7^ | 1.34^ |
| Council | 711 | 915 | 2.5 | 76 | 2.5 | 1.0^ | 2.5 | 1.0 | 14.5* | 2.06 |
| Daksoy | 709 | 906 | 2.5 | 77 | 3.0 | 2.0^ | 2.3 | 1.0 | 13.1 | 1.83 |
| Danatto | 715 | 913 | 3.5 | 68 | 2.0 | 1.0^ | 2.3 | 1.5 | 8.3 | 1.88* |
| Faribault | 721 | 923 | 2.0 | 85 | 2.5 | 1.0^ | 2.0 | 1.0 | 12.5 | 2.24* |
| Freeborn | 715 | 928 | 2.0 | 84 | 2.5 | 2.0^ | 1.5 | 1.0 | 17.3 | 2.26* |
| Glacier | 709 | 907 | 2.5 | 74 | 3.0 | 2.0^ | 2.5 | 1.0 | 13.2 | 1.96* |
| Granite | 711 | 930 | 2.5 | 92 | 2.5 | 1.0^ | 2.0 | 1.0 | 17.6 | 2.50* |
| Harlon | 714 | 919 | 2.0 | 95 | 3.0 | 1.0 | 2.0 | 1.0 | 14.3 | 2.08 |
| Hendricks | 713 | 918 | 2.0* | 73* | 2.0 | 1.0 | 2.8 | 1.0 | 15.2 | 1.54 |
| Jim | 710 | 909 | 2.5 | 78 | 3.0 | 2.0^ | 2.3 | 1.0 | 14.8 | 2.09* |
| Maple Presto | 705 | 828 | 1.0 | 56 | 3.0 | 3.5* | 3.0 | 1.0 | 12.5 | 0.61 |
| MN0201 | 711 | 909 | 2.0* | 78 | 2.5 | 2.0^ | 1.8 | 1.0 | 12.4 | 1.97* |
| MN0301 | 707 | 910 | 2.0 | 86 | 2.5 | 2.0^ | 2.3 | 1.0 | 13.0 | 2.50* |
| MN0302 | 712 | 911 | 1.5 | 79 | 2.5 | 2.0^ | 1.8 | 1.0 | 13.0 | 2.23* |
| MN0901 | 711 | 920 | 2.5 | 74* | 2.5 | 1.0 | 2.0 | 1.0 | 14.6 | 2.68* |
| MN0902CN | 709 | 920 | 2.0* | 81* | 2.5 | 2.0^ | 1.8 | 1.5 | 11.9 | 1.84* |
| MN1301 | 711 | 923 | 2.0 | 85 | 2.5 | 1.0^ | 1.8 | 1.0 | 15.9 | 2.45* |
| MN1302 | 713 | 923 | 2.0 | 81 | 2.5 | 1.0^ | 2.0 | 1.0 | 17.5 | 2.64* |
| MN1401 | 713 | 921 | 2.0 | 93 | 2.5 | 1.0^ | 2.0 | 1.0 | 17.9* | 2.38* |
| MN1801 | 713 | 929 | 2.0 | 91 | 2.5 | 1.0^ | 1.8 | 1.0 | 15.5 | 2.59* |
| NE1900 | 719 | 930 | 2.0* | 74 | 2.5 | 1.0^ | 1.5 | 1.0 | 15.6 | 2.44* |
| Norpro | 711 | 909 | 2.0 | 74 | 2.5 | 3.0^ | 2.0 | 1.0 | 14.8* | 1.79* |
| OAC Vision | 707 | 901 | 2.0 | 63 | 3.0 | 3.0 | 2.5 | 1.0 | 15.6 | 0.36 |
| Sargent | 711 | 917 | 2.0 | 76 | 2.5 | 2.0^ | 1.5 | 1.0 | 15.6 | 2.51* |
| Stride | 712 | 923 | 1.5 | 80 | 2.5 | 1.0^ | 1.5 | 1.0 | 16.1 | 2.53* |
| Sturdy | 713 | 1001 | 2.5 | 93 | 2.5 | 1.0 | 1.8 | 1.0 | 17.3 | 2.58* |
| Surge | 711 | 923 | 2.0 | 69 | 2.5 | 1.0^ | 2.3 | 1.0 | 17.4* | 2.31* |
| Titan | 713 | 1001 | 2.0 | 78 | 2.5 | 1.0^ | 1.8 | 1.5 | 16.9 | 2.43* |
| Toyopro | 713 | 919 | 2.0 | 70* | 2.5 | 1.0^ | 2.0 | 1.5 | 13.4 | 1.93* |
| Traill | 708 | 907 | 1.5 | 70 | 2.5 | 2.0^ | 2.0 | 1.0 | 13.3 | 1.96* |
| UM3 | 711 | 907 | 2.0 | 55 | 1.0 | 1.0^ | 2.3 | 1.5 | 6.0 | 1.21* |
| Walsh | 713 | 909 | 2.0 | 72 | 2.5 | 2.0^ | 2.3* | 1.0 | 14.0 | 2.32* |
| 342619A | 719 | 915 | 5.0 | 41 | 5.0 | 5.0^ | 2.5 | | 4.6 | 0.47 |
| 342619B | 716 | 915 | 5.0 | 41* | 5.0 | 5.0^ | 2.5 | | 4.9 | 0.29 |
| 468904 | 723 | 910 | 5.0 | 44 | 5.0 | 5.0^ | 2.8 | | 2.7 | 0.29 |
| 468906 | 728 | 919 | 5.0 | 49 | 5.0 | 2.0^ | 2.0^ | | 3.8^ | 0.03^ |
| 468907 | 803 | 927 | 4.0 | 101* | 5.0 | 2.0^ | 2.5 | | 4.6 | 0.97 |
| 468908 | 711 | 901 | 4.5 | 14 | 5.0 | 5.0^ | 2.3 | | 2.4 | 0.09 |
| 468909 | 723 | 913 | 5.0 | 50* | 5.0 | 5.0^ | 2.5 | | 2.7 | 0.33 |
| 468910 | 715 | 913 | 5.0 | 69* | 5.0 | 3.0^ | 2.5 | | 3.2 | 0.41 |
| 468911 | 719 | 903 | 5.0 | 41 | 5.0 | 5.0^ | 2.5 | | 3.0 | 0.06 |
| 468912 | 718^ | 903 | 5.0 | 36 | 5.0 | 5.0^ | 2.5^ | | 2.4^ | 0.04^ |
| 468913 | 714 | 831 | 5.0 | 45* | 5.0 | 3.5 | 2.3 | | 2.4 | 0.20 |
| 483459 | 731 | 923 | 4.5 | 54 | 4.5 | 3.0^ | 2.3 | | 3.8 | 0.83 |
| 504483A | 712 | 909 | 2.0 | 68 | 3.0 | 5.0^ | 2.3 | 1.0 | 18.5 | 1.08* |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed con | | Oil composition | | | | |
|--------------|----------|---------------------|---------------------|-----------------|---------|-------|----------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| Alpha | I | 42.0^ | 16.4^ | 10.4 | 2.2 | 18.0 | 57.1 | 12.3 |
| Barnes | 0 | 40.1^ | 20.9^ | 10.6 | 3.4 | 23.3 | 55.2 | 7.5 |
| Council | 0 | 40.0 | 19.5 | 10.6 | 3.6 | 22.3 | 54.7 | 8.8 |
| Daksoy | 00 | 41.6 | 18.5 | 10.3 | 3.3 | 22.0 | 55.7 | 8.7 |
| Danatto | 0 | 40.5 | 18.6 | 10.6 | 3.5 | 21.7 | 55.3 | 8.9 |
| Faribault | I | 38.7 | 20.3 | 11.1 | 3.7 | 21.1 | 54.4 | 9.7 |
| Freeborn | I | 40.8 | 19.2 | 10.1 | 3.1 | 23.1 | 55.0 | 8.6 |
| Glacier | 00 | 40.9 | 19.0 | 11.2 | 3.4 | 20.5 | 56.6 | 8.2 |
| Granite | I | 41.4 | 18.8 | 10.1 | 3.5 | 20.4 | 55.8 | 10.2 |
| Harlon | I | 39.8 | 20.0 | 11.2 | 2.8 | 23.8 | 52.7 | 9.4 |
| Hendricks | 0 | 41.5 | 19.1 | 11.7 | 3.5 | 19.2 | 56.8 | 8.7 |
| Jim | 00 | 41.6 | 18.5 | 10.5 | 3.2 | 21.4 | 56.2 | 8.8 |
| Maple Presto | 000 | 40.1 | 21.7 | 10.4 | 3.1 | 35.9 | 44.8 | 5.8 |
| MN0201 | 0 | 42.8 | 19.1 | 11.0 | 3.4 | 21.1 | 55.6 | 8.9 |
| MN0301 | 0 | 40.3 | 19.6 | 10.5 | 3.8 | 21.4 | 55.8 | 8.5 |
| MN0302 | 0 | 40.3 | 19.2 | 10.8 | 3.4 | 20.9 | 56.0 | 8.9 |
| MN0901 | 0 | 39.6 | 21.0 | 10.2 | 3.6 | 22.0 | 55.6 | 8.5 |
| MN0902CN | 0 | 42.6 | 18.5 | 11.2 | 3.9 | 22.9 | 54.7 | 7.2 |
| MN1301 | Ĭ | 40.7 | 19.5 | 10.8 | 3.8 | 23.8 | 53.2 | 8.3 |
| MN1302 | Ī | 39.2 | 19.2 | 10.7 | 3.7 | 19.2 | 57.0 | 9.5 |
| MN1401 | Ī | 41.4 | 19.4 | 10.4 | 3.7 | 20.9 | 55.9 | 9.1 |
| MN1801 | Ī | 40.8 | 19.1 | 11.8 | 3.6 | 19.8 | 55.8 | 9.1 |
| NE1900 | Ī | 40.1 | 18.5 | 11.6 | 3.8 | 22.5 | 53.0 | 9.0 |
| Norpro | 0 | 44.0 | 18.3 | 11.5 | 3.3 | 22.4 | 54.1 | 8.6 |
| OAC Vision | 000 | 43.0 | 19.9 | 12.0 | 3.1 | 22.0 | 53.6 | 7.7 |
| Sargent | 0 | 40.8 | 20.7 | 10.1 | 3.9 | 24.4 | 53.9 | 7.7 |
| Stride | Ĭ | 38.1 | 20.5 | 11.2 | 3.7 | 22.1 | 54.5 | 8.5 |
| Sturdy | II | 40.6 | 19.0 | 10.0 | 3.3 | 23.9 | 54.4 | 8.5 |
| Surge | 0 | 41.5 | 20.4 | 11.1 | 3.8 | 23.7 | 54.0 | 7.4 |
| Fitan | Ĭ | 38.3 | 19.4 | 11.3 | 3.3 | 20.8 | 55.9 | 8.6 |
| Гоуорго | 0 | 45.9 | 16.7 | 10.8 | 3.8 | 20.6 | 55.9 | 8.9 |
| Traill | 0 | 41.6 | 19.1 | 10.9 | 4.2 | 22.5 | 53.8 | 8.5 |
| UM3 | 0 | 40.7 | 18.1 | 11.6 | 3.5 | 16.8 | 57.1 | 11.0 |
| Walsh | 0 | 41.5 | 19.4 | 11.5 | 3.6 | 21.1 | 54.8 | 9.1 |
| 342619A | 0 | 53.9 ^w | 13.3 ^w | 10.1 | 3.2 | 12.2 | 61.4 | 13.1 |
| 342619B | 0 | 49.1 ^w | 14.3 ^w | 10.2 | 3.6 | 13.0 | 60.6 | 12.5 |
| 468904 | 0 | 54.5 ^w | 9.5 ^w | 10.3 | 2.9 | 11.9 | 56.8 | 18.1 |
| 468906 | 0 | 46.1 ^w ^ | 11.6 ^w ^ | 11.8 | 2.7 | 11.8 | 58.9 | 14.8 |
| 468907 | Ĭ | 55.4 ^w | 11.7 ^w | 10.7 | 3.0 | 11.2 | 59.6 | 15.6 |
| 468908 | 000 | 53.1 ^w ^ | 12.7 ^w ^ | 10.7 | 3.7 | 15.6 | 56.4 | 13.9 |
| 468909 | 0 | 54.4 ^w | 11.0 ^w | 10.5 | 2.8 | 12.5 | 57.9 | 16.4 |
| 468910 | 0 | 53.3 ^w | 12.5 ^w | 9.0 | 2.8 | 14.5 | 57.7 | 15.9 |
| 468911 | 00 | 52.1 ^w | 9.7 ^w | 10.5 | 3.1 | 13.4 | 56.0 | 17.0 |
| 468912 | 00 | 47.6 ^w ^ | 12.6 ^w ^ | 10.3 | 3.5 | 15.4 | 57.0 | 13.4 |
| 468913 | 000 | 52.6 ^w | 9.8 ^w | 11.9 | 2.7 | 11.3 | 58.3 | 15.4 |
| 483459 | I | 48.5 ^w | 12.6 ^w | 10.7 | 2.6 | 12.2 | 58.6 | 15.8 |
| 504483A | 00 | 42.5 | 18.2 | 10.7 | 3.4 | 21.2 | 55.4 | 8.6 |

Table 1.1 Identification and origin information for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|------------------------|--------------------------|--------------|---------|-------------|-------------|----------|
| | Accession | Region | of | of | introduced | Maturity |
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 504483B | (Huang pau tsu) | unknown | Taiwan | Taiwan | 1986 | I |
| 504484 | Hua yen | unknown | Taiwan | Taiwan | 1986 | Ī |
| 504485 | Ho ko tao (Mikawshima) | unknown | Japan | Taiwan | 1986 | Ī |
| 504492 | Tien kuan ou yuan | unknown | Taiwan | Taiwan | 1986 | 00 |
| 504494 | Shan ho tao | unknown | Taiwan | Taiwan | 1986 | I |
| 504499 | Ta li tsao shen wu tou | unknown | Taiwan | Taiwan | 1986 | 000 |
| 504502 | Ou yuan tsao shen | unknown | Taiwan | Taiwan | 1986 | I |
| 504506 | ou y uun touo snen | unknown | China | Taiwan | 1986 | 0 |
| | (Tercinskaja 24) | unknown | Ukraine | Russia | 1987 | 000 |
| 549077 | Jui feng No. 1 | unknown | China | China | 1990 | 0 |
| 561233A | | Beijing | China | China | 1991 | Ĭ |
| | Yantarnaya | Voronezh | Russia | Russia | 1991 | 00 |
| | (Yantarnaya) | Voronezh | Russia | Russia | 1991 | 00 |
| 578371 | Aai hui ben di zhong | Heilongjiang | China | China | 1993 | 0 |
| 578371 | Aan da 37-1 | Heilongjiang | China | China | 1993 | 0 |
| 578372 | An da bai mei | Heilongjiang | China | China | 1993 | 0 |
| 578374 | Aan tu bai hua lu da dou | Jilin | China | China | 1993 | I |
| | Aan tu dang di hei dou | Jilin | China | China | 1993 | 0 |
| | (Aan tu dang di hei dou) | Jilin | China | China | 1993 | I |
| 578373 D 578377 | Aan tu niu mao huang | Jilin | China | China | 1993 | 0 |
| 578380A | _ | Heilongjiang | China | China | 1993 | I |
| 578380A | Bai qi kuai dou | Heilongjiang | China | China | 1993 | 0 |
| 578382 | Bai qi xiao jin huang | Heilongjiang | China | China | 1993 | I |
| 578384 | Bai tie jia qing | Liaoning | China | China | 1993 | I |
| 578385 | Bao qing xiao jin huang | Heilongjiang | China | China | 1993 | I |
| 578386 | Bao xian dou | Heilongjiang | China | China | 1993 | I |
| 578387 | Bei feng No. 3 | Heilongjiang | China | China | 1993 | 000 |
| | Bei man 217 | Heilongjiang | China | China | 1993 | 0 |
| | (Bei man 217) | Heilongjiang | China | China | 1993 | I |
| 578389 | Bei man 41 | Heilongjiang | China | China | 1993 | 0 |
| 578391 | Bian da li | Jilin | China | China | 1993 | 0 |
| | Cai zhong pu | Jilin | China | China | 1993 | Ĭ |
| 578393 | Feng shou 11 | Heilongjiang | China | China | 1993 | 000 |
| 578394 | Feng shou 11 xuan | Jilin | China | China | 1993 | 0 |
| 578395 | Feng shou 12 | Heilongjiang | China | China | 1993 | I |
| 578396 | Feng shou 13 | Heilongjiang | China | China | 1993 | 0 |
| 578397 | Feng shou 14 | Heilongjiang | China | China | 1993 | 00 |
| 578398 | Feng shou 15 | Heilongjiang | China | China | 1993 | 00 |
| 578400 | Fu dou | Jilin | China | China | 1993 | I |
| 578401A | | Liaoning | China | China | 1993 | I |
| | (Fu shou) | Liaoning | China | China | 1993 | I |
| | (Fu shou) | Liaoning | China | China | 1993 | Ī |
| 578404 | Gong jiao 5601-1 | Jilin | China | China | 1993 | 0 |
| 578407 | Gong jiao 5610-2 | Jilin | China | China | 1993 | I |
| 578408 | Gong jiao 5610-3 | Jilin | China | China | 1993 | I |
| | Gong jiao 5919-1 | Jilin | China | China | 1993 | I |
| 578415 | Guan shi suo da dou | Heilongjiang | China | China | 1993 | 0 |
| 370713 | Saan biii bao aa aoa | Tronglang | Cillia | Cillia | 1//3 | U |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | _ | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|---------|----|--------|----------|-----|--------|--------|----------------|--------------|---------------|
| | | | | | | • | | | | | other traits | |
| 504483B | I | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 504484 | I | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 504485 | I | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 504492 | 00 | D | P | T | Sa | Ssp | Br | I | Y | Br | | 2N |
| 504494 | I | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 504499 | 000 | D | W | T | Sa | N | Br | D | Bl | Bl | | 2N |
| 504502 | I | D | P | T | E | Ssp | Br | I | Y | Br | | 2N |
| 504506 | 0 | S | P | G | E | N | Br | I | Y | Y | | 2N |
| 507704B | 000 | N | P | T | E | N | Br | S | Y | Br | | 3N |
| 549077 | 0 | D | P | G | E | N | Br | I | Y | Y | Sna | 2N |
| 561233A | I | N | W | G | E | Ssp | Br | I | Y | Y | | 1N |
| 561282A | 00 | D | P | T | E | N | Br | D | Y | B1 | | 2N |
| 561282E | 00 | D | P | T | Е | Ssp | Br | I | Y | G | | 2N |
| 578371 | 0 | N | P | G | E | N | Br | S | Y | Y | | 2N |
| 578372 | 0 | N | P | G | E | N | Bl | I | Y | Ib | | 2N |
| 578373 | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578374 | Ī | D | W | T | E | Ssp | Bl | Ī | Gn | Tn | Gnc | 2N |
| 578375A | 0 | N | P | T | Ē | Ssp | Br | Ī | B1 | Bl | 3.1 . | 4N |
| 578375B | Ĭ | N | P | T | E | Ssp | Br | Ī | Bl | Bl | | 3N |
| 578377 | 0 | N | P | T | E | Ssp | Br | D | Y | Br | | 3N |
| 578380A | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 578381 | 0 | N | P | Lt | E | Ssp | Br | I | Y | Y | | 2N |
| 578382 | I | D | P | G | E | N N | Tn | I | Y | Y | | 2N |
| 578384 | I | D | W | G | E | Ssp | Dbr | I | Y | Y | | 2N 2N |
| 578385 | I | N | vv P | T | E | Ssp N | Bl | I | Y | Br | | 2N 2N |
| 578386 | I | S | W | G | E | N | | I | Y | Y | | 2N 2N |
| | 000 | s N | vv P | G | E E | N N | Br | I | Y | Y | | 2N 2N |
| 578387 | | | | | | | Br | | Y Y | | | |
| 578388A | 0 | N | P | G | Е | N | Br | I | | Y | | 2N |
| 578388B | I | N | P | G | Е | N | Br | I | Y | Y | | 2N |
| 578389 | 0 | N | P | G | Е | N | Br | I | Y | Y | | 3N |
| 578391 | 0 | N | P | G | Е | N | Br | I | Y | Bf | | 2N |
| 578392A | I | N | W | G | Е | Ssp | Br | S | Y | Y | | 2N |
| 578393 | 000 | N | W | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 578394 | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578395 | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 578396 | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578397 | 00 | N | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 578398 | 00 | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 578400 | I | D | P | T | E | Ssp | Br | I | Y | Br | | 2N |
| 578401A | I | N | P | G | E | N | Tn | I | Y | Y | | 2N |
| 578401B | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 578401C | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578404 | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578407 | I | N | W | G | E | N | Br | I | Y | \mathbf{Bf} | | 2N |
| 578408 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 578409A | I | N | W | G | E | N | Br | I | Y | Lbf | Na | 2N |
| 578415 | 0 | S | P | G | E | N | Br | I | Y | Y | | 3N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| Charle | | Flowering Maturity | | | Stem | Shattering | Seed | | | | |
|---|---------|--------------------|--------|---------|----------|-------------|---------|---------|----------|---------|---------|
| 504483B 712 921 1.5 49* 1.5 3.0^ 2.5 1.5 17.5 1.47* 504484 725 924 2.0* 46 1.0 3.0^ 2.3 1.0 24.7 1.52 504492 709 903 1.0 33 1.0 4.5 3.3 1.5 20.0* 1.05* 504494 723 921* 2.0* 45 1.0 4.0* 2.5 1.0 22.9 1.06 504494 723 921* 2.0* 45 1.0 4.5 3.0 - 1.7 1.05* 504406 711 909 3.0* 61 2.0 3.0^* 2.8* 1.0 16.3* 1.51* 504506 711 909 3.0* 61 2.0 3.0^* 2.8* 1.0 16.3* 1.51* 504704B 78 831 3.0 66 3.0 4.0^* 2.3 1.0 1.0 2.2 | | | | | g Height | termination | early | Quality | Mottling | Weight | Yield |
| 504484 725 924 2.0* 46 1.0 3.0^ 2.3 1.0 24,7 1.52 504485 723 921* 1.5 41 1.0 5.0^ 2.5 1.0 22.3 1.05* 504494 723 921* 2.0* 45 1.0 4.0^ 2.5 1.0 22.9* 1.06* 504499 711 824 1.0 24 1.0 4.5 3.0 | Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 504485 723 921* 1.5 41 1.0 5.0^ 2.5 1.0 2.3 1.15 504492 709 903 1.0 33 1.0 4.5 3.3 1.5 20.9* 1.05* 504499 711 824 1.0 24 1.0 4.5 3.0 17.7 0.55* 504502 715 921 1.5 46 1.5 5.0^ 2.3 2.0* 24.1 0.93 504506 711 909 3.0* 61 2.0 3.0^ 2.8* 1.0 16.3* 1.51* 504506 711 909 3.0* 61 2.0 3.0^ 2.2* 1.0 1.0 1.0 1.1 1.63* 1.5* 56 1.0 2.0 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.2 1.46* 5612826 711 905 2.5 1.0 | 504483B | 712 | 921 | 1.5 | 49* | 1.5 | 3.0^ | 2.5 | 1.5 | 17.5 | 1.47* |
| 504485 723 921* 1.5 41 1.0 5.0^ 2.5 1.0 2.3 1.15 504492 709 903 1.0 33 1.0 4.5 3.3 1.5 20.9* 1.05* 504499 711 824 1.0 24 1.0 4.5 3.0 17.7 0.55* 504502 715 921 1.5 46 1.5 5.0^ 2.3 2.0* 24.1 0.93 504506 711 909 3.0* 61 2.0 3.0^ 2.8* 1.0 16.3* 1.51* 504506 711 909 3.0* 61 2.0 3.0^ 2.2* 1.0 1.0 1.0 1.1 1.63* 1.5* 56 1.0 2.0 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.2 1.46* 5612826 711 905 2.5 1.0 | 504484 | 725 | 924 | 2.0* | 46 | 1.0 | 3.0^ | | 1.0 | 24.7 | 1.52 |
| 504494 723 921* 2.0* 45 1.0 4.0^ 2.5 1.0 22.9 1.06 504499 711 824 1.0 24 1.0 4.5 3.0 17.7 0.55 504506 711 909 3.0* 61 2.0 3.0^ 2.8* 1.0 16.3* 1.51* 504506 711 909 3.0* 66 3.0 4.0^ 2.3* 1.0 16.3* 1.51* 504707 709 911 1.5 55* 1.0 1.0^ 2.5 1.5 15.7 1.54* 561282A 711 903 2.0* 56 1.0 1.0^ 2.0 1.0 12.2 1.44* 578373 717 912 2.0* 71 3.0 1.0^ 2.0 1.0 14.8* 199* 578373 717 910 2.0* 56 1.0 1.0^ 2.0 1.0 14.4* 1.99* </td <td>504485</td> <td></td> <td>921*</td> <td>1.5</td> <td></td> <td></td> <td>5.0^</td> <td></td> <td></td> <td></td> <td></td> | 504485 | | 921* | 1.5 | | | 5.0^ | | | | |
| 504494 723 921* 2.0* 45 1.0 4.0^ 2.5 1.0 22.9 1.06 504499 711 824 1.0 24 1.0 4.5 3.0 17.7 0.55 504506 711 909 3.0* 61 2.0 3.0^ 2.8* 1.0 16.3* 1.51* 504506 711 909 3.0* 66 3.0 4.0^ 2.3* 1.0 16.3* 1.51* 504707 709 911 1.5 55* 1.0 1.0^ 2.5 1.5 15.7 1.54* 561282A 711 903 2.0* 56 1.0 1.0^ 2.0 1.0 12.2 1.44* 578373 717 912 2.0* 71 3.0 1.0^ 2.0 1.0 14.8* 199* 578373 717 910 2.0* 56 1.0 1.0^ 2.0 1.0 14.4* 1.99* </td <td>504492</td> <td></td> <td>903</td> <td>1.0</td> <td></td> <td></td> <td></td> <td></td> <td>1.5</td> <td>20.0*</td> <td></td> | 504492 | | 903 | 1.0 | | | | | 1.5 | 20.0* | |
| 504499 711 824 1.0 24 1.0 4.5 3.0 — 17.7 0.55 504502 715 921 1.5 46 1.5 5.0^ 2.3 2.0* 24.1 0.93 504506 711 909 3.0* 61 2.0 3.0^ 2.8* 1.0 16.3* 1.51* 507704B 708 831 3.0 66 3.0 4.0^ 2.3 1.0 11.3 1.38* 549077 709 911 1.5 55* 1.0 1.0^ 2.5 1.5 15.7 1.54* 561282C 719 1004 3.0 10.0 1.0^ 2.0 1.0 12.0 1.44* 578371 717 912 2.0* 56 1.0 2.0^ 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 | 504494 | | 921* | 2.0* | | | | | 1.0 | 22.9 | |
| 504506 711 909 3.0° 61 2.0 3.0° 2.8* 1.0 16.3* 1.51* 507704B 708 831 3.0 66 3.0 4.0° 2.3 1.0 11.3* 1.38* 549077 709 911 1.5 55* 1.0 1.0° 2.2 1.5 15.7 1.54* 561282E 711 903 2.0° 59 1.0 1.0° 2.0 1.0 12.2 1.46* 578373 717 905 2.0° 71 3.0 1.0° 2.0 1.0 12.0 1.44* 578373 711 918 4.0° 84 3.0 1.0° 2.3 2.5 16.9 1.75* 578374 720 929 1.5 51 1.0 1.0° 1.5 1.0 1.4* 1.69* 578375B 717 925 3.0 86 3.0 2.0° 1.5 1.6 1.6* 2.0* </td <td>504499</td> <td></td> <td>824</td> <td>1.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | 504499 | | 824 | 1.0 | | | | | | | |
| 507704B 708 831 3.0 66 3.0 4.0^ 2.3 1.0 11.3 1.38* 549077 709 911 1.5 55* 1.0 1.0^ 2.5 1.5 15.7 1.54* 561233A 719 1004 3.0 102 3.0 2.0^ 2.0 1.5 27.9* 1.96* 561282A 711 903 2.0 59 1.0 1.0^ 2.0 1.0 12.2 1.46* 561282E 712 905 2.0* 56 1.0 2.0^ 2.0 1.0 12.2 1.46* 578373 717 910 3.5 76* 2.5 1.0^ 2.3 1.5 17.8* 1.61 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 1.0 19.4* 1.6 | 504502 | 715 | 921 | 1.5 | 46 | 1.5 | 5.0^ | 2.3 | 2.0* | 24.1 | 0.93 |
| 549077 709 911 1.5 55* 1.0 1.0^ 2.5 1.5 15.7 1.54* 561233A 719 1004 3.0 102 3.0 2.0^ 2.0 1.5 27.9* 1.96* 561282B 712 905 2.0* 56 1.0 2.0^ 2.0 1.0 12.2 1.46* 578371 717 912 2.0* 71 3.0 1.0^ 2.0 1.0 14.8 1.99* 78372 717 920 3.5 76* 2.5 1.0^ 2.3 1.5 17.8* 1.61 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 19.4* 1.65* 578375B 717 925 3.0 86 3.0 2.0^ 1.5 1.4 1.69* <tr< td=""><td>504506</td><td>711</td><td>909</td><td>3.0*</td><td>61</td><td>2.0</td><td>3.0^</td><td>2.8*</td><td>1.0</td><td>16.3*</td><td>1.51*</td></tr<> | 504506 | 711 | 909 | 3.0* | 61 | 2.0 | 3.0^ | 2.8* | 1.0 | 16.3* | 1.51* |
| 561233A 719 1004 3.0 102 3.0 2.0^ 2.0 1.5 27.9* 1.96* 561282A 711 903 2.0* 56 1.0 1.0^ 2.0 1.0 12.2 1.46* 578371 717 912 2.0* 71 3.0 1.0^ 2.0 1.0 12.0 1.44* 578372 717 920 3.5 76* 2.5 1.0^ 2.3 2.5 1.69 1.75 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 14.7 1.69* 578375B 717 919 2.5 88* 3.0 2.0^ 2.0 12.9 2.25 578377 715 915 3.0 93 3.0 1.0^ 2.0 1.5 16.4 2.0* <td>507704B</td> <td>708</td> <td>831</td> <td>3.0</td> <td>66</td> <td>3.0</td> <td>4.0^</td> <td>2.3</td> <td>1.0</td> <td>11.3</td> <td>1.38*</td> | 507704B | 708 | 831 | 3.0 | 66 | 3.0 | 4.0^ | 2.3 | 1.0 | 11.3 | 1.38* |
| 561282A 711 903 2.0 59 1.0 1.0^ 2.0 1.0 12.2 1.46 56128ZE 712 905 2.0* 56 1.0 2.0^ 2.0 1.0 12.0 1.44* 578371 717 920 3.5 76* 2.5 1.0^ 2.3 2.5 16.9 1.75 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 1.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 1.0 1.4* 1.65* 578377A 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 1.69* 578381 713 920* 2.5 54 1.0 2.0^ 2.8 1.5 17.8 | 549077 | 709 | 911 | 1.5 | 55* | 1.0 | 1.0^ | 2.5 | 1.5 | 15.7 | 1.54* |
| 561282A 711 903 2.0 59 1.0 1.0^ 2.0 1.0 12.2 1.46 56128ZE 712 905 2.0* 56 1.0 2.0^ 2.0 1.0 12.0 1.44* 578371 717 920 3.5 76* 2.5 1.0^ 2.3 2.5 16.9 1.75 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 1.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 1.0 1.4* 1.65* 578377A 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 1.69* 578381 713 920* 2.5 54 1.0 2.0^ 2.8 1.5 17.8 | 561233A | | | 3.0 | 102 | | 2.0^ | | 1.5 | | |
| 561282E 712 905 2.0* 56 1.0 2.0^ 2.0 1.0 12.0 1.44* 578371 717 912 2.0* 71 3.0 1.0^ 2.0 1.0 14.8 1.99* 578372 717 920 3.5 76* 2.5 1.0^ 2.3 2.5 16.9 1.75 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 1.0 19.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 14.7 1.66* 578375B 717 925 3.0 86 3.0 2.0^ 1.5 14.7 1.66* 578377 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 578381 713 925 3.0 71 3.0 2.0 2.0 1.5 16.4 | 561282A | | | | 59 | | 1.0^ | | 1.0 | 12.2 | |
| 578371 717 912 2.0* 71 3.0 1.0^ 2.0 1.0 14.8 1.99* 578372 717 920 3.5 76* 2.5 1.0^ 2.3 2.5 16.9 1.75 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 19.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 14.7 1.69* 578375B 717 925 3.0 86 3.0 2.0^ 2.0 12.9 2.25 578375B 717 925 4.0 102 3.0 2.0^ 2.0 1.5 16.4 2.07* 578381 713 920* 2.5 54 1.0 2.0^ 2.8 1.5 18.4 2.28* | | | 905 | 2.0* | 56 | | 2.0^ | | | | |
| 578372 717 920 3.5 76* 2.5 1.0^ 2.3 2.5 16.9 1.75 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61* 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 19.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 14.7 1.69* 578375B 717 925 3.0 86 3.0 2.0^ 2.0 12.9 2.25 578377 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.7* 82.5 58.0 12.0* 2.0 1.5 16.4 2.07* 578381 713 920* 3.0 71 3.0 2.0^ 2.0 1.5 16.4 2.07* 58.8 15.7 17.8 1.23* 578388 <td< td=""><td></td><td></td><td>912</td><td>2.0*</td><td></td><td></td><td>1.0^</td><td></td><td></td><td></td><td>1.99*</td></td<> | | | 912 | 2.0* | | | 1.0^ | | | | 1.99* |
| 578373 711 918 4.0* 84 3.0 1.0^ 2.3 1.5 17.8* 1.61 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 19.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 1.0 14.7 1.69* 578375B 717 925 3.0 86 3.0 2.0^ 1.5 1.0 14.8 1.71* 578377 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 578381 713 920* 4.0 102 3.0 2.0^ 1.5 16.4 2.07* 578382 723 926 2.5 54 1.0 2.0^ 1.8 1.5 18.8 1.85* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.85* | | | 920 | 3.5 | 76* | | 1.0^ | | | | |
| 578374 720 929 1.5 51 1.0 1.0^ 1.5 1.0 19.4* 1.65* 578375A 717 919 2.5 88* 3.0 2.0^ 1.5 14.7 1.69* 578375B 717 925 3.0 86 3.0 2.0^ 2.0 12.9 2.25 578375B 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 578380A 717 925 4.0 102 3.0 2.0^ 2.0 1.5 16.4 2.07* 57838B1 713 920** 3.0 71 3.0 2.0^ 1.8 1.5 18.4 2.28* 578388 723 930 2.5 63 1.0 2.0^ 1.8 1.5 18.4 2.28* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* </td <td>578373</td> <td></td> <td>918</td> <td>4.0*</td> <td>84</td> <td></td> <td>1.0^</td> <td></td> <td>1.5</td> <td></td> <td></td> | 578373 | | 918 | 4.0* | 84 | | 1.0^ | | 1.5 | | |
| 578375B 717 925 3.0 86 3.0 2.0^ 2.0 12.9 2.25 578377 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 578380A 717 925 4.0 102 3.0 2.0^ 2.0 1.5 16.4 2.07* 578381 713 920* 3.0 71 3.0 2.0^ 2.8 1.5 17.8 1.23* 578382 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.4 2.28* 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.4 2.28* 578385 717 925 3.0 81 2.5 1.0^ 1.8 1.5 16.5 1.85* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.9 1.68* | | | | 1.5 | | | 1.0^ | | | 19.4* | |
| 578377 715 915 3.0 93 3.0 1.0^ 2.3 1.0 14.8 1.71* 578380A 717 925 4.0 102 3.0 2.0^ 2.0 1.5 16.4 2.07* 578381 713 920* 3.0 71 3.0 2.0^ 2.8 1.5 17.8 1.23* 578382 723 926 2.5 54 1.0 2.0^ 1.8 1.5 18.4 2.28* 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.8 1.85* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.85* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* | 578375A | 717 | 919 | 2.5 | 88* | 3.0 | 2.0^ | 1.5 | | 14.7 | 1.69* |
| 578380A 717 925 4.0 102 3.0 2.0^ 2.0 1.5 16.4 2.07* 578381 713 920* 3.0 71 3.0 2.0^ 2.8 1.5 17.8 1.23* 578382 723 926 2.5 54 1.0 2.0^ 1.8 1.5 18.4 2.28* 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.8 1.85* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.85* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388B 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 | 578375B | 717 | 925 | 3.0 | 86 | 3.0 | 2.0^ | 2.0 | | 12.9 | 2.25 |
| 578381 713 920* 3.0 71 3.0 2.0^ 2.8 1.5 17.8 1.23* 578382 723 926 2.5 54 1.0 2.0^ 1.8 1.5 18.4 2.28* 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.4 2.28* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.85* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.5 18.9 1.88 57838BB 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 | 578377 | 715 | 915 | 3.0 | 93 | 3.0 | 1.0^ | 2.3 | 1.0 | 14.8 | 1.71* |
| 578382 723 926 2.5 54 1.0 2.0^ 1.8 1.5 18.4 2.28* 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.8 1.85* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.88* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.0 17.2 1.85 57838BB 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 57839B 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 2.0^ 1.5 19.0 <td>578380A</td> <td>717</td> <td>925</td> <td>4.0</td> <td>102</td> <td>3.0</td> <td>2.0^</td> <td>2.0</td> <td>1.5</td> <td>16.4</td> <td>2.07*</td> | 578380A | 717 | 925 | 4.0 | 102 | 3.0 | 2.0^ | 2.0 | 1.5 | 16.4 | 2.07* |
| 578382 723 926 2.5 54 1.0 2.0^ 1.8 1.5 18.4 2.28* 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.8 1.85* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.88* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.0 17.2 1.85 57838BB 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 57839B 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 2.0^ 1.5 19.0 <td></td> <td></td> <td>920*</td> <td>3.0</td> <td></td> <td></td> <td>2.0^</td> <td></td> <td>1.5</td> <td></td> <td></td> | | | 920* | 3.0 | | | 2.0^ | | 1.5 | | |
| 578384 723 930 2.5 63 1.0 1.0^ 1.8 1.5 18.8 1.85* 578385 717 925 3.0 81 2.5 1.0^ 2.0 3.5 14.5 1.85* 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.0 17.2 1.85 57838BB 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 57838BB 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 57839B 716^ 914^* 1.0^* 71^* 3.0 1.0^* 2.0^* 2.0^* 1.5 19 | | | 926 | | | | 2.0^ | | | | |
| 578386 713 921 3.5 80* 2.0 1.0^ 1.8 1.5 16.3 1.71* 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.0 17.2 1.85 578388B 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 5783889 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 2.0^ 12.8^ 1.33^ 578391 713 919 2.5 82* 3.0 1.0^ 2.0 1.5 19.0 1.55* 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 5783939 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 | 578384 | 723 | 930 | 2.5 | 63 | 1.0 | 1.0^ | 1.8 | 1.5 | 18.8 | 1.85* |
| 578387 708 901 1.5 65 2.5 3.0^ 2.0 1.0 15.2* 1.68* 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.0 17.2 1.85 578388B 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 578389 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 2.0^ 12.8^ 1.33^ 578391 713 919 2.5 82* 3.0 1.0^ 2.0 1.5 19.0 1.55* 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.3 1.5 18.3* 1. | 578385 | 717 | 925 | 3.0 | 81 | 2.5 | 1.0^ | 2.0 | 3.5 | 14.5 | 1.85* |
| 578388A 715 919 3.0* 71* 2.5 1.0^ 1.8 1.0 17.2 1.85 578388B 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 578389 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 2.0^ 12.8^ 1.33^ 578391 713 919 2.5 82* 3.0 1.0^ 2.0 1.5 19.0 1.55* 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1 | 578386 | 713 | 921 | 3.5 | 80* | 2.0 | 1.0^ | 1.8 | 1.5 | 16.3 | 1.71* |
| 578388B 717 923 3.0 76 2.5 1.0^ 1.8 1.5 18.9 1.88 578389 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 2.0^ 12.8^ 1.33^ 578391 713 919 2.5 82* 3.0 1.0^ 2.0 1.5 19.0 1.55* 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 2.5 1.0 14.8 1.3 | 578387 | 708 | 901 | 1.5 | 65 | 2.5 | 3.0^ | 2.0 | 1.0 | 15.2* | 1.68* |
| 578389 716^ 914^ 1.0^ 71^ 3.0^ 2.0^ 2.0^ 12.8^ 1.33^ 578391 713 919 2.5 82* 3.0 1.0^ 2.0 1.5 19.0 1.55* 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 | 578388A | 715 | 919 | 3.0* | 71* | 2.5 | 1.0^ | 1.8 | 1.0 | 17.2 | 1.85 |
| 578391 713 919 2.5 82* 3.0 1.0^ 2.0 1.5 19.0 1.55* 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 | 578388B | 717 | 923 | 3.0 | 76 | 2.5 | 1.0^ | 1.8 | 1.5 | 18.9 | 1.88 |
| 578392A 715 921* 3.0 74* 2.0 2.0^ 2.3 1.0 13.7 1.41 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 | 578389 | 716^ | 914^ | 1.0^ | 71^ | 3.0^ | 2.0^ | 2.0^ | 2.0^ | 12.8^ | 1.33^ |
| 578393 707 901 1.0 38 2.5 5.0^ 2.5 1.0 15.2 0.65 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* | 578391 | 713 | 919 | 2.5 | 82* | 3.0 | 1.0^ | 2.0 | 1.5 | 19.0 | 1.55* |
| 578394 711 913 2.5 83* 2.5 1.0^ 2.0 1.0 15.7 1.70* 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578404 711 910 2.5 68 3.0 2.0^ | 578392A | 715 | 921* | 3.0 | 74* | 2.0 | 2.0^ | 2.3 | 1.0 | 13.7 | 1.41 |
| 578395 711 921 3.0* 71* 2.5 1.0^ 2.3 1.5 18.3* 1.54* 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 | 578393 | 707 | 901 | 1.0 | 38 | 2.5 | 5.0^ | 2.5 | 1.0 | 15.2 | 0.65 |
| 578396 713 911 2.5 73 3.0 1.0^ 3.5 2.0* 16.3 1.58* 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578408 715 924 3.5 94* 2.5 1.0^ 2. | 578394 | 711 | 913 | 2.5 | 83* | 2.5 | 1.0^ | 2.0 | 1.0 | 15.7 | 1.70* |
| 578397 710 907 1.5 62* 3.0 2.0^ 2.5 1.0 14.8 1.39 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 | 578395 | 711 | 921 | 3.0* | 71* | 2.5 | 1.0^ | 2.3 | 1.5 | 18.3* | 1.54* |
| 578398 711 905 1.5 68 3.0 2.0^ 2.8 1.0 16.5 1.57* 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 | 578396 | 713 | 911 | 2.5 | 73 | 3.0 | 1.0^ | 3.5 | 2.0* | 16.3 | 1.58* |
| 578400 717 926 2.0* 69 1.0 2.0^ 2.0 1.0 25.4 1.93 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | 578397 | 710 | 907 | 1.5 | 62* | 3.0 | 2.0^ | 2.5 | 1.0 | 14.8 | 1.39 |
| 578401A 719 927 3.5 92 3.0 2.0^ 1.8 1.0 17.2 1.87* 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | 578398 | 711 | 905 | 1.5 | 68 | 3.0 | 2.0^ | 2.8 | 1.0 | 16.5 | 1.57* |
| 578401B 721 927 2.5 78 2.5 2.0^ 1.8 1.0 18.5 1.87* 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | 578400 | 717 | 926 | 2.0* | 69 | 1.0 | 2.0^ | 2.0 | 1.0 | 25.4 | 1.93 |
| 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | 578401A | 719 | 927 | 3.5 | 92 | 3.0 | 2.0^ | 1.8 | 1.0 | 17.2 | 1.87* |
| 578401C 715 925 3.0 100 3.0 1.0^ 1.5 1.0 17.9 1.48 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | 578401B | | | | 78 | | | | 1.0 | | |
| 578404 711 910 2.5 68 3.0 2.0^ 3.0 1.0 13.6 1.78* 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | 578401C | | | 3.0 | 100 | | | | 1.0 | | |
| 578407 711 919 3.0 81* 2.0 1.0^ 1.8 1.0 13.8 1.64 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | | | | | | | | | | | |
| 578408 715 924 3.5 94* 2.5 1.0^ 2.0 1.0 16.6 1.45 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | | | | | | | | | | | |
| 578409A 713 929 4.0 100 3.0 2.0^ 2.3 1.0 18.7 2.07 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 578415 | | 915 | 2.5 | 54 | | | | 2.0* | | |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil composition | | | | |
|--------------------|----------|---------------------|-------------------|-----------------|------------|-------|--------------|------------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 504483B | I | 40.7 | 18.7 | 10.1 | 3.5 | 21.6 | 55.7 | 9.2 |
| 504484 | I | 45.3 | 15.7 | 11.5 | 3.0 | 21.4 | 52.7 | 11.4 |
| 504485 | Ī | 45.4 | 15.1 | 10.8 | 2.7 | 24.4 | 50.7 | 11.5 |
| 504492 | 00 | 42.3 | 19.1 | 10.8 | 3.3 | 25.8 | 52.6 | 7.5 |
| 504494 | I | 45.2 | 15.7 | 11.3 | 3.1 | 20.7 | 52.8 | 12.2 |
| 504499 | 000 | 51.5 ^w | 15.5 ^w | 11.6 | 2.8 | 19.0 | 56.8 | 9.9 |
| 504502 | I | 42.0 | 17.6 | 10.8 | 3.2 | 25.1 | 51.5 | 9.4 |
| 504506 | 0 | 43.3 | 18.0 | 12.5 | 4.5 | 22.2 | 51.7 | 9.1 |
| 507704B | 000 | 43.9 | 17.6 | 11.4 | 4.1 | 21.0 | 54.8 | 8.7 |
| 549077 | 0 | 42.2 | 18.9 | 10.2 | 3.6 | 26.0 | 51.2 | 9.0 |
| 61233A | I | 41.8 | 17.2 | 10.2 | 3.1 | 22.2 | 52.4 | 11.4 |
| 61282A | 00 | 43.2 | 18.0 | 11.6 | 3.8 | 21.8 | 54.0 | 8.8 |
| 61282E | 00 | 43.2 | 17.1 | 10.6 | 3.8 | 19.9 | 56.5 | 9.2 |
| | 0 | 43.1 | 17.1 | | 3.8 | 22.3 | 50.5 53.9 | 9.2 9.2 |
| 578371 578372 | 0 | 42.5 41.4 | | 11.4 | 3.3 4.1 | | 53.9 51.0 | 9.2 8.7 |
| 578372 578373 | | | 19.3 | 11.8 | | 24.4 | | |
| 578373 578374 | 0 | 42.4 | 18.2 | 12.2 | 3.5 | 18.7 | 57.0 | 8.6 |
| 578374 578375 A | I | 52.1 ^w | 17.3 ^w | 10.3 | 2.9 | 17.7 | 58.8 | 10.2 |
| 78375A | 0 | 54.1 ^w | 16.5 ^w | 9.8 | 3.1 | 19.1 | 58.0 | 10.1 |
| 78375B | I | 50.2 ^w | 16.2 ^w | 10.0 | 2.9 | 16.5 | 59.6 | 10.9 |
| 78377 | 0 | 40.5 | 19.4 | 9.6 | 3.5 | 22.8 | 55.8 | 8.3 |
| 78380A | I | 40.0 | 18.8 | 11.8 | 3.8 | 22.8 | 52.5 | 9.0 |
| 78381 | 0 | 44.0 | 18.2 | 10.3 | 4.2 | 22.2 | 53.8 | 9.5 |
| 78382 | I | 44.9 | 16.9 | 11.1 | 2.7 | 20.4 | 55.7 | 10.0 |
| 78384 | I | 41.2 | 18.2 | 11.3 | 3.5 | 21.8 | 53.8 | 9.6 |
| 78385 | I | 52.5^{w} | 17.3^{w} | 9.1 | 2.5 | 16.9 | 58.7 | 12.9 |
| 78386 | I | 42.4 | 18.1 | 11.3 | 4.2 | 23.0 | 52.7 | 8.8 |
| 78387 | 000 | 42.5 | 18.6 | 11.9 | 3.9 | 21.3 | 54.5 | 8.4 |
| 78388A | 0 | 45.1 | 17.6 | 10.5 | 3.5 | 24.4 | 51.7 | 9.9 |
| 78388B | I | 44.0 | 17.3 | 10.4 | 3.2 | 23.0 | 52.5 | 10.8 |
| 78389 | 0 | 42.5^ | 18.3^ | 11.1 | 3.9 | 23.6 | 52.2 | 9.3 |
| 78391 | 0 | 42.9 | 18.4 | 10.9 | 3.4 | 24.4 | 52.6 | 8.8 |
| 78392A | I | 40.5 | 19.6 | 11.0 | 3.4 | 23.9 | 52.9 | 8.8 |
| 78393 | 000 | 41.9 | 18.6 | 12.0 | 3.6 | 21.0 | 53.8 | 9.5 |
| 78394 | 0 | 42.9 | 18.7 | 11.6 | 4.0 | 23.4 | 52.8 | 8.2 |
| 78395 | I | 42.2 | 18.3 | 11.2 | 3.5 | 22.6 | 54.0 | 8.7 |
| 78396 | 0 | 44.0 | 18.0 | 12.5 | 4.1 | 21.6 | 53.2 | 8.6 |
| 578397 | 00 | 42.8 | 18.6 | 11.8 | 4.0 | 21.8 | 52.4 | 10.0 |
| 78398 | 00 | 43.3 | 18.1 | 10.8 | 4.2 | 26.3 | 48.7 | 10.0 |
| 78400 | I | 41.3 | 17.4 | 10.9 | 3.0 | 24.1 | 51.6 | 10.4 |
| 78401A | Ī | 41.4 | 18.1 | 12.0 | 3.3 | 20.0 | 54.2 | 10.5 |
| 78401B | I | 43.3 | 17.2 | 11.0 | 3.0 | 27.5 | 49.1 | 9.4 |
| 78401C | I | 43.0 | 17.6 | 11.5 | 3.1 | 22.2 | 52.7 | 10.5 |
| 78404 | 0 | 43.6 | 18.0 | 11.6 | 3.6 | 22.2 | 53.0 | 9.6 |
| 578407 | I | 39.8 | 19.4 | 10.5 | 3.7 | 25.4 | 51.4 | 8.9 |
| 78408 | I | 38.0 | 20.6 | 10.9 | 3.9 | 25.2 | 51.4 | 8.2 |
| 578409A | I | 40.7 | 18.4 | 10.9 | 3.9 | 22.5 | 53.9 | 9.8 |
| 578409A 578415 | 0 | 40.7 46.4 | 17.2 | 10.8 | 3.2 | 24.8 | 52.1 | 9.8 9.1 |

 $Table 1.1 \ Identification \ and \ origin \ information \ for \ USDA \ soybean \ germplasm \ in \ maturity \ groups \ 000 \ through \ I, \ PI \ 578371 \ to \ PI \ 612761B \ plus \ earlier \ accessions \ not \ previously \ evaluated.$

| | | | Country | Country | Year | |
|---------|----------------------|--------------|---------|-------------|-------------|----------|
| | Accession | Region | of | of | introduced | Maturity |
| PI No. | identifier | of origin | origin | acquisition | or released | |
| | | | | acquisition | 01 10104500 | Втопр |
| | Guo yu B4 | Jilin | China | China | 1993 | I |
| 578417B | (Guo yu B4) | Jilin | China | China | 1993 | I |
| 578418 | Guo yu B5 | Jilin | China | China | 1993 | I |
| 578420 | Ha No. 1 | Jilin | China | China | 1993 | I |
| 578421 | Ha No. 3 | Jilin | China | China | 1993 | I |
| 578422 | Hai lun du lu dou | Heilongjiang | China | China | 1993 | 0 |
| 578423 | He feng No. 1 | Heilongjiang | China | China | 1993 | 0 |
| 578424 | He feng No. 5 | Heilongjiang | China | China | 1993 | 0 |
| 578425 | He feng No. 6 | Heilongjiang | China | China | 1993 | I |
| 578426 | He feng 14 | Heilongjiang | China | China | 1993 | 0 |
| 578427 | He feng 15 | Heilongjiang | China | China | 1993 | 0 |
| 578428A | He feng 16 | Heilongjiang | China | China | 1993 | 0 |
| 578428B | (He feng 16) | Heilongjiang | China | China | 1993 | 0 |
| 578429 | He feng 17 | Heilongjiang | China | China | 1993 | 0 |
| 578431 | He jiao No. 6 | Heilongjiang | China | China | 1993 | I |
| 578432A | He jiao No. 8 | Heilongjiang | China | China | 1993 | 0 |
| 578432B | (He jiao No. 8) | Heilongjiang | China | China | 1993 | I |
| 578433 | He jiao 11 | Heilongjiang | China | China | 1993 | 0 |
| 578474 | S864-1 | unknown | China | China | 1993 | I |
| 578481 | Nizhen No. 1 | unknown | China | China | 1993 | I |
| 578482A | Tai xin Black Bean | unknown | China | China | 1993 | 0 |
| 578482B | (Tai xin Black Bean) | unknown | China | China | 1993 | 0 |
| 578482C | (Tai xin Black Bean) | unknown | China | China | 1993 | 0 |
| 578485A | Sui dao huang | unknown | China | China | 1993 | 0 |
| 578487 | Feng shou No. 6 | Heilongjiang | China | China | 1994 | 0 |
| 578496 | Jin shan pu | Heilongjiang | China | China | 1994 | I |
| 578501 | Sui nong No. 4 | Heilongjiang | China | China | 1994 | 0 |
| 578503 | Tie jia si li huang | Jilin | China | China | 1994 | I |
| 578506 | Yuan bao jin | Heilongjiang | China | China | 1994 | 0 |
| 592899 | · · | Beijing | China | China | 1991 | I |
| 592905 | Kitami nagaha | unknown | Japan | Japan | 1994 | I |
| 592907A | | unknown | Russia | Russia | 1993 | I |
| 592907B | | unknown | Russia | Russia | 1993 | I |
| 592907C | ı | unknown | Russia | Russia | 1993 | I |
| 592907D | • | unknown | Russia | Russia | 1993 | I |
| 592909 | | unknown | Russia | Russia | 1994 | 0 |
| 592911A | | unknown | Russia | Russia | 1993 | I |
| 592911B | | unknown | Russia | Russia | 1993 | I |
| 592912A | | unknown | Russia | Russia | 1993 | I |
| 592912B | | unknown | Russia | Russia | 1993 | I |
| 592915 | Hei he No. 9 | Heilongjiang | China | China | 1994 | 00 |
| 592916 | Feng shou 21 | Heilongjiang | China | China | 1994 | 00 |
| 592917 | Dong nong 42 | Heilongjiang | China | China | 1994 | 0 |
| 592918 | He feng 30 | Heilongjiang | China | China | 1994 | 0 |
| 592919 | He feng 31 | Heilongjiang | China | China | 1994 | I |
| 592920 | He feng 33 | Heilongjiang | China | China | 1994 | I |
| 592921 | Hei nong 37 | Heilongjiang | China | China | 1994 | I |
| | 2 | <i>3, 0</i> | | | | |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|--------------------|-------------------|--------|---------|---|--------------|----------|--------------|------------------|---------|----------------|---------------|---------------|
| 579417A | | NT | W | | | | | | | TLC | | |
| 578417A | I | N | W | G | E | N | Br | I | Y | Lbf | 3.71. '1 | 2N |
| 578417B | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 578418 | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 578420 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 578421 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 1N |
| 578422 | 0 | N | P | G | E | N | Br | I | Y | Y | | 3N |
| 578423 | 0 | N | W | G | E | N | Br | I | Y | Y | _ | 2N |
| 578424 | 0 | N | W | G | E | N | Br | I | Y | Lbf | Sna | 1N |
| 578425 | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578426 | 0 | N | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 578427 | 0 | N | W | G | E | Ssp | Br | I | Y | Bf | | 2N |
| 578428A | 0 | N | W | G | E | N | Br | I | Y | Lbf | | 2N |
| 578428B | 0 | N | W | G | E | N | Br | I | Y | Lbf | | 2N |
| 578429 | 0 | N | P | G | \mathbf{E} | N | Br | I | Y | Y | Sna | 2N |
| 578431 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 1R |
| 578432A | 0 | S | W | G | E | N | Br | I | Y | Lbf | | 2N |
| 578432B | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578433 | 0 | N | W | G | E | N | Br | I | Y | Lbf | | 2N |
| 578474 | I | N | P | T | Α | N | Br | D | Ggn | Bl | | 3N |
| 578481 | I | D | P | T | Sa | N | Br | I | Y | Bl | | 3N |
| 578482A | 0 | S | W | T | Sa | N | Tn | I | Bl | Bl | | 3N |
| 578482B | 0 | S | W | T | Sa | N | Tn | I | Bl | B1 | | 3N |
| 578482C | 0 | D | W | T | Sa | N | Tn | Ī | Bl | Bl | | 3N |
| 578485A | 0 | D | P | T | Sa | N | Tn | Ī | Y | Bl | | 3N |
| 578487 | 0 | S | W | G | E | N | Br | I | Y | Y | | 2N |
| 578496 | Ĭ | N | W | G | Sa | N | Dbr | Ī | Lgn | Lbf | Na | 2N |
| 578501 | 0 | S | P | G | E | Ssp | Dbr | D | Y | Y | Na | 2N |
| 578503 | I | N | W | G | E | Ssp | Bl | I | Y | Lbf | Na | 1N |
| 578506 | 0 | N | W | G | E | N N | Br | I | Y | Y | 144 | 1N 1N |
| 592899 | I | N | P | T | E | Ssp | Br | I | Y | G | | 2N |
| 592905 | I | D | P | T | E | Ssp | Br | I | Y | Br | Na | 1N |
| 592907A | I | N | W | G | E | N N | Br | D | Y | Y | 1Na | 2N |
| 592907A 592907B | I | N | vv P | T | E | N | Br | I | Y | Tn | | 2N 2N |
| 592907Б 592907С | | | W | | E E | | | D D | Y | Y | V/b: 1 | |
| | I | N N | | G | | N N | Br | _ | | | Vhil | 2N |
| 592907D | I | N | W | G | Е | N Sam | Br | I | Y | Y | | 2N |
| 592909 | 0 | N | W | T | E | Ssp | Br | Lb | Bl V | Bl | | 3N |
| 592911A | I | N | P | T | Е | N | Br | I | Y | Bl | | 2N |
| 592911B | I | N | P | T | E | N | Br | D | Y | Bl | X 71 '1 | 4N |
| 592912A | I | S | P | T | E | N | Br | I | Y | Tn | Vhil | 2N |
| 592912B | I | S | P | T | Е | N | Br | I | Y | Tn | Vhil | 2N |
| 592915 | 00 | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 592916 | 00 | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 592917 | 0 | N | P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 592918 | 0 | S | W | G | E | N | Br | S | Y | Y | Sna | 2N |
| 592919 | I | D | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 592920 | I | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 592921 | I | D | W | G | E | N | Br | D | Y | Y | | 3N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering | Maturity | | | Stem | Shattering | Seed | | | |
|---------|-----------|----------|---------|----------|-------------|------------|---------|----------|---------|---------|
| | date | | | g Height | termination | early | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 578417A | 713 | 923 | 2.5 | 83* | 3.0 | 1.0^ | 1.8 | 1.0 | 18.3 | 1.75* |
| 578417B | 715 | 929 | 4.0 | 112 | 3.0 | 2.0^ | 1.8 | 1.0 | 17.9 | 2.04* |
| 578418 | 713 | 923 | 2.0 | 86 | 2.5 | 1.0^ | 1.8 | 1.0 | 20.3 | 2.03* |
| 578420 | 713 | 930 | 3.5 | 89 | 3.0 | 1.0^ | 1.8 | 1.0 | 18.7 | 2.14 |
| 578421 | 713 | 924 | 2.0 | 88 | 3.0 | 1.0^ | 1.5 | 1.0 | 21.0 | 1.76* |
| 578422 | 711 | 910 | 2.5 | 90 | 3.0 | 3.0^ | 2.8 | 1.5 | 16.5 | 1.34 |
| 578423 | 713 | 915 | 3.0* | 94* | 3.0 | 1.0^ | 2.3 | 1.0 | 16.1 | 1.95* |
| 578424 | 711 | 915 | 4.0* | 70 | 3.0 | 1.0^ | 2.0 | 1.5 | 14.8 | 1.68 |
| 578425 | 711 | 923 | 2.0 | 91 | 2.5 | 1.0^ | 1.8 | 1.0 | 20.4 | 2.30 |
| 578426 | 711 | 912 | 1.5 | 71 | 3.0 | 1.0^ | 2.5 | 1.5 | 14.4 | 1.69 |
| 578427 | 713 | 917 | 3.5 | 74 | 3.0 | 1.0^ | 1.8 | 1.5 | 17.2 | 1.86* |
| 578428A | 713 | 915 | 2.5 | 79* | 3.0 | 2.0^ | 2.8 | 1.5 | 16.8* | 1.96* |
| 578428B | 711 | 919 | 3.5 | 79 | 3.0 | 1.0 | 2.5 | 1.5 | 18.4 | 1.91* |
| 578429 | 713 | 917 | 3.5 | 90* | 3.0 | 2.0^ | 2.3* | 1.5 | 15.8 | 1.41 |
| 578431 | 711 | 919 | 2.5 | 84 | 2.0 | 2.0^ | 2.8 | 1.5 | 19.8 | 1.53 |
| 578432A | 711 | 913 | 2.0 | 81 | 2.0 | 2.0^ | 2.3 | 2.0* | 18.0 | 2.19* |
| 578432B | 711 | 923 | 2.0 | 85 | 2.5 | 1.0^ | 2.0 | 1.0 | 18.9 | 1.78* |
| 578433 | 711 | 911 | 2.5 | 94 | 3.0 | 2.0^ | 2.8 | 1.0 | 15.6* | 1.79* |
| 578474 | 726 | 923 | 3.0 | 70* | 3.0 | 3.0^ | 2.5 | 1.0 | 18.9 | 1.41 |
| 578481 | 719 | 922 | 1.5 | 62 | 1.0 | 2.0^ | 2.0 | 1.0 | 17.1 | 1.41 |
| 578482A | 720 | 911 | 3.0 | 65 | 2.0 | 5.0^ | 1.8 | | 12.9 | 0.75 |
| 578482B | 720 | 920 | 3.0 | 78 | 2.0 | 5.0^ | 1.5 | | 13.6 | 1.13 |
| 578482C | 722 | 917 | 3.5 | 65 | 1.5 | 5.0^ | 1.8 | | 14.9 | 1.75* |
| 578485A | 719 | 919 | 1.5 | 52 | 1.0 | 2.0^ | 1.8 | 1.0 | 16.3 | 1.29 |
| 578487 | 711 | 910 | 2.0 | 59 | 2.0 | 1.0^ | 1.8 | 1.0 | 14.4 | 1.70* |
| 578496 | 715 | 929 | 3.5 | 79 | 3.0 | 1.0^ | 1.8 | 1.5 | 17.1 | 1.43* |
| 578501 | 711 | 917 | 2.0 | 60 | 2.0 | 2.0^ | 2.0 | 1.5 | 16.8* | 1.95 |
| 578503 | 722 | 1003 | 3.5 | 94* | 2.5 | 1.0^ | 1.8 | 2.0* | 14.9 | 1.80 |
| 578506 | 711 | 916 | 2.0 | 70 | 3.0 | 1.5 | 1.8 | 1.0 | 15.5 | 1.71 |
| 592899 | 715 | 921 | 2.5 | 62 | 2.0 | 2.0^ | 2.0 | 3.5 | 18.4 | 1.49* |
| 592905 | 723 | 1005 | 2.0 | 78* | 1.5 | 2.0^ | 1.8 | 2.0* | 18.1 | 1.78 |
| 592907A | 717 | 1004 | 3.0* | 96 | 3.0 | 1.0^ | 1.8 | 1.0 | 14.1 | 1.99 |
| 592907B | 713 | 929 | 3.0* | 84 | 2.5 | 2.0^ | 1.5 | 1.0 | 17.3 | 1.88 |
| 592907C | 719 | 1007 | 3.5 | 102 | 3.0 | 2.0^ | 2.3* | 1.5 | 18.5 | 1.90 |
| 592907D | 719 | 1006 | 2.5 | 79 | 2.0 | 2.0^ | 2.0 | 1.0 | 15.6 | 1.22 |
| 592909 | 713 | 911 | 2.0 | 91 | 3.0 | 1.0^ | 2.3 | | 11.3 | 1.55 |
| 592911A | 722 | 930 | 3.0 | 94 | 3.0 | 2.0^ | 1.8 | 1.0 | 15.1 | 1.74 |
| 592911B | 725 | 930 | 3.5 | 103 | 3.0 | 2.0^ | 2.5 | 4.0 | 12.2 | 1.19 |
| 592912A | 717 | 1001 | 3.0* | 86 | 2.0 | 1.0^ | 1.5 | 2.5 | 17.2 | 1.55 |
| 592912B | 715 | 929 | 2.0 | 86 | 2.0 | 2.0^ | 1.5 | 1.0 | 17.6 | 1.65 |
| 592915 | 707 | 905 | 1.5 | 52 | 1.5 | 5.0^ | 2.0 | 1.0 | 14.0 | 1.07 |
| 592916 | 715 | 907 | 2.5 | 75 | 1.5 | 1.0^ | 3.5 | 1.5 | 16.0* | 1.60* |
| 592917 | 711 | 919 | 1.5 | 86 | 2.5 | 2.0^ | 2.5 | 1.5 | 19.9* | 2.01* |
| 592918 | 711 | 912 | 2.5 | 66 | 2.0 | 1.0^ | 1.5 | 1.5 | 14.4 | 1.76* |
| 592919 | 715 | 921 | 1.5 | 74 | 1.5 | 1.0^ | 2.0 | 1.5 | 14.3 | 1.57 |
| 592920 | 713 | 922 | 1.5 | 68 | 1.5 | 1.0^ | 1.8 | 1.0 | 16.0 | 2.16* |
| 592921 | 713 | 929 | 1.5 | 78* | 1.0 | 1.0^ | 1.8 | 1.0 | 18.7 | 1.45 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil composition | | | | |
|--------------------|----------|---------------------|-------------------|-----------------|------------|-------|--------------|-------------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 578417A | I | 42.9 | 18.2 | 11.2 | 3.4 | 22.1 | 54.8 | 8.6 |
| 578417B | Ī | 40.1 | 18.9 | 10.5 | 3.6 | 25.2 | 52.1 | 8.6 |
| 578418 | Ī | 40.1 | 19.1 | 11.0 | 3.3 | 24.8 | 52.2 | 8.8 |
| 578420 | I | 40.3 | 19.2 | 10.6 | 3.9 | 22.9 | 53.9 | 8.7 |
| 578421 | I | 39.2 | 19.1 | 10.4 | 3.3 | 27.9 | 49.9 | 8.5 |
| 578422 | 0 | 43.5 | 18.3 | 10.4 | 3.8 | 22.3 | 54.8 | 8.7 |
| 578423 | 0 | 39.8 | 20.8 | 10.5 | 3.8 4.1 | 25.0 | 51.6 | 7.8 |
| | | | | | | | | |
| 578424 | 0 | 40.8 | 19.2 | 11.1 | 4.4 | 24.2 | 52.3 | 7.9 |
| 578425 | I | 41.2 | 19.1 | 12.0 | 3.3 | 25.5 | 50.0 | 9.2 |
| 578426 | 0 | 40.5 | 19.8 | 10.2 | 4.7 | 26.9 | 50.3 | 7.8 |
| 578427 | 0 | 40.5 | 19.1 | 10.6 | 4.9 | 26.2 | 50.6 | 7.7 |
| 578428A | 0 | 43.0 | 18.5 | 10.7 | 4.3 | 25.4 | 51.3 | 8.3 |
| 578428B | 0 | 41.8 | 19.3 | 10.2 | 4.0 | 26.6 | 51.4 | 7.8 |
| 578429 | 0 | 41.3 | 18.3 | 11.3 | 4.2 | 22.6 | 53.2 | 8.6 |
| 578431 | I | 40.8 | 19.5 | 11.0 | 3.9 | 25.5 | 51.4 | 8.1 |
| 578432A | 0 | 41.0 | 19.2 | 11.2 | 4.4 | 25.4 | 50.9 | 8.2 |
| 578432B | I | 40.5 | 18.8 | 11.9 | 3.5 | 22.5 | 53.0 | 9.1 |
| 578433 | 0 | 40.9 | 19.4 | 10.6 | 4.8 | 27.4 | 48.5 | 8.7 |
| 578474 | I | 42.8 | 17.5 | 10.5 | 4.0 | 22.0 | 53.7 | 9.8 |
| 578481 | I | 44.0 | 17.2 | 10.4 | 3.8 | 20.3 | 55.6 | 9.9 |
| 578482A | 0 | 53.4^{w} | 15.9 ^w | 10.0 | 3.3 | 20.9 | 54.8 | 11.0 |
| 578482B | 0 | 53.2^{w} | $16.7^{\rm w}$ | 10.0 | 3.0 | 19.9 | 55.9 | 11.3 |
| 578482C | 0 | 50.7^{w} | 15.9 ^w | 9.6 | 2.9 | 20.0 | 55.6 | 12.0 |
| 578485A | 0 | 43.6 | 17.3 | 9.7 | 4.4 | 23.4 | 53.4 | 9.1 |
| 578487 | 0 | 42.3 | 18.4 | 12.2 | 4.5 | 23.0 | 51.5 | 8.7 |
| 578496 | Ĭ | 40.4 | 18.3 | 10.9 | 4.1 | 25.2 | 51.5 | 8.3 |
| 578501 | 0 | 41.8 | 18.4 | 13.6 | 4.5 | 21.3 | 51.3 | 9.2 |
| 578503 | I | 39.2 | 17.0 | 12.0 | 3.4 | 17.4 | 56.8 | 10.4 |
| 578506 | 0 | 40.9 | 19.2 | 11.9 | 4.1 | 23.1 | 52.0 | 8.9 |
| 592899 | I | 42.0 | 18.5 | 11.1 | 3.2 | 22.0 | 53.8 | 9.9 |
| 592905 | I | 43.5 | 16.9 | 12.3 | 3.0 | 17.9 | 56.3 | 10.6 |
| 592903 592907A | I | 39.1 | 19.4 | 12.3 | 3.0 | 20.3 | 54.8 | |
| 592907A 592907B | I | 39.1 41.9 | 19.4 17.7 | 11.2 | 3.5 | 19.2 | 54.8 56.0 | 9.1 10.1 |
| | | | | | | | | |
| 592907C | I | 40.8 | 17.3 | 10.6 | 2.9 | 18.1 | 56.8 | 11.6 |
| 592907D | I | 41.8 | 17.7 | 10.8 | 3.7 | 18.8 | 56.6 | 10.1 |
| 592909 | 0 | 51.9 ^w | 16.8 ^w | 11.2 | 3.1 | 17.6 | 57.4 | 10.7 |
| 592911A | I | 43.6 | 17.7 | 11.1 | 3.6 | 18.6 | 55.9 | 10.7 |
| 592911B | I | 53.3 ^w | 17.4 ^w | 9.3 | 2.7 | 18.5 | 57.5 | 12.0 |
| 592912A | I | 48.6 ^w | 14.9 ^w | 10.1 | 3.1 | 17.4 | 57.3 | 12.1 |
| 592912B | Ι | 41.7 | 17.8 | 11.0 | 3.5 | 19.3 | 56.5 | 9.7 |
| 592915 | 00 | 43.2 | 17.8 | 12.8 | 4.0 | 17.8 | 55.5 | 9.9 |
| 592916 | 00 | 40.5 | 19.1 | 11.0 | 4.9 | 24.0 | 51.5 | 8.7 |
| 592917 | 0 | 42.5 | 17.5 | 12.4 | 4.6 | 22.7 | 50.9 | 9.3 |
| 592918 | 0 | 41.0 | 18.6 | 11.7 | 3.9 | 23.7 | 51.8 | 8.9 |
| 592919 | I | 41.6 | 16.6 | 13.2 | 3.6 | 16.4 | 56.0 | 10.9 |
| 592920 | I | 43.0 | 18.0 | 13.1 | 4.0 | 20.2 | 53.8 | 8.9 |
| 592921 | I | 39.9 | 18.5 | 10.6 | 3.7 | 22.9 | 53.9 | 8.9 |

 $Table 1.1 \ Identification \ and \ origin \ information \ for \ USDA \ soybean \ germplasm \ in \ maturity \ groups \ 000 \ through \ I, \ PI \ 578371 \ to \ PI \ 612761B \ plus \ earlier \ accessions \ not \ previously \ evaluated.$

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|-------------------------|-----------------------|---------------|---------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 592922 | Hong feng No. 3 | Heilongjiang | China | China | 1994 | 00 |
| 592923 | Ken nong No. 2 | Heilongjiang | China | China | 1994 | 0 |
| 592924 | Ken nong No. 4 | Heilongjiang | China | China | 1994 | 0 |
| 592925 | Bai nong No. 1 | Jilin | China | China | 1994 | Ĭ |
| 592926 | Tong nong No. 8 | Jilin | China | China | 1994 | Ī |
| 592931 | Yin huang No. 4 | Shandong | China | China | 1994 | 0 |
| 592943 | Lu dou No. 6 | Shandong | China | China | 1994 | 0 |
| 592957 | Chang nong No. 5 | Jilin | China | China | 1994 | I |
| 592958 | Chang nong No. 6 | Jilin | China | China | 1994 | I |
| 592960 | Dong nong 38 | Heilongjiang | China | China | 1994 | Ī |
| 592961 | Dong nong 41 | Heilongjiang | China | China | 1995 | 000 |
| | Hei nong 30 | Heilongjiang | China | China | 1995 | 0 |
| | (Hei nong 30) | Heilongjiang | China | China | 1995 | I |
| 592962B | Hei nong 31 | Heilongjiang | China | China | 1995 | I |
| 592964 | Hei nong 32 | Heilongjiang | China | China | 1995 | I |
| 592967 | _ | | China | China | 1993 | I |
| | Hei nong 36 Jilin 29 | Heilongjiang Jilin | China | China | 1994 1994 | I |
| 592970 | | | | | | |
| 592975 | Sui nong No. 5 | Heilongjiang | China | China | 1995 | 0 |
| 592976 | Sui nong No. 8 | Heilongjiang | China | China | 1995 | 0 |
| 592977 | Sui nong No. 9 | Heilongjiang | China | China | 1994 | I |
| 593938 | He feng 34 | Heilongjiang | China | China | 1995 | 0 |
| 593939 | He feng 35 | Heilongjiang | China | China | 1995 | 0 |
| 593940 | He feng 7791 | Heilongjiang | China | China | 1995 | 0 |
| 593941 | He feng 8719 | Heilongjiang | China | China | 1995 | 0 |
| 593942 | He feng 9388 | Heilongjiang | China | China | 1994 | 0 |
| 593943 | He feng 88851 | Heilongjiang | China | China | 1994 | I |
| 593944 | Ken nong No. 7 | Heilongjiang | China | China | 1995 | 0 |
| 593946 | Ken feng No. 3 | Heilongjiang | China | China | 1995 | 00 |
| | Ken 83-2922 | Heilongjiang | China | China | 1995 | I |
| | Ken 84-4009 | Heilongjiang | China | China | 1995 | 00 |
| 593950B | (Ken 84-4009) | Heilongjiang | China | China | 1995 | 0 |
| 593951 | JH-1 | Heilongjiang | China | China | 1995 | 00 |
| 593953 | Sui nong No. 10 | Heilongjiang | China | China | 1995 | I |
| 593955 | NEAC 187 | Heilongjiang | China | China | 1995 | I |
| 593956A | NEAC 190 | Heilongjiang | China | China | 1995 | I |
| 593957 | NEAC 593 | Heilongjiang | China | China | 1995 | I |
| 593961 | GD 369 | Jilin | China | China | 1995 | I |
| 593967 | GD 3184 | Jilin | China | China | 1995 | I |
| 593968 | GD 3245 | Jilin | China | China | 1995 | I |
| 593969 | GD 3325 | Jilin | China | China | 1995 | I |
| 593970 | Oosodeno mai | Hokkaido | Japan | Japan | 1995 | I |
| 593971 | Kariyutaka | Hokkaido | Japan | Japan | 1995 | I |
| 593972 | Suzumaru | Hokkaido | Japan | Japan | 1995 | I |
| 593973 | Toyokomachi | Hokkaido | Japan | Japan | 1995 | I |
| 593975 | Tsurumusume | Hokkaido | Japan | Japan | 1995 | I |
| 593976 | Gokuwase chishima | Hokkaido | Japan | Japan | 1996 | 000 |
| 593979 | Wasekosode | Hokkaido | Japan | Japan | 1996 | 000 |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|----|-------|---|--------------|----------|--------------|------------------|----|----------------|--------------|---------------|
| | | NT | *** | | | | | | | | 0 | |
| 592922 | 00 | N | W | G | E | N | Br | I | Y | Y | Sna | 2N |
| 592923 | 0 | S | P | G | E | Ssp | Br | I | Y | Y | Sna | 2N |
| 592924 | 0 | D | W | G | Е | Ssp | Br | I | Y | Y | Na | 2N |
| 592925 | I | N | W | G | E | N | Tn | I | Y | Bf | Na | 2N |
| 592926 | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 592931 | 0 | D | W | G | Va | N | Tn | D | Y | Lbf | | 3N |
| 592943 | 0 | D | P | G | Va | N | Tn | I | Y | Bf | Wa | 3N |
| 592957 | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 592958 | I | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 592960 | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 592961 | 000 | D | P | T | E | N | Br | I | Y | Br | | 2N |
| 592962A | 0 | D | W | G | \mathbf{E} | Ssp | Br | I | Y | Y | | 3R |
| 592962B | I | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 592963 | I | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 592964 | I | D | W | G | E | Ssp | Br | I | Y | Lbf | | 2N |
| 592967 | I | N | W | G | E | N | Br | D | Y | Bf | Na | 2N |
| 592970 | I | S | W | G | Е | N | Br | I | Y | Y | Na | 2N |
| 592975 | 0 | S | P | G | E | N | Br | I | Y | Y | Sna | 2N |
| 592976 | 0 | N | P | G | E | Ssp | Br | D | Y | Y | | 3N |
| 592977 | Ī | S | P | G | E | N | Tn | Ī | Y | Y | Na | 2N |
| 593938 | 0 | D | P | G | Ē | N | Br | Ī | Y | Y | Sna | 2N |
| 593939 | 0 | D | P | G | E | Ssp | Br | Ī | Y | Y | Na | 3R |
| 593940 | 0 | S | W | G | E | N | Br | I | Y | Y | 114 | 2N |
| 593941 | 0 | S | P | G | E | Ssp | Br | D | Y | Bf | Na | 2N |
| 593942 | 0 | D | P | G | E | N N | Br | I | Y | Y | Na | 2N |
| 593943 | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N 2N |
| 593944 | 0 | D | W | G | E | Ssp | Br | I | Y | Y | Sna | 2N 2N |
| 593946 | 00 | D | W | G | E | Ssp N | | D | Y | Y | Sila | 2N 2N |
| | | | | | | | Br | | Y | | | |
| 593949A | I | D | P | G | Sa | Ssp | Br | I | | Y | | 2N |
| 593950A | 00 | D | W | G | Е | N | Br | I | Y | Y | N | 2N |
| 593950B | 0 | D | W | G | Е | N | Br | I | Y | Y | Na | 2N |
| 593951 | 00 | N | P | T | E | N | Tn | I | Y | Tn | | 3N |
| 593953 | I | N | W | G | E | Ssp | Tn | D | Y | Y | Na | 2N |
| 593955 | I | S | W | G | E | N | Tn | I | Y | Y | | 2N |
| 593956A | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 593957 | I | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 593961 | I | N | P | T | E | N | Br | I | Y | Bl | | 3N |
| 593967 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 593968 | I | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 593969 | I | N | P | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 593970 | I | D | W | G | Sa | Ssp | Br | D | Gn | Gn | | 2N |
| 593971 | I | D | P | G | E | Ssp | Br | D | Y | Y | | 2N |
| 593972 | I | D | P | G | E | Ssp | Br | I | Y | Y | Na | 1N |
| 593973 | I | D | P | G | E | Ssp | Br | I | Y | Y | | 2N |
| 593975 | I | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 593976 | 000 | D | P | T | Sa | N | Br | I | Bl | Bl | | 2N |
| 593979 | 000 | D | P | T | Sa | N | Br | I | Gn | Bl | | 2F |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering | g Maturity | | | Stem | Shattering | Seed | | | |
|---------|-----------|------------|---------|----------|-------------|------------|---------|----------|---------|---------|
| | date | | | g Height | termination | early | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 592922 | 709 | 905 | 1.5 | 57 | 3.0 | 4.0^ | 2.3 | 1.0 | 14.5 | 1.69* |
| 592923 | 711 | 909 | 1.0 | 56 | 2.0 | 2.0^ | 2.0 | 1.0 | 16.3 | 1.62* |
| 592924 | 711 | 920 | 1.0 | 69 | 1.5 | 1.0^ | 1.8 | 1.0 | 17.1 | 2.03* |
| 592925 | 711 | 923 | 2.5 | 78 | 2.5 | 1.0^ | 2.0 | 1.0 | 15.9 | 1.56 |
| 592926 | 711 | 925 | 2.5 | 86 | 3.0 | 1.0^ | 1.8 | 1.0 | 20.8 | 1.90 |
| 592931 | 719 | 913 | 2.0 | 37 | 1.0 | 3.0^ | 1.8 | 1.0 | 13.9 | 0.73 |
| 592943 | 717 | 917* | 2.0 | 36 | 1.0 | 2.0^ | 1.5 | 1.0 | 15.0 | 0.40 |
| 592957 | 719* | 1003 | 2.5 | 84 | 1.5 | 1.0^ | 1.5 | 1.0 | 19.0 | 1.53 |
| 592958 | 723 | 1006 | 3.0 | 90 | 2.0 | 1.0^ | 2.3 | 1.0 | 19.3 | 1.77 |
| 592960 | 715 | 921 | 2.0 | 76 | 2.5 | 1.0^ | 2.0 | 1.5 | 15.2 | 2.16* |
| 592961 | 707 | 822 | 1.0 | 38 | 1.0 | 4.0* | 3.0 | 1.0 | 16.1 | 0.62 |
| 592962A | 713 | 916 | 2.5 | 74 | 1.5 | 1.0^ | 2.0 | 1.0 | 15.9* | 2.20* |
| 592962B | 715 | 925 | 2.5 | 77 | 1.5 | 1.0^ | 2.0 | 1.0 | 17.5 | 1.64* |
| 592963 | 715 | 921 | 3.0 | 89 | 1.5 | 2.0^ | 2.0 | 1.0 | 15.6 | 1.91* |
| 592964 | 715 | 921 | 2.5 | 72 | 1.0 | 1.0^ | 2.0 | 1.0 | 16.3 | 1.70* |
| 592967 | 713 | 927 | 2.0 | 76 | 2.5 | 1.0^ | 1.8 | 1.5 | 17.7 | 1.90* |
| 592970 | 717^ | 1012^ | 3.0^ | 86^ | 2.0^ | _ | 3.0^ | 1.0^ | 16.6^ | 1.92^ |
| 592975 | 711 | 913 | 1.5 | 66* | 2.0 | 2.0^ | 1.8 | 1.0 | 14.3* | 1.97* |
| 592976 | 711 | 919 | 1.5 | 83* | 2.5 | 2.0^ | 1.8 | 1.5 | 18.2* | 2.03* |
| 592977 | 713 | 923 | 1.5 | 66 | 2.0 | 1.0^ | 1.8 | 1.5 | 15.3 | 1.98 |
| 593938 | 711 | 919 | 2.0 | 71 | 1.5 | 2.0^ | 1.8 | 1.5 | 15.7 | 1.93 |
| 593939 | 711 | 913 | 1.0 | 59 | 1.0 | 2.0^ | 2.5* | 1.5 | 14.3* | 1.49* |
| 593940 | 711 | 909 | 1.0 | 56 | 2.0 | 2.0^ | 2.3* | 1.5 | 15.2* | 1.81* |
| 593941 | 711 | 912 | 1.5 | 60 | 2.0 | 2.0^ | 2.3 | 1.0 | 16.0 | 1.64* |
| 593942 | 711 | 914 | 1.0 | 57 | 1.5 | 1.0^ | 1.5 | 1.0 | 14.5 | 1.72* |
| 593943 | 711 | 919 | 2.0 | 69 | 2.0 | 2.0^ | 1.5 | 1.5 | 16.2 | 1.59 |
| 593944 | 711 | 919 | 1.5 | 74 | 1.5 | 2.0^ | 1.5 | 1.0 | 17.2 | 2.39^ |
| 593946 | 711 | 906 | 2.0 | 72 | 1.5 | 3.0^ | 2.3 | 1.0 | 12.7* | 1.61 |
| 593949A | 720 | 927 | 1.5 | 47* | 1.0 | 2.0^ | 2.8 | 1.5 | 28.6 | 1.52 |
| 593950A | 711 | 907 | 2.0 | 65 | 1.0 | 3.0^ | 2.3 | 1.0 | 14.1 | 0.96 |
| 593950B | 711 | 911 | 3.0 | 88 | 1.5 | 3.0^ | 2.3 | 1.5 | 14.7 | 1.67 |
| 593951 | 708 | 904 | 1.5 | 61 | 2.5 | 4.0^ | 2.5 | 1.0 | 13.8* | 1.31 |
| 593953 | 713 | 921 | 1.0 | 60 | 2.0 | 1.0^ | 2.0 | 1.0 | 16.3 | 2.12* |
| 593955 | 715 | 923 | 2.5 | 79 | 2.0 | 1.0^ | 1.8 | 1.0 | 13.3 | 1.62 |
| 593956A | 713 | 929 | 2.5 | 79 | 1.0 | 1.0^ | 2.0 | 1.0 | 18.5 | 2.12 |
| 593957 | 711 | 921 | 1.5 | 63 | 1.0 | 1.0^ | 1.8 | 1.0 | 16.6 | 1.20 |
| 593961 | 716 | 1001 | 4.0 | 108 | 2.5 | 2.0^ | 1.5 | 1.0 | 16.0 | 1.78 |
| 593967 | 721 | 1004 | 3.5 | 94* | 3.0 | 2.0^ | 1.8 | 1.0 | 18.4 | 1.71 |
| 593968 | 717 | 927 | 2.0 | 60* | 1.0 | 1.0^ | 1.8 | 1.0 | 16.2 | 1.61 |
| 593969 | 713 | 921 | 3.0 | 75 | 2.5 | 2.0^ | 2.0 | 1.0 | 17.8 | 1.71 |
| 593970 | 713 | 1004 | 1.5 | 40 | 1.0 | 3.0^ | 2.3 | 1.0 | 23.0 | 1.50 |
| 593971 | 716 | 926 | 1.5 | 51* | 1.0 | 2.0^ | 1.8 | 1.0 | 20.5 | 1.50 |
| 593972 | 721 | 1003 | 1.5 | 64 | 1.0 | 1.0^ | 2.0 | 1.0 | 10.9 | 2.27 |
| 593973 | 713 | 927 | 1.0 | 39 | 1.0 | 3.0^ | 2.5 | 1.0 | 24.0 | 1.66 |
| 593975 | 719 | 921 | 1.0 | 39 | 1.0 | 3.0^ | 2.5 | 1.0 | 28.9 | 1.49 |
| 593976 | 711 | 822 | 1.0 | 28 | 1.0 | 4.5 | 2.5 | | 15.7 | 0.77 |
| 593979 | 711 | 829 | 1.0 | 31 | 1.0 | 4.5 | 2.8 | 1.0 | 15.7 | 0.90 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed con | nposition | Oil compos | | | | | | |
|----------------------------|----------|---------------------|---------------------|------------|---------|-------|--------------|-----------|--|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | | |
| 592922 | 00 | 40.7 | 19.1 | 12.2 | 4.2 | 20.9 | 52.7 | 10.1 | | |
| 592923 | 0 | 39.7 | 18.4 | 12.9 | 3.7 | 20.0 | 54.3 | 9.2 | | |
| 592924 | 0 | 40.6 | 18.7 | 11.3 | 3.9 | 23.9 | 52.0 | 8.8 | | |
| 92925 | I | 42.2 | 19.4 | 11.1 | 3.1 | 27.2 | 50.7 | 7.9 | | |
| 592926 | I | 41.7 | 18.7 | 10.9 | 3.3 | 26.2 | 51.4 | 8.2 | | |
| 592931 | 0 | 41.5 | 18.3 | 10.4 | 2.8 | 23.5 | 53.5 | 9.9 | | |
| 592943 | 0 | 44.2 | 16.9 | 10.4 | 2.8 | 22.6 | 54.8 | 9.4 | | |
| 92957 | Ĭ | 42.4 | 17.3 | 11.1 | 3.6 | 22.1 | 53.7 | 9.6 | | |
| 92958 | Ī | 40.1 | 17.9 | 10.9 | 3.7 | 22.5 | 52.6 | 10.4 | | |
| 92960 | Ī | 39.1 | 19.6 | 11.5 | 3.6 | 26.7 | 49.2 | 9.0 | | |
| 92961 | 000 | 43.4 | 18.9 | 10.9 | 3.0 | 26.6 | 52.6 | 6.9 | | |
| 92962A | 0 | 42.1 | 18.9 | 10.8 | 3.7 | 23.0 | 54.6 | 7.9 | | |
| 92962B | I | 40.7 | 19.2 | 10.3 | 3.7 | 23.6 | 53.5 | 8.8 | | |
| 92963 | I | 39.3 | 20.3 | 11.0 | 3.6 | 22.1 | 55.3 | 8.0 | | |
| 92964 | I | 40.3 | 20.5 | 10.9 | 3.4 | 22.1 | 55.5 54.8 | 8.1 | | |
| 9290 4 92967 | I | 40.3 | 20.5 18.6 | 10.9 | 3.4 | 20.7 | 54.6 54.7 | 10.2 | | |
| 92907 92970 | I | 42.9^ | 17.9 | 10.9 | 4.0 | 24.4 | 52.5 | 8.0 | | |
| 92970 92975 | 0 | 42.9 | 17.9 | 12.3 | 4.0 | 20.7 | 52.5 | 10.4 | | |
| 92973 92976 | | 41.0 | 17.8 | 12.5 | 4.2 | 20.7 | 52.5 52.6 | 8.3 | | |
| 92976 92977 | 0 I | 39.9 | 19.4 | 12.0 | | 18.5 | | | | |
| | | | | | 3.9 | | 54.3 | 11.3 | | |
| 93938 | 0 | 40.0 | 19.6 | 10.7 | 3.0 | 26.5 | 52.3 | 7.4 | | |
| 93939 | 0 | 42.1 | 17.5 | 11.9 | 4.0 | 20.7 | 53.9 | 9.5 | | |
| 93940 | 0 | 44.0 | 16.8 | 11.4 | 3.3 | 25.3 | 51.2 | 8.7 | | |
| 93941 | 0 | 43.0 | 17.6 | 11.1 | 3.9 | 21.8 | 54.2 | 9.0 | | |
| 93942 | 0 | 40.6 | 18.3 | 11.0 | 3.4 | 22.0 | 54.7 | 8.9 | | |
| 93943 | I | 37.7 | 18.0 | 11.2 | 3.6 | 22.7 | 53.8 | 8.6 | | |
| 93944 | 0 | 41.5 | 18.1 | 11.8 | 4.1 | 22.1 | 52.7 | 9.4 | | |
| 93946 | 00 | 41.9 | 17.7 | 10.9 | 3.6 | 20.0 | 56.3 | 9.1 | | |
| 93949A | I | 41.3 | 17.2 | 11.8 | 2.9 | 21.0 | 53.0 | 11.2 | | |
| 93950A | 00 | 41.8 | 17.2 | 12.4 | 3.4 | 19.2 | 55.1 | 9.9 | | |
| 93950B | 0 | 41.5 | 18.4 | 12.0 | 3.2 | 22.5 | 53.8 | 8.4 | | |
| 93951 | 00 | 40.2 | 19.5 | 10.9 | 3.5 | 22.2 | 55.3 | 8.0 | | |
| 93953 | I | 41.0 | 18.5 | 13.4 | 3.6 | 17.6 | 56.2 | 9.1 | | |
| 93955 | I | 41.2 | 18.2 | 10.9 | 3.7 | 21.8 | 55.0 | 8.6 | | |
| 93956A | I | 41.3 | 18.2 | 11.9 | 3.7 | 21.5 | 53.3 | 9.6 | | |
| 93957 | I | 42.3 | 17.3 | 12.4 | 3.0 | 19.3 | 55.9 | 9.4 | | |
| 93961 | I | 45.2 | 17.0 | 10.8 | 3.1 | 24.0 | 52.9 | 9.2 | | |
| 93967 | I | 42.9 | 18.4 | 12.1 | 3.3 | 20.9 | 54.8 | 9.0 | | |
| 93968 | I | 43.3 | 16.2 | 11.1 | 3.1 | 16.3 | 56.8 | 12.8 | | |
| 93969 | I | 43.4 | 18.1 | 11.6 | 3.7 | 20.1 | 54.8 | 9.8 | | |
| 93970 | I | 53.2^{w} | 17.1^{w} | 9.5 | 2.8 | 17.2 | 60.0 | 10.5 | | |
| 93971 | I | 39.9 | 18.6 | 11.9 | 3.5 | 20.5 | 54.5 | 9.5 | | |
| 93972 | I | 40.7 | 17.3 | 11.4 | 3.0 | 18.0 | 56.6 | 10.9 | | |
| 93973 | I | 42.6 | 17.8 | 11.9 | 2.9 | 20.9 | 55.2 | 9.1 | | |
| 93975 | I | 41.2 | 18.3 | 11.9 | 3.5 | 21.8 | 53.8 | 9.0 | | |
| 93976 | 000 | 55.6^{w} | 14.4^{w} | 12.4 | 2.5 | 16.0 | 58.6 | 10.6 | | |
| 93979 | 000 | 55.8^{w} | 14.7^{w} | 11.8 | 2.9 | 17.4 | 57.7 | 10.2 | | |

Table 1.1 Identification and origin information for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|-----------------------------|---------------|---------------|---------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 593982 | | unknown | Japan | Japan | 1996 | I |
| 593997 | | Kyongsang Nam | | South Korea | 1995 | 0 |
| 594016 | Keun daedu | unknown | South Korea | South Korea | 1995 | I |
| 594021 | Keunolkong | Kyongsang Nam | | South Korea | 1996 | Ī |
| | Geden shirazu | Akita | Japan | Japan | 1996 | I |
| | (Geden shirazu) | Akita | Japan | Japan | 1996 | I |
| 594178 | Himeyutaka | Hokkaido | Japan | Japan | 1996 | I |
| 594196 | Kinshu | unknown | Japan | Japan | 1996 | I |
| 594198 | Kitakomachi | Hokkaido | Japan | Japan | 1996 | I |
| 594200 | Kitami shiro | Hokkaido | Japan | Japan | 1996 | I |
| | Okuhara 1-B | Hokkaido | Japan | Japan | 1996 | 00 |
| | (Okuhara 1-B) | Hokkaido | Japan | Japan | 1996 | 0 |
| 594261 | Shika 4 | unknown | Japan | Japan | 1996 | 0 |
| 594276 | Shirosaya 1 | Kumamoto | Japan | Japan | 1996 | I |
| 594279 | Shinsei | Hokkaido | Japan | Japan | 1996 | 0 |
| 594279 | Tokachi kuro | Hokkaido | • | • | 1996 | I |
| | | Hokkaido | Japan | Japan | 1996 | I |
| 594301 | Toyomusume | Hokkaido | Japan | Japan | 1996 | I |
| | Tsurukogane | | Japan | Japan | | |
| 594314 | Wase suzunari | Akita | Japan | Japan | 1996 | I |
| 594319 | Yuuhime | Hokkaido | Japan | Japan | 1996 | I |
| 594898 | Tie jia | Liaoning | China | China | 1996 | I |
| 597390 | E94-202 | Dornod | Mongolia | Mongolia | 1994 | 0 |
| | Kievskaya 27 | Kiev | Ukraine | Ukraine | 1996 | 00 |
| | (Kievskaya 27) | Kiev | Ukraine | Ukraine | 1996 | 00 |
| | (Kievskaya 27) | Kiev | Ukraine | Ukraine | 1996 | 0 |
| 597393 | Kirovogradskaya 5 | Kirovograd | Ukraine | Ukraine | 1996 | 0 |
| 597394 | Kharkovskaya Zernokormovaya | | Ukraine | Ukraine | 1996 | 00 |
| 597395 | Solnechnaya | Zaporizhzhya | Ukraine | Ukraine | 1996 | 0 |
| 597397A | | Krasnodar | Russia | Ukraine | 1996 | I |
| 597397B | | Krasnodar | Russia | Ukraine | 1996 | I |
| 597398 | Yug 40 | Kherson | Ukraine | Ukraine | 1996 | 0 |
| 597399 | Yug 30 | Kherson | Ukraine | Ukraine | 1996 | 00 |
| 597400 | Viza | Krasnodar | Russia | Ukraine | 1996 | 0 |
| 597402 | Runo | Krasnodar | Russia | Ukraine | 1996 | 0 |
| | Krasnodar 391-89 | Krasnodar | Russia | Ukraine | 1996 | 0 |
| | (Krasnodar 391-89) | Krasnodar | Russia | Ukraine | 1996 | 0 |
| 597404 | Krasnodar 568-89 | Krasnodar | Russia | Ukraine | 1996 | I |
| | Zaporozhie 46-96 | Zaporizhzhya | Ukraine | Ukraine | 1996 | 0 |
| | (Zaporozhie 46-96) | Zaporizhzhya | Ukraine | Ukraine | 1996 | I |
| | (Zaporozhie 46-96) | Zaporizhzhya | Ukraine | Ukraine | 1996 | I |
| | (Zaporozhie 46-96) | Zaporizhzhya | Ukraine | Ukraine | 1996 | I |
| 597406 | 502 | Sichuan | China | China | 1996 | I |
| | Hefen 22 | Sichuan | China | China | 1996 | I |
| 597407B | (Hefen 22) | Sichuan | China | China | 1996 | I |
| 597409 | Helong 26 | Heilongjiang | China | China | 1996 | I |
| 597411A | Jilin 26 | Jilin | China | China | 1996 | I |
| 597415 | Dong nong 42 | Heilongjiang | China | China | 1995 | I |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco Luster | | Hilum color | Other traits | Seed shape |
|-------------------|-------------------|--------|---------|---|--------|----------|----------|------------------|-----------|----------------|--------------|---------------|
| | | | | | | | | | | | | |
| 593982 | I | N | P | T | Sa | Ssp | Br | I | Br | Rbr | Sw | 4N |
| 593997 | 0 | D | P | T | E | Sp | Br | I | Bl | B1 | | 1N |
| 594016 | I | S | W | T | A | N | Br | D | Y | Br | | 2N |
| 594021 | I | D | W | G | A | N | Br | D | Y | Y | N 7 | 2N |
| 594170A | I | D | P | G | Е | Ssp | Br | I | Y | Y | Na | 2N |
| 594170B | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 594178 | I | D | P | G | E | Ssp | Br | D | Y | Y | *** | 2N |
| 594196 | I | D | W | T | E | Ssp | Br | D | Gn | Bl | Vhil | 2N |
| 594198 | I | D | Dp | G | E | Ssp | Br | D | Y | Y | | 2N |
| 594200 | I | D | P | T | E | Ssp | Br | D | Y | Br | | 2N |
| 594245A | 00 | D | P | G | E | N | Br | I | Y | Bf | | 2N |
| 594245B | 0 | D | P | T | E | Ssp | Br | I | Y | Br | | 2N |
| 594261 | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 594276 | I | D | P | G | A | N | Tn | D | Y | Bf | | 2N |
| 594279 | 0 | D | P | T | E | Ssp | Br | D | Y | Br | | 2N |
| 594296 | I | D | P | T | E | Ssp | Br | I | Bl | Bl | | 2F |
| 594301 | I | D | P | G | E | Ssp | Br | D | Y | Y | | 2N |
| 594304A | I | N | W | G | E | Ssp | Br | I | Y | Y | Vhil | 2N |
| 594314 | I | D | P | G | A | Ssp | Br | D | Y | Y | | 2N |
| 594319 | I | D | P | G | Sa | Ssp | Br | I | Y | Y | | 2N |
| 594898 | I | N | W | G | Sa | N | Br | I | Y | Lbf | | 2N |
| 597390 | 0 | N | P | T | E | N | Br | I | Y | Y | | 2N |
| 597391A | 00 | S | P | T | E | N | Br | S | Y | B1 | | 3N |
| 597391B | 00 | D | W | T | E | N | Br | I | Y | Br | Abh | 3N |
| 597391C | 0 | N | P | T | E | Ssp | Br | D | Y | Br | | 3N |
| 597393 | 0 | D | P | T | E | N | Br | S | Y | Br | Sabh | 3N |
| 597394 | 00 | D | P | T | Е | N | Br | I | G | Bl | Abh | 2N |
| 597395 | 0 | N | P | T | E | N | Br | D | Y | Y | | 3N |
| 597397A | I | N | W | G | E | N | Tn | D | Y | Y | | 2N |
| 597397B | I | S | P | G | E | N | Tn | I | Y | Bf | | 2N |
| 597398 | 0 | N | W | G | E | N | Br | D | Y | Y | | 2N |
| 597399 | 00 | D | P | G | E | N | Tn | I | Y | Bf | | 3N |
| 597400 | 0 | N | W | G | E | N | Dbr | Ī | Y | Bf | | 2N |
| 597402 | 0 | S | P | G | Ē | N | Br | Ī | Y | Ib | | 3N |
| 597403A | 0 | N | P | G | E | N | Tn | I | G | Ib | Vsc | 2N |
| 597403B | 0 | S | P | G | E | N | Tn | Ī | Y | Bf | , 50 | 2N |
| 597404 | Ĭ | N | W | T | E | N | Tn | I | Y | Br | | 2N |
| 597405A | 0 | N | P | T | E | N | Tn | I | Y | Br | | 2N |
| 597405B | I | N | P | T | E | N | Dbr | I | Y | Br | | 2N |
| 597405C | I | N | W | T | E | N | Tn | D | Y | Br | | 2N |
| 597405D | I | N | P VV | T | E | N | Br | I | Y | Dbr | Abh | 3N |
| 597403D 597406 | I | N | P P | T | E E | N N | Br | | ı Gnbr | Rbr | AUII | 5N 5F |
| | I | N N | P P | G | | | | I | Gnor Y | Kor Y | No | 5F 1N |
| 597407A | | | | | E | Ssp | Br Br | I | | | Na | |
| 597407B | I | N | W | G | E | Ssp | Br | I | Y | Y | Mo | 2N |
| 597409 | I | S | W | G | E | N Sam | Br | I | Y | Y | Na Na | 2N |
| 597411A | I | N | P | G | Е | Ssp | Br | I | Y | Y | Na | 1N |
| 597415 | I | N | P | G | E | Ssp | Tn | I | Y | Y | | 3N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering | Maturity | | | Stem | Shattering | Seed | | | |
|---------|-----------|----------|---------|----------|-------------|------------|---------|----------|---------|---------|
| | date | | | g Height | termination | early | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 593982 | 730 | 923 | 4.0 | 76 | 5.0 | 2.0^ | 1.5 | | 4.2 | 0.99 |
| 593997 | 713 | 913 | 1.5 | 50* | 1.0 | 4.5 | 2.3 | | 19.8 | 1.28 |
| 594016 | 805^ | 1002 | 4.0 | 82* | 2.0 | 2.0^ | 2.3 | 1.0 | 12.3 | 1.48 |
| 594021 | 720 | 921 | 1.0 | 36 | 1.0 | 5.0 | 2.5 | 1.0 | 26.3 | 1.28 |
| 594170A | 720 | 924 | 2.0 | 50 | 1.0 | 2.0^ | 2.0 | 1.0 | 10.5 | 1.31 |
| 594170B | 720 | 925 | 2.0 | 51 | 1.0 | 3.0^ | 2.0 | 1.0 | 10.4 | 1.36 |
| 594178 | 715 | 923 | 1.5 | 55* | 1.0 | 4.0^ | 2.0 | 1.0 | 24.0 | 1.30 |
| 594196 | 721 | 926 | 1.5 | 47* | 1.0 | 3.0^ | 2.0 | 1.0 | 27.4 | 1.35 |
| 594198 | 711 | 925 | 2.0 | 47 | 1.0 | 3.0^ | 2.0 | 1.0 | 21.6 | 1.54 |
| 594200 | 727 | 1001 | 2.0 | 64* | 1.0 | 2.0^ | 2.0 | 1.0 | 17.4 | 1.74 |
| 594245A | 708 | 905 | 1.0 | 44 | 1.0 | 5.0^ | 3.0 | 1.0 | 15.8 | 0.59 |
| 594245B | 715 | 917 | 1.5 | 49 | 1.0 | 5.0^ | 2.0 | 1.5 | 24.0 | 1.37 |
| 594261 | 711 | 907 | 1.5 | 57 | 2.5 | 3.0^ | 2.3* | 1.0 | 15.2 | 1.78* |
| 594276 | 725 | 930 | 2.5 | 58 | 2.0 | 3.0^ | 1.8 | 1.0 | 13.6 | 1.04 |
| 594279 | 715 | 912 | 1.5 | 52 | 1.5 | 5.0^ | 2.0 | 1.5 | 16.9 | 1.03 |
| 594296 | 717 | 923 | 1.5 | 44 | 1.0 | 5.0^ | 2.0 | | 26.4 | 1.39* |
| 594301 | 715 | 1004 | 1.5 | 46* | 1.0 | 2.0^ | 2.5 | 1.5 | 24.0 | 1.27 |
| 594304A | 719 | 1003 | 2.5 | 80 | 2.5 | 1.0^ | 1.8 | 1.5 | 28.8* | 2.06 |
| 594314 | 715^ | 1001^ | 2.0^ | 36^ | 1.0^ | 3.0^ | 2.0^ | 1.0^ | 17.1^ | 1.08^ |
| 594319 | 721 | 1001 | 1.5 | 44 | 1.0 | 1.0^ | 2.3 | 1.5 | 28.3* | 2.24 |
| 594898 | 713 | 923 | 3.0 | 87* | 3.0 | 1.5 | 1.8 | 1.0 | 16.1 | 1.78* |
| 597390 | 708 | 913 | 1.5 | 68 | 3.0 | 1.0^ | 2.0 | 1.0 | 12.4 | 1.06 |
| 597391A | 711 | 907 | 2.5 | 71 | 2.0 | 4.0^ | 2.5 | 1.0 | 11.7 | 1.05 |
| 597391B | 711 | 906 | 1.5 | 65* | 1.5 | 4.0^ | 2.0 | 1.0 | 13.4 | 1.45* |
| 597391C | 708 | 911 | 1.5 | 73 | 3.0 | 3.0^ | 2.3* | 1.0 | 14.1 | 1.37* |
| 597393 | 717 | 917 | 1.5 | 55 | 1.5 | 1.0^ | 2.0 | 1.0 | 12.5 | 1.76* |
| 597394 | 711 | 903 | 2.0 | 56* | 1.5 | 1.0^ | 1.8 | 1.0 | 13.4 | 1.30 |
| 597395 | 711 | 912 | 1.5 | 74 | 2.5 | 2.0^ | 2.0 | 1.0 | 12.9 | 1.93* |
| 597397A | 711 | 919 | 2.0 | 83 | 3.0 | 1.0^ | 1.8 | 1.0 | 12.9 | 2.26 |
| 597397B | 713 | 921 | 2.5 | 81 | 2.0 | 1.0^ | 1.8 | 1.0 | 13.0 | 1.97 |
| 597398 | 711 | 911 | 1.5 | 80* | 3.0 | 1.0^ | 2.0 | 1.0 | 14.0 | 1.86 |
| 597399 | 711 | 903 | 2.5 | 50 | 1.0 | 2.0^ | 2.3 | 1.0 | 14.2 | 0.92 |
| 597400 | 709 | 910 | 2.5 | 89 | 3.0 | 1.0^ | 2.5 | 1.0 | 13.2 | 1.74 |
| 597402 | 713 | 917 | 2.5 | 67 | 2.0 | 1.0^ | 2.0 | 1.0 | 11.3 | 1.48 |
| 597403A | 713 | 913 | 2.0 | 84 | 2.5 | 2.0^ | 1.8 | 1.0 | 11.9 | 2.17 |
| 597403B | 711 | 909 | 2.0 | 76 | 2.0 | 1.0^ | 1.8 | 1.0 | 11.2 | 1.80 |
| 597404 | 713 | 915 | 3.0 | 74 | 2.0 | 2.0^ | 1.5 | 1.0 | 10.2 | 1.49 |
| 597405A | 713 | 919 | 3.5 | 112 | 4.0 | 2.0^ | 2.0 | 1.0 | 12.4 | 1.95* |
| 597405B | 713 | 921 | 2.5 | 85 | 2.0 | 2.0^ | 1.3 | 1.0 | 13.8 | 2.22 |
| 597405C | 713 | 921 | 2.5 | 105 | 3.0 | 1.0^ | 1.8 | 1.0 | 12.4 | 2.26 |
| 597405D | 711 | 919 | 4.0 | 85 | 3.0 | 2.0^ | 1.8 | 1.0 | 11.1 | 1.60 |
| 597406 | 804 | 1006 | 3.5 | 107 | 3.0 | 1.0^ | 2.5 | | 9.6 | 1.14 |
| 597407A | 723 | 1004 | 3.0 | 92 | 2.0 | 2.0^ | 2.3 | 1.5 | 18.5 | 2.17* |
| 597407B | 717 | 1005 | 3.5 | 97 | 2.0 | 1.0^ | 2.0 | 2.5 | 16.9 | 1.58 |
| 597409 | 711 | 923 | 3.0* | 81 | 2.0 | 1.0^ | 1.8 | 2.0* | 14.7 | 1.94* |
| 597411A | 717^ | 1005 | 3.0 | 92 | 2.0 | 1.0^ | 2.0 | 1.0 | 18.5 | 1.91 |
| 597415 | 713 | 924 | 3.0 | 83 | 2.5 | 1.0^ | 2.0 | 2.0 | 13.3 | 1.84 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil compo | | | | | |
|---------------------------|----------|---------------------------|---------------------------|-----------|------------|-------|----------|-----------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 593982 | I | 53.1 ^w | 13.4^{w} | 10.8 | 2.7 | 13.2 | 58.9 | 14.4 | |
| 593997 | 0 | 53.5 ^w | 16.5 ^w | 9.9 | 2.3 | 15.8 | 58.3 | 13.7 | |
| 594016 | I | 43.8 | 14.8 | 11.4 | 2.7 | 16.9 | 55.1 | 13.9 | |
| 594021 | I | 44.6 | 16.5 | 12.5 | 2.9 | 19.8 | 53.8 | 10.9 | |
| 594170A | Ī | 39.7 | 17.9 | 11.9 | 3.4 | 17.1 | 57.6 | 10.2 | |
| 594170B | Ī | 40.4 | 17.9 | 12.2 | 3.3 | 15.7 | 57.9 | 10.9 | |
| 594178 | I | 41.5 | 18.2 | 12.4 | 2.9 | 20.2 | 54.9 | 9.6 | |
| 594196 | I | 48.9 ^w | 18.2 ^w | 9.9 | 2.8 | 19.8 | 56.4 | 11.0 | |
| 594198 | I | 42.8 | 17.9 | 11.3 | 2.7 | 21.0 | 56.0 | 9.1 | |
| 594200 | Ī | 40.0 | 16.9 | 11.6 | 2.7 | 19.0 | 56.0 | 10.7 | |
| 594245A | 00 | 42.0 | 19.0 | 10.2 | 3.8 | 26.7 | 52.4 | 7.0 | |
| 94245B | 0 | 42.2 | 18.1 | 11.0 | 2.9 | 26.4 | 51.3 | 8.4 | |
| 194243 D 194261 | 0 | 44.2 | 17.8 | 11.6 | 3.4 | 21.3 | 54.0 | 9.7 | |
| 194201 194276 | I | 47.3 | 13.4 | 12.0 | 2.8 | 19.5 | 53.6 | 12.0 | |
| 594270 594279 | 0 | 47.3 | 17.5 | 12.0 | 3.3 | 22.1 | 54.3 | 8.6 | |
| 194219 194296 | I | 43.0 47.5 ^w | 17.3 19.4 ^w | 9.3 | 3.3 2.9 | 21.0 | 57.8 | 9.1 | |
| 194290 194301 | I | 40.9 | 17.4 | 11.2 | 2.6 | 21.4 | 55.8 | 9.0 | |
| 194301 194304A | I | 40.5 | 17.4 | 10.4 | 2.7 | 24.7 | 52.1 | 10.1 | |
| | I | 40.3 41.2^ | | | | | | | |
| 94314 | | | 18.7^ | 10.8 | 2.9 | 19.5 | 56.9 | 9.8 | |
| 94319 | I | 40.2 | 17.5 | 11.1 | 2.7 | 21.0 | 54.1 | 11.2 | |
| 94898 | I | 40.5 | 20.4 | 9.9 | 4.5 | 30.8 | 47.6 | 7.2 | |
| 97390 | 0 | 42.8 | 18.4 | 12.2 | 3.7 | 19.7 | 56.2 | 8.2 | |
| 97391A | 00 | 42.3 | 18.1 | 10.3 | 3.6 | 20.6 | 55.2 | 10.3 | |
| 97391B | 00 | 42.8 | 17.7 | 10.8 | 3.7 | 20.3 | 55.5 | 9.7 | |
| 97391C | 0 | 42.8 | 19.5 | 10.1 | 3.5 | 22.6 | 55.3 | 8.5 | |
| 97393 | 0 | 42.6 | 18.2 | 10.9 | 4.3 | 22.5 | 53.4 | 8.9 | |
| 97394 | 00 | 53.8 ^w | 16.1 ^w | 11.3 | 3.5 | 17.6 | 57.4 | 10.2 | |
| 97395 | 0 | 43.3 | 18.2 | 11.2 | 3.9 | 20.2 | 54.5 | 10.2 | |
| 97397A | I | 39.8 | 18.8 | 10.6 | 2.7 | 19.5 | 57.3 | 10.0 | |
| 97397B | I | 41.5 | 18.8 | 12.0 | 2.8 | 19.6 | 56.4 | 9.2 | |
| 97398 | 0 | 39.3 | 20.1 | 11.5 | 3.7 | 20.7 | 55.7 | 8.3 | |
| 597399 | 00 | 41.7 | 17.7 | 10.8 | 4.0 | 21.8 | 53.5 | 9.9 | |
| 597400 | 0 | 40.7 | 19.8 | 10.2 | 3.6 | 22.8 | 54.2 | 9.2 | |
| 97402 | 0 | 40.0 | 19.7 | 10.2 | 3.7 | 23.1 | 54.0 | 9.1 | |
| 97403A | 0 | 41.5 | 19.4 | 10.7 | 3.7 | 22.4 | 55.1 | 8.2 | |
| 97403B | 0 | 41.2 | 19.0 | 11.8 | 3.7 | 20.1 | 55.6 | 8.8 | |
| 97404 | I | 40.5 | 19.4 | 12.4 | 2.9 | 18.5 | 56.6 | 9.7 | |
| 597405A | 0 | 42.1 | 19.7 | 11.5 | 4.0 | 24.8 | 51.9 | 7.9 | |
| 97405B | I | 42.2 | 20.2 | 12.5 | 3.1 | 23.3 | 52.8 | 8.3 | |
| 97405C | I | 39.5 | 20.1 | 11.5 | 3.2 | 21.5 | 55.5 | 8.4 | |
| 97405D | I | 40.1 | 19.8 | 10.8 | 3.2 | 25.4 | 52.1 | 8.5 | |
| 97406 | I | 53.8^{w} | 15.5^{w} | 9.9 | 2.9 | 21.2 | 55.1 | 11.0 | |
| 97407A | I | 40.9 | 18.4 | 10.9 | 2.7 | 24.4 | 52.4 | 9.5 | |
| 97407B | I | 41.3 | 17.8 | 11.2 | 3.1 | 21.9 | 53.6 | 10.1 | |
| 97409 | I | 40.2 | 18.1 | 10.8 | 3.9 | 20.9 | 54.0 | 10.4 | |
| 597411A | I | 41.4 | 18.3 | 11.5 | 3.1 | 22.9 | 53.2 | 9.4 | |
| 597415 | I | 42.1 | 18.1 | 10.8 | 3.4 | 18.5 | 56.8 | 10.5 | |

 $Table 1.1 \ Identification \ and \ origin \ information \ for \ USDA \ soybean \ germplasm \ in \ maturity \ groups \ 000 \ through \ I, \ PI \ 578371 \ to \ PI \ 612761B \ plus \ earlier \ accessions \ not \ previously \ evaluated.$

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|---------------------|--------------|---------------|---------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 11110. | Identifier | or origin | origin | acquisition | or rereased | group |
| 597416 | He feng 26 | Heilongjiang | China | China | 1995 | 00 |
| 597417 | He feng 29 | Heilongjiang | China | China | 1995 | 00 |
| 597419 | He feng 871004 | Heilongjiang | China | China | 1995 | I |
| 597420 | He feng 91239 | Heilongjiang | China | China | 1995 | I |
| 597421 | He feng 91342 | Heilongjiang | China | China | 1995 | I |
| 597422 | Hei he 92-1372 | Heilongjiang | China | China | 1995 | 0 |
| 597423 | He feng 8719 | Heilongjiang | China | China | 1995 | 0 |
| 597425 | Heng feng No. 9 | Heilongjiang | China | China | 1995 | 0 |
| 597426 | Gang 81-128-1 | Heilongjiang | China | China | 1995 | 0 |
| 597427A | Gang 84-62-19 | Heilongjiang | China | China | 1995 | I |
| 597427B | (Gang 84-62-19) | Heilongjiang | China | China | 1995 | I |
| 597428 | JFH | Heilongjiang | China | China | 1995 | I |
| 597429 | Gang 8827-4 | Heilongjiang | China | China | 1995 | I |
| 597430A | Gang 8774-1 | Heilongjiang | China | China | 1995 | 0 |
| | (Gang 8774-1) | Heilongjiang | China | China | 1995 | 0 |
| 597431 | Gang 8779-3 | Heilongjiang | China | China | 1995 | I |
| 597432 | Gang 8819-3-16 | Heilongjiang | China | China | 1995 | I |
| 597433 | Gang 8869-1 | Heilongjiang | China | China | 1995 | 0 |
| 597434 | K90-09 | Heilongjiang | China | China | 1995 | 0 |
| 597435 | K90-11 | Heilongjiang | China | China | 1995 | 0 |
| 597436 | F8201-205 | Heilongjiang | China | China | 1995 | Ī |
| 597439 | Hei nong 38 | Heilongjiang | China | China | 1995 | Ī |
| | Hei nong 39 | Heilongjiang | China | China | 1995 | Ī |
| | (Hei nong 39) | Heilongjiang | China | China | 1995 | Ī |
| | (Hei nong 39) | Heilongjiang | China | China | 1995 | I |
| 597442 | NEAU 785 | Heilongjiang | China | China | 1995 | 0 |
| 597443 | NEAU 9142 | Heilongjiang | China | China | 1995 | Ĭ |
| 597444 | NEAU 91212 | Heilongjiang | China | China | 1995 | Ī |
| 597445 | NEAU 9243 | Heilongjiang | China | China | 1995 | Ī |
| 597446 | DN 104 | Heilongjiang | China | China | 1995 | Ī |
| 597447 | Bei feng 87-09 | Heilongjiang | China | China | 1995 | 0 |
| 597467 | E dou No. 4 | Hubei | China | China | 1997 | 0 |
| 597487 | Hwaseongputkong | Kyonggi | South Korea | South Korea | 1997 | I |
| 597651 | Wei da yu | Jilin | China | China | 1997 | 0 |
| 597652 | Sun wu xiao bai mei | Jilin | China | China | 1997 | 0 |
| | Ke shan si li jia | Heilongjiang | China | China | 1996 | I |
| | (Ke shan si li jia) | Heilongjiang | China | China | 1996 | 00 |
| 602498 | Xiao jin huang | Jilin | China | China | 1996 | I |
| 603147 | Tituo jiii iiuung | unknown | North Korea | North Korea | 1997 | 000 |
| 603148 | Oh won No. 1 | unknown | North Korea | North Korea | 1997 | I |
| 603149 | OII WOII 110. I | unknown | North Korea | North Korea | 1997 | 000 |
| 603150 | | unknown | North Korea | North Korea | 1997 | 000 |
| 603151A | | unknown | North Korea | North Korea | 1997 | I |
| 603151B | | unknown | North Korea | North Korea | 1997 | 0 |
| 603151B | | unknown | North Korea | North Korea | 1997 | 0 |
| 603169 | | unknown | North Korea | North Korea | 1997 | 00 |
| 603290 | Zao shu 18 | Beijing | China | China | 1998 | I |
| 003290 | Zao siiu 10 | Deiling | Cillia | Cillia | 1770 | 1 |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|------------------|-------------------|---|--------|---|---|---------|--------------|------------------|----|----------------|--------------|---------------|
| | | | | - | | N | | D | 17 | | | |
| 597416 | 00 | D | W | G | E | N | Br | D | Y | Y | | 2N |
| 597417 | 00 | N | P | G | Е | N | Dbr | I | Y | Y | N 7 | 2N |
| 597419 | I | S | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597420 | I | D | W | G | E | Ssp | Br | D | Y | Y | | 2N |
| 597421 | I | D | W | G | E | N | Br | I | Y | Y | | 3N |
| 597422 | 0 | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 597423 | 0 | D | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 597425 | 0 | N | W | G | E | N | Br | D | Y | Y | | 2N |
| 597426 | 0 | S | Dp | T | E | N | Br | I | Y | Br | | 2N |
| 597427A | I | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597427B | I | S | P | G | E | N | Br | D | Y | Bf | Na,Vhil | 2N |
| 597428 | I | D | P | G | E | N | Br | I | Y | Lbf | | 2N |
| 597429 | I | D | P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597430A | 0 | D | P | G | E | N | Br | I | Y | Y | | 1N |
| 597430B | 0 | N | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 597431 | I | D | W | G | E | N | Tn | I | Y | Y | Na | 2N |
| 597432 | I | D | P | G | Е | N | Br | I | Y | Y | | 3N |
| 597433 | 0 | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597434 | 0 | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 597435 | 0 | D | W | G | E | N | Br | Ī | Y | Y | Sna | 2N |
| 597436 | Ĭ | N | W | G | E | N | Br | Ī | Y | Bf | 2114 | 2N |
| 597439 | Ī | D | W | G | E | N | Br | D | Y | Y | | 3N |
| 597440A | Ī | D | W | G | E | Ssp | Br | I | Y | Y | | 3N |
| 597440B | I | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 597440C | I | D | W | G | E | N | Br | I | Y | Y | | 3N |
| 597442 | 0 | D | W | G | E | N | Br | D | Y | Bf | Na | 2R |
| 597443 | I | N | P P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597444 597444 | I | D | W | G | E | - | | I | Y | Y | 1Na | 3N |
| | | | | | | Ssp | Br | | Y | | | |
| 597445 | I | D | W | G | E | Ssp | Br | D | | Y | NT. | 2N |
| 597446 | I | S | P | G | E | N | Tn | I | Y | Y | Na | 2N |
| 597447 | 0 | D | W | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 597467 | 0 | D | W | G | A | N | Tn | I | Y | Lbf | | 3N |
| 597487 | I | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 597651 | 0 | D | P | G | E | Ssp | Br | D | Y | Y | | 2N |
| 597652 | 0 | D | P | G | E | Ssp | Br | D | Y | Y | | 2N |
| 602497A | I | N | P | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 602497B | 00 | D | P | G | E | N | Br | D | Y | Y | | 3N |
| 602498 | I | N | W | G | E | N | Dbr | I | Y | Y | Vhil | 2N |
| 603147 | 000 | D | P | T | E | N | Br | I | Gn | Bl | | 2N |
| 603148 | I | D | P | T | E | Ssp | Br | I | Y | Br | | 2N |
| 603149 | 000 | D | P | T | E | N | Br | I | Gn | Bl | | 2N |
| 603150 | 00 | N | P | T | E | N | Br | D | Y | Tn | | 2N |
| 603151A | I | N | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 603151B | 0 | N | W | G | E | N | Br | I | Y | Y | Sna | 2N |
| 603153 | 0 | N | P | T | E | Ssp | Br | I | Y | Br | | 1N |
| 603169 | 00 | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 603290 | I | N | P | G | A | N | Br | D | Y | Y | Vhil | 2N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering Maturity | | | | Stem | Stem Shattering | Seed | | | |
|---------|--------------------|--------|---------|-----------|-------------|------------------|---------|----------|--------------|----------------|
| | date | date | | g Height | termination | _ | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 597416 | 711 | 909 | 2.0 | 71 | 1.5 | 4.0^ | 2.3 | 1.0 | 14.7 | 1.43* |
| 597417 | 709 | 909 | 2.5 | 98 | 3.0 | 2.0^ | 2.0 | 1.0 | 13.8 | 1.94* |
| 597419 | 713 | 925 | 2.0 | 85 | 1.0 | 1.0^ | 1.5 | 1.0 | 18.3 | 1.84 |
| 597420 | 713 | 920 | 1.0 | 59 | 1.0 | 3.0^ | 1.8 | 1.5 | 18.1 | 1.75 |
| 597421 | 715 | 921 | 2.0 | 66 | 1.0 | 2.0^ | 1.8 | 1.0 | 15.8 | 1.58 |
| 597422 | 709 | 913 | 1.5 | 68 | 1.0 | 3.0^ | 2.3 | 1.0 | 15.1 | 1.57* |
| 597423 | 711 | 911 | 1.5 | 73 | 1.5 | 1.0^ | 1.8 | 1.5 | 13.7 | 1.82 |
| 597425 | 711 | 912 | 2.0* | 81 | 3.0 | 3.0^ | 2.8 | 1.0 | 16.4* | 1.87* |
| 597426 | 709 | 917 | 2.0 | 73 | 2.0 | 2.0^ | 1.8 | 1.0 | 16.1 | 2.25 |
| 597427A | 713 | 929 | 1.5 | 61 | 1.0 | 1.0^ | 1.8 | 1.5 | 18.1 | 1.58* |
| 597427B | 717 | 929 | 3.0 | 92 | 2.0 | 2.0^ | 1.8 | 1.0 | 15.9 | 1.98 |
| 597428 | 711 | 923 | 1.0 | 47 | 1.0 | 1.0^ | 1.8 | 1.5 | 18.3 | 2.14 |
| 597429 | 713 | 921 | 1.0 | 65 | 1.0 | 1.0^ | 1.8 | 1.5 | 16.7 | 1.93* |
| 597430A | 711 | 913 | 2.5 | 73 | 1.5 | 3.0^ | 2.0 | 1.5 | 12.5 | 1.77 |
| 597430B | 711 | 919 | 2.0 | 81 | 3.0 | 1.0^ | 1.8 | 1.0 | 12.8 | 2.06 |
| 597431 | 711 | 921 | 1.5 | 75 | 1.0 | 1.0^ | 1.8 | 2.0* | 13.8 | 2.01 |
| 597432 | 713 | 921 | 1.5 | 69 | 1.0 | 1.0^ | 1.8 | 1.5 | 15.8 | 1.99 |
| 597433 | 711 | 917 | 1.5 | 70 | 1.0 | 1.0^ | 2.3 | 1.5 | 15.3 | 2.08 |
| 597434 | 711 | 913 | 2.5 | 84 | 1.5 | 2.0^ | 2.5 | 1.0 | 14.0 | 1.47* |
| 597435 | 713 | 915 | 2.0 | 82 | 1.5 | 1.0^ | 1.8 | 1.0 | 14.5* | 1.57 |
| 597436 | 711 | 927 | 2.5 | 100 | 2.5 | 1.0^ | 2.3* | 1.0 | 17.1 | 1.99 |
| 597439 | 715 | 929 | 1.5 | 68 | 1.0 | 1.0^ | 1.8 | 1.0 | 17.5 | 1.54* |
| 597440A | 713 | 923 | 2.5 | 76 | 1.5 | 1.0^ | 1.5 | 1.5 | 17.6 | 2.00* |
| 597440B | 713 | 1001 | 2.5 | 86 | 1.0 | 1.0^ | 1.5 | 1.0 | 15.2 | 2.04* |
| 597440C | 713 | 1001 | 2.0 | 60* | 1.0 | 1.0^ | 1.8 | 1.0 | 18.1 | 1.70 |
| 597442 | 711 | 915 | 2.5 | 60 | 1.0 | 2.0^ | 2.3 | 1.0 | 16.5 | 1.57 |
| 597443 | 713 | 921 | 2.0 | 84 | 2.5 | 2.0^ | 2.0 | 1.0 | 20.1 | 2.42 |
| 597444 | 711 | 923 | 2.5 | 69 | 1.0 | 3.0^ | 2.3 | 1.0 | 19.4 | 2.35 |
| 597445 | 713 | 924 | 2.0 | 66 | 1.0 | 1.0^ | 2.0 | 1.0 | 15.4 | 1.82 |
| 597446 | 713 | 923 | 1.5 | 69 | 2.0 | 1.0^ | 1.8 | 1.5 | 14.3 | 2.07 |
| 597447 | 709 | 911 | 1.0 | 54 | 1.0 | 2.0^ | 2.0 | 1.0 | 16.8 | 1.55 |
| 597467 | 714^ | 913^ | | 30^ | 1.0^ | 5.0^ | 2.5^ | 1.0^ | 12.3^ | 0.10^ |
| 597487 | 725 | 925* | | 42 | 1.0 | 2.0^ | 2.5 | 1.0 | 24.0 | 1.63 |
| 597651 | 713 | 908 | 1.5 | 46 | 1.0 | 5.0^ | 2.3 | 1.0 | 14.8 | 1.47 |
| 597652 | 713 | 909 | 1.5 | 50 | 1.5 | 5.0^ | 2.3 | 1.5 | 15.2 | 1.36 |
| 602497A | 711 | 922 | 3.5 | 74 | 2.5 | 2.0^ | 2.0 | 1.5 | 17.9 | 1.79 |
| 602497B | 708 | 905 | 1.0 | 46 | 1.0 | 5.0 [^] | 2.0 | 1.0 | 16.6* | 1.77* |
| 602497B | 708 | 1003 | 3.5 | 89 | 2.5 | 1.0^ | 1.8 | 2.0* | 19.6 | 1.50 |
| 603147 | 710 | 822 | 1.0 | 37 | 1.0 | 4.0* | 2.8* | 1.5 | 16.6 | 0.96 |
| 603147 | 721 | 928 | 2.0 | 59 | 1.0 | 2.0^ | 2.3 | 1.5 | 25.9 | 2.01 |
| 603149 | 711 | 901 | 1.0 | 27 | 1.0 | 4.5 | 3.3 | 1.5 | 25.9 16.1 | 0.87 |
| 603149 | 711 709 | 901 | 2.5 | 75 | 2.5 | 2.0^ | 2.3 | 1.0 | 14.2 | 0.87 1.64* |
| | 709 715 | 906 | 2.5 | 73 83 | 3.0 | 1.0^ | 2.3 | 3.0* | 14.2 14.7 | 2.37* |
| 603151A | 713 | | 2.5 | | | | | | 14.7 | 2.37* 1.74* |
| 603151B | | 914 | | 61 68* | 2.5 | 1.0^ | 2.0 | 1.5 | | |
| 603153 | 713 | 911 | 2.0 | | 2.5 | 1.0^ | 2.0 | 1.0 | 16.0 | 1.67* |
| 603169 | 711 | 905 | 1.0 | 49 60 | 1.0 | 1.0^ | 2.0 | 1.5 | 14.1 | 1.28* |
| 603290 | 719 | 1004 | 2.5 | 60 | 2.5 | 1.0^ | 2.3 | 1.0 | 17.6 | 1.23 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil composition | | | | | |
|--------------------|----------|---------------------------|---------------------------|-----------------|---------|-------|----------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 597416 | 00 | 41.9 | 17.8 | 12.6 | 3.5 | 18.7 | 55.7 | 9.4 | |
| 597417 | 00 | 38.9 | 19.5 | 12.9 | 3.7 | 23.2 | 52.1 | 8.1 | |
| 597419 | Ĭ | 41.2 | 18.4 | 11.6 | 3.3 | 23.6 | 52.4 | 9.2 | |
| 597420 | I | 40.4 | 19.5 | 12.4 | 3.4 | 21.2 | 54.0 | 9.1 | |
| 597421 | Ī | 42.3 | 18.9 | 11.2 | 4.0 | 22.7 | 52.8 | 9.3 | |
| 597422 | 0 | 40.5 | 19.3 | 12.2 | 4.2 | 20.0 | 54.6 | 9.0 | |
| 597423 | 0 | 41.6 | 17.9 | 10.7 | 4.0 | 18.9 | 57.0 | 9.3 | |
| 597425 | 0 | 40.2 | 20.6 | 10.7 | 4.1 | 23.5 | 52.7 | 9.2 | |
| 597426 | 0 | 42.1 | 18.9 | 9.4 | 4.8 | 22.7 | 54.3 | 8.8 | |
| 597427A | I | 40.2 | 17.7 | 11.7 | 3.3 | 21.7 | 53.5 | 9.8 | |
| 197427A 197427B | I | 42.7 | 17.7 | 12.7 | 3.8 | 18.3 | 55.9 | 9.6 9.4 | |
| | | | | | | | | | |
| 597428 507420 | I | 42.5 | 18.0 | 11.5 | 3.9 | 21.2 | 54.6 | 8.8 | |
| 97429 | I | 40.8 | 18.4 | 11.8 | 3.1 | 20.0 | 55.7 | 9.3 | |
| 697430A | 0 | 38.3 | 19.2 | 11.1 | 4.3 | 21.8 | 53.8 | 9.0 | |
| 97430B | 0 | 36.6 | 20.7 | 11.8 | 4.9 | 21.3 | 52.7 | 9.3 | |
| 97431 | I | 40.4 | 18.3 | 10.3 | 4.9 | 19.8 | 54.3 | 10.7 | |
| 97432 | I | 40.2 | 19.9 | 10.4 | 3.5 | 24.0 | 54.0 | 8.0 | |
| 97433 | 0 | 41.2 | 18.2 | 11.5 | 3.5 | 22.9 | 53.7 | 8.4 | |
| 97434 | 0 | 41.8 | 18.0 | 11.4 | 3.5 | 20.9 | 55.5 | 8.7 | |
| 97435 | 0 | 41.3 | 17.6 | 11.2 | 4.0 | 21.5 | 54.0 | 9.3 | |
| 97436 | I | 39.5 | 20.0 | 10.1 | 3.6 | 24.5 | 53.8 | 8.0 | |
| 97439 | I | 39.7 | 19.2 | 10.6 | 3.6 | 20.4 | 56.0 | 9.3 | |
| 97440A | I | 40.1 | 19.8 | 11.0 | 3.5 | 22.3 | 55.0 | 8.2 | |
| 97440B | I | 40.0 | 17.5 | 12.2 | 3.4 | 20.5 | 52.7 | 11.3 | |
| 97440C | I | 39.8 | 18.3 | 10.7 | 3.5 | 22.1 | 55.0 | 8.7 | |
| 97442 | 0 | 42.2 | 19.0 | 12.8 | 4.2 | 20.3 | 53.7 | 9.0 | |
| 97443 | I | 43.0 | 17.5 | 12.4 | 3.3 | 19.9 | 53.9 | 10.5 | |
| 97444 | I | 41.9 | 19.3 | 12.0 | 3.9 | 23.4 | 52.1 | 8.5 | |
| 97445 | I | 41.7 | 18.9 | 12.1 | 3.1 | 20.1 | 55.0 | 9.6 | |
| 97446 | I | 40.8 | 18.6 | 12.2 | 3.8 | 19.0 | 53.9 | 11.1 | |
| 97447 | 0 | 40.9 | 19.8 | 10.4 | 3.9 | 21.1 | 56.3 | 8.3 | |
| 97467 | 0 | 44.8^ | 17.1^ | 11.0 | 3.6 | 23.7 | 52.7 | 9.1 | |
| 97487 | I | 44.6 | 16.1 | 12.0 | 2.7 | 20.1 | 53.1 | 12.1 | |
| 97651 | 0 | 42.8 | 16.8 | 11.5 | 3.4 | 20.2 | 55.3 | 9.5 | |
| 97652 | 0 | 42.8 | 17.0 | 11.0 | 3.4 | 19.1 | 55.8 | 10.7 | |
| 02497A | I | 42.6 | 17.5 | 11.0 | 3.7 | 17.9 | 56.2 | 11.1 | |
| 02497B | 00 | 41.3 | 19.5 | 11.0 | 3.4 | 19.9 | 56.9 | 8.8 | |
| 02497B 02498 | I | 42.7 | 18.4 | 10.0 | 3.4 | 26.1 | 51.1 | 9.2 | |
| 03147 | 000 | 56.0 ^w | 15.2 ^w | 11.7 | 2.9 | 17.4 | 58.0 | 10.0 | |
| 03147 | I | 41.6 | 17.2 | 11.7 | 2.9 | 22.6 | 53.5 | 10.0 | |
| | 000 | 41.6 57.9 ^w | 17.2 14.8 ^w | | | | | | |
| 03149 | | | | 12.1 | 2.8 | 17.8 | 57.2 | 10.1 | |
| 03150 | 00 | 42.5 | 18.4 | 11.0 | 3.5 | 20.9 | 55.2 | 9.3 | |
| 03151A | I | 41.6 | 18.5 | 8.4 | 4.5 | 22.7 | 55.5 | 8.9 | |
| 03151B | 0 | 41.4 | 18.9 | 9.1 | 4.6 | 20.9 | 56.2 | 9.1 | |
| 03153 | 0 | 44.2 | 17.5 | 10.6 | 3.8 | 23.6 | 52.7 | 9.4 | |
| 603169 | 00 | 40.2 | 18.9 | 8.8 | 4.5 | 26.4 | 51.3 | 9.0 | |
| 503290 | I | 41.6 | 17.5 | 11.2 | 3.1 | 18.8 | 56.8 | 10.0 | |

Table 1.1 Identification and origin information for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|---------------------------|--------------|---------------|---------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| | | - | | • | | |
| 603291 | Bai qi kuai dou | Heilongjiang | China | China | 1998 | 0 |
| | Zhao dong 50 | Heilongjiang | China | China | 1998 | I |
| | (Zhao dong 50) | Heilongjiang | China | China | 1998 | I |
| 603294 | Jin Yuan No. 2 | Heilongjiang | China | China | 1998 | 0 |
| 603295 | Hei qi da dou | Heilongjiang | China | China | 1998 | 0 |
| 603296 | Ke shan da jin huang | Heilongjiang | China | China | 1998 | 0 |
| 603297 | Jin huang dou | Heilongjiang | China | China | 1998 | 0 |
| 603298 | Tang yuan hou ding kui | Heilongjiang | China | China | 1998 | I |
| 603299 | Bao qing da bai mei | Heilongjiang | China | China | 1998 | 0 |
| | Ke dong tie jia qing | Heilongjiang | China | China | 1998 | 0 |
| 603301B | (Ke dong tie jia qing) | Heilongjiang | China | China | 1998 | 0 |
| 603302 | Si li huang | Heilongjiang | China | China | 1998 | I |
| 603304 | Tang yuan tu jia zi | Heilongjiang | China | China | 1998 | I |
| 603305 | Niu moa huang | Heilongjiang | China | China | 1998 | I |
| 603306 | Xun ke xiao yang dou | Heilongjiang | China | China | 1998 | 0 |
| 603307 | Fu jin si li huang | Heilongjiang | China | China | 1998 | I |
| 603308A | Niu xin hong | Heilongjiang | China | China | 1998 | I |
| 603308B | (Niu xin hong) | Heilongjiang | China | China | 1998 | I |
| 603309 | Ning an xiao hei qi | Heilongjiang | China | China | 1998 | I |
| 603310 | Si li huang (Nong 16) | Heilongjiang | China | China | 1998 | I |
| 603311 | Fang zheng bai lu dou | Heilongjiang | China | China | 1998 | I |
| 603312 | Zao dou | Heilongjiang | China | China | 1998 | I |
| 603313 | Bai lu dou | Heilongjiang | China | China | 1998 | 00 |
| 603314 | Bai lu dou (Xiao bai hua) | Heilongjiang | China | China | 1998 | 00 |
| 603315 | Si li huang (Nong 27) | Heilongjiang | China | China | 1998 | I |
| 603316 | Suo yi ling | Heilongjiang | China | China | 1998 | 000 |
| 603317 | Xiao jin huang | Heilongjiang | China | China | 1998 | I |
| 603318 | Xiao zhu yao | Heilongjiang | China | China | 1998 | I |
| 603319 | Sui wei tu si zi | Heilongjiang | China | China | 1998 | 0 |
| 603320 | Yong feng dou | Heilongjiang | China | China | 1998 | 0 |
| 603321 | Xiao hong qi | Heilongjiang | China | China | 1998 | I |
| 603322 | Hei qi dou | Heilongjiang | China | China | 1998 | 0 |
| 603323 | Kui wu dou a | Heilongjiang | China | China | 1998 | I |
| | Da jin huang | Heilongjiang | China | China | 1998 | 0 |
| | (Da jin huang) | Heilongjiang | China | China | 1998 | Ī |
| 603325 | Si li huang | Heilongjiang | China | China | 1998 | Ī |
| 603326 | Tie jia qing | Heilongjiang | China | China | 1998 | I |
| 603327 | Xiao huang qi | Heilongjiang | China | China | 1998 | I |
| 603328 | Kuai dou | Heilongjiang | China | China | 1998 | 0 |
| 603329 | Yi wo feng D | Heilongjiang | China | China | 1998 | Ĭ |
| 603330 | Ping ding xiang B | Heilongjiang | China | China | 1998 | I |
| 603331 | Xiao hui qi | Heilongjiang | China | China | 1998 | I |
| 603331 | Xiao he qi No. 2 | Heilongjiang | China | China | 1998 | I |
| 603334 | Guan shi suo | Heilongjiang | China | China | 1998 | I |
| | Hei jin yuan | Heilongjiang | China | China | 1998 | 0 |
| | Yan shou chang li hei | Heilongjiang | China | China | 1998 | I |
| 603337A | Cha se dou B | Heilongjiang | China | China | 1998 | I |
| 002330 | Cha se dud D | Henonghang | Cillia | Cillia | 1770 | 1 |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|-----------|-------------------|----|--------|----|--------------|---------|--------------|------------------|----|----------------|--------------|---------------|
| · · · · · | | NI | D | | | | | | | т., | Call | |
| 603291 | 0 | N | P | G | E | Ssp | Br | I | Y | Tn | Sabh | 2N |
| 603293A | I | N | W | G | E | N | Br | I | Y | Lbf | Sabh | 2N |
| 603293B | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 603294 | 0 | N | P | G | E | N | Tn | D | Y | Y | | 3N |
| 603295 | 0 | N | P | T | E | N | Br | I | Y | Bl | | 3N |
| 603296 | 0 | N | W | G | E | N | Br | D | Y | Y | | 3N |
| 603297 | 0 | S | P | G | Е | N | B1 | I | Y | Y | | 2N |
| 603298 | I | D | P | G | Е | N | Br | I | Y | G | | 2N |
| 603299 | 0 | N | P | G | Е | N | Br | I | Y | Y | | 2N |
| 603301A | 0 | S | W | G | Е | N | Br | I | Y | Y | | 2N |
| 603301B | 0 | D | P | G | Е | N | Br | D | Y | Y | ¥ 71 ·1 | 2N |
| 603302 | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 3N |
| 603304 | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 603305 | I | N | P | T | E | Ssp | Tn | I | Y | Tn | | 2N |
| 603306 | 0 | N | P | G | E | N | Br | I | Y | Y | | 3N |
| 603307 | I | N | P | T | E | N | Br | I | Y | G | | 3N |
| 603308A | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 603308B | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 603309 | I | S | P | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 603310 | I | D | W | G | E | N | Br | I | Y | Y | Na,Vhil | 1N |
| 603311 | I | S | P | G | E | N | Br | I | Y | Ib | | 3N |
| 603312 | I | S | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 603313 | 00 | N | P | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603314 | 00 | D | P | G | E | N | Br | D | Y | Y | | 3N |
| 603315 | I | N | W | G | E | N | Br | I | Y | Bf | | 4N |
| 603316 | 000 | N | P | G | \mathbf{E} | N | Br | I | Y | Y | | 2N |
| 603317 | I | N | P | G | E | N | Br | I | Y | Ib | | 3N |
| 603318 | I | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 603319 | 0 | N | P | G | E | N | Br | D | Y | Y | Sdef | 2N |
| 603320 | 0 | S | W | G | E | N | Br | I | Y | Y | | 2N |
| 603321 | I | N | W | T | E | N | Br | I | Y | Br | | 2N |
| 603322 | 0 | N | W | G | E | Ssp | Br | I | Y | Bf | Sabh | 2N |
| 603323 | I | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 603324A | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 603324B | I | N | W | G | E | N | Dbr | I | Y | Y | Sabh, Vhil | 2N |
| 603325 | I | N | W | G | E | N | Dbr | I | Y | Bf | | 3N |
| 603326 | I | S | P | G | Е | N | Dbr | I | Y | Y | | 2N |
| 603327 | I | S | P | G | Е | N | Dbr | I | Y | Y | | 3N |
| 603328 | 0 | N | P | G | E | N | Dbr | D | Y | Y | | 2N |
| 603329 | I | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 603330 | I | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 603331 | Ī | D | P | G | E | Ssp | Br | I | Y | G | | 2N |
| 603332 | Ī | N | P | G | E | Ssp | Br | Ī | Y | G | | 3N |
| 603334 | Ī | S | P | G | E | N | Br | Ī | Y | Y | | 3N |
| 603335A | 0 | N | W | G | E | N | Br | I | Y | Lbf | | 2N |
| 603337A | I | N | P | Lt | E | Ssp | Br | Lb | Bl | Bl | Flk | 4F |
| 603338 | I | N | W | T | E | Ssp | Br | I | Br | Br | | 2N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering | g Maturity | 7 | | Stem | Shattering | Seed | | | |
|---------|-----------|------------|---------|----------|-------------|------------|---------|----------|---------|---------|
| | date | date | Lodging | g Height | termination | early | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 603291 | 711 | 913 | 2.5 | 68 | 2.5 | 2.0^ | 2.5 | 2.5* | 18.0* | 1.30* |
| 603293A | 717 | 1001 | 4.0* | 102 | 3.0 | 1.0^ | 1.8 | 2.0* | 18.9 | 1.98 |
| 603293B | 715 | 930 | 3.5 | 78 | 2.5 | 1.0^ | 1.5 | 2.0* | 20.1 | 1.78 |
| 603294 | 713 | 915 | 2.0 | 61 | 2.5 | 1.0^ | 2.0 | 2.0* | 15.7 | 1.61 |
| 603295 | 715 | 913 | 3.0* | 70 | 2.5 | 3.0^ | 2.5 | 2.0* | 14.6 | 1.45 |
| 603296 | 711 | 911 | 2.5 | 75 | 3.0 | 3.0^ | 2.8 | 2.0* | 15.0 | 1.68 |
| 603297 | 711 | 909 | 1.5 | 56 | 2.0 | 2.0^ | 2.5 | 2.0* | 12.4 | 1.48 |
| 603298 | 713 | 929 | 2.5 | 75* | 1.0 | 1.0^ | 1.8 | 1.0 | 19.7 | 2.29 |
| 603299 | 713 | 920 | 2.5 | 66 | 2.5 | 2.0^ | 2.0 | 1.0 | 16.6 | 2.27 |
| 603301A | 713 | 914 | 2.5 | 86 | 2.0 | 1.0^ | 2.3 | 2.0* | 15.4 | 1.92 |
| 603301B | 715 | 915 | 2.0 | 61 | 1.5 | 2.0^ | 2.3 | 2.0* | 15.0 | 1.67 |
| 603302 | 720 | 1007 | 3.5 | 89 | 3.0 | 1.0^ | 1.8 | 3.0* | 21.9 | 2.00 |
| 603304 | 713 | 929 | 3.0* | 85 | 3.0 | 1.0^ | 2.0 | 2.5* | 21.3* | 2.12 |
| 603305 | 715 | 921 | 4.0 | 67 | 2.5 | 1.0^ | 2.5 | 1.5 | 15.1 | 1.99 |
| 603306 | 713 | 908 | 3.0* | 63 | 3.0 | 2.0^ | 2.0 | 1.0 | 16.8 | 1.27 |
| 603307 | 715 | 927 | 3.5 | 81 | 2.5 | 1.0^ | 2.0 | 3.0 | 16.6 | 2.20 |
| 603308A | 715 | 929 | 2.0* | 71 | 2.5 | 2.0^ | 2.0 | 2.0* | 23.3 | 1.84* |
| 603308B | 717 | 930 | 3.5 | 97 | 3.0 | 2.0^ | 2.0 | 1.0 | 19.2 | 2.03* |
| 603309 | 713 | 922 | 2.5 | 70 | 2.5 | 3.0^ | 2.0^ | 1.0^ | 19.8^ | 1.52^ |
| 603310 | 715 | 1002 | 2.5 | 74 | 1.0 | 2.0^ | 1.8 | 1.5 | 18.7 | 1.65 |
| 603311 | 723 | 1002 | 4.0 | 92 | 2.0 | 1.0^ | 2.3 | 1.0 | 15.2 | 1.94 |
| 603312 | 713 | 918 | 2.0* | 74 | 2.0 | 1.0^ | 2.5 | 1.5 | 21.0 | 1.85 |
| 603313 | 709 | 906 | 3.0 | 56 | 3.0^ | - | 2.5^ | 1.0^ | 18.5^ | 1.50^ |
| 603314 | 711 | 905 | 1.5 | 51 | 1.0 | 4.0^ | 1.8 | 1.0 | 16.3* | 1.42* |
| 603315 | 713 | 927* | | 84 | 2.5 | 1.0^ | 2.5 | 1.0 | 19.1 | 1.97 |
| 603316 | 711 | 830 | 2.0* | 76* | 2.5 | 3.0^ | 2.0 | 1.0 | 13.5* | 1.19 |
| 603317 | 723 | 922 | 4.0 | 71 | 2.5 | 2.0^ | 2.0 | 2.0* | 14.5 | 0.90 |
| 603318 | 722 | 925 | 4.0 | 79 | 2.5 | 2.0^ | 1.8 | 1.0 | 15.4 | 1.63 |
| 603319 | 711 | 915 | 1.0 | 63 | 2.5 | 1.0^ | 2.8 | 1.0 | 17.6 | 1.95* |
| 603320 | 713 | 915 | 2.0 | 69 | 2.0 | 1.0^ | 2.3 | 2.0* | 14.5 | 1.34* |
| 603321 | 717 | 1004 | 3.0* | 84 | 2.5 | 1.0^ | 1.8 | 1.5 | 20.8 | 2.02 |
| 603322 | 711 | 917 | 2.5 | 74 | 2.5 | 2.0^ | 2.8 | 2.0* | 21.9* | 1.70 |
| 603323 | 713 | 927 | 3.0* | 60 | 1.0 | 1.0^ | 2.0 | 2.0* | 15.5 | 1.73 |
| 603324A | 711 | 909 | 2.5 | 65 | 2.5 | 2.0^ | 2.5 | 2.0* | 13.7 | 1.50* |
| 603324B | 715 | 1001 | 3.5 | 84 | 2.5 | 1.0^ | 1.8 | 1.5 | 20.9 | 1.84 |
| 603325 | 725 | 1003 | 3.5 | 85* | 2.5 | 1.0^ | 1.5 | 1.0 | 19.0 | 1.91 |
| 603326 | 713 | 921 | 2.5 | 74 | 2.0 | 2.0^ | 1.5 | 2.5* | 16.1 | 1.72* |
| 603327 | 721 | 927 | 3.5 | 76 | 2.0 | 1.0^ | 2.0 | 2.0* | 17.1 | 1.97 |
| 603328 | 711 | 913 | 2.0 | 61* | 2.5 | 2.0^ | 2.3* | 2.0* | 15.1 | 1.55* |
| 603329 | 713 | 929 | 3.0* | 75* | 1.5 | 1.0^ | 1.5 | 1.0 | 14.4 | 2.09 |
| 603330 | 713 | 1001 | 3.0 | 56 | 1.0 | 1.0^ | 1.8 | 1.0 | 16.0 | 2.02 |
| 603331 | 724 | 1001 | 2.0 | 59 | 1.0 | 1.0^ | 1.5 | 1.5 | 13.5 | 1.25* |
| 603332 | 721 | 1007 | 3.5 | 102 | 3.0 | 1.0^ | 1.8 | 2.0* | 23.2 | 2.29 |
| 603334 | 724* | 1007 | 2.5 | 84 | 2.0 | 2.0^ | 4.3 | 1.0 | 17.5 | 0.85* |
| 603335A | 713 | 920 | 3.0* | 73 | 2.5 | 1.0^ | 2.0 | 1.0 | 16.6 | 1.73* |
| 603337A | 722 | 1003 | 3.5 | 88 | 3.0 | 1.0^ | 2.3 | | 9.8 | 1.73 |
| 603338 | 721 | 1003 | 3.0* | 112* | 3.0 | 1.0^ | 1.8 | | 16.6 | 1.92 |
| 003330 | 121 | 1001 | 5.0 | 114 | 5.0 | 1.0 | 1.0 | • | 10.0 | 1.72 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed con | <u>nposition</u> | Oil composition | | | | | | |
|---------|----------|-------------------|-------------------|-----------------|---------|-------|----------|------------|--|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | | |
| 503291 | 0 | 44.5 | 17.7 | 9.4 | 4.6 | 22.4 | 53.8 | 9.8 | | |
| 503293A | I | 40.7 | 19.5 | 10.4 | 2.7 | 27.7 | 51.1 | 8.2 | | |
| 503293B | Ī | 42.1 | 18.2 | 12.3 | 2.8 | 19.4 | 55.2 | 10.2 | | |
| 503294 | 0 | 43.4 | 18.0 | 9.1 | 3.8 | 24.4 | 55.0 | 7.8 | | |
| 503295 | 0 | 42.8 | 17.4 | 9.4 | 3.6 | 20.2 | 57.4 | 9.4 | | |
| 503296 | 0 | 43.1 | 18.0 | 9.5 | 3.8 | 22.1 | 55.1 | 9.4 | | |
| 503297 | 0 | 43.1 | 17.1 | 8.9 | 3.5 | 18.9 | 58.2 | 10.5 | | |
| 503297 | Ĭ | 40.2 | 19.2 | 10.4 | 2.7 | 20.8 | 55.7 | 10.3 | | |
| 503299 | 0 | 41.9 | 18.4 | 9.3 | 4.0 | 18.0 | 57.9 | 10.8 | | |
| 503301A | 0 | 42.3 | 17.1 | 9.6 | 4.0 | 20.6 | 56.4 | 9.4 | | |
| 503301A | 0 | 41.7 | 17.1 | 9.4 | 4.2 | 21.8 | 55.9 | 8.7 | | |
| 503301B | I | 40.9 | 18.2 | 9.3 | 2.7 | 26.0 | 53.4 | 8.6 | | |
| 503304 | I | 40.4 | 17.8 | 10.5 | 3.4 | 24.9 | 52.3 | 8.9 | | |
| 503305 | I | 40.4 | 18.2 | 10.3 | 3.4 | 24.9 | 55.7 | 9.5 | | |
| 503306 | 0 | 42.0 | 18.2 17.9 | 10.4 | 3.0 | 20.1 | 55.2 | 9.5 9.6 | | |
| 503307 | I | 42.0 47.0 | 16.9 | 10.9 | 2.7 | 18.7 | 57.8 | 9.0 9.9 | | |
| | I | 40.4 | | | 2.7 | 23.4 | 53.5 | 9.9 9.4 | | |
| 603308A | | | 17.3 | 11.0 | | | | | | |
| 503308B | I | 41.0 | 17.6 | 9.9 | 3.0 | 20.0 | 57.7 | 9.4 | | |
| 503309 | I | 44.0^ | 17.6^ | 11.3 | 3.4 | 19.8 | 54.5 | 11.0 | | |
| 03310 | I | 42.6 | 17.7 | 11.4 | 3.1 | 20.4 | 55.2 | 10.0 | | |
| 03311 | I | 39.8 | 18.7 | 11.0 | 2.9 | 20.3 | 55.7 | 10.0 | | |
| 03312 | I | 40.4 | 19.8 | 10.2 | 3.2 | 25.9 | 51.9 | 8.9 | | |
| 03313 | 00 | 41.1^ | 18.0^ | 11.1 | 4.3 | 20.7 | 53.7 | 10.2 | | |
| 03314 | 00 | 40.9 | 19.1 | 10.4 | 3.5 | 20.3 | 56.7 | 9.1 | | |
| 503315 | I | 40.9 | 18.9 | 10.4 | 2.6 | 27.6 | 50.3 | 9.0 | | |
| 503316 | 000 | 42.9 | 19.1 | 10.8 | 3.5 | 23.6 | 52.8 | 9.4 | | |
| 503317 | I | 42.6 | 19.0 | 8.6 | 4.6 | 22.0 | 55.8 | 9.0 | | |
| 503318 | I | 43.6 | 19.1 | 9.4 | 4.3 | 22.3 | 54.2 | 9.8 | | |
| 503319 | 0 | 42.0 | 17.8 | 9.8 | 3.7 | 21.2 | 55.0 | 10.3 | | |
| 603320 | 0 | 41.9 | 18.6 | 10.0 | 4.3 | 20.5 | 55.3 | 9.8 | | |
| 503321 | I | 40.4 | 18.3 | 10.7 | 2.6 | 23.6 | 53.9 | 9.3 | | |
| 503322 | 0 | 42.4 | 18.1 | 9.3 | 3.7 | 26.9 | 51.4 | 8.7 | | |
| 503323 | I | 41.4 | 18.1 | 10.4 | 3.2 | 20.3 | 55.5 | 10.6 | | |
| 603324A | 0 | 45.3 | 17.2 | 9.8 | 3.8 | 21.0 | 54.4 | 11.0 | | |
| 603324B | I | 41.6 | 17.9 | 10.0 | 2.7 | 25.4 | 52.6 | 9.3 | | |
| 503325 | I | 40.8 | 18.9 | 10.2 | 3.0 | 27.4 | 50.6 | 8.9 | | |
| 503326 | I | 41.0 | 19.4 | 10.0 | 4.3 | 24.4 | 52.2 | 9.0 | | |
| 503327 | I | 40.0 | 18.6 | 11.0 | 2.8 | 26.1 | 50.5 | 9.6 | | |
| 03328 | 0 | 42.0 | 18.0 | 9.2 | 3.4 | 23.6 | 53.4 | 10.4 | | |
| 03329 | I | 41.8 | 18.6 | 10.0 | 3.4 | 21.8 | 54.5 | 10.3 | | |
| 603330 | I | 42.1 | 17.6 | 9.8 | 3.2 | 18.9 | 57.2 | 10.9 | | |
| 03331 | I | 44.7 | 16.5 | 11.1 | 2.6 | 18.1 | 57.4 | 10.9 | | |
| 03332 | I | 42.4 | 18.0 | 10.8 | 2.7 | 26.5 | 50.7 | 9.4 | | |
| 03334 | I | 40.6 | 18.6 | 10.3 | 4.0 | 19.0 | 56.0 | 10.7 | | |
| 603335A | 0 | 40.1 | 20.0 | 9.2 | 4.4 | 25.1 | 52.9 | 8.4 | | |
| 603337A | I | 50.2 ^w | 14.9 ^w | 10.2 | 3.0 | 18.7 | 55.8 | 12.3 | | |
| 503338 | Ī | 51.9 ^w | 19.4 ^w | 9.1 | 2.9 | 20.8 | 57.9 | 9.3 | | |

 $Table 1.1 \ Identification \ and \ origin \ information \ for \ USDA \ soybean \ germplasm \ in \ maturity \ groups \ 000 \ through \ I, \ PI \ 578371 \ to \ PI \ 612761B \ plus \ earlier \ accessions \ not \ previously \ evaluated.$

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|----------|-----------------------------|--------------|---------------|---------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 602220 A | A 1 | | | | | |
| | An gua dou | Heilongjiang | China | China | 1998 | I |
| | (An gua dou) | Heilongjiang | China | China | 1998 | I |
| 603341 | Da bai mei | Jilin | China | China | 1998 | I |
| 603342 | Guo yu B5 | Jilin | China | China | 1998 | I |
| 603344 | Ha No. 2 | Jilin | China | China | 1998 | I |
| 603345 | Gong jiao 5603-2 | Jilin | China | China | 1998 | II |
| | Zhi No. 3 | Jilin | China | China | 1998 | 0 |
| | (Zhi No. 3) | Jilin | China | China | 1998 | I |
| | Si li huang | Jilin | China | China | 1998 | I |
| | (Si li huang) | Jilin | China | China | 1998 | I |
| 603349 | Da li huang | Jilin | China | China | 1998 | I |
| 603350 | Da li huang | Jilin | China | China | 1998 | I |
| 603351 | Da li huang | Jilin | China | China | 1998 | I |
| 603352 | Xiao jin huang | Jilin | China | China | 1998 | I |
| 603354 | Xiao bai mei | Jilin | China | China | 1998 | I |
| 603355 | Suo yi ling | Jilin | China | China | 1998 | I |
| 603356 | Yi wo feng | Jilin | China | China | 1998 | I |
| 603357 | Du Lu Dou | Jilin | China | China | 1998 | I |
| 603359 | Xiao hei qi | Jilin | China | China | 1998 | I |
| 603360 | Bai lu dou | Jilin | China | China | 1998 | I |
| 603361 | Da bai mei | Jilin | China | China | 1998 | I |
| 603362 | Beng pi | Jilin | China | China | 1998 | I |
| 603367 | Hong mao | Jilin | China | China | 1998 | I |
| 603371 | Tie jia qing | Jilin | China | China | 1998 | I |
| 603373 | Cha se dou | Jilin | China | China | 1998 | I |
| 603375 | Qian guo jian ye he jia dou | Jilin | China | China | 1998 | I |
| 603376 | Shu lan da ye huang jin ta | Jilin | China | China | 1998 | I |
| 603377 | Jiu tai wu xian bai hua | Jilin | China | China | 1998 | I |
| 603378A | Yong ji bei jing dou | Jilin | China | China | 1998 | I |
| | (Yong ji bei jing dou) | Jilin | China | China | 1998 | I |
| 603379 | Wang qing shen xian dong | Jilin | China | China | 1998 | I |
| 603380 | Hua dian huang bao zhu | Jilin | China | China | 1998 | I |
| 603382A | Hai long feng di huang | Jilin | China | China | 1998 | I |
| 603383 | Ke xi 209 | Jilin | China | China | 1998 | I |
| 603388 | Niu mao huang | Liaoning | China | China | 1998 | I |
| 603400 | Tian e dan | Liaoning | China | China | 1998 | I |
| 603408 | Qing dou | Liaoning | China | China | 1998 | I |
| | (Hei dou) | Nei Monggol | China | China | 1998 | II |
| | Ben di huang dou | Nei Monggol | China | China | 1998 | 0 |
| | (Ben di huang dou) | Nei Monggol | China | China | 1998 | I |
| | (Ben di huang dou) | Nei Monggol | China | China | 1998 | I |
| | (Ben di huang dou) | Nei Monggol | China | China | 1998 | Ī |
| | Ben di yuan huang dou | Nei Monggol | China | China | 1998 | 00 |
| | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | 0 |
| | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | 00 |
| | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | 0 |
| | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | 0 |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|--------|---|--------------|----------|--------------|------------------|----|----------------|---------------|---------------|
| | | | P | T | | <u> </u> | | | | | | |
| 603339A | I | N | W | T | E | N | Br | I I | Br | Bl | Sad | 2N |
| 603339B | I | N | | | Е | N | Br | | Br | Bl | Sad | 3N |
| 603341 | I | D | P | G | Е | N | Br | I | Y | Y | 3.71 *1 | 3N |
| 603342 | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 603344 | I | N | W | G | Е | N | Br | I | Y | Y | | 2N |
| 603345 | II | S | W | G | E | N | Br | I | Y | Bf | | 3N |
| 603346A | 0 | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 603346B | I | S | W | G | E | Ssp | Br | I | Y | Bf | | 3N |
| 603348A | I | S | W | G | E | N | Bl | D | Y | Lbf | | 2N |
| 603348B | I | N | W | G | E | Ssp | Bl | D | Y | Lbf | | 1N |
| 603349 | Ι | N | P | G | \mathbf{E} | N | Br | I | Y | G | | 2N |
| 603350 | I | S | P | G | E | Ssp | Br | I | Y | Y | | 1N |
| 603351 | I | N | W | G | E | N | Dbr | I | Y | Lbf | | 3N |
| 603352 | I | N | W | G | E | N | Dbr | I | Y | Y | Vhil | 2N |
| 603354 | I | S | P | G | Е | N | Dbr | I | Y | Y | | 3N |
| 603355 | I | D | W | G | E | N | Br | D | Y | Bf | | 3N |
| 603356 | I | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 603357 | I | D | P | G | E | Ssp | Tn | Ī | Y | Y | | 2N |
| 603357 | I | S | P | G | E | N | Dbr | Ī | Y | Ib | Vhil | 2N |
| 603360 | I | N | P | G | E | N | Br | D | Y | Y | V 1111 | 2N |
| 603361 | I | N | P | G | E | N | Br | D | Y | Y | | 2N |
| | I | S | W | G | E | N | | I | Y | | | 2N 2N |
| 603362 | | | | | | | Dbr | | | Lbf | | |
| 603367 | I | N | W | T | Е | Ssp | B1 | I | Y | Tn | C | 3N |
| 603371 | I | N | P | T | Е | N | Bl | I | Gn | Tn | Gnc | 3N |
| 603373 | I | N | W | T | Е | Ssp | Br | I | Br | Rbr | | 3N |
| 603375 | I | N | W | G | E | Ssp | Bl | I | Y | Lbf | Na | 2N |
| 603376 | I | D | P | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603377 | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 603378A | I | D | W | G | E | Ssp | Br | I | Y | Y | Na | 1N |
| 603378B | I | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603379 | I | N | W | G | E | N | Br | I | Y | Lbf | | 2R |
| 603380 | I | S | W | G | E | N | Br | I | Y | Y | | 2N |
| 603382A | I | S | W | G | E | N | Br | I | Y | Y | | 3N |
| 603383 | I | N | P | G | E | N | Br | D | Y | Y | | 3N |
| 603388 | I | N | W | T | E | N | Br | I | Y | Tn | | 2N |
| 603400 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 603408 | I | N | W | T | E | N | Br | I | Gn | Brbl | Gnc, Vhil | 3N |
| 603422B | II | N | P | T | E | N | Br | I | Bl | Bl | , | 5F |
| 603424A | 0 | N | W | G | E | N | Br | Ī | Y | Y | | 2N |
| 603424B | I | D | P | T | E | N | Tn | I | Y | Br | Abh | 3N |
| 603424C | I | D | P | T | E | N | Tn | I | Y | Br | Abh | 3N |
| 603424C | I | N | P | T | E | N | Br | D | Y | Br | Sw | 3N |
| 603424D | 00 | S | r P | T | E | N | Tn | I | Y | | | 2N |
| | | | | | | | | | | Br | Abh | |
| 603426B | 0 | S | P | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603426C | 00 | S | P | G | Е | Ssp | Br | I | Y | Y | 0.11 | 2N |
| 603426D | 0 | S | W | G | E | N | Br | I | Y | Y | Sabh | 2N |
| 603426E | 0 | D | P | T | E | N | Tn | I | Y | Br | Abh,Dab | 2N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| - | Flowering | Maturity | | | Stem | Shattering | Seed | | | |
|---------|-----------|----------|---------|----------|-------------|------------|---------|----------|---------|---------|
| | date | | | g Height | termination | early | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 603339A | 717 | 923 | 3.0* | 73 | 2.5 | 2.0^ | 2.0 | | 17.5 | 1.83* |
| 603339B | 715 | 1003 | 2.5 | 95 | 2.5 | 2.0^ | 1.8 | | 17.0 | 2.11 |
| 603341 | 715 | 926 | 2.0* | 63 | 1.0 | 2.0^ | 2.0 | 1.0 | 16.9 | 2.05 |
| 603342 | 715 | 925 | 2.5 | 81 | 2.5 | 1.0^ | 1.8 | 1.0 | 19.7 | 2.09 |
| 603344 | 713 | 925 | 2.5 | 79 | 2.5 | 2.0^ | 2.0 | 1.0 | 19.9 | 1.82 |
| 603345 | 718 | 1011 | 3.5 | 100 | 2.5 | 2.0^ | 2.3* | 1.5 | 15.4 | 1.86 |
| 603346A | 711 | 917 | 2.0 | 85 | 2.5 | 1.0^ | 2.5 | 1.0 | 18.9 | 1.60* |
| 603346B | 714^ | 921^ | 2.0^ | 76^ | 2.0^ | 2.0^ | 2.0^ | 1.0^ | 16.5^ | 0.86^ |
| 603348A | 717 | 1001 | 3.0 | 80 | 2.0 | 2.0^ | 2.0 | 2.0 | 15.7 | 2.04 |
| 603348B | 723 | 1007 | 3.0 | 107 | 2.5 | 2.0^ | 2.3 | 2.0 | 16.8 | 2.12 |
| 603349 | 717 | 1009 | 3.0 | 106 | 3.0 | 1.0^ | 2.3 | 1.5 | 19.9 | 1.79 |
| 603350 | 719 | 1005 | 2.0 | 88 | 2.0 | 1.0^ | 2.0 | 2.0* | 18.2 | 1.87 |
| 603351 | 721 | 1009 | 3.5 | 97 | 2.0 | 1.0^ | 1.8 | 1.5 | 19.0 | 2.04 |
| 603352 | 722 | 1003 | 3.5 | 84 | 3.0 | 1.0^ | 1.8 | 2.0* | 18.8 | 1.52 |
| 603354 | 723* | 1001 | 3.0 | 71* | 2.0 | 2.0^ | 1.8 | 1.5 | 13.8 | 1.88 |
| 603355 | 724* | 1003 | 2.5 | 64 | 1.0 | 1.0^ | 2.0 | 1.5 | 16.6 | 1.83 |
| 603356 | 715 | 925 | 2.0 | 60 | 1.5 | 2.0^ | 1.8 | 1.5 | 15.7 | 1.40* |
| 603357 | 718 | 1001 | 2.0 | 65 | 1.0 | 1.0^ | 2.0 | 1.5 | 12.8 | 1.51 |
| 603359 | 725 | 1009 | 3.5 | 79 | 2.0 | 1.0^ | 2.0 | 1.0 | 17.0 | 1.82* |
| 603360 | 713 | 918 | 2.5 | 86 | 2.5 | 2.0^ | 2.3 | 1.5 | 18.4 | 1.85 |
| 603361 | 727 | 1005 | 2.5 | 82* | 2.5 | 2.0^ | 2.5 | 1.0 | 23.2 | 1.77 |
| 603362 | 721 | 1009 | 2.5 | 83* | 2.5 | 1.0^ | 2.3 | 1.0 | 14.3 | 2.19* |
| 603367 | 723 | 1005 | 3.0 | 102 | 3.0 | 1.0^ | 2.3 | 3.0 | 13.7 | 1.61 |
| 603371 | 725 | 1001 | 2.0 | 74 | 2.5 | 1.0^ | 2.8 | 4.0 | 14.0 | 1.22 |
| 603373 | 726 | 1003 | 3.0 | 86 | 3.0 | 1.0^ | 3.0 | | 15.1 | 1.47 |
| 603375 | 717 | 1001 | 3.0* | 89 | 2.5 | 2.0^ | 2.3 | 1.5 | 15.4 | 1.29* |
| 603376 | 723* | 925 | 1.5 | 50 | 1.0 | 2.0^ | 2.0 | 2.0* | 16.0 | 1.30 |
| 603377 | 724 | 930 | 3.5 | 112* | 3.0 | 3.0^ | 2.0 | 1.5 | 16.0 | 1.64 |
| 603378A | 718* | 1003 | 2.0 | 73 | 1.5 | 2.0^ | 2.0 | 1.5 | 18.0 | 1.52 |
| 603378B | 725* | 1004 | 2.0 | 66* | 1.5 | 2.0^ | 2.0 | 1.5 | 18.3 | 1.76* |
| 603379 | 711 | 923 | 2.0 | 83 | 2.5 | 2.0^ | 1.8 | 1.0 | 20.8 | 1.83* |
| 603380 | 721* | 1007 | 3.0 | 69 | 2.0 | 1.0^ | 2.0 | 1.5 | 16.5 | 1.74* |
| 603382A | 713 | 1001 | 2.0 | 72 | 2.0 | 1.0^ | 2.8 | 2.0* | 16.8 | 2.03 |
| 603383 | 719 | 923 | 4.0 | 86 | 2.5 | 2.0^ | 2.3 | 1.5 | 16.6 | 1.63 |
| 603388 | 717 | 925 | 3.0 | 80 | 2.5 | 2.0^ | 1.8 | 1.5 | 16.3 | 1.66 |
| 603400 | 719 | 1008 | 4.0 | 102 | 3.0 | 2.0^ | 2.0 | 2.0* | 14.6* | 1.46 |
| 603408 | 728 | 1005 | 2.5 | 73* | 3.0 | 2.0^ | 2.0 | 1.0 | 10.3 | 1.02 |
| 603422B | 804 | 1009 | 5.0 | 122 | 4.0 | 2.0^ | 2.5 | | 7.8 | 0.87 |
| 603424A | 709 | 909 | 3.0 | 65 | 3.0 | 3.0^ | 2.5 | 1.0 | 14.3 | 1.58* |
| 603424B | 715 | 923 | 3.5 | 52 | 2.5* | 2.0^ | 2.0 | 2.0* | 13.4 | 1.86 |
| 603424C | 717 | 1005 | 3.0 | 58 | 1.5 | 2.0^ | 2.0 | 2.0* | 11.2 | 1.02 |
| 603424D | 721 | 1005 | 5.0 | 127 | 4.5 | 1.0^ | 2.3 | 2.5 | 10.9 | 1.20 |
| 603426A | 709 | 904 | 4.0 | 58 | 2.0 | 2.0^ | 2.3 | 1.0 | 11.1 | 1.17 |
| 603426B | 709 | 908 | 2.0 | 59 | 2.0 | 5.0^ | 2.0 | 1.0 | 15.1 | 1.37 |
| 603426C | 709 | 905 | 2.0 | 57 | 2.0 | 4.0^ | 2.0 | 1.0 | 17.3 | 1.33* |
| 603426D | 711 | 912 | 2.5 | 80 | 2.0 | 2.0^ | 2.0 | 1.0 | 15.3 | 1.66* |
| 603426E | 711 | 909 | 4.0 | 56 | 1.0 | 1.0^ | 2.0 | 1.0 | 9.9 | 1.15 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil compo | | | | |
|------------------|----------|---------------------|---------------------|-----------|------------|-------|----------|------------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 503339A | I | 47.7 ^w | 17.6 ^w | 10.0 | 2.9 | 20.0 | 56.8 | 10.2 |
| 503339B | I | 50.0^{w} | 17.0^{w} | 9.6 | 2.7 | 15.0 | 60.6 | 12.1 |
| 503341 | Ī | 41.6 | 17.9 | 10.2 | 3.3 | 21.6 | 54.5 | 10.3 |
| 503342 | I | 41.0 | 18.6 | 10.5 | 2.6 | 27.4 | 50.8 | 8.7 |
| 503344 | I | 41.5 | 19.4 | 10.6 | 2.7 | 26.2 | 51.6 | 8.9 |
| 503345 | II | 41.9 | 17.6 | 9.6 | 2.9 | 22.1 | 55.8 | 9.5 |
| 503346A | 0 | 41.6 | 19.5 | 9.5 | 4.0 | 25.2 | 53.1 | 8.3 |
| 503346B | Ĭ | 43.7^ | 15.9^ | 8.8 | 3.6 | 23.0 | 53.7 | 10.8 |
| 603348A | Ī | 41.9 | 17.4 | 10.9 | 3.0 | 19.4 | 55.8 | 10.9 |
| 503348B | Ī | 40.7 | 17.1 | 10.8 | 2.4 | 19.9 | 55.6 | 11.3 |
| 503349 | Ī | 42.2 | 17.5 | 10.7 | 2.3 | 22.4 | 54.6 | 10.0 |
| 503350 | I | 42.4 | 17.6 | 11.6 | 2.7 | 19.8 | 55.6 | 10.3 |
| 503350 | I | 41.6 | 18.6 | 10.7 | 3.2 | 24.3 | 52.7 | 9.2 |
| 503351 | I | 42.6 | 18.2 | 10.7 | 3.1 | 27.3 | 50.1 | 9.3 |
| 503354 | I | 43.8 | 17.1 | 10.2 | 3.1 | 21.3 | 55.0 | 9.5 9.6 |
| 503355 | I | 42.3 | 17.1 | 10.4 | 3.3 | 22.0 | 55.3 | 9.1 |
| 503356 | I | 42.3 | 17.9 17.9 | 10.4 | 3.5 3.6 | 19.9 | 55.2 | 10.8 |
| 503350 503357 | I | 40.8 | 17.5 | 10.0 | 2.9 | 20.6 | 55.8 | 10.8 |
| | I | | | | | | | |
| 03359 | | 44.1 | 17.5 | 11.1 | 3.0 | 19.0 | 55.4 | 11.6 |
| 03360 | I | 40.4 | 18.3 | 11.2 | 2.8 | 24.4 | 53.6 | 8.0 |
| 03361 | I | 41.2 | 17.6 | 10.6 | 2.9 | 24.7 | 51.4 | 10.4 |
| 03362 | I | 41.8 | 17.5 | 11.7 | 3.5 | 19.4 | 55.3 | 10.0 |
| 03367 | I | 48.7 ^w | 15.9 ^w | 10.0 | 2.6 | 15.3 | 59.4 | 12.8 |
| 03371 | I | 51.8 ^w | 15.0 ^w | 10.0 | 3.0 | 17.1 | 58.4 | 11.5 |
| 03373 | I | 50.8 ^w | 17.5 ^w | 8.9 | 2.8 | 21.0 | 58.0 | 9.3 |
| 503375 | I | 39.5 | 18.3 | 12.3 | 3.4 | 20.7 | 54.2 | 9.5 |
| 503376 | I | 43.8 | 16.7 | 11.0 | 2.8 | 18.1 | 57.6 | 10.6 |
| 503377 | I | 42.2 | 17.7 | 11.2 | 2.8 | 22.8 | 54.0 | 9.3 |
| 603378A | I | 39.8 | 17.5 | 11.0 | 3.3 | 18.9 | 56.1 | 10.7 |
| 603378B | I | 39.6 | 18.5 | 10.9 | 2.8 | 22.4 | 54.9 | 9.0 |
| 503379 | I | 41.5 | 18.5 | 9.1 | 3.5 | 30.7 | 49.3 | 7.3 |
| 503380 | I | 39.7 | 18.4 | 11.3 | 2.5 | 18.4 | 56.9 | 10.8 |
| 603382A | I | 48.9 ^w | 12.6 ^w | 10.3 | 2.5 | 20.6 | 55.8 | 10.8 |
| 503383 | I | 42.6 | 17.3 | 11.1 | 3.1 | 23.2 | 53.0 | 9.7 |
| 503388 | I | 41.2 | 19.0 | 10.8 | 3.9 | 22.3 | 53.1 | 9.9 |
| 503400 | I | 39.5 | 18.3 | 11.6 | 3.1 | 20.0 | 55.1 | 10.3 |
| 503408 | I | 46.2^{w} | 18.2^{w} | 9.7 | 3.6 | 18.8 | 56.9 | 11.1 |
| 603422B | II | 49.0^{w} | 16.3^{w} | 9.7 | 2.6 | 16.1 | 59.5 | 12.0 |
| 603424A | 0 | 41.9 | 18.3 | 10.7 | 4.3 | 20.4 | 55.5 | 9.1 |
| 03424B | I | 41.7^ | 17.3^ | 13.7 | 2.9 | 19.7 | 54.4 | 9.3 |
| 603424C | I | 43.7 | 16.3 | 13.3 | 3.0 | 17.3 | 55.7 | 10.6 |
| 603424D | I | 41.2 | 16.4 | 11.2 | 2.7 | 17.5 | 57.4 | 11.2 |
| 603426A | 00 | 42.0 | 17.5 | 11.2 | 4.0 | 24.6 | 51.8 | 8.5 |
| 603426B | 0 | 41.7 | 18.0 | 10.0 | 3.6 | 20.9 | 54.6 | 10.8 |
| 603426C | 00 | 38.7 | 18.5 | 11.1 | 4.7 | 22.3 | 52.5 | 9.4 |
| 603426D | 0 | 38.7 | 19.9 | 10.5 | 4.4 | 23.2 | 53.4 | 8.5 |
| 603426E | 0 | 42.3 | 17.2 | 12.1 | 4.1 | 18.4 | 55.7 | 9.7 |

Table 1.1 Identification and origin information for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|------------------------------|-------------|---------------|---------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| | | | _ | | | |
| | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | I |
| | Qing dou | Nei Monggol | China | China | 1998 | I |
| | (Qing dou) | Nei Monggol | China | China | 1998 | I |
| | Da li hei dou | Nei Monggol | China | China | 1998 | I |
| 603429A | | Nei Monggol | China | China | 1998 | 0 |
| | (Cha dou) | Nei Monggol | China | China | 1998 | 0 |
| 603429C | (Cha dou) | Nei Monggol | China | China | 1998 | I |
| 603430B | (Da hei qi) | Nei Monggol | China | China | 1998 | I |
| 603431 | Chi feng da hei qi | Nei Monggol | China | China | 1998 | I |
| 603432A | Huang dou | Nei Monggol | China | China | 1998 | 00 |
| 603432B | (Huang dou) | Nei Monggol | China | China | 1998 | 0 |
| 603432C | (Huang dou) | Nei Monggol | China | China | 1998 | I |
| 603435A | Huang dou | Nei Monggol | China | China | 1998 | 00 |
| 603437A | Huang dou | Nei Monggol | China | China | 1998 | 00 |
| 603437B | (Huang dou) | Nei Monggol | China | China | 1998 | 0 |
| | (Huang dou) | Nei Monggol | China | China | 1998 | 0 |
| | Da hei qi | Nei Monggol | China | China | 1998 | I |
| | (Da hei qi) | Nei Monggol | China | China | 1998 | I |
| 603439 | • • | Nei Monggol | China | China | 1998 | I |
| | Nong yan da bai qi | Nei Monggol | China | China | 1998 | 0 |
| | (Nong yan da bai qi) | Nei Monggol | China | China | 1998 | Ī |
| | Ke qi xiao hei dou | Nei Monggol | China | China | 1998 | Ī |
| | (Ke qi xiao hei dou) | Nei Monggol | China | China | 1998 | 0 |
| | (Hei dou) | Nei Monggol | China | China | 1998 | Ĭ |
| | Da li hei dou | Nei Monggol | China | China | 1998 | Ī |
| 603447 | Ka qi mao yan dou | Nei Monggol | China | China | 1998 | Ī |
| 603479 | Qing ba yue xian | Shandong | China | China | 1998 | Ī |
| | Xiao hei dou | Shanxi | China | China | 1998 | Ī |
| 603561 | Huang dou | Shanxi | China | China | 1998 | I |
| | Hei jin gang | Shanxi | China | China | 1998 | I |
| 603594 | Xia men da hong dou | Fujian | China | China | 1998 | II |
| 603659 | Huai hua 79-16 | Hunan | China | China | 1998 | I |
| 603666 | Li gong gang huang dou No. 2 | Hunan | China | China | 1998 | II |
| | Dan yang shui bai dou | Jiangsu | China | China | 1998 | 0 |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | |
| | (Dan yang shui bai dou) | - C | China | China | 1998 | I 0 |
| | | Jiangsu | | | | |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | I |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | I |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | 0 |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | 00 |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | I |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | I |
| | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | 0 |
| | Ya que yan | Jiangxi | China | China | 1998 | I |
| 603712 | Zi pi dou | Sichuan | China | China | 1998 | 0 |
| 603727 | Hei da dou | Sichuan | China | China | 1998 | I |
| 603750A | 92-526 | Sichuan | China | China | 1998 | I |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|---------|----|---------|---------|-----|--------|-----|----------------|--------------|---------------|
| | | | | | | | | | | | | |
| 603426F | I | D | P | T | E | N | Tn | I | Y | Br | Abh | 4N |
| 603427A | I | N | W | Lt | E | Ssp | Br | I | Gn | Bl | Gnc | 4N |
| 603427B | I | N | W | Lt | E | N | Br | I | Gn | Bl | Gnc | 3N |
| 603428A | I | N | W | T | E | N | Br | I | Bl | Bl | | 3N |
| 603429A | 0 | N | W | Lt | E | N | Br | I | Rbr | Rbr | | 3N |
| 603429B | 0 | N | W | T | E | N | Br | I | Rbr | Rbr | | 2N |
| 603429C | I | N | W | T | E | N | Br | I | Rbr | Rbr | Dab | 3N |
| 603430B | I | N | P | T | E | N | Br | I | Y | Bl | Sabh | 3N |
| 603431 | I | N | W | T | E | N | Br | I | Y | Bl | Sabh | 3N |
| 603432A | 00 | S | P | T | E | N | Br | D | Y | Tn | | 2N |
| 603432B | 0 | N | P | T | E | N | Br | D | Y | Tn | Dab | 3N |
| 603432C | I | N | P | T | E | N | Br | I | Y | Y | Vhil | 2N |
| 603435A | 00 | D | P | G | E | N | Br | D | Y | Y | | 2N |
| 603437A | 00 | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 603437B | 0 | S | P | G | E | Ssp | Br | S | Y | Y | | 2N |
| 603437C | 0 | N | P | G | E | N | Br | D | Y | Y | | 2N |
| 603438A | I | N | P | T | E | N | Br | I | Y | Bl | | 4N |
| 603438B | I | N | P | T | E | N | Br | I | Y | Bl | | 4N |
| 603439 | I | N | P | G | E | N | Br | I | Y | Bf | | 2N |
| 603440A | 0 | S | P | G | E | N | Dbr | Ī | Y | Y | | 2N |
| 603440B | Ĭ | S | P | G | E | N | Tn | Ī | Y | Y | | 2N |
| 603443A | Ī | N | P | Lt | E | N | Br | Ī | Bl | Bl | | 4F |
| 603443B | 0 | S | P | Lt | Sa | N | Tn | I | Bl | Bl | | 4F |
| 603444B | I | N | P | T | E | N | Br | Lb | Bl | Bl | | 5F |
| 603445A | I | N | W | T | E | N | Br | I | Bl | Bl | | 3N |
| 603447 | I | N | P | T | E | N | Br | I | Br | Bl | Sabh,Sad | 3N |
| 603479 | I | N | W | T | A | N | Br | D | Gn | Br | Saon, Sau | 4N |
| 603546A | I | D | P | T | E | N | Br | Lb | Bl | Bl | | 3N |
| 603561 | I | S | W | G | E | N | Br | S | Y | Y | | 3N |
| 603587A | I | N | W | T | Sa | N | Dbr | I | Bl | Bl | | 4N |
| 603594 | II | N | W | Lt | Sa A | N | Br | I | Rbr | Rbr | | 3N |
| 603659 | I | D | W | G | A Va | N | Tn | I | Y | Y | | 2N |
| 603666 | I | D N | vv P | G | | N N | Tn | I | Y | I Bf | | 3N |
| | | | W | | A | | | | Y | Y | Whil Was | |
| 603698A | 0 | N | | G | E | N N | Br | I | | | Vhil,Vsc | 3N |
| 603698B | I | N | W | G | Е | N | Br | I | Lgn | Bf | X71. '1 X7 | 3N |
| 603698C | 0 | N | P | G | Е | N | Br | D | Gn | Gn | Vhil,Vsc | 3N |
| 603698D | I | N | P | G | Е | N | Br | I | G | G | | 2N |
| 603698E | I | S | P | G | Е | N | Br | I | Ggn | G | * 7 | 2N |
| 603698F | 0 | N | P | G | E | N | Br | D | Y | Ib | Vsc | 3N |
| 603698G | 00 | D | P | G | Е | N | Tn | I | G | G | Vhil,Vsc | 3N |
| 603698H | I | N | P | G | E | N | Br | D | Lgn | Gn | Vhil,Vsc | 3N |
| 603698I | I | N | W | G | E | N | Br | I | Y | Y | | 3N |
| 603698J | 0 | D | W | G | E | N | Br | I | Y | Dbf | | 3N |
| 603704A | I | S | P | Lt | Sa | Ssp | Br | I | Y | Brbl | Vhil | 3N |
| 603712 | 0 | S | P | Lt | A | N | Tn | I | Br | Rbr | | 3N |
| 603727 | I | D | P | T | Sa | Ssp | Tn | I | Bl | Bl | | 3N |
| 603750A | I | D | P | T | A | N | Tn | I | Y | Br | | 3N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering | Maturity | 7 | | Stem | Shattering | Seed | | | |
|--------------------|------------|------------|---------|----------|-------------|------------|---------|----------|---------|---------|
| | date | date | | Height | termination | - | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 603426F | 721 | 1005 | 3.5 | 60* | 1.5 | 3.0^ | 2.0 | 1.5 | 11.8 | 1.31 |
| 603427A | 726 | 1008 | 4.0 | 92 | 3.0 | 2.0^ | 2.5 | 2.5 | 12.3 | 1.48 |
| 603427B | 727* | 1007 | 4.0 | 78* | 3.0 | 1.0^ | 2.3 | 1.5 | 13.0 | 1.52 |
| 603428A | 719 | 1005 | 3.5 | 101 | 3.0 | 1.0^ | 1.8 | | 19.2 | 1.99 |
| 603429A | 717 | 917* | 4.0 | 72* | 4.5 | 4.0^ | 2.0 | | 15.5 | 1.87 |
| 603429B | 717 | 915* | | 70 | 3.0 | 1.0^ | 2.0 | | 20.4 | 1.97 |
| 603429C | 719 | 923 | 4.0 | 87* | 2.5 | 2.0^ | 2.0 | | 13.5 | 1.38 |
| 603430B | 727 | 1002 | 4.0 | 85 | 2.5 | 2.0^ | 1.8 | 1.5 | 17.0 | 1.46 |
| 603431 | 725 | 1005 | 2.5 | 84 | 2.5 | 2.0^ | 1.5 | 1.0 | 18.3 | 1.48 |
| 603432A | 709 | 906 | 2.0 | 70 | 2.0 | 2.0^ | 2.3 | 1.0 | 14.9 | 1.69 |
| 603432B | 713 | 911 | 4.5 | 71 | 3.0 | 2.0^ | 2.3 | 1.0 | 13.1 | 1.25 |
| 603432C | 713 | 915 | 2.0 | 70 | 2.5 | 2.0^ | 2.3 | 1.5 | 15.0 | 1.60 |
| 603435A | 707 | 903 | 1.5 | 51 | 1.0 | 5.0^ | 2.3 | 1.0 | 15.3 | 1.59* |
| 603433A 603437A | 707 | 903 | 3.5 | 70 | 3.0 | 2.0^ | 2.5 | 1.0 | 14.4 | 1.36 |
| 603437A | 709 | 907 | 2.0 | 70 79 | 2.0 | 3.0^ | 1.8 | 1.0 | 13.7 | 1.76 |
| | 709 | | 2.5 | 84 | 3.0 | 2.0^ | 2.3 | 1.0 | | |
| 603437C | 709 727 | 911 929 | | 89* | | 2.0^ | | | 15.4 | 1.96* |
| 603438A | | | 4.0 | | 2.5 | | 2.0 | 1.0 | 15.1 | 1.72 |
| 603438B | 725* | 1004 | 4.0 | 86 | 2.5 | 2.0^ | 2.3 | 1.5 | 16.0 | 1.57 |
| 603439 | 717 | 1001 | 2.5 | 85 | 2.5 | 2.0^ | 2.0 | 1.0 | 17.4 | 1.88 |
| 603440A | 714^ | 912^ | | 69^ | 2.0^ | 1.0^ | 2.5^ | 2.0^ | 17.5^ | 1.29^ |
| 603440B | 720* | 925* | 3.5* | 80 | 1.5 | 2.0^ | 1.8 | 1.0 | 16.5 | 2.00 |
| 603443A | 802 | 1007 | 4.5 | 83 | 4.0 | 2.0^ | 2.3 | | 7.7 | 0.98* |
| 603443B | 715 | 913 | 3.0 | 64* | 3.5 | 2.0^ | 2.5 | | 10.7 | 0.86 |
| 603444B | 721 | 1007 | 3.5 | 89 | 3.0 | 2.0^ | 3.0 | | 10.2 | 0.84 |
| 603445A | 721 | 1007 | 3.0 | 73 | 3.0 | 1.0^ | 2.0 | | 22.1* | 1.58 |
| 603447 | 728 | 1007 | 4.0 | 92 | 3.0 | 2.0^ | 2.3 | | 16.5 | 1.30 |
| 603479 | 801 | 1007 | 3.0 | 80* | 3.5 | 1.0^ | 2.5 | 2.5 | 17.5 | 1.52 |
| 603546A | 801 | 1005 | 2.0 | 69 | 1.5 | 1.0^ | 2.8 | | 15.6 | 1.30 |
| 603561 | 713 | 919 | 1.5 | 73 | 2.0 | 1.0^ | 2.0 | 2.5 | 15.2 | 1.89 |
| 603587A | 725* | 1003 | 4.5 | 105 | 4.0 | 1.0^ | 2.3 | | 11.1 | 1.63 |
| 603594 | 804 | 1011 | 3.0 | 88 | 3.0 | 2.0^ | 3.3* | | 15.7 | 1.18 |
| 603659 | 722^ | 928^ | 3.0^ | 33^ | 1.0^ | 3.0^ | 1.5^ | 1.0^ | 17.0^ | 1.39^ |
| 603666 | 806 | 1011 | 4.0 | 102 | 3.5 | 1.0^ | 3.0 | 1.5 | 10.5* | 0.79 |
| 603698A | 713 | 913 | 3.0 | 100 | 3.0 | 5.0^ | 2.3 | 1.5 | 13.6 | 1.73* |
| 603698B | 717 | 930 | 2.5 | 85 | 3.0 | 3.0^ | 2.3 | 1.0 | 17.4 | 1.45 |
| 603698C | 719 | 917 | 2.0 | 70 | 2.5 | 5.0^ | 2.3 | 1.5 | 14.4 | 1.23* |
| 603698D | 724 | 1003 | 3.0 | 75* | 3.0 | 2.0^ | 2.0 | 4.0* | 13.6 | 1.52 |
| 603698E | 726 | 1001 | 3.0 | 78 | 2.0 | 4.0^ | 2.0 | 3.0* | 13.9 | 1.60 |
| 603698F | 715 | 913 | 3.0 | 115 | 4.0 | 1.0^ | 2.3 | 1.5 | 15.2 | 1.65 |
| 603698G | 707 | 909 | 2.0 | 54 | 1.0 | 5.0^ | 2.0 | 1.5 | 14.1 | 1.20* |
| 603698H | 721 | 921 | 2.5 | 71 | 3.0 | 5.0^ | 2.0 | 1.0 | 15.5 | 1.28 |
| 603698I | 721 | 927 | 2.5 | 107* | 2.5 | 4.0^ | 1.8 | 1.0 | 12.8 | 1.39 |
| 603698J | 717 | 920 | 3.5 | 71 | 1.5 | 4.0^ | 1.5 | 1.0 | 12.5 | 1.28* |
| 603704A | 805 | 1009 | 4.5 | 68 | 3.0 | 3.0^ | 2.5 | 4.5 | 9.4* | 0.29 |
| 603712 | 727 | 916 | 3.0* | 64 | 2.0 | 5.0^ | 2.3 | | 12.2 | 1.02 |
| 603727 | 804 | 1001 | 4.5 | 60* | 2.5 | 2.0^ | 2.0 | | 8.3 | 0.89 |
| 603750A | 802 | 1009 | 3.0 | 71 | 2.0 | 1.0^ | 2.8* | 1.0^ | 15.5 | 0.83 |
| 003130A | 302 | 1007 | 5.0 | / 1 | 2.0 | 1.0 | 2.0 | 1.0 | 15.5 | 0.05 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil composition | | | | | |
|-----------------|----------|---------------------------|---------------------------|------------------------|---------|-------|--------------|-------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603426F | I | 43.4 | 16.5 | 13.4 | 2.8 | 17.7 | 55.7 | 10.4 | |
| 503427A | Ī | 48.7 ^w | 16.8 ^w | 10.1 | 3.4 | 17.8 | 57.4 | 11.4 | |
| 603427B | Ī | 48.9 ^w | 16.8 ^w | 9.3 | 3.1 | 18.9 | 57.6 | 11.1 | |
| 603428A | I | 49.9 ^w | 16.9 ^w | 9.3 | 2.9 | 20.9 | 56.5 | 10.4 | |
| 503429A | 0 | 51.3 ^w | 10.5 17.1 ^w | 10.3 | 3.2 | 15.8 | 58.9 | 11.8 | |
| 603429B | 0 | 52.8 ^w | 17.1 16.7 ^w | 10.5 | 3.9 | 18.3 | 57.8 | 9.5 | |
| 603429B | I | 32.8 41.5 ^w | 16.7 16.8 ^w | 10.3 | 3.9 | 16.0 | 57.8 59.1 | 9.3 11.7 | |
| | I | | | | | | | | |
| 03430B | | 41.7 | 17.8 | 10.6 | 3.5 | 21.2 | 54.5 | 10.2 | |
| 03431 | I | 40.4 | 19.4 | 10.4 | 3.8 | 21.6 | 55.0 | 9.2 | |
| 03432A | 00 | 42.7 | 18.6 | 11.0 | 3.6 | 20.8 | 55.0 | 9.6 | |
| 03432B | 0 | 41.3 | 18.2 | 10.0 | 3.8 | 19.1 | 58.2 | 9.0 | |
| 03432C | I | 42.3 | 18.4 | 12.1 | 3.1 | 20.0 | 55.0 | 9.8 | |
| 03435A | 00 | 41.5 | 18.8 | 10.8 | 3.3 | 20.9 | 56.4 | 8.6 | |
| 03437A | 00 | 42.7 | 18.7 | 11.1 | 4.1 | 20.7 | 55.3 | 8.9 | |
| 03437B | 0 | 40.9 | 18.7 | 10.4 | 4.5 | 19.2 | 55.4 | 10.5 | |
| 03437C | 0 | 41.5 | 17.8 | 11.0 | 4.5 | 23.6 | 52.1 | 8.8 | |
| 03438A | I | 49.2^{w} | 16.6^{w} | 8.5 | 2.8 | 16.4 | 59.5 | 12.7 | |
| 03438B | I | 44.4 | 16.8 | 11.1 | 3.5 | 19.1 | 56.1 | 10.3 | |
| 03439 | I | 39.8 | 18.0 | 10.4 | 3.4 | 24.1 | 52.0 | 10.1 | |
| 03440A | 0 | 40.9 | 17.8 | 10.6 | 3.9 | 24.6 | 52.7 | 8.2 | |
| 03440B | I | 39.9 | 18.5 | 11.4 | 3.7 | 21.2 | 54.6 | 9.1 | |
| 03443A | I | $49.0^{\rm w}$ | 14.6^{w} | 10.8 | 2.7 | 14.6 | 59.8 | 12.1 | |
| 03443B | 0 | 49.3 ^w | 15.9^{w} | 9.9 | 3.1 | 16.3 | 58.5 | 12.2 | |
| 03444B | I | 48.0^{w} | 15.6 ^w | 9.2 | 2.8 | 17.6 | 58.5 | 11.9 | |
| 03445A | Ī | 49.1 ^w | 16.4 ^w | 10.4 | 3.4 | 18.9 | 56.0 | 11.3 | |
| 03447 | Ī | 48.6 ^w | 17.0 ^w | 9.4 | 2.8 | 16.4 | 60.9 | 10.5 | |
| 03479 | I | 45.6 ^w | 17.6 ^w | 9.2 | 3.0 | 21.8 | 55.2 | 10.8 | |
| 03546A | I | 48.5 ^w | 15.6 ^w | 10.2 | 2.7 | 15.0 | 59.2 | 13.0 | |
| 03561 | I | 40.8 | 20.1 | 11.3 | 4.0 | 24.2 | 52.3 | 8.2 | |
| 03587A | I | 48.8 ^w | 16.4 ^w | 9.4 | 3.3 | 19.7 | 57.5 | 10.1 | |
| 03587A 03594 | I | 48.8 43.7 ^w | 16.4 15.3 ^w | 9. 4 9.7 | 2.8 | 16.3 | 57.5 59.5 | 10.1 | |
| | II I | | 18.7 | 10.3 | 3.3 | | | | |
| 03659 | | 42.0 | | | | 24.5 | 52.6 | 9.3 | |
| 03666 | II | 48.9 | 12.8 | 9.9 | 2.7 | 16.3 | 57.6 | 13.6 | |
| 03698A | 0 | 42.7 | 17.5 | 10.3 | 3.4 | 26.7 | 50.8 | 8.7 | |
| 03698B | I | 42.1 | 17.9 | 11.2 | 2.8 | 20.4 | 54.7 | 11.0 | |
| 03698C | 0 | 44.2 | 17.3 | 10.3 | 2.8 | 20.8 | 54.1 | 12.0 | |
| 03698D | I | 50.3 ^w | 15.7 ^w | 9.4 | 2.6 | 17.4 | 57.4 | 13.2 | |
| 03698E | I | 50.1 ^w | 17.5 ^w | 9.4 | 3.0 | 19.3 | 56.6 | 11.6 | |
| 03698F | 0 | 41.5 | 18.8 | 9.9 | 3.1 | 21.5 | 54.4 | 11.1 | |
| 03698G | 00 | 50.9^{w} | 17.2^{w} | 9.5 | 2.8 | 19.4 | 58.4 | 9.9 | |
| 03698H | I | 44.4 | 17.4 | 11.0 | 2.8 | 23.3 | 52.4 | 10.5 | |
| 03698I | I | 43.8 | 16.4 | 12.1 | 3.3 | 22.8 | 51.1 | 10.7 | |
| 03698J | 0 | 45.8 | 15.9 | 9.6 | 2.8 | 19.5 | 57.1 | 11.0 | |
| 03704A | I | 52.5^{w} | 14.1^{w} | 9.5 | 2.9 | 19.9 | 56.7 | 11.0 | |
| 03712 | 0 | 53.9^{w} | 17.0^{w} | 11.5 | 3.1 | 20.7 | 52.7 | 12.0 | |
| 03727 | I | 49.3^{w} | 16.4^{w} | 9.8 | 3.0 | 16.5 | 59.4 | 11.3 | |
| 503750A | I | 44.3 | 16.9 | 11.4 | 2.8 | 17.1 | 57.8 | 10.9 | |

 $Table 1.1 \ Identification \ and \ origin \ information \ for \ USDA \ soybean \ germplasm \ in \ maturity \ groups \ 000 \ through \ I, \ PI \ 578371 \ to \ PI \ 612761B \ plus \ earlier \ accessions \ not \ previously \ evaluated.$

| - | | ъ . | Country | Country | Year | 34 |
|---------|----------------|--------------|-------------|-------------|-------------|-------|
| DIA | Accession | Region | of | of | introduced | |
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 603750B | (92-526) | Sichuan | China | China | 1998 | II |
| 603754 | Liu yue dou | Zhejiang | China | China | 1998 | I |
| 603758A | Liu yue dou | Zhejiang | China | China | 1998 | I |
| 603758B | (Liu yue dou) | Zhejiang | China | China | 1998 | I |
| 603758C | (Liu yue dou) | Zhejiang | China | China | 1998 | I |
| 612610 | Musan-1 | unknown | North Korea | North Korea | 1998 | I |
| 612615 | Bochon | unknown | North Korea | North Korea | 1998 | 0 |
| 612617A | Kapsan | unknown | North Korea | North Korea | 1998 | I |
| | (Kapsan) | unknown | North Korea | North Korea | 1998 | 0 |
| 612705 | He feng No. 9 | Heilongjiang | China | China | 1999 | I |
| | Bayan 32 | Heilongjiang | China | China | 1999 | I |
| | (Bayan 32) | Heilongjiang | China | China | 1999 | 0 |
| | Bei 8709 | Heilongjiang | China | China | 1999 | 0 |
| | (Bei 8709) | Heilongjiang | China | China | 1999 | 0 |
| | K 89-9081 | Heilongjiang | China | China | 1999 | 0 |
| | (K 89-9081) | Heilongjiang | China | China | 1999 | I |
| | (K 89-9081) | Heilongjiang | China | China | 1999 | I |
| | (K 89-9081) | Heilongjiang | China | China | 1999 | Ī |
| | K 87-104 | Heilongjiang | China | China | 1999 | 0 |
| | (K 87-104) | Heilongjiang | China | China | 1999 | I |
| | (K 87-104) | Heilongjiang | China | China | 1999 | Ī |
| | K 93-600 | Heilongjiang | China | China | 1999 | 00 |
| 612711A | | Heilongjiang | China | China | 1999 | I |
| | (K 93-89) | Heilongjiang | China | China | 1999 | Ī |
| | He feng 93-111 | Heilongjiang | China | China | 1999 | 0 |
| | He feng 910 | Heilongjiang | China | China | 1999 | Ĭ |
| | (He feng 910) | Heilongjiang | China | China | 1999 | Ī |
| | (He feng 1538) | Heilongjiang | China | China | 1999 | Ī |
| 612715 | Hei nong 40 | Heilongjiang | China | China | 1999 | Ī |
| 612716 | Harbin 93-6349 | Heilongjiang | China | China | 1999 | Ī |
| 612717 | Harbin 94-2508 | Heilongjiang | China | China | 1999 | Ī |
| 612718 | Harbin 92-1062 | Heilongjiang | China | China | 1999 | Ī |
| 612719 | Harbin 91-6065 | Heilongjiang | China | China | 1999 | Ī |
| 612720A | | Jilin | China | China | 1999 | 0 |
| | (Jilin 26) | Jilin | China | China | 1999 | Ĭ |
| 612721A | | Jilin | China | China | 1999 | Ī |
| | (Jilin 33) | Jilin | China | China | 1999 | 0 |
| 612722 | Jilin 34 | Jilin | China | China | 1999 | I |
| 612723 | Jilin 35 | Jilin | China | China | 1999 | I |
| 612724 | Jilin 36 | Jilin | China | China | 1999 | I |
| 612725 | Jilin 37 | Jilin | China | China | 1999 | I |
| 612726 | Jilin 8966-25 | Jilin | China | China | 1999 | I |
| 612727 | Jilin 8966-35 | Jilin | China | China | 1999 | I |
| 612728 | Jilin 8978-6 | Jilin | China | China | 1999 | 0 |
| 612732 | Zhao shu 18 | Beijing | China | China | 1999 | I |
| 612735 | Jiunong 21 | Jilin | China | China | 2000 | I |
| 612736 | Yi No. 3 | Jilin | China | China | 2000 | I |
| 012/30 | 11110. 3 | J11111 | Cillia | Cillia | 2000 | 1 |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|---------|----|----|---------|--------------|------------------|----|----------------|--------------|---------------|
| 602750D | | | | | | • | | | | | 3.71. '1 | |
| 603750B | II | N | W | Lt | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603754 | I | D | W | Lt | A | N | Br | I | Y | Br | | 3N |
| 603758A | I | S | P | Lt | A | N | Br | I | Y | Br | | 3N |
| 603758B | I | S | P | T | Sa | Ssp | Br | I | Y | Br | | 3N |
| 603758C | I | S | P | T | Е | Ssp | Br | I | Y | Br | a . | 3N |
| 612610 | I | N | W | T | E | N | Br | I | Br | Bl | Sad | 2N |
| 612615 | 0 | S | P | G | E | N | Br | I | Y | Y | | 2N |
| 612617A | I | N | P | Lt | E | N | Tn | I | Y | Y | Vhil | 2N |
| 612617B | 0 | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 612705 | I | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 612706A | I | S | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 612706B | 0 | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 612707A | 0 | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 612707B | 0 | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 612708A | 0 | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 612708B | I | S | P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 612708C | I | S | P | G | E | N | Br | D | Y | Y | Na | 2N |
| 612708D | I | N | P | G | E | N | Br | D | Y | Y | Na | 2N |
| 612709A | 0 | N | P | G | E | N | Br | D | Y | Y | Na | 2N |
| 612709B | I | S | P | G | Е | N | Br | D | Y | Y | Na | 2N |
| 612709C | I | D | W | G | Е | N | Br | D | Y | Y | Na | 2N |
| 612710 | 00 | D | P | G | E | N | Br | D | Y | Y | | 2N |
| 612711A | I | D | W | G | E | N | Tn | Ī | Y | Y | | 2N |
| 612711B | Ī | D | W | G | E | Ssp | Br | Ī | Y | Y | Na | 2N |
| 612712 | 0 | D | W | G | E | N | Br | Ī | Y | Y | Na | 2N |
| 612713A | Ĭ | D | W | G | E | N | Br | D | Y | Bf | Na | 2N |
| 612713B | I | D | W | G | E | N | Br | D | Y | Bf | Na | 2N |
| 612714B | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 612715 | I | S | P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 612716 | I | S | P | G | E | N N | Br | D | Y | Y | Na | 2N |
| 612717 | I | D | W | G | E | Ssp | Br | I | Y | Bf | INa | 1R |
| 612718 | I | D | W | G | E | N N | Br | D | Y | Bf | Na | 2N |
| 612719 | I | D | W | G | E | N | Br | D | Y | Y | Na | 2N 2N |
| | | N | vv P | | E | | Br | I | | Y | 1Na | |
| 612720A | 0 | | - | G | | Ssp | | | Y | | | 2N |
| 612720B | I | D | P | G | Е | Ssp | Br | I | Y | Y | | 2N |
| 612721A | I | S | W | G | Е | Ssp | Br | I | Y | Y | | 2N |
| 612721B | 0 | D | W | G | Е | Ssp | Tn | I | Y | Y | N | 2N |
| 612722 | I | S | W | G | Е | Ssp | Tn | I | Y | Y | Na | 2N |
| 612723 | I | D | P | G | Е | N | Tn | I | Y | Y | | 2N |
| 612724 | I | S | P | G | E | Ssp | Tn | I | Y | Y | | 2N |
| 612725 | I | D | P | G | Е | N | Br | I | Y | Y | | 2N |
| 612726 | I | S | P | G | E | N | Br | I | Y | Y | | 2N |
| 612727 | I | N | P | G | E | N | Br | I | Y | Tn | | 2N |
| 612728 | 0 | N | P | G | E | Ssp | Bl | D | Y | Y | Na | 2N |
| 612732 | I | N | P | G | A | N | Br | I | Y | Y | Vhil | 2N |
| 612735 | I | N | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 612736 | I | D | P | T | E | N | Br | I | Y | Bl | | 2N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| Mart | - | Flowering | Maturity | | | Stem | Shattering | Seed | | | |
|--|---------|-----------|----------|---------|--------|-------------|------------|---------|---------|---------|---------|
| 603750B | | date | | | Height | termination | early | Quality | | Weight | Yield |
| 603758A 801 1005 3.0 59 1.5 2.0^ 2.5 2.0 15.2 1.02 603758B 802 1003 3.5 75* 3.0 2.0^ 2.3 2.5 12.2 0.54 603758B 802 1003 3.5 75* 3.0* 1.0^ 2.0 2.5 11.9 0.86* 603758C 729* 1006 3.0 87* 3.0 1.0^ 1.8 2.0 11.8 603758C 729* 1006 3.0 87* 3.0 1.0^ 1.8 2.0 11.8 612615 713 913 2.0 81 2.0 2.0^ 2.0 1.0 14.6 1.74* 612616 717 223 3.5 88 2.5 1.0^ 2.0 2.0 1.0 14.6 1.74* 612617 723* 1007 3.0 83 2.5 2.0^ 1.5 1.0 17.1 1.77* 612618 713 918 2.0 70 2.5 1.0^ 2.0 2.0* 14.8 1.87* 612705 711 921 1.5 42 1.0 1.0^ 2.0 2.0* 18.2 1.51* 612706A 715 923 2.5 85 2.0 1.0^ 2.3 1.0 15.8 1.76* 612706B 713 919 1.0 68 1.5 1.0^ 2.5 2.0* 16.2 1.70* 612707A 711 909 1.5 53 1.0 5.0^ 2.0 1.0 16.3* 1.5* 612708A 713 919 2.5 78 1.0 3.0^ 2.5 1.0 15.9 612708B 713 921 1.0 63 2.0 1.0^ 1.5 1.0 15.0 1.59* 612708C 711 921 1.0 64 2.0 1.0^ 1.5 1.0 16.7 3.25* 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3 1.68* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 2.0 1.0 18.3 1.68* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 1.5 1.5 1.0 612711B 717 1021 1.5 80* 1.5 1.0^ 1.8 1.0 1.6 1.3 612711B 717 1001 1.5 80* 1.5 1.0^ 1.8 1.0 1.6 2.0 1.0 612711B 717 1001 1.5 64 1.0 1.0^ 1.8 1.0 1.5 1.1 1.3 612711B 717 1001 1.5 64 1.0 1.0^ 1.8 1.0 1.5 1.0 1.5 1.0 612711B 717 1001 1.5 64 1.0 1.0^ 1.8 1.0 1.5 1.0 1.5 2.0* 612712B 713 922 2.5 86 2.0 2.0^ 2.0 1.0 1.0 1.5 2.0* 612713B 713 922 2.5 86 2.0 2.0^ 2.0 1.0 1.0 1.5 2.0* 612713B 713 922 2.5 86 2.0 2.0^ 2.0 1.0 1.0 1.5 2.0* 612711B 717 1001 1.5 64 | Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 603758B 801 1010 4.5 75* 3.0 2.0^ 2.3 2.5 12.2 0.54* 603758B 802 1003 3.5 75* 3.0* 1.0^ 2.0 2.5 11.9 0.86* 603758C 729* 1006 3.0 87* 3.0 1.0^ 1.8 2.0 11.8 0.87* 612610 717 923 3.5 88 2.5 1.0^ 2.0 - 19.5 1.86* 612617A 723* 1007 3.0 83 2.5 2.0^ 1.0 1.0 1.1 1.77* 612617B 713 918 2.0 70 2.5 1.0^ 2.0 2.0* 14.6 1.77* 612706A 715 923 2.5 85 2.0 1.0^ 2.0 2.0 1.0 15.8 1.76 612706B 713 919 1.0 68 1.5 1.0 2.5 2.0 1.0 </td <td>603750B</td> <td>807^</td> <td>1011</td> <td>3.5</td> <td>59*</td> <td>3.5</td> <td>2.0^</td> <td>2.0^</td> <td>2.0^</td> <td>13.9^</td> <td>0.30^</td> | 603750B | 807^ | 1011 | 3.5 | 59* | 3.5 | 2.0^ | 2.0^ | 2.0^ | 13.9^ | 0.30^ |
| 603758B 802 1003 3.5 75* 3.0* 1.0^ 2.0 2.5 11.9 0.86* 603758C 729* 1006 3.0 87* 3.0 1.0^ 1.8 2.0 11.8 0.87 612615 713 913 2.0 81 2.0 2.0 2.0 1.0 14.6 1.74 612617A 723** 1007 3.0 83 2.5 2.0^ 2.0 1.0 14.6 1.74 612705 711 921 1.5 42 1.0 1.0^ 2.0 2.0* 18.2 1.51* 612706A 715 923 2.5 85 2.0 1.0^ 2.0 2.0* 18.2 1.51* 612706B 713 919 1.0 68 1.5 1.0^ 2.0 1.0 16.2 1.70* 612707A 711 909 1.5 53 1.0 5.0^ 2.0 1.0 16.2 1.70 | 603754 | 801 | 1005 | 3.0 | 59 | 1.5 | 2.0^ | 2.5 | 2.0 | 15.2 | 1.02 |
| G03758C 729* 1006 3.0 87* 3.0 1.0^ 1.8 2.0 1.18 0.87 | 603758A | 801 | 1010 | 4.5 | 75* | 3.0 | 2.0^ | 2.3 | 2.5 | 12.2 | 0.54 |
| 612610 | 603758B | 802 | 1003 | 3.5 | 75* | 3.0* | 1.0^ | 2.0 | 2.5 | 11.9 | 0.86* |
| 612615 | 603758C | 729* | 1006 | 3.0 | 87* | 3.0 | 1.0^ | 1.8 | 2.0 | 11.8 | 0.87 |
| 612617A | 612610 | 717 | 923 | 3.5 | 88 | 2.5 | 1.0^ | 2.0 | | 19.5 | 1.86* |
| 612617B 713 918 2.0 70 2.5 1.0^ 2.0 2.0* 14.8 1.87* 612706A 715 923 1.5 42 1.0 1.0^ 2.0 2.0* 14.8 1.51* 612706B 713 919 1.0 68 1.5 1.0^ 2.5 2.0* 16.2 1.70* 612707A 711 909 1.5 53 1.0 5.0^ 2.0 1.0 16.3* 1.24* 612707B 709 909 1.0 51 1.0 3.0^ 2.0 1.0 15.9 0.65* 612708A 713 919 2.5 78 1.0 3.0^ 2.0 1.0 15.0 16.5 1.8** 612708B 713 921 1.0 64 2.0 1.0^ 1.8 1.0 16.5 1.8** 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3< | 612615 | 713 | 913 | 2.0 | 81 | 2.0 | 2.0^ | 2.0 | 1.0 | 14.6 | 1.74 |
| 612705 711 921 1.5 42 1.0 1.0^ 2.0 2.0* 18.2 1.51* 612706B 713 919 1.0 68 1.5 1.0^ 2.3 1.0 15.8 1.76* 612707A 711 909 1.5 53 1.0 5.0^ 2.0 1.0 16.3* 1.24* 612707B 709 909 1.0 51 1.0 3.0^ 2.5 1.0 15.9* 0.65* 612708A 713 919 2.5 78 1.0 3.0^ 2.0 1.0 15.0 16.5* 1.88* 612708B 713 921 1.0 63 2.0 1.0^ 1.5 1.0 16.5* 1.88* 612708C 717 924 1.0 63 2.0 1.0^ 1.8 1.0 16.7 3.25* 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.0 1.7 </td <td>612617A</td> <td>723*</td> <td>1007</td> <td>3.0</td> <td>83</td> <td>2.5</td> <td>2.0^</td> <td>1.5</td> <td>1.0</td> <td>17.1</td> <td>1.77*</td> | 612617A | 723* | 1007 | 3.0 | 83 | 2.5 | 2.0^ | 1.5 | 1.0 | 17.1 | 1.77* |
| 612706A | 612617B | 713 | 918 | 2.0 | 70 | 2.5 | 1.0^ | 2.0 | 2.0* | 14.8 | 1.87* |
| 612706B 713 919 1.0 68 1.5 1.0^ 2.5 2.0* 16.2 1.70* 612707B 709 90 1.5 53 1.0 5.0^ 2.0 1.0 16.3* 1.24* 612708A 713 919 2.5 78 1.0 3.0^ 2.0 1.0 15.9 0.65* 612708B 713 921 1.0 63 2.0 1.0^ 1.5 1.0 16.5 1.88* 612708C 711 921 1.0 64 2.0 1.0^ 1.8 1.0 16.5 3.25* 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.5 15.8 2.01 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.5 15.8 2.01 612709A 713 930 1.5 54 1.0 1.0^ 1.0 1.0 1.0 1.0 | 612705 | 711 | 921 | 1.5 | 42 | 1.0 | 1.0^ | 2.0 | 2.0* | 18.2 | 1.51* |
| 612707A 711 909 1.5 53 1.0 5.0^ 2.0 1.0 16.3* 1.24* 612708A 713 919 2.5 78 1.0 3.0^ 2.5 1.0 15.9 0.66* 612708B 713 921 1.0 63 2.0 1.0^ 1.5 1.0 16.5 1.88* 612708C 711 921 1.0 64 2.0 1.0^ 1.8 1.0 16.7 3.25* 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3 1.68* 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 1.9 1.12 612710 711 992 2.5 55 1.0 3.0^ 3.0 1.0 1.74* 1.19 | 612706A | 715 | 923 | 2.5 | 85 | 2.0 | 1.0^ | 2.3 | 1.0 | 15.8 | 1.76 |
| 612707B 709 909 1.0 51 1.0 3.0^ 2.5 1.0 15.9 0.65* 612708A 713 919 2.5 78 1.0 3.0^ 2.0 1.0 15.0 1.59* 612708B 713 921 1.0 64 2.0 1.0^ 1.8 1.0 16.7 3.25* 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3 1.68* 612709A 711 921 2.5 84 2.5 1.0^ 1.8 1.5 15.8 2.01 612709B 713 921 2.0 64 2.0 2.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 15.9 1.12 612710 711 992 2.5 55 1.0 3.0^ 3.0 1.0 17.4* 1.19 | 612706B | 713 | 919 | 1.0 | 68 | 1.5 | 1.0^ | 2.5 | 2.0* | 16.2 | 1.70* |
| 612708A 713 919 2.5 78 1.0 3.0^ 2.0 1.0 15.0 1.59* 612708B 713 921 1.0 63 2.0 1.0^ 1.5 1.0 16.5 1.88* 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3 1.68* 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.5 15.8 2.01 612709B 713 921 2.0 64 2.0 2.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 15.8 2.01 612710 711 909 2.5 55 1.0 3.0^ 3.0 1.0 17.0 1.88 2.0 612711A 711 902 2.5 52 1.0 1.0^ 2.0 1.0 1.42 | 612707A | | 909 | 1.5 | 53 | 1.0 | 5.0^ | 2.0 | 1.0 | 16.3* | 1.24* |
| 612708B 713 921 1.0 63 2.0 1.0^ 1.5 1.0 16.5 1.88* 612708C 711 921 1.0 64 2.0 1.0^ 1.8 1.0 16.7 3.25* 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3 1.68* 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.5 15.8 2.01 612709B 713 921 2.0 64 2.0 2.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 1.9 1.12 612710 711 909 2.5 55 1.0 3.0^ 3.0 1.0 1.74* 1.19 612711A 711 902 1.5 52 1.0 1.0^ 2.0 1.0 1.42 1.84* | 612707B | 709 | 909 | 1.0 | 51 | 1.0 | 3.0^ | 2.5 | 1.0 | 15.9 | 0.65* |
| 612708C 711 921 1.0 64 2.0 1.0^ 1.8 1.0 16.7 3.25* 612708D 717 924 1.0 57 1.5 2.0^ 2.0 1.0 18.3 1.68* 612709B 713 921 2.0 64 2.0 2.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 15.9 1.12 612710 711 909 2.5 55 1.0 3.0^ 3.0 1.0 17.4* 1.19 612711A 711 923 2.0 81 1.0 1.0^ 2.0 1.0 14.2 1.80* 612711B 717 1002 1.5 52 1.0 2.0^ 2.3 1.5 1.1 1.30* 61271B 711 1002 1.5 80* 1.5 1.0^ 2.0 1.0 1.0 2.0* | 612708A | 713 | 919 | 2.5 | 78 | 1.0 | 3.0^ | 2.0 | 1.0 | 15.0 | 1.59* |
| 612708D 717 924 1.0 57 1.5 2.0^{\chicklet} 2.0 1.0 18.3 1.68* 612709A 711 917 2.5 84 2.5 1.0^{\chicklet} 1.8 1.5 15.8 2.01 612709C 715 930 1.5 54 1.0 1.0^{\chicklet} 2.0 1.5 15.9 1.12 612710 711 909 2.5 55 1.0 3.0^{\chicklet} 3.0 1.0 17.4* 1.19 612711A 711 909 2.5 55 1.0 3.0^{\chicklet} 3.0 1.0 17.4* 1.19 612711B 717 1002 1.5 52 1.0 2.0^{\chicklet} 2.0 1.0 1.42 1.80* 612711B 717 1002 1.5 80* 1.5 1.0^{\chicklet} 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 1 | 612708B | 713 | 921 | 1.0 | 63 | 2.0 | 1.0^ | 1.5 | 1.0 | 16.5 | 1.88* |
| 612709A 711 917 2.5 84 2.5 1.0^ 1.8 1.5 15.8 2.01 612709B 713 921 2.0 64 2.0 2.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 15.9 1.12 612710 711 909 2.5 55 1.0 3.0^ 3.0 1.0 17.4* 1.19 612711B 711 902 1.5 52 1.0 2.0^ 2.0 1.0 14.2 1.80* 612711B 717 1002 1.5 52 1.0 2.0^ 2.3 1.5 1.10 1.0 2.0 1.0 14.2 1.80* 612711B 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 61271B 713 925 1.5 71 1.0 2.0^ | 612708C | 711 | 921 | 1.0 | 64 | 2.0 | 1.0^ | 1.8 | 1.0 | 16.7 | 3.25* |
| 612709B 713 921 2.0 64 2.0 2.0^ 1.8 1.0 17.0 1.88* 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 15.9 1.12 612710 711 909 2.5 55 1.0 3.0^ 3.0 1.0 17.4* 1.19 612711A 711 923 2.0 81 1.0 1.0^ 2.0 1.0 14.2 1.80* 612711B 717 1002 1.5 52 1.0 2.0^ 2.3 1.5 15.1 1.30* 612712 711 915 1.5 80* 1.5 1.0^ 1.8 2.0* 1.4.2 1.54* 612713A 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 61271B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.54 | 612708D | 717 | 924 | 1.0 | 57 | 1.5 | 2.0^ | 2.0 | 1.0 | 18.3 | 1.68* |
| 612709C 715 930 1.5 54 1.0 1.0^ 2.0 1.5 15.9 1.12 612710 711 909 2.5 55 1.0 3.0^ 3.0 1.0 17.4* 1.19 612711B 717 1002 1.5 52 1.0 2.0^ 2.3 1.5 15.1 1.30* 612712 711 915 1.5 80* 1.5 1.0^ 2.0^ 2.3 1.5 15.1 1.30* 612712 711 915 1.5 80* 1.5 1.0^ 1.8 2.0* 14.2 1.54* 612713A 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 612713B 713 927 1.5 71 1.0 2.0^ 2.0 1.0 16.2 2.01 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 | 612709A | 711 | 917 | 2.5 | 84 | 2.5 | 1.0^ | 1.8 | 1.5 | 15.8 | 2.01 |
| 612710 711 909 2.5 55 1.0 3.0^{\textstyle=100} 3.0 1.0 17.4* 1.19 612711A 711 923 2.0 81 1.0 1.0^{\textstyle=100} 2.0 1.0 14.2 1.80* 61271B 717 1002 1.5 52 1.0 2.0^{\textstyle=100} 2.3 1.5 15.1 1.30* 612712 711 915 1.5 80* 1.5 1.0^{\textstyle=100} 1.8 2.0* 14.2 1.54* 612713A 713 925 1.5 70 1.0 2.0^{\textstyle=100} 2.0 1.0 16.0 2.11 612713B 713 927 1.5 71 1.0 2.0^{\textstyle=1000} 2.0 1.0 16.0 2.1 612714B 717 930 3.0* 73 1.5 1.0^{\textstyle=1000} 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 | 612709B | 713 | 921 | 2.0 | 64 | 2.0 | 2.0^ | 1.8 | 1.0 | 17.0 | 1.88* |
| 612711A 711 923 2.0 81 1.0 1.0^ 2.0 1.0 14.2 1.80* 612711B 717 1002 1.5 52 1.0 2.0^ 2.3 1.5 15.1 1.30* 612712 711 915 1.5 80* 1.5 1.0^ 1.8 2.0* 14.2 1.54* 612713A 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 612713B 713 927 1.5 71 1.0 2.0^ 2.0 1.0 16.0 2.11 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.54 612716 715 929 1.5 78 2.0 2.0^ 2.0 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19* | 612709C | 715 | 930 | 1.5 | 54 | 1.0 | 1.0^ | 2.0 | 1.5 | 15.9 | 1.12 |
| 612711B 717 1002 1.5 52 1.0 2.0^ 2.3 1.5 15.1 1.30* 612712 711 915 1.5 80* 1.5 1.0^ 1.8 2.0* 14.2 1.54* 612713A 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 612713B 713 925 1.5 71 1.0 2.0^ 2.0 1.0 16.2 2.01 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.5 612715 715 929 1.5 78 2.0 2.0^ 2.3 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19* 612717 713 1003 1.5 64 1.0 1.0^ 1.8 1.0 20.1 2.5 | 612710 | 711 | 909 | 2.5 | 55 | 1.0 | 3.0^ | 3.0 | 1.0 | 17.4* | 1.19 |
| 612712 711 915 1.5 80* 1.5 1.0^ 1.8 2.0* 14.2 1.54* 612713A 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 612713B 713 927 1.5 71 1.0 2.0^ 2.0 1.0 16.2 2.01 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.54 612715 715 929 1.5 78 2.0 2.0^ 2.3 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19* 612717 713 1003 1.5 64 1.0 1.0^ 1.5 1.0 19.3* 2.10* | 612711A | 711 | 923 | 2.0 | 81 | 1.0 | 1.0^ | 2.0 | 1.0 | 14.2 | 1.80* |
| 612713A 713 925 1.5 70 1.0 2.0^ 2.0 1.0 16.0 2.11 612713B 713 927 1.5 71 1.0 2.0^ 2.0 1.0 16.2 2.01 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.54 612715 715 929 1.5 78 2.0 2.0^ 2.3 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19 612717 713 1003 1.5 64 1.0 1.0^ 1.8 1.0 20.1 2.58 612718 711 923 2.0 79 1.0 1.0^ 1.5 1.0 19.3* 2.10* 612718 711 923 2.0 79 1.0 1.0^ 1.8 1.5 17.5 2.19* | 612711B | 717 | 1002 | 1.5 | | 1.0 | 2.0^ | 2.3 | 1.5 | 15.1 | 1.30* |
| 612713B 713 927 1.5 71 1.0 2.0^ 2.0 1.0 16.2 2.01 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.54 612715 715 929 1.5 78 2.0 2.0^ 2.3 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19 612717 713 1003 1.5 64 1.0 1.0^ 1.8 1.0 20.1 2.58 612718 711 923 2.0 79 1.0 1.0^ 1.5 1.0 19.3* 2.10* 612718 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* 612719 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* | 612712 | 711 | 915 | 1.5 | 80* | 1.5 | 1.0^ | 1.8 | 2.0* | 14.2 | 1.54* |
| 612714B 717 930 3.0* 73 1.5 1.0^ 2.5 1.5 13.7 1.54 612715 715 929 1.5 78 2.0 2.0^ 2.3 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19 612717 713 1003 1.5 64 1.0 1.0^ 1.8 1.0 20.1 2.58 612718 711 923 2.0 79 1.0 1.0^ 1.5 1.0 19.3* 2.10* 612719 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* 612720A 713 915 2.5 91 3.0 2.0^ 1.8 1.0 18.1 1.99 612720B 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 | 612713A | 713 | 925 | 1.5 | 70 | 1.0 | 2.0^ | 2.0 | 1.0 | 16.0 | 2.11 |
| 612715 715 929 1.5 78 2.0 2.0^ 2.3 1.0 19.8 2.59* 612716 717 1001 1.5 76 2.0 2.0^ 2.0 1.0 18.2 2.19 612717 713 1003 1.5 64 1.0 1.0^ 1.8 1.0 20.1 2.58 612718 711 923 2.0 79 1.0 1.0^ 1.5 1.0 19.3* 2.10* 612719 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* 612720A 713 915 2.5 91 3.0 2.0^ 1.8 1.0 18.1 1.99 612720B 713 922 2.0 90 1.5 1.0^ 2.0 1.0 20.8* 1.98* 612721A 713 917 2.0 86 1.5 1.0^ 2.0 1.0 17.2 1.82 | 612713B | 713 | 927 | 1.5 | 71 | 1.0 | 2.0^ | 2.0 | 1.0 | 16.2 | 2.01 |
| 612716 717 1001 1.5 76 2.0 2.0^{\textstyle{\chick}} 2.0 1.0 18.2 2.19 612717 713 1003 1.5 64 1.0 1.0^{\textstyle{\chick}} 1.8 1.0 20.1 2.58 612718 711 923 2.0 79 1.0 1.0^{\textstyle{\chick}} 1.5 1.0 19.3* 2.10* 612719 711 923 1.5 73 1.0 1.0^{\textstyle{\chick}} 1.5 1.0 19.3* 2.10* 612720A 713 915 2.5 91 3.0 2.0^{\textstyle{\chick}} 1.8 1.0 18.1 1.99 612720B 713 922 2.0 90 1.5 1.0^{\textstyle{\chick}} 2.0 1.0 20.8* 1.98* 612721A 713 922 2.5 86 2.0 2.0^{\textstyle{\chick}} 2.0 1.0 15.1 1.97* 612721B 713 917 2.0 <t< td=""><td>612714B</td><td>717</td><td>930</td><td>3.0*</td><td>73</td><td>1.5</td><td>1.0^</td><td>2.5</td><td>1.5</td><td>13.7</td><td>1.54</td></t<> | 612714B | 717 | 930 | 3.0* | 73 | 1.5 | 1.0^ | 2.5 | 1.5 | 13.7 | 1.54 |
| 612717 713 1003 1.5 64 1.0 1.0^ 1.8 1.0 20.1 2.58 612718 711 923 2.0 79 1.0 1.0^ 1.5 1.0 19.3* 2.10* 612719 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* 612720A 713 915 2.5 91 3.0 2.0^ 1.8 1.0 18.1 1.99 612720B 713 922 2.0 90 1.5 1.0^ 2.0 1.0 20.8* 1.98* 612721A 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 | 612715 | 715 | 929 | 1.5 | 78 | 2.0 | 2.0^ | 2.3 | 1.0 | 19.8 | 2.59* |
| 612718 711 923 2.0 79 1.0 1.0^ 1.5 1.0 19.3* 2.10* 612719 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* 612720A 713 915 2.5 91 3.0 2.0^ 1.8 1.0 18.1 1.99 612720B 713 922 2.0 90 1.5 1.0^ 2.0 1.0 20.8* 1.98* 612721A 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 | 612716 | 717 | 1001 | 1.5 | 76 | 2.0 | 2.0^ | 2.0 | 1.0 | 18.2 | 2.19 |
| 612719 711 923 1.5 73 1.0 1.0^ 1.8 1.5 17.5 2.19* 612720A 713 915 2.5 91 3.0 2.0^ 1.8 1.0 18.1 1.99 612720B 713 922 2.0 90 1.5 1.0^ 2.0 1.0 20.8* 1.98* 612721A 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 | 612717 | | 1003 | 1.5 | 64 | | | | 1.0 | 20.1 | |
| 612720A 713 915 2.5 91 3.0 2.0^ 1.8 1.0 18.1 1.99 612720B 713 922 2.0 90 1.5 1.0^ 2.0 1.0 20.8* 1.98* 612721A 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 | 612718 | | | | | | | | | | |
| 612720B 713 922 2.0 90 1.5 1.0^ 2.0 1.0 20.8* 1.98* 612721A 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.5 13.2 1.73* <td>612719</td> <td>711</td> <td>923</td> <td></td> <td>73</td> <td>1.0</td> <td></td> <td>1.8</td> <td>1.5</td> <td>17.5</td> <td></td> | 612719 | 711 | 923 | | 73 | 1.0 | | 1.8 | 1.5 | 17.5 | |
| 612721A 713 922 2.5 86 2.0 2.0^ 2.3 1.0 17.2 1.82 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* </td <td>612720A</td> <td>713</td> <td>915</td> <td>2.5</td> <td>91</td> <td>3.0</td> <td>2.0^</td> <td>1.8</td> <td>1.0</td> <td>18.1</td> <td>1.99</td> | 612720A | 713 | 915 | 2.5 | 91 | 3.0 | 2.0^ | 1.8 | 1.0 | 18.1 | 1.99 |
| 612721B 713 917 2.0 86 1.5 1.0^ 2.0 1.0 15.1 1.97* 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24*< | 612720B | | 922 | 2.0 | 90 | 1.5 | 1.0^ | 2.0 | 1.0 | 20.8* | 1.98* |
| 612722 719 1006 2.5 85 2.0 1.0^ 1.8 1.0 16.8 2.31 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43*< | 612721A | 713 | 922 | 2.5 | 86 | 2.0 | 2.0^ | 2.3 | 1.0 | 17.2 | 1.82 |
| 612723 715 1004 2.0 68* 1.0 3.0^ 1.5 1.0 15.5 2.31 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66< | 612721B | 713 | 917 | 2.0 | 86 | 1.5 | 1.0^ | 2.0 | 1.0 | 15.1 | 1.97* |
| 612724 718 1005^ 2.0 86 2.0 2.0^ 1.8 1.0 16.3 2.58 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 2.0 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66 | 612722 | 719 | 1006 | 2.5 | 85 | 2.0 | 1.0^ | 1.8 | 1.0 | 16.8 | 2.31 |
| 612725 719 1002 2.5 83* 1.5 2.0^ 2.0 1.0 16.1 2.06 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66 | 612723 | 715 | 1004 | 2.0 | 68* | 1.0 | 3.0^ | 1.5 | 1.0 | 15.5 | 2.31 |
| 612726 717 1003 2.0 87* 2.0 1.0^ 2.0^ 1.0^ 20.6^ 2.53^ 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66 | 612724 | 718 | 1005^ | 2.0 | 86 | 2.0 | 2.0^ | 1.8 | 1.0 | 16.3 | 2.58 |
| 612727 713 923 3.0* 88 2.5 2.0^ 2.0 1.5 13.2 1.73* 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66 | 612725 | 719 | 1002 | 2.5 | 83* | 1.5 | 2.0^ | 2.0 | 1.0 | 16.1 | 2.06 |
| 612728 711 919 2.0 94 2.5 2.0^ 1.8 1.0 17.0* 2.24* 612732 722 1003 2.5 48 2.5 1.0^ 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66 | 612726 | | | | | | | 2.0^ | 1.0^ | 20.6^ | |
| 612732 722 1003 2.5 48 2.5 1.0 [^] 2.0 1.0 18.8 1.43* 612735 713 1003 2.0 76 2.5 1.0 [^] 1.8 1.0 17.4 2.66 | | | | 3.0* | 88 | | | | | | |
| 612735 713 1003 2.0 76 2.5 1.0^ 1.8 1.0 17.4 2.66 | | | 919 | 2.0 | 94 | | 2.0^ | | 1.0 | 17.0* | |
| | 612732 | | 1003 | 2.5 | 48 | | 1.0^ | 2.0 | 1.0 | 18.8 | 1.43* |
| 612736 715 1001 2.0 69 1.0 1.0^ 1.8 1.0 14.9 2.53 | 612735 | | | 2.0 | 76 | 2.5 | 1.0^ | 1.8 | 1.0 | 17.4 | |
| | 612736 | 715 | 1001 | 2.0 | 69 | 1.0 | 1.0^ | 1.8 | 1.0 | 14.9 | 2.53 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed composition | | Oil composition | | | | | |
|---------------------------|----------|---------------------|---------------------|-----------------|---------|-------|--------------|-----------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603750B | II | 44.0 ^w ^ | 15.0 ^w ^ | 9.1 | 3.0 | 19.7 | 56.7 | 11.4 | |
| 603754 | I | 44.7 | 15.9 | 11.0 | 2.9 | 19.6 | 55.0 | 11.5 | |
| 603758A | I | 45.8 | 15.1 | 12.1 | 3.0 | 17.3 | 55.5 | 12.1 | |
| 603758B | Ī | 46.6 | 14.6 | 11.5 | 3.6 | 19.0 | 52.5 | 13.3 | |
| 603758C | I | 46.2 | 14.4 | 11.1 | 3.4 | 20.8 | 52.2 | 12.5 | |
| 612610 | I | 53.0 ^w | 17.5 ^w | 9.6 | 2.8 | 18.3 | 58.5 | 10.8 | |
| 612615 | 0 | 41.6 | 18.9 | 11.1 | 3.8 | 24.8 | 51.5 | 8.8 | |
| 512617A | I | 43.5 | 17.5 | 11.0 | 3.2 | 20.8 | 55.7 | 9.3 | |
| 612617B | 0 | 43.0 | 18.0 | 10.8 | 3.0 | 24.5 | 52.5 | 9.1 | |
| 512017 B 512705 | I | 41.7 | 17.6 | 11.3 | 3.4 | 20.5 | 55.4 | 9.4 | |
| 512705 512706A | I | 40.0 | 18.3 | 10.7 | 3.4 | 20.9 | 54.3 | 10.9 | |
| | | | | | | | | | |
| 512706B | 0 | 42.9 | 17.4 | 11.2 | 3.1 | 20.2 | 55.9 | 9.6 | |
| 512707A | 0 | 42.9 | 17.9 | 11.7 | 3.2 | 18.7 | 56.4 | 10.0 | |
| 512707B | 0 | 40.7 | 19.6 | 11.6 | 3.4 | 19.7 | 56.0 | 9.2 | |
| 512708A | 0 | 39.6 | 19.5 | 10.7 | 4.0 | 23.5 | 53.2 | 8.6 | |
| 512708B | I | 42.1 | 18.5 | 12.7 | 4.0 | 19.9 | 53.4 | 10.1 | |
| 512708C | I | 41.0 | 18.6 | 12.9 | 4.0 | 18.8 | 53.9 | 10.4 | |
| 512708D | I | 42.5 | 18.2 | 13.2 | 4.0 | 19.1 | 53.5 | 10.4 | |
| 512709A | 0 | 41.4 | 17.7 | 11.5 | 3.4 | 22.0 | 53.5 | 9.6 | |
| 512709B | I | 41.5 | 18.4 | 13.0 | 4.0 | 21.9 | 51.5 | 9.5 | |
| 512709C | I | 43.2 | 16.3 | 11.6 | 3.0 | 22.2 | 54.0 | 9.2 | |
| 512710 | 00 | 43.6 | 18.6 | 12.6 | 4.3 | 22.6 | 52.5 | 7.9 | |
| 512711A | I | 40.5 | 17.9 | 11.3 | 4.1 | 22.7 | 51.7 | 10.2 | |
| 512711B | I | 43.6 | 16.9 | 12.1 | 3.2 | 19.1 | 55.5 | 10.1 | |
| 512712 | 0 | 40.9 | 18.5 | 11.0 | 3.6 | 22.3 | 54.3 | 8.8 | |
| 512713A | I | 42.6 | 17.6 | 12.1 | 3.5 | 20.6 | 54.4 | 9.5 | |
| 512713B | I | 44.6 | 17.6 | 12.7 | 3.3 | 19.3 | 55.1 | 9.6 | |
| 512714B | I | 41.4 | 17.3 | 10.8 | 3.2 | 19.7 | 56.2 | 10.1 | |
| 512715 | I | 41.6 | 18.5 | 11.5 | 3.3 | 20.9 | 55.3 | 8.9 | |
| 512716 | I | 39.9 | 17.7 | 12.0 | 2.9 | 16.7 | 57.9 | 10.4 | |
| 512717 | I | 39.1 | 19.3 | 10.8 | 3.0 | 22.9 | 54.6 | 8.6 | |
| 512718 | I | 40.3 | 18.6 | 11.6 | 3.8 | 22.5 | 53.4 | 8.6 | |
| 512719 | I | 40.4 | 18.9 | 11.5 | 3.2 | 21.6 | 55.0 | 8.7 | |
| 512719 512720A | 0 | 44.1 | 17.9 | 11.3 | 3.1 | 22.3 | 52.8 | 10.8 | |
| 512720A 512720B | I | 44.1 | 17.9 17.9 | 11.1 | 3.3 | 24.4 | 52.8 52.1 | 8.8 | |
| | | | | | 3.3 | | | | |
| 512721A | I | 39.8 | 18.3 | 10.8 | | 20.5 | 54.8 54.0 | 10.9 | |
| 512721B | 0 | 40.4 | 19.1 | 10.5 | 2.9 | 23.8 | 54.0 | 8.7 | |
| 512722 | I | 39.2 | 17.9 | 11.5 | 3.0 | 24.4 | 51.8 | 9.3 | |
| 512723 | I | 39.1 | 19.3 | 12.2 | 3.5 | 20.2 | 54.2 | 9.8 | |
| 512724 | I | 39.2 | 18.5 | 11.3 | 3.4 | 22.8 | 53.5 | 8.9 | |
| 512725 | I | 39.7 | 18.5 | 11.9 | 3.7 | 21.4 | 54.0 | 9.0 | |
| 512726 | I | 41.9^ | 18.3^ | 12.5 | 3.2 | 24.2 | 52.4 | 7.7 | |
| 512727 | I | 41.7 | 17.6 | 10.2 | 3.0 | 18.0 | 57.9 | 10.8 | |
| 512728 | 0 | 42.6 | 19.1 | 10.9 | 3.7 | 33.7 | 44.5 | 7.1 | |
| 512732 | I | 41.2 | 17.9 | 11.5 | 3.8 | 20.2 | 55.7 | 8.9 | |
| 512735 | I | 39.0 | 17.9 | 11.3 | 3.7 | 21.1 | 54.3 | 9.6 | |
| 512736 | I | 41.5 | 18.4 | 10.4 | 3.6 | 19.5 | 56.9 | 9.5 | |

 $Table 1.1 \ Identification \ and \ origin \ information \ for \ USDA \ soybean \ germplasm \ in \ maturity \ groups \ 000 \ through \ I, \ PI \ 578371 \ to \ PI \ 612761B \ plus \ earlier \ accessions \ not \ previously \ evaluated.$

| | | | Country | Country | Year | |
|-----------------|------------|-----------|---------|-------------|-------------|----------|
| | Accession | Region | of | of | introduced | Maturity |
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 612737 | Hefeng 21 | Jilin | China | China | 2000 | I |
| 612738 | 67803 | Jilin | China | China | 2000 | I |
| 612740 | CM048 | Jilin | China | China | 2000 | 0 |
| 612743 | Bianjing | Jilin | China | China | 2000 | I |
| 612744 | 89445 | Jilin | China | China | 2000 | I |
| 612745 | Bonwand | Jilin | China | China | 2000 | 0 |
| 612746 | Fushuali | Jilin | China | China | 2000 | I |
| 612751 | Hegi 342 | Jilin | China | China | 2000 | 0 |
| 612752 | | unknown | China | China | 1999 | I |
| 612753A | A | unknown | China | China | 1999 | 0 |
| 612753H | 3 | unknown | China | China | 1999 | I |
| 612754 | | unknown | China | China | 1999 | I |
| 612756 | | unknown | China | China | 1999 | 0 |
| 612757 | | unknown | China | China | 1999 | 0 |
| 612758A | A | unknown | China | China | 1999 | 0 |
| 612759A | A | unknown | China | China | 1999 | 0 |
| 612759H | 3 | unknown | China | China | 1999 | 0 |
| 6127590 | | unknown | China | China | 1999 | I |
| 612760 | 50392 | unknown | China | China | 1999 | I |
| 612761 <i>A</i> | A 50131 | unknown | China | China | 1999 | 0 |
| 612761H | 3 (50131) | unknown | China | China | 1999 | I |

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 through I PI 578371 to PI 612761B plus earlier accessions not previously evaluated.

| | Maturity | Stem | Flower | r Pubes | cence | | Pod | Seedco | at | Hilum | | Seed |
|---------|----------|-------|--------|---------|-------|---------|-------|--------|------|-------|--------------|-------|
| Entry | group | term. | color | | | Density | color | | | color | Other traits | shape |
| 612737 | I | D | W | G | Е | Ssp | Br | I | Y | Y | Na | 3N |
| 612738 | I | N | P | T | E | N | Tn | D | Y | Bl | | 2N |
| 612740 | 0 | N | P | G | E | N | Br | I | Y | G | | 2N |
| 612743 | I | S | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 612744 | I | S | P | G | E | N | Br | I | Y | Lg | Vhil | 2N |
| 612745 | 0 | S | P | T | E | N | Br | D | Y | Br | | 3N |
| 612746 | I | D | P | G | E | N | Br | D | Y | Ib | | 2N |
| 612751 | 0 | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 612752 | I | N | P | T | E | Sp | Br | Lb | Br | Rbr | Sw | 4N |
| 612753A | 0 | N | P | T | Sa | Ssp | B1 | I | Gnbr | Gnbr | Sw | 4N |
| 612753B | I | N | P | Lt | E | N | Bl | I | Gn | Br | Sw | 3N |
| 612754 | I | N | P | T | E | N | Bl | I | Y | Br | Sw | 3N |
| 612756 | 0 | N | P | T | A | Ssp | Br | D | Br | Rbr | Sw | 4N |
| 612757 | 0 | N | P | T | A | Ssp | Br | D | Br | Rbr | Sw | 4N |
| 612758A | 0 | N | W | T | A | Ssp | Br | В | Bl | Bl | Flk,Sw | 2N |
| 612759A | 0 | N | P | T | E | Ssp | Bl | I | Bl | Bl | Flk,Sw | 3N |
| 612759B | 0 | N | W | T | E | Ssp | Bl | I | Bl | Bl | Sw | 3N |
| 612759C | I | N | W | T | E | Ssp | B1 | I | Bl | Bl | Sw | 3N |
| 612760 | I | N | P | T | E | Ssp | Br | Lb | Br | Rbr | Sw | 4N |
| 612761A | 0 | N | P | T | A | Ssp | Dbr | D | Br | Rbr | Sw | 4N |
| 612761B | I | N | P | Lt | E | N | Br | I | Br | Rbr | | 5N |

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | Flowering | Maturity | | | Stem | Shattering | Seed | | | |
|---------|-----------|----------|---------|--------|-------------|------------|---------|----------|---------|---------|
| | date | date | Lodging | Height | termination | early | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (cg/sd) | (Mg/ha) |
| 612737 | 715 | 920 | 1.5 | 65 | 1.0 | 1.0^ | 2.0^ | 1.0^ | 20.2^ | 1.57^ |
| 612738 | 713 | 921 | 3.0 | 94 | 2.5 | 1.0^ | 1.8 | 1.0 | 14.5 | 2.70* |
| 612740 | 711 | 919 | 2.0 | 85 | 2.5 | 1.0^ | 1.8 | 1.0 | 12.8 | 2.60* |
| 612743 | 715 | 1004^ | 3.0* | 84 | 2.0 | 1.0^ | 1.8 | 1.0 | 18.3 | 2.13* |
| 612744 | 715 | 928 | 1.5 | 67* | 2.0 | 2.0^ | 2.0 | 1.0 | 14.4 | 2.30 |
| 612745 | 711 | 915 | 2.0 | 85 | 2.0 | 1.0^ | 1.8 | 1.0 | 14.1 | 1.68 |
| 612746 | 722 | 1005^ | 2.0 | 80 | 1.0 | 1.0^ | 2.0 | 1.0 | 25.5 | 1.95 |
| 612751 | 713 | 916 | 1.5 | 69 | 1.0 | 2.0^ | 1.8 | 1.0 | 14.3 | 2.03 |
| 612752 | 801 | 925 | 4.5 | 68 | 5.0 | 2.0^ | 2.5 | | 5.5 | 0.36 |
| 612753A | 724 | 917 | 5.0 | 78 | 5.0 | 2.0^ | 1.8 | | 3.3 | 0.52 |
| 612753B | 803 | 1004^ | 5.0 | 92* | 5.0 | 3.0^ | 2.0 | 4.0 | 4.5 | 0.36 |
| 612754 | 805 | 925 | 5.0 | 73 | 5.0 | 5.0^ | 2.0 | 4.5 | 5.5 | 0.15 |
| 612756 | 717 | 915 | 4.5 | 56 | 5.0 | 2.0^ | 1.5 | | 4.1 | 0.79 |
| 612757 | 719 | 915 | 4.5 | 51 | 5.0 | 3.0^ | 1.5 | | 4.3 | 0.91 |
| 612758A | 713 | 915 | 5.0 | 66* | 5.0 | 5.0^ | 2.3 | | 4.2 | 0.47 |
| 612759A | 719 | 917 | 5.0 | 69 | 5.0 | 5.0^ | 2.3 | | 4.1 | 0.29 |
| 612759B | 721 | 917 | 5.0 | 51 | 5.0 | 3.0^ | 2.3 | | 5.3 | 0.65 |
| 612759C | 731 | 923 | 5.0 | 97* | 5.0 | 5.0^ | 2.5 | | 4.6 | 0.30 |
| 612760 | 804 | 929 | 5.0 | 71 | 5.0 | 2.0^ | 2.5 | | 5.7 | 0.47 |
| 612761A | 720 | 914 | 4.0 | 58* | 5.0 | 5.0^ | 2.0 | | 4.0 | 0.49 |
| 612761B | 803 | 1003 | 4.0* | 122 | 3.0 | 2.0^ | 2.3* | | 7.7 | 1.14 |

Table 4.1. Seed composition data for USDA soybean germplasm in maturity groups 000 through I, PI 578371 to PI 612761B plus earlier accessions not previously evaluated, grown at Rosemount, MN.

| | | Seed con | nposition | Oil compos | sition | | | |
|---------|----------|---------------------|---------------------|------------|---------|-------|----------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 612737 | I | 43.6^ | 17.8^ | 12.4 | 3.2 | 24.0 | 52.5 | 8.0 |
| 612738 | I | 39.8 | 19.5 | 10.4 | 3.8 | 21.0 | 56.0 | 8.8 |
| 612740 | 0 | 40.7 | 19.1 | 10.9 | 3.9 | 21.6 | 54.9 | 8.7 |
| 612743 | I | 41.7 | 17.4 | 11.6 | 3.7 | 21.4 | 52.9 | 10.4 |
| 612744 | I | 39.7 | 19.2 | 13.0 | 3.7 | 19.1 | 54.7 | 9.5 |
| 612745 | 0 | 41.0 | 19.2 | 9.6 | 3.1 | 24.2 | 54.7 | 8.4 |
| 612746 | I | 42.0 | 17.1 | 12.0 | 3.9 | 20.0 | 53.1 | 11.1 |
| 612751 | 0 | 41.0 | 19.6 | 11.1 | 4.2 | 23.7 | 52.1 | 8.9 |
| 612752 | I | 50.3^{w} | 15.6^{w} | 10.1 | 3.0 | 16.3 | 57.6 | 13.0 |
| 612753A | 0 | 46.5^{w} | 12.9^{w} | 10.9 | 2.8 | 11.1 | 59.1 | 16.1 |
| 612753B | I | 49.9^{w} | 14.5 ^w | 10.1 | 2.3 | 14.8 | 59.0 | 13.8 |
| 612754 | I | 49.0^{w} | $15.7^{\rm w}$ | 9.6 | 2.8 | 15.6 | 58.8 | 13.2 |
| 612756 | 0 | 47.6^{w} | 11.4^{w} | 10.0 | 2.7 | 12.3 | 60.2 | 14.9 |
| 612757 | 0 | 53.0^{w} | 9.7^{w} | 10.1 | 2.7 | 12.3 | 60.4 | 14.4 |
| 612758A | 0 | 54.1 ^w | 11.4^{w} | 11.0 | 3.1 | 15.7 | 58.2 | 12.0 |
| 612759A | 0 | 50.9^{w} | 12.4^{w} | 11.8 | 3.3 | 17.4 | 54.3 | 13.2 |
| 612759B | 0 | 55.2 ^w | 13.2^{w} | 11.4 | 3.3 | 17.9 | 55.7 | 11.7 |
| 612759C | I | 53.6 ^w | 12.9^{w} | 10.8 | 2.7 | 15.1 | 57.6 | 13.8 |
| 612760 | I | 46.1^{w} | $15.0^{\rm w}$ | 10.4 | 2.8 | 14.7 | 59.0 | 13.1 |
| 612761A | 0 | 53.2^{w} | 11.7^{w} | 10.8 | 2.8 | 13.1 | 59.1 | 14.2 |
| 612761B | I | 50.6^{w} | 14.2^{w} | 9.7 | 2.7 | 14.8 | 58.7 | 14.1 |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| PI No. | Accession identifier | Region of origin | Country of origin | Country of acquisition | Year introduced or released | |
|--------|----------------------|---------------------|-------------------------|------------------------------|-----------------------------------|-------|
| rino. | identifier | of origin | Origin | acquisition | oi icicaseu | group |
| | 7499 | Kentucky | United States | United States | 2000 | IV |
| | Alpha | Minnesota | United States | United States | 1992 | I |
| | Amcor 89 | Ohio | United States | United States | 1989 | II |
| | Apollo | Michigan | United States | United States | 1998 | II |
| | Athow | Indiana | United States | United States | 1996 | III |
| | Bronson | Indiana | United States | United States | 1993 | IV |
| | Calhoun | Kentucky | United States | United States | 1993 | IV |
| | CF 461 | Kentucky | United States | United States | 1995 | IV |
| | CF 492 | Kentucky | United States | United States | 1995 | IV |
| | Chesapeake | Virginia | United States | United States | 1994 | IV |
| | Cisne | Illinois | United States | United States | 1995 | IV |
| | Colfax | Nebraska | United States | United States | 1993 | II |
| | Croton 3.9 | Ohio | United States | United States | 2000 | III |
| | Darby | Ohio | United States | United States | 2000 | III |
| | Defiance | Ohio | United States | United States | 1996 | III |
| | Delsoy 4900 | Missouri | United States | United States | 1989 | IV |
| | Dwight | Illinois | United States | United States | 1997 | II |
| | Faribault | Minnesota | United States | United States | 1994 | I |
| | Flint | Ohio | United States | United States | 1996 | II |
| | Freeborn | Minnesota | United States | United States | | I |
| | General | Ohio | United States | United States | | III |
| | GR8836 | Ohio | United States | United States | | III |
| | GR8936 | Ohio | United States | United States | | III |
| | Granite | Minnesota | United States | United States | 1995 | I |
| | Harlon | Ontario | Canada | Canada | 1974 | I |
| | HF93-035 | Ohio | United States | United States | | III |
| | HF93-083 | Ohio | United States | United States | | II |
| | Holladay | North Carolina | United States | United States | | V |
| | Holt | Nebraska | United States | United States | | II |
| | HS93-4118 | Ohio | United States | United States | | IV |
| | Ina | Illinois | United States | United States | | IV |
| | Iroquois | Illinois | United States | United States | 1995 | III |
| | Kato | Minnesota | United States | United States | 1989 | I |
| | Kottman | Ohio | United States | United States | 2000 | III |
| | KS3494 | Kansas | United States | United States | 1993 | III |
| | KS4694 | Kansas | United States | United States | | IV |
| | KS4895 | Kansas | United States | United States | | IV |
| | LN92-7369 | Illinois | United States | United States | | II |
| | Loda | Illinois | United States | United States | | II |
| | LS90-1920 | Illinois | United States | United States | | IV |
| | Macon | Illinois | United States | United States | | III |
| | Manokin | Maryland | United States | United States | | IV |
| | Maverick | Missouri | United States | United States | | III |
| | Mercury | Nebraska | United States | United States | | III |
| | MN0901 | Minnesota | United States | United States | | 0 |
| | MN1301 | Minnesota | United States | United States | | I |
| | MN1302 | Minnesota | United States | United States | | Ī |
| | 1111 11302 | Willing SOta | omica states | omica states | 2001 | 1 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| T499 | Entry | Maturity group | Stem term. | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---|------------------|-------------------|------------|--------|---|--------|---------|--------------|------------------|---|----------------|--------------|---------------|
| Alpha | 7499 | IV | N | Р | Т | E | N | Tn | Ţ | Y | B1 | | 3N |
| Ancor 89 | | | | | | | | | | | | | |
| Apollo | _ | | | | | | | | | | | | |
| Athow III | | | | | | | | | | | | | |
| Bronson | | | | | | | | | | | | | |
| Calhoun | | | | | | | | | | | | | |
| CF 461 IV N W T E N Tn I Y BI 2N CF 492 IV D W G Sa N Tn D Y Bf 3N Chesapeake IV N W G E N Tn D Y Bf 3N Cisne IV N P T E N Tn D Y BI 3N Colfax II D W G E N Tn D Y BI 3N Croton 3.9 III N P T E N Tn D Y BI 3N Darby III N P G E N Tn D Y BI 3N Delsoy 4900 IV D P T E N Tn D Y BI | | | | | | | | | | | | | |
| CF 492 IV D W G Sa N Tn D Y Bf 3N Chesapeake IV N W G E N Tn D Y Bf 3N Coffax II D W G E N Tn D Y Bf 3N Cofora III N P T E N Tn D Y Bf 3N Croton 3.9 III N P T E N Tn D Y Bl 3N Darby III N P G E N Tn D Y Bl 2N Delsoy 4900 IV D P T E N Tn D Y Lb 2N Delsoy 4900 IV D P T E N Tn D Y Bl < | | | | | | | | | | | | | |
| Chesapeake IV N W G E N Tn D Y Bf 3N Cisne IV N P T E N Tn D Y Bf 3N Croton 3.9 III N P T E N Tn D Y Bf 3N Darby IIII N W T E N Tn D Y Bl 2N Defiance III N P T E N Tn D Y Bl 2N Delsoy 4900 IV D P T E N Tn D Y Ib 2N Dwight II N P T E N Tn D Y Bl 3N Freeborn I N W T E N Br D Y Bl | | | | | | | | | | | | | |
| Cisne IV N P T E N Tn D Y BI 3N Colfax II D W G E N Tn D Y Bf 3N Croton 3.9 III N W T E N Tn D Y BI 3N Defiance III N P G E N Br D Y Ib 2N Defiance III N P T E N Tn D Y Bl 2N Delsoy 4900 IV D P T E N Tn D Y Lb 2N Dwight II N P T E N Tn D Y Bl 3N Friit II N W T E N Tn D Y Bl | | | | | | | | | | | | | |
| Colfax | _ | | | | | | | | | | | | |
| Croton 3.9 III N P T E N Tn D Y BI 3N Darby III N W T E N Tn D Y BI 2N Defiance III N P T E N Tn D Y Ib 2N Descoy 4900 IV D P T E N Tn D Y Ib 2N Dwight II N P T E N Tn D Y BI 3N Faribault I N W G E N Tn D Y BI 3N Freeborn I N W T E N Br D Y BI 3N GR8836 III N P G E N Tn D Y BI < | | | | | | | | | | | | | |
| Darby III | | | | | | | | | | | | | |
| Defiance | | | | | | | | | | | | | |
| Delsoy 4900 | • | | | | | | | | | | | | |
| Dwight | | | | | | | | | | | | | |
| Faribault | • | | | | | | | | | | | | |
| Flint | | | | | | | | | | | | | |
| Freeborn | | | | | | | | | | | | | |
| General III N P Lt E N H D Y BI 3N GR8836 III N P T E N Tn D Y BI 3N GR8936 III N W T E N Tn D Y BI 3N Granite I N P G E N Br D Y G 2N Harlon I N W G E N Br D Y Y 2N Harlon I N W G E N Br D Y Y 2N Harlon I N P G E N Br I Y Ib 3N HF93-083 II N P G E N Br I Y Ib 3N </td <td></td> | | | | | | | | | | | | | |
| GR8836 III N P T E N Tn D Y BI 3N GR8936 III N W T E N Tn D Y BI 3N Granite I N P G E N Br D Y G 2N Harlon I N W G E N Br D Y G 2N Harlon I N W G E N Br D Y Y 2N Harlon I N W G E N Br I Y G 3N HF93-083 III N P G E N Br I Y Ib 3N Holt II N W G E N Br I Y Bf 2N | | | | | | | | | | | | | |
| GR8936 III N W T E N Tn D Y BI 3N Granite I N P G E N Br D Y G 2N Harlon I N W G E N Br D Y Y 2N HF93-035 III N P G E N Br I Y G 3N HF93-083 II N P G E N Br I Y Ib 3N Hollday V D P G E N Br I Y Ib 3N Hollday V D P G E N Br I Y Ib 3N Hollday V D P G E N Br D Y Bf 2N | | | | | | | | | | | | | |
| Granite I N P G E N Br D Y G 2N Harlon I N W G E N Br D Y Y 2N HF93-035 III N P G E N Br I Y G 3N HF93-083 II N P G E N Br I Y G 3N Holladay V D P G E N Br I Y Ib 3N Holl II N W G E N Br D Y Bf 2N HS93-4118 IV N W Lt E N Br D Y Bf 3N Ina IV N W G E N Br D Y Bf 3N </td <td></td> | | | | | | | | | | | | | |
| Harlon I N W G E N Br D Y Y 2N HF93-035 III N P G E N Br I Y G 3N HF93-083 II N P G E N Br I Y Ib 3N Holt II N W G E N Br I Y Ib 2N Holt II N W G E N Br D Y Bf 2N HS93-4118 IV N W Lt E N Br D Y Bf 3N Ina IV N W G E N Br D Y Bf 2N HS93-4118 IV N W G E N Br D Y Bf 2N | | | | | | | | | | | | | |
| HF93-035 | | | | | | | | | | | | | |
| HF93-083 | | | | | | | | | | | | | |
| Holladay V D P G E N Tn I Y Ib 2N Holt II N W G E N Br D Y Bf 2N HS93-4118 IV N W Lt E N Br D Y Bl 3N Ina IV N W G E N Br D Y Bl 3N Ina IV N W G E N Br D Y Bf 3N Ina IV N W G E N Br I Y Bf 3N Ina N P T E N Br I Y Bl 2N Kottman IIII N P T E N Br I Y Bl 3N K | | | | | | | | | | | | | |
| Holt II N W G E N Br D Y Bf 2N HS93-4118 IV N W Lt E N Br D Y Bl 3N Ina IV N W G E N Br D Y Bf 3N Ina IV N W G E N Br D Y Bf 3N Ina IV N W G E N Br I Y Bf 3N Ina IV N P T E N Br I Y Bl 3N Kato III N P T E N Br I Y Bl 3N KS3494 III N P T E N Br I Y Bf 3N <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | | | | | | |
| HS93-4118 | • | | | | | | | | | | | | |
| Ina IV N W G E N Br D Y Bf 3N Iroquois III N P G E N Br I Y Ib 3N Kato I N P T E N Br I Y Bl 2N Kottman III N W Lt E N Tn D Y Bl 2N Kottman III N P T E N Br I Y Bl 2N Kottman III N P T E N Br I Y Bl 2N K53494 III N P T E N Br I Y Bf 3N K54694 IV N P G E N Tn I Y Bf 3N | | | | | | | | | | | | | |
| Iroquois | | | | | | | | | | | | | |
| Kato I N P T E N Br S Y BI 2N Kottman III N W Lt E N Tn D Y BI 2N KS3494 III N P T E N Br I Y BI 3N KS4694 IV N W G E Sdn Br I Y Bf 3N KS4895 IV N P G E N Tn I Y Bf 3N LN92-7369 II N P T E N Br I Y Bl 3N Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Br I Y Br 2N | | | | | | | | | | | | | |
| Kottman III N W Lt E N Tn D Y Bl 2N KS3494 III N P T E N Br I Y Bl 3N KS4694 IV N W G E Sdn Br I Y Bf 3N KS4895 IV N P G E N Tn I Y Bf 3N LN92-7369 II N P T E N Br I Y Bl 3N Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N <td>_</td> <td></td> | _ | | | | | | | | | | | | |
| KS3494 III N P T E N Br I Y BI 3N KS4694 IV N W G E Sdn Br I Y Bf 3N KS4895 IV N P G E N Tn I Y Bf 3N LN92-7369 II N P T E N Br I Y Bl 3N Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Br D Y Bf 2N | | | | | | | | | | | | | |
| KS4694 IV N W G E Sdn Br I Y Bf 3N KS4895 IV N P G E N Tn I Y Bf 3N LN92-7369 II N P T E N Br I Y Bl 3N Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Br D Y Bf 2N Mercury III N P G E N Br I Y Y 3N | | | | | | | | | _ | | | | |
| KS4895 IV N P G E N Tn I Y Bf 3N LN92-7369 II N P T E N Br I Y Bl 3N Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Tn I Y Bl 3N Maverick III N P G E N Br D Y Y 3N MN0901 0 N W G E N Br I Y Y 3N | | | | | | | | | | | | | |
| LN92-7369 II N P T E N Br I Y Bl 3N Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Tn I Y Bl 3N Maverick III N P G E N Br D Y Y 3N Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| Loda II N P G E N Br D Y G 3N LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Tn I Y Bl 3N Maverick III N P G E N Br D Y Bf 2N Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br D Y Y 3N MN1301 I N W G E N Br D Y Y 3N < | | | | | | | | | | | | | |
| LS90-1920 IV D P T E N Tn I Y Br 2N Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Tn I Y Bl 3N Maverick III N P G E N Br D Y Bf 2N Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br D Y Y 3N MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| Macon III N W T E N Br I Y Bl 3N Manokin IV D W T E N Tn I Y Bl 3N Maverick III N P G E N Br D Y Bf 2N Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br I Y Y 3N MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| Manokin IV D W T E N Tn I Y Bl 3N Maverick III N P G E N Br D Y Bf 2N Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br I Y Y 3N MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| Maverick III N P G E N Br D Y Bf 2N Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br I Y Y 3N MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| Mercury III D P G E N Tn D Y Y 3N MN0901 0 N W G E N Br I Y Y 3N MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| MN0901 0 N W G E N Br I Y Y 3N MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| MN1301 I N W G E N Br D Y Y 3N | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| MANIEUD I M D C E M D., I V DE 2M | MN1301 MN1302 | I | N N | w P | G | E E | N N | Br | I | Y | r Bf | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| - | Flowering | g Maturity | | Stem | Shatter | ing | Seed | | | |
|-----------------------|------------|----------------------|----------|------------|---------|---------|------------|----------|-------------------|------------------------|
| | date | date Lodging | g Heigh | it term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 7499 | 710* | 1020 1.8 | 105 | 3.0 | 1.0 | 1.0 | 3.0 | 2.5 | 15.8 | 3.19 |
| Alpha | 621 | 827^ 1.5^ | 65 | 3.0^ | 1.0^ | - | 2.5^ | 2.0 | 13.0^ | - |
| Amcor 89 | 701 | 917 2.0 | 100 | 3.0 | 1.0 | 1.0 | 3.0 | 2.0 | 13.7 | 2.97 |
| Apollo | 630 | 913 1.3 | 86 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 15.4 | 3.12 |
| Athow | 703 | 919 1.5 | 79 | 3.0 | 1.0 | 1.0 | 2.8 | 1.0 | 14.8 | 3.72 |
| Bronson | 711 | 1008 2.5 | 108 | 3.0 | 1.0 | 1.0 | 3.3 | 2.5 | 16.4 | 3.48 |
| Calhoun | 717 | 1005 1.3 | 66 | 1.0 | 1.0 | 1.0 | 2.5 | 2.0 | 16.2 | 3.59 |
| CF 461 | 704 | 1007 1.8 | 102* | | 1.0 | 1.0 | 3.0 | 1.5 | 14.7 | 3.85^ |
| CF 492 | 727 | 1015 1.5 | 64* | | 1.0 | 1.0 | 2.3 | 1.0 | 13.4 | 3.84^ |
| Chesapeake | 719 | 1015 2.0 | 92* | | 1.0 | 1.0 | 2.8 | 2.0 | 15.2 | 3.38 |
| Cisne | 709 | 1002 1.8 | 84 | 3.0 | 1.0 | 1.0 | 3.5 | 1.5 | 19.6 | 3.62 |
| Colfax | 629 | 914 1.0 | 62* | | 1.0 | 1.0 | 3.0 | 1.0 | 16.2 | 3.16 |
| Croton 3.9 | 701* | 925 1.8 | 99 | 3.0 | 1.0 | 1.0 | 3.5 | 2.5 | 14.3 | 3.36 |
| Darby | 702 | 924 1.5 | 85 | 3.0 | 1.0 | 1.0 | 3.3 | 1.0 | 14.4 | 3.19 |
| Defiance | 702 | 924 1.8 | 85 | 3.0 | 1.0 | 1.0 | 3.3 | 1.0 | 18.5 | 3.52 |
| Delsoy 4900 | 703 727 | 1019 2.5 | 95 | 1.0 | 1.0 | 1.0 | 3.0 | 2.0 | 18.6 | 2.94 |
| Deisoy 4900 Dwight | 703 | 915 1.3 | 69* | | 1.0 | 1.0 | 3.0 | 1.5 | 13.2 | 2.99* |
| Faribault | 627 | 825^ 1.5^ | 67 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 12.7^ | 3.17^ |
| Flint | 629 | 918 1.5 | 94 | 3.0 | 1.0 | 1.0 | 3.5 | 2.5 | 13.4 | 2.75 |
| Freeborn | 623 | 825^ 1.5^ | 65 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.4 | 2.73 |
| General | 706 | 929 1.3 | 89 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 17.9 | 3.97* |
| GR8836 | 629* | 927 1.5 | 86 | 3.0 | 1.0 | 1.0 | 3.0 | 1.5 | 14.1 | 3.94 |
| GR8936 | 629* | 927 1.8 | 91 | 3.0 | 1.0 | 1.0 | 3.0 | 1.0 | 14.1 16.6 | 3.55 |
| Granite | 623 | 826^ 1.5^ | 69 | 3.0^ | 1.0^ | 2.0^ | 1.5^ | 1.0 | 15.4^ | 2.99^ |
| Harlon | 621 | 821 1.0^ | 66* | | 1.0^ | 2.0^ | 2.0^ | 1.0 | 13.1^ | 1.90^ |
| HF93-035 | 703 | 921 2.0 | 84 | 3.0 | 1.0 | 1.0 | 3.5 | 3.5 | 19.0 | 2.70 |
| HF93-083 | 703 | 920 2.0 | 104 | 3.0 | 1.0 | 1.0 | 3.8 | 1.5 | 17.5 | 2.76 |
| Holladay | 703 727 | 1018 1.8 | 89 | 1.0 | 1.0 | 1.0 | 1.8 | 1.0 | 17.5 | 4.38 |
| Holt | 627* | 904 1.0 | 70* | | 1.0 | 1.0 | 2.3 | 1.0 | 14.5 | 4.36 3.04* |
| HS93-4118 | 703 | 929 1.3 | 89 | 3.0 | 1.0 | 1.0 | 3.3 | 2.0 | 15.5 | 3.79 |
| Ina | 703 | 1007 2.3 | 112 | 3.0 | 1.0 | 1.0 | 3.0 | 2.5 | 13.8 | 3.79 |
| Iroquois | 629* | 924 1.5 | 86 | 3.0 | 1.0 | 1.0 | 3.3 | 1.5 | 15.4 | 3.53 |
| Kato | 622 | 822 1.0 [^] | 58* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.4 16.7^ | 2.98^ |
| Kato | 703 | 924 1.3 | | 3.0 | 1.0 | 1.0 | 3.0 | 2.0 | 16.0 | 3.83 |
| KS3494 | 703 704 | 925 1.3 | 77 | 3.0 | 1.0 | 1.0 | 2.8 | 3.0 | 15.5 | 3.04 |
| KS4694 | 704 | 1018 1.8 | 100 | 3.0 | 1.0 | 1.0 | 2.8 | 1.5 | 16.9 | 3.32 |
| KS4895 | 727 | 1018 1.8 | 91 | 3.0 | 1.0 | 1.0 | 2.3 | 2.0 | 13.3 | 2.88* |
| LN92-7369 | 703 | 915 1.3 | 74* | | 1.0 | 1.5 | 2.5 | 1.5 | 16.6 | 3.18 |
| Ling2-7309 Loda | 703 701 | 909 1.3 | 86* | | 1.0 | 1.5 | 3.5 | 2.0* | 15.9 | 3.45 |
| LS90-1920 | 701 | 1015 1.8 | 96 | 1.0 | 1.0 | 1.0 | 2.0 | 2.5 | 12.8 | 3.43 |
| Macon | 723 701 | 929 1.3 | 86 | 3.0 | 1.0 | 1.0 | 3.0 | 2.0* | 18.0 | 4.00* |
| Manokin | 701 729 | 1024 2.8 | 95 | 1.0 | 1.0 | 1.0 | 2.8 | 3.0 | 13.2 | 2.88 |
| Maverick | 630* | 1001 2.0 | 93 96 | 3.0 | 1.0 | 1.0 | 3.3 | 1.5 | 15.2 | 2.88 4.16 |
| | 715 | 917 1.3 | 96 65 | 3.0 1.0 | 1.0 | 1.0 | 3.3 2.0 | 2.0 | 8.3 | 2.98 |
| Mercury MN0901 | 620 | 820 1.0 [^] | 51* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 6.5 12.4^ | 2.98 2.11^ |
| MN1301 | 621 | 825 1.0 [^] | 61* | | 1.0^ | 2.0^ | 2.0^ | 1.0 | 14.3^ | 2.71^ |
| MN1301 MN1302 | 623 | 822^ 1.5^ | 62* | | 1.0^ | 2.0^ | 2.5^ | 1.0 | 14.5 [^] | 3.81^ |
| IVII V I 302 | 023 | 022 1.5 | 02" | 3.0 | 1.0 | ∠.0. | 4.5 | 1.0 | 17.5 | 3.01 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | Seed composition | | Oil composition | | | | | |
|---------------------|----------|---------------------|---------------------------|----------|-----------------|-------|----------|-----------|--|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | | |
| 7499 | IV | 40.7 | 18.5 | 9.4 | 4.3 | 23.2 | 55.8 | 7.2 | | |
| Alpha | I | 40.9^ | 20.1^ | 11.0^ | 3.9^ | 23.5^ | 54.6^ | 7.0^ | | |
| Amcor 89 | II | 37.9 | 20.3 | 10.1 | 3.6 | 27.5 | 51.8 | 7.0 | | |
| Apollo | II | 38.1 | 21.6 | 10.9 | 4.2 | 28.2 | 50.8 | 6.0 | | |
| Athow | III | 42.1 | 19.5 | 10.9 | 4.7 | 23.0 | 54.4 | 6.9 | | |
| Bronson | IV | 42.9 | 17.9 | 8.6 | 4.6 | 26.8 | 53.2 | 6.8 | | |
| Calhoun | IV | 40.7 | 18.7 | 9.9 | 3.7 | 21.2 | 57.0 | 8.3 | | |
| CF 461 | IV | 40.4 | 18.5 | 8.9 | 4.2 | 22.8 | 56.6 | 7.4 | | |
| CF 492 | IV | 39.9 | 18.8 | 8.3 | 4.0 | 19.5 | 60.1 | 8.2 | | |
| Chesapeake | IV | 42.4 | 17.3 | 8.5 | 4.6 | 23.5 | 56.5 | 7.0 | | |
| Cisne | IV | 43.5 | 18.2 | 8.6 | 4.9 | 27.8 | 52.1 | 6.6 | | |
| Colfax | II | 40.1 | 20.3 | 10.9 | 4.4 | 25.8 | 52.7 | 6.1 | | |
| Croton 3.9 | III | 43.9 | 18.2 | 10.6 | 5.2 | 25.6 | 52.7 | 6.2 | | |
| Darby | III | 42.3 | 19.4 | 9.7 | 3.8 | 27.4 | 52.6 | 6.5 | | |
| Defiance | III | 41.4 | 20.7 | 11.1 | 4.7 | 28.2 | 50.1 | 5.9 | | |
| Delsoy 4900 | IV | 42.6 ^w | 20.7 19.1 ^w | 11.5 | 3.6 | 22.9 | 54.9 | 7.1 | | |
| • | II | 38.2 | 19.1 | 12.7 | 5.0 | 24.2 | 51.5 | 6.5 | | |
| Dwight Faribault | I | 35.2 [^] | 22.3^ | 11.1 | 4.3^ | 28.1 | 50.7^ | 5.8^ | | |
| | I | 39.3 | | | 4.3 | | | | | |
| Flint | | | 19.8 | 10.6 | 4.0 3.9^ | 24.5 | 53.7 | 7.1 | | |
| Freeborn | I | 41.4^ | 21.2^ | 10.2^ | | 28.6^ | 51.4^ | 5.9^ | | |
| General | III | 41.9 | 18.8 | 10.4 | 4.6 | 26.9 | 51.6 | 6.5 | | |
| GR8836 | III | 41.9 | 19.3 | 10.7 | 4.4 | 22.6 | 55.3 | 7.0 | | |
| GR8936 | III | 43.2 | 18.6 | 10.0 | 4.2 | 25.5 | 53.8 | 6.4 | | |
| Granite | I | 38.6^ | 21.2^ | 10.3^ | 4.8^ | 24.8^ | 53.4^ | 6.8^ | | |
| Harlon | I | 38.1^ | 22.5^ | 12.6^ | 3.4^ | 24.9^ | 52.8^ | 6.3^ | | |
| HF93-035 | III | 41.2 ^w | 20.7 ^w | 10.7 | 3.7 | 27.1 | 52.4 | 6.1 | | |
| HF93-083 | II | 39.3 | 20.1 | 10.2 | 3.8 | 23.6 | 56.2 | 6.2 | | |
| Holladay | V | 38.6 | 18.1 | 11.7 | 3.6 | 17.7 | 57.9 | 9.1 | | |
| Holt | II | 39.2 | 21.1 | 10.5 | 3.9 | 24.1 | 55.2 | 6.3 | | |
| HS93-4118 | IV | 38.3 | 18.9 | 8.7 | 4.3 | 27.7 | 53.1 | 6.2 | | |
| Ina | IV | 40.2 | 18.7 | 8.4 | 4.6 | 27.1 | 54.0 | 5.9 | | |
| Iroquois | III | 42.5 | 19.2 | 10.8 | 4.2 | 25.7 | 53.5 | 5.8 | | |
| Kato | I | 41.2^ | 20.7^ | 11.4^ | 3.7^ | 23.2^ | 55.2^ | 6.6^ | | |
| Kottman | III | 41.8 | 19.6 | 10.9 | 4.5 | 28.2 | 50.0 | 6.4 | | |
| KS3494 | III | 39.7 | 18.1 | 10.2 | 4.9 | 29.6 | 49.5 | 5.8 | | |
| KS4694 | IV | 41.8 | 18.3 | 9.1 | 3.9 | 25.0 | 54.6 | 7.3 | | |
| KS4895 | IV | 43.8 | 17.4 | 9.6 | 3.8 | 21.9 | 57.1 | 7.6 | | |
| LN92-7369 | II | 42.1 | 18.6 | 10.3 | 3.5 | 26.5 | 53.3 | 6.3 | | |
| Loda | II | 40.3 | 21.5 | 10.2 | 4.9 | 27.3 | 51.7 | 5.9 | | |
| LS90-1920 | IV | 41.3^{w} | 17.0^{w} | 11.5 | 3.3 | 19.2 | 58.9 | 7.2 | | |
| Macon | III | 40.2 | 19.4 | 10.4 | 4.8 | 29.2 | 49.8 | 5.7 | | |
| Manokin | IV | 42.1^{w} | 18.8^{w} | 12.1 | 3.7 | 22.3 | 54.8 | 7.0 | | |
| Maverick | III | 41.7 | 18.7 | 10.9 | 4.8 | 27.1 | 50.9 | 6.2 | | |
| Mercury | III | 39.8 | 19.8 | 10.5 | 3.9 | 22.8 | 55.8 | 7.0 | | |
| MN0901 | 0 | 37.3^ | 23.3^ | 11.3^ | 3.9^ | 20.6^ | 56.8^ | 7.3^ | | |
| MN1301 | I | 37.8^ | 20.7^ | 11.3^ | 4.4^ | 24.2^ | 54.0^ | 6.1^ | | |
| MN1302 | I | 37.1^ | 22.1^ | 10.0^ | 3.6^ | 24.6^ | 55.4^ | 6.4^ | | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| PI No. | Accession identifier | Region of origin | Country of origin | Country of acquisition | Year introduced or released | |
|--------|------------------------|---------------------|-------------------------|------------------------------|-----------------------------------|-------|
| FI NO. | identifier | or origin | origin | acquisition | of feleased | group |
| | MN1401 | Minnesota | United States | United States | 2000 | I |
| | MN1801 | Minnesota | United States | United States | 2000 | I |
| | Mustang | Missouri | United States | United States | 1995 | IV |
| | NE1900 | Nebraska | United States | United States | 2000 | I |
| | NE3297 | Nebraska | United States | United States | 1999 | III |
| | NE3399 | Nebraska | United States | United States | 1999 | III |
| | NE3400 | Nebraska | United States | United States | 2000 | III |
| | Nemaha | Nebraska | United States | United States | 1996 | III |
| | Odell | Nebraska | United States | United States | 1996 | III |
| | Ohio FG1 | Ohio | United States | United States | 1994 | III |
| | Ohio FG2 | Ohio | United States | United States | 1994 | III |
| | Olympus | Michigan | United States | United States | 1998 | II |
| | Omaha | Illinois | United States | United States | 1996 | IV |
| | Pana | Illinois | United States | United States | 1997 | III |
| | Probst | Indiana | United States | United States | 1994 | III |
| | Rend | Illinois | United States | United States | 1998 | IV |
| | Saline | Illinois | United States | United States | 1993 | III |
| | Saturn | Nebraska | United States | United States | 1994 | III |
| | Savoy | Illinois | United States | United States | 1996 | II |
| | Stout | Ohio | United States | United States | 2000 | III |
| | Stressland | Ohio | United States | United States | 1994 | IV |
| | Stride | South Dakota | United States | United States | 1997 | I |
| | Strong | Ohio | United States | United States | | IV |
| | Surge | South Dakota | United States | United States | | 0 |
| | Tiffin | Ohio | United States | United States | 2000 | II |
| | Titan | Michigan | United States | United States | | I |
| | TN 4-94 | Tennessee | United States | United States | | IV |
| | Troll | Ohio | United States | United States | 1998 | IV |
| | Yale | Illinois | United States | United States | 1994 | III |
| 424005 | | Kyonggi | South Korea | South Korea | 1978 | III |
| 468907 | | Jilin | China | China | 1982 | I |
| 468919 | | Liaoning | China | China | 1982 | III |
| 483459 | | Jilin | China | China | 1984 | I |
| 504480 | Tainan tsai lai chung | unknown | Taiwan | Taiwan | 1986 | IV |
| 504481 | Fengshan lu tsao shen | unknown | Taiwan | Taiwan | 1986 | III |
| 504482 | | unknown | Taiwan | Taiwan | 1986 | IV |
| 504484 | Hua yen | unknown | Taiwan | Taiwan | 1986 | I |
| 504485 | Ho ko tao (Mikawshima) | unknown | Japan | Taiwan | 1986 | I |
| 504486 | KS 469 (N) | unknown | Taiwan | Taiwan | 1986 | II |
| 504487 | Yao tou | unknown | Taiwan | Taiwan | 1986 | III |
| 504488 | Lu tsao shen | unknown | Taiwan | Taiwan | 1986 | III |
| 504489 | Ou yuan tsao shen | unknown | Taiwan | Taiwan | 1986 | I |
| 504490 | Pai niao chi tou | unknown | Taiwan | Taiwan | 1986 | II |
| 504493 | Hua yen | unknown | Taiwan | Taiwan | 1986 | I |
| 504494 | Shan ho tao | unknown | Taiwan | Taiwan | 1986 | Ī |
| 504496 | Ta li chung | unknown | Taiwan | Taiwan | 1986 | II |
| 504497 | La po wu | unknown | Taiwan | Taiwan | 1986 | II |
| 2011/1 | r · · · · | WIIII (11 II | | | 1,00 | |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|-----------------|-------------------|--------|---------|---|----------|----------|--------------|------------------|--------|----------------|--------------------|---------------|
| MN1401 | I | N | P | Т | Е | N | Tn | D | Y | Bl | | 3N |
| MN1801 | I | N | P | G | E | N | Br | I | Y | Bf | | 2N |
| Mustang | IV | N | W | G | E | N | Tn | I | Y | Bf | | 3N |
| NE1900 | I | N | W | G | E | N | Br | D | Y | Y | | 2N |
| NE3297 | III | N | W | T | E | N | Br | D | Y | Br | | 2N |
| NE3399 | III | N | W | T | E | N | Br | D | Y | Bl | | 2N |
| NE3400 | III | N | P V | G | E | N | Tn | I | Y | Bf | | 3N |
| Nemaha | III | N | W | G | E | N | Tn | D | Y | Bf | | 2N |
| Odell | III | N | P | G | E | N | Tn | I | Y | Bf | | 2N |
| Ohio FG1 | III | N | P | G | E | N | Br | D | Y | Y | | 3N |
| Ohio FG2 | III | N | P | G | E | N | Br | D | G | G | | 3N |
| Olympus | II | N | P | T | E | N | Н | D | Y | Bl | | 3N |
| Omaha | IV | N | P | T | E | N | Tn | D | Y | Bl | | 3N |
| Pana | III | N | P | G | E | N | Br | D | Y | Bf | | 2N |
| Probst | III | N | P | T | E | N | Tn | I | Y | Bl | | 3N |
| Rend | IV | N | W | G | E | N | Br | D | Y | Bf | | 2N |
| Saline | III | N | W | G | E | N | Tn | I | Y | Bf | | 3N |
| Saturn | III | D | W | G | E | H | Tn | I | Y | Y | | 3N |
| Savoy | II | N | P VV | T | E | N | Tn | D | Y | Bl | | 2N |
| Stout | III | D | W | T | E | N | Tn | I | Y | Bl | | 2N |
| Stressland | IV | N | P VV | T | E | N | Tn | D | Y | Bl | | 3N |
| Stride | I | N | P | G | E | N | Br | I | Y | Ib | | 3N |
| Strong | IV | D | W | T | E | N | Tn | D | Y | Bl | | 3N |
| _ | 0 | N | P VV | G | E | N | Br | I | Y | Ib | | 3N |
| Surge Tiffin | II | N | P | G | E | N | Br | I | Y | Ib | | 3N |
| Titan | I | N | P | T | E | N | Br | D | Y | Bl | | 3N |
| TN 4-94 | IV | N | P | G | E | N | Br | I | Y | Bf | | 3N |
| Troll | IV | D | W | T | E | N | Br | D | Y | Bl | | 3N |
| Yale | III | N | W | G | E | N | Tn | I | Y | Bf | | 3N |
| 424005 | III | N N | W | T | E A | N N | Bl | I | Gn | Brbl | Vhil, Sw | 3N 4N |
| 468907 | I | N | W | T | Sa | N | Br | В | Bl | Bl | Flk, Sw, 4sd | 4N 2N |
| 468919 | III | N | vv P | T | Sa Sa | N | Bl | S | Bl | Bl | | 4N |
| 483459 | I | N | r P | T | Sa A | | Br | S I | Bl | Bl | Flk, Sw Flk, Sw | 4N 4N |
| 504480 | IV | D | r P | G | | Sp N | Br | I | Y | Bf | FIK, SW | 3N |
| 504481 | III | D | r P | G | A E | N | Br | | Y | Y | | 3N |
| 504482 | IV | D | r P | T | E | N | Tn | I | Y | | | 3N |
| | | D D | W | | | | Tn | I | Y | Br Bf | | |
| 504484 | I | D D | W | G | A | N N | | I | Y | | | 2N |
| 504485 | I | | | G | A | N N | Tn | I | Y | Bf | | 2N |
| 504486 | II | N | P | G | E | N Sam | Br | I | | Bf | | 3N |
| 504487 | III | D | P | G | A | Ssp | Br Br | I | Y Y | Bf | | 2N |
| 504488 | III | D | P D | G | A | Ssp | Br Br | I | Y Y | Bf | | 2N |
| 504489 | I | D | P D | T | Sa | Ssp | Br Br | I | | Br | | 3N |
| 504490 | II | D | P | T | Sa | Ssp | Br | I | Gn | Bl | | 2N |
| 504493 | I | D | W | G | A | N N | Tn | I | Y | Bf | | 2N |
| 504494 | I | D | W | G | A | N Sam | Tn | I | Y | Bf | | 2N |
| 504496 | II | D | P | T | Е | Ssp | Br | I | Gn | Bl | | 3N |
| 504497 | II | D | P | T | E | Ssp | Br | I | Gn | Bl | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| - | Flowering Maturity | | | Stem | Shatter | ing | Seed | | | | |
|------------|--------------------|--------|---------|-------|---------|------|------|---------|----------|------------------------|------------------------|
| | date | date | Lodging | Heigh | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | | | (score) | (score) | (cg sd ⁻¹) | (Mg ha ⁻¹) |
| MN1401 | 623 | 821^ | 1.0^ | 70 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 16.1^ | 3.03^ |
| MN1801 | 625 | 826^ | 1.5^ | 73 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.0^ | 3.29^ |
| Mustang | 713 | 1011 | 1.8 | 100 | 3.0 | 1.0 | 1.0 | 3.0 | 1.5 | 15.4 | 3.18 |
| NE1900 | 626 | 901 | 1.5^ | 70* | 3.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 13.8^ | - |
| NE3297 | 703 | 924 | 1.5 | 97 | 3.0 | 1.0 | 1.0 | 3.0 | 1.5 | 16.9 | 3.70* |
| NE3399 | 703 | 929 | 1.5 | 99 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 15.5 | 4.15 |
| NE3400 | 703 | 929 | 1.5 | 88 | 3.0 | 1.0 | 1.0 | 3.8 | 2.5 | 17.7 | 3.18 |
| Nemaha | 705 | 928 | 1.5 | 81 | 3.0 | 1.0 | 1.0 | 3.5 | 1.0 | 16.2 | 3.39* |
| Odell | 705 | 929 | 2.0 | 91 | 3.0 | 1.0 | 1.0 | 3.3 | 2.5 | 16.5 | 3.69 |
| Ohio FG1 | 701* | 923 | 1.3 | 74 | 3.0 | 1.0 | 1.0 | 3.3 | 2.0 | 21.0 | 2.89 |
| Ohio FG2 | 704 | 925 | 1.8 | 86* | 3.0 | 1.0 | 1.5 | 3.0 | 2.0 | 23.1 | 3.17 |
| Olympus | 701 | 904 | 1.3 | 68 | 3.0 | 1.0 | 1.0 | 2.3 | 1.5 | 13.8 | 2.98* |
| Omaha | 705 | 1004 | 1.8 | 87 | 3.0 | 1.0 | 1.0 | 3.5 | 1.5 | 15.6 | 3.60 |
| Pana | 701* | 929 | 2.0 | 108 | 3.0 | 1.0 | 1.5 | 3.3 | 1.0 | 15.6 | 4.48 |
| Probst | 630* | 926 | 1.3 | 88 | 3.0 | 1.0 | 1.0 | 3.3 | 2.5 | 14.9 | 3.57* |
| Rend | 703 | 1003 | 2.0 | 102 | 3.0 | 1.0 | 1.0 | 3.3 | 2.5 | 14.4 | 3.62 |
| Saline | 708 | 1006 | 2.3 | 103* | 3.0 | 1.0 | 1.0 | 3.3 | 2.0 | 15.8 | 4.26^ |
| Saturn | 707 | 927 | 1.5 | 64 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 27.1 | 2.64* |
| Savoy | 703 | 915 | 1.3 | 65 | 3.0 | 1.0 | 1.0 | 2.3 | 1.5 | 15.3 | 3.22* |
| Stout | 706 | 927 | 1.3 | 61 | 1.0 | 1.0 | 1.0 | 2.5 | 1.0 | 16.7 | 3.45 |
| Stressland | 711 | 1005 | 1.8 | 96 | 3.0 | 1.0 | 1.0 | 3.0 | 2.5 | 14.2 | 3.84 |
| Stride | 623 | 822^ | 1.0^ | 49 | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 14.3^ | 2.68^ |
| Strong | 707 | 1003 | 1.3 | 58 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 19.0 | 3.51 |
| Surge | 622 | 825 | 1.5^ | 54 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.7^ | - |
| Tiffin | 628* | 913 | 2.3 | 85 | 3.0 | 1.0 | 1.0 | 3.5 | 1.5 | 14.5 | 2.86 |
| Titan | 625 | 829^ | 1.5^ | 65 | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 15.4^ | 2.50^ |
| TN 4-94 | 715 | 1023 | 1.8 | 113 | 3.0 | 1.0 | 1.0 | 2.5 | 1.0 | 14.4 | 2.94 |
| Troll | 709 | 1002 | 1.3 | 60 | 1.0 | 1.0 | 1.0 | 2.5 | 1.0 | 19.2 | 3.92 |
| Yale | 706* | 929 | 1.3 | 85 | 3.0 | 1.0 | 1.0 | 3.8 | 3.0 | 16.4 | 3.44^ |
| 424005 | 731 | 927 | 5.0 | 42* | 5.0 | 2.5 | 3.5* | 3.0 | 3.0 | 3.5 | 0.44^ |
| 468907 | 717 | 907^ | 5.0^ | 103 | 5.0^ | 1.0^ | 3.0^ | 2.5^ | | 3.2^ | 1.15^ |
| 468919 | 727 | 921 | 5.0 | 100 | 5.0 | 3.0 | 4.5 | 2.0 | | 2.6 | 0.37 |
| 483459 | 630 | 827^ | 2.5^ | 37* | 4.0^ | 1.0^ | 1.0^ | 3.0^ | | 4.4^ | 0.84^ |
| 504480 | 804 | 1009 | 3.5 | 88 | 1.0 | 2.0* | 3.0* | 2.3 | 1.5 | 14.5 | 1.52* |
| 504481 | 721 | 923 | 2.0 | 66 | 1.0 | 1.5 | 4.0* | 2.0 | 3.0 | 16.8 | 2.19 |
| 504482 | 725 | 1005 | 2.5 | 85 | 1.0 | 2.0 | 3.5 | 3.0 | 3.5 | 12.9 | 1.54 |
| 504484 | 703 | 823 | 1.0^ | 37 | 1.0^ | 1.0^ | 3.0^ | 2.0^ | 1.0 | 21.6^ | 1.32^ |
| 504485 | 703 | 822 | 1.0^ | 29 | 1.0^ | 1.0^ | - | 1.5^ | 1.0 | 19.0^ | - |
| 504486 | 629* | 905 | 1.8 | 79 | 3.0 | 1.0 | 1.0 | 2.8 | 1.0 | 13.4 | 2.88* |
| 504487 | 717 | 917 | 1.8 | 59 | 1.0 | 3.0* | 5.0 | 2.8* | 1.0 | 12.7 | 1.48 |
| 504488 | 721 | 917 | 2.3 | 60* | 1.0 | 3.5 | 5.0 | 2.8* | 1.5 | 13.2 | 1.47* |
| 504489 | 627 | 824* | 1.0 | 30 | 1.0 | 3.0 | 5.0 | 2.8 | 1.0 | 22.3 | 1.09 |
| 504490 | 701 | 905 | 1.0 | 42 | 1.0 | 3.0 | 5.0 | 2.5 | 1.0 | 21.6* | 1.60 |
| 504493 | 707 | 828 | 2.0 | 60* | 1.5 | 3.5 | 5.0 | 2.3 | 1.0 | 20.1 | 0.89 |
| 504494 | 701 | 822 | 1.0^ | 36 | 1.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 18.6^ | 1.24^ |
| 504496 | 701 | 901 | 1.0 | 34 | 1.0 | 3.5 | 5.0 | 2.0 | 1.0 | 19.3 | 1.42^ |
| 504497 | 629 | 901* | 1.0 | 37 | 1.0 | 3.0 | 5.0 | 2.3 | 1.0 | 22.2 | 1.56 |
| | | | | | | | | | | | |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | | nposition | Oil composition | | | | | | |
|---------------|----------|---------------------------|---------------------|-----------------|---------|-------|--------------|------------|--|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | | |
| MN1401 | I | 39.8^ | 21.2^ | 10.7^ | 3.9^ | 22.0^ | 56.2^ | 7.0^ | | |
| MN1801 | I | 38.8^ | 22.4^ | 11.6^ | 4.4^ | 24.6^ | 53.4^ | 6.0^ | | |
| Mustang | IV | 42.8 | 17.3 | 9.6 | 4.6 | 23.6 | 55.0 | 7.2 | | |
| NE1900 | I | 36.8^ | 21.9^ | 11.3^ | 4.9^ | 27.6^ | 50.3^ | 5.8^ | | |
| NE3297 | III | 41.3 | 19.9 | 11.1 | 4.6 | 28.6 | 49.8 | 5.9 | | |
| NE3399 | III | 42.4 | 18.7 | 11.3 | 3.7 | 23.9 | 54.4 | 6.8 | | |
| NE3400 | III | 44.3 | 18.6 | 9.9 | 4.2 | 31.7 | 48.7 | 5.4 | | |
| Nemaha | III | 40.5 | 20.6 | 11.4 | 4.4 | 24.9 | 52.9 | 6.5 | | |
| Odell | III | 41.5 | 19.6 | 10.9 | 4.2 | 26.8 | 51.9 | 6.2 | | |
| Ohio FG1 | III | 43.1 | 18.4 | 10.7 | 3.9 | 27.1 | 52.0 | 6.3 | | |
| Ohio FG2 | III | 43.1 ^w | 20.3 ^w | 13.9 | 3.9 | 25.7 | 49.0 | 7.5 | | |
| | III | | | | 3.9 | | 53.5 | 6.2 | | |
| Olympus | II IV | 37.9 | 21.1 | 10.2 | | 26.2 | | | | |
| Omaha Dona | | 42.3 | 19.3 | 8.9 | 5.1 | 26.5 | 52.7 54.5 | 6.8 | | |
| Pana | III | 41.1 | 19.4 | 9.9 | 4.8 | 24.8 | 54.5 | 6.0 | | |
| Probst | III | 41.7 | 18.6 | 10.1 | 5.6 | 28.9 | 49.2 | 6.2 | | |
| Rend | IV | 42.4 | 18.0 | 9.1 | 3.9 | 23.5 | 56.5 | 6.9 | | |
| Saline | III | 41.8 | 19.6 | 10.5 | 4.4 | 23.7 | 54.3 | 7.2 | | |
| Saturn | III | 41.8 | 18.5 | 9.3 | 4.0 | 35.0 | 46.0 | 5.7 | | |
| Savoy | II | 38.5 | 20.6 | 10.2 | 3.8 | 23.7 | 55.1 | 7.1 | | |
| Stout | III | 40.1 | 20.2 | 10.0 | 3.9 | 27.9 | 52.5 | 5.7 | | |
| Stressland | IV | 44.0 | 18.2 | 9.3 | 4.4 | 22.4 | 56.3 | 7.6 | | |
| Stride | I | 35.3^ | 24.0^ | 11.7^ | 5.3^ | 25.8^ | 51.1^ | 6.0^ | | |
| Strong | IV | 40.5 | 20.3 | 8.6 | 4.1 | 23.1 | 57.9 | 6.2 | | |
| Surge | 0 | 38.8^ | 22.9^ | 10.9^ | 3.9^ | 25.8^ | 53.4^ | 5.9^ | | |
| Γiffin | II | 40.5 | 19.7 | 10.4 | 3.9 | 26.4 | 52.9 | 6.4 | | |
| Γitan | I | 35.5^ | 21.7^ | 12.1^ | 4.6^ | 25.7^ | 51.9^ | 5.8^ | | |
| ΓN 4-94 | IV | 39.9 | 18.7 | 9.2 | 4.6 | 25.9 | 53.7 | 6.6 | | |
| Γroll | IV | 39.8 | 21.3 | 9.0 | 4.3 | 27.4 | 53.5 | 5.8 | | |
| Yale | III | 41.0 | 17.3 | 11.1 | 4.3 | 25.3 | 53.5 | 5.9 | | |
| 124005 | III | 48.8^{w} | 10.2^{w} | 15.0 | 4.0 | 16.4 | 54.1 | 10.6 | | |
| 168907 | I | 49.5 ^w ^ | 10.7 ^w ∧ | 14.0^ | 4.7^ | 16.3^ | 54.2^ | 10.7^ | | |
| 168919 | III | 45.3 ^w | 12.3 ^w | 12.6 | 3.7 | 27.2 | 49.7 | 6.7 | | |
| 183459 | I | 51.4 ^w ∧ | 13.2 ^w ∧ | 13.4^ | 4.0^ | 20.2^ | 53.3^ | 9.2^ | | |
| 504480 | IV | 46.0 | 14.5 | 8.6 | 4.0 | 25.3 | 53.0 | 9.2 | | |
| 504481 | III | 43.9 | 17.9 | 10.2 | 3.8 | 27.9 | 51.3 | 6.8 | | |
| 504482 | IV | 44.5 ^w | 16.7 ^w | 9.7 | 3.9 | 22.2 | 55.6 | 8.5 | | |
| 504484 | I | 43.7^ | 19.0^ | 12.4^ | 3.4^ | 29.6^ | 48.5^ | 6.1^ | | |
| 504485 | I | 44.4^ | 18.5^ | 11.8^ | 3.2^ | 29.0^ | 50.0^ | 6.0^ | | |
| 504486 | II | 42.3 | 19.1 | 10.8 | 3.8 | 26.6 | 51.4 | 7.3 | | |
| 504487 | III | 41.5 | 18.0 | 10.5 | 3.4 | 23.6 | 54.2 | 8.3 | | |
| 504488 | III | 41.3 | 16.9 | 10.5 | 3.4 | 23.6 | 54.2 54.5 | 9.9 | | |
| 504489 | III | 41.3 44.7 | 10.9 | 10.9 | 2.9 | 38.8 | 43.2 | 9.9 4.4 | | |
| | | 44.7 43.4 ^w | | | | | | | | |
| 504490 | II | | 19.1 ^w | 14.9 | 4.0 | 29.1 | 45.5 | 6.5 | | |
| 504493 | I | 44.6 | 17.0 | 11.5 | 3.2 | 28.6 | 50.2 | 6.5 | | |
| 504494 | I | 42.8^ | 18.8^ | 12.2^ | 3.5^ | 25.7^ | 51.6^ | 7.0^ | | |
| 504496 | II | $42.8^{\rm w}$ | $20.4^{\rm w}$ | 12.1 | 2.8 | 27.3 | 51.4 | 6.4 | | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country | Country of | Year introduced | Maturity |
|---------|--------------------------|--------------|-------------|---------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | • |
| 504498 | Lu ta hsiu | unknown | Taiwan | Taiwan | 1986 | II |
| 504500 | Kaohsiung No. 1 | unknown | Taiwan | Taiwan | 1986 | II |
| 504501 | Kaohsiung No. 3 | unknown | Taiwan | Taiwan | 1986 | II |
| 504502 | Ou yuan tsao shen | unknown | Taiwan | Taiwan | 1986 | I |
| 504503 | Tainung 15 | unknown | Taiwan | Taiwan | 1986 | IV |
| 504504 | Sundar No. 1 | unknown | Taiwan | Taiwan | 1986 | III |
| 504508 | Yukimame | unknown | Japan | Taiwan | 1986 | III |
| 504509 | Kaohsiung yu 1034 | unknown | Taiwan | Taiwan | 1986 | IV |
| 506420 | Tankyongkong | Kyonggi | South Korea | South Korea | 1986 | IV |
| 506590E | (Bansei ao daizu) | Tohoku | Japan | Japan | 1986 | IV |
| 506838A | Kantou 7 | Kanto | Japan | Japan | 1986 | III |
| 506838B | (Kantou 7) | Kanto | Japan | Japan | 1986 | III |
| 507174 | Rikuu 10 | Kanto | Japan | Japan | 1986 | II |
| 507196 | Saikai 10 | Kyushu | Japan | Japan | 1986 | II |
| 507268 | Shiro higo | Tohoku | Japan | Japan | 1986 | IV |
| 549045A | | Shaanxi | China | China | 1990 | IV |
| 561233A | | Beijing | China | China | 1991 | I |
| 561233B | | Beijing | China | China | 1991 | II |
| 561233C | | Beijing | China | China | 1991 | II |
| 567344A | Mi qiao lu dou | Gansu | China | China | 1992 | IV |
| 567723 | Fu yang (47) | Anhui | China | China | 1992 | IV |
| 578360 | Guan nan chun hei dou | unknown | China | China | 1992 | II |
| 578362 | Chun hei dou | unknown | China | China | 1992 | I |
| 578363 | Wu chun liu yue bao | unknown | China | China | 1992 | II |
| 578364 | Wu yue huang | unknown | China | China | 1992 | II |
| 578365 | Tian men niu mao hong | unknown | China | China | 1992 | II |
| 578366 | Hong hu liu yue bao | unknown | China | China | 1992 | III |
| 578367 | 164-4-19 | Liaoning | China | China | 1993 | III |
| 578368 | 164-4-32 | Liaoning | China | China | 1993 | III |
| 578369 | 274-2 | Liaoning | China | China | 1993 | II |
| 578370 | 6-5 | Liaoning | China | China | 1993 | III |
| 578374 | Aan tu bai hua lu da dou | Jilin | China | China | 1993 | I |
| 578375B | (Aan tu dang di hei dou) | Jilin | China | China | 1993 | Ī |
| 578376 | Aantu hei se da dou | Jilin | China | China | 1993 | II |
| 578378 | Bai pi dou | Liaoning | China | China | 1993 | II |
| 578379 | Bai pi zi | Liaoning | China | China | 1993 | IV |
| 578380A | Bai qi | Heilongjiang | China | China | 1993 | I |
| 578380B | (Bai qi) | Heilongjiang | China | China | 1993 | II |
| 578382 | Bai qi xiao jin huang | Heilongjiang | China | China | 1993 | I |
| 578383 | Bai tie jia | Liaoning | China | China | 1993 | IV |
| 578384 | Bai tie jia qing | Liaoning | China | China | 1993 | I |
| 578385 | Bao qing xiao jin huang | Heilongjiang | China | China | 1993 | Ī |
| 578388B | (Bei man 217) | Heilongjiang | China | China | 1993 | Ī |
| 578390 | Beng pi | Jilin | China | China | 1993 | II |
| 578392A | Cai zhong pu | Jilin | China | China | 1993 | I |
| 578392B | (Cai zhong pu) | Jilin | China | China | 1993 | II |
| 578399 | Fu ding zhu | Liaoning | China | China | 1993 | II |
| 510577 | I a ding zina | Liuoming | Cilliu | Cillia | 1773 | 11 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry |
|--|
| 504500 II N P G E N Tn D Y Y Sdef 2N 504501 II N P G E N Tn I Y Y Sdef 2N 504502 I D P T E Ssp Br I Y Br 2N 504503 IV D P G A Ssp Br I Y Bf 2N 504504 III D P G A Ssp Br I Y Bf 2N 504508 III D W G E Ssp Br I Y Bf 2N 504509 IV D P T A Ssp Br I Y Th N N Tn I Y Th N N Tn I Y Tn |
| 504501 II N P G E N Tn I Y Y Sdef 2N 504502 I D P T E Ssp Br I Y Br 2N 504503 IV D P G A N Br I Y Bf 2N 504504 IIII D W G E Ssp Br I Y Bf 2N 504508 III D W G E Ssp Br I Y Br Vhil 3N 504509 IV D W T E N Tn I Y Br Vhil 3N 504509 IV D P T E N Br I Gn Bl Gnc 3N 506838A III D W T A Ssp |
| 504502 I D P T E Ssp Br I Y Br 2N 504503 IV D P G A N Br I Y Bf 3N 504504 III D P G A Ssp Br I Y Bf 2N 504508 IIII D W G E Ssp Br I Y Bf 2N 504509 IV D P T A Ssp Br I Y Br Vhil 3N 506420 IV D P T E N Br I Gn Bl Gnc 3N 5063838A III D W T A Ssp Tn D Y Br 2N 507196 II D W G E N Tn I |
| 504503 IV D P G A N Br I Y Bf 3N 504504 III D P G A Ssp Br I Y Bf 2N 504508 III D W G E Ssp Br I Y Bf 2N 504509 IV D P T A Ssp Br I Y Br Vhil 3N 506420 IV D W T E N Br I Y Br Vhil 3N 506420 IV D P T E N Br I Y Br Vhil 3N 506838A III D W T A Ssp Tn D Y Br 2N 507196 II D W G E N Tn |
| 504504 III D P G A Ssp Br I Y Bf 2N 504508 III D W G E Ssp Br I Gn Gn 3N 504509 IV D P T A Ssp Br I Y Br Vhil 3N 504509 IV D P T E N Tn I Y Br Vhil 3N 506838A III D W T A Ssp Tn D Y Br 2N 506838B III D W T A Ssp Tn D Y Br 2N 507174 II D W G E N Tn I Y Tn 2N 507268 IV D W G A N Bl Bl |
| 504508 III D W G E Ssp Br I Gn Gn 3N 504509 IV D P T A Ssp Br I Y Br Vhil 3N 504509 IV D W T E N Tn I Y Tn Vhil 3N 506420 IV D W T E N Tn I Y Tn Vhil 3N 506838A III D W T A Ssp Tn D Y Br 2N 506838B III D W G E N Tn I Y Tn 2N 507174 II D W G E N Tn D Y Bf 3N 507268 IV D W G A N Bl |
| 504509 IV D P T A Ssp Br I Y Br Vhil 3N 506420 IV D W T E N Tn I Y Tn Vhil 3N 506590E IV D P T E N Br I Gn Bl Gnc 3N 506838A III D W T A Ssp Tn D Y Br 2N 506838B III D W G E N Tn I Y Tn 2N 507174 II D W G E N Tn I Y Bf 3N 507196 II D P G A Ssp Br I Y Y Vhill 2N 507268 IV D W G A N |
| 506420 IV D W T E N Tn I Y Tn Vhil 3N 506590E IV D P T E N Br I Gn BI Gnc 3N 506838A III D W T A Ssp Tn D Y Br 2N 506838B III D W T A Ssp Tn I Y Tn 2N 507174 II D W G E N Tn I Y Tn 2N 507196 II D P G A Ssp Br I Y Y Vhill 2N 507268 IV D W G A N Bl Bl Bl Bl Flk, Sw 5N 561233A I N W G E N |
| 506590E IV D P T E N Br I Gn BI Gnc 3N 506838A III D W T A Ssp Tn D Y Br 2N 506838B III D W T A Ssp Tn I Y Tn 2N 507174 II D W G E N Tn I Y Tn 2N 507196 II D P G A Ssp Br I Y Y Vhill 2N 507268 IV D W G A N Tn D Y Bf 3N 549045A IV N P T A N Bl B Bl Bl Flk, Sw 5N 561233A I N W G E N Br |
| 506838A III D W T A Ssp Tn D Y Br 2N 506838B III D W T A Ssp Tn I Y Tn 2N 507174 II D W G E N Tn I Y Bf 3N 507196 II D P G A Ssp Br I Y Y Vhil 2N 507268 IV D W G A N Tn D Y Bf 3N 549045A IV N P T A N Bl B Bl Bl Flk, Sw 5N 561233A I N W G E Ssp Br I Y Y 3N 561233C II N W G E N Br I |
| 506838B III D W T A Ssp Tn I Y Tn 2N 507174 II D W G E N Tn I Y Bf 3N 507196 II D P G A Ssp Br I Y Y Vhill 2N 507268 IV D W G A N Tn D Y Bf 3N 549045A IV N P T A N Bl Bl Bl Bl Flk, Sw 5N 561233A I N W G E Ssp Br I Y Y 1N 561233B II N W G E N Br D Y Y 2N 567344A IV S P G E N Br D |
| 507174 II D W G E N Tn I Y Bf 3N 507196 II D P G A Ssp Br I Y Y Vhil 2N 507268 IV D W G A N Tn D Y Bf 3N 549045A IV N P T A N Bl Bl Bl Bl Flk, Sw 5N 561233A I N W G E Ssp Br I Y Y IN 561233B II N W G E N Br D Y Y 3N 561233C II N W G E N Br I Y Y 2N 567344A IV D W G A N Br D |
| 507196 II D P G A Ssp Br I Y Y Vhil 2N 507268 IV D W G A N Tn D Y Bf 3N 549045A IV N P T A N Bl B Bl Bl Flk, Sw 5N 561233A I N W G E Ssp Br I Y Y 1N 561233B II N W G E N Br D Y Y 3N 561233C II N W G E N Br I Y Y 2N 567344A IV S P G E N Bl D G Bf 3N 578360 II D W T A N Tn I B |
| 507268 IV D W G A N Tn D Y Bf 3N 549045A IV N P T A N Bl B Bl Bl Flk, Sw 5N 561233A I N W G E Ssp Br I Y Y 1N 561233B II N W G E N Br D Y Y 3N 561233C II N W G E N Br I Y Y 2N 561233C II N W G E N Br I Y Y 2N 567344A IV S P G E N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl </td |
| 549045A IV N P T A N Bl B Bl Bl Flk, Sw 5N 561233A I N W G E Ssp Br I Y Y 1N 561233B II N W G E N Br D Y Y 3N 561233C II N W G E N Br I Y Y 2N 567344A IV S P G E N Bl D Gn Bf 3N 567723 IV D W G A N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl Bl 4N 578363 II N P G A N Tn I Lg |
| 561233A I N W G E Ssp Br I Y Y 1N 561233B II N W G E N Br D Y Y 3N 561233C II N W G E N Br I Y Y 2N 567344A IV S P G E N Bl D Gn Bf 3N 567723 IV D W G A N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl 3N 578362 I D P Lt A N Br I Bl Bl 4N 578363 II N P G Sa N Br I Y Bf 3N |
| 561233B II N W G E N Br D Y Y 3N 561233C II N W G E N Br I Y Y 2N 567344A IV S P G E N Bl D Gn Bf 3N 567723 IV D W G A N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl 3N 578362 I D P Lt A N Br I Bl Bl 4N 578363 II N P G A N Tn I Lgn Bf 3N 578365 II D W T Sa N Tn I Y Br 3N |
| 561233C II N W G E N Br I Y Y 2N 567344A IV S P G E N Bl D Gn Bf 3N 567723 IV D W G A N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl 3N 578362 I D P Lt A N Br I Bl Bl 4N 578363 II N P G A N Tn I Lgn Bf 3N 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Bf 4N |
| 567344A IV S P G E N BI D Gn Bf 3N 567723 IV D W G A N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl 3N 578362 I D P Lt A N Br I Bl Bl 4N 578363 II N P G A N Tn I Lgn Bf 3N 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III D W G E N Br I Y Y 3N |
| 567723 IV D W G A N Br D Y Bf 3N 578360 II D W T A N Tn I Bl Bl 3N 578362 I D P Lt A N Br I Bl Bl 4N 578363 II N P G A N Tn I Lgn Bf 3N 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III S W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578360 II D W T A N Tn I BI BI 3N 578362 I D P Lt A N Br I BI BI 4N 578363 II N P G A N Tn I Lgn Bf 3N 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III S W G E N Br I Y Bf 4N 578367 III D W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578362 I D P Lt A N Br I Bl Bl 4N 578363 II N P G A N Tn I Lgn Bf 3N 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III S W G E N Br I Y Bf 4N 578367 III D W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578363 II N P G A N Tn I Lgn Bf 3N 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III S W G E N Br I Y Bf 4N 578367 III D W G E Nsp Br D Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III S W G E N Br I Y Bf 4N 578367 III D W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578364 II S P G Sa N Br I Y Bf 3N 578365 II D W T Sa N Tn I Y Br 3N 578366 III S W G E N Br I Y Bf 4N 578367 III D W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578366 III S W G E N Br I Y Bf 4N 578367 III D W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578367 III D W G E N Br I Y Y 3N 578368 III D W G E Ssp Br D Y Y 3N |
| 578368 III D W G E Ssp Br D Y Y 3N |
| 578368 III D W G E Ssp Br D Y Y 3N |
| <u>.</u> |
| 578369 II N P G E N Tn D Y Y 3N |
| 578370 III D W T E N Br I Y Br 3N |
| 578374 I D W T E Ssp Bl I Gn Tn Gnc 2N |
| 578375B I N P T E Ssp Br I Bl Bl 3N |
| 578376 II N W T E Ssp Br I Bl Bl 3N |
| 578378 II D P G E Ssp Tn I Y Y 3N |
| 578379 IV D W G E N Br D Y Bf 3N |
| 578380A I N W G E N Br I Y Y 2N |
| 578380B II N W G E N Br I Y Y 3N |
| 578382 I D P G E N Tn I Y Y 2N |
| 578383 IV N W Lt E N Tn D Gn Br 3N |
| 578384 I D W G E Ssp Dbr I Y Y 2N |
| 578385 I N P T E N Bl I Y Br 2N |
| 578388B I N P G E N Br I Y Y 2N |
| 578390 II S W G E N Br I Y Y Vhil 2N |
| 578392A I N W G E Ssp Br S Y Y 2N |
| 578392B II S W G E N Br S Y Bf 4N |
| 578399 II S P T E N Tn I Y Tn 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering Maturity | | | Stem | Shatter | ing | Seed | | | | |
|-------------------|--------------------|--------|---------|-----------|---------|---------|------|------|----------|----------------|------------------------|
| | date | | Lodging | Heigh | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | (score) | | - | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 504498 | 701 | 901 | 1.0 | 39 | 1.0 | 2.5 | 5.0 | 2.5 | 1.0 | 19.6 | 1.68 |
| | 701 701 | 901 | 2.3 | 39 80* | | 1.0 | | 3.0 | | 21.7 | 2.24^ |
| 504500 | | | | | 2.5 | | 2.0 | | 1.5 | | |
| 504501 | 702 | 905 | 1.3 | 76 | 2.5 | 1.0 | 1.0 | 3.3 | 1.5 | 19.5 | 2.38 |
| 504502 | 621 | 820 | 1.0^ | 36 | 1.0^ | 3.0^ | 5.0^ | 3.0^ | 1.0 | 25.0^ | 1.36^ |
| 504503 | 804 | 1007 | 3.5 | 69 | 1.0 | 2.5 | 3.5 | 2.3 | 1.5 | 14.3 | 1.45* |
| 504504 | 721 | 925 | 2.0 | 70* | 1.0 | 3.0 | 4.0* | 2.3 | 1.0 | 15.0 | 1.56 |
| 504508 | 713 | 928 | 1.8 | 60 | 1.0 | 1.0 | 2.5 | 3.0 | 2.5 | 28.9 | 2.00^ |
| 504509 | 719 | 1005 | 2.0 | 64 | 1.0 | 3.5 | 4.0 | 3.0 | 1.5 | 20.1 | 1.22 |
| 506420 | 705 | 930 | 1.3 | 56 | 1.0 | 1.0 | 2.0 | 2.3 | 1.0 | 18.9 | 2.64 |
| 506590E | 721 | 1012 | 2.0 | 64 | 1.0 | 3.0 | 3.5 | 3.3 | 1.0 | 24.2 | 1.47 |
| 506838A | 720 | 921 | 2.0 | 62 | 1.0 | 3.5 | 5.0 | 2.3 | 1.5 | 16.8 | 1.94 |
| 506838B | 721 | 925 | 2.0 | 66 | 1.0 | 3.0 | 4.5 | 2.3 | 2.5 | 17.2 | 1.92 |
| 507174 | 719 | 913 | 2.8 | 70 | 1.0 | 2.0 | 4.0 | 2.8 | 3.0 | 11.5 | 2.01 |
| 507196 | 717 | 909 | 2.3 | 50 | 1.0 | 2.5 | 5.0 | 1.8 | 1.0 | 12.0 | 1.50 |
| 507268 | 723 | 1003 | 2.3 | 71 | 1.0 | 2.5 | 4.0* | 3.0 | 1.0 | 20.7 | 1.66 |
| 549045A | 821 | 1016 | 5.0 | 34 | 5.0 | 2.0 | 4.0^ | 3.0 | | 2.0 | 0.13^ |
| 561233A | 628 | 827^ | 2.0^ | 66* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 23.0^ | 2.53^ |
| 561233B | 629* | 907 | 2.3 | 83 | 3.0 | 1.0 | 2.0 | 3.5 | 1.5 | 17.8 | 2.64 |
| 561233C | 703 | 913 | 2.5 | 85 | 3.0 | 1.0 | 1.0 | 3.0 | 1.5 | 18.4 | 2.74 |
| 567344A | 728 | 1014 | 3.5 | 78 | 2.0 | 1.0 | 1.5 | 2.8 | 3.0 | 9.4 | 1.28 |
| 567723 | 727 | 1007 | 4.0 | 79 | 1.0 | 1.5 | 2.0 | 2.8 | 3.0 | 9.4 | 1.73 |
| 578360 | 712 | 903 | 2.3 | 71* | 1.5 | 3.5* | 5.0 | 2.0 | | 14.9 | 1.73 |
| 578362 | 719 | 830 | 2.5 | 85* | 1.5 | 1.0 | 2.0 | 2.3* | | 9.3 | 1.55 |
| 578363 | 721 | 906 | 2.3 | 67* | 2.5 | 3.5 | 5.0 | 2.5 | 3.0* | 11.5 | 0.87 |
| 578364 | 726 | 913 | 3.0 | 85 | 2.0 | 3.0* | 5.0 | 2.8 | 3.0* | 10.9 | 1.05 |
| 578365 | 715 | 913 | 2.5 | 83 | 1.5 | 1.0 | 2.5 | 2.5 | 2.5 | 12.1 | 1.58 |
| 578366 | 724 | 923 | 3.0 | 91* | 2.0 | 3.0 | 4.5 | 2.5 | 3.0 | 10.9 | 1.00 |
| 578367 | 713 | 916 | 2.5 | 75 | 1.0 | 1.0 | 2.0 | 3.5 | 2.5 | 20.8 | 2.41 |
| 578368 | 713 | 921 | 2.0 | 68 | 1.0 | 1.0 | 1.0 | 2.8 | 2.0 | 21.3 | 2.55 |
| 578369 | 709* | 913 | 2.5 | 86 | 3.0 | 1.0 | 1.0 | 3.5 | 2.0 | 16.8 | 2.47 |
| 578370 | 717 | 923^ | 2.5 | 77* | 1.0 | 2.5 | 4.0 | 3.0 | 1.5 | 16.3 | 2.38 |
| 578374 | 629 | 830^ | 1.0^ | 34 | 1.0^ | 1.0^ | 2.0^ | 2.0^ | 3.0 | 19.2^ | 1.97^ |
| 578375B | 623 | 824^ | 2.0^ | 63* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | | 10.3^ | 2.80^ |
| 578376 | 629 | 911 | 2.0 | 103* | 3.5 | 1.0 | 1.0 | 3.0 | | 9.3 | 2.14 |
| 578378 | 629* | 903 | 2.8 | 66* | 1.0 | 1.0 | 1.0 | 2.8 | 1.5 | 10.7 | 2.11 |
| 578379 | 722 | 929 | 2.3 | 82 | 1.0 | 1.0 | 2.5 | 2.5 | 1.0 | 15.7 | 2.26 |
| 578380A | 630 | 824^ | 4.0^ | 64* | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 2.0 | 14.2^ | 2.73^ |
| 578380B | 703 | 905 | 3.5 | 102 | 3.0 | 1.0 | 3.0 | 3.5 | 1.5 | 13.9 | 2.18 |
| 578382 | 701 | 827 | 1.5^ | 41 | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.5^ | 2.65^ |
| 578383 | 715* | 929 | 3.0 | 100* | 4.0 | 1.0 | 2.5 | 3.0 | 2.5 | 14.4 | 2.10* |
| 578384 | 701 | 829 | 1.0^ | 37 | 1.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 17.0^ | 2.13^ |
| 578385 | 623 | 826^ | 2.0^ | 69 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 3.0 | 10.7^ | 2.14^ |
| 578388B | 627 | 824 | 1.5^ | 51* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.3^ | 2.04^ |
| 578390 | 703 | 907 | 2.0 | 95* | 2.0 | 1.0 | 1.5 | 3.0 | 1.0 | 14.3 | 2.48 |
| 578390 578392A | 627 | 830 | 1.5^ | 60* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 15.2^ | - - |
| 578392B | 630* | 903 | 2.0 | 76 | 2.0 | 1.0 | 2.5 | 2.8 | 1.0 | 12.5 | 2.49 |
| 578392B 578399 | 709* | 913 | 2.0 | 75 | 2.0 | 1.0 | 1.0 | 2.8 | 3.0* | 12.5 | 2.52 |
| 310377 | 103 | 913 | 2.0 | 13 | 2.0 | 1.0 | 1.0 | 2.0 | 5.0 | 14.5 | 4.34 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil composition | | | | | |
|------------------|----------|---------------------|--------------------------------|-----------------|------------------|-------|---------------|------------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 504498 | II | 42.7 ^w | 19.8 ^w | 12.1 | 2.9 | 27.3 | 51.4 | 6.3 | |
| 504500 | II | 42.3 | 19.4 | 11.1 | 3.7 | 35.9 | 43.5 | 5.9 | |
| 504501 | II | 40.1 | 19.2 | 9.8 | 3.2 | 25.4 | 54.4 | 7.2 | |
| 504502 | I | 42.9^ | 19.1^ | 10.6^ | 2.7^ | 42.7^ | 39.8^ | 4.2^ | |
| 504503 | IV | 46.0 | 14.0 | 8.6 | 3.8 | 23.9 | 53.7 | 10.0 | |
| 504504 | III | 41.5 | 17.0 | 10.6 | 3.3 | 22.5 | 54.7 | 9.0 | |
| 504504 | III | 45.4 ^w | 17.0 18.6 ^w | 12.3 | 3.5 | 30.4 | 47.9 | 6.0 | |
| 504508 | IV | 43.4 | 17.3 | 9.4 | 3.9 | 25.1 | 54.5 | 7.1 | |
| | IV IV | 43.6 | 17.5 | 9.4 9.5 | 4.0 | 22.4 | 54.5 56.7 | 7.1 | |
| 506420 | | | | | | | | | |
| 506590E | IV | 44.7 ^w | 18.0 ^w | 12.4 | 3.8 | 25.3 | 52.0 | 6.5 | |
| 506838A | III | 39.6 | 18.1 | 10.9 | 3.5 | 29.4 | 49.1 | 7.2 | |
| 506838B | III | 40.7 | 17.4 | 11.5 | 3.6 | 28.3 | 49.3 | 7.2 | |
| 507174 | II | 45.8 | 14.3 | 12.7 | 3.5 | 21.6 | 52.5 | 9.7 | |
| 507196 | II | 46.0 | 15.3 | 10.4 | 3.6 | 18.6 | 57.2 | 10.2 | |
| 507268 | IV | 42.2 | 17.7 | 9.8 | 4.1 | 25.2 | 53.7 | 7.2 | |
| 549045A | IV | 50.6^{w} | 8.2^{w} | 12.2 | 3.2 | 14.6 | 55.4 | 14.6 | |
| 561233A | I | 40.3^ | 18.7^ | 10.5^ | 4.5^ | 32.9^ | 46.1^ | 6.1^ | |
| 561233B | II | 44.2 | 19.0 | 12.0 | 4.8 | 28.7 | 47.9 | 6.7 | |
| 561233C | II | 40.9 | 18.7 | 11.4 | 3.9 | 26.9 | 51.0 | 6.7 | |
| 567344A | IV | 43.1^{w} | 15.5^{w} | 12.7 | 3.3 | 22.6 | 52.8 | 8.5 | |
| 567723 | IV | 46.2 | 15.6 | 9.1 | 4.2 | 27.4 | 52.3 | 7.1 | |
| 578360 | II | 44.8^{w} | 17.4^{w} | 12.5 | 3.2 | 25.3 | 51.2 | 7.9 | |
| 578362 | I | 46.4^{w} | 14.1^{w} | 12.2 | 3.8 | 23.8 | 52.1 | 8.1 | |
| 578363 | II | 48.0^{w} | 14.8^{w} | 12.6 | 3.8 | 29.7 | 46.4 | 7.6 | |
| 578364 | II | 46.1^{w} | 15.4 ^w | 10.4 | 3.8 | 30.0 | 48.7 | 7.2 | |
| 578365 | II | 43.3 | 16.7 | 11.3 | 4.2 | 31.3 | 47.4 | 5.8 | |
| 578366 | III | 45.4 | 15.8 | 9.1 | 4.5 | 30.6 | 49.0 | 6.8 | |
| 578367 | III | 43.8 | 18.5 | 9.8 | 4.6 | 27.0 | 50.9 | 7.7 | |
| 578368 | III | 43.7 | 17.6 | 9.7 | 4.1 | 22.9 | 55.4 | 7.7 | |
| 578369 | II | 45.1 | 18.1 | 12.1 | 4.0 | 30.4 | 47.7 | 5.8 | |
| 578370 | III | 41.8 | 19.0 | 10.1 | 3.9 | 29.0 | 50.5 | 6.5 | |
| 578370 578374 | III I | 41.6 48.6 way | 19.0 19.1 ^w ^ | 13.1^ | 3.5 [^] | 26.3 | 50.5 52.0^ | 5.1 [^] | |
| | | 51.2 ^w ^ | 19.1 ^\ 15.8 ^w ^ | | | 23.3^ | | | |
| 578375B | I | | 13.8 ^\ 18.0 ^w | 12.8^ | 3.8^ | | 53.5^ | 6.6^ | |
| 578376 | II | 41.4 ^w | | 12.5 | 3.8 | 23.0 | 54.2 | 6.5 | |
| 578378 | II | 40.9 | 18.7 | 12.8 | 4.0 | 24.8 | 51.2 | 7.3 | |
| 578379 | IV | 40.9 | 18.9 | 10.4 | 4.1 | 23.3 | 54.3 | 7.8 | |
| 578380A | I | 38.7^ | 22.0^ | 11.7^ | 4.5^ | 33.0^ | 45.8^ | 4.9^ | |
| 578380B | II | 40.7 | 19.7 | 12.5 | 4.5 | 24.9 | 51.8 | 6.3 | |
| 578382 | I | 43.6^ | 18.9^ | 11.2^ | 3.1^ | 28.2^ | 52.0^ | 5.5^ | |
| 578383 | IV | 47.2^{w} | 16.8^{w} | 12.9 | 3.4 | 25.0 | 51.6 | 7.1 | |
| 578384 | I | 41.2^ | 20.5^ | 11.8^ | 4.3^ | 25.2^ | 52.9^ | 5.9^ | |
| 578385 | I | 38.6^ | 20.2^ | 10.1^ | 3.6^ | 22.0^ | 56.2^ | 8.0^ | |
| 578388B | I | 45.6^ | 17.9^ | 10.8^ | 3.5^ | 25.2^ | 53.1^ | 7.5^ | |
| 578390 | II | 41.8 | 18.8 | 12.1 | 4.2 | 26.8 | 50.5 | 6.4 | |
| 578392A | I | 41.6^ | 19.7^ | 12.2^ | 3.2^ | 24.8^ | 53.5^ | 6.3^ | |
| 578392B | II | 42.1 | 19.3 | 11.2 | 4.4 | 28.0 | 50.0 | 6.4 | |
| 578399 | II | 40.7^{w} | 18.8^{w} | 12.6 | 3.9 | 26.3 | 50.9 | 6.4 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|------------------------------|-------------------|---------------|----------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 578400 | Fu dou | Jilin | China | China | 1993 | I |
| 578401A | Fu shou | Liaoning | China | China | 1993 | I |
| 578401A | (Fu shou) | Liaoning | China | China | 1993 | I |
| 578401B | (Fu shou) | Liaoning | China | China | 1993 | I |
| | | | China | China | 1993 | II |
| 578401D | (Fu shou) | Liaoning Jilin | China | China | 1993 | II |
| 578402 | Gong jiao 5201-18 | | | | | II |
| 578403 | Gong jiao 5202-4 | Jilin | China | China | 1993 | |
| 578405 | Gong jiao 5603-2 | Jilin | China | China | 1993 | II |
| 578406 | Gong jiao 5610-1 | Jilin | China | China | 1993 | II |
| 578407 | Gong jiao 5610-2 | Jilin | China | China | 1993 | I |
| 578408 | Gong jiao 5610-3 | Jilin | China | China | 1993 | I |
| 578409A | Gong jiao 5919-1 | Jilin | China | China | 1993 | I |
| 578409B | (Gong jiao 5919-1) | Jilin | China | China | 1993 | II |
| 578410 | Gong jiao 6005-2 | Jilin | China | China | 1993 | II |
| 578411 | Gong jiao 6005-3 | Jilin | China | China | 1993 | II |
| 578412 | Gong jiao 6308-1 | Jilin | China | China | 1993 | II |
| 578413 | Gong jiao 6309-1 | Jilin | China | China | 1993 | II |
| 578414 | Gong jiao 6309-2 | Jilin | China | China | 1993 | II |
| 578416 | Guo yu 98 | Jilin | China | China | 1993 | II |
| 578417B | (Guo yu B4) | Jilin | China | China | 1993 | I |
| 578418 | Guo yu B5 | Jilin | China | China | 1993 | I |
| 578419A | Guo yu B6 | Jilin | China | China | 1993 | II |
| 578419B | (Guo yu B6) | Jilin | China | China | 1993 | II |
| 578420 | Ha No. 1 | Jilin | China | China | 1993 | I |
| 578421 | Ha No. 3 | Jilin | China | China | 1993 | I |
| 578425 | He feng No. 6 | Heilongjiang | China | China | 1993 | I |
| 578431 | He jiao No. 6 | Heilongjiang | China | China | 1993 | I |
| 578432B | (He jiao No. 8) | Heilongjiang | China | China | 1993 | I |
| 578439 | Coc hong phuong a | (north) | Vietnam | Vietnam | 1993 | III |
| 578440 | Cuc luc ngan | (north) | Vietnam | Vietnam | 1993 | IV |
| 578473A | Tai Lake Yellow | unknown | China | China | 1993 | III |
| 578473B | (Tai Lake Yellow) | unknown | China | China | 1993 | IV |
| | Huai 810 | unknown | China | China | 1993 | IV |
| 578477B | (Huai 810) | unknown | China | China | 1993 | IV |
| 578477C | (Huai 810) | unknown | China | China | 1993 | IV |
| 578478A | Huai 823 | unknown | China | China | 1993 | IV |
| 578479 | Huai 833 | unknown | China | China | 1993 | III |
| 578481 | Nizhen No. 1 | unknown | China | China | 1993 | I |
| 578486 | Local variety | Uttar Pradesh | India | India | 1993 | III |
| 578490 | He nan zao feng No. 1 | Henan | China | China | 1994 | IV |
| 578492 | Hui chun dou | Jilin | China | China | 1994 | II |
| 578493 | Huang bao zhu | Jilin | China | China | 1994 | II |
| 578494A | Jin dou No. 1 | Shanxi | China | China | 1994 | IV |
| 578494A | (Jin dou No. 1) | Shanxi | China | China | 1994 1994 | III |
| 578494B | Jin dou No. 1) Jin dou No. 4 | Shanxi | China | | 1994 1994 | IV |
| | | | China | China China | | |
| 578497A | Jin yuan | Jilin | | China China | 1994 | III |
| 578497B | (Jin yuan) | Jilin | China | China | 1994 | III |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|---------|----|----|---------|-----|------------------|--------|----------------|---------------|---------------|
| | | | | | | | | | | | other traits | |
| 578400 | I | D | P | T | E | Ssp | Br | I | Y | Br | | 2N |
| 578401A | I | N | P | G | E | N | Tn | I | Y | Y | | 2N |
| 578401B | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 578401C | I | N | P | G | E | N | Br | I | Y | Y | | 2N |
| 578401D | II | N | P | G | E | N | Br | I | Y | Y | | 3N |
| 578402 | II | N | W | G | E | N | Tn | I | Y | Bf | Na, Vhil | 2N |
| 578403 | II | N | W | G | E | N | Br | I | Y | Lbf | | 3N |
| 578405 | II | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578406 | II | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578407 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 578408 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 578409A | I | N | W | G | E | N | Br | I | Y | Lbf | Na | 2N |
| 578409B | II | N | W | G | E | Ssp | Br | I | Y | Bf | Vhil | 3N |
| 578410 | II | D | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578411 | II | D | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578412 | II | N | W | G | E | Ssp | Br | I | Y | Y | Na | 3N |
| 578413 | II | D | W | G | E | N | Br | Ī | Y | Y | Vhil | 3N |
| 578414 | II | D | W | G | E | N | Br | Ī | Y | Y | , | 3N |
| 578416 | II | D | W | G | E | N | Br | Ī | Y | Y | Na | 3N |
| 578417B | I | N | W | G | E | N | Br | Ī | Y | Y | Vhil | 2N |
| 578418 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 578419A | II | N | W | G | E | Ssp | Tn | I | Y | Y | V 1111 | 3N |
| 578419B | II | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578420 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 578421 | I | N | W | G | E | N | Br | I | Y | Y | Viii | 1N |
| 578425 | I | N | P | G | E | N | Br | I | Y | Y | V 1111 | 2N |
| 578431 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 1R |
| 578432B | I | N | P VV | G | E | N | Br | I | Y | Y | VIIII | 2N |
| 578439 | III | S | r P | T | | N N | Tn | I | Y | Bl | | 3N |
| | III IV | S D | P P | G | A | N N | | I | Y | | | 3N |
| 578440 | | | | | A | | Tn | | Y | Dbf | X71.:1 | |
| 578473A | III | N | P | Lt | A | N | Tn | I | | Brbl | Vhil | 3N |
| 578473B | IV | D | P | G | Va | N | Tn | D | Y Y | Bf | Vhil | 3N |
| 578477A | IV | D | P P | G | A | Ssp | Tn | D | | Bf | | 3N |
| 578477B | IV | D | | T | A | N | Tn | D | Y | Br | 3 71 '1 | 3N |
| 578477C | IV | D | P | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 578478A | IV | N | W | G | Sa | N | Br | I | Y | Y | **** | 3N |
| 578479 | III | N | P | G | A | N | Tn | I | Y | Bf | Vhil | 3N |
| 578481 | I | D | P | T | Sa | N | Br | I | Y | Bl | | 3N |
| 578486 | III | D | P | G | E | Ssp | Br | D | Y | Y | Def | 3N |
| 578490 | IV | D | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578492 | II | S | W | G | E | N | Br | S | Y | Lbf | | 3N |
| 578493 | II | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 578494A | IV | N | W | T | E | Ssp | Br | I | Y | Bl | | 3N |
| 578494B | III | N | P | T | A | N | Tn | I | Y | Tn | | 3N |
| 578495 | IV | N | W | T | E | Ssp | Br | I | Y | Bl | | 3N |
| 578497A | III | D | W | G | E | Ssp | Br | I | Y | Y | | 3N |
| 578497B | III | D | W | G | E | N | Br | I | Y | Bf | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | 7 | | Stem | Shatter | ing | Seed | | | |
|-----------------|-----------|------------|---------|-----------|---------|---------|---------|---------|----------|----------------|------------------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 578400 | 627 | 831 | 1.0^ | 36 | 1.0^ | 3.0^ | 5.0^ | 2.0^ | 1.0 | 19.9^ | - |
| 578401A | 625 | 825^ | 2.0^ | 73* | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 14.1^ | 2.45^ |
| 578401B | 629 | 825^ | 1.0^ | 55* | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 16.7^ | 2.48^ |
| 578401C | 624 | 824^ | 3.0^ | 79* | 3.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 15.8^ | 2.63^ |
| 578401D | 703 | 907 | 1.8 | 94 | 3.0 | 1.0 | 1.5 | 2.8 | 2.5 | 13.8 | 2.55 |
| 578402 | 707* | 911 | 2.3 | 87 | 3.0 | 1.0 | 1.0 | 2.3 | 1.5 | 11.7 | 2.54 |
| 578403 | 628 | 903 | 2.3 | 94 | 3.0 | 1.0 | 1.5 | 3.0 | 1.0 | 14.1 | 2.30 |
| 578405 | 630* | 909 | 2.8 | 82* | 3.0 | 1.0 | 1.0 | 3.0 | 2.0 | 13.2 | 2.30 |
| 578406 | 629 | 904 | 2.8 | 91 | 3.0 | 1.0 | 2.0 | 2.5 | 1.0 | 16.5 | 2.44 |
| 578407 | 621 | 824 | 2.0^ | 69 | 3.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 13.1^ | 2.15^ |
| 578407 | 626 | 824 826 | 2.0^ | 74* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 14.5^ | 2.13^ |
| | | 827^ | | | | | | | | | |
| 578409A | 622 | | 2.5^ | 75 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.5^ | 2.52^ |
| 578409B | 703 | 905 | 3.0 | 80 | 3.0 | 1.0 | 1.0 | 2.8 | 1.0 | 17.2 | 2.28 |
| 578410 | 701* | 904 | 2.0 | 60* | 1.0 | 1.0 | 1.0 | 2.8 | 1.5 | 12.2 | 2.25 |
| 578411 | 701* | 907 | 2.0 | 63 | 1.0 | 1.0 | 2.5 | 2.5 | 1.5 | 12.6 | 2.43 |
| 578412 | 628 | 911 | 2.3 | 78 | 3.0 | 1.0 | 1.0 | 3.0 | 2.5 | 12.5 | 2.07 |
| 578413 | 629* | 903 | 2.0 | 66 | 1.0 | 1.0 | 3.5 | 3.3 | 2.0 | 12.8 | 2.25^ |
| 578414 | 629 | 902 | 1.5 | 57 | 1.0 | 1.0 | 1.5 | 2.8 | 1.5 | 13.0 | 2.43 |
| 578416 | 704 | 903 | 1.3 | 50 | 1.0 | 1.0 | 1.0 | 2.5 | 1.0 | 12.1 | 2.45^ |
| 578417B | 625 | 823^ | 3.0^ | 86* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 14.7^ | 2.54^ |
| 578418 | 624 | 824 | 1.5^ | 59* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 15.9^ | 2.11^ |
| 578419A | 707* | 915 | 3.3 | 127 | 4.0 | 1.0 | 1.0 | 3.3 | 2.5 | 15.1 | 2.22 |
| 578419B | 629* | 914 | 3.0 | 91 | 3.0 | 1.0 | 1.0 | 3.0 | 1.5 | 14.4 | 2.70 |
| 578420 | 621 | 828 | 2.0^ | 64 | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 16.2^ | - |
| 578421 | 623 | 823 | 1.5^ | 68* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.0^ | 2.41^ |
| 578425 | 623 | 823 | 1.0^ | 58* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 18.3^ | 2.71^ |
| 578431 | 623 | 819 | 1.5^ | 58* | 3.0^ | 1.0^ | 1.0^ | 4.0^ | 1.0 | 17.6^ | 2.21^ |
| 578432B | 624 | 824 | 1.0^ | 57* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.0^ | 2.82^ |
| 578439 | 803 | 927 | 4.3 | 63 | 2.0 | 2.0 | 3.0* | 3.0 | 2.5 | 8.7 | 0.45 |
| 578440 | 729 | 929 | 3.0 | 68 | 1.0 | 4.0* | 4.5 | 2.8 | 3.0 | 8.3 | 0.28 |
| 578473A | 723 | 922 | 2.8 | 106* | 4.0 | 4.0* | 5.0 | 3.5 | 3.0 | 12.7 | 0.83 |
| 578473B | 723 | 1001 | 1.8* | 31* | 1.0 | 2.0* | 3.0 | 2.5 | 1.0 | 19.6 | 0.44 |
| 578477A | 722 | 1001 | 2.5 | 70* | 1.0 | 1.0 | 1.5 | 3.0 | 1.0 | 22.9 | 1.25* |
| 578477B | 727 | 1001 | 2.3 | 69 | 1.0 | 1.0 | 1.5 | 2.3 | 3.0 | 12.5 | 1.29 |
| 578477C | 728 | 1003 | 2.8 | 81 | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 11.2 | 1.88 |
| 578478A | 711* | 1011 | 2.3 | 99 | 3.0 | 1.0 | 1.0 | 2.8 | 1.5 | 18.2 | 2.22 |
| 578479 | 723 | 926 | 3.0 | 64* | 3.0 | 2.0 | 3.5 | 2.8 | 1.0 | 18.7 | 1.00* |
| 578481 | 706 | 826 | 1.0^ | 34 | 1.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 16.6^ | 1.73^ |
| 578486 | 719 | 930 | 1.5 | 63 | 1.0 | 1.0 | 1.0 | 4.0 | 3.0 | 25.4* | 1.58 |
| 578490 | 728 | 1005 | 3.0 | 89* | 1.0 | 1.5 | 2.0* | 1.8 | 1.5 | 10.6 | 2.11 |
| 578492 | 701 | 904 | 2.0 | 74* | 2.0 | 1.0 | 1.0 | 2.3 | 2.0* | 11.6 | 2.33 |
| 578493 | 705 | 905 | 3.3 | 100 | 3.0 | 1.0 | 2.0 | 3.0 | 1.0 | 14.7 | 2.32 |
| 578494A | 718 | 1003 | 2.0 | 99 | 3.0 | 1.0 | 1.0 | 2.0 | 2.5 | 17.9 | 2.40 |
| 578494B | 721 | 927 | 2.5 | 71 | 3.0 | 1.0 | 1.0 | 2.5 | 2.5 | 16.4 | 1.79 |
| 578495 | 719 | 1009 | 2.0 | 108 | 3.0 | 1.0 | 1.0 | 2.0 | 2.0 | 18.3 | 2.17 |
| 578497A | 719 | 920 | 2.0 | 69 | 1.0 | 1.0 | 1.0 | 3.0 | 2.5 | 14.7 | 2.20 |
| 578497B | 713 | 922 | 2.3 | 61 | 1.0 | 1.0 | 2.0 | 2.5 | 1.0 | 17.9 | 2.95 |
| 510171 D | 113 | 122 | 2.5 | 01 | 1.0 | 1.0 | 2.0 | 2.5 | 1.0 | 11.7 | 2.75 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compos | sition | | | |
|--------------------|----------|----------|-----------|------------|---------|-------|---------------|------------------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 578400 | I | 41.5^ | 22.1^ | 10.7^ | 3.2^ | 37.8^ | 43.9^ | 4.4^ |
| 578401A | Ī | 39.8^ | 19.9^ | 12.2^ | 4.0^ | 21.5^ | 54.9^ | 7.4^ |
| 578401B | I | 43.4^ | 19.0^ | 11.9^ | 3.7^ | 27.2^ | 50.6^ | 6.7^ |
| 578401C | I | 41.3^ | 19.3^ | 11.5^ | 3.5^ | 29.4^ | 49.5^ | 6.1^ |
| 578401D | II | 41.6 | 17.9 | 12.0 | 3.7 | 26.1 | 51.1 | 7.1 |
| 578402 | II | 39.1 | 20.1 | 12.4 | 4.1 | 24.0 | 53.7 | 5.9 |
| 578402 578403 | II | 41.8 | 19.3 | 11.1 | 4.5 | 30.8 | 48.0 | 5.6 |
| 578405 578405 | II | 43.0 | 18.7 | 11.1 | 4.3 | 27.1 | 51.5 | 6.0 |
| 578405 578406 | II | 43.0 | 20.7 | 11.1 | | 31.1 | 47.5 | 5.8 |
| | | 38.5^ | | | 4.6 | 29.1 | 47.3 48.4^ | |
| 578407 | I | | 23.4^ | 11.5^ | 4.6^ | | | 6.4 [^] |
| 578408 578408 A | I | 38.3^ | 23.1^ | 11.2^ | 4.8^ | 34.6^ | 44.3^ | 5.1^ |
| 578409A | I | 40.4^ | 20.1^ | 11.4^ | 4.4^ | 27.0^ | 51.3^ | 5.9^ |
| 578409B | II | 42.5 | 19.4 | 11.8 | 4.6 | 32.2 | 45.6 | 5.7 |
| 578410 | II | 40.5 | 20.8 | 12.3 | 4.1 | 28.1 | 49.6 | 5.9 |
| 578411 | II | 40.2 | 19.6 | 14.1 | 5.0 | 29.3 | 46.3 | 5.3 |
| 578412 | II | 41.5 | 18.7 | 14.9 | 4.0 | 26.6 | 49.0 | 5.6 |
| 578413 | II | 39.7 | 21.2 | 12.1 | 4.7 | 32.0 | 45.7 | 5.5 |
| 578414 | II | 40.0 | 21.3 | 11.9 | 4.6 | 31.8 | 46.1 | 5.5 |
| 578416 | II | 38.1 | 20.6 | 10.9 | 4.3 | 26.0 | 52.3 | 6.6 |
| 578417B | I | 40.4^ | 21.0^ | 10.8^ | 4.6^ | 30.3^ | 49.2^ | 5.1^ |
| 578418 | I | 40.2^ | 19.9^ | 11.3^ | 3.8^ | 29.2^ | 49.8^ | 5.9^ |
| 578419A | II | 43.7 | 17.8 | 12.3 | 3.8 | 25.0 | 52.6 | 6.3 |
| 578419B | II | 43.3 | 18.4 | 11.0 | 3.9 | 29.1 | 50.1 | 5.9 |
| 578420 | I | 38.6^ | 21.8^ | 11.2^ | 4.6^ | 27.1^ | 51.2^ | 5.9^ |
| 578421 | I | 39.6^ | 22.0^ | 11.1^ | 4.1^ | 27.1^ | 51.8^ | 5.9^ |
| 578425 | I | 41.7^ | 20.5^ | 11.9^ | 4.2^ | 29.5^ | 48.8^ | 5.6^ |
| 578431 | I | 40.6^ | 22.3^ | 11.0^ | 4.2^ | 34.0^ | 45.9^ | 4.9^ |
| 578432B | Ī | 41.8^ | 20.4^ | 11.9^ | 4.2^ | 27.6^ | 49.9^ | 6.3^ |
| 578439 | III | 47.1 | 15.2 | 10.0 | 5.3 | 26.9 | 50.1 | 7.8 |
| 578440 | IV | 42.4 | 17.0 | 10.7 | 4.3 | 29.9 | 47.2 | 7.8 |
| 578473A | III | 46.7 | 15.1 | 12.0 | 3.9 | 27.8 | 49.7 | 6.5 |
| 578473B | IV | 43.5 | 16.9 | 9.8 | 3.4 | 26.9 | 53.2 | 6.7 |
| 578477 D | IV | 43.6 | 16.4 | 8.8 | 4.0 | 30.0 | 51.3 | 5.8 |
| | IV IV | 43.0 | 17.8 | 9.3 | | 24.9 | 54.5 | 7.4 |
| 578477B | | | | | 3.8 | | | |
| 578477C | IV | 41.7 | 17.1 | 9.1 | 3.7 | 23.3 | 56.2 | 7.6 |
| 578478A | IV | 46.6 | 15.3 | 10.6 | 3.6 | 20.4 | 56.3 | 9.1 |
| 578479 | III | 42.5 | 18.2 | 10.6 | 3.9 | 30.1 | 49.7 | 5.6 |
| 578481 | I | 41.3^ | 19.5^ | 11.4^ | 4.5^ | 25.6^ | 52.0^ | 6.5^ |
| 578486 | III | 46.0 | 16.9 | 9.2 | 3.5 | 26.2 | 53.9 | 7.2 |
| 578490 | IV | 44.7 | 17.3 | 10.0 | 4.0 | 21.1 | 57.0 | 7.9 |
| 578492 | II | 40.7 | 18.8 | 11.4 | 4.3 | 28.0 | 50.3 | 6.1 |
| 578493 | II | 41.8 | 21.0 | 10.8 | 5.0 | 33.4 | 45.2 | 5.6 |
| 578494A | IV | 41.7 | 18.5 | 10.1 | 4.9 | 28.9 | 51.0 | 5.1 |
| 578494B | III | 43.9 | 18.3 | 9.2 | 4.3 | 25.7 | 54.6 | 6.2 |
| 578495 | IV | 42.3 | 18.3 | 9.7 | 5.4 | 25.7 | 53.7 | 5.4 |
| 578497A | III | 42.2 | 17.6 | 10.4 | 4.3 | 20.7 | 56.4 | 8.1 |
| 578497B | III | 41.4 | 19.6 | 10.2 | 3.9 | 26.5 | 52.7 | 6.7 |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|------------|----------------------------|-----------|---------|----------------|--------------------------|-------|
| | Accession | Region | of | of | introduced | • |
| PI No. io | dentifier | of origin | origin | acquisition | or released | group |
| 578498A Ju | ı xuan 23 | Shandong | China | China | 1994 | III |
| | u yue bai | unknown | China | China | 1994 | II |
| | Lu yue bai) | unknown | China | China | 1994 | II |
| | Lu yue bai) | unknown | China | China | 1994 | II |
| | un xuan No. 1 | Jilin | China | China | 1994 | II |
| | ie 5621 | Liaoning | China | China | 1994 | II |
| | ie jia si li huang | Jilin | China | China | 1994 | I |
| | iang dou No. 3 | Hunan | China | China | 1994 | II |
| | iao jin huang No. 1 | Jilin | China | China | 1994 | II |
| | /u xian gui yuan huang | Jiangsu | China | China | 1994 | IV |
| | ai men bai mao jia | Jiangsu | China | China | 1994 | IV |
| | /u jin xi zi wan dou | Jiangsu | China | China | 1994 | IV |
| | ang yin hei dou | Jiangsu | China | China | 1994 | III |
| | ng 789 | Hubei | China | China | 1994 | IV |
| | ei huang dou | Hubei | China | China | 1994 | IV |
| | iu yue bao | Sichuan | China | China | 1994 | IV |
| | uang dou | Sichuan | China | China | 1994 | IV |
| | iao huang dou | Sichuan | China | China | 199 4 1994 | III |
| | _ | | China | | 199 4 1994 | IV |
| | iu yue huang No. 1 | Sichuan | China | China China | 199 4 1994 | III |
| * | Liu yue huang No. 1) | Sichuan | | | | |
| | Liu yue huang No. 1) | Sichuan | China | China | 1994 | IV |
| | a huang dou | Sichuan | China | China | 1994 | III |
| | uang mao bai shui dou | Sichuan | China | China | 1994 | III |
| | Huang mao bai shui dou) | Sichuan | China | China | 1994 | IV |
| | huang zhuang dou | Sichuan | China | China | 1994 | IV |
| | Zhuang zhuang dou) | Sichuan | China | China | 1994 | IV |
| | a li dong dou | Sichuan | China | China | 1994 | IV |
| | Shuang hua huang jiao dou) | Sichuan | China | China | 1994 | IV |
| | iu yue huang | Sichuan | China | China | 1994 | III |
| | Cheng guan ba yue huang) | Sichuan | China | China | 1994 | IV |
| | iu yue huang | Sichuan | China | China | 1994 | IV |
| | Liu yue huang) | Sichuan | China | China | 1994 | IV |
| | Liu yue huang) | Sichuan | China | China | 1994 | IV |
| | Liu yue huang) | Sichuan | China | China | 1994 | IV |
| | ai mao zi | Sichuan | China | China | 1994 | III |
| , | Bai mao zi) | Sichuan | China | China | 1994 | IV |
| , | Bai mao zi) | Sichuan | China | China | 1994 | IV |
| | iang shan ba yue huang | Sichuan | China | China | 1994 | IV |
| | uo xi | Sichuan | China | China | 1994 | IV |
| | Luo xi) | Sichuan | China | China | 1994 | IV |
| * | Luo xi) | Sichuan | China | China | 1994 | IV |
| | lei zao dou | Sichuan | China | China | 1994 | IV |
| | iao bai dou No. 1 | Sichuan | China | China | 1994 | IV |
| * | Kiao bai dou No. 1) | Sichuan | China | China | 1994 | IV |
| * | Kiao bai dou No. 1) | Sichuan | China | China | 1994 | IV |
| , | Kiao bai dou No. 1) | Sichuan | China | China | 1994 | IV |
| 588050A Da | a li huang | Guangdong | China | China | 1994 | III |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco Luster | | Hilum color | Other traits | Seed shape |
|------------------------------------|-------------------|--------|---------|----|-----|---------|------|------------------|-----|----------------|--------------|---------------|
| | | | | | | • | | | | | | |
| 578498A | III | D | W | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 578499A | II | D | P | T | A | Ssp | Br | D | Gn | Br | | 3N |
| 578499B | II | D | P | T | A | N | Br | I | Gn | Br | | 3N |
| 578499C | II | D | P | T | A | N | Br | I | Gn | Br | | 3N |
| 578500 | II | N | W | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 578502 | II | D | P | G | E | N | Bl | I | Y | Y | | 2N |
| 578503 | I | N | W | G | E | Ssp | Bl | I | Y | Lbf | Na | 1N |
| 578504 | II | N | P | G | Sa | N | Tn | I | Y | Ib | Vhil | 3N |
| 578505 | II | D | W | G | E | N | Br | I | Y | Bf | | 3N |
| 587576 | IV | D | W | G | A | N | Tn | I | Y | Bf | Sabh | 3N |
| 587607A | IV | D | W | G | Va | N | Tn | I | Y | Bf | | 3N |
| 587636 | IV | D | P | T | A | N | Br | I | Bl | Bl | | 3N |
| 587637 | III | D | P | T | A | N | Br | Lb | Bl | Bl | | 3N |
| 587804 | IV | N | P | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 587845 | IV | S | W | Lt | A | N | Br | I | Bl | Bl | | 3N |
| 587967 | IV | D | W | G | A | N | Br | Ī | Y | Bf | | 3N |
| 587976A | IV | S | P | T | A | N | Tn | Ī | Y | Br | | 3N |
| 587977 | III | S | P | T | A | N | Tn | I | Y | Br | | 3N |
| 587980A | IV | S | P | T | Sa | N | Tn | I | Y | Bl | | 3N |
| 587980B | III | S | P | T | A | N | Tn | I | Y | Br | | 3N |
| 587980C | IV | D | W | T | A | N | Tn | I | Y | Br | | 3N |
| 587981 | III | S | vv P | T | | N | Tn | I | Y | | | 3N |
| | | S S | W | | A | | | | Y | Br Bf | | |
| 587982A | III | | | G | A | N | Br | I | | | 3.71. '1 | 2N |
| 587982B | IV | D | P | Lt | Sa | N | Br | I | Y | Brbl | Vhil | 3N |
| 587983A | IV | S | W | T | Sa | N | Br | I | Y | Brbl | Vhil | 3N |
| 587983B | IV | S | W | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 587987A | IV | D | P | G | Α | N | Tn | I | Y | Bf | | 3N |
| 587989B | IV | S | W | T | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 587991 | III | D | P | G | A | N | Tn | I | Y | Ib | | 3N |
| 587998H | IV | D | W | T | A | N | Br | I | Y | Rbr | | 3N |
| 587999A | IV | D | P | G | A | N | Br | I | Y | Ib | | 3N |
| 587999B | IV | D | P | G | A | N | Br | I | Y | Bf | | 3N |
| 587999C | IV | D | W | G | A | N | Br | I | Y | Bf | | 3N |
| 587999D | IV | S | W | T | A | N | Br | I | Y | Br | | 3N |
| 588008A | III | S | P | T | A | N | Tn | I | Y | Br | | 3N |
| 588008B | IV | D | P | G | A | N | Tn | I | Y | Bf | | 3N |
| 588008C | IV | S | P | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 588016 | IV | D | W | G | A | N | Tn | I | Y | Bf | | 3N |
| 588026A | IV | D | P | Lt | Sa | Ssp | Br | D | Y | Bl | | 3N |
| 588026B | IV | D | W | Lt | Е | N | Br | I | Y | Br | | 3N |
| 588026C | IV | D | W | T | Sa | N | Tn | Ī | Y | Br | | 3N |
| 588028 | IV | S | W | G | E | N | Br | Ī | Lgn | Dib | | 3N |
| 588033A | IV | D | W | G | A | N | Br | I | Y | Bf | | 3N |
| 588033A 588033B | IV | S | P | G | Sa | N | Br | I | Y | Ib | Vhil | 3N |
| 588033 D 588033 C | IV | D | P | G | E | N | Br | I | Y | Bf | Y 1111 | 3N |
| 588033D | IV | S | P | G | Sa | N | Bl | I | Lgn | Bf | | 3N |
| 588053D 588050A | III | D | P | T | Va | N | Tn | I | Y | Bl | | 3N |
| JOOUJUA | 111 | D | I | 1 | v a | IA | 1 11 | 1 | 1 | ы | | 31 N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| date date Lodging Height term. early late Quality Mottling Weight Yield | | Flowering | g Maturity | : | | Stem | Shatter | ing | Seed | | | |
|---|---------|-----------|------------|---------|-------|---------|---------|---------|---------|----------|----------------|------------------------|
| 578498A 720 924 3.5 72* 1.0 1.0 1.5 2.8 2.0 15.0 2.53* 578499A 721 915 2.5 68* 1.0 2.5 4.5 3.0 2.0 12.9 1.03 578499C 717 913 1.8 53* 1.0 3.5 5.0 2.8 2.5 1.6 0.81 578500 629 907 2.3 86 3.0 1.0 2.0 3.0 2.5 11.2 0.73 578500 629 907 2.3 86 3.0 1.0 2.0 3.0 2.5 11.2 0.73 578503 626 827* 2.5* 71* 3.0* 1.0 2.0 2.5* 2.0 10.4* 2.17* 578503 626 827* 2.5* 71* 3.0* 1.0 2.0 3.5 2.8 1.0 1.0 2.0 3.0 2.5* 2.8 1.0 1.0 1.0 1.0 </th <th></th> <th>date</th> <th>date</th> <th>Lodging</th> <th>Heigh</th> <th>t term.</th> <th>early</th> <th>late</th> <th>Quality</th> <th>Mottling</th> <th></th> <th></th> | | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | |
| 578499A 721 915 2.5 68* 1.0 2.5 4.5 3.0 2.0 1.29 1.03 578499B 721 915 2.5 59* 1.0 2.0 4.5 2.8 2.5 12.6 0.81 578500 629 907 2.3 86 3.0 1.0 2.0 3.0 2.5 11.2 0.73 578502 708 917 1.5 62* 1.0 1.5 3.0 3.0 2.5 11.3 2.34 578504 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 1.0 2.5 2.8 1.0 1.0 2.5 2.8 1.0 1.0 2.5 2.8 1.0 1 | Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 578499A 721 915 2.5 68* 1.0 2.5 4.5 3.0 2.0 1.29 1.03 578499B 721 915 2.5 59* 1.0 2.0 4.5 2.8 2.5 12.6 0.81 578500 629 907 2.3 86 3.0 1.0 2.0 3.0 2.5 11.2 0.73 578502 708 917 1.5 62* 1.0 1.5 3.0 3.0 2.5 11.3 2.34 578504 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 1.0 2.5 2.8 1.0 1.0 2.5 2.8 1.0 1.0 2.5 2.8 1.0 1 | 578498A | 720 | 924 | 3.5 | 72* | 1.0 | 1.0 | 1.5 | 2.8 | 2.0 | 15.0 | 2.53* |
| 578499B 721 915 2.5 59* 1.0 2.0 4.5 2.8 2.5 12.6 0.81 578499C 717 913 1.8 53* 1.0 3.5 5.0 2.8 2.5 11.2 0.73 578502 708 917 1.5 62* 1.0 1.5 3.0 3.0 2.5 11.3 2.10 578503 626 827^* 2.5 71* 3.0° 1.0° 2.0° 2.5 2.0 10.4^* 2.17^* 578504 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 1.0 2.5 2.8 1.0 1.0 2.5 2.8 1.0 1.0 2.2 2.5 2.8 1.0 | | | | | | | | | | | | |
| 578499C 717 913 1.8 53* 1.0 3.5 5.0 2.8 2.5 11.2 0.73 578500 629 907 2.3 86 3.0 1.0 2.0 3.0 2.5 13.5 2.10 578503 626 827* 2.5^ 71* 3.0^ 1.0 2.5 11.3 2.34 578504 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 10.4 2.17* 578505 703 907 2.3 68 1.5 1.0 2.5 2.8 1.0 10.2 2.2 2.45 587576 731 1002 2.0 67 1.0 1.0 1.0 1.8 1.0 1.0 1.2 2.8 1.3 1.47 587636 722 930 2.5 85* 1.0 2.0 3.5 2.3 19.4 1.61 587636 722 930 | | | | | | | | | | | | |
| 578500 629 907 2.3 86 3.0 1.0 2.0 3.0 2.5 13.5 2.10 578502 708 917 1.5 62* 1.0 1.5 3.0 3.0 2.5 11.3 2.34 578504 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 8.9 0.60 578505 703 907 2.3 68 1.5 1.0 2.5 2.8 1.0 1.2 2.45 587576 731 1009 2.8 81 1.0 1.0 2.5 2.8 1.0 < | | | | | | | | | | | | |
| 578502 708 917 1.5 62° 1.0 1.5 3.0 3.0 2.5 11.3 2.34 578503 626 827° 2.5° 71* 3.0° 1.0° 2.0° 2.5° 2.0 10.4° 2.17° 578504 729 911 3.5 60 4.0° 2.0° 3.5 2.8 1.0 12.2 2.45 5875076 731 1009 2.8 81 1.0 1.0 2.5 2.8 1.0 12.2 2.45 587607A 724 1002 2.0 67 1.0 1.0 1.0 1.8 1.0 13.0 1.80 587636 722 930 2.5 85* 1.0 2.0 3.5 2.3 19.4 1.61 587637 725 925 2.8 93* 1.5 2.0 4.0 2.3 13.6 1.55 587845 804 1003 3.5 68* | | | | | | | | | | | | |
| 578503 626 827^{\chick} 2.5^{\chick} 71* \(3.0^{\chick} \) 1.0^{\chick} \) 2.0^{\chick} \) 1.04 \(8.9 \) 0.60 578504 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 8.9 0.60 578505 731 1009 2.8 81 1.0 1.0 2.5 2.8 1.0 1.2 2.45 5875076 731 1009 2.8 81 1.0 <td></td> | | | | | | | | | | | | |
| 578SO4 729 911 3.5 60 4.0 2.0 3.5 2.8 1.0 8.9 0.60 578SO5 703 907 2.3 68 1.5 1.0 2.5 2.8 1.0 1.2 2.45 5876O7A 724 1002 2.0 67 1.0 1.0 1.0 1.8 1.0 13.0 1.80 5876O7A 724 1002 2.0 67 1.0 1.0 1.0 1.8 1.0 13.0 1.80 5876O7A 725 925 2.5 85* 1.0 2.0 3.5 2.3 19.4 1.61 5876O7A 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 5878OA 726 929 3.8 63 2.0 1.0 1.0 2.2 2.0 11.5 0.5 5879ACA 731 1003 3.4 63 2.0 | | | | | | | | | | | | |
| 578505 703 907 2.3 68 1.5 1.0 2.5 2.8 1.0 1.2.2 2.45 587576 731 1009 2.8 81 1.0 1.0 2.5 2.8 3.5 13.3 1.47 587636 722 930 2.5 85* 1.0 2.0 3.5 2.3 19.4 1.61 587637 725 925 2.8 93* 1.5 2.0 4.0 2.3 19.4 1.61 587643 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 587845 804 1003 4.3 76 2.0 1.0 1.0 2.8 3.5 9.9 1.64 587967 731 1003 3.5 68* 1.0 1.0 1.0 2.3 2.0 11.0 1.60 587976A 802 925 3.8 63 <td></td> | | | | | | | | | | | | |
| 587576 731 1009 2.8 81 1.0 1.0 2.5 2.8 3.5 13.3 1.47 587607A 724 1002 2.0 67 1.0 1.0 1.0 1.8 1.0 13.0 1.80 587636 722 930 2.5 88* 1.0 2.0 3.5 2.3 19.4 1.61 587637 725 925 2.8 93* 1.5 2.0 4.0 2.3 13.6 1.55 587804 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 587967 731 1003 3.5 68* 1.0 1.0 1.0 2.3 2.0 11.0 1.60 5879767 731 1003 3.5 68* 1.0 1.0 1.0 2.3 2.0 11.0 1.60 5879767 731 1017 3.3 1 | | | | | | | | | | | | |
| 587607A 724 1002 2.0 67 1.0 1.0 1.0 1.8 1.0 13.0 1.80 587636 722 930 2.5 85* 1.0 2.0 3.5 2.3 13.6 1.55 587804 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 587845 804 1003 4.3 76 2.0 1.0 1.5 2.5 10.0 1.48* 587967 731 1003 3.5 68* 1.0 1.0 1.0 2.3 2.0 11.5 0.34 587976A 806 929 3.8 63 2.0 2.5 3.0 2.5 2.5 11.0 1.60 2.5 5.87980A 729 1017 3.3 100 2.0 1.0 1.0 2.8 3.0 11.5 0.55 587980A 729 1017 3.3 < | | | | | | | | | | | | |
| 587636 722 930 2.5 85* 1.0 2.0 3.5 2.3 19.4 1.61 587637 725 925 2.8 93* 1.5 2.0 4.0 2.3 13.6 1.55 587804 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 587967 731 1003 3.5 68* 1.0 1.0 1.5 2.5 10.0 1.48* 587976A 806 929 3.8 63 2.0 2.5 3.0* 2.5 2.0 11.5 0.34 5879777 802 925 4.0 61 2.0 2.5 3.0 2.5 2.0 11.5 0.34 587980A 729 1017 3.3 100 2.0 1.0 1.0 2.8 2.5 11.7 0.55 587980C 727 1001 3.8 8 | | | | | | | | | | | | |
| 587637 725 925 2.8 93* 1.5 2.0 4.0 2.3 13.6 1.55 587804 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 587967 731 1003 3.5 68* 1.0 1.0 1.0 2.3 2.0 11.0 1.60 587976A 806 929 3.8 63 2.0 2.5 3.0* 2.5 2.0 11.5 0.34 587977 802 925 4.0 61 2.0 2.5 4.0 2.5 2.5 2.0 11.5 0.34 587980A 729 1017 3.3 100 2.0 1.0 1.0 2.8 2.5 1.1 0.36 58798D 804 925 3.8 53 2.0 2.5 3.5 2.8 2.5 11.7 0.25 58798D 727 1001 3.8< | | | | | | | | | | | | |
| 587804 726 929 3.3 103 4.0 1.0 1.0 2.8 3.5 9.9 1.64 587845 804 1003 4.3 76 2.0 1.0 1.5 2.5 10.0 1.48* 587967A 806 929 3.8 63 2.0 2.5 3.0* 2.5 2.0 11.0 1.60 587976A 806 929 3.8 63 2.0 2.5 3.0* 2.5 2.0 11.5 0.34 587977A 802 925 4.0 61 2.0 2.5 4.0 2.5 2.5 11.7 0.55 587980B 804 925 3.8 53 2.0 2.5 3.5 2.8 3.0 11.3 0.36 587980C 727 1001 3.8 85* 1.5 1.0 2.0* 2.8 2.5 11.4 1.24 587982A 727 928 3.0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | | | | | |
| 587845 804 1003 4.3 76 2.0 1.0 1.5 2.5 10.0 1.48* 587967 731 1003 3.5 68* 1.0 1.0 1.0 2.3 2.0 11.0 1.60 587976A 806 929 3.8 63 2.0 2.5 3.0* 2.5 2.0 11.5 0.34 5879777 802 925 4.0 61 2.0 2.5 4.0 2.5 1.17 0.55 587980A 729 1017 3.3 100 2.0 1.0 1.0 2.8 3.0 13.6 1.38 587980B 804 925 3.8 53 2.0 2.5 3.5 2.8 3.0 11.3 0.36 58798D 727 1001 3.8 85* 1.5 1.0 2.0* 2.8 2.5 11.4 1.24 587981A 727 925 3.3 777* 2.0 1.0 | | | | | | | | | | | | |
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| 588033B 728 1007 3.0 90* 2.0 1.0 1.0 2.0 2.0 8.7 1.62 588033C 729 1007 3.0 97 1.5 1.5 1.5 2.3 2.5 9.4 1.61* | | | | | | | | | | | | |
| 588033C 729 1007 3.0 97 1.5 1.5 1.5 2.3 2.5 9.4 1.61* | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 588033D 802 1007 2.5 92* 2.0 1.5 2.0 2.5 3.0 9.0 1.26 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 588050A 727 926 3.8 65 1.0 1.0 1.5 2.8 2.5 16.5 1.16 | 588050A | 727 | 926 | 3.8 | 65 | 1.0 | 1.0 | 1.5 | 2.8 | 2.5 | 16.5 | 1.16 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compo | sition | | | |
|------------------------------|----------|---------------------------|---------------------------|-----------|---------|--------------|--------------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 578498A | III | 43.6 | 18.0 | 10.0 | 4.1 | 26.2 | 52.8 | 6.9 |
| 578499A | II | 46.2 ^w | 16.7 ^w | 13.4 | 3.8 | 26.4 | 49.0 | 7.5 |
| 578499B | II | 44.6 ^w | 16.7 ^w | 13.7 | 3.6 | 27.1 | 48.6 | 6.9 |
| 578499C | II | 41.7 ^w | 17.4 ^w | 13.2 | 3.8 | 26.1 | 49.6 | 7.4 |
| 578500 | II | 41.4 | 17.7 | 12.5 | 4.3 | 22.6 | 52.9 | 7.8 |
| 578502 | II | 39.8 | 19.1 | 11.0 | 3.3 | 25.3 | 53.6 | 6.8 |
| 578502 578503 | I | 40.4^ | 18.4^ | 12.2^ | 4.0^ | 21.7 | 55.3^ | 6.8^ |
| 578503 578504 | II | 43.6 | 17.0 | 12.4 | 4.0 | 28.6 | 48.8 | 6.1 |
| 57850 4 578505 | II | 39.9 | 20.3 | 11.0 | 4.1 | 29.4 | 40.6 49.6 | 5.8 |
| | II IV | 39.9 44.5 ^w | 20.5 17.6 ^w | | | | | |
| 587576 587607A | | | | 10.0 | 3.4 | 26.5 | 52.8 | 7.3 |
| 587607A | IV | 42.5 | 18.9 | 9.3 | 5.0 | 27.6 | 52.0 | 6.1 |
| 587636 | IV | 45.7 ^w | 16.7 ^w | 11.8 | 3.1 | 23.5 | 54.6 | 6.9 |
| 587637 | III | 43.4 ^w | 18.6 ^w | 13.2 | 3.3 | 25.8 | 51.0 | 6.7 |
| 587804 | IV | 42.5 | 15.3 | 11.1 | 4.2 | 23.9 | 52.5 | 8.4 |
| 587845 | IV | 45.4 ^w | 15.2 ^w | 12.7 | 4.0 | 22.9 | 51.7 | 8.7 |
| 587967 | IV | 43.9 | 15.8 | 9.5 | 4.2 | 22.0 | 56.1 | 8.3 |
| 587976A | IV | 45.3 | 15.4 | 10.0 | 4.0 | 28.0 | 51.3 | 6.7 |
| 587977 | III | 45.5 | 15.7 | 10.2 | 3.9 | 26.5 | 52.2 | 7.2 |
| 587980A | IV | 45.1 | 14.7 | 9.4 | 4.2 | 24.2 | 55.6 | 6.6 |
| 587980B | III | 45.8 | 15.6 | 10.0 | 4.2 | 25.7 | 52.8 | 7.3 |
| 587980C | IV | 46.6 | 15.0 | 10.5 | 4.0 | 24.2 | 53.2 | 8.2 |
| 587981 | III | 46.0 | 15.4 | 9.7 | 3.8 | 24.5 | 54.3 | 7.7 |
| 587982A | III | 41.4 | 17.3 | 10.8 | 4.2 | 27.1 | 49.9 | 7.9 |
| 587982B | IV | 45.6 ^w | 15.2 ^w | 12.7 | 3.3 | 30.6 | 47.0 | 6.4 |
| 587983A | IV | 43.2 | 15.3 | 9.4 | 4.0 | 23.5 | 55.1 | 8.1 |
| 587983B | IV | 43.5 | 15.6 | 9.3 | 4.3 | 23.0 | 55.4 | 7.9 |
| 587987A | IV | 43.9 | 17.3 | 10.8 | 4.7 | 28.0 | 50.3 | 6.2 |
| 587989B | IV | 42.1 | 16.5 | 9.5 | 4.5 | 26.4 | 52.8 | 6.9 |
| 587991 | III | 44.1 | 14.1 | 9.1 | 3.5 | 24.2 | 56.4 | 6.9 |
| 587998H | IV | 44.0 ^w | 17.6 ^w | 12.6 | 3.1 | 20.5 | 56.2 | 7.7 |
| 587999A | IV | 42.3 | 16.3 | 10.4 | 4.2 | 26.0 | 51.8 | 7.5 |
| 587999B | IV IV | 42.3 45.5 | 14.0 | 10.4 | 4.2 | 20.0 19.7 | 57.5 | 8.6 |
| 587999 Б 587999С | | | | | | | | |
| | IV | 45.2 | 14.1 14.3 ^w | 9.7 | 3.3 | 22.1 | 56.2 | 8.7 |
| 587999D | IV | 49.5 ^w | | 9.9 | 4.0 | 23.6 | 54.0 | 8.5 |
| 588008A | III | 43.1 | 15.6 | 9.6 | 5.1 | 33.4 | 45.9 | 6.0 |
| 588008B | IV | 43.6 | 15.1 | 10.0 | 4.3 | 27.2 | 51.3 | 7.2 |
| 588008C | IV | 44.2 | 15.1 | 10.2 | 4.0 | 25.5 | 52.5 | 7.7 |
| 588016 | IV | 46.3 | 15.1 | 9.5 | 4.9 | 32.1 | 47.1 | 6.3 |
| 588026A | IV | 43.9 | 15.5 | 10.5 | 5.4 | 25.2 | 52.6 | 6.3 |
| 588026B | IV | 45.8 | 15.0 | 10.4 | 3.7 | 25.4 | 52.7 | 7.8 |
| 588026C | IV | 44.4 | 14.9 | 15.0 | 3.9 | 19.1 | 57.4 | 4.6 |
| 588028 | IV | 46.1^{w} | 15.4^{w} | 12.1 | 3.5 | 23.9 | 52.6 | 7.9 |
| 588033A | IV | 44.2 | 16.0 | 10.7 | 3.9 | 24.0 | 53.4 | 8.0 |
| 588033B | IV | 41.9 | 16.5 | 12.1 | 3.6 | 22.5 | 53.7 | 8.0 |
| 588033C | IV | 41.4 | 15.8 | 10.8 | 4.0 | 22.8 | 53.8 | 8.5 |
| 588033D | IV | 45.0^{w} | 16.4^{w} | 12.3 | 3.1 | 22.2 | 53.6 | 8.8 |
| 588050A | III | 42.8 | 16.8 | 9.8 | 4.4 | 24.8 | 54.3 | 6.7 |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| New Introduced Maturity New Introduced Maturity New Introduced Maturity New New | | | | Country | Country | Year | |
|---|----------|-------------------|-------------------|---------|-------------|-------------|----------|
| \$88052A Yue dou No. 1 | | Accession | Region | of | of | introduced | Maturity |
| Sey289 | PI No. | identifier | of origin | origin | acquisition | or released | group |
| Sey289 | 588052 A | Vue dou No. 1 | Guanadona | China | China | 199/ | IV |
| Segon | | Tuc dou 140. 1 | | | | | |
| 592905 Kitami nagaha unknown Japan Japan 1994 1 592907R unknown Russia Russia 1993 1 592907D unknown Russia Russia 1993 1 592907D unknown Russia Russia 1993 1 592907D unknown Russia Russia 1993 1 592910 unknown Russia Russia 1993 II 592910 unknown Russia Russia 1993 II 592911B unknown Russia Russia 1993 I 592912A unknown Russia Russia 1993 I 59291B unknown Russia Russia 1993 I 59291B unknown Russia Russia 1993 I 59291B Hei nong 37 Heilongjiang China 1993 I 59291B Tog nong No. 8 Jilin China | | | <i>3</i> C | | | | |
| S92907A | | Vitami nagaha | | | | | |
| 592907B unknown Russia Russia 1993 1 592907D unknown Russia Russia 1993 1 592907D unknown Russia Russia 1993 1 592910 unknown Russia Russia 1993 II 592911A unknown Russia Russia 1993 I 592911B unknown Russia Russia 1993 I 592912A unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592912 Hei nong 37 Heilongjiang China China 1993 I 592921 Orgong nong No. 8 Jilin China China 1994 I 592922 Chen dou No. 4 unknown China China 1994 II 592923 Gong dou No. 4 unknown China China 1994 II 592923 Cao shu No. 2 Beijing China | | Kitaiiii iiagaiia | | - | • | | |
| 592907C unknown Russia Russia 1993 I 592907B unknown Russia Russia 1993 I 592908 unknown Russia Russia 1993 II 592910 unknown Russia Russia 1993 II 592911A unknown Russia Russia 1993 I 592911B unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592912 Hei nong 37 Heilongjiang China China 1993 I 592921 Corpong No. 8 Jilin China China 1994 I 592921 Corpong No. 8 Jilin China China 1994 I 592922 Corpong Ou No. 4 unknown China China 1994 II 5929232 Corpong Ou No. 1 Jiangsu China | | | | | | | |
| 592907D | | | | | | | |
| 592908 unknown Russia Russia 1993 II 592911A unknown Russia Russia 1993 I 592911B unknown Russia Russia 1993 I 592912A unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592911 Hei nong 37 Heilongjiang China China 1993 I 592921 Hei nong 37 Heilongjiang China China 1994 I 592921 Chen dou No. 4 unknown China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592927 Chen dou No. 1 Jiangsu China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592930 Xiang chun dou 12 Hunan China <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | |
| 592910 unknown Russia Russia 1993 II 5929111A unknown Russia Russia 1993 I 592911B unknown Russia Russia 1993 I 592912A unknown Russia Russia 1993 I 592913 unknown Russia Russia 1993 I 592914 Hei nong 37 Heilongjiang China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592929 Guan dou No. 1 Jiangsu China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592933 Zao shu No. 9 Beijing China C | | | | | | | |
| 592911A unknown Russia Russia 1993 I 592911B unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592912 B unknown Russia Russia 1993 I 592912 Hei nong 37 Heilongjiang China China 1994 I 592921 Chen dou No. 4 unknown China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592929 Guan dou No. 1 Jiangsu China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Xao shu 14 Beijing China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592936 Ji dou No. 7 | | | | | | | |
| 592911B unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592912B unknown Russia Russia 1993 I 592911 Hei nong 37 Heilongjiang China China 1994 I 592921 Hei nong 37 Heilongjiang China China 1994 I 592926 Tong nong No. 8 Jilin China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592928 Gong dou No. 1 Jiangsu China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao chu No. 1 | | | | | | | |
| 592912A unknown Russia Russia 1993 I 592913 unknown Russia Russia 1993 I 592914 Hei nong 37 Heilongijang China China 1994 I 592926 Tong nong No. 8 Jilin China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592929 Guan dou No. 1 Jiangsu China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592936 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592937 | | | | | | | |
| 592912B unknown unknown Russia Russia 1993 I 592913 Formal System unknown Russia Russia 1993 II 592921 Hei nong 37 Heilongjiang China China 1994 I 592927 Chen dou No. 4 unknown China 1994 I 592928 Gong dou No. 4 unknown China China 1994 II 592929 Guan dou No. 1 Jiangsu China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592931 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu 14 Beijing China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Jin dou 16 Sic | | | | | | | |
| 592913 unknown Russia Russia 1993 II 592926 Tong nong No. 8 Jilin China China 1994 I 592926 Tong nong No. 8 Jilin China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu I4 Beijing China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | |
| 592921 Hei nong 37 Heilongjiang China China 1994 I 592927 Tong nong No. 8 Jilin China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 IV 592932 Gaon dou No. 1 Jiangsu China China 1994 IV 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu No. 9 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592936 Jin dou 16 Sichuan China China 1994 IV <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| 592926 Tong nong No. 8 Jilin China China 1994 I 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592929 Guan dou No. 1 Jiangsu China China 1994 IV 592930 Xiang chun dou 12 Hunan China China 1994 II 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu 14 Beijing China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Ji dou No. 7 Hebei China China 1994 IV 592937 Jin dou 14 Sichuan China China 1994 IV | | II : 07 | | | | | |
| 592927 Chen dou No. 4 unknown China China 1994 II 592928 Gong dou No. 4 unknown China China 1994 II 592929 Guan dou No. 1 Jiangsu China China 1994 IV 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu 14 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 IV | | _ | | | | | |
| 592928 Gong dou No. 4 unknown China China 1994 IV 592929 Guan dou No. 1 Jiangsu China China 1994 IV 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 III 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 IV 592939 Jin dou 16 Sichuan China China 1994 IV | | | | | | | |
| 592929 Guan dou No. 1 Jiangsu China China 1994 IV 592930 Xiang chun dou 12 Hunan China China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu 14 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| 592930 Xiang chun dou 12 Hunan China 1994 II 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu 14 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 II 592935 Fu dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 IV 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 59 | | _ | | | | | |
| 592932 Zao shu No. 9 Beijing China China 1994 II 592933 Zao shu 14 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 III 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 IV 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 III | | | _ | | | | |
| 592933 Zao shu 14 Beijing China China 1994 II 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 III 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 II 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 IV < | | | | | | | |
| 592934 Zhe chun No. 2 Zhejiang China China 1994 II 592935 Fu dou No. 1 Fujian China China 1994 III 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 IV 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 II 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 IV | | | | | | | |
| 592935 Fu dou No. 1 Fujian China China 1994 III 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 II 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 II 592942 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 IV 592946 Ji dou No. 4 Hebei China China 1994 IV | | | | | | | |
| 592936 Ji dou No. 7 Hebei China China 1994 II 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 II 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 III 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 IV 592946 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<> | | | | | | | |
| 592937 Jin dou 14 Sichuan China China 1994 IV 592938 Jin dou 15 Sichuan China China 1994 II 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 II 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 II 592945 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV < | | | _ | | | | |
| 592938 Jin dou 15 Sichuan China China 1994 II 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 III 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 III 592945 Zhong huang No. 1 unknown China China 1994 IV 592945 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| 592939 Jin dou 16 Sichuan China China 1994 IV 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 III 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 III 592946 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 IV <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | |
| 592940 Jin dou 17 Sichuan China China 1994 IV 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 III 592944 Tie feng 22 Liaoning China China 1994 III 592945 Zhong huang No. 1 unknown China China 1994 III 592945 Zhong huang No. 1 unknown China China 1994 III 592945 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 IV <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| 592941 Liao dou No. 10 Liaoning China China 1994 II 592942 7605 Shandong China China 1994 III 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 III 592946 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 IV 592951 Zheng 133 Henan China China 1994 IV <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | |
| 592942 7605 Shandong China 1994 III 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 III 592946 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956B | | | | | | | |
| 592944 Tie feng 22 Liaoning China China 1994 II 592945 Zhong huang No. 1 unknown China China 1994 III 592946 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 IV 592953 Zhong dou 19 Hubei China China 1994 II 592956A Jiangsu China China China 1994 II | | | | | | | |
| 592945 Zhong huang No. 1 unknown China 1994 III 592946 Ji dou No. 4 Hebei China China 1994 IV 592947 Jin yi No. 9 Sichuan China China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 IV 592953 Zhong dou 19 Hubei China China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China | | | _ | | | | |
| 592946 Ji dou No. 4 Hebei China 1994 IV 592947 Jin yi No. 9 Sichuan China 1994 IV 592948 Jin yi No. 10 Sichuan China China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 II 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | | _ | _ | | | | |
| 592947 Jin yi No. 9 Sichuan China 1994 IV 592948 Jin yi No. 10 Sichuan China 1994 IV 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 III 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | | | | | | | |
| 592948 Jin yi No. 10 Sichuan China 1994 IV 592949 Yu dou No. 8 Henan China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 III 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | | | | | | | |
| 592949 Yu dou No. 8 Henan China China 1994 IV 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 III 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | | • | | | | | |
| 592950 Yu dou 11 Henan China China 1994 III 592951 Zheng 133 Henan China China 1994 IV 592952 Zheng 77249 Henan China China 1994 III 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | | • | | | | | |
| 592951 Zheng 133 Henan China 1994 IV 592952 Zheng 77249 Henan China China 1994 III 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | 592949 | | Henan | | China | 1994 | IV |
| 592952 Zheng 77249 Henan China 1994 III 592953 Zhong dou 19 Hubei China China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | 592950 | | Henan | China | China | 1994 | III |
| 592953 Zhong dou 19 Hubei China 1994 IV 592954 Nin zhen No. 1 Jiangsu China China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | 592951 | Zheng 133 | Henan | China | China | 1994 | IV |
| 592954 Nin zhen No. 1 Jiangsu China 1994 II 592956A Jiangsu China China 1994 II 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | 592952 | Zheng 77249 | Henan | China | China | 1994 | III |
| 592956AJiangsuChinaChina1994II592956BJiangsuChinaChina1994II592956CJiangsuChinaChina1994II | 592953 | Zhong dou 19 | Hubei | China | China | 1994 | IV |
| 592956B Jiangsu China China 1994 II 592956C Jiangsu China China 1994 II | 592954 | Nin zhen No. 1 | Jiangsu | | | 1994 | |
| 592956C Jiangsu China China 1994 II | 592956A | | Jiangsu | China | China | 1994 | II |
| | 592956B | | Jiangsu | China | China | 1994 | II |
| 592957 Chang nong No. 5 Jilin China China 1994 I | 592956C | | Jiangsu | China | China | 1994 | II |
| | 592957 | Chang nong No. 5 | Jilin | China | China | 1994 | I |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|--------|----|----|---------|--------------|------------------|--------|----------------|--------------|---------------|
| | | | | | | | | | | | | |
| 588052A | IV | D | P | Lt | Va | N | Tn | I | Y | Bl | | 3N |
| 592899 | I | N | P | T | E | Ssp | Br | I | Y | G | | 2N |
| 592901 | II | D | W | G | Е | Ssp | Br | S | Y | Y | N T | 2N |
| 592905 | I | D | P | T | E | Ssp | Br | I | Y | Br | Na | 1N |
| 592907A | I | N | W | G | E | N | Br | D | Y | Y | | 2N |
| 592907B | I | N | P | T | E | N | Br | I | Y | Tn | | 2N |
| 592907C | I | N | W | G | E | N | Br | D | Y | Y | Vhil | 2N |
| 592907D | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 592908 | II | N | P | Lt | E | N | Bl | I | Br | Br | | 4N |
| 592910 | II | D | W | G | E | N | Br | I | Y | Y | Sdef | 2N |
| 592911A | I | N | P | T | E | N | Br | I | Y | Bl | | 2N |
| 592911B | I | N | P | T | E | N | Br | D | Y | Bl | | 4N |
| 592912A | I | S | P | T | E | N | Br | I | Y | Tn | Vhil | 2N |
| 592912B | I | S | P | T | E | N | Br | I | Y | Tn | Vhil | 2N |
| 592913 | II | D | W | G | E | N | Br | I | Y | Y | Sdef | 2N |
| 592921 | I | D | W | G | E | N | Br | D | Y | Y | | 3N |
| 592926 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 592927 | II | D | W | G | E | N | Br | I | Lgn | Lgn | | 3N |
| 592928 | II | D | P | G | A | N | Br | I | Y | Ϋ́ | | 3N |
| 592929 | IV | D | P | G | A | N | Tn | I | Y | Bf | | 3N |
| 592930 | II | D | W | Lt | A | N | Tn | Ī | Y | Brbl | Vhil | 3N |
| 592932 | II | D | W | G | Sa | N | Br | Ī | Y | Bf | Vhil | 3N |
| 592933 | II | S | W | G | Sa | Ssp | Tn | Ī | Y | Bf | Na | 2N |
| 592934 | II | D | W | Lt | E | N | Tn | I | Y | Brbl | Vhil | 4N |
| 592935 | III | D | W | T | Sa | N | Br | I | Y | Bl | V 1111 | 3N |
| 592936 | II | S | P | Lt | E | N | Tn | I | Y | Tn | | 2N |
| 592937 | IV | N | P | G | E | N | Br | I | Y | Y | | 5N |
| 592938 | II | N | P | T | E | Ssp | Br | D | Y | Br | | 2N |
| 592939 | IV | N | P | T | Sa | N N | Br | D | Y | Tn | | 2N 2N |
| | IV | N | r P | T | | N | | I | Y | | Vhil | |
| 592940 | | | | | Sa | | Dbr | | Y | Tn | VIIII | 2N |
| 592941 | II | N | P | G | E | N | Tn | I | | Y | NT. 371.11 | 3N |
| 592942 | III | D | W | G | Sa | Ssp | Br | I | Y Y | Y | Na, Vhil | 2N |
| 592944 | II | D | W | G | E | N | Br | I | | Y | | 2N |
| 592945 | III | N | W | T | Sa | Ssp | Br | I | Y | Brbl | N. G.L.C.X | 3N |
| 592946 | IV | N | P | T | E | N | Br | I | Y | Brbl | Na, Sdef, V | |
| 592947 | IV | D | P | G | E | Ssp | Br | I | Y | Bf | ~ | 3N |
| 592948 | IV | N | P | G | E | Ssp | Br | D | Y | Y | Sdef | 3N |
| 592949 | IV | D | W | G | E | N | Tn | I | Y | Bf | Na | 2N |
| 592950 | III | D | P | G | A | N | Tn | S | Y | Ib | Vhil | 3N |
| 592951 | IV | D | P | T | A | Sp | Br | I | Y | Br | Vhil | 3N |
| 592952 | III | D | P | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 592953 | IV | D | P | T | A | Ssp | Br | I | Y | Br | | 3N |
| 592954 | II | D | P | T | Sa | N | Br | I | Y | Bl | | 3N |
| 592956A | II | N | W | T | E | N | Br | I | B1 | B1 | Def | 3N |
| 592956B | II | D | W | T | E | Ssp | Br | I | Bl | Bl | | 3N |
| 592956C | II | N | W | T | E | Ssp | Br | I | Bl | Bl | Def | 3N |
| 592957 | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------|------------|------------|---------|-------|---------|---------|---------|---------|----------|----------------|----------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | $(Mg ha^{-1})$ |
| 588052A | 729 | 929 | 3.0 | 78 | 1.0 | 1.0 | 1.5 | 2.5 | 2.0 | 16.8 | 1.20 |
| 592899 | 625 | 823 | 1.5^ | 63 | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 16.2^ | 1.60^ |
| 592901 | 707 | 911 | 1.8 | 67 | 1.0 | 1.0 | 2.0* | 3.0 | 1.5 | 18.5 | 2.75 |
| 592905 | 707 | 902^ | 1.0^ | 39* | 1.0^ | 3.0^ | 5.0^ | 2.0^ | 2.0 | 14.2^ | 2.13 - |
| 592903 592907A | 624 | 830 | 1.5^ | 70* | 3.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 11.6^ | _ |
| 592907A 592907B | 627 | 830 | 2.5^ | 67* | 3.0^ | 1.0^ | 1.0^ | 4.0^ | 2.0 | 14.2^ | _ |
| | | | | | | | | | | | |
| 592907C | 626 | 902^ | 2.0^ | 85* | 3.0^ | 1.0^ | 2.0^ | 2.0^ | 2.0 | 14.9^ | 2.43^ |
| 592907D | 625 | 829^ | 2.5^ | 76* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 18.2^ | 2.51^ |
| 592908 | 630 | 909 | 2.5 | 72 | 3.5 | 1.0 | 3.0 | 2.8 | | 8.9 | 1.23* |
| 592910 | 630 | 909 | 1.0 | 43 | 1.0 | 1.0 | 1.0 | 3.8 | 1.5 | 15.8 | 1.90^ |
| 592911A | 629 | 904 | 2.5^ | 79* | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 13.0^ | - |
| 592911B | 701 | 905^ | 3.0^ | 90 | 4.0^ | 1.0^ | 1.0^ | 3.0^ | 3.0 | 10.3^ | 1.57^ |
| 592912A | 624 | 830 | 1.5^ | 74* | 2.0^ | 1.0^ | 1.0^ | 4.0^ | 2.0 | 16.9^ | - |
| 592912B | 623 | 821^ | 2.0^ | 66* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 15.8^ | 2.19^ |
| 592913 | 701 | 909 | 1.0 | 27 | 1.0 | 1.0 | 1.0 | 3.5 | 1.5 | 16.5 | - |
| 592921 | 627 | 827^ | 1.0^ | 52* | 1.0^ | 1.0^ | 3.0^ | 2.0^ | 1.0 | 17.2^ | 2.79^ |
| 592926 | 623 | 823 | 1.5^ | 67* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 16.5^ | 2.13^ |
| 592927 | 705* | 904 | 1.8 | 70 | 1.0 | 3.0 | 5.0 | 2.3 | 1.0 | 13.5 | 1.99 |
| 592928 | 721 | 917 | 2.8 | 59* | 1.0 | 1.0 | 1.0 | 2.8 | 3.0* | 16.3* | 1.22* |
| 592929 | 722 | 1001 | 2.5 | 63 | 1.0 | 1.5 | 3.0* | 2.8 | 1.0 | 20.0 | 1.65* |
| 592930 | 714 | 908 | 2.3 | 58* | 1.5 | 2.5 | 4.5 | 2.3 | 1.0 | 12.9 | 0.90 |
| 592932 | 715 | 917 | 2.0 | 58* | 1.0 | 1.0 | 1.5 | 3.3 | 1.0 | 17.4 | 1.79 |
| 592933 | 703 | 904 | 3.5 | 63 | 2.0 | 1.0 | 2.0 | 2.5 | 1.0 | 15.1 | 1.93 |
| 592934 | 715 | 909 | 2.0 | 69 | 1.5 | 3.5 | 5.0 | 2.5 | 2.0 | 11.1 | 1.81 |
| 592935 | 727 | 1001 | 3.0 | 79 | 1.0 | 2.0 | 3.5 | 2.3 | 2.0 | 14.8 | 1.94 |
| 592936 | 703 | 909 | 2.3 | 79 | 2.0 | 1.0 | 2.0 | 2.3 | 2.0 | 14.2 | 2.93 |
| 592937 | 726 | 1012 | 2.8 | 110 | 3.0 | 1.0 | 1.0 | 2.3 | 1.0 | 12.2 | 2.29 |
| 592938 | 703 | 903 | 2.8 | 75 | 3.0 | 1.0 | 1.0 | 3.3 | 1.5 | 15.1 | 2.55 |
| 592939 | 713 | 1006 | 2.8 | 114 | 3.0 | 1.0 | 1.0 | 2.3 | 3.0 | 16.4 | 1.80^ |
| 592940 | 713 | 1009 | 2.8 | 112 | 3.0 | 1.0 | 1.0 | 2.5 | 3.0 | 16.7 | 2.87* |
| 592941 | 703 | 918 | 1.5 | 86* | 3.0 | 1.0 | 1.0 | 3.0 | 1.5 | 18.4 | 2.59 |
| 592942 | 703 711 | 921 | 2.5 | 74 | 1.0 | 1.0 | 1.0 | 1.8 | 1.0 | 11.7 | 2.76* |
| 592944 592944 | 711 | 921 | 2.5 | 70 | 1.0 | 1.0 | 1.0 | 2.8 | 1.5 | 15.3 | 2.76 |
| 592945 | 715 | 917 | 1.5 | 70 | 3.0 | 2.0* | 4.0 | 2.5 | 2.0 | 15.5 | 2.43 |
| | | | | | | | | | | | 2.43 2.73* |
| 592946 | 711 | 929 | 2.3 | 87 | 3.0 | 1.0 | 1.0 | 3.3 | 1.0 | 17.7 | |
| 592947 | 715 | 1005 | 1.8 | 68 | 1.0 | 1.0 | 1.5 | 2.8 | 2.5 | 15.9 | 3.60* |
| 592948 | 719 | 1003 | 2.0 | 96* | 3.0 | 1.0 | 1.0 | 3.3 | 4.0 | 21.1 | 2.20* |
| 592949 | 722 | 1003 | 3.3* | 83 | 1.0 | 2.0 | 4.0* | 2.8 | 1.0 | 19.8 | 2.59* |
| 592950 | 721 | 925 | 2.3 | 57 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 17.3 | 1.97* |
| 592951 | 721 | 1009 | 1.5 | 50 | 1.0 | 1.0 | 1.5 | 2.5 | 1.0 | 17.7 | 0.95 |
| 592952 | 717 | 925 | 2.3 | 71 | 1.0 | 1.0 | 1.5 | 2.8 | 2.0 | 17.1 | 2.43 |
| 592953 | 727 | 930 | 2.5 | 57* | 1.0 | 1.0 | 1.5 | 3.0 | 2.0 | 17.6 | 1.45* |
| 592954 | 710 | 901 | 1.5 | 54 | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 14.1 | 1.76 |
| 592956A | 702 | 917 | 2.0 | 86 | 3.0 | 1.0 | 3.0 | 3.3 | | 16.8 | 2.71 |
| 592956B | 711 | 916 | 1.0 | 65 | 1.0 | 2.5 | 4.5 | 2.5 | | 16.4 | 1.99 |
| 592956C | 702 | 919 | 1.8 | 92 | 3.0 | 1.0 | 1.5 | 3.3 | | 16.4 | 2.40 |
| | 623 | 903 | 2.0^ | 63 | 1.0^ | 1.0^ | 1.0^ | 2.5^ | 2.0 | 13.7^ | _ |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compo | | | | |
|-----------------|-----------|---------------------|---------------------|-----------|---------|-------|----------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 588052A | IV | 42.7 | 16.9 | 9.7 | 4.4 | 25.5 | 53.5 | 6.9 |
| 592899 | I | 41.8^ | 21.2^ | 11.0^ | 3.9^ | 32.8^ | 46.9^ | 5.4^ |
| 592901 | II | 41.3 | 19.2 | 9.6 | 3.9 | 28.6 | 51.7 | 6.3 |
| 92905 | I | 41.7^ | 18.6^ | 12.2^ | 4.7^ | 25.8^ | 51.3^ | 6.0^ |
| 592907A | Ī | 35.5^ | 23.2^ | 12.8^ | 3.7^ | 23.3^ | 53.5^ | 6.7^ |
| 692907B | Ī | 41.2^ | 19.6^ | 12.2^ | 4.3^ | 22.9^ | 53.5^ | 7.2^ |
| 92907C | I | 39.7^ | 19.8^ | 11.1^ | 3.7^ | 21.2^ | 56.8^ | 7.2^ |
| 92907D | I | 39.8^ | 19.9^ | 11.2^ | 4.3^ | 25.0^ | 53.1^ | 6.4^ |
| 92908 | II | 40.2 ^w | 18.1 ^w | 12.5 | 3.5 | 26.5 | 50.6 | 7.0 |
| 92910 | II | 40.8 | 20.2 | 11.9 | 3.6 | 23.4 | 54.5 | 6.5 |
| 92910 92911A | I | 44.3^ | 20.2 19.1^ | 11.7^ | 5.0^ | 22.9^ | 53.9^ | 6.6^ |
| | | | | | | | | 7.2^ |
| 92911B | I | 39.5^ | 19.0^ | 11.2^ | 3.6^ | 23.1^ | 54.9^ | |
| 92912A | I | 43.1^ | 18.1^ | 12.4^ | 4.5^ | 22.2^ | 54.4^ | 6.5^ |
| 92912B | I | 39.6^ | 21.4^ | 11.6^ | 4.5^ | 26.6^ | 51.6^ | 5.8^ |
| 92913 | II | 40.8 | 20.4 | 12.0 | 3.7 | 23.6 | 54.8 | 5.9 |
| 92921 | I | 39.4^ | 21.0^ | 10.6^ | 5.0^ | 27.9^ | 50.8^ | 5.7^ |
| 92926 | I | 45.3^ | 20.2^ | 11.6^ | 3.8^ | 29.0^ | 50.6^ | 5.0^ |
| 92927 | II | 44.9 ^w | 17.1 ^w | 12.1 | 3.1 | 25.6 | 51.7 | 7.5 |
| 92928 | II | 43.4^{w} | 18.7^{w} | 11.9 | 4.5 | 29.8 | 48.2 | 5.5 |
| 92929 | IV | 45.1 | 16.4 | 10.8 | 4.1 | 27.7 | 50.6 | 6.8 |
| 92930 | II | 41.4 | 19.7 | 11.6 | 3.3 | 27.6 | 51.0 | 6.6 |
| 92932 | II | 42.1 | 17.4 | 11.9 | 3.4 | 22.1 | 54.7 | 7.9 |
| 92933 | II | 41.3 | 19.0 | 12.0 | 4.0 | 29.7 | 48.7 | 5.6 |
| 92934 | II | 42.4 | 17.2 | 12.5 | 3.9 | 25.1 | 50.5 | 8.0 |
| 92935 | III | 41.7 | 17.9 | 10.2 | 5.4 | 27.9 | 49.9 | 6.5 |
| 92936 | II | 42.8 | 18.6 | 11.3 | 3.4 | 33.2 | 46.6 | 5.5 |
| 92937 | IV | 42.5 | 16.9 | 10.6 | 3.9 | 19.4 | 58.4 | 7.7 |
| 92938 | II | 41.5 | 18.7 | 12.1 | 3.3 | 28.3 | 50.2 | 6.2 |
| 92939 | IV | 42.7 | 18.0 | 10.7 | 4.8 | 22.6 | 55.4 | 6.4 |
| 92940 | IV | 42.7 | 17.6 | 10.9 | 4.4 | 20.5 | 57.2 | 7.1 |
| 92941 | II | 43.2 | 18.4 | 11.6 | 4.4 | 33.1 | 45.2 | 5.8 |
| 92942 | III | 44.2 | 16.5 | 10.1 | 4.0 | 24.5 | 53.3 | 8.0 |
| 92944 | II | 40.3 | 20.8 | 11.0 | 3.9 | 27.9 | 50.5 | 6.7 |
| 92945 | III | 42.4 | 20.8 17.7 | 9.8 | 4.6 | 27.9 | 51.2 | 7.4 |
| 92943 | III IV | 42.4 44.1 | 17.7 | 10.2 | 6.2 | 23.6 | 53.6 | 6.5 |
| 92946 92947 | | 39.0 | 18.7 | | | | | |
| | IV | | | 10.3 | 4.8 | 23.7 | 54.7 | 6.5 |
| 92948 | IV | 44.9 ^w | 18.6 ^w | 12.9 | 4.2 | 27.0 | 48.7 | 7.2 |
| 92949 | IV | 45.0 | 17.4 | 9.2 | 4.5 | 26.0 | 53.8 | 6.6 |
| 92950 | III | 40.2 | 18.6 | 10.0 | 3.3 | 23.9 | 56.1 | 6.8 |
| 92951 | IV | 44.3 | 17.2 | 8.6 | 3.7 | 24.4 | 56.5 | 6.9 |
| 92952 | III | 42.0 | 18.0 | 9.9 | 3.4 | 28.7 | 51.7 | 6.2 |
| 92953 | IV | 41.2 | 15.8 | 10.1 | 4.2 | 27.8 | 51.6 | 6.3 |
| 92954 | II | 40.3 | 19.1 | 12.4 | 4.0 | 25.0 | 51.6 | 7.0 |
| 92956A | II | 43.8^{w} | $17.5^{\rm w}$ | 12.1 | 4.6 | 28.0 | 48.8 | 6.6 |
| 92956B | II | 44.1^{w} | 18.7^{w} | 11.9 | 4.1 | 31.1 | 46.7 | 6.2 |
| 92956C | II | 47.6^{w} | 15.3 ^w | 12.2 | 4.0 | 26.4 | 50.8 | 6.6 |
| 92957 | I | 38.7^ | 21.1^ | 12.0^ | 4.1^ | 24.9^ | 52.7^ | 6.2^ |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|---------------------|---------------------|---------------|---------------|---------------|-------------|----------|
| | Accession | Region | Country of | Country of | introduced | Moturity |
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 11110. | identifier | or origin | Origin | acquisition | or released | group |
| 592958 | Chang nong No. 6 | Jilin | China | China | 1994 | I |
| 592959 | Chang nong No. 7 | Jilin | China | China | 1994 | II |
| 592960 | Dong nong 38 | Heilongjiang | China | China | 1994 | I |
| 592967 | Hei nong 36 | Heilongjiang | China | China | 1994 | I |
| 592968 | Jilin 25 | Jilin | China | China | 1994 | II |
| 592969 | Jilin 28 | Jilin | China | China | 1994 | II |
| 592970 | Jilin 29 | Jilin | China | China | 1994 | I |
| 592971 | Jin dou 35 | Liaoning | China | China | 1994 | III |
| 592972 | Kaiyu No. 9 | Liaoning | China | China | 1994 | II |
| 592973 | Kaiyu No. 10 | Liaoning | China | China | 1994 | II |
| 592974 | Liao dou No. 10 | Liaoning | China | China | 1994 | III |
| 592977 | Sui nong No. 9 | Heilongjiang | China | China | 1994 | I |
| 592978 | Tie feng 24 | Liaoning | China | China | 1994 | III |
| 592979 | Tie feng 25 | Liaoning | China | China | 1994 | II |
| 592980 | Tie feng 26 | Liaoning | China | China | 1994 | IV |
| 592981 | Tie feng 27 | Liaoning | China | China | 1994 | III |
| 593942 | He feng 9388 | Heilongjiang | China | China | 1994 | 0 |
| 593943 | He feng 88851 | Heilongjiang | China | China | 1994 | Ī |
| 593949A | Ken 83-2922 | Heilongjiang | China | China | 1995 | I |
| 593949B | (Ken 83-2922) | Heilongjiang | China | China | 1995 | II |
| 593953 | Sui nong No. 10 | Heilongjiang | China | China | 1995 | I |
| 593956A | NEAC 190 | Heilongjiang | China | China | 1995 | I |
| 593956B | (NEAC 190) | Heilongjiang | China | China | 1995 | II |
| 593956C | (NEAC 190) | Heilongjiang | China | China | 1995 | II |
| 593956D | (NEAC 190) | Heilongjiang | China | China | 1995 | II |
| 593956E | (NEAC 190) | Heilongjiang | China | China | 1995 | I |
| 593957 | NEAC 593 | Heilongjiang | China | China | 1995 | I |
| 593958 | Jilin 30 | Jilin | China | China | 1995 | II |
| 593959 | Jilin 31 | Jilin | China | China | 1995 | II |
| 593960 | Jilin 32 | Jilin | China | China | 1995 | II |
| 593961 | GD 369 | Jilin | China | China | 1995 | I |
| 593962 | GD 1596 | Jilin | China | China | 1995 | II |
| 593963 | GD 2828 | Jilin | China | China | 1995 | II |
| 593964 | GD 3009 | Jilin | China | China | 1995 | II |
| 593966 | GD 3106 | Jilin | China | China | 1995 | II |
| 593967 | GD 3184 | Jilin | China | China | 1995 | I |
| 593968 | GD 3245 | Jilin | China | China | 1995 | I |
| 593969 | GD 3325 | Jilin | China | China | 1995 | I |
| 593970 | Oosodeno mai | Hokkaido | Japan | Japan | 1995 | I |
| 593971 | Kariyutaka | Hokkaido | Japan | Japan | 1995 | I |
| 593972 | Suzumaru | Hokkaido | Japan | Japan | 1995 | I |
| 593973 | Toyokomachi | Hokkaido | Japan | Japan | 1995 | I |
| 593975 | Tsurumusume | Hokkaido | Japan | Japan | 1995 | I |
| 593997 | 1 sur umusume | Kyongsang Nam | - | South Korea | 1995 | 0 |
| 594001 | | Kyongsang Puk | South Korea | South Korea | 1995 | V |
| 594001 | Jekpaunmok daedu | unknown | South Korea | South Korea | 1995 | V IV |
| 594010 | Josaeng heukchensuk | unknown | South Korea | South Korea | 1995 | IV IV |
| J7 4 U11 | JOSACHE HEURCHEHSUK | uIIKIIOWII | South Kolea | South Kolea | 1773 | 1 4 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|--------|---|--------|----------|--------------|------------------|--------|----------------|---------------|---------------|
| 592958 | Ţ | D | W | G | Е | N | Br | I | Y | Y | | 2N |
| | I II | D D | W | G | E E | | Dbr | I | Y | Y | No | |
| 592959 | | | w P | G | | Ssp | | | Y Y | Y Y | Na | 2N |
| 592960 | I | N | W | G | E | N N | Br | I | Y Y | | NT. | 2N |
| 592967 | I II | N | w P | G | E | N Sam | Br | D | Y Y | Bf Y | Na | 2N |
| 592968 | | D | W | | E | Ssp | Br | I | Y Y | | N. Cl.f | 3N |
| 592969 | II | N | | G | E | N N | Br | I | Y Y | Y | Na, Sdef | 2N |
| 592970 | I | S | W | G | E | N N | Br | I | Y Y | Y Y | Na | 2N |
| 592971 | III | D | W | G | E | N N | Br | I | Y Y | | | 3N |
| 592972 | II | D | P | G | E | N N | Br | I | | Y | | 3N |
| 592973 | II | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 592974 | III | N | P | G | E | N | Tn | I | Y | Y | NT | 3N |
| 592977 | I | S | P | G | E | N | Tn | I | Y | Y | Na | 2N |
| 592978 | III | D | W | G | E | N | Br | I | Y | Y | NT | 3N |
| 592979 | II | D | P | G | E | N | Br | I | Y | Y | Na | 3N |
| 592980 | IV | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 592981 | III | D | P | T | E | Ssp | Br | I | Y | Tn | | 3N |
| 593942 | 0 | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 593943 | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 593949A | I | D | P | G | Sa | Ssp | Br | I | Y | Y | | 2N |
| 593949B | II | D | P | G | Sa | Ssp | Br | D | Y | Y | | 2N |
| 593953 | I | N | W | G | E | Ssp | Tn | D | Y | Y | Na | 2N |
| 593956A | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 593956B | II | D | P | G | E | N | Br | I | Y | Y | Na | 3N |
| 593956C | II | D | W | G | E | N | Br | I | Y | Bf | | 4N |
| 593956D | II | D | W | G | E | N | Br | I | Y | Bf | | 4N |
| 593956E | I | D | P | G | E | N | Br | I | Y | Y | | 4N |
| 593957 | I | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 593958 | II | S | W | G | E | N | Br | D | Y | Y | Na | 3N |
| 593959 | II | N | P | G | E | N | Br | I | Y | Bf | | 3N |
| 593960 | II | D | W | G | E | N | Br | I | Y | Y | | 3N |
| 593961 | I | N | P | T | E | N | Br | I | Y | Bl | | 3N |
| 593962 | II | D | W | G | E | N | Br | I | Y | Y | | 3N |
| 593963 | II | N | P | G | E | N | Br | I | Y | Bf | | 3N |
| 593964 | II | N | W | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 593966 | II | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 593967 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 593968 | I | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 593969 | I | N | P | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 593970 | I | D | W | G | Sa | Ssp | Br | D | Gn | Gn | | 2N |
| 593971 | I | D | P | G | E | Ssp | Br | D | Y | Y | | 2N |
| 593972 | Ī | D | P | G | E | Ssp | Br | I | Y | Y | Na | 1N |
| 593973 | Ī | D | P | G | E | Ssp | Br | Ī | Y | Y | . | 2N |
| 593975 | Ī | D | W | G | E | N | Br | I | Y | Y | | 2N |
| 593997 | 0 | D | P | T | E | Sp | Br | I | Bl | Bl | | 1N |
| 594001 | V | D | P | T | E | N N | Bl | I | Gn | Gn | Gnc, Vhil | 2N |
| 594010 | IV | D | P | T | E | N | Tn | I | Rbr | Rbr | 5110, v 1111 | 2N |
| 594011 | IV | D | W | T | Sa | N | Bl | Lb | Bl | Bl | Gnc | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------|-------------|-------------|-------------------------|------------|-------------|-------------|-------------|-------------|------------|----------------|--|
| | date | | Lodging | Heigh | t term. | early | late | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | - | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 592958 | 629 | 830^ | 1.5^ | 73 | 1.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 14.0^ | 2.16^ |
| 592959 | 627* | 905 | 1.5 | 71 | 1.5 | 1.0 | 1.0 | 2.5 | 1.0 | 15.8 | 2.39 |
| 592960 | 627 | 822^ | 1.5^ | 60* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 13.9^ | 2.42^ |
| 592967 | 622 | 826 | 1.5^ | 61 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.7^ | 1.76^ |
| 592968 | 627* | 905 | 1.8 | 61 | 1.0 | 1.0 | 2.5 | 3.0 | 1.0 | 17.6 | 2.44 |
| 592969 | 701 | 906 | 2.3 | 86 | 3.0 | 1.0 | 2.5 | 3.5 | 1.5 | 12.7 | 2.18^ |
| 592970 | 625 | 831^ | 1.5^ | 69* | 2.0^ | 1.0^ | 2.0^ | 1.5^ | 1.0 | 11.4^ | 2.18^ |
| 592971 | 713 | 922 | 2.0 | 63* | 1.0 | 1.0 | 1.0 | 2.8 | 1.5 | 17.5 | 3.31 |
| 592972 | 713 | 912 | 2.0 | 75* | 1.0 | 1.0 | 1.5 | 3.8* | 1.0 | 16.9 | 2.82 |
| 592973 | 709* | 915 | 1.8 | 62 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 16.6 | 2.88 |
| 592974 | 706* | 918 | 2.0 | 85 | 3.0 | 1.0 | 1.5 | 3.3 | 1.5 | 17.9 | 3.24 |
| 592977 | 625 | 826 | 1.0^ | 52* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 11.3^ | - |
| 592978 | 718 | 927 | 1.3 | 72 | 1.0 | 1.0 | 2.0* | 2.8 | 2.0 | 18.9 | 2.78 |
| 592979 | 709* | 914 | 1.8 | 64 | 1.0 | 1.0 | 1.0 | 2.5 | 1.0 | 18.3 | 3.37 |
| 592980 | 719 | 1002 | 1.8 | 80 | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 17.8 | 3.64* |
| 592981 | 715 | 929 | 1.5 | 72 | 1.0 | 1.0 | 1.5 | 3.0 | 1.5 | 19.6 | 2.81 |
| 593942 | 621 | 819 | 1.0^ | 43 | 1.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 14.3^ | 1.86^ |
| 593942 | 621 | 819^ | 1.5^ | 51 | 1.0^ | 1.0^ | 2.0^ | 2.5^ | 1.0 | 14.7^ | 1.99^ |
| 593949A | 625 | 826^ | 1.0^ | 33 | 1.0^ | 2.0^ | 4.0^ | 2.0^ | 1.0 | 24.2^ | 1.32^ |
| 593949A 593949B | 701 | 908 | 1.0 | 43 | 1.0 | 2.5 | 5.0 | 2.8 | 1.5 | 26.3 | 1.39 |
| 593949B 593953 | 621 | 825 | 1.0^ | 43 44* | 3.0^ | 2.3 1.0^ | 3.0 1.0^ | 2.0^ | 1.0 | 20.3 15.0^ | 2.60^ |
| 593956A | 621 | 823 819^ | 1.5^ | 55* | 2.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 14.3^ | 2.35^ |
| 593956A 593956B | 629 | 902 | 1.5 | | | 1.0 | | 3.0 | 1.0 | 14.5 | 2.33 [^] 1.74 [^] |
| 593956С | 629 | 902 901 | 1.5 | 61 69* | 1.0 1.0 | 1.0 | 1.5 | 4.0 | 1.0 | 13.8 | 1.74 |
| 593956D | 628 | 901 | 1.5 | 70 | 1.5 | 1.0 | 1.0 | 3.8 | 1.0 | 13.8 | 2.02 |
| | 627* | | 2.5 | | | | 1.0 | | | | 2.63 |
| 593956E | | 831 | | 74 | 1.0 | 1.0 | 1.5 2.0^ | 3.5 4.5^ | 1.0 | 16.5 | |
| 593957 | 621 629* | 820 | 1.5^ | 38 | 2.0^ | 1.0^ | | | 1.0 | 14.8^ | 1.68^ |
| 593958 | | 907 | 1.0 | 70 | 2.0 | 1.0 | 3.0 | 2.5 | 1.0 | 13.0 | 2.65 |
| 593959 | 629* | 905 | 2.5 | 82 | 2.5 | 1.0 | 1.0 | 3.0 | 1.0 | 17.5 | 3.07 |
| 593960 | 627 | 903 | 2.3 | 66 02* | 1.5 | 1.0 | 1.0 | 3.0 | 1.5 | 17.6 | 2.43 2.24^ |
| 593961 | 627 628 | 827 901 | 3.5 [^] 2.0 | 93* 72* | 3.0^ 1.5 | 1.0^ 1.0 | 2.0^ | 4.0^ | 1.0 2.0 | 13.1^ | 2.24 |
| 593962 | | 901 | 3.5 | | 4.0 | 1.0 | 1.5 | 3.8 | | 15.7 | |
| 593963 | 705 | | | 102 | | | 1.0 | 3.3 | 2.5 | 13.0 | 2.31 |
| 593964 | 629 700* | 905 | 2.5 | 78 70* | 3.0 | 1.0 | 2.0 | 3.0 | 1.5 | 15.7 | 2.48 |
| 593966 | 709* | 910 | 2.0 2.5^ | 70* | 1.0 | 1.0 | 1.0 | 2.8 2.0^ | 1.5 | 14.3 | 2.32 2.58^ |
| 593967 | 627 | 826^ | | 70* | 3.0^ | 1.0^ | 1.0^ | | 1.0 | 14.9^ | |
| 593968 | 623 | 826 | 1.0^ | 39 42* | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 16.2^ | 2.31^ |
| 593969 | 621 | 824 | 2.5^ | 43* | 3.0^ | 1.0^ | 5.0^ | 3.5^ | 1.0 | 16.7^ | - |
| 593970 | 625 | 901 | 1.0^ | 27 | 1.0^ | 3.0^ | 5.0^ | 2.0^ | 1.0 | 19.1^ | 0.99^ |
| 593971 | 625 | 826^ | 1.0^ | 37 | 1.0^ | 1.0^ | 2.0^ | 2.5^ | 1.0 | 18.7^ | 1.49^ |
| 593972 | 630 | 826^ | 1.0^ | 38* | 1.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 7.7^ | 2.02^ |
| 593973 | 625 | 821^ | 1.0^ | 38 | 1.0^ | 2.0^ | 5.0^ | 2.5^ | 1.0 | 20.9^ | 1.60^ |
| 593975 | 625 | 825 | 1.0^ | 28 | 1.0^ | 1.0^ | 4.0^ | 1.5^ | 1.0 | 23.9^ | - |
| 593997 | 624 | 819 | 1.0^ | 33 | 1.0^ | 2.0^ | 3.0^ | 1.5^ | 4.5 | 17.6^ | 1.44^ |
| 594001 | 813 | 1027 | 3.0 | 95 | 1.0 | 1.0 | 1.0 | 2.0 | 4.5 | 7.9 | 1.71 |
| 594010 | 725 | 1011 | 2.0 | 65 | 1.0 | 1.0 | 1.0 | 2.0 | | 8.8 | 1.65^ |
| 594011 | 721 | 1005 | 1.8 | 56 | 1.0 | 1.0 | 1.5 | 2.5 | | 8.0 | 0.96^ |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compos | sition | | | | |
|------------------|----------|---------------------|---------------------|------------|-------------|-------|-------------------|------------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 592958 | I | 36.0^ | 22.4^ | 11.2^ | 4.8^ | 34.1^ | 45.1^ | 4.9^ | |
| 592959 | II | 40.1 | 20.2 | 12.2 | 3.8 | 28.9 | 49.3 | 5.8 | |
| 592960 | I | 38.5^ | 22.2^ | 13.4^ | 3.8^ | 30.4^ | 47.2^ | 5.2^ | |
| 592967 | I | 37.7^ | 22.0^ | 11.4^ | 4.5^ | 26.5^ | 51.8^ | 5.8^ | |
| 592968 | II | 40.3 | 20.5 | 12.0 | 4.3 | 28.0 | 49.6 | 6.1 | |
| 592969 | II | 38.8 | 19.6 | 12.1 | 4.6 | 23.2 | 52.9 | 7.2 | |
| 592970 | I | 37.6^ | 20.9^ | 11.4^ | 5.2^ | 23.6^ | 53.6^ | 6.2^ | |
| 592971 | III | 39.9 | 20.2 | 9.8 | 3.6 | 22.3 | 56.5 | 7.7 | |
| 592972 | II | 39.4 | 20.1 | 11.5 | 3.8 | 25.6 | 52.8 | 6.2 | |
| 592973 | II | 40.8 | 20.1 | 11.8 | 4.2 | 25.0 | 52.3 | 6.7 | |
| 592974 | III | 42.5 | 18.7 | 9.6 | 4.4 | 37.0 | 42.9 | 6.2 | |
| 592974 592977 | III I | 42.3 37.7^ | 20.6^ | | 4.4 4.3^ | 21.0^ | 55.0 [^] | 8.3^ | |
| | | | | 11.4^ | | | | | |
| 592978 | III | 42.0 | 18.1 | 10.8 | 4.2 | 24.0 | 53.2 | 7.8 | |
| 592979 | II | 38.8 | 20.4 | 11.9 | 3.4 | 24.1 | 54.3 | 6.2 | |
| 592980 | IV | 41.3 | 18.3 | 10.2 | 4.1 | 26.9 | 51.9 | 6.9 | |
| 592981 | III | 42.2 | 18.2 | 9.4 | 3.9 | 28.2 | 51.8 | 6.7 | |
| 593942 | 0 | 39.9^ | 20.6^ | 12.2^ | 3.6^ | 27.0^ | 51.5^ | 5.6^ | |
| 93943 | I | 40.4^ | 20.3^ | 11.6^ | 3.9^ | 32.4^ | 47.3^ | 4.8^ | |
| 593949A | I | 41.2^ | 19.3^ | 20.4^ | 6.7^ | 34.6^ | 35.7^ | 2.7^ | |
| 93949B | II | 40.8 | 18.5 | 11.0 | 3.4 | 29.0 | 50.0 | 6.6 | |
| 93953 | I | 38.4^ | 20.2^ | 14.6^ | 3.9^ | 21.1^ | 54.7^ | 5.6^ | |
| 593956A | I | 38.0^ | 21.7^ | 11.5^ | 4.3^ | 27.9^ | 50.4^ | 5.8^ | |
| 593956B | II | 42.1 | 18.7 | 11.6 | 4.3 | 26.9 | 50.2 | 7.0 | |
| 593956C | II | 43.4 | 20.0 | 11.8 | 4.1 | 31.2 | 47.1 | 5.8 | |
| 593956D | II | 44.5 | 20.7 | 11.8 | 4.6 | 32.8 | 44.7 | 6.0 | |
| 593956E | I | 40.7 | 19.2 | 11.6 | 4.4 | 31.0 | 46.6 | 6.4 | |
| 593957 | I | 41.8^ | 18.8^ | 12.0^ | 3.8^ | 29.3^ | 49.0^ | 5.8^ | |
| 593958 | II | 41.3 | 19.9 | 12.0 | 4.2 | 27.1 | 50.7 | 6.0 | |
| 593959 | II | 40.2 | 20.1 | 12.2 | 4.7 | 29.7 | 47.1 | 6.3 | |
| 93960 | II | 37.8 | 20.0 | 12.7 | 4.4 | 25.2 | 51.5 | 6.2 | |
| 593961 | I | 43.2^ | 20.1^ | 11.8^ | 4.3^ | 32.9^ | 45.6^ | 5.4^ | |
| 593962 | II | 43.7 | 18.5 | 11.2 | 3.5 | 31.5 | 48.4 | 5.5 | |
| 593963 | II | 40.5 | 18.3 | 11.8 | 4.3 | 25.4 | 52.2 | 6.3 | |
| 93964 | II | 40.7 | 18.3 | 12.4 | 4.2 | 22.8 | 53.1 | 7.5 | |
| 93966 | II | 42.1 | 18.6 | 12.8 | 4.2 | 21.3 | 53.8 | 7.8 | |
| 593967 | I | 39.9^ | 20.9^ | 12.2^ | 4.8^ | 29.5^ | 48.5^ | 5.1 [^] | |
| 593968 | I | 45.1^ | 18.3^ | 12.2 | 3.8^ | 23.3^ | 53.5^ | 7.4 [^] | |
| 593969 | | 41.8^ | 20.5^ | 13.0^ | 4.9^ | 25.2^ | 50.8^ | 6.1^ | |
| | I | 41.6 ^w ^ | 20.3 ^w ^ | 13.0^ | 3.5^ | 23.2^ | 50.8 [^] | 5.7^ | |
| 593970 503071 | I | | | | | | | | |
| 93971 | I | 39.4^ | 21.5^ | 12.6^ | 4.1^ | 28.0^ | 49.4^ | 5.8^ | |
| 593972 | I | 39.0^ | 19.3^ | 12.4^ | 3.9^ | 25.2^ | 52.2^ | 6.2^ | |
| 593973 | I | 42.3^ | 20.0^ | 11.8^ | 2.5^ | 27.8^ | 52.4^ | 5.5^ | |
| 593975 | I | 41.6^ | 20.5^ | 13.4^ | 4.1^ | 28.1^ | 49.0^ | 5.5^ | |
| 593997 | 0 | 48.1 ^w ^ | 19.8 ^w ^ | 12.7^ | 3.1^ | 33.7^ | 44.6^ | 5.9^ | |
| 594001 | V | 47.0^{w} | 14.8 ^w | 12.2 | 3.5 | 24.3 | 51.7 | 8.2 | |
| 594010 | IV | 47.8^{w} | 14.6 ^w | 13.2 | 3.9 | 21.7 | 53.6 | 7.5 | |
| 594011 | IV | 42.9^{w} | $17.5^{\rm w}$ | 11.3 | 3.4 | 27.6 | 51.6 | 6.2 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|------------------|--------------------------|----------------|----------------|----------------|--------------|-------|
| | Accession | Region | of | of | introduced | |
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 594016 | Keun daedu | unknown | South Korea | South Korea | 1995 | I |
| 594018 | Jangdancha | unknown | South Korea | South Korea | 1995 | IV |
| 594019 | Haman daedu | unknown | South Korea | South Korea | 1995 | IV |
| 594020 | Samnamkong | Kyongsang Nam | | South Korea | 1995 | IV |
| 594022 | Duyoukong | Kyongsang Nam | | South Korea | 1995 | IV |
| 594146 | Ani | Akita | Japan | Japan | 1996 | IV |
| 594148 | Aso masari | Kumamoto | Japan | Japan | 1996 | II |
| 594153 | Chizuka Ibaraki 1 | Ibaraki | Japan | Japan | 1996 | III |
| 594156 | Chusei hadaka | Hokkaido | Japan | Japan | 1996 | III |
| 594158 | Chusei hikarikuro | Hokkaido | Japan | Japan | 1996 | II |
| 594160 | Dewa musume | Akita | Japan | Japan | 1996 | IV |
| 594164 | Fujimijiro | unknown | Japan | Japan | 1996 | IV |
| 594166 | Fukunagaha | unknown | Japan | Japan | 1996 | III |
| 594167 | Fukushirome (Touhoku 41) | Akita | Japan | Japan | 1996 | III |
| 594170A | Geden shirazu | Akita | Japan | Japan | 1996 | I |
| 594170R | (Geden shirazu) | Akita | Japan | Japan | 1996 | I |
| 594178 | Himeyutaka | Hokkaido | Japan | Japan | 1996 | I |
| 594188 | Iwate yagi 1 | Iwate | Japan | Japan | 1996 | IV |
| 594196 | Kinshu | unknown | Japan | Japan | 1996 | I |
| 594198 | Kitakomachi | Hokkaido | Japan | Japan | 1996 | I |
| 594200 | Kitami shiro | Hokkaido | Japan | Japan | 1996 | I |
| 594208 | Kosuzu | Akita | Japan | Japan | 1996 | IV |
| 594215 | Matsuura | Saga | Japan | Japan | 1996 | II |
| 594227A | Nanbu shirome | Akita | Japan | Japan | 1996 | III |
| 594227B | (Nanbu shirome) | Akita | Japan | Japan | 1996 | III |
| 594233A | Nourin 1 | Ibaraki | Japan | Japan | 1996 | IV |
| 594233B | (Nourin 1) | Ibaraki | Japan | Japan | 1996 | IV |
| 594235 | Nourin 2 | unknown | Japan | Japan | 1996 | IV |
| 594238 | Nourin 4 | Akita | Japan | Japan | 1996 | IV |
| 594247 | Oodate 1 (Take 16) | Akita | Japan | Japan | 1996 | II |
| 594250 | Ootsuru | unknown | Japan | Japan | 1996 | IV |
| 594252A | Orihime | Kumamoto | Japan | Japan | 1996 | II |
| 594252B | (Orihime) | Kumamoto | Japan | Japan | 1996 | II |
| 594252B | Ouhoushu | unknown | Japan | Japan | 1996 | II |
| 594255 | Ouu 13 | Akita | Japan | Japan | 1996 | IV |
| 594268A | Shiro higo | Miyagi | Japan | Japan | 1996 | IV |
| 594268B | (Shiro higo) | Miyagi | Japan | Japan | 1996 | IV |
| 594206 D | Shirosaya 1 | Kumamoto | Japan | Japan | 1996 | I |
| 594280A | Shoufuku | Nagano | Japan | Japan | 1996 | III |
| 594280A | (Shoufuku) | Nagano | Japan | Japan | 1996 | IV |
| 594280C | (Shoufuku) | Nagano | Japan | Japan | 1996 | IV |
| 594280D | (Shoufuku) | Nagano | Japan | Japan | 1996 | IV |
| 594280E | (Shoufuku) | Nagano | Japan | Japan | 1996 | IV |
| 594280E | Suzuhime | Hokkaido | Japan | Japan Japan | 1996 | III |
| 594282 594283 | Suzukari | Akita | Japan | Japan Japan | 1996 | IV |
| 594285 594286 | Tachikogane | Akita Akita | Japan Japan | Japan Japan | 1996 1996 | IV |
| 594288 | Tachi suzunari | Ibaraki | _ | _ | 1996 | IV |
| J74200 | raciii suzuliali | ivai aki | Japan | Japan | 1770 | 1 V |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco Luster | | Hilum color | Other traits | Seed shape |
|--------------------|-------------------|--------|--------|----|---------|------------|-----|------------------|-----|----------------|----------------|---------------|
| · · · · · · | | | | | | | | | | | o unor trains | |
| 594016 | I | S | W | T | A | N | Br | D | Y | Br | | 2N |
| 594018 | IV | N | P | T | E | Ssp | Br | D | Y | Br | | 2N |
| 594019 | IV | D | P | G | E | Ssp | Br | I | Y | Y | Vhil | 3N |
| 594020 | IV | D | W | G | E | N | Br | I | Y | Bf | Sdef | 2N |
| 594022 | IV | D | W | T | E | N | Br | D | Y | Br | | 2N |
| 594146 | IV | D | P | T | A | Ssp | Br | I | Lgn | Br | | 2N |
| 594148 | II | D | W | T | E | Ssp | Br | I | Y | Br | | 2N |
| 594153 | III | D | W | T | E | Ssp | Br | I | Gn | Gn | Gnc, Na | 3N |
| 594156 | III | D | P | - | - | G | Bl | I | Y | Tn | Vhil | 3N |
| 594158 | II | D | W | T | E | Ssp | Br | S | Bl | Bl | | 2F |
| 594160 | IV | N | P | G | E | N | Br | D | Y | Y | Vhil | 3N |
| 594164 | IV | D | P | G | Α | Ssp | Tn | I | Y | Y | Vhil | 2N |
| 594166 | III | D | W | G | E | Ssp | Br | D | Y | Y | Na | 3N |
| 594167 | III | D | P | G | E | Ssp | Br | I | Y | Y | | 3N |
| 594170A | I | D | P | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 594170B | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 594178 | I | D | P | G | E | Ssp | Br | D | Y | Y | | 2N |
| 594188 | IV | D | P | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594196 | I | D | W | T | E | Ssp | Br | D | Gn | Bl | Vhil | 2N |
| 594198 | I | D | Dp | G | Е | Ssp | Br | D | Y | Y | | 2N |
| 594200 | I | D | P | T | E | Ssp | Br | D | Y | Br | | 2N |
| 594208 | IV | D | P | G | Е | N | Tn | D | Y | Y | | 2N |
| 594215 | II | D | W | G | E | N | Tn | D | Y | Bf | | 3N |
| 594227A | III | D | P | G | A | Ssp | Br | D | Y | Y | Lft5, Na | 2N |
| 594227B | III | D | P | G | A | Ssp | Br | Lb | Bf | Bf | Lft5, Na | 2N |
| 594233A | IV | D | W | T | A | Ssp | Tn | I | Y | Br | | 2N |
| 594233B | IV | D | W | T | A | Ssp | Br | Ī | Y | Br | | 3N |
| 594235 | IV | D | W | T | A | Ssp | Br | Ī | Lgn | Bl | | 3N |
| 594238 | IV | D | W | G | A | N | Br | Ī | Y | Bf | | 2N |
| 594247 | II | D | P | T | A | Ssp | Br | Ī | Y | Br | | 3N |
| 594250 | IV | D | P | G | Sa | N | Br | Ī | Y | Y | | 3N |
| 594252A | II | D | В | G | E | Ssp | Br | Ī | Y | Bf | | 2N |
| 594252B | II | D | P | G | E | Ssp | Br | Ī | Ÿ | Bf | | 2N |
| 594254 | II | N | W | G | E | N | Br | Ī | Y | Y | | 2N |
| 594255 | IV | D | P | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594268A | IV | D | W | G | A | N | Tn | I | Y | Y | | 2N |
| 594268B | IV | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 594276 | I | D | P | G | A | N | Tn | D | Y | Bf | | 2N |
| 594280A | III | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 594280B | IV | D | W | G | Sa | | Br | I | Y | Y | | 2N 2N |
| 594280Б 594280С | IV IV | D D | W | G | Sa E | Ssp Ssp | Br | | Gn | Gn | Na | 2N 2N |
| 594280C 594280D | | D D | W | | | Ssp | | I | | | Na Na Vibil | |
| | IV | | | Lt | Sa | Ssp | Br | I | Gn | Tn | Na, Vhil | 1N |
| 594280E | IV | D | W | G | E | Ssp | Br | I | Gn | Gn | | 1N |
| 594282 | III | D | Dp | G | Sa | Ssp | Br | I | Y | Y | | 3N |
| 594283 | IV | D | Dp | G | A | N | Br | D | Y | Y | | 3N |
| 594286 | IV | D | Dp | G | A | Ssp | Br | D | Y | Y | | 2N |
| 594288 | IV | D | W | T | A | Ssp | Br | I | Y | Br | | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|------------------|------------|------------|---------|----------------------|---------|---------|-------------|---------|----------|----------------|------------------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 594016 | 711 | 827^ | 2.5^ | 58 | 2.0^ | 1.0^ | 4.0^ | 1.5^ | 1.0 | 8.6^ | 1.89^ |
| 594018 | 721 | 1013 | 3.8 | 99 | 3.0 | 1.0 | 1.0 | 2.0 | 1.5 | 22.1 | 2.74* |
| 594019 | 725 | 1013 | 1.8 | 68 | 1.0 | 1.0 | 2.0 | 2.8 | 3.0 | 21.4 | 2.74 |
| 594019 | 723 | 1008 | 1.8 | 79 | 1.0 | 1.0 | 1.0 | 2.8 | 2.0 | 17.3 | 3.31* |
| 594020 | 715 | 1007 | 1.5 | 59 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 17.5 | 2.81 |
| 594022 594146 | 730 | 1007 | 1.8 | 59 67 | 1.0 | 2.0* | 2.5 | 2.0 | 2.0 | 16.7 | 1.88* |
| | | | | 58* | | | | | | | |
| 594148 | 720 | 917 | 1.3 | | 1.0 | 4.5 | 5.0 | 2.5 | 2.5 | 13.2 | 0.87 |
| 594153 | 718 | 923 | 2.0 | 70 | 1.0 | 1.0 | 1.5 | 2.8 | 4.0* | 13.8 | 2.37 |
| 594156 | 715 | 921 | 1.0 | 28 | 1.0 | 2.5 | 4.0* | 2.8 | 3.0 | 13.4* | 0.37 |
| 594158 | 702 | 906 | 1.0 | 44 | 1.0 | 3.0 | 5.0 | 2.8 | 2. 7 | 24.9 | 1.19 |
| 594160 | 721 | 1003 | 2.0 | 105* | 4.0 | 1.0 | 2.0 | 3.3 | 3.5 | 18.7 | 2.59* |
| 594164 | 730 | 1017 | 2.3 | 95 | 1.0 | 1.0 | 2.5 | 2.5 | 2.5 | 20.5 | 1.45^ |
| 594166 | 707 | 927 | 2.0 | 69 | 1.0 | 2.0 | 3.5 | 2.5 | 2.5 | 24.8 | 2.11 |
| 594167 | 716 | 921 | 1.3 | 50 | 1.0 | 3.5 | 4.0* | 2.5 | 2.0 | 19.4 | 1.75 |
| 594170A | 628 | 825^ | 1.0^ | 35 | 1.0^ | 1.0^ | 5.0^ | 1.5^ | 1.0 | 9.9^ | 1.39^ |
| 594170B | 813* | 826^ | 1.0^ | 45 | 1.0^ | 2.0^ | 5.0^ | 1.5^ | 1.0 | 8.8^ | 1.66^ |
| 594178 | 625 | 821^ | 1.0^ | 32 | 1.0^ | 1.0^ | 5.0^ | 2.0^ | 1.0 | 20.6^ | 0.79^ |
| 594188 | 729 | 1012 | 1.8 | 74 | 1.0 | 2.0* | 3.5 | 2.5 | 1.5 | 17.1 | 1.70* |
| 594196 | 627 | 823^ | 1.0^ | 28 | 1.0^ | 1.0^ | 3.0^ | 2.0^ | 1.0 | 22.6^ | 1.90^ |
| 594198 | 623 | 819^ | 1.0^ | 39 | 1.0^ | 1.0^ | 5.0^ | 2.0^ | 1.0 | 19.9^ | 1.92^ |
| 594200 | 630 | 830^ | 1.0^ | 51* | 1.0^ | 2.0^ | 5.0^ | 1.5^ | 2.0 | 15.2^ | 1.35^ |
| 594208 | 726 | 1005 | 2.5 | 89 | 1.0 | 1.0 | 2.5 | 2.0 | 4.5 | 8.4 | 2.72* |
| 594215 | 715 | 909 | 2.3 | 75 | 1.0 | 1.5 | 5.0 | 2.5 | 2.0* | 11.2 | 1.98 |
| 594227A | 713 | 927 | 2.3 | 68 | 1.0 | 2.5 | 4.0* | 2.3 | 2.0 | 15.9 | 2.06 |
| 594227B | 711* | 927 | 2.5 | 69 | 1.0 | 1.5 | 4.5 | 2.0 | | 15.8 | 1.88 |
| 594233A | 727 | 1001 | 2.8 | 90* | 1.0 | 2.0 | 4.0* | 2.5 | 2.0 | 14.5 | 2.26* |
| 594233B | 730 | 1001 | 3.3 | 89* | 1.0 | 1.5 | 3.5* | 2.5 | 2.0 | 15.8 | 2.53* |
| 594235 | 723 | 1001 | 1.8 | 70 | 1.0 | 3.0 | 4.5 | 2.5 | 2.0 | 20.5 | 2.07 |
| 594238 | 727 | 1012 | 1.5 | 66 | 1.0 | 1.5 | 2.0 | 2.8 | 2.0 | 18.4 | 1.91 |
| 594247 | 717 | 915 | 2.0 | 65* | 1.0 | 4.5 | 5.0 | 3.0 | 1.5 | 15.8 | 0.55 |
| 594250 | 727 | 1017 | 2.0 | 79 | 1.0 | 1.0 | 2.0 | 2.3 | 2.0 | 26.6* | 2.48* |
| 594252A | 719 | 910 | 2.0 | 64 | 1.0 | 3.0 | 4.5 | 2.5 | 1.0 | 12.2 | 1.67 |
| 594252B | 718 | 908 | 2.0 | 70 | 1.5 | 3.5 | 5.0 | 2.3 | 1.0 | 12.4 | 1.93 |
| 594254 | 628 | 904 | 2.3 | 79 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 17.8 | 2.90 |
| 594255 | 724 | 929 | 2.0 | 72 | 1.0 | 3.0 | 4.5 | 2.8 | 1.0 | 19.0 | 1.35* |
| 594268A | 725 | 1011 | 2.3 | 73 | 1.0 | 2.0* | 3.5 | 2.5 | 2.5 | 21.4 | 2.09* |
| 594268B | 727 | 1015 | 2.3 | 85* | 1.0 | 2.0* | 3.0 | 2.3 | 1.0 | 20.6 | 2.70* |
| 594276 | 709 | 826 | 2.0^ | 53* | 1.0^ | 1.0^ | 4.0^ | 1.5^ | 1.0 | 11.3^ | 1.27^ |
| 594280A | 715 | 927 | 1.5 | 59 | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 19.2 | 2.35 |
| 594280B | 727 | 1009 | 1.8 | 76 | 1.0 | 1.0 | 1.0 | 2.3 | 2.5 | 16.0 | 2.52* |
| 594280C | 721 | 1009 | 1.8 | 69 | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 16.6 | 2.69* |
| 594280D | 721 | 1012 | 1.8 | 74 | 1.0 | 1.0 | 1.0 | 2.3 | 3.0 | 18.3 | 2.80* |
| 594280E | 720 | 1012 | 2.0 | 7 4 79 | 1.0 | 1.0 | 1.0 | 2.3 | 2.5 | 17.5 | 2.65* |
| 594280E | 723 | 921 | 2.0 | 57 | 1.0 | 1.0 | 3.5 | 2.8 | 2.0 | 17.5 | 2.10 |
| 594283 | 718 | 921 | 1.5 | 51 | 1.0 | 2.0 | 3.3 4.0* | 2.3 | 1.0 | 19.5 | 2.10 |
| 594286 | 718 719 | 929 | 2.3 | 66 | 1.0 | 2.0 | 4.0* | 2.3 | 2.5 | 16.6 | 2.26* |
| | 719 | | | | | | | | | | 2.20** |
| 594288 | 121 | 1006 | 1.8 | 75 | 1.0 | 1.5 | 3.5 | 2.3 | 1.5 | 16.9 | ∠.11 ⁻ |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed composition | | Oil compos | sition | | | | |
|-------------------|----------|-----------------------------|---------------------|--------------|--------------|-------|----------|--|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 594016 | I | 43.0^ | 15.4^ | 13.2^ | 3.5^ | 24.9^ | 50.4^ | 8.0^ | |
| 594018 | IV | 43.5 | 17.7 | 9.8 | 3.8 | 24.3 | 55.0 | 7.1 | |
| 594019 | IV | 46.0 | 15.8 | 8.8 | 3.0 | 24.9 | 55.8 | 7.5 | |
| 594020 | IV | 43.2 | 17.5 | 9.2 | 3.9 | 25.9 | 53.8 | 7.2 | |
| 594022 | IV | 38.3 | 18.1 | 9.7 | 3.5 | 17.0 | 61.3 | 8.5 | |
| 594146 | IV | 42.5 ^w | 17.4 ^w | 12.2 | 3.1 | 22.3 | 53.6 | 8.8 | |
| 594148 | II | 46.0 | 16.1 | 12.8 | 3.3 | 26.4 | 51.2 | 6.2 | |
| 594153 | III | 44.4 ^w | 18.6 ^w | 12.3 | 3.8 | 24.6 | 51.9 | 7.5 | |
| 594156 | III | 49.0 | 14.7 | 10.5 | 4.0 | 22.8 | 55.1 | 7.6 | |
| 594158 | II | 44.7 ^w | 18.5 ^w | 11.9 | 3.5 | 35.7 | 43.4 | 5.5 | |
| 594160 | IV | 43.3 ^w | 17.8 ^w | 11.4 | 3.4 | 24.1 | 53.5 | 7.6 | |
| 594164 | IV | 41.4 | 17.0 | 11.3 | 3.3 | 19.3 | 57.6 | 8.5 | |
| 594164 594166 | III | 42.2 | 17.3 | 8.8 | 3.6 | 27.2 | 53.8 | 6.6 | |
| 594160 594167 | III | 42.2 | 17.3 | 8.8 | 3.6 | 24.3 | 55.0 | 8.4 | |
| 594107 594170A | I | 38.4^ | 20.0^ | 0.6 12.6^ | 3.0 4.4^ | 23.8^ | 53.3^ | 6.0^ | |
| 594170A | I | 37.7 | 20.0 19.9^ | 12.4^ | 3.9^ | 22.2^ | 54.8^ | 6.6^ | |
| 594170 b | I | 42.1^ | 21.1^ | 13.0^ | 3.0^ | 27.7 | 50.4^ | 5.8^ | |
| 594178 594188 | IV | 41.7 | 16.6 | 9.5 | 3.7 | 22.8 | 55.6 | 8.4 | |
| 594100 594196 | I | 41.7 46.8 ^w ^ | 20.6 ^w ^ | 9.3 12.4^ | 3.3^ | 31.5^ | 47.0^ | 5.8^ | |
| 594190 594198 | I | 41.8^ | 21.0^ | 13.4^ | 3.5^ | 23.4^ | 53.4^ | 5.8 ⁻⁴ 6.4 ⁻⁴ | |
| | I | 39.2^ | | | 3.3^ 4.2^ | | | | |
| 594200 | | | 19.1^ | 12.7^ | | 26.4^ | 51.0^ | 5.7^ | |
| 594208 | IV | 46.1 ^w | 15.2 ^w | 12.0 | 2.9 | 19.5 | 56.5 | 9.1 | |
| 594215 | II | 44.8 | 14.0 | 12.9 | 3.2 | 22.3 | 52.5 | 9.1 | |
| 594227A | III | 42.3 | 17.5 | 10.2 | 5.0 | 24.2 | 52.7 | 7.9 | |
| 594227B | III | 44.9 ^w | 16.7 ^w | 12.7 | 3.4 | 21.5 | 53.1 | 9.3 | |
| 594233A | IV | 43.3 | 14.9 | 9.4 | 3.9 | 27.1 | 51.5 | 8.1 | |
| 594233B | IV | 44.1 | 13.9 | 9.5 | 3.5 | 21.1 | 57.2 | 8.7 | |
| 594235 | IV | 47.9 ^w | 16.5 ^w | 12.7 | 3.1 | 24.7 | 51.9 | 7.5 | |
| 594238 | IV | 40.0 | 17.6 | 8.9 | 3.8 | 24.4 | 55.3 | 7.6 | |
| 594247 | II | 43.6 | 16.6 | 9.8 | 3.7 | 21.1 | 57.1 | 8.2 | |
| 594250 | IV | 42.8 | 16.8 | 8.6 | 3.3 | 24.2 | 56.7 | 7.2 | |
| 594252A | II | 42.1 | 16.3 | 13.1 | 3.6 | 23.1 | 52.0 | 8.2 | |
| 594252B | II | 46.3 | 14.3 | 12.5 | 3.5 | 25.7 | 50.0 | 8.4 | |
| 594254 | II | 41.3 | 18.3 | 11.3 | 3.9 | 25.1 | 53.0 | 6.7 | |
| 594255 | IV | 42.7 | 16.6 | 9.7 | 3.7 | 23.8 | 55.3 | 7.4 | |
| 594268A | IV | 41.7 | 16.4 | 9.4 | 3.6 | 23.7 | 55.3 | 8.0 | |
| 594268B | IV | 39.7 | 16.7 | 9.3 | 3.7 | 23.7 | 54.9 | 8.4 | |
| 594276 | I | 44.0^ | 15.2^ | 13.9^ | 3.9^ | 25.0^ | 50.3^ | 7.0^ | |
| 594280A | III | 39.7 | 17.5 | 9.7 | 4.1 | 25.7 | 53.2 | 7.2 | |
| 594280B | IV | 39.7 | 15.7 | 9.2 | 4.1 | 21.2 | 56.0 | 9.6 | |
| 594280C | IV | 41.6 ^w | 18.1^{w} | 12.9 | 3.1 | 23.2 | 52.9 | 7.8 | |
| 594280D | IV | 43.6 ^w | $17.7^{\rm w}$ | 12.6 | 3.0 | 19.7 | 56.1 | 8.6 | |
| 594280E | IV | 41.4^{w} | 18.1^{w} | 12.5 | 3.1 | 22.4 | 54.0 | 8.0 | |
| 594282 | III | 42.4 | 18.4 | 10.3 | 4.1 | 23.1 | 54.2 | 8.3 | |
| 594283 | IV | 41.2 | 18.2 | 9.8 | 3.1 | 21.7 | 56.5 | 9.0 | |
| 594286 | IV | 39.2 | 18.2 | 8.9 | 3.1 | 22.1 | 57.5 | 8.3 | |
| 594288 | IV | 42.0 | 15.9 | 9.0 | 3.4 | 25.8 | 53.5 | 8.3 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|-----------------|----------------------------------|-----------|---------------|---------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 594289 | Tachiyutaka | Akita | Japan | Japan | 1996 | IV |
| 594295 | Tanrei | Nagano | Japan | Japan | 1996 | IV |
| 594296 | Tokachi kuro | Hokkaido | Japan | Japan | 1996 | I |
| 594297 | Tokachi nagaha | Hokkaido | Japan | Japan | 1996 | II |
| 594298 | Tokachi shiro | Hokkaido | Japan | Japan | 1996 | II |
| 594301 | Toyomusume | Hokkaido | Japan | Japan | 1996 | I |
| 594304A | Tsurukogane | Hokkaido | Japan | Japan | 1996 | I |
| 594304B | (Tsurukogane) | Hokkaido | Japan | Japan | 1996 | II |
| 594308 | Ugo daizu | Akita | Japan | Japan | 1996 | IV |
| 594314 | Wase suzunari | Akita | Japan | Japan | 1996 | I |
| 594319 | Yuuhime | Hokkaido | Japan | Japan | 1996 | Ī |
| 594393 | Shui niu pi | Anhui | China | China | 1996 | IV |
| 594394 | 1012 Yuan huang | Anhui | China | China | 1996 | III |
| 594398A | 87-32 | Anhui | China | China | 1996 | IV |
| 594398B | (87-32) | Anhui | China | China | 1996 | IV |
| 594399A | 85-23-9 | Anhui | China | China | 1996 | IV |
| 594399C | (85-23-9) | Anhui | China | China | 1996 | IV |
| 594401A | 88-35 | Anhui | China | China | 1996 | III |
| 594401B | (88-35) | Anhui | China | China | 1996 | III |
| 594401C | (88-35) | Anhui | China | China | 1996 | III |
| 594401D | (88-35) | Anhui | China | China | 1996 | III |
| 594401E | (88-35) | Anhui | China | China | 1996 | IV |
| 594402 | 87-72-1 | Anhui | China | China | 1996 | III |
| 594403 | 85-125-1 | Anhui | China | China | 1996 | IV |
| 594404 | 85-57 | Anhui | China | China | 1996 | III |
| 594405 | 86-36 | Anhui | China | China | 1996 | III |
| 594406 | 25-1 | Anhui | China | China | 1996 | IV |
| 594407 | 32-25 | Anhui | China | China | 1996 | III |
| 594408 | He yin yi hao | Anhui | China | China | 1996 | III |
| 594409A | 86-8-39 | Anhui | China | China | 1996 | IV |
| 594409B | (86-8-39) | Anhui | China | China | 1996 | III |
| 594410 | Liu yue zha | Anhui | China | China | 1996 | IV |
| 594411 | Wan dou yuan | Anhui | China | China | 1996 | IV |
| 594412 | Shi dian huang dou | Anhui | China | China | 1996 | IV |
| 594413 | Ba yue bai | Anhui | China | China | 1996 | IV |
| 594415A | Jiu yue xiao dou | Anhui | China | China | 1996 | IV |
| 594419 | Cha zhuang huang dou | Anhui | China | China | 1996 | IV |
| 594420 | Niu mao huang | Anhui | China | China | 1996 | IV |
| 594430A | Guang qian qing dou | Anhui | China | China | 1996 | IV |
| 594430B | (Guang qian qing dou) | Anhui | China | China | 1996 | IV |
| 594438 | Tong jiang huang dou | Sichuan | China | China | 1996 | II |
| 594439A | Guang han liu yue huang | Sichuan | China | China | 1996 | IV |
| 594439B | (Guang han liu yue huang) | Sichuan | China | China | 1996 | IV |
| 594440 | Chong qing qi yue huang | Sichuan | China | China | 1996 | IV |
| 594441 | Qiong lai huang mao zi | Sichuan | China | China | 1996 | IV |
| 594442A | Han yuan hong hua chi dou zi | Sichuan | China | China | 1996 | IV |
| 594442B | (Han yuan hong hua chi dou zi) | Sichuan | China | China | 1996 | IV |
| J74444 D | (11aii yuan nong nua cin dou zi) | Siciluali | Cillia | Cillia | 1770 | 1 4 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|-----------|-------------------|-----|--------|----|----|---------|--------------|------------------|-----|----------------|--------------|---------------|
| · · · · · | | - D | D | - | Г | N | ъ. | т | 17 | 17 | | |
| 594289 | IV | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 594295 | IV | D | P | G | A | Ssp | Br | I | Y | Y | | 2N |
| 594296 | I | D | P | T | Е | Ssp | Br | I | Bl | Bl | NT | 2F |
| 594297 | II | D | P | T | Е | Ssp | Br | D | Y | Br | Na | 2N |
| 594298 | II | D | В | T | E | Ssp | Br | I | Y | Tn | Vhil | 2N |
| 594301 | I | D | P | G | Е | Ssp | Br | D | Y | Y | X 71 ·1 | 2N |
| 594304A | I | N | W | G | Е | Ssp | Br | I | Y | Y | Vhil | 2N |
| 594304B | II | N | W | G | E | Ssp | Br | I | Y | Lbf | | 2N |
| 594308 | IV | D | Dp | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594314 | I | D | P | G | A | Ssp | Br | D | Y | Y | | 2N |
| 594319 | I | D | P | G | Sa | Ssp | Br | I | Y | Y | | 2N |
| 594393 | IV | N | W | G | Sa | Ssp | Br | I | Y | Bf | | 3N |
| 594394 | III | N | W | G | A | N | Dbr | I | Y | Bf | X 71 .11 | 3N |
| 594398A | IV | D | W | G | A | N | Tn | I | Y | Y | Vhil | 3N |
| 594398B | IV | D | P | G | A | N | Tn | I | Y | Y | Vhil | 4N |
| 594399A | IV | D | W | G | A | N | Br | I | Y | Y | Vhil | 3N |
| 594399C | IV | D | W | G | E | N | Br | I | Y | Bf | Sdef | 2N |
| 594401A | III | D | W | G | Sa | N | Tn | I | Y | Bf | Vhil | 3N |
| 594401B | III | D | P | G | A | N | Tn | I | Y | Ib | Vhil | 3N |
| 594401C | III | D | P | G | A | N | Tn | I | Y | Ib | Vhil | 3N |
| 594401D | III | D | P | G | Sa | N | Tn | I | Y | Ib | Vhil | 3N |
| 594401E | IV | D | P | G | A | N | Br | I | Y | Ib | Vhil | 3N |
| 594402 | III | D | P | G | A | Ssp | Br | I | Y | Lbf | Vhil | 3N |
| 594403 | IV | D | P | G | A | N | Br | I | Y | Bf | | 3N |
| 594404 | III | D | P | G | A | N | Br | I | Y | Bf | Sdef, Vhil | 2N |
| 594405 | III | D | W | G | A | N | Br | I | Y | Bf | Vhil | 3N |
| 594406 | IV | D | P | G | E | N | Br | I | Y | Bf | Vhil | 3N |
| 594407 | III | D | W | G | Sa | Ssp | Tn | I | Y | Bf | | 3N |
| 594408 | III | D | P | G | A | N | Tn | I | Y | Ib | Vhil | 3N |
| 594409A | IV | D | W | T | Sa | N | Br | I | Y | Brbl | Vhil | 2N |
| 594409B | III | D | W | T | A | N | Br | I | Lgn | Brbl | Vhil | 2N |
| 594410 | IV | D | P | G | Sa | Ssp | Tn | I | Y | Bf | Vhil | 3N |
| 594411 | IV | D | P | T | A | N | Tn | I | Y | Br | | 3N |
| 594412 | IV | N | P | G | A | N | Br | I | Y | Lbf | | 2N |
| 594413 | IV | D | W | G | E | Ssp | Br | I | Y | Bf | | 3N |
| 594415A | IV | D | P | G | A | N | Tn | I | Y | Bf | | 2N |
| 594419 | IV | S | W | G | A | N | Br | I | Y | Bf | | 3N |
| 594420 | IV | D | W | G | A | Ssp | Br | I | Y | Bf | | 4N |
| 594430A | IV | D | P | T | A | Ssp | Tn | I | Y | Brbl | Vhil | 3N |
| 594430B | IV | D | P | T | A | Ssp | Br | I | Lgn | Br | | 3N |
| 594438 | II | D | P | G | A | N | Br | I | Y | Bf | Vhil | 2N |
| 594439A | IV | D | W | T | A | N | Tn | I | Y | Bl | | 3N |
| 594439B | IV | D | W | T | A | N | Br | I | Y | Br | | 3N |
| 594440 | IV | D | W | T | A | N | Br | I | Y | Bl | | 3N |
| 594441 | IV | D | W | T | Sa | Ssp | Br | I | Lgn | B1 | | 3N |
| 594442A | IV | D | W | G | A | N | Br | I | Y | Bf | | 2N |
| 594442B | IV | D | W | Lt | Sa | N | Br | I | Y | Br | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------------|-----------|------------------------|-------------|----------------|---------|---------|-------------|-------------|----------|----------------|----------------|
| | date | | Lodging | Heigh | t term. | early | late | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | $(Mg ha^{-1})$ |
| 594289 | 719 | 1007 | 1.3 | 62* | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 19.7 | 3.00* |
| 594295 | 725 | 1007 | 1.3 | 67* | 1.0 | 2.0* | 3.5 | 2.0 | 2.5 | 19.7 | 1.78* |
| 594296 | 629 | 831 | 1.0^ | 33 | 1.0^ | 1.0^ | 5.0^ | 2.5^ | 2.3 | 18.1^ | - |
| 594290 | 704 | 904 | 1.0 | 53 51 | 1.0 | 3.0 | 5.0 | 2.5 | 1.5 | 12.9 | 1.79 |
| | 704 | 90 4 911 | 2.3 | 53 | 1.0 | 3.0 | 5.0 | 2.3 | 1.0 | 13.0 | 1.79 |
| 594298 | | 830^ | 2.5 1.0^ | 38 | 1.0^ | 2.0^ | 3.0 4.0^ | 2.5 1.5^ | | | |
| 594301 | 625 | | | | | | | | 1.0 | 20.4^ | 1.86^ |
| 594304A | 625 | 903^ | 1.5^ | 60* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 22.2^ | 2.63^ |
| 594304B | 705^ | 917^ | 1.0^ | 66^ | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 21.2^ | 1.39^ |
| 594308 | 723 | 929 | 2.3 | 70* | 1.0 | 3.0 | 4.5 | 2.3 | 1.0 | 16.8* | 1.71* |
| 594314 | 629 | 827^ | 1.0^ | 31 | 1.0^ | 1.0^ | 2.0^ | 1.5^ | 1.0 | 14.2^ | 1.29^ |
| 594319 | 628 | 825^ | 1.0^ | 29 | 1.0^ | 1.0^ | 4.0^ | 2.0^ | 1.0 | 25.5^ | 1.19^ |
| 594393 | 728 | 1004 | 2.5 | 71 | 3.5 | 1.0 | 3.0 | 2.5 | 1.5 | 13.6 | 2.15* |
| 594394 | 715 | 919 | 3.0 | 104 | 4.0 | 1.0 | 2.0* | 2.8 | 1.0 | 18.0 | 2.61* |
| 594398A | 725 | 1013 | 1.8 | 73* | 1.0 | 1.0 | 1.0 | 2.3 | 1.0 | 16.6 | 2.14* |
| 594398B | 722 | 1003 | 1.8 | 69 | 1.0 | 1.0 | 2.0* | 2.8 | 1.0 | 18.0 | 2.33* |
| 594399A | 721 | 1006 | 2.3 | 53 | 1.0 | 1.5 | 3.0* | 2.8 | 1.0 | 17.3 | 1.84* |
| 594399C | 724 | 1013 | 2.5 | 63 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 16.5 | 2.79 |
| 594401A | 720 | 925 | 2.5 | 72* | 1.0 | 1.0 | 1.5 | 2.0 | 1.0 | 16.3 | 2.27 |
| 594401B | 726 | 925 | 3.0 | 69 | 1.5 | 2.5 | 3.0* | 2.3 | 1.0 | 14.6 | 1.65* |
| 594401C | 721 | 925 | 2.5 | 71 | 1.0 | 1.0 | 1.5 | 2.5 | 1.5 | 17.3 | 1.24 |
| 594401D | 723 | 927 | 3.0 | 79 | 1.5 | 2.0 | 3.5 | 2.5 | 1.0 | 16.6 | 2.10 |
| 594401E | 723 | 1001 | 2.3 | 70 | 1.0 | 1.0 | 3.0* | 2.5 | 1.0 | 16.5 | 1.39^ |
| 594402 | 720 | 929 | 1.8 | 69 | 1.0 | 1.5 | 1.5 | 3.0 | 1.0 | 17.2* | 2.08 |
| 594403 | 727 | 1003 | 2.8 | 63 | 1.0 | 1.0 | 2.0 | 2.5 | 1.0 | 14.0 | 1.44^ |
| 594404 | 721 | 927 | 2.3 | 72* | 1.0 | 1.5 | 2.0* | 2.8 | 1.0 | 20.2* | 1.73 |
| 594405 | 721 | 925 | 3.3 | 70 | 1.0 | 1.0 | 2.0 | 2.5 | 1.0 | 14.4 | 2.40* |
| 594406 | 723 | 1001 | 1.5 | 86 | 1.0 | 1.5 | 3.5 | 2.5 | 1.0 | 19.7 | 2.99 |
| 594407 | 719 | 927 | 1.8 | 69 | 1.0 | 2.0* | 4.5 | 2.5 | 1.0 | 19.9 | 2.67 |
| 594408 | 719 | 919 | 2.5 | 49* | 1.0 | 3.0 | 5.0 | 3.3 | 1.0 | 20.7 | 0.92* |
| 594409A | 723 | 1005 | 2.8 | 98 | 1.0 | 1.0 | 3.0 | 2.0 | 1.0 | 13.5 | 2.44* |
| 594409B | 719 | 926 | 2.5 | 86* | 1.0 | 1.0 | 1.5 | 2.0 | 1.0 | 13.3 | 2.21* |
| 594410 | 723 | 1003 | 1.5 | 76 | 1.0 | 1.0 | 2.0* | 2.8 | 1.0 | 18.4 | 3.18* |
| 594411 | 727 | 929 | 3.8 | 61* | 1.0 | 1.0 | 1.0 | 2.3 | 2.5 | 14.7 | 1.19* |
| 594412 | 723 | 1001 | 2.0 | 74* | 3.0 | 1.0 | 2.0* | 2.8 | 1.0 | 20.0 | 1.72* |
| 594413 | 725 | 1011 | 2.8 | 79* | 1.0 | 1.0 | 1.5 | 2.0 | 1.0 | 15.4 | 2.32* |
| 594415A | 814 | 1016 | 3.3 | 94 | 1.0 | 1.5 | 2.0 | 2.3 | 2.0 | 10.9 | 1.06 |
| 594419 | 807 | 1001 | 4.3 | 87* | 2.0 | 2.5 | 4.0* | 2.3 | 2.0 | 10.1 | 0.98* |
| 594420 | 808 | 1017 | 2.3 | 77* | 1.0 | 1.0 | 2.0 | 2.5 | 2.0 | 14.8 | 1.66* |
| 594430A | 808 | 1005 | 3.3 | 91* | 1.5 | 1.0 | 2.5 | 2.3 | 1.0 | 12.2 | 1.28* |
| 594430B | 811 | 1018 | 3.5 | 74* | 1.5 | 1.0 | 1.0 | 2.3 | 1.5 | 14.4 | 1.02 |
| 594438 | 729 | 915 | 2.8 | 57* | 1.5 | 1.0 | 2.5 | 2.8 | 1.5 | 9.9 | 1.02 |
| 594439A | 802 | 1007 | 3.3 | 90* | 1.0 | 1.0 | 2.5 | 2.3 | 2.0 | 8.6 | 1.85* |
| 594439B | 803 | 1007 | 3.0 | 81 | 1.0 | 1.5 | 3.5 | 2.5 | 3.0 | 9.2 | 1.89* |
| 594440 | 727 | 1015 | 3.3 | 113* | 1.5 | 1.0 | 1.0 | 2.0 | 2.0 | 13.7 | 1.37 |
| 594441 | 725 | 1008 | 2.5 | 62 | 1.0 | 2.0 | 4.5 | 2.8 | 2.5 | 15.4 | 1.49 |
| 594442A | 802 | 1009 | 2.5 | 98 | 1.0 | 1.0 | 2.5 | 2.0 | 1.5 | 8.8 | 1.50 |
| 594442B | 806 | 1017* | 2.8 | 94 | 1.0 | 1.0 | 1.5 | 2.5 | 3.5 | 10.2 | 1.12 |
| J/TT T 4 U | 000 | 101/ | 2.0 |) + | 1.0 | 1.0 | 1.5 | ۵.5 | 5.5 | 10.2 | 1.14 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | | Oil compos | | | | | |
|--------------------------|-----------|---------------------|---------------------|------------|------------|--------------|--------------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 594289 | IV | 42.7 | 17.8 | 8.8 | 3.6 | 25.5 | 54.3 | 7.8 | |
| 594295 | IV | 43.2 | 16.6 | 9.6 | 3.0 | 22.8 | 56.5 | 8.1 | |
| 594296 | I | 45.4 ^w ^ | 20.4 ^w ^ | 11.4^ | 3.3^ | 29.6^ | 50.2^ | 5.5^ | |
| 594297 | II | 44.3 | 16.4 | 12.1 | 3.7 | 20.8 | 55.9 | 7.5 | |
| 594298 | II | 40.8 | 18.5 | 13.5 | 3.2 | 22.9 | 52.7 | 7.7 | |
| 594301 | I | 42.0^ | 19.7^ | 12.7^ | 3.3^ | 26.1^ | 52.1^ | 5.8^ | |
| 594304A | I | 42.0^ | 18.6^ | 12.2^ | 4.3^ | 27.1^ | 50.7^ | 5.7^ | |
| 594304B | II | 41.5^ | 17.7^ | 11.2^ | 3.6^ | 27.6^ | 51.9^ | 5.7^ | |
| 594308 | IV | 43.7 | 15.2 | 9.6 | 2.8 | 22.1 | 55.8 | 9.8 | |
| 594314 | I | 37.9^ | 21.5^ | 12.9^ | 3.5^ | 23.5^ | 53.9^ | 6.2^ | |
| 594319 | Ī | 37.8^ | 19.7^ | 12.7^ | 3.7^ | 27.6^ | 49.8^ | 6.2^ | |
| 594393 | IV | 42.3 | 17.9 | 11.3 | 3.5 | 23.9 | 52.5 | 8.8 | |
| 594394 | III | 41.6 | 18.6 | 11.0 | 3.5 | 26.3 | 51.4 | 7.8 | |
| 594398A | IV | 39.3 | 18.0 | 9.6 | 3.5 | 24.6 | 54.4 | 7.8 7.8 | |
| 594398B | IV | 40.4 | 17.9 | 9.6 | 3.7 | 26.1 | 53.4 | 7.2 | |
| 594399A | IV | 39.4 | 18.6 | 9.0 | 3.5 | 26.4 | 53.9 | 7.2 | |
| 594399C | IV | 45.6 | 14.5 | 9.3 | 3.5 | 23.6 | 55.6 | 8.0 | |
| 594401A | III | 44.3 | 16.1 | 9.1 | 3.7 | 28.5 | 50.8 | 7.9 | |
| 94401A | III | 45.3 | 16.1 | 9.1 | 4.0 | 27.8 | 51.3 | 7.2 | |
| 94401 C | III | 45.0 | 16.1 | 9.0 | 3.9 | 26.5 | 53.5 | 7.2 | |
| 94401C | III | 43.7 | 17.2 | 9.0 9.4 | 3.4 | 26.5 | 53.5 | 7.2 | |
| 94401E | IV | 45.8 | 14.8 | 9.4 8.8 | 2.9 | 23.7 | 56.0 | 8.7 | |
| 194401E 194402 | III | 43.8 43.9 | | | | 25.7 25.4 | 53.7 | | |
| | III IV | | 17.1 18.0 | 9.5 9.5 | 4.4 3.4 | 23.4 | 56.3 | 7.0 | |
| 594403 | | 41.0 | | | | | 36.3 49.2 | 7.9 | |
| 594404 50440 5 | III | 41.9 | 18.2 | 9.8 | 3.7 | 31.0 | | 6.3 | |
| 594405 | III | 42.2 | 17.7 | 9.8 | 3.7 | 27.7 | 51.9 | 6.8 | |
| 594406 504407 | IV | 42.0 | 17.9 | 9.8 | 3.2 | 23.6 | 55.8 | 7.6 | |
| 94407 | III | 41.1 | 18.4 | 9.9 | 3.0 | 21.0 | 58.6 | 7.5 | |
| 94408 | III | 44.3 | 17.1 | 9.6 | 4.2 | 28.7 | 50.6 | 6.9 | |
| 594409A | IV | 39.6 | 17.0 | 10.2 | 3.6 | 21.9 | 54.1 | 10.1 | |
| 594409B | III | 43.0 ^w | 17.2 ^w | 12.6 | 3.1 | 21.6 | 53.2 | 9.4 | |
| 594410 | IV | 41.3 | 17.5 | 9.6 | 3.3 | 22.3 | 57.5 | 7.3 | |
| 594411 | IV | 43.8 | 17.3 | 10.3 | 3.8 | 23.3 | 55.0 | 7.6 | |
| 594412 | IV | 42.1 | 18.4 | 9.8 | 3.6 | 24.8 | 54.5 | 7.2 | |
| 594413 | IV | 41.3 | 17.0 | 9.3 | 3.3 | 22.6 | 57.4 | 7.4 | |
| 594415A | IV | 43.8 | 16.2 | 8.6 | 3.7 | 24.1 | 54.2 | 9.5 | |
| 594419 | IV | 43.5 | 15.3 | 9.6 | 3.9 | 24.0 | 53.8 | 8.8 | |
| 594420 | IV | 42.4 | 16.5 | 9.3 | 3.5 | 21.9 | 56.5 | 8.8 | |
| 94430A | IV | 44.6 | 14.0 | 9.3 | 3.0 | 26.1 | 53.1 | 8.5 | |
| 94430B | IV | 45.4 ^w | 14.8 ^w | 12.3 | 2.9 | 22.5 | 53.4 | 8.9 | |
| 594438 | II | 40.9 | 14.6 | 10.1 | 3.6 | 27.4 | 50.6 | 8.3 | |
| 594439A | IV | 40.0 | 17.0 | 9.9 | 4.1 | 19.1 | 58.0 | 9.0 | |
| 594439B | IV | 42.0 | 16.5 | 9.9 | 3.7 | 21.7 | 55.4 | 9.3 | |
| 594440 | IV | 43.1 | 16.0 | 8.8 | 3.2 | 22.3 | 57.5 | 8.2 | |
| 594441 | IV | 46.0^{w} | 16.2^{w} | 12.4 | 3.5 | 23.4 | 54.4 | 6.4 | |
| 594442A | IV | 45.7 | 14.5 | 9.2 | 3.4 | 21.6 | 57.0 | 8.8 | |
| 594442B | IV | 43.6^{w} | 15.6^{w} | 9.4 | 4.2 | 22.9 | 55.4 | 8.1 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | A | D | Country | Country | Year | Maria |
|---------------------|---------------------------------|------------------|--------------|-------------------|------------------------|-------|
| PI No. | Accession identifier | Region of origin | of origin | of acquisition | introduced or released | • |
| TINO. | idelitillei | or origin | Origin | acquisition | or released | group |
| 594443 | Wan yuan tian kan dou | Sichuan | China | China | 1996 | IV |
| 594444A | Shi fang ba jiao qi yue huang | Sichuan | China | China | 1996 | III |
| 594444B | (Shi fang ba jiao qi yue huang) | Sichuan | China | China | 1996 | III |
| 594445 | Han yuan qian jin qing pi dou | Sichuan | China | China | 1996 | III |
| 594446 | Mei shan lu pi dou | Sichuan | China | China | 1996 | IV |
| 594448A | Guang han hei dou | Sichuan | China | China | 1996 | IV |
| 594448B | (Guang han hei dou) | Sichuan | China | China | 1996 | IV |
| 594451 | Liu yue bao | Sichuan | China | China | 1996 | III |
| 594452 | Huang dou | Sichuan | China | China | 1996 | IV |
| 594453 | Liu yue huang | Sichuan | China | China | 1996 | IV |
| 594454A | · | Sichuan | China | China | 1996 | II |
| 594454B | (Da huang dou) | Sichuan | China | China | 1996 | III |
| 594455A | Bao ji mu dou | Sichuan | China | China | 1996 | I |
| 594455B | (Bao ji mu dou) | Sichuan | China | China | 1996 | II |
| 594456A | Xiao jin huang | Sichuan | China | China | 1996 | III |
| 594456B | (Xiao jin huang) | Sichuan | China | China | 1996 | II |
| 594457A | Liu yue zao | Sichuan | China | China | 1996 | III |
| 594457B | (Liu yue zao) | Sichuan | China | China | 1996 | IV |
| 594459 | Zao dou zi | Sichuan | China | China | 1996 | IV |
| 594460 | Liu yue huang | Sichuan | China | China | 1996 | III |
| 594461A | Da bai shui dou | Sichuan | China | China | 1996 | IV |
| 594461B | (Da bai shui dou) | Sichuan | China | China | 1996 | IV |
| 594462 | He dong huang dou | Sichuan | China | China | 1996 | IV |
| 594463A | Ba jiao qi yue huang | Sichuan | China | China | 1996 | IV |
| 594463B | (Ba jiao qi yue huang) | Sichuan | China | China | 1996 | IV |
| 594464 | Chun huang dou No. 2 | Sichuan | China | China | 1996 | II |
| 594466 | Hua qiao hei dou | Sichuan | China | China | 1996 | II |
| 594467 | Zi pi dou | Sichuan | China | China | 1996 | III |
| 594469A | Huang ke zi | Sichuan | China | China | 1996 | III |
| 594469B | (Huang ke zi) | Sichuan | China | China | 1996 | III |
| 594471A | Da bai dou | Sichuan | China | China | 1996 | III |
| 594471B | (Da bai dou) | Sichuan | China | China | 1996 | IV |
| 594476 | Xiao bai mao zao | Sichuan | China | China | 1996 | IV |
| 594478 | Zao huang dou No. 2 | Sichuan | China | China | 1996 | IV |
| 594479 | Lu lan zi No. 1 | Sichuan | China | China | 1996 | IV |
| 594480A | Lu dou | Sichuan | China | China | 1996 | V |
| 594482 | Qing pi dou No. 1 | Sichuan | China | China | 1996 | IV |
| 594483 | Qing pi dou | Sichuan | China | China | 1996 | IV |
| 594484 | Lu lan zi No. 1 | Sichuan | China | China | 1996 | IV |
| 594486A | Lu lan zi No. 2 | Sichuan | China | China | 1996 | IV |
| 594486B | (Lu lan zi No. 2) | Sichuan | China | China | 1996 | IV |
| 594488 | Qing pi dou | Sichuan | China | China | 1996 | IV |
| 594489 | Xiao bai shui dou No. 1 | Sichuan | China | China | 1996 | IV |
| 594496 | Xiao hei dou | Sichuan | China | China | 1996 | IV |
| 594501A | Hei dou zi | Sichuan | China | China | 1996 | IV |
| 594501A | Jiang se dou | Sichuan | China | China | 1996 | IV |
| 594507 594508 | Jiang se dou | Sichuan | China | China | 1996 | III |
| J7 4 JU0 | Jiang Se dou | Siciluali | Cillia | Cillia | 1770 | 111 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | _ | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|--------|---------|----------|----------|-----|--------|-----|----------------|--------------|---------------|
| | <u> </u> | | | | TOIM | | | | | | other traits | |
| 594443 | IV | D | P | T | A | N | Br | I | Gn | Br | | 3N |
| 594444A | III | D | W | T | A | N | Br | I | Gn | Brbl | Vhil | 3N |
| 594444B | III | D | W | T | Sa | N | Br | I | Gn | Br | | 2N |
| 594445 | III | D | P | Lt | A | N | Br | D | Gn | Bl | | 2N |
| 594446 | IV | D | W | G | A | N | Br | I | Gn | Bf | | 2N |
| 594448A | IV | S | W | T | A | N | Br | I | Bl | Bl | Flk, Sdef | 3N |
| 594448B | IV | S | W | T | A | N | Br | I | Bl | Bl | | 3N |
| 594451 | III | S | W | G | A | N | Br | I | Y | Bf | | 3N |
| 594452 | IV | S | W | G | A | N | Br | I | Y | Bf | Vhil | 3N |
| 594453 | IV | D | P | G | Sa | N | Tn | I | Y | Bf | | 2N |
| 594454A | II | D | W | G | Sa | N | Br | I | Y | Lbf | | 3N |
| 594454B | III | S | W | G | Е | Ssp | Br | I | Y | Bf | Vhil | 3N |
| 594455A | I | D | W | Lt | A | N | Br | I | Y | Br | | 3N |
| 594455B | II | N | P | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 594456A | III | S | P | G | A | N | Tn | D | Y | Bf | | 3N |
| 594456B | II | Š | P | G | A | N | Tn | Ī | Y | Bf | | 3N |
| 594457A | III | D | P | G | Sa | Ssp | Br | Ī | Gn | Bf | | 4N |
| 594457B | IV | D | P | G | Sa | Ssp | Br | Ī | Gn | Bf | | 3F |
| 594459 | IV | D | W | T | A | N | Br | Ī | Y | Bl | | 2N |
| 594460 | III | D | W | T | A | N | Br | I | Y | Br | | 2N |
| 594461A | IV | D | P | T | Sa | N | Br | I | Y | Bl | | 3N |
| 594461B | IV | D | W | T | E | N | Tn | I | Y | Br | | 2N |
| 594462 | IV | D | W | T | Sa | N | Lbr | I | Y | Brbl | Vhil | 3N |
| 594463A | IV | D | P | T | Sa | N | Br | D | Y | Bl | V 1111 | 3N |
| 594463B | IV | D | P | T | A | N | Br | I | Y | Br | | 2N |
| 594464 | II | D | P | T | Sa | Ssp | Br | I | Gn | Br | | 3N |
| 594466 | II | D | r P | | Sa Sa | Ssp N | | | Bl | Bl | | 3N |
| | | | | Lt T | | | Lbr | I | | | 0.1-0 | |
| 594467 | III | D | W | | A | N N | Tn | I | Rbr | Rbr | Sdef | 3N |
| 594469A | III | D | P | T | A | N | Tn | I | Y | Br | | 3N |
| 594469B | III | D | P | T | A | N | Br | I | Y | Br | | 2N |
| 594471A | III | D | P | T | Е | Ssp | Br | I | Gn | Bl | | 3N |
| 594471B | IV | S | P | T | E | Ssp | Br | I | Lgn | Br | X 71 ·1 | 3N |
| 594476 | IV | S | P | G | A | N | Br | I | Y | Ib | Vhil | 3N |
| 594478 | IV | S | P | T | A | N | Br | I | Gn | Br | | 3N |
| 594479 | IV | S | P | T | A | N | Br | I | Gn | Br | | 2N |
| 594480A | V | N | P | T | A | N | Br | I | Gn | Bl | | 3N |
| 594482 | IV | S | P | T | Α | N | Br | I | Gn | Br | | 2N |
| 594483 | IV | S | P | T | A | N | Br | I | Gn | Br | | 2N |
| 594484 | IV | D | P | T | A | N | Br | I | Gn | Br | | 2N |
| 594486A | IV | S | P | T | A | N | Br | I | Gn | Br | | 2N |
| 594486B | IV | D | W | T | A | N | Br | I | Gn | Bl | | 3N |
| 594488 | IV | S | W | T | A | N | Br | I | Gn | Bl | | 3N |
| 594489 | IV | S | W | T | A | N | Br | I | Gn | Bl | | 3N |
| 594496 | IV | D | W | T | A | N | Bl | Lb | Bl | Bl | | 4F |
| 594501A | IV | D | W | T | E | Ssp | Br | I | Bl | Bl | Sflk | 3N |
| 594507 | IV | S | P | T | E | Ssp | Bl | I | Br | Rbr | | 3N |
| 594508 | III | D | W | T | A | N | Tn | I | Rbr | Rbr | Sdef | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|---------|-----------|------------|---------|-------|------|---------|------|---------|----------|------------------------|------------------------|
| | date | | Lodging | Heigh | | | late | | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | | | (score) | (score) | (cg sd ⁻¹) | (Mg ha ⁻¹) |
| 594443 | 728 | 1011 | 2.3 | 71 | 1.0 | 2.0* | 3.5 | 1.8 | 2.0 | 14.9 | 1.20* |
| 594444A | 726 | 925 | 3.5 | 79* | 1.0 | 2.0 | 3.5 | 2.0 | 2.0 | 8.8 | 1.22* |
| 594444B | 726 | 918 | 2.3 | 78 | 1.0 | 2.0 | 3.0* | 2.3 | 3.0 | 8.9 | 1.25 |
| 594445 | 723 | 919 | 2.8 | 72* | 1.5 | 1.0 | 2.5 | 2.8 | 2.5 | 10.6 | 0.95 |
| 594446 | 727 | 1013 | 2.0 | 70 | 1.0 | 1.0 | 1.0 | 1.5 | 2.0 | 8.9 | 1.62 |
| 594448A | 731 | 1012 | 2.8 | 92* | 2.0 | 1.0 | 2.0 | 2.0 | | 11.7 | 1.66* |
| 594448B | 804 | 1016 | 2.5 | 92* | 2.0 | 1.0 | 1.0 | 2.5 | | 16.3 | 1.66 |
| 594451 | 730 | 925 | 3.3 | 90 | 2.0 | 2.5 | 3.5 | 2.0 | 2.0 | 7.2 | 1.27 |
| 594452 | 804 | 1011 | 2.5 | 100* | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 | 11.8 | 1.15 |
| 594453 | 805 | 1012 | 2.8 | 80 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 11.3 | 1.66* |
| 594454A | 708* | 903 | 1.8 | 57 | 1.5 | 2.0* | 4.5 | 2.0 | 2.0 | 14.4 | 1.66 |
| 594454B | 720 | 919 | 2.8 | 78 | 2.0 | 1.5 | 2.5 | 2.5 | 3.5 | 13.0 | 1.37 |
| 594455A | 713 | 830 | 2.0 | 36 | 1.0 | 2.5 | 5.0 | 2.0 | 1.0 | 11.6 | 0.82 |
| 594455B | 722 | 906 | 2.5 | 95* | 3.0 | 3.0* | 5.0 | 2.5 | 3.0 | 11.8 | 1.18 |
| 594456A | 729 | 917 | 3.3 | 99* | 2.0 | 1.0 | 1.0 | 2.0 | 4.0 | 8.7 | 1.04 |
| 594456B | 721 | 915 | 3.0 | 83* | 2.0 | 1.0 | 3.5 | 2.5 | 2.0 | 10.3* | 1.15 |
| 594457A | 727 | 929 | 2.3 | 68 | 1.0 | 2.5 | 4.5 | 3.5 | 3.0 | 20.6* | 1.18 |
| 594457B | 802 | 1007 | 1.8 | 82* | 1.5 | 2.0* | 4.0* | 2.8 | 2.5 | 18.2 | 1.11 |
| 594459 | 731 | 1009 | 2.8 | 98 | 1.5 | 1.0 | 2.0 | 2.0 | 1.5 | 9.8 | 1.23* |
| 594460 | 728 | 927 | 2.8 | 105* | 1.0 | 1.5 | 2.5 | 2.3 | 2.0 | 8.9 | 1.42* |
| 594461A | 802 | 1009 | 2.8 | 110 | 1.5 | 1.5 | 2.0 | 2.3 | 2.0 | 12.2 | 1.62 |
| 594461B | 805 | 1019 | 3.0 | 88* | 1.5 | 1.0 | 1.0 | 2.5 | 2.0 | 11.9 | 1.78 |
| 594462 | 728 | 1007 | 3.3 | 94 | 1.0 | 1.0 | 1.0 | 2.5 | 2.0 | 9.8 | 2.09* |
| 594463A | 805 | 1013 | 3.3 | 93 | 1.0 | 1.0 | 2.0 | 2.8 | 2.0 | 9.2 | 1.50 |
| 594463B | 804 | 1006 | 3.3 | 93 | 1.0 | 1.0 | 3.0 | 2.5 | 3.5 | 9.4 | 1.53 |
| 594464 | 719 | 904 | 2.5 | 60 | 1.5 | 2.0* | 5.0 | 2.0 | 3.0 | 8.2 | 1.05 |
| 594466 | 715 | 905 | 2.5 | 66 | 1.5 | 1.5 | 5.0 | 2.8 | | 9.8 | 1.22 |
| 594467 | 719 | 920 | 2.3 | 64 | 1.0 | 2.5 | 4.5 | 2.8 | | 11.9 | 1.72 |
| 594469A | 723 | 923 | 3.0 | 64 | 1.0 | 3.0 | 5.0 | 2.5 | 2.0 | 11.0 | 0.62 |
| 594469B | 725 | 925 | 4.0 | 96* | 1.5 | 4.5 | 5.0 | 2.0 | 2.5 | 10.6 | 0.76 |
| 594471A | 729 | 928 | 3.5 | 74 | 1.5 | 1.0 | 1.5 | 3.0 | 4.5 | 7.8 | 0.72 |
| 594471B | 802 | 1015 | 2.5 | 123* | 2.0 | 1.5 | 2.0 | 2.3 | 2.5 | 10.0 | 1.37 |
| 594476 | 804 | 1003 | 3.8 | 111 | 2.0 | 1.0 | 1.5 | 2.0 | 1.0 | 8.9 | 1.34* |
| 594478 | 806 | 1012 | 3.3 | 85 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 13.6* | 0.95 |
| 594479 | 811 | 1013* | | 94* | 2.0 | 1.0 | 1.0 | 2.3 | 2.0 | 14.8* | 0.88 |
| 594480A | 812 | 1024 | 3.3 | 76 | 3.0* | 1.0 | 1.0 | 2.5 | 2.0 | 15.5 | 1.00 |
| 594482 | 810 | 1013* | 3.3 | 84* | 2.0 | 1.0 | 1.5 | 2.3 | 2.0 | 14.8* | 0.96* |
| 594483 | 810 | 1013* | 3.0 | 78* | 2.0 | 1.0 | 1.5 | 1.8 | 2.0 | 13.5* | 0.94 |
| 594484 | 806 | 1012* | 3.3* | 66* | 1.5 | 1.0 | 1.0 | 2.3 | 2.0 | 13.9 | 0.66 |
| 594486A | 809 | 1014* | | 84 | 2.0 | 1.0 | 1.0 | 2.3 | 2.0 | 14.1* | 0.76 |
| 594486B | 806 | 1017 | 3.0 | 73* | 1.5 | 1.0 | 1.5 | 2.0 | 1.0 | 16.2* | 1.34* |
| 594488 | 804 | 1014 | 3.5 | 76* | | 1.0 | 1.5 | 2.3 | 1.0 | 15.7* | 1.30* |
| 594489 | 805 | 1017* | | 101* | | 1.0 | 1.5 | 2.0 | 1.0 | 17.8* | 1.24* |
| 594496 | 725 | 929 | 3.3 | 79 | 1.0 | 1.0 | 2.0* | 2.3 | | 9.3 | 1.25 |
| 594501A | 801 | 1013 | 3.0 | 110 | 1.0 | 1.0 | 1.0 | 2.5 | | 9.5 | 1.26 |
| 594507 | 723 | 1011 | 3.0 | 113* | | 1.0 | 2.5 | 2.3 | | 12.6 | 1.59* |
| 594508 | 719 | 921 | 2.3 | 63 | 1.0 | 2.0* | 4.5 | 2.8 | | 12.7 | 1.71 |
| | | | | | | | | | | | |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed composition | | Oil compo | sition | | | | |
|---------|----------|---------------------------|---------------------------|-----------|---------|-------|----------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 594443 | IV | 44.7 ^w | 16.0^{w} | 12.1 | 3.5 | 23.1 | 54.4 | 6.9 | |
| 594444A | III | 47.2 ^w | 15.8 ^w | 12.6 | 3.7 | 25.1 | 50.5 | 8.2 | |
| 594444B | III | 46.8 ^w | 14.3 ^w | 13.9 | 3.7 | 26.7 | 48.6 | 7.0 | |
| 594445 | III | 47.5 ^w | 15.0 ^w | 13.4 | 3.9 | 26.7 | 48.6 | 7.4 | |
| 594446 | IV | 47.3 42.0 ^w | 15.0 16.4 ^w | 12.0 | 3.9 | 21.4 | 55.5 | 8.1 | |
| | IV | 42.0 43.8 ^w | | | | | | | |
| 594448A | | | 15.0 ^w | 12.4 | 3.2 | 21.7 | 54.1 | 8.5 | |
| 594448B | IV | 41.8 ^w | 16.3 ^w | 11.2 | 3.4 | 24.7 | 53.0 | 7.7 | |
| 594451 | III | 46.0 ^w | 15.2 ^w | 11.3 | 3.8 | 23.5 | 53.5 | 7.9 | |
| 594452 | IV | 42.6 | 15.1 | 9.7 | 3.3 | 20.1 | 58.1 | 8.9 | |
| 594453 | IV | 44.6 | 14.4 | 9.7 | 3.0 | 23.2 | 55.8 | 8.3 | |
| 594454A | II | 41.2 | 16.6 | 11.3 | 3.5 | 28.3 | 49.7 | 7.2 | |
| 594454B | III | 47.2^{w} | $15.0^{\rm w}$ | 11.0 | 3.1 | 24.3 | 53.8 | 7.7 | |
| 594455A | I | 41.7 | 18.4 | 12.1 | 3.3 | 22.9 | 53.3 | 8.3 | |
| 594455B | II | 48.1 | 14.4 | 10.7 | 3.7 | 23.5 | 54.2 | 7.9 | |
| 594456A | III | 46.0^{w} | 16.5 ^w | 13.2 | 3.0 | 25.5 | 51.5 | 6.7 | |
| 594456B | II | 43.0 | 16.8 | 10.3 | 4.1 | 31.4 | 45.7 | 8.5 | |
| 594457A | III | 49.8^{w} | 15.1 ^w | 13.3 | 3.9 | 27.5 | 48.7 | 6.6 | |
| 594457B | IV | $48.1^{\rm w}$ | 15.7 ^w | 13.8 | 3.0 | 22.6 | 53.9 | 6.8 | |
| 594459 | IV | 41.7 | 15.3 | 9.8 | 4.4 | 24.9 | 52.8 | 8.0 | |
| 594460 | III | 43.4 | 16.5 | 9.7 | 3.2 | 27.1 | 51.5 | 8.5 | |
| 594461A | IV | 46.7 | 14.4 | 9.6 | 4.0 | 24.0 | 54.5 | 7.9 | |
| 594461B | IV | 44.4 | 14.7 | 9.7 | 3.5 | 21.2 | 57.9 | 7.7 | |
| 594462 | IV | 41.3 | 16.1 | 9.9 | 4.0 | 19.6 | 57.3 | 9.2 | |
| 594463A | IV | 41.5 | 16.1 | 10.1 | 3.9 | 22.5 | 55.3 | 8.2 | |
| 594463B | IV | 41.8 ^w | 16.5 ^w | 9.9 | 3.4 | 19.9 | 58.3 | 8.5 | |
| 594464 | II | 47.2 ^w | 15.3 ^w | 12.5 | 3.8 | 23.5 | 50.7 | 9.5 | |
| 594466 | II | 46.4 ^w | 14.9 ^w | 13.0 | 4.0 | 23.5 | 52.0 | 7.4 | |
| 594467 | III | 44.1 ^w | 14.9 17.0 ^w | 13.4 | 3.9 | 28.6 | 47.9 | 6.3 | |
| 594469A | III | 41.6 | 15.7 | 10.0 | 5.0 | 27.8 | 49.4 | 0.3 7.7 | |
| | III | | 17.3 | | | | | 7.7 | |
| 594469B | | 40.8 | | 9.5 | 3.2 | 25.0 | 54.7 | | |
| 594471A | III | 48.8 ^w | 13.6 ^w | 13.3 | 4.0 | 24.0 | 51.4 | 7.3 | |
| 594471B | IV | 47.1 ^w | 16.1 ^w | 12.7 | 3.6 | 22.0 | 53.0 | 8.8 | |
| 594476 | IV | 42.1 | 16.6 | 8.9 | 3.7 | 24.8 | 54.7 | 8.0 | |
| 594478 | IV | 43.9 ^w | 15.5 ^w | 12.5 | 3.6 | 25.0 | 51.8 | 7.1 | |
| 594479 | IV | 44.7 ^w | 16.1 ^w | 11.8 | 3.5 | 25.0 | 52.2 | 7.4 | |
| 594480A | V | 49.6^{w} | 14.1^{w} | 11.2 | 3.5 | 27.3 | 51.3 | 6.6 | |
| 594482 | IV | 45.3^{w} | $16.7^{\rm w}$ | 12.0 | 3.7 | 25.5 | 52.0 | 6.9 | |
| 594483 | IV | 43.3^{w} | 16.4 ^w | 12.0 | 3.3 | 24.1 | 53.2 | 7.4 | |
| 594484 | IV | 46.4 ^w | 15.7^{w} | 12.1 | 3.5 | 25.4 | 52.1 | 6.9 | |
| 594486A | IV | 46.8^{w} | 15.2 ^w | 11.7 | 3.3 | 24.1 | 53.0 | 7.9 | |
| 594486B | IV | 43.5^{w} | 16.4^{w} | 12.6 | 3.2 | 23.4 | 52.5 | 8.2 | |
| 594488 | IV | 42.0^{w} | $17.0^{\rm w}$ | 12.8 | 3.5 | 23.9 | 52.3 | 7.6 | |
| 594489 | IV | 44.9 ^w | 16.8 ^w | 12.9 | 3.8 | 23.9 | 52.2 | 7.2 | |
| 594496 | IV | 44.5 ^w | 15.7 ^w | 12.3 | 3.1 | 21.0 | 56.4 | 7.2 | |
| 594501A | IV | 46.2 ^w | 14.2 ^w | 12.3 | 3.8 | 21.1 | 54.2 | 8.6 | |
| 594507 | IV | 45.5 ^w | 14.2 16.7 ^w | 12.6 | 3.8 | 20.8 | 54.7 | 8.2 | |
| 594508 | III | 46.1 ^w | 16.7 ^w | 13.6 | 4.0 | 27.9 | 48.3 | 6.3 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|---------------------------|-----------|---------------|---------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 594550 | Jiu yue huang | Jiangxi | China | China | 1996 | II |
| 594576 | Cha dou | Jiangxi | China | China | 1996 | IV |
| 594578 | Li xian bai huang dou | Hunan | China | China | 1996 | IV |
| 594580 | Chang de xiao huang dou | Hunan | China | China | 1996 | IV |
| 594581 | Jiang ba liu yue huang | Hunan | China | China | 1996 | IV |
| 594582 | Shi men da bai li | Hunan | China | China | 1996 | IV |
| 594583 | Shi men xiao bai li | Hunan | China | China | 1996 | IV |
| 594584 | An hua yun yi zao | Hunan | China | China | 1996 | IV |
| 594587 | Yong shun da bai li | Hunan | China | China | 1996 | IV |
| 594593 | Zhen shang huang dou | Hunan | China | China | 1996 | IV |
| 594599 | Chang de chun hei dou | Hunan | China | China | 1996 | IV |
| 594600 | Shi men hei huang dou | Hunan | China | China | 1996 | IV |
| 594601 | Tao jiang hong dou | Hunan | China | China | 1996 | IV |
| 594603A | Long shan cha huang dou | Hunan | China | China | 1996 | IV |
| 594603B | (Long shan cha huang dou) | Hunan | China | China | 1996 | IV |
| 594604 | Niu mao dou | Guizhou | China | China | 1996 | IV |
| 594606 | Feng ding dou | Guizhou | China | China | 1996 | IV |
| 594607 | Huang ke dou | Guizhou | China | China | 1996 | IV |
| 594608A | _ | Guizhou | China | China | 1996 | IV |
| 594608B | (Bie huang dou) | Guizhou | China | China | 1996 | IV |
| 594609 | Ba yue huang | Guizhou | China | China | 1996 | IV |
| 594611 | Xiao huang dou | Guizhou | China | China | 1996 | IV |
| 594612 | Hei ke bai dou | Guizhou | China | China | 1996 | IV |
| 594614A | | Guizhou | China | China | 1996 | IV |
| 594614B | (Ba yue huang) | Guizhou | China | China | 1996 | V |
| 594615 | Liu yue zao | Guizhou | China | China | 1996 | IV |
| 594616 | Liu yue zao | Guizhou | China | China | 1996 | III |
| 594618A | Qi yue dou | Guizhou | China | China | 1996 | III |
| 594618B | (Qi yue dou) | Guizhou | China | China | 1996 | III |
| 594618C | (Qi yue dou) | Guizhou | China | China | 1996 | IV |
| 594618D | (Qi yue dou) | Guizhou | China | China | 1996 | IV |
| 594619 | Sheng lian zao | Guizhou | China | China | 1996 | IV |
| 594620 | Da bai shui dou | Guizhou | China | China | 1996 | IV |
| 594624 | Zong zi dou | Guizhou | China | China | 1996 | IV |
| 594625 | Leng sha dou | Guizhou | China | China | 1996 | IV |
| 594626 | Liu yue huang No. 1 | Guizhou | China | China | 1996 | IV |
| 594628 | Lu pi dou No. 1 | Guizhou | China | China | 1996 | IV |
| 594632 | Yan he huang dou | Guizhou | China | China | 1996 | IV |
| 594633 | Yan he huang dou No. 1 | Guizhou | China | China | 1996 | IV |
| 594634 | Qing huang za dou No. 5 | Guizhou | China | China | 1996 | IV |
| 594635A | Qing huang za dou No. 6 | Guizhou | China | China | 1996 | IV |
| 594635B | (Qing huang za dou No. 6) | Guizhou | China | China | 1996 | IV |
| 594637 | Huang ke dou No. 8 | Guizhou | China | China | 1996 | IV |
| 594638A | Huang ke dou 13 | Guizhou | China | China | 1996 | IV |
| 594638B | (Huang ke dou 13) | Guizhou | China | China | 1996 | IV |
| 594644A | Qi yue dou | Guizhou | China | China | 1996 | IV |
| 594644B | (Qi yue dou) | Guizhou | China | China | 1996 | IV |
| JJTUTTD | (Vi yue dou) | Guizhou | Cimia | Cillia | 1770 | 1 4 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco Luster | | Hilum color | Other traits | Seed shape |
|-------------|-------------------|---|--------|----|----|----------|-----|------------------|------|----------------|--------------|---------------|
| · · · · · · | | | | | | <u> </u> | | | | | | |
| 594550 | II | D | P | T | E | Ssp | Br | I | Gnbl | Bl | | 3N |
| 594576 | IV | S | P | T | Sa | Ssp | Tn | I | Br | Rbr | Def | 3N |
| 594578 | IV | S | P | G | A | N | Br | I | Y | Bf | | 3N |
| 594580 | IV | D | P | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594581 | IV | S | P | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594582 | IV | D | P | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594583 | IV | S | P | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594584 | IV | S | P | T | A | Ssp | Br | I | Y | Br | ~ | 2N |
| 594587 | IV | D | W | G | A | N | Br | I | Y | Bf | Sdef | 2N |
| 594593 | IV | D | P | T | Α | Ssp | Br | I | Y | Br | | 2N |
| 594599 | IV | S | P | T | A | Ssp | Tn | Lb | Bl | Bl | | 3N |
| 594600 | IV | S | W | T | Sa | N | Br | I | Bl | Bl | | 3N |
| 594601 | IV | S | W | T | A | N | Tn | I | Rbr | Rbr | | 2N |
| 594603A | IV | D | P | T | A | N | Br | I | Rbr | Rbr | | 3N |
| 594603B | IV | D | P | T | A | N | Br | I | Rbr | Rbr | | 3N |
| 594604 | IV | D | W | T | A | N | Br | I | Lgn | Bl | | 3N |
| 594606 | IV | D | W | Lt | A | N | Br | I | Y | Br | | 2N |
| 594607 | IV | D | W | T | A | N | Br | I | Y | Br | | 2N |
| 594608A | IV | D | W | T | A | N | Br | I | Y | Br | | 2N |
| 594608B | IV | D | W | T | A | N | Br | I | Y | Br | | 2N |
| 594609 | IV | D | W | Lt | A | N | Br | I | Y | Br | | 2N |
| 594611 | IV | D | W | T | E | N | Br | I | Y | Brbl | Vhil | 3N |
| 594612 | IV | D | W | Ng | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 594614A | IV | D | P | Lt | A | N | Tn | I | Y | Br | Vhil | 2N |
| 594614B | V | D | W | T | A | Ssp | Tn | I | Y | Br | Vhil | 2N |
| 594615 | IV | S | P | T | A | Ssp | Br | I | Y | Br | | 3N |
| 594616 | III | S | P | T | A | Ssp | Br | I | Y | Br | | 3N |
| 594618A | III | D | P | T | A | N | Tn | D | Y | Br | | 3N |
| 594618B | III | D | P | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 594618C | IV | S | P | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 594618D | IV | D | P | T | Sa | N | Br | I | Y | Br | | 4N |
| 594619 | IV | S | W | T | A | N | Br | I | Y | Br | | 3N |
| 594620 | IV | S | W | G | Sa | N | Br | I | Y | Bf | | 3N |
| 594624 | IV | D | W | T | E | Ssp | Br | Lb | Br | Rbr | Sdef | 4N |
| 594625 | IV | D | W | G | A | Ssp | Bl | I | Gn | Bf | | 2N |
| 594626 | IV | D | W | Lt | A | N | Tn | I | Y | Bl | | 2N |
| 594628 | IV | S | P | G | A | N | Br | I | Y | Bf | Vhil | 2N |
| 594632 | IV | D | W | G | A | N | Br | I | Y | Bf | | 2N |
| 594633 | IV | D | P | G | A | N | Br | I | Lgn | Bf | | 2N |
| 594634 | IV | D | P | G | A | N | Tn | I | Y | Bf | | 3N |
| 594635A | IV | D | P | G | A | N | Tn | I | Y | Bf | Vhil | 3N |
| 594635B | IV | D | P | G | A | N | Tn | I | Y | Bf | | 3N |
| 594637 | IV | D | P | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 594638A | IV | D | P | Lt | A | N | Br | I | Y | Br | | 3N |
| 594638B | IV | D | P | Lt | A | N | Br | I | Y | Br | | 3N |
| 594644A | IV | S | P | G | A | N | Br | I | Y | Bf | | 3N |
| 594644B | IV | S | W | G | A | N | Br | I | Y | Bf | | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| - | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|-----------------|-----------|------------|---------|-------|---------|---------|---------|---------|----------|----------------|------------------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 594550 | 711 | 903 | 1.5 | 49 | 1.0 | 2.0* | 4.5 | 2.3 | | 14.8 | 1.45* |
| 594576 | 727 | 1009 | 3.8 | 115* | 2.0 | 1.5 | 3.0 | 3.0 | | 14.0 | 0.87 |
| 594578 | 811 | 1013* | 3.5 | 84 | 2.0 | 1.0 | 1.5 | 2.3 | 2.0 | 11.9 | 0.73 |
| 594580 | 806 | 1013 | 4.0 | 73* | 1.0 | 1.0 | 2.0* | 2.3 | 2.5 | 7.3 | 1.32 |
| 594581 | 810 | 1007 | 4.3 | 90* | 2.0 | 1.0 | 1.5 | 2.3 | 2.0 | 7.3 | 1.28* |
| 594582 | 808 | 1007 | 4.0 | 88* | 1.0 | 1.0 | 1.5 | 2.0 | 2.0 | 8.8 | 1.42* |
| 594583 | 808 | 1003 | 4.3 | 72 | 2.0 | 1.0 | 1.0 | 1.8 | 2.0 | 7.5 | 1.42* |
| 594584 | 806 | 1005 | 4.0 | 80* | 2.0 | 1.0 | 1.0 | 2.3 | 2.0 | 8.0 | 1.47* |
| | 804 | | 2.5 | 67 | | 1.0 | 1.0 | | 2.0 | | 1.31 |
| 594587 | | 1011 | | | 1.0 | | | 2.3 | | 11.9 | |
| 594593 | 808 | 1003 | 2.5* | 73 | 1.0 | 1.0 | 2.0 | 2.3 | 2.0 | 7.6 | 1.51* |
| 594599 | 729 | 929 | 3.3* | 59* | 2.0 | 1.0 | 1.0 | 2.3 | | 10.1 | 0.66 |
| 594600 | 811 | 1022 | 2.5 | 94* | 2.0 | 1.0 | 1.0 | 2.5 | | 10.3 | 1.30 |
| 594601 | 803 | 1009 | 3.8 | 67* | 2.0 | 1.0 | 1.0 | 1.8 | | 12.0 | 1.45* |
| 594603A | 730 | 1016 | 3.0 | 67 | 1.0 | 1.0 | 1.0 | 2.5 | | 12.8 | 1.07 |
| 594603B | 802 | 1014 | 2.5 | 79 | 1.0 | 1.0 | 1.0 | 2.5 | | 12.9 | 1.33 |
| 594604 | 804 | 1013 | 3.5 | 92 | 1.0 | 1.5 | 2.5 | 2.5 | 3.5 | 8.1 | 1.42 |
| 594606 | 802 | 1020 | 2.3 | 78* | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 | 14.3 | 1.21 |
| 594607 | 803 | 1010 | 2.5 | 81 | 1.0 | 1.0 | 1.0 | 2.3 | 2.5 | 14.1 | 1.58 |
| 594608A | 802 | 1005 | 2.0 | 72 | 1.5 | 1.0 | 1.0 | 2.8 | 3.0 | 13.8 | 1.54 |
| 594608B | 731 | 1011 | 2.5 | 71 | 1.0 | 1.0 | 1.0 | 2.3 | 3.0 | 14.8 | 1.24 |
| 594609 | 802 | 1020 | 2.3 | 67 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 14.0 | 0.67^ |
| 594611 | 807 | 1009 | 3.0 | 107 | 1.5 | 1.0 | 2.0 | 2.0 | 1.0 | 8.6 | 1.92 |
| 594612 | 806 | 1022 | 2.5 | 93 | 1.0 | 1.0 | 1.0 | 2.5 | 1.0 | 14.2 | 1.39 |
| 594614A | 727 | 1010 | 3.3 | 85 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 10.7 | 1.41* |
| 594614B | 729 | 1023 | 3.0 | 86 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 11.2 | 1.10 |
| 594615 | 806 | 1007 | 4.0 | 101* | 2.0 | 1.0 | 2.0 | 2.5 | 2.0 | 9.3 | 0.77 |
| 594616 | 805 | 1001 | 3.8 | 100* | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 9.8 | 1.32 |
| 594618A | 804 | 1001 | 2.5 | 84 | 1.0 | 2.0 | 3.5* | 2.8 | 2.5 | 10.5 | 1.54 |
| 594618B | 803 | 926 | 2.8 | 68* | 1.0 | 2.0 | 3.5 | 2.5 | 2.0 | 10.0 | 0.93 |
| 594618C | 806 | 1014 | 3.3 | 111 | 2.0 | 2.0* | 3.5* | 2.5 | 2.5 | 10.3 | 1.32* |
| 594618D | 805 | 1017 | 3.3 | 103* | 1.5 | 2.5* | 4.5 | 2.3 | 2.5 | 11.8 | 1.34* |
| 594619 | 803 | 1003* | 2.5 | 80 | 2.0 | 1.0 | 1.5 | 2.5 | 2.5 | 10.5 | 0.82 |
| 594620 | 808 | 1021 | 2.5 | 94 | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 | 12.3 | 1.21 |
| 594624 | 802 | 1015 | 3.5 | 97* | 1.0 | 1.5 | 2.5 | 2.8 | | 14.5 | 1.37 |
| 594625 | 808 | 1021 | 3.0 | 101 | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 | 8.6 | 1.89 |
| 594626 | 804 | 1015 | 2.5 | 87 | 1.0 | 1.0 | 1.5 | 2.0 | 3.0 | 9.2 | 1.29* |
| 594628 | 812 | 1018 | 2.8 | 88 | 2.0 | 1.0 | 1.0 | 1.8 | 2.0 | 11.6 | 0.99 |
| 594632 | 802 | 1003 | 3.0 | 90 | 1.0 | 1.0 | 2.0 | 2.3 | 2.0 | 8.8 | 1.59 |
| 594633 | 802 | 1015 | 2.5 | 88* | 1.0 | 1.0 | 1.5 | 1.8 | 1.0 | 11.2 | 1.30 |
| 594634 | 810 | 1009 | 3.0 | 98 | 1.0 | 1.0 | 1.5 | 2.0 | 1.0 | 8.5 | 1.29* |
| 594635A | 810 | 1014 | 2.5 | 87 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 8.4 | 1.26* |
| 594635B | 804 | 1019 | 2.5 | 81* | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 9.9 | 1.26* |
| 594637 | 802 | 1015 | 2.5 | 86 | 1.0 | 1.5 | 1.5 | 2.0 | 2.0 | 10.7 | 0.91 |
| 594638A | 811 | 1019 | 2.8 | 107* | 1.5 | 1.0 | 1.0 | 2.0 | 2.0 | 10.7 | 1.35* |
| 594638B | 812 | 1019 | 2.8* | 116* | 1.5 | 1.0 | 1.0 | 2.0 | 2.0 | 10.1 | 1.33* |
| 594644A | 809 | 1021 | 2.8 | 90 | 2.0 | 1.0 | 1.5 | 2.0 | 2.0 | 9.5 | 0.93* |
| 594644B | 808 | 1018 | 3.5 | 91 | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 | 12.2 | 0.93 |
| J74044 D | 000 | 1021 | 5.5 | 71 | ∠.0 | 1.0 | 1.0 | ∠.∪ | ۷.0 | 14.4 | U.77 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition_ | Oil compos | | | | | |
|--------------------|----------|---------------------------|---------------------------|------------|------------|-------|----------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 594550 | II | 44.9 ^w | 16.6 ^w | 13.4 | 4.0 | 34.6 | 41.9 | 6.0 | |
| 594576 | IV | 46.2^{w} | 15.4 ^w | 12.1 | 3.6 | 24.5 | 51.8 | 8.0 | |
| 594578 | IV | 43.4 | 13.8 | 9.0 | 3.7 | 22.5 | 56.2 | 8.5 | |
| 594580 | IV | 39.6 | 16.6 | 9.8 | 3.4 | 20.9 | 56.9 | 9.0 | |
| 594581 | IV | 41.2 | 16.2 | 9.8 | 3.3 | 20.4 | 57.1 | 9.3 | |
| 594582 | IV | 41.7 | 16.6 | 10.1 | 3.3 | 20.2 | 56.5 | 9.8 | |
| 594583 | IV | 39.6 | 16.9 | 9.6 | 3.4 | 19.7 | 57.5 | 9.8 | |
| 594584 | IV | 40.7 | 16.0 | 9.5 | 3.7 | 22.5 | 55.6 | 8.7 | |
| 594587 | IV | 42.5 | 15.2 | 9.2 | 3.4 | 25.1 | 54.3 | 8.0 | |
| 594593 | IV | 40.1 | 16.8 | 10.4 | 3.6 | 21.3 | 55.7 | 9.0 | |
| 594599 | IV | 44.7 ^w | 14.7 ^w | 13.3 | 4.0 | 23.7 | 50.1 | 8.9 | |
| 594600 | IV | 45.4 ^w | 14.8 ^w | 11.7 | 3.3 | 21.7 | 53.9 | 9.4 | |
| 594601 | IV | 43.4 41.4 ^w | 14.8 17.0 ^w | 11.7 | 3.4 | 24.5 | 54.4 | 6.1 | |
| 594603A | IV | 44.4 ^w | 17.0 16.1 ^w | 11.5 | 3.5 | 24.5 | 52.7 | 7.7 | |
| 194603A 194603B | IV IV | 44.4 ^w | 16.1 16.4 ^w | 11.5 | 3.3 | 24.5 | 52.7 | 7.7 7.9 | |
| 94604 | IV | 44.4 47.3 ^w | 15.5 ^w | 12.9 | 3.3 | 19.9 | 55.3 | 8.7 | |
| 594604 594606 | IV | 42.8 | 16.2 | 9.6 | 3.7 | 21.8 | 56.4 | 8.5 | |
| 194600 194607 | IV IV | 44.0 | 16.2 | 10.1 | 3.5 | 22.2 | 56.5 | 7.6 | |
| 94607 94608A | IV IV | 44.0 45.9 | 16.2 | 10.1 | 3.3 4.0 | 21.8 | 55.3 | 8.3 | |
| | | | | | | | | | |
| 94608B | IV | 46.2 | 15.6 | 9.5 | 3.8 | 22.9 | 56.2 | 7.6 | |
| 94609 | IV | 42.0 | 16.6 | 9.3 | 3.7 | 23.2 | 56.3 | 7.5 | |
| 94611 | IV | 44.6 | 13.7 | 9.1 | 3.8 | 19.2 | 58.4 | 9.5 | |
| 94612 | IV | 44.2 | 14.9 | 9.2 | 3.7 | 23.4 | 55.1 | 8.5 | |
| 94614A | IV | 42.9 | 14.9 | 9.2 | 3.9 | 24.9 | 53.9 | 8.2 | |
| 94614B | V | 45.4 | 14.4 | 9.2 | 3.3 | 19.5 | 58.1 | 9.9 | |
| 94615 | IV | 47.1 | 14.3 | 11.0 | 3.8 | 27.0 | 50.7 | 7.5 | |
| 94616 | III | 47.1 ^w | 14.5 ^w | 11.4 | 3.9 | 27.2 | 50.3 | 7.2 | |
| 94618A | III | 44.1 | 16.9 | 9.8 | 3.8 | 25.5 | 54.1 | 6.8 | |
| 94618B | III | 46.3 | 16.7 | 10.2 | 4.2 | 26.0 | 52.9 | 6.8 | |
| 94618C | IV | 42.9 | 16.3 | 9.3 | 3.2 | 22.0 | 56.9 | 8.6 | |
| 94618D | IV | 46.2 | 15.2 | 9.5 | 3.5 | 23.1 | 56.3 | 7.6 | |
| 94619 | IV | 47.5 | 15.8 | 10.2 | 4.0 | 23.3 | 55.3 | 7.2 | |
| 94620 | IV | 43.4 | 15.8 | 8.6 | 3.1 | 23.2 | 56.1 | 9.1 | |
| 94624 | IV | 47.9^{w} | 15.4 ^w | 11.7 | 3.0 | 23.0 | 55.2 | 7.1 | |
| 94625 | IV | 47.8^{w} | 15.1 ^w | 11.3 | 3.3 | 18.7 | 56.6 | 10.2 | |
| 94626 | IV | 43.8 | 14.0 | 9.7 | 3.6 | 21.7 | 57.1 | 7.8 | |
| 94628 | IV | 45.0 | 15.7 | 8.8 | 3.8 | 22.5 | 56.2 | 8.7 | |
| 94632 | IV | 43.5 | 14.8 | 8.6 | 3.7 | 24.2 | 54.8 | 8.7 | |
| 94633 | IV | 44.7^{w} | 16.0^{w} | 11.7 | 3.6 | 22.9 | 53.9 | 7.9 | |
| 94634 | IV | 41.3 | 15.5 | 9.3 | 3.7 | 21.0 | 56.8 | 9.2 | |
| 94635A | IV | 43.5 | 14.3 | 9.4 | 3.7 | 21.4 | 56.5 | 9.0 | |
| 94635B | IV | 44.3 ^w | 15.9^{w} | 9.7 | 3.7 | 22.7 | 55.4 | 8.5 | |
| 94637 | IV | 46.9 | 14.2 | 9.3 | 3.9 | 21.2 | 57.1 | 8.5 | |
| 594638A | IV | 43.1 | 15.9 | 9.6 | 4.5 | 21.6 | 55.7 | 8.7 | |
| 94638B | IV | 43.9 | 15.8 | 9.2 | 4.6 | 22.8 | 54.7 | 8.7 | |
| 94644A | IV | 43.1 | 16.2 | 8.6 | 3.3 | 23.9 | 56.1 | 8.1 | |
| 594644B | IV | 46.2 | 15.4 | 8.9 | 3.8 | 25.4 | 54.5 | 7.3 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|----------------------|------------------------|-----------|---------------|---------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | • |
| 594646 | Wu zui zao dou No. 1 | Guizhou | China | China | 1996 | IV |
| 594648A | Wu zui zao dou No. 6 | Guizhou | China | China | 1996 | IV |
| 594648B | (Wu zui zao dou No. 6) | Guizhou | China | China | 1996 | IV |
| 594649 | Wu zui zao dou 11 | Guizhou | China | China | 1996 | IV |
| 594650A | Wu zui zao dou 12 | Guizhou | China | China | 1996 | IV |
| 594650B | (Wu zui zao dou 12) | Guizhou | China | China | 1996 | V |
| 594651 | Wu zui zao dou 14 | Guizhou | China | China | 1996 | V |
| 594670A | Huang dou No. 2 | Guizhou | China | China | 1996 | IV |
| 594670B | (Huang dou No. 2) | Guizhou | China | China | 1996 | IV |
| 594676 | Huang dou No. 4 | Guizhou | China | China | 1996 | IV |
| 594682A | Liu yue ba | Guizhou | China | China | 1996 | IV |
| 594685A | Zao huang dou No. 1 | Guizhou | China | China | 1996 | III |
| 594685B | (Zao huang dou No. 1) | Guizhou | China | China | 1996 | IV |
| 594687 | Liu yue dou | Guizhou | China | China | 1996 | IV |
| 594689 | Za dou No. 1 | Guizhou | China | China | 1996 | III |
| 594690A | Za dou No. 2 | Guizhou | China | China | 1996 | IV |
| 594691 | Niu mao dou No. 10 | Guizhou | China | China | 1996 | IV |
| 594692 | Zao dou zi No. 3 | Guizhou | China | China | 1996 | IV |
| 594693A | | Guizhou | China | China | 1996 | IV |
| 594693B | (Zao dou zi No. 5) | Guizhou | China | China | 1996 | IV |
| 594695 | Niu mao dou No. 4 | Guizhou | China | China | 1996 | IV |
| 594696A | Hua mian dou | Guizhou | China | China | 1996 | IV |
| 594696B | (Hua mian dou) | Guizhou | China | China | 1996 | IV |
| 594708A | Liu yue bao No. 8 | Guizhou | China | China | 1996 | IV |
| 594708B | (Liu yue bao No. 8) | Guizhou | China | China | 1996 | IV |
| 594710 | Zong zi dou | Guizhou | China | China | 1996 | IV |
| 594712 | Liu yue dou 17 | Guizhou | China | China | 1996 | IV |
| 594713 | Huang dou 12 | Guizhou | China | China | 1996 | IV |
| 594714 | Ni ba dou | Guizhou | China | China | 1996 | III |
| 594777 | Liu yue huang | Yunnan | China | China | 1996 | IV |
| 594778 | Zao dou zi | Yunnan | China | China | 1996 | III |
| 594779 | Zao bai dou | Yunnan | China | China | 1996 | IV |
| 594780 | Zao bai dou | Yunnan | China | China | 1996 | IV |
| | Hua lian dou | Yunnan | China | China | 1996 | IV |
| 594791 | Hua pi dou | Yunnan | China | China | 1996 | IV |
| 594792A | Xiao lu dou | Yunnan | China | China | 1996 | V |
| 594795 | Yao ren bai dou | Yunnan | China | China | 1996 | IV |
| 594798 | Huang dou | Yunnan | China | China | 1996 | IV |
| 594799A | Huang dou | Yunnan | China | China | 1996 | IV |
| 594799B | (Huang dou) | Yunnan | China | China | 1996 | III |
| 594800 | Tuo liang huang dou | Yunnan | China | China | 1996 | IV |
| 594801A | Er huang zao dou | Yunnan | China | China | 1996 | IV |
| 594801B | (Er huang zao dou) | Yunnan | China | China | 1996 | IV |
| 594801B | Da huang zao dou | Yunnan | China | China | 1996 | IV |
| 594802A | (Da huang zao dou) | Yunnan | China | China | 1996 | IV |
| 594802 B | Xi bai dou | Yunnan | China | China | 1996 | IV |
| 594807A | | Yunnan | China | China | 1996 | IV |
| 37 1 00/A | Truang dod | ı uman | Cillia | Cillia | 1,790 | 1 4 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|--------|----|---------|----------|--------------|------------------|----------|----------------|---------------|---------------|
| 594646 | IV | D | P | Lt | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 594648A | IV | D | W | T | A | N | Tn | I | Y | Brbl | Viiii Vhil | 3N |
| 594648B | IV | D | W | T | A | N | Tn | I | Y | Brbl | Viiii Vhil | 3N |
| 594649 | IV | D | P V | T | A | N | Br | I | Y | Brbl | Viiii Vhil | 3N |
| 594650A | IV | D | P | T | A | N | Br | I | Y | Brbl | Viiii Vhil | 3N |
| 594650B | V | D | W | T | A | N | Br | I | Y | Br | V 1111 | 2N |
| 594651 | V | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 594670A | IV | D | W | T | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 594670B | IV | S | W | T | A | N | Br | I | Y | Brbl | Viiii Vhil | 3N |
| 594676 | IV | D | P V | G | A | Ssp | Tn | I | Y | Bf | V 1111 | 2N |
| 594682A | IV | D | W | G | A | Ssp N | Br | I | | Bf | | 2N |
| 594685A | III | D D | W | G | | N N | | I | Lgn Y | Bf | | 2N |
| | III IV | D D | W | | A Sa | N N | Br | | I Bl | | Elle Cdof | |
| 594685B | | | | Lt | | | Br | I | Y | Bl | Flk, Sdef | 2N |
| 594687 | IV | D | P W | G | A | Ssp | Tn | I | | Bf | | 3N |
| 594689 | III | D | | G | A | N | Br | I | Lgn | Bf | 3.71. *1 | 2N |
| 594690A | IV | D | P | G | A | N | Br | I | Y | Bf | Vhil | 3N |
| 594691 | IV | S | W | T | A | Ssp | Br | I | Y | Br | | 2N |
| 594692 | IV | S | P | G | A | N | Br | I | Y | Bf | 016171 | 3N |
| 594693A | IV | D | W | T | A | N | Br | I | Y | Br | Sdef, Vhil | 2N |
| 594693B | IV | D | P | T | A | N | Br | I | Y | Br | | 2N |
| 594695 | IV | D | P | T | A | N | Tn | I | Y | Br | | 3N |
| 594696A | IV | D | W | T | A | Ssp | Br | I | Gn | Bl | Sad | 3N |
| 594696B | IV | D | W | T | A | N | Br | I | Gn | Bl | Sad | 3N |
| 594708A | IV | D | W | Lt | A | N | Lbr | I | Bl | B1 | Flk | 3N |
| 594708B | IV | D | W | Lt | Sa | N | Br | I | Bl | B1 | Flk | 3N |
| 594710 | IV | D | W | Lt | Α | N | Br | I | Rbr | Rbr | | 3N |
| 594712 | IV | D | W | T | Α | N | Br | I | Br | Rbr | | 3N |
| 594713 | IV | D | W | T | A | N | Br | I | Bl | Bl | Flk | 3N |
| 594714 | III | S | W | T | A | Ssp | Br | I | Y | Bl | | 3N |
| 594777 | IV | D | W | T | A | N | Br | I | Y | Br | | 3N |
| 594778 | III | D | W | T | Sa | N | Br | I | Y | B1 | | 3N |
| 594779 | IV | D | W | T | Sa | Ssp | Br | I | Y | Br | | 3N |
| 594780 | IV | D | W | T | E | Ssp | Br | I | Y | Br | | 3N |
| 594790A | IV | D | W | G | A | N | Tn | I | Y | Bf | | 3N |
| 594791 | IV | D | W | G | Α | N | Tn | I | Y | Bf | | 3N |
| 594792A | V | S | P | T | Sa | N | Br | I | Y | Brbl | Vhil | 3N |
| 594795 | IV | S | W | T | Sa | N | Br | I | Y | Br | Sph | 3N |
| 594798 | IV | D | W | G | A | N | Tn | I | Y | Bf | | 3N |
| 594799A | IV | D | W | T | E | N | Br | D | Y | Br | | 3N |
| 594799B | III | D | P | T | E | N | Br | I | Y | Br | | 4N |
| 594800 | IV | S | P | T | A | N | Br | I | Y | B1 | | 4F |
| 594801A | IV | D | W | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 594801B | IV | S | W | T | A | N | Br | I | Y | Bl | Vhil | 3N |
| 594802A | IV | D | P | T | E | N | Br | Ī | Y | Br | | 3N |
| 594802B | IV | D | W | G | A | N | Tn | Ī | Y | Bf | | 2N |
| 594804 | IV | D | P | Lt | A | N | Br | D | Y | Br | | 3N |
| 594807A | IV | D | W | T | Sa | N | Br | I | Y | Br | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| - | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------|-----------|------------|---------|----------|---------|---------|---------|---------|----------|----------------|------------------------|
| | date | | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 594646 | 812 | 1017 | 3.5 | 98* | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 | 8.5 | 1.43^ |
| 594648A | 810 | 1017 | 2.5 | 82 | 1.0 | 2.0* | 2.5 | 2.0 | 4.0 | 7.8 | 1.19* |
| 594648B | 810 | 1015 | 3.3 | 86 | 1.0 | 1.5 | 2.0 | 2.0 | 3.0 | 8.5 | 1.60 |
| 594649 | 812 | 1013 | 3.5 | 86 | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 9.2 | 1.51* |
| 594650A | 812 | 1019 | 3.3 | 86 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 9.2 9.8 | 1.43 |
| 594650B | 812 | 1021 | 3.0 | 94 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 12.1 | 1.43 |
| | | | | 94 94 | | | | | | | 1.21 |
| 594651 | 816 | 1023 | 2.5 | | 1.0 | 1.0 | 1.0 | 1.8 | 2.0 | 10.9 | |
| 594670A | 806 | 1011 | 3.5 | 79* | 1.0 | 2.5 | 4.0* | 2.3 | 3.0 | 10.6 | 1.21* |
| 594670B | 813 | 1021 | 3.0 | 92 | 2.0 | 1.0 | 1.0 | 2.0 | 2.5 | 10.3 | 0.81 |
| 594676 | 804 | 1008 | 2.5 | 75 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 8.1 | 1.30 |
| 594682A | 802 | 1002 | 3.0 | 69 | 1.0 | 1.0 | 1.0 | 2.3 | 2.5 | 10.0 | 1.33 |
| 594685A | 802 | 928 | 2.5 | 77 | 1.0 | 1.5 | 2.5 | 2.3 | 2.0 | 7.3 | 1.48 |
| 594685B | 804 | 1011 | 2.5 | 98 | 1.0 | 1.5 | 2.0 | 2.8 | | 9.4 | 1.46* |
| 594687 | 810 | 1009 | 2.5 | 69 | 1.0 | 1.0 | 1.5 | 2.0 | 1.0 | 8.5 | 1.15 |
| 594689 | 802 | 1001 | 3.3 | 72 | 1.0 | 1.0 | 1.0 | 1.8 | 2.0 | 7.9 | 1.35 |
| 594690A | 808 | 1009 | 2.0 | 75 | 1.0 | 1.0 | 2.5 | 2.3 | 1.0 | 9.8 | 0.82 |
| 594691 | 728 | 1009 | 3.5 | 114 | 2.0 | 1.0 | 2.0 | 2.5 | 3.0 | 10.6 | 1.07 |
| 594692 | 802 | 1011 | 3.0 | 80 | 2.0 | 1.0 | 1.0 | 2.3 | 2.0 | 12.6 | 1.25 |
| 594693A | 805 | 1013 | 2.3 | 94 | 1.5 | 1.0 | 1.0 | 2.3 | 1.0 | 10.1 | 0.97* |
| 594693B | 804 | 1013 | 2.8 | 107* | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 | 11.7 | 1.33 |
| 594695 | 801 | 1008 | 3.0 | 70* | 1.5 | 1.0 | 1.0 | 2.3 | 2.0 | 12.6 | 1.06* |
| 594696A | 807 | 1019 | 1.8 | 71* | 1.0 | 1.0 | 1.0 | 2.3 | | 9.9 | 0.71 |
| 594696B | 807 | 1015 | 1.5 | 68* | 1.5 | 1.0 | 1.0 | 2.0 | | 10.2 | 0.60 |
| 594708A | 805 | 1004 | 2.8 | 79 | 1.0 | 1.0 | 2.5 | 2.8 | | 8.3 | 1.32* |
| 594708B | 804 | 1011 | 2.8 | 97 | 1.5 | 1.5 | 2.5 | 2.8 | | 9.4 | 1.66* |
| 594710 | 804 | 1001 | 3.5 | 87* | 1.0 | 1.0 | 2.5 | 2.5 | | 9.4 | 1.44* |
| 594712 | 804 | 1005 | 4.0 | 74* | 1.0 | 1.0 | 2.0 | 2.3 | | 8.9 | 1.60* |
| 594713 | 804 | 1005 | 3.3 | 77 | 1.0 | 1.5 | 2.5* | 3.0 | | 8.2 | 1.38* |
| 594714 | 801 | 921 | 3.3 | 75 | 2.0 | 2.0 | 5.0 | 2.0 | 3.5 | 9.7 | 1.17 |
| 594777 | 802 | 930 | 3.0 | 100* | 1.0 | 2.0 | 3.5 | 2.0 | 1.5 | 8.7 | 0.54^ |
| 594778 | 725 | 923 | 2.3 | 75 | 1.0 | 1.0 | 1.0 | 2.3 | 3.5 | 9.7 | 1.01 |
| 594779 | 804 | 1015 | 1.8 | 84 | 1.0 | 1.0 | 1.0 | 2.3 | 3.0 | 12.1 | 1.30 |
| 594780 | 727 | 1011 | 3.3 | 90 | 1.0 | 1.0 | 1.0 | 2.3 | 2.5 | 12.8 | 1.53* |
| 594790A | 803 | 1017 | 3.0 | 80 | 1.0 | 1.5 | 2.5 | 2.0 | 2.0 | 11.2 | 1.23 |
| 594791 | 804 | 1017 | 3.0 | 87 | 1.0 | 1.5 | 2.0 | 2.0 | 2.0 | 11.6 | 1.55* |
| 594792A | 812 | 1024 | 3.0 | 117 | 2.0 | 1.0 | 1.5 | 3.0 | 2.0 | 18.5 | 1.21 |
| 594795 | 804 | 1013 | 2.8 | 99* | 2.0 | 1.5 | 2.5 | 2.0 | 3.0 | 10.1 | 1.40 |
| 594798 | 804 | 1015 | 3.3 | 97 | 1.5 | 2.0* | 3.0 | 2.0 | 2.0 | 12.1 | 1.21* |
| 594799A | 728 | 1005 | 3.0 | 84 | 1.0 | 1.0 | 1.5 | 2.8 | 3.0 | 12.6 | 1.51 |
| 594799B | 720 | 926 | 2.8 | 78* | 1.0 | 3.0 | 5.0 | 3.3 | 2.5 | 18.1 | 1.02^ |
| 594800 | 731 | 1019 | 2.5 | 98 | 2.0 | 1.0 | 1.0 | 3.0 | 2.5 | 16.1 | 1.02 |
| 594801A | 806 | 1019 | 3.0 | 78 | 1.5 | 1.0 | 1.0 | 2.3 | 1.5 | 10.9 | 1.12 |
| 594801A 594801B | 806 | 1017 | 2.8 | 110* | 2.0 | 1.0 | 1.5 | 2.3 | 2.0 | 8.7 | 1.12 |
| | 802 | 1017 | 2.8 | | | 1.0 | 1.0 | 2.5 | 3.0 | | 1.13 |
| 594802A | | | | 102 | 1.0 | | | | | 14.2 | |
| 594802B | 803 | 1017 | 3.5 | 87 | 1.5 | 2.0* | 2.5 | 2.3 | 2.0 | 11.2 | 1.21 |
| 594804 | 804 | 1013 | 2.8 | 100 | 1.5 | 1.0 | 1.5 | 2.0 | 3.0 | 10.1 | 1.13 |
| 594807A | 802 | 1006 | 3.3 | 102* | 1.0 | 1.5 | 2.5 | 2.5 | 3.0 | 10.5 | 1.87* |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed composition | | Oil compos | | | | | |
|---------------------------|-----------|---------------------------|---------------------------|-------------|---------|--------------|--------------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 594646 | IV | 45.4 | 14.1 | 9.4 | 4.2 | 19.6 | 57.2 | 9.6 | |
| 594648A | IV | 44.6 ^w | 14.4^{w} | 12.2 | 3.2 | 20.9 | 56.2 | 7.4 | |
| 594648B | IV | 43.6 | 14.4 | 10.1 | 3.7 | 21.8 | 57.3 | 7.0 | |
| 594649 | IV | 43.4 | 15.0 | 10.0 | 4.5 | 20.2 | 56.5 | 8.8 | |
| 594650A | IV | 43.8 | 14.9 | 9.5 | 4.9 | 22.7 | 54.5 | 8.1 | |
| 594650B | V | 43.3 | 14.3 | 8.9 | 3.5 | 19.3 | 59.3 | 9.0 | |
| 594651 | V | 44.7 | 14.2 | 8.6 | 3.6 | 19.8 | 58.4 | 9.6 | |
| 594670A | IV | 44.5 | 15.2 | 10.2 | 4.4 | 22.4 | 54.9 | 8.0 | |
| 594670B | IV | 44.3 | 14.6 | 9.4 | 4.0 | 24.8 | 53.1 | 8.7 | |
| 594676 | IV | 43.3 | 14.7 | 10.0 | 3.7 | 20.2 | 56.6 | 9.5 | |
| 594682A | IV | 47.5 ^w | 15.6 ^w | 11.3 | 3.8 | 24.6 | 53.8 | 6.6 | |
| 594685A | III | 46.2 | 13.9 | 10.4 | 4.4 | 19.7 | 56.5 | 8.9 | |
| 594685B | IV | 40.2 47.5 ^w | 13.9 13.6 ^w | 12.3 | 3.6 | 20.7 | 54.2 | 9.0 | |
| 194083 Б 194687 | IV IV | 42.2 | 15.0 | 9.9 | 4.0 | 23.0 | 54.2 54.8 | 8.3 | |
| 694689 | III | 42.2 44.6 ^w | 13.1 14.9 ^w | 9.9 9.5 | 3.9 | 22.8 | 55.9 | 6.3 7.9 | |
| 194689 194690A | III IV | 44.6 | 15.2 | 9.3 11.0 | 3.9 | 22.0 | 53.7 | 7.9 9.4 | |
| 194690A 194691 | IV IV | 45.1 45.0 | 13.2 14.6 | 11.0 | 3.9 | 22.0 26.1 | 53.7 51.7 | 9.4 7.0 | |
| 194691 194692 | IV IV | | | | | | | | |
| | | 43.8 | 16.8 | 10.6 | 3.6 | 25.5 | 53.7 | 6.6 | |
| 694693A | IV | 45.5 | 14.3 | 10.4 | 3.9 | 23.4 | 54.5 | 7.8 | |
| 94693B | IV | 42.7 | 15.0 | 10.2 | 3.6 | 22.3 | 54.8 | 9.0 | |
| 194695 | IV | 43.8 | 15.9 | 10.8 | 3.8 | 25.5 | 53.0 | 6.9 | |
| 94696A | IV | 45.9 ^w | 14.1 ^w | 12.9 | 3.8 | 22.9 | 52.5 | 7.9 | |
| 94696B | IV | 46.0 ^w | 13.8 ^w | 12.5 | 3.7 | 24.2 | 51.8 | 7.8 | |
| 94708A | IV | 46.6 ^w | 13.1 ^w | 12.7 | 3.8 | 20.4 | 53.7 | 9.4 | |
| 94708B | IV | 46.0 ^w | 14.1 ^w | 12.3 | 3.7 | 21.2 | 53.8 | 8.9 | |
| 594710 | IV | 41.2 ^w | 15.9 ^w | 11.3 | 3.1 | 22.0 | 55.7 | 7.9 | |
| 94712 | IV | 42.5 ^w | 14.8 ^w | 10.9 | 3.4 | 20.4 | 56.9 | 8.4 | |
| 94713 | IV | 47.0 ^w | 13.1 ^w | 12.5 | 3.7 | 19.6 | 54.4 | 9.8 | |
| 594714 | III | 45.1 ^w | $17.1^{\rm w}$ | 10.6 | 3.7 | 30.4 | 48.4 | 6.9 | |
| 94777 | IV | 42.0 | 16.7 | 10.4 | 3.0 | 25.3 | 52.3 | 9.0 | |
| 594778 | III | 47.1 ^w | 15.9^{w} | 11.1 | 3.8 | 21.8 | 55.1 | 8.4 | |
| 94779 | IV | 43.2 | 15.1 | 11.2 | 2.7 | 18.6 | 59.3 | 8.3 | |
| 594780 | IV | 45.8 | 15.9 | 10.2 | 2.7 | 22.1 | 57.4 | 7.5 | |
| 94790A | IV | 42.3 | 16.5 | 10.2 | 3.7 | 29.6 | 49.7 | 6.8 | |
| 594791 | IV | 43.1 | 16.9 | 10.0 | 3.7 | 27.2 | 51.5 | 7.6 | |
| 594792A | V | 43.8^{w} | 15.8^{w} | 11.2 | 4.0 | 21.2 | 53.8 | 9.8 | |
| 594795 | IV | 45.1 | 14.5 | 11.1 | 3.3 | 18.7 | 58.0 | 9.0 | |
| 594798 | IV | 44.1 | 16.9 | 9.8 | 4.0 | 29.7 | 50.0 | 6.4 | |
| 94799A | IV | 42.3 | 16.3 | 10.2 | 4.2 | 22.6 | 56.2 | 6.7 | |
| 94799B | III | 44.7 | 16.8 | 10.9 | 3.7 | 23.2 | 55.2 | 7.0 | |
| 94800 | IV | 46.2 | 14.1 | 11.4 | 3.4 | 21.5 | 55.0 | 8.7 | |
| 94801A | IV | 45.3 ^w | 14.8^{w} | 10.3 | 3.8 | 22.1 | 54.5 | 9.3 | |
| 594801B | IV | 45.0^{w} | 14.6^{w} | 11.3 | 3.6 | 21.8 | 54.3 | 9.0 | |
| 594802A | IV | 43.8 | 16.2 | 9.5 | 3.7 | 27.4 | 52.2 | 7.1 | |
| 94802B | IV | 42.2 | 17.6 | 10.1 | 3.8 | 26.8 | 52.2 | 7.1 | |
| 94804 | IV | 44.0 | 15.2 | 10.0 | 3.9 | 23.0 | 56.0 | 7.1 | |
| 594807A | IV | 41.7 | 15.9 | 10.3 | 4.2 | 21.6 | 55.8 | 8.1 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Accession | Region | Country of | Country of | Year introduced | Maturity |
|-------------------------|--|---|----------------|--|-----------|
| identifier | of origin | origin | acquisition | or released | |
| (II | V | China | China | 1006 | TV. |
| | | | | | IV |
| • | | | | | III |
| | | | | | III |
| | | | | | IV |
| | | | | | IV |
| | | | | | IV |
| • | | | | | IV |
| | | | | | IV |
| _ | | | | | IV |
| _ | | | | | IV |
| | | | | | III |
| | | | | | III |
| | | | | | IV |
| 1 0 | | | | | IV |
| _ | | | | | III |
| | | | | | III |
| | | | | | IV |
| • | | | | | IV |
| _ | | | | | V |
| • | Yunnan | | | | IV |
| • | Yunnan | | | | IV |
| | Liaoning | | | | III |
| (Tia jia bai qi) | Liaoning | China | China | 1996 | III |
| Pei xian hong mao you | Jiangsu | China | China | 1996 | III |
| (Pei xian hong mao you) | Jiangsu | China | China | 1996 | IV |
| Pei xian da bai jiao | Jiangsu | China | China | 1996 | IV |
| Wu xi liu yue ku | Jiangsu | China | China | 1996 | I |
| Lan' | Krasnodar | Russia | Ukraine | 1996 | I |
| (Lan') | Krasnodar | Russia | Ukraine | 1996 | I |
| Krasnodar 568-89 | Krasnodar | Russia | Ukraine | 1996 | I |
| (Zaporozhie 46-96) | Zaporizhzhya | Ukraine | Ukraine | 1996 | I |
| (Zaporozhie 46-96) | Zaporizhzhya | Ukraine | Ukraine | 1996 | I |
| (Zaporozhie 46-96) | Zaporizhzhya | Ukraine | Ukraine | 1996 | I |
| 502 | Sichuan | China | China | 1996 | I |
| Hefen 22 | Sichuan | China | China | 1996 | I |
| (Hefen 22) | Sichuan | China | China | 1996 | I |
| Heilong No. 2 | Heilongjiang | China | China | 1996 | II |
| Helong 26 | Heilongjiang | China | China | 1996 | I |
| Jilin 26 | Jilin | China | China | 1996 | I |
| (Jilin 26) | Jilin | China | China | 1996 | II |
| L3-1 | Sichuan | China | China | 1996 | II |
| L3-2 | Sichuan | China | China | 1996 | II |
| | | | | | I |
| | | | | | Ī |
| _ | C0 C | | | | Ī |
| _ | | | | | Ī |
| _ | | | | | Ī |
| | (Huang dou) Liu yue huang Bai mao zi qi yue huang Qi yue huang Xi la dou (Xi la dou) Bai huang dou Xiao hei dou Song zi dou Zao huang dou Da lu dou Hou zi dou Bao shan da dou Hu pi huang dou Xiao hong dou Hei da dou (Hei da dou) De hong xuan No. 8 Song zi dou Zao huang dou Yang dou Tia jia bai qi (Tia jia bai qi) Pei xian hong mao you (Pei xian hong mao you) Pei xian da bai jiao Wu xi liu yue ku Lan' (Lan') Krasnodar 568-89 (Zaporozhie 46-96) (Zaporozhie 46-96) (Zaporozhie 46-96) (Zaporozhie 46-96) (Zaporozhie 46-96) (Jilin 26) Lilin 26 (Jilin 26) Lilin 26 | (Huang dou) Liu yue huang Bai mao zi qi yue huang Qi yue huang Xi la dou Xi la dou Yunnan Bai huang dou Yunnan Bai huang dou Yunnan Bai huang dou Yunnan Xiao hei dou Yunnan Xiao hei dou Yunnan Song zi dou Yunnan Da lu dou Yunnan Hou zi dou Bao shan da dou Hu pi huang dou Yunnan Yunnan Hei da dou Yunnan Hei da dou Yunnan Hei da dou Yunnan Yunnan Yunnan Tia jia bai qi (Tia jia bai qi) Pei xian hong mao you Pei xian da bai jiao Wu xi liu yue ku Lan' Krasnodar Krasnodar Krasnodar 568-89 (Zaporozhie 46-96) | Yunnan China | (Huang dou) Yunnan China China Liu yue huang Yunnan China China China Bai mao zi qi yue huang Yunnan China China China Qi yue huang Yunnan China China China (Xi la dou) Yunnan China China China Bai huang dou Yunnan China China China Bai huang dou Yunnan China China China Stao hei dou Yunnan China China China Song zi dou Yunnan China China China Da lu dou Yunnan China China China Da lu dou Yunnan China China China Bao shan da dou Yunnan China China China Bao shan da dou Yunnan China China China Hu pi huang dou Yunnan China China China Hu pi huang dou Yunnan China China China Bao shan da dou Yunnan China China China Hei da dou Yunnan China Ch | Huang dou |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|-------------------|-------------------|--------|---------|--------|---------|---------|-------|--------|--------|----------------|--------------|---------------|
| | | term. | | Color | | | COIOI | | | COIOI | Other traits | |
| 594807B | IV | D | W | Lt | Sa | Ssp | Tn | I | Y | Br | | 3N |
| 594817 | III | D | W | T | E | N | Br | I | Y | Br | | 3N |
| 594818 | III | D | W | T | E | N | Br | I | Y | Br | | 4N |
| 594819 | IV | D | P | T | A | Ssp | Br | I | Y | Bl | Vhil | 2N |
| 594821A | IV | D | P | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 594821B | IV | D | W | T | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 594823 | IV | D | W | T | E | N | Br | I | Y | Brbl | Vhil | 3N |
| 594845 | IV | D | P | T | A | N | Bl | I | Bl | Bl | | 3N |
| 594853 | IV | D | W | T | E | Ssp | Br | Lb | Br | Rbr | Sdef | 3N |
| 594859 | IV | D | W | T | E | Ssp | Br | Lb | Br | Rbr | Sdef | 4N |
| 594861 | III | D | W | T | E | Ssp | Br | Lb | Br | Rbr | | 3N |
| 594871 | III | D | P | T | A | N | Br | Lb | Gnbr | Rbr | | 2N |
| 594872 | IV | S | P | T | E | Ssp | Br | I | Br | Rbr | | 4N |
| 594873 | IV | S | P | T | Sa | N | Br | I | Rbr | Rbr | Sdef | 3N |
| 594878 | III | D | W | T | A | N | Br | I | Rbr | Rbr | | 2N |
| 594882A | III | S | W | T | E | N | Br | Lb | Br | Rbr | | 3N |
| 594882B | IV | D | W | T | E | Ssp | Br | Lb | Br | Rbr | | 4N |
| 594883 | IV | S | P | T | Sa | N | Br | I | Rbr | Rbr | Sdef | 3N |
| 594885A | V | D | W | T | Sa | N | Bl | Ī | Rbr | Rbr | 2001 | 3N |
| 594886 | IV | D | P | T | A | N | Br | Ī | Gnbr | Rbr | St | 3F |
| 594889 | IV | D | P | T | E | N | Br | D | Br | Rbr | St | 3F |
| 594899A | III | D | W | T | E | N | Br | I | Y | Br | Di. | 3N |
| 594899B | III | D | W | T | E | N | Br | I | Y | Br | Vhil | 3N |
| 594900A | III | N | P | T | A | N | Tn | I | Y | Br | V 1111 | 3N |
| 594900B | IV | N | P | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 594900B 594901 | IV | N | W | G | A | N | Tn | D | Y | Bf | Sabh | 3N |
| 594902 | I | D | P | G | Sa | N | Br | I | Gn | Bf | Saon | 3F |
| 597397A | I | N | W | G | Ба Е | N | Tn | D | Y | Y | | 2N |
| 597397B | | S | vv P | G | E | N | Tn | I | Y | Bf | | 2N 2N |
| 597404 | I | S N | W | T | E | | Tn | I | Y | | | |
| | I | | | T | | N N | | | Y | Br | | 2N |
| 597405B | I | N | P | | E | N N | Dbr | I | | Br | | 2N |
| 597405C | I | N | W | T T | Е | N | Tn | D | Y Y | Br | A 1.1. | 2N |
| 597405D | I | N | P P | | Е | N | Br | I | | Dbr | Abh | 3N |
| 597406 | I | N | - | T | Е | N | Br | I | Gnbr | | NT. | 5F |
| 597407A | I | N | P | G | Е | Ssp | Br | I | Y | Y | Na | 1N |
| 597407B | I | N | W | G | Е | Ssp | Br | I | Y | Y | G 1 6 | 2N |
| 597408 | II | D | P | G | Е | N | Br | I | Y | Y | Sdef | 2N |
| 597409 | I | S | W | G | E | N | Br | I | Y | Y | Na | 2N |
| 597411A | I | N | P | G | E | Ssp | Br | I | Y | Y | Na | 1N |
| 597411B | II | N | P | G | Е | Ssp | Tn | I | Y | Y | | 3N |
| 597412 | II | N | P | G | E | N | Tn | I | Y | Y | | 2N |
| 597413 | II | N | P | G | E | N | Tn | I | Y | Y | | 2N |
| 597415 | I | N | P | G | E | Ssp | Tn | I | Y | Y | | 3N |
| 597419 | I | S | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597420 | I | D | W | G | E | Ssp | Br | D | Y | Y | | 2N |
| 597421 | I | D | W | G | E | N | Br | I | Y | Y | | 3N |
| 597427A | I | D | W | G | E | Ssp | Br | D | Y | Y | Na | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| - | Flowering Maturity | | | Stem | Shatter | ing | Seed | | | | |
|-------------------|--------------------|------------|---------|-------|---------|------|------|---------|----------|----------------|------------------------|
| | date | - | Lodging | Heigh | t term. | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | - | | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| | | | | | | | | | | | |
| 594807B | 729 723 | 1007 | 2.5 | 96 | 1.0 | 1.5 | 2.5 | 2.5 | 3.5 | 11.4 | 1.66 |
| 594817 | 723 | 927 | 2.0 | 73* | 1.0 | 1.5 | 1.5 | 2.3 | 3.0* | 16.8 | 2.07 |
| 594818 | 719 | 927 | 1.3 | 82* | 1.0 | 1.0 | 2.5 | 2.3 | 3.0* | 17.3 | 1.81 |
| 594819 | 804 | 1009 | 2.3 | 109 | 1.0 | 1.0 | 2.0 | 2.5 | 2.0 | 9.8 | 1.56 |
| 594821A | 804 | 1006 | 3.0 | 83 | 1.0 | 1.0 | 1.0 | 2.5 | 2.5 | 8.4 | 1.52 |
| 594821B | 804 | 1003 | 2.3 | 83 | 1.0 | 1.0 | 1.5 | 2.3 | 2.0 | 6.7 | 0.99 |
| 594823 | 806 | 1017 | 3.3 | 102 | 1.5 | 1.0 | 1.0 | 2.3 | 2.0 | 9.2 | 1.31 |
| 594845 | 802 | 1015 | 3.0 | 74* | 1.0 | 1.0 | 1.5 | 2.5 | | 9.5 | 1.20 |
| 594853 | 727 | 1010 | 2.8 | 80 | 1.0 | 1.5 | 3.0* | 2.8 | | 14.0 | 1.39* |
| 594859 | 727 | 1011 | 3.0 | 97* | 1.0 | 1.5 | 3.0* | 2.8 | | 14.8 | 1.34 |
| 594861 | 725 | 1001 | 3.0 | 75* | 1.0 | 2.0 | 4.5 | 3.0 | | 13.9 | 1.69 |
| 594871 | 728 | 929 | 3.0 | 93 | 1.0 | 1.5 | 1.5 | 3.0 | | 15.5 | 1.57 |
| 594872 | 805 | 1010 | 3.5 | 124* | 2.0 | 1.0 | 2.0 | 2.8 | | 12.8 | 1.70* |
| 594873 | 808 | 1017 | 3.3 | 119* | 2.0 | 1.0 | 2.0 | 2.8 | | 14.3 | 0.86* |
| 594878 | 725 | 1001 | 3.0 | 65 | 1.0 | 1.0 | 1.5 | 3.0 | | 16.3* | 1.19* |
| 594882A | 729 | 929 | 2.8 | 78 | 2.0 | 2.5 | 3.5 | 3.0 | | 11.6 | 0.59 |
| 594882B | 725 | 1015 | 3.0 | 88 | 1.0 | 2.0* | 2.5 | 3.0 | | 14.1 | 1.31* |
| 594883 | 808 | 1015 | 3.0 | 104* | 2.0 | 1.0 | 1.5 | 2.5 | | 14.9 | 0.98* |
| 594885A | 805 | 1028 | 3.3 | 102* | 1.0 | 1.0 | 1.5 | 2.5 | | 9.3 | 1.35 |
| 594886 | 729 | 1009 | 1.8 | 72 | 1.0 | 1.0 | 1.5 | 2.8 | | 10.8 | 1.31 |
| 594889 | 802 | 1011 | 2.8 | 94* | 1.5 | 1.0 | 1.5 | 3.0 | | 9.8 | 1.04 |
| 594899A | 717 | 918 | 1.8 | 65 | 1.0 | 1.0 | 1.5 | 2.8 | 1.5 | 15.1 | 2.47 |
| 594899B | 719 | 927 | 2.3 | 80 | 1.0 | 1.5 | 3.5 | 2.8 | 2.0 | 16.5 | 2.23* |
| 594900A | 721 | 917 | 3.0 | 101* | 3.0 | 1.0 | 3.5 | 2.3 | 2.0 | 11.3 | 2.01* |
| 594900B | 727 | 1001 | 2.3 | 113 | 3.0 | 2.0 | 4.5 | 2.3 | 2.5 | 12.5 | 2.20 |
| 594901 | 804 | 1001 | 3.5 | 104 | 3.0 | 1.0 | 1.0 | 2.5 | 2.5 | 13.4 | 1.93 |
| 594902 | 715 | 830 | 2.3 | 49 | 1.0 | 2.0* | 5.0 | 2.0 | 1.0 | 16.6 | 1.59 |
| 597397A | 619 | 820 | 1.0^ | 59* | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 13.3^ | 2.76^ |
| 597397B | 625 | 825 | 2.0^ | 70* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 11.9^ | 3.06^ |
| 597404 | 622 | 821 | 2.0^ | 64* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 11.2^ | 2.55^ |
| 597405B | 623 | 822 | 3.5^ | 62* | 3.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 12.9^ | 3.11^ |
| 597405C | 623 | 828 | 2.0^ | 76* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 11.7^ | 3.03^ |
| 597405D | 623 | 820 | 3.0^ | 67* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 10.8^ | 2.23^ |
| 597406 | 709* | 907^ | 3.5^ | 113 | 4.0^ | 1.0^ | 2.0^ | 2.5^ | | 9.2^ | 1.84^ |
| 597407A | 627 | 831^ | 1.0^ | 63* | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 13.4^ | 2.16^ |
| 597407B | 624 | 901^ | 2.0^ | 89* | 3.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 13.9^ | 2.56^ |
| 597408 | 709* | 915 | 1.8 | 62 | 1.0 | 1.0 | 3.0 | 2.5 | 1.0 | 19.6 | 2.45^ |
| 597409 | 621 | 822 | 1.5^ | 61* | 3.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 13.0^ | 2.36^ |
| 597411A | 625 | 829^ | 1.5^ | 67* | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 14.2^ | 2.31^ |
| 597411B | 701* | 905 | 1.3 | 77 | 3.0 | 1.0 | 2.0* | 3.0 | 1.5 | 15.6 | 2.65 |
| 597412 | 701 | 913 | 2.0 | 76 | 3.0 | 1.0 | 1.0 | 3.0 | 2.0* | 13.6 | 2.71 |
| 597413 | 630 | 911 | 1.5 | 79 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 12.9 | 2.34 |
| 597415 | 623 | 821^ | 2.5^ | 69 | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 11.2^ | 2.46^ |
| 597419 | 622 | 827^ | 1.5^ | 55* | 2.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 14.5^ | 2.32^ |
| 597419 | 623 | 821 | 1.5^ | 41 | 1.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 14.6^ | 2.42^ |
| 597420 | 627 | 825 | 1.0^ | 51* | 1.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 14.0^ | 2.07^ |
| 597421 597427A | 623 | 823 827 | 1.0^ | 39 | 1.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 14.4^ | 2.09^ |
| 371441A | 023 | 021 | 1.0 | 37 | 1.0 | 1.0 | 1.0 | 4.5 | 1.0 | 14.4 | 4.03 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compos | sition | | | |
|---------------------------|----------|---------------------|---------------------------|------------|---------|-------|--------------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 594807B | IV | 47.3 ^w | 15.5 ^w | 9.7 | 3.2 | 19.3 | 59.8 | 7.9 |
| 594817 | III | 46.3 ^w | 18.1 ^w | 11.1 | 3.6 | 25.5 | 53.4 | 6.4 |
| 594818 | III | 47.0^{w} | 17.6 ^w | 11.7 | 3.6 | 25.8 | 52.9 | 6.0 |
| 594819 | IV | 42.5 | 15.6 | 10.5 | 3.4 | 21.0 | 57.5 | 7.6 |
| 594821A | IV | 40.0 | 15.2 | 9.8 | 4.4 | 25.4 | 53.5 | 6.9 |
| 594821B | IV | 41.4 | 13.9 | 10.3 | 4.5 | 21.2 | 55.8 | 8.2 |
| 594823 | IV | 44.3 | 13.5 | 11.2 | 4.0 | 20.1 | 56.2 | 8.5 |
| 594845 | IV | 46.3 ^w | 16.9 ^w | 11.5 | 3.7 | 21.6 | 55.9 | 7.3 |
| 594853 | IV | 49.2 ^w | 16.3 ^w | 11.9 | 3.2 | 24.9 | 53.8 | 6.2 |
| 594859 | IV | 48.7 ^w | 15.3 ^w | 12.2 | 3.1 | 24.0 | 54.5 | 6.2 |
| 594861 | III | 47.9 ^w | 16.9 ^w | 12.5 | 3.3 | 24.0 | 53.7 | 6.5 |
| 594871 | III | 47.3 ^w | 16.9 15.7 ^w | 13.1 | 4.3 | 28.0 | 48.0 | 6.6 |
| | | | | | | | | |
| 594872 | IV | 47.2 ^w | 16.5 ^w | 14.0 | 3.4 | 23.4 | 52.7 55.2 | 6.5 |
| 594873 | IV | 49.7 ^w | 13.3 ^w | 11.4 | 3.4 | 21.7 | 55.2 | 8.4 |
| 594878 | III | 47.5 ^w | 16.9 ^w | 13.3 | 4.3 | 27.6 | 48.6 | 6.2 |
| 594882A | III | 48.9 ^w | 15.1 ^w | 13.2 | 3.4 | 22.9 | 52.8 | 7.6 |
| 594882B | IV | 49.0 ^w | 15.2 ^w | 12.1 | 3.0 | 23.5 | 54.8 | 6.6 |
| 594883 | IV | 48.6 ^w | 14.4 ^w | 11.6 | 3.4 | 21.8 | 54.8 | 8.3 |
| 594885A | V | 45.7 ^w | 16.5 ^w | 11.7 | 3.2 | 19.7 | 56.7 | 8.7 |
| 94886 | IV | 45.2^{w} | 13.6^{w} | 12.9 | 3.1 | 18.4 | 56.7 | 8.9 |
| 94889 | IV | 44.2^{w} | $16.0^{\rm w}$ | 11.2 | 3.3 | 22.9 | 57.7 | 4.9 |
| 594899A | III | 40.9 | 19.1 | 10.6 | 4.3 | 25.7 | 52.0 | 7.4 |
| 594899B | III | 42.5 | 18.0 | 11.6 | 4.6 | 25.6 | 51.1 | 7.1 |
| 94900A | III | 43.9 | 17.5 | 9.6 | 4.9 | 28.7 | 50.2 | 6.6 |
| 594900B | IV | 42.5 | 16.2 | 9.9 | 4.3 | 27.3 | 50.5 | 8.1 |
| 94901 | IV | 42.4 | 17.8 | 9.3 | 4.2 | 28.7 | 51.4 | 6.4 |
| 594902 | I | 46.4^{w} | 16.4 ^w | 13.7 | 4.3 | 28.7 | 46.9 | 6.3 |
| 597397A | I | 37.4^ | 23.0^ | 12.1^ | 3.7^ | 24.9^ | 53.2^ | 6.0^ |
| 597397B | I | 39.5^ | 21.7^ | 13.2^ | 3.9^ | 28.6^ | 48.8^ | 5.5^ |
| 97404 | I | 39.4^ | 20.8^ | 13.4^ | 3.9^ | 22.2^ | 54.0^ | 6.5^ |
| 597405B | Ī | 40.2^ | 22.6^ | 13.4^ | 4.0^ | 30.9^ | 46.8^ | 4.9^ |
| 97405C | Ī | 39.5^ | 21.9^ | 13.3^ | 4.6^ | 27.4^ | 50.0^ | 4.8^ |
| 597405D | Ī | 41.2^ | 22.9^ | 12.5^ | 4.5^ | 29.5^ | 47.7^ | 5.8^ |
| 97406 | Ī | 49.9 ^w ^ | 16.5 ^w ^ | 12.9^ | 3.6^ | 21.5^ | 54.5^ | 7.5^ |
| 597407A | I | 39.4^ | 21.0^ | 11.4^ | 4.7^ | 33.9^ | 45.3^ | 4.7^ |
| 697407B | I | 40.6 | 18.8^ | 11.4 | 4.6^ | 28.6^ | 49.2^ | 6.0^ |
| 597407 Б 597408 | II | 40.8 | 19.5 | 12.7 | 3.6 | 27.5 | 49.5 | 6.7 |
| 597408 597409 | | | | | | | | |
| | I | 40.1^ | 20.6^ | 12.2^ | 5.2^ | 26.6^ | 49.6^ | 6.4^ |
| 97411A | I | 39.9^ | 19.3^ | 11.7^ | 5.4^ | 30.5^ | 47.2^ | 5.3^ |
| 97411B | II | 42.9 | 17.4 | 12.8 | 4.2 | 25.4 | 50.4 | 7.1 |
| 97412 | II | 41.3 | 19.0 | 12.6 | 4.7 | 28.0 | 47.1 | 7.6 |
| 97413 | II | 41.0 | 19.7 | 12.6 | 4.8 | 32.5 | 43.6 | 6.5 |
| 97415 | I | 39.0^ | 21.0^ | 11.4^ | 3.7^ | 24.7^ | 53.8^ | 6.4^ |
| 97419 | I | 39.1^ | 21.1^ | 12.2^ | 3.7^ | 31.2^ | 47.6^ | 5.2^ |
| 97420 | I | 40.3^ | 21.0^ | 13.0^ | 3.7^ | 26.0^ | 51.1^ | 6.2^ |
| 97421 | I | 40.9^ | 21.1^ | 11.8^ | 4.8^ | 24.1^ | 52.7^ | 6.6^ |
| 597427A | I | 40.3^ | 21.0^ | 12.2^ | 3.9^ | 26.4^ | 51.2^ | 6.3^ |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | <u> </u> | | *** | |
|---------|----------------------------|--------------|-----------------|-----------------|------------------------|-------|
| | A | Desir | Country | Country | Year | Maria |
| DI No | Accession identifier | Region | of | of | introduced or released | • |
| PI No. | Identifier | of origin | origin | acquisition | or released | group |
| 597427B | (Gang 84-62-19) | Heilongjiang | China | China | 1995 | I |
| 597429 | Gang 8827-4 | Heilongjiang | China | China | 1995 | I |
| 597432 | Gang 8819-3-16 | Heilongjiang | China | China | 1995 | I |
| 597439 | Hei nong 38 | Heilongjiang | China | China | 1995 | I |
| 597440A | Hei nong 39 | Heilongjiang | China | China | 1995 | I |
| 597440B | (Hei nong 39) | Heilongjiang | China | China | 1995 | I |
| 597440C | (Hei nong 39) | Heilongjiang | China | China | 1995 | I |
| 597441 | NEAU 40727 | Heilongjiang | China | China | 1995 | II |
| 597442 | NEAU 785 | Heilongjiang | China | China | 1995 | 0 |
| 597443 | NEAU 9142 | Heilongjiang | China | China | 1995 | I |
| 597444 | NEAU 91212 | Heilongjiang | China | China | 1995 | I |
| 597445 | NEAU 9243 | Heilongjiang | China | China | 1995 | I |
| 597446 | DN 104 | Heilongjiang | China | China | 1995 | I |
| 597464 | Zhe chun No. 3 | Zhejiang | China | China | 1996 | II |
| 597474 | Hwanggeumkong | unknown | South Korea | South Korea | 1997 | IV |
| 597475A | Namcheonkong | unknown | South Korea | South Korea | 1997 | IV |
| 597475B | (Namcheonkong) | unknown | South Korea | South Korea | 1997 | IV |
| 597477 | Baegunkong | unknown | South Korea | South Korea | 1997 | IV |
| 597478A | Paldalkong | unknown | South Korea | South Korea | 1997 | III |
| 597478B | (Paldalkong) | unknown | South Korea | South Korea | 1997 | III |
| 597479 | Bokwangkong | unknown | South Korea | South Korea | 1997 | IV |
| 597480A | Namhaekong | unknown | South Korea | South Korea | 1997 | IV |
| 597480B | (Namhaekong) | unknown | South Korea | South Korea | 1997 | IV |
| 597481 | Jangsukong | unknown | South Korea | South Korea | 1997 | IV |
| 597482 | Sinpaldalkong | unknown | South Korea | South Korea | 1997 | III |
| 597483 | Keunolkong | unknown | South Korea | South Korea | 1997 | IV |
| 597484 | Bukwangkong | unknown | South Korea | South Korea | 1997 | IV |
| 597485 | Keomjeongkong 1 | unknown | South Korea | South Korea | 1997 | IV |
| 597486 | Kwangankong | unknown | South Korea | South Korea | 1997 | IV |
| 597487 | Hwaseongputkong | Kyonggi | South Korea | South Korea | 1997 | I |
| 599509 | | Xinjiang | China | China | 1995 | III |
| 602490 | Liao dou No. 9 | Liaoning | China | China | 1997 | II |
| 602491 | Liao dou 11 | Liaoning | China | China | 1997 | III |
| 602492 | Liao dou 12 | Liaoning | China | China | 1997 | III |
| 602497A | Ke shan si li jia | Heilongjiang | China | China | 1996 | I |
| 602498 | Xiao jin huang | Jilin | China | China | 1996 | I |
| 602499 | Tie jia huang | Shandong | China | China | 1996 | III |
| 602500A | Tong shan tian er dan | Jiangsu | China | China | 1996 | IV |
| 602500B | (Tong shan tian er dan) | Jiangsu | China | China | 1996 | IV |
| 602501 | Tong shan tian er dan | Jiangsu | China | China | 1996 | IV |
| 602502A | Xiong yue xiao huang dou | unknown | China | China | 1996 | III |
| 602502B | (Xiong yue xiao huang dou) | unknown | China | China | 1996 | IV |
| 602993 | Pi xian ruan tiao zhi | Jiangsu | China | China | 1998 | IV |
| 603148 | Oh won No. 1 | unknown | North Korea | North Korea | 1997 | I |
| 603155 | // // | unknown | North Korea | North Korea | 1997 | IV |
| 603156 | | unknown | North Korea | North Korea | 1997 | IV |
| 603157 | | unknown | North Korea | North Korea | 1997 | IV |
| 303131 | | 3111110 WII | 1101111 1101011 | 1,01111 1101011 | 1/// | |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe color | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|--------------------|-------------------|--------|-------------|----|---------|----------|--------------|------------------|--------|----------------|-----------------|---------------|
| 597427B | I | S | P | G | Е | N | Br | D | Y | Bf | Na, Vhil | 2N |
| 597427 B | I | D | P | G | E | Ssp | Br | D | Y | Y | Na, viiii Na | 2N |
| 597429 | I | D | P | G | E | N N | Br | I | Y | Y | 1Na | 3N |
| 597432 | I | D | W | G | E | N | Br | D | Y | Y | | 3N |
| 597439 597440A | I | D | W | G | E | | Br | I | Y | Y | | 3N |
| 597440A 597440B | I | D D | vv P | G | E E | Ssp N | | I | Y | Y | | 3N 2N |
| 597440B 597440C | | | W | | | | Br | I | Y Y | | | |
| | I | D | | G | Е | N | Br | | Y Y | Y | NT. | 3N |
| 597441 | II | S | P | G | E | N | Br | I | | Y | Na | 3N |
| 597442 | 0 | D | W | G | E | N | Br | D | Y | Bf | Na | 2R |
| 597443 | I | N | P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 597444 | I | D | W | G | Е | Ssp | Br | I | Y | Y | | 3N |
| 597445 | I | D | W | G | E | Ssp | Br | D | Y | Y | | 2N |
| 597446 | I | S | P | G | E | N | Tn | I | Y | Y | Na | 2N |
| 597464 | II | D | W | Lt | Sa | N | Br | I | Y | Bl | | 4N |
| 597474 | IV | D | P | G | Sa | N | Dbr | I | Y | Y | | 2N |
| 597475A | IV | D | P | G | A | Ssp | Br | I | Y | Bf | | 3N |
| 597475B | IV | D | P | G | A | Ssp | Br | I | Y | Bf | | 2N |
| 597477 | IV | D | P | G | E | N | Br | D | Y | Bf | | 2N |
| 597478A | III | D | P | T | Sa | N | Br | I | Lgn | Bl | | 4N |
| 597478B | III | D | P | T | Sa | N | Tn | I | G | Bl | | 4N |
| 597479 | IV | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 597480A | IV | D | W | T | Sa | N | Tn | D | Y | Br | | 2N |
| 597480B | IV | D | W | T | Sa | N | Tn | D | Y | Brbl | Vhil | 2N |
| 597481 | IV | N | P | G | E | N | Tn | I | Y | Bf | | 3N |
| 597482 | III | D | W | T | E | N | Tn | I | Y | Bl | | 3N |
| 597483 | IV | D | P | G | E | Ssp | Br | I | Y | Y | | 2N |
| 597484 | IV | D | W | G | Sa | N | Br | D | Y | Bf | | 2N |
| 597485 | IV | D | W | Lt | Е | N | Br | I | Bl | Bl | | 2N |
| 597486 | IV | D | P | G | Sa | N | Tn | I | Y | Ib | | 3N |
| 597487 | I | D | W | G | A | N | Tn | I | Y | Bf | | 2N |
| 599509 | III | N | P | G | E | Ssp | Tn | D | Y | Bf | | 4N |
| 602490 | II | D | W | Lt | E | N | Br | S | Y | Y | | 3N |
| 602491 | III | N | P | G | E | Ssp | Tn | I | Y | Y | Sdef | 3N |
| 602492 | III | N | P | G | E | N | Tn | Ī | Y | Ib | Sdef | 3N |
| 602497A | I | N | P | G | E | Ssp | Br | Ī | Y | Y | Na | 2N |
| 602498 | Ī | N | W | G | E | N | Dbr | Ī | Y | Y | Vhil | 2N |
| 602499 | III | D | P | G | A | N | Br | Ī | Y | Bf | V 1111 | 3N |
| 602500A | IV | N | P | G | Sa | N | Br | D | Y | Ib | Vhil | 3N |
| 602500B | IV | N | P | G | E | N | Br | D | Y | Ib | Viii | 3N |
| 602501 | IV | N | P | G | Sa | N | Br | I | Y | Bf | ¥ 1111 | 3N |
| 602502A | III | D | W | G | Sa E | N | Bl | D | Y | Y | | 2N |
| 602502A | IV | N | P VV | G | E | N | Bl | D | Y | Y | | 2N 2N |
| 602302B 602993 | IV | N N | W | G | E Sa | | Br | I | Y | I Bf | Vhil | 4N |
| 602993 | I | D D | vv P | T | Sa E | Ssp | | I | Y | | V 1111 | 4N 2N |
| | | D N | W | T | | Ssp | Br | | | Br | | 2N 3N |
| 603155 | IV | | | | E | Ssp | Bl | D | Gn | Br | | |
| 603156 | IV | D | W | G | Sa | Ssp | Bl | D | Gn | Bf | | 3N |
| 603157 | IV | D | W | T | Sa | Ssp | Bl | I | Gn | Br | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------|-------------|--------------|-------------|------------|-------------|------------|-------------|-------------|----------|------------------------|------------------------|
| | date | | Lodging | Heigh | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | (score) | | | (score) | (cg sd ⁻¹) | (Mg ha ⁻¹) |
| 597427B | 623 | 826 | 1.5^ | 59 | 2.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 12.9^ | _ |
| 597429 | 623 | 825 | 1.0^ | 33 | 1.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 14.2^ | 2.06^ |
| 597432 | 623 | 820^ | 1.0^ | 37* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 14.1^ | 2.22^ |
| 597439 | 627 | 825^ | 1.0^ | 41* | | 1.0^ | 4.0^ | 3.0^ | 1.0 | 12.4^ | 1.41^ |
| 597440A | 623 | 822 | 2.0^ | 59* | | 1.0^ | 1.0^ | 3.5^ | 1.0 | 13.8^ | 2.32^ |
| 597440B | 623 | 825^ | 2.0^ | 67* | | 1.0^ | 1.0^ | 3.5^ | 1.0 | 14.5^ | 3.04^ |
| 597440C | 626 | 827^ | 1.0^ | 43* | | 1.0^ | 2.0^ | 2.5^ | 1.0 | 15.0^ | 2.80^ |
| 597441 | 626* | 903 | 1.5 | 61 | 2.0 | 1.0 | 1.0 | 3.3 | 1.0 | 17.6 | 2.08 |
| 597442 | 621 | 819 | 1.5^ | 47* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.3^ | 2.35^ |
| 597443 | 621 | 825 | 1.0^ | 63 | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 17.7^ | 2.51^ |
| 597444 | 623 | 822^ | 1.5^ | 62 | 2.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 16.4^ | 2.81^ |
| 597445 | 623 | 825^ | 1.0^ | 46* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.4^ | 2.54^ |
| 597446 | 623 | 825^ | 1.0^ | 47 | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.5^ | 2.63^ |
| 597464 | 717 | 906 | 1.8 | 46* | | 1.0 | 4.0 | 2.5 | 1.0 | 13.5 | 1.02* |
| 597474 | 720 | 1004 | 2.3 | 62 | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 22.2 | 3.26 |
| 597475A | 719 | 929 | 2.0 | 57 | 1.0 | 2.0 | 3.5 | 2.3 | 1.0 | 14.5 | 2.03 |
| 597475B | 719 | 1005 | 2.0 | 56 | 1.0 | 1.0 | 2.0* | 2.0 | 1.0 | 14.1 | 2.30 |
| 597477 | 726 | 1017 | 1.8 | 82 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 16.9 | 2.95 |
| 597478A | 711 | 924 | 1.3 | 52 | 1.0 | 1.0 | 1.5 | 2.3 | 2.0 | 12.2 | 2.44* |
| 597478B | 711 | 926 | 1.0 | 50 | 1.0 | 1.0 | 1.0 | 2.0 | 2.5 | 12.0 | 3.23* |
| 597479 | 724 | 1003 | 1.8 | 62 | 1.0 | 2.0 | 3.5 | 2.5 | 3.0 | 22.7 | 1.84^ |
| 597480A | 725 | 1003 | 2.0 | 80 | 1.0 | 1.0 | 1.0 | 2.8 | 1.5 | 12.4 | 2.89* |
| 597480B | 725 | 1002 | 1.8 | 76* | | 1.0 | 1.0 | 2.8 | 1.5 | 12.4 | 2.53 |
| 597480 D | 723 | 1003 | 2.0 | 111 | 3.0 | 1.0 | 1.5 | 2.5 | 1.0 | 20.6 | 2.76 |
| 597482 | 709 | 927 | 1.0 | 54 | 1.0 | 1.0 | 1.0 | 2.5 | 1.0 | 16.0 | 3.26* |
| 597483 | 725 | 1011 | 1.3 | 60 | 1.0 | 1.0 | 1.0 | 2.0 | 2.5 | 18.3 | 2.84* |
| 597484 | 727 | 1005 | 1.8 | 67 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 11.9 | 2.45* |
| 597485 | 723 | 1003 | 3.3 | 70 | 1.0 | 1.5 | 2.5 | 2.3 | | 23.9 | 2.45* |
| 597486 | 728 | 1012 | 2.0 | 85 | 1.0 | 1.0 | 1.0 | 2.5 | 1.5 | 11.4 | 3.05 |
| 597487 | 702 | 823^ | 1.0^ | 39 | 1.0^ | 1.0^ | 5.0^ | 2.0^ | 1.0 | 20.1^ | 1.69^ |
| 599509 | 720 | 917 | 3.3* | 109* | 4.0 | 1.0 | 1.0 | 2.5 | 3.0 | 8.8 | 1.62* |
| 602490 | 711 | 917 | 1.3 | 55 | 1.0 | 1.5 | 3.5 | 2.8 | 1.0 | 20.8 | 3.07 |
| 602491 | 705 | 925 | 2.3 | 98 | 3.0 | 1.0 | 1.5 | 3.0 | 3.5 | 19.8 | 2.30 |
| 602491 | 703 709* | 919 | 2.0 | 98 87 | 3.0 | 1.0 | 1.5 | 3.8 | 1.0 | 19.8 | 2.88 |
| 602492 602497A | 623 | 820^ | 2.0^ | 44* | | 1.0^ | 4.0^ | 3.0^ | 1.0 | 17.4 17.8^ | 2.21^ |
| 602497A | 625 | 820^ | 2.0^ | 68* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.2^ | 2.52^ |
| 602499 | 726 | 926 | 4.0 | 108* | | 1.0 | | 2.8 | 3.0* | 13.4 | 1.81 |
| 602499 602500A | 802 | 1007 | 3.3 | 108** | 1.0 4.0 | 1.5 | 1.0 3.5 | 2.8 | 1.0 | 13.4 19.4 | 2.06 |
| 602500A | 804 | 1007 | 3.5 | 102 | 4.0 | 1.5 | 2.5 | 3.0 | 1.0 | 19.4 | 1.86 |
| | 725 | | | 90 | 4.0 3.0* | 1.5 | | | 2.0 | | 2.44 |
| 602501 | | 1013 | 3.0 2.5 | 90 97* | | | 2.0 | 3.0 | 4.0* | 14.2 | |
| 602502A 602502B | 723 723 | 929 1002 | 2.3 | | 1.0 3.0 | 1.0 1.5 | 1.5 2.5 | 2.8 3.0 | | 11.3 | 2.10 2.06 |
| | | | 2.3 3.8 | 97 126 | | | | | 3.0 | 12.1 | |
| 602993 | 725 627 | 1005 822^ | 5.8 1.0^ | 136 | 4.0 | 1.0 | 2.5 5.0^ | 3.0 2.0^ | 2.0 | 11.7 22.7^ | 1.93 1.75^ |
| 603148 | 627 | | | 46 | 1.0^ | 1.0^ | | | 1.0 | | |
| 603155 | 721 721 | 1019 | 2.3 2.3 | 108 86 | 3.5 | 1.0 | 1.5 | 2.5 | 3.0 | 14.1 | 1.74 |
| 603156 | 731 729 | 1017 | 2.3 | 86 110* | 1.0 1.5 | 1.0 1.0 | 1.0 | 2.3 2.5 | 3.0 | 11.3 | 2.44 2.11 |
| 603157 | 129 | 1018 | 2.0 | 110* | 1.5 | 1.0 | 1.0 | 2.3 | 3.0 | 10.1 | 2.11 |
| 106 | | | | | | | | | | | |

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Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compo | sition | | | |
|-------------------|----------|---------------------------|---------------------|-----------|---------|-------|-------------------|------------------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 597427B | I | 43.2^ | 19.0^ | 13.0^ | 4.4^ | 23.3^ | 53.0^ | 6.3^ |
| 597429 | Ī | 38.1^ | 21.2^ | 11.6^ | 3.6^ | 29.0^ | 50.8^ | 5.1^ |
| 597432 | Ī | 38.3^ | 23.1^ | 10.8^ | 4.1^ | 31.3^ | 49.0^ | 4.9^ |
| 597439 | I | 37.2^ | 23.2^ | 11.7^ | 4.2^ | 27.5^ | 50.9^ | 5.7^ |
| 597440A | I | 41.2^ | 22.6^ | 11.7 | 4.6^ | 31.6^ | 47.6^ | 4.9^ |
| 597440B | I | 40.3^ | 19.2^ | 11.9^ | 4.1^ | 31.7^ | 45.1^ | 7.2^ |
| 597440 C | I | 37.0^ | 23.1^ | 10.5^ | 4.5^ | 30.9^ | 49.3^ | 4.8^ |
| 597440C 597441 | II | 42.2 | 19.2 | 11.0 | 4.0 | 31.9 | 47.1 | 6.0 |
| 597441 597442 | 0 | 40.2 | 22.9^ | 13.0^ | 5.0^ | 23.6^ | 52.5 [^] | 5.9^ |
| | | | | | | 25.3^ | | |
| 597443 | I | 40.7^ | 20.4^ | 12.6^ | 4.3^ | | 51.1^ | 6.6 [^] |
| 597444 | I | 38.5^ | 22.5^ | 12.7^ | 4.5^ | 27.0^ | 50.3^ | 5.6^ |
| 597445 | I | 40.1^ | 22.4^ | 12.8^ | 3.8^ | 28.1^ | 49.9^ | 5.5^ |
| 597446 | I | 37.6^ | 22.1^ | 13.1^ | 4.6^ | 25.5^ | 50.3^ | 6.5^ |
| 597464 | II | 44.9 | 16.9 | 12.5 | 4.3 | 23.0 | 53.3 | 6.9 |
| 597474 | IV | 40.5 | 18.2 | 9.1 | 3.0 | 21.7 | 57.6 | 8.7 |
| 597475A | IV | 42.0 | 16.9 | 9.1 | 3.7 | 25.7 | 54.2 | 7.2 |
| 597475B | IV | 41.8 | 16.3 | 9.3 | 3.4 | 24.0 | 54.8 | 8.5 |
| 597477 | IV | 42.9^{w} | 17.5^{w} | 11.9 | 3.6 | 20.7 | 56.7 | 7.2 |
| 597478A | III | $43.7^{\rm w}$ | $17.0^{\rm w}$ | 13.3 | 5.0 | 24.4 | 50.3 | 6.9 |
| 597478B | III | 42.6^{w} | 16.9 ^w | 11.4 | 3.6 | 23.6 | 54.4 | 7.0 |
| 597479 | IV | 40.6 | 17.2 | 9.7 | 4.0 | 25.3 | 54.2 | 6.7 |
| 597480A | IV | 44.2 | 17.4 | 10.9 | 4.2 | 21.1 | 56.1 | 7.6 |
| 597480B | IV | 44.7 | 17.5 | 11.0 | 4.7 | 21.6 | 55.1 | 7.6 |
| 597481 | IV | 44.1 | 17.6 | 10.2 | 3.3 | 23.0 | 56.8 | 6.7 |
| 597482 | III | 39.6 | 20.9 | 9.6 | 3.7 | 23.9 | 56.8 | 6.1 |
| 597483 | IV | 41.6 | 17.5 | 8.8 | 3.7 | 25.3 | 54.8 | 7.4 |
| 597484 | IV | 43.5 | 17.2 | 11.4 | 3.5 | 19.8 | 57.2 | 8.1 |
| 597485 | IV | 45.7 ^w | 17.9 ^w | 12.7 | 3.5 | 23.3 | 53.0 | 7.4 |
| 597486 | IV | 48.3 | 15.3 | 11.3 | 4.7 | 29.6 | 46.1 | 8.2 |
| 597487 | I | 44.8^ | 18.8^ | 13.9^ | 3.2^ | 30.2^ | 47.5^ | 5.2^ |
| 599509 | III | 44.2 | 15.7 | 11.0 | 4.6 | 25.8 | 51.5 | 7.1 |
| 502490 | II | 41.9 | 18.7 | 10.4 | 4.6 | 31.7 | 47.2 | 6.0 |
| | III | 41.9 43.6 ^w | 18.8 ^w | | | | | 6.3 |
| 502491 | | | | 12.6 | 4.2 | 33.9 | 43.0 52.2 | |
| 502492 | III | 41.7 | 18.5 | 10.6 | 4.4 | 25.6 | | 7.1 |
| 502497A | I | 43.2^ | 20.6^ | 12.2^ | 4.2^ | 28.1^ | 49.9^ | 5.7^ |
| 502498 | I | 40.7^ | 21.3^ | 11.3^ | 4.7^ | 32.3^ | 46.0^ | 5.7^ |
| 502499 | III | 48.9 ^w | 16.0^{w} | 10.4 | 3.8 | 25.6 | 53.3 | 6.9 |
| 502500A | IV | 42.4 | 17.0 | 10.4 | 3.3 | 25.6 | 53.7 | 7.0 |
| 502500B | IV | 42.9 | 16.7 | 10.2 | 3.9 | 27.1 | 51.7 | 7.1 |
| 502501 | IV | 42.2 | 17.3 | 11.6 | 3.3 | 22.7 | 55.2 | 7.2 |
| 502502A | III | 47.2^{w} | 17.3^{w} | 10.6 | 3.8 | 24.4 | 54.3 | 6.8 |
| 502502B | IV | 46.3 | 16.5 | 11.7 | 4.4 | 22.4 | 54.8 | 6.6 |
| 502993 | IV | 45.7 | 15.3 | 10.7 | 3.8 | 21.3 | 56.0 | 8.3 |
| 503148 | I | 42.4^ | 20.6^ | 11.4^ | 2.9^ | 35.5^ | 44.9^ | 5.3^ |
| 503155 | IV | 51.5^{w} | 14.7^{w} | 12.6 | 3.5 | 23.5 | 52.3 | 8.1 |
| 603156 | IV | 51.1 ^w | 14.1^{w} | 11.5 | 3.1 | 18.7 | 57.2 | 9.4 |
| 503157 | IV | 49.6^{w} | 15.4 ^w | 13.9 | 3.7 | 21.8 | 52.7 | 7.9 |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|-----------------|------------------------|--------------|---------------|---------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | • |
| 603158 | | unknown | North Korea | North Korea | 1997 | IV |
| 603159 | | unknown | North Korea | North Korea | 1997 | IV |
| 603160 | | unknown | North Korea | North Korea | 1997 | IV |
| 603162 | | unknown | North Korea | North Korea | 1997 | IV |
| 603165A | | unknown | North Korea | North Korea | 1997 | IV |
| 603165B | | unknown | North Korea | North Korea | 1997 | IV |
| 603166 | | unknown | North Korea | North Korea | 1997 | IV |
| 603167 | | unknown | North Korea | North Korea | 1997 | III |
| 603168 | | unknown | North Korea | North Korea | 1997 | V |
| 603170 | | unknown | North Korea | North Korea | 1997 | IV |
| 603171 | | unknown | North Korea | North Korea | 1997 | IV |
| 603172 | | unknown | North Korea | North Korea | 1997 | IV |
| 603174A | | unknown | North Korea | North Korea | 1997 | IV |
| 603174B | | unknown | North Korea | North Korea | 1997 | IV |
| 6031715 | | unknown | North Korea | North Korea | 1997 | IV |
| 603176A | | unknown | North Korea | North Korea | 1997 | IV |
| 603290 | Zao shu 18 | Beijing | China | China | 1998 | I |
| 603293A | Zhao dong 50 | Heilongjiang | China | China | 1998 | I |
| 603293B | (Zhao dong 50) | Heilongjiang | China | China | 1998 | I |
| 603298 | Tang yuan hou ding kui | Heilongjiang | China | China | 1998 | Ī |
| 603302 | Si li huang | Heilongjiang | China | China | 1998 | I |
| 603303 | Hua dian si li huang | Heilongjiang | China | China | 1998 | II |
| 603304 | Tang yuan tu jia zi | Heilongjiang | China | China | 1998 | I |
| 603305 | Niu moa huang | Heilongjiang | China | China | 1998 | I |
| 603306 | Xun ke xiao yang dou | Heilongjiang | China | China | 1998 | 0 |
| 603307 | Fu jin si li huang | Heilongjiang | China | China | 1998 | I |
| 603308A | Niu xin hong | Heilongjiang | China | China | 1998 | I |
| 603308B | (Niu xin hong) | Heilongjiang | China | China | 1998 | I |
| 603300 B | Ning an xiao hei qi | Heilongjiang | China | China | 1998 | Ī |
| 603310 | Si li huang (Nong 16) | Heilongjiang | China | China | 1998 | I |
| 603311 | Fang zheng bai lu dou | Heilongjiang | China | China | 1998 | Ī |
| 603311 | Zao dou | Heilongjiang | China | China | 1998 | Ī |
| 603315 | Si li huang (Nong 27) | Heilongjiang | China | China | 1998 | Ī |
| 603321 | Xiao hong qi | Heilongjiang | China | China | 1998 | Ī |
| 603323 | Kui wu dou a | Heilongjiang | China | China | 1998 | Ī |
| 603324B | (Da jin huang) | Heilongjiang | China | China | 1998 | Ī |
| 603325 | Si li huang | Heilongjiang | China | China | 1998 | Ī |
| 603327 | Xiao huang qi | Heilongjiang | China | China | 1998 | Ī |
| 603329 | Yi wo feng D | Heilongjiang | China | China | 1998 | Ī |
| 603330 | Ping ding xiang B | Heilongjiang | China | China | 1998 | Ī |
| 603331 | Xiao hui qi | Heilongjiang | China | China | 1998 | Ī |
| 603332 | Xiao he qi No. 2 | Heilongjiang | China | China | 1998 | Ī |
| 603333 | Man di jin | Heilongjiang | China | China | 1998 | II |
| 603335B | (Hei jin yuan) | Heilongjiang | China | China | 1998 | II |
| 603333B | Qing pi si li huang | Heilongjiang | China | China | 1998 | II |
| 603337A | Yan shou chang li hei | Heilongjiang | China | China | 1998 | I |
| 60333711 | Cha se dou B | Heilongjiang | China | China | 1998 | Ī |
| 302220 | | | | | | - |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | _ | | Density | Pod | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|--------|----|----|---------|-----|------------------|-----|----------------|--------------|---------------|
| | | | | | | • | | | | | | |
| 603158 | IV | N | P | Lt | Sa | Ssp | Tn | I | Rbr | Rbr | Sdef | 3N |
| 603159 | IV | D | P | G | E | N | Tn | I | Y | Bf | | 3N |
| 603160 | IV | D | P | G | E | N | Tn | I | Y | Bf | | 3N |
| 603162 | IV | N | W | Lt | E | Ssp | Tn | I | Bl | Bl | | 4N |
| 603165A | IV | D | W | G | E | Ssp | Tn | D | Y | Y | Vhil | 2N |
| 603165B | IV | D | P | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603166 | IV | D | W | G | E | Ssp | Tn | D | Y | Bf | | 3N |
| 603167 | III | D | P | G | E | Ssp | Br | D | Gn | Bf | | 2N |
| 603168 | V | N | P | T | E | Ssp | Tn | I | Bl | Bl | | 4N |
| 603170 | IV | D | P | T | E | Ssp | Tn | I | Rbr | Rbr | | 2N |
| 603171 | IV | N | P | T | Sa | Ssp | Tn | I | Br | Rbr | | 4F |
| 603172 | IV | N | P | T | E | Ssp | Bl | D | Gn | Br | | 3N |
| 603174A | IV | N | W | Lt | E | N | Tn | I | Bl | Bl | | 4N |
| 603174B | IV | S | W | T | Α | Ssp | Tn | Lb | B1 | Bl | | 3N |
| 603175 | IV | D | P | T | E | N | Br | I | Rbr | Rbr | | 2N |
| 603176A | IV | N | P | T | Sa | N | Br | Lb | Bl | Bl | | 4N |
| 603290 | I | N | P | G | A | N | Br | D | Y | Y | Vhil | 2N |
| 603293A | I | N | W | G | E | N | Br | I | Y | Lbf | Sabh | 2N |
| 603293B | Ī | N | W | G | E | N | Br | Ī | Y | Y | Vhil | 2N |
| 603298 | Ī | D | P | G | E | N | Br | Ī | Y | G | , | 2N |
| 603302 | Ī | N | W | G | E | N | Br | Ī | Y | Y | Vhil | 3N |
| 603303 | II | N | W | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 603304 | I | N | W | G | E | N | Br | I | Y | Y | Vhil | 2N |
| 603305 | I | N | P | T | E | Ssp | Tn | I | Y | Tn | V 1111 | 2N |
| 603306 | 0 | N | P | G | E | N N | Br | I | Y | Y | | 3N |
| 603307 | I | N | P | T | E | N | Br | I | Y | G | | 3N |
| | I | N | r P | G | E | N | | I | Y | Y | | 2N |
| 603308A | | | | | | | Br | | Y | Y | | |
| 603308B | I | N | P | G | Е | N | Br | I | | | NT. | 2N |
| 603309 | I | S | P | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 603310 | I | D | W | G | Е | N | Br | I | Y | Y | Na, Vhil | 1N |
| 603311 | I | S | P | G | Е | N | Br | I | Y | Ib | X 71 .1 | 3N |
| 603312 | I | S | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 603315 | I | N | W | G | E | N | Br | I | Y | Bf | | 4N |
| 603321 | I | N | W | T | E | N | Br | I | Y | Br | | 2N |
| 603323 | I | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 603324B | I | N | W | G | E | N | Dbr | I | Y | Y | Sabh, Vhil | 2N |
| 603325 | I | N | W | G | E | N | Dbr | I | Y | Bf | | 3N |
| 603327 | I | S | P | G | E | N | Dbr | I | Y | Y | | 3N |
| 603329 | I | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 603330 | I | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 603331 | I | D | P | G | E | Ssp | Br | I | Y | G | | 2N |
| 603332 | I | N | P | G | E | Ssp | Br | I | Y | G | | 3N |
| 603333 | II | D | W | G | E | N | Br | I | Y | Lbf | | 3N |
| 603335B | II | D | W | G | E | N | Br | D | Y | Y | | 3N |
| 603336 | II | D | W | G | E | Ssp | Br | I | Gn | Gn | Na | 3N |
| 603337A | I | N | P | Lt | E | Ssp | Br | Lb | Bl | Bl | Flk | 4F |
| 603338 | I | N | W | T | E | Ssp | Br | I | Br | Br | | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | Stem | Shatter | ring | Seed | | | |
|-------------------|------------|----------------------|-------------------------|--------|-------------|------|---------|----------|----------------|------------------------|
| | date | | ging Heig | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) (sco | | | - | | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 603158 | 728 | 1021 3.3 | 104 | * 4.0 | 1.0 | 1.5 | 2.8 | | 9.9 | 2.00 |
| 603159 | 802 | 1021 3.3 | 84 | 1.0 | 1.0 | 1.0 | 2.8 | 2.0 | 17.8 | 2.27 |
| 603160 | 804 | 1017 3.0 | 84 | 1.0 | 1.0 | 1.0 | 2.5 | 2.0 | 18.1 | 2.32 |
| 603162 | 724 | 1015 3.8 | 123 | 4.0 | 1.0 | 1.5 | 2.5 | | 10.7 | 2.45 |
| 603165A | 729 | 1015 3.6 | 94 | 1.0 | 1.0 | 1.0 | 2.3 | 3.0 | 12.4 | 1.69 |
| 603165B | 730 | 1015 2.3 | 94 | 1.0 | 1.0 | 1.0 | 2.3 | 3.0 | 15.6 | 2.19 |
| 603166 | 727 | 1013 2.3 | 80 | 1.0 | 1.5 | 1.5 | 2.0 | 2.0 | 11.8 | 2.65* |
| 603167 | 720 | 923 1.8 | 73 | 1.0 | 1.0 | 1.0 | 2.8 | 2.5 | 19.2 | 1.73 |
| 603168 | 802 | 1023 2.8 | 111 | 4.0 | 1.0 | 1.0 | 2.5 | | 11.2 | 2.21 |
| 603170 | 802 | 1023 2.8 | 65 | 1.0 | 1.0 | 1.0 | 2.5 | | 8.3 | 1.66 |
| 603171 | 728 | 1011 2.3 | 115 | 4.0 | 1.5 | 2.0 | 2.0 | | 12.5 | 2.46 |
| | 730 | 1017 3.0 | 113 129 ³ | | 2.5 | 3.0 | 2.5 | 2 0 | 12.3 | 1.98 |
| 603172 603174A | 730 729 | 1015 3.5 | | | 1.0 | 2.5 | 2.5 | 3.0 | 10.1 | 2.38 |
| | | | 116 | 2.0 | 1.0 | | 2.3 | | 8.8 | 2.38 1.86 |
| 603174B | 731 735 | | 106 | | | 1.5 | | | | |
| 603175 | 725 726 | 1002 1.8 1019 3.8 | 59 ³ | | 1.0 | 1.0 | 2.3 | | 7.5 | 2.05 |
| 603176A | 726 701 | | 126 | 4.0 | 1.0 1.0^ | 1.5 | 3.3 | 1.0 | 15.9 | 1.14 |
| 603290 | 701 | 903^ 1.0 | | | | 1.0^ | 1.5^ | 1.0 | 13.8^ | 0.56^ |
| 603293A | 625 | 827^ 2.0 | | | 1.0^ | 1.0^ | 2.5^ | 2.0 | 16.0^ | 2.10^ |
| 603293B | 623 | 822^ 1.5 | | | 1.0^ | 2.0^ | 2.0^ | 1.0 | 15.9^ | 2.69^ |
| 603298 | 623 | 820^ 1.5 | | 3.0^ | 1.0^ | 3.0^ | 2.5^ | 1.0 | 17.7^ | 2.82^ |
| 603302 | 628 | 901^ 2.0 | | | 1.0^ | 2.0^ | 2.5^ | 2.0 | 17.8^ | 2.60^ |
| 603303 | 629 | 903 2.8 | 73 | 3.0 | 1.0 | 2.5 | 2.8 | 1.5 | 13.6 | 2.26 |
| 603304 | 620 | 826 1.0 | | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.4^ | 2.40^ |
| 603305 | 625 | 819^ 1.5 | | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 12.4^ | 2.00^ |
| 603306 | 625 | 818 2.0 | | 3.0^ | 1.0^ | 2.0^ | 3.5^ | 1.0 | 17.2^ | 2.07^ |
| 603307 | 626 | 822^ 2.0 | | | 1.0^ | 1.0^ | 3.0^ | 1.0 | 13.5^ | 2.88^ |
| 603308A | 626 | 826 1.5 | | | 1.0^ | 1.0^ | 2.5^ | 1.0 | 18.8^ | 2.96^ |
| 603308B | 627 | 825^ 3.0 | | | 1.0^ | 1.0^ | 3.5^ | 1.0 | 14.8^ | 2.93^ |
| 603309 | 625 | 825^ 2.0 | | | 1.0^ | 3.0^ | 3.0^ | 1.0 | 16.8^ | - |
| 603310 | 621 | 823^ 1.0 | | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.2^ | 2.34^ |
| 603311 | 630 | 826^ 3.0 | | | 1.0^ | 1.0^ | 1.5^ | 1.0 | 12.2^ | 2.89^ |
| 603312 | 623 | 822 1.5 | | | 1.0^ | 2.0^ | 4.0^ | 2.0 | 16.4^ | 1.87^ |
| 603315 | 623 | 824 2.0 | | | 1.0^ | 3.0^ | 2.5^ | 1.0 | 15.3^ | 2.18^ |
| 603321 | 627 | 827^ 1.5 | | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 15.1^ | 2.42^ |
| 603323 | 625 | 824 1.0 | | | 1.0^ | 2.0^ | 3.0^ | 1.0 | 13.4^ | 2.53^ |
| 603324B | 623 | 822^ 2.0 | | | 1.0^ | 1.0^ | 2.5^ | 1.0 | 19.3^ | 3.07^ |
| 603325 | 627 | 827^ 2.0 | | 3.0^ | 1.0^ | 1.0^ | 4.0^ | 1.0 | 15.3^ | 2.11^ |
| 603327 | 701 | 821^ 2.0 | | | 1.0^ | 1.0^ | 3.0^ | 1.0 | 14.0^ | 2.55^ |
| 603329 | 627 | 821^ 1.0 | | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 12.3^ | 2.46^ |
| 603330 | 627 | 825^ 1.0 | | | 1.0^ | 2.0^ | 2.5^ | 1.0 | 14.7^ | 2.51^ |
| 603331 | 701 | 827^ 1.0 | | 1.0^ | 1.0^ | 1.0^ | 1.5^ | 2.0 | 11.3^ | 1.74^ |
| 603332 | 627 | 826^ 2.0 | | | 1.0^ | 1.0^ | 2.0^ | 2.0 | 17.0^ | 2.06^ |
| 603333 | 713 | 917 2.0 | | 1.0 | 1.0 | 1.0 | 3.0 | 1.5 | 18.8 | 2.90 |
| 603335B | 627 | 901 1.0 | 56 | 1.0 | 1.0 | 4.0* | 3.0 | 1.0 | 15.9 | 2.22^ |
| 603336 | 707 | 907 1.3 | 57 | 1.0 | 1.0 | 2.5 | 2.3 | 2.5 | 16.1 | 1.90 |
| 603337A | 701 | 825^ 1.0 | | | 1.0^ | 4.0^ | 1.5^ | | 8.0^ | 1.48^ |
| 603338 | 623 | 826^ 1.5 | ^ 78 | * 3.0^ | 1.0^ | 1.0^ | 2.0^ | | 13.6^ | 2.02^ |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compo | sition | | | |
|---------------------------|----------|---------------------------|---------------------------|-----------|---------|-------|----------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 503158 | IV | 48.2 ^w | 14.3 ^w | 13.2 | 3.9 | 19.1 | 56.2 | 7.6 |
| 603159 | IV | 45.3 | 16.6 | 10.3 | 3.7 | 22.5 | 55.9 | 7.7 |
| 503160 | IV | 46.5 | 15.8 | 10.8 | 3.9 | 22.4 | 55.0 | 7.9 |
| 503160 | IV | 50.2 ^w | 14.5 ^w | 13.8 | 3.9 | 19.0 | 55.7 | 7.7 |
| 503162 503165A | IV | 46.8 | 15.6 | 10.5 | 2.9 | 21.2 | 57.3 | 8.2 |
| 603165A | IV | 44.9 | 17.0 | 9.9 | 2.9 | 21.2 | 58.4 | 7.7 |
| | IV | 44.9 44.6 | 17.0 | 9.9 | 3.5 | 19.8 | 58.0 | 8.9 |
| 603166 | | 44.6 45.7 ^w | 13.4 18.2 ^w | | | | | |
| 603167 | III | | | 12.9 | 3.2 | 29.5 | 47.9 | 6.5 |
| 503168 | V | 48.5 ^w | 14.4 ^w | 12.6 | 3.5 | 20.9 | 54.5 | 8.5 |
| 503170 | IV | 49.6 ^w | 12.8 ^w | 14.7 | 4.4 | 20.6 | 52.7 | 7.7 |
| 503171 | IV | 47.9 ^w | 13.5 ^w | 13.1 | 3.3 | 18.6 | 56.4 | 8.6 |
| 503172 | IV | 49.8 ^w | 17.0 ^w | 13.0 | 3.6 | 20.9 | 55.3 | 7.2 |
| 03174A | IV | 45.7 ^w | 14.8 ^w | 11.7 | 3.4 | 21.8 | 55.0 | 8.1 |
| 603174B | IV | 47.8^{w} | 14.2^{w} | 13.3 | 3.1 | 18.4 | 56.0 | 9.2 |
| 603175 | IV | 48.2^{w} | 13.6^{w} | 11.8 | 3.9 | 24.1 | 53.0 | 7.2 |
| 603176A | IV | 51.2^{w} | $14.6^{\rm w}$ | 12.4 | 3.6 | 21.8 | 55.0 | 7.2 |
| 503290 | I | 38.7^ | 20.6^ | 12.4^ | 4.1^ | 23.7^ | 53.3^ | 6.5^ |
| 603293A | I | 41.0^ | 19.5^ | 12.4^ | 3.7^ | 33.6^ | 45.5^ | 4.7^ |
| 603293B | I | 41.5^ | 19.4^ | 13.7^ | 3.9^ | 21.6^ | 53.8^ | 7.0^ |
| 03298 | I | 39.8^ | 22.1^ | 11.5^ | 3.9^ | 28.8^ | 50.1^ | 5.8^ |
| 03302 | I | 42.0^ | 19.7^ | 11.2^ | 4.0^ | 28.9^ | 50.3^ | 5.6^ |
| 03303 | II | 41.0 | 18.5 | 13.1 | 4.1 | 20.8 | 53.7 | 8.3 |
| 03304 | I | 39.1^ | 21.3^ | 11.2^ | 4.5^ | 26.6^ | 51.7^ | 5.9^ |
| 603305 | I | 38.4^ | 20.8^ | 11.8^ | 3.5^ | 25.8^ | 52.6^ | 6.4^ |
| 603306 | 0 | 42.2^ | 18.9^ | 14.3^ | 3.6^ | 25.2^ | 51.2^ | 5.6^ |
| 603307 | I | 42.8^ | 20.0^ | 11.6^ | 3.7^ | 22.5^ | 55.3^ | 6.9^ |
| 603308A | I | 40.4^ | 19.6^ | 12.1^ | 4.0^ | 29.4^ | 49.2^ | 5.3^ |
| 603308B | Ĭ | 39.5^ | 19.3^ | 11.5^ | 4.6^ | 26.7 | 51.4^ | 5.8^ |
| i03308 Б i03309 | I | 42.7^ | 20.6^ | 12.2^ | 4.0 | 25.8^ | 51.6^ | 6.3^ |
| | | | | 12.5^ | 4.0^ | | | |
| 03310 | I | 39.7^ | 19.9^ | | | 25.1^ | 52.8^ | 5.6^ |
| 03311 | I | 37.7^ | 21.1^ | 12.8^ | 3.9^ | 24.9^ | 51.7^ | 6.6^ |
| 03312 | I | 40.4^ | 23.5^ | 12.3^ | 4.4^ | 30.6^ | 47.8^ | 4.9^ |
| 03315 | I | 40.0^ | 21.7^ | 12.1^ | 3.8^ | 34.4^ | 44.4^ | 5.3^ |
| 503321 | I | 43.4^ | 18.4^ | 12.3^ | 4.5^ | 28.4^ | 49.1^ | 5.7^ |
| 503323 | I | 40.0^ | 19.8^ | 11.9^ | 4.2^ | 30.7^ | 47.9^ | 5.3^ |
| 603324B | I | 40.5^ | 22.1^ | 11.6^ | 4.0^ | 29.6^ | 49.2^ | 5.5^ |
| 603325 | I | 39.6^ | 21.9^ | 11.1^ | 4.2^ | 40.6^ | 39.3^ | 4.9^ |
| 03327 | I | 39.2^ | 22.3^ | 12.4^ | 4.6^ | 37.3^ | 41.0^ | 4.7^ |
| 03329 | I | 40.0^ | 22.0^ | 11.5^ | 4.8^ | 28.9^ | 48.5^ | 6.3^ |
| 03330 | I | 42.0^ | 20.5^ | 11.0^ | 4.7^ | 28.9^ | 49.2^ | 6.2^ |
| 03331 | I | 44.8^ | 17.5^ | 12.9^ | 3.5^ | 24.4^ | 53.3^ | 6.0^ |
| 03332 | I | 40.3^ | 20.7^ | 12.9^ | 3.8^ | 27.7^ | 49.6^ | 6.1^ |
| 03333 | II | 41.3 | 18.7 | 12.0 | 3.8 | 23.9 | 52.9 | 7.4 |
| 603335B | II | 40.4 | 21.4 | 11.0 | 3.9 | 26.7 | 51.7 | 6.7 |
| 03336 | II | 46.9 ^w | 15.9 ^w | 13.7 | 3.8 | 21.1 | 53.9 | 7.6 |
| 03337A | I | 50.3 ^w ^ | 14.9 ^w ^ | 13.5^ | 4.1^ | 24.6^ | 50.6^ | 7.3^ |
| 603338 | I | 48.5 ^w ^ | 20.6 ^w ^ | 11.2^ | 3.3^ | 32.8^ | 47.9^ | 4.9^ |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country | Year introduced | Maturity |
|---------|-----------------------------|--------------|---------------|-------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | • |
| 603339B | (An gua dou) | Heilongjiang | China | China | 1998 | I |
| 603340 | Xiao jin huang No. 2 | Jilin | China | China | 1998 | II |
| 603341 | Da bai mei | Jilin | China | China | 1998 | I |
| 603342 | Guo yu B5 | Jilin | China | China | 1998 | I |
| 603344 | Ha No. 2 | Jilin | China | China | 1998 | I |
| 603345 | Gong jiao 5603-2 | Jilin | China | China | 1998 | II |
| 603347 | Si li huang | Jilin | China | China | 1998 | II |
| 603348A | Si li huang | Jilin | China | China | 1998 | I |
| 603348B | (Si li huang) | Jilin | China | China | 1998 | I |
| 603348C | (Si li huang) | Jilin | China | China | 1998 | II |
| 603349 | Da li huang | Jilin | China | China | 1998 | I |
| 603350 | Da li huang | Jilin | China | China | 1998 | Ī |
| 603351 | Da li huang | Jilin | China | China | 1998 | Ī |
| 603352 | Xiao jin huang | Jilin | China | China | 1998 | Ī |
| 603354 | Xiao bai mei | Jilin | China | China | 1998 | Ī |
| 603355 | Suo yi ling | Jilin | China | China | 1998 | Ī |
| 603356 | Yi wo feng | Jilin | China | China | 1998 | Ī |
| 603357 | Du Lu Dou | Jilin | China | China | 1998 | Ī |
| 603358A | Hei tie jia | Jilin | China | China | 1998 | II |
| 603358B | (Hei tie jia) | Jilin | China | China | 1998 | II |
| 603359 | Xiao hei qi | Jilin | China | China | 1998 | I |
| 603360 | Bai lu dou | Jilin | China | China | 1998 | Ī |
| 603361 | Da bai mei | Jilin | China | China | 1998 | Ī |
| 603362 | Beng pi | Jilin | China | China | 1998 | I |
| 603363A | Dong feng jin yuan | Jilin | China | China | 1998 | II |
| 603363B | (Dong feng jin yuan) | Jilin | China | China | 1998 | II |
| 603364 | Da jin huang | Jilin | China | China | 1998 | II |
| 603365 | Bai hua cuo | Jilin | China | China | 1998 | II |
| 603366 | Huang qi dou | Jilin | China | China | 1998 | II |
| 603367 | Hong mao | Jilin | China | China | 1998 | I |
| 603368 | He mao | Jilin | China | China | 1998 | II |
| 603369 | Hou ding kui | Jilin | China | China | 1998 | II |
| 603370 | Shuang xiao jin huang | Jilin | China | China | 1998 | II |
| 603371 | Tie jia qing | Jilin | China | China | 1998 | I |
| 603371 | Hei pi qing rang | Jilin | China | China | 1998 | II |
| 603373 | Cha se dou | Jilin | China | China | 1998 | I |
| 603374 | Tu yan dou | Jilin | China | China | 1998 | II |
| 603375 | Qian guo jian ye he jia dou | Jilin | China | China | 1998 | I |
| 603376 | Shu lan da ye huang jin ta | Jilin | China | China | 1998 | I |
| 603377 | Jiu tai wu xian bai hua | Jilin | China | China | 1998 | I |
| 603378A | Yong ji bei jing dou | Jilin | China | China | 1998 | I |
| 603378B | (Yong ji bei jing dou) | Jilin | China | China | 1998 | I |
| 603380 | Hua dian huang bao zhu | Jilin | China | China | 1998 | I |
| 603381A | Hui nan da lan qi | Jilin | China | China | 1998 | II |
| 603381B | (Hui nan da lan qi) | Jilin | China | China | 1998 | II |
| 603381C | (Hui nan da lan qi) | Jilin | China | China | 1998 | II |
| 603382A | - · | Jilin | China | China | 1998 | I |
| 003302A | That folig folig di flualig | J11111 | Cillia | Ciiiia | 1770 | 1 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|------|---------|---|---|----------|--------------|------------------|-----|----------------|--------------|---------------|
| | | N.T. | *** | | | | | | | D1 | G 1 | |
| 603339B | I | N | W | T | Е | N | Br | I | Br | Bl D.c | Sad | 3N |
| 603340 | II | N | W | G | Е | N | Br | S | Y | Bf | | 4N |
| 603341 | I | D | P | G | Е | N | Br | I | Y | Y | X 71 ·1 | 3N |
| 603342 | I | N | W | G | Е | N | Br | I | Y | Y | Vhil | 2N |
| 603344 | I | N | W | G | E | N | Br | I | Y | Y | | 2N |
| 603345 | II | S | W | G | E | N | Br | I | Y | Bf | | 3N |
| 603347 | II | N | W | G | E | N | Br | I | Y | Lbf | | 2N |
| 603348A | I | S | W | G | E | N | Bl | D | Y | Lbf | | 2N |
| 603348B | I | N | W | G | E | Ssp | Bl | D | Y | Lbf | | 1N |
| 603348C | II | N | W | G | E | Ssp | Bl | S | Y | Lbf | Na | 2N |
| 603349 | I | N | P | G | E | N | Br | I | Y | G | | 2N |
| 603350 | I | S | P | G | E | Ssp | Br | I | Y | Y | | 1N |
| 603351 | I | N | W | G | E | N | Dbr | I | Y | Lbf | | 3N |
| 603352 | I | N | W | G | E | N | Dbr | I | Y | Y | Vhil | 2N |
| 603354 | I | S | P | G | E | N | Dbr | I | Y | Y | | 3N |
| 603355 | I | D | W | G | E | N | Br | D | Y | Bf | | 3N |
| 603356 | I | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 603357 | I | D | P | G | E | Ssp | Tn | I | Y | Y | | 2N |
| 603358A | II | N | W | G | E | N | Br | I | Y | Y | | 3N |
| 603358B | II | N | W | G | E | Ssp | Br | I | Y | Y | Na | 3N |
| 603359 | I | S | P | G | E | N | Dbr | I | Y | Ib | Vhil | 2N |
| 603360 | I | N | P | G | Е | N | Br | D | Y | Y | | 2N |
| 603361 | I | N | P | G | E | N | Br | D | Y | Y | | 2N |
| 603362 | I | S | W | G | Е | N | Dbr | I | Y | Lbf | | 2N |
| 603363A | II | N | W | G | E | N | Tn | I | Y | Bf | | 3N |
| 603363B | II | D | W | G | E | N | Dbr | I | Y | Bf | | 3N |
| 603364 | II | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 603365 | II | N | W | G | E | N | Br | Ī | Y | Y | | 2N |
| 603366 | II | D | W | G | E | N | Br | S | Y | Y | | 3N |
| 603367 | I | N | W | T | E | Ssp | Bl | I | Y | Tn | | 3N |
| 603368 | II | N | P | T | E | N | Br | Ī | Y | Tn | | 3N |
| 603369 | II | D | W | G | E | N | Br | Ī | Y | Bf | | 3N |
| 603370 | II | N | W | G | E | N | Dbr | I | Y | Lbf | | 3N |
| 603371 | I | N | P | T | E | N | Bl | I | Gn | Tn | Gnc | 3N |
| 603372 | II | N | W | T | E | N | Br | I | Bl | Bl | Gnc, Snet | 3N |
| 603373 | I | N | W | T | E | Ssp | Br | I | Br | Rbr | One, Shet | 3N |
| 603374 | II | N | P | T | E | N N | Br | I | Rbr | Rbr | Sdef, Snet | 3N |
| 603375 | I | N | W | G | E | Ssp | Bl | I | Y | Lbf | Na | 2N |
| 603376 | I | D | vv P | G | E | _ | | | Y | Y | INa | 2N |
| | | | | | | Ssp | Br | I | | | | |
| 603377 | I | N | W | G | E | N Sam | Br | I | Y | Y | No | 2N |
| 603378A | I | D | W | G | Е | Ssp | Br | I | Y | Y | Na | 1N |
| 603378B | I | D | W | G | Е | Ssp | Br | I | Y | Y | | 2N |
| 603380 | I | S | W | G | Е | N | Br | I | Y | Y | N G16 | 2N |
| 603381A | II | N | P | G | E | Ssp | Br | I | Y | G | Na, Sdef | 3N |
| 603381B | II | N | P | G | Е | Ssp | Br | I | Y | G | Def | 3N |
| 603381C | II | N | W | G | Е | Ssp | Br | I | Y | Y | Na | 2N |
| 603382A | I | S | W | G | E | N | Br | I | Y | Y | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | Stem | Shatter | ing | Seed | | | |
|---------|-----------|----------------|----------|---------|---------|---------|---------|----------|----------------|------------------------|
| | date | date Lodging | g Height | term. | early | late | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 603339B | 627 | 823^ 1.0^ | 63* | 3.0^ | 1.0^ | 3.0^ | 1.5^ | | 14.9^ | 2.15^ |
| 603340 | 629* | 901 3.3 | 85 | 4.0 | 1.0 | 4.5 | 3.5 | 1.5 | 11.3 | 2.21 |
| 603341 | 625 | 824 1.5^ | 45* | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 14.6^ | 2.60^ |
| 603342 | 625 | 824 2.0^ | 64* | 3.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 15.3^ | 2.39^ |
| 603344 | 625 | 824 2.0^ | 60* | 3.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 16.1^ | 2.30^ |
| 603345 | 630 | 913 2.5^ | 51* | 2.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 11.5^ | - |
| 603347 | 701 | 909 2.3 | 83 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 14.9 | 2.27 |
| 603348A | 630 | 827^ 1.5^ | 53* | 3.0^ | 1.0^ | 2.0^ | 1.5^ | 2.0 | 13.2^ | 2.83^ |
| 603348B | 702 | 831^ 2.0^ | 59* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 3.0 | 12.5^ | 2.02^ |
| 603348C | 629* | 903 2.5 | 84 | 3.0 | 1.0 | 2.0^ | 2.8 | 2.5 | 12.3 | 1.72 |
| 603349 | 625 | 905 3.0^ | 86* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 2.0 | 15.9^ | - |
| 603350 | 624 | 829^ 2.0^ | 70* | 3.0^ | 1.0^ | 2.0^ | 1.5^ | 1.0 | 15.3^ | 2.65^ |
| 603351 | 628 | 827^ 2.0^ | 68* | 3.0^ | 1.0^ | 2.0^ | 3.5^ | 1.0 | 15.8^ | 2.57^ |
| 603352 | 625 | 826^ 2.0^ | 71* | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 14.9^ | 2.40^ |
| | | 824^ 2.5^ | | | 1.0^ | | 3.0^ | 1.0 | 12.7^ | 2.40^ |
| 603354 | 627 | | 61 | 2.0^ | | 1.0^ | | | | |
| 603355 | 627 | 817^ 1.0^ | 38 | 1.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 14.7^ | 2.27^ |
| 603356 | 626 | 819^ 1.0^ | 40 | 1.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 13.3^ | 1.91^ |
| 603357 | 626 | 823^ 1.5^ | 38* | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 10.1^ | 1.11^ |
| 603358A | 703* | 918 2.8 | 106 | 4.0 | 1.0 | 1.0 | 3.3 | 2.0 | 15.3 | 2.43 |
| 603358B | 629 | 907 3.0 | 76* | 3.0 | 1.0 | 2.0* | 4.0 | 2.0* | 17.8 | 2.38 |
| 603359 | 629 | 830^ 1.5^ | 47* | 3.0^ | 1.0^ | 2.0^ | 1.5^ | 1.0 | 14.0^ | 2.33^ |
| 603360 | 623 | 822 2.0^ | 58* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 14.9^ | 2.00^ |
| 603361 | 704 | 831^ 1.5^ | 73 | 3.0^ | 1.0^ | 3.0^ | 2.0^ | 1.0 | 18.7^ | 1.81^ |
| 603362 | 701 | 903^ 2.0^ | 50* | 2.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 12.7^ | 2.46^ |
| 603363A | 705* | 903 2.8 | 89 | 3.0 | 1.0 | 1.0 | 3.0 | 1.0 | 12.0 | 2.49 |
| 603363B | 707* | 903 2.0 | 65 | 1.0 | 1.0 | 1.5 | 2.8 | 1.0 | 12.6 | 2.53 |
| 603364 | 706* | 909 2.8 | 83 | 3.0 | 1.0 | 2.5 | 3.3 | 1.0 | 17.3 | 2.48 |
| 603365 | 629 | 905 2.5 | 82 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 21.3 | 2.41 |
| 603366 | 629* | 911 2.3* | 57 | 1.0 | 1.0 | 1.0 | 2.5 | 1.5 | 14.5 | 2.58* |
| 603367 | 629 | 902^ 2.5^ | 96 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 3.0 | 12.5^ | 1.98^ |
| 603368 | 704 | 908 2.5 | 84 | 3.5 | 1.0 | 2.5 | 3.0 | 3.0 | 12.4 | 1.86* |
| 603369 | 629* | 904 1.8 | 59 | 1.5 | 1.0 | 2.0* | 2.5 | 1.0 | 14.3 | 2.32 |
| 603370 | 629* | 907 3.0 | 81 | 3.0 | 1.0 | 1.0 | 3.3 | 1.0 | 13.8 | 2.20 |
| 603371 | 629 | 827^ 1.5^ | 65 | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 2.0 | 11.4^ | 1.45^ |
| 603372 | 706* | 909 2.3 | 67 | 3.0 | 3.0 | 5.0 | 2.5 | | 14.5 | 2.10 |
| 603373 | 625 | 824^ 2.5^ | 82* | 3.0^ | 1.0^ | 1.0^ | 1.5^ | | 12.9^ | 2.43^ |
| 603374 | 707* | 907 4.0 | 97 | 4.0 | 1.0 | 2.0 | 2.5 | | 11.3 | 2.57 |
| 603375 | 622 | 826^ 1.5^ | 51 | 3.0^ | 1.0^ | 1.0^ | 1.0^ | 1.0 | 13.5^ | 1.96^ |
| 603376 | 701 | 825^ 1.0^ | 29 | 1.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 14.0^ | 1.41^ |
| 603377 | 629 | 829^ 3.0^ | 84* | 3.0^ | 1.0^ | 2.0^ | 3.0^ | 1.0 | 13.3^ | 2.49^ |
| 603378A | 701 | 830^ 1.0^ | 42* | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 2.0 | 14.7^ | 1.53^ |
| 603378B | 629 | 831^ 1.0^ | 40 | 1.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 16.1^ | 1.78^ |
| 603380 | 625 | 831^ 2.0^ | 59* | 2.0^ | 1.0^ | 2.0^ | 1.5^ | 1.0 | 13.5^ | 2.74^ |
| 603381A | 629* | 911 2.0 | 72 | 3.0 | 1.0 | 2.0* | 2.8 | 2.0 | 15.7 | 2.28 |
| 603381B | 630* | 915 2.0 | 77 | 3.0 | 1.0 | 1.5 | 3.3 | 2.5 | 16.0 | 2.70 |
| | | | | | | | | | | |
| 603381C | 628 | 910 1.8 | 73 | 3.0 | 1.0 | 2.0 | 2.8 | 1.5 | 15.3 | 2.50 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed composition | | Oil compo | sition | | | | |
|------------------|----------|-----------------------------|-----------------------------|--------------|-------------|-------------------|---------------|-----------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603339B | I | 48.0 ^w ^ | 19.1 ^w ∧ | 12.8^ | 4.4^ | 28.1^ | 48.8^ | 5.9^ | |
| 603340 | II | 40.5 | 21.4 | 10.2 | 3.7 | 29.8 | 49.6 | 6.6 | |
| 503341 | I | 40.8^ | 21.1^ | 12.0^ | 3.5^ | 28.0^ | 50.1^ | 6.3^ | |
| 503342 | I | 39.7^ | 21.2^ | 10.9^ | 4.1^ | 33.6^ | 46.3^ | 5.2^ | |
| 503344 | Ī | 39.6^ | 21.3^ | 11.8^ | 3.6^ | 32.5^ | 46.9^ | 5.2^ | |
| 503345 | II | 40.1^ | 20.4^ | 10.9^ | 4.3^ | 26.4^ | 52.3^ | 6.1^ | |
| 503347 | II | 43.3 | 17.1 | 10.2 | 4.0 | 32.4 | 47.3 | 6.2 | |
| 503348A | I | 40.3^ | 19.9^ | 13.8^ | 3.7^ | 24.7^ | 51.4^ | 6.4^ | |
| 603348B | I | 40.1 | 18.2^ | 12.6^ | 3.6^ | 23.5^ | 53.3^ | 7.1^ | |
| 603348C | II | 40.1 | 17.3 | 9.5 | 4.2 | 28.8 | 51.3 | 6.1 | |
| 503346C | | 40.5 38.6^ | 17.3 19.7^ | 9.5 11.9^ | 4.2 3.9^ | 25.7 [^] | 51.5 51.9^ | 6.5^ | |
| | I | | | | | | | | |
| 03350 | I | 39.8^ | 18.6^ | 12.7^ | 4.0^ | 25.6^ | 51.5^ | 6.2^ | |
| 03351 | I | 38.7^ | 23.4^ | 11.1^ | 4.8^ | 35.6^ | 43.4^ | 5.1^ | |
| 503352 | I | 42.3^ | 20.1^ | 12.5^ | 4.8^ | 30.2^ | 46.9^ | 5.6^ | |
| 503354 | I | 39.6^ | 21.5^ | 11.2^ | 4.7^ | 34.7^ | 44.4^ | 4.9^ | |
| 603355 | I | 40.4^ | 21.7^ | 12.0^ | 4.5^ | 27.4^ | 50.5^ | 5.6^ | |
| 603356 | I | 37.6^ | 22.0^ | 11.5^ | 4.8^ | 26.6^ | 50.5^ | 6.5^ | |
| 503357 | I | 39.8^ | 20.2^ | 12.4^ | 3.1^ | 27.5^ | 51.3^ | 5.8^ | |
| 603358A | II | 41.0 | 20.4 | 9.8 | 4.9 | 25.3 | 53.3 | 6.8 | |
| 603358B | II | 43.5 | 18.7 | 10.5 | 4.1 | 26.9 | 50.9 | 7.6 | |
| 03359 | I | 43.1^ | 18.7^ | 12.1^ | 3.9^ | 30.4^ | 47.5^ | 6.0^ | |
| 603360 | I | 41.7^ | 20.5^ | 11.2^ | 3.5^ | 35.5^ | 44.7^ | 5.1^ | |
| 603361 | I | 41.1^ | 20.4^ | 11.6^ | 5.1^ | 33.8^ | 43.5^ | 6.0^ | |
| 503362 | I | 39.3^ | 19.8^ | 13.4^ | 4.0^ | 23.3^ | 53.2^ | 6.2^ | |
| 603363A | II | 39.3 | 21.8 | 10.2 | 5.0 | 28.6 | 50.3 | 5.8 | |
| 03363B | II | 40.5 | 19.8 | 9.9 | 4.6 | 27.2 | 51.6 | 6.8 | |
| 03364 | II | 42.2 | 20.0 | 9.6 | 4.6 | 33.1 | 46.8 | 5.8 | |
| 603365 | II | 43.6 | 18.7 | 10.3 | 4.0 | 28.6 | 51.2 | 5.9 | |
| 603366 | II | 39.5 | 19.5 | 9.6 | 3.3 | 28.1 | 52.4 | 6.6 | |
| 03367 | I | 40.0^ | 18.2^ | 13.5^ | 4.3^ | 24.0^ | 51.5^ | 6.8^ | |
| 03368 | II | 45.8 | 16.5 | 11.3 | 3.9 | 25.0 | 52.8 | 7.1 | |
| 603369 | II | 41.5 | 19.5 | 10.1 | 4.4 | 28.7 | 50.8 | 6.0 | |
| i03309 i03370 | II | | | | | | | 6.8 | |
| | | 40.2 51.3 ^w ^ | 20.2 17.8 ^w ^ | 9.2 | 4.3 | 27.1 | 52.7 | | |
| 03371 | I | | | 14.3^ | 3.9^ | 25.2^ | 50.8^ | 5.8^ | |
| 503372 | II | 44.6 ^w | 18.1 ^w | 13.4 | 3.3 | 29.0 | 48.5 | 5.8 | |
| 503373 | I | 49.1 ^w ^ | 17.7 ^w ^ | 10.8^ | 3.1^ | 31.5^ | 49.1^ | 5.5^ | |
| 03374 | II | 42.9 ^w | 17.1 ^w | 11.2 | 3.4 | 27.7 | 51.9 | 5.8 | |
| 03375 | I | 40.7^ | 20.2^ | 12.5^ | 4.0^ | 26.4^ | 51.1^ | 6.1^ | |
| 03376 | I | 43.9^ | 17.8^ | 12.4^ | 3.2^ | 29.2^ | 49.3^ | 5.8^ | |
| 503377 | I | 42.6^ | 18.8^ | 12.2^ | 3.9^ | 25.7^ | 52.1^ | 6.0^ | |
| 03378A | I | 40.2^ | 20.2^ | 11.7^ | 4.6^ | 25.4^ | 52.1^ | 6.3^ | |
| 03378B | I | 40.2^ | 19.8^ | 12.1^ | 3.5^ | 24.2^ | 54.1^ | 6.0^ | |
| 03380 | I | 37.4^ | 21.8^ | 12.5^ | 3.5^ | 25.4^ | 52.0^ | 6.7^ | |
| 603381A | II | 40.7 | 19.8 | 10.5 | 4.2 | 23.0 | 55.5 | 6.8 | |
| 03381B | II | 41.0 | 19.3 | 10.8 | 4.3 | 21.4 | 56.0 | 7.5 | |
| 603381C | II | 39.8 | 19.6 | 10.8 | 4.3 | 23.5 | 54.9 | 6.4 | |
| 503382A | I | 43.5^ | 18.7^ | 11.7^ | 3.4^ | 33.5^ | 46.5^ | 4.9^ | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|---------|--------------------------|-------------|---------|-------------|-------------|-------|
| DI M. | Accession | Region | of | of | introduced | |
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 603382B | (Hai long feng di huang) | Jilin | China | China | 1998 | II |
| 603383 | Ke xi 209 | Jilin | China | China | 1998 | I |
| 603384 | Ping ding xiang | Jilin | China | China | 1998 | III |
| 603385 | Xiao jin huang | Liaoning | China | China | 1998 | II |
| 603386 | Ping ding xiang | Liaoning | China | China | 1998 | II |
| 603387 | Da jin huang | Liaoning | China | China | 1998 | II |
| 603388 | Niu mao huang | Liaoning | China | China | 1998 | I |
| 603389 | Huang ke | Liaoning | China | China | 1998 | II |
| 603390A | Man cang jin | Liaoning | China | China | 1998 | II |
| 603391 | Da jin huang | Liaoning | China | China | 1998 | II |
| 603392 | Man cang jin | Liaoning | China | China | 1998 | III |
| 603393 | Da li huang | Liaoning | China | China | 1998 | III |
| 603394 | Bai pi zi | Liaoning | China | China | 1998 | III |
| 603395 | Da dou No. 2 | Liaoning | China | China | 1998 | III |
| 603396 | Suo jian dou | Liaoning | China | China | 1998 | III |
| 603397 | Hei qi huang da dou | Liaoning | China | China | 1998 | IV |
| 603398A | Huang qi | Liaoning | China | China | 1998 | II |
| 603398B | (Huang qi) | Liaoning | China | China | 1998 | III |
| 603399 | Xiao bai qi | Liaoning | China | China | 1998 | II |
| 603400 | Tian e dan | Liaoning | China | China | 1998 | I |
| 603401 | Yi wo hou | Liaoning | China | China | 1998 | IV |
| 603402 | Xiao jin huang | Liaoning | China | China | 1998 | III |
| 603403 | Huang mao dou | Liaoning | China | China | 1998 | II |
| 603404 | Xiao bai mei | Liaoning | China | China | 1998 | IV |
| 603405A | Qing pi | Liaoning | China | China | 1998 | II |
| 603405B | (Qing pi) | Liaoning | China | China | 1998 | IV |
| 603406 | Qing pi dou | Liaoning | China | China | 1998 | III |
| 603407 | Niu mao qing | Liaoning | China | China | 1998 | IV |
| 603408 | Qing dou | Liaoning | China | China | 1998 | I |
| 603409 | Tie jia qing | Liaoning | China | China | 1998 | IV |
| 603410 | Lu cha dou | Liaoning | China | China | 1998 | IV |
| 603411 | Qing mo shi dou | Liaoning | China | China | 1998 | IV |
| 603412A | | Liaoning | China | China | 1998 | II |
| 603412B | (Bai mo shi dou) | Liaoning | China | China | 1998 | II |
| 603413 | Yu shi dou | Liaoning | China | China | 1998 | IV |
| 603414 | Tie jia jin huang dou | Liaoning | China | China | 1998 | II |
| 603415 | Li wai qing | Liaoning | China | China | 1998 | III |
| 603416 | Hei qi da dou | Liaoning | China | China | 1998 | IV |
| 603417 | Dan dong jin huang dou | Liaoning | China | China | 1998 | IV |
| 603418A | Xiao si li huang | Liaoning | China | China | 1998 | III |
| 603418B | (Xiao si li huang) | Liaoning | China | China | 1998 | III |
| 603418C | (Xiao si li huang) | Liaoning | China | China | 1998 | III |
| 603418D | (Xiao si li huang) | Liaoning | China | China | 1998 | IV |
| 603419A | Da li qing | Liaoning | China | China | 1998 | II |
| 603419B | (Da li qing) | Liaoning | China | China | 1998 | IV |
| 603419C | (Da li qing) | Liaoning | China | China | 1998 | IV |
| 603420 | Hei dou | Nei Monggol | China | China | 1998 | II |
| | | | | | | |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Enter | Maturity | | | | | Donaitre | Pod | Seedco | | Hilum | | Seed |
|-------------------|----------|--------|-------|-------|--------|----------|-------|--------|-------|-------|--------------|----------|
| Entry | group | term. | color | Color | FOIII | Density | color | Luster | Color | color | Other traits | shape |
| 603382B | II | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603383 | I | N | P | G | E | N | Br | D | Y | Y | | 3N |
| 603384 | III | D | W | G | E | N | Br | I | Y | Bf | | 4N |
| 603385 | II | D | P | G | E | N | Br | I | Y | Ib | Na, Vhil | 4N |
| 603386 | II | N | W | G | E | N | Br | I | Y | Bf | Vhil | 3N |
| 603387 | II | D | P | T | E | Ssp | Br | I | Y | Tn | | 2N |
| 603388 | I | N | W | T | Е | N | Br | I | Y | Tn | | 2N |
| 603389 | II | N | W | G | Е | N | Br | I | Y | Y | | 2N |
| 603390A | II | N | W | G | Е | N | Br | I | Y | Bf | | 3N |
| 603391 | II | N | W | G | E | N | Br | I | Y | Y | | 3N |
| 603392 | III | N | P | G | Sa | N | Br | I | Y | Ib | | 2N |
| 603393 | III | N | W | G | E | N | Br | D | Y | Bf | Vhil | 3N |
| 603394 | III | D | W | G | E | N | Dbr | D | Y | Bf | | 3N |
| 603395 | III | N | W | T | E | N | Br | I | Ŷ | Br | | 3N |
| 603396 | III | N | W | T | Ē | N | Br | Ī | Y | Br | | 3N |
| 603397 | IV | D | P | T | Sa | Ssp | Br | D | Ŷ | Bl | | 3N |
| 603398A | II | N | W | G | E | N | Br | I | Ŷ | Bf | | 3N |
| 603398B | III | N | W | G | E | N | Br | D | Y | Y | Vhil | 2N |
| 603399 | II | N | W | Lt | E | N | Br | I | Y | Tn | V 1111 | 3N |
| 603400 | I | N | W | G | E | N | Br | I | Y | Bf | | 2N |
| 603401 | IV | N | W | G | E | N | Br | I | Lgn | Bf | | 3N |
| 603402 | III | D | P | G | E | Ssp | Br | S | Y | Tn | | 2N |
| 603403 | II | D | P | G | E | N N | Br | D | Y | Dib | Vhil | 3N |
| 603404 | IV | D | P | G | E | Ssp | Br | I | Y | Y | V 1111 | 2N |
| 603404 603405A | II | D | W | G | E | N N | Br | I | Gn | Lbf | | 3N |
| 603405B | IV | D | W | G | E | N | Br | I | Gn | Bf | | 3N |
| 603403B | III | | W | G | E | | | I | Gn | Bf | | 2N |
| | IV | D N | W | T | E E | Ssp | Br | I | | | Sdef | 2N 3N |
| 603407 | | | | T | | N N | Br | | Gn | Br | | |
| 603408 | I | N | W | | E | N | Br | I | Gn | Brbl | Gnc, Vhil | 3N |
| 603409 | IV | D | W | G | Е | N | Br | I | Lgn | Lgn | C | 3N |
| 603410 | IV | D | W | T | E | Ssp | Br | I | Gn | Bl | Gnc | 3N |
| 603411 | IV | N | P | T | Е | N | B1 | I | Gn | Br | | 5N |
| 603412A | II | N | W | Lt | Е | N | Tn | I | Y | Br | | 4F |
| 603412B | II | N | P | Lt | E | Ssp | B1 | I | Gn | Br | D C C: | 5F |
| 603413 | IV | N | P | T | Sa | Ssp | Br | I | Br | Br | Def, St | 3N |
| 603414 | II | N | W | G | E | N | Br | I | Y | Bf | ~ | 3N |
| 603415 | III | N | W | Lt | E | N | Br | I | Gn | Brbl | Gnc, Vhil | 3N |
| 603416 | IV | D | W | T | Sa | Ssp | Br | D | Y | Bl | | 2N |
| 603417 | IV | D | W | G | E | Ssp | Br | I | Y | Y | | 2N |
| 603418A | III | D | P | G | E | N | Br | D | Y | Y | Na | 3N |
| 603418B | III | D | W | G | E | N | Br | D | Y | Y | Na | 3N |
| 603418C | III | N | P | G | E | N | Br | D | Y | Y | Na | 3N |
| 603418D | IV | N | W | G | E | N | Br | D | Y | Y | Na | 3N |
| 603419A | II | N | P | Lt | E | Ssp | Br | D | Gn | Gn | Gnc | 3N |
| 603419B | IV | N | P | T | E | Ssp | Br | D | Gn | Gn | Gnc | 1R |
| 603419C | IV | N | W | T | E | Ssp | Br | D | Gn | Gn | Gnc | 1R |
| 603420 | II | N | P | T | E | N | Bl | Lb | Bl | Bl | | 5F |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | , | | Stem | Shatter | ing | Seed | | | |
|---------|-----------|------------|---------|-----------|---------|---------|-------------|---------|----------|----------------|------------------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 603382B | 707* | 907 | 1.8 | 62 | 1.0 | 1.0 | 1.5 | 2.3 | 1.5 | 13.0 | 2.18 |
| 603382B | 625 | 820 | 2.5^ | 63* | 3.0^ | 1.0^ | 1.0^ | 3.5^ | 1.0 | 12.4^ | 1.91^ |
| 603384 | 718 | 917 | 2.8 | 74* | 1.0 | 1.0 | 2.5 | 2.8 | 2.5 | 14.5 | 2.14 |
| 603385 | 705* | 907 | 2.5 | 72 | 1.0 | 1.0 | 2.5 3.5* | 4.0 | 1.0 | 15.0 | 2.14 |
| 603386 | 629* | 907 | 3.0 | 70 | 3.0 | 1.0 | 1.0 | 3.3 | 1.0 | 13.0 | 2.32 |
| 603387 | 715 | 909 | 1.5 | 54 | 1.0 | 1.0 | 1.0 | 2.8 | 3.0 | 15.8 | 1.07 |
| 603388 | | | 2.0^ | 54 68* | | | | | | | 2.08^ |
| | 624 | 826 | | | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 14.5^ | |
| 603389 | 704 | 911 | 2.5 | 84 | 3.0 | 1.0 | 1.0 | 3.3 | 2.0 | 13.3 | 2.00 |
| 603390A | 703 | 911 | 2.5 | 89* | 3.0 | 1.0 | 2.0 | 3.3 | 1.0 | 16.1 | 2.19 |
| 603391 | 712 | 917 | 3.0 | 73 | 3.0 | 1.0 | 1.0 | 3.5 | 2.5 | 14.4 | 2.17 |
| 603392 | 720 | 926 | 3.8 | 121 | 3.0 | 1.0 | 2.5 | 3.3 | 2.0 | 17.2 | 2.40 |
| 603393 | 719 | 927 | 3.5 | 117 | 3.0 | 1.0 | 3.0 | 2.8 | 1.0 | 15.0 | 2.35 |
| 603394 | 720 | 930 | 2.3 | 82 | 1.0 | 1.0 | 1.5 | 2.8 | 1.0 | 15.0 | 2.59 |
| 603395 | 719 | 925 | 3.0 | 106 | 3.0 | 1.0 | 1.5 | 3.0 | 3.0 | 13.5 | 2.50* |
| 603396 | 715 | 925 | 3.5 | 91 | 3.0 | 1.0 | 1.0 | 3.0 | 3.0 | 14.2 | 2.08* |
| 603397 | 723 | 1006 | 1.3 | 72 | 1.0 | 1.0 | 1.0 | 3.0 | 2.0 | 18.6 | 1.85 |
| 603398A | 703 | 915 | 3.8 | 91* | 4.0 | 1.0 | 1.5 | 2.8 | 2.5 | 13.0 | 2.08 |
| 603398B | 717 | 925 | 2.5 | 119 | 3.0 | 1.0 | 1.5 | 3.0 | 4.0 | 18.0 | 2.31* |
| 603399 | 703 | 917 | 4.0 | 86 | 4.0 | 1.0 | 1.5 | 3.3 | 2.5 | 14.8 | 2.46 |
| 603400 | 625 | 904^ | 3.0^ | 95* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.3^ | 2.60^ |
| 603401 | 724 | 1007 | 3.0 | 117* | 3.0 | 2.0* | 3.5 | 2.8 | 2.0 | 18.4 | 1.78 |
| 603402 | 715 | 919 | 1.8 | 61 | 1.0 | 1.0 | 1.0 | 3.0 | 4.0 | 13.6 | 1.64 |
| 603403 | 629* | 917 | 2.0 | 70 | 1.0 | 1.0 | 1.0 | 3.0 | 1.5 | 12.3 | 2.22 |
| 603404 | 731 | 1012 | 2.0 | 83* | 1.0 | 1.0 | 1.0 | 2.5 | 4.0 | 16.9 | 2.12^ |
| 603405A | 713 | 909 | 2.5 | 53 | 1.0 | 1.0 | 1.5 | 2.0 | 1.0 | 11.4 | 1.99 |
| 603405B | 722 | 929 | 3.3 | 95 | 1.0 | 1.0 | 1.0 | 2.8 | 2.0 | 13.0 | 2.31 |
| 603406 | 717 | 1001 | 1.8 | 80 | 1.0 | 1.0 | 1.0 | 2.8 | 2.0 | 19.3 | 1.86 |
| 603407 | 721 | 1007 | 3.5 | 126 | 3.5 | 1.0 | 1.0 | 3.3 | 3.0 | 17.5 | 2.33 |
| 603408 | 702 | 828^ | 2.5^ | 60 | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 11.2^ | 1.99^ |
| 603409 | 719 | 1007 | 2.3 | 81 | 1.0 | 1.0 | 2.0 | 3.0 | 3.0 | 18.6 | 1.82 |
| 603410 | 725 | 1019 | 2.8 | 72 | 1.0 | 1.0 | 1.0 | 3.0 | 3.0 | 20.2 | 1.51 |
| 603411 | 729 | 1001 | 3.5 | 118* | 3.0 | 1.0 | 1.0 | 2.0 | 3.5 | 10.0 | 2.22* |
| 603412A | 714 | 913 | 2.8 | 117* | 4.0 | 1.5 | 3.5 | 2.5 | 3.0 | 8.6 | 2.33 |
| 603412B | 720 | 915 | 3.5 | 118* | | 1.5 | 3.0* | | 3.5 | 8.8 | 2.28 |
| 603412B | 721 | 1005 | 2.5 | 82 | 3.0 | 1.0 | 2.5 | 3.5 | | 26.2 | 1.44 |
| 603414 | 707* | 909 | 2.5 | 103* | 3.0 | 1.0 | 1.5 | 3.3 | 1.0 | 12.8 | 2.46 |
| 603414 | 707* | 909 | 2.5 | 89 | 4.0 | 1.0 | 3.0* | 3.0 | 3.0 | 13.8 | 1.83 |
| | | | | | | | | | | | |
| 603416 | 723 | 1009 | 1.8 | 64 | 1.0 | 1.0 | 1.5 | 2.5 | 2.0 | 18.4 | 2.21 |
| 603417 | 719 | 1015 | 1.8 | 78 75 | 1.0 | 1.0 | 1.5 | 2.3 | 2.5 | 18.1 | 2.29 |
| 603418A | 715 | 929 | 2.0 | 75 | 1.0 | 1.0 | 1.0 | 2.8 | 1.0 | 20.4 | 3.02* |
| 603418B | 717 | 928 | 1.8 | 74 | 1.0 | 1.0 | 1.0 | 2.5 | 1.5 | 20.7 | 3.21 |
| 603418C | 720 | 930 | 3.0 | 115 | 3.0 | 1.0 | 1.5 | 3.3 | 1.5 | 23.0 | 2.67 |
| 603418D | 719 | 1007 | 3.0 | 111 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 22.1 | 2.67* |
| 603419A | 705* | 914 | 3.8 | 105* | 3.0 | 1.0 | 1.0 | 3.3 | 1.5 | 16.3 | 1.59 |
| 603419B | 723 | 1021 | 3.0 | 89 | 4.0 | 1.0 | 1.0 | 2.3 | 3.0 | 18.0 | 1.58 |
| 603419C | 725 | 1019 | 3.5 | 100 | 3.0 | 1.0 | 1.0 | 2.8 | 2.0 | 18.7 | 1.68 |
| 603420 | 707* | 913 | 4.0 | 116* | 4.0 | 1.5 | 3.5 | 3.3 | | 6.6 | 1.90 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed composition | | Oil compo | sition | | | | |
|--------------------------|----------|---------------------------|-----------------------------|-----------|-------------|-------|-------------------|-------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603382B | II | 42.5 | 17.5 | 11.7 | 4.3 | 19.7 | 56.1 | 8.2 | |
| 603383 | I | 41.7^ | 20.3^ | 11.8^ | 3.3^ | 31.8^ | 47.9^ | 5.2^ | |
| 603384 | III | 43.9 | 17.3 | 11.0 | 4.5 | 26.2 | 51.1 | 7.3 | |
| 603385 | II | 40.4 | 19.5 | 10.3 | 4.6 | 25.2 | 53.4 | 6.5 | |
| 603386 | II | 40.4 | 20.0 | 9.5 | 3.9 | 25.2 | 54.7 | 6.8 | |
| 603387 | II | 44.2 | 16.8 | 11.3 | 4.1 | 24.9 | 52.2 | 7.5 | |
| 603388 | I | 44.2 41.6^ | 21.0^ | 12.0^ | 4.1 4.5^ | 32.7^ | 45.3 [^] | 7.5 5.6^ | |
| | | | | | | | | | |
| 603389 | II | 43.0 | 18.0 | 10.7 | 3.6 | 25.5 | 53.5 | 6.7 | |
| 603390A | II | 44.0 | 17.6 | 10.5 | 4.5 | 23.7 | 54.1 | 7.3 | |
| 603391 | II | 43.5 | 19.2 | 10.3 | 3.9 | 32.2 | 47.9 | 5.7 | |
| 603392 | III | 41.1 | 17.5 | 9.8 | 5.4 | 25.6 | 51.8 | 7.3 | |
| 603393 | III | 41.1 | 18.3 | 11.3 | 4.5 | 25.6 | 51.5 | 7.1 | |
| 603394 | III | 41.5 | 18.7 | 10.7 | 4.0 | 22.7 | 54.9 | 7.7 | |
| 603395 | III | 40.8 | 18.1 | 12.4 | 4.5 | 21.1 | 53.7 | 8.4 | |
| 503396 | III | 44.1 | 17.3 | 10.1 | 6.4 | 26.7 | 50.3 | 6.6 | |
| 603397 | IV | 46.6 | 15.1 | 9.7 | 3.6 | 23.2 | 55.8 | 7.7 | |
| 603398A | II | 42.0 | 18.3 | 11.2 | 3.7 | 24.3 | 54.8 | 6.1 | |
| 503398B | III | 44.7^{w} | $19.0^{\rm w}$ | 12.4 | 3.8 | 25.6 | 52.2 | 5.9 | |
| 503399 | II | 42.7 | 18.5 | 11.0 | 5.0 | 22.1 | 53.6 | 8.3 | |
| 503400 | I | 37.5^ | 21.4^ | 13.8^ | 4.0^ | 26.5^ | 49.9^ | 5.8^ | |
| 503401 | IV | 47.0^{w} | 17.8^{w} | 12.9 | 3.5 | 24.8 | 52.6 | 6.2 | |
| 503402 | III | 45.5 ^w | 15.8^{w} | 12.2 | 3.9 | 24.8 | 51.8 | 7.4 | |
| 503403 | II | 44.3 | 16.1 | 10.9 | 3.7 | 21.3 | 56.4 | 7.6 | |
| 603404 | IV | 48.1 ^w | 15.4 ^w | 12.4 | 3.3 | 20.7 | 55.8 | 7.9 | |
| 603405A | II | 45.2 ^w | 16.7 ^w | 13.0 | 3.1 | 22.9 | 53.3 | 7.7 | |
| 603405B | IV | 45.5 ^w | 17.9 ^w | 13.2 | 3.4 | 19.8 | 55.3 | 8.3 | |
| 603406 | III | 47.2 ^w | 18.2 ^w | 12.5 | 4.2 | 26.6 | 49.8 | 7.0 | |
| 503400 503407 | IV | 47.2 46.4 ^w | 13.2 17.7 ^w | 13.9 | 3.7 | 21.3 | 53.6 | 7.0 7.5 | |
| 50340 <i>7</i> 503408 | I | 44.6 ^w ^ | 17.7 18.6 ^w ^ | 13.1^ | 5.1^ | 27.0^ | 48.5^ | 6.3^ | |
| | IV | 44.6 ^w | | | | | | | |
| 603409 | | | 16.6 ^w | 14.0 | 3.7 | 22.9 | 51.4 | 8.1 | |
| 503410 | IV | 47.9 ^w | 16.6 ^w | 13.5 | 3.8 | 23.9 | 51.5 | 7.3 | |
| 503411 | IV | 45.6 ^w | 15.9 ^w | 12.5 | 3.5 | 20.9 | 54.9 | 8.2 | |
| 503412A | II | 42.1 | 16.1 | 11.6 | 3.5 | 29.7 | 47.9 | 7.4 | |
| 503412B | II | 42.5 ^w | 16.0 ^w | 12.8 | 3.2 | 24.5 | 51.6 | 7.9 | |
| 503413 | IV | 48.8^{w} | 17.0^{w} | 13.0 | 3.4 | 23.7 | 53.1 | 6.8 | |
| 503414 | II | 39.7 | 20.4 | 11.0 | 4.4 | 28.7 | 49.3 | 6.5 | |
| 503415 | III | 46.6 ^w | 17.1^{w} | 11.4 | 4.3 | 25.9 | 51.7 | 6.7 | |
| 503416 | IV | 43.2 | 17.1 | 9.5 | 4.1 | 28.0 | 51.9 | 6.6 | |
| 503417 | IV | 42.1 | 16.8 | 11.9 | 3.9 | 21.2 | 55.1 | 7.9 | |
| 503418A | III | 41.8 | 18.6 | 10.8 | 4.1 | 28.4 | 50.2 | 6.5 | |
| 603418B | III | 44.1 | 17.8 | 10.9 | 4.2 | 26.5 | 51.9 | 6.5 | |
| 603418C | III | 42.2 | 17.9 | 10.7 | 4.1 | 29.9 | 49.1 | 6.2 | |
| 503418D | IV | 44.5 | 17.5 | 10.4 | 4.0 | 29.2 | 49.8 | 6.7 | |
| 503419A | II | 42.4 ^w | 18.6 ^w | 12.4 | 4.3 | 30.0 | 47.9 | 5.4 | |
| 503419B | IV | 43.0 ^w | 17.9 ^w | 12.5 | 4.3 | 23.6 | 53.2 | 6.3 | |
| 503419 C | IV | 42.2 ^w | 18.2 ^w | 12.4 | 4.3 | 24.3 | 52.4 | 6.5 | |
| JUJ 1170 | ± * | | 10.2 | 12.7 | 1.0 | ∠ T.J | J 2.T | 0.5 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|-------------------------|--------------|---------------|-------------|-----------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 603421A | Da hei dou | Nei Monggol | China | China | 1998 | II |
| 603421B | (Da hei dou) | Nei Monggol | China | China | 1998 | III |
| 603422A | Hei dou | Nei Monggol | China | China | 1998 | II |
| 603422B | (Hei dou) | Nei Monggol | China | China | 1998 | II |
| 603423A | Xiao huang dou | Nei Monggol | China | China | 1998 | III |
| 603423B | (Xiao huang dou) | Nei Monggol | China | China | 1998 | III |
| 603424B | (Ben di huang dou) | Nei Monggol | China | China | 1998 | I |
| 603424C | (Ben di huang dou) | Nei Monggol | China | China | 1998 | I |
| 603424D | (Ben di huang dou) | Nei Monggol | China | China | 1998 | I |
| 603425 | Huang dou | Nei Monggol | China | China | 1998 | II |
| 603426F | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | I |
| 603426G | (Ben di yuan huang dou) | Nei Monggol | China | China | 1998 | II |
| 603427A | Qing dou | Nei Monggol | China | China | 1998 | I |
| 603427B | (Qing dou) | Nei Monggol | China | China | 1998 | Ī |
| 603427C | (Qing dou) | Nei Monggol | China | China | 1998 | III |
| 603428A | Da li hei dou | Nei Monggol | China | China | 1998 | I |
| 603428B | (Da li hei dou) | Nei Monggol | China | China | 1998 | II |
| 603428C | (Da li hei dou) | Nei Monggol | China | China | 1998 | III |
| 603428D | (Da li hei dou) | Nei Monggol | China | China | 1998 | III |
| 603429C | (Cha dou) | Nei Monggol | China | China | 1998 | I |
| 603429D | (Cha dou) | Nei Monggol | China | China | 1998 | II |
| 603430A | Da hei qi | Nei Monggol | China | China | 1998 | II |
| 603430B | (Da hei qi) | Nei Monggol | China | China | 1998 | I |
| 603431 | Chi feng da hei qi | Nei Monggol | China | China | 1998 | I |
| 603432C | (Huang dou) | Nei Monggol | China | China | 1998 | I |
| 603433A | Chi 382 | Nei Monggol | China | China | 1998 | II |
| 603433B | (Chi 382) | Nei Monggol | China | China | 1998 | II |
| 603434 | A 8122 | Nei Monggol | China | China | 1998 | III |
| 603436A | Huang dou | Nei Monggol | China | China | 1998 | II |
| 603436B | (Huang dou) | Nei Monggol | China | China | 1998 | II |
| 603438A | Da hei qi | Nei Monggol | China | China | 1998 | I |
| 603438B | (Da hei qi) | Nei Monggol | China | China | 1998 | I |
| 603438C | (Da hei qi) | Nei Monggol | China | China | 1998 | II |
| 603438D | (Da hei qi) | Nei Monggol | China | China | 1998 | II |
| 603438E | (Da hei qi) | Nei Monggol | China | China | 1998 | III |
| 603439 | 74-2 | Nei Monggol | China | China | 1998 | I |
| 603440B | (Nong yan da bai qi) | Nei Monggol | China | China | 1998 | I |
| 603441 | Qing zha dou | Nei Monggol | China | China | 1998 | II |
| 603442 | Ke qi xiao hei dou | Nei Monggol | China | China | 1998 | III |
| 603443A | Ke qi xiao hei dou | Nei Monggol | China | China | 1998 | I |
| 603443B | (Ke qi xiao hei dou) | Nei Monggol | China | China | 1998 | 0 |
| 603443C | (Ke qi xiao hei dou) | Nei Monggol | China | China | 1998 | II |
| 603444A | Hei dou | Nei Monggol | China | China | 1998 | II |
| 603444B | (Hei dou) | Nei Monggol | China | China | 1998 | I |
| 603444C | (Hei dou) | Nei Monggol | China | China | 1998 | II |
| 603445A | Da li hei dou | Nei Monggol | China | China | 1998 | I |
| 603445B | (Da li hei dou) | Nei Monggol | China | China | 1998 | IV |
| UC++COO | (Da II lici dou) | Tici monggor | Cima | Cillia | 1770 | Τ 4 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|-------------|-------------------|------|--------|----|----|---------|--------------|------------------|-----|----------------|--------------|---------------|
| · · · · · · | | N.T. | D | | | | | | | D1 | | |
| 603421A | II | N | P | T | Е | N | Bl | Lb | Bl | Bl | | 5F |
| 603421B | III | N | P | T | Е | N | Br | Lb | Bl | Bl | | 5F |
| 603422A | II | N | W | T | Е | N | Br | Lb | Bl | Bl | | 5F |
| 603422B | II | N | P | T | Е | N | Br | I | Bl | Bl | | 5F |
| 603423A | III | N | P | T | Е | Ssp | Br | I | Y | Br | | 5N |
| 603423B | III | S | P | T | Е | N | Br | D | Y | Br | 411 | 5N |
| 603424B | I | D | P | T | Е | N | Tn | I | Y | Br | Abh | 3N |
| 603424C | I | D | P | T | Е | N | Tn | I | Y | Br | Abh | 3N |
| 603424D | I | N | P | T | Е | N | Br | D | Y | Br | Sw | 3N |
| 603425 | II | N | P | T | Е | N | Br | I | Y | Br | 411 | 5N |
| 603426F | I | D | P | T | Е | N | Tn | I | Y | Br | Abh | 4N |
| 603426G | II | S | P | T | Е | N | Tn | D | Y | Br | G | 3N |
| 603427A | I | N | W | Lt | Е | Ssp | Br | I | Gn | Bl | Gnc | 4N |
| 603427B | I | N | W | Lt | Е | N | Br | I | Gn | Bl | Gnc | 3N |
| 603427C | III | N | W | Lt | E | N | Br | I | Gn | Brbl | Gnc, Vhil | 4N |
| 603428A | I | N | W | T | Е | N | Br | I | Bl | Bl | 016011 | 3N |
| 603428B | II | N | W | T | Е | N | Br | I | Bl | Bl | Sdef, Sdab | 3N |
| 603428C | III | S | W | T | E | N | Br | I | Bl | Bl | | 4N |
| 603428D | III | S | P | T | Sa | N | Br | I | Bl | Bl | D 1 | 3N |
| 603429C | I | N | W | T | Е | N | Br | I | Rbr | Rbr | Dab | 3N |
| 603429D | II | N | P | T | E | N | Br | I | Rbr | Rbr | Sdef | 4N |
| 603430A | II | N | W | T | E | N | Br | I | Y | Bl | Sabh | 3N |
| 603430B | I | N | P | T | E | N | Br | I | Y | Bl | Sabh | 3N |
| 603431 | I | N | W | T | E | N | Br | I | Y | Bl | Sabh | 3N |
| 603432C | I | N | P | T | E | N | Br | I | Y | Y | Vhil | 2N |
| 603433A | II | N | P | T | E | Ssp | Br | D | Y | Tn | | 4N |
| 603433B | II | N | P | G | E | N | Dbr | I | Y | Y | Na | 3N |
| 603434 | III | N | W | T | E | N | Br | I | Y | Bl | | 3N |
| 603436A | II | N | W | G | E | N | Dbr | Ι | Y | Bf | | 3N |
| 603436B | II | N | P | G | E | N | Br | D | Y | Ib | Vhil | 2N |
| 603438A | I | N | P | T | E | N | Br | Ι | Y | Bl | | 4N |
| 603438B | I | N | P | T | E | N | Br | I | Y | Bl | | 4N |
| 603438C | II | S | P | T | E | N | Br | I | Y | Brbl | Vhil | 4N |
| 603438D | II | N | W | T | E | N | Br | I | Y | Bl | Sabh | 3N |
| 603438E | III | N | P | T | E | N | Tn | I | Y | Brbl | Vhil | 4N |
| 603439 | I | N | P | G | E | N | Br | I | Y | Bf | | 2N |
| 603440B | I | S | P | G | E | N | Tn | I | Y | Y | | 2N |
| 603441 | II | N | W | T | E | N | Br | I | Gn | Brbl | Gnc, Vhil | 3N |
| 603442 | III | N | P | T | E | N | Bl | В | Bl | Bl | | 5F |
| 603443A | I | N | P | Lt | E | N | Br | I | Bl | Bl | | 4F |
| 603443B | 0 | S | P | Lt | Sa | N | Tn | I | Bl | Bl | | 4F |
| 603443C | II | N | P | Lt | E | N | Br | I | Bl | Bl | | 5F |
| 603444A | II | N | P | T | E | Ssp | Br | Lb | Bl | Bl | | 5F |
| 603444B | I | N | P | T | E | N | Br | Lb | Bl | Bl | | 5F |
| 603444C | II | N | P | T | E | N | Br | I | B1 | Bl | | 4F |
| 603445A | I | N | W | T | E | N | Br | I | B1 | Bl | | 3N |
| 603445B | IV | N | P | T | E | N | Br | В | Bl | B1 | Dab | 5F |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering Maturity | | Stem Shattering | | | | Seed | | | |
|-------------------|--------------------|----------------|-----------------|------|------|------|---------|----------|------------------------|------------------------|
| | date | • | g Heigl | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) (score) | | | | | (score) | (score) | (cg sd ⁻¹) | (Mg ha ⁻¹) |
| 603421A | 703 | 909 3.5 | 96* | 4.0 | 1.0 | 3.5 | 3.3 | | 6.3 | 1.87 |
| 603421B | 705 | 919 4.0 | 92* | 4.0 | 1.0 | 1.0 | 3.3 | | 8.1 | 2.51 |
| 603422A | 707* | 920 4.3 | 84 | 4.0 | 1.0 | 1.0 | 3.3 | | 7.5 | 1.93 |
| 603422B | 705 | 909^ 4.0^ | 107* | 5.0^ | 1.0^ | 1.0^ | 3.0^ | | 8.3^ | 2.08^ |
| 603423A | 713 | 927 4.0 | 105* | 4.0 | 1.0 | 2.5 | 3.0 | 3.5 | 14.2 | 2.53 |
| 603423B | 713 | 927 3.8 | 82 | 2.0 | 1.5 | 3.5 | 3.0 | 4.5 | 12.3 | 2.03 |
| 603424B | 623 | 816^ 1.5^ | 37* | 1.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 11.6^ | 1.48^ |
| 603424C | 624 | 825^ 1.0^ | 23 | 1.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 12.1^ | 1.45^ |
| 603424D | 625 | 825^ 4.5^ | 64 | 4.0^ | 1.0^ | 2.0^ | 3.0^ | 2.0 | 10.4^ | 2.21^ |
| 603425 | 629* | 907 3.8 | 83 | 4.0 | 1.0 | 3.5 | 2.8 | 2.5 | 9.1 | 1.93 |
| 603426F | 623 | 822^ 1.0^ | 26 | 1.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 13.3^ | 1.53^ |
| 603426G | 627 | 901 3.8 | 72 | 2.0 | 1.0 | 2.5 | 2.3 | 1.0 | 8.8 | 2.03 |
| 603427A | 701 | 901^ 3.0^ | 80* | | 1.0^ | 2.0^ | 3.0^ | 2.0 | 12.6^ | 2.50^ |
| 603427B | 701 | 901^ 3.5^ | 70* | | 1.0^ | 1.0^ | 2.5^ | 1.0 | 14.1^ | 2.68^ |
| 603427C | 706* | 925 3.5 | 102 | 4.0 | 1.0 | 1.5 | 3.0 | 3.0 | 13.3 | 1.81 |
| 603428A | 627 | 828^ 2.5^ | 72* | | 1.0^ | 1.0^ | 3.5^ | | 16.2^ | 1.99^ |
| 603428B | 703 | 913 3.0 | 107* | | 1.0 | 1.0 | 3.3 | | 12.8 | 1.97 |
| 603428C | 707* | 929 4.0 | 88 | 2.0 | 1.0 | 1.0 | 2.5 | | 13.8 | 1.81 |
| 603428D | 707* | 1001 3.8* | 89 | 2.0 | 1.0 | 1.0 | 3.5 | | 12.4 | 1.47 |
| 603429C | 623 | 826 2.5^ | 56* | | 1.0^ | 1.0^ | 2.0^ | | 13.7^ | 2.41^ |
| 603429D | 707* | 915 3.3 | 88 | 4.0 | 1.0 | 1.0 | 3.0 | | 13.2 | 2.34 |
| 603430A | 703 | 907 2.8 | 75* | | 1.0 | 2.0 | 2.5 | 2.0 | 17.2 | 2.62 |
| 603430B | 629 | 831^ 3.5^ | 53* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.2^ | 3.10^ |
| 603431 | 625 | 831^ 3.0^ | 57* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.5^ | 3.13^ |
| 603432C | 623 | 822 1.5^ | 47* | | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.8^ | 2.12^ |
| 603433A | 703 | 905 2.5 | 75 | 3.0 | 1.0 | 1.5 | 3.0 | 2.0 | 13.2 | 1.77 |
| 603433B | 630* | 905 3.0 | 78 | 3.0 | 1.0 | 1.0 | 3.0 | 3.0 | 14.4 | 1.81 |
| 603434 | 704 | 923 2.0 | 103 | 3.0 | 1.0 | 1.0 | 3.5 | 2.5 | 15.0 | 2.90 |
| 603436A | 703 | 907 3.0 | 91 | 3.0 | 1.0 | 3.0 | 3.0 | 1.0 | 15.2 | 2.31 |
| 603436B | 709 | 913 3.3 | 98* | | 1.0 | 1.5 | 3.3 | 1.5 | 13.9 | 2.23 |
| 603438A | 701 | 827 3.0^ | 60* | | 1.0^ | 5.0^ | 3.5^ | 1.0 | 12.0^ | 2.14^ |
| 603438B | 629 | 901^ 3.0^ | 70* | | 1.0^ | 2.0^ | 2.5^ | 1.0 | 13.9^ | 2.40^ |
| 603438C | 709* | 912 3.3 | 95 | 2.0 | 1.5 | 4.0* | 2.3 | 1.5 | 12.5 | 2.27 |
| 603438D | 630* | 909 2.5 | 86 | 3.0 | 1.0 | 2.5 | 2.3 | 2.0 | 19.3 | 2.66 |
| 603438E | 713 | 927 3.5 | 102* | | 1.0 | 4.5 | 3.3 | 2.5 | 13.8 | 2.40 |
| 603439 | 627 | 829^ 1.5^ | 44* | | 1.0^ | 2.0^ | 2.0^ | 1.0 | 13.4^ | - |
| 603440B | 628 | 829^ 2.5^ | 41* | | 1.0^ | 1.0^ | 1.5^ | 1.0 | 11.0^ | 2.43^ |
| 603441 | 703 | 914 2.8 | 87* | | 1.0 | 3.0 | 3.3 | 3.0 | 15.0 | 2.03 |
| 603442 | 701 | 921 3.8 | 99 | 3.0* | 1.5 | 2.5 | 3.0 | | 8.6 | 2.21 |
| 603443A | 629 | 831^ 4.5^ | 114 | 4.0^ | 1.0^ | 2.0^ | 2.5^ | | 7.8^ | 2.59^ |
| 603443B | 622 | 820 2.5^ | 48 | 2.0^ | 1.0^ | 2.0^ | 2.5^ | | 12.0^ | 1.47^ |
| 603443C | 630* | 912 3.8 | 111* | | 1.0 | 2.0 | 3.8 | | 7.1 | 2.24 |
| 603444A | 629 | 907 4.3 | 105 | 3.5 | 1.0 | 3.0 | 3.0 | | 9.5 | 2.18 |
| 603444B | 621 | 831^ 4.5^ | 81* | | 1.0^ | 1.0^ | 2.5^ | | 10.4^ | 2.68^ |
| 603444C | 628* | 911 4.0 | 98 | 4.0 | 1.0 | 4.0 | 3.3 | | 9.6 | 2.06 |
| 603445A | 624 | 830^ 2.5^ | 59* | | 1.0^ | 3.0^ | 2.5^ | | 19.9^ | 2.53^ |
| 603445B | 715 | 1005 4.5 | 123* | | 1.0 | 1.0 | 3.3 | | 10.9 | 2.18 |
| 505 1 15 D | , 13 | 1000 1.5 | 123 | 2.0 | 1.0 | 1.0 | 5.5 | | 10.7 | 2.10 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compo | sition | | | |
|-------------------|----------|---------------------|---------------------|-----------|-------------|-------|-------------------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 603421A | II | 40.9 ^w | 17.2 ^w | 12.8 | 3.3 | 21.8 | 53.0 | 9.1 |
| 603421B | III | 42.5 ^w | 16.2 ^w | 14.5 | 3.1 | 20.7 | 54.2 | 7.5 |
| 603422A | II | 42.7 ^w | 16.3 ^w | 14.5 | 3.7 | 20.8 | 52.3 | 8.6 |
| 603422B | II | 47.3 ^w ^ | 16.0 ^w ^ | 14.0^ | 3.9^ | 22.6^ | 52.7^ | 6.7^ |
| 603423A | III | 46.5 ^w | 18.4 ^w | 11.3 | 3.9 | 23.1 | 54.5 | 7.3 |
| 603423B | III | 46.3 ^w | 17.2 ^w | 12.7 | 4.3 | 25.3 | 51.2 | 6.6 |
| 603424B | I | 43.8^ | 18.9^ | 13.9^ | 3.7^ | 31.0^ | 45.7 [^] | 5.7^ |
| 603424 D | I | 40.9^ | 18.5^ | 14.4^ | 3.5^ | 23.5^ | 51.8^ | 6.8^ |
| 603424D | I | 39.6^ | 18.6^ | 12.5^ | 3.6^ | 21.2^ | 55.5^ | 7.2^ |
| 603424D | II | 42.4 | 13.5 | 11.5 | 3.9 | 20.2 | 56.1 | 8.3 |
| 603425 603426F | I | 42.4 | 18.3^ | 14.5^ | 3.3^ | 20.2 | 50.1 52.5^ | 6.7^ |
| | | | | | | | | |
| 603426G | II | 41.2 | 16.9 | 12.1 | 4.2 | 25.3 | 52.2 | 6.2 |
| 603427A | I | 47.8 ^w ^ | 17.3 ^w ^ | 12.9^ | 4.7^ | 26.0^ | 49.5^ | 6.9^ |
| 603427B | I | 50.4 ^w ^ | 15.9 ^w ^ | 13.1^ | 4.6^ | 26.7^ | 49.1^ | 6.5^ |
| 603427C | III | 45.9 ^w | 15.8 ^w | 12.0 | 4.4 | 21.1 | 54.6 | 7.8 |
| 503428A | I | 48.3 ^w ^ | 17.4 ^w ^ | 12.6^ | 4.8^ | 32.2^ | 44.8^ | 5.6^ |
| 503428B | II | 45.4 ^w | 16.8 ^w | 14.0 | 4.1 | 26.7 | 49.1 | 6.2 |
| 503428C | III | 46.0^{w} | 16.1 ^w | 11.9 | 3.9 | 24.1 | 53.4 | 6.6 |
| 603428D | III | 49.8^{w} | 13.4 ^w | 11.6 | 4.4 | 20.8 | 55.7 | 7.4 |
| 503429C | I | 47.1 ^w ^ | 18.7 ^w ∧ | 12.7^ | 3.8^ | 24.9^ | 52.7^ | 6.0^ |
| 603429D | II | 43.8^{w} | 18.2^{w} | 11.6 | 4.5 | 28.8 | 49.7 | 5.3 |
| 603430A | II | 43.1 | 19.6 | 10.9 | 4.5 | 26.4 | 51.3 | 6.8 |
| 603430B | I | 42.4^ | 20.0^ | 12.3^ | 4.5^ | 27.0^ | 50.2^ | 6.0^ |
| 603431 | I | 39.9^ | 20.5^ | 11.5^ | 4.6^ | 25.8^ | 52.1^ | 5.9^ |
| 603432C | I | 41.3^ | 19.8^ | 13.2^ | 3.3^ | 23.6^ | 52.8^ | 7.2^ |
| 603433A | II | 44.2 | 17.9 | 10.4 | 3.5 | 23.6 | 54.8 | 7.7 |
| 603433B | II | 40.3 | 19.4 | 11.4 | 4.9 | 28.3 | 49.0 | 6.3 |
| 503434 | III | 43.3 | 18.2 | 10.9 | 4.9 | 24.7 | 52.9 | 6.6 |
| 503436A | II | 41.5 | 21.1 | 10.2 | 4.5 | 34.5 | 45.2 | 5.6 |
| 503436B | II | 42.7 | 18.1 | 10.5 | 3.9 | 29.9 | 49.1 | 6.6 |
| 503438A | I | 39.4^ | 20.3^ | 11.0^ | 4.0^ | 23.6^ | 54.6^ | 6.9^ |
| 503438B | I | 43.5^ | 18.2^ | 12.6^ | 4.8^ | 26.8^ | 50.0^ | 5.7^ |
| 503438C | II | 44.4 | 16.2 | 10.3 | 4.3 | 20.5 | 56.7 | 8.2 |
| 503438D | II | 42.5 | 19.5 | 10.5 | 4.5 | 25.3 | 53.5 | 6.2 |
| 503438E | III | 42.7 | 15.7 | 9.8 | 5.0 | 21.6 | 55.9 | 7.7 |
| 503438L 503439 | III I | 38.8^ | 20.5^ | 11.9^ | 3.0 4.6^ | 25.9^ | 51.4^ | 6.2^ |
| 503439 503440B | I | 39.1^ | 20.3^ | 12.3^ | 4.0 | 28.1^ | 49.2^ | 6.3^ |
| | | | | | | | | |
| 503441 | II | 46.5 ^w | 18.2 ^w | 13.1 | 4.3 | 26.2 | 50.2 | 6.2 |
| 603442 | III | 44.7 ^w | 15.0 ^w | 12.7 | 3.8 | 18.2 | 57.0 | 8.2 |
| 603443A | I | 43.0 ^w ^ | 13.9 ^w ^ | 13.4^ | 3.9^ | 20.7^ | 53.9^ | 8.2^ |
| 503443B | 0 | 48.6 ^w ^ | 15.8 ^w ^ | 12.7^ | 3.6^ | 31.0^ | 46.8^ | 5.9^ |
| 503443C | II | 43.6 ^w | 13.5 ^w | 13.2 | 3.7 | 21.9 | 52.1 | 9.0 |
| 503444A | II | 43.1 ^w | 14.4 ^w | 12.7 | 3.3 | 19.0 | 56.5 | 8.5 |
| 603444B | I | 42.9 ^w ^ | 16.9 ^w ^ | 12.3^ | 3.9^ | 25.2^ | 52.4^ | 6.2^ |
| 503444C | II | 43.3^{w} | 15.4 ^w | 12.9 | 4.1 | 18.9 | 56.6 | 7.6 |
| 603445A | I | 46.1 ^w ^ | 20.1 ^w ∧ | 11.5^ | 5.3^ | 30.2^ | 47.7^ | 5.3^ |
| 603445B | IV | $45.9^{\rm w}$ | 14.2^{w} | 13.8 | 3.1 | 21.4 | 53.2 | 8.6 |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | Maturity |
|---------|-----------------------|-------------|---------------|---------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 603446 | Hong huang dou | Nei Monggol | China | China | 1998 | II |
| 603447 | Ka qi mao yan dou | Nei Monggol | China | China | 1998 | I |
| 603448 | Miao lou 68-8 | Shandong | China | China | 1998 | IV |
| 603449 | Kai guo lan | Shandong | China | China | 1998 | IV |
| 603450 | Gu li huang | Shandong | China | China | 1998 | IV |
| 603451A | Xiao tie ke | Shandong | China | China | 1998 | III |
| 603451B | (Xiao tie ke) | Shandong | China | China | 1998 | IV |
| 603452 | Diao si gui | Shandong | China | China | 1998 | III |
| 603453 | Dang nian chen | Shandong | China | China | 1998 | IV |
| 603454 | 7672-333 | Shandong | China | China | 1998 | IV |
| 603455A | Mao huang dou | Shandong | China | China | 1998 | III |
| 603455B | (Mao huang dou) | Shandong | China | China | 1998 | IV |
| 603456 | Lu shun dou | Shandong | China | China | 1998 | III |
| 603457A | Mi lan dou zi | Shandong | China | China | 1998 | IV |
| 603457B | (Mi lan dou zi) | Shandong | China | China | 1998 | IV |
| 603457C | (Mi lan dou zi) | Shandong | China | China | 1998 | IV |
| 603458A | Shui dou | Shandong | China | China | 1998 | IV |
| 603458B | (Shui dou) | Shandong | China | China | 1998 | IV |
| 603459 | Luo ye huang | Shandong | China | China | 1998 | IV |
| 603460 | Shui dou | Shandong | China | China | 1998 | IV |
| 603462 | Bai jia zi | Shandong | China | China | 1998 | IV |
| 603463 | Dong jie No. 1 | Shandong | China | China | 1998 | II |
| 603464 | Zi jie huang | Shandong | China | China | 1998 | II |
| 603465B | (Qi si mi) | Shandong | China | China | 1998 | IV |
| 603465C | (Qi si mi) | Shandong | China | China | 1998 | IV |
| 603465D | (Qi si mi) | Shandong | China | China | 1998 | IV |
| 603466A | Qi si wa | Shandong | China | China | 1998 | IV |
| 603466B | (Qi si wa) | Shandong | China | China | 1998 | IV |
| 603467 | Pa man jiang nan qing | Shandong | China | China | 1998 | II |
| 603468 | Pa man qing | Shandong | China | China | 1998 | IV |
| 603469 | Pa man qing | Shandong | China | China | 1998 | IV |
| 603470 | Xiao qing dou | Shandong | China | China | 1998 | II |
| 603471 | Xiao hua pi | Shandong | China | China | 1998 | II |
| 603472A | Qing huang dou | Shandong | China | China | 1998 | II |
| 603472B | (Qing huang dou) | Shandong | China | China | 1998 | IV |
| 603473 | Qing huang dou | Shandong | China | China | 1998 | III |
| 603474 | 60 Ri huan jia | Shandong | China | China | 1998 | II |
| 603475 | No. 1 | Shandong | China | China | 1998 | III |
| 603476 | Lu you dou | Shandong | China | China | 1998 | IV |
| 603477A | Jiang nan qing | Shandong | China | China | 1998 | III |
| 603477B | (Jiang nan qing) | Shandong | China | China | 1998 | III |
| 603478 | Yong fu qing da dou | Shandong | China | China | 1998 | IV |
| 603479 | Qing ba yue xian | Shandong | China | China | 1998 | I |
| 603480 | Ba yue mang | Shandong | China | China | 1998 | II |
| 603481 | Bai yi cao da dou | Shandong | China | China | 1998 | II |
| 603482 | Si li qing | Shandong | China | China | 1998 | II |
| 603483 | Lu si li | Shandong | China | China | 1998 | II |
| 303 103 | 20 01 11 | Similading | Cillia | Cillia | 1770 | 11 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe color | | | Density | Pod color | Seedco | | Hilum color | Other traits | Seed shape |
|-------------------|-------------------|---|-------------|----|--------|---------|--------------|--------|-----|----------------|--------------|---------------|
| | | | | | | - | | | | | Other truits | |
| 603446 | II | N | P | T | Е | N | Br | I | Rbr | Rbr | 0.11.0.1 | 4N |
| 603447 | I | N | P | T | E | N | Br | I | Br | Bl | Sabh, Sad | 3N |
| 603448 | IV | D | W | G | A | N | Dbr | I | Y | Bf | | 3N |
| 603449 | IV | D | W | G | E | N | Br | I | Y | Bf | | 5N |
| 603450 | IV | D | W | G | E | Ssp | Br | I | Y | Bf | | 3N |
| 603451A | III | N | W | G | E | Ssp | Bl | I | Y | Bf | | 4N |
| 603451B | IV | D | W | G | E | Ssp | Dbr | I | Y | Bf | Na | 4N |
| 603452 | III | N | W | G | E | Ssp | Br | I | Y | Bf | | 4N |
| 603453 | IV | D | P | G | E | N | Tn | I | Y | Bf | | 3N |
| 603454 | IV | N | W | T | E | N | Tn | I | Y | Bl | | 3N |
| 603455A | III | D | P | G | Α | N | Br | I | Y | Bf | Vhil | 3N |
| 603455B | IV | N | W | T | E | N | Br | D | Y | Br | Def | 3N |
| 603456 | III | N | W | T | E | N | Br | D | Y | Br | | 3N |
| 603457A | IV | D | P | T | E | Ssp | Br | I | Lgn | Br | | 3N |
| 603457B | IV | N | W | G | E | N | Br | I | Y | Bf | | 3N |
| 603457C | IV | D | W | G | E | Ssp | Br | I | Y | Bf | | 4N |
| 603458A | IV | D | W | T | Α | Ssp | Tn | I | Y | Br | | 2N |
| 603458B | IV | D | P | T | A | Ssp | Tn | D | Y | Br | | 3N |
| 603459 | IV | D | W | G | E | N | Dbr | I | Y | Bf | | 4N |
| 603460 | IV | N | W | T | E | N | Tn | D | Y | Bl | | 3N |
| 603462 | IV | D | W | G | E | Ssp | Tn | Ī | Y | Bf | | 2N |
| 603463 | II | D | W | G | Ē | N | Tn | Ī | Y | Bf | | 3N |
| 603464 | II | D | P | G | A | N | Br | Ī | Ŷ | Y | Vhil | 2N |
| 603465B | IV | D | W | T | E | Ssp | Br | D | Y | Bl | V 1111 | 2N |
| 603465C | IV | D | P | T | Sa | Ssp | Br | D | Y | Bl | | 2N |
| 603465D | IV | D | P | T | Sa | Ssp | Br | D | Y | Bl | | 2N |
| 603466A | IV | N | W | Lt | E | Ssp | Br | I | Y | Br | | 3N |
| 603466B | IV | N | W | T | E | Ssp | Br | I | Y | Br | Sst | 3N |
| 603467 | II | D | W | T | E | Ssp | Br | D | Gn | Br | DSC | 3N |
| 603468 | IV | N | W | Lt | E | N N | Br | I | Gn | Br | | 3N |
| 603469 | IV | S | W | Lt | E | N | Br | D | Gn | Br | | 3N |
| 603470 | II | N | W | T | E | | Br | D | Gn | Bl | | 3N |
| 603470 | II | D | W | G | E | Ssp | Dbr | D | Gn | Bf | | 3N |
| 603471 603472A | | N | w P | T | E E | Ssp | | I | Y | | | |
| | II | | | | | Ssp | Br | | | Bl | Dala Van | 4N |
| 603472B | IV | N | P | T | E | Ssp | Br | I | G | Bl | Dab, Vsc | 4N |
| 603473 | III | D | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |
| 603474 | II | D | W | G | Е | Ssp | Br | D | Gn | Bf | | 3N |
| 603475 | III | D | W | T | E | Ssp | Br | D | Gn | Br | | 3N |
| 603476 | IV | N | W | Lt | Е | Ssp | Br | D | Gn | Br | | 3N |
| 603477A | III | S | W | T | E | Ssp | Br | D | Gn | Br | | 4N |
| 603477B | III | D | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |
| 603478 | IV | D | W | T | E | N | Tn | D | Gn | Bl | | 3N |
| 603479 | I | N | W | T | A | N | Br | D | Gn | Br | | 4N |
| 603480 | II | D | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |
| 603481 | II | D | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |
| 603482 | II | D | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |
| 603483 | II | D | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | Maturity | 7 | | Stem | Shatter | ing | Seed | | | |
|-------------------|-------------|------------|------------|----------|------|---------|------|------|----------|------------------------|------------------------|
| | date | date | Lodging | Heigh | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | (score) | | - • | (score) | (cg sd ⁻¹) | (Mg ha ⁻¹) |
| 603446 | 707* | 915 | 3.5 | 90 | 4.0 | 1.0 | 1.0 | 3.0 | | 11.3 | 2.18 |
| 603447 | 629 | 831^ | 3.5^ | 71* | 3.0^ | 1.0^ | 5.0^ | 2.0^ | | 15.9^ | 2.84^ |
| 603448 | 728 | 1008 | 3.3 | 93 | 1.0 | 1.0 | 1.0 | 2.3 | 1.0 | 12.8 | 2.30 |
| 603449 | 726 | 1003 | 4.0 | 105 | 1.0 | 1.0 | 1.5 | 2.8 | 2.0 | 11.9 | 2.24 |
| 603450 | 729 | 1007 | 3.0 | 77 | 1.0 | 1.0 | 2.0 | 2.5 | 1.0 | 12.4 | 2.19 |
| 603451A | 721 | 927 | 4.0 | 103* | | 1.5 | 3.0* | 2.8 | 2.0 | 11.8 | 2.18 |
| 603451B | 724 | 1010 | 2.8 | 111 | 1.0 | 1.0 | 2.0 | 1.8 | 1.5 | 12.0 | 1.96^ |
| 603452 | 723 | 921 | 3.5 | 108 | 4.0 | 1.0 | 1.5 | 2.5 | 2.0 | 9.7 | 1.92 |
| 603453 | 723 | 1011 | 2.0 | 75 | 1.0 | 1.0 | 1.0 | 2.3 | 1.0 | 20.7 | 2.69 |
| 603454 | 704 | 1003 | 1.5 | 105 | 3.0 | 1.0 | 1.0 | 3.3 | 2.0 | 17.6 | 2.81* |
| 603455A | 722 | 923 | 1.5 | 42 | 1.0 | 2.0 | 3.5* | 2.5 | 1.0 | 15.9 | 1.06* |
| 603455B | 715* | 1009 | 4.5 | 106* | | 2.0 | 3.0 | 3.3 | 2.5 | 17.0 | 2.14 |
| 603456 | 725 | 929 | 3.8 | 71* | | 2.0 | 3.5 | 2.3 | 2.5 | 16.5 | 2.40 |
| 603457A | 719 | 1002 | 2.0 | 72 | 1.0 | 1.5 | 3.0 | 2.3 | 1.5 | 16.1 | 2.45 |
| 603457B | 801 | 1022 | 4.0 | 118 | 4.0 | 1.0 | 2.0 | 2.3 | 1.0 | 17.1 | 2.40 |
| 603457C | 729 | 1017 | 3.8 | 112 | 1.0 | 1.5 | 2.5 | 2.5 | 2.0 | 13.4 | 2.39* |
| 603458A | 723 | 1017 | 3.3 | 91 | 1.0 | 1.5 | 2.0 | 2.3 | 1.5 | 12.1 | 2.65* |
| 603458B | 723 | 1015 | 3.0 | 81 | 1.0 | 1.0 | 1.5 | 2.0 | 2.0 | 13.0 | 2.70* |
| 603459 | 729 | 1010 | 3.8 | 108 | 1.5 | 1.0 | 2.0 | 2.5 | 2.0 | 11.0 | 2.02* |
| 603460 | 725 | 1005 | 3.5 | 115 | 4.0 | 1.5 | 2.5 | 2.5 | 2.0 | 15.0 | 1.88 |
| 603462 | 731 | 1003 | 2.5 | 89 | 1.0 | 1.5 | 1.5 | 2.3 | 2.5 | 14.2 | 2.78* |
| 603463 | 704 | 917 | 1.3 | 65 | 1.0 | 1.0 | 2.5 | 2.3* | 1.0 | 12.7 | 2.76 |
| 603464 | 719 | 909 | 2.0 | 58 | 1.5 | 2.0 | 5.0 | 2.5 | 1.0 | 13.1 | 1.17* |
| 603465B | 717* | 1003 | 2.5 | 67* | | 2.5 | 3.0* | 2.5 | 2.0 | 17.1 | 2.14 |
| 603465C | 721 | 1003 | 2.0 | 68 | 1.0 | 1.0 | 1.0 | 2.5 | 2.0 | 17.1 | 2.14 |
| 603465D | 721 | 1001 | 1.5 | 63 | 1.0 | 1.0 | 1.0 | 2.3 | 1.5 | 19.1 | 2.29 |
| 603466A | 731 | 1005 | 3.8 | 147 | 4.0 | 1.5 | 2.5 | 2.8 | 4.0* | 10.1 | 1.85 |
| 603466B | 801 | 1013 | 4.0 | 130 | 4.0 | 1.0 | 2.0 | 2.8 | 4.0 | 10.1 | 1.52 |
| 603467 | 709 | 909 | 2.3 | 62 | 1.5 | 3.0* | 5.0 | 1.5 | 1.0 | 13.2 | 2.07 |
| 603468 | 718* | 1018 | 3.8 | 152* | | 1.0 | 1.5 | 3.3 | 3.0 | 17.2 | 1.87 |
| 603469 | 716 | 1013 | 3.8 | 169 | 2.0 | 1.0 | 1.5 | 3.3 | 3.0 | 17.2 | 1.79 |
| 603470 | 710 709* | 911 | 3.6 4.0 | 80 | 4.0 | 3.5 | 5.0 | 3.0 | 2.0* | 12.9 | 1.79 |
| 603470 | 717 | 916 | 3.3* | 75 | 1.0 | 2.5 | 4.5 | 2.5 | 2.0 | 12.6 | 2.04 |
| 603471 603472A | 717* | 916 | | 139 | 4.0 | 1.0 | 1.5 | 3.0 | 3.5 | 13.8 | 2.04 |
| 603472B | 721 | 1003 | 4.5 | 150* | | 1.0 | 2.0 | 3.0 | 3.0 | 15.8 | 2.30 |
| 603472B | 721 | 924 | 3.3 | 76 | 1.0 | 2.0 | 3.0 | 2.3 | 2.5 | 13.4 | 1.83 |
| 603474 | 723 719 | 924 914 | 2.8 | 64* | | 1.5 | 4.0 | 2.5 | 2.0 | 12.9 | 1.03 |
| | 719 721 | | | 72 | | | | 3.3 | | | |
| 603475 | 721 715* | 927 | 3.0 3.5 | 134 | 1.0 | 2.0 | 4.0 | | 3.5 | 15.2 | 1.98 1.99 |
| 603476 | | 1017 | | 110* | 4.0 | 1.0 | 2.0 | 3.0 | 3.5 | 16.6 | |
| 603477A | 715* | 925 | 4.3 | | | 1.0 | 1.5 | 2.3 | 5.0 | 12.8 | 2.50 |
| 603477B | 719 | 921 | 2.8 | 73* | | 1.5 | 3.0 | 2.8 | 3.0 | 14.4 | 2.10 |
| 603478 | 727 705 | 1017 | 3.5 | 108 | 1.0 | 1.0 | 2.0* | 2.8 | 2.5 | 15.1 | 1.65^ |
| 603479 | 705 | 830^ | 3.5^ | 61* | | 1.0^ | 3.0^ | 1.5^ | 1.0 | 15.2^ | 1.73^ |
| 603480 | 717 | 915 | 2.8 | 65 95 | 1.0 | 1.5 | 3.0 | 2.8 | 1.5 | 14.2 | 2.06 |
| 603481 | 717 | 916 | 3.0 | 85 | 1.0 | 2.0 | 3.5 | 2.3 | 2.0 | 12.3 | 2.10 |
| 603482 | 721 | 919 | 3.0 | 62* | | 1.5 | 4.5 | 2.5 | 3.0 | 12.0 | 2.14 |
| 603483 | 717 | 913 | 3.3 | 61 | 1.0 | 2.5 | 3.0 | 3.0 | 1.5 | 10.7 | 2.09 |
| 100 | | | | | | | | | | | |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil compos | | | | | |
|--------------------------|----------|---------------------------|---------------------------------------|------------|---------|-------|----------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603446 | II | 42.7 ^w | 16.6 ^w | 12.0 | 3.9 | 21.6 | 55.2 | 7.2 | |
| 603447 | I | 44.5 ^w ^ | 18.1 ^w ∧ | 11.9^ | 3.9^ | 24.5^ | 53.5^ | 6.2^ | |
| 503448 | IV | 43.9 | 16.5 | 10.1 | 3.5 | 22.5 | 55.9 | 8.0 | |
| 503449 | IV | 46.4 | 17.0 | 11.9 | 3.1 | 19.5 | 57.4 | 8.1 | |
| 503450 | IV | 45.1 | 17.4 | 11.3 | 3.6 | 20.8 | 56.7 | 7.7 | |
| 503451A | III | 42.6 | 18.9 | 10.9 | 4.3 | 33.5 | 45.1 | 6.2 | |
| 503451B | IV | 44.1 | 17.0 | 9.6 | 3.8 | 24.6 | 54.1 | 7.6 | |
| 503452 | III | 42.4 | 18.0 | 9.3 | 3.6 | 42.9 | 37.3 | 6.8 | |
| 503453 | IV | 45.6 | 17.0 | 10.3 | 2.7 | 21.4 | 57.4 | 8.2 | |
| 503454 | IV | 42.7 | 18.7 | 9.7 | 4.2 | 22.9 | 56.4 | 6.8 | |
| 503455A | III | 42.7 | 17.2 | 10.5 | 4.0 | 26.5 | 51.8 | 7.2 | |
| 603455B | IV | 42.7 | 18.1 | 9.9 | 4.0 | 26.3 | 52.7 | 7.2 | |
| юз433 Б 603456 | III | 43.0 | 18.9 | 10.8 | 3.9 | 26.3 | 51.6 | 7.0 | |
| 603450A | IV | 45.0 46.4 ^w | 17.3 ^w | 11.8 | 3.9 | 26.3 | 51.0 | 7.3 6.9 | |
| | | | | | | | | | |
| 603457B | IV | 42.8 | 16.5 | 8.9 | 3.8 | 26.0 | 54.7 | 6.6 | |
| 503457C | IV | 45.3 | 15.1 | 10.1 | 3.5 | 22.6 | 55.3 | 8.5 | |
| 603458A | IV | 43.5 | 15.8 | 9.6 | 3.7 | 23.8 | 53.9 | 9.0 | |
| 603458B | IV | 43.6 | 16.8 | 11.1 | 3.6 | 22.9 | 54.4 | 8.0 | |
| 503459 | IV | 45.7 | 17.0 | 11.8 | 3.8 | 24.2 | 53.6 | 6.6 | |
| 603460 | IV | 45.1 | 15.4 | 9.9 | 3.4 | 30.4 | 49.6 | 6.8 | |
| 603462 | IV | 43.8 | 15.5 | 10.4 | 2.9 | 18.2 | 59.5 | 8.9 | |
| 503463 | II | 42.5 | 18.1 | 11.4 | 3.7 | 23.8 | 53.5 | 7.5 | |
| 603464 | II | 43.5 | 16.3 | 10.9 | 3.8 | 28.5 | 48.8 | 8.0 | |
| 603465B | IV | 42.9 | 16.5 | 9.9 | 3.2 | 26.0 | 53.4 | 7.5 | |
| 603465C | IV | 42.9 | 16.7 | 10.2 | 3.5 | 26.4 | 53.0 | 6.9 | |
| 603465D | IV | 44.0 | 16.7 | 10.5 | 3.4 | 24.5 | 54.2 | 7.4 | |
| 603466A | IV | 48.3^{w} | 14.2^{w} | 11.5 | 2.9 | 18.8 | 57.3 | 9.4 | |
| 603466B | IV | 47.2^{w} | $16.1^{\rm w}$ | 12.3 | 3.4 | 25.0 | 51.5 | 7.8 | |
| 503467 | II | 41.8^{w} | 18.3^{w} | 13.0 | 3.0 | 25.9 | 51.6 | 6.6 | |
| 503468 | IV | 47.5 ^w | 16.3 ^w | 13.4 | 3.2 | 25.0 | 50.9 | 7.5 | |
| 503469 | IV | 44.8^{w} | 17.7 ^w | 13.0 | 3.1 | 24.0 | 52.6 | 7.3 | |
| 503470 | II | 42.0^{w} | 17.9 ^w | 12.4 | 3.3 | 36.6 | 42.0 | 5.6 | |
| 503471 | II | 45.1 ^w | 17.7 ^w | 12.8 | 3.3 | 27.1 | 50.5 | 6.4 | |
| 503472A | II | 43.4 ^w | 17.0 ^w | 12.0 | 4.3 | 27.6 | 49.5 | 6.7 | |
| 603472B | IV | 46.0 ^w | 15.9 ^w | 11.8 | 3.4 | 25.5 | 52.5 | 6.8 | |
| 503473 | III | 47.6 ^w | 17.4 ^w | 13.1 | 2.9 | 23.9 | 52.5 | 7.5 | |
| 503474 | II | 43.5 ^w | 17. 4 18.1 ^w | 13.4 | 3.3 | 25.6 | 50.8 | 6.9 | |
| 503474 | III | 48.2 ^w | 17.3 ^w | 12.4 | 4.2 | 27.6 | 49.4 | 6.4 | |
| 603475 | IV | 45.3 ^w | 17.3 17.2 ^w | 13.2 | 3.0 | 24.1 | 52.2 | 7.5 | |
| | | | | | | | | | |
| 603477A | III | 45.4 ^w | 18.0 ^w | 13.0 | 3.3 | 25.9 | 51.1 | 6.7 | |
| 603477B | III | 47.1 ^w | 16.8 ^w | 13.3 | 3.0 | 25.7 | 50.9 | 7.1 | |
| 503478 | IV | 47.7 ^w | 16.5 ^w | 13.9 | 3.0 | 20.9 | 53.6 | 8.6 | |
| 503479 | I | 45.9 ^w ^ | 18.2 ^w ^ | 16.8^ | 6.9^ | 36.6^ | 35.9^ | 3.8^ | |
| 503480 | II | 44.7 ^w | 17.3 ^w | 13.3 | 3.3 | 25.8 | 50.2 | 7.5 | |
| 503481 | II | 43.7 ^w | 18.7 ^w | 12.8 | 3.2 | 26.9 | 50.6 | 6.5 | |
| 503482 | II | 42.8^{w} | 18.9^{w} | 14.1 | 3.4 | 26.6 | 48.7 | 7.2 | |
| 503483 | II | 42.9^{w} | 17.1^{w} | 14.7 | 3.4 | 20.7 | 52.9 | 8.4 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Dagion | Country of | Country | Year | Maturity |
|-----------------|---------------------------|------------------|---------------|-------------|------------------------|----------|
| PI No. | identifier | Region of origin | origin | acquisition | introduced or released | |
| 11110. | Identifier | or origin | _ | acquisition | | group |
| 603484 | Mai li hun | Shandong | China | China | 1998 | II |
| 603485 | Dong fang lu dou | Shandong | China | China | 1998 | III |
| 603486 | Zao qing dou | Shandong | China | China | 1998 | III |
| 603487A | Diao ya dou | Shandong | China | China | 1998 | IV |
| 603487B | (Diao ya dou) | Shandong | China | China | 1998 | IV |
| 603487C | (Diao ya dou) | Shandong | China | China | 1998 | IV |
| 603488 | Zao hei dou | Shandong | China | China | 1998 | III |
| 603489 | Da li hei dou | Shandong | China | China | 1998 | IV |
| 603490 | Hei you dou | Shandong | China | China | 1998 | IV |
| 603491 | Da hei dou | Shandong | China | China | 1998 | IV |
| 603492 | Qi hei dou | Shandong | China | China | 1998 | IV |
| 603493 | Da hei dou | Shandong | China | China | 1998 | IV |
| 603494 | Hai dou zi | Shandong | China | China | 1998 | IV |
| 603495A | Hong mi lan dou zi | Shandong | China | China | 1998 | IV |
| 603496A | Xiao hong dou | Shandong | China | China | 1998 | IV |
| 603496B | (Xiao hong dou) | Shandong | China | China | 1998 | IV |
| 603497 | Hua dou | Shandong | China | China | 1998 | III |
| 603498A | Lao shu pi | Shaanxi | China | China | 1998 | IV |
| 603501 | Lu pi da dou | Shaanxi | China | China | 1998 | IV |
| 603502A | Da hei dou | Shaanxi | China | China | 1998 | III |
| 603502B | (Da hei dou) | Shaanxi | China | China | 1998 | IV |
| 603502C | (Da hei dou) | Shaanxi | China | China | 1998 | IV |
| 603502D | (Da hei dou) | Shaanxi | China | China | 1998 | IV |
| 603504 | Hong pi da dou | Shaanxi | China | China | 1998 | IV |
| 603505 | Da dou | Shaanxi | China | China | 1998 | IV |
| 603511A | Wan dou huang | Shaanxi | China | China | 1998 | IV |
| 603511B | (Wan dou huang) | Shaanxi | China | China | 1998 | IV |
| 603515 | Ba yue bao | Shaanxi | China | China | 1998 | IV |
| 603526 | Hei you dou | Shaanxi | China | China | 1998 | IV |
| 603527A | Hei liao dou | Shaanxi | China | China | 1998 | IV |
| 603531A | Zao jiao hu mian dou zi | Shaanxi | China | China | 1998 | IV |
| 603531B | (Zao jiao hu mian dou zi) | Shaanxi | China | China | 1998 | IV |
| 603533 | Hong huang dou | Shaanxi | China | China | 1998 | IV |
| | Huang dou | Shanxi | China | China | 1998 | IV |
| 603541B | (Haung dou) | Shanxi | China | China | 1998 | IV |
| 603542 | Ji yao huang dou | Shanxi | China | China | 1998 | IV |
| 603543A | • | Shanxi | China | China | 1998 | IV |
| 603543B | (Lu huang dou) | Shanxi | China | China | 1998 | IV |
| 603543C | (Lu huang dou) | Shanxi | China | China | 1998 | IV |
| 603544A | Lu da dou | Shanxi | China | China | 1998 | IV |
| 603545A | | Shanxi | China | China | 1998 | IV |
| 603545B | (Xiao hei dou) | Shanxi | China | China | 1998 | IV |
| 603546A | Xiao hei dou | Shanxi | China | China | 1998 | I |
| 603546B | (Xiao hei dou) | Shanxi | China | China | 1998 | II |
| 603540 D | Xiao hei dou | Shanxi | China | China | 1998 | IV |
| 603548A | Ba wang bian | Shanxi | China | China | 1998 | IV |
| 603548B | (Ba wang bian) | Shanxi | China | China | 1998 | IV |
| 003340 D | (Da wang blan) | SHAHAI | Ciiiia | Cillia | 1770 | 1 4 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|---------|----|--------|---------|----------|--------|------|----------------|--------------|---------------|
| | | | | | | - | | | | | Other traits | |
| 603484 | II | S | W | G | E | Ssp | Br | D | Gn | Bf | | 3N |
| 603485 | III | D | W | G | E | Ssp | Dbr | I | Gn | Bf | | 3N |
| 603486 | III | N | W | T | E | Ssp | Br | D | Gn | Br | | 4N |
| 603487A | IV | D | P | G | E | Ssp | Br | I | Gn | Bf | | 3N |
| 603487B | IV | D | P | G | A | Ssp | Br | D | Gn | Bf | | 3N |
| 603487C | IV | D | P | G | A | N | Br | I | Y | Bf | | 3N |
| 603488 | III | D | W | T | E | N | Dbr | В | Bl | Bl | | 3N |
| 603489 | IV | N | W | Lt | Sa | N | Br | I | Bl | Bl | | 4N |
| 603490 | IV | N | W | Lt | E | N | Br | I | Bl | Bl | | 4N |
| 603491 | IV | N | W | Lt | E | N | Br | I | Bl | Bl | | 4N |
| 603492 | IV | N | W | T | E | Ssp | Br | Lb | Bl | Bl | Dab | 4N |
| 603493 | IV | N | P | Lt | E | Ssp | Bl | I | Bl | B1 | Dab | 5F |
| 603494 | IV | N | W | Lt | E | N | Br | Lb | Gnbr | Rbr | | 3N |
| 603495A | IV | S | W | Lt | Е | N | Tn | Lb | Gnbr | Rbr | | 5N |
| 603496A | IV | D | P | T | Е | Ssp | Br | Lb | Rbr | Rbr | | 4N |
| 603496B | IV | N | W | T | E | Ssp | Br | Lb | Rbr | Rbr | Def | 4N |
| 603497 | III | D | P | T | E | Ssp | Br | I | Bl | Bl | | 4N |
| 603498A | IV | D | W | G | Sa | N | Br | Ī | Y | Bf | | 3N |
| 603501 | IV | N | P | Lt | E | N | Br | Lb | Gn | Bl | | 5N |
| 603502A | III | N | P | Lt | Sa | N | Br | I | Bl | Bl | | 4N |
| 603502B | IV | N | P | T | E | N | Br | Lb | Bl | B1 | | 5N |
| 603502C | IV | N | P | Lt | Sa | N | Br | Lb | Bl | Bl | | 5N |
| 603502D | IV | N | P | T | E | N | Br | Lb | Bl | B1 | | 5N |
| 603502D | IV | D | P | T | E | N | Br | I | Rbr | Rbr | | 5N |
| 603505 | IV | D | W | T | E | N | Bl | I | Gnbr | Rbr | St | 4N |
| 603511A | IV | D | W | G | Sa | Ssp | Br | I | Y | Bf | St | 3N |
| 603511B | IV | D | W | G | A | Ssp | Br | I | Y | Bf | | 3N |
| 603511B | IV | D | W | T | E | N N | Bl | I | Y | Br | | 3N |
| 603526 | IV | N | W | T | E | N | Bl | В | Bl | Bl | Flk, Sdef | 3N |
| 603527A | IV | N N | vv P | | E E | N N | | | Bl | Вl | rik, Suei | |
| | | | P P | Lt | | | Bl D. | Lb | | | 0.1-0 | 4F |
| 603531A | IV | S | P P | T | Sa | Ssp | Br | I | Br | Rbr | Sdef | 3F |
| 603531B | IV | S | W | T | Sa | N | Br | I | Br | Rbr | Sdef | 3F |
| 603533 | IV | D | | G | E | N | B1 | I | Rbf | Rbf | Sdef | 3N |
| 603541A | IV | N | P | G | A | N | Br | I | Y | Bf | | 5N |
| 603541B | IV | N | W | G | A | N | Br | I | Y | Bf | | 5N |
| 603542 | IV | N | P | G | A | N | Br | I | Y | Bf | | 5N |
| 603543A | IV | N | P | T | E | N | Br | I | Gn | Br | | 4N |
| 603543B | IV | D | P | T | E | N | Br | I | Gn | Br | _ | 5N |
| 603543C | IV | S | P | T | E | N | Br | D | Gn | Br | Gnc | 4N |
| 603544A | IV | N | P | G | A | N | Bl | D | Gn | Dbf | | 5N |
| 603545A | IV | N | P | T | E | N | Tn | I | Bl | Bl | | 4N |
| 603545B | IV | N | W | T | E | N | Tn | В | Bl | Bl | | 5N |
| 603546A | I | D | P | T | E | N | Br | Lb | Bl | Bl | | 3N |
| 603546B | II | N | P | T | E | N | Br | I | Bl | Bl | Def | 3N |
| 603547 | IV | N | P | T | E | N | Bl | I | Bl | Bl | | 5F |
| 603548A | IV | N | W | T | E | N | Br | I | Bl | B1 | | 4N |
| 603548B | IV | N | W | T | E | N | Br | I | Bl | B1 | Sdef | 4N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------|-------------|----------|---------|-----------|-------------|---------|---------|-------------|-------------|----------------|------------------------|
| | date | | Lodging | Heigh | t term. | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | • | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 603484 | 717 | 917 | 3.0 | 73 | 2.0 | 2.0* | 4.0* | 2.5 | 2.0 | 12.4 | 2.14 |
| 603485 | 724 | 925 | 2.3 | 61 | 1.0 | 1.0 | 2.0 | 2.5 | 2.5 | 12.4 | 2.05 |
| 603486 | 715 | 929 | 4.3 | 72* | 4.0 | 1.0 | 2.0 | 2.3 | 5.0 | 13.4 | 2.70 |
| 603487A | 721 | 1009 | 2.5 | 109 | 1.0 | 1.0 | 2.5 | 3.0 | 2.0 | 22.5 | 1.86 |
| 603487B | 723 | 1016 | 2.8 | 110* | 1.0 | 1.0 | 2.5 | 3.0 | 2.0 | 25.4 | 2.36* |
| 603487C | 727 | 1015 | 2.5 | 98 | 1.0 | 1.5 | 2.5 | 2.3 | 1.0 | 18.8 | 1.92* |
| 603488 | 724 | 927 | 2.3 | 88 | 1.0 | 1.0 | 1.0 | 2.3 | | 12.1 | 2.31 |
| 603489 | 729 | 1007 | 4.0 | 105 | 4.0 | 1.5 | 2.5 | 2.8 | | 13.6 | 2.47* |
| 603490 | 730 | 1005 | 3.8 | 129* | 4.0 | 1.0 | 3.5 | 2.8 | | 13.0 | 2.67* |
| 603491 | 721* | 1006 | 3.8 | 157 | 4.0 | 1.5 | 2.5 | 3.0 | | 12.2 | 2.04* |
| 603492 | 729 | 1013 | 5.0 | 114 | 5.0 | 1.0 | 1.5 | 2.5 | | 13.0 | 2.18 |
| 603493 | 730* | 1005 | 4.8 | 153* | 5.0 | 1.0 | 2.0 | 2.5 | | 8.9 | 2.46* |
| 603494 | 801 | 1005 | 4.3 | 113 | 4.0 | 1.0 | 2.0 | 2.8 | | 13.1 | 2.88 |
| 603495A | 721 | 1018 | 3.3 | 90 | 2.0 | 1.5 | 2.0 | 3.0 | | 15.9 | 1.41 |
| 603496A | 713 | 929 | 2.3 | 64 | 1.0 | 1.0 | 3.0 | 3.0 | | 13.4 | 1.96 |
| 603496B | 715* | 1006 | 3.3 | 147* | 4.0 | 1.5 | 3.0 | 3.8 | | 13.4 | 2.54 |
| 603497 | 723 | 923 | 3.3 | 54* | 1.0 | 1.5 | 2.5 | 2.8 | | 7.1 | 1.57 |
| 603498A | 812 | 1013 | 3.0 | 111* | 1.0 | 1.0 | 1.5 | 2.0 | 2.0 | 12.8 | 2.01 |
| 603501 | 711* | 1013 | 4.0 | 110* | 4.0 | 1.0 | 1.0 | 3.3 | 4.0 | 18.9 | 1.41 |
| 603502A | 715 | 926 | 4.0 | 67 | 4.0 | 1.0 | 1.5 | 3.3 | | 12.1 | 1.78 |
| 603502A | 713* | 1012 | 4.5 | 172* | 5.0 | 1.0 | 1.0 | 2.8 | | 12.1 | 1.73 |
| 603502B | 709* | 1012 | 4.3 | 179 | 5.0 | 1.0 | 1.0 | 3.3 | | 12.9 | 1.98 |
| 603502D | 715* | 1015 | 4.5 | 181 | 5.0 | 1.0 | 2.0 | 3.0 | | 15.0 | 2.43 |
| 603504 | 725 | 1010 | 3.8 | 127* | 1.0 | 1.0 | 1.5 | 2.5 | | 9.4 | 2.43 1.76* |
| 603505 | 804 | 1011 | 2.8 | 76* | 1.0 | 1.0 | 1.0 | 2.5 | | 7.1 | 2.15 |
| 603511A | 805 | 1019 | 2.5 | 109* | 1.0 | 1.0 | 1.0 | 2.3 | 2.0 | 13.3 | 2.09* |
| 603511B | 804 | 1019 | 2.5 | 90 | 1.0 | 1.0 | 1.0 | 1.8 | 1.0 | 12.0 | 2.33* |
| 603511B | 802 | 1010 | 2.8 | 113 | 1.0 | 1.0 | 2.0 | 2.3 | 3.0 | 9.6 | 1.32 |
| 603526 | 724 | 1017 | 3.5 | 128* | 4.0 | 1.0 | 1.0 | 3.0 | 3.0 | 11.2 | 1.90 |
| 603527A | 804 | 1017 | 3.0 | 105 | 4.0 | 1.0 | 1.5 | 2.8 | | 6.7 | 2.06* |
| 603531A | 723 | 1018 | 3.3 | 136 | 2.0 | 1.0 | 2.0 | 3.0 | | 13.4 | 2.04 |
| 603531A | 727 | 1013 | 3.5 | 119 | 2.0 | 1.0 | 2.0 | 3.0 | | 16.9 | 1.76 |
| 603531B | 728 | 1013 | 2.0 | 84* | 1.0 | 1.0 | 1.0 | 2.5 | | 14.4 | 1.60 |
| 603541A | 725 | 1014 | 3.5 | 87 | 4.0 | 1.0 | 1.0 | 2.5 | 2.5 | 9.6 | 1.87* |
| 603541B | 723 | 1007 | 2.8 | 100 | 3.0 | 1.0 | 2.5 | 2.8 | 3.0 | 14.0 | 1.93* |
| 603541B | 721 | 1007 | 3.3 | 88 | 3.0 | 1.0 | 1.5 | 3.0 | 2.0 | 13.7 | 1.93 |
| 603543A | 717* | 1007 | 2.8 | 95 | 3.0 | 1.0 | 1.5 | 1.5 | 2.5 | 14.3 | 1.60^ |
| 603543B | 717* | 1005 | 2.8 | 95 85* | 1.0 | 1.0 | 1.0 | 2.0 | 2.5 | 14.3 | 2.40 |
| 603543C | 729 | 1003 | 2.8 | 116* | 2.0 | 1.0 | 1.0 | 2.0 | 2.5 | 12.7 | 1.81 |
| 603544A | 725 | 1022 | 3.3 | 107 | 4.0 | 1.0 | 1.0 | 2.8 | 3.0 | 12.7 | 1.86 |
| 603545A | 723 717 | 1011 | 3.5 | 99 | 4.0 | 1.0 | 1.5 | 2.8 | | 12.0 | 1.59 |
| 603545A | 717 | 1007 | 3.0 | 99 98 | 4.0 | 1.0 | 1.0 | 2.8 | | 10.5 | 1.59 |
| 603546A | 713 | 901^ | 2.0^ | 98 54* | 4.0 1.0^ | 1.0^ | 3.0^ | 2.8 2.5^ | | 10.5 14.5^ | 2.26^ |
| 603546A 603546B | 713 706* | 901^ | 3.0 | 96* | 3.0 | 1.0 | 1.0 | 3.5 | | 17.0 | 2.26 |
| 603547 | 700** | 1010 | 3.3 | 103* | 3.0 | 1.0 | 1.5 | 3.0 | | 17.0 | 2.00 |
| 603548A | 723 731 | 1010 | 3.5 | 103** | 3.0 | 1.0 | 1.5 | 2.5 | | 10.4 | 1.73 |
| 603548A 603548B | 731 | | | | 3.0 | | 2.0 | 2.5 | | 9.8 | 1.73 1.73* |
| 003340 D | /31 | 1009 | 3.0 | 114 | 5.0 | 1.0 | 2.0 | 2.3 | | 7.8 | 1./3 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | Seed composition | | Oil composition | | | | |
|---------------------------|----------|---------------------------|---------------------------|----------|-----------------|-------|----------|------------------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603484 | II | 44.4 ^w | 17.9 ^w | 12.7 | 3.1 | 26.7 | 50.9 | 6.5 | |
| 603485 | III | 47.4^{w} | 17.0^{w} | 13.5 | 3.7 | 24.4 | 51.4 | 7.0 | |
| 603486 | III | 45.7 ^w | 17.0^{w} | 12.8 | 3.0 | 24.9 | 52.5 | 6.9 | |
| 503487A | IV | 52.9 ^w | 16.0^{w} | 11.7 | 3.2 | 24.4 | 53.4 | 7.3 | |
| 503487B | IV | 51.0 ^w | 16.6 ^w | 12.6 | 3.2 | 21.7 | 54.8 | 7.7 | |
| 503487C | IV | 46.0 | 15.4 | 10.3 | 3.8 | 22.7 | 55.3 | 8.0 | |
| 503488 | III | 44.4 ^w | 17.2 ^w | 11.9 | 3.6 | 23.7 | 53.3 | 7.5 | |
| 503489 | IV | 44.7 ^w | 16.9 ^w | 13.4 | 3.1 | 22.3 | 53.1 | 8.1 | |
| 503490 | IV | 45.9 ^w | 15.8 ^w | 13.3 | 3.1 | 22.7 | 53.0 | 7.9 | |
| 503491 | IV | 43.9 ^w | 16.3 ^w | 13.0 | 3.3 | 23.8 | 52.5 | 7.5 | |
| 503492 | IV | 44.9 ^w | 15.7 ^w | 11.5 | 3.5 | 27.6 | 50.8 | 6.6 | |
| 503493 | IV | 48.8 ^w | 12.8 ^w | 11.9 | 2.8 | 18.3 | 57.1 | 9.8 | |
| 503494 | IV | 42.8 ^w | 15.9 ^w | 13.5 | 2.8 | 23.8 | 51.8 | 8.1 | |
| 503494 503495A | IV | 42.8 49.5 ^w | 13.9 14.8 ^w | 11.7 | 3.8 | 30.2 | 47.0 | 7.4 | |
| 503495A 503496A | IV IV | 49.3 46.3 ^w | 14.8 16.1 ^w | 13.7 | 3.8 2.9 | 22.3 | 52.7 | 8.4 | |
| 603496B | IV | 40.3 47.4 ^w | 16.1 16.5 ^w | 13.7 | 2.9 | 24.2 | 52.7 | 7.6 | |
| 503490 Б 503497 | IV | 47.4 49.2 ^w | | | | | | | |
| | | | 12.2 ^w | 13.8 | 3.9 | 21.0 | 52.3 | 8.9 | |
| 603498A | IV | 45.5 | 14.5 | 10.1 | 3.3 | 24.9 | 54.1 | 7.5 | |
| 503501 | IV | 48.0 ^w | 16.9 ^w | 11.0 | 3.3 | 23.6 | 55.5 | 6.6 | |
| 503502A | III | 47.9 ^w | 16.1 ^w | 12.4 | 3.2 | 18.2 | 56.8 | 9.4 | |
| 503502B | IV | 47.5 ^w | 15.7 ^w | 12.8 | 3.5 | 19.7 | 55.4 | 8.7 | |
| 503502C | IV | 48.1 ^w | 15.4 ^w | 12.9 | 3.1 | 19.5 | 56.2 | 8.3 | |
| 503502D | IV | 46.6 ^w | 16.6 ^w | 13.6 | 3.0 | 19.5 | 55.6 | 8.3 | |
| 503504 | IV | 42.8 ^w | 15.5 ^w | 14.1 | 2.9 | 18.7 | 55.6 | 8.6 | |
| 503505 | IV | 42.7^{w} | 15.1 ^w | 12.2 | 3.1 | 19.3 | 55.7 | 9.7 | |
| 503511A | IV | 44.9 | 16.7 | 10.0 | 4.1 | 19.7 | 57.9 | 8.3 | |
| 503511B | IV | 44.7 | 16.4 | 9.5 | 3.5 | 20.7 | 58.7 | 7.6 | |
| 503515 | IV | 47.4 | 14.3 | 9.0 | 3.7 | 19.5 | 60.3 | 7.5 | |
| 503526 | IV | 42.8^{w} | 16.3^{w} | 13.6 | 3.2 | 17.3 | 56.9 | 9.0 | |
| 503527A | IV | 46.8^{w} | 13.8^{w} | 12.1 | 3.1 | 16.5 | 58.7 | 9.6 | |
| 503531A | IV | 47.5^{w} | 16.6^{w} | 11.7 | 3.2 | 21.2 | 55.9 | 8.1 | |
| 503531B | IV | 48.9^{w} | 15.6^{w} | 12.9 | 3.6 | 23.0 | 52.5 | 8.0 | |
| 503533 | IV | 49.9^{w} | 15.2^{w} | 13.1 | 2.9 | 20.9 | 55.4 | 7.7 | |
| 503541A | IV | 40.1 | 14.2 | 10.9 | 3.6 | 20.2 | 56.7 | 8.6 | |
| 603541B | IV | 42.0 | 16.2 | 11.0 | 4.1 | 23.8 | 53.3 | 7.8 | |
| 503542 | IV | 44.4 | 14.3 | 10.9 | 3.2 | 20.4 | 57.3 | 8.2 | |
| 503543A | IV | 46.6^{w} | $16.3^{\rm w}$ | 13.4 | 3.5 | 23.1 | 53.8 | 6.2 | |
| 603543B | IV | 46.1^{w} | 17.2^{w} | 13.4 | 3.5 | 21.6 | 54.6 | 6.9 | |
| 503543C | IV | 46.3 ^w | 16.0^{w} | 13.3 | 3.4 | 21.2 | 55.2 | 6.9 | |
| 503544A | IV | 45.2 ^w | 15.7 ^w | 13.0 | 3.4 | 21.5 | 54.6 | 7.5 | |
| 503545A | IV | 45.9 ^w | 15.9 ^w | 12.1 | 3.5 | 19.9 | 56.3 | 8.2 | |
| 503545B | IV | 48.6 ^w | 13.6 ^w | 12.2 | 3.2 | 21.0 | 54.9 | 8.6 | |
| 503546A | I | 45.8 ^w ^ | 21.8 ^w ^ | 14.2^ | 3.5^ | 25.6^ | 49.7^ | 7.0^ | |
| 503546B | II | 44.5 ^w | 19.9 ^w | 11.5 | 3.5 | 24.4 | 54.6 | 6.0 | |
| 5035 40B | IV | 45.1 ^w | 14.8 ^w | 13.7 | 2.9 | 19.2 | 55.2 | 9.1 | |
| 503547 503548A | IV | 44.4 ^w | 14.3 ^w | 12.2 | 3.3 | 24.3 | 52.9 | 7.4 | |
| 503548B | IV | 44.4 43.4 ^w | 14.3 15.9 ^w | 12.4 | 3.3 | 23.3 | 53.5 | 7. 4 7.7 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|---------|-----------------------|-----------|---------|-------------|-------------|----------|
| | Accession | Region | of | of | introduced | Maturity |
| PI No. | identifier | of origin | origin | acquisition | or released | |
| - | | | | • | | |
| 603549 | Mei dou | Shanxi | China | China | 1998 | III |
| 603550 | Xiao bai dou | Shanxi | China | China | 1998 | III |
| 603551A | 1 & | Shanxi | China | China | 1998 | IV |
| 603551B | (Hei qing dou) | Shanxi | China | China | 1998 | IV |
| 603551C | (Hei qing dou) | Shanxi | China | China | 1998 | IV |
| 603552 | Hong xiao dou | Shanxi | China | China | 1998 | III |
| 603553 | Huang pi dou | Shanxi | China | China | 1998 | III |
| 603554A | Ba wang bian | Shanxi | China | China | 1998 | IV |
| 603554B | (Ba wang bian) | Shanxi | China | China | 1998 | IV |
| 603555 | Hua da hei dou | Shanxi | China | China | 1998 | IV |
| 603556 | Xiao huang dou | Shanxi | China | China | 1998 | III |
| 603557 | Er huang pi huang dou | Shanxi | China | China | 1998 | IV |
| 603558 | Xiao huang dou | Shanxi | China | China | 1998 | III |
| 603559 | Xiao huang dou | Shanxi | China | China | 1998 | IV |
| 603560 | Yuan huang dou | Shanxi | China | China | 1998 | III |
| 603561 | Huang dou | Shanxi | China | China | 1998 | I |
| 603562A | Tian e dan II | Shanxi | China | China | 1998 | II |
| 603562B | (Tian e dan II) | Shanxi | China | China | 1998 | III |
| 603563A | Hei qi huang dou | Shanxi | China | China | 1998 | IV |
| 603563B | (Hei qi huang dou) | Shanxi | China | China | 1998 | IV |
| 603564A | Huang dou | Shanxi | China | China | 1998 | IV |
| 603564B | (Huang dou) | Shanxi | China | China | 1998 | IV |
| 603564C | (Huang dou) | Shanxi | China | China | 1998 | IV |
| 603567A | Da huang dou <1> | Shanxi | China | China | 1998 | III |
| 603567B | (Da huang dou <1>) | Shanxi | China | China | 1998 | IV |
| 603568 | Da huang dou <1> | Shanxi | China | China | 1998 | IV |
| 603569A | Bai dou | Shanxi | China | China | 1998 | IV |
| 603569B | (Bai dou) | Shanxi | China | China | 1998 | IV |
| 603570A | Huang dou <1> | Shanxi | China | China | 1998 | IV |
| 603570B | (Huang dou <1>) | Shanxi | China | China | 1998 | IV |
| 603570C | (Huang dou <1>) | Shanxi | China | China | 1998 | IV |
| 603571A | Da bai dou | Shanxi | China | China | 1998 | II |
| 603571B | (Da bai dou) | Shanxi | China | China | 1998 | IV |
| 603571C | (Da bai dou) | Shanxi | China | China | 1998 | IV |
| 603573A | Jing dou | Shanxi | China | China | 1998 | II |
| 603574 | Huang dou | Shanxi | China | China | 1998 | IV |
| 603575 | Bai dou | Shanxi | China | China | 1998 | IV |
| 603576A | Bai da dou | Shanxi | China | China | 1998 | III |
| 603579 | Xiao bai jiao dou | Shanxi | China | China | 1998 | IV |
| 603582 | Da lu dou <1> | Shanxi | China | China | 1998 | III |
| 603583 | Da qing dou | Shanxi | China | China | 1998 | IV |
| 603585A | Xiao hei dou | Shanxi | China | China | 1998 | III |
| 603585B | (Xiao hei dou) | Shanxi | China | China | 1998 | III |
| 603586 | Xiao hei dou | Shanxi | China | China | 1998 | IV |
| 603587A | Hei jin gang | Shanxi | China | China | 1998 | I |
| 603587B | (Hei jin gang) | Shanxi | China | China | 1998 | IV |
| 603587C | (Hei jin gang) | Shanxi | China | China | 1998 | IV |
| | | | | | | |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|--------|--------|---------|---------|----------|--------------|------------------|----------|----------------|--------------|---------------|
| 603549 | III | N | P | Т | Б | Can | D., | Ţ | D1 | D1 | Sdef | 2NI |
| | III | N N | P P | | E E | Ssp N | Br Bl | I | Bl Bl | Bl | Suei | 3N 5F |
| 603550 | | | | Lt T | | | | I | | Bl | | |
| 603551A | IV | N | P | | Sa | N N | Bl D. | I | Bl | Bl | | 5F |
| 603551B | IV | N | W | T | E | N N | Br | Lb | Bl | Bl | | 5F |
| 603551C | IV | D | P | T | Е | N | Bl | Lb | Bl | Bl | | 5F |
| 603552 | III | S | P | T | E | Ssp | Br | I | Rbr | Rbr | | 3N |
| 603553 | III | S | P | T | E | Ssp | Br | I | Rbr | Rbr | G. | 4N |
| 603554A | IV | N | P | T | Sa | Ssp | Br | Lb | Gnbr | Rbr | St | 4F |
| 603554B | IV | N | P | Lt | Е | Ssp | Br | Lb | Gnbr | Rbr | St | 4N |
| 603555 | IV | N | P | T | E | N | Br | Lb | Br | Rbr | St | 5F |
| 603556 | III | N | P | T | E | N | Tn | I | Y | Brbl | Vhil | 5N |
| 603557 | IV | N | P | T | Sa | N | Tn | I | Y | Br | | 5N |
| 603558 | III | N | P | G | E | N | Tn | D | Y | Bf | | 5N |
| 603559 | IV | N | P | T | E | N | Br | I | Y | Br | | 4N |
| 603560 | III | N | P | T | E | N | Br | I | Y | Br | | 5N |
| 603561 | I | S | W | G | E | N | Br | S | Y | Y | | 3N |
| 603562A | II | N | W | T | E | N | Br | I | Y | Brbl | Sabh, Vhil | 3N |
| 603562B | III | D | W | T | E | N | Br | I | Y | Bl | | 3N |
| 603563A | IV | N | P | G | E | N | Br | I | Y | Bf | | 4N |
| 603563B | IV | N | P | T | E | N | Br | I | Y | Brbl | Vhil | 3N |
| 603564A | IV | N | P | T | E | N | Bl | I | Y | Br | | 3N |
| 603564B | IV | N | P | T | E | N | Br | I | Y | Br | | 4N |
| 603564C | IV | S | P | T | E | N | Br | I | Y | Br | | 5N |
| 603567A | III | D | W | G | E | N | Br | I | Y | Bf | Sdef | 3N |
| 603567B | IV | S | P | G | Sa | N | Br | I | Y | Bf | | 3N |
| 603568 | IV | N | P | T | E | N | Br | I | Y | Brbl | Vhil | 4N |
| 603569A | IV | N | P | Ng | E | N | Br | D | Y | Br | | 4N |
| 603569B | IV | N | W | T | E | N | Tn | I | Y | Br | | 5N |
| 603570A | IV | N | P | T | E | N | Tn | D | Y | Br | | 5N |
| 603570B | IV | N | P | Ng | E | N | Br | I | Y | Br | Sabh | 2N |
| 603570C | IV | N | W | G | E | N | Br | I | Y | Y | | 3N |
| 603571A | II | N | W | T | E | N | Br | I | Y | Bl | | 2N |
| 603571B | IV | N | W | T | E | N | Tn | I | Y | Bl | | 3N |
| 603571C | IV | N | W | T | E | N | Br | I | G | Bl | | 3N |
| 603573A | II | N | W | T | E | N | Br | Ī | Y | Bl | | 2N |
| 603574 | IV | N | P | G | E | N | Bl | Ī | Y | Ib | | 3N |
| 603575 | IV | N | P | G | E | N | Bl | Ī | Y | Ib | | 3N |
| 603576A | III | N | W | T | E | N | Br | Ī | Y | Brbl | Vhil | 4N |
| 603579 | IV | N | W | G | A | N | Tn | I | Y | Bf | V 1111 | 4F |
| 603582 | III | S | P | T | E | N | Bl | I | Gn | Brbl | Gnc, Vhil | 4N |
| 603583 | IV | N | P | T | E | N | Br | D | Gn | Bl | Abh | 3N |
| 603585A | III | N | P | T | E | N | Bl | I | Bl | Bl | Dab | 5F |
| 603585B | III | N | P | T | E | N | Bl | I | Bl | Bl | Dao | 5F |
| 603586 | IV | N | r P | T | E | N | Bl | I | Bl | Bl | | 5F |
| 603587A | I | N | W | T | E Sa | N | Dbr | I | Bl | Bl | | 3F 4N |
| 603587B | I IV | N | W | T | Sa E | N N | Bl | I | Вl | Bl | | 4N 5F |
| 603587С | IV IV | N | W | T | E E | | Bl | | Вl | | Dob | эг 4F |
| 00330/C | 1 V | 1.4 | ٧V | 1 | E | N | DI | I | DI | Bl | Dab | 4 Г |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|------------------|-------------|------------|---------|-----------|------------|---------|------------|-------------|------------|------------------------|------------------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | (cg sd ⁻¹) | (Mg ha ⁻¹) |
| 603549 | 705 | 927 | 3.5 | 145 | 4.0 | 1.0 | 1.0 | 3.3 | | 17.5 | 2.20 |
| 603550 | 725 | 1001 | 3.8 | 109* | 4.0 | 1.0 | 1.5 | 2.5 | | 8.8 | 2.43* |
| 603551A | 727 | 1009 | 3.3 | 104 | 4.0 | 1.0 | 2.0 | 3.0 | | 11.2 | 1.57 |
| 603551H | 807 | 1007 | 2.8 | 121 | 4.0 | 1.0 | 1.5 | 2.8 | | 8.0 | 1.71 |
| 603551C | 806 | 1015 | 3.3 | 104* | 1.5 | 1.0 | 1.5 | 2.3 | | 8.0 | 2.16 |
| 6035516 | 727 | 927 | 4.0 | 80* | 2.0 | 1.5 | 3.5 | 2.0 | | 9.0 | 2.10 |
| 603553 | 726 | 929 | 4.0 | 77* | 2.0 | 1.0 | 3.5 | 2.3 | | 10.3 | 2.46* |
| 603554A | 723 | 1007 | 3.3 | 132* | 4.0 | 1.0 | 1.5 | 3.0 | | 18.0 | 2.36 |
| 603554B | 726 | 1011 | 3.3 | 99 | 4.0 | 1.0 | 1.5 | 2.8 | | 18.2 | 1.74 |
| 603555 603555 | 725 | 1013 | 4.0 | 141 | 4.0 | 1.0 | 1.0 | 2.3 | | 16.5 | 1.98 |
| 603556 | 715 | 927 | 4.5 | 88 | 4.0 | 1.0 | 1.5 | 3.3 | 4.5 | 10.0 | 1.81 |
| 603557 | 717 | 1002 | 4.3 | 69 | 4.0 | 1.0 | 1.0 | 3.5 | 3.5 | 12.7 | 2.17 |
| 603558 | 717 | 1002 | 3.8 | 95 | 4.0 | 1.0 | 3.5 | 3.5 | 4.0 | 13.4 | 2.00 |
| 603559 | 713* | 1001 | 3.8 | 140* | 4.0 | 1.0 | 2.0 | 2.5 | 3.5 | 10.8 | 1.92 |
| 603560 | 710* | 1003 | 3.5 | 99* | 4.0 | 1.0 | 1.0 | 2.3 3.8* | 3.3 4.5 | 10.8 | 1.55* |
| 603561 | 623 | 820 | 1.5^ | 52* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 15.3^ | 1.91^ |
| 603562A | 715 | 919 | 2.3 | 86 | 2.5 | 1.5 | 2.5 | 3.5 | 3.0 | 17.3 | 2.34 |
| 603562B | 719 | 1001 | 2.5 | 90 | 1.5 | 1.5 | 2.0 | 3.3 | 3.0 | 18.8 | 2.34 |
| 603563A | 719 | 1001 | 3.5 | 120* | 4.0 | 1.0 | 1.0 | 3.3 | 3.0 | 12.5 | 2.11 |
| 603563B | 723 729 | 1003 | 2.5 | 110 | 4.0 | 1.0 | 2.5 | 2.5 | 3.5 | 15.0 | 2.08 1.99 |
| 603564A | 729 714 | 1009 | 3.8 | 122* | 3.5 | 1.0 | 2.3 1.5 | 3.3 | 3.5 | 12.3 | 2.07 |
| | 714 | 1003 | 3.8 | 122** | 3.3 4.0 | 1.0 | | 3.3 3.3 | 3.3 4.0 | 12.5 15.6* | |
| 603564B | | | | | | | 1.0 | 3.0 | | | 1.62 |
| 603564C | 711 | 1013* | 3.5 | 113 | 2.0 | 1.0 | 1.0 | | 4.0 | 15.2 | 1.55 |
| 603567A | 723 | 930 | 3.5 | 81 99* | 1.5 | 1.5 | 2.0 | 3.8 | 3.0 | 16.9 | 2.22 |
| 603567B | 729 720* | 1015 | 3.0 | | 2.0 | 1.0 | 1.0 | 3.0 | 2.0 | 13.6 | 1.57 |
| 603568 | 730* | 1017 | 3.8 | 124 | 4.0 | 1.0 | 1.0 | 2.0 | 3.0 | 10.5 | 2.10 |
| 603569A | 725 | 1009 | 3.8 | 105 | 3.0 | 1.0 | 1.0 | 3.0 | 3.0 | 10.9 | 1.73 |
| 603569B | 729 725 | 1007 | 3.5 | 99 | 4.0 | 1.0 | 1.5 | 2.8 | 4.0 | 9.7 | 1.60 |
| 603570A | 725 | 1004 | 4.0 | 112 | 4.0 | 1.0 | 1.5 | 3.0 | 5.0 | 13.4 | 1.42 |
| 603570B | 721 | 1012 | 3.3 | 66* | 4.0 | 1.0 | 1.0 | 2.3 | 3.5 | 13.4 | 2.45 |
| 603570C | 725 | 1016 | 2.3 | 106 | 4.0 | 1.0 | 1.0 | 2.8 | 3.0 | 16.4 | 1.77 |
| 603571A | 627* | 916 | 2.3 | 108* | 4.0 | 1.0 | 1.0 | 2.8 | 2.5 | 18.1 | 2.95 |
| 603571B | 710 | 1003 | 2.3 | 102 | 3.0 | 1.0 | 1.0 | 3.3 | 1.5 | 16.7 | 3.05 |
| 603571C | 710* | 1004 | 3.8 | 115 | 3.0 | 1.0 | 2.0 | 2.5 | 2.5 | 13.0 | 2.40 |
| 603573A | 627* | 917 | 2.5 | 108* | 4.0 | 1.0 | 1.0 | 3.0 | 2.0 | 18.0 | 2.81 |
| 603574 | 725 | 1010 | 4.3 | 155* | 4.0 | 1.0 | 1.0 | 3.3 | 2.0 | 12.5 | 2.33 |
| 603575 | 725 | 1010 | 4.3 | 138* | 3.0* | 1.0 | 1.5 | 3.3 | 2.0 | 12.9 | 2.24 |
| 603576A | 718 | 927 | 3.3 | 113 | 4.0 | 1.0 | 3.5 | 3.0 | 3.0 | 10.2 | 2.03 |
| 603579 | 731 | 1011 | 3.8 | 95 | 3.5 | 1.0 | 1.5 | 2.8 | 3.0 | 9.3 | 1.79 |
| 603582 | 705 | 920 | 3.5 | 67 | 2.0 | 1.0 | 2.0* | 3.3 | 3.0 | 11.9 | 1.46 |
| 603583 | 723 | 1013 | 3.5 | 113 | 4.0 | 1.0 | 1.0 | 2.8 | 2.5 | 16.2 | 2.20* |
| 603585A | 709* | 921 | 4.0 | 102* | 5.0 | 1.0 | 1.0 | 3.0 | | 7.6 | 1.94 |
| 603585B | 709* | 921 | 4.3* | 89* | 4.5 | 1.0 | 1.0 | 3.0 | | 6.8 | 1.97* |
| 603586 | 709* | 1003 | 4.5 | 131 | 5.0 | 1.0 | 1.0 | 3.3 | | 8.6 | 1.86 |
| 603587A | 629 | 901^ | 3.5^ | 114 | 4.0^ | 1.0^ | 2.0^ | 2.5^ | | 11.0^ | 2.45^ |
| 603587B | 709* | 1003 | 4.8 | 125* | 4.5 | 1.0 | 2.5 | 2.8 | | 9.1 | 2.16 |
| 603587C | 731 | 1014 | 5.0 | 121* | 5.0 | 1.0 | 1.0 | 2.5 | | 8.7 | 1.78 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | Seed composition | | sition | | | | |
|--------------------|-----------|---------------------------|---------------------------|----------|---------|-------|----------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603549 | III | 44.9 ^w | 19.2 ^w | 11.3 | 3.8 | 24.6 | 53.6 | 6.6 | |
| 603550 | III | 45.5 ^w | 14.8 ^w | 12.2 | 2.9 | 20.3 | 56.9 | 7.7 | |
| 603551A | IV | 46.5 ^w | 16.5 ^w | 11.6 | 3.9 | 24.5 | 52.8 | 7.2 | |
| 603551B | IV | 42.3 ^w | 14.5 ^w | 13.2 | 3.1 | 19.3 | 54.9 | 9.6 | |
| 603551C | IV | 42.3 43.9 ^w | 14.3 13.7 ^w | 14.0 | 2.9 | 17.4 | 56.3 | 9.0 9.4 | |
| 603551C | III | 43.9 42.1 ^w | 15.7 16.8 ^w | 12.9 | 3.3 | 23.6 | 52.0 | 8.1 | |
| 603553 | III | 42.1 42.5 ^w | 16.8 ^w | 13.0 | 3.3 | 24.4 | 51.6 | 7.6 | |
| | IV | 42.3 46.4 ^w | 16.8 16.1 ^w | 14.2 | 3.3 | 24.4 | 51.0 | 6.8 | |
| 603554A | IV | 48.1 ^w | 16.1 ^w | 13.5 | 3.7 | 26.2 | 50.1 | | |
| 603554B | | | | | | | | 6.7 | |
| 603555 | IV | 45.8 ^w | 17.5 ^w | 13.7 | 3.2 | 20.5 | 55.7 | 6.8 | |
| 603556 | III | 45.1 ^w | 15.6 ^w | 13.0 | 3.3 | 24.0 | 53.1 | 6.6 | |
| 603557 | IV | 45.4 ^w | 16.7 ^w | 11.4 | 3.7 | 20.6 | 57.0 | 7.3 | |
| 603558 | III | 46.7 ^w | 15.1 ^w | 13.0 | 3.4 | 20.3 | 55.7 | 7.6 | |
| 603559 | IV | 45.6 ^w | 15.8 ^w | 12.0 | 3.4 | 20.8 | 55.2 | 8.7 | |
| 603560 | III | 48.4^{w} | 18.0^{w} | 10.6 | 4.4 | 35.3 | 45.4 | 4.2 | |
| 603561 | I | 39.7^ | 23.2^ | 12.6^ | 4.8^ | 29.7^ | 47.8^ | 5.1^ | |
| 603562A | II | 41.2 | 17.4 | 12.4 | 3.4 | 25.0 | 52.2 | 6.9 | |
| 603562B | III | 41.9 | 17.9 | 10.2 | 4.4 | 27.5 | 51.8 | 6.0 | |
| 603563A | IV | 46.5 | 15.2 | 11.8 | 3.7 | 24.5 | 53.6 | 6.4 | |
| 603563B | IV | 44.7^{w} | 17.7^{w} | 13.7 | 3.6 | 25.4 | 51.2 | 6.2 | |
| 603564A | IV | 47.0^{w} | 16.3 ^w | 12.0 | 3.3 | 20.6 | 55.7 | 8.4 | |
| 603564B | IV | 47.6^{w} | 15.1 ^w | 13.2 | 3.9 | 25.5 | 50.3 | 7.1 | |
| 603564C | IV | $47.7^{\rm w}$ | 14.6^{w} | 13.1 | 4.1 | 25.4 | 50.1 | 7.3 | |
| 603567A | III | 41.0 | 18.3 | 10.8 | 4.7 | 22.6 | 55.3 | 6.5 | |
| 603567B | IV | 46.1 | 15.5 | 10.0 | 3.4 | 20.0 | 58.7 | 8.0 | |
| 603568 | IV | 40.2 | 16.0 | 10.8 | 3.2 | 19.2 | 57.8 | 8.9 | |
| 603569A | IV | 42.7 | 15.5 | 11.8 | 3.8 | 16.6 | 58.6 | 9.2 | |
| 603569B | IV | 45.0 ^w | 15.5 ^w | 13.8 | 3.0 | 20.8 | 53.8 | 8.6 | |
| 603570A | IV | 46.4 ^w | 16.3 ^w | 13.4 | 3.4 | 22.3 | 53.9 | 7.0 | |
| 603570A 603570B | IV | 40.4 42.5 ^w | 10.3 ^w | 10.8 | 3.4 | 21.8 | 57.3 | 7.0 6.9 | |
| 603570 Б | IV | | | 10.8 | 3.3 | 22.3 | | 6.9 | |
| | I v II | 44.2 | 15.9 | | | | 57.0 | | |
| 603571A | | 43.0 | 18.5 | 11.4 | 4.4 | 30.1 | 48.7 | 5.4 | |
| 603571B | IV | 42.5 | 19.1 | 9.6 | 4.4 | 24.9 | 54.7 | 6.4 | |
| 603571C | IV | 42.3 ^w | 19.5 ^w | 12.5 | 3.6 | 26.4 | 50.9 | 6.6 | |
| 603573A | II | 41.6 | 18.8 | 10.5 | 4.6 | 34.7 | 45.0 | 5.1 | |
| 603574 | IV | 41.7 | 17.1 | 11.3 | 3.6 | 20.5 | 57.2 | 7.4 | |
| 603575 | IV | 42.1 | 17.1 | 13.0 | 3.9 | 21.8 | 55.0 | 6.4 | |
| 603576A | III | 44.1 | 16.3 | 11.8 | 4.7 | 22.3 | 53.9 | 7.3 | |
| 603579 | IV | 44.9 | 14.5 | 10.3 | 3.4 | 19.9 | 58.0 | 8.5 | |
| 603582 | III | 45.9^{w} | 15.8^{w} | 12.6 | 3.8 | 26.5 | 50.8 | 6.4 | |
| 603583 | IV | 47.1^{w} | 16.8^{w} | 13.2 | 3.7 | 23.0 | 52.8 | 7.3 | |
| 603585A | III | 44.3 ^w | 15.7^{w} | 13.5 | 3.1 | 18.7 | 56.6 | 8.0 | |
| 603585B | III | 44.1^{w} | 15.9^{w} | 13.7 | 3.4 | 20.2 | 54.2 | 8.5 | |
| 603586 | IV | 44.7^{w} | 15.4^{w} | 14.0 | 3.3 | 18.8 | 55.4 | 8.6 | |
| 603587A | I | 42.0 ^w ^ | 17.2 ^w ∧ | 12.5^ | 4.0^ | 23.7^ | 53.0^ | 6.8^ | |
| 603587B | IV | 44.4^{w} | 14.0^{w} | 13.0 | 3.6 | 20.9 | 54.8 | 7.7 | |
| 603587C | IV | 45.1 ^w | 14.2 ^w | 13.7 | 4.2 | 20.7 | 52.9 | 8.4 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country | Year introduced | Maturity |
|---------|-------------------------------|----------------|---------------|-------------|--------------------|----------|
| PI No. | identifier | of origin | origin | acquisition | or released | |
| 603589 | Da huang dou | Fujian | China | China | 1998 | III |
| 603592 | Xia men teng zi dou | Fujian | China | China | 1998 | IV |
| 603593 | Tong an you zi dou | Fujian | China | China | 1998 | IV |
| 603594 | Xia men da hong dou | Fujian | China | China | 1998 | II |
| 603596 | Bai hua gu tian dou | Fujian | China | China | 1998 | III |
| 603597 | Pu xi 542 | Fujian | China | China | 1998 | III |
| 603598A | Pu dou 426 | Fujian | China | China | 1998 | IV |
| 603599A | Da ye huang | Fujian | China | China | 1998 | IV |
| 603599B | (Da ye huang) | Fujian | China | China | 1998 | IV |
| 603611A | Wu feng shai lu qing | Hubei | China | China | 1998 | IV |
| 603612 | Jia yu liu yue bao | Hubei | China | China | 1998 | III |
| 603613 | Bai mao zao | Hubei | China | China | 1998 | II |
| 603614A | | Hubei | China | China | 1998 | III |
| 603615A | 70-2 | Hubei | China | China | 1998 | V |
| 603620 | 82-6 | Hubei | China | China | 1998 | IV |
| 603623 | | Hubei | China | China | 1998 | IV |
| 603645 | Ba yue zao Hei huang dou | Hubei | China | China | 1998 | IV |
| 603647 | Hei dou | Hubei | China | China | 1998 | IV IV |
| 603648 | Hei se da dou | | China | China | 1998 | IV IV |
| 603653 | | Hubei Hubei | China | China | 1998 | IV IV |
| | Cha huang dou | | | | | |
| 603654 | Liu yue bao | Hunan | China | China | 1998 | II |
| 603655 | Zong yi dou | Hunan | China | China | 1998 | III |
| 603656 | Jiang nan he dou | Hunan | China | China | 1998 | II |
| 603658 | Hua rong liu yue bao yi | Hunan | China | China | 1998 | II |
| 603660 | Xiang xiang huang dou bing | Hunan | China | China | 1998 | II |
| 603661A | | Hunan | China | China | 1998 | II |
| 603662A | Xiang xiang qing dou | Hunan | China | China | 1998 | II |
| 603662B | (Xiang xiang qing dou) | Hunan | China | China | 1998 | II |
| 603663 | Shao yang hei dou | Hunan | China | China | 1998 | II |
| 603664 | An hua he dou | Hunan | China | China | 1998 | II |
| 603666 | Li gong gang huang dou No. 2 | Hunan | China | China | 1998 | II |
| 603667A | Wen bai xiang hei dou No. 2 | Hunan | China | China | 1998 | II |
| 603667B | (Wen bai xiang hei dou No. 2) | Hunan | China | China | 1998 | II |
| 603668A | 1 | Hunan | China | China | 1998 | II |
| 603670 | Shuang long cun da hei dou | Hunan | China | China | 1998 | III |
| 603671 | Tong shan huang mao | Jiangsu | China | China | 1998 | IV |
| 603672A | Xin yi gua pi lan | Jiangsu | China | China | 1998 | II |
| 603673A | Dong hai bai ta me jia cao | Jiangsu | China | China | 1998 | III |
| 603673C | (Dong hai bai ta me jia cao) | Jiangsu | China | China | 1998 | IV |
| 603673D | (Dong hai bai ta me jia cao) | Jiangsu | China | China | 1998 | IV |
| 603674 | Huai yin lao ba dou yi | Jiangsu | China | China | 1998 | III |
| 603675 | Huai yin gua dou jia | Jiangsu | China | China | 1998 | III |
| 603676 | Guan yun hong mao you yi No. | - | China | China | 1998 | IV |
| 603678A | Feng xian xiao huang dou | Jiangsu | China | China | 1998 | IV |
| 603678B | (Feng xian xiao huang dou) | Jiangsu | China | China | 1998 | IV |
| 603679 | Feng xian bai pi | Jiangsu | China | China | 1998 | IV |
| 603682 | Tong shan xiao bai pi | Jiangsu | China | China | 1998 | III |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe color | | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|-------------|----|---------|---------|-----|--------|----------|----------------|--------------|---------------|
| | | | | | TOITI | - | | | | | Other traits | - |
| 603589 | III | D | W | T | A | N | Tn | I | Y | Br | | 3N |
| 603592 | IV | N | P | T | E | N | Br | I | Rbr | Rbr | | 3N |
| 603593 | IV | D | W | T | E | N | Br | I | Br | Rbr | | 4N |
| 603594 | II | N | W | Lt | Α | N | Br | I | Rbr | Rbr | | 3N |
| 603596 | III | D | W | T | A | N | Tn | I | Y | Br | | 3N |
| 603597 | III | D | P | Lt | Sa | N | Tn | I | Y | Bl | | 3N |
| 603598A | IV | D | W | Lt | Sa | N | Tn | I | Y | Bl | | 3N |
| 603599A | IV | D | W | Lt | Sa | N | Tn | I | Y | Bl | | 3N |
| 603599B | IV | N | P | T | A | N | Br | I | Y | Br | Sdef | 3N |
| 603611A | IV | S | W | Lt | Α | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603612 | III | D | W | G | A | Ssp | Br | I | Y | Bf | | 4N |
| 603613 | II | S | P | G | Sa | Ssp | Br | I | Y | Bf | | 3N |
| 603614A | III | D | W | G | A | N | Br | I | Y | Bf | Na, Vhil | 3N |
| 603615A | V | D | P | T | A | N | Tn | I | Y | Br | , | 3N |
| 603620 | IV | D | W | Lt | A | N | Tn | I | Y | Br | | 3F |
| 603623 | IV | S | W | T | A | N | Br | I | Y | Br | | 3N |
| 603645 | IV | S | W | T | A | N | Br | Ī | B1 | Bl | Flk, Sdef | 3N |
| 603647 | IV | S | W | T | A | N | Br | Ī | Bl | Bl | Sdef | 3N |
| 603648 | IV | S | W | T | A | N | Br | I | B1 | Bl | Flk, Sdef | 3N |
| 603653 | IV | D | P | T | A | N | Br | I | Rbr | Rbr | Sdef | 2N |
| 603654 | II | S | P | T | Sa | Ssp | Br | I | Bl | Bl | Suci | 3N |
| 603655 | III | D | P | Lt | A | Ssp | Br | I | Br | Rbr | | 3N |
| 603656 | II | D | P | Lt | A | Ssp | Br | I | Br | Rbr | | 3N |
| 603658 | II | S | W | T | Sa | N N | Tn | I | Y | Brbl | Vhil | 4N |
| 603660 | II | S | P VV | T | Sa A | N | Tn | I | Y | Bl | VIIII | 3N |
| | II | S | W | T | | N | | I | Gn | Brbl | Vhil | 3N |
| 603661A | | | | | A | | Br | | | | | |
| 603662A | II | D | W | Lt | A | Ssp | Br | I | Bl Cr | Bl | Sdef | 3N |
| 603662B | II | S | W | T | A | N | Br | I | Gn | Brbl | Vhil | 3N |
| 603663 | II | D | W | Lt | A | Ssp | Br | I | Bl | Bl | Sdef | 3N |
| 603664 | II | D | P | T | E | Ssp | Br | I | Br | Rbr | Sdef | 3N |
| 603666 | II | N | P | G | A | N | Tn | I | Y | Bf | G 1 6 | 3N |
| 603667A | II | D | W | T | E | N | Tn | I | B1 | Bl | Sdef | 3F |
| 603667B | II | D | P | T | E | Ssp | Br | I | B1 | Bl | Sdef, Sflk | 3N |
| 603668A | II | D | P | T | E | N | Br | I | Br | Rbr | | 3N |
| 603670 | III | S | W | T | A | N | Tn | I | Bl | Bl | Flk | 4F |
| 603671 | IV | D | P | T | Sa | N | Br | I | G | Bl | | 4N |
| 603672A | II | D | P | G | A | Ssp | Tn | I | Y | Bf | | 3N |
| 603673A | III | S | W | T | Sa | N | Tn | I | Y | Bl | | 3N |
| 603673C | IV | S | P | T | Sa | N | Br | D | Y | Brbl | Vhil | 3N |
| 603673D | IV | S | P | G | A | Ssp | Tn | I | Y | Bf | | 2N |
| 603674 | III | S | P | G | Sa | Ssp | Br | I | Y | Ib | Vhil | 3N |
| 603675 | III | S | P | G | Sa | N | Br | I | Y | Dib | | 3N |
| 603676 | IV | S | P | T | A | N | Tn | I | Y | Bl | | 2N |
| 603678A | IV | S | W | G | Sa | N | Br | I | Y | Bf | | 3N |
| 603678B | IV | D | P | G | Sa | N | Br | I | Y | Bf | | 4N |
| 603679 | IV | S | W | G | A | N | Tn | I | Y | Bf | Sabh | 3N |
| 603682 | III | N | P | G | Sa | N | Tn | I | Y | Ib | Vhil | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|---------|------------|-------------|-------------|-----------|------------|-------------|-------------|-------------|-------------|----------------|------------------------|
| | date | date | Lodging | Heigh | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | (score) | (score) | - | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 603589 | 725 | 925 | 2.5 | 66 | 1.0 | 3.0 | 5.0 | 2.5 | 3.5 | 11.5 | 0.94 |
| 603592 | 727 | 1005 | 3.8 | 136* | 4.0 | 1.5 | 3.0 | 2.8 | | 9.0 | 1.12 |
| 603593 | 725 | 1001 | 3.8 | 90* | 1.0 | 1.5 | 2.5 | 3.0 | | 10.0 | 1.41 |
| 603594 | 717 | 907 | 2.0^ | 75* | 2.0^ | 2.0^ | - | 2.0^ | | 12.6^ | 0.97^ |
| 603596 | 725 | 919 | 3.0 | 64 | 1.0 | 3.0 | 5.0 | 2.3 | 4.5 | 10.4 | 0.79 |
| 603597 | 724 | 923 | 2.3 | 73 | 1.5 | 2.5 | 4.0 | 2.0 | 3.5 | 10.4 | 1.93 |
| 603598A | 731 | 1013 | 2.0 | 60 | 1.0 | 2.5 | 4.0 | 2.5 | 1.0 | 15.2 | 1.81^ |
| 603599A | 802 | 1011 | 2.0 | 57 | 1.0 | 3.5* | 4.5 | 2.3 | 1.0 | 15.2 | 1.40 |
| 603599B | 720 | 1005 | 3.5 | 137* | 4.0 | 1.0 | 1.5 | 2.8 | 2.0 | 19.0 | 2.68 |
| 603611A | 726 | 1010 | 3.5 | 99* | 2.0 | 1.0 | 1.5 | 3.0 | 3.0 | 13.0 | 1.12 |
| 603612 | 727 | 923 | 2.8 | 62* | 1.0 | 1.0 | 1.5 | 2.8 | 5.0 | 9.7 | 1.13 |
| 603613 | 727 | 915 | 3.3 | 90* | 2.0 | 3.0 | 5.0 | 2.8 | 3.0 | 10.4 | 1.25 |
| 603614A | 721 | 925 | 4.0 | 68 | 1.0 | 2.5 | 4.0* | 2.3 | 1.0 | 12.6 | 0.94 |
| 603615A | 807 | 1024 | 3.0 | 111 | 1.5 | 1.0 | 2.0 | 2.8 | 3.0 | 12.8 | 1.05 |
| 603620 | 728 | 1005 | 2.5 | 85 | 1.0 | 2.0 | 3.5 | 2.5 | 1.0 | 19.1 | 1.72 |
| 603623 | 805 | 1011 | 2.8 | 109 | 2.0 | 1.0 | 1.5 | 2.0 | 4.0 | 9.9 | 1.72 |
| 603645 | 808 | 1011 | 3.0 | 92 | 2.0 | 1.0 | 1.0 | 2.8 | | 9.9 9.9 | 1.11 |
| 603647 | 808 | 1013 | 3.0 | 122 | 2.0 | 1.0 | 1.5 | 2.8 | | 10.5 | 1.11 |
| 603648 | 807 | 1012 | 4.3 | 109* | 2.0 | 1.5 | 2.5 | 2.5 | | 10.3 | 1.26 |
| 603653 | 804 | 1012 | 2.8 | 85 | 1.0 | 1.5 | 2.5* | 2.5 | | 13.9 | 1.50 |
| 603654 | 719 | 905 | 3.0 | 69 | 2.0 | 1.0 | 4.0* | 2.5 | | 6.8 | 1.43 |
| 603655 | 719 | 903 | 2.8 | 58 | 1.5 | 1.0 | | 3.0 | | 10.6 | 0.60 |
| | 723 721 | | 2.8 | 58 52 | | 1.5 | 1.5 | 3.0 | | 10.6 | 0.60 |
| 603656 | 721 | 915 905 | 3.0 | 32 88 | 1.5 | 1.5 | 4.0 | 2.8 | 3.5 | 9.4 | |
| 603658 | 713 726 | | 2.5 | 31 | 2.0 2.0 | 4.5 | 4.5 | 2.5 | 3.0 | 9.4 7.7 | 1.55 0.24 |
| 603660 | 720 | 915 | | | | | 5.0 | 2.3 | | | |
| 603661A | | 913 | 3.3 2.5 | 49 | 2.0 | 2.5 | 4.5 | 2.8 | 2.5 | 8.1 | 0.51 0.77 |
| 603662A | 719 731 | 909 | | 45 47* | 1.0 | 1.0 | 3.5 | 2.8 | 2.5 | 11.0 7.9 | |
| 603662B | | 913 | 3.0 | 47* | 2.0 | 2.5 | 4.5 | | 2.5 | | 0.38 |
| 603663 | 719 | 909 | 2.3 | 59 | 1.0 | 1.0 | 3.5 | 2.5 | | 10.9 | 0.82 |
| 603664 | 716 721 | 907 | 2.3 2.5^ | 73 76* | 1.0 | 1.0 | 2.5 5.0^ | 2.5 2.5^ | 2.0 | 14.4 | 1.74 |
| 603666 | | 901^ 907 | | | 4.0^ | 1.0^ 1.5 | 3.5* | 2.5 | 2.0 | 10.6^ | 1.50^ |
| 603667A | 714 | | 3.3 | 66 75 | 1.0 | 1.5 | | 3.3 | | 11.6 | 1.42 |
| 603667B | 719 | 911 | 3.3 | | 1.5 | | 4.5 | | | 13.6 | 1.12 |
| 603668A | 714 | 907 | 2.5 | 77 55 | 1.0 | 1.5 | 5.0 | 2.8 | | 15.2 | 1.59 |
| 603670 | 727 725 | 923 | 2.8 | 55 76 | 2.0 | 2.0 | 3.0* | 2.5 | 4 O* | 14.2 | 1.07 |
| 603671 | 725 | 1005 | 3.3 | 76 | 1.0 | 2.0 | 4.5 | 2.8 | 4.0* | 11.0 | 2.13 |
| 603672A | 713 | 905 | 3.0 | 67 | 1.5 | 1.5 | 4.5 | 2.0 | 2.0 | 11.8 | 1.97 |
| 603673A | 719 | 925 | 2.8 | 61* | 2.0 | 1.0 | 2.5 | 2.5 | 3.0 | 13.3 | 1.76 |
| 603673C | 719 | 1003 | 4.8 | 124 | 2.0 | 1.0 | 2.0 | 3.0 | 1.0 | 18.1 | 1.71 |
| 603673D | 727 | 1007 | 3.0 | 104* | 2.0 | 1.0 | 3.0 | 2.3 | 1.5 | 15.3 | 1.76 |
| 603674 | 723 | 919 | 3.8 | 103 | 2.0 | 3.0 | 5.0 | 3.0 | 4.5 | 11.0 | 1.10 |
| 603675 | 723 | 924 | 3.8 | 95 | 2.0 | 1.5 | 2.5 | 2.5 | 4.0 | 12.2 | 1.78 |
| 603676 | 726 | 1002 | 3.3 | 89* | 2.0 | 2.0 | 4.0* | 2.5 | 3.0* | 12.4 | 1.50 |
| 603678A | 731 | 1015 | 3.5 | 158* | 2.0 | 1.0 | 1.5 | 2.3 | 2.5 | 10.3 | 1.85 |
| 603678B | 731 | 1003 | 4.0 | 106 | 1.0 | 1.0 | 2.5 | 2.3 | 2.0 | 11.5 | 2.18 |
| 603679 | 803 | 1006 | 3.5 | 99 | 2.0 | 1.0 | 1.0 | 2.5 | 3.5 | 13.4 | 1.62 |
| 603682 | 725 | 919 | 3.3 | 88 | 3.0 | 1.0 | 2.0* | 2.5 | 3.0 | 10.4 | 1.85 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | <u>nposition</u> | Oil compos | sition | | | |
|---------|----------|---------------------------|---------------------------|------------|---------|--------------|--------------|-----------|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| 503589 | III | 45.7 ^w | 14.6 ^w | 10.2 | 3.2 | 26.5 | 52.8 | 7.4 |
| 603592 | IV | 47.6^{w} | 15.5 ^w | 13.7 | 4.1 | 21.1 | 53.5 | 7.6 |
| 503593 | IV | 49.1^{w} | 15.1 ^w | 13.6 | 4.1 | 26.3 | 49.0 | 7.1 |
| 503594 | II | 44.9 ^w ^ | 16.9 ^w ∧ | 12.6^ | 3.5^ | 25.4^ | 50.4^ | 8.1^ |
| 503596 | III | 47.7 ^w | 14.5 ^w | 12.4 | 3.5 | 26.3 | 50.9 | 7.0 |
| 503597 | III | 47.4 ^w | 16.8 ^w | 11.1 | 4.2 | 23.5 | 53.1 | 8.1 |
| 503598A | IV | 44.1 | 15.5 | 10.9 | 4.0 | 25.3 | 52.9 | 6.9 |
| 603599A | IV | 44.5 | 15.8 | 11.0 | 3.3 | 22.8 | 55.4 | 7.5 |
| 603599B | IV | 41.1 | 17.3 | 10.3 | 3.8 | 25.3 | 53.5 | 7.2 |
| 503611A | IV | 47.0 | 14.5 | 10.9 | 3.8 | 23.1 | 54.6 | 7.6 |
| 603612 | III | 47.6 ^w | 15.4 ^w | 13.2 | 4.3 | 26.2 | 49.0 | 7.3 |
| 503613 | II | 43.9 | 15.4 | 10.9 | 5.3 | 28.7 | 47.3 | 7.8 |
| 603614A | III | 41.5 | 18.5 | 10.4 | 4.1 | 26.4 | 52.4 | 6.8 |
| 603615A | V | 43.7 | 16.1 | 9.4 | 4.1 | 25.5 | 52.4 | 8.2 |
| 603620 | v IV | 45.7 46.1^ | 16.1 14.9^ | 9.4 9.0 | 3.6 | 23.3 29.3 | 52.8 50.8 | 7.2 |
| 503623 | IV IV | 49.2 ^w | 14.9 ^w | 12.6 | 3.6 | 23.0 | 52.9 | 8.0 |
| | IV IV | 49.2 47.8 ^w | | | | | | |
| 603645 | | | 13.3 ^w | 13.0 | 3.8 | 22.5 | 52.2 | 8.5 |
| 503647 | IV | 49.5 ^w | 13.5 ^w | 12.0 | 4.0 | 23.2 | 52.3 | 8.6 |
| 503648 | IV | 47.5 ^w | 14.1 ^w | 11.9 | 3.4 | 20.1 | 55.8 | 8.8 |
| 603653 | IV | 46.5 ^w | 16.0 ^w | 12.0 | 3.3 | 24.8 | 52.2 | 7.6 |
| 603654 | II | 45.2 ^w | 14.2 ^w | 12.8 | 3.9 | 21.8 | 52.5 | 8.9 |
| 603655 | III | 46.0 ^w | 15.2 ^w | 13.3 | 3.3 | 27.8 | 48.2 | 7.3 |
| 603656 | II | 46.3 ^w | 13.9 ^w | 12.8 | 2.8 | 26.9 | 49.3 | 8.1 |
| 603658 | II | 45.2 ^w | 14.1 ^w | 11.3 | 3.8 | 27.3 | 48.9 | 8.7 |
| 603660 | II | 43.8 | 15.0 | 11.0 | 4.5 | 22.7 | 52.6 | 9.2 |
| 603661A | II | 46.3 ^w | 14.7 ^w | 13.0 | 4.2 | 24.1 | 51.0 | 7.6 |
| 603662A | II | 47.2^{w} | 15.1 ^w | 12.5 | 4.1 | 27.9 | 47.9 | 7.5 |
| 603662B | II | 48.9^{w} | 13.6^{w} | 13.2 | 4.1 | 23.9 | 51.1 | 7.7 |
| 03663 | II | 48.2^{w} | $15.0^{\rm w}$ | 12.5 | 4.1 | 27.6 | 48.2 | 7.6 |
| 03664 | II | 42.6^{w} | $16.8^{\rm w}$ | 12.7 | 3.5 | 33.5 | 44.2 | 6.1 |
| 603666 | II | 47.7^ | 14.5^ | 11.9^ | 3.8^ | 20.9^ | 54.6^ | 8.8^ |
| 603667A | II | 46.8^{w} | 15.8^{w} | 13.3 | 4.1 | 27.2 | 48.6 | 6.9 |
| 603667B | II | 45.9^{w} | 15.9 ^w | 13.0 | 4.9 | 29.8 | 46.0 | 6.3 |
| 603668A | II | 45.4^{w} | $16.1^{\rm w}$ | 12.7 | 3.6 | 34.5 | 43.2 | 6.0 |
| 603670 | III | 46.1^{w} | $15.7^{\rm w}$ | 12.5 | 4.2 | 29.3 | 47.9 | 6.1 |
| 503671 | IV | 45.8^{w} | 15.4 ^w | 13.2 | 3.7 | 24.4 | 51.8 | 6.9 |
| 603672A | II | 42.1 | 18.1 | 10.2 | 3.8 | 27.4 | 50.0 | 8.6 |
| 603673A | III | 42.6 | 16.6 | 10.7 | 4.3 | 30.5 | 48.5 | 6.0 |
| 603673C | IV | 41.8 | 17.4 | 11.3 | 5.9 | 30.1 | 46.7 | 5.9 |
| 603673D | IV | 43.1 | 17.0 | 10.8 | 4.4 | 24.9 | 52.3 | 7.6 |
| 603674 | III | 48.2 ^w | 16.4 ^w | 12.5 | 3.6 | 30.8 | 46.6 | 6.6 |
| 603675 | III | 46.9 ^w | 17.0 ^w | 14.8 | 3.5 | 24.8 | 49.6 | 7.3 |
| 603676 | IV | 46.6 ^w | 15.1 ^w | 10.2 | 4.1 | 28.3 | 50.8 | 6.6 |
| 603678A | IV | 44.2 | 15.9 | 10.2 | 3.8 | 22.2 | 54.7 | 8.6 |
| 603678B | IV | 48.5 | 13.8 | 11.6 | 3.8 | 20.7 | 54.8 | 9.1 |
| 603679 | IV | 46.1 ^w | 13.8 17.4 ^w | 11.6 | 4.3 | 27.3 | 50.8 | 6.0 |
| 503682 | III | 40.1 | 17.4 | 11.8 | 3.7 | 25.5 | 51.4 | 7.6 |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | Accession | Region | Country of | Country of | Year introduced | |
|---------|-------------------------------|-----------|---------------|----------------|--------------------|-------|
| PI No. | identifier | of origin | origin | acquisition | or released | group |
| 603683 | Pei xian lian mao sheng | Jiangsu | China | China | 1998 | IV |
| 603684 | Xin yi hei ke zi | Jiangsu | China | China | 1998 | IV |
| 603686 | Dong hai hei tie jia | Jiangsu | China | China | 1998 | IV |
| 603687A | Dong hai bai guo | Jiangsu | China | China | 1998 | IV |
| 603687B | (Dong hai bai guo) | Jiangsu | China | China | 1998 | IV |
| 603690 | Xu zhou ping ding wu | Jiangsu | China | China | 1998 | IV |
| 603691 | Su qian hong mao zi | Jiangsu | China | China | 1998 | IV |
| 603692 | Si hong xiao ya dou | Jiangsu | China | China | 1998 | IV |
| 603694A | Lian shui bai hua qiu | Jiangsu | China | China | 1998 | III |
| 603694B | (Lian shui bai hua qiu) | Jiangsu | China | China | 1998 | IV |
| 603698B | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | I |
| 603698D | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | Ī |
| 603698E | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | Ī |
| 603698H | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | Ī |
| 603698I | (Dan yang shui bai dou) | Jiangsu | China | China | 1998 | I |
| 603704A | Ya que yan | Jiangxi | China | China | 1998 | I |
| 603704R | (Ya que yan) | Jiangxi | China | China | 1998 | II |
| 603705A | Liu yue huang | Jiangxi | China | China | 1998 | III |
| 603705A | Huang dou | Jiangxi | China | China | 1998 | IV |
| 603700A | Hu kou cha dou | Jiangxi | China | China | 1998 | II |
| 603707 | Hua lian ba | Sichuan | China | China | 1998 | IV |
| 603711A | Wen jiang san ke dou | Sichuan | China | China | 1998 | IV |
| 603716 | Wen jiang huang ke zi | Sichuan | China | China | 1998 | III |
| 603717 | Da yi er zao huang | Sichuan | China | China | 1998 | III |
| 603717 | Xin jin bai mao zi | Sichuan | China | China | 1998 | IV |
| 603718B | (Xin jin bai mao zi) | Sichuan | China | China | 1998 | IV |
| 603718B | Eng xi liu yue huang (xiao) | Sichuan | China | China | 1998 | II |
| 603719A | (Eng xi liu yue huang (xiao)) | Sichuan | China | China | 1998 | IV |
| 603719B | | Sichuan | China | China | 1998 | III |
| 6037190 | (Eng xi liu yue huang (xiao)) | Sichuan | China | China | 1998 | IV |
| 603723 | You yang qing dou Chun dou | | China | China | 1998 | III |
| | | Sichuan | China | | 1998 | IV |
| 603724A | Liu yue huang | Sichuan | China | China China | 1998 | IV |
| 603724C | (Liu yue huang) | Sichuan | | | | |
| 603725 | Qiao wo huang dou | Sichuan | China | China | 1998 | IV |
| 603726 | Qing hu dou | Sichuan | China | China | 1998 | IV |
| 603727 | Hei da dou | Sichuan | China | China | 1998 | I |
| 603728 | Hei dou | Sichuan | China | China | 1998 | II |
| 603729 | Hie huang dou | Sichuan | China | China | 1998 | III |
| 603735A | Lu pi dou | Sichuan | China | China | 1998 | IV |
| 603735B | (Lu pi dou) | Sichuan | China | China | 1998 | IV |
| 603738 | Da hei dou | Sichuan | China | China | 1998 | IV |
| 603742A | 8601 Wei -1 | Sichuan | China | China | 1998 | IV |
| 603742B | (8601 Wei -1) | Sichuan | China | China | 1998 | IV |
| 603742D | (8601 Wei -1) | Sichuan | China | China | 1998 | IV |
| 603743A | No. 6 | Sichuan | China | China | 1998 | IV |
| 603743B | (No. 6) | Sichuan | China | China | 1998 | IV |
| 603744 | Zao huang dou | Sichuan | China | China | 1998 | II |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flowe | | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|--------|----|----|---------|-----|--------|-----|----------------|--------------|---------------|
| | | | | | | - | | | | | Other traits | |
| 603683 | IV | S | W | G | Sa | N | Br | I | Y | Bf | | 4N |
| 603684 | IV | S | P | G | A | N | Br | I | Y | Bf | | 2N |
| 603686 | IV | S | P | G | A | N | Br | I | Y | Ib | | 3N |
| 603687A | IV | D | W | G | A | N | Br | I | Y | Bf | Vhil | 3N |
| 603687B | IV | S | W | G | A | Ssp | Br | I | Y | Bf | | 3N |
| 603690 | IV | S | P | G | A | N | Br | I | Y | Bf | | 3N |
| 603691 | IV | D | P | T | A | N | Br | I | Y | Bl | | 3N |
| 603692 | IV | D | W | T | A | Sp | Br | I | Y | Brbl | Vhil | 4N |
| 603694A | III | D | P | G | Sa | N | Tn | I | Y | Bf | | 4N |
| 603694B | IV | D | W | G | A | Ssp | Br | D | Y | Bf | | 3N |
| 603698B | I | N | W | G | E | N | Br | I | Lgn | Bf | | 3N |
| 603698D | I | N | P | G | Е | N | Br | I | Ğ | G | | 2N |
| 603698E | I | S | P | G | E | N | Br | I | Ggn | G | | 2N |
| 603698H | I | N | P | G | E | N | Br | D | Lgn | Gn | Vhil, Vsc | 3N |
| 603698I | I | N | W | G | E | N | Br | I | Y | Y | , | 3N |
| 603704A | Ī | S | P | Lt | Sa | Ssp | Br | Ī | Y | Brbl | Vhil | 3N |
| 603704B | II | S | P | Lt | Sa | N | Br | Ī | Y | Brbl | Vhil | 3N |
| 603705A | III | D | P | G | A | N | Br | D | Y | Bf | V 1111 | 3N |
| 603706A | IV | S | W | G | A | Ssp | Tn | I | Y | Bf | | 3N |
| 603707 | II | S | P | T | E | Ssp | Br | I | Br | Rbr | Sdef | 3N |
| 603711A | IV | S | W | Lt | A | N N | Tn | I | Y | Brbl | Vhil | 3N |
| 603711A | IV | D | P | T | Sa | N | Tn | I | Y | Br | V 1111 | 3N |
| 603716 | III | D | P | T | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603717 | III | S | r P | T | | N | | I | Y | Bl | VIIII | 3N |
| | | | P P | G | A | | Tn | I | Y | | X 71- :1 | |
| 603718A | IV | S | W | | A | N | Br | | Y | Bf | Vhil | 3N |
| 603718B | IV | S | | G | A | N | Dbr | I | | Bf | 3.71. *1 | 3N |
| 603719A | II | D | P | T | Е | N | Br | I | Y | Brbl | Vhil | 3N |
| 603719B | IV | D | P | T | E | Ssp | Br | I | Y | Brbl | Vhil | 3N |
| 603719C | III | D | P | G | A | Ssp | Br | I | Y | Ib | Vhil | 2N |
| 603721 | IV | D | W | G | A | N | Tn | I | Lgn | Bf | | 2N |
| 603723 | III | D | W | G | A | N | Br | I | Y | Bf | | 2N |
| 603724A | IV | D | P | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 603724C | IV | S | W | G | Sa | N | Br | I | Y | Bf | | 2N |
| 603725 | IV | D | W | T | A | N | Br | I | Y | Br | | 3N |
| 603726 | IV | D | W | Lt | Sa | Ssp | Br | D | Gn | Bl | | 3N |
| 603727 | I | D | P | T | Sa | Ssp | Tn | I | Bl | Bl | | 3N |
| 603728 | II | D | P | Lt | Sa | N | Tn | I | Bl | Bl | Sdef | 3N |
| 603729 | III | D | P | Lt | A | N | Br | Lb | Bl | Bl | Sdef | 3N |
| 603735A | IV | D | P | Lt | A | N | Br | I | Gn | Bl | | 2N |
| 603735B | IV | D | W | G | A | N | Br | I | Gn | Bf | | 3N |
| 603738 | IV | D | W | T | A | N | Br | I | Bl | Bl | | 3N |
| 603742A | IV | D | P | T | A | N | Br | I | Y | Tn | | 3N |
| 603742B | IV | D | P | T | A | N | Br | I | Y | Tn | | 3N |
| 603742D | IV | D | P | T | A | N | Br | I | Y | G | | 3N |
| 603743A | IV | D | P | T | A | N | Br | I | Y | G | | 2N |
| 603743B | IV | D | P | T | A | N | Br | I | Y | Brbl | Sdef, Vhil | 3N |
| 603744 | II | D | W | G | E | N | Br | I | Lgn | Bf | , | 3N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| y Mottling) (score) | g Weight (cg sd ⁻¹) | Yield |
|----------------------|---|--|
| (score) | | |
| | (cg su) | (Mg ha ⁻¹) |
| 1.5 | 12.0 | 1.59 |
| 1.5 | 14.0 | 1.82 |
| 2.5 | 11.7 | 1.90 |
| | | 2.00 |
| | | 1.91 |
| | | 1.76 |
| | | 1.99 |
| | | 1.47* |
| | | 2.33 |
| | | 2.18 |
| | | 1.77^ |
| | | 2.55^ |
| | | 2.65^ |
| | | 1.88^ |
| | | 1.67^ |
| | | 1.07 |
| | | 1.17 |
| | | 0.70 |
| | | |
| | | 1.09* |
| | | 1.70* |
| | | 1.20 |
| | | 1.00 |
| | | 1.36 |
| | | 1.46 |
| | | 1.53 |
| | | 1.54 |
| | | 1.39 |
| | | 0.93 |
| | | 1.17 |
| | | 1.07 |
| | | 1.26 |
| | | 1.22 |
| | | 0.76 |
| | | 1.22 |
| 3.0 | | 1.43 |
| | | 1.71^ |
| | | 0.94 |
| | | 0.99 |
| | | 1.93 |
| 3.5 | | 0.97 |
| | | 1.81 |
| 2.5 | 22.0 | 1.38^ |
| 3.0 | 18.7 | 1.93* |
| 2.5 | 21.6 | 2.29 |
| 2.5 | 21.0 | 2.34 |
| 1.0 | 14.1* | 1.03* |
| 1.0 | 13.8 | 1.54* |
| | 2.0 3.5 2.5 3.0 2.5 2.5 1.0 | 1.0 10.7 3.0* 11.9 4.5 14.2 3.0 5.6 1.0 18.4 1.0 14.1 1.0 13.7^ 2.0 10.4^ 1.0 11.3^ 1.0 11.1^ 2.0 7.2^ 3.0 8.8 1.0 13.6* 2.0 13.5 15.8 2.5 11.5 3.0 11.8 1.5 13.9 2.0 12.0 2.0 12.7 3.5 9.6 2.5 8.9 2.0 7.8 2.0 9.9 2.5 8.3 2.5 9.5 3.0 9.2 9.6 18.0* 2.0 10.1 3.5 7.8 16.5 2.5 22.0 3.0 18.7 2.5 21.6 |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil composition | | | | | | |
|----------------------------|----------|---------------------|---------------------------|-----------------|---------|-------|----------|-----------|--|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | | |
| 603683 | IV | 46.4 | 15.7 | 11.6 | 4.0 | 22.2 | 54.5 | 7.6 | | |
| 603684 | IV | 43.4 | 17.1 | 13.0 | 3.6 | 23.9 | 52.4 | 7.1 | | |
| 603686 | IV | 43.6 | 16.2 | 10.8 | 4.4 | 26.6 | 51.6 | 6.6 | | |
| 503687A | IV | 44.8 | 15.9 | 10.6 | 3.4 | 20.7 | 57.3 | 8.0 | | |
| 503687B | IV | 46.2 | 15.6 | 11.9 | 3.4 | 19.9 | 55.6 | 9.1 | | |
| 503690 | IV | 45.2 ^w | 16.9 ^w | 11.0 | 6.1 | 22.1 | 54.2 | 6.6 | | |
| 503691 | IV | 44.8 ^w | 16.6 ^w | 13.0 | 4.0 | 25.3 | 50.6 | 7.1 | | |
| 503692 | IV | 41.8 | 12.8 | 14.4 | 3.4 | 20.2 | 52.9 | 9.2 | | |
| 603694A | III | 42.5 | 17.5 | 10.1 | 4.6 | 27.2 | 51.3 | 6.9 | | |
| 503694B | IV | 41.6 | 18.5 | 12.7 | 3.2 | 23.6 | 53.0 | 7.5 | | |
| 603698B | I | 42.8 ^w ^ | 20.4 ^w ^ | 12.7^ | 3.1^ | 25.3^ | 50.5^ | 8.3^ | | |
| 603698D | I | 46.8 ^w ^ | 16.6 ^w ^ | 11.7^ | 3.3^ | 26.6^ | 50.3^ | 8.1^ | | |
| 603698E | I | 47.3 ^w ^ | 16.5 ^w ^ | 12.0^ | 3.4^ | 26.9^ | 50.0^ | 7.8^ | | |
| 603698H | I | 46.6 ^w ^ | 17.9 ^w ^ | 12.9^ | 3.0^ | 24.7^ | 50.9^ | 8.6^ | | |
| 603698I | I | 40.1^ | 18.9^ | 13.6^ | 3.6^ | 23.3^ | 50.3^ | 9.2^ | | |
| 503704A | I | 42.6^ | 16.3^ | 12.5^ | 3.7^ | 24.4^ | 52.0^ | 7.5^ | | |
| 603704A 603704B | II | 44.7 | 16.1 | 11.9 | 4.4 | 24.4 | 50.4 | 8.4 | | |
| 603704 Б 603705А | III | 46.5 | 15.6 | 13.0 | 4.4 | 25.7 | 50.4 | 6.9 | | |
| 603705A 603706A | IV | 43.8 | 15.0 | 10.7 | 3.3 | 21.4 | 54.4 | 10.2 | | |
| | | | 13.2 17.4 ^w | | | | | | | |
| 503707 | II | 43.7 ^w | | 11.9 | 3.6 | 35.8 | 42.8 | 5.8 | | |
| 503711A | IV | 47.0 | 14.6 | 11.8 | 3.4 | 22.0 | 55.0 | 7.7 | | |
| 503715 | IV | 43.1 | 15.4 | 10.0 | 4.1 | 26.2 | 51.6 | 8.0 | | |
| 503716 | III | 42.0 | 17.1 | 11.0 | 4.4 | 26.6 | 52.0 | 6.0 | | |
| 503717 | III | 41.7 | 17.9 | 9.5 | 4.0 | 27.3 | 52.8 | 6.4 | | |
| 503718A | IV | 47.9 | 13.8 | 13.3 | 3.3 | 21.6 | 54.6 | 7.3 | | |
| 503718B | IV | 43.4 | 15.8 | 13.0 | 3.5 | 26.4 | 50.4 | 6.7 | | |
| 503719A | II | 41.8 ^w | 14.6 ^w | 10.4 | 4.5 | 26.1 | 50.9 | 8.1 | | |
| 503719B | IV | 49.2 | 14.0 | 12.1 | 4.8 | 22.8 | 52.4 | 8.0 | | |
| 603719C | III | 46.3 | 15.6 | 9.7 | 4.0 | 21.5 | 55.4 | 9.5 | | |
| 503721 | IV | 46.2^{w} | $15.0^{\rm w}$ | 12.4 | 3.7 | 21.1 | 54.2 | 8.6 | | |
| 503723 | III | 43.6 | 17.0 | 10.3 | 3.7 | 28.3 | 50.5 | 7.3 | | |
| 503724A | IV | 40.8 | 14.7 | 10.1 | 4.0 | 21.9 | 55.1 | 9.0 | | |
| 503724C | IV | 44.0 | 13.0 | 10.6 | 4.3 | 22.7 | 54.3 | 8.1 | | |
| 503725 | IV | 43.3 | 16.5 | 10.3 | 3.3 | 26.5 | 52.1 | 7.7 | | |
| 603726 | IV | 46.4^{w} | 14.1^{w} | 12.9 | 4.4 | 23.4 | 51.9 | 7.5 | | |
| 503727 | I | 45.8 ^w ^ | 14.9 ^w ^ | 13.2^ | 3.8^ | 21.3^ | 53.4^ | 8.3^ | | |
| 503728 | II | 47.6^{w} | $15.0^{\rm w}$ | 12.4 | 4.1 | 23.8 | 52.0 | 7.7 | | |
| 503729 | III | 45.8^{w} | 16.4 ^w | 13.2 | 3.5 | 29.0 | 47.2 | 7.2 | | |
| 603735A | IV | 46.9^{w} | 16.3 ^w | 12.7 | 3.7 | 24.9 | 52.0 | 6.6 | | |
| 603735B | IV | 49.1^{w} | 14.5 ^w | 12.6 | 3.5 | 23.0 | 53.7 | 7.2 | | |
| 503738 | IV | 44.9^{w} | $14.7^{\rm w}$ | 12.3 | 3.3 | 24.7 | 52.3 | 7.4 | | |
| 503742A | IV | 42.7 | 18.0 | 9.1 | 3.6 | 26.7 | 53.6 | 7.0 | | |
| 503742B | IV | 44.6 | 16.0 | 11.1 | 4.5 | 28.8 | 49.2 | 6.4 | | |
| 603742D | IV | 41.4 | 17.3 | 11.4 | 3.9 | 28.2 | 49.5 | 7.0 | | |
| 503743A | IV | 42.6 | 18.7 | 11.4 | 3.5 | 26.4 | 51.4 | 7.2 | | |
| 603743B | IV | 42.7 | 18.0 | 11.7 | 3.8 | 25.4 | 52.1 | 7.0 | | |
| 503744 | II | $46.7^{\rm w}$ | 17.8 ^w | 12.0 | 3.2 | 29.1 | 48.9 | 6.9 | | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | . | Destan | Country | Country | Year | N.C. |
|---------|------------------------------|------------------|--------------|-------------------|------------------------|-------|
| PI No. | Accession identifier | Region of origin | of origin | of acquisition | introduced or released | • |
| TINO. | identifier | or origin | origin | acquisition | of Teleased | group |
| 603745 | Ben di huang dou | Sichuan | China | China | 1998 | IV |
| 603746 | Bei chuan qi yue huang | Sichuan | China | China | 1998 | II |
| 603747 | Yi long tian kan dou No. 3 | Sichuan | China | China | 1998 | II |
| 603748 | Guang han qi yue huang no. 2 | Sichuan | China | China | 1998 | IV |
| 603749 | Xin jin san ke dou | Sichuan | China | China | 1998 | II |
| 603750A | 92-526 | Sichuan | China | China | 1998 | I |
| 603750B | (92-526) | Sichuan | China | China | 1998 | II |
| 603751A | Liu yue dou | Zhejiang | China | China | 1998 | II |
| 603751B | (Liu yue dou) | Zhejiang | China | China | 1998 | II |
| 603752 | Tie jiang dou | Zhejiang | China | China | 1998 | III |
| 603753A | You yi dou | Zhejiang | China | China | 1998 | II |
| 603753B | (You yi dou) | Zhejiang | China | China | 1998 | III |
| 603754 | Liu yue dou | Zhejiang | China | China | 1998 | I |
| 603755A | Liu yue dou | Zhejiang | China | China | 1998 | II |
| 603755B | (Liu yue dou) | Zhejiang | China | China | 1998 | III |
| 603755C | (Liu yue dou) | Zhejiang | China | China | 1998 | III |
| 603755D | (Liu yue dou) | Zhejiang | China | China | 1998 | III |
| 603755E | (Liu yue dou) | Zhejiang | China | China | 1998 | IV |
| 603756 | Bai dou | Zhejiang | China | China | 1998 | II |
| 603757A | Liu yue dou | Zhejiang | China | China | 1998 | II |
| 603757B | (Liu yue dou) | Zhejiang | China | China | 1998 | II |
| 603757C | (Liu yue dou) | Zhejiang | China | China | 1998 | II |
| 603758A | Liu yue dou | Zhejiang | China | China | 1998 | I |
| 603758B | (Liu yue dou) | Zhejiang | China | China | 1998 | Ī |
| 603758C | (Liu yue dou) | Zhejiang | China | China | 1998 | Ī |
| 603759A | Liu yue dou | Zhejiang | China | China | 1998 | II |
| 603760 | Jiang shui dou | Zhejiang | China | China | 1998 | II |
| 603764B | (Yuan dou) | Zhejiang | China | China | 1998 | II |
| 603777 | Wan ning huang dou | Hainan | China | China | 1998 | IV |
| 603908 | Baktae | unknown | North Korea | North Korea | 1998 | II |
| 603909A | Byol | unknown | North Korea | North Korea | 1998 | IV |
| 603909B | (Byol) | unknown | North Korea | North Korea | 1998 | IV |
| 603909C | (Byol) | unknown | North Korea | North Korea | 1998 | IV |
| 603910A | | unknown | North Korea | North Korea | 1998 | IV |
| 603910B | (Cin) | unknown | North Korea | North Korea | 1998 | IV |
| 603911B | (Jijori) | unknown | North Korea | North Korea | 1998 | III |
| 603911C | (Jijori) | unknown | North Korea | North Korea | 1998 | IV |
| 603912 | Kange | unknown | North Korea | North Korea | 1998 | III |
| 603913A | • | unknown | North Korea | North Korea | 1998 | III |
| 603913B | (No. 1) | unknown | North Korea | North Korea | 1998 | IV |
| 603913C | (No. 1) | unknown | North Korea | North Korea | 1998 | IV |
| 603914 | Samsu | unknown | North Korea | North Korea | 1998 | IV |
| 603915C | (Uid) | unknown | North Korea | North Korea | 1998 | III |
| 603915D | (Uid) | unknown | North Korea | North Korea | 1998 | IV |
| 603915E | (Uid) | unknown | North Korea | North Korea | 1998 | IV |
| 603916 | Unsan | unknown | North Korea | North Korea | 1998 | IV |
| 603917 | | unknown | North Korea | North Korea | 1998 | IV |
| * | | • | | | - | |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | | Flower | | | Density | Pod color | Seedco Luster | | Hilum color | Other traits | Seed shape |
|---------|-------------------|---|--------|----|----|---------|--------------|------------------|-----|----------------|--------------|---------------|
| | | | | | | | | | | | X71. '1 | |
| 603745 | IV | S | W | Lt | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603746 | II | D | P | T | Sa | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603747 | II | D | P | T | A | N | Br | D | Y | Bl | Na | 3N |
| 603748 | IV | D | W | T | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 603749 | II | D | W | Lt | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603750A | I | D | P | T | A | N | Tn | I | Y | Br | 3.71 '1 | 3N |
| 603750B | II | N | W | Lt | A | N | Tn | I | Y | Brbl | Vhil | 3N |
| 603751A | II | D | P | T | E | Ssp | Tn | I | Y | Br | Sdef | 3N |
| 603751B | II | D | P | T | Sa | Ssp | Tn | I | Y | Br | | 3N |
| 603752 | III | D | P | T | A | N | Tn | D | Lgn | Br | | 3N |
| 603753A | II | D | P | T | A | N | Tn | I | Lgn | Br | X 71 .11 | 3N |
| 603753B | III | D | W | Lt | A | N | Br | I | Y | Brbl | Vhil | 3N |
| 603754 | I | D | W | Lt | A | N | Br | I | Y | Br | | 3N |
| 603755A | II | D | P | T | E | Ssp | Tn | I | Y | Br | | 3N |
| 603755B | III | D | P | T | Sa | Ssp | Tn | I | Y | Br | | 3N |
| 603755C | III | S | P | T | E | Ssp | Tn | I | Y | Br | ~ | 3N |
| 603755D | III | D | W | T | E | N | Tn | I | Y | Br | Sdef | 3N |
| 603755E | IV | D | W | Lt | E | N | Tn | D | Y | Br | | 3N |
| 603756 | II | D | W | Lt | A | N | Br | I | Y | Br | | 3N |
| 603757A | II | S | P | T | E | Ssp | Tn | I | Y | Brbl | Vhil | 3N |
| 603757B | II | D | W | Lt | A | N | Br | I | Y | Br | | 3N |
| 603757C | II | D | W | G | A | N | Tn | I | Y | Bf | | 3N |
| 603758A | I | S | P | Lt | A | N | Br | I | Y | Br | | 3N |
| 603758B | I | S | P | T | Sa | Ssp | Br | I | Y | Br | | 3N |
| 603758C | I | S | P | T | E | Ssp | Br | I | Y | Br | | 3N |
| 603759A | II | D | P | T | E | Ssp | Br | I | Gn | Brbl | Vhil | 3N |
| 603760 | II | D | P | T | E | Ssp | Tn | I | Br | Rbr | | 3N |
| 603764B | II | D | P | G | E | N | Br | I | Gn | Ib | Vhil | 3N |
| 603777 | IV | D | P | Lt | A | Ssp | Br | I | Y | Br | | 3N |
| 603908 | II | D | W | G | A | Ssp | Tn | I | Y | Y | | 2N |
| 603909A | IV | D | W | G | Sa | N | Br | I | Y | Y | | 2N |
| 603909B | IV | D | P | G | A | N | Br | I | Lgn | Lgn | | 2N |
| 603909C | IV | D | P | G | E | Ssp | Br | I | Y | Y | | 3N |
| 603910A | IV | N | W | T | Sa | Ssp | Tn | Lb | Bl | B1 | | 3N |
| 603910B | IV | N | P | T | E | N | Tn | В | Bl | Bl | Flk, Sdef | 4N |
| 603911B | III | N | W | T | E | Ssp | Br | I | Y | Bl | | 3N |
| 603911C | IV | D | W | G | E | N | Br | I | Y | Bf | | 1N |
| 603912 | III | D | P | G | E | Ssp | Br | I | Y | Y | Def | 2N |
| 603913A | III | D | P | G | E | N | Br | I | Y | Y | Def | 3N |
| 603913B | IV | D | P | G | E | Ssp | Br | I | Y | Y | Sdef | 2N |
| 603913C | IV | D | P | G | E | N | Br | I | Y | Y | Sdef, Vhil | 3N |
| 603914 | IV | N | P | T | A | Ssp | Br | I | Gn | Br | Sdef | 3N |
| 603915C | III | D | P | T | A | Ssp | Br | I | Y | Br | | 3N |
| 603915D | IV | N | W | T | E | N | Tn | I | Y | Bl | | 3N |
| 603915E | IV | D | W | G | Sa | N | Br | I | Y | Y | | 2N |
| 603916 | IV | D | W | T | Sa | Ssp | Br | I | Y | Tn | Sdef | 3N |
| 603917 | IV | D | W | G | E | N | Tn | I | Y | Bf | | 2N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | Flowering | g Maturity | | | Stem | Shatter | ing | Seed | | | |
|--------------------|------------|-------------|---------|----------|---------|---------|------------------|---------|----------|----------------|------------------------|
| | date | date | Lodging | Heigh | t term. | early | late | Quality | Mottling | | Yield |
| Entry | (mmdd) | (mmdd) | (score) | (cm) | (score) | (score) | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 603745 | 804 | 1007 | 4.0 | 74 | 2.0 | 1.5 | 2.5 | 2.5 | 3.5 | 8.3 | 2.05* |
| 603746 | 721 | 913 | 2.8 | 68 | 1.0 | 1.5 | 3.5 | 2.8 | 4.0* | 8.0 | 1.30 |
| 603747 | 705 | 904 | 1.3 | 40 | 1.0 | 1.0 | 3.0 | 1.5 | 1.0 | 11.4 | 1.47 |
| 603748 | 802 | 1003 | 4.0 | 83 | 1.0 | 2.0 | 3.0 4.0* | 2.3 | 2.5 | 7.6 | 1.65* |
| 603749 | 721 | 913 | 3.0 | 38* | 1.5 | 4.5 | 5.0 | 2.5 | 2.0 | 12.2 | 0.28 |
| 603750A | 721 | 913 904^ | 2.5^ | 46* | 1.0^ | 2.0^ | 5.0 [^] | 2.0^ | 1.0 | 14.2 | 0.28 1.74^ |
| 603750A 603750B | | 904** | 3.0^ | 40* | 2.0^ | 1.0^ | 5.0^ | | | | |
| | 723 | | | | | | | 2.5^ | 1.0 | 10.8^ | 0.50^ |
| 603751A | 719 | 911 | 2.0 | 75 74 | 1.0 | 4.0* | 5.0 | 3.0 | 3.0 | 10.5 | 1.19 |
| 603751B | 719 | 909 | 2.5 | 74 | 1.5 | 1.5 | 4.5 | 2.5 | 2.5 | 13.1 | 1.11 |
| 603752 | 725 | 919 | 2.3 | 63 | 1.0 | 1.0 | 2.0 | 2.5 | 3.0 | 13.2 | 0.95 |
| 603753A | 722 | 914 | 2.5 | 67* | 1.0 | 2.0 | 3.0* | 2.5 | 2.5 | 13.8 | 1.24 |
| 603753B | 721 | 919 | 3.0 | 43 | 1.5 | 2.0 | 3.0* | 2.5 | 2.0 | 12.3 | 0.60 |
| 603754 | 717 | 907 | 1.5^ | 34* | 1.0^ | 1.0^ | - | 2.0^ | 1.0 | 11.7^ | 0.78^ |
| 603755A | 721 | 913 | 2.8 | 74 | 1.5 | 1.5 | 2.0* | 2.5 | 1.5 | 12.9 | 1.52 |
| 603755B | 723 | 927 | 3.3 | 77 | 1.0 | 1.5 | 3.5 | 3.3 | 4.0* | 14.8 | 0.73 |
| 603755C | 725 | 927 | 2.3 | 85 | 2.0 | 1.5 | 2.0* | 3.0 | 4.0 | 13.4 | 0.87 |
| 603755D | 723 | 927 | 2.8 | 79 | 1.0 | 2.0 | 2.5 | 2.5 | 3.0 | 11.4 | 1.46 |
| 603755E | 723 | 1002 | 2.8 | 83 | 1.5 | 1.0 | 2.5 | 2.8 | 2.0 | 13.0 | 1.42 |
| 603756 | 717 | 909 | 2.0 | 48 | 1.0 | 4.0* | 5.0 | 2.8 | 1.0 | 13.0 | 0.76 |
| 603757A | 719 | 911 | 3.3 | 71 | 2.0 | 1.5 | 5.0 | 2.5 | 3.0 | 9.9 | 1.11 |
| 603757B | 718 | 910 | 2.0 | 42* | 1.0 | 3.5 | 5.0 | 2.8 | 2.0 | 12.6 | 0.71 |
| 603757C | 719 | 913 | 2.8 | 66* | 1.0 | 3.0* | 5.0 | 3.0 | 2.5 | 15.3 | 1.07* |
| 603758A | 717 | 829^ | 3.5^ | 48* | 2.0^ | 1.0^ | 4.0^ | 2.0^ | 1.0 | 9.7^ | 1.19^ |
| 603758B | 713 | 903 | 2.0^ | 70* | 2.0^ | 1.0^ | 2.0^ | 2.0^ | 2.0 | 8.9^ | 1.02^ |
| 603758C | 717 | 903^ | 2.5^ | 76* | 2.0^ | 1.0^ | 3.0^ | 2.5^ | 2.0 | 9.8^ | 1.40^ |
| 603759A | 720 | 917 | 3.0 | 73 | 1.0 | 2.5 | 4.5 | 2.8 | 2.5 | 11.7 | 0.85 |
| 603760 | 717 | 911 | 2.5 | 63 | 1.0 | 2.0 | 4.0* | 3.0 | | 14.6 | 1.27 |
| 603764B | 720 | 919 | 2.3 | 70 | 1.0 | 1.0 | 4.0 | 3.0 | 2.0 | 14.6 | 1.65 |
| 603777 | 727 | 929 | 2.8 | 68* | 1.0 | 1.0 | 1.0 | 2.8 | 2.0 | 14.5 | 2.10* |
| 603908 | 715 | 918 | 2.3 | 58 | 1.0 | 5.0 | 5.0 | 3.3 | 2.5 | 21.3 | 1.09 |
| 603909A | 725 | 1003 | 1.3 | 59 | 1.0 | 1.0 | 1.0 | 2.0 | 4.5 | 16.9 | 2.41 |
| 603909B | 804 | 1018 | 2.3 | 74 | 1.0 | 1.0 | 1.0 | 1.8 | 2.0 | 15.2 | 2.27 |
| 603909C | 723 | 1013 | 2.0 | 68 | 1.0 | 1.0 | 1.0 | 2.8 | 3.5 | 20.8 | 1.65^ |
| 603910A | 725 | 1009 | 3.3 | 82 | 4.0 | 2.5* | 3.5 | 2.0 | | 9.7 | 1.06^ |
| 603910B | 807 | 1021 | 2.5 | 86 | 4.0 | 1.0 | 1.0 | 2.5 | | 13.9 | 2.65* |
| 603911B | 719 | 927 | 3.5 | 105 | 3.0 | 1.0 | 3.5 | 3.0 | 2.5 | 13.9 | 2.17 |
| 603911C | 721 | 1007 | 1.5 | 71 | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 12.8 | 2.46* |
| 603912 | 719 | 927 | 1.8 | 55 | 1.0 | 1.0 | 1.0 | 3.5 | 3.0 | 24.0 | 2.09^ |
| 603913A | 713 | 923 | 2.0 | 62 | 1.0 | 1.0 | 1.0 | 3.0 | 2.5 | 17.2 | 2.33 |
| 603913A | 725 | 1017 | 2.0 | 67 | 1.0 | 1.0 | 1.5 | 3.0 | 2.5 | 20.9 | 1.85^ |
| 603913B | 725 725 | 1017 | 1.8 | 64 | 1.0 | 1.0 | 1.0 | 3.3 | 4.0 | 20.9 19.9 | 1.83^ |
| | | | | | | | | | | 19.9 17.6* | |
| 603914 | 715 710 | 1003 | 2.5 | 116 | 4.0 | 1.0 | 1.0 | 3.0 | 3.0 | | 1.36 |
| 603915C | 719 | 927 | 1.3 | 48 | 1.0 | 1.0 | 2.0 | 2.8 | 2.0 | 13.4 | 1.51 |
| 603915D | 711 | 1003 | 2.0 | 103 | 3.0 | 1.0 | 1.0 | 3.5 | 1.5 | 17.9 | 3.15 |
| 603915E | 725 | 1003 | 1.0 | 63 | 1.0 | 1.0 | 1.0 | 2.0 | 3.5 | 17.1 | 2.60 |
| 603916 | 727 | 1017 | 2.5 | 82 | 1.0 | 1.0 | 1.0 | 3.0 | 4.0* | 22.6 | 1.32^ |
| 603917 | 726 | 1013 | 2.8* | 89* | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 12.0 | 3.15* |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| | | Seed con | nposition | Oil composition | | | | | |
|---------------------------|----------|---------------------------|---------------------------|-----------------|---------|-------|--------------|------------|--|
| | Maturity | Protein | Oil | Palmitic | Stearic | Oleic | Linoleic | Linolenic | |
| Entry | group | (%) | (%) | (%) | (%) | (%) | (%) | (%) | |
| 603745 | IV | 45.7 ^w | 15.2 ^w | 11.4 | 4.0 | 21.5 | 54.7 | 8.4 | |
| 603746 | II | 45.5 ^w | 14.6 ^w | 11.4 | 3.8 | 26.2 | 50.2 | 8.4 | |
| 603747 | II | 39.5 | 20.7 | 11.0 | 4.4 | 20.5 | 57.3 | 6.8 | |
| 603748 | IV | 42.1 | 15.9 | 11.9 | 4.9 | 21.4 | 54.5 | 7.4 | |
| 603749 | II | 41.6 | 16.5 | 10.0 | 4.7 | 31.8 | 47.4 | 6.1 | |
| 603750A | I | 41.5^ | 18.6^ | 12.4^ | 3.3^ | 23.3^ | 54.1^ | 7.0^ | |
| 503750A 503750B | II | 41.1^ | 17.6^ | 12.9^ | 3.6^ | 25.6^ | 50.6^ | 7.3^ | |
| 503750 B | II | 46.1 | 14.8 | 11.3 | 3.6 | 22.3 | 52.6 | 10.2 | |
| 603751A | II | 46.3 | 14.5 | 11.3 | 3.6 | 26.0 | 49.6 | 9.5 | |
| 503751 B | III | 44.2 ^w | 14.3 16.9 ^w | 12.9 | 4.2 | 28.9 | 49.0 47.4 | 9.5 6.6 | |
| | III | | | 13.0 | 3.5 | | | | |
| 603753A | | 45.4 ^w | 16.1 ^w | | | 25.3 | 50.3 | 7.9 | |
| 503753B | III | 49.5 | 13.6 | 9.7 | 4.8 | 26.4 | 52.0 | 7.2 | |
| 503754 | I | 41.3^ | 18.4^ | 12.6^ | 3.3^ | 25.0^ | 51.3^ | 7.8^ | |
| 603755A | II | 43.4 | 16.9 | 10.3 | 4.0 | 27.4 | 49.6 | 8.7 | |
| 503755B | III | 46.0 ^w | 14.7 ^w | 12.0 | 4.0 | 30.5 | 46.9 | 6.7 | |
| 503755C | III | 48.6 ^w | 14.9 ^w | 12.7 | 3.7 | 26.4 | 48.7 | 8.4 | |
| 503755D | III | 43.1 | 16.2 | 8.7 | 4.2 | 25.4 | 54.1 | 7.5 | |
| 503755E | IV | 41.7 | 16.3 | 10.6 | 4.3 | 25.7 | 52.8 | 6.6 | |
| 503756 | II | 46.4 | 16.3 | 11.9 | 3.9 | 25.4 | 51.4 | 7.3 | |
| 503757A | II | 42.1 | 15.7 | 10.6 | 4.2 | 26.2 | 49.8 | 9.3 | |
| 503757B | II | 46.7 | 15.3 | 12.2 | 4.1 | 26.9 | 50.0 | 6.9 | |
| 603757C | II | 44.6 | 16.3 | 10.5 | 3.5 | 33.7 | 46.0 | 6.4 | |
| 603758A | I | 43.2^ | 16.9^ | 13.6^ | 3.9^ | 23.2^ | 51.5^ | 7.8^ | |
| 503758B | I | 42.6^ | 15.8^ | 12.5^ | 4.5^ | 22.9^ | 50.5^ | 9.7^ | |
| 603758C | I | 43.3^ | 16.0^ | 13.1^ | 4.5^ | 25.8^ | 47.9^ | 8.7^ | |
| 603759A | II | 50.4^{w} | 14.9^{w} | 12.9 | 3.6 | 28.1 | 48.5 | 6.8 | |
| 503760 | II | 49.4 ^w | 15.2 ^w | 12.5 | 3.2 | 26.9 | 48.8 | 8.6 | |
| 503764B | II | 48.1 ^w | 17.2 ^w | 12.2 | 4.5 | 30.4 | 46.1 | 6.8 | |
| 503777 | IV | 39.4 | 17.2 | 11.4 | 3.9 | 27.1 | 51.2 | 6.3 | |
| 503908 | II | 43.1 | 17.3 | 10.6 | 4.3 | 27.5 | 51.1 | 6.5 | |
| 503909A | IV | 43.7 ^w | 17.5 19.0 ^w | 13.3 | 3.6 | 24.0 | 51.5 | 7.6 | |
| 603909B | IV | 44.8 ^w | 16.0 ^w | 13.4 | 3.4 | 21.0 | 54.9 | 7.0 | |
| юзэоэ Б 603909С | IV IV | 44.8 49.3 ^w | 15.5 ^w | 12.4 | 3.5 | 22.4 | 54.1 | 7.6 | |
| 603910A | IV | 49.5 47.6 ^w | 13.5 14.6 ^w | 13.6 | 3.7 | 18.5 | 56.1 | | |
| | | | | | | | | 8.2 | |
| 603910B | IV | 51.1 ^w | 14.0 ^w | 10.7 | 3.3 | 24.1 | 53.9 | 8.0 | |
| 503911B | III | 45.9 | 17.2 | 8.8 | 5.0 | 27.0 | 52.3 | 6.8 | |
| 603911C | IV | 38.9 | 18.2 | 11.9 | 3.3 | 20.1 | 57.1 | 7.7 | |
| 503912 | III | 48.0 | 13.0 | 10.1 | 3.7 | 22.8 | 55.5 | 7.8 | |
| 603913A | III | 43.5 | 18.0 | 9.0 | 3.3 | 24.1 | 56.3 | 7.2 | |
| 603913B | IV | 46.4 | 16.1 | 10.5 | 3.2 | 22.2 | 57.1 | 7.0 | |
| 603913C | IV | 48.0^{w} | 17.0^{w} | 12.4 | 3.3 | 24.1 | 53.0 | 7.2 | |
| 503914 | IV | 44.0^{w} | 18.8^{w} | 11.5 | 4.0 | 24.9 | 52.4 | 7.2 | |
| 603915C | III | 40.6 | 17.3 | 8.0 | 3.7 | 21.9 | 58.8 | 7.6 | |
| 603915D | IV | 43.0 | 18.2 | 8.6 | 3.7 | 23.4 | 57.5 | 6.8 | |
| 603915E | IV | 43.3 ^w | 18.5^{w} | 10.5 | 3.6 | 21.8 | 55.4 | 8.8 | |
| 603916 | IV | 46.2^{w} | 17.2^{w} | 11.0 | 3.6 | 24.6 | 54.2 | 6.6 | |
| 503917 | IV | 41.8 | 17.5 | 10.3 | 3.4 | 23.1 | 56.4 | 6.8 | |

Table 1.2 Identification and origin information for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| | | | Country | Country | Year | |
|-----------------|--------------------|--------------|-------------|-------------|-------------|----------|
| | Accession | Region | of | of | introduced | Maturity |
| PI No. | identifier | of origin | origin | acquisition | or released | |
| c10.c11 | ъ | 1 | N1. V. | NY .1 YZ | 1000 | |
| 612611 | Browngilgun | unknown | North Korea | North Korea | 1998 | III |
| | Ryong song | unknown | North Korea | North Korea | 1998 | IV |
| 612612B | (Ryong song) | unknown | North Korea | North Korea | 1998 | IV |
| 612616 | Nyong byon | unknown | North Korea | North Korea | 1998 | III |
| 612617A | 1 | unknown | North Korea | North Korea | 1998 | I |
| 612708D | (K 89-9081) | Heilongjiang | China | China | 1999 | I |
| 612709C | (K 87-104) | Heilongjiang | China | China | 1999 | I |
| 612711B | (K 93-89) | Heilongjiang | China | China | 1999 | I |
| 612713A | He feng 910 | Heilongjiang | China | China | 1999 | I |
| 612713B | (He feng 910) | Heilongjiang | China | China | 1999 | I |
| 612714B | (He feng 1538) | Heilongjiang | China | China | 1999 | I |
| 612715 | Hei nong 40 | Heilongjiang | China | China | 1999 | I |
| 612716 | Harbin 93-6349 | Heilongjiang | China | China | 1999 | I |
| 612717 | Harbin 94-2508 | Heilongjiang | China | China | 1999 | I |
| 612722 | Jilin 34 | Jilin | China | China | 1999 | I |
| 612723 | Jilin 35 | Jilin | China | China | 1999 | I |
| 612724 | Jilin 36 | Jilin | China | China | 1999 | I |
| 612725 | Jilin 37 | Jilin | China | China | 1999 | I |
| 612726 | Jilin 8966-25 | Jilin | China | China | 1999 | I |
| 612729 | Zhong huong No. 9 | Beijing | China | China | 1999 | II |
| 612730 | Zhong huong No. 10 | Beijing | China | China | 1999 | II |
| 612731 | Ke fong No. 6 | Beijing | China | China | 1999 | II |
| 612732 | Zhao shu 18 | Beijing | China | China | 1999 | I |
| 612733 | Jiqing No. 1 | Jilin | China | China | 2000 | II |
| 612735 | Jiunong 21 | Jilin | China | China | 2000 | I |
| 612736 | Yi No. 3 | Jilin | China | China | 2000 | I |
| 612737 | Hefeng 21 | Jilin | China | China | 2000 | I |
| 612741 | Jifeng No. 1 | Jilin | China | China | 2000 | II |
| 612742 | Jifeng No. 2 | Jilin | China | China | 2000 | II |
| 612744 | 89445 | Jilin | China | China | 2000 | I |
| 612746 | Fushuali | Jilin | China | China | 2000 | I |
| 612747 | Xuan No. 3 | Jilin | China | China | 2000 | II |
| 612748 | Xuan No. 1 | Jilin | China | China | 2000 | II |
| 612749 | Xuan No. 2 | Jilin | China | China | 2000 | II |
| 612750 | BPR 2502 | Jilin | China | China | 2000 | III |
| 612752 | | unknown | China | China | 1999 | I |
| 612753B | | unknown | China | China | 1999 | I |
| 612754 | | unknown | China | China | 1999 | Ī |
| 612758B | | unknown | China | China | 1999 | III |
| 612759D | | unknown | China | China | 1999 | III |
| 612760 | 50392 | unknown | China | China | 1999 | I |
| 612761B | (50131) | unknown | China | China | 1999 | I |
| 012/01 D | (30131) | GIIKIIO W II | Cillia | Cillia | 1777 | 1 |

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated.

| Entry | Maturity group | Stem term. | | | | Density | Pod | Seedco | | Hilum color | Other traits | Seed shape |
|---------|-------------------|------------|-------|-------|-------|----------|-------|--------|-------|----------------|--------------|---------------|
| Entry | group | term. | COIOI | Coloi | TOITI | Delisity | COIOI | Luster | Coloi | COIOI | Other traits | Shape |
| 612611 | III | N | P | Lt | E | N | Bl | I | Br | Rbr | | 5N |
| 612612A | IV | D | W | T | E | N | Br | D | Y | Br | | 3N |
| 612612B | IV | D | P | G | E | Ssp | Tn | D | Y | Y | | 3N |
| 612616 | III | D | P | G | Sa | Ssp | Br | I | Gn | Bf | | 3N |
| 612617A | I | N | P | Lt | E | N | Tn | I | Y | Y | Vhil | 2N |
| 612708D | I | N | P | G | E | N | Br | D | Y | Y | Na | 2N |
| 612709C | I | D | W | G | E | N | Br | D | Y | Y | Na | 2N |
| 612711B | I | D | W | G | E | Ssp | Br | I | Y | Y | Na | 2N |
| 612713A | I | D | W | G | E | N | Br | D | Y | Bf | Na | 2N |
| 612713B | I | D | W | G | E | N | Br | D | Y | Bf | Na | 2N |
| 612714B | I | D | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 612715 | I | S | P | G | E | Ssp | Br | D | Y | Y | Na | 2N |
| 612716 | I | S | P | G | E | N | Br | D | Y | Y | Na | 2N |
| 612717 | I | D | W | G | E | Ssp | Br | I | Y | Bf | | 1R |
| 612722 | I | S | W | G | E | Ssp | Tn | I | Y | Y | Na | 2N |
| 612723 | I | D | P | G | E | N | Tn | I | Y | Y | | 2N |
| 612724 | I | S | P | G | E | Ssp | Tn | I | Y | Y | | 2N |
| 612725 | I | D | P | G | E | N | Br | I | Y | Y | | 2N |
| 612726 | I | S | P | G | E | N | Br | I | Y | Y | | 2N |
| 612729 | II | N | P | G | E | N | Tn | D | Y | Bf | | 3N |
| 612730 | II | D | W | G | Sa | N | Br | D | Y | Lbf | Sdef | 3N |
| 612731 | II | N | P | G | Sa | N | Tn | I | Y | Bf | | 3N |
| 612732 | I | N | P | G | A | N | Br | I | Y | Y | Vhil | 2N |
| 612733 | II | N | W | G | E | Ssp | Dbr | I | Gn | Gn | Gnc | 3N |
| 612735 | I | N | P | G | E | N | Br | I | Y | Y | Na | 2N |
| 612736 | I | D | P | T | E | N | Br | I | Y | B1 | | 2N |
| 612737 | I | D | W | G | E | Ssp | Br | I | Y | Y | Na | 3N |
| 612741 | II | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 612742 | II | D | P | G | E | N | Br | I | Y | Y | | 3N |
| 612744 | I | S | P | G | E | N | Br | I | Y | Lg | Vhil | 2N |
| 612746 | I | D | P | G | E | N | Br | D | Y | Ib | | 2N |
| 612747 | II | D | P | G | E | N | Br | I | Y | Y | Sdef | 3N |
| 612748 | II | D | P | G | E | N | Br | I | Y | Y | Na, Sdef | 3N |
| 612749 | II | D | P | G | E | N | Br | I | Y | Y | Na, Sdef | 3N |
| 612750 | III | N | P | T | E | N | Br | D | Y | B1 | Vhil | 2N |
| 612752 | I | N | P | T | E | Sp | Br | Lb | Br | Rbr | Sw | 4N |
| 612753B | Ī | N | P | Lt | E | N | Bl | I | Gn | Br | Sw | 3N |
| 612754 | Ī | N | P | T | E | N | Bl | Ī | Y | Br | Sw | 3N |
| 612758B | III | N | W | T | Sa | Ssp | Dbr | В | Bl | Bl | Flk, Sw | 4N |
| 612759D | III | N | P | T | E | Ssp | Bl | I | Bl | Bl | Sw | 3N |
| 612760 | I | N | P | T | E | Ssp | Br | Lb | Br | Rbr | Sw | 4N |
| 612761B | Ī | N | P | Lt | E | N | Br | I | Br | Rbr | | 5N |

Table 3.2 Agronomic data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| - | Flowering Maturity | | | Stem Shattering | | | | Seed | | | |
|-------------------|--------------------|-------------|--------------------------|-----------------|------------------|------|--------------|--------------|----------|--------------------------------------|----------------------------|
| | date | | Lodging | Heigh | | | late | | Mottling | Weight | Yield |
| Entry | (mmdd) | (mmdd) | | (cm) | | | (score) | (score) | (score) | $(cg sd^{-1})$ | (Mg ha ⁻¹) |
| 612611 | 714 | 921 | 3.3* | 118* | 3.5 | 1.0 | 1.5 | 3.5 | | 10.7 | 2.58 |
| 612612A | 727 | 1004 | 3.0 | 102 | 1.0 | 1.0 | 1.5 | 1.8 | 3.0 | 12.1 | 2.92* |
| 612612B | 719 | 1003 | 1.5 | 65 | 1.0 | 1.0 | 1.0 | 2.5 | 3.5 | 17.5 | 1.72 |
| 612616 | 719 | 918 | 2.0 | 48 | 1.0 | 1.0 | 2.0 | 3.0 | 3.0 | 15.0 | 2.44^ |
| 612617A | 627 | 903^ | 2.0^ | 62* | 3.0^ | 1.0^ | 1.0^ | 3.0^ | 2.0 | 12.0^ | 2.51^ |
| 612708D | 621 | 824 | 1.0^ | 44* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 14.6^ | 2.31^ |
| 612709C | 623 | 830 | 1.0^ | 34 | 1.0^ | 1.0^ | 1.0^ | 4.0^ | 1.0 | 12.4^ | 1.78^ |
| 612711B | 627 | 826^ | 1.5^ | 32* | 1.0^ | 1.0^ | - | 4.5^ | 1.0 | 11.4^ | 1.15^ |
| 612711B | 621 | 828 | 1.0^ | 40* | 1.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 14.1^ | 2.03^ |
| 612713R | 620 | 828 | 1.0^ | 33 | 1.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 13.5^ | - |
| 612713B | 623 | 827 | 1.0^ | 32* | 1.0^ | 1.0^ | 1.0^ | 4.0^ | 1.0 | 12.4^ | _ |
| 612715 | 621 | 826^ | 1.0^ | 62* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.0^ | 2.74^ |
| 612716 | 623 | 830 | 1.0^ | 43 | 1.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 15.1^ | - |
| 612717 | 625 | 826^ | 1.0^ | 42* | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 17.0^ | 2.58^ |
| 612722 | 623 | 828^ | 1.0^ | 62* | 3.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 12.4^ | 2.69^ |
| 612723 | 625 | 901^ | 1.5^ | 51* | 1.0^ | 1.0^ | 1.0^ | 3.0^ | 1.0 | 11.8^ | 2.72^ |
| 612724 | 625* | 904^ | 1.5^ | 50* | 1.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.9^ | 2.76^ |
| 612725 | 627 | 828 | 2.0^ | 62* | 2.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 13.0^ | 2.47^ |
| 612726 | 624 | 824 | 1.0^ | 48* | 2.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 17.3^ | 2.40^ |
| 612729 | 718 | 917 | 1.8 | 72* | 3.0 | 1.5 | 2.0 | 3.0 | 1.0 | 18.7 | 2.62* |
| 612730 | 716 | 917 | 1.8 | 66 | 1.0 | 1.0 | 1.0 | 3.0 | 1.0 | 15.2 | 2.13* |
| 612731 | 719 | 915 | 1.8 | 75 | 3.0 | 1.5 | 2.5 | 3.0 | 1.0 | 17.1 | 2.20* |
| 612732 | 701 | 903 | 1.0^ | 32* | 4.0^ | 1.0^ | 1.0^ | 1.5^ | 1.0 | 12.3^ | 0.50^ |
| 612733 | 701* | 908 | 2.3 | 81* | 3.0 | 1.0 | 3.5 | 2.8 | 1.0 | 18.6 | 1.96 |
| 612735 | 624 | 825^ | 1.5^ | 63* | 3.0^ | 1.0^ | 1.0^ | 2.0^ | 1.0 | 13.8^ | 2.79^ |
| 612736 | 623 | 828^ | 1.5^ | 57* | 2.0^ | 1.0^ | 2.0^ | 2.0^ | 1.0 | 13.1^ | 3.25^ |
| 612737 | 621 | 826 | 1.0^ | 45* | 1.0^ | 1.0^ | 1.0^ | 4.5^ | 1.0 | 14.8^ | 2.45^ |
| 612741 | 629 | 909 | 1.8 | 76* | 1.5 | 1.0 | 1.0 | 2.8* | 1.0 | 17.9 | 2.62 |
| 612742 | 629 | 909 | 1.8 | 70 | 1.5 | 1.0 | 1.0 | 2.5 | 1.0 | 17.5 | 2.36 |
| 612744 | 622 | 825^ | 1.0^ | 48* | 3.0^ | 1.0^ | 1.0^ | 2.5^ | 1.0 | 11.5^ | 2.44^ |
| 612746 | 701 | 903^ | 1.0^ | 39 | 1.0^ | 1.0^ | 3.0^ | 3.5^ | 1.0 | 22.1^ | 1.39^ |
| 612747 | 629 | 909 | 1.5 | 72* | 1.0 | 1.0 | 1.0 | 2.8 | 1.5 | 19.7 | 2.68* |
| 612748 | 629* | 905 | 1.3 | 69 | 1.5 | 1.0 | 1.0 | 2.5 | 1.0 | 17.2 | 2.34 |
| 612749 | 629 | 905 | 1.3 | 69* | | 1.0 | 1.0 | 2.8 | 2.0 | 17.2 | 2.34 |
| 612750 | 629* | 900 | 1.3 | 90 | 3.0 | 1.0 | 1.0 | 3.5 | 2.0 | | 3.37 |
| 612752 | 701 | 827^ | 4.0^ | 62* | 5.0 [^] | 1.0^ | 5.0^ | 3.0^ | 2.0 | 14.0 4.6^ | 3.37 1.26^ |
| | 701 | 903^ | | | | 1.0^ | | | | 3.7^ | 1.25^ |
| 612753B 612754 | 703 | 903^ 828 | 5.0^ 5.0^ | 64* 40 | 5.0^ | 2.0^ | 4.0^ 5.0^ | 2.5^ 2.0^ | 4.0 | 3.7 [^] 3.6 [^] | 0.51^ |
| 612754 612758B | 703 715* | 828 923 | 5.0 [^] 4.3* | 40 85 | 5.0^ | 2.0 | | 2.5 | 5.0 | 3.6^ | 0.51 [^] 1.27* |
| | | 923 925 | | | 5.0 | | 4.0 | | | | |
| 612759D | 727 | | 5.0 | 80 5.4* | 5.0 | 1.5 | 1.5 | 3.0 | | 3.6 | 0.60 |
| 612760 | 630 | 829^ | 4.0^ | 54* | 5.0^ | 1.0^ | 3.0^ | 3.0^ | | 4.5^ | 0.90^ |
| 612761B | 705 | 906^ | 4.0^ | 101 | 4.0^ | 1.0^ | 1.0^ | 3.0^ | | 7.1^ | 1.97^ |

Table 4.2. Seed composition data for USDA soybean germplasm in maturity groups I through IV, PI 578360 to PI 612761B plus earlier accessions not previously evaluated, grown at Urbana, IL.

| Entry | Maturity group | Seed composition | | Oil composition | | | | |
|---------|-------------------|---------------------|---------------------|-----------------|----------------|--------------|-------------------|---------------|
| | | Protein (%) | Oil (%) | Palmitic | Stearic (%) | Oleic (%) | Linoleic (%) | Linolenic (%) |
| | | | | (%) | | | | |
| 612611 | III | 44.6 ^w | 16.9 ^w | 12.7 | 3.0 | 20.8 | 56.9 | 6.6 |
| 612612A | IV | 42.6 | 17.5 | 11.9 | 3.7 | 20.6 | 56.2 | 7.7 |
| 612612B | IV | 44.8^{w} | $19.0^{\rm w}$ | 11.8 | 4.3 | 27.6 | 50.6 | 5.7 |
| 612616 | III | 42.7^{w} | 16.7 ^w | 13.0 | 3.4 | 24.8 | 51.5 | 7.4 |
| 612617A | I | 41.6^ | 18.8^ | 12.8^ | 3.8^ | 22.8^ | 54.2^ | 6.4^ |
| 612708D | I | 39.6^ | 21.3^ | 15.2^ | 4.4^ | 23.6^ | 50.3^ | 6.5^ |
| 512709C | I | 41.1^ | 18.4^ | 12.0^ | 3.6^ | 23.6^ | 54.5^ | 6.3^ |
| 512711B | I | 40.7^ | 17.0^ | 12.3^ | 4.1^ | 29.0^ | 48.5^ | 6.0^ |
| 512713A | I | 39.7^ | 19.8^ | 12.7^ | 3.7^ | 22.6^ | 54.2^ | 6.9^ |
| 512713B | I | 38.7^ | 20.5^ | 12.8^ | 3.4^ | 21.7^ | 55.5^ | 6.5^ |
| 512714B | I | 38.5^ | 20.8^ | 11.9^ | 4.1^ | 29.6^ | 48.5^ | 5.9^ |
| 512715 | I | 39.3^ | 21.1^ | 11.9^ | 3.7^ | 22.4^ | 55.8^ | 6.2^ |
| 512716 | I | 37.4^ | 21.8^ | 12.1^ | 3.4^ | 21.5^ | 56.6^ | 6.4^ |
| 512717 | I | 37.9^ | 21.6^ | 10.1^ | 4.0^ | 28.7^ | 51.3^ | 6.0^ |
| 512722 | I | 36.6^ | 21.8^ | 12.0^ | 3.0^ | 26.3^ | 52.7^ | 6.0^ |
| 512723 | I | 36.5^ | 21.3^ | 12.4^ | 4.7^ | 26.5^ | 49.8^ | 6.6^ |
| 512724 | I | 36.2^ | 22.1^ | 11.4^ | 4.4^ | 29.6^ | 49.4^ | 5.2^ |
| 512725 | Ī | 34.5^ | 20.2^ | 11.7^ | 4.3^ | 29.5^ | 48.9^ | 5.6^ |
| 512726 | Ī | 40.7^ | 21.2^ | 12.1^ | 3.7^ | 29.0^ | 50.0^ | 5.2^ |
| 512729 | II | 45.0 | 17.5 | 11.6 | 3.9 | 23.3 | 53.9 | 7.3 |
| 512730 | II | 39.8 | 20.0 | 10.6 | 3.9 | 28.1 | 50.6 | 6.8 |
| 512731 | II | 44.8 | 17.5 | 11.9 | 3.6 | 25.3 | 51.9 | 7.3 |
| 512732 | I | 40.6^ | 21.1^ | 11.5^ | 4.1^ | 23.2^ | 54.8^ | 6.4^ |
| 512733 | II | 43.2 ^w | 20.8 ^w | 13.4 | 4.2 | 28.0 | 49.0 | 5.4 |
| 512735 | I | 36.8^ | 21.3^ | 10.7^ | 4.1^ | 26.8^ | 52.1^ | 6.3^ |
| 512736 | I | 40.1^ | 19.2^ | 10.7 | 4.3^ | 25.7^ | 53.4^ | 6.2^ |
| 512737 | I | 40.1 | 20.5^ | 11.6^ | 3.6^ | 31.6^ | 48.0^ | 5.3^ |
| 512737 | II | 41.0 | 18.8 | 8.3 | 3.9 | 31.6 | 50.0 | 6.3 |
| 512741 | II | 40.2 | 19.0 | 8.6 | 3.9 | 27.9 | 53.1 | 6.5 |
| 512742 | I | 37.8 [^] | 21.4^ | 10.6^ | 3.5^ | 21.8^ | 57.0 [^] | 7.1^ |
| 512744 | I | 42.8^ | 18.4^ | 11.3^ | 4.8^ | 23.6 | 53.0^ | 7.1^ |
| 512740 | II | 42.7 | 19.5 | 11.7 | 4.3 | 27.1 | 51.1 | 5.9 |
| 512747 | II | 40.8 | 19.3 | 11.7 | 4.1 | 23.0 | 53.4 | 7.2 |
| 512748 | II | | | 12.1 | | | | |
| | | 41.0 | 19.1 | | 4.6 | 23.4 | 52.8 | 7.1 |
| 512750 | III | 39.0 | 19.9 | 8.7 | 4.5 | 23.5 | 57.0 | 6.2 |
| 512752 | I | 48.9 ^w ^ | 11.2 ^w ^ | 14.2^ | 4.1^ | 17.4^ | 54.5^ | 9.7^ |
| 512753B | I | 42.5 ^w ^ | 11.4 ^w ^ | 14.0^ | 3.5^ | 22.9^ | 51.0^ | 8.6^ |
| 512754 | I | 45.0 ^w ^ | 12.2 ^w ^ | 14.4^ | 3.7^ | 20.8^ | 51.8^ | 9.4^ |
| 512758B | III | 45.2 ^w | 10.0 ^w | 15.1 | 4.0 | 19.5 | 51.4 | 10.1 |
| 612759D | III | 46.8 ^w | 11.9 ^w | 14.4 | 4.0 | 20.9 | 52.1 | 8.6 |
| 612760 | I | 47.2 ^w ^ | 10.5 ^w ^ | 14.1^ | 4.0^ | 17.7^ | 54.5^ | 9.6^ |
| 612761B | I | 45.0 ^w ^ | 13.7 ^w ^ | 13.1^ | 3.8^ | 21.6^ | 53.2^ | 8.3^ |