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Evaluation of the USDA Soybean Germplasm Collection: Maturity Groups 000 to IV (PI 273.483 to PI 427.107)

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ABSTRACT

Nelson, Randall L., Paul J. Amdor, James H. Orf, and others. 1987. Evaluation of the USDA Soybean Germplasm Collection: Maturity Groups 000 to IV (PI 273.483 to PI 427.107). U.S. Department of Agriculture, Technical Bulletin No. 1718, 267 p.

This report contains data on the origin, descriptive characteristics, agronomic performance, seed composition, and disease reaction of over 2,800 accessions from the USDA Soybean Germplasm Collection in maturity groups 000 to IV. These accessions were introduced into the United States from 1961 to 1978. Publicly released cultivars from the United States and Canada during this same period were also tested. A maximum of 40 categories of data is presented for each entry. These accessions were evaluated in four tests based on maturity, with each maturity group grown in a latitude to which it was adapted.

KEYWORDS: Disease reactions, fatty acids, *Glycine max* (L.) Merr., oil percentage, origin of germplasm, protein percentage, seed yield.

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Issued May 1987

EVALUATION OF THE USDA SOYBEAN GERMPLASM COLLECTION: MATURITY GROUPS 000 TO IV (PI 273.483 TO PI 427.107)

Randall L. Nelson,[1] Paul J. Amdor,[2] James H. Orf,[3] Jean W. Lambert,[3] James F. Cavins,[4] Robert Kleiman,[4] Francis A. Laviolette,[5] and Kirk L. Athow[5]

This report contains information on the origin, descriptive characteristics, agronomic performance, seed composition, and disease reactions of soybean (Glycine max (L.) Merr.) germplasm accessions for PI 273.483 to PI 427.107 in maturity groups 000 through IV. Accessions in these maturity groups with smaller PI numbers have been previously evaluated by R.L. Bernard and C.R. Cremeens, USDA-ARS, Urbana, IL.

The data in this report were collected in four evaluation tests based on maturity groups. The tests were conducted in 1980 and 1981 with one replication per year. The plots were four rows wide and 3 m long with 75 cm between rows. The center two rows were end trimmed to 2.4 m after flowering was completed, and all data were collected on those two rows. In those tests in which more than one maturity group was included, the test was blocked by maturity group in the field, but the data were reported in PI-number order.

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The authors thank R.L. Bernard, curator of the USDA Soybean Germplasm Collection at Urbana, IL, for providing the seeds of the accessions evaluated in these tests and Joyce Fasnacht, USDA-ARS, for compiling and formatting the data in this publication.

Information on the individual tests is as follows:

Maturity groups 000 to 0: In this test the seed was planted on May 22, 1980, and May 11, 1981, at the University of Minnesota, St. Paul (45°0' N. lat.). J.W. Lambert was in charge of the test in 1980 and J.H. Orf shared responsibility for the work in 1981.

Maturity groups I, II, and III: In this test the seed was planted on May 22, 1980, and May 25, 1981, on the Agronomy-Plant Pathology South Farm, University of Illinois, Urbana (40°8' N. lat.). R.L. Nelson and P.J. Amdor were in charge of the test.

Early maturity group IV: This test contains those accessions that matured in the first half of maturity group IV. The maturity of the U.S. cultivar Kent was used as the dividing date between early and late maturity group IV. The seed was planted on May 16, 1980, and May 24, 1981, on the Agronomy-Plant Pathology South Farm, University of Illinois, Urbana (40°8' N. lat.). R.L. Nelson and P.J. Amdor were in charge of the test.

Late maturity group IV: This test contained those accessions that matured later than the cultivar Kent when grown at Urbana. The seed was planted on May 26, 1980, and June 11, 1981, at the University of Kentucky, Lexington (38°2' N. lat.). J.H. Orf was in charge of the test and received assistance from D.B. Egli, professor of Agronomy, University of Kentucky, in 1981.

Only accession means were reported, but if the difference between the values recorded in the two replications exceeded a specified limit, the mean was followed by an asterisk (*). The limits for each trait were as follows:

Flowering	>5 days	Maturity	>8 days
Lodging	>1 unit	Height	>15 cm
Stem termination	>1 unit	Shattering	>1 unit
Seed quality	>1 unit	Mottling	>1 unit
Seed weight	>3.0 cg/seed	Yield	>0.7 Mg/ha

This system was devised because of the possibility of misinterpreting the mean of only two observations when the difference between the individual values was large. As an example, in 1980 the weather conditions at Urbana were very conducive to producing large amounts of shattering, but in 1981, because of a cool, wet fall, limited shattering occurred. It was not uncommon to have a late shattering score of 5 in 1980 and a score of 1 in 1981 on the same accession.

The seed and oil composition data were collected by J.F. Cavins and Robert Kleiman of the USDA Northern Regional Research

Center, Peoria, IL. To obtain oil and protein percentages of the seed, approximately 7 g of seed were placed in a beaker and dried in a forced air oven for 3 hours at 130°C. The seed was then transferred to 50-g bottles, sealed, and allowed to cool for 1 hour. Samples were then ground in a Varco model MX-228 electric dry-food grinder and returned to the 50-g bottles. The ground meal was analyzed by near-infrared reflectance in a Neotec model 51A grain-quality analyzer. The analyzer had previously been calibrated with 40 soybean samples having a protein range of 33 to 50 percent and an oil range of 12 to 24 percent.

Fatty acid composition was obtained by gas-liquid chromatography of the methyl esters. Seeds were ground in a small food grinder and stored at -20°C until analyzed. Approximately 200 mg were placed in a 25-mL vial, and 5 mL of sodium methoxide were added in two 2.5-mL aliquots with an automatic syringe in such a way as to ensure mixing. The sodium methoxide solution was prepared daily by adding 1 g of sodium metal to 100 mL of reagent grade methanol. The suspension of ground sample in sodium methoxide was allowed to stand for 45 minutes, after which 1 mL of 10 percent acetic acid solution was added followed immediately by 10 mL of heptane. The samples were completely mixed after each reagent addition. These mixtures stood for several minutes so that the layers could separate. Part of the heptane layer was used for gas chromatographic analysis on a Varian model 3700 gas chromatograph equipped with two model 8000 autoinjectors and flame detectors. Columns were 2 m by 2 mm and packed with 100/120 mesh Gas-Chrom Q coated with 5 percent LAC-2R-446. Analyses were made isothermally at 180° with the injector at 230° and the detector at 240°. Gas flow rates for helium, hydrogen, and air were 25, 25, and 250 mL per minute, respectively. The autoinjectors were set to inject 0.5 μL. Total analysis time was 10 minutes. Integration, peak identification, data storage, and report printing were all done by computer.

The disease reaction data were collected by F.A. Laviolette and K.L. Athow, Purdue University, West Lafayette, IN. The data on reaction to frogeye leafspot, physiologic race 2, were obtained by artificial inoculation in the field. All accessions were planted in 1-m rows with 30 seeds per row. Every third row was planted with the susceptible cultivar Lindarin. Petri plates of V-8 juice agar were streaked with a spore-mycelial suspension, which was grown on tubes of potato dextrose agar. The petri plates were incubated for 1 to 2 weeks until there was good sporulation over the entire plate. The contents of the plates were macerated in a Waring blender and strained through cheesecloth. Forty plates were used to produce 11 L of inoculum, which was sufficient to treat 150 1-m plots.

Inoculation was done on a cloudy day or in the evening when the plants had approximately four trifoliolate leaves. In most tests, large amounts of secondary spread occurred from the initial infection. Disease readings were taken when the susceptible cultivar had infection over the entire plant. An explanation of the rating system is included in the explanation of table 4.

Phytophthora root rot inoculations were done in the greenhouse. Inoculum was prepared by growing the fungus on oatmeal agar in petri plates in an unlighted cabinet for 2 to 3 weeks at 22° to 24°C. Fourteen seeds per accession were planted in a 10-cm clay pot. Ten to twelve 10-day-old seedlings were inoculated by inserting a 2- by 2-mm piece of mycelium into a longitudinal slit in the hypocotyl and covering the wound with petrolatum to prevent desiccation of the inoculum and host tissue. The inoculated plants were incubated in the greenhouse for 6 days at 24° to 27° before classification.

Explanations of the data categories and abbreviations used are as follows:

Table 1:

Accession name and foreign collection number: All accession names and identification numbers from other germplasm collections were reported as received. No attempt was made to change transliterations or translations done by others. If sublines were isolated from the original seed sample, the name, number, or both of the original sample were maintained with all sublines but were enclosed in parentheses. Sublines were usually identified by adding letter suffixes beginning with "A" to the PI number, but sometimes a subline was assigned a separate PI number. The smallest PI number or the subline designated with an "A" suffix retained the name and number without parentheses.

Primary seed source: This is the source of the actual seeds that were received in the collection.

Secondary seed source: This is the source of the seeds for the primary supplier, if known and if it is different from the origin of the genotype.

Origin of genotype: This is the best information available on the origin of the line. In some cases the primary supplier indicated the original source of the material. If no information was available, this would be the same as the primary seed source. If the country in this column was followed by a plus sign (+), the name or identification number of the

accession would indicate that this was the most likely origin but no other supporting evidence was available.

Year of introduction or release: This is the year in which cultivars from the USA or Canada were officially released, or, in the case of introductions, it is the year in which they were assigned PI numbers.

Table 2:

Flower color: P = purple, Dp = dark purple, Lp = light purple, W = white

Pubescence color: T = tawny, Lt = light tawny, G = gray, Ng = near gray

Pubescence form:

A = appressed on leaf surface
C = curly (twisted and appressed)
E = erect on leaf surface
I = irregular (slightly curly or twisted)
Sa = semiappressed on leaf surface

Pubescence density:

Dn = dense
G = glabrous (no pubescence)
N = normal density
Sdn = semidense
Sp = sparse
Ssp = semisparse (slightly reduced density, most noticeable on the pulvinus)

Pod color: Bl = black, Br = brown, Dbr = dark brown, Lbr = light brown, Tn = tan

Seedcoat luster: B = bloom, D = dull, I = intermediate (between shiny and dull), S = shiny

Seedcoat and hilum color:

Bf = buff	Bl = black
Br = brown	Blbr = black hilum with brown outer ring
G = gray	Gn = green
Ggn = grayish green	Gnbr = greenish brown
Gnbl = greenish black	Ib = imperfect black
Rbf = reddish buff	Rbr = reddish brown
Tn = tan	Y = yellow

Dark or light shades of these colors are indicated by prefixing the abbreviations with D or L.

Other seed traits:

Abh = imperfect abscission of hilum
Def = defective seedcoat (irregular splitting of the seedcoat)
Fleck = brown flecks on black seedcoat
Gncot = green cotyledon
Net = splitting of the seedcoat, which produces a netted appearance on the sides of the seeds
Saddle = saddle-shaped dark pigment on seedcoat encompassing the hilum
Sph = spread hilum (slight, regular extension of hilum pigment beyond hilum boundary)
St = black stripes (rings) on seedcoat

Other leaf traits:

5Lft = 5 leaflets
Dab = delayed abscission of leaves
Na = narrow leaflet
Wa = wavy leaflet margin

Other plant traits:

Sw = semiwild
Det = determinate stem termination (used for maturity groups 000 to 0 only; for stem termination in other maturity groups, see table 3)

Slight or some expression of any of these other traits is indicated by prefixing the abbreviation with S.

Table 3:

Flowering: 50 percent of the plants have flowered (days after May 31)

Maturity: 95 percent of the pods have reached final color (days after May 31)

Lodging: Scored 1 (erect) to 5 (prostrate)

Height: From ground to stem tip in centimeters at maturity

Stem termination: Scored 1 (very determinate) to 5 (very indeterminate), (not scored at St. Paul location, see other plant traits under table 2)

Shattering: (Early, scored at harvest; late, scored 2 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. Shattering scores were not taken at the St. Paul location.

Seed quality: Scored 1 (good) to 5 (poor), considering wrinkling, defective seedcoat, greenish or diseased seeds

Mottling: Score based on percentage of seedcoat with dark pigment as follows: 1 = no mottling, 2 = 1 to 10 percent, 3 = 10 to 25 percent, 4 = 25 to 50 percent, 5 = >50 percent. No mottling scores can be obtained from accessions with dark pigmented seedcoats. A dash (-) would indicate that a mottling score is not possible.

Seed weight: Centigrams per seed based on a 200-seed sample

Seed yield: Megagrams per hectare at 13 percent moisture

Table 4:

Seed composition:

Oil and protein: Percentage of dry weight of seed

Fatty acids: Percentage of total fatty acids

Disease reaction:

F.L. = Frogeye leafspot caused by *Cercospora sojina* rated on a scale of 1 to 5. 1 = no infection, 2 = very few small lesions, 3, 4, and 5 = increasing degrees of susceptibility.

Phytophthora = Phytophthora root rot caused by *Phytophthora megasperma* f. sp. *glycinea*. H = mixed reaction, R = resistant, S = susceptible.

If more than one but less than half of the plants had a susceptible reaction, the line was classified as "H." If more than half of the plants had a susceptible reaction, the line was classified as "S."

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
	Ada		USA		USA	1972	00
	Altona		Canada		Canada	1966	00
	Clay		USA		USA	1968	0
	Evans		USA		USA	1974	0
	Grande		USA		USA	1976	0
	Maple Arrow		Canada		Canada	1976	00
	Maple Presto		Canada		Canada	1979	000
	McCall		USA		USA	1978	00
	Morsoy		Canada		Canada	1970	00
	Norman		USA		USA	1969	00
	Portage		Canada		Canada	1964	00
	Swift		USA		USA	1972	0
	Traverse		USA		USA	1965	0
	Vansoy		Canada		Canada	1970	0
	Wilkin		USA		USA	1972	0
290.114	Pavilikeni 502	II-2-5	Hungary		Hungary	1963	0
290.115	Pavilikeni 519	II-2-6	Hungary		Hungary	1963	0
290.116A	Hodoninska Zluta	II-2-11	Hungary		Hungary	1963	0
290.116B	(Hodoninska Zluta)	II-2-11	Hungary		Hungary	1963	0
290.118	Izj hua	II-2-17	Hungary		Hungary	1963	0
290.119	Amurszkaja 41	II-2-26	Hungary		USSR+	1963	0
290.120	Amurszkaja 42	II-2-27	Hungary		USSR+	1963	00
290.121	Amurszkaja 154	II-2-28	Hungary		USSR+	1963	0
290.122	Avril	II-2-29	Hungary		Hungary	1963	0
290.123A	Braungelbe Austria	II-2-34	Hungary		E. Germany+	1963	0
290.123B	(Braungelbe Austria)	II-2-34	Hungary		E. Germany+	1963	0
290.125	Gelbe Riesen	II-2-60	Hungary		E. Germany+	1963	0
290.127	Herb Muller 861	II-2-70	Hungary		Hungary	1963	0
290.129A	Keszthelyi Aproszemu Sarga	II-2-82	Hungary		Hungary	1963	0
290.129B	(Keszthelyi Aproszemu Sarga)	II-2-82	Hungary		Hungary	1963	0
290.131	Locale 11	II-2-88	Hungary		Hungary	1963	0
290.132	Mandurska 1	II-2-95	Hungary		Hungary	1963	0
290.133	Mandurska 2	II-2-96	Hungary		Hungary	1963	0
290.135	Mediachev	II-2-98	Hungary		Hungary	1963	0
290.136	Noir 1	II-2-100	Hungary		Hungary	1963	0
290.137	Noir 2	II-2-101	Hungary		Hungary	1963	0
290.138	Norddeutsche	II-2-103	Hungary		E. Germany+	1963	0
290.139	Ochrolwuca	II-2-106	Hungary		Hungary	1963	0
290.140	Precoce	II-2-111	Hungary		Hungary	1963	0
290.141	Primorszkaja 529	II-2-112	Hungary		USSR+	1963	0
290.142	Rabakecoli 10	II-2-115	Hungary		Hungary	1963	0
290.143	Reatz	II-2-116	Hungary		Hungary	1963	00
290.144	Rouest 68.1	II-2-121	Hungary		France+	1963	0
290.145	Rouest 250	II-2-123	Hungary		France+	1963	0
290.148	Vilnensis Freta	II-2-132	Hungary		Hungary	1963	0
290.150	Balvanska	II-2-147	Hungary		Hungary	1963	00

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
Ada	00	W	G	E	N	Br	S	Y	Y			
Altona	00	P	T	E	N	Br	S	Y	Bl			
Clay	0	P	G	E	N	Br	S	Y	Y			
Evans	0	W	G	E	N	Br	D	Y	Y			
Grande	0	P	T	E	N	Br	D	Y	Y			
Maple Arrow	00	P	T	E	N	Br	D	Y	Br			
Maple Presto	000	P	T	E	Ssp	Br	I	Y	Y			
McCall	00	P	G	E	N	Br	I	Y	Y			
Morsoy	00	P	G	E	N	Br	I	Y	Lib			
Norman	00	P	G	E	N	Br	S	Y	Y			
Portage	00	P	G	E	N	Br	S	Y	Y			
Swift	0	W	T	E	N	Br	D	Y	Bl			
Traverse	0	W	G	E	N	Br	S	Y	Y			
Vansoy	0	W	T	E	N	Br	S	Y	Y			
Wilkin	0	W	G	E	N	Br	D	Y	Y			
290.114	0	P	T	E	N	Br	I	Y	Br	Abh		
290.115	0	P	G	E	N	Br	S	Y	Y			
290.116A	0	P	G	E	N	Br	I	Y	Y			
290.116B	0	P	T	E	N	Tn	I	Y	Y			
290.118	0	P	G	E	N	Br	S	Y	Y			
290.119	0	P	T	E	N	Br	D	Y	Y			
290.120	00	P	T	E	Ssp	Br	D	Y	Y			
290.121	0	P	T	E	N	Br	S	Y	Y			
290.122	0	P	T	E	N	Tn	I	Y	Br	Abh		
290.123A	0	P	T	E	N	Br	I	Y	Br	Abh		
290.123B	0	P	T	E	N	Br	S	Y	Br			
290.125	0	P	G	E	N	Br	D	Y	Y			
290.127	0	P	G	E	N	Br	D	Y	Y			
290.129A	0	P	T	E	N	Tn	S	Y	Br	Abh		
290.129B	0	P	T	E	N	Tn	S	Y	Br	Abh		
290.131	0	P	G	E	N	Br	S	Y	Y			
290.132	0	P	G	E	N	Br	I	Y	Y			
290.133	0	P	G	E	N	Br	I	Y	Y			
290.135	0	P	T	E	N	Br	D	Y	Br			
290.136	0	W	T	E	Ssp	Br	D	Bl	Bl			
290.137	0	W	T	E	Ssp	Br	D	Bl	Bl			
290.138	0	W	T	E	Ssp	Br	D	Bl	Bl			
290.139	0	P	T	E	N	Br	I	Y	Br	Abh		
290.140	0	P	G	E	N	Br	I	Y	Y			
290.141	0	P	G	E	N	Br	I	Y	Y			
290.142	0	W	T	E	N	Br	S	Bl	Bl			
290.143	00	P	T	E	N	Br	D	Y	Bl			
290.144	0	P	G	E	N	Br	D	Y	Bf	Abh		
290.145	0	P	G	E	N	Br	D	Y	Bf	Abh		
290.148	0	W	T	E	Ssp	Br	D	Bl	Bl			
290.150	00	P	T	E	N	Tn	S	Y	Br	Abh		

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
Ada	31	99	3.0*	88	2.0	2.5	16.3	2.38
Altona	29	99	3.5	91	2.5	3.0	18.0*	2.62
Clay	33	103	3.0	75	2.0	2.0	16.4	3.08
Evans	32	111	3.5	112*	1.5	1.0	16.8	2.89
Grande	33	111	3.5	102*	2.3	1.0	23.9	3.38
Maple Arrow	30	105	3.5	93	2.3	2.0	17.8	2.51
Maple Presto	24	83	2.0	76*	2.8	2.0	16.8	2.35
McCall	29	99	2.5	98	2.3	2.0	16.6*	3.29
Morsoy	33	101	3.5	103	2.5	3.0	19.1	2.75
Norman	32	100	3.5	83*	2.3	2.5	17.2	2.35*
Portage	30	95*	3.0	81*	2.3	3.5	18.8*	2.47
Swift	35	112	3.0	105	1.8	2.0	17.7	3.19
Traverse	34	113	3.5	103	2.0	2.0	17.9	3.02
Vansoy	33	105	4.0	105	2.0	2.5	15.3	2.67
Wilkin	31	102*	2.5	89	1.8	1.0	16.1	2.34
290.114	33	109	3.5	75	1.8	1.5	12.4	2.42
290.115	34*	106	3.5	77*	2.3	2.0*	18.7	2.42
290.116A	Tested in and reported with group I evaluation							
290.116B	39	118	3.5	57	1.5	1.0	9.9	2.21
290.118	33	107	3.0*	76*	2.0	3.5	17.1	2.29
290.119	32	105	4.0	86	1.8	4.0	16.5	2.36
290.120	33	101	3.5	90	2.0	5.0	13.8	2.36
290.121	35	105	3.5	76	2.3	4.0	18.4	2.08
290.122	36	107	4.5	74	2.3	2.0	11.9	2.29
290.123A	40	113	4.0	79	2.0	1.0	12.0	2.05
290.123B	34	105	3.5	79*	2.3	3.0	17.2	2.10
290.125	36	112	4.0	114*	2.5	2.0	19.2	2.32
290.127	42*	113	3.0	74	2.3	3.0	21.3	2.18
290.129A	35	110	4.0*	51	2.3	2.5	11.8	1.82
290.129B	33	106	3.5	65	2.0	2.5	14.6	2.50
290.131	34	110	3.5	76	2.5	2.0	19.1	2.30
290.132	36	103*	3.0	85	2.0	3.0	19.5	2.12
290.133	32	100*	3.5	85	2.0	4.0	19.6	2.24
290.135	32	106	3.5	86*	2.5	3.0	16.5	2.35
290.136	35	108	3.5	90	2.0	-	14.1	2.24
290.137	36	108	4.0	90	1.5	-	13.1	2.64
290.138	36	108	3.5	97	2.0	-	14.3	2.69
290.139	37*	109	5.0	63*	1.8	1.0	10.4	1.86
290.140	35*	101*	3.5	71	2.3	3.5	21.9	2.41
290.141	35	101*	3.0	69	2.0	3.5	21.6	2.14
290.142	32	108	3.0	95	2.5	-	18.4	2.36
290.143	30	104	3.5	94	2.3	1.0	14.8	2.52
290.144	34*	108	3.0	77	1.8	1.0	17.3	2.55
290.145	32	108	3.5	86*	2.5	1.0	17.0	2.45
290.148	39	109	3.5	105*	2.3	-	13.3	2.44
290.150	33	108	3.0	74*	2.0	1.5	12.2	2.59

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
Ada	00	20.4	42.2	11.7	3.0	29.7	49.0	6.4	0.0	4									
Altona	00	20.0	43.0	11.1	2.8	26.4	52.4	7.1	0.0	3	R	R	R	R	S	S	S	S	S
Clay	0	20.9	40.6	11.5	2.6	20.5	57.0	8.4	0.0	5	S	S	S	S	S	S	S	S	S
Evans	0	21.3	38.5	11.8	2.5	18.2	58.9	8.7	0.0	5	R	R	S	S	S	S	S	S	S
Grande	0	20.0	38.8	10.7	2.7	25.4	51.5	9.6	0.0	3	S	S	S	S	S	S	S	S	S
M. Arrow	00	21.2	39.8	10.9	2.6	21.2	57.4	7.8	0.0	2	R								
M. Presto	000	21.8	39.1	10.9	3.0	36.5	42.6	6.9	0.1	3	R								
McCall	00	19.4	39.3	12.2	3.6	20.8	55.4	7.9	0.1	5	S	S	S	S	S	S	S	S	S
Morsoy	00	19.9	41.0	11.8	3.3	27.4	48.4	9.0	0.1	5	S	S	S	S	S	S	S	S	S
Norman	00	19.3	41.3	11.7	3.2	25.5	52.3	7.2	0.1	4	S	S	S	S	S	S	S	S	S
Portage	00	20.1	40.8	12.4	2.3	30.2	47.8	7.2	0.0	5	S	S	S	S	S	S	S	S	S
Swift	0	21.2	38.7	11.3	3.1	20.9	54.9	9.6	0.0	5	S	S	S	S	S	S	S	S	S
Traverse	0	20.0	41.1	11.8	3.0	20.1	55.1	10.0	0.1	4	S	S	S	S	S	S	S	S	S
Vansoy	0	19.3	40.6	12.2	2.9	17.6	56.2	11.0	0.1										
Wilkin	0	20.3	41.2	12.1	2.5	20.7	55.2	9.4	0.0	5	R								
290.114	0	19.0	42.2	14.0	3.0	17.6	56.4	8.9	0.0	1	S								
290.115	0	18.8	42.7	12.4	2.6	20.7	53.5	10.6	0.0	5	S								
290.116A	0	Tested in and reported with the group I evaluation								4	S								
290.116B	0	17.9	43.9	11.4	2.9	13.8	58.0	13.7	0.0	4	S								
290.118	0	19.1	43.2	11.9	2.5	20.4	54.4	10.6	0.0	5	S								
290.119	0	19.6	41.9	12.5	2.7	21.2	54.5	8.9	0.0	5	S								
290.120	00	19.5	43.0	13.3	2.8	24.8	51.7	7.3	0.0	4	R		S	R					
290.121	0	19.8	42.7	11.5	2.1	22.6	54.2	9.5	0.0	5	S								
290.122	0	18.4	42.5	13.7	3.0	17.3	56.6	9.3	0.0	2	S								
290.123A	0	18.8	41.3	13.4	3.1	18.7	55.0	9.8	0.0	5	S								
290.123B	0	20.0	42.1	11.5	2.7	24.2	51.2	10.3	0.0	4	S								
290.125	0	19.0	42.3	11.8	2.7	22.4	53.4	9.6	0.0	4	S								
290.127	0	18.3	45.9	12.3	2.4	19.9	55.7	9.6	0.0	5	S								
290.129A	0	18.4	42.8	13.9	3.1	18.1	55.5	9.3	0.0	4	S								
290.129B	0	18.2	42.0	12.4	2.9	18.5	56.4	9.6	0.0	3	S								
290.131	0	18.3	45.3	12.0	2.4	23.2	52.6	9.4	0.1	5	S								
290.132	0	17.7	44.0	12.5	2.8	20.0	54.7	10.1	0.0	5	S								
290.133	0	17.5	45.8	12.0	2.8	23.7	53.3	8.1	0.0	5	S								
290.135	0	18.5	43.2	11.8	2.4	23.4	51.9	10.4	0.0	4	S								
290.136	0	18.7	43.4	13.3	2.6	17.7	56.8	9.6	0.0	5	R		H	R					
290.137	0	18.6	43.0	13.5	2.4	17.8	56.7	9.4	0.0	4	H							H	
290.138	0	18.7	43.5	13.1	2.5	17.1	57.6	9.5	0.0	3	R							R	
290.139	0	18.1	41.4	12.8	3.2	16.6	56.7	10.4	0.3	3	S								
290.140	0	17.6	43.3	12.2	2.7	21.4	55.5	7.9	0.1	4	S								
290.141	0	17.7	44.4	12.3	2.6	20.8	56.0	8.3	0.0	5	S								
290.142	0	19.3	41.7	11.4	3.2	20.6	56.1	8.5	0.0	4	S								
290.143	00	17.6	45.2	11.3	2.8	23.5	53.4	8.8	0.0	5	S								
290.144	0	19.9	40.6	12.8	2.6	21.0	54.3	9.1	0.0	4	S								
290.145	0	20.5	40.6	13.0	2.7	21.5	53.5	9.2	0.0	3	S								
290.148	0	18.6	43.4	13.5	2.8	18.5	56.1	8.9	0.0	5	R	R	R	R	S	S	S	H	
290.150	00	18.8	40.6	14.2	3.0	18.5	55.1	9.0	0.0	4	S								

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
290.151	Browneas	II-2-153	Hungary		Hungary	1963	0
290.152	Conie I	II-2-155	Hungary		Hungary	1963	0
290.153	Soya Heimkraft II	II-2-163	Hungary		E. Germany+	1963	00
290.154	Harkovskaja 149	II-2-168	Hungary		USSR+	1963	0
290.155	Vinca	II-2-181	Hungary		Hungary	1963	00
290.156	Wielnska Brunatna	II-2-184	Hungary		Hungary	1963	000
290.157	SHWN	II-2-186	Hungary		Hungary	1963	0
290.158	Ke schuan	II-2-234	Hungary		China+	1963	00
291.311A			Sweden		China	1963	0
291.312			Sweden		China	1963	0
291.313			Sweden		China	1963	0
291.318			Sweden		China	1963	0
291.319A			Sweden		China	1963	0
291.319B			Sweden		China	1963	0
291.320B			Sweden		China	1963	0
291.321			Sweden		China	1963	0
291.325			Sweden		China	1963	0
291.326			Sweden		China	1963	00
291.329			Sweden		China	1963	0
291.331			Sweden		China	1963	0
295.947	Amurskaja 57		E. Germany		USSR	1964	0
295.948	Amurskaja 262		E. Germany		USSR	1964	0
295.949	Amurskaja 266		E. Germany		USSR	1964	0
295.950	Jubilee (Jubilaum)		E. Germany		USSR	1964	0
295.951	Record North		E. Germany		USSR	1964	00
295.952	Salut 216		E. Germany		USSR	1964	00
297.498A	Amurszkaja 154	II-2-397	Hungary		USSR+	1964	0
297.498B	(Amurszkaja 154)	(II-2-397)	Hungary		USSR+	1964	0
297.499	Ca chua No. 4	II-2-528	Hungary		China+	1964	0
297.501	Cina 50-6268	II-2-527	Hungary		China+	1964	00
297.503	Cina 6268	II-2-618	Hungary		China+	1964	00
297.506	Czy chua No. 1	II-2-533	Hungary		China+	1964	0
297.507A	Czy chua No. 1	II-2-567	Hungary		China+	1964	0
297.507B	(Czy chua No. 1)	(II-2-567)	Hungary		China+	1964	0
297.508	Czy chua No. 4	II-2-555	Hungary		China+	1964	0
297.509	Czyn juan No. 2	II-2-536	Hungary		China+	1964	0
297.512	Harkovszkaja	II-2-168	Hungary		USSR+	1964	0
297.513	Hartinskaja	II-2-19	Hungary		USSR+	1964	0
297.516	Iregi I. Sz. 1	II-2-409	Hungary		Hungary	1964	0
297.518	Iregi Nagyszemu Feher	II-2-278	Hungary		Hungary	1964	0
297.519	Iregi Szurkebarat	II-2-1	Hungary		Hungary	1964	0
297.520	Iregi Universal	II-2-12	Hungary		Hungary	1964	0
297.522	Izj hua	II-2-17	Hungary		Hungary	1964	0
297.523	Juanj bao tsingj	II-2-241	Hungary		China+	1964	0
297.524	Ke schuan	II-2-234	Hungary		China+	1964	00
297.525	Ke si No. 283	II-2-546	Hungary		China+	1964	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
290.151	0	W	T	E	Ssp	Br	D	Bl	Bl			
290.152	0	P	G	E	N	Br	S	Y	Y			
290.153	00	P	T	E	N	Tn	S	Y	Y			
290.154	0	P	T	E	N	Br	S	Y	Bl			
290.155	00	P	G	E	Ssp	Br	I	Y	Y			Det
290.156	000	W	T	E	Ssp	Br	S	Br	Br			
290.157	0	P	G	E	N	Br	I	Y	Y			
290.158	00	P	G	E	N	Br	S	Y	Y			
291.311A	0	P	G	E	N	Br	I	Y	Y			
291.312	0	P	G	E	N	Br	S	Y	Y			
291.313	0	P	G	E	N	Bl	I	Y	Bf			
291.318	0	P	G	E	N	Br	D	Y	Y			
291.319A	0	P	T	E	N	Tn	D	Y	Y			
291.319B	0	W	G	E	N	Bl	I	Gn	Bf	Gncot		
291.320B	0	P	T	E	N	Br	D	Br	Br			
291.321	0	P	G	E	N	Br	S	Y	Y			
291.325	0	P	G	E	N	Br	S	Y	Y			
291.326	00	P	G	E	N	Br	I	Y	Y			
291.329	0	P	G	E	N	Tn	D	Y	Y			
291.331	0	P	T	E	N	Tn	D	Y	Y			
295.947	0	P	T	E	N	Br	S	Br	Br		Dab	
295.948	0	P	T	E	N	Tn	I	Bl	Bl		Dab	
295.949	0	P	T	E	N	Br	D	Bl	Bl		Dab	
295.950	0	W	T	E	N	Br	D	Y	Y			
295.951	00	P	G	E	N	Br	D	Y	Y			
295.952	00	P	T	E	Ssp	Br	D	Y	Y			
297.498A	0	P	T	E	N	Tn	I	Y	Br	Abh		
297.498B	0	P	T	E	N	Br	S	Y	Y			
297.499	0	P	T	E	N	Br	D	Y	Y			
297.501	00	P	T	E	N	Tn	S	Lgn	Bl			
297.503	00	P	T	E	N	Tn	S	Y	Y			
297.506	0	P	T	E	N	Br	I	Y	Y			
297.507A	0	P	G	E	N	Br	I	Y	Y			
297.507B	0	P	T	E	N	Br	S	Y	G			
297.508	0	P	G	E	N	Br	S	Y	Y			
297.509	0	P	G	E	N	Br	S	Y	Y			
297.512	0	P	T	E	N	Br	I	Y	Bl			
297.513	0	W	G	E	N	Br	I	Y	Bf			
297.516	0	W	T	E	N	Tn	I	G	Bl		5Lft	
297.518	0	P	G	E	N	Tn	D	Y	G			
297.519	0	W	T	E	N	Tn	S	G	Bl		5Lft	
297.520	0	P	T	E	N	Tn	S	Y	G			
297.522	0	P	G	E	N	Br	I	Y	Y			
297.523	0	W	G	E	N	Br	S	Y	Lbf			
297.524	00	P	G	E	N	Tn	S	Y	Y			
297.525	0	P	G	E	N	Br	I	Y	Y	SAbh		

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
290.151	35	108	4.0	99	2.0	-	14.0	2.47
290.152	35	105	3.5	95	2.0	2.0	15.9	2.38
290.153	31*	102	3.0	89	1.8	2.0	15.4	2.42
290.154	36	105	4.0	85	2.3	3.0	17.9	1.88
290.155	33	94	2.5	48	2.5	3.5	16.7	1.81
290.156	33	90	3.5	56	2.5	-	16.9	1.70
290.157	32	101	3.5	79	2.5	2.0	18.9	2.04
290.158	30	93	4.0	71	2.8	3.0	18.8	2.35
291.311A	38	109	4.5	95*	2.5	4.0	19.8	1.99*
291.312	34	106	2.5	71	2.5	2.0	16.8*	2.24
291.313	39	103	3.5	76*	2.5	3.0*	19.4	2.00
291.318	37	112	3.0	75	2.3	2.0	20.8	2.07
291.319A	42	110	4.0	75	2.0	4.5	17.9	1.83
291.319B	Tested in and reported with group I evaluation							
291.320B	32	108	4.0	94	2.3	-	16.1	2.37
291.321	35*	105	2.5	79	2.5	3.5	20.4	2.25
291.325	34	105	2.5	76	2.5	3.5	20.0	2.30
291.326	30	93	3.5	69	2.8	2.5	18.7	2.33
291.329	39	109	3.5	66	2.3	2.0	16.8	2.10
291.331	35	100	4.0	86*	2.3	5.0	13.5	1.78
295.947	34	111	5.0	93*	1.8	-	13.2	1.60
295.948	32	109	4.5	93	2.3	-	13.4	2.17
295.949	33	109	5.0	86	2.3	-	12.9	1.97
295.950	36	103	2.5	81	2.0	4.0	22.3*	2.39
295.951	30	93	3.5	75	2.5	2.0	17.6	2.35
295.952	30	103	4.0	93*	2.5	3.5	15.8	2.62
297.498A	37	110	4.5	97	2.3	2.5	16.0	2.34
297.498B	38	104	4.0	81	2.3	4.0	16.3	2.32
297.499	Tested in and reported with group I evaluation							
297.501	38	94	2.5	43	2.3	3.0	16.9	1.40
297.503	32	102	3.0*	86	2.3	1.0	16.7	2.65
297.506	32	103	4.0	99	2.3	2.0	15.5	2.55
297.507A	31	103	3.0*	74	2.3	2.5	16.7	2.35
297.507B	36	113	4.0	104*	2.0	2.5	17.7	2.88
297.508	34	105	3.0*	81	2.0	3.0	19.4	2.33
297.509	33	109	4.0	80	1.8	2.0	16.7	2.31*
297.512	36	106	3.5	89	2.3	3.0	17.7	2.51
297.513	37	111	3.5	83	1.8	2.0	14.3	3.01
297.516	37	110	3.0	77	2.5	1.0	16.2	2.90*
297.518	37	109	3.0	84	1.8	1.0	16.2	2.89
297.519	41	110	4.0	85	2.5	1.0	16.3	2.68
297.520	33	113	4.0	102*	2.0	1.5	15.3	2.53
297.522	33	106	3.5	81	2.5	3.0	19.4	2.23*
297.523	33	111	5.0	93*	1.8	1.5	17.7	2.44
297.524	32	92*	3.0*	65	3.0	2.5	17.2*	2.28
297.525	38	110	4.5	102*	2.5	3.0	21.6	2.24

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
290.151	0	18.7	43.1	13.4	2.8	18.6	56.2	8.8	0.1	5	H H R R R R S H
290.152	0	19.4	39.2	11.8	2.6	21.6	55.1	8.7	0.1		S
290.153	00	18.8	42.0	12.2	2.9	16.7	57.8	10.1	0.0	5	S
290.154	0	19.3	41.3	11.3	2.5	23.3	54.7	8.0	0.0	5	S
290.155	00	18.3	44.3	12.4	2.7	20.6	56.1	8.2	0.0	4	S
290.156	000	17.3	43.7	11.5	2.8	30.5	46.9	8.1	0.0	1	S
290.157	0	17.6	42.2	12.0	2.8	23.3	52.6	8.9	0.4	4	S
290.158	00	19.5	41.0	11.3	2.8	26.1	52.0	7.6	0.0	3	S
291.311A	0	19.0	43.4	12.0	2.9	22.3	53.6	8.8	0.3	5	S
291.312	0	18.6	41.0	12.2	2.6	22.7	54.0	8.5	0.0	1	S
291.313	0	18.0	41.1	12.7	3.0	21.7	53.3	9.1	0.1	4	S
291.318	0	18.1	42.9	11.7	2.7	23.3	53.6	8.6	0.0	5	S
291.319A	0	17.5	43.8	11.5	2.8	23.3	52.7	9.4	0.0	5	S
291.319B	0	Tested in and reported with the group I evaluation								4	S
291.320B	0	19.1	39.6	11.9	2.8	26.8	49.1	9.3	0.0	5	S
291.321	0	18.5	42.5	12.1	2.7	23.2	52.3	9.5	0.0	5	S
291.325	0	18.7	42.8	12.1	2.7	23.5	52.1	9.3	0.0	5	S
291.326	00	19.2	42.6	11.6	2.7	25.0	52.5	8.0	0.0	5	S
291.329	0	18.1	41.0	12.4	2.9	22.6	53.4	8.5	0.0	3	S
291.331	0	18.1	40.5	13.7	2.8	20.8	54.7	7.8	0.1	3	R R R R R R R R
295.947	0	16.4	43.3	12.4	2.7	18.3	56.5	10.1	0.0	5	R R S S S S S S R
295.948	0	19.0	42.0	10.4	3.1	19.7	57.4	9.3	0.0	5	S
295.949	0	17.8	42.7	10.8	3.2	18.4	58.4	9.0	0.1	4	S
295.950	0	19.5	42.0	11.3	3.2	20.8	55.7	8.9	0.1	4	S
295.951	00	19.3	44.1	11.5	2.8	25.1	51.9	8.6	0.0	4	S
295.952	00	19.2	41.5	11.3	2.8	23.8	54.4	7.5	0.0	4	S
297.498A	0	18.0	42.0	12.0	2.7	19.7	54.9	10.4	0.1	3	S
297.498B	0	19.2	42.0	11.6	2.7	22.4	53.1	10.0	0.1	5	S
297.499	0	Tested in and reported with the group I evaluation								3	S
297.501	00	15.8	46.4	13.0	3.0	20.6	53.7	9.6	0.0	1	S
297.503	00	19.6	41.8	13.2	3.3	20.7	51.5	11.1	0.0	5	S
297.506	0	18.4	43.6	11.7	2.8	20.9	54.2	10.2	0.0	4	S
297.507A	0	19.3	41.5	11.8	2.9	22.4	52.1	10.5	0.0	5	S
297.507B	0	18.4	40.8	12.0	3.3	21.1	52.8	10.6	0.1	5	S
297.508	0	18.5	43.2	12.0	2.9	21.1	53.6	10.3	0.0	5	S
297.509	0	18.4	40.7	11.8	2.9	23.3	51.6	10.1	0.1	5	S
297.512	0	19.3	42.2	11.5	2.7	21.9	53.8	9.8	0.1	5	S
297.513	0	20.3	38.3	11.2	2.9	22.0	55.1	8.5	0.1	5	S
297.516	0	19.8	38.4	12.3	2.7	19.8	55.7	9.1	0.1	1	S
297.518	0	20.1	38.1	12.5	2.8	19.0	54.9	10.6	0.1	4	S
297.519	0	19.4	39.9	12.7	2.9	18.3	55.3	10.6	0.1	1	S
297.520	0	19.6	38.4	12.2	2.9	19.7	55.1	10.0	0.0	5	S
297.522	0	18.6	43.5	11.9	2.9	22.2	52.2	10.6	0.0	5	S
297.523	0	19.7	40.2	11.8	3.0	25.1	50.7	9.1	0.1	3	H
297.524	00	19.7	42.3	12.0	2.8	23.0	53.8	8.3	0.0	3	S
297.525	0	19.3	43.2	11.9	2.9	23.8	52.9	8.3	0.0	5	S

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
297.529	Kuban	II-2-191	Hungary		USSR+	1964	0
297.531	Kujbisevskaja	II-2-540	Hungary		USSR+	1964	0
297.532	Mandarin 2	II-2-94	Hungary		China+	1964	0
297.534	Mandurska 1	II-2-95	Hungary		Hungary	1964	0
297.535	Mandurska 2	II-2-96	Hungary		Hungary	1964	0
297.540	Miao king huang	II-2-367	Hungary		China+	1964	0
297.542	Pannonia 10		Hungary		Hungary	1964	0
297.546	Si bi va	II-2-549	Hungary		China+	1964	0
297.547	Szaljut		Hungary		USSR+	1964	0
297.549	Tsu chua I	II-2-413	Hungary		China+	1964	0
297.550	Urozsanjnaja	II-2-188	Hungary		USSR+	1964	0
297.552	Voronyezskaja	II-2-577	Hungary		USSR+	1964	00
303.650	Sys li zia	CPI 34066	Australia		China	1965	0
317.333	Karikachi		Japan		Japan	1966	0
317.336	Shinsei		Japan		Japan	1966	0
317.337	Suzunari		Japan		Japan	1966	0
319.534A	Hoshu No. 4		Japan		China	1967	0
319.534B	(Hoshu No. 4)		Japan		China	1967	00
319.534C	(Hoshu No. 4)		Japan		China	1967	0
319.536A	Shika No. 4		Japan		China	1967	00
319.536B	(Shika No. 4)		Japan		China	1967	0
319.536C	(Shika No. 4)		Japan		China	1967	0
319.536D	(Shika No. 4)		Japan		China	1967	0
319.537A	Tono No. 1		Japan		China	1967	0
319.537B	(Tono No. 1)		Japan		China	1967	0
319.538	No. 6014		Japan		China	1967	0
323.586A	Dobrangeana		Portugal		Portugal	1967	0
323.586C	(Dobrangeana)		Portugal		Portugal	1967	0
339.868A	Yuwoltae		S. Korea		S. Korea	1969	0
347.540A	F59-244		Romania		Romania	1970	000
347.540B	(F59-244)		Romania		Romania	1970	00
347.540C	(F59-244)		Romania		Romania	1970	00
347.544A	Iregy Soja		Romania		Hungary	1970	00
347.544B	(Iregy Soja)		Romania		Hungary	1970	00
347.545	Kirovogradska 4		Romania		USSR	1970	0
347.548	Pavlikieni 2		Romania		Bulgaria	1970	0
347.549	Pavlodovskaia		Romania		USSR	1970	0
347.550B	(Primorskaia 494)		Romania		USSR	1970	0
347.551	S-16 (probably L16 Cluj)		Romania		Romania	1970	00
347.554	Beltcaia 636		Romania		Romania	1970	0
347.555	BG 23-44		Romania		Romania	1970	0
347.556	F60-156		Romania		Romania	1970	00
347.559A	Len sin pin din		Romania		China	1970	0
347.559B	(Len sin pin din)		Romania		China	1970	0
347.561	Novosadska BR-3		Romania		Yugoslavia	1970	00
347.563A	Sitno Zrna		Romania		Yugoslavia	1970	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
297.529	0	P	G	E	N	Br	S	Y	Ib			
297.531	0	P	T	E	N	Br	D	Y	Y			
297.532	0	P	G	E	N	Br	S	Y	Y			
297.534	0	P	G	E	N	Br	I	Y	Y			
297.535	0	P	G	E	N	Br	I	Y	Y			
297.540	0	P	G	E	N	Br	S	Y	Y			
297.542	0	W	T	E	N	Br	S	Bl	Bl			
297.546	0	P	G	E	N	Br	S	Y	Y			
297.547	0	P	T	E	N	Br	D	Y	Y			
297.549	0	P	G	E	N	Br	I	Y	Y			
297.550	0	P	G	E	N	Br	D	Y	Y			
297.552	00	P	T	E	Ssp	Tn	I	Y	Br	Abh		
303.650	0	P	G	E	N	Br	I	Y	Y		Na	
317.333	0	P	T	E	Ssp	Br	D	Y	Br			
317.336	0	P	T	E	Ssp	Br	I	Y	Br			
317.337	0	P	T	E	Ssp	Bl	I	Y	Br		Na	
319.534A	0	P	G	E	N	Br	I	Y	Y			
319.534B	00	W	G	E	N	Br	S	Y	Y			
319.534C	0	P	G	E	N	Br	S	Y	Y		Na	
319.536A	00	P	T	E	N	Br	D	Y	Y			
319.536B	0	P	T	E	N	Tn	D	Y	Y			
319.536C	0	P	G	E	N	Br	I	Y	Y			
319.536D	0	P	G	E	N	Br	I	Y	Y			
319.537A	0	P	G	E	N	Br	S	Y	Y			
319.537B	0	P	T	E	N	Br	S	Y	Y			
319.538	0	W	G	E	N	Br	S	Y	Lbf			
323.586A	0	P	T	E	N	Tn	I	Y	Br	Abh	Dab	
323.586C	0	P	G	E	N	Br	S	Y	Bf			
339.868A	0	W	T	Sa	Ssp	Tn	D	Y	Br			
347.540A	000	P	T	E	N	Tn	I	Y	Br	Abh		
347.540B	00	P	T	E	N	Tn	I	Y	Br	Abh		
347.540C	00	P	T	E	Ssp	Br	S	Y	Y			
347.544A	00	P	T	E	N	Br	D	Y	Y			
347.544B	00	P	T	E	N	Br	D	Y	Y			
347.545	0	P	T	E	N	Br	S	Y	Br			
347.548	0	P	T	E	N	Tn	I	Y	Br	Abh		
347.549	0	P	T	E	N	Tn	I	Y	Br	Abh		
347.550B	0	P	G	E	N	Br	D	Y	Y			
347.551	00	P	T	E	Ssp	Tn	I	Y	Br	Abh		
347.554	0	P	T	E	N	Tn	S	Y	Br	Abh		
347.555	0	P	Lt	E	N	Br	S	Bl	Bl		SDab	
347.556	00	P	T	E	N	Tn	S	Y	Br	Abh	Dab	
347.559A	0	P	T	E	N	Br	D	Y	Y			
347.559B	0	P	T	E	N	Tn	I	Y	Y	Abh		
347.561	00	P	G	E	N	Br	I	Y	Y			
347.563A	0	P	T	E	N	Tn	S	Y	Br	Abh	SDab	

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
297.529	33	103*	3.0	70	2.3	1.0	17.0	2.11*
297.531	32	105	4.0	86	1.8	3.0	15.6	2.24
297.532	33	109	2.5	85	2.0	1.5	20.0	2.97*
297.534	32	101	3.5	90	2.0	3.0	19.0	2.17
297.535	38	101	3.5	84	2.3	2.5	21.0	2.09
297.540	32	108	3.0	86	1.8	3.0	16.4	2.22
297.542	36*	109	4.0*	90	2.3	-	17.8	2.60
297.546	39	117*	4.0	91*	2.3	2.5	18.7	2.33
297.547	32	104	3.5	84*	2.3	4.0	16.4	2.31
297.549	32	108	3.5	90	2.5	2.5	15.5	2.08
297.550	38	99	3.0	69	2.8	2.0	16.4	1.90*
297.552	32	103*	4.5	76	2.3	1.0	18.8*	2.01
303.650	33	109	4.0	80	2.8	2.5	19.6	2.04
317.333	42	111	3.5	77	2.0	4.0	24.2	1.89
317.336	41	109	3.5	76	2.3	4.5	19.5	1.78
317.337	43	109	3.5	65	2.3	4.5	14.9	1.74
319.534A	39	109	4.0	89*	2.0	2.0	16.9	2.30
319.534B	30	102	4.5	80	2.0	1.0	18.3	2.63
319.534C	37	111	3.5	88	2.3	3.0	20.5	1.43*
319.536A	32	105	4.5	97	2.3	2.5	16.6	2.30
319.536B	40	108	4.0	86*	2.3	4.0	18.3*	2.13
319.536C	33	106	2.5	81	2.5	3.5	19.4*	1.90*
319.536D	38	109	4.0	91	2.3	3.5	20.6	2.19
319.537A	38	116	3.0	91*	2.0	3.0	20.3	2.56
319.537B	37	112	3.0	90	2.3	4.0	21.0	2.48
319.538	37	106	3.0	85	2.0	1.0	20.7	2.06
323.586A	44	115*	3.0	88*	1.5	1.0	9.3	1.40*
323.586C	41	105	3.0	84	1.5	1.0	12.8	1.95
339.868A	52	116*	3.0	63	2.0	2.5	11.4	1.82
347.540A	30	97	4.0	81	2.8	1.0	16.9	2.38
347.540B	32	107*	4.5	104*	2.3	1.0	18.0	2.51
347.540C	29	103	3.5	77	2.0	3.5	15.6	2.63
347.544A	31	102	4.0	85	2.3	2.0	17.3	2.55
347.544B	33	103	4.5	84*	2.3	2.5	16.7	2.66
347.545	37	111	4.0	83	1.5	1.0	14.2	2.62
347.548	39	111*	4.0*	80	1.8	1.0	9.9	1.98
347.549	35	111	4.0*	74*	1.8	2.0	9.7	2.02
347.550B	32	110	4.0	84*	2.3	2.5	20.3	2.60
347.551	37	108*	4.5	66*	1.5	1.0	12.5	2.19
347.554	34	112	4.0*	74	1.8	1.5	17.4*	2.34
347.555	43*	124*	3.5	85	2.0	-	12.7	1.62
347.556	33	106	4.0*	71*	1.8	1.5	11.9	2.50
347.559A	40	120	3.0	94*	2.0	3.0	15.5	2.61
347.559B	43	122	3.5	117*	2.3	3.0	17.0	1.64
347.561	33	104	2.5	80	2.8	2.0	19.8	2.59
347.563A	39	111	5.0	104	2.0	2.0	10.7	2.21*

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
297.529	0	19.3	40.1	11.3	2.7	25.3	53.1	7.5	0.0	5	S								
297.531	0	18.8	42.2	11.5	2.5	21.6	55.4	8.8	0.0	5	S								
297.532	0	19.4	39.0	11.9	2.2	22.1	54.0	9.7	0.0	5	S								
297.534	0	17.3	40.8	12.2	2.6	23.6	52.2	9.2	0.1	5	S								
297.535	0	18.6	41.6	12.4	2.6	20.3	54.3	10.2	0.1	5	S								
297.540	0	19.3	41.0	11.5	2.6	22.6	53.5	9.5	0.0	5	S								
297.542	0	20.1	38.3	11.2	3.1	19.5	57.2	8.8	0.1	4	S								
297.546	0	18.5	41.9	11.5	2.8	20.5	55.1	9.8	0.2	5	S								
297.547	0	18.7	42.3	11.0	2.8	22.7	53.2	9.9	0.2	5	S								
297.549	0	18.5	41.5	11.9	3.2	22.7	51.9	10.1	0.1	5	S								
297.550	0	19.5	38.6	11.6	2.8	20.8	55.1	9.5	0.1	5	S								
297.552	00	19.6	41.3	11.6	2.9	23.2	53.5	8.6	0.0	1	R	R	R	R	R	S	S	S	R
303.650	0	19.6	41.5	12.0	2.2	20.6	56.3	8.7	0.1	5	S								
317.333	0	19.8	39.3	11.2	2.9	24.9	52.2	8.5	0.1	1	S								
317.336	0	18.8	39.6	11.6	2.6	24.9	52.3	8.4	0.1	1	S								
317.337	0	17.0	41.6	12.4	2.8	18.5	55.8	10.3	0.1	1	R		S	S					
319.534A	0	18.0	43.8	12.3	2.6	20.9	53.4	10.6	0.0	5	S								
319.534B	00	19.2	43.3	11.9	3.1	21.1	54.9	8.8	0.0	2	S								
319.534C	0	18.5	43.0	11.0	2.9	19.2	57.3	9.4	0.0	3	S								
319.536A	00	18.9	42.3	12.4	2.8	20.7	54.5	9.5	0.0	4	S								
319.536B	0	18.3	44.8	11.3	2.6	20.9	54.6	10.4	0.0	5	S								
319.536C	0	18.3	41.5	12.2	2.7	21.9	54.5	8.6	0.0	1	S								
319.536D	0	18.4	42.4	11.8	2.5	21.5	55.4	8.7	0.0	5	S								
319.537A	0	18.3	41.8	11.6	2.7	24.2	52.4	8.9	0.0	4	S								
319.537B	0	18.8	42.6	11.8	2.6	23.4	52.8	9.3	0.0	5	S								
319.538	0	19.2	41.8	11.3	3.0	25.1	52.3	8.1	0.0	1	S								
323.586A	0	18.9	38.4	13.2	2.9	16.2	56.8	10.7	0.0	3	S								
323.586C	0	16.9	42.6	12.9	2.7	15.5	56.5	12.3	0.0	5	S								
339.868A	0	15.6	42.7	13.1	2.5	16.4	55.8	12.1	0.0	1	S								
347.540A	000	19.4	42.0	12.0	3.3	24.0	52.2	8.3	0.0	1	H								
347.540B	00	19.2	41.4	12.1	2.9	20.0	55.8	8.9	0.0	1	S								
347.540C	00	19.5	42.8	11.1	2.8	23.5	53.7	8.8	0.0	5	S								
347.544A	00	18.4	45.6	12.1	2.8	20.3	55.7	8.9	0.0	5	S								
347.544B	00	18.7	44.9	12.2	2.6	19.5	56.4	9.0	0.0	5	S								
347.545	0	17.5	42.1	11.0	3.0	18.1	58.4	9.3	0.0	4	S								
347.548	0	18.7	41.1	12.8	3.0	14.1	59.9	10.0	0.0	2	S								
347.549	0	18.4	39.1	12.7	2.9	14.0	59.9	10.3	0.0	1	S								
347.550B	0	19.0	40.6	12.3	2.8	20.3	53.9	10.4	0.1	2	S								
347.551	00	17.5	44.2	12.4	3.3	14.9	58.7	10.6	0.0	1	R	R	R	R	R	R	S	R	
347.554	0	18.9	41.3	11.2	3.2	13.8	60.5	11.2	0.0	4	S								
347.555	0	17.1	45.2	11.9	2.5	20.4	55.1	10.0	0.0	5	S								
347.556	00	18.3	40.2	14.1	3.0	18.1	55.8	8.8	0.0	2	S								
347.559A	0	19.0	39.8	11.1	2.5	21.0	55.7	9.6	0.0	5	S								
347.559B	0	18.9	41.6	10.8	2.9	20.7	56.6	8.9	0.0	5	S								
347.561	00	17.3	44.5	13.3	2.4	23.1	51.0	10.0	0.0	5	S								
347.563A	0	17.5	41.7	12.4	3.2	16.3	57.1	10.9	0.0	5	S								

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
347.563B	(Sitno Zrna)		Romania		Yugoslavia	1970	0
347.565B	(Tzi hua No. 1)		Romania		China	1970	0
347.567	Tzi hua No. 4		Romania		China	1970	0
347.568	Talijanska Rana		Romania		Yugoslavia	1970	0
347.570	Zolta Przebsdowska		Romania		Poland	1970	0
358.316C	(Shirosaya)		Japan		Japan	1971	0
358.317A	Sapporo Commercial No. 1		Japan		Japan	1971	0
358.320			Japan		China	1971	00
358.321A			Japan		China	1971	00
358.321B			Japan		China	1971	00
358.321C			Japan		China	1971	00
358.322			Japan		China	1971	00
358.323			Japan		China	1971	0
360.850	Wasekogane		Canada		Japan	1971	0
360.952	Amurskaja 310		Sweden		USSR	1971	0
360.953	Chishima		Sweden		Japan	1971	000
360.954	Fiskeby IV		Sweden		Sweden	1971	000
360.955A	Fiskeby V		Sweden		Sweden	1971	000
360.955B	(Fiskeby V)		Sweden		Sweden	1971	000
360.957	Karafuto No. 1		Sweden		Japan	1971	00
360.958	Kamishunbetzu		Sweden		Japan	1971	00
360.962	Severnaja 4		Sweden		USSR	1971	000
360.963A	Shinsei		Sweden		Japan	1971	000
360.963B	(Shinsei)		Sweden		Japan	1971	000
360.963C	(Shinsei)		Sweden		Japan	1971	000
360.964	Smena		Sweden		USSR	1971	00
360.965	Toshi 7910		Sweden		Japan	1971	00
361.056	Beltskaia 645		Romania		USSR+	1971	0
361.058	Braungelbe		Romania		E. Germany+	1971	0
361.059A	Crusulea 9/3		Romania		Romania	1971	00
361.059B	(Crusulea 9/3)		Romania		Romania	1971	0
361.060	Dieckmanova Cierna		Romania		E. Germany+	1971	0
361.061A	Domaca Verusic		Romania		Romania	1971	0
361.061B	(Domaca Verusic)		Romania		Romania	1971	0
361.068	F.61-339		Romania		Romania	1971	00
361.069	F.166		Romania		Romania	1971	0
361.070	Faur		Romania		Romania	1971	0
361.071A	Gaterslebener St. 7		Romania		E. Germany+	1971	00
361.072	Gaterslebener St. 22		Romania		E. Germany+	1971	00
361.073	Gessener		Romania		E. Germany+	1971	000
361.077A	Harbinskaia 3971		Romania		USSR+	1971	0
361.077B	(Harbinskaia 3971)		Romania		USSR+	1971	0
361.078	Herb 620		Romania		Romania	1971	00
361.082	Kuriadaizu		Romania		Japan+	1971	0
361.083	L.16		Romania		Romania	1971	00
361.084	L.17		Romania		Romania	1971	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
347.563B	0	P	T	E	N	Br	I	Y	Br	Abh	SDab	
347.565B	0	P	G	E	N	Br	I	Y	Y			
347.567	0	P	G	E	N	Br	I	Y	Y			
347.568	0	P	T	E	N	Tn	S	Y	Br	Abh		
347.570	0	P	T	E	N	Br	S	Y	G			
358.316C	0	P	G	Sa	N	Tn	D	Y	Bf			
358.317A	0	P	G	E	N	Br	I	Y	Y			
358.320	00	W	G	E	N	Br	S	Y	Y			
358.321A	00	P	G	E	N	Br	S	Y	Bf			
358.321B	00	P	G	E	N	Br	S	Y	Ib			
358.321C	00	P	G	E	N	Br	S	Y	Bf			
358.322	00	P	G	E	N	Br	D	Y	Ib			
358.323	0	P	G	E	N	Br	D	Y	Y			
360.850	0	P	G	E	Ssp	Br	S	Y	Y		Na	
360.952	0	P	T	E	N	Br	S	Y	Y			
360.953	000	P	T	E	N	Tn	S	Bl	Bl			
360.954	000	P	T	E	Ssp	Tn	D	Y	Br			
360.955A	000	P	T	E	Ssp	Br	I	Y	Br	Abh		
360.955B	000	P	T	E	Ssp	Br	S	Y	Br			
360.957	00	P	T	E	Ssp	Br	I	Y	Br			
360.958	00	P	T	E	Ssp	Br	I	Y	Br			
360.962	000	P	T	E	N	Br	S	Y	Y			
360.963A	000	P	T	E	Ssp	Br	S	Y	Br			
360.963B	000	P	T	E	Ssp	Br	I	Y	Br	Abh		
360.963C	000	P	T	E	Ssp	Tn	D	Y	Br			
360.964	00	P	T	E	N	Br	S	Y	Y			
360.965	00	P	T	E	Ssp	Br	I	Y	Br			
361.056	0	P	G	E	N	Br	S	Y	Y		SWa	
361.058	0	P	T	E	N	Tn	I	Y	Br	Abh		
361.059A	00	P	G	E	Ssp	Br	I	Y	Y			
361.059B	0	P	G	E	N	Br	I	Y	Y			
361.060	0	W	T	E	Ssp	Br	D	Bl	Bl			
361.061A	0	P	T	E	N	Tn	S	Y	Br	Abh		
361.061B	0	P	T	E	N	Tn	I	Y	Br	Abh	SDab	
361.068	00	P	T	E	Ssp	Tn	D	Y	Br	Abh		
361.069	0	P	T	E	Ssp	Tn	D	Y	Br	Abh		
361.070	0	W	T	E	N	Tn	S	G	Blbr			
361.071A	00	P	T	E	N	Br	S	Bl	Bl			
361.072	00	P	T	E	N	Tn	S	Y	Bl			
361.073	000	W	T	E	Ssp	Tn	S	Br	Br			
361.077A	0	P	T	E	N	Tn	I	Y	Br			
361.077B	0	P	T	E	N	Br	I	Y	Br			
361.078	00	P	T	E	Ssp	Br	D	Y	Br	Abh		
361.082	0	W	T	E	Ssp	Br	D	Bl	Bl			
361.083	00	P	T	E	Ssp	Tn	I	Y	Br	Abh		
361.084	0	P	T	E	Ssp	Tn	I	Y	Br	Abh		

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
347.563B	41*	109	4.5	86*	1.8	2.0	10.1	2.03*
347.565B	39	111	4.5	114*	2.3	1.0	20.3	2.21
347.567	Tested in and reported with group I evaluation							
347.568	41	116	3.5	94	1.8	2.0	10.2	2.71
347.570	34	105*	3.5	103	2.5	2.0	15.1	2.26
358.316C	54*	120	4.0	93	2.0	2.5	17.1*	2.66
358.317A	33	106	3.5	84	2.3	3.0	16.8	2.35*
358.320	31	105	4.5	93	2.3	1.5	18.6	2.76
358.321A	37	108	4.5	123*	2.3	2.0	16.0	2.88
358.321B	36	108	4.5	110	2.0	2.0	14.9	2.57
358.321C	37	103	3.5	104	2.3	2.0	15.0	2.44
358.322	32	103	2.5*	85	2.0	1.0	16.3*	2.84
358.323	34	110	3.5	105*	2.3	1.5	17.1	2.50
360.850	Tested in and reported with group I evaluation							
360.952	31	101*	3.0	86	2.0	4.5	15.9	2.30
360.953	31	84	1.5	41	2.5	-	15.7	1.47
360.954	30	88	2.5	44	2.5	2.0	17.6	1.97
360.955A	29	84	2.0*	50	2.8	2.0	15.1	1.61*
360.955B	25*	85	2.5*	56	2.5	1.5	17.2	1.82*
360.957	35*	89	3.5	57	2.8	3.0	24.2	1.80
360.958	29	90	2.5	48	2.5	2.5	26.9	1.88
360.962	27	87*	2.0*	72*	2.3	1.5	14.8*	1.89
360.963A	30	83*	3.0*	58	2.0	1.0	16.9	2.15
360.963B	29	85	2.5*	47*	2.8	2.0	16.8	1.78*
360.963C	30	87	2.0*	42	2.8	2.0	18.3	1.68*
360.964	31	94*	2.5	84*	2.8	3.0	15.3*	2.14
360.965	32*	89	3.5	55*	2.5	3.0	22.6	1.69*
361.056	33	105	3.0	84	2.5	2.0	17.4	2.62
361.058	40	110	4.5	75*	1.5	1.0	9.0	1.89
361.059A	30	100	3.5	83	2.5	1.5	19.6	2.34
361.059B	35	103*	3.5	80	2.3	2.5	19.0	2.21
361.060	40	110	3.5	126	2.0	-	13.8	2.60
361.061A	41	112	3.5	93*	1.5	1.0	8.9	2.57
361.061B	44	118*	3.5	89*	2.0	1.0	10.0	1.52
361.068	32	104	4.0	77	2.8	1.0	18.0	2.41
361.069	33	98	3.5	72	2.5	1.5	20.6	1.59
361.070	37*	111	3.5	86*	2.5	1.5	14.9	2.72
361.071A	31	99	3.5	89*	2.5	-	15.0	2.34
361.072	30	101	3.5	98	2.0	1.0	16.2	2.94
361.073	33	86	2.5	50	2.5	-	15.8*	1.46
361.077A	36	108	4.0	84	2.3	2.5	15.5	2.31
361.077B	35	108	3.5	76*	2.3	2.5	15.9	2.74
361.078	30	94	4.0	74*	2.5	2.0	16.1	2.15
361.082	42	109	3.0*	71*	2.0	-	28.8	1.70
361.083	38	104	3.0	62	1.5	1.0	12.3	2.52
361.084	35	102	4.0	58	1.8	1.0	12.6	1.82

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
347.563B	0	18.4	41.4	12.6	2.7	13.7	59.4	11.5	0.0	5	S								
347.565B	0	19.8	40.9	11.5	2.8	18.5	57.3	9.7	0.0	5	S								
347.567	0	Tested in and reported with the group I evaluation								5	S								
347.568	0	18.1	40.3	11.1	2.6	17.8	59.1	9.3	0.0	2	S								
347.570	0	19.0	40.6	11.6	2.8	17.1	57.6	10.7	0.0	2	S								
358.316C	0	16.8	43.2	12.0	2.5	20.6	53.2	11.5	0.0	1	S								
358.317A	0	18.6	41.5	11.5	1.7	20.0	56.1	10.6	0.0	4	S								
358.320	00	19.3	42.7	11.9	2.9	19.9	56.2	8.9	0.0	3	S								
358.321A	00	19.8	43.6	12.0	2.8	20.2	56.6	8.2	0.2	5	R	R	S	S	R	R	S	S	
358.321B	00	19.3	44.4	12.1	2.9	20.5	56.2	8.2	0.0	5	R	R	S	S	R	R	S	S	
358.321C	00	19.5	43.8	11.9	2.8	20.4	56.7	8.1	0.0	5	R	R	S	S	H	R	S	S	
358.322	00	19.5	43.0	11.6	2.9	22.7	54.1	8.5	0.0	5	R	R	S	S	S	R	S	S	
358.323	0	20.8	38.4	11.2	2.6	21.8	55.6	8.6	0.0	4	R	R	S	S	S	R	S	S	
360.850	0	Tested in and reported with the group I evaluation								3	R	S	S	H	H	R	S	H	
360.952	0	18.9	41.3	11.7	2.6	25.3	53.1	7.1	0.0	5	R	S	S	S	S	S	S	S	
360.953	000	15.7	48.9	13.8	2.7	17.1	55.3	11.0	0.0	1	R	S	R	R	S	S	S	S	
360.954	000	19.8	40.3	11.2	3.0	30.1	48.3	7.2	0.0	1	H								
360.955A	000	18.9	43.5	12.1	3.3	25.6	51.0	7.9	0.0	1	S								
360.955B	000	19.5	42.7	12.5	3.3	22.9	52.4	8.7	0.1	3	S								
360.957	00	19.1	43.3	11.8	2.8	29.5	48.2	7.5	0.0	1	R								
360.958	00	19.2	43.4	12.0	2.7	29.0	48.6	7.6	0.0	1	H								
360.962	000	18.5	44.2	12.3	2.7	22.0	54.2	8.6	0.0	5	S								
360.963A	000	19.2	42.1	12.3	3.1	23.0	52.9	8.5	0.1	1	S								
360.963B	000	19.4	43.2	12.5	3.4	23.2	52.5	8.2	0.0	1	S								
360.963C	000	19.7	41.3	11.5	3.0	29.6	49.1	6.8	0.0	2	S								
360.964	00	19.3	42.2	12.3	2.7	26.2	51.3	7.2	0.1	5	S								
360.965	00	19.1	43.4	12.0	2.8	28.4	49.3	7.3	0.1	2	R	R	R	R	R	S	S	S	
361.056	0	18.8	41.6	12.1	2.8	19.8	54.5	10.6	0.0	5	S								
361.058	0	17.5	39.6	12.4	2.9	14.7	58.6	11.2	0.0	4	S								
361.059A	00	18.0	43.6	12.7	2.9	21.2	53.4	9.7	0.0	1	S								
361.059B	0	17.3	41.8	12.0	2.5	19.7	55.3	10.4	0.0	5	S								
361.060	0	18.7	41.1	13.0	2.7	18.2	57.1	8.8	0.0	3	S								
361.061A	0	17.5	40.0	12.4	2.9	13.8	59.1	11.7	0.0	2	S								
361.061B	0	19.4	38.8	12.9	2.8	16.1	57.4	10.6	0.0	5	S								
361.068	00	20.3	39.7	11.6	2.9	28.9	49.3	7.1	0.0	1	H								
361.069	0	19.2	40.8	11.7	2.7	25.7	51.5	8.3	0.0	1	R							S	
361.070	0	19.5	39.0	12.1	2.8	17.8	57.2	9.8	0.0	1	S								
361.071A	00	19.6	40.4	12.8	3.1	17.7	55.2	11.1	0.0	5	S								
361.072	00	19.9	40.9	12.6	3.1	19.5	54.6	10.1	0.0	5	S								
361.073	000	17.3	44.8	12.4	2.8	20.9	53.2	10.6	0.0	1	S								
361.077A	0	17.8	41.2	12.8	2.8	18.6	56.4	9.3	0.1	3	S								
361.077B	0	18.3	41.2	12.6	2.8	20.1	55.8	8.6	0.0	2	S								
361.078	00	18.5	43.8	12.5	2.3	21.0	55.0	9.1	0.0	1	R							R	
361.082	0	18.5	42.2	11.6	2.7	26.3	50.2	9.1	0.0	1	S								
361.083	00	18.1	43.6	13.6	2.6	25.1	50.6	8.0	0.0	1	S								
361.084	0	17.9	40.6	12.1	3.1	15.4	57.9	11.3	0.0	2	H								

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
361.085A	L.117		Romania		Romania	1971	0
361.085B	(L.117)		Romania		Romania	1971	0
361.086	Mauthner Drobnozrna		Romania		E. Germany+	1971	00
361.091	Nicogri		Romania		Romania	1971	0
361.094	Novosadska Br. 5		Romania		Romania	1971	0
361.097A	Novosadska Br. 10		Romania		Romania	1971	0
361.097B	(Novosadska Br. 10)		Romania		Romania	1971	0
361.100	Pantera		Romania		Romania	1971	00
361.102	Peragis St. II		Romania		Romania	1971	00
361.107	Saliut		Romania		USSR+	1971	00
361.108	Saliut I		Romania		USSR+	1971	00
361.110	Secca		Romania		Romania	1971	000
361.111	Shimshirazu Nr. 1		Romania		Japan+	1971	00
361.114	Trzic Rana		Romania		Romania	1971	00
361.118	V 4/65		Romania		Romania	1971	0
361.119	V 10/65		Romania		Romania	1971	0
361.120	V 15/65		Romania		Romania	1971	0
361.121	Volfsthaler I		Romania		Romania	1971	0
361.122	Volfsthaler II		Romania		Romania	1971	0
361.123A	Warszawska		Romania		Romania	1971	00
361.123B	(Warszawska)		Romania		Romania	1971	0
370.056		5524	Brazil		USSR	1972	0
370.057A		5525	Brazil		USSR	1972	0
370.058		5568	Brazil		USSR	1972	0
372.402	B.G. 23-44 Cluj		Romania		Romania	1972	0
372.403A	Caloria		Romania		Austria	1972	00
372.403B	(Caloria)		Romania		Austria	1972	00
372.403C	(Caloria)		Romania		Austria	1972	0
372.406	Dieckmann		Romania		E. Germany	1972	00
372.407	Dobrogeanca		Romania		Romania	1972	0
372.408	Fruhe Gelbe		Romania		E. Germany	1972	0
372.409	Hercumft		Romania		E. Germany	1972	0
372.410	Hercumft		Romania		E. Germany	1972	00
372.411	Hercumft		Romania		E. Germany	1972	000
372.412	Hercumft		Romania		E. Germany	1972	000
372.413	Hercumft Giessen		Romania		E. Germany	1972	0
372.414	Hdabinska 111		Romania	Yugoslavia	USSR+	1972	0
372.417	Mauthner Universal		Romania		E. Germany	1972	0
372.419	Pappelsdorf		Romania		E. Germany	1972	0
372.420	Praemata		Romania		E. Germany	1972	00
372.421A	Rastatter Schwartze		Romania		E. Germany	1972	0
372.421B	(Rastatter Schwartze)		Romania		E. Germany	1972	0
372.422	Reiner		Romania		Yugoslavia	1972	00
372.423	Ronset 4		Romania		E. Germany	1972	000
372.424	Sesiles Novoslachtenie		Romania		Czechoslovakia	1972	0
378.656A	Besarabka 4731		Bulgaria		Bulgaria	1973	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
361.085A	0	P	G	E	N	Tn	I	Y	Y		SWa	
361.085B	0	P	G	E	N	Br	S	Y	Y			
361.086	00	P	T	E	Ssp	Br	I	Y	Br	Abh		
361.091	0	P	T	E	N	Br	I	Y	Y			
361.094	0	P	T	E	N	Tn	I	Y	Br	Abh	Dab	
361.097A	0	P	T	E	N	Br	I	Y	Br	Abh		
361.097B	0	P	T	E	N	Tn	S	Y	Br	Abh		
361.100	00	P	T	E	Ssp	Tn	D	Y	Br	Abh		
361.102	00	P	T	E	Ssp	Tn	I	Y	Br			
361.107	00	P	T	E	Ssp	Br	D	Y	Y			
361.108	00	P	T	E	Ssp	Br	D	Y	Y			
361.110	000	P	G	E	N	Br	S	Y	Y			
361.111	00	W	T	E	N	Br	D	Y	Br			
361.114	00	P	T	E	Ssp	Tn	D	Y	Br	Abh		
361.118	0	P	T	E	Ssp	Tn	I	Y	Br	Abh		
361.119	0	P	T	E	Ssp	Tn	I	Y	Br	Abh		
361.120	0	P	T	E	Ssp	Tn	I	Y	Br	Abh		
361.121	0	P	T	E	N	Br	S	Y	Y	Abh		
361.122	0	P	T	E	N	Br	S	Y	Y			
361.123A	00	P	T	E	Ssp	Tn	I	Y	Br			
361.123B	0	P	T	E	Ssp	Tn	S	Y	Br			
370.056	0	P	T	E	N	Tn	I	Y	Y			
370.057A	0	P	T	E	N	Tn	I	Y	Br			
370.058	0	P	G	E	N	Br	S	Y	Y			
372.402	0	P	T	E	N	Br	D	Y	Br	Abh		
372.403A	00	P	T	E	Ssp	Tn	I	Y	Bl			
372.403B	00	P	T	E	N	Br	I	Y	Bl			
372.403C	0	P	T	E	Ssp	Br	S	Y	Bl			
372.406	00	P	T	E	N	Br	S	Y	G			
372.407	0	P	T	E	N	Tn	D	Y	Br	Abh	Dab	
372.408	0	P	T	E	N	Tn	I	Y	Br			
372.409	0	P	T	E	Ssp	Tn	I	Y	Br			
372.410	00	P	T	E	Ssp	Br	D	Y	Br	Abh		
372.411	000	P	T	E	N	Br	I	Y	Bl			
372.412	000	P	T	E	N	Tn	S	Lgn	Bl			
372.413	0	P	T	E	Ssp	Br	I	Y	Bl			
372.414	0	P	G	E	N	Br	I	Y	Y			
372.417	0	P	G	E	N	Br	I	Y	Y			
372.419	0	P	T	E	N	Br	S	Bl	Bl			
372.420	00	P	T	E	Ssp	Br	I	Y	Br			
372.421A	0	P	T	E	N	Tn	S	Y	Br			
372.421B	0	P	T	E	N	Br	I	Y	Br	Abh		
372.422	00	P	G	E	N	Br	D	Y	Y	Abh		
372.423	000	P	T	E	N	Br	I	Lgn	Bl			Det
372.424	0	P	G	E	N	Br	S	Y	Y			
378.656A	0	P	T	E	N	Br	S	Y	Br		Dab	

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
361.085A	33	104	3.0	75	2.3	1.0	17.3	2.76
361.085B	33	106	4.5	89	2.3	2.0	19.8	2.46
361.086	33	96	4.0	80	2.3	1.0	16.5	2.25
361.091	34	105	3.5	80	2.3	3.0	18.6	2.43
361.094	39	110	4.0	79*	1.8	1.5	10.9	2.15
361.097A	41	111	4.0	86*	1.8	1.0	10.9	2.14
361.097B	41*	117	4.0	93*	1.5	1.5	10.3	2.35
361.100	33	97	3.5	74	2.8	1.0	17.2*	2.09
361.102	40	95	4.0	69	2.3	1.0	16.3	2.16
361.107	30	100	4.0	77	2.3	3.0	15.0	2.57
361.108	30	99	4.0	80	2.3	3.0	15.4	2.61
361.110	31	92	2.5	77*	2.3	1.5	20.2*	2.51
361.111	37*	102	3.0	71*	2.3	2.0	19.5	2.10
361.114	34	94	4.0	75	2.5	2.0	15.7	1.86
361.118	38	103	4.0	58	1.8	1.0	13.1	1.83
361.119	36	104	4.0	62	1.8	1.0	12.5	1.96
361.120	39*	107	3.5	56	2.0	1.5	12.5	1.97
361.121	42	108	3.0	88	1.8	2.0	12.0	2.53
361.122	41*	109	3.5	88	2.0	2.0	10.8	2.42
361.123A	32	98	4.5	84*	2.5	1.5	17.2	2.40
361.123B	37	107	3.5	71*	2.3	1.5	16.3	2.21
370.056	42*	117	4.0	86	2.0	2.0	18.7	2.40
370.057A	45	117*	4.0	146*	1.8	4.0	16.0	1.81
370.058	39	104	4.0	90	1.8	3.5	18.9	1.68*
372.402	39	109	4.0	83	1.5	1.5	10.9	2.36
372.403A	32	99	3.5	77*	2.0	1.0	17.7	2.60
372.403B	32	93	3.5	123*	2.5	1.0	16.5	2.62
372.403C	31	102*	3.0	99*	2.3	1.5	17.8	2.36
372.406	35	102*	3.5	95	2.5	2.5	15.3	2.55
372.407	35	109	4.0*	72*	1.8	2.0	9.8	1.61
372.408	33	101	3.5	75	2.0	1.0	15.7	1.53
372.409	35	99	3.0	66	2.5	2.0	15.6	1.64
372.410	31	94	4.5	75	3.0	2.0	17.2	1.86
372.411	33	83*	3.0*	57	2.8	2.5	14.6*	1.23
372.412	31	86	1.5	42*	2.5	3.5	16.0	1.17
372.413	30	96	3.0	83	2.3	1.5	16.8	2.31
372.414	34	104	3.0	79	2.3	2.0	20.3	2.14
372.417	36	109	4.5	81	2.3	2.0	20.5	2.63
372.419	32	108	3.5	88	2.5	-	18.9	2.74
372.420	34	93	4.0	97	2.8	2.5	19.3	2.04
372.421A	31	104	3.5	114	2.3	1.0	16.4	2.31
372.421B	32	109	4.0*	83	2.5	1.0	12.3	2.10
372.422	34	105	4.0	95	2.0	2.0	15.6	2.29
372.423	32	87	1.5	36	2.5	4.0	16.1	1.14
372.424	35	109	3.5	85	2.0	2.0	19.4	2.50
378.656A	39	110	3.5	91*	1.8	2.0	10.8	1.96

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction									
	Maturity	Oil	Protein	Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
361.085A	0	19.5	39.1	12.8	2.6	20.3	54.4	9.8	0.0	4	S								
361.085B	0	19.0	40.5	11.8	2.2	24.4	52.0	9.4	0.0	5	S								
361.086	00	18.4	43.4	12.5	3.1	16.8	57.7	9.7	0.1	1	H								
361.091	0	18.3	44.3	10.7	2.6	18.3	57.5	10.8	0.0	3	S								
361.094	0	17.8	41.8	13.9	1.8	16.3	57.3	10.6	0.0	2	S								
361.097A	0	17.5	41.9	13.2	3.3	19.2	54.0	10.3	0.0	3	S								
361.097B	0	18.0	40.3	11.5	2.9	14.3	60.7	10.5	0.0	3	S								
361.100	00	18.9	43.3	12.7	2.8	30.6	46.4	7.3	0.1	1	H								
361.102	00	17.3	42.6	12.5	2.8	28.5	47.0	9.1	0.0	1	S								
361.107	00	19.5	42.4	10.8	2.7	23.5	54.1	8.7	0.0	5	S								
361.108	00	19.4	41.9	11.3	2.8	22.5	54.0	9.3	0.0	4	S								
361.110	000	19.8	40.6	12.3	3.0	27.3	48.4	8.8	0.0	5	S								
361.111	00	19.2	40.8	12.6	2.8	23.0	52.3	9.2	0.0	1	S								
361.114	00	18.5	42.8	12.1	2.9	18.1	57.2	9.5	0.0	1	H								
361.118	0	17.5	43.4	11.7	3.0	19.0	56.3	10.0	0.0	2	H								
361.119	0	17.7	40.7	12.0	3.1	15.8	58.3	10.6	0.0	2	S								
361.120	0	18.0	41.7	11.9	3.1	14.9	58.8	11.1	0.0	1	H								
361.121	0	19.4	37.0	13.1	2.7	17.4	55.1	11.6	0.0	3	R	R	R	S	S	R	R	S	S
361.122	0	19.2	38.7	13.8	2.9	17.2	55.0	11.1	0.0	3	R							R	
361.123A	00	19.1	41.9	13.0	2.5	23.4	52.9	8.0	0.1	3	S								
361.123B	0	18.1	40.0	12.7	2.5	20.0	55.1	9.6	0.0	4	S								
370.056	0	18.7	42.0	11.6	2.9	19.1	56.7	9.6	0.1	5	S								
370.057A	0	17.1	42.9	10.9	2.9	19.9	56.0	10.0	0.1	5	S								
370.058	0	18.9	41.0	12.2	2.8	20.8	55.1	8.8	0.1	5	S								
372.402	0	18.7	40.4	12.7	2.9	17.8	56.2	10.1	0.1	5	S								
372.403A	00	19.1	41.3	13.9	2.5	22.5	51.8	9.2	0.0	4	S								
372.403B	00	19.4	41.7	13.3	3.2	27.1	47.7	8.4	0.0	4	S								
372.403C	0	18.2	40.1	13.0	3.3	22.0	51.6	9.9	0.1	4	S								
372.406	00	20.3	39.3	13.7	3.1	17.3	54.8	11.0	0.0	5	S								
372.407	0	18.2	39.9	12.5	3.0	15.1	58.0	11.3	0.0	4	S								
372.408	0	17.9	42.4	12.4	3.1	16.8	56.4	11.1	0.1	1	S								
372.409	0	17.6	41.6	13.3	2.8	20.2	54.3	9.1	0.1	2	S								
372.410	00	17.7	44.2	12.8	2.9	21.6	53.5	9.0	0.1	1	S								
372.411	000	18.3	43.8	13.1	3.3	23.2	50.4	9.9	0.0	1	S								
372.412	000	16.1	47.8	13.8	3.2	19.0	55.2	8.7	0.0	1	S								
372.413	0	20.3	42.0	12.3	3.6	20.5	55.3	7.8	0.3	4	S								
372.414	0	17.7	45.0	11.7	2.5	22.1	53.7	9.8	0.1	5	S								
372.417	0	18.4	43.8	12.1	2.8	21.7	53.4	9.7	0.2	5	S								
372.419	0	19.5	41.4	11.4	3.3	19.3	56.9	8.7	0.3	5	S								
372.420	00	19.4	44.4	11.5	3.3	21.8	54.3	9.0	0.1	1	S								
372.421A	0	19.6	43.0	12.6	3.3	18.0	57.1	8.7	0.3	5	S								
372.421B	0	18.5	42.8	12.5	3.1	13.8	59.7	10.7	0.0	5	S								
372.422	00	19.4	43.0	12.9	2.5	20.0	54.4	10.0	0.0	4	S								
372.423	000	15.6	47.7	14.1	1.9	17.2	56.8	9.8	0.0	1	S								
372.424	0	19.6	41.9	11.9	2.6	22.8	53.1	9.4	0.1	5	S								
378.656A	0	19.3	41.6	13.0	3.0	18.4	54.7	10.6	0.1	3	H								

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
378.656B	(Besarabka 4731)		Bulgaria		Bulgaria	1973	0
378.657	Dikcistusaja		Bulgaria		Bulgaria	1973	0
378.658	Dnepropetrovsk 12		Bulgaria		Bulgaria	1973	0
378.659	Dobrudzanka V 4731		Bulgaria		Bulgaria	1973	00
378.660A	Dobrudzanka Elita		Bulgaria		Bulgaria	1973	0
378.660B	(Dobrudzanka Elita)		Bulgaria		Bulgaria	1973	0
378.661	Dobrudzanski Stambovij 4752		Bulgaria		Bulgaria	1973	0
378.662	Drebna Ungarska		Bulgaria		Bulgaria	1973	00
378.665		II g-1-5	Bulgaria		Hungary	1973	0
378.666		II g-1-55	Bulgaria		Hungary	1973	00
378.667		II g-1-62	Bulgaria		Hungary	1973	00
378.668		K 5057	Bulgaria		USSR+	1973	00
378.669A		K 5058	Bulgaria		USSR+	1973	0
378.669B		(K 5058)	Bulgaria		USSR+	1973	0
378.673	Nigra		Bulgaria		Bulgaria	1973	0
378.674A	Pavlikeni 519		Bulgaria		Bulgaria	1973	0
378.674B	(Pavlikeni 519)		Bulgaria		Bulgaria	1973	0
378.675A	Peremoga		Bulgaria		Bulgaria	1973	0
378.675B	(Peremoga)		Bulgaria		Bulgaria	1973	0
378.677A	Primorskaja 508		Bulgaria		USSR+	1973	0
378.678	Staroukrainskaja		Bulgaria		USSR+	1973	00
378.680A	VNIIMK 9186		Bulgaria		Bulgaria	1973	0
378.680B	(VNIIMK 9186)		Bulgaria		Bulgaria	1973	0
378.680C	(VNIIMK 9186)		Bulgaria		Bulgaria	1973	0
378.681	Zarja		Bulgaria		Bulgaria	1973	00
379.559A	Komagi dadacha		Japan		Japan	1973	0
379.563	Ezonishiki		Japan		Japan	1973	000
384.467	Amurskaja 041	4112	Ethiopia		USSR	1974	00
391.588	Hei nung No. 10		China		China	1974	0
399.074			S. Korea		S. Korea	1975	0
404.155A	Primorskij 450	K 5620	USSR		USSR	1975	00
404.155C	(Primorskij 450)	(K 5620)	USSR		USSR	1975	0
404.162	Lanka	K 6233	USSR		USSR	1975	0
407.386A			China		China	1976	00
407.386B			China		China	1976	0
407.386C			China		China	1976	0
407.702	Hei nong No. 16		Canada		China	1976	0
407.707	Chuen sien No. 1	PGR 384	Canada		China	1976	0
407.708A	Feng shou No. 10	PGR 423	Canada		China	1976	0
407.708B	(Feng shou No. 10)	(PGR 423)	Canada		China	1976	0
407.709	Feng shou No. 12	PGR 424	Canada		China	1976	0
407.713	Jao teh jar ching	PGR 425	Canada		China	1976	0
407.725A	Suen wu dah bai mee	PGR 427	Canada		China	1976	00
407.725B	(Suen wu dah bai mee)	(PGR 427)	Canada		China	1976	00
416.746	A576	040318	Japan		Japan	1977	0
416.845	Chuusei kuro daizu	020195	Japan		Japan	1977	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
378.656B	0	P	G	E	N	Br	I	Y	Bf		Dab	
378.657	0	P	T	E	N	Br	S	Y	Br	Abh		
378.658	0	W	T	E	N	Br	S	Y	Y			
378.659	00	P	T	E	N	Tn	S	Y	Br	Abh	Dab	
378.660A	0	P	T	E	N	Tn	S	Y	Br	Abh	Dab	
378.660B	0	P	T	E	N	Tn	I	Y	Br	Abh		
378.661	0	P	T	E	N	Br	D	Rbr	Rbr	Abh		
378.662	00	P	T	E	N	Tn	I	Y	Br	Abh	Dab	
378.665	0	W	T	E	N	Br	S	Bl	Bl			
378.666	00	P	T	E	N	Br	S	Y	Br			
378.667	00	P	T	E	N	Br	D	Y	Br			
378.668	00	P	G	E	N	Br	S	Y	G			
378.669A	0	P	G	E	N	Br	S	Y	Y			
378.669B	0	P	T	E	N	Br	D	Y	Bl			
378.673	0	W	T	E	N	Br	S	Bl	Bl			
378.674A	0	P	G	E	N	Br	S	Y	Y			
378.674B	0	P	G	E	N	Br	S	Y	Y			
378.675A	0	P	T	E	N	Br	S	Y	Y	Abh		
378.675B	0	P	T	E	N	Tn	I	Y	Y	Abh		
378.677A	0	P	T	E	N	Br	D	Y	Y	SAbh		
378.678	00	P	T	E	N	Tn	S	Y	Br	Abh	Dab	
378.680A	0	P	T	E	N	Br	I	Y	Br			
378.680B	0	P	T	E	N	Tn	I	Y	Br	Abh		
378.680C	0	P	T	E	N	Br	S	Y	Br	Abh		
378.681	00	P	G	E	Ssp	Br	D	Y	Y			
379.559A	0	W	Lt	E	Ssp	Br	S	Br	Br			
379.563	000	P	T	E	Ssp	Br	S	Y	Br	Saddle		
384.467	00	P	T	E	N	Br	D	Y	Y			
391.588	0	W	G	E	N	Br	S	Y	Y		Na	
399.074	0	W	G	E	Ssp	Br	D	Y	Bf			
404.155A	00	P	G	E	N	Br	S	Y	Y			
404.155C	0	P	T	E	N	Tn	S	Y	Br	Abh		
404.162	0	P	G	E	N	Br	I	Y	G			
407.386A	00	P	G	E	N	Br	I	Y	Y			
407.386B	0	P	T	E	N	Br	D	Y	Y			
407.386C	0	W	G	E	N	Br	I	Y	Bf			
407.702	0	W	G	E	N	Br	I	Y	Lbf		Na	
407.707	0	W	G	E	N	Br	I	Y	Lbf			
407.708A	0	P	G	E	N	Bl	S	Y	Bf			
407.708B	0	P	G	E	N	Bl	D	Y	Bf			
407.709	0	W	G	E	N	Br	S	Y	Y			
407.713	0	P	G	E	N	Bl	I	Y	Bf			
407.725A	00	P	G	E	N	Br	I	Y	Y			
407.725B	00	P	G	E	N	Br	I	Y	Y			
416.746	0	P	T	E	N	Br	D	Y	Br			
416.845	0	W	T	E	Ssp	Br	D	Bl	Bl			

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
378.656B	33	110	4.0	83	2.3	1.0	12.4	1.98
378.657	45	109	4.0*	74*	2.0	1.5	12.7	2.45
378.658	41	118	3.5	128	1.8	1.0	18.1	2.88
378.659	37	108*	4.5	86	2.3	1.0	10.3	2.07
378.660A	39	112	3.5	74*	1.8	1.0	10.8	1.84
378.660B	36	111	4.0	99	1.8	1.0	10.4	2.14
378.661	43	111	4.0	97	1.8	-	10.7	1.81
378.662	33	107	4.5	76*	1.8	1.0	12.3	2.69
378.665	32	108	3.5	102	2.3	-	18.1	2.44
378.666	33	103	4.0	84	2.5	2.5	18.0	2.80
378.667	32	103	3.5	83	2.3	2.5	17.6	2.41
378.668	37	103	3.0	81	2.3	2.0	15.5	2.51
378.669A	36	113	4.0	103*	2.0	1.0	16.6	2.34
378.669B	35	117*	4.5	116*	2.0	1.5	19.0*	1.68*
378.673	32	109	4.0	102	2.5	-	18.0	2.57
378.674A	Tested in and reported with group I evaluation							
378.674B	34	105	3.5	72	2.5	2.0	19.7	2.33
378.675A	39	110	4.0	116*	2.3	2.0	13.5	2.54*
378.675B	40	116	4.0*	105*	2.0	1.5	15.0	2.55
378.677A	32	109	4.5	93	2.3	2.5	21.0	2.53
378.678	32	107	4.0	70*	1.8	1.0	12.6	2.59
378.680A	45	112	3.5	85	2.3	1.5	16.0	2.61
378.680B	39	111	3.5	89	2.0	1.0	11.1	2.56
378.680C	39	111	4.5	93	1.8	1.5	10.0	2.27
378.681	38	100	3.5	70	2.0	3.0	20.1	2.00
379.559A	43*	119*	4.5	88*	2.8*	-	23.3*	1.16
379.563	33	90	2.5	52	2.3	-	18.8*	1.65
384.467	32	92	3.0	72	2.5	3.5	17.6	2.20
391.588	37	110	3.5	90	2.3	2.5	18.5	2.69
399.074	53	110	3.5	77	1.8	3.0	11.1	1.51
404.155A	31	99*	2.5	79	2.3	4.0	19.8	1.92
404.155C	37	108	4.0	80	1.8	1.0	15.1	2.06
404.162	40	111*	3.5	81	1.8	1.0	16.7	2.56
407.386A	29	100*	2.5	69	2.3	3.0	19.0	2.96
407.386B	32	105	4.0	89	2.3	3.0*	17.8	2.54
407.386C	38	116	3.5	94	2.8	3.5	22.7	2.50
407.702	37	114*	3.5	90	1.8	3.0	15.8	2.24
407.707	34	109	4.5	102	2.3	2.5	16.7	2.66
407.708A	35	104*	3.0	76	2.5	2.5	16.2	2.47
407.708B	38	111	2.5	72	2.5	3.5	19.8	2.40
407.709	32	108	3.0*	79	2.8	2.0	21.6	2.25
407.713	40	109	2.5	74	2.5	3.0*	16.6	2.34
407.725A	33	103	3.5	84	2.5	4.0	19.6	2.39
407.725B	36	103	4.0	93	2.3	2.5	20.7	2.56
416.746	39	108	4.0	95	2.3	1.0	18.5	2.00
416.845	43	111	3.0	74	2.3	-	29.6*	2.05

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
378.656B	0	19.4	41.3	12.6	3.0	19.1	54.6	10.4	0.1	5	H								
378.657	0	19.5	43.1	12.4	3.3	18.1	56.7	9.1	0.2	3	S								
378.658	0	20.0	41.0	11.9	2.9	17.6	57.5	9.9	0.0	3	S								
378.659	00	18.5	41.5	13.7	3.1	18.4	55.8	8.8	0.0	2	S								
378.660A	0	17.5	42.4	12.9	3.0	15.4	57.1	11.4	0.2	4	S								
378.660B	0	18.6	41.7	12.8	3.2	14.9	58.8	10.1	0.1	2	S								
378.661	0	17.9	43.2	12.4	3.0	16.0	58.4	9.9	0.1	4	S								
378.662	00	18.9	40.8	14.5	2.8	17.2	56.4	9.1	0.0	3	S								
378.665	0	19.9	41.5	11.3	3.1	19.2	57.2	9.0	0.1	4	S								
378.666	00	19.2	42.8	11.6	2.4	22.3	53.0	10.5	0.0	5	S								
378.667	00	19.4	43.0	11.6	2.5	22.2	53.0	10.7	0.0	5	S								
378.668	00	18.8	42.9	13.1	2.6	18.2	56.6	9.4	0.0	5	R	R	R	S	S	R	R	R	R
378.669A	0	19.0	43.5	12.1	2.8	17.9	57.4	9.5	0.2	5	S								
378.669B	0	16.7	45.7	11.6	2.7	19.6	55.9	9.9	0.2	5	S								
378.673	0	20.7	40.1	11.1	3.3	20.4	56.8	8.0	0.3	4	S								
378.674A	0	Tested in and reported with the group I evaluation								5	S								
378.674B	0	19.7	41.6	12.0	2.8	21.5	53.8	9.7	0.2	5	S								
378.675A	0	20.1	41.5	10.7	3.1	22.4	54.9	8.6	0.3	1	S								
378.675B	0	18.7	42.9	10.9	3.0	19.2	56.9	9.8	0.1	5	S								
378.677A	0	19.7	41.7	11.4	2.9	19.3	57.0	9.1	0.2	1	S								
378.678	00	18.5	41.6	13.9	2.9	18.4	55.9	8.8	0.0	3	S								
378.680A	0	19.3	42.8	11.8	3.1	16.8	58.0	10.1	0.1	1	S								
378.680B	0	19.2	41.2	12.1	3.3	15.6	58.8	10.0	0.1	1	S								
378.680C	0	19.3	40.6	12.3	3.3	16.3	58.1	9.8	0.1	2	S								
378.681	00	17.7	43.9	10.8	2.8	21.6	55.3	9.5	0.0	3	S								
379.559A	0	18.1	43.3	12.7	2.9	19.8	54.5	9.8	0.1	1	R	R	R	S	S	R	R	R	R
379.563	000	18.9	43.8	11.7	2.6	32.1	46.1	7.3	0.0	1	R		R	R					
384.467	00	20.2	42.5	12.3	2.9	24.1	53.2	7.3	0.0	3	R		R	R					
391.588	0	19.9	42.2	11.2	3.6	24.5	53.1	7.3	0.2	1	S								
399.074	0	15.6	47.1	12.6	2.9	18.7	53.9	11.6	0.1	1	R		R	R					
404.155A	00	18.8	44.1	11.9	2.8	22.9	53.6	8.7	0.0	4	S								
404.155C	0	18.9	43.3	12.4	3.0	22.4	52.1	9.6	0.3	5	S								
404.162	0	19.0	41.1	12.1	3.0	17.8	56.1	10.8	0.1	5	S								
407.386A	00	19.4	42.8	11.7	1.8	21.6	56.6	8.3	0.0	5	H								
407.386B	0	19.3	43.1	12.1	2.6	21.5	54.6	8.9	0.1	4	S								
407.386C	0	20.3	41.5	11.1	3.4	26.2	51.2	7.8	0.2	4	S								
407.702	0	20.5	40.1	11.5	3.8	24.6	52.1	7.7	0.2	2									
407.707	0	20.6	39.9	11.6	3.5	23.2	53.0	8.4	0.3	4									
407.708A	0	19.2	42.4	11.1	2.8	21.0	55.6	9.2	0.1	5									
407.708B	0	19.4	42.2	10.9	2.4	23.7	53.9	8.9	0.1	5									
407.709	0	19.5	42.4	11.8	2.7	19.7	56.3	9.3	0.0	4									
407.713	0	19.6	42.5	11.1	2.7	21.9	54.9	9.0	0.2	4	S								
407.725A	00	17.8	43.8	12.0	2.6	22.4	54.3	8.6	0.0	5	S								
407.725B	00	18.4	43.8	12.0	2.4	22.1	55.0	8.4	0.0	5	S								
416.746	0	18.1	43.8	12.2	2.9	17.5	56.6	10.4	0.2	1	S								
416.845	0	18.9	43.3	11.7	2.5	24.3	51.4	9.9	0.2	1	R								

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
416.890	Gokuwase natsu daizu	040238	Japan		Japan	1977	0
416.930	Hokkai hadaka	010023	Japan		Japan	1077	0
416.964	Jizou	040246	Japan		Japan	1977	0
416.976	Kairyou shirome	090041	Japan		Japan	1977	0
417.046	Kitsunesaya	040180	Japan		Japan	1977	0
417.078	Koushurei 555	110015	Japan		China	1977	0
417.095	Kuro sakigake	030011	Japan		Japan	1977	0
417.150A	Mikawashima	040314	Japan		Japan	1977	0
417.150B	(Mikawashima)	(040314)	Japan		Japan	1977	0
417.187	Natsu kurakake	090035	Japan		Japan	1977	0
417.381	Tenpoku shirome	010030	Japan		Japan	1977	0
417.391	Toppa	090029	Japan		Japan	1977	0
417.446	Wase daizu	040241	Japan		Japan	1977	0
417.448	Wase daizu 7	040235	Japan		Japan	1977	0
417.449	Wase daizu 11	020242	Japan		Japan	1977	0
417.450	Wase daizu 12	040243	Japan		Japan	1977	0
417.458	Wase natsu	090050	Japan		Japan	1977	0
417.476	Yori karami	040231	Japan		Japan	1977	0
417.478	Yoshioka dairyuu	010038	Japan		Japan	1977	0
417.506	Bitterhof A	360074	Japan	E. Europe	E. Germany+	1977	0
417.507	Bitterhof C	360008	Japan	E. Europe	E. Germany+	1977	0
417.508	Dippes	360044	Japan		E. Europe	1977	0
417.511	Grignon 48	360069	Japan	E. Europe	France+	1977	000
417.512A	Herb 22	360015	Japan		E. Europe	1977	00
417.512B	(Herb 22)	(360015)	Japan		E. Europe	1977	00
417.513A	Ikar 111	370006	Japan		E. Europe	1977	0
417.514	Kabine	360017	Japan		E. Europe	1977	0
417.518	Pulawska Wczesna	360060	Japan	E. Europe	Poland+	1977	00
417.519A	Szklista	360048	Japan	E. Europe	Poland+	1977	0
417.522	Zagrebacka	360056	Japan		E. Europe	1977	0
417.523	Zlocista	360064	Japan	E. Europe	Poland+	1977	0
417.524	Zolta Swhn	360065	Japan		E. Europe	1977	00
417.529	A38	340027	Japan		Germany	1977	0
417.530	A52	340028	Japan		Germany	1977	0
417.531	A401	340003	Japan		Germany	1977	00
417.532	A403	340024	Japan		Germany	1977	00
417.533	A425	340012	Japan		Germany	1977	0
417.534	A438	340013	Japan		Germany	1977	0
417.535	A448	340014	Japan		Germany	1977	0
417.536A	A455	340015	Japan		Germany	1977	0
417.536B	(A455)	340015	Japan		Germany	1977	0
417.537A	A456	340016	Japan		Germany	1977	0
417.538	A560	340019	Japan		Germany	1977	0
417.539	A568	340020	Japan		Germany	1977	0
417.540	A609	340009	Japan		Germany	1977	0
417.541	B31	340026	Japan		Germany	1977	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
416.890	0	W	G	E	N	Br	I	Y	Bf			
416.930	0	P	-	-	G	Br	S	Y	Br		Na	
416.964	0	W	G	E	Ssp	Br	I	Y	Bf			
416.976	0	P	T	E	N	Br	D	Y	Br			
417.046	0	W	T	E	N	Br	D	Y	Br			
417.078	0	P	G	E	N	Tn	D	Y	Y			
417.095	0	W	T	E	Ssp	Br	I	Bl	Bl			
417.150A	0	W	G	A	N	Br	I	Y	Bf			
417.150B	0	W	G	A	N	Tn	I	Y	Bf			
417.187	0	P	T	E	Ssp	Tn	I	Lgn	Bl	Saddle		
417.381	0	P	G	E	N	Br	I	Y	Y			
417.391	0	P	G	A	N	Tn	I	Y	Bf			
417.446	0	W	T	E	Ssp	Lbr	D	Y	Br			
417.448	0	W	G	E	N	Br	S	Y	Bf			
417.449	0	W	T	E	N	Lbr	D	Y	Br			
417.450	0	W	T	E	Ssp	Lbr	D	Y	Br			
417.458	0	W	G	Sa	Ssp	Br	D	Y	Bf			
417.476	0	W	T	A	N	Br	D	Y	Br			
417.478	0	P	T	E	N	Br	I	Lgn	Bl			
417.506	0	P	G	E	N	Br	I	Y	Y			
417.507	0	P	G	E	N	Br	I	Y	Bf			
417.508	0	W	T	E	Ssp	Br	S	Bl	Bl			
417.511	000	P	T	E	Ssp	Br	D	Bl	Bl			
417.512A	00	P	T	E	Ssp	Tn	D	Y	Br	Abh		
417.512B	00	P	T	E	Ssp	Tn	I	Y	Br	Abh		
417.513A	0	P	G	E	N	Tn	I	Y	Y	Abh	Na	
417.514	0	W	T	E	Ssp	Br	D	Bl	Bl			
417.518	00	P	G	E	Ssp	Tn	I	Y	Y			Det
417.519A	0	P	G	E	N	Br	S	Y	Y			
417.522	0	P	G	E	N	Br	I	Y	Y			
417.523	0	P	G	E	N	Br	I	Y	Y			
417.524	00	P	G	E	N	Br	S	Y	Y			
417.529	0	P	T	E	N	Br	I	Y	Br			
417.530	0	P	T	E	N	Tn	S	Y	Br			
417.531	00	P	T	E	Ssp	Br	I	Y	Br			
417.532	00	P	T	E	Ssp	Br	S	Y	Br			
417.533	0	P	T	E	N	Tn	S	Y	Br			
417.534	0	P	T	E	N	Tn	S	Y	Br			
417.535	0	P	T	E	Ssp	Tn	I	Y	Br			
417.536A	0	P	T	E	N	Br	I	Y	Br			
417.536B	0	W	T	E	N	Br	I	Y	Br			
417.537A	0	P	T	E	N	Tn	I	Y	Br			
417.538	0	P	T	E	N	Tn	S	Y	Br			
417.539	0	P	T	E	N	Tn	S	Y	Br			
417.540	0	P	T	E	N	Br	I	Y	Br			
417.541	0	P	T	E	N	Br	I	Y	Br		5Lft	

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
416.890	47*	122	3.5	103	1.8	2.0	17.6	1.56
416.930	Tested in and reported with group I evaluation							
416.964	51	117*	3.5	76*	1.8	2.0	13.5	1.75
416.976	52	123	3.0	99*	1.8	2.5	14.9	1.43
417.046	52	111*	4.0	80*	1.8	4.5	13.9	1.51
417.078	33	106	3.5	81	2.0	2.0	17.1	2.27*
417.095	46	111*	3.5	60*	2.8*	-	29.4	1.14
417.150A	49	109	2.5	61	2.3	1.0	23.0	2.26
417.150B	50	110	3.0	63	2.0	1.0	25.9	2.08
417.187	44	117	3.0*	70	2.0	-	24.9	1.89
417.381	39	108	3.5	91	2.0	4.0	16.0	2.08
417.391	Tested in and reported with group I evaluation							
417.446	45	109	4.0	83*	2.0	4.5	14.9	1.12
417.448	47*	118	4.0	85*	1.8	2.0	16.8	1.72
417.449	45	109	4.0	85*	2.0	4.0	15.3	1.29
417.450	45	109	3.5	79*	2.3	4.0	15.1	1.47
417.458	53	122	4.5	91	1.8	3.0	11.3	1.58
417.476	52	111	3.5	80	2.0	3.0	17.8	1.87
417.478	46	109	4.0	62	2.5	2.0	26.1	1.60
417.506	34	100	4.0	80*	2.3	2.0	21.4	1.96
417.507	35	108	3.5	79	2.3	3.0	19.3	2.29
417.508	39	111	4.0	108	2.0	-	14.4	2.18
417.511	26*	90	2.5	69*	2.3	-	21.5*	2.31
417.512A	33	96	4.0	89	2.8	1.5	16.1	1.86
417.512B	32	96	4.0	89*	2.3	1.0	17.9	2.05*
417.513A	37	109	4.5	105*	1.8	1.0	14.8	2.44
417.514	33	110	3.5	94*	2.3	-	15.6	2.22
417.518	34	93	3.0	48	2.5	2.5	16.0	1.69
417.519A	33	107	3.5	84	2.3	2.0	20.8	2.43
417.522	Tested in and reported with group I evaluation							
417.523	33	100	4.0	79	2.3	2.0	20.2	1.91
417.524	33	98*	3.5	80	2.3	2.0	19.4	2.56
417.529	37*	108	4.0	102*	2.5	1.0	17.3	1.73
417.530	33	106	4.0	105	2.0	1.0	15.0	2.29
417.531	33	93	4.0	81	2.8	2.5	18.1	2.17
417.532	33	93	4.0	95	2.8	2.5	18.0	2.11
417.533	31	103	4.0	105	2.3	1.0	15.6	2.53*
417.534	32	103	4.0	110	2.0	1.0	15.1	2.21
417.535	36	100	4.0	108	2.3	1.0	19.1	1.99
417.536A	41	110	4.0	128*	2.3	1.0	18.2	2.25*
417.536B	43	115	3.5	104	2.0	1.0	18.7	1.96
417.537A	32	108	4.0	112	1.8	1.0	15.0	2.65
417.538	34*	107	4.5	114	2.3	1.0	14.4	2.32
417.539	35	106	4.0	105	2.3	1.5	14.7	2.24
417.540	31	108	4.5	103	2.5	1.5	15.0	2.48
417.541	34	109	4.0	97	2.8	1.5	18.4	1.47

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
416.890	0	15.5	47.6	11.5	2.4	22.5	53.0	10.3	0.1	1	R
416.930	0	Tested in and reported with the group I evaluation								1	R R R H
416.964	0	17.5	42.3	12.0	3.2	19.5	55.1	9.9	0.1	1	S
416.976	0	15.8	45.1	10.8	2.9	19.9	54.6	11.7	0.1	1	R
417.046	0	17.8	42.9	12.5	2.8	18.3	55.8	10.2	0.1	1	S
417.078	0	18.7	44.6	11.8	3.0	22.7	51.7	10.5	0.1	5	S
417.095	0	17.8	45.0	11.2	3.0	25.7	50.1	9.8	0.1	1	R R R R
417.150A	0	16.9	44.6	11.6	2.3	22.6	52.3	10.9	0.1	1	S
417.150B	0	16.5	45.3	11.9	2.4	20.8	53.4	11.3	0.1	1	S
417.187	0	17.8	45.0	11.8	3.0	19.3	54.8	10.9	0.1	1	
417.381	0	18.9	43.5	11.2	2.8	26.6	49.4	9.7	0.3	1	S
417.391	0	Tested in and reported with the group I evaluation								1	R
417.446	0	17.1	42.7	12.0	2.9	23.4	51.3	10.3	0.0	1	S
417.448	0	15.6	48.0	11.8	2.8	21.1	53.8	10.3	0.0	3	R
417.449	0	17.2	43.1	12.3	2.8	20.1	53.1	11.8	0.0	1	S
417.450	0	16.9	43.6	12.2	2.6	20.8	53.3	11.0	0.0	1	S
417.458	0	15.9	46.1	13.1	2.9	17.9	54.7	11.2	0.0	1	R
417.476	0	16.6	45.0	12.2	2.8	21.1	53.7	10.1	0.0	1	R R S S
417.478	0	18.6	41.8	11.8	3.2	20.8	55.0	9.1	0.0	2	R H S S
417.506	0	18.7	43.8	11.9	2.4	22.3	55.1	8.1	0.0	5	S
417.507	0	18.8	43.8	12.4	2.5	20.6	54.5	9.9	0.0	5	S
417.508	0	18.3	43.9	12.8	2.6	17.9	56.9	9.6	0.0	3	H
417.511	000	20.1	41.3	12.1	2.7	29.0	47.7	8.3	0.1	1	S
417.512A	00	18.4	43.3	12.0	2.9	18.2	57.1	9.6	0.0	1	R
417.512B	00	18.4	42.0	12.3	3.0	21.8	53.9	8.8	0.0	1	R
417.513A	0	17.9	43.2	12.6	2.3	22.2	54.5	8.3	0.0	1	S
417.514	0	19.2	42.0	12.1	2.7	18.9	56.8	9.4	0.0	1	R
417.518	00	17.3	44.7	12.1	2.7	19.7	56.4	8.9	0.0	5	S
417.519A	0	20.2	41.7	11.4	2.5	22.0	54.4	9.6	0.0	5	S
417.522	0	Tested in and reported with the group I evaluation								4	S
417.523	0	19.2	42.8	11.9	3.0	21.8	54.9	8.2	0.0	5	S
417.524	00	18.5	43.9	12.1	2.5	20.5	56.5	8.2	0.0	5	S
417.529	0	18.3	44.4	11.7	2.9	18.5	57.3	9.4	0.0	3	S
417.530	0	19.1	41.9	12.6	3.1	17.7	57.3	9.1	0.0	4	S
417.531	00	19.7	42.0	11.1	3.0	20.9	55.7	9.1	0.0	3	S
417.532	00	19.5	43.7	11.1	2.9	19.3	57.1	9.4	0.0	4	S
417.533	0	19.5	41.8	12.5	3.4	19.7	55.7	8.5	0.0	4	S
417.534	0	20.0	42.3	12.1	3.1	19.2	56.2	9.2	0.0	5	S
417.535	0	19.5	42.9	12.3	3.1	19.5	56.1	8.9	0.0	5	S
417.536A	0	18.7	41.6	11.9	3.0	17.9	57.1	10.0	0.0	5	S
417.536B	0	18.3	42.1	12.3	3.1	17.5	57.2	9.8	0.0	5	S
417.537A	0	19.8	40.1	12.1	3.3	17.3	57.6	9.5	0.0	5	S
417.538	0	19.4	42.6	11.7	3.2	17.8	57.7	9.4	0.0	5	S
417.539	0	19.7	42.6	11.9	2.9	17.8	57.9	9.4	0.0	5	S
417.540	0	19.7	42.9	11.2	3.1	19.3	57.4	8.9	0.0	4	S
417.541	0	18.2	44.2	11.9	3.1	19.4	56.1	9.3	0.0	4	S

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.542	B32	340022	Japan		Germany	1977	0
417.543	B33	340004	Japan		Germany	1977	0
417.544A	B44	340006	Japan		Germany	1977	00
417.544B	(B44)	340006	Japan		Germany	1977	0
417.545	B51	340025	Japan		Germany	1977	0
417.546	B52	340007	Japan		Germany	1977	0
417.547	Soja 27/60 Heimkraft I	340033	Japan		Germany	1977	00
417.548	Soja 74/60 Dornburger St	340031	Japan		Germany	1977	0
417.550	Amurskaje	350005	Japan	Poland	USSR+	1977	0
417.551	Asijskoja Aklimatyrowana	350006	Japan		Poland	1977	0
417.552	Black Tokio	350007	Japan		Poland	1977	0
417.553	Czarna S.W.H.N.	350011	Japan		Poland	1977	0
417.554	Early Mandarin	350016	Japan		Poland	1977	0
417.555	Halfon 502	350019	Japan		Poland	1977	0
417.556	Itocista	350021	Japan		Poland	1977	00
417.557	Krusolia	350031	Japan		Poland	1977	0
417.558	Murzynka	350028	Japan		Poland	1977	0
417.560	Virginia	350036	Japan		Poland	1977	0
417.564	856-3-34	310013	Japan		Sweden	1977	00
417.565	1040-3-23-1	310003	Japan		Sweden	1977	000
423.707	Bydgoska 057		Poland		Poland	1978	00
423.708A	Bydgoska 071		Poland		Poland	1978	00
423.708B	(Bydgoska 071)		Poland		Poland	1978	0
423.709	Bydgoska 072		Poland		Poland	1978	00
423.710	Bydgoska 074		Poland		Poland	1978	000
423.711	Czarna Swhn		Poland		Poland	1978	00
423.712	Mazowiecka II		Poland		Poland	1978	000
423.713	Mlochowska		Poland		Poland	1978	000
423.714	Murzynka		Poland		Poland	1978	0
423.715	Pulawska Wczesna		Poland		Poland	1978	00
423.716	SN-18		Poland		Poland	1978	00
423.717	Zlocista		Poland		Poland	1978	00
423.718	Zolta Przebedowska		Poland		Poland	1978	00
423.719	Zolta z Zolna		Poland		Czechoslovakia	1978	00
423.864	Miharu daizu		Japan		Japan	1978	0
423.866	Sakamotowase		Japan		Japan	1978	000
423.867	Shimoshirazu 1		Japan		Japan	1978	0
423.869	Tenpoku wase		Japan		Japan	1978	00
423.953	Sako 25-36		Japan		Japan	1978	0
423.954	Shirome		Japan		Japan	1978	0
424.148		KAS 642-2	S. Korea		S. Korea	1978	0
424.190	Ajma (R11-17/76)		Poland		Poland	1978	00
424.191			China		China	1978	0
424.193	ISZ-I		Hungary		Hungary	1978	0
424.194	ISZ-II		Hungary		Hungary	1978	0
424.195A	ISZ-3		Hungary		Hungary	1978	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.542	0	P	T	E	N	Br	I	Y	Br		5Lft	
417.543	0	P	T	E	N	Tn	S	Y	Br			
417.544A	00	P	T	E	N	Tn	S	Y	Br			
417.544B	0	P	T	E	N	Tn	S	Y	Br			
417.545	0	P	T	E	N	Br	D	Y	Br			
417.546	0	P	T	E	N	Br	I	Y	Y			
417.547	00	P	T	E	N	Br	S	Y	G			
417.548	0	P	T	E	N	Tn	S	Y	Y			
417.550	0	P	T	E	N	Tn	S	Y	Bl			
417.551	0	P	G	E	N	Br	I	Y	Y			
417.552	0	W	T	E	Ssp	Br	D	Bl	Bl			
417.553	0	P	T	E	N	Br	S	Bl	Bl			
417.554	0	P	T	E	N	Tn	S	Y	Bl			
417.555	0	W	T	E	N	Br	S	Y	Bl			
417.556	00	P	G	E	N	Br	I	Y	Y			
417.557	0	P	G	E	N	Br	I	Y	Y			
417.558	0	W	T	E	N	Br	S	Bl	Bl			
417.560	0	W	T	E	Ssp	Br	D	Bl	Bl			
417.564	00	P	T	E	Ssp	Br	I	Y	Br	Abh		
417.565	000	P	T	E	N	Br	I	Y	Br			
423.707	00	P	T	E	Ssp	Tn	I	Y	Br			
423.708A	00	W	T	E	N	Br	S	Y	G			
423.708B	0	W	G	E	N	Br	S	Y	Y			
423.709	00	P	T	E	N	Tn	D	Y	Br	Abh		
423.710	000	P	G	E	N	Tn	S	Y	Y			
423.711	00	P	T	E	N	Br	S	Bl	Bl			
423.712	000	P	T	E	N	Br	S	Y	G			
423.713	000	P	T	E	N	Br	S	Y	G			
423.714	0	W	T	E	N	Br	S	Bl	Bl			
423.715	00	P	G	E	N	Br	D	Y	Y			
423.716	00	P	T	E	Ssp	Tn	I	Y	Br			Det
423.717	00	P	G	E	N	Br	I	Y	Y			
423.718	00	P	T	E	Ssp	Tn	I	Y	Br			
423.719	00	P	G	E	N	Br	I	Y	Y			
423.864	0	P	T	E	Ssp	Br	I	Y.	Br			
423.866	000	P	T	E	N	Tn	S	Lgn	Bl	Saddle		
423.867	0	W	T	E	N	Br	D	Y	Br			
423.869	00	P	T	E	Ssp	Br	S	Y	Br			
423.953	0	W	G	Sa	Ssp	Br	D	Y	Bf			
423.954	0	W	G	Sa	Ssp	Br	D	Y	Bf			
424.148	0	W	G	A	Ssp	Br	I	Y	Bf			
424.190	00	P	T	E	N	Br	S	Bl	Bl			
424.191	0	W	G	E	N	Br	D	Y	Y			
424.193	0	W	T	E	N	Tn	I	G	Bl			
424.194	0	W	T	E	N	Tn	I	Y	Br			
424.195A	0	P	T	E	N	Tn	S	Y	Bl			

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.542	40*	110	4.0	113*	2.3	1.0	16.8	1.75*
417.543	31	104	3.5	112*	1.8	1.0	15.2	2.21
417.544A	30	101	3.5	104	2.0	1.0	17.5	2.64
417.544B	31	102*	3.5	105	2.3	1.0	17.5	2.08
417.545	33	105	4.0	99	2.5	1.0	17.2	2.41
417.546	37*	104	3.5	104*	2.0	1.0	14.6	2.51*
417.547	31	98*	3.0	77	2.3	1.5	15.2	2.75
417.548	35*	104	3.5	90*	2.3	1.0	15.3	2.59
417.550	Tested in and reported with group I evaluation							
417.551	33	99*	4.5	84	2.5	2.0	21.4	1.84
417.552	38	110	4.5	108	2.3	-	14.5	2.59
417.553	32	108	4.0	93	2.5	-	18.7	2.48
417.554	33	106	4.0*	83	2.3	1.5	16.9	2.50
417.555	35	110	4.0*	100	2.0	2.0	14.5	2.30
417.556	31	101	3.0	77	3.3	2.0	20.5	2.48
417.557	31	100*	3.5*	81	2.0	2.5	20.1	1.93
417.558	31	105	4.0*	99	2.5	-	18.6	2.49
417.560	39	114	4.0*	108	2.0	-	14.1	2.70*
417.564	29	89	1.5	42	2.8	2.0*	22.6	1.80
417.565	30	84	3.0*	55*	2.0	1.5	16.0	2.07
423.707	29	94	3.5	62	2.3	1.0	16.7	2.35
423.708A	30	104	4.0	117	2.3	1.0	14.9	2.93
423.708B	36	116*	3.5	107	1.5	1.0	15.4	2.57*
423.709	31	103	3.5	63*	3.0	1.5	16.5	2.14
423.710	29*	86	2.0*	53*	2.0	2.0	18.4*	1.83
423.711	32	98*	3.5	83	2.3	-	15.7	2.66
423.712	32	96*	3.5	85*	2.5	1.5	14.8	2.14*
423.713	31	96*	3.5	81*	2.8	1.5	14.3	2.32
423.714	32	105	3.5	93	2.3	-	18.3	2.39
423.715	34	97*	2.5	46	2.5	2.5	17.4	1.75
423.716	35	95	2.5	62	1.8	1.0	15.5	2.40
423.717	30	98*	3.0	71	2.8	2.5	19.6	2.71*
423.718	36*	101	4.0	83	2.5	1.0	15.8	2.55
423.719	32	96*	2.5	77*	2.3	3.0*	19.5	2.16
423.864	35	105	3.5	65	2.0	4.0	24.9	1.55
423.866	29	86	1.5	30	2.0	-	17.0	1.89*
423.867	40	105	4.5	67	2.0	3.0	19.9	1.78
423.869	32	92*	3.0*	62	2.8	3.0*	19.0	2.07
423.953	Tested in and reported with group I evaluation							
423.954	52	113	4.0	88*	1.5	3.0	11.8	1.33
424.148	Tested in and reported with group I evaluation							
424.190	31	92	3.0	75	2.5	-	15.2*	1.98
424.191	31	101*	2.5	85	1.5	1.0	14.5	2.25
424.193	39	109	3.0	81	2.3	1.5	15.3	2.59
424.194	34	109	4.5	84*	2.3	1.0	18.8	2.55
424.195A	33	110	4.0	98	1.8	1.0	15.4	2.64

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.542	0	18.3	44.0	12.0	3.3	19.0	56.3	9.3	0.0	3	S
417.543	0	19.8	41.9	11.8	3.3	20.4	55.7	8.7	0.0	5	S
417.544A	00	19.9	41.6	12.4	3.3	19.2	56.0	9.0	0.0	5	S
417.544B	0	19.8	42.8	12.0	2.8	19.1	57.6	8.4	0.0	5	S
417.545	0	19.1	43.6	12.1	3.3	19.3	54.9	10.4	0.0	5	S
417.546	0	18.9	43.3	11.4	2.5	19.3	56.8	9.9	0.0	5	S
417.547	00	20.3	38.5	12.7	2.6	16.8	55.4	12.3	0.0	5	R
417.548	0	18.9	43.3	13.1	2.8	18.3	55.0	10.6	0.0	5	S
417.550	0	Tested in and reported with the group I evaluation								5	S
417.551	0	19.4	42.7	11.4	2.8	21.7	55.6	8.2	0.0	5	S
417.552	0	18.7	42.3	12.1	1.8	18.8	57.8	9.4	0.1	4	R
417.553	0	20.1	39.9	11.4	2.9	18.5	57.7	9.2	0.0	5	S
417.554	0	20.5	41.8	12.0	2.9	20.2	55.5	9.2	0.0	4	S
417.555	0	19.0	43.9	11.2	3.1	19.0	57.5	9.2	0.0	5	R
417.556	00	19.1	42.1	11.6	2.3	19.7	56.7	9.5	0.1	5	S
417.557	0	18.3	44.3	12.3	3.0	21.0	55.1	8.4	0.0	5	S
417.558	0	20.4	40.7	12.1	3.0	21.0	54.8	9.0	0.0	3	S
417.560	0	19.1	42.3	12.2	3.2	19.8	56.2	8.4	0.0	3	R
417.564	00	18.4	41.6	11.9	2.9	28.4	48.8	7.9	0.0	4	R
417.565	000	20.3	41.6	12.0	2.7	26.0	50.9	8.3	0.0	1	R R R R
423.707	00	18.1	44.3	13.3	2.7	22.4	53.3	8.2	0.0	5	R R R R
423.708A	00	19.3	42.1	12.5	2.8	19.8	55.1	9.7	0.0	5	H
423.708B	0	20.2	40.5	12.5	2.8	22.8	52.1	9.7	0.0	5	H
423.709	00	19.4	42.1	12.6	2.9	20.9	54.3	9.1	0.0	3	S
423.710	000	18.6	43.2	12.2	2.7	23.9	53.3	7.8	0.0	5	S
423.711	00	20.2	38.8	12.7	3.3	19.1	54.3	10.5	0.0	5	R R R S
423.712	000	20.5	40.0	13.5	3.3	18.6	53.4	11.0	0.0	5	S
423.713	000	20.3	38.9	13.6	3.4	18.3	53.9	10.7	0.1	5	S
423.714	0	20.7	39.6	11.5	2.9	22.6	55.0	7.9	0.0	5	S
423.715	00	18.0	45.4	12.0	2.6	19.9	57.1	8.3	0.0	4	S
423.716	00	18.4	41.9	13.7	2.5	18.3	54.7	10.7	0.0	3	H
423.717	00	19.1	43.4	11.8	2.4	19.2	56.9	9.6	0.0	5	S
423.718	00	18.2	44.0	13.3	2.4	19.9	55.2	9.1	0.0	5	R R R H
423.719	00	17.4	45.5	12.1	2.5	21.5	55.4	8.4	0.0	5	S
423.864	0	19.3	42.4	11.9	2.8	19.3	56.6	9.4	0.0	1	R
423.866	000	15.7	48.0	13.6	3.0	17.7	55.9	9.8	0.0		S
423.867	0	20.0	40.3	12.3	2.8	24.2	51.6	9.0	0.0	1	S
423.869	00	19.2	43.7	12.0	2.7	23.5	52.9	8.8	0.0	1	S
423.953	0	Tested in and reported with the group I evaluation								1	S
423.954	0	15.6	47.3	12.8	2.8	17.9	56.1	10.2	0.0	1	R R R R
424.148	0	Tested in and reported with the group I evaluation								1	
424.190	00	20.0	40.1	12.7	3.4	20.4	53.2	10.1	0.0	5	
424.191	0	20.4	39.9	11.6	2.9	21.9	54.6	8.8	0.0	5	R R S S
424.193	0	19.7	39.9	12.7	2.9	18.8	56.7	8.7	0.0	2	H
424.194	0	19.4	40.4	11.7	3.2	20.6	56.2	8.2	0.0	4	S
424.195A	0	20.1	40.6	12.6	3.3	17.2	57.5	9.1	0.0	4	S

Table 1.1. Identification and origin information for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
424.196	Amurskaja 25		Yugoslavia		USSR+	1978	0
424.197	Dobrogenca		Yugoslavia		Yugoslavia	1978	0
424.198	Dobrudza		Yugoslavia		Yugoslavia	1978	0
424.205	Heilungkiang No. 16		Yugoslavia		China+	1978	0
424.207	Norddeutsche Schwarze		Yugoslavia		E. Germany+	1978	0
424.208	Os-289		Yugoslavia		Yugoslavia	1978	0
424.242		KAS 173-5	S. Korea		S. Korea	1978	0

Table 2.1. Descriptive data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence			Pod color	Seed coat		Hilum color	Other traits		
			Color	Form	Density		Luster	Color		Seed	Leaf	Plant
424.196	0	W	T	E	N	Tn	I	G	Bl			
424.197	0	P	T	E	N	Tn	S	Y	Br	Abh		
424.198	0	P	T	E	N	Tn	S	Y	Br	Abh		
424.205	0	W	G	E	N	Br	I	Y	Bf		Na	
424.207	0	W	T	E	Ssp	Br	D	Bl	Bl			
424.208	0	P	T	E	N	Tn	S	Y	Br			
424.242	0	W	G	Sa	Ssp	Br	D	Y	Bf			

Table 3.1. Agronomic data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.196	36	109	4.0	77*	2.3	1.5	15.8	2.72
424.197	40	113	4.0	83*	1.5	1.0	10.2	2.13
424.198	39	113	4.5	81	1.5	1.0	10.4	2.38
424.205	38	111	3.0*	81	2.0	3.0	16.4	2.05
424.207	39	110	4.0	93	2.3	-	13.3	2.08
424.208	32	103	3.5	103	2.0	1.0	15.1	2.19
424.242	54	111	4.0*	80	1.5	2.5	10.1	1.25

Table 4.1. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups 000 to 0, PI 273.483 to PI 427.107, grown at St. Paul, MN

		Seed composition		Oil composition						Disease reaction								
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
424.196	0	20.5	39.8	12.3	2.9	16.5	58.3	9.9	0.0	3	H								
424.197	0	18.7	40.6	11.4	3.5	21.7	54.4	8.9	0.1	4	H								
424.198	0	19.1	40.4	12.4	3.0	16.6	58.4	9.5	0.0	5	S								
424.205	0	21.1	38.9	11.8	3.5	22.6	54.1	7.7	0.0	2	S								
424.207	0	19.1	41.8	13.0	2.9	17.0	56.1	10.7	0.0	5									
424.208	0	20.1	41.8	12.1	2.8	19.5	56.0	9.3	0.0	5	S								
424.242	0	16.4	46.3	12.0	3.0	18.1	55.8	11.0	0.0	1	S	S	S	S					

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
	Amcor		USA		USA	1979	II
	Amsoy 71		USA		USA	1970	II
	Anoka		USA		USA	1970	I
	Bansei (Ames)		USA		Japan+	1929	II
	Bavender Special A		USA		USA	1967	III
	Bavender Special B		USA		USA	1967	III
	Bavender Special C		USA		USA	1967	III
	Beeson		USA		USA	1968	II
	Beeson 80		USA		USA	1979	II
	Blackeye		Canada		China	1934	I
	Bombay		USA		USA+	1966	I
	BSR 301		USA		USA	1979	III
	BSR 302		USA		USA	1980	III
	Calland		USA		USA	1968	III
	Century		USA		USA	1979	II
	Coles		USA		USA	1976	I
	Corsoy		USA		USA	1967	II
	Corsoy 79		USA		USA	1979	II
	Cumberland		USA		USA	1978	III
	Disoy		USA		USA	1967	I
	Dunn		USA		USA	1969	I
	Elf		USA		USA	1970	III
	Ennis I		USA		USA	1967	III
	Gnome		USA		USA	1979	II
	Harcor		Canada		Canada	1975	II
	Hardin		USA		USA	1980	I
	Hark		USA		USA	1966	I
	Harlon		Canada		Canada	1976	I
	Harwood		Canada		Canada	1970	II
	Hodgson		USA		USA	1974	I
	Hodgson 78		USA		USA	1978	I
	Jogun (Ames)		USA		Korea+	1930	III
	Madison		USA		USA	1960	II
	Magna		USA		USA	1967	II
	Manchu (Lafayette) B		USA		China	1911	III
	Marion		USA		USA	1976	II
	Mead		USA		USA	1981	III
	Miller 67		USA		USA	1967	III
	Nebsoy		USA		USA	1979	II
	Oakland		USA		USA	1978	III
	Pella		USA		USA	1979	III
	Pridesoy 57		USA		USA	1948	I
	Prize		USA		USA	1967	II
	Protana		USA		USA	1969	II
	Provar		USA		USA	1969	II
	Rampage		USA		USA	1969	I

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
Amcor	II	P	G	E	N	Br	S	Y	Y			
Amsoy 71	II	P	G	E	N	Tn	S	Y	Y			
Anoka	I	P	T	E	N	Br	S	Y	Bl			
Bansei (Ames)	II	P	G	E	N	Br	D	Y	Y			
Bav. Spec. A	III	P	T	E	N	Br	D	Y	Bl			
Bav. Spec. B	III	W	T	E	N	Br	D	Y	Br			
Bav. Spec. C	III	P	T	E	N	Br	S	Y	Br			
Beeson	II	P	G	E	N	Br	S	Y	Ib			
Beeson 80	II	P	G	E	N	Br	S	Y	Ib			
Blackeye	I	P	T	E	Ssp	Br	D	Gn	Bl			
Bombay	I	P	G	E	N	Br	S	Y	Y			
BSR 301	III	W	T	E	N	Br	D	Y	Br			
BSR 302	III	P	T	E	N	Br	D	Y	Bl			
Calland	III	P	T	E	N	Br	D	Y	Bl			
Century	II	P	T	E	N	Br	D	Y	Bl			
Coles	I	P	G	E	N	Tn	D	Y	Y			
Corsoy	II	P	G	E	N	Br	D	Y	Y			
Corsoy 79	II	P	G	E	N	Br	D	Y	Y			
Cumberland	III	P	G	E	N	Br	S	Y	Ib			
Disoy	I	P	G	E	N	Tn	D	Y	Y			
Dunn	I	P	Lt	E	N	Br	S	Y	Bl			
Elf	III	P	T	E	N	Tn	S	Y	Bl			
Ennis I	III	P	T	E	N	Br	D	Y	Bl	Saddle		
Gnome	II	P	T	E	N	Tn	S	Y	Bl			
Harcor	II	P	G	E	N	Br	S	Y	Y			
Hardin	I	P	G	E	N	Br	D	Y	Y			
Hark	I	P	G	E	N	Br	D	Y	Y			
Harlon	I	W	G	E	N	Br	D	Y	Y			
Harwood	II	P	G	E	N	Br	D	Y	Y			
Hodgson	I	P	G	E	N	Br	D	Y	Bf			
Hodgson 78	I	P	G	E	N	Br	D	Y	Bf			
Jogun (Ames)	III	W	G	E	Ssp	Br	D	Y	Y			
Madison	II	W	G	E	N	Br	S	Y	Bf			
Magna	II	P	G	E	N	Br	D	Y	Y			
Manchu (Laf.) B	III	P	T	E	N	Br	D	Y	Br			
Marion	II	P	G	E	N	Tn	S	Y	Bf			
Mead	III	P	T	E	N	Br	S	Y	Bl			
Miller 67	III	P	G	E	N	Tn	S	Y	Bf			
Nebsoy	II	W	G	E	N	Br	S	Y	Bf			
Oakland	III	P	T	E	N	Br	D	Y	Bl			
Pella	III	P	T	E	N	Tn	D	Y	Bl			
Pridesoy 57	I	P	G	E	N	Br	D	Y	Y			
Prize	II	P	G	E	N	Tn	D	Y	Y			
Protana	II	P	G	E	N	Br	S	Y	Ib			
Provar	II	P	T	E	N	Br	D	Y	Br			
Rampage	I	P	T	E	N	Br	S	Y	Bl			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
Amcor	33	112	2.8	113	3.0	1.0	1.0	2.5	1.0	17.2*	3.99*
Amsoy 71	33	108	2.2	120*	3.0	1.0	1.0	3.0	1.0	17.4	4.15*
Anoka	31	102	1.8	71	3.0	1.0	1.0	3.0	1.0	17.6	3.32
Bansei (A.)	41	102	1.8	65	2.0	1.0	1.0	3.0	1.0	23.3	2.72
Bav. Sp. A	40*	116	3.5	102*	3.0	1.0	1.5	2.8*	1.5	17.1*	3.18*
Bav. Sp. B	39	117	3.2	125*	3.0	1.0	1.5	2.0	1.5	15.2	3.23
Bav. Sp. C	43	118	3.0	127	3.0	1.0	1.5	2.5	1.0	15.6*	2.55*
Beeson	33	110	1.8	101*	3.0	1.0	1.0	2.5	1.0	19.5	4.16*
Beeson 80	33	108	2.0	92*	3.0	1.0	1.0	2.3	1.0	19.5	4.06*
Blackeye	33	92	1.0	31	1.0	1.0	2.0	3.5	1.0	24.1	1.77
Bombay	37	102	2.3*	83*	3.0	1.0	1.0	3.3	1.0	19.9	3.47*
BSR 301	40	121	2.0	113*	3.0	1.0	1.0	2.8	1.5	18.5*	3.62
BSR 302	45	125	2.5	103	4.0	1.5	2.0*	2.5	2.0	18.3*	3.32*
Calland	37	120	2.0	105	3.0	1.5	1.5	2.5	2.0	18.2*	3.68
Century	33	110	1.4	92*	3.0	1.0	1.0	2.3	1.0	19.0	4.18*
Coles	29	106	2.0	102	3.0	1.0	1.0	2.0	1.0	17.3	3.93
Corsoy	33	107	2.1	95*	3.5	1.0	1.0	2.5	1.0	15.4	3.83*
Corsoy 79	32	108	2.1	98*	3.5	1.0	1.0	2.3	1.0	14.9	3.65
Cumberland	41	121	2.0	104*	3.0	1.0	1.0	2.5	1.0	21.2	4.02
Disoy	31	100	2.2	91	3.0	1.0	1.0	3.5	1.0	25.9*	2.92
Dunn	28	98	1.5	81*	3.0	1.0	1.0	2.5	1.0	16.8	3.34
Elf	42	125	1.2	54	1.0	1.0	1.0	1.8	1.0	16.6	3.99
Ennis I	41	116	2.0	116*	4.0	1.0	1.0	2.0	-	16.9*	3.27
Gnome	40	115	1.4	47	1.0	1.0	1.0	1.8	1.0	16.1	3.86
Harcor	33	108	2.1	109*	3.0	1.0	1.0	2.5	1.0	14.3	3.59*
Hardin	31	107*	1.8	92	3.0	1.0	1.0	3.3	1.0	14.8	3.83
Hark	29	104	1.3	95	3.0	1.0	1.0	2.0	1.5	15.4	3.68
Harlon	27	95	1.3	82	3.0	1.0	1.0	3.0*	1.0	14.7	3.10*
Harwood	32	106	1.6	95*	3.0	1.0	1.0	2.8	1.0	18.6	3.23
Hodgson	28	99	1.3	81	3.0	1.0	1.0	2.8	1.0	15.2	3.41
Hodgson 78	28	101	1.8*	85*	3.0	1.0	1.0	3.0	1.0	16.4	3.25
Jogun (A.)	47	120	1.3	71	1.0	1.5	1.5	3.0	2.0*	24.2*	3.03*
Madison	33	107	1.8	104	3.0	1.0	1.0	2.5	1.0	11.9	3.89*
Magna	31	107	2.0	94*	3.0	1.0	1.5	4.0	1.0	26.3*	3.26
Manchu (L.)B	40*	116	2.8	122*	4.0	1.0	1.0	2.3	1.5	14.5*	2.90
Marion	34	110	2.0	89*	3.0	1.0	1.0	3.5	1.0	24.3*	4.31*
Mead	41	116	1.3	90	3.0	1.0	1.0	2.0	2.0	15.3	3.61*
Miller 67	48	116	1.8	74	1.0	1.0	2.0*	2.3	3.0	15.0	2.90*
Nebsoy	30	107	1.5	96*	3.0	1.0	1.0	2.5	1.0	18.4	3.28
Oakland	40	119	1.5	105*	3.0	1.5	1.5	2.3	1.5	20.1*	3.59
Pella	36	116	1.1	107*	3.0	1.0	1.5	2.8*	2.0	21.4*	3.75
Pridesoy 57	30	91	1.3	64*	3.0	1.0	1.0	2.3	1.0	12.6	2.70
Prize	34	105	1.9	90*	3.0	1.0	1.0	2.5	1.0	26.8	3.29
Protana	36	107	2.2	94*	3.0	1.0	1.0	2.0	1.0	17.9	3.41*
Provar	31	107	2.3	95*	3.0	1.0	1.0	2.3	1.0	20.0	3.36
Rampage	29	103	1.7	89	3.0	1.0	1.0	2.8	1.0	16.6	3.79

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
Amcor	II	19.5	42.5	11.3	3.0	22.9	55.0	7.7	0.0		R	R	S	S	S	S	S	S	S
Amsoy 71	II	20.5	43.0	11.8	3.4	24.9	52.4	7.6	0.0	5	R	R	S	S	S	S	S	S	S
Anoka	I	21.4	43.3	11.3	4.0	23.1	55.3	6.1	0.1	5	S	S	S	S	S	S	S	S	S
Bansei (Ames)	II	18.8	43.7	11.8	3.5	26.9	49.3	8.5	0.0	1	S	S	S	S	S	S	S	S	S
Bav. Sp. A	III	17.9	46.4	11.3	3.2	18.6	58.5	8.4	0.0	4	S	S	S	S	S	S	S	S	S
Bav. Sp. B	III	18.1	47.0	11.1	3.4	18.8	58.2	8.5	0.0										
Bav. Sp. C	III	18.1	46.8	11.4	3.4	20.2	55.8	9.1	0.0										
Beeson	II	19.2	44.2	11.1	3.5	17.9	59.0	8.5	0.0	1	R	R	S	S	S	S	S	S	S
Beeson 80	II	19.3	42.8	11.1	3.4	18.4	59.0	8.1	0.0	1	R	R	R	S	S	R	R	R	R
Blackeye	I	20.5	42.6	11.9	3.1	28.4	49.8	6.6	0.1										
Bombay	I	18.2	45.9	12.0	3.2	22.3	54.9	7.5	0.0										
BSR 301	III	19.2	45.1	11.9	3.8	21.8	55.4	7.1	0.1										
BSR 302	III	17.7	47.0	11.2	4.0	19.2	57.1	8.5	0.1		R								
Calland	III	18.5	45.2	10.6	3.8	17.2	60.0	8.4	0.0	4	R	R	S	S	S	S	S	S	S
Century	II	19.7	44.0	11.6	3.3	19.3	57.9	7.9	0.0	4	R	R	S	S	S	S	S	S	S
Coles	I	19.9	42.4	11.7	3.6	21.8	55.5	7.3	0.1	4	S	S	S	S	S	S	S	S	S
Corsoy	II	19.1	43.6	11.9	3.1	22.8	55.3	6.9	0.0	5	S	S	S	S	S	S	S	S	S
Corsoy 79	II	19.7	45.2	11.8	3.1	23.1	55.1	6.7	0.1	5	R	R	R	S	S	R	R	R	R
Cumberland	III	19.9	45.5	10.9	3.3	29.0	51.0	5.9	0.0	4	S	S	S	S	S	S	S	S	S
Disoy	I	19.3	44.5	12.0	3.6	27.7	49.8	6.7	0.1		S	S	S	S	S	S	S	S	S
Dunn	I	19.8	43.6	11.4	3.9	23.4	54.2	7.1	0.1	5	S	S	S	S	S	S	S	S	S
Elf	III	19.2	46.5	11.4	4.0	20.2	56.7	7.7	0.1	1	S	S	S	S	S	S	S	S	S
Ennis I	III	19.2	44.6	11.4	3.9	20.8	56.4	7.4	0.0										
Gnome	II	19.5	44.9	11.6	3.5	18.9	58.3	7.7	0.0	1	S	S	S	S	S	S	S	S	S
Harcor	II	19.3	43.1	11.7	3.1	22.9	55.5	6.9	0.0	5	R	R	S	S	S	S	S	S	S
Hardin	I	20.6	41.8	11.4	3.4	20.8	56.8	7.6	0.1	1	R								
Hark	I	20.1	43.2	11.7	3.8	22.4	54.8	7.4	0.1	4	S	S	S	S	S	S	S	S	S
Harlon	I	20.7	42.1	12.3	2.8	26.7	51.3	7.0	0.1	5	R								
Harwood	II	19.0	46.1	11.9	3.1	25.7	51.7	7.5	0.2										
Hodgson	I	21.0	42.2	11.6	3.1	25.9	52.7	6.5	0.1	4	S	S	S	S	S	S	S	S	S
Hodgson 78	I	20.9	42.6	11.7	3.4	26.5	52.1	6.2	0.1	5	R	R	R	S	S	R	R	R	R
Jogun (Ames)	III	19.6	43.7	10.5	3.1	25.4	53.8	7.1	0.0	1	S	S	S	S	S	S	S	S	S
Madison	II	18.9	46.9	11.7	3.7	20.7	55.6	8.2	0.0	1	R	R	S	S	S	S	S	S	S
Magna	II	19.8	45.1	10.5	3.0	28.4	49.6	8.4	0.0		S	S	S	S	S	S	S	S	S
Manchu (L.)B	III	17.5	47.4	8.2	3.0	19.7	56.7	9.0	0.0	4	S	S	S	S	S	S	S	S	S
Marion	II	20.2	43.2	11.4	3.0	35.8	42.9	6.8	0.0										
Mead	III	18.5	44.3	11.1	3.5	18.3	58.0	9.0	0.0										
Miller 67	III	17.2	45.8	11.6	3.2	23.6	53.1	8.4	0.0										
Nebsoy	II	19.3	43.7	11.7	3.9	24.8	52.6	6.9	0.0	4	R	R	S	S	S	S	S	S	S
Oakland	III	19.8	43.4	11.3	3.9	24.2	54.0	6.6	0.0	5	R	R	S	S	S	S	S	S	S
Pella	III	20.3	44.5	11.2	3.7	22.7	56.0	6.5	0.1	2	R	R	S	S	S	S	S	S	S
Pridesoy 57	I	18.0	46.5	12.8	2.9	21.4	54.6	8.3	0.0	5	S	S	S	S	S	S	S	S	S
Prize	II	19.7	42.6	10.6	3.0	28.1	50.9	7.4	0.1		S	S	S	S	S	S	S	S	S
Protana	II	19.2	45.4	11.0	3.5	21.6	56.4	7.5	0.0	4	R	R	S	S	S	S	S	S	S
Provar	II	19.1	48.4	11.1	3.3	23.9	55.0	6.7	0.1	5	S	S	S	S	S	S	S	S	S
Rampage	I	20.3	43.0	10.8	3.5	19.3	58.1	8.2	0.0	5	S	S	S	S	S	S	S	S	S

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
	Sloan		USA		USA	1978	II
	Sprite		USA		USA	1980	III
	Steele		USA		USA	1972	I
	Verde		USA		USA	1967	III
	Vickery		USA		USA	1978	II
	Vinton		USA		USA	1978	I
	Weber		USA		USA	1979	I
	Wells		USA		USA	1973	II
	Wells II		USA		USA	1978	II
	Will		USA		USA	1979	III
	Williams		USA		USA	1972	III
	Williams 79		USA		USA	1979	III
	Willomi B		USA		USA	1967	III
	Wirth		USA		USA	1969	I
	Woodworth		USA		USA	1975	III
96.927			Korea		Korea	1932	III
273.483A			S. Korea		S. Korea	1961	III
273.483B			S. Korea		S. Korea	1961	III
273.483E			S. Korea		S. Korea	1961	III
273.483F			S. Korea		S. Korea	1961	III
274.206	Choongpuk back		S. Korea		S. Korea	1961	III
274.455	Aohigu		Japan		Japan	1961	II
274.456	Hyaku avda		Japan		Japan	1961	III
281.850	Wase shiroge		Japan		Japan	1962	II
283.331	No. 380	CPI 26669	Australia		Morocco	1962	III
283.332	CNS-65F	CPI 26670	Australia		Morocco	1962	III
283.334	Grignon	CPI 26675	Australia	Morocco	France+	1962	II
290.116A	Hodoninska Ziuta		Hungary		Hungary	1963	0
290.124	Charbinszkaja 111		Hungary		USSR+	1963	I
290.126A	Hei ch'i		Hungary		China+	1963	I
290.126B	(Hei ch'i)		Hungary		China+	1963	II
290.128	Ito san		Hungary		Hungary	1963	I
290.130	Kubanszkaja 276		Hungary		USSR+	1963	II
290.134	Man ts'ang chin		Hungary		China+	1963	I
290.149	Zelena Echo 3		Hungary		Hungary	1963	I
291.272			Sweden		China	1963	I
291.273			Sweden		China	1963	I
291.274A			Sweden		China	1963	I
291.274B			Sweden		China	1963	I
291.275			Sweden		China	1963	I
291.276			Sweden		China	1963	I
291.277			Sweden		China	1963	I
291.278			Sweden		China	1963	I
291.279			Sweden		China	1963	I
291.281			Sweden		China	1963	I
291.282			Sweden		China	1963	I

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
Sloan	II	W	T	E	N	Br	S	Y	Br			
Sprite	III	W	T	E	N	Tn	S	Y	Bl			
Steele	I	P	G	E	N	Br	D	Y	Y			
Verde	III	P	G	E	Ssp	Br	D	Gn	Lbf	Gncot		
Vickery	II	P	G	E	N	Br	D	Y	Y			
Vinton	I	P	G	E	N	Tn	I	Y	Y			
Weber	I	W	T	E	N	Br	D	Y	Bl			
Wells	II	P	G	E	N	Br	D	Y	Ib			
Wells II	II	P	G	E	N	Br	D	Y	Ib			
Will	III	W	T	E	N	Tn	S	Y	Bl			
Williams	III	W	T	E	N	Tn	S	Y	Bl			
Williams 79	III	W	T	E	N	Tn	S	Y	Bl			
Willomi B	III	P	G	E	N	Br	D	Y	Y			
Wirth	I	P	T	E	N	Br	S	Y	Bl			
Woodworth	III	W	T	E	N	Tn	D	Y	Bl			
96.927	III	P	T	E	N	Br	D	Y	Bl			
273.483A	III	W	G	A	Ssp	Tn	D	Y	Y			
273.483B	III	P	G	Sa	Ssp	Tn	D	Y	Bf			
273.483E	III	W	G	A	Ssp	Tn	S	Y	Bf			
273.483F	III	P	G	E	Ssp	Br	D	Y	Bf			
274.206	III	W	G	A	Ssp	Tn	D	Y	Y			
274.455	II	W	T	Sa	Ssp	Br	S	Gn	Br			
274.456	III	W	T	Sa	Ssp	Tn	D	Y	Br			
281.850	II	P	G	A	Ssp	Br	S	Y	Lbf			
283.331	III	P	T	E	N	Br	D	Y	Y			
283.332	III	W	G	E	N	Br	D	G	G			
283.334	II	W	G	E	N	Tn	S	Y	Bf			
290.116A	0	P	G	E	N	Br	I	Y	Y			
290.124	I	P	T	E	N	Br	D	Y	Br			
290.126A	I	P	T	E	Ssp	Br	S	Y	Br			
290.126B	II	W	T	E	N	Br	S	Y	Br			
290.128	I	P	T	E	N	Br	D	Y	Y			
290.130	II	W	G	E	N	Br	S	Y	Bf			
290.134	I	W	G	E	N	Br	I	Y	Lbf			
290.149	I	P	T	E	Ssp	Br	D	Ggn	Bl			
291.272	I	P	T	E	Ssp	Br	D	Bl	Bl	SAbh		
291.273	I	P	T	E	Ssp	Br	D	Bl	Bl			
291.274A	I	P	T	E	Ssp	Br	D	Bl	Bl	SAbh,Fleck		Sw
291.274B	I	P	T	A	Ssp	Br	I	Bl	Bl			Sw
291.275	I	P	T	A	Ssp	Br	B	Bl	Bl			Sw
291.276	I	P	T	A	Ssp	Br	B	Bl	Bl			Sw
291.277	I	P	T	A	Ssp	Br	B	Bl	Bl			Sw
291.278	I	P	T	A	Ssp	Br	B	Bl	Bl			Sw
291.279	I	P	G	E	N	Br	S	Y	Bf		Na	
291.281	I	P	T	E	N	Bl	D	Y	Br			
291.282	I	P	T	E	Ssp	Br	D	Y	Br			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
Sloan	37	113	2.4*	112*	3.0	1.0	1.0	3.0	1.5	18.4	4.23*
Sprite	43	121	1.1	46	1.0	1.0	1.0	1.8	1.0	19.2*	3.71
Steele	29	100	1.7	84	3.0	1.0	1.0	2.5	1.0	17.5	3.46
Verde	40	115	2.3	70	1.0	2.0	3.5*	3.5	1.0	34.6	2.54
Vickery	32	107	2.6	98*	3.0	1.0	1.0	2.5	1.0	15.0	3.84
Vinton	27	107	1.7	81*	3.0	1.0	1.0	2.5	1.0	24.2	3.97*
Weber	31	107	2.0	93	3.0	1.0	1.0	2.3	1.0	13.3	4.34*
Wells	32	106	1.8	101*	3.0	1.0	1.5	3.0	1.0	17.4	3.99
Wells II	33	107	1.8	102*	3.0	1.0	1.5	3.0	1.0	16.6	3.97*
Will	40	117	1.2	91	2.0	1.0	1.5	2.3	1.0	18.5	4.00
Williams	43	123	2.0	116*	3.0	1.0	1.0	2.0	1.0	19.0	4.02
Williams 79	43	122	2.1	112*	3.0	1.5	1.5	2.0	1.0	19.3	3.66
Willomi B	45*	114	1.3	52*	1.0	1.5	2.0*	2.8	1.5	23.8	3.17*
Wirth	29	97	1.8*	90*	3.0	1.0	1.0	2.3	1.0	14.8	3.34
Woodworth	41	119	2.1	118*	4.0	1.0	1.0	2.3	2.0	16.6*	3.82*
96.927	41	115	2.7	90*	1.0	1.0	1.0	2.3	2.5	11.4	2.35
273.483A	49*	115	1.8	67	1.0	2.5*	3.5*	2.8	2.0*	23.8	2.17*
273.483B	47	115	2.5	73	1.5	1.0	3.0*	1.8	1.5	16.2	2.80
273.483E	49*	116	1.8	72	1.0	1.5	3.0*	2.5	1.5	25.0	2.56
273.483F	50*	115	2.1	81	2.0	1.0	3.0*	2.0	2.0	16.8	2.62
274.206	Tested in and reported with early group IV evaluation										
274.455	50*	109	2.6	69	2.0	2.0	3.5*	2.0	2.5	12.6*	2.18
274.456	58	118	2.2	84	1.0	1.5	2.0*	1.8	4.0*	12.2	2.05
281.850	45	109	2.0	64	1.0	2.0	5.0	2.0	1.0	20.8	2.57
283.331	49*	119	3.0	117*	3.0	1.0	1.0	2.3	1.0	16.0*	2.81*
283.332	Tested in and reported with early group IV evaluation										
283.334	43	109	2.8	102*	3.0	1.0	1.0	2.8	1.0	15.0	2.84
290.116A	28	91	1.3	64	3.0	1.0	1.0	2.3	1.0	16.0	3.18
290.124	30	97	2.2*	70*	3.0	1.0	1.0	3.0	1.0	14.8	3.16
290.126A	33	100	2.2*	68*	3.0	1.0	1.0	2.5	1.5	18.6	3.16
290.126B	35	107	2.3	88*	2.5	1.0	1.0	2.5	2.0	20.7	3.18
290.128	33	101	3.6	77	3.0	1.0	1.0	2.8	2.0	14.2	2.80
290.130	36	102	2.5	80*	3.0	1.0	1.0	2.5	1.0	17.5	3.37
290.134	30	98	2.9	83	3.0	1.0	1.0	2.5	1.0	17.0	2.92
290.149	35	104	1.5	43	1.0	1.0	1.5	2.5	1.0	24.6	3.17
291.272	33	93	3.1	84*	4.0	1.0	1.0	1.8	-	11.6	2.90
291.273	36	93	2.6	77*	3.5	1.0	1.0	1.8	-	10.2	2.86
291.274A	36	93	2.8	83*	3.5	1.0	1.0	1.8	-	11.3	2.94
291.274B	45	103	4.0	48	4.0	1.0	1.0	1.8	-	4.1	1.44*
291.275	40	105	3.6	56	4.0	1.0	2.0	2.0	-	3.5	1.48*
291.276	39	101*	3.3	67	4.0	1.0	1.0	1.8	-	4.9	2.22*
291.277	40	104	3.8	54*	4.0	1.0	2.0	2.1	-	3.8	1.76*
291.278	39	104	3.8	53	4.0	1.0	2.0	2.0	-	3.7	1.53*
291.279	31	100	3.2	88	3.0	1.0	1.5	2.5	1.5	17.4	3.06
291.281	32	99	2.6	77*	3.0	1.0	1.0	2.8	3.0*	18.1	3.26
291.282	31	103	2.6*	87*	3.0	1.0	1.0	2.5	1.5	14.4	3.11*

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
Sloan	II	21.0	42.3	11.7	3.5	20.4	56.5	7.9	0.0	4	S	S	S	S	S	S	S	S	S
Sprite	III	21.1	45.2	10.8	2.8	24.0	55.7	6.6	0.0										
Steele	I	20.0	44.0	11.6	2.8	23.3	55.0	7.3	0.0	5	R								
Verde	III	19.1	43.3	11.8	3.0	26.3	51.5	7.3	0.0										
Vickery	II	19.6	42.9	11.8	3.0	21.6	56.5	7.1	0.0	5	R	R	R	S	S	R	R	R	R
Vinton	I	19.0	45.6	11.5	3.1	24.7	53.0	7.7	0.0										
Weber	I	20.8	43.1	12.0	3.4	20.1	55.9	8.7	0.0	4	S	S	S	S	S	S	S	S	S
Wells	II	19.5	44.1	10.9	3.2	18.8	59.4	7.8	0.0	1	R	R	S	S	S	S	S	S	S
Wells II	II	19.7	43.8	10.9	3.3	18.9	59.3	7.5	0.0	1	R	R	R	S	S	R	R	R	R
Will	III	19.7	46.6	11.1	3.3	22.5	56.2	6.9	0.1	3	S	S	S	S	S	S	S	S	S
Williams	III	19.8	45.6	11.2	3.4	21.8	56.6	7.0	0.0	4	S	S	S	S	S	S	S	S	S
Williams 79	III	18.9	46.1	10.8	3.4	26.8	52.8	6.1	0.1	5	R	R	R	S	S	R	R	R	R
Willomi B	III	18.9	43.2	11.5	3.6	28.9	48.6	7.4	0.1	3									
Wirth	I	19.7	45.1	10.9	3.5	20.2	57.3	8.1	0.0	5	S	S	S	S	S	S	S	S	S
Woodworth	III	20.1	44.1	11.5	4.0	21.7	55.8	6.9	0.0	4	S	S	S	S	S	S	S	S	S
96.927	III	18.2	46.6	11.6	3.6	24.6	52.4	7.9	0.0										
273.483A	III	17.8	46.4	12.1	3.2	28.7	49.2	6.8	0.0	1	H								
273.483B	III	18.5	45.0	12.1	3.2	23.8	54.1	6.7	0.1	2	R	R	R	R	R	H	S	R	H
273.483E	III	17.1	46.0	12.2	3.0	25.6	51.5	7.7	0.0	1	H								
273.483F	III	18.5	46.8	11.1	3.1	22.8	54.6	8.3	0.0	1	R	R	R	S	R	R	R	R	R
274.206	III	Tested in and reported with early group IV evaluation								1	S								
274.455	II	15.2	49.2	12.0	2.9	23.8	52.4	8.9	0.0	1	R	R	R	R	R	H	H	H	
274.456	III	16.8	48.4	12.7	3.3	24.8	51.2	8.0	0.1	1	R		R	R					
281.850	II	17.0	44.5	14.5	3.0	22.8	52.7	6.9	0.1	1	R	R	R	R	R	S	S	S	S
283.331	III	18.9	46.4	11.6	3.2	26.4	52.1	6.6	0.1	3	S								
283.332	III	Tested in and reported with early group IV evaluation								1	S								
283.334	II	20.0	42.7	12.2	3.1	27.4	49.6	7.7	0.1	4	H								
290.116A	0	18.5	46.4	12.3	2.8	23.5	53.1	8.2	0.0	4	S								
290.124	I	19.8	43.0	10.8	2.9	19.5	58.7	8.2	0.0	2	S								
290.126A	I	19.8	44.6	11.9	3.1	27.0	51.5	6.4	0.0	1	S								
290.126B	II	18.9	45.7	11.8	3.3	28.7	50.0	6.2	0.0	1	S								
290.128	I	17.5	45.1	13.0	2.9	20.9	53.6	9.6	0.0	5	S								
290.130	II	19.8	42.9	11.9	3.4	28.1	49.4	7.1	0.1	5	S								
290.134	I	22.0	43.8	11.4	3.8	27.7	50.8	6.1	0.0	1	S								
290.149	I	18.8	46.1	9.7	3.0	21.6	57.7	7.9	0.0	4	S								
291.272	I	16.8	46.6	13.4	3.1	21.5	54.1	7.9	0.0	5	S								
291.273	I	15.8	46.3	13.7	3.3	19.7	55.1	8.2	0.0	5	S								
291.274A	I	16.4	45.8	13.6	3.0	20.6	54.5	8.4	0.0	5	S								
291.274B	I	13.6	43.9	13.2	3.2	13.2	57.5	12.8	0.0	2	R	R	S	S	S	R	S	S	
291.275	I	14.0	43.8	13.3	3.5	12.5	58.0	12.7	0.0	3	R	R	S	S	S	R	S	S	
291.276	I	14.0	43.0	13.6	3.3	14.5	57.7	10.9	0.0	3	S								
291.277	I	13.7	43.6	13.3	3.4	12.4	58.3	12.7	0.0	3	R	R	S	S	S	R	S	S	
291.278	I	13.9	45.2	13.4	3.5	12.3	58.1	12.6	0.0	3	R	R	S	S	S	R	S	S	
291.279	I	18.2	47.7	12.9	4.1	21.5	53.5	8.0	0.1	5	S								
291.281	I	18.6	48.1	11.8	3.4	24.2	52.9	7.6	0.1	5	S								
291.282	I	18.2	46.3	12.3	3.3	20.3	56.5	7.6	0.0	4	S								

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
291.283			Sweden		China	1963	I
291.284			Sweden		China	1963	I
291.286			Sweden		China	1963	II
291.288			Sweden		China	1963	II
291.290			Sweden		China	1963	I
291.291			Sweden		China	1963	I
291.293A			Sweden		China	1963	II
291.293B			Sweden		China	1963	II
291.294			Sweden		China	1963	I
291.295			Sweden		China	1963	II
291.296			Sweden		China	1963	II
291.297			Sweden		China	1963	II
291.298			Sweden		China	1963	II
291.299			Sweden		China	1963	II
291.300			Sweden		China	1963	I
291.301			Sweden		China	1963	II
291.302A			Sweden		China	1963	II
291.302B			Sweden		China	1963	II
291.302C			Sweden		China	1963	II
291.303A			Sweden		China	1963	I
291.303B			Sweden		China	1963	I
291.304			Sweden		China	1963	I
291.305			Sweden		China	1963	I
291.306A			Sweden		China	1963	II
291.306B			Sweden		China	1963	III
291.309A			Sweden		China	1963	II
291.309B			Sweden		China	1963	II
291.309C			Sweden		China	1963	I
291.309D			Sweden		China	1963	II
291.310A			Sweden		China	1963	I
291.310B			Sweden		China	1963	II
291.310C			Sweden		China	1963	II
291.311B			Sweden		China	1963	I
291.315			Sweden		China	1963	II
291.319B			Sweden		China	1963	0
291.320A			Sweden		China	1963	I
291.322			Sweden		China	1963	I
291.323			Sweden		China	1963	I
291.324			Sweden		China	1963	I
291.327			Sweden		China	1963	II
291.328			Sweden		China	1963	I
297.499	Ca chua No. 4	II-2-528	Hungary		China+	1964	0
297.500	Charbinszkaja 111	II-2-43	Hungary		USSR+	1964	I
297.502	Cina 496-079	II-2-550	Hungary		China+	1964	I
297.504	Czi ti No. 3	II-2-537	Hungary		China+	1964	II
297.505	Czi ti No. 5	II-2-493	Hungary		China+	1964	I

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
291.283	I	P	G	E	N	Br	S	Y	Y			
291.284	I	P	G	E	Ssp	Br	S	Y	Bf		Na	
291.286	II	P	T	E	N	Br	D	Y	Br			
291.288	II	P	T	E	N	Br	I	Y	Br			
291.290	I	P	T	E	Ssp	Br	I	Y	Br			
291.291	I	P	T	E	N	Br	I	Y	Br			
291.293A	II	P	Lt	E	N	Br	D	Y	Br			
291.293B	II	P	T	E	Ssp	Br	I	Y	Br			
291.294	I	P	G	E	N	Br	S	Y	Ib			
291.295	II	P	G	E	N	Br	I	Y	Ib			
291.296	II	P	T	E	Ssp	Br	D	Y	Br			
291.297	II	P	T	E	Ssp	Br	S	Y	Bl			
291.298	II	P	G	E	N	Br	S	Y	G			
291.299	II	P	G	E	N	Lbr	S	Y	Y			
291.300	I	P	G	E	N	Br	S	Y	Y			
291.301	II	W	G	E	N	Br	S	Y	Bf			
291.302A	II	P	Lt	E	N	Br	D	Y	Y			
291.302B	II	W	G	E	N	Br	S	Y	Lbf			
291.302C	II	P	G	E	N	Br	S	Y	Y			
291.303A	I	P	G	E	N	Br	S	Y	G			
291.303B	I	P	G	E	N	Br	S	Y	Bf			
291.304	I	P	G	E	N	Br	S	Y	Lbf			
291.305	I	W	G	E	N	Br	S	Y	Lbf			
291.306A	II	P	G	E	N	Lbr	I	Y	Y			
291.306B	III	P	G	E	N	Br	D	Y	Y	SDef		
291.309A	II	P	Lt	E	N	Br	D	Y	Br			
291.309B	II	W	T	E	N	Br	S	Br	Bl	Saddle		
291.309C	I	P	T	A	Ssp	Br	S	Gnbr	Br			Sw
291.309D	II	P	Lt	Sa	Sp	Br	D	Br	Br			
291.310A	I	P	T	E	N	Tn	D	Y	Tn			
291.310B	II	P	Lt	E	N	Br	D	Tn	Br		Dab	
291.310C	II	W	Lt	E	N	Br	S	Y	Br			
291.311B	I	P	G	E	N	Br	S	Y	Y			
291.315	II	P	G	E	N	Br	S	Y	Y			
291.319B	0	W	G	E	N	Bl	I	Gn	Bf	Gncot		
291.320A	I	P	T	E	N	Br	D	Bl	Bl	Fleck	Dab	
291.322	I	W	G	E	N	Br	S	Y	Lbf			
291.323	I	P	G	E	N	Br	S	Y	Y			
291.324	I	W	Lt	E	N	Br	S	Y	Bl			
291.327	II	W	G	E	N	Br	S	Y	Bf			
291.328	I	W	G	E	N	Br	I	Y	Y	SAbh		
297.499	0	P	T	E	N	Br	D	Y	Y			
297.500	I	P	T	E	N	Tn	D	Y	Br			
297.502	I	P	G	E	N	Br	S	Y	Bf			
297.504	II	W	G	E	Ssp	Br	S	Y	Lbf		Na	
297.505	I	W	G	E	N	Br	S	Y	Lbf			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
291.283	28	97	2.8	75	3.0	1.0	1.0	3.3	1.0	18.6	2.90
291.284	33	104	3.4	82	3.0	1.0	1.0	2.5	1.0	14.3	3.12
291.286	32	101	2.6*	80*	3.0	1.0	1.0	2.5	1.5	14.5	2.72
291.288	33	102	2.2	77*	3.0	1.0	1.0	2.8	2.0	14.4	2.94
291.290	32	102	1.9	83*	3.0	1.0	1.0	2.5	1.5	14.1	3.04
291.291	32	102	2.3*	81*	3.0	1.0	1.0	2.5	2.0	14.1	3.25
291.293A	43	110	3.8	102*	4.0	1.0	1.5	2.5	2.5	14.5*	2.49
291.293B	39	106	2.2	95*	3.0	1.0	1.0	2.3	2.0	15.6	2.98*
291.294	35	105	3.0*	94*	3.0	1.0	1.0	2.3	1.0	13.4	3.08
291.295	35	101	2.8	85	4.0	1.0	1.0	3.5	1.5	15.6	2.67
291.296	36	107	2.5	109*	4.0	1.0	1.0	2.0	2.0	12.8	2.75*
291.297	43	108	2.8	98	3.0	1.0	1.0	2.8	2.0	12.1*	2.48*
291.298	35	107	3.1	92*	3.5	1.0	1.0	2.3	1.0	16.9	2.76*
291.299	36	105	2.0	75	3.0	1.0	1.0	2.5	1.0	18.9	3.29*
291.300	28	94	2.0*	64	3.0	1.0	1.0	2.5	1.0	18.7	3.51
291.301	36	105	2.8	89*	3.0	1.0	1.0	2.5	1.0	15.8	2.70
291.302A	36	108	2.5*	79	3.0	1.0	1.0	2.0	1.0	17.9	3.54*
291.302B	32	101	2.1	77	2.5	1.0	1.0	3.3	1.5	17.1	2.88
291.302C	34	105	2.6	110*	4.0	1.0	1.0	3.5*	1.0	15.1	3.21
291.303A	37	101	2.6*	71	3.0	1.0	1.0	2.5	1.0	13.2	3.04
291.303B	36	101	2.8	98*	3.5	1.0	1.0	2.5	1.0	16.1	3.23
291.304	32	100	3.0	94*	3.0	1.0	1.5	2.5	1.0	17.8	3.08
291.305	29	98	3.5	81	3.0	1.0	1.0	2.5	1.0	17.3	2.71
291.306A	34	109	3.1	92*	3.0	1.0	1.0	2.0	1.0	12.9	3.14*
291.306B	42	115	3.8	95*	3.0	1.0	1.0	3.0	1.0	18.6	2.76
291.309A	44	107	3.6	103*	4.0	1.0	1.0	2.3	2.5	15.5	2.75*
291.309B	34	102	2.4	74*	3.0	1.0	1.0	2.5	-	18.1*	2.98
291.309C	45	104	4.0	59	4.0	1.0	1.0	2.5	-	3.7	1.91*
291.309D	49	106	3.3	79*	4.0	1.0	1.0	2.0	-	7.2	2.17
291.310A	30	100	2.9	83	3.0	1.0	1.0	2.8	2.0*	14.9*	3.23
291.310B	38*	101	3.3*	76	3.0	1.0	1.0	2.5	2.0	12.8	2.75
291.310C	46*	108	2.0	86*	3.0	1.0	1.0	2.5	1.0	18.1	2.55
291.311B	33	102	1.6	63	2.0	1.0	1.0	2.3	1.0	15.6	3.31
291.315	33	102	2.7	64	2.0	1.0	1.0	2.0	1.0	15.0	3.16*
291.319B	32	91	1.4	57	3.0	1.0	1.0	4.0	1.0	21.5*	2.40
291.320A	28	108*	2.8	97*	3.0	1.0	1.0	2.0	-	16.1	3.05*
291.322	29	100	2.9	83	3.0	1.0	1.0	2.5	1.0	17.7*	2.84
291.323	31	100	3.2	64	2.5	1.0	1.0	2.3	1.0	14.6	3.25
291.324	29	96	1.9	72	3.0	1.0	1.0	2.8	1.0	23.4	3.09
291.327	35	101	3.4	101*	3.0	1.0	1.0	2.8	1.0	16.7*	2.80*
291.328	31	98	2.4	68*	3.0	1.0	1.0	3.5	1.5	19.2*	3.04
297.499	30	91	2.1	84	3.0	1.0	1.0	2.5	2.5	14.6	2.42
297.500	30	98	1.8	68	3.0	1.0	1.0	2.5	1.5	14.4	3.14
297.502	31	96	1.7	64*	3.0	1.0	1.0	2.3	2.0*	16.8	2.89
297.504	36	107	3.0	91*	3.0	1.0	1.0	3.3*	1.0	20.0	2.66
297.505	29	101	1.6	85	3.0	1.0	1.0	2.5	1.0	22.2	2.97*

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
291.283	I	19.8	45.2	12.9	3.5	20.1	55.7	7.8	0.0	4	S
291.284	I	18.4	44.8	12.6	3.3	18.8	55.7	9.5	0.1	4	S
291.286	II	17.8	46.9	12.3	3.3	21.0	56.0	7.4	0.0	5	S
291.288	II	17.4	48.7	12.3	3.4	20.9	55.9	7.4	0.0	4	S
291.290	I	18.2	46.9	12.2	3.3	19.7	56.9	7.8	0.0	4	S
291.291	I	18.0	47.3	12.5	3.4	19.6	56.7	7.9	0.1	4	S
291.293A	II	18.1	44.9	10.8	3.0	28.9	50.9	6.3	0.0	4	S
291.293B	II	17.9	44.1	11.2	2.8	19.9	57.9	8.1	0.0	4	S
291.294	I	18.5	45.7	13.2	3.3	19.2	56.1	8.2	0.0	5	S
291.295	II	20.3	44.9	11.6	3.8	28.4	50.3	5.9	0.0	4	S
291.296	II	17.5	45.6	11.9	3.2	19.4	56.7	8.7	0.0	5	S
291.297	II	18.2	43.9	11.5	2.9	23.6	54.3	7.7	0.0	5	S
291.298	II	19.2	45.0	11.0	3.2	24.6	54.4	6.8	0.0	5	S
291.299	II	17.8	46.0	12.7	3.0	22.9	53.7	7.7	0.0	5	S
291.300	I	19.5	44.0	13.2	2.8	22.6	54.6	6.9	0.0	5	S
291.301	II	19.3	45.3	11.2	3.6	25.1	53.2	6.9	0.0	4	S
291.302A	II	19.9	43.1	12.1	3.1	23.7	53.7	7.5	0.0	5	S
291.302B	II	18.1	46.0	11.1	3.1	30.1	49.5	6.2	0.1	1	S
291.302C	II	17.6	46.8	10.8	3.1	31.2	48.5	6.4	0.1	5	S
291.303A	I	20.1	44.1	12.5	3.5	23.6	53.4	7.0	0.0	5	S
291.303B	I	18.8	43.5	12.6	3.1	20.2	55.7	8.4	0.0	5	S
291.304	I	19.0	43.9	12.6	3.0	20.5	55.6	8.2	0.0	1	S
291.305	I	21.7	41.7	11.4	3.9	27.9	50.6	6.1	0.1	1	S
291.306A	II	18.5	45.5	12.0	2.9	18.3	57.7	9.2	0.0	4	S
291.306B	III	18.6	46.4	11.9	3.0	25.7	51.7	7.7	0.0	3	S
291.309A	II	17.9	46.2	12.8	3.2	19.3	57.2	7.4	0.0	5	S
291.309B	II	18.5	48.4	12.5	3.3	22.9	52.9	8.5	0.0	5	S
291.309C	I	13.9	46.7	13.8	3.3	13.8	56.1	13.0	0.0	3	R R S S S S S S
291.309D	II	13.9	46.4	12.4	3.0	19.9	54.5	10.1	0.0	3	R R R R R R H R R
291.310A	I	19.7	45.4	11.9	3.1	21.6	56.1	7.2	0.1	5	S
291.310B	II	17.6	45.4	12.3	3.4	19.1	55.7	9.5	0.0	4	R R R R R R S R R
291.310C	II	18.1	47.2	13.5	3.5	21.4	53.6	7.9	0.1	2	S
291.311B	I	19.5	43.8	11.7	3.6	21.2	55.3	8.3	0.0	4	S
291.315	II	19.2	43.3	11.6	3.7	22.7	54.3	7.7	0.0	5	S
291.319B	0	18.6	47.3	12.4	3.4	30.2	47.3	6.4	0.1	4	S
291.320A	I	16.7	47.7	12.3	3.3	20.7	55.4	8.3	0.0	4	S
291.322	I	20.8	41.8	11.3	3.8	29.8	49.2	5.8	0.0	1	H
291.323	I	19.6	44.3	11.3	3.6	22.8	54.2	8.0	0.0	4	S
291.324	I	19.3	45.5	12.0	4.0	22.7	54.0	7.4	0.1	5	S
291.327	II	18.5	45.1	10.9	3.0	27.3	51.8	7.0	0.0	4	R R R R R R R R R
291.328	I	19.6	43.7	11.3	3.3	25.7	52.2	7.4	0.0	5	S
297.499	0	20.3	45.5	13.1	3.4	25.1	52.4	6.1	0.0	3	S
297.500	I	19.6	44.2	10.8	3.0	19.7	58.2	8.3	0.1	2	S
297.502	I	19.0	46.7	11.3	3.4	22.4	55.3	7.6	0.1	4	R R R S S S S R S
297.504	II	19.0	45.7	12.4	3.9	24.4	51.7	7.5	0.0	1	S
297.505	I	21.1	44.0	11.6	3.4	26.7	52.2	5.9	0.1	3	S

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
297.510	Dchi ti	II-2-291	Hungary		China+	1964	II
297.511	Dun nun	II-2-15	Hungary		China+	1964	I
297.514	Hei ch'i	II-2-68	Hungary		China+	1964	I
297.515	Iregi GM/1	II-2-480	Hungary		Hungary	1964	II
297.521	Irszuriszkaja		Hungary		USSR	1964	II
297.528	Kou tchen do	II-2-294	Hungary		China+	1964	II
297.533	Man di czin	II-2-552	Hungary		China+	1964	II
297.536	Mandzsu I	II-2-270	Hungary		Hungary	1964	II
297.537	Mandzsu II	II-2-271	Hungary		Hungary	1964	II
297.538	Mandzsu III	II-2-272	Hungary		Hungary	1964	I
297.541	Pak cok taj	II-2-488	Hungary		China+	1964	I
297.543	Peking	II-2-553	Hungary		China+	1964	II
297.544	Primorszkaja 529	II-2-269	Hungary		USSR+	1964	II
297.545	Schao hi tschi	II-2-297	Hungary		China+	1964	II
297.548	Ta chin hu houan tsa	II-2-357	Hungary		China+	1964	I
297.551	Viola Manchu Mediasch	II-2-91	Hungary		Hungary	1964	I
303.651		CPI 34068	Australia		China	1965	II
317.332	Isuzu		Japan		Japan	1966	I
317.334A	Kitamishiro		Japan		Japan	1966	I
317.334B	(Kitamishiro)		Japan		Japan	1966	II
317.335	Koganejiro		Japan		Japan	1966	I
319.535A	Keisanboku		Japan		China	1967	I
319.535B	(Keisanboku)		Japan		China	1967	I
323.586B	(Dobrageana)		Portugal		Portugal	1967	II
326.579		K 5776	England	USSR	Romania	1968	I
326.580		K 5683	England	USSR	E. Germany	1968	I
339.868E	(Yuwoltae)		S. Korea		S. Korea	1969	III
339.977			S. Korea		S. Korea	1969	III
339.985			S. Korea		S. Korea	1969	III
339.991			S. Korea		S. Korea	1969	III
339.993			S. Korea		S. Korea	1969	III
339.995			S. Korea		S. Korea	1969	III
340.005			S. Korea		S. Korea	1969	III
340.007			S. Korea		S. Korea	1969	III
340.011			S. Korea		S. Korea	1969	III
340.017			S. Korea		S. Korea	1969	III
340.018			S. Korea		S. Korea	1969	II
340.021A			S. Korea		S. Korea	1969	III
340.031A			S. Korea		S. Korea	1969	III
340.033			S. Korea		S. Korea	1969	III
340.038			S. Korea		S. Korea	1969	III
340.041			S. Korea		S. Korea	1969	III
340.052			S. Korea		S. Korea	1969	III
342.435A	Early Akita Yellow		Japan		Japan	1969	I
342.435B	(Early Akita Yellow)		Japan		Japan	1969	I
342.436	Early Green		Japan		Japan	1969	II

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
297.510	II	W	G	E	Ssp	Br	S	Y	Y		Na	
297.511	I	W	G	E	N	Br	S	Y	Bf			
297.514	I	P	T	E	Ssp	Br	S	Y	Br			
297.515	II	W	G	E	N	Tn	I	Y	Y			
297.521	II	P	T	E	Ssp	Br	D	Y	Br			
297.528	II	W	G	E	N	Br	S	Y	Lbf			
297.533	II	W	G	E	N	Br	S	Y	Y			
297.536	II	W	G	E	Ssp	Bl	S	Y	Lbf		Na	
297.537	II	W	G	E	N	Br	S	Y	Lbf			
297.538	I	W	G	E	N	Br	D	Y	Bf			
297.541	I	P	T	E	N	Br	D	Y	Y			
297.543	II	P	T	E	N	Br	S	Y	Bl			
297.544	II	W	G	E	N	Br	S	Y	Lbf			
297.545	II	W	Lt	E	N	Bl	D	Y	Bl			
297.548	I	P	T	E	Ssp	Tn	D	Y	Y			
297.551	I	P	T	E	Ssp	Br	S	Br	Br	Abh		
303.651	II	W	G	E	Ssp	Tn	I	Y	Bf			
317.332	I	P	T	E	Ssp	Br	D	Y	Br		Na	
317.334A	I	P	T	E	Ssp	Br	D	Y	Br			
317.334B	II	P	T	E	Ssp	Br	D	Y	Br			
317.335	I	P	G	E	Ssp	Br	S	Y	Y		Na	
319.535A	I	W	G	E	N	Br	S	Y	Lbf		Na	
319.535B	I	P	G	E	N	Br	S	Y	Y			
323.586B	II	P	G	E	N	Br	S	Y	Bf	Abh		
326.579	I	P	T	A	Sp	Br	S	Bl	Br			Sw
326.580	I	P	T	A	N	Bl	S	Gnbr	Br			Sw
339.868E	III	W	G	A	Ssp	Tn	D	Y	Bf			
339.977	III	W	G	A	Ssp	Tn	I	Y	Bf	SDef		
339.985	III	P	G	A	Ssp	Br	S	Y	Bf	SDef		
339.991	III	W	G	A	Ssp	Tn	D	Y	Y			
339.993	III	W	G	A	Ssp	Tn	S	Y	Y			
339.995	III	P	G	E	N	Br	D	Y	Bf			
340.005	III	W	G	A	Ssp	Br	D	Y	Lbf			
340.007	III	W	G	A	Ssp	Tn	D	Y	Y			
340.011	III	P	G	E	Ssp	Br	D	Y	Y			
340.017	III	P	G	E	Ssp	Br	D	Y	Bf			
340.018	II	Dp	G	A	Ssp	Tn	D	Y	Y			
340.021A	III	W	G	A	Ssp	Tn	D	Y	Y			
340.031A	III	W	G	A	Ssp	Tn	D	Y	Y			
340.033	III	W	G	A	Ssp	Tn	I	Y	Bf			
340.038	III	P	G	Sa	Ssp	Br	S	Y	Bf			
340.041	III	W	G	A	Ssp	Tn	D	Y	Y			
340.052	III	W	G	A	Ssp	Tn	D	Y	Y	SDef		
342.435A	I	P	T	E	Ssp	Br	S	Y	Br			
342.435B	I	P	T	E	Ssp	Br	S	Y	Br			
342.436	II	P	T	E	Ssp	Br	D	Gn	Br			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
297.510	34	107	2.8	90	3.0	1.0	1.0	3.0	1.0	20.3	2.96*
297.511	32	100	2.0	82	3.0	1.0	1.0	2.8	1.0	19.6*	3.40*
297.514	35	101	2.0	69*	3.0	1.0	1.0	2.3	2.5	18.2	3.08
297.515	33	106	2.1	86	3.0	1.0	1.0	2.0	1.0	17.0	3.02*
297.521	35	108	2.7	98*	3.0	1.0	1.0	2.3	2.0	14.2	2.81*
297.528	33	102	2.1	73	3.0	1.0	1.0	2.8	1.5	15.7	2.32
297.533	35	108	2.1	96*	3.0	1.0	1.5	2.5	1.0	17.4	2.92
297.536	32	103	2.5	95*	3.0	1.0	1.0	2.8	2.0	13.6	2.33*
297.537	33	105	2.5	86	2.0	1.0	1.0	3.5	2.0	16.5	2.54
297.538	36	102	3.3*	104*	3.5	1.0	1.0	2.8	1.0	16.1	3.22
297.541	30	93	2.1*	61*	3.0	1.0	1.0	3.0	1.0	18.0	3.14
297.543	33	109	2.4	96*	3.0	1.0	1.0	2.5	1.0	16.6	2.81*
297.544	32	107	2.0	82	3.0	1.0	1.0	2.5	1.5	21.9	3.29
297.545	35	105	2.4	100*	3.5	1.0	1.0	2.8	2.0	14.8	3.01*
297.548	30	93	3.6	70*	3.0	1.0	1.0	2.8	1.0	14.5	2.93
297.551	30	100	1.8	52	1.5	1.0	1.0	2.0	-	12.7	2.99
303.651	46	110	1.9	66	2.0	1.0	1.0	2.0	1.0	12.6	2.96
317.332	33	100	1.2	48	1.0	1.0	5.0	2.3	1.0	16.4	2.89
317.334A	36	105	1.1	55	1.0	2.0*	5.0	2.8	2.0	17.2	2.54
317.334B	39	111	1.1	53	1.0	3.5	4.5	2.0	2.5	16.9	2.31
317.335	34	98	1.5	66	3.0	1.0	1.5	2.5	1.0	16.6	2.96
319.535A	33	103	3.4*	77	3.0	1.0	1.0	2.5	1.0	16.4	3.00
319.535B	35	105	3.1	104*	4.0	1.0	1.0	2.8	1.0	14.5	2.80
323.586B	31	107	1.1	52	2.5	1.0	1.0	1.5	1.0	15.2	3.19
326.579	43	105	4.0	57	4.0	1.0	1.0	1.8	-	3.8	1.57*
326.580	41	99*	4.0	63	4.0	1.0	5.0	2.0	-	3.4	1.51*
339.868E	54	119	1.8	76	1.0	1.5	3.0*	1.8	1.0	11.9	2.56
339.977	48*	116	2.0	70	2.0	2.0*	3.5*	3.0	1.0	24.3	2.39*
339.985	Tested in and reported with early group IV evaluation										
339.991	48*	118	3.4*	76	1.5	2.5	3.5*	2.5	2.0	25.6	2.08*
339.993	50*	116	3.0*	75	1.0	2.0*	3.5*	2.8	2.0	25.1	2.27
339.995	49*	115	2.3	64	1.0	2.0	3.5*	1.8	1.0	16.6	2.45
340.005	Tested in and reported with early group IV evaluation										
340.007	48	117	1.9	67	1.0	2.5	3.5*	2.8	2.0	24.8	2.29*
340.011	54	117	3.1	79	1.0	2.5	3.5*	2.0	3.5	19.2	2.14
340.017	Tested in and reported with early group IV evaluation										
340.018	49	113	2.9*	77	1.5	2.0	3.5*	2.5	2.5	21.7	2.58
340.021A	Tested in and reported with early group IV evaluation										
340.031A	47	114	2.3	68	1.0	2.0*	3.5*	2.0	3.0*	19.9	2.35
340.033	48	114	1.8	67	1.0	3.0*	3.5*	2.0	1.5	22.7	2.07*
340.038	Tested in and reported with early group IV evaluation										
340.041	Tested in and reported with early group IV evaluation										
340.052	47	115	2.3*	68	1.0	3.0*	3.5*	2.5	2.0	25.4	2.23
342.435A	34	101	1.5	58	1.0	1.5	5.0	2.5	1.5	22.4	2.39*
342.435B	34	103	1.5	64	1.0	1.5	5.0	2.5	1.5	23.6	2.70
342.436	35	109	1.3	47	1.0	1.5	3.5*	2.5	1.5	27.2	2.65

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
297.510	II	19.1	45.0	12.0	3.6	22.4	54.3	7.7	0.0	2	S
297.511	I	20.2	43.6	11.4	3.1	33.5	45.9	6.0	0.1	4	S
297.514	I	19.2	46.5	12.2	3.4	27.9	50.3	6.2	0.0	1	S
297.515	II	19.4	44.9	11.9	3.2	20.9	56.4	7.7	0.0	3	S
297.521	II	19.1	44.4	11.6	3.1	19.5	57.9	7.9	0.0	4	S
297.528	II	18.1	46.9	11.3	3.3	28.5	50.6	6.4	0.0	3	S
297.533	II	19.4	45.4	11.7	3.6	25.0	52.9	6.8	0.1	2	H
297.536	II	18.4	44.9	11.8	3.3	24.6	53.1	7.1	0.0	5	R R S S S S S S
297.537	II	18.0	47.2	10.9	3.0	30.0	49.9	6.1	0.0	1	S
297.538	I	18.5	45.8	11.8	3.7	26.1	51.5	7.0	0.0	4	S
297.541	I	18.2	46.1	11.1	3.3	24.0	54.7	6.7	0.1	5	S
297.543	II	18.6	44.6	11.6	3.3	20.0	57.0	8.1	0.0	4	S
297.544	II	19.2	47.3	11.7	3.5	22.1	55.5	7.3	0.0	1	S
297.545	II	19.4	43.3	12.4	3.5	20.8	55.7	7.6	0.0	4	R S S
297.548	I	19.9	43.1	11.3	3.5	26.6	52.3	6.3	0.0	5	S
297.551	I	18.8	42.7	13.5	3.6	22.0	53.6	7.1	0.0	3	S
303.651	II	16.4	47.3	12.8	3.9	30.0	46.5	6.7	0.0	3	S
317.332	I	19.4	45.2	12.2	3.2	21.2	56.6	6.7	0.1	2	H
317.334A	I	17.8	44.3	13.1	3.0	18.6	56.6	8.6	0.0	1	H
317.334B	II	18.3	42.1	12.6	3.0	16.7	58.1	9.7	0.0	1	H
317.335	I	18.6	45.5	11.5	3.0	21.6	56.9	6.9	0.0	3	S
319.535A	I	21.1	41.8	12.1	3.9	25.1	52.3	6.5	0.0	2	H
319.535B	I	18.6	43.4	11.7	2.9	21.0	55.4	9.1	0.0	4	S
323.586B	II	16.0	45.7	12.7	2.8	19.2	55.2	10.2	0.0	5	S
326.579	I	13.9	43.1	13.5	3.3	14.3	57.4	11.5	0.0	3	R R S H H S S S
326.580	I	13.2	44.1	14.1	3.4	12.3	57.1	13.2	0.0	3	S
339.868E	III	16.3	48.2	12.9	2.5	18.3	57.8	8.4	0.0	3	H
339.977	III	16.9	47.2	12.6	2.8	23.2	53.6	7.9	0.0	1	S
339.985	III	Tested in and reported with early group IV evaluation								1	H
339.991	III	17.7	45.9	11.5	3.0	31.4	47.6	6.4	0.0	1	S
339.993	III	17.8	46.6	11.9	2.9	26.6	51.3	7.3	0.0	1	S
339.995	III	18.0	47.7	12.7	3.3	25.5	51.7	6.9	0.0	1	R R R R R R R R
340.005	III	Tested in and reported with early group IV evaluation								1	S
340.007	III	17.3	46.5	11.5	2.9	26.9	51.4	7.2	0.0	1	S
340.011	III	16.5	49.3	12.0	3.0	20.2	56.5	8.3	0.0	1	H
340.017	III	Tested in and reported with early group IV evaluation								1	R
340.018	II	17.2	45.8	12.0	2.9	26.9	51.1	7.2	0.0	1	S
340.021A	III	Tested in and reported with early group IV evaluation								1	S
340.031A	III	16.0	49.0	12.3	3.0	26.1	51.5	7.0	0.0	1	S
340.033	III	17.8	45.5	12.4	2.9	24.0	52.9	7.8	0.0	1	S
340.038	III	Tested in and reported with early group IV evaluation								1	S
340.041	III	Tested in and reported with early group IV evaluation								1	S
340.052	III	17.2	46.6	10.7	3.4	25.9	52.3	7.8	0.0	1	S
342.435A	I	19.5	44.0	12.2	2.9	24.4	53.1	7.4	0.1	1	R R R R R H S H R
342.435B	I	19.3	43.3	12.0	2.9	25.6	52.3	7.1	0.1	1	R R R R H S S S S
342.436	II	19.6	44.3	11.4	2.9	23.9	54.7	7.2	0.0	5	R R R R S S S S S

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
342.437	Early Hakucho		Japan		Japan	1969	I
342.438	Tsurunoko		Japan		Japan	1969	III
347.539A	Adreula		Romania		Romania	1970	II
347.539B	(Adreula)		Romania		Romania	1970	II
347.541	F63-914		Romania		Romania	1970	I
347.542	F63-1124		Romania		Romania	1970	I
347.543	F63-1167		Romania		Romania	1970	I
347.546A	Notanthoris		Romania		Romania	1970	I
347.546B	(Notanthoris)		Romania		Romania	1970	I
347.550A	Primorskaia 494		Romania		USSR	1970	I
347.552A	Visocostebelnaia		Romania		USSR	1970	I
347.552B	(Visocostebelnaia)		Romania		USSR	1970	I
347.552C	(Visocostebelnaia)		Romania		USSR	1970	I
347.560	Man tan tzin		Romania		China	1970	I
347.565A	Tzi hua No. 1		Romania		China	1970	I
347.567	Tsi hua No. 4		Romania		China	1970	0
358.313	Kitami		Japan		Japan	1971	II
358.314	Nagaba jiro		Japan		Japan	1971	I
358.315A	Tokachi shiro		Japan		Japan	1971	I
358.315B	(Tokachi shiro)		Japan		Japan	1971	I
358.315C	(Tokachi shiro)		Japan		Japan	1971	I
358.316A	Shirosaya		Japan		Japan	1971	I
358.316B	(Shirosaya)		Japan		Japan	1971	I
358.317B	(Sapporo Commercial No. 1)		Japan		Japan	1971	II
358.318A	Sapporo Commercial No. 2		Japan		Japan	1971	II
358.318B	(Sapporo Commercial No. 2)		Japan		Japan	1971	I
358.319	Sapporo Commercial No. 3		Japan		Japan	1971	I
360.835	Bonminori		Canada		Japan	1971	II
360.837	Hon iku 65		Canada		Japan	1971	II
360.840	Nagahajiro		Canada		Japan	1971	II
360.841	Nezumizaya		Canada		Japan	1971	III
360.843	Oshimashirome		Canada		Japan	1971	III
360.844	Raiden		Canada		Japan	1971	III
360.849	Tokachishiro		Canada		Japan	1971	II
360.850	Wasekogane		Canada		Japan	1971	0
360.959	Kita musume		Sweden		Japan	1971	II
361.053	Baj mej		Romania		China+	1971	II
361.055	Beljska Krasna		Romania		Romania	1971	II
361.057	Berkners Gescheckte		Romania		E. Germany	1971	I
361.062A	F. 55-39		Romania		Romania	1971	I
361.062B	(F. 55-39)		Romania		Romania	1971	II
361.063	F. 55-54		Romania		Romania	1971	III
361.064	F. 56-51		Romania		Romania	1971	II
361.065A	F. 56-7		Romania		Romania	1971	I
361.065B	(F. 56-7)		Romania		Romania	1971	II
361.066A	F. 56-17		Romania		Romania	1971	I

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
342.437	I	P	T	E	Ssp	Br	S	Gn	Bl			
342.438	III	W	G	E	Ssp	Br	I	Y	Y			
347.539A	II	W	G	E	N	Br	I	Y	Y			
347.539B	II	P	G	E	N	Br	I	Y	Y			
347.541	I	W	G	E	N	Br	D	Y	Bf			
347.542	I	P	T	E	N	Br	S	Y	Bl			
347.543	I	P	T	E	N	Br	S	Y	Bl			
347.546A	I	W	G	E	N	Br	S	Y	Y			
347.546B	I	W	T	E	N	Tn	D	Y	Y			
347.550A	I	P	G	E	N	Br	D	Y	Y			
347.552A	I	W	G	E	N	Br	I	Y	Y			
347.552B	I	W	G	E	N	Br	S	Y	Lbf			
347.552C	I	W	G	E	N	Br	D	Y	Bf			
347.560	I	W	G	E	N	Br	S	Y	Lbf			
347.565A	I	P	G	E	N	Br	D	Y	Y			
347.567	0	P	G	E	N	Br	I	Y	Y			
358.313	II	P	T	E	Ssp	Br	D	Y	Br			
358.314	I	P	G	E	Ssp	Br	D	Y	Y		Na	
358.315A	I	P	G	E	Ssp	Br	D	Y	Y			
358.315B	I	P	G	E	Ssp	Br	D	Y	Y			
358.315C	I	P	G	E	Ssp	Br	D	Y	Y			
358.316A	I	W	G	E	N	Tn	D	Y	Bf		S4Lft	
358.316B	I	P	G	Sa	N	Tn	D	Y	Bf			
358.317B	II	W	G	E	Ssp	Br	D	Y	Y			
358.318A	II	P	T	E	Ssp	Br	D	Y	Br			
358.318B	I	P	T	E	Ssp	Br	D	Y	Br		Na	
358.319	I	P	G	E	Ssp	Br	D	Y	Y			
360.835	II	W	T	Sa	Ssp	Tn	I	Y	Br			
360.837	II	P	Lt	E	Ssp	Br	D	Y	Y		Na	
360.840	II	P	G	E	Ssp	Br	D	Y	Y		Na	
360.841	III	P	G	A	Ssp	Br	D	Y	Bf			
360.843	III	W	G	E	N	Br	I	Y	Y			
360.844	III	P	G	A	Ssp	Br	D	Y	Y			
360.849	II	P	G	E	Ssp	Br	D	Y	Y			
360.850	0	P	G	E	Ssp	Br	S	Y	Y		Na	
360.959	II	P	T	E	Ssp	Br	D	Y	Br			
361.053	II	P	G	E	N	Tn	D	Y	Y			
361.055	II	W	G	E	N	Br	S	Y	Bf			
361.057	I	P	T	E	N	Br	S	Bl	Bl			
361.062A	I	W	T	E	N	Br	I	Y	Br			
361.062B	II	W	T	E	N	Br	I	Y	Br			
361.063	III	P	T	E	N	Br	I	Y	Br	Abh		
361.064	II	W	T	E	N	Br	S	Y	Br			
361.065A	I	W	T	E	N	Br	I	Y	Br			
361.065B	II	W	T	E	N	Br	I	Y	Br			
361.066A	I	P	T	E	N	Br	I	Y	Br	Abh		

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
342.437	34	105	1.5	52	1.0	1.5	5.0	2.0	1.0	23.4	2.97
342.438	40	113	1.2	46	1.0	3.5	4.5	2.5	1.0	33.1	2.14
347.539A	32	108	2.0	79*	3.0	1.0	1.0	3.0	1.5	23.1	3.17
347.539B	38	109	3.3	105*	3.5	1.0	1.0	2.5	2.0	16.7	3.26
347.541	32	99	2.8	97*	3.0	1.0	1.0	2.8	1.0	15.5	3.37
347.542	30	106	1.8	105	4.0	1.0	1.0	2.5	1.0	17.9	3.02*
347.543	30	105	2.0	104	3.5	1.0	1.0	2.3	1.0	17.7	3.02*
347.546A	34	99	2.5	91*	3.0	1.0	1.0	3.0	1.0	13.0	2.80
347.546B	34	99	3.3	85	3.0	1.0	1.0	2.5	1.0	15.6	3.02
347.550A	30	99	2.1*	86*	3.0	1.0	1.0	2.8	1.0	18.2	3.29
347.552A	32	100	3.6	111*	4.0	1.0	1.0	3.0	1.0	17.1	2.92
347.552B	30	99	3.6	98*	3.5	1.0	1.5	2.5	1.0	16.8	2.86
347.552C	38	103	3.0	109*	3.0	1.0	1.0	2.8*	1.0	17.8	3.05
347.560	29	98	2.8	93*	3.0	1.0	1.0	2.8	1.0	17.1	3.15
347.565A	32	98	1.8*	62	3.0	1.0	1.0	3.3	1.0	16.9	2.82
347.567	27	88	1.3	53	3.0	1.0	1.0	2.8	1.0	15.1	2.45
358.313	37	106*	1.1	56	1.0	2.0	5.0	2.8	2.5	14.8	2.21
358.314	33	104	1.3	78	3.0	1.0	2.0*	2.8	1.0	18.0	3.12*
358.315A	32	93	1.9	82*	3.0	1.0	1.0	2.5	1.0	19.1	3.06
358.315B	32	102	1.4	45	1.0	1.0	2.0	2.5	1.0	16.1	2.25
358.315C	35	103	1.3	52	1.0	1.0	2.0	2.5	1.0	15.7	2.68*
358.316A	48	102	1.8	60	1.0	2.5	5.0	2.3	1.0	13.8	2.06*
358.316B	45*	97	1.8	57	2.0*	1.0	3.0*	2.0	1.0	12.1	2.49
358.317B	46	108	2.3	72	2.0	1.0	1.0	3.5*	2.5	20.6	2.91
358.318A	36*	108	1.3	58	1.5	2.0	5.0	2.0	1.5	15.2	2.35*
358.318B	35	100	1.1	51	1.5	1.5	5.0	2.3	1.5	16.8	2.35
358.319	34	102	1.1	54	1.0	1.0	2.0	2.8	1.0	16.7	2.66
360.835	51	113	1.9	78	1.0	1.5	3.5*	2.0	1.0	19.7	2.68
360.837	40	101	1.3	62	2.0	1.0	2.5	2.5	1.5	18.8	2.20*
360.840	35	102	1.7	84	3.0	1.0	2.0	2.3	1.5	17.0	3.02
360.841	57	123	2.2	76	1.0	1.5	3.5*	2.0	1.0	18.4	2.39
360.843	37	114	2.6	87*	3.0	1.0	2.0*	3.0	2.5	19.9	2.73
360.844	50	118	2.0	56	1.0	1.5	3.0*	2.3	1.0	18.8	2.74
360.849	36	101	1.3	50	1.0	1.0	2.0	2.8*	1.0	16.3	2.50
360.850	31	92	1.1	60	3.0	1.0	1.0	2.5	1.0	14.3	2.12
360.959	34	108	1.3	51	1.0	2.0	5.0	2.5	2.0	15.9	1.83
361.053	40	107	3.1	88*	3.0	1.0	1.0	2.3	1.0	19.3	3.08
361.055	38	106	2.1	78	3.0	1.0	1.0	2.8	1.0	15.1	3.10*
361.057	27	103	3.5	86	4.0	1.0	1.0	2.5	-	12.4	2.85
361.062A	33	100	2.1	85*	3.5	1.0	1.0	2.3	1.0	13.6	3.23*
361.062B	37	109	1.8	102*	3.5	1.0	1.5	2.3	1.0	14.1*	2.85*
361.063	47	114	2.3	86*	3.0	1.0	1.0	2.5	2.0	12.1	2.69*
361.064	40	112	1.9	85	3.0	1.0	1.0	2.0	1.0	12.5	3.46*
361.065A	37	102	2.2	65	3.0	1.0	1.0	2.3	1.0	12.9	3.14
361.065B	39	106	2.1	68*	3.0	1.0	1.5	2.0	1.0	13.2	3.05*
361.066A	34	94	2.3	69*	3.5	1.0	1.0	2.3	1.0	10.3	2.90

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
342.437	I	19.4	43.5	11.8	3.1	24.8	53.0	7.4	0.1	1	S
342.438	III	18.6	44.5	11.1	2.8	29.8	49.1	7.2	0.0		
347.539A	II	19.5	45.9	11.6	3.0	22.5	55.3	7.6	0.0	3	H
347.539B	II	19.1	42.4	11.4	2.8	22.2	55.5	8.0	0.0	4	S
347.541	I	19.8	43.7	12.8	3.1	28.4	48.9	6.7	0.0	5	R R S S S R S S
347.542	I	20.1	44.3	12.1	4.0	25.1	51.5	7.3	0.0	5	S
347.543	I	20.2	43.0	12.1	3.9	24.7	52.0	7.3	0.1	5	S
347.546A	I	19.5	41.2	12.2	3.8	20.6	55.2	8.1	0.1	4	R R S S S S S S
347.546B	I	20.1	44.8	11.5	3.1	20.8	56.6	7.9	0.1	4	S
347.550A	I	19.8	44.7	12.9	3.1	21.9	54.3	7.8	0.0	3	S
347.552A	I	20.3	43.4	11.8	3.1	24.1	54.4	6.6	0.0	1	S
347.552B	I	22.4	40.6	11.6	3.8	25.9	52.6	6.1	0.0	2	S
347.552C	I	18.6	47.3	12.2	3.5	26.5	51.0	6.9	0.0	5	S
347.560	I	22.2	42.8	11.5	3.6	27.2	51.4	6.3	0.0	1	H
347.565A	I	19.0	46.5	10.9	2.8	25.9	53.2	7.0	0.1	5	S
347.567	0	18.7	46.5	12.4	3.1	24.8	50.7	8.6	0.3	5	S
358.313	II	18.1	43.6	11.9	3.0	23.8	52.9	8.4	0.0	1	S
358.314	I	18.7	45.1	12.4	3.2	21.8	55.2	7.4	0.0	1	S
358.315A	I	19.3	44.7	12.1	3.1	26.7	51.1	6.9	0.0	4	S
358.315B	I	19.1	44.8	12.3	3.6	19.9	56.3	7.9	0.0	3	R S H R R S S H R
358.315C	I	18.3	44.4	12.4	3.6	18.7	56.8	8.6	0.1	4	R S S R R S R R H
358.316A	I	14.3	47.3	13.4	3.1	21.6	52.9	9.0	0.1	1	R S R R R R S H
358.316B	I	15.1	45.6	13.6	3.0	18.7	54.4	10.3	0.0	1	R R H R R S H
358.317B	II	17.8	44.5	11.8	3.3	27.4	49.3	8.3	0.0	3	S
358.318A	II	18.5	42.5	12.8	2.9	19.1	56.3	8.9	0.0	1	S
358.318B	I	18.6	46.8	12.1	3.5	24.4	53.4	6.5	0.0	1	R R R R R S R R H
358.319	I	18.5	45.2	12.5	3.4	18.3	57.0	8.8	0.0	3	R S R R R S S R R
360.835	II	16.5	46.8	12.3	3.1	21.7	53.3	9.5	0.0	1	S
360.837	II	18.9	43.2	12.3	3.6	22.8	52.9	8.3	0.0	1	S
360.840	II	18.9	44.4	12.5	3.3	20.6	55.9	7.8	0.0	2	H
360.841	III	17.2	46.2	11.6	2.7	21.1	54.2	10.3	0.0	1	R R R R R R R
360.843	III	18.4	48.4	11.3	3.2	19.7	58.0	7.8	0.0	3	S
360.844	III	18.0	46.2	11.3	2.7	22.4	56.4	7.2	0.0	1	R R R S R R R S R
360.849	II	18.4	45.0	12.3	3.3	20.5	56.0	7.8	0.0	3	H
360.850	0	17.6	45.5	12.5	3.2	23.3	53.3	7.7	0.0	3	R S S H H R S H
360.959	II	18.7	44.2	12.0	3.0	22.4	54.9	7.7	0.1	1	R R R R S S S H
361.053	II	18.7	46.8	11.7	3.2	24.0	53.6	7.6	0.0	1	S
361.055	II	20.3	43.6	12.1	3.4	20.9	56.0	7.7	0.0	4	S
361.057	I	16.8	47.3	11.9	3.1	21.2	56.9	6.9	0.0	5	S
361.062A	I	18.9	42.1	12.9	3.5	21.1	54.4	8.1	0.1	4	S
361.062B	II	18.2	43.4	12.7	3.2	20.3	55.2	8.6	0.0	5	S
361.063	III	19.2	43.1	12.1	3.6	19.5	56.3	8.4	0.1	3	S
361.064	II	17.9	42.6	13.5	3.4	21.1	53.6	8.2	0.1	3	S
361.065A	I	17.7	42.2	13.4	3.6	24.0	51.0	7.9	0.0	4	S
361.065B	II	17.3	45.2	13.3	3.8	25.4	49.3	8.2	0.0	4	S
361.066A	I	19.0	42.8	12.9	3.3	23.1	53.3	7.4	0.0	3	S

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
361.066B	(F. 56-17)		Romania		Romania	1971	I
361.067	F. 61-309		Romania		Romania	1971	II
361.071B	(Gaterslebener St. 7)		Romania		E. Germany+	1971	I
361.071C	(Gaterslebener St. 7)		Romania		E. Germany+	1971	I
361.074	Ghirin No. 1		Romania		China+	1971	II
361.075	Ghirin No. 3		Romania		China+	1971	I
361.080	Kormovaia 15		Romania		Romania	1971	II
361.081	Kubanskaia 4958		Romania		USSR+	1971	I
361.087	Medias 23		Romania		Romania	1971	I
361.088A	Mica Ungara		Romania		Romania	1971	I
361.088B	(Mica Ungara)		Romania		Romania	1971	I
361.089	Mittelfruheschwarze I		Romania		E. Germany+	1971	I
361.090	Neagra de Platt		Romania		Romania	1971	I
361.092	Novosadska Br. 1/2		Romania		Yugoslavia+	1971	I
361.093	Novosadska Br. 1		Romania		Yugoslavia+	1971	I
361.095	Novosadska Br. 8		Romania		Yugoslavia+	1971	I
361.096	Novosadska Br. 9		Romania		Yugoslavia+	1971	I
361.098	Novosadska Br. 16		Romania		Yugoslavia+	1971	I
361.099	Pannonia 8		Romania		Romania	1971	I
361.101	Pekmok Sorip		Romania		Korea+	1971	III
361.104	Plattergelbe		Romania		E. Germany+	1971	I
361.109	Seao tzin huan No. 1		Romania		China+	1971	II
361.112A	Si li hian		Romania		China+	1971	I
361.112B	(Si li hian)		Romania		China+	1971	II
361.113	Strengs Weihenstephaneer		Romania		E. Germany+	1971	I
361.115	Tzao fen No. 1		Romania		China+	1971	I
361.116	Tzi ti No. 4		Romania		China+	1971	II
361.117	Ucrainca		Romania		Romania	1971	I
370.055		4167	Brazil		USSR	1972	III
370.057B		(5525)	Brazil		USSR	1972	II
370.059		5622	Brazil		USSR	1972	I
372.404A	Ghirin No. 1		Romania		China	1972	I
372.404B	(Ghirin No. 1)		Romania		China	1972	I
372.404C	(Ghirin No. 1)		Romania		China	1972	II
372.415A	Hikmok sorip		Romania		Korea	1972	II
372.415B	(Hikmok sorip)		Romania		Korea	1972	II
372.416A	Kineska		Romania		Yugoslavia	1972	I
372.416B	(Kineska)		Romania		Yugoslavia	1972	II
372.418	Novosadska Br. 4		Romania		Yugoslavia	1972	I
378.655	Besarabka 724		Bulgaria		Bulgaria	1973	I
378.663	Habarovskaja II		Bulgaria		USSR+	1973	I
378.664A	Hersonskaja 2		Bulgaria		USSR+	1973	I
378.664B	(Hersonskaja 2)		Bulgaria		USSR+	1973	I
378.664C	(Hersonskaja 2)		Bulgaria		USSR+	1973	I
378.669C		(K 5058)	Bulgaria		USSR+	1973	I
378.669D		(K 5058)	Bulgaria		USSR+	1973	I

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence			Pod color	Seed coat		Hilum color	Other traits		
			Color	Form	Density		Luster	Color		Seed	Leaf	Plant
361.066B	I	P	T	E	N	Br	S	Y	Br	Abh		
361.067	II	W	G	E	N	Br	S	Y	Y			
361.071B	I	P	T	E	N	Br	D	Bl	Bl			
361.071C	I	P	T	E	N	Br	I	Bl	Bl			
361.074	II	W	G	E	Ssp	Tn	S	Y	Y			
361.075	I	W	G	E	N	Tn	S	Y	Lbf		Na	
361.080	II	P	T	E	Sp	Bl	S	Gn	Bl			
361.081	I	P	G	E	N	Br	S	Y	Ib			
361.087	I	P	G	E	N	Br	I	Y	Y			
361.088A	I	P	T	E	N	Tn	S	Y	Br	Abh		
361.088B	I	P	T	E	N	Br	S	Y	Br	Abh		
361.089	I	P	Lt	E	N	Tn	S	Bl	Bl	Fleck		
361.090	I	P	Lt	E	N	Tn	S	Bl	Bl	Fleck		
361.092	I	P	G	E	N	Tn	S	Y	Bf			
361.093	I	P	T	E	N	Tn	S	Y	Br	Abh		
361.095	I	P	T	E	N	Br	D	Y	Br	Abh		
361.096	I	P	T	E	Ssp	Br	D	Bl	Bl			
361.098	I	P	T	E	N	Tn	I	Y	Br	Abh		
361.099	I	W	G	E	N	Tn	D	Y	Y			
361.101	III	W	G	E	N	Br	I	Y	Y			
361.104	I	P	T	E	Ssp	Tn	S	Y	Br	Abh		
361.109	II	W	G	E	N	Br	S	Y	Bf			
361.112A	I	W	G	E	N	Br	S	Y	Lbf			
361.112B	II	W	G	E	N	Br	I	Y	Bf			
361.113	I	P	T	E	N	Br	S	Bl	Bl			
361.115	I	W	G	E	Ssp	Br	S	Y	Y			
361.116	II	P	G	E	N	Br	I	Y	G			
361.117	I	P	T	E	N	Tn	S	Y	Br	Abh		
370.055	III	W	G	E	N	Br	S	Y	Lbf			
370.057B	II	P	T	E	N	Br	S	Y	Bl			
370.059	I	P	G	E	N	Br	D	Y	Y			
372.404A	I	W	G	E	N	Br	D	Y	Y	Abh		
372.404B	I	W	G	E	Ssp	Tn	S	Y	Y			
372.404C	II	P	G	E	N	Tn	I	Y	G			
372.415A	II	W	Lt	E	N	Br	I	Y	Bl			
372.415B	II	W	Lt	E	N	Br	I	Y	Bl			
372.416A	I	W	G	E	N	Tn	S	Y	Bf			
372.416B	II	W	G	E	N	Br	S	Y	Bf			
372.418	I	P	T	E	N	Tn	I	Y	Br	Abh		
378.655	I	P	G	E	N	Br	S	Y	Y			
378.663	I	P	T	E	Ssp	Bl	D	Gnbr	Br		Dab	
378.664A	I	P	T	E	N	Br	S	Y	Br			
378.664B	I	P	T	E	N	Br	S	Y	Y	Abh		
378.664C	I	P	T	E	N	Br	S	Y	Br			
378.669C	I	P	T	E	N	Br	I	Y	Bl			
378.669D	I	P	T	E	N	Br	S	G	G			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
361.066B	32	97	3.1	106	4.0	1.0	1.0	2.0	1.0	11.5	2.89
361.067	35	109	2.3	99	3.0	1.0	1.0	2.5	1.0	12.9	3.43*
361.071B	35	101	3.1	79*	3.0	1.0	1.0	2.5	-	13.5	3.24
361.071C	27	102	3.6	93	4.0	1.0	1.0	2.5	-	13.3	2.95
361.074	35	105	2.5	89	3.0	1.0	1.0	2.5	1.0	14.8	2.77
361.075	33	102	1.5	75	3.0	1.0	1.0	1.8	1.0	13.2	2.90
361.080	33	111	2.8*	105*	4.0	1.5	3.0*	2.3	1.5	8.9	3.11
361.081	38	106	3.5	83	3.0	1.0	1.0	2.5	1.0	14.4	3.27*
361.087	28	95	1.3	35*	1.0	1.0	1.0	2.3*	1.0	11.3	2.14
361.088A	31	94	2.8	57	2.5	1.0	1.0	2.3	1.0	9.1	2.29
361.088B	30	95	3.5	55	2.5	1.0	1.0	2.0	1.0	7.9	2.83
361.089	33	102	3.3	90*	4.0	1.0	1.0	2.3*	-	9.2	2.53
361.090	34	101	3.3*	93	4.0	1.0	1.0	2.3*	-	8.8	2.47
361.092	31	97	1.9	58*	2.5	1.0	1.0	2.3	1.0	11.3	2.30*
361.093	31	97	1.5	49*	2.5	1.0	1.0	2.0	1.0	13.6	2.63*
361.095	30	97	3.3	66	3.0	1.0	1.0	2.0	1.0	10.6	2.82
361.096	35	100	2.8	69	3.0	1.0	1.0	2.5	-	13.4	2.83
361.098	31	98*	2.8	66	3.5	1.0	1.0	2.3	1.0	9.1	2.61
361.099	30	97	2.5	81	3.0	1.0	1.0	2.3	1.0	14.9	2.87
361.101	40	118	2.6	108*	3.0	1.0	1.5	2.3	2.5	16.7*	2.89*
361.104	29	96	2.7	58	3.0	1.0	1.0	2.0	1.0	9.2	2.59
361.109	37	106	2.8*	77	2.0	1.0	1.0	2.8	1.0	15.0	3.39*
361.112A	34	102	2.1	83*	3.0	1.0	1.0	2.5	1.0	15.5	3.09*
361.112B	36	110	2.7	110*	3.0	1.0	1.5	2.3	1.5	19.5*	3.36
361.113	27	103	2.9	93	4.0	1.0	1.0	2.3	-	12.7*	3.02*
361.115	39	100	2.3*	59	2.0	1.0	1.0	2.8	1.0	17.1	2.91*
361.116	35	106	1.8	115*	3.0	1.0	1.0	2.3	1.0	16.5	2.82*
361.117	32	95	2.8	54	3.0	1.0	1.0	2.0	1.0	7.7	2.56
370.055	39	115	3.3	133*	4.0	1.0	1.0	2.5	2.0	19.7	2.95
370.057B	42	112	3.1	107*	3.0	1.0	1.0	2.3	2.0	12.9	3.04*
370.059	29	99	1.9	82*	3.0	1.0	1.0	2.8	1.5	19.8	3.51
372.404A	32	96	2.8	74	3.0	1.0	1.0	3.8*	1.0	13.0	2.42
372.404B	33	104	2.6	89	3.0	1.0	1.0	2.3	1.0	15.8	2.91
372.404C	35	113	2.5	108*	3.0	1.0	1.5	1.8	1.0	16.9	3.31*
372.415A	33	103	1.8*	79	3.0	1.0	1.0	2.3	2.0	22.7	3.26*
372.415B	36	107	2.1*	85*	3.0	1.0	1.0	2.3	2.0	17.4	3.08
372.416A	38	103	2.3	89	3.0	1.0	1.0	3.0	1.0	14.7	3.16
372.416B	38	103	2.5	83	3.0	1.0	1.0	3.0	1.0	13.9	2.94*
372.418	30	97	1.9	52	1.5	1.0	1.0	2.3	1.0	12.9	2.69
378.655	29	93	1.8*	65*	3.0	1.0	1.0	2.5	1.0	16.8	3.28
378.663	35	108	2.5*	89	4.0	1.0	1.0	2.3	-	8.8	2.89
378.664A	29	94	1.8	56	3.0	1.0	1.0	2.5	1.0	13.7	3.28
378.664B	33	96	3.3	102*	4.0	1.0	1.0	3.0	1.0	14.1	2.69
378.664C	32	100	2.1	71	3.0	1.0	1.0	2.8	1.0	11.0*	3.00
378.669C	30	99	2.8	79	3.0	1.0	1.0	3.0	1.0	17.0	2.80*
378.669D	32	104	2.5	89	3.0	1.0	1.5	2.5	1.0	15.4	2.91*

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
361.066B	I	17.8	44.3	12.3	3.4	20.3	55.4	8.5	0.0	5	S								
361.067	II	19.8	42.1	12.3	3.0	24.3	52.9	7.5	0.0	3	S								
361.071B	I	19.4	42.7	11.1	3.1	22.4	56.0	7.5	0.0	2	S								
361.071C	I	16.9	46.8	11.8	2.9	21.2	57.1	7.1	0.0	4	S								
361.074	II	20.3	42.2	11.3	3.4	29.8	49.7	5.7	0.0	3	S								
361.075	I	19.3	43.7	11.7	3.5	27.2	51.2	6.5	0.0	4	S								
361.080	II	15.9	46.5	12.5	3.0	17.6	57.3	9.6	0.0	4	S								
361.081	I	19.4	43.2	12.0	3.3	20.8	56.0	8.0	0.0	5	S								
361.087	I	18.1	43.0	12.6	3.1	21.0	55.2	8.0	0.1	4	S								
361.088A	I	17.3	44.0	14.3	3.6	19.8	53.8	8.5	0.0	1	S								
361.088B	I	18.0	40.8	13.6	3.3	19.6	57.2	6.2	0.0	4	S								
361.089	I	16.2	45.6	12.3	3.2	26.2	51.4	6.8	0.0	5	S								
361.090	I	16.7	44.4	12.2	2.9	25.1	52.7	7.1	0.0	5	S								
361.092	I	19.2	42.8	12.8	2.8	22.0	53.4	9.0	0.0	4	S								
361.093	I	17.8	45.6	13.3	2.8	23.8	51.4	8.7	0.0	2	S								
361.095	I	18.2	41.2	13.7	3.2	17.7	56.1	9.2	0.0	3	S								
361.096	I	18.6	44.1	11.3	3.3	23.0	55.0	7.3	0.1	3	S								
361.098	I	17.5	41.9	14.0	3.4	18.8	54.7	9.0	0.0	3	S								
361.099	I	21.2	41.3	12.3	3.2	21.5	55.7	7.4	0.1	3	S								
361.101	III	18.0	46.0	10.3	2.8	18.2	59.4	9.3	0.1	3	S								
361.104	I	17.4	43.8	13.5	3.6	19.2	55.2	8.5	0.1	3	S								
361.109	II	19.8	43.8	11.5	3.4	22.7	55.3	7.2	0.0	4	S								
361.112A	I	20.1	42.2	12.4	3.2	22.7	54.6	7.0	0.1	5	S								
361.112B	II	18.8	45.9	11.0	3.5	22.7	55.6	7.1	0.0	4	S								
361.113	I	17.1	47.8	11.6	3.0	20.9	57.1	7.3	0.1	5	S								
361.115	I	19.6	42.5	12.2	2.9	23.0	54.3	7.6	0.0	1	S								
361.116	II	18.7	46.4	12.0	3.2	24.8	52.5	7.4	0.0	4	R	R	S	S	S	S	S	S	S
361.117	I	16.9	45.0	13.3	3.3	15.4	57.6	10.2	0.1	3	S								
370.055	III	19.0	46.2	12.4	2.9	24.8	52.5	7.4	0.1	2	S								
370.057B	II	18.0	43.1	11.7	3.8	20.1	56.0	8.5	0.0	4	S								
370.059	I	18.7	46.4	12.6	3.1	23.1	53.6	7.6	0.1	3	S								
372.404A	I	20.9	42.2	12.3	3.7	28.8	49.5	5.8	0.0										
372.404B	I	21.3	44.2	11.8	3.5	27.9	50.8	5.9	0.1	4	S								
372.404C	II	19.6	44.4	12.1	3.5	25.5	51.9	7.0	0.0	4	S								
372.415A	II	18.9	45.5	11.6	3.8	24.1	53.5	6.9	0.0	1	S								
372.415B	II	19.1	45.0	11.3	4.0	23.4	54.0	7.3	0.1	4	S								
372.416A	I	20.6	43.8	11.7	3.1	22.4	54.9	7.8	0.1	5	R				R		S	S	
372.416B	II	20.4	44.1	11.8	3.7	24.0	53.3	7.3	0.1	4	R							S	
372.418	I	17.7	42.5	13.6	3.6	18.7	55.9	8.1	0.1	5	S								
378.655	I	19.1	44.8	12.2	2.9	23.6	53.1	8.2	0.1	5	S								
378.663	I	16.5	44.5	12.5	3.6	22.0	54.3	7.6	0.1	5	S								
378.664A	I	19.5	44.6	11.6	3.4	26.5	51.5	6.9	0.1	4	S								
378.664B	I	18.6	44.7	11.2	4.0	27.8	49.9	7.1	0.1	4	S								
378.664C	I	18.5	47.1	12.2	3.5	25.3	51.8	7.1	0.1	4	S								
378.669C	I	17.7	44.8	11.9	3.4	19.3	57.0	8.4	0.1	4	S								
378.669D	I	17.6	45.5	12.7	3.3	17.8	56.8	9.4	0.1	4	S								

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
378.670A	Kisinevskaja 1		Bulgaria		USSR+	1973	I
378.670B	(Kisinevskaja 1)		Bulgaria		USSR+	1973	II
378.671	Lanka		Bulgaria		Bulgaria	1973	I
378.672	Nepoloegaustaja		Bulgaria		USSR+	1973	II
378.674A	Pavlikeni 519		Bulgaria		Bulgaria	1973	0
378.676A	Primorskaja 500		Bulgaria		USSR+	1973	I
378.676B	(Primorskaja 500)		Bulgaria		USSR+	1973	I
378.677B	(Primorskaja 508)		Bulgaria		USSR+	1973	I
378.677C	(Primorskaja 508)		Bulgaria		USSR+	1973	I
378.679	Tokio Noir		Bulgaria		Japan+	1973	I
378.680D	(VNIIMK 9186)		Bulgaria		USSR+	1973	I
378.680E	(VNIIMK 9186)		Bulgaria		USSR+	1973	I
379.559B	(Komagi dadacha)		Japan		Japan	1973	I
379.559C	(Komagi dadacha)		Japan		Japan	1973	III
379.559D	(Komagi dadacha)		Japan		Japan	1973	III
379.561	Shiroyama dadacha		Japan		Japan	1973	III
383.276	Kirin No. 6		FAO, Rome		China	1973	I
383.277	Kirin No. 5		FAO, Rome		China	1973	II
383.278	Kirin No. 3		FAO, Rome		China	1973	II
384.468	Komsomolka	5950	Ethiopia		USSR	1974	II
384.469A	Kubanskaja 33	5573	Ethiopia		USSR	1974	I
384.469B	(Kubanskaja 33)	(5573)	Ethiopia		USSR	1974	I
384.469C	(Kubanskaja 33)	(5573)	Ethiopia		USSR	1974	I
384.470	Osetinskaja 132	5692	Ethiopia		USSR	1974	I
384.471	Nepolegajuscaja 2	5651	Ethiopia		USSR	1974	II
384.473	Primorskaja 529	4167	Ethiopia		USSR	1974	II
384.474	VNIIMK 7	4987	Ethiopia		USSR	1974	II
391.577	Ch'a ye sheng tou		China		China	1974	II
391.578	Chien ye tou		China		China	1974	II
391.581A	Kirin No. 4		China		China	1974	II
391.581B	(Kirin No. 4)		China		China	1974	I
391.583	Kirin No. 10		China		China	1974	II
391.584	Kirin No. 11		China		China	1974	I
391.585	K'oupch'ien tou		China		China	1974	II
391.586	P'ing ting hsiang		China		China	1974	III
391.589A	Hei nung No. 11		China		China	1974	I
391.589B	(Hei nung No. 11)		China		China	1974	I
391.594	Kirin No. 8		China		China	1974	II
393.535	Aohigu		Japan		Japan	1975	III
393.537	Hiku anda		Japan		Japan	1975	III
393.538	Hiku anda No. 4		Japan		Japan	1975	III
393.541A			Hong Kong		China	1975	III
393.541B			Hong Kong		China	1975	II
393.563			Hong Kong		China	1975	II
393.999	Swan Egg		China		China	1975	II
398.227			S. Korea		S. Korea	1975	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
378.670A	I	W	G	E	N	Br	S	Y	Bf		Dab	
378.670B	II	W	G	E	N	Br	D	Y	Bf	Abh	Dab	
378.671	I	P	G	E	N	Br	S	Y	G			
378.672	II	P	T	E	N	Tn	I	Y	Br	Abh		
378.674A	0	P	G	E	N	Br	S	Y	Y			
378.676A	I	W	G	E	N	Br	D	Y	Lbf			
378.676B	I	W	G	E	Ssp	Bl	S	Y	Bf		Na	
378.677B	I	P	T	E	N	Tn	I	Y	Br	Abh		
378.677C	I	P	T	E	N	Tn	D	Y	Y	Abh		
378.679	I	W	T	E	Ssp	Br	I	Bl	Bl			
378.680D	I	P	T	E	N	Br	I	Y	Br			
378.680E	I	P	T	E	N	Br	S	Y	Br	Abh		
379.559B	I	W	Lt	E	Ssp	Br	S	Br	Br			
379.559C	III	W	Lt	E	Ssp	Br	I	Br	Br			
379.559D	III	W	Lt	E	Ssp	Br	I	Br	Br		S5Lft	
379.561	III	W	Lt	E	Ssp	Br	S	Br	Br		S5Lft	
383.276	I	W	G	E	Ssp	Tn	S	Y	Bf		Na	
383.277	II	W	G	E	Ssp	Dbr	S	Y	Y		Na	
383.278	II	W	G	E	N	Tn	S	Y	Bf			
384.468	II	P	G	E	N	Br	S	Y	Ib	Abh		
384.469A	I	P	G	E	N	Br	S	Y	Bf			
384.469B	I	P	G	E	N	Br	D	Y	Y		SWa	
384.469C	I	P	G	E	N	Br	D	Y	G			
384.470	I	P	T	E	N	Br	D	Y	Br			
384.471	II	P	T	E	N	Tn	S	Y	Br	Abh		
384.473	II	W	G	E	N	Br	I	Y	Lbf			
384.474	II	P	G	E	N	Br	S	Y	Ib	Abh		
391.577	II	P	T	E	Ssp	Lbr	S	Br	Br			
391.578	II	W	G	E	Ssp	Br	S	Y	Y		Na	
391.581A	II	W	G	E	Ssp	Dbr	S	Y	Y		Na	
391.581B	I	W	G	E	Ssp	Br	S	Y	Bf		Na	
391.583	II	W	G	E	N	Br	S	Y	Bf			
391.584	I	W	G	E	N	Tn	S	Y	Bf			
391.585	II	W	G	E	N	Br	S	Y	Lbf			
391.586	III	W	G	E	N	Br	S	Y	Bf			
391.589A	I	W	G	E	N	Br	S	Y	Y		Na	
391.589B	I	W	G	E	Ssp	Br	I	Y	Y			
391.594	II	P	G	E	N	Br	S	Y	Bf			
393.535	III	W	T	Sa	N	Br	I	Gn	Br			
393.537	III	W	T	E	Ssp	Tn	D	Y	Br			
393.538	III	W	T	E	N	Tn	D	Y	Br			
393.541A	III	W	G	E	Ssp	Br	S	Y	Y			
393.541B	II	W	G	E	Ssp	Dbr	S	Y	Y		Na	
393.563	II	W	G	E	Ssp	Dbr	S	Y	Bf		Na	
393.999	II	W	G	E	N	Lbr	I	Y	Lbf			
398.227	III	P	G	A	N	Tn	D	Y	Y			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
378.670A	33	102	3.8	89*	3.0	1.0	1.0	2.3	1.0	11.2	2.53*
378.670B	38	110	3.8	96*	2.0	1.0	1.5	1.8	1.0	12.8	3.10
378.671	33	93	1.3	50*	1.5	1.0	1.0	2.3	1.0	14.1	2.94
378.672	38	105	1.6	64	2.5	1.0	1.0	3.5	1.0	14.9	2.99*
378.674A	29	92	1.5	61	3.0	1.0	1.0	2.5	1.0	17.0	3.17
378.676A	29	93	1.3	66	3.0	1.0	1.0	2.8	1.0	20.6*	3.14
378.676B	32	103	2.5	90	3.0	1.0	1.0	2.3	2.0	13.3	2.53
378.677B	30	97	2.3	64	2.5	1.0	1.0	2.0	1.0	10.5	2.51
378.677C	29	93	2.5	78	4.0	1.0	1.0	2.5	1.0	13.3	2.28
378.679	35	104	1.4	56	1.5	1.0	4.5	2.5	-	20.7	2.61
378.680D	34	100	2.3*	66*	2.0	1.0	1.0	2.5	1.0	13.6	3.03
378.680E	35	100	2.8	77	3.0	1.0	1.0	3.0*	1.0	9.5	2.86
379.559B	40	98	2.7	71	2.5	1.0	1.0	2.5	-	24.3	2.40
379.559C	47*	114	2.3	70	1.0	1.5	3.5*	3.3	-	26.7	2.21*
379.559D	48	116	2.5	69	1.0	2.0	3.5*	3.3	-	26.7	2.03*
379.561	46*	114	2.1	62	1.0	2.0	3.5*	3.3	-	27.7	2.04*
383.276	31	101	1.5	81*	3.0	1.0	1.0	2.0	1.0	14.5	2.76
383.277	33	110	2.3	95	3.0	1.0	1.0	2.5	1.0	18.0	3.14*
383.278	35	104	2.5	74	2.5	1.0	1.0	2.0	1.0	14.4	2.78*
384.468	37	106	1.8	77*	3.0	1.0	1.0	2.5	1.0	15.2*	3.22*
384.469A	37	101	2.4*	74*	3.0	1.0	1.0	2.5	1.0	13.9	3.10
384.469B	30	101	2.1*	106*	3.5	1.0	1.0	2.5	1.0	16.8	3.53
384.469C	34	100	1.8*	73	3.0	1.0	1.0	3.3	1.0	19.2	3.47
384.470	30	96	2.0	75*	3.0	1.0	1.0	2.8	1.0	14.3	3.25
384.471	38	105	1.2	64	3.0	1.0	1.0	2.5	1.0	13.5	3.02*
384.473	33	108	1.9	98*	3.0	1.0	1.0	2.8	1.5	17.2	2.85*
384.474	38	105	1.7	74*	3.0	1.0	1.0	2.5	1.0	14.5	3.40*
391.577	58	116	4.3	116*	5.0	1.0	1.5	2.3	-	6.3	2.09
391.578	35	102	3.5	79*	3.5	1.0	1.0	2.8	1.0	17.2	2.53
391.581A	32	103	2.3	88*	3.0	1.0	1.0	2.0	1.0	16.7	2.99*
391.581B	31	102	2.2*	83	2.5	1.0	1.0	2.0	1.0	17.2	3.17
391.583	36	107	2.2	80	2.0	1.0	1.0	2.8	1.0	15.9	3.16
391.584	34	104	2.4	77	3.0	1.0	1.0	2.0	1.0	14.7	3.25
391.585	34	103	2.3	82*	3.0	1.0	1.0	3.8	2.0	17.2	2.83
391.586	51	116	3.9	88*	2.0	1.5	3.0*	2.5	1.5	18.5	3.11
391.589A	31	96	1.9	64	3.0	1.0	1.0	3.3	1.0	15.4	2.85*
391.589B	33	100	1.3	65	2.0	1.0	1.0	2.8	1.0	19.0	2.74
391.594	33	103	2.0	83*	3.0	1.0	1.0	2.5	1.0	17.8	3.57*
393.535	51	111	4.1	86	2.0	2.0	3.5*	1.8	4.0*	13.1	2.33
393.537	Tested in and reported with early group IV evaluation										
393.538	Tested in and reported with early group IV evaluation										
393.541A	40	111	1.3	66	1.0	1.0	1.0	2.3	2.0	18.2	2.71
393.541B	34	109	2.8	86*	3.0	1.0	1.0	2.5	1.0	18.4	3.03*
393.563	35	107	2.8	96*	3.0	1.0	1.0	2.3	1.0	17.9	2.90
393.999	34	107	1.9	82	3.0	1.0	1.0	2.8	1.5	22.8	2.88*
398.227	52	117	1.6	57	1.0	1.0	2.5*	1.8	2.0	16.8	2.43

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
378.670A	I	18.7	45.9	12.6	3.3	21.2	55.7	7.2	0.1	4	S								
378.670B	II	18.5	45.2	12.2	3.1	18.3	58.5	7.7	0.0	3	S								
378.671	I	18.2	44.8	13.1	3.2	19.7	55.3	8.7	0.1	5	S								
378.672	II	18.7	46.5	13.0	3.4	20.0	56.0	7.7	0.0	2	S								
378.674A	0	18.8	43.4	12.3	3.1	25.8	50.9	7.8	0.1	5	S								
378.676A	I	19.2	46.4	12.5	3.3	27.6	49.5	7.1	0.1	4	S								
378.676B	I	18.8	44.7	13.0	3.6	21.1	54.8	7.4	0.1	4	R	R	S	S	R	H	S	S	
378.677B	I	19.4	42.4	13.0	3.2	18.4	57.5	7.8	0.1	3	S								
378.677C	I	18.1	45.4	13.0	3.9	26.9	50.7	5.5	0.0	1	S								
378.679	I	19.8	43.1	12.1	3.0	23.6	53.0	8.3	0.0	1	R	R	R	R	H	S	S	R	S
378.680D	I	18.8	46.0	12.2	3.7	17.9	57.4	8.5	0.1	1	S								
378.680E	I	19.4	43.6	12.4	3.9	19.8	55.5	8.2	0.1	2	S								
379.559B	I	17.7	45.9	13.0	2.9	29.8	47.4	6.8	0.1	1	R	R	R	S	R	R	R	R	R
379.559C	III	16.8	43.2	12.0	2.6	41.9	37.6	5.8	0.0	1	S								
379.559D	III	16.4	43.0	12.3	2.7	38.9	40.4	5.7	0.0	1	S								
379.561	III	16.2	42.3	12.4	2.7	40.2	38.7	6.0	0.0	1	S								
383.276	I	18.9	44.5	11.5	3.7	27.4	50.9	6.4	0.1	5	R		S	S					
383.277	II	19.3	44.1	12.7	3.6	23.2	53.2	7.4	0.0	4	R		S	S					
383.278	II	19.4	43.6	11.7	3.7	27.1	51.2	6.3	0.1	5	R		S	S					
384.468	II	19.6	45.5	10.3	3.1	31.3	48.4	7.0	0.0	4	S								
384.469A	I	19.5	42.9	13.1	3.7	19.7	55.0	8.4	0.1	4	S								
384.469B	I	20.0	43.7	12.2	3.4	23.3	52.9	8.1	0.1	5	R		S	S					
384.469C	I	19.8	44.3	13.3	3.6	23.6	52.5	7.0	0.0	3	S								
384.470	I	19.8	44.5	10.9	2.9	19.7	57.8	8.6	0.0	4	S								
384.471	II	17.6	46.2	13.0	3.3	21.6	54.0	8.1	0.0	4	S								
384.473	II	18.5	45.4	12.3	3.2	20.6	55.8	8.1	0.1	5	S								
384.474	II	19.8	44.2	10.4	3.0	28.9	50.1	7.3	0.1	4	S								
391.577	II	14.1	46.4	13.5	2.9	16.6	56.6	10.4	0.0	1	S								
391.578	II	17.2	46.0	13.1	3.6	19.8	54.6	8.9	0.0	5	S								
391.581A	II	19.4	45.1	12.8	3.7	25.7	51.1	6.6	0.0										
391.581B	I	19.0	43.9	12.7	3.8	27.2	49.8	6.5	0.0										
391.583	II	20.0	43.7	11.8	3.5	25.9	52.7	6.1	0.0	4	S								
391.584	I	19.3	44.1	11.9	3.5	24.5	53.1	7.0	0.0	5	R		S	S					
391.585	II	18.1	47.7	11.1	3.1	30.1	49.6	6.1	0.1										
391.586	III	18.5	45.8	11.5	3.3	33.4	45.5	6.2	0.1	1	S								
391.589A	I	20.3	42.6	12.3	3.9	21.3	55.5	6.9	0.1	5									
391.589B	I	19.1	45.9	12.5	3.2	24.1	53.5	6.7	0.1	5									
391.594	II	19.6	44.6	11.3	3.9	27.0	50.9	6.8	0.1	5	S								
393.535	III	15.4	46.2	12.1	2.8	22.8	52.9	9.3	0.0	1	R		S	S					
393.537	III	Tested in and reported with early group IV evaluation								1	R		R	H					
393.538	III	Tested in and reported with early group IV evaluation								1	R		R	H					
393.541A	III	18.6	45.1	12.0	3.0	21.7	55.3	7.9	0.1										
393.541B	II	19.1	44.3	12.7	3.6	25.0	51.6	7.0	0.1										
393.563	II	18.5	43.8	12.1	3.8	26.2	51.1	6.7	0.1	4	R		H	H					
393.999	II	19.7	44.7	11.6	3.1	23.2	54.8	7.3	0.0	4	H								
398.227	III	17.8	44.6	12.1	3.1	20.3	56.4	8.0	0.0	1	R		R	R					

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.230			S. Korea		S. Korea	1975	III
398.261			S. Korea		S. Korea	1975	III
398.275			S. Korea		S. Korea	1975	III
398.295			S. Korea		S. Korea	1975	III
398.296		(KAS 173-3)	S. Korea		S. Korea	1975	II
398.297		(KAS 173-3)	S. Korea		S. Korea	1975	III
398.300		KAS 174-2	S. Korea		S. Korea	1975	III
398.311		(KAS 180-4)	S. Korea		S. Korea	1975	III
398.312		(KAS 180-4)	S. Korea		S. Korea	1975	III
398.395		KAS 200-30-2	S. Korea		S. Korea	1975	III
398.416		(KAS 201-7-1)	S. Korea		S. Korea	1975	III
398.451		KAS 210-6	S. Korea		S. Korea	1975	III
398.493		(KAS 232-8)	S. Korea		S. Korea	1975	II
398.494		(KAS 232-8)	S. Korea		S. Korea	1975	III
398.504		(KAS 287-1)	S. Korea		S. Korea	1975	III
398.505		KAS 287-2	S. Korea		S. Korea	1975	III
398.514		KAS 310-1	S. Korea		S. Korea	1975	III
398.516		(KAS 310-1)	S. Korea		S. Korea	1975	III
398.600		(KAS 390-6)	S. Korea		S. Korea	1975	III
398.620		(KAS 390-11)	S. Korea		S. Korea	1975	III
398.624		KAS 390-14-2	S. Korea		S. Korea	1975	III
398.625		(KAS 390-14-2)	S. Korea		S. Korea	1975	III
398.637		(KAS 390-18)	S. Korea		S. Korea	1975	III
398.638		(KAS 390-18)	S. Korea		S. Korea	1975	III
398.639		(KAS 390-18)	S. Korea		S. Korea	1975	III
398.641		(KAS 390-19)	S. Korea		S. Korea	1975	III
398.643		(KAS 390-21)	S. Korea		S. Korea	1975	III
398.654		KAS 390-31	S. Korea		S. Korea	1975	III
398.672		KAS 301-1	S. Korea		S. Korea	1975	III
398.684		KAS 320-5	S. Korea		S. Korea	1975	III
398.686		KAS 320-6	S. Korea		S. Korea	1975	III
398.687		(KAS 320-6)	S. Korea		S. Korea	1975	III
398.693		KAS 330-1	S. Korea		S. Korea	1975	III
398.694		(KAS 330-1)	S. Korea		S. Korea	1975	III
398.697		KAS 330-3	S. Korea		S. Korea	1975	III
398.702		KAS 330-9-1	S. Korea		S. Korea	1975	III
398.708		KAS 330-11-1	S. Korea		S. Korea	1975	III
398.709		(KAS 330-11-1)	S. Korea		S. Korea	1975	III
398.710		(KAS 330-11-1)	S. Korea		S. Korea	1975	III
398.712		(KAS 330-11-2)	S. Korea		S. Korea	1975	III
398.726		KAS 330-16-1	S. Korea		S. Korea	1975	III
398.727		KAS 330-16-2	S. Korea		S. Korea	1975	III
398.747		(KAS 339-4)	S. Korea		S. Korea	1975	III
398.748		(KAS 339-4)	S. Korea		S. Korea	1975	III
398.749		KAS 339-5	S. Korea		S. Korea	1975	III
398.751		(KAS 339-6)	S. Korea		S. Korea	1975	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence			Pod color	Seed coat		Hilum color	Other traits		
			Color	Form	Density		Luster	Color		Seed	Leaf	Plant
398.230	III	P	G	Sa	Ssp	Br	S	Y	Bf			
398.261	III	P	T	E	Ssp	Br	S	Bl	Bl			
398.275	III	P	T	E	Ssp	Tn	I	Y	Br			
398.295	III	P	G	E	Ssp	Br	D	Y	Y			
398.296	II	P	G	E	N	Br	D	Y	Bf			
398.297	III	P	G	E	Ssp	Tn	D	Y	Bf			
398.300	III	P	T	E	Ssp	Tn	S	Br	Br			
398.311	III	P	G	E	Ssp	Br	D	Y	Bf			
398.312	III	P	G	E	Ssp	Tn	D	Y	Bf			
398.395	III	P	G	E	Ssp	Br	S	Y	Bf			
398.416	III	P	G	Sa	Ssp	Br	I	Y	Bf			
398.451	III	W	T	E	Ssp	Br	S	Bl	Bl			
398.493	II	P	G	E	Ssp	Br	D	Y	Y			
398.494	III	W	G	E	Ssp	Br	S	Y	Y			
398.504	III	W	G	A	Ssp	Tn	D	Y	Y			
398.505	III	W	G	A	Ssp	Tn	I	Y	Bf			
398.514	III	P	Lt	E	Ssp	Br	D	Y	Y	Def		
398.516	III	P	Lt	E	Ssp	Br	D	Y	Y	Def		
398.600	III	W	G	A	Ssp	Tn	D	Y	Y			
398.620	III	P	G	E	N	Tn	I	Y	Bf			
398.624	III	W	T	E	Ssp	Br	S	Bl	Bl			
398.625	III	W	T	E	Ssp	Br	S	Bl	Bl			
398.637	III	W	G	Sa	Ssp	Tn	D	Y	Bf	SDef		
398.638	III	W	G	Sa	Ssp	Tn	D	Y	Bf	SDef		
398.639	III	W	G	Sa	Ssp	Tn	D	Y	Bf	SDef		
398.641	III	W	G	Sa	Ssp	Tn	D	Y	Bf	SDef		
398.643	III	Dp	G	E	Ssp	Tn	D	Y	Bf			
398.654	III	W	G	A	Ssp	Tn	D	Y	Y			
398.672	III	Dp	T	E	Ssp	Br	S	Rbr	Rbr			
398.684	III	W	G	A	Ssp	Lbr	D	Y	Y			
398.686	III	W	G	A	Ssp	Tn	D	Y	Bf	SDef		
398.687	III	W	T	A	Ssp	Tn	D	Y	Br			
398.693	III	P	G	E	Ssp	Br	D	Y	Bf			
398.694	III	P	G	E	Ssp	Br	D	Y	Bf			
398.697	III	P	G	E	N	Br	D	Y	Y			
398.702	III	P	G	E	Ssp	Lbr	D	Y	Y			
398.708	III	W	G	A	Ssp	Tn	D	Y	Bf	SDef		
398.709	III	W	G	A	Ssp	Br	I	Y	Bf			
398.710	III	W	G	A	Ssp	Br	D	Y	Bf			
398.712	III	W	G	A	Ssp	Tn	D	Y	Y			
398.726	III	W	G	A	Ssp	Tn	D	Y	Y			
398.727	III	W	G	A	Ssp	Tn	D	Y	Bf	SDef		
398.747	III	P	G	E	Ssp	Br	D	Y	Bf			
398.748	III	P	G	E	Ssp	Br	S	Y	Y			
398.749	III	W	G	A	Ssp	Tn	D	Y	Y			
398.751	III	W	G	A	Ssp	Tn	D	Y	Bf			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.230	51	118	2.3	70	1.0	1.5	3.0*	1.8	1.5	16.9	3.03
398.261	53	123	3.1	73	1.0	1.5	3.5*	2.0	-	16.9*	2.47
398.275	53	117	2.8	87*	1.5	1.0	3.0*	1.8	2.0	14.8	2.81
398.295	51	118	2.0	86*	1.0	1.5	3.0*	1.8	2.0	17.6	2.45
398.296	48	110	2.4	74*	1.5	1.0	3.0*	2.0	2.0	12.8	2.89
398.297	50	117	2.2	78	1.5	1.0	2.0*	1.8	1.0	17.1	3.09
398.300	55	122	2.3	70	1.0	1.0	1.5	2.3	-	23.3*	2.57*
398.311	52	121	2.5	76	1.5	1.0	3.5*	1.5	1.5	16.6	2.86
398.312	47	117	2.5	74	1.5	1.0	3.0*	1.8	1.0	16.2	3.03*
398.395	53	122	2.2	70	1.5	1.0	2.5*	2.3	1.0	17.9	2.98
398.416	53	118	2.4	63	1.0	1.5	3.0*	2.0	1.5	17.5	3.07
398.451	49	119	2.8	66	1.0	1.5	3.0*	2.3	-	22.4	2.49
398.493	46	106	1.5	69	2.5	1.0	2.0*	2.3	1.0	14.7	2.73
398.494	53	121	2.6	75	1.0	1.5	2.5*	2.0	1.0	17.0	2.85
398.504	51	118	4.1*	87	2.0	2.0	3.5*	2.5	2.5	23.3	2.51
398.505	49	115	2.3	73	2.0	1.5	3.5*	2.5	1.5	21.9	2.64
398.514	51	117	2.5	73	1.0	1.0	1.5	2.5	1.5	15.9	2.58
398.516	52	117	2.7	71	1.0	1.0	2.0*	2.5	1.5	15.8	2.61
398.600	51	117	2.6*	72	1.0	1.5	3.5*	2.3	2.0	22.2	2.63
398.620	55	121	2.6	88	1.5	1.5	1.5	2.0	3.0	16.9*	2.73
398.624	53	124	2.8	68	1.0	1.5	1.5	2.3	-	25.9*	2.25
398.625	54	127	2.3	61	1.0	1.5	1.5	2.3	-	25.8*	2.23
398.637	51	119	2.1*	74	1.0	1.5	3.5*	2.3	3.0	22.0*	2.49
398.638	52	117	1.8	62	1.0	2.0	3.5*	2.0	3.0	21.7	2.41
398.639	51	119	1.8	74	1.0	1.5	3.5*	2.3	3.0	22.4	2.57
398.641	51	118	2.0	65	1.0	1.5	3.5*	2.5	3.0	22.3	2.41
398.643	55	121	2.3	65	1.0	1.5	3.0*	1.8	1.5	12.5	2.71
398.654	49	118	2.0	71	1.5	1.5	3.5*	2.3	2.0	23.8	2.88
398.672	53	122	2.8	79	1.0	1.0	2.5*	2.3	-	26.4	2.55
398.684	50	120*	2.3	69	1.0	1.0	2.5*	2.5	1.5	21.0	2.45
398.686	48*	116	2.0	72	1.5	2.0*	3.5*	2.5	2.0	23.4	2.37*
398.687	52	118	2.4	79	2.5	1.5	2.5*	2.3	2.0	18.9	2.66
398.693	51	120	2.9	80	2.0	1.0	3.0*	2.0	1.0	16.0	2.93
398.694	54	121	2.4	75	1.0	1.0	3.0*	1.8	1.5	12.6	2.65
398.697	51	120	2.3	78	1.0	1.0	3.0*	1.8	1.0	18.2	2.79
398.702	52	120	2.1	77	1.0	1.0	1.5	1.8	2.5	9.3	2.76
398.708	50*	118	2.8	68	1.0	1.5	3.0*	2.3	1.5	21.9	2.73
398.709	48	115	2.0	61	1.0	2.0*	3.5*	2.3	1.5	22.3	2.44
398.710	48*	117	2.8*	74	1.0	2.0	3.5*	2.3	1.5	22.7	2.51
398.712	48*	118	2.3*	72	1.5	2.0*	3.5*	2.3	2.0	24.2	2.75
398.726	51	117	2.0	76	1.5	2.0	3.0*	2.3	1.5	19.0	2.52
398.727	47*	116	1.6	63	1.0	2.0*	3.5*	2.5	1.5	23.2	2.46*
398.747	51	119	2.5	83	2.0	1.0	3.5*	1.5	1.0	15.1	2.74
398.748	49	114	2.8	70	1.0	1.5	3.5*	2.0	1.0	16.9	2.74
398.749	48*	117	2.5	68	2.0	2.5	3.5*	2.3	2.0	24.0	2.60*
398.751	45*	114	2.3	74	2.0	1.5	3.5*	2.0	1.0	18.9	2.94

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction								
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.230	III	17.5	44.0	12.4	2.8	20.5	55.0	9.1	0.0	2	R		R	R					
398.261	III	17.6	44.3	12.1	3.4	20.0	56.1	8.4	0.1	4	R		R	S					
398.275	III	18.0	46.3	12.8	2.9	23.8	53.5	7.0	0.0	1	R		R	H					
398.295	III	18.6	45.8	12.3	3.0	24.0	53.1	7.5	0.0	4	R		R	R					
398.296	II	17.8	46.7	12.5	3.3	18.8	56.9	8.5	0.0	1	H								
398.297	III	19.5	45.6	12.1	3.1	23.1	54.2	7.5	0.1	1	R		R	R					
398.300	III	18.2	46.3	11.7	3.0	24.0	53.5	7.7	0.0	2	S								
398.311	III	19.2	44.3	12.8	3.4	20.3	55.2	8.3	0.0	1	R		R	H					
398.312	III	18.7	45.3	12.2	3.2	21.3	56.2	7.2	0.0	1	R		R	R					
398.395	III	18.0	41.6	12.5	2.7	18.8	56.0	9.8	0.1	1	R		R	R					
398.416	III	19.4	40.7	13.6	2.9	19.6	55.3	8.6	0.0	2	S								
398.451	III	17.9	47.3	12.7	3.2	19.1	57.0	8.1	0.0	2	R		R	R					
398.493	II	18.2	45.8	11.9	2.9	23.3	53.6	8.1	0.0	1	R		R	S					
398.494	III	18.5	46.4	12.8	2.9	20.5	56.3	7.4	0.0	4	R		R	R					
398.504	III	18.2	46.8	11.9	3.0	28.8	49.1	7.2	0.1	1	S								
398.505	III	17.3	46.0	12.6	3.0	21.3	54.6	8.5	0.0	1	S								
398.514	III	16.5	47.7	12.3	2.3	21.0	55.9	8.4	0.0	1	S								
398.516	III	16.7	49.4	12.3	2.7	21.6	55.3	7.9	0.0	1	S								
398.600	III	17.9	45.6	11.7	2.9	25.1	52.5	7.8	0.1	1	S								
398.620	III	18.4	48.0	12.0	3.4	20.3	55.8	8.5	0.1	1	S								
398.624	III	17.0	44.9	10.8	3.2	26.6	50.6	8.7	0.0	1	S								
398.625	III	16.5	47.0	10.9	3.5	25.4	51.1	9.1	0.0	1	S								
398.637	III	16.5	47.2	12.9	3.0	20.3	55.0	8.6	0.1	1	S								
398.638	III	16.3	47.5	13.3	3.0	20.2	55.2	8.2	0.0	1	S								
398.639	III	16.9	47.8	12.7	2.4	18.1	57.3	9.5	0.0	1	S								
398.641	III	16.6	48.5	12.8	2.8	20.6	55.4	8.4	0.1	1	S								
398.643	III	17.4	46.6	11.3	3.0	18.0	59.6	8.0	0.1	1	R		R	R					
398.654	III	17.8	46.1	12.2	3.1	19.8	56.1	8.7	0.1	1	S								
398.672	III	17.7	49.4	11.8	3.2	22.5	54.9	7.6	0.1	1	S								
398.684	III	17.5	45.8	12.7	3.1	17.1	57.4	9.6	0.0	1	H								
398.686	III	17.5	46.6	12.4	2.9	23.0	53.6	8.0	0.0	1	S								
398.687	III	17.0	47.0	12.2	3.1	22.4	54.3	7.9	0.1	1	S								
398.693	III	19.6	44.5	12.0	2.8	24.7	53.4	7.1	0.0	1	R		R	R					
398.694	III	18.0	44.9	12.0	3.2	21.7	55.1	8.1	0.0	1	R		R	R					
398.697	III	18.9	46.4	11.4	3.2	24.8	53.4	7.2	0.1	1	R		R	R					
398.702	III	17.3	45.2	12.6	3.0	19.8	55.7	8.8	0.1	1	R		R	R					
398.708	III	17.9	44.2	12.1	3.0	26.7	50.8	7.3	0.0	1	S								
398.709	III	17.5	46.4	12.3	2.9	20.2	55.5	8.9	0.1	1	S								
398.710	III	18.8	45.1	12.3	2.9	21.3	55.5	7.9	0.1	1	R								
398.712	III	17.2	44.9	11.7	2.8	26.3	51.8	7.5	0.0	1	S								
398.726	III	18.6	45.3	11.9	3.1	22.6	55.0	7.4	0.0	1	S								
398.727	III	17.5	44.5	12.0	2.9	25.0	52.7	7.4	0.0	1	S								
398.747	III	18.8	45.3	12.5	3.0	18.6	56.7	9.2	0.0	1	R		R	R					
398.748	III	18.8	44.7	12.5	3.2	21.7	55.2	7.4	0.0	3	R		R	H					
398.749	III	18.3	45.1	11.8	2.9	23.8	53.7	7.9	0.0	1	S								
398.751	III	17.9	45.5	13.0	3.1	21.2	54.9	7.8	0.0	1	S								

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.752		KAS 340-1	S. Korea		S. Korea	1975	III
398.755		(KAS 340-2)	S. Korea		S. Korea	1975	III
398.763		KAS 341-4	S. Korea		S. Korea	1975	III
398.776		KAS 352-5	S. Korea		S. Korea	1975	III
398.806		KAS 360-2	S. Korea		S. Korea	1975	III
398.813		KAS 360-6	S. Korea		S. Korea	1975	III
398.814		(KAS 360-6)	S. Korea		S. Korea	1975	III
398.821		KAS 360-11	S. Korea		S. Korea	1975	III
398.822		(KAS 360-11)	S. Korea		S. Korea	1975	III
398.831		(KAS 361-1)	S. Korea		S. Korea	1975	III
398.832		(KAS 361-1)	S. Korea		S. Korea	1975	III
398.841		(KAS 361-10)	S. Korea		S. Korea	1975	III
398.859		(KAS 363-4)	S. Korea		S. Korea	1975	III
398.881		KLS 126-1	S. Korea		S. Korea	1975	III
398.885		KLS 132-1	S. Korea		S. Korea	1975	III
398.898		KLS 211	S. Korea		S. Korea	1975	III
398.902		KLS 215	S. Korea		S. Korea	1975	III
398.903		(KLS 215)	S. Korea		S. Korea	1975	III
398.908		KLS 219	S. Korea		S. Korea	1975	III
398.927		KLS 415-1	S. Korea		S. Korea	1975	III
398.930		KLS 418	S. Korea		S. Korea	1975	III
398.954		KLS 618-1	S. Korea		S. Korea	1975	III
398.955		(KLS 618-1)	S. Korea		S. Korea	1975	III
398.957		KLS 619-1	S. Korea		S. Korea	1975	III
398.980		KLS 708-1	S. Korea		S. Korea	1975	III
398.989		KLS 719	S. Korea		S. Korea	1975	III
398.992		KLS 721-1	S. Korea		S. Korea	1975	III
398.993		KLS 723-1	S. Korea		S. Korea	1975	III
399.008		KLS 738-1	S. Korea		S. Korea	1975	III
399.043		KLS 903	S. Korea		S. Korea	1975	III
399.063			S. Korea		S. Korea	1975	III
399.068			S. Korea		S. Korea	1975	III
399.077			S. Korea		S. Korea	1975	III
399.080			S. Korea		S. Korea	1975	III
401.418		VIR 5683	England	E. Germany	USSR	1975	I
404.151	Biruinca 12	K 569	USSR		USSR	1975	II
404.152		K 4583	USSR		USSR	1975	III
404.154	Saksaj 02	K 4995	USSR		USSR	1975	III
404.155B	(Primorskij 450)	(K 5620)	USSR		USSR	1975	I
404.156	Primorskaja 533	K 5621	USSR		USSR	1975	I
404.157	Primorskaja 494	K 5622	USSR		USSR	1975	I
404.158	Primorskaja 500	K 5623	USSR		USSR	1975	I
404.160A	Adreula 6	K 6174	USSR		USSR	1975	III
404.160B	(Adreula 6)	(K 6174)	USSR		USSR	1975	III
404.166	Krasnoarmejskaja	K 5222	USSR		China	1975	III
404.168	Siui czui siao ju dou	K 5323	USSR		China	1975	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.752	III	P	G	Sa	Ssp	Br	D	Y	Bf			
398.755	III	P	G	E	Ssp	Tn	I	Y	Y			
398.763	III	P	G	E	Ssp	Tn	I	Y	Bf			
398.776	III	P	T	E	Ssp	Br	S	Lgn	Bl			
398.806	III	W	G	A	Ssp	Tn	D	Y	Y			
398.813	III	P	G	E	Ssp	Tn	D	Y	Y			
398.814	III	W	G	A	Ssp	Tn	D	Y	Y			
398.821	III	W	G	E	Ssp	Tn	D	Y	Y			
398.822	III	W	G	E	Ssp	Tn	D	Y	Y			
398.831	III	W	G	A	Ssp	Tn	D	Y	Y			
398.832	III	W	G	A	Ssp	Tn	D	Y	Y			
398.841	III	P	G	E	Ssp	Tn	D	Y	Y			
398.859	III	W	G	A	Ssp	Tn	I	Y	Bf			
398.881	III	P	T	E	N	Br	D	Y	Bl			
398.885	III	W	G	A	Ssp	Tn	D	Y	Y			
398.898	III	P	G	E	Ssp	Br	D	Y	Y			
398.902	III	W	G	A	Ssp	Br	D	Y	Y			
398.903	III	W	G	Sa	Ssp	Br	D	Y	Lbf			
398.908	III	W	G	A	Sp	Tn	D	Y	Y			
398.927	III	W	G	A	Ssp	Tn	D	Y	Y			
398.930	III	P	G	E	Ssp	Br	D	Y	Bf			
398.954	III	Dp	G	A	Ssp	Br	S	Y	Bf			
398.955	III	Dp	G	Sa	Ssp	Tn	D	Y	Bf			
398.957	III	W	G	A	Ssp	Tn	D	Y	Y			
398.980	III	W	G	E	Ssp	Tn	I	Y	Y			
398.989	III	W	G	A	Ssp	Tn	I	Y	Bf			
398.992	III	W	G	E	Ssp	Tn	D	Y	Bf			
398.993	III	W	G	E	Ssp	Tn	D	Y	Bf			
399.008	III	W	G	Sa	N	Tn	I	Y	Bf			
399.043	III	W	G	A	Ssp	Tn	D	Y	Y			
399.063	III	W	G	A	Ssp	Br	D	Y	Lbf			
399.068	III	W	G	A	Ssp	Tn	D	Y	Y			
399.077	III	Dp	T	Sa	N	Tn	D	Y	Br			
399.080	III	P	G	E	Ssp	Br	I	Y	Y			
401.418	I	P	T	A	N	Bl	S	Gnbr	Br			Sw
404.151	II	P	T	E	N	Bl	I	Bl	Bl		Dab	
404.152	III	W	G	E	N	Br	S	Y	Y			
404.154	III	W	G	E	N	Dbr	S	Y	Bf			
404.155B	I	W	G	E	N	Br	S	Y	Bf			
404.156	I	W	G	E	N	Br	S	Y	Lbf			
404.157	I	P	G	E	N	Br	D	Y	Y			
404.158	I	W	G	E	N	Br	D	Y	Y			
404.160A	III	W	G	E	N	Dbr	S	Y	Bf			
404.160B	III	W	G	E	N	Dbr	S	Y	Bf			
404.166	III	P	T	E	N	Br	I	Bl	Bl			
404.168	III	W	G	E	Sp	Dbr	S	Y	Bf			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.752	53	117	3.0	85	2.0	1.0	3.5*	2.0	1.0	16.0	3.21
398.755	49	118	2.3	76	1.5	1.0	3.5*	1.8	2.5	14.5	3.00
398.763	49*	116	2.8	79	2.5	1.0	3.0*	2.0	1.5	16.4	3.00
398.776	52	119	3.8	73	1.0	1.5	3.0*	2.5	2.0	22.6	2.66*
398.806	Tested in and reported with early group IV evaluation										
398.813	50*	117	1.5	72*	2.0	1.0	2.5*	2.0	1.5	16.6	3.05
398.814	48*	116	2.0	70	1.5	2.0*	3.5*	2.3	2.0	23.0	2.74*
398.821	48*	118	2.5	74	1.0	1.5	3.0*	2.5	1.5	24.0	2.76
398.822	49*	119	3.3	88*	1.0	1.5	3.0*	2.8*	1.5	24.4*	2.74
398.831	49*	118	2.8	76	2.0	1.5	3.5*	2.3	2.5	23.4	2.50
398.832	Tested in and reported with early group IV evaluation										
398.841	52	116	4.3	73	2.0	1.0	3.5*	2.8	1.5	19.0	2.00
398.859	48*	116	2.3*	63	2.0	2.5	3.5*	2.3	1.5	24.2	2.47
398.881	41	116	1.8	123*	4.0	1.0	1.0	2.8*	2.0	16.3	3.34*
398.885	50*	118	3.4*	70	2.0	2.0*	3.5*	2.5	2.0	24.1	2.33
398.898	51	118	2.3	79	1.0	1.5	3.5*	2.5	3.5	21.1	2.41
398.902	50	116	2.0	65	2.0	3.0*	3.5*	2.3	3.0*	21.5	2.37
398.903	Tested in and reported with early group IV evaluation										
398.908	50	119	3.3*	76	2.0	1.5	3.5*	2.5	2.0	23.1	2.47
398.927	50	118	3.5*	75	2.0	2.5	3.5*	2.3	2.5	23.0	2.31
398.930	51	119	2.5	78	2.0	1.5	3.0*	1.8	1.0	16.2	2.87
398.954	51	117	3.0	76	2.0	1.0	3.0*	2.3	2.0	20.2	2.53
398.955	50	116	2.2	75	1.0	1.0	1.5	2.3	2.0	15.1	2.72
398.957	50	116	3.1	73	2.0	1.5	3.5*	2.5	2.0	24.1	2.76
398.980	51	121	3.3*	77	2.0	1.5	3.5*	2.5	2.5	19.4*	2.64
398.989	48	114	1.8	68	2.0	2.0*	3.5*	2.3	2.0	22.6	2.39
398.992	51	119	2.3	82	1.5	1.5	3.5*	2.5	2.0	24.9	2.55
398.993	52	119	2.6	81	1.5	2.0*	3.5*	2.3	2.0	24.9	2.40
399.008	52	118	2.6	87*	2.0	1.0	3.0*	1.8	1.0	13.0	2.70*
399.043	54	123	2.6	80	1.0	2.5*	3.0*	2.3	3.0	23.1*	2.26
399.063	50	114	2.0	63	2.0	2.0*	3.5*	2.3	2.5	22.2	2.40
399.068	51	118	3.5*	76	1.5	2.0	3.0*	2.3	2.0	22.4	2.49
399.077	58	126	2.3	86*	2.0	1.5	2.0*	2.0	5.0	11.9	2.05
399.080	53	117	3.6	73	1.0	1.5	3.5*	2.3	3.0*	20.0	2.00
401.418	40	99*	4.5	70*	4.5	1.0	4.0*	2.0	-	2.6	1.83
404.151	32	114*	4.0	106*	4.0	1.0	1.0	2.3	-	9.8	2.62*
404.152	34	112	3.5	88	3.0	1.0	2.5*	2.3	1.5	18.3	2.88
404.154	44	115	2.8	103	3.0	1.0	1.0	2.8	1.0	16.3	3.20*
404.155B	34	101	2.3*	74*	3.0	1.0	1.0	2.5	1.0	16.9	3.17
404.156	33	96*	3.3	74	3.0	1.0	1.0	3.5*	1.0	17.7	2.76
404.157	29	95	1.9	81*	3.0	1.0	1.0	2.8	1.0	18.4	3.35
404.158	29	93	1.3	69	3.0	1.0	1.0	3.0	1.0	19.9*	2.80
404.160A	45	115	3.0	106	3.0	1.0	1.0	2.5	1.0	17.3	3.02*
404.160B	46*	115	3.9	109	3.0	1.0	1.0	2.5	1.0	17.4	3.45
404.166	63	123	2.5	100*	2.5	2.0*	3.5*	1.8	-	8.1	2.15
404.168	60	122	4.3	96*	3.5	1.0	3.5*	2.0	2.0	8.3	2.02

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction								
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.752	III	19.4	44.6	11.6	3.0	22.1	54.7	8.6	0.0	1	R		R	H					
398.755	III	18.6	45.7	12.3	2.9	19.3	57.5	8.0	0.0	1	R		R	R					
398.763	III	18.9	45.1	12.5	3.1	22.0	55.3	7.1	0.0	3	R		R	R					
398.776	III	19.2	44.6	11.5	3.1	22.7	55.3	7.4	0.0	4	R								
398.806	III	Tested in and reported with early group IV evaluation																	
398.813	III	17.9	44.6	12.9	3.2	17.4	57.7	8.9	0.0										
398.814	III	17.6	45.8	12.0	3.0	23.1	54.0	7.8	0.0										
398.821	III	17.8	46.3	11.9	3.3	26.5	51.7	6.5	0.0	1	S								
398.822	III	18.4	45.1	12.0	3.2	25.2	52.7	7.0	0.0	1	S								
398.831	III	17.5	45.0	11.8	2.9	24.0	53.6	7.6	0.0	1	H								
398.832	III	Tested in and reported with early group IV evaluation								1	S								
398.841	III	18.8	43.7	12.5	2.8	23.1	54.7	6.8	0.0	1	R		R	R					
398.859	III	18.3	43.7	12.4	3.0	24.7	52.5	7.5	0.0	1	S								
398.881	III	19.1	45.4	11.4	3.9	21.9	55.3	7.5	0.0	5	S								
398.885	III	17.6	44.1	11.7	3.1	29.6	49.1	6.6	0.0	1	S								
398.898	III	19.0	44.9	12.4	3.3	22.2	54.3	7.9	0.0	1	H								
398.902	III	17.6	46.3	12.7	3.1	21.0	55.4	7.8	0.0	4	S								
398.903	III	Tested in and reported with early group IV evaluation								5	S								
398.908	III	17.9	46.8	12.2	3.0	22.2	54.6	7.9	0.0	1	S								
398.927	III	17.9	45.1	12.1	2.9	25.8	51.8	7.4	0.0	1	H								
398.930	III	19.4	43.6	12.6	3.2	19.8	56.1	8.3	0.0	2	R								
398.954	III	17.7	47.6	11.5	3.0	22.6	55.6	7.3	0.0	1	S								
398.955	III	18.1	45.5	13.2	3.0	20.7	55.1	7.9	0.0	5	R		R	R					
398.957	III	18.4	45.5	11.9	2.9	22.9	54.3	7.9	0.0	1	S								
398.980	III	18.0	44.5	11.4	2.8	31.0	47.6	7.3	0.0	1	S								
398.989	III	17.7	45.8	12.5	2.9	23.5	53.0	8.1	0.0	1	S								
398.992	III	17.8	44.3	12.4	2.7	26.1	51.5	7.3	0.0	1	H								
398.993	III	17.9	44.9	12.1	3.0	23.0	53.7	8.2	0.0	1	R		R	S					
399.008	III	18.4	44.1	12.0	3.1	21.3	54.8	8.8	0.0	1	R		R	R					
399.043	III	18.3	44.0	12.6	3.0	20.8	55.3	8.4	0.0	1	S								
399.063	III	17.5	46.0	12.6	3.1	20.6	55.7	8.0	0.0	3	S								
399.068	III	17.9	45.0	12.0	2.9	26.6	51.4	7.2	0.0	1	H								
399.077	III	16.5	45.3	12.0	3.5	25.2	51.3	8.0	0.0	1	R		R	R					
399.080	III	16.6	48.1	12.1	2.9	21.8	55.8	7.5	0.0	1	R		R	R					
401.418	I	13.1	43.8	14.0	3.4	13.3	56.6	12.6	0.0	3	S								
404.151	II	14.8	45.9	13.1	3.1	16.0	58.1	9.8	0.0	4	S								
404.152	III	18.7	45.8	11.4	3.3	24.5	54.2	6.7	0.0	5	S								
404.154	III	18.9	44.1	12.0	3.3	29.2	48.7	6.7	0.0	5	S								
404.155B	I	20.1	43.2	11.1	3.8	28.0	49.9	7.3	0.1	3	S								
404.156	I	19.2	44.0	10.9	3.1	37.1	43.1	5.7	0.1	4	S								
404.157	I	19.6	43.4	12.8	3.1	24.5	51.9	7.6	0.1	3	S								
404.158	I	18.9	46.5	12.7	3.4	25.6	50.8	7.4	0.1	4	S								
404.160A	III	19.2	42.6	12.2	3.3	27.9	49.6	7.0	0.0	4	S								
404.160B	III	19.6	43.7	11.8	3.1	33.0	45.8	6.4	0.0	5	S								
404.166	III	15.5	43.1	11.9	2.5	17.0	56.2	12.3	0.0	1	S								
404.168	III	17.3	46.6	12.4	3.3	19.8	54.4	10.0	0.1	4	H								

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
404.169A	Tun san bai can ker	K 5324	USSR		China	1975	I
404.169B	(Tun san bai can ker)	(K 5324)	USSR		China	1975	III
404.171	Tyn san pin dian huan	K 5326	USSR		China	1975	II
404.175	Tyn san tian ep dan	K 5330	USSR		China	1975	III
404.180	Sin i da baj pi	K 5335	USSR		China	1975	III
404.182	Sin i tu li rau	K 5337	USSR		China	1975	III
404.186	Dun haj sy li czao	K 5344	USSR		China	1975	III
404.187	Suj nii hun mao ju	K 5348	USSR		China	1975	II
404.188A	Huaj an si er dian	K 5349	USSR		China	1975	II
404.188B	(Huaj an si er dian)	(K 5349)	USSR		China	1975	III
404.189	Da dou	K 5360	USSR		China	1975	III
404.192A	Czao dun 50	K 5396	USSR		China	1975	I
404.192B	(Czao dun 50)	(K 5396)	USSR		China	1975	I
404.192C	(Czao dun 50)	(K 5396)	USSR		China	1975	I
404.196A		K 5435	USSR		China	1975	II
404.196B		(K 5435)	USSR		China	1975	III
405.690	Tie feng No. 3		China		China	1976	II
405.691	Tie feng No. 5		China		China	1975	III
407.386D			China		China	1976	I
407.653		VIR 964	USSR		China	1976	III
407.654		VIR 1511	USSR		China	1976	I
407.655A		VIR 2504	USSR		China	1976	I
407.655B		(VIR 2504)	USSR		China	1976	II
407.655C		(VIR 2504)	USSR		China	1976	III
407.656	Len suj pin din huan	VIR 5215	USSR		China	1976	II
407.657		VIR 5227	USSR		China	1976	III
407.659A	Dun haj hun mao czi	VIR 5341	USSR		China	1976	II
407.659B	(Dun haj hun mao czi)	(VIR 5341)	USSR		China	1976	III
407.661	Toyosuzu		Canada		Japan	1976	II
407.701	Hei long No. 3		Canada		China	1976	I
407.704	Jilin No. 9		Canada		China	1976	I
407.705	Jilin No. 12		Canada		China	1976	I
407.706A	Chou yao tao		Canada		China	1976	I
407.706B	(Chou yao tao)		Canada		China	1976	II
407.710	Foo sun No. 1		Canada		China	1976	I
407.711A	Hei nung No. 4		Canada		China	1976	II
407.711B	(Hei nung No. 4)		Canada		China	1976	II
407.712	Hei nung No. 18		Canada		China	1976	I
407.714	Jan chi tao		Canada		China	1976	II
407.715	Jin nung No. 2		Canada		China	1976	I
407.716	Jin nung No. 3		Canada		China	1976	I
407.717	Jin nung No. 5		Canada		China	1976	II
407.718	Jin shen chi		Canada		China	1976	I
407.719	Jou feng No. 2		Canada		China	1976	II
407.720	Kao chien tao		Canada		China	1976	II
407.721	Muim bao jing		Canada		China	1976	II

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
404.169A	I	P	T	E	N	Br	D	Y	Br			
404.169B	III	P	G	A	N	Tn	D	Y	Ib			
404.171	II	W	G	E	N	Br	S	Y	Bf			
404.175	III	P	G	A	N	Br	D	Y	Bf			
404.180	III	W	G	E	N	Tn	S	Y	Bf			
404.182	III	Lp	G	Sa	N	Tn	I	Y	Bf			
404.186	III	P	G	A	N	Br	S	Y	Ib			
404.187	II	P	T	A	N	Br	I	Y	Br			
404.188A	II	W	T	E	N	Br	S	Y	Bl			
404.188B	III	P	Ng	A	Ssp	Tn	I	Y	Bl			
404.189	III	W	G	E	Sp	Dbr	S	Y	Bf			
404.192A	I	W	G	E	N	Br	D	Y	Y			
404.192B	I	W	G	E	N	Br	D	Y	Y			
404.192C	I	W	G	E	N	Lbr	I	Y	Y			
404.196A	II	P	G	Sa	N	Br	I	Y	Bf			
404.196B	III	Lp	G	Sa	N	Tn	D	Y	Bf			
405.690	II	W	G	E	N	Dbr	S	Y	Bf		Na	
405.691	III	W	G	E	Ssp	Br	S	Y	Y			
407.386D	I	P	G	E	N	Tn	I	Y	Y			
407.653	III	P	Ng	E	N	Lbr	S	Bl	Bl			
407.654	I	P	T	E	N	Br	I	Y	Br			
407.655A	I	P	T	E	N	Br	S	Br	Br		Dab	
407.655B	II	P	T	E	N	Br	I	G	Bl			
407.655C	III	P	T	E	N	Br	I	Tn	Tn			
407.656	II	W	Lt	Sa	N	Tn	I	Br	Br			
407.657	III	P	G	E	N	Br	S	Y	Bf			
407.659A	II	P	G	Sa	N	Tn	I	G	Bf			
407.659B	III	P	G	A	N	Tn	S	G	Bf			
407.661	II	P	Lt	E	Ssp	Br	D	Y	Y			
407.701	I	W	G	E	N	Br	S	Y	Lbf			
407.704	I	W	G	E	Ssp	Br	S	Y	Bf			
407.705	I	W	G	E	Ssp	Tn	S	Y	Lbf			
407.706A	I	W	G	E	Ssp	Br	S	Y	Lbf			
407.706B	II	W	G	E	Ssp	Br	S	Y	Y			
407.710	I	P	G	E	N	Br	I	Y	Ib			
407.711A	II	W	G	E	Ssp	Br	S	Y	Lbf		Na	
407.711B	II	W	G	E	Ssp	Br	S	Y	Y			
407.712	I	W	G	E	Ssp	Br	I	Y	Bf			
407.714	II	W	G	E	Ssp	Br	S	Y	Y		Na	
407.715	I	P	G	E	N	Br	S	Y	Y			
407.716	I	W	G	E	N	Br	S	Y	Y			
407.717	II	W	G	E	N	Br	S	Y	Lbf			
407.718	I	W	G	E	N	Br	I	Y	Lbf		Na	
407.719	II	W	G	E	N	Br	S	Y	Lbf			
407.720	II	W	G	E	N	Br	S	Y	Y			
407.721	II	W	G	E	N	Br	I	Y	Lbf			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
404.169A	32	98	2.4	95*	4.0	1.0	1.0	3.0*	1.0	13.3	2.61
404.169B	59	120	3.9	86	2.0	1.5	3.0*	1.5	2.0	10.1*	2.29
404.171	39	103	2.8	80	3.0	1.0	1.0	2.3	1.0	15.3	3.02*
404.175	58	124	3.1	114	4.0	1.5	1.5	2.0	2.0	14.5	2.51*
404.180	57	124	3.5	93	2.5	1.0	1.5	2.3	2.5	10.8*	2.56*
404.182	56	119	3.5	110*	3.0*	1.5	3.5*	2.0	2.0	9.7	2.40
404.186	54	121	3.9	89*	2.0	1.5	3.5*	2.3	2.0	13.4*	2.27
404.187	54	109	4.1*	113*	2.5	1.0	1.5	1.8	3.0	10.4	2.28*
404.188A	39	113	2.1	111	3.0	1.0	1.0	2.5	1.0	13.9*	3.21*
404.188B	56	117	3.1*	112*	4.0	2.0	5.0	2.5	1.5	14.8	2.10*
404.189	57	121	4.0	86*	3.5	1.5	3.5*	2.0	1.5	6.7	2.04
404.192A	31	93	2.6*	83*	3.0	1.0	1.0	3.5	1.0	17.6	2.79
404.192B	33	101	2.3*	92	3.0	1.0	1.0	3.3	1.0	18.5	2.86*
404.192C	31	106	1.8*	75*	3.0	1.0	1.0	2.8	1.0	20.6	3.45
404.196A	55	109	3.3	93*	3.0	1.5	4.0*	2.3	2.0	10.4	2.12
404.196B	58	118	3.6	98*	3.0*	1.0	3.5*	1.8	2.0	9.4	2.55
405.690	37	108	2.7	98	3.0	1.0	1.0	2.3	1.0	17.9	2.79*
405.691	Tested in and reported with early group IV evaluation										
407.386D	34	98	2.8*	59	3.0	1.0	1.0	2.5	1.0	11.9	2.59
407.653	62	118	3.4	133*	5.0	1.0	3.5*	2.3	-	8.4	2.20*
407.654	33	106	2.7	88	3.0	1.0	1.0	2.0	1.0	12.4	3.50*
407.655A	33	102	4.2*	90*	4.0	1.0	1.0	2.3	-	12.0	2.93
407.655B	40	112	3.4	115*	4.0	1.0	1.0	2.0	3.0	14.2	2.80
407.655C	47*	118	3.6	117*	4.0	1.0	2.0*	2.3	4.5	13.1*	2.51
407.656	53	111	3.0	92*	4.0	1.0	2.5*	2.0	-	9.3	2.24*
407.657	50	113	2.3	88	2.0	1.5	2.5*	1.8	1.0	15.1*	2.87*
407.659A	49	116	3.8	100	4.0	1.0	2.0*	2.0	2.0	10.3	3.05*
407.659B	53	117	3.1	100	3.5	1.5	3.5*	2.0	2.0	10.6	2.96*
407.661	34	113	2.0*	46	1.0	1.5	4.0*	2.3	1.0	22.8	2.95
407.701	30	94	2.3	82	3.0	1.0	1.0	3.3	1.0	19.5	2.78
407.704	36	102	2.6	91	3.0	1.0	1.0	2.5	1.0	19.7	3.38
407.705	34	100	2.6	83*	3.0	1.0	1.0	2.3	1.0	16.5	2.94
407.706A	39	100	1.8	59	2.5	1.0	1.0	2.3	1.0	16.8	2.88
407.706B	38	105	1.8*	56	2.0	1.0	1.0	2.3	1.0	18.8	2.97
407.710	30	103	1.7*	59	2.5	1.0	1.0	2.8	1.0	17.1	3.63*
407.711A	34	107	2.6	84	3.0	1.0	1.0	2.8	1.0	17.2	2.79
407.711B	44	109	2.1	85	1.0	1.0	1.0	2.5	1.5	15.8	2.96
407.712	29	96	2.3*	65	3.0	1.0	1.0	3.5	1.0	22.3*	2.54*
407.714	36	102	3.1*	82*	3.0	1.0	1.0	2.8	1.5	17.9	2.85
407.715	34	102	3.0	80	3.0	1.0	1.0	2.3	1.0	16.4	2.83
407.716	33	98	2.4	76	2.0	1.0	1.0	2.8	1.0	18.8	3.02
407.717	33	106	2.1	74	2.0	1.0	1.0	3.0	1.0	18.9	3.12*
407.718	33	101	3.3*	76*	3.0	1.0	1.0	2.0	1.0	16.4	3.43
407.719	33	104	2.1	76	2.5	1.0	1.0	2.5	1.0	18.3	2.82
407.720	32	110*	2.6	77	2.0	1.0	1.0	2.5	1.0	18.3	3.42*
407.721	33	108	2.2	85	3.0	1.0	1.0	2.8	1.5	23.0	3.25*

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
404.169A	I	19.3	44.5	12.0	3.9	25.3	52.1	6.7	0.1	3	R
404.169B	III	17.0	44.2	11.5	3.2	19.7	57.0	8.6	0.0	1	R
404.171	II	20.0	42.6	12.0	3.5	23.0	53.2	8.4	0.0	5	S
404.175	III	18.1	45.7	13.2	2.8	21.3	55.1	7.8	0.0	4	S
404.180	III	17.6	45.5	11.5	3.0	22.2	54.5	8.8	0.0	1	S
404.182	III	16.7	46.2	12.3	2.8	17.9	56.4	10.6	0.0	1	R
404.186	III	16.8	45.9	11.1	2.9	29.3	49.4	7.3	0.0	1	R
404.187	II	16.8	46.3	12.6	3.0	21.3	54.7	8.4	0.0	1	S
404.188A	II	19.3	43.0	11.1	3.5	17.7	59.0	8.7	0.0	5	S
404.188B	III	16.6	47.6	12.2	2.7	20.2	56.1	8.8	0.0		
404.189	III	17.1	43.6	13.4	3.0	18.4	55.0	10.2	0.0	3	H
404.192A	I	20.4	43.2	12.0	3.3	28.7	49.5	6.4	0.1	2	S
404.192B	I	20.4	44.0	11.7	3.5	22.8	54.8	7.1	0.1	1	S
404.192C	I	18.6	44.7	13.2	3.3	19.5	55.9	8.1	0.1	3	H
404.196A	II	14.9	46.0	12.7	3.4	21.1	52.7	10.0	0.0	1	R
404.196B	III	16.7	47.2	12.4	2.9	16.4	57.1	11.2	0.0	5	S
405.690	II	18.0	44.7	11.9	3.9	26.8	50.6	6.9	0.0	3	R
405.691	III	Tested in and reported with early group IV evaluation								5	S
407.386D	I	19.8	42.6	11.4	3.0	24.0	54.3	7.2	0.1	4	S
407.653	III	15.5	46.2	12.9	2.8	17.1	56.8	10.4	0.0	1	R
407.654	I	19.0	43.4	11.7	3.3	19.0	57.3	8.6	0.1	5	S
407.655A	I	17.8	45.7	13.2	3.3	18.9	56.6	7.8	0.1		S
407.655B	II	17.6	47.6	12.1	3.2	26.4	51.5	6.8	0.0	5	S
407.655C	III	18.0	45.8	12.4	3.4	21.0	55.6	7.6	0.0	1	S
407.656	II	16.1	44.6	13.4	2.9	20.1	54.1	9.5	0.0	1	S
407.657	III	18.9	44.2	12.1	2.9	25.4	52.6	7.0	0.0	5	S
407.659A	II	16.4	44.4	12.4	2.6	20.2	53.6	11.2	0.0	1	R
407.659B	III	18.0	45.0	12.0	3.0	18.3	56.3	10.3	0.0		
407.661	II	18.5	45.7	12.0	2.7	18.9	58.4	8.0	0.0	1	R
407.701	I	20.8	43.6	11.7	3.4	30.5	48.1	6.3	0.1	4	R
407.704	I	20.0	44.9	12.5	3.9	28.2	48.4	6.9	0.0	4	H
407.705	I	20.2	42.8	12.6	3.6	25.9	51.5	6.3	0.0	1	R
407.706A	I	20.2	43.9	12.6	3.7	23.2	53.7	6.9	0.1	4	H
407.706B	II	19.6	42.9	11.9	3.0	23.5	54.2	7.4	0.0	1	H
407.710	I	20.2	45.4	11.7	3.3	21.9	55.9	7.3	0.1	4	S
407.711A	II	18.6	43.7	12.4	3.8	21.7	53.8	8.3	0.0	4	R
407.711B	II	18.3	45.5	12.5	3.8	18.8	56.3	8.7	0.0	1	S
407.712	I	20.1	44.3	12.0	3.1	26.1	51.7	7.0	0.1	4	S
407.714	II	18.5	46.6	12.9	3.7	20.0	54.4	8.9	0.0	4	S
407.715	I	19.3	45.1	11.7	3.7	25.7	52.7	6.3	0.0	5	S
407.716	I	19.0	46.7	12.0	3.4	21.5	55.3	7.7	0.0	1	R
407.717	II	19.7	47.8	11.4	3.6	25.4	52.9	6.7	0.0	3	H
407.718	I	21.2	41.4	12.1	3.8	26.1	51.8	6.0	0.1	3	R
407.719	II	19.2	47.0	11.1	3.8	30.1	48.7	6.3	0.0	3	R
407.720	II	19.3	43.1	11.2	3.5	22.1	55.2	7.9	0.0	3	R
407.721	II	19.8	44.6	11.7	3.4	22.1	55.2	7.6	0.0	3	R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
407.722	Ping ting sheung		Canada		China	1976	III
407.723	See shen tze lee huang		Canada		China	1976	I
407.724	Sin peh tao		Canada		China	1976	II
407.726	Wu ding choo		Canada		China	1976	I
407.728	(Probably Williams)		China		USA+	1976	III
407.730			China		China	1976	III
407.740	(Probably Williams)		China		USA+	1976	III
407.746			China		China	1976	III
407.810		ORD 8150	S. Korea		S. Korea	1976	III
407.849		KAS 510-1	S. Korea		S. Korea	1976	III
407.850		KAS 510-2-1	S. Korea		S. Korea	1976	III
407.851		KAS 510-2-2	S. Korea		S. Korea	1976	III
407.861A		KAS 510-8	S. Korea		S. Korea	1976	III
407.861B		(KAS 510-8)	S. Korea		S. Korea	1976	III
407.870		KAS 511-4	S. Korea		S. Korea	1976	III
407.875A		KAS 511-9	S. Korea		S. Korea	1976	III
407.903A		KAS 530-1	S. Korea		S. Korea	1976	III
407.903B		(KAS 530-1)	S. Korea		S. Korea	1976	III
407.907A		KAS 530-5	S. Korea		S. Korea	1976	III
407.922		KAS 551-2	S. Korea		S. Korea	1976	III
407.925		KAS 551-5	S. Korea		S. Korea	1976	III
407.926A		KAS 551-6	S. Korea		S. Korea	1976	III
407.926B		(KAS 551-6)	S. Korea		S. Korea	1976	III
407.933		KAS 552-5	S. Korea		S. Korea	1976	III
407.974A		KAS 540-3	S. Korea		S. Korea	1976	III
407.974B		(KAS 540-3)	S. Korea		S. Korea	1976	III
408.005		KAS 547-1	S. Korea		S. Korea	1976	III
408.019A		KAS 549-2	S. Korea		S. Korea	1976	III
408.025		KAS 549-8	S. Korea		S. Korea	1976	III
408.026		KAS 549-9	S. Korea		S. Korea	1976	III
408.028		KAS 549-11	S. Korea		S. Korea	1976	III
408.048A		KAS 575-6	S. Korea		S. Korea	1976	III
408.050A		KAS 575-8	S. Korea		S. Korea	1976	III
408.052A		KAS 575-10	S. Korea		S. Korea	1976	III
408.052B		(KAS 575-10)	S. Korea		S. Korea	1976	III
408.075		KAS 631-3	S. Korea		S. Korea	1976	III
408.128		KAS 639-3	S. Korea		S. Korea	1976	III
408.130		KAS 639-5	S. Korea		S. Korea	1976	III
408.135A		KAS 640-4	S. Korea		S. Korea	1976	III
408.138C		KAS 640-7	S. Korea		S. Korea	1976	III
408.255A		KAS 611-2	S. Korea		S. Korea	1976	III
408.262A		KAS 612-7	S. Korea		S. Korea	1976	III
408.270A		KAS 613-4	S. Korea		S. Korea	1976	III
408.312A		KAS 626-4	S. Korea		S. Korea	1976	III
408.312B		(KAS 626-4)	S. Korea		S. Korea	1976	III
408.315A		KAS 626-7	S. Korea		S. Korea	1976	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
407.722	III	W	G	E	Ssp	Dbr	S	Y	Y			
407.723	I	W	G	E	N	Br	S	Y	Lbf			
407.724	II	P	G	E	N	Tn	I	Y	Y			
407.726	I	P	G	E	N	Br	S	Y	Y			
407.728	III	W	T	E	N	Tn	S	Y	Bl			
407.730	III	P	Lt	E	N	Lbr	S	Y	Blbr			
407.740	III	W	T	E	N	Tn	S	Y	Bl			
407.746	III	W	Lt	Sa	N	Br	I	Bl	Bl		Dab	
407.810	III	P	T	E	N	Tn	S	Bl	Bl			
407.849	III	W	G	A	Ssp	Tn	D	Y	Y			
407.850	III	W	G	A	Ssp	Tn	D	Y	Y			
407.851	III	W	G	A	Ssp	Tn	D	Y	Y			
407.861A	III	W	G	E	Ssp	Tn	D	Y	Bf			
407.861B	III	W	G	A	Ssp	Br	I	Y	Bf			
407.870	III	W	G	A	Ssp	Tn	D	Y	Bf			
407.875A	III	W	G	A	Ssp	Tn	D	Y	Y			
407.903A	III	W	G	A	Ssp	Tn	D	Y	Y			
407.903B	III	W	G	A	Ssp	Tn	D	Y	Y			
407.907A	III	P	G	E	Ssp	Br	D	Y	Bf			
407.922	III	P	G	E	Ssp	Br	S	Y	Bf			
407.925	III	W	G	A	Ssp	Tn	D	Y	Bf			
407.926A	III	W	G	A	Ssp	Tn	D	Y	Y			
407.926B	III	W	G	A	Ssp	Tn	D	Y	Y			
407.933	III	W	G	A	Ssp	Tn	D	Y	Y			
407.974A	III	Dp	T	E	Ssp	Tn	D	Y	Br			
407.974B	III	Dp	G	E	Ssp	Tn	D	Y	Bf			
408.005	III	W	G	A	Ssp	Tn	D	Y	Y			
408.019A	III	W	G	A	Ssp	Tn	D	Y	Bf			
408.025	III	W	G	A	Ssp	Tn	D	Y	Y			
408.026	III	W	G	A	Ssp	Tn	D	Y	Bf			
408.028	III	W	G	A	Ssp	Tn	D	Y	Bf			
408.048A	III	W	G	A	Ssp	Tn	D	Y	Y			
408.050A	III	W	T	E	Ssp	Br	S	Bl	Bl			
408.052A	III	W	G	E	Ssp	Tn	D	Y	Bf			
408.052B	III	W	G	A	Ssp	Tn	D	Y	Y			
408.075	III	W	G	A	Ssp	Tn	D	Y	Y			
408.128	III	W	G	A	Ssp	Tn	D	Y	Y			
408.130	III	W	G	A	Ssp	Tn	D	Y	Y			
408.135A	III	W	G	Sa	Ssp	Tn	D	Y	Y			
408.138C	III	P	G	E	Ssp	Br	D	Y	Y			
408.255A	III	W	G	A	Ssp	Tn	D	Y	Y			
408.262A	III	P	G	E	Ssp	Tn	D	Y	Y			
408.270A	III	W	G	A	Ssp	Tn	D	Y	Y			
408.312A	III	W	G	A	Ssp	Br	D	Y	Y			
408.312B	III	W	G	A	Ssp	Tn	D	Y	Y			
408.315A	III	W	G	A	Ssp	Tn	D	Y	Bf			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
407.722	45*	115	2.8	111*	3.0	1.0	1.5	2.3	1.5	16.0	2.87*
407.723	31	98	2.2	75	3.0	1.0	1.0	2.3	1.0	18.2	2.82
407.724	39	103	4.1	73	3.0	1.0	1.0	2.5	1.0	12.5	2.63*
407.726	30	100	1.8	55	2.0	1.0	1.0	2.3	1.0	15.6	3.29
407.728	43	121	1.5	120	3.0	1.0	1.0	2.0	2.0	18.9	3.91*
407.730	Tested in and reported with early group IV evaluation										
407.740	42	121	1.8	122*	3.0	1.0	1.0	2.3	1.0	18.9*	4.17*
407.746	47*	113	2.0	75	1.5	3.5*	3.5*	2.0	-	19.2	2.10
407.810	56	123	3.1	113	4.0	1.5	1.5	2.0	-	11.0	2.72*
407.849	51	119	3.4*	71	1.5	2.5	3.5*	2.3	2.0	22.6	2.22
407.850	47*	118	2.6*	69	1.0	1.5	3.5*	2.3	2.0	24.4	2.62
407.851	Tested in and reported with early group IV evaluation										
407.861A	48*	115	1.5	59	1.5	2.0	3.5*	2.5	1.5	18.8	2.61
407.861B	51	120	2.8*	81*	2.0	1.5	3.5*	2.0	3.0	19.2	2.06
407.870	51	118	3.5	72	1.5	1.5	3.5*	2.3	2.0	23.0	2.68
407.875A	49*	118	3.5*	73	1.5	2.0	3.5*	2.3	2.5	24.1	2.76
407.903A	49*	116	2.3*	72	2.0	2.0	3.5*	2.3	2.0	23.2	2.53
407.903B	51	120	3.5*	80*	2.0	2.0*	3.5*	2.3	2.0	21.9*	2.12
407.907A	50	116	2.5	73	2.0	1.0	2.5*	1.8	1.0	15.4	2.86
407.922	Tested in and reported with early group IV evaluation										
407.925	49	117	2.0	70	2.0	1.5	3.5*	2.5	1.5	21.4	2.43
407.926A	48	112	1.6	59	1.5	1.5	3.5*	2.3	2.5	18.9	2.08
407.926B	49	116	3.3*	67	2.0	2.0	3.5*	2.3	2.0	23.2	2.21
407.933	47	116	2.3*	67	1.5	1.5	3.5*	2.3	2.0	21.5	2.46*
407.974A	53	117	2.9*	75	1.0	1.5	3.0*	1.8	1.5	18.4	2.60
407.974B	52	118	2.3	65	1.5	1.0	2.5*	1.5	1.5	12.2	2.86
408.005	50	120	3.5*	72	1.0	2.5	3.5*	2.3	2.0	23.7	2.38
408.019A	48	118	2.8*	77	1.0	2.0	3.5*	2.3	1.5	22.4*	2.76
408.025	Tested in and reported with early group IV evaluation										
408.026	51	119	2.5	77	1.0	2.5	3.5*	2.0	2.0	25.2	2.49
408.028	Tested in and reported with early group IV evaluation										
408.048A	Tested in and reported with early group IV evaluation										
408.050A	49	117	3.9	57	1.5	1.5	3.0*	2.5	-	24.3	2.60
408.052A	49	119	2.8	75	1.5	1.5	3.0*	2.5	2.0	20.4	2.96*
408.052B	47	117	2.8*	63	1.5	1.5	3.5*	2.3	2.0	21.3	2.52
408.075	46	115	2.3*	71	1.5	1.5	3.0*	2.5	2.0	24.5	2.80
408.128	48	116	3.3*	70	2.0	1.5	3.5*	2.3	2.0	21.4	2.49
408.130	49	118	2.6	73	1.5	2.0	3.5*	2.5	2.0	24.3	2.42
408.135A	49	120	2.0	68	1.5	1.5	3.5*	2.0	1.0	25.7	2.18*
408.138C	Tested in and reported with early group IV evaluation										
408.255A	52	119	3.2*	75	1.5	1.5	3.5*	2.3	2.0	22.7	2.26
408.262A	Tested in and reported with early group IV evaluation										
408.270A	48	117	2.6	78	1.5	2.0	3.5*	2.3	2.0	24.8	2.61
408.312A	48	119	2.1*	66	1.0	2.0	3.0*	2.5	2.0	21.7	2.39
408.312B	Tested in and reported with early group IV evaluation										
408.315A	48	116	2.8*	71	1.5	1.5	3.5*	2.3	2.0	23.6	2.44

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
407.722	III	18.0	43.1	12.2	3.0	22.6	54.5	7.6	0.0	4	S
407.723	I	21.6	42.3	11.5	3.4	28.6	50.5	5.9	0.1	3	R
407.724	II	19.3	43.7	11.4	3.3	22.8	55.2	7.2	0.0	3	H
407.726	I	19.4	45.0	11.4	3.7	23.4	54.2	7.4	0.1	5	S
407.728	III	19.0	43.8	11.3	3.4	23.3	55.2	6.8	0.0	4	S
407.730	III	Tested in and reported with early group IV evaluation								4	S
407.740	III	18.9	44.3	11.2	3.4	22.6	55.9	6.8	0.1	4	S
407.746	III	16.5	44.9	12.1	3.5	27.8	50.1	6.5	0.0	1	S
407.810	III	17.3	46.9	13.4	3.3	23.3	53.3	6.6	0.1	1	H
407.849	III	18.1	43.8	12.0	3.0	26.3	51.6	7.1	0.0	1	S
407.850	III	18.0	44.6	11.8	3.1	25.7	52.0	7.3	0.0	1	R
407.851	III	Tested in and reported with early group IV evaluation								1	S
407.861A	III	18.2	44.6	12.3	3.4	18.1	57.8	8.4	0.0	1	R
407.861B	III	18.1	44.2	13.2	2.9	18.9	57.0	8.0	0.0	1	R
407.870	III	18.1	44.4	12.7	3.1	22.1	54.1	7.9	0.0		H
407.875A	III	17.9	45.0	12.1	3.1	24.2	53.3	7.2	0.0		S
407.903A	III	18.5	45.9	12.0	3.1	23.9	53.6	7.4	0.0	1	S
407.903B	III	17.9	45.1	12.4	3.1	24.4	52.5	7.6	0.0	1	S
407.907A	III	18.9	46.0	12.8	3.3	21.4	53.9	8.6	0.1	1	R
407.922	III	Tested in and reported with early group IV evaluation								1	R
407.925	III	18.1	44.2	12.4	3.3	22.8	53.3	8.1	0.0	1	S
407.926A	III	18.1	46.6	12.3	3.1	22.8	53.7	8.1	0.0	1	R
407.926B	III	17.6	45.6	11.5	3.2	31.7	47.0	6.6	0.0	1	R
407.933	III	17.9	45.6	11.6	3.1	25.2	52.4	7.5	0.0	1	R
407.974A	III	18.7	45.9	12.9	3.4	21.1	55.0	7.7	0.0	1	H
407.974B	III	17.7	46.7	11.8	3.2	20.4	56.8	7.7	0.1	1	
408.005	III	17.9	45.4	11.9	3.0	23.3	54.2	7.6	0.0	1	S
408.019A	III	17.5	46.5	11.6	3.0	24.5	53.4	7.5	0.0	1	S
408.025	III	Tested in and reported with early group IV evaluation								1	S
408.026	III	17.4	45.9	11.6	2.8	21.1	55.6	8.9	0.0	1	S
408.028	III	Tested in and reported with early group IV evaluation								1	S
408.048A	III	Tested in and reported with early group IV evaluation								1	R
408.050A	III	17.9	46.2	12.7	3.2	18.4	57.4	8.3	0.0	1	R
408.052A	III	18.3	43.5	12.9	3.2	21.0	54.8	8.1	0.0	1	R
408.052B	III	17.3	47.1	12.8	3.3	20.1	54.3	9.4	0.1	1	S
408.075	III	17.6	45.9	11.8	3.0	23.4	53.7	8.0	0.0	1	R
408.128	III	17.7	45.6	11.8	3.1	26.3	51.3	7.4	0.0	1	S
408.130	III	16.5	46.2	12.6	3.5	22.6	52.6	8.6	0.1	1	S
408.135A	III	18.3	45.3	11.1	3.0	21.7	56.8	7.4	0.0	1	S
408.138C	III	Tested in and reported with early group IV evaluation								1	R
408.255A	III	17.6	46.4	11.9	2.9	21.1	56.0	8.1	0.1	1	
408.262A	III	Tested in and reported with early group IV evaluation								1	S
408.270A	III	18.5	46.3	11.8	3.1	24.9	52.6	7.5	0.0	1	S
408.312A	III	17.4	46.0	12.5	3.3	20.7	55.3	8.1	0.0		R
408.312B	III	Tested in and reported with early group IV evaluation								1	H
408.315A	III	17.5	45.2	11.6	3.0	24.8	52.9	7.6	0.0	1	S

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
408.315B		(KAS 626-7)	S. Korea		S. Korea	1976	III
408.321		KAS 635-2-1	S. Korea		S. Korea	1976	III
415.072	Hei long		France		China	1977	I
415.073A	Tie feng 17A		France		China	1977	I
415.073B	(Tie feng 17A)		France		China	1977	II
415.074	Tie feng 19A		France		China	1977	III
416.747	A-B	020235	Japan		Japan	1977	I
416.748	A-B(A)	020237	Japan		Japan	1977	II
416.749	A-B(B)	020238	Japan		Japan	1977	II
416.750	A-B(C)	020239	Japan		Japan	1977	III
416.751	A-B(D)	020240	Japan		Japan	1977	I
416.752	A-B(E)	020241	Japan		Japan	1977	II
416.753	Abura daizu	040079	Japan		Japan	1977	III
416.757	Aka ban	090009	Japan		Japan	1977	I
416.762	Akanida	020157	Japan		Japan	1977	II
416.763	Akasaya	040155	Japan		Japan	1977	III
416.773	Aka wase	040082	Japan		Japan	1977	II
416.774	Akebono 1	020321	Japan		Japan	1977	III
416.776	Akita daizu	020183	Japan		Japan	1977	I
416.782	Amakusa	020093	Japan		Japan	1977	I
416.784	ANC-B(A)	020233	Japan		Japan	1977	III
416.789	Aochi daizu	020112	Japan		Japan	1977	III
416.791	Ao daizu	090017	Japan		Japan	1977	II
416.802	Aoroku	020450	Japan		Japan	1977	II
416.805	Asamidori	040315	Japan		Japan	1977	I
416.816	Bikuni	040244	Japan		Japan	1977	II
416.817	Bitoku daizu	040030	Japan		Japan	1977	III
416.818	Bonjiro 55	020011	Japan		Japan	1977	II
416.822	Cha mame shouryuu	040051	Japan		Japan	1977	II
416.823	Cha masshokutou	110024	Japan		China	1977	III
416.830	Chikugo daizu	090057	Japan		Japan	1977	II
416.832	Chougetsu	020028	Japan		Japan	1977	III
416.833	Chousen daizu gei	040084	Japan		Japan	1977	III
416.835	Chousenshu	040313	Japan		Japan	1977	II
416.846	Chuusei shirosaya	020098	Japan		Japan	1977	II
416.852	Daini akasaya	020019	Japan		Japan	1977	III
416.853	Daioutou	040117	Japan		Japan	1977	III
416.856	Daizu kantou 3	040221	Japan		Japan	1977	III
416.862	Doyou mame	090033	Japan		Japan	1977	III
416.863	Ekou daizu	040071	Japan		Japan	1977	II
416.865	Fuji	040044	Japan		Japan	1977	II
416.866	Fuji zairai	040048	Japan		Japan	1977	II
416.868A	Fukken daizu	060074	Japan		Japan	1977	III
416.868B	(Fukken daizu)	(060074)	Japan		Japan	1977	III
416.870	Fukumusume	040194	Japan		Japan	1977	III
416.875	Fuufu daizu	090027	Japan		Japan	1977	II

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
408.315B	III	W	G	A	Ssp	Tn	D	Y	Bf			
408.321	III	W	G	A	Ssp	Tn	D	Y	Y			
415.072	I	W	G	E	N	Br	S	Y	Lbf			
415.073A	I	P	G	E	N	Tn	I	Y	Y			
415.073B	II	P	G	E	N	Tn	I	Y	Y			
415.074	III	W	G	E	N	Tn	S	Y	Y		Na	
416.747	I	P	T	E	Ssp	Br	D	Y	Br			
416.748	II	P	G	E	N	Br	D	Y	Bf			
416.749	II	P	G	E	N	Br	I	Y	Bf			
416.750	III	W	G	E	N	Br	I	Y	Y			
416.751	I	W	G	E	N	Br	I	Y	Y			
416.752	II	W	G	E	N	Br	I	Y	Lbf			
416.753	III	P	-	C	N	Tn	S	Y	Bf			
416.757	I	W	T	A	N	Br	D	Y	Br			
416.762	II	P	T	E	N	Bl	S	Bl	Bl			
416.763	III	P	-	C	N	Tn	I	Y	Bf			
416.773	II	Dp	T	A	N	Tn	D	Y	Br			
416.774	III	P	-	C	N	Tn	D	Y	Bf			
416.776	I	P	T	E	Ssp	Br	I	Y	Br			
416.782	I	W	G	E	Ssp	Br	I	Y	Bf			
416.784	III	W	G	Sa	Ssp	Br	I	Y	Y	Def		
416.789	III	W	G	E	N	Br	D	Y	Bf			
416.791	II	W	T	A	Ssp	Tn	D	Gn	Br			
416.802	II	W	G	A	N	Br	I	Gn	Bf			
416.805	I	P	T	E	Ssp	Br	D	Gn	Bl			
416.816	II	P	-	C	N	Tn	S	Y	Bf			
416.817	III	W	G	E	Ssp	Br	S	Gn	Gn	SSt	Na	
416.818	II	P	G	A	Ssp	Tn	I	Y	Bf			
416.822	II	W	T	Sa	N	Tn	I	Rbr	Rbr			
416.823	III	P	Ng	E	N	Lbr	S	Gnbr	Br			
416.830	II	W	T	A	N	Tn	I	Y	Br			
416.832	III	P	G	A	Ssp	Br	I	Y	Y			
416.833	III	P	-	C	N	Tn	S	Y	Bf			
416.835	II	P	G	Sa	Sp	Br	B	Bl	Bl			Sw
416.846	II	W	G	A	Ssp	Tn	D	Y	Y			
416.852	III	P	T	E	Ssp	Br	S	Y	Br			
416.853	III	W	G	E	N	Dbr	S	Y	Bf			
416.856	III	W	T	A	Ssp	Br	I	Gn	Br			
416.862	III	W	T	E	Ssp	Br	S	Br	Br			
416.863	II	W	G	E	N	Tn	D	Y	Bf			
416.865	II	P	-	C	N	Tn	S	Y	Bf			
416.866	II	W	T	A	N	Br	I	Gn	Br			
416.868A	III	W	T	E	N	Tn	D	Y	Bl			
416.868B	III	W	Ng	E	N	Tn	D	Y	Bl			
416.870	III	W	G	A	Ssp	Tn	D	Y	Y			
416.875	II	W	T	A	N	Tn	D	Lgn	Br			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
408.315B	47	114	2.3*	62	1.5	2.5	4.5	2.3	1.5	22.1*	2.18
408.321	47	117	2.5*	75	1.5	2.0	3.5*	2.3	2.0	23.0	2.41
415.072	29	98	2.6	84	3.0	1.0	1.0	3.0	1.0	20.1	3.08
415.073A	37	100	2.3	72	3.0	1.0	1.0	2.5	1.0	15.1	2.75
415.073B	37	108	2.6	78*	2.5	1.0	1.0	2.3	1.0	14.5	3.02*
415.074	37	113	2.6	95	3.0	1.0	1.5	2.0	1.0	18.1	3.25*
416.747	34	104	2.5	91*	3.0	1.0	1.0	2.3	1.0	20.4	2.77
416.748	34	105	3.0	83*	3.0	1.0	1.0	2.8	1.5	20.1	2.44
416.749	39	113	3.1	93*	2.0	1.5	3.0*	3.0	1.5	20.3*	2.89
416.750	38	121	2.5	107	3.5	1.0	1.5	2.3	3.5	20.8	2.60
416.751	33	99	1.7	82	4.0	1.0	1.0	2.8	1.0	17.8	2.70
416.752	39	106	2.2	96*	3.0	1.0	1.0	2.5	1.5	18.8	2.58
416.753	50	114	1.5	54	1.0	1.5	3.5*	1.8	2.5	16.6*	2.12
416.757	49	105	2.5*	80	2.5	1.0	2.5*	2.0	2.5	12.0	2.74
416.762	42	113*	4.4	118*	4.5	1.0	1.0	2.3	-	8.9*	2.84*
416.763	51	115	1.5	57	1.0	1.5	3.0*	1.8	2.5	14.1	2.36
416.773	50	108	2.6	68	2.0	1.0	1.5	1.8	3.5	9.5	1.97
416.774	50	114	1.5	55	1.0	1.5	3.5*	2.3	2.5	15.4	2.30
416.776	37	104	1.8	57	1.0	1.5	4.5	2.8	1.5	23.6	2.68
416.782	41*	94	1.2	54	3.0	1.5	3.5*	2.0	2.0	11.3	1.62
416.784	39	122*	1.0	39	1.0	1.5	3.5*	2.3	2.5	17.6	2.32
416.789	52	118	2.5	85	1.5	2.0	3.5*	2.0	2.5	16.9*	2.18
416.791	47	107	3.8*	77	2.0	2.0	3.5*	1.8	2.0	14.6	2.79
416.802	46	107	3.3*	72	2.0	1.0	3.5*	2.3	1.0	19.6*	2.51
416.805	34	94	2.1*	49	2.5	1.5	1.5	3.0	1.0	25.1	2.37
416.816	49	110	1.9	56	1.0	1.0	3.5*	2.5	2.0	13.7	2.20
416.817	44	111	2.4*	62	2.0	1.0	1.0	1.5	2.5	18.1	2.54
416.818	48	104	2.0	70	1.5	1.0	3.0*	2.3	1.0	16.4	1.95
416.822	52	110	2.0	64	1.0	1.0	3.5*	2.3	-	11.0	2.35*
416.823	51	114	2.7	119	4.0	1.0	1.0	2.0	-	10.7	2.73*
416.830	49	107	2.3	68	1.0	1.0	3.5*	2.0	2.5	14.2	2.63
416.832	51	115	1.3	62	1.5	1.5	3.0*	2.3	2.0	16.8*	2.36*
416.833	50	113	1.5	60	1.0	2.5	3.5*	2.5*	2.5	14.3*	2.01
416.835	52	115	4.0	65	4.5	1.5	3.0*	2.3	-	6.3	2.10
416.846	45*	110	1.9	58	1.5	3.5*	3.5*	2.3	2.0	24.2	2.20
416.852	50	116	2.3	81	1.5	1.5	3.5*	2.0	4.0*	14.7*	2.18
416.853	41	113	2.5	108	3.5	1.0	1.5	2.3	1.0	20.2	3.02*
416.856	53	117	2.8*	70	1.0	1.5	3.5*	1.8	2.0	16.3*	2.36
416.862	48	123	1.8	81	1.0	1.5	3.0*	2.8	-	24.5*	1.51
416.863	49	109	2.0	85	2.0	1.0	3.5*	1.5	2.0	12.3	2.67*
416.865	51	110	1.8	50	1.0	1.0	3.0*	2.8*	2.5	12.8	1.92
416.866	52	108	2.0*	60	1.0	2.0	4.5	2.0	3.5	13.2*	1.94*
416.868A	55	114	3.0	120*	4.0	2.0	3.5*	2.3	3.5	11.4	2.03
416.868B	58	114	2.9	96*	2.0	2.5	4.0*	2.0	5.0	11.8	2.07
416.870	48	118	2.5	72	1.0	2.0	3.5*	2.3	2.0	25.5	2.79
416.875	50	108	3.8	83	2.0	1.5	3.5*	1.8	2.0	14.6	2.55*

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
408.315B	III	17.6	44.7	11.3	3.2	29.8	49.0	6.7	0.0	1	S
408.321	III	18.2	45.6	11.8	3.2	27.2	50.9	6.9	0.0	1	S
415.072	I	19.2	45.3	11.4	3.7	32.4	46.8	5.6	0.1	4	
415.073A	I	20.0	43.7	11.8	3.4	26.3	51.5	7.1	0.0	5	
415.073B	II	18.9	44.9	11.9	3.2	26.0	51.7	7.2	0.1	2	
415.074	III	19.2	45.8	10.8	3.8	24.1	54.2	7.0	0.0	1	
416.747	I	18.1	44.3	12.1	3.9	25.7	51.3	7.0	0.1	1	S
416.748	II	19.1	44.8	12.0	3.5	25.7	52.1	6.8	0.0	1	S
416.749	II	16.8	46.4	11.0	3.0	24.1	53.1	8.7	0.0	1	S
416.750	III	18.1	47.7	11.2	3.2	23.2	55.0	7.3	0.1	1	S
416.751	I	19.4	44.6	12.2	3.4	28.3	49.9	6.2	0.0	1	S
416.752	II	18.4	45.4	12.2	3.5	24.7	52.5	7.0	0.1	1	S
416.753	III	18.4	44.3	11.1	3.3	30.2	48.0	7.4	0.0	1	R
416.757	I	16.4	44.6	12.0	3.0	23.8	51.5	9.8	0.0	1	R
416.762	II	16.0	45.3	12.8	3.0	19.3	56.2	8.7	0.1	4	S
416.763	III	18.1	43.2	11.3	3.1	28.4	49.1	8.1	0.0	1	S
416.773	II	15.2	48.0	13.8	3.3	20.0	52.1	10.7	0.0	1	R
416.774	III	17.4	43.2	11.4	3.2	28.1	49.2	8.0	0.1	1	S
416.776	I	18.7	46.1	11.9	3.0	27.7	50.5	6.8	0.1	1	R
416.782	I	17.7	43.1	12.8	3.3	21.9	53.8	8.3	0.0	1	S
416.784	III	18.7	43.2	13.3	3.4	16.0	58.8	8.4	0.0	1	R
416.789	III	17.9	43.9	12.7	3.2	27.7	48.8	7.6	0.0	1	S
416.791	II	16.2	44.0	13.0	3.2	23.7	51.2	9.0	0.0	1	R
416.802	II	16.8	45.8	11.9	3.2	27.7	48.8	8.4	0.0	1	S
416.805	I	20.6	43.6	11.1	2.7	29.9	50.1	6.1	0.1	1	R
416.816	II	18.1	42.8	11.3	3.2	27.7	49.5	8.3	0.0	1	S
416.817	III	18.8	45.0	12.9	3.8	19.9	55.4	8.1	0.0	1	S
416.818	II	17.1	46.1	13.4	3.3	23.3	50.9	9.0	0.0	1	S
416.822	II	16.6	46.0	12.8	3.0	21.5	53.1	9.6	0.0	1	S
416.823	III	17.7	43.2	12.2	3.1	22.7	54.4	7.7	0.0	5	R
416.830	II	18.1	45.5	12.3	3.1	22.7	53.5	8.5	0.0	1	R
416.832	III	18.3	45.1	11.5	2.8	22.9	55.3	7.4	0.0	1	H
416.833	III	17.6	43.2	11.1	3.1	32.8	45.4	7.5	0.0	1	S
416.835	II	13.1	46.7	13.6	3.0	15.6	56.4	11.3	0.1	4	R
416.846	II	18.4	43.7	11.8	3.0	28.7	49.4	7.2	0.0	1	S
416.852	III	17.5	45.7	11.9	3.0	24.9	51.7	8.6	0.0	1	S
416.853	III	20.3	45.3	13.0	3.2	22.9	52.3	8.6	0.0	1	S
416.856	III	17.7	46.2	12.1	3.0	26.3	51.3	7.2	0.0	1	R
416.862	III	16.5	43.1	11.7	2.8	25.3	52.3	7.8	0.0	1	R
416.863	II	15.7	46.3	11.7	3.3	28.6	49.2	7.2	0.0	1	R
416.865	II	18.1	43.5	10.9	3.2	31.8	46.3	7.6	0.1	1	S
416.866	II	17.1	44.2	12.6	3.0	28.2	47.6	8.4	0.0	1	R
416.868A	III	16.2	47.8	10.6	2.7	29.7	49.5	7.3	0.0	1	S
416.868B	III	16.3	47.4	12.8	3.1	22.7	52.6	8.9	0.0	1	R
416.870	III	17.9	44.5	11.8	3.0	23.9	53.5	7.9	0.0	1	S
416.875	II	16.5	44.6	12.8	3.1	25.8	49.6	8.7	0.0	1	R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
416.878	Gennai	030002	Japan		Japan	1977	I
416.887	Gionbou 3	020091	Japan		Japan	1977	I
416.889	Goku daizu	020094	Japan		Japan	1977	III
416.891	Goubara daizu	040058	Japan		Japan	1977	II
416.892	Goyou kuro mame	030044	Japan		Japan	1977	III
416.896	Hadaka 3	020105	Japan		Japan	1977	III
416.897	Hadaka mame	020355	Japan		Japan	1977	III
416.898	Haga zairai	040196	Japan		Japan	1977	III
416.902	Hakka zashi	020003	Japan		Japan	1977	III
416.904A	Hakubi	110007	Japan		China	1977	II
416.904B	(Hakubi)	(110007)	Japan		China	1977	II
416.904C	(Hakubi)	(110007)	Japan		China	1977	I
416.905	Hakubi	040321	Japan		Japan	1977	II
416.906	Hakubi daizu	040070	Japan		Japan	1977	I
416.910	Hashinomi	040074	Japan		Japan	1977	I
416.911	Hashiri mame	030031	Japan		Japan	1977	I
416.915	Hayakin	090056	Japan		Japan	1977	I
416.916	Hayatakiya jun 1	030036	Japan		Japan	1977	III
416.917	Hazenomi daizu	090018	Japan		Japan	1977	II
416.918	Head Green 3	060027	Japan		Japan	1977	III
416.920	Higan mame	020374	Japan		Japan	1977	II
416.921	Higo musume	090013	Japan		Japan	1977	I
416.923	Hikarikuro	020197	Japan		Japan	1977	I
416.929	Hiyama kuro 2	040158	Japan		Japan	1977	II
416.930	Hokkai hadaka	010023	Japan		Japan	1977	0
416.936	Houchi daizu	110021	Japan		China	1977	III
416.940	Hourai	010036	Japan		Japan	1977	I
416.941	Houten hakubi	020063	Japan		Japan	1977	II
416.943	Ibaragi	040178	Japan		Japan	1977	III
416.946	Ichigou wase	090060	Japan		Japan	1977	I
416.952	Ise mame	040229	Japan		Japan	1977	III
416.953	Ishihara daizu	090021	Japan		Japan	1977	II
416.954	Ishikari shiro	020188	Japan		Japan	1977	III
416.956	Itachi	040239	Japan		Japan	1977	II
416.963	Jin nai	090008	Japan		Japan	1977	I
416.966	Jo. 1080	010005	Japan		Japan	1977	III
416.967	Jukkoku	040227	Japan		Japan	1977	III
416.972	Kaigen hakka	090039	Japan		Japan	1977	II
416.974	Kairyou gionbou	040069	Japan		Japan	1977	I
416.978	Kaki hadaka	040223	Japan		Japan	1977	I
416.985	Kaneko	090055	Japan		Japan	1977	I
416.986	Kantou 6	040209	Japan		Japan	1977	II
416.988	Kantou 11	040211	Japan		Japan	1977	III
416.989	Kantou 12	040212	Japan		Japan	1977	III
416.990	Kantou 13	040213	Japan		Japan	1977	III
416.991	Kantou 17	040146	Japan		Japan	1977	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
416.878	I	W	T	Sa	N	Br	D	Y	Br			
416.887	I	P	G	Sa	N	Br	D	Y	Bf			
416.889	III	P	T	E	Ssp	Br	D	Y	Br			
416.891	II	W	T	A	N	Tn	D	Y	Br			
416.892	III	P	T	A	Ssp	Br	S	Bl	Bl		5Lft	
416.896	III	P	-	C	N	Tn	S	Y	Bf			
416.897	III	P	-	C	N	Tn	S	Y	Bf			
416.898	III	P	T	A	Ssp	Br	I	Y	Br			
416.902	III	W	G	E	N	Dbr	S	Y	Lbf			
416.904A	II	P	G	E	N	Tn	D	Y	Y			
416.904B	II	P	G	A	Ssp	Br	D	Y	Y			
416.904C	I	P	G	Sa	Ssp	Br	S	Y	Y			
416.905	II	P	G	E	N	Tn	D	Y	Y			
416.906	I	P	G	Sa	N	Br	D	Y	Bf			
416.910	I	W	T	A	N	Br	I	Rbr	Rbr			
416.911	I	P	T	A	N	Br	D	Y	Br			
416.915	I	W	T	A	N	Br	D	Y	Br			
416.916	III	P	G	A	Ssp	Br	D	Y	Bf			
416.917	II	W	T	A	N	Br	I	Rbr	Rbr			
416.918	III	W	G	E	N	Br	S	Gn	Bf			
416.920	II	W	G	A	Ssp	Tn	D	Y	Y			
416.921	I	P	T	E	Ssp	Tn	D	Y	Br			
416.923	I	W	T	E	Ssp	Br	S	Bl	Bl			
416.929	II	W	T	E	Ssp	Br	D	Bl	Bl			
416.930	0	P	-	-	G	Br	S	Y	Br		Na	
416.936	III	W	G	E	Ssp	Br	I	Y	Y			
416.940	I	P	G	E	Ssp	Br	I	Y	Y			
416.941	II	P	G	E	N	Br	D	Y	Y			
416.943	III	W	G	A	Ssp	Tn	D	Y	Y			
416.946	I	W	T	A	N	Br	D	Y	Br			
416.952	III	P	T	A	N	Br	S	Y	Br			
416.953	II	P	G	Sa	N	Tn	D	Y	Bf			
416.954	III	P	T	E	N	Br	S	Y	Br			
416.956	II	W	G	E	Ssp	Tn	I	Y	Bf			
416.963	I	W	T	A	N	Br	D	Y	Br			
416.966	III	P	T	E	Ssp	Bl	D	Y	Bl			
416.967	III	P	T	A	N	Br	S	Lgn	Br			
416.972	II	W	G	E	Ssp	Br	D	Y	Bf			
416.974	I	P	G	Sa	N	Br	D	Y	Bf			
416.978	I	P	-	C	N	Br	D	Y	Br			
416.985	I	W	T	A	N	Br	D	Y	Br			
416.986	II	P	-	C	N	Tn	I	Y	Y			
416.988	III	W	G	A	Ssp	Br	D	Y	Bf			
416.989	III	W	T	A	Ssp	Tn	I	Y	Br			
416.990	III	W	T	A	Ssp	Tn	D	Y	Br			
416.991	III	P	G	E	Ssp	Br	D	Y	Lbf			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
416.878	43	101	2.1	72	3.0	1.5	3.0*	1.5	1.5	12.4	2.81
416.887	47	100	2.3	58	1.0	1.0	5.0	2.5	1.5	12.5	2.77
416.889	49	115	1.8	70	1.5	2.0	4.0*	2.3	2.0	16.7	2.70
416.891	47	101	2.9*	66	2.0	1.0	4.5	2.3	2.0	17.7*	2.18
416.892	48	119	2.8*	60	1.0	3.0	4.5	2.5	-	37.3*	2.37
416.896	51	112	1.8	54	1.0	2.5	3.5*	2.0	2.5	14.4	1.78
416.897	49	113	1.8	55	1.0	1.5	3.5*	2.3	2.5	15.3	2.32
416.898	50	119	3.3	68	1.0	1.5	3.0*	2.3	1.0	16.0	2.86
416.902	40	113	2.3	106	3.0	1.0	1.5	2.0	1.0	20.3*	3.23*
416.904A	43	108	3.2	88	3.5	1.0	1.0	2.5	1.0	18.6	2.64
416.904B	47	114	2.8	86*	3.0	1.5	3.0*	2.3	1.0	19.6	2.23
416.904C	39	98	2.5	83	3.0	1.0	1.5	2.8	1.0	15.5	2.61
416.905	43	105	2.8	84	3.0	1.0	1.0	2.5	1.0	18.3	3.03
416.906	47	100	1.9	53	2.0	1.5	5.0	3.0	1.0	12.0	2.20
416.910	47	99	2.1	71	2.0	1.0	4.0*	2.5	-	10.5	2.24
416.911	47	100	2.3	66	2.0	1.0	1.5	2.3	1.0	14.9	2.67
416.915	47	102	2.3	72	2.0	1.0	2.5	1.8	2.0	11.5	2.68
416.916	52	118	2.3	71	1.0	2.0	3.5*	2.0	1.0	17.0	2.57
416.917	49	109	4.1	74	1.0	2.0	4.0*	2.3	-	15.0	2.20
416.918	Tested in and reported with early group IV evaluation										
416.920	48	109	2.5*	61	1.0	1.5	3.5*	2.8	1.0	21.9	2.28
416.921	49	101	3.1	65	2.0	1.0	1.5	2.3	1.0	12.3	2.71
416.923	39	105	1.3	58	1.5	1.5	5.0	2.5	-	26.2	2.77
416.929	40	103	1.3	61	1.0	1.0	3.5	2.5	-	28.8*	2.43
416.930	37	90	1.0	25	3.0	2.0*	4.0	3.3	1.0	14.2	0.64
416.936	39	112	1.6	55	1.0	1.0	1.0	2.3	2.0	18.4*	2.73*
416.940	34	95	2.8	80	3.0	1.0	1.5	3.0	1.0	18.2	2.60
416.941	39	103	2.5	75	3.0	1.5	1.0	2.5	1.5	19.6	3.17*
416.943	48	115	2.1	61	1.0	2.5	3.5*	2.3	2.0	24.6	2.12
416.946	47	100	3.1	72	3.0	1.0	3.0*	2.0	2.5	11.9	2.68
416.952	51	120	2.1	61	1.0	2.0	3.5*	2.3	1.0	19.6	2.85
416.953	48	103	2.8*	69	1.5	1.0	3.0*	2.3	1.5	13.1	2.65
416.954	45*	118	1.4	49	1.0	1.5	2.5*	2.0	2.5	11.6	2.26
416.956	46	103	1.9	69	1.5	1.0	3.0*	2.3	1.0	15.6	2.29
416.963	45	99	2.6	62	2.0	1.5	2.5	1.8	1.5	11.4	2.47
416.966	52	120	2.2	73	1.5	1.5	3.5*	1.8	3.5	9.2	2.73
416.967	50	116	1.8	57	1.0	2.0	3.5*	2.3	1.0	19.5*	2.92*
416.972	36	102	2.7	78*	3.0	1.0	1.0	3.0	1.0	17.5	2.58*
416.974	46	99	1.8	60	2.0	1.5	3.0	2.3	1.0	12.2	2.44
416.978	49	104	1.7	45	1.0	1.0	3.5*	2.5	1.5	12.8	1.94
416.985	45	100	3.1	73	2.5	1.0	2.5	2.0	1.5	11.9	2.58
416.986	49	107	2.2	54	2.0	1.5	3.5*	2.8	2.0	14.2*	1.70
416.988	55	121	2.3*	73	1.0	1.5	3.5*	2.0	1.5	17.7*	2.28
416.989	54	122	2.9*	77	1.5	1.5	3.5*	2.3	2.0	21.2*	2.16
416.990	57	122	3.1	74	1.0	2.0	3.5*	2.3	2.0*	22.0	2.54
416.991	49	119	2.5	85	1.0	1.5	3.5*	2.3	1.0	19.9	2.72*

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
416.878	I	17.3	42.6	12.8	2.9	20.9	54.3	9.1	0.0	1	R
416.887	I	16.1	46.0	12.6	3.4	23.6	51.2	9.2	0.1	1	S
416.889	III	17.1	45.3	11.8	2.9	18.9	57.2	9.2	0.0	1	R
416.891	II	18.1	45.1	11.4	3.9	30.1	47.5	7.2	0.0	1	H
416.892	III	17.1	41.7	11.2	2.9	31.5	46.3	8.2	0.0	1	R
416.896	III	16.9	45.5	11.9	3.1	25.8	50.9	8.4	0.0	1	R
416.897	III	18.6	44.0	11.3	3.2	29.3	48.5	7.6	0.0	1	S
416.898	III	18.7	43.7	12.3	3.0	20.1	55.4	9.3	0.0	1	R
416.902	III	20.7	44.6	11.0	3.2	25.4	53.8	6.6	0.0	3	S
416.904A	II	18.9	47.1	12.2	3.2	25.2	51.6	7.7	0.0	3	S
416.904B	II	17.8	47.9	11.9	2.9	28.5	50.4	6.3	0.0	1	R
416.904C	I	18.8	46.4	14.6	3.5	20.5	53.6	7.7	0.0	1	S
416.905	II	18.8	46.5	11.9	3.2	26.2	51.0	7.6	0.0	3	S
416.906	I	15.4	46.8	12.7	3.4	22.0	52.4	9.5	0.0	1	S
416.910	I	17.0	43.5	12.3	2.9	22.1	53.1	9.7	0.0	1	R
416.911	I	17.5	46.0	12.6	3.0	19.6	55.3	9.5	0.1	1	R
416.915	I	16.4	44.3	12.5	2.9	22.1	52.3	10.3	0.0	1	R
416.916	III	17.7	44.2	11.5	2.8	19.6	55.7	10.4	0.0	1	R
416.917	II	16.4	43.2	12.5	2.9	24.9	50.3	9.2	0.0	1	S
416.918	III	Tested in and reported with early group IV evaluation								1	R
416.920	II	18.3	44.7	12.6	3.4	28.7	48.0	7.3	0.0	1	R
416.921	I	16.7	46.8	13.9	3.5	26.0	49.0	7.6	0.1	1	S
416.923	I	18.4	44.2	11.7	3.4	32.3	45.9	6.6	0.0	1	R
416.929	II	18.9	45.5	11.3	3.4	31.4	47.1	6.8	0.0	1	R
416.930	0	17.7	43.0	12.2	3.2	28.4	48.5	7.6	0.0	1	R R R H
416.936	III	19.0	45.6	12.3	3.1	20.8	56.1	7.6	0.0	1	S
416.940	I	18.1	45.0	12.4	3.1	24.4	52.6	7.4	0.0	1	S
416.941	II	18.2	47.6	12.4	3.1	24.1	52.9	7.5	0.0	5	S
416.943	III	16.7	44.4	11.5	3.3	28.0	49.9	7.3	0.0	1	S
416.946	I	16.2	45.4	12.2	2.8	22.8	52.3	10.0	0.0		R
416.952	III	19.1	41.3	12.8	3.1	22.3	53.7	8.0	0.0	1	R
416.953	II	17.0	45.1	12.2	3.3	26.9	48.2	9.4	0.0	1	R
416.954	III	18.1	42.9	12.3	2.8	21.5	54.8	8.5	0.0	1	R
416.956	II	16.6	47.8	12.3	2.9	25.9	50.0	8.9	0.0	1	H
416.963	I	17.0	42.3	12.1	3.0	21.5	54.7	8.8	0.0	1	R
416.966	III	18.0	41.7	10.6	2.8	23.6	55.0	7.8	0.0	1	H
416.967	III	19.5	43.1	13.0	3.1	24.3	52.4	7.2	0.0	1	R
416.972	II	18.5	46.4	12.0	3.8	24.7	51.9	7.5	0.0	5	S
416.974	I	15.8	46.5	12.5	3.4	24.5	50.4	9.1	0.0	1	S
416.978	I	17.7	42.4	11.3	3.5	30.5	46.5	8.2	0.0	1	R
416.985	I	16.6	42.7	12.2	2.8	22.0	53.1	9.8	0.0	1	R
416.986	II	16.6	48.8	12.5	3.0	22.8	52.9	8.8	0.0	1	S
416.988	III	16.7	44.3	11.8	3.2	20.7	55.6	8.8	0.0	1	R
416.989	III	16.5	42.9	11.9	3.3	23.8	52.4	8.6	0.0	1	S
416.990	III	16.8	45.3	11.3	3.1	19.5	57.0	9.1	0.0	1	S
416.991	III	17.6	44.4	11.9	2.8	19.8	56.6	8.9	0.0	1	R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
416.993	Kantou 20	040148	Japan		Japan	1977	III
416.994	Kantou 27	040149	Japan		Japan	1977	III
416.996	Kantou 38	040152	Japan		Japan	1977	III
416.998	Kantou 47	040293	Japan		Japan	1977	III
417.010	Karige 19-1	020304	Japan		Japan	1977	III
417.012	Kasuga zairai	090051	Japan		Japan	1977	I
417.015	Kawanagare (Iwate)	020347	Japan		Japan	1977	III
417.017	Ke hadaka	090066	Japan		Japan	1977	III
417.018	Keikidou suigen	020017	Japan		Japan	1977	III
417.020	Ke nashi	040237	Japan		Japan	1977	II
417.023	Kimusume	040252	Japan		Japan	1977	II
417.024	Kin	090054	Japan		Japan	1977	I
417.027	Kinbee	040219	Japan		Japan	1977	III
417.029	Kingen	020062	Japan		Japan	1977	II
417.030	Kingen 1	110022	Japan		China	1977	II
417.032	Kinmon daizu	060026	Japan		Japan	1977	III
417.040A	Kin ou 1	110023	Japan		China	1977	II
417.040B	(Kin ou 1)	(110023)	Japan		China	1977	II
417.042	Kisaya (1)	090022	Japan		Japan	1977	II
417.043	Kitahama 1	040256	Japan		Japan	1977	I
417.044	Kitahama wase	040257	Japan		Japan	1977	II
417.045	Kitami nagaha (Shirome)	010019	Japan		Japan	1977	II
417.050	Kogane daizu	090046	Japan		Japan	1977	II
417.051	Ko hachigatsu	040166	Japan		Japan	1977	III
417.054	Kojiro	020021	Japan		Japan	1977	III
417.059	Konpo daizu	110011	Japan		China	1977	I
417.060	Konpokei 1	040116	Japan		Japan	1977	III
417.062	Koshika daizu	040055	Japan		Japan	1977	II
417.064	Kotou	020042	Japan		Japan	1977	II
417.066	Kou 309	040114	Japan		Japan	1977	III
417.067	Kou andaa	090012	Japan		Japan	1977	II
417.072	Kou kei 95	030026	Japan		Japan	1977	III
417.075	Kounou 390	040115	Japan		Japan	1977	III
417.076	Koushurei 224	020169	Japan		Japan	1977	I
417.077	Koushurei 273	090040	Japan		Japan	1977	III
417.079	Koushurei hakubi	110012	Japan		China	1977	III
417.082	Kugatsu mame	030059	Japan		Japan	1977	II
417.087	Kuro	040191	Japan		Japan	1977	II
417.091	Kuro mame	040095	Japan		Japan	1977	II
417.094	Kuro masshokutou (Kou 205)	110025	Japan		China	1977	III
417.100	Kurokawa seikyou	000002	Japan		Japan	1977	III
417.101	Kurome	040085	Japan		Japan	1977	II
417.137	Maru shouryuu	020189	Japan		Japan	1977	III
417.138	Masshokutou (Kou 502)	020070	Japan		Japan	1977	II
417.139	Masshokutou (Kou 503)	020068	Japan		Japan	1977	I
417.140	Masshokutou roshiyashu	020069	Japan		Japan	1977	II

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
416.993	III	W	T	Sa	Ssp	Br	S	Y	Br			
416.994	III	W	-	C	N	Tn	S	Y	Bf			
416.996	III	W	G	A	Ssp	Tn	I	Y	Y	SDef		
416.998	III	W	G	A	Ssp	Tn	I	Y	Y			
417.010	III	P	T	A	Ssp	Br	I	Y	Br			
417.012	I	P	G	A	Ssp	Br	D	Y	Bf			
417.015	III	Lp	G	A	Ssp	Br	D	Y	Bf			
417.017	III	W	G	A	Ssp	Br	D	Y	Bf			
417.018	III	W	G	A	Ssp	Tn	D	Y	Y			
417.020	II	P	-	-	G	Br	I	Y	Bf			
417.023	II	P	-	C	N	Tn	S	Y	Bf			
417.024	I	P	G	Sa	N	Br	D	Y	Bf			
417.027	III	W	T	E	N	Br	S	Y	Br			
417.029	II	P	G	E	N	Tn	D	Y	Y			
417.030	II	W	G	E	N	Tn	S	Y	Bf			
417.032	III	W	G	E	N	Tn	I	Y	Br			
417.040A	II	W	G	E	N	Br	S	Y	Bf			
417.040B	II	W	G	E	N	Br	D	Y	Bf			
417.042	II	Dp	T	A	Ssp	Tn	I	Y	Br			
417.043	I	W	T	A	N	Tn	D	Y	Br			
417.044	II	W	T	A	N	Tn	I	Y	Br			
417.045	II	P	Lt	E	Ssp	Br	I	Y	Y		Na	
417.050	II	Lp	T	A	Ssp	Tn	I	Y	Br			
417.051	III	W	T	E	Ssp	Br	S	Y	Br			
417.054	III	W	-	-	G	Tn	I	Y	Bf			
417.059	I	W	G	E	N	Br	S	Y	Lbf			
417.060	III	P	G	E	Ssp	Br	I	Y	Bf			
417.062	II	W	T	E	N	Tn	I	Y	Br			
417.064	II	W	G	E	Ssp	Br	S	Gn	Gn	St	Na	
417.066	III	P	-	C	N	Tn	D	Y	Bf			
417.067	II	W	G	Sa	N	Br	D	Y	Bf			
417.072	III	P	G	E	N	Tn	D	Y	Bf			
417.075	III	P	-	C	N	Tn	D	Y	Bf			
417.076	I	P	G	E	N	Tn	D	Y	Y			
417.077	III	W	G	E	N	Bl	I	Y	Bf			
417.079	III	P	T	E	Ssp	Dbr	D	Y	Br			
417.082	II	W	G	E	Ssp	Br	D	Gn	Bf			
417.087	II	W	T	E	Ssp	Br	S	Bl	Bl			
417.091	II	P	T	E	N	Br	I	Bl	Bl			
417.094	III	P	Ng	E	Ssp	Br	I	Bl	Bl			
417.100	III	W	T	E	N	Br	I	Bl	Bl	Gncot		
417.101	II	W	T	A	N	Tn	D	Lgn	Br			
417.137	III	Dp	T	E	N	Br	D	Y	Br			
417.138	II	P	T	A	Sp	Br	D	Bl	Br	Fleck		Sw
417.139	I	P	T	A	Ssp	Br	S	Br	Br			Sw
417.140	II	P	T	A	Sp	Br	S	Br	Br			Sw

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
416.993	56	123	2.0	79	1.0	3.0*	3.5*	2.0	1.0	18.5	2.49*
416.994	51	116	1.7	54	1.0	2.0	5.0	2.5	2.5	14.8*	2.21
416.996	47	118	2.0	73	2.0	2.0	3.5*	2.3	2.0	21.3	2.86
416.998	52	117	1.8	70	2.0	2.0	4.0*	2.3	1.0	21.5	2.85*
417.010	48	115	2.4*	70	1.5	3.0*	4.0*	3.0	1.0	18.6	2.23
417.012	48	96	2.3	73	1.0	1.0	3.0*	2.0	1.0	10.0	2.12
417.015	54	121	1.8	73	1.0	1.5	3.5*	2.3	1.0	18.4	2.94*
417.017	49	111	2.3	76	1.5	2.0	4.0*	1.5	2.0	11.7	2.66*
417.018	46	116	2.0*	58*	1.0	2.0	3.5*	2.3	2.0	23.8	2.61*
417.020	49	104	1.5	33	1.5	1.0	4.0*	2.8	2.0	12.1*	0.86
417.023	48	110	2.0	55	1.0	2.0	3.5*	2.3*	3.0*	11.3	1.84
417.024	47	100	2.0	59	1.5	1.0	3.0*	2.3	2.0	13.1	2.79
417.027	50	114	2.5	66	1.0	3.0*	4.0*	2.0	3.0*	13.3	2.03
417.029	43	106	3.0	79*	3.0	1.0	1.0	2.3	2.0	18.2	2.93*
417.030	39	107	2.6	88	3.0	1.0	1.0	3.0	1.0	14.5	2.87*
417.032	50*	116	3.1	89*	2.0	2.5	4.5	1.8	2.5	11.4	2.21
417.040A	38	105	1.5	70	2.0	1.0	1.0	3.3*	1.0	14.6	2.75*
417.040B	46	111	2.7	83*	3.0	2.0*	3.5*	2.3	1.0	21.1*	2.18*
417.042	51	108	3.0	70*	2.0	1.0	1.5	1.5	3.0*	9.7*	1.95*
417.043	45	99	2.6	72	3.0	1.5	3.5	2.3	1.5	17.4*	1.96
417.044	46	102	2.5	69	2.5	2.0	5.0	2.5	2.0	18.5	1.93
417.045	42	105	1.3	56	1.5	1.5	3.0	2.5	2.0	20.1	2.13*
417.050	48	110	1.8*	67	1.0	1.5	3.5*	2.3	1.0	15.2	2.49
417.051	51	114	2.8	82	1.0	2.5	4.0*	1.8	3.0	14.0	2.45
417.054	Tested in and reported with early group IV evaluation										
417.059	33	100	2.0	65	3.0	1.0	1.0	3.5	1.0	14.4	2.64
417.060	47	119	1.5	66	1.0	1.5	3.5*	1.8	2.0	12.6	2.24
417.062	46	104	3.3*	70	2.0	2.0	4.5	2.5	2.0	17.2	1.64
417.064	45	108	2.0*	66	1.5	1.0	1.0	2.3	2.0	17.8	2.31
417.066	49	112	2.2	46	1.0	1.5	4.0*	2.3	2.0	17.3	1.83
417.067	50	110	2.6	75	1.5	1.0	4.0*	1.8	2.0	11.3	2.51*
417.072	55	122	3.0	81	1.0	1.5	3.5*	2.0	1.0	14.9	2.66
417.075	49	113	2.3	50	1.0	2.5	4.0*	2.3	2.0	17.4	2.03
417.076	36	103	1.8*	69	3.0	1.0	1.0	2.8	1.0	16.1	3.14
417.077	49	121	3.0	114	3.0	1.0	1.0	2.3	3.0*	17.8	3.28*
417.079	47	120	1.6	53	1.0	1.5	2.5	2.0	2.5	16.7	2.15*
417.082	47	110	1.9	62	1.5	2.5	3.5*	2.5	2.0	23.6*	2.19
417.087	46	112	2.4	72	1.0	2.0	3.5*	2.5	-	21.5*	2.18
417.091	42	113*	4.4	90*	5.0	1.0	1.0	2.5	-	8.2*	2.15*
417.094	48	111	3.3	105	4.0	1.0	1.0	2.3	-	10.8	2.58
417.100	42	114	2.3	84	3.0	2.0	4.5	2.3	-	17.8	2.74*
417.101	47	104	3.8*	71	2.0	1.5	4.0*	2.3	2.0	13.8*	1.92
417.137	45	115	1.8	71	1.0	1.5	3.5*	1.8	2.0	14.2	2.96
417.138	46	107	4.5	41	3.5	1.0	1.0	2.3	-	5.0	1.58
417.139	48	105	4.0	83*	4.0	1.0	1.0	2.5	-	4.5	1.97
417.140	47	107	4.0	51	4.0	1.0	1.5	2.0	-	4.4	1.40

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
416.993	III	17.1	46.2	12.6	2.9	23.8	52.4	8.2	0.0	1	R
416.994	III	17.8	44.9	12.1	3.1	23.1	52.8	8.9	0.0	1	S
416.996	III	17.8	45.1	11.3	3.0	25.1	52.7	7.7	0.0	1	S
416.998	III	18.5	43.6	11.5	2.8	22.0	55.0	8.7	0.0	1	S
417.010	III	18.8	41.8	11.5	2.9	26.9	51.0	7.6	0.0	1	R
417.012	I	15.0	46.5	13.1	3.0	18.8	54.1	11.1	0.0	1	R
417.015	III	17.0	44.1	11.8	3.1	19.7	55.1	10.2	0.0	1	R
417.017	III	17.0	43.9	12.0	3.2	25.1	50.5	9.1	0.0	1	S
417.018	III	17.7	45.3	11.7	3.2	24.4	53.3	7.4	0.0	1	H
417.020	II	17.1	46.8	12.3	3.0	25.0	51.1	8.6	0.0	1	R
417.023	II	17.3	45.5	10.9	3.0	30.9	46.9	8.2	0.0	1	S
417.024	I	15.6	46.5	12.5	3.3	22.3	52.3	9.6	0.0	1	S
417.027	III	16.5	46.7	12.7	2.8	26.6	49.9	8.0	0.0	1	S
417.029	II	17.6	48.4	12.2	3.0	25.2	51.8	7.8	0.0	1	S
417.030	II	20.5	44.0	11.6	3.8	26.6	51.7	6.4	0.0	4	S
417.032	III	17.6	46.1	12.7	3.3	25.7	49.7	8.6	0.0	1	R
417.040A	II	19.9	45.3	11.3	3.7	27.1	51.2	6.7	0.0	4	S
417.040B	II	17.2	47.9	12.4	3.4	28.4	48.8	6.9	0.0	1	H
417.042	II	14.8	47.2	14.1	3.3	19.7	51.9	11.0	0.0	1	R
417.043	I	17.3	47.1	11.5	3.9	29.6	47.8	7.3	0.0	1	S
417.044	II	17.4	45.4	11.0	3.9	33.2	44.9	6.9	0.0	1	S
417.045	II	18.3	45.2	9.1	4.2	24.9	53.1	8.6	0.0	1	S
417.050	II	16.8	44.5	12.4	3.3	33.8	43.6	6.8	0.1	1	R
417.051	III	16.8	47.6	12.9	2.8	25.7	50.6	8.0	0.0	1	S
417.054	III	Tested in and reported with early group IV evaluation								1	S
417.059	I	19.6	43.2	11.2	3.3	30.5	48.5	6.4	0.0	5	S
417.060	III	18.4	47.1	12.6	2.8	17.0	57.8	9.8	0.1	1	S
417.062	II	16.2	45.6	12.4	2.9	28.7	47.9	8.1	0.0	1	R
417.064	II	17.9	46.1	12.9	4.0	21.2	53.7	8.1	0.0	1	S
417.066	III	17.4	46.4	12.3	3.1	23.8	52.4	8.4	0.0	1	S
417.067	II	16.6	42.2	12.4	3.4	23.6	51.5	9.1	0.0	1	S
417.072	III	16.2	44.8	11.8	2.9	18.1	55.9	11.4	0.0	1	S
417.075	III	16.9	47.0	12.2	3.0	24.7	51.5	8.6	0.0	1	S
417.076	I	18.2	44.9	13.4	3.0	23.2	52.7	7.8	0.0	5	S
417.077	III	20.1	43.6	11.8	2.6	28.1	50.0	7.3	0.0	1	S
417.079	III	17.9	45.1	11.3	2.8	20.4	56.4	9.1	0.0	1	R
417.082	II	16.2	46.1	12.2	3.0	24.2	51.8	8.7	0.0	4	R R R H
417.087	II	16.4	46.3	13.3	3.3	18.3	56.6	8.5	0.0	1	R
417.091	II	16.3	44.8	12.8	3.1	18.4	56.9	8.8	0.0	4	S
417.094	III	16.9	43.9	12.2	3.0	19.2	56.8	9.0	0.0	4	S
417.100	III	19.3	46.7	12.1	2.8	28.9	49.6	6.5	0.0	1	S
417.101	II	15.3	44.2	12.8	3.2	25.8	49.9	8.4	0.0	1	R
417.137	III	17.9	44.2	11.5	2.7	25.2	52.8	7.7	0.0	1	R
417.138	II	13.7	46.0	14.7	3.3	17.2	54.0	10.8	0.0	5	R
417.139	I	13.9	43.9	13.3	3.4	16.8	55.7	10.8	0.0	2	S
417.140	II	13.2	45.7	14.0	3.4	16.8	54.9	10.9	0.0	4	R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.142	Matsuba daizu	040081	Japan		Japan	1977	II
417.143	Matsuba daizu	090053	Japan		Japan	1977	I
417.144	Matsuura zairai	040065	Japan		Japan	1977	I
417.145	Matsuzukuri	040183	Japan		Japan	1977	II
417.148	Mejiro 3	020398	Japan		Japan	1977	II
417.151	Mikuri daizu	040072	Japan		Japan	1977	II
417.152	Mikuri 46	040073	Japan		Japan	1977	III
417.154	Misaki daizu	090011	Japan		Japan	1977	II
417.160	Miyashiro	040216	Japan		Japan	1977	II
417.161	Miyashiro jun 1	040214	Japan		Japan	1977	III
417.162	Mizukugari	030029	Japan		Japan	1977	III
417.167	Mumou hadaka	020149	Japan		Japan	1977	III
417.170	Mutsu mejiro	020338	Japan		Japan	1977	II
417.173	N-B(A)	020248	Japan		Japan	1977	II
417.174	N-B(A)	020249	Japan		Japan	1977	II
417.175	N-B(A)	020254	Japan		Japan	1977	III
417.177	N-B(B)	020255	Japan		Japan	1977	III
417.178	N-B (Katsuge)	020258	Japan		Japan	1977	III
417.183	Nakaide d sou	020113	Japan		Japan	1977	II
417.185	Natsu daizu	090002	Japan		Japan	1977	II
417.186	Natsu daizu 1	090045	Japan		Japan	1977	III
417.189	Nerikuri	020014	Japan		Japan	1977	III
417.191	Nezumi gaishi	020114	Japan		Japan	1977	III
417.192	Nezumi gaishi	020115	Japan		Japan	1977	III
417.196A	Nishiarai	040316	Japan		Japan	1977	I
417.196B	(Nishiarai)	(040316)	Japan		Japan	1977	I
417.198	Nomoto shirohana	020215	Japan		Japan	1977	III
417.201	Nyuuchan	020065	Japan		Japan	1977	III
417.210	Okuhara daizu	020180	Japan		Japan	1977	I
417.214	Ooinoue 50	020104	Japan		Japan	1977	III
417.218	Oomedama	020214	Japan		Japan	1977	II
417.219	Oomejiro	010044	Japan		Japan	1977	II
417.225	Ooshiratama	020022	Japan		Japan	1977	III
417.226	Ooyachi	020182	Japan		Japan	1977	I
417.227	Ooyachi 1	010013	Japan		Japan	1977	I
417.228	Ooyachi 3	020181	Japan		Japan	1977	I
417.229	Orukon	040097	Japan		Japan	1977	III
417.239	Ouu 12	020284	Japan		Japan	1977	III
417.241	Pekin dai outou	110004	Japan		China	1977	III
417.242	Pekin dai seitou	110005	Japan		China	1977	II
417.244	Petten	040133	Japan		Japan	1977	III
417.246	Rankoshi	020186	Japan		Japan	1977	II
417.248	Rikuu 2	020520	Japan		Japan	1977	III
417.255	Rikuu 20	020274	Japan		Japan	1977	II
417.257	Rikuu 30	020278	Japan		Japan	1977	III
417.268	Sanryuuiri	020106	Japan		Japan	1977	II

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.142	II	P	T	E	N	Br	D	Y	Br			
417.143	I	W	T	A	N	Br	D	Y	Br			
417.144	I	P	G	A	N	Tn	D	Y	Bf			
417.145	II	W	G	Sa	N	Br	D	Y	Bf			
417.148	II	P	G	A	N	Br	I	Y	Bf			
417.151	II	W	G	E	N	Tn	I	Y	Bf			
417.152	III	W	T	Sa	Ssp	Lbr	D	Y	Br		SWa	
417.154	II	P	T	A	N	Br	I	Y	Br			
417.160	II	W	G	E	N	Br	I	Y	Y			
417.161	III	P	G	Sa	Ssp	Br	D	Y	Bf			
417.162	III	P	-	-	G	Br	D	Y	Bf			
417.167	III	P	-	-	G	Br	S	Br	Br			
417.170	II	P	G	E	Ssp	Br	D	Y	Y			
417.173	II	P	G	Sa	N	Br	I	Y	Ib			
417.174	II	W	G	E	N	Br	I	Y	Y			
417.175	III	W	T	A	N	Br	D	Y	Tn			
417.177	III	W	T	A	Ssp	Br	D	Y	Tn			
417.178	III	W	T	A	Ssp	Br	D	Y	Tn			
417.183	II	P	G	E	N	Br	I	Y	Bf			
417.185	II	W	T	A	N	Tn	D	Y	Br			
417.186	III	W	T	A	Ssp	Tn	D	Y	Br			
417.189	III	P	T	Sa	Ssp	Br	S	Y	Br			
417.191	III	P	G	A	Ssp	Br	S	Y	Bf			
417.192	III	P	G	A	Ssp	Br	I	Y	Bf			
417.196A	I	W	G	A	Ssp	Tn	I	Y	Bf			
417.196B	I	W	G	A	Ssp	Br	I	Y	Bf			
417.198	III	P	T	Sa	Ssp	Lbr	S	Y	Br			
417.201	III	W	G	A	Ssp	Tn	D	Y	Y			
417.210	I	P	T	E	Ssp	Br	S	Y	Br			
417.214	III	P	-	C	N	Tn	I	Y	Bf			
417.218	II	W	G	Sa	Ssp	Tn	D	Y	Y			
417.219	II	W	G	A	Ssp	Tn	I	Y	Y			
417.225	III	W	G	A	Ssp	Br	D	Y	Y			
417.226	I	P	T	E	Ssp	Br	S	Y	Br			
417.227	I	P	T	E	Ssp	Br	S	Y	Br			
417.228	I	P	T	E	Ssp	Br	S	Y	Br			
417.229	III	P	G	E	Ssp	Br	D	Y	Y			
417.239	III	P	G	Sa	Ssp	Br	D	Y	Y			
417.241	III	P	G	A	Ssp	Tn	D	Y	Y			
417.242	II	P	T	E	Ssp	Br	S	Gn	Bl	Gncot		
417.244	III	Dp	G	E	N	Br	I	Gn	Bf	Gncot		
417.246	II	W	G	E	N	Tn	I	Y	Bf			
417.248	III	P	T	Sa	N	Tn	I	Y	Br			
417.255	II	Lp	T	A	Ssp	Br	S	Y	Lbr			
417.257	III	P	-	C	N	Tn	I	Y	Bf			
417.268	II	W	T	A	N	Tn	D	Y	Br			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.142	51	103	2.0	67	1.0	1.5	3.5*	2.3	2.0	10.9	2.01
417.143	48	99	3.3	79	3.0	1.0	2.0	1.8	1.5	10.5	2.53*
417.144	44*	97	2.1	58	2.5	1.5	2.0	2.0	1.0	11.1	2.36
417.145	49	109	2.8	68	2.0	2.0	3.5*	1.8	2.0	10.5	2.21
417.148	48	107	2.5	74	2.0	1.0	3.5*	1.8	2.0	13.1	2.58
417.151	50	108	2.5	79	1.5	1.0	2.5*	1.8	2.0	11.9	2.46*
417.152	58	117	3.0	80	1.0	2.5	4.0*	2.3	2.5	11.4	2.35
417.154	47	104	3.5*	72	1.5	1.0	3.5*	2.5	2.5	12.2	2.31
417.160	46	106	2.1	64	2.0	1.0	3.5*	2.0	1.0	14.7	2.51*
417.161	53	120	2.2	73	1.0	1.5	3.5*	2.5	1.0	18.8	2.82*
417.162	52	114*	1.5	30	1.0	1.5	3.5*	2.3	1.0	12.2	1.07
417.167	51	114	1.5	30	1.0	2.0	3.5*	2.3	-	20.2*	1.25*
417.170	43	108	1.9	61	1.0	2.0*	5.0	2.3	2.0	18.3	1.99
417.173	48	108	1.3	52	1.0	2.0*	3.5*	2.5	1.0	17.2	2.63
417.174	47	110	2.0	82	1.5	1.0	3.5*	2.5	2.0	18.5	2.58*
417.175	48	112	1.3	81	2.0	2.0*	3.5*	3.3*	2.5	21.4	2.62
417.177	46	114	1.2	62	2.0	1.0	1.0	2.3	2.5	21.5*	2.92
417.178	46	113	1.1	61	2.0	1.0	1.0	2.3	1.5	21.5*	2.77
417.183	39	109	2.7	85	3.0	1.5	3.5*	3.0	1.0	20.1	2.39*
417.185	49	108	3.4	81	2.0	2.0	3.5*	2.0	2.0	12.7*	2.66
417.186	48	112	2.1	72	1.0	2.0	4.5	2.0	3.0	14.4	2.76*
417.189	56	116	2.8	71	1.5	2.5	4.5	2.0	4.0	11.5*	2.24
417.191	51	113	1.8	66	1.0	1.5	3.5*	2.5	2.0	17.0	2.62*
417.192	50	119	2.3	74	1.0	2.0	3.5*	2.5	1.0	16.9	2.65
417.196A	45	103	1.3	50	1.0	1.0	4.0*	2.8	1.0	26.1	2.54
417.196B	43	100	1.6	52	1.0	1.0	1.5	2.3	1.0	21.2	2.69
417.198	Tested in and reported with early group IV evaluation										
417.201	47	116	1.8	72	1.5	2.0	4.0*	2.3	2.0	24.0	2.50
417.210	35	104	1.6	55	1.0	1.5	3.0*	2.5	1.5	22.3	2.50
417.214	50	111	1.6	51	1.0	1.0	3.5*	2.0	2.0	14.1	1.92
417.218	45*	108	2.0	69	1.5	2.0	4.5	2.3	2.5	19.4	2.57
417.219	46	109	2.0*	63*	1.0	2.0*	3.5*	2.8	1.0	27.4	2.36
417.225	46	115	2.5*	64	1.5	2.5	3.5*	2.5	2.0	25.1	2.21
417.226	34	103	1.6	56	1.0	1.5	3.5*	2.5	1.0	23.3	2.67
417.227	35	104	2.0	56	1.0	1.5	3.5*	2.5	1.5	24.0	3.00
417.228	38	105*	2.1	62	1.0	1.5	2.5	2.8	1.5	23.0	2.77
417.229	46	116	2.3	74	2.0	1.0	2.0*	2.0	1.0	16.4	3.19
417.239	45	117	2.5	73	1.0	1.5	3.0*	2.3	1.5	22.7	2.65
417.241	49	117	2.6	71	1.0	2.0	3.0*	1.8	1.0	17.4	2.88
417.242	44*	108	2.0	93*	4.0	1.5	2.0	2.3	1.0	15.8	1.87
417.244	52	118	2.4	85	1.0	2.0	4.0*	2.0	1.0	12.7	2.58
417.246	40	106	2.5*	55*	1.0	1.0	3.5*	3.3	2.0	18.9	2.47
417.248	52	116	2.8	77	1.0	2.5	3.5*	1.8	2.0	11.4	2.36
417.255	47	110	2.0	62	1.0	1.0	3.5*	2.3	1.0	15.8	2.64
417.257	48	113	1.5	55	1.0	1.0	3.5*	2.3	2.5	14.7	2.26
417.268	47	105	2.0	64	2.0	1.5	4.0*	2.0	2.0	14.4	2.32

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.142	II	16.0	45.1	12.2	3.1	21.6	53.6	9.5	0.0	1	R
417.143	I	15.8	44.4	12.7	2.8	21.0	53.2	10.4	0.0	1	R
417.144	I	14.5	45.7	13.8	3.1	21.4	51.6	10.0	0.1	1	H
417.145	II	16.5	43.9	12.2	3.4	25.1	50.4	9.0	0.0	1	S
417.148	II	16.4	44.3	12.2	3.5	24.8	50.8	8.7	0.0	1	S
417.151	II	15.7	47.6	13.6	3.0	21.7	51.5	10.2	0.0	1	R
417.152	III	17.2	43.1	11.3	3.1	24.7	51.7	9.1	0.0	1	R
417.154	II	16.4	45.2	12.1	3.2	23.7	51.9	9.2	0.0	1	R
417.160	II	17.7	44.8	12.0	3.3	22.8	53.7	8.2	0.0	2	R
417.161	III	17.6	44.7	11.8	2.9	20.0	55.1	10.2	0.0	1	R
417.162	III	16.7	42.2	11.2	3.0	21.9	54.6	9.2	0.0	1	R R R H
417.167	III	17.8	47.4	13.0	3.3	22.3	53.7	7.6	0.0	1	S
417.170	II	17.8	45.5	12.4	3.8	21.8	52.6	9.4	0.0	1	S
417.173	II	17.7	45.8	11.6	2.9	26.8	51.0	7.7	0.0	1	R
417.174	II	18.7	47.9	11.6	3.0	31.9	46.0	7.6	0.0	1	S
417.175	III	17.7	42.5	10.3	2.6	31.7	48.0	7.5	0.0	1	R
417.177	III	19.0	44.1	13.1	2.9	20.3	55.8	7.8	0.0	1	R
417.178	III	18.8	45.2	13.1	2.7	18.7	57.4	8.0	0.0	1	R
417.183	II	15.9	46.5	11.3	2.8	22.6	54.0	9.3	0.0	1	S
417.185	II	16.6	44.5	12.0	2.6	21.7	54.5	9.2	0.0	1	R
417.186	III	18.6	44.0	11.9	2.9	22.3	54.6	8.3	0.0	1	R
417.189	III	16.9	44.5	12.1	2.6	23.3	52.8	9.2	0.0	1	R
417.191	III	17.9	45.2	11.5	2.7	25.3	53.1	7.4	0.0	1	R
417.192	III	16.6	44.4	10.9	2.3	18.4	57.2	11.2	0.0	1	R
417.196A	I	15.8	45.7	11.6	2.9	28.7	48.3	8.6	0.0	1	S
417.196B	I	16.4	46.8	13.0	2.8	22.3	53.0	8.8	0.0	1	S
417.198	III	Tested in and reported with early group IV evaluation								1	R
417.201	III	17.9	45.2	11.5	2.8	23.2	54.5	8.0	0.0	1	S
417.210	I	18.6	44.7	11.9	2.7	25.6	52.4	7.4	0.0	1	R
417.214	III	18.3	42.0	11.0	3.0	28.6	49.2	8.2	0.0	1	S
417.218	II	18.9	47.6	14.4	3.0	20.8	53.9	7.8	0.0	1	R
417.219	II	18.1	44.7	12.4	3.1	28.7	48.6	7.1	0.0	1	S
417.225	III	17.6	45.9	11.4	2.8	24.1	53.5	8.2	0.0	1	S
417.226	I	18.4	45.5	12.1	2.5	26.8	51.6	7.0	0.0	1	R
417.227	I	18.7	43.6	12.0	2.6	27.5	50.9	7.0	0.0	1	R
417.228	I	18.5	45.5	11.6	2.8	27.7	50.9	6.9	0.0	1	R
417.229	III	18.5	47.4	12.1	2.9	22.7	54.1	8.1	0.0	1	R
417.239	III	18.5	45.2	11.3	2.8	26.3	52.1	7.4	0.0	2	S
417.241	III	18.2	45.9	13.2	2.9	24.4	50.7	8.9	0.0	1	S
417.242	II	18.7	44.8	11.6	3.8	25.3	52.3	6.9	0.0	3	S
417.244	III	18.1	46.3	12.1	2.9	20.8	55.8	8.3	0.0	1	R
417.246	II	17.6	45.9	12.5	3.0	25.6	51.2	7.8	0.0	1	R
417.248	III	17.2	46.5	12.4	2.6	19.6	55.8	9.6	0.0	1	S
417.255	II	18.4	45.2	13.8	3.0	22.9	52.3	8.0	0.1	1	R
417.257	III	17.3	42.9	11.0	3.1	28.2	49.5	8.2	0.0	1	S
417.268	II	17.8	46.5	12.5	2.9	21.3	54.4	9.0	0.0	1	R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.274	Sayohime	090047	Japan		Japan	1977	II
417.282	Sennari kimusume sai 1	040224	Japan		Japan	1977	III
417.285	Sennari musume	020386	Japan		Japan	1977	II
417.291	Shiheigai hakka	020064	Japan		Japan	1977	III
417.292	Shiheigai kurobeso	020172	Japan		Japan	1977	II
417.294	Shika 1	110014	Japan		China	1977	I
417.295	Shika 3	110016	Japan		China	1977	I
417.296	Shimabara	040068	Japan		Japan	1977	I
417.297	Shimizu 1-8-1	040312	Japan		Japan	1977	III
417.299	Shimonaga	020461	Japan		Japan	1977	I
417.300	Shimo shirazu 1	020179	Japan		Japan	1977	I
417.303	Shin 3	030021	Japan		Japan	1977	III
417.304	Shin hounen	090049	Japan		Japan	1977	II
417.309A	Shirasaya 1	040197	Japan		Japan	1977	III
417.315	Shiro daizu	020320	Japan		Japan	1977	II
417.321	Shiro hadaka 1	090016	Japan		Japan	1977	II
417.323	Shirokuchi 1	090025	Japan		Japan	1977	III
417.324A	Shiro mame	020023	Japan		Japan	1977	III
417.325	Shirome	040080	Japan		Japan	1977	II
417.326	Shirome	090004	Japan		Japan	1977	I
417.327	Shirome 1	090003	Japan		Japan	1977	I
417.328	Shirome (2)	090019	Japan		Japan	1977	III
417.333	Shiro sengoku	010032	Japan		Japan	1977	III
417.334	Shiroshouryuu	020184	Japan		Japan	1977	II
417.338	Shiro teppou	020387	Japan		Japan	1977	III
417.340	Shiyuuou	020066	Japan		Japan	1977	III
417.343	Shoufuku daizu	040029	Japan		Japan	1977	III
417.344	Shoufuku 1	040028	Japan		Japan	1977	III
417.349	Souroushi	020171	Japan		Japan	1977	II
417.353	Suzu mame	040086	Japan		Japan	1977	III
417.354	Ta kei 9	020297	Japan		Japan	1977	III
417.355A	Ta kei 14	020336	Japan		Japan	1977	II
417.355B	(Ta kei 14)	(020336)	Japan		Japan	1977	III
417.361	Takaoka zairai	040046	Japan		Japan	1977	III
417.362	Takata 1	040045	Japan		Japan	1977	II
417.364	Takei 2	020517	Japan		Japan	1977	III
417.384	Tochigi	020447	Japan		Japan	1977	II
417.391	Toppa	090029	Japan		Japan	1977	0
417.393	Totsuta daizu	040156	Japan		Japan	1977	III
417.398	Touhou torotou	110008	Japan		China	1977	III
417.425	Tousan kei B497	040380	Japan		Japan	1977	III
417.436	Tsuru no tamago 8	020227	Japan		Japan	1977	II
417.447	Wase daizu 4	040234	Japan		Japan	1977	II
417.451	Wase keburi	020228	Japan		Japan	1977	I
417.452	Wase kin	090030	Japan		Japan	1977	II
417.453	Wase kin	090065	Japan		Japan	1977	I

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.274	II	Lp	G	E	Ssp	Br	S	Y	Bf			
417.282	III	P	-	C	N	Tn	I	Y	Bf			
417.285	II	P	-	C	N	Tn	S	Y	Bf			
417.291	III	W	G	E	N	Br	I	Y	Bf	SDef		
417.292	II	W	T	E	N	Br	S	Y	Bl			
417.294	I	P	G	E	N	Br	D	Y	Bf			
417.295	I	P	G	E	N	Br	I	Y	Y			
417.296	I	P	T	E	N	Br	I	Y	Br			
417.297	III	P	-	-	G	Br	I	Bl	Bl			
417.299	I	P	T	E	N	Br	D	Gn	Bl			
417.300	I	P	T	E	Ssp	Br	I	Y	Br			
417.303	III	P	T	A	Ssp	Br	S	Y	Br			
417.304	II	W	G	E	N	Tn	S	Y	Bf			
417.309A	III	P	T	A	N	Br	I	Lgn	Br			
417.315	II	W	G	A	N	Tn	S	Y	Bf			
417.321	II	W	T	A	N	Tn	D	Lgn	Br			
417.323	III	W	G	A	N	Br	D	Y	Bf			
417.324A	III	W	G	A	N	Br	S	Y	Lbf			
417.325	II	W	G	A	N	Br	D	Y	Bf			
417.326	I	P	G	Sa	N	Br	D	Y	Bf			
417.327	I	P	G	Sa	N	Br	D	Y	Bf			
417.328	III	W	G	E	N	Tn	I	Y	Bf			
417.333	III	P	T	E	Ssp	Br	D	Y	Br			
417.334	II	W	T	E	Ssp	Tn	I	Y	Br			
417.338	III	W	G	A	Ssp	Tn	D	Y	Y			
417.340	III	W	G	Sa	Ssp	Br	D	Y	Y			
417.343	III	W	G	E	Ssp	Br	S	Gn	Gn	St	Na	
417.344	III	W	G	E	Ssp	Br	S	Gn	Gn	St	Na	
417.349	II	P	G	E	N	Tn	D	Y	Y			
417.353	III	P	T	Sa	Ssp	Tn	S	Y	Br			
417.354	III	P	T	E	Ssp	Tn	D	Y	Y			
417.355A	II	P	T	A	N	Br	I	Y	Br			
417.355B	III	Dp	T	A	Ssp	Br	I	Y	Br			
417.361	III	P	-	C	N	Tn	S	Y	Bf			
417.362	II	P	-	C	N	Tn	S	Y	Bf			
417.364	III	W	T	A	Ssp	Br	S	Y	Br			
417.384	II	W	G	Sa	Ssp	Tn	S	Y	Bf			
417.391	0	P	G	A	N	Tn	I	Y	Bf			
417.393	III	P	T	E	Ssp	Bl	S	Y	Br			
417.398	III	W	G	E	Ssp	Br	I	Y	Y			
417.425	III	W	G	A	Ssp	Br	D	Y	Y			
417.436	II	W	G	Sa	Ssp	Tn	D	Y	Y			
417.447	II	W	G	E	Ssp	Tn	I	Y	Bf			
417.451	I	W	T	E	Ssp	Tn	D	Lgn	Y			
417.452	II	W	T	E	N	Br	I	Y	Br			
417.453	I	W	T	A	N	Br	D	Y	Br			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.274	47	103	2.3	73	2.0	1.5	3.5*	2.3	1.0	12.6	2.33
417.282	49	113	1.6	56	1.0	2.0	3.5*	2.3	2.0	13.4	2.20
417.285	49	111	2.1	56	1.0	1.0	3.5*	2.8*	2.0	13.3	2.11
417.291	35	112	1.8	82	3.0	1.0	1.0	2.8	2.0	20.2	2.76*
417.292	38	110	2.8*	86*	3.0	1.0	1.5	3.3*	1.0	16.7*	2.46
417.294	34	97	1.3	70*	3.0	1.0	1.0	2.3	1.5	18.3*	2.88
417.295	32	95*	1.6	62	3.0	1.0	1.0	3.0	1.0	16.9	3.03*
417.296	48	93	1.5	60	2.0	1.5	2.5	2.3	1.0	11.8	2.40
417.297	48	116	1.5	26	1.0	2.0	3.5*	2.3	-	13.2	1.32*
417.299	34	93*	1.1	47	1.5	1.5	2.0	3.5	1.0	26.8*	2.24
417.300	38	104	2.0	61	1.0	1.5	4.5	2.8	2.0	22.4	2.58
417.303	48	111	2.3	65	1.0	1.0	4.0*	2.0	1.0	17.5	2.87*
417.304	48	107	1.8	78	1.5	1.0	3.0*	2.5	2.5	14.1	2.28
417.309A	Tested in and reported with early group IV evaluation										
417.315	48	109	3.1*	75	2.0	1.5	3.5*	1.8	2.5	16.5	2.49*
417.321	47	108	3.4*	81	2.0	1.5	3.5*	1.5	3.0	15.0	2.43*
417.323	49	111	2.8*	67	1.5	2.0	4.0*	1.5	2.0	11.1	2.45*
417.324A	Tested in and reported with early group IV evaluation										
417.325	50	110	2.5	68	1.0	1.5	3.5*	2.3	2.5	12.2*	2.39
417.326	46	99	1.7	58	1.5	1.5	2.5	2.3	2.0	12.1	2.32
417.327	47	96	1.4	55	2.0	2.0*	4.0	2.5	2.0	11.9	2.11
417.328	50	112	2.8	84	2.0	1.0	3.5*	1.8	2.0	12.8	2.41*
417.333	46	122*	2.0	81	1.5	2.0	3.5*	2.0	3.5	13.3	2.41
417.334	47	110	2.5	79	1.0	1.0	3.5*	2.0	3.0*	11.8	2.41
417.338	50	118	3.0	76	1.0	1.5	4.0*	2.3	1.0	19.4	3.19
417.340	Tested in and reported with early group IV evaluation										
417.343	44	113	2.1*	73	2.5	1.0	1.0	2.0	2.5	17.7	2.29*
417.344	44	112	2.1*	75	2.5	1.0	1.0	2.3	2.0*	17.6	2.50
417.349	44	110	3.0	94	3.0	1.0	1.0	2.0	2.0	18.9	2.92*
417.353	51	116	2.0	74	2.0	2.5	3.5*	1.8	3.0	10.8	2.20
417.354	49	115	1.8	85	2.0	3.5*	4.0*	2.3	3.0*	18.9	2.34
417.355A	46	109	1.8	55	1.0	2.0	4.0*	3.3*	1.0	17.1	1.88
417.355B	47	116	2.3*	72	2.0	3.5*	4.0*	2.8*	1.0	18.4	2.33
417.361	49	112	1.5	57	1.5	1.5	4.0*	2.3	2.0	14.2	2.07
417.362	50	112	1.6	57	1.0	1.0	3.0*	2.8*	2.5	14.2	2.13
417.364	52	122	1.8	72	1.5	2.5	4.0*	2.8*	2.5	21.2	1.38*
417.384	46	107	2.1	69	1.0	1.0	3.5*	2.5	1.0	18.2	2.31
417.391	45	92	2.5	58	2.5	1.0	2.0*	2.0	1.5	11.9	2.14
417.393	45*	119	1.5	56	1.0	2.5	4.0*	2.0	2.5	15.1	2.25
417.398	39	111	1.8	55*	1.0	1.0	1.0	2.3	1.5	20.6	3.59
417.425	52	121	2.1*	69	1.0	1.5	3.0*	2.3	1.0	21.6	2.84
417.436	46	109	1.8	63	1.0	1.0	3.5*	2.8	1.0	28.1	2.22
417.447	47	103	1.9	64	1.0	1.0	3.5*	2.3	1.5	15.1	2.11
417.451	35	100	1.7	63	2.5	1.0	4.0*	2.5	1.0	26.7	2.86
417.452	47	103	2.0	60	1.5	1.5	3.5*	2.3	2.5	12.3	2.16
417.453	48	100	2.6	74	2.5	1.0	1.5	2.3	1.5	11.2	2.56

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.274	II	16.1	47.5	13.4	3.1	21.8	52.9	8.9	0.0	1	R
417.282	III	18.3	42.8	10.9	2.9	27.6	50.0	8.5	0.0	1	S
417.285	II	17.7	44.9	11.1	3.0	30.0	47.9	8.0	0.0	1	S
417.291	III	18.7	47.5	11.4	2.9	26.1	52.9	6.7	0.1	4	S
417.292	II	18.3	45.5	11.1	3.6	25.8	52.6	6.9	0.0	3	S
417.294	I	17.1	46.4	12.0	2.9	21.5	55.5	8.2	0.0	1	S
417.295	I	18.6	46.3	11.1	2.9	27.8	52.2	5.9	0.0	4	S
417.296	I	16.4	44.4	11.5	2.9	24.8	51.9	8.9	0.0	1	R
417.297	III	17.3	44.7	11.5	2.7	17.2	59.1	9.6	0.0	1	S
417.299	I	19.5	42.0	12.0	2.9	28.4	49.9	6.9	0.0	1	S
417.300	I	18.8	44.7	12.3	2.8	24.9	52.2	7.7	0.1	1	R
417.303	III	17.3	42.9	12.4	2.9	25.4	50.7	8.6	0.0	1	R
417.304	II	14.9	48.3	11.9	2.9	26.5	48.9	9.8	0.0	1	S
417.309A	III	Tested in and reported with early group IV evaluation								1	S
417.315	II	16.8	44.9	12.7	3.1	23.4	51.4	9.5	0.0	1	R
417.321	II	15.9	43.8	12.6	2.9	25.1	50.7	8.7	0.0	1	H
417.323	III	17.0	44.7	11.9	3.0	23.2	52.2	9.7	0.0	1	S
417.324A	III	Tested in and reported with early group IV evaluation								1	H
417.325	II	16.8	43.0	11.7	3.4	32.3	44.9	7.8	0.0	1	S
417.326	I	15.6	47.8	12.6	3.3	23.7	51.3	9.2	0.0	1	S
417.327	I	15.6	45.4	12.7	3.3	24.8	50.2	9.0	0.0	1	S
417.328	III	15.9	47.8	13.3	2.8	21.1	52.7	10.0	0.0	1	R
417.333	III	19.0	42.1	12.1	2.9	19.1	56.9	9.0	0.0	1	S
417.334	II	15.7	48.7	13.6	2.9	18.2	54.7	10.6	0.0	1	S
417.338	III	18.1	44.6	12.2	3.0	26.1	51.0	7.9	0.0	1	S
417.340	III	Tested in and reported with early group IV evaluation								1	H
417.343	III	17.8	44.9	12.7	3.5	18.7	56.4	8.7	0.0	1	S
417.344	III	18.7	44.9	12.3	3.4	19.9	55.9	8.5	0.0	1	S
417.349	II	18.0	46.7	12.4	3.1	22.0	54.4	8.1	0.0	4	S
417.353	III	17.3	45.1	12.3	2.5	18.5	56.3	10.4	0.0	1	S
417.354	III	17.2	44.1	11.0	2.7	20.0	56.2	10.1	0.0	1	R
417.355A	II	16.6	45.2	11.4	3.0	23.4	53.8	8.4	0.0	1	R
417.355B	III	18.4	44.0	11.6	2.9	23.7	53.6	8.2	0.0	1	R
417.361	III	18.0	42.0	12.0	3.1	26.4	50.2	8.4	0.0	1	S
417.362	II	18.2	42.8	10.9	3.2	30.0	47.7	8.2	0.1	1	S
417.364	III	18.7	39.4	10.6	3.5	27.0	50.7	8.2	0.0	1	R
417.384	II	16.2	47.0	12.3	2.9	26.2	50.1	8.5	0.0	1	S
417.391	0	15.8	45.8	13.8	3.0	22.7	52.2	8.3	0.0	1	R
417.393	III	19.7	41.8	11.4	2.9	21.4	56.0	8.3	0.0	1	R
417.398	III	19.5	43.4	12.0	3.0	20.9	56.1	8.2	0.0	3	S
417.425	III	18.4	43.4	12.5	2.6	24.1	52.8	8.0	0.0	1	S
417.436	II	17.5	45.9	11.9	2.9	32.4	45.9	6.8	0.1	1	H
417.447	II	16.3	45.3	12.2	2.7	26.9	49.4	8.8	0.0	1	H
417.451	I	18.1	44.6	13.2	2.9	22.2	53.4	8.2	0.0	1	S
417.452	II	16.3	46.9	12.4	3.1	23.1	52.0	9.4	0.0	1	H
417.453	I	15.9	44.5	12.5	2.7	22.4	52.5	9.8	0.0	1	R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.454	Wase kuro sengoku	010043	Japan		Japan	1977	III
417.455	Wase kurohikari	040159	Japan		Japan	1977	II
417.456	Wase mame	010001	Japan		Japan	1977	III
417.459	Wase oiran	030041	Japan		Japan	1977	II
417.460	Wase shirome	020341	Japan		Japan	1977	II
417.461	Wase tainome	030034	Japan		Japan	1977	II
417.482	Yuumou madara	020162	Japan		Japan	1977	III
417.485	Zairaishu	020322	Japan		Japan	1977	III
417.487	Zairaishu	040066	Japan		Japan	1977	II
417.509	Dr. Brillmayer 2800	360009	Japan		E. Europe	1977	I
417.510	Glosman	360057	Japan		E. Europe	1977	I
417.513B	(Ikar 111)	(370006)	Japan		E. Europe	1977	I
417.513C	(Ikar 111)	(370006)	Japan		E. Europe	1977	I
417.515	Kubanska 276	370060	Japan	E. Europe	USSR+	1977	I
417.516	N14	370027	Japan		E. Europe	1977	I
417.517	Novosadska White	370018	Japan	E. Europe	Yugoslavia+	1977	I
417.519B	(Szklista)	(360048)	Japan	E. Europe	Poland+	1977	I
417.520	Tjeczjaczi	370050	Japan		E. Europe	1977	II
417.521	Yellow	360076	Japan		E. Europe	1977	I
417.522	Zagrebacka	360056	Japan		E. Europe	1977	0
417.525	Dippe Fruhegelb 14/9	390015	Japan	France	Germany+	1977	I
417.526	Garola Rouest	390035	Japan		France	1977	III
417.527	Hispida A Grain Juane	390027	Japan		France	1977	I
417.528	Scheoken	390023	Japan		France	1977	I
417.537B	(A456)	(340016)	Japan		Germany	1977	I
417.549	Soja 540/60	340038	Japan		Germany	1977	I
417.550	Amurskaje	350005	Japan	Poland	USSR+	1977	0
417.559	Pulaska Zolta Wczesna	350030	Japan		Poland	1977	III
417.572A	Kubanskaja 33	320012	Japan		USSR	1977	I
417.572B	(Kubanskaja 33)	(320012)	Japan		USSR	1977	I
417.573	Ussurijskaja 19	320001	Japan		USSR	1977	III
417.574	Ussurijskaja 029	320003	Japan		USSR	1977	II
417.576	Lexington	020080	Japan		USA	1977	II
417.580	Tokyo	020079	Japan	USA	Japan+	1977	III
423.706	Oh won No. 1		S. Korea		S. Korea	1978	I
423.730B		(KAS 100-10-2)	S. Korea		S. Korea	1978	III
423.744		KAS 150-23	S. Korea		S. Korea	1978	III
423.747A		KAS 200-31	S. Korea		S. Korea	1978	III
423.748A		KAS 200-32	S. Korea		S. Korea	1978	III
423.769A		KAS 231-2	S. Korea		S. Korea	1978	III
423.776		KAS 233-1	S. Korea		S. Korea	1978	III
423.798A		KAS 301-3	S. Korea		S. Korea	1978	III
423.814A		KAS 339-10	S. Korea		S. Korea	1978	III
423.814B		(KAS 339-10)	S. Korea		S. Korea	1978	III
423.815		KAS 339-11	S. Korea		S. Korea	1978	III
423.818		KAS 355-3	S. Korea		S. Korea	1978	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.454	III	W	T	E	N	Bl	I	Bl	Bl	Gncot		
417.455	II	W	T	E	Ssp	Br	S	Bl	Bl			
417.456	III	W	G	A	Ssp	Tn	D	Y	Y			
417.459	II	W	G	E	Ssp	Tn	D	Y	Y			
417.460	II	P	G	A	Ssp	Br	D	Y	Y			
417.461	II	W	G	Sa	N	Br	I	Gn	Bf			
417.482	III	P	T	Sa	N	Br	S	Br	Br	St		
417.485	III	W	T	A	N	Br	I	Y	Br			
417.487	II	W	G	E	N	Tn	I	Y	Bf			
417.509	I	P	T	E	Ssp	Br	D	Bl	Bl			
417.510	I	Dp	G	E	N	Br	S	Y	Y			
417.513B	I	P	G	E	N	Tn	S	Y	Bf	Abh	Na	
417.513C	I	P	G	E	N	Br	D	Y	Y		Na	
417.515	I	W	G	E	N	Br	S	Y	Bf			
417.516	I	P	T	E	N	Br	D	Y	Br	Abh		
417.517	I	P	Lt	E	N	Tn	I	Bl	Bl	Fleck		
417.519B	I	P	G	E	N	Br	I	Y	Y			
417.520	II	W	G	E	Ssp	Bl	S	Y	Y		Na	
417.521	I	W	G	E	N	Br	I	Y	Y			
417.522	0	P	G	E	N	Br	I	Y	Y			
417.525	I	P	T	E	N	Br	D	Y	Br			
417.526	III	P	T	E	N	Br	S	Y	Bl			
417.527	I	P	T	E	N	Tn	S	Y	Y			
417.528	I	P	T	E	N	Br	D	Y	Br			
417.537B	I	P	T	E	N	Tn	I	Y	Br			
417.549	I	W	G	E	N	Br	S	Y	Lbf			
417.550	0	P	T	E	N	Tn	S	Y	Bl			
417.559	III	W	T	Sa	Ssp	Tn	I	Y	Br			
417.572A	I	W	G	E	N	Br	S	Y	Bf			
417.572B	I	W	G	E	N	Br	S	Y	Bf			
417.573	III	P	T	E	N	Br	S	Y	Bl			
417.574	II	P	T	E	Ssp	Lbr	D	Y	Br			
417.576	II	W	G	E	N	Br	D	Gn	Bf			
417.580	III	W	G	A	Ssp	Br	I	Y	Bf			
423.706	I	P	T	E	Ssp	Br	I	Y	Br			
423.730B	III	P	T	I	Ssp	Tn	I	Bl	Bl	Net		
423.744	III	W	G	A	Ssp	Tn	D	Y	Y			
423.747A	III	P	G	E	Ssp	Br	I	Y	Bf			
423.748A	III	P	G	E	N	Br	D	Y	Bf			
423.769A	III	P	G	E	N	Br	I	Y	Y	SSt		
423.776	III	W	G	Sa	Ssp	Tn	D	Y	Y			
423.798A	III	W	G	A	Ssp	Tn	I	Y	Bf	SDef		
423.814A	III	P	G	E	Ssp	Tn	D	Y	Bf			
423.814B	III	P	G	E	Ssp	Br	D	Y	Y			
423.815	III	W	G	A	Ssp	Tn	D	Y	Y			
423.818	III	P	G	E	Ssp	Tn	D	Y	Y			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.454	51	121	1.5	61	1.0	1.5	2.0*	1.8	-	7.2	2.23*
417.455	40	109	1.3	54	1.0	3.5*	4.0*	2.8	-	28.2	1.93
417.456	47	116	2.3	69	1.5	2.0	4.0*	2.0	2.5	23.0	2.72
417.459	41	103	1.6	57	1.0	1.0	3.5*	2.5	1.0	25.6	2.43
417.460	41	108	1.3	51	1.0	1.5	5.0	2.5	1.0	19.0	2.70*
417.461	46	111	1.1	42	1.0	2.0	5.0	2.0	1.0	23.0	2.39*
417.482	49	115	3.3	70	1.0	1.5	3.5*	2.3	-	22.6*	2.41*
417.485	57	124	1.8	81	2.0	1.5	3.0*	2.3	1.5	22.7*	1.82
417.487	43*	111	2.2	78	2.0	1.0	3.5*	2.0	2.0	12.3	2.29
417.509	31	95	1.7	88*	4.0	1.0	1.0	2.3	-	14.3	2.54
417.510	34	101	2.6*	76*	3.0	1.0	1.0	3.0	1.5	18.4	3.15
417.513B	33	97	2.8	65	3.0	1.0	1.5	1.8	1.0	10.4	2.64
417.513C	31	97	2.9	83*	4.0	1.0	1.0	2.3	1.0	12.8	2.58*
417.515	35	99	1.9*	67	3.0	1.0	1.0	2.5	1.0	16.6	2.85
417.516	32	94	2.8	62	3.0	1.0	1.5	2.5	1.0	9.7	2.20
417.517	34	99*	3.1	99*	4.0	1.0	1.0	2.0	-	9.1	2.68
417.519B	29	93	1.2	65	3.0	1.0	1.0	2.5	1.0	18.0	3.04
417.520	34	103	2.3	89	3.0	1.0	1.0	3.0	2.0	14.4	2.15
417.521	32	98	2.0	79*	3.0	1.0	1.0	3.3	1.5	16.5	2.32
417.522	29	91	2.0	82	3.0	1.0	1.5	3.5*	1.0	17.0	2.44
417.525	31	100	2.9	97*	3.0	1.0	1.0	2.3	1.0	15.7	2.83
417.526	43	118	3.3	108	3.0	1.0	1.0	2.3	1.0	18.0	3.09*
417.527	40	100	2.8	94*	4.0	1.0	1.0	2.5	1.5	12.6	2.37*
417.528	32	100	3.3	93	3.0	1.0	1.0	2.3	1.0	14.9	2.70
417.537B	31	98	3.8	117*	4.0	1.0	1.0	2.3	1.0	14.0	2.74
417.549	30	100	1.8	83	3.0	1.0	1.0	3.0	1.0	21.1	3.21*
417.550	27	91	1.5	63	3.0	1.0	1.0	2.5	1.0	15.4	2.52
417.559	49	115	2.0	77	2.0	2.0	3.5*	2.0	1.0	20.8	2.85
417.572A	35	101	2.6*	72	3.0	1.0	1.0	2.5	1.0	16.3	3.25*
417.572B	38	100	2.1*	71	3.0	1.5	1.0	2.5	1.0	16.4	2.68
417.573	43	118	3.3	129	3.5	1.0	1.0	2.0	1.0	14.5	2.91*
417.574	38	107	2.8	88	3.0	1.0	1.0	2.8	1.0	14.1	2.67
417.576	48	105	2.1	69	1.5	1.0	1.0	3.0*	1.0	12.0	2.86
417.580	Tested in and reported with early group IV evaluation										
423.706	34	103	1.6	57	1.0	1.5	5.0	2.5	1.5	23.5	2.58
423.730B	49	119	1.8	57	1.0	1.0	1.0	2.3	-	19.7	2.84
423.744	49	116	2.0	63	1.0	1.5	3.5*	2.3	2.0	19.1	2.39
423.747A	51	119	1.8	65	1.0	1.0	3.5*	2.0	1.5	15.9	2.60*
423.748A	51	119	3.1	79	1.0	1.0	2.0*	2.3	1.0	20.0	2.52
423.769A	48	118	3.0	72	1.0	1.5	3.0*	3.0*	4.0*	22.9	3.04
423.776	48	121	2.6*	69	1.0	1.5	3.0*	2.3	1.0	25.3	2.39
423.798A	46	115	1.8*	57	2.0	1.5	4.0*	2.3	2.0	23.1*	1.94*
423.814A	48	119	2.6	71	1.5	1.5	3.0*	1.8	1.5	15.9	2.95
423.814B	48	119	2.4	77	1.0	1.5	3.0*	2.0	3.0*	14.8	2.75
423.815	49	119	2.5	76	1.0	1.5	3.5*	2.3	2.5	23.8	2.70
423.818	52	122	1.5	67	1.0	1.5	3.0*	2.3	1.5	16.5	2.62

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.454	III	18.3	43.8	10.9	2.9	20.9	57.2	7.8	0.1	1	S
417.455	II	18.5	44.4	11.0	3.2	36.6	43.0	6.0	0.1	1	R
417.456	III	17.5	43.8	11.2	2.9	23.7	54.1	8.0	0.0	1	S
417.459	II	16.8	48.2	12.6	3.0	29.0	47.7	7.6	0.0	1	R
417.460	II	17.8	45.1	11.4	3.5	20.5	55.0	9.5	0.0	1	S
417.461	II	17.0	45.9	12.7	3.0	29.0	47.0	8.3	0.0	1	S
417.482	III	17.6	46.2	12.7	2.8	22.7	54.4	7.4	0.0	1	S
417.485	III	18.9	41.4	11.9	3.3	25.2	52.2	7.3	0.0	1	R
417.487	II	15.5	48.2	13.1	2.8	23.2	51.4	9.6	0.0	1	R
417.509	I	17.6	45.9	12.5	3.3	24.6	51.2	8.4	0.0	1	S
417.510	I	17.6	46.6	12.3	2.9	20.9	55.6	8.3	0.0	4	S
417.513B	I	16.7	43.4	12.5	2.3	14.6	60.2	10.4	0.0	3	S
417.513C	I	17.7	45.5	13.4	3.0	23.9	53.0	6.6	0.0	4	S
417.515	I	20.1	43.1	10.9	3.7	30.2	48.2	7.0	0.0	1	S
417.516	I	17.7	44.3	13.7	3.5	23.2	51.4	8.2	0.0	1	S
417.517	I	15.9	43.9	12.6	3.2	25.9	51.7	6.6	0.0	4	S
417.519B	I	18.7	44.0	12.1	2.6	28.3	49.4	7.6	0.0	5	S
417.520	II	18.5	44.5	12.4	3.5	24.9	52.1	7.1	0.0	5	R
417.521	I	18.9	45.5	12.1	3.5	24.3	53.1	7.1	0.0	5	S
417.522	0	17.5	45.8	12.2	2.8	26.6	50.4	8.0	0.0	4	S
417.525	I	17.8	45.6	12.2	2.9	20.5	55.9	8.6	0.0	5	S
417.526	III	19.1	44.4	10.9	2.9	22.7	55.7	7.8	0.0	1	R
417.527	I	17.1	46.4	12.4	3.2	21.4	55.0	8.0	0.0	4	S
417.528	I	18.5	44.7	12.0	2.7	20.2	55.8	9.0	0.3	4	S
417.537B	I	18.4	42.7	12.4	3.3	23.1	53.6	7.6	0.0		S
417.549	I	20.5	43.3	11.3	3.1	27.6	51.8	6.1	0.0	5	H
417.550	0	19.2	45.1	11.5	3.3	24.2	53.4	7.6	0.0	5	S
417.559	III	16.6	46.7	12.5	2.8	24.5	51.2	9.0	0.0	1	S
417.572A	I	19.9	42.8	11.5	3.1	27.5	51.1	6.8	0.1	1	S
417.572B	I	20.2	42.8	10.8	3.7	28.3	49.8	7.3	0.0	2	S
417.573	III	19.8	43.4	11.4	2.9	19.0	57.2	9.4	0.0	5	S
417.574	II	18.5	46.0	11.1	3.3	22.0	56.6	7.0	0.1	4	S
417.576	II	17.5	45.7	13.0	2.9	17.2	57.1	9.9	0.0	1	S
417.580	III	Tested in and reported with early group IV evaluation								1	H
423.706	I	19.0	45.7	11.9	2.9	24.7	52.6	8.0	0.0	1	R R R R
423.730B	III	18.6	43.2	11.1	3.3	20.6	55.5	9.6	0.0	1	H
423.744	III	18.5	43.6	11.9	3.1	20.5	56.7	7.7	0.0	1	H
423.747A	III	17.4	42.6	12.5	2.7	16.4	57.8	10.6	0.0	1	R R R R
423.748A	III	18.5	46.9	11.7	3.1	21.3	56.0	7.9	0.0		R R S S
423.769A	III	18.1	47.5	12.1	3.1	26.6	51.7	6.5	0.0	1	S
423.776	III	18.3	45.2	10.6	3.0	22.0	57.0	7.5	0.0	1	S
423.798A	III	17.8	45.4	12.5	3.2	22.3	54.0	8.1	0.0	1	S
423.814A	III	19.1	44.3	12.3	3.1	20.8	56.3	7.5	0.0	3	R R R R
423.814B	III	17.8	45.9	11.9	3.1	18.9	57.5	8.6	0.0	1	R H S S
423.815	III	17.8	43.2	11.5	2.8	29.0	49.4	7.4	0.0	1	R R S H
423.818	III	17.4	44.7	12.7	3.1	17.1	57.7	9.5	0.0	4	R H R R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
423.826A		KAS 362-5	S. Korea		S. Korea	1978	III
423.826B		(KAS 362-5)	S. Korea		S. Korea	1978	III
423.829		KAS 362-8	S. Korea		S. Korea	1978	III
423.838		KAS 370-19	S. Korea		S. Korea	1978	III
423.865	Nakate hikari kuro		Japan		Japan	1978	II
423.868	Shirobana tairyu hadaka		Japan		Japan	1978	I
423.870	Tokachi hadaka		Japan		Japan	1978	II
423.871	Toyosuzu		Japan		Japan	1978	II
423.872	Wase midori		Japan		Japan	1978	I
423.880	Horai	Ao 1052	Japan		Japan	1978	I
423.881	Karikei 44	Bb 1152	Japan		Japan	1978	II
423.882A	Karikei 61	Bb 1153	Japan		Japan	1978	III
423.883	Karikei 72	Bb 1154	Japan		Japan	1978	II
423.884	Karikei 73	Bb 1155	Japan		Japan	1978	II
423.885	Karumai	Bb 1150	Japan		Japan	1978	III
423.889	Shirobana 1	Co 1006	Japan		Japan	1978	III
423.890A	Shirohigo	Be 1011	Japan		Japan	1978	II
423.891	Shirome (Nagasaki)	Hd 1004	Japan		Japan	1978	I
423.892	Shiromenagaha	Be 1018	Japan		Japan	1978	III
423.896	Takei 6	Bb 1085	Japan		Japan	1978	III
423.899	Yuzuru		Japan		Japan	1978	III
423.932	Ishibaru daizu		Japan		Japan	1978	II
423.933	Kin		Japan		Japan	1978	II
423.935	Kyushu 77		Japan		Japan	1978	II
423.936	Kyushu 87		Japan		Japan	1978	III
423.937	Kyushu 90		Japan		Japan	1978	I
423.938	Matsuba daizu		Japan		Japan	1978	II
423.939	Meguro		Japan		Japan	1978	II
423.940	Natsu daizu 1		Japan		Japan	1978	II
423.941	Orihime		Japan		Japan	1978	II
423.942	Saikai 1		Japan		Japan	1978	I
423.943	Saikai 5		Japan		Japan	1978	I
423.944	Saikai 11		Japan		Japan	1978	I
423.945	Saikai 12		Japan		Japan	1978	II
423.946	Saikai 13		Japan		Japan	1978	III
423.947	Saikai 16		Japan		Japan	1978	I
423.948A	Saikai 18		Japan		Japan	1978	II
423.948B	(Saikai 18)		Japan		Japan	1978	III
423.949	Saikai 20		Japan		Japan	1978	I
423.950	Saikai 22		Japan		Japan	1978	II
423.951	Saikai 24		Japan		Japan	1978	II
423.952	Saikai 27		Japan		Japan	1978	II
423.953	Sako 25-36		Japan		Japan	1978	0
423.955	Shirosaya 1		Japan		Japan	1978	I
423.973	Chizuka ibaragi 1	Cc 1020	Japan		Japan	1978	III
423.974	Fujimusume	Hb 1003	Japan		Japan	1978	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
423.826A	III	P	G	E	Ssp	Tn	D	Y	Bf			
423.826B	III	P	G	E	Ssp	Br	D	Y	Bf			
423.829	III	W	G	A	Ssp	Tn	D	Y	Y	Def		
423.838	III	Dp	G	A	Ssp	Tn	D	Y	Y			
423.865	II	W	T	E	Ssp	Br	S	Bl	Bl			
423.868	I	W	-	-	G	Br	D	Y	Br			
423.870	II	P	-	-	G	Dbr	S	Y	Br			
423.871	II	P	Lt	E	Ssp	Br	D	Y	Y			
423.872	I	W	T	E	Ssp	Br	D	Gn	Bl			
423.880	I	P	G	E	Ssp	Br	I	Y	Y			
423.881	II	P	G	Sa	Ssp	Br	D	Y	Y			
423.882A	III	P	G	A	Ssp	Br	D	Y	Y			
423.883	II	P	G	Sa	Ssp	Br	I	Y	Y		Na	
423.884	II	P	G	A	Ssp	Br	I	Y	Y		Na	
423.885	III	Dp	G	Sa	Ssp	Br	D	Y	Y			
423.889	III	W	G	Sa	Ssp	Tn	D	Y	Y	Def		
423.890A	II	W	G	A	N	Tn	I	Y	Bf			
423.891	I	P	G	Sa	N	Br	D	Y	Bf			
423.892	III	W	G	E	Ssp	Br	D	Y	Y		Na	
423.896	III	P	T	A	Ssp	Br	I	Y	Br			
423.899	III	W	G	E	Ssp	Br	D	Y	Y			
423.932	II	Dp	T	A	N	Tn	I	Y	Br			
423.933	II	P	G	A	Ssp	Tn	I	Y	Bf			
423.935	II	P	T	E	N	Tn	S	Y	Y		Na	
423.936	III	P	T	E	Ssp	Tn	I	Y	Y		Na	
423.937	I	P	G	E	N	Br	S	Y	Bf			
423.938	II	W	T	E	N	Tn	I	Y	Br			
423.939	II	W	T	A	N	Tn	D	Gn	Br			
423.940	II	W	G	A	N	Br	D	Y	Bf			
423.941	II	Lp	G	E	Ssp	Br	I	Y	Bf			
423.942	I	P	G	A	N	Tn	I	Y	Bf			
423.943	I	W	T	E	N	Br	D	Y	Br			
423.944	I	W	G	E	N	Tn	I	Y	Bf			
423.945	II	W	G	A	N	Br	D	Y	Bf			
423.946	III	P	G	Sa	N	Tn	I	Y	Bf			
423.947	I	P	G	Sa	N	Tn	I	Y	Bf			
423.948A	II	Lp	G	E	N	Br	S	Y	Bf			
423.948B	III	P	T	E	Ssp	Br	S	Y	Br			
423.949	I	Lp	G	A	Ssp	Br	I	Y	Bf			
423.950	II	P	T	E	N	Tn	D	Y	Br			
423.951	II	W	G	E	N	Br	I	Y	Bf			
423.952	II	P	G	E	N	Br	S	Y	Y			
423.953	0	W	G	Sa	Ssp	Br	D	Y	Bf			
423.955	I	P	G	A	N	Tn	D	Y	Bf			
423.973	III	P	T	Sa	Ssp	Br	S	Y	Br			
423.974	III	P	T	E	Ssp	Br	S	Y	Br			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
423.826A	46	115	2.0	72	2.0	1.0	2.0*	2.3	1.5	17.2	2.77
423.826B	46	118	2.3*	74	1.5	1.5	3.5*	1.8	1.5	16.2	2.71
423.829	48	116	1.5	65	1.5	1.5	3.5*	2.5	2.0	23.3*	2.30
423.838	49	119	1.8	73	1.0	1.0	1.5	2.3	2.0	22.1	2.52
423.865	40	106	1.1	51	1.0	2.0	4.5	3.0	-	27.8	2.12
423.868	34	95*	1.0	22	3.0	1.5	1.5	2.5	1.0	17.1	0.63
423.870	46	108	1.2	21	1.0	2.0	4.5	3.8*	2.5	12.4*	0.46
423.871	36	115	1.3	35	1.0	2.0	4.5	2.8	1.0	21.6*	1.97*
423.872	38*	108	1.1	44	1.0	1.5	2.5	2.5	1.0	25.6	2.80
423.880	34	96	2.5	78*	3.0	1.5	1.5	3.0	1.5	19.0	2.70
423.881	46	106	1.3	55	1.5	1.5	5.0	2.5	1.0	21.0	2.29
423.882A	40	121	1.8	42	1.0	1.5	2.0*	2.0	1.0	19.4	2.95
423.883	43	110	1.3	58*	1.0	1.0	3.5*	2.0	1.0	19.0	2.61*
423.884	42	103	1.1	52	1.5	1.0	3.5*	2.3	1.0	15.2	2.03
423.885	49	116	2.3	62	1.0	1.0	3.0*	2.8*	2.0	20.9	2.37
423.889	47	117	3.0*	71	2.0	2.0*	4.0*	2.8	2.0	25.4	2.52
423.890A	49	113	2.7*	62	1.0	2.0*	3.0*	3.0*	1.0	21.4	1.96
423.891	47	101	2.4	65	2.0	1.5	4.5	2.0	2.0	13.3	3.04
423.892	44*	113	1.3	61	2.0	1.5	1.5	2.3	1.5	23.8	2.59
423.896	48	115	2.0	84*	2.5	3.0*	4.5	2.3	1.0	20.1	2.23
423.899	40	112	1.5	48	1.0	4.0*	4.5	2.3	1.0	32.5*	2.40
423.932	50	106	2.0	65	2.0	1.0	3.0*	1.8	3.0*	10.0	1.67
423.933	51	108	2.5*	66	2.0	1.0	3.0*	2.3	1.0	12.4*	2.05*
423.935	43	108	1.1	48	1.0	1.0	3.5*	2.3	1.0	15.2	2.24
423.936	48	116	1.3	55	1.0	1.0	3.0*	2.0	1.0	15.1	2.95
423.937	33	97	1.1	68	3.0	1.0	1.5	2.3	1.0	15.3	2.69*
423.938	50	110	2.4	76	1.0	1.5	3.5*	2.0	2.5	12.8*	2.27*
423.939	48	107	3.8*	85*	2.0	1.5	4.0*	2.0	2.0	14.2*	2.29*
423.940	49	107	2.0	57	1.0	1.0	3.5*	2.0	2.0	10.4	2.07
423.941	52	110	1.7*	70	1.0	1.0	3.5*	2.3	1.0	11.2	2.31*
423.942	49	101	2.5	57*	1.0	2.0	3.5	2.0	1.5	12.6	2.13
423.943	48	106	2.5	82	1.0	1.5	3.5*	2.3	2.0	13.9	2.31
423.944	47	103	2.3	72	2.0*	1.5	3.5*	2.3	1.5	15.5	2.77
423.945	51	116	2.0	67	1.5	2.0*	3.5*	2.0	2.0	10.8	2.24
423.946	56	116	1.3	72	2.0	1.0	4.0*	2.0	1.0	12.1	2.25
423.947	49	103	2.0	68	2.0	1.5	4.0*	2.3	2.0	16.4	2.15
423.948A	48	110	2.8	78	2.5	1.0	3.5*	2.3	1.0	12.6	1.94
423.948B	48	115	1.8	78	2.0	2.0	3.5*	2.0	1.0	14.1	2.22
423.949	47	102	1.5	59	1.5	1.0	3.5*	2.0	1.0	13.3	2.28
423.950	51	111	2.3	94	3.0	1.0	1.5	1.8	1.0	13.7	2.64*
423.951	48	109	2.0	69	1.5	3.5*	3.5*	2.3	1.5	15.0	1.75*
423.952	37	103	2.3	105	4.0	1.5	1.5	2.5	1.0	15.4	3.00
423.953	42*	92	2.0	56	2.5	1.5	2.0*	1.8	2.0	9.6	2.21
423.955	49	101	1.9	57	1.5	1.0	4.5	2.3	2.0	12.4	2.46
423.973	Tested in and reported with early group IV evaluation										
423.974	48	114	2.0	70	1.0	3.0*	4.0*	2.0	1.0	17.1	2.77

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
423.826A	III	18.2	45.4	12.5	3.0	22.5	53.8	8.2	0.0	1	R R R S
423.826B	III	19.2	45.2	11.9	3.1	21.2	56.4	7.4	0.1	1	R R R R
423.829	III	18.0	44.4	12.0	3.0	23.8	53.5	7.8	0.0	1	H
423.838	III	19.1	45.8	11.5	2.8	24.0	54.2	7.6	0.0	1	S
423.865	II	18.0	45.6	10.7	3.7	38.8	40.8	5.5	0.5	1	R R H S
423.868	I	19.5	44.2	11.8	3.0	24.0	54.2	7.0	0.0	1	
423.870	II	16.3	45.9	11.7	3.1	22.9	52.4	9.8	0.0	1	R R R R
423.871	II	18.0	48.0	11.8	2.7	20.4	58.0	7.1	0.0	1	R R R R
423.872	I	18.4	44.8	11.6	3.3	35.0	42.8	7.2	0.1	1	
423.880	I	18.3	45.7	12.7	3.4	25.6	51.3	6.9	0.1	1	S
423.881	II	17.3	46.7	11.5	2.9	24.2	53.0	8.3	0.0	1	R R R R
423.882A	III	19.4	42.9	12.2	2.8	19.8	56.1	9.1	0.0	4	R R R S
423.883	II	18.0	45.9	11.9	2.4	19.5	58.0	8.1	0.0	1	S
423.884	II	17.0	48.1	13.1	3.0	18.7	56.9	8.3	0.0	1	S
423.885	III	18.6	43.2	12.6	2.9	20.1	55.8	8.7	0.0	1	R R R R
423.889	III	18.3	44.6	11.6	2.8	24.5	53.0	7.8	0.0		
423.890A	II	17.8	43.4	10.6	3.1	35.3	43.8	7.1	0.0	1	R
423.891	I	15.5	46.9	12.8	3.3	22.9	51.6	9.3	0.0	1	S
423.892	III	18.9	46.4	11.7	3.0	24.0	53.0	8.3	0.0	1	S
423.896	III	18.0	44.2	12.0	2.9	19.0	57.4	8.8	0.0	1	R R R R
423.899	III	18.0	43.4	11.1	2.8	25.8	51.7	8.4	0.0	1	S
423.932	II	15.0	46.7	13.5	3.3	21.7	51.3	10.0	0.0	1	R R R H
423.933	II	15.9	44.9	12.1	3.0	25.6	49.6	9.6	0.1	1	R R R R
423.935	II	18.8	43.6	15.2	3.9	25.1	50.0	8.3	0.0	1	S
423.936	III	17.3	41.6	12.4	3.2	24.6	51.4	8.4	0.0	1	S
423.937	I	17.6	46.9	13.5	3.5	27.1	47.8	8.0	0.1	5	S
423.938	II	16.6	44.7	12.2	2.9	22.8	52.5	9.5	0.0	1	H
423.939	II	16.1	43.6	12.7	3.0	22.6	52.8	8.8	0.0	1	R R R R
423.940	II	16.1	44.4	12.3	3.6	24.9	50.2	8.9	0.0	1	S
423.941	II	17.0	42.8	13.3	2.9	21.2	53.5	9.0	0.0	1	R R R R
423.942	I	14.9	48.9	14.0	3.3	23.7	50.5	8.3	0.1	1	R H H S
423.943	I	16.4	45.4	12.5	3.6	24.4	50.6	8.9	0.1	1	R R S S
423.944	I	15.9	45.2	12.1	2.9	28.6	47.8	8.4	0.1	1	H
423.945	II	15.7	43.4	11.7	3.1	28.2	48.4	8.6	0.0	1	H
423.946	III	15.6	45.2	12.8	2.6	17.3	57.0	10.3	0.0	1	R R R R
423.947	I	15.9	46.8	13.2	3.5	26.2	48.1	9.0	0.1	1	S
423.948A	II	15.7	49.9	12.4	3.0	22.1	53.1	9.3	0.1	1	S
423.948B	III	16.3	46.8	12.1	3.0	19.7	56.1	9.2	0.0	1	R R R R
423.949	I	14.4	51.4	14.9	3.1	18.3	53.7	10.0	0.1	1	R R R R
423.950	II	17.4	44.0	14.0	3.2	29.1	45.2	8.4	0.1	1	S
423.951	II	16.7	45.4	11.8	3.0	25.6	51.1	8.3	0.0	1	R R R R
423.952	II	17.4	43.3	13.7	3.2	23.4	50.7	8.9	0.1	4	S
423.953	0	15.8	47.6	12.7	3.6	22.7	51.1	10.0	0.0	1	S
423.955	I	15.3	45.7	13.8	3.3	22.4	51.3	9.1	0.0	1	R R S S
423.973	III	Tested in and reported with early group IV evaluation								1	R R R S
423.974	III	18.2	43.6	13.6	2.8	22.1	53.2	8.4	0.0	1	R R R R

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
423.987A	Fujimusume		Japan		Japan	1978	I
423.987B	(Fujimusume)		Japan		Japan	1978	III
424.078		74077	S. Korea		S. Korea	1978	III
424.134		KAS 629-1	S. Korea		S. Korea	1978	III
424.143		KAS 641-2	S. Korea		S. Korea	1978	III
424.148		KAS 642-2	S. Korea		S. Korea	1978	0
424.155A		KAS 643-3	S. Korea		S. Korea	1978	III
424.159A		KAS 643-8	S. Korea		S. Korea	1978	III
424.192A			China		China	1978	II
424.192B			China		China	1978	II
424.195B	(ISZ-3)		Hungary		Hungary	1978	I
424.199	Karikachi		Yugoslavia		Yugoslavia	1978	I
424.201	Kirin No. 6		Yugoslavia		China+	1978	II
424.202	Kirovogradska		Yugoslavia		Yugoslavia	1978	I
424.203	Heilungkiang No. 10		Yugoslavia		China+	1978	I
424.204	Heilungkiang No. 11		Yugoslavia		China+	1978	I
424.206	M-525/69		Yugoslavia		Yugoslavia	1978	I
424.209	Tokachi nagaha		Yugoslavia		Japan+	1978	I
424.210	Wniimk 8072		Yugoslavia		USSR+	1978	I
424.247A		KAS 200-40	S. Korea		S. Korea	1978	III
424.249A		KAS 200-42	S. Korea		S. Korea	1978	III
424.261		KAS 205-25	S. Korea		S. Korea	1978	III
424.297		KAS 300-9	S. Korea		S. Korea	1978	III
424.319		KAS 333-5	S. Korea		S. Korea	1978	III
424.339		KAS 351-7	S. Korea		S. Korea	1978	III
424.353		KAS 351-21	S. Korea		S. Korea	1978	III
424.356		KAS 351-24	S. Korea		S. Korea	1978	III
424.358		KAS 351-26	S. Korea		S. Korea	1978	III
424.359		KAS 351-27	S. Korea		S. Korea	1978	III
424.366		KAS 351-34	S. Korea		S. Korea	1978	III
424.368A		KAS 351-36	S. Korea		S. Korea	1978	III
424.373		KAS 353-6	S. Korea		S. Korea	1978	III
424.382		KAS 371-2	S. Korea		S. Korea	1978	III
424.405A		KAS 530-16	S. Korea		S. Korea	1978	III
424.408		KAS 531-2	S. Korea		S. Korea	1978	III
424.422		KAS 540-16	S. Korea		S. Korea	1978	III
424.423		KAS 540-17	S. Korea		S. Korea	1978	III
424.425		KAS 540-19	S. Korea		S. Korea	1978	III
424.444A		KAS 571-11	S. Korea		S. Korea	1978	III
424.463		KAS 581-11	S. Korea		S. Korea	1978	III
424.488A		KAS 604-21	S. Korea		S. Korea	1978	III
424.540		KAS 624-29	S. Korea		S. Korea	1978	III
424.541		KAS 624-30	S. Korea		S. Korea	1978	III
424.550		KAS 632-25	S. Korea		S. Korea	1978	III
424.563		KAS 636-16	S. Korea		S. Korea	1978	III
424.568		KAS 640-13	S. Korea		S. Korea	1978	III

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
423.987A	I	P	T	E	Ssp	Tn	D	Y	Br			
423.987B	III	P	T	E	Ssp	Br	S	Y	Br			
424.078	III	P	T	E	Ssp	Bl	B	Bl	Bl			Sw
424.134	III	W	G	A	Ssp	Tn	D	Y	Y	SDef		
424.143	III	P	G	E	Ssp	Br	D	Y	Bf			
424.148	0	W	G	A	Ssp	Br	I	Y	Bf			
424.155A	III	W	G	A	Ssp	Tn	D	Y	Y			
424.159A	III	P	G	E	Ssp	Br	D	Y	Bf			
424.192A	II	P	T	A	N	Br	I	Y	Br			
424.192B	II	P	T	A	N	Tn	I	Y	Bl			
424.195B	I	W	G	E	N	Tn	I	Y	Bf			
424.199	I	P	T	E	N	Br	S	Y	Lbl			
424.201	II	W	G	E	N	Br	S	Y	Bf			
424.202	I	P	T	E	Ssp	Br	S	Y	Br			
424.203	I	W	G	E	N	Br	S	Y	Y		Na	
424.204	I	W	G	E	N	Br	S	Y	Y		Na	
424.206	I	P	G	E	N	Tn	D	Y	Bf			
424.209	I	W	G	E	N	Br	S	Y	Y			
424.210	I	P	T	E	N	Br	D	Y	Br			
424.247A	III	P	G	E	Ssp	Br	D	Y	Bf			
424.249A	III	W	G	Sa	Ssp	Tn	I	Y	Y			
424.261	III	W	G	A	Ssp	Br	S	Y	Bf			
424.297	III	W	G	A	Ssp	Tn	I	Y	Bf	SDef		
424.319	III	W	G	A	Ssp	Tn	D	Y	Y			
424.339	III	P	G	E	Ssp	Br	D	Y	Bf			
424.353	III	P	G	Sa	Ssp	Br	D	Y	Bf			
424.356	III	W	T	E	Ssp	Br	S	Br	Br			
424.358	III	P	G	E	Ssp	Br	D	Y	Bf			
424.359	III	W	G	A	Ssp	Tn	D	Y	Y			
424.366	III	W	G	A	Ssp	Tn	D	Y	Y			
424.368A	III	P	G	E	Ssp	Br	D	Y	Bf			
424.373	III	P	G	E	N	Br	D	Y	Bf			
424.382	III	W	G	A	Ssp	Tn	I	Y	Bf			
424.405A	III	P	T	E	N	Br	D	Y	Bl			
424.408	III	W	G	A	Ssp	Tn	I	Y	Bf	SDef		
424.422	III	W	G	A	Ssp	Tn	I	Y	Bf	SDef		
424.423	III	W	G	A	Ssp	Tn	I	Y	Bf			
424.425	III	W	G	A	Ssp	Tn	D	Y	Y			
424.444A	III	W	G	A	Ssp	Tn	I	Y	Bf			
424.463	III	P	G	E	Ssp	Br	I	Y	Bf			
424.488A	III	W	G	E	Ssp	Tn	D	Y	Lbf	SDef		
424.540	III	W	G	A	Ssp	Tn	D	Y	Y			
424.541	III	W	G	A	Ssp	Tn	D	Y	Y			
424.550	III	W	G	A	Ssp	Tn	I	Y	Bf			
424.563	III	W	G	A	Ssp	Tn	S	Y	Y			
424.568	III	W	G	A	Ssp	Tn	D	Y	Y			

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
423.987A	48	102	2.4	58	2.0	1.0	3.5*	2.3	1.0	11.9	2.65
423.987B	48	112	2.1*	59*	1.0	1.0	3.5*	2.3	1.0	17.1	2.94*
424.078	64	119	2.8*	76	3.5	2.0*	5.0	2.3	-	4.6	1.27
424.134	48	121	2.8*	72	2.0	2.5	4.0*	2.5	2.0	24.5	2.46
424.143	Tested in and reported with early group IV evaluation										
424.148	43*	89	2.0	58	2.5	2.0*	3.0*	2.3	1.0	8.9	1.80
424.155A	47	116	3.1*	71	2.0	2.0	3.5*	2.8*	2.0	20.4	2.60
424.159A	Tested in and reported with early group IV evaluation										
424.192A	50	106	1.5	58	1.0	1.0	1.0	2.3	1.0	17.5*	2.18
424.192B	47*	106	1.5	62	1.0	1.0	3.5*	2.3	1.5	17.5	2.38
424.195B	30	98	1.5	80*	3.0	1.0	1.0	3.0	1.0	13.0	2.92*
424.199	29	96*	2.3	80*	3.0	1.0	1.0	3.0	1.0	15.6	2.77*
424.201	35	109	2.1	68	1.0	1.0	1.0	2.5	1.0	15.7	3.21*
424.202	30	94	2.3	75*	3.5	1.0	1.0	3.0	1.0	11.3	2.43
424.203	30	95	1.7	65	3.0	1.0	1.0	2.8	1.0	17.0	2.52
424.204	32	94	1.5	58	3.0	1.0	1.0	3.0	1.0	13.3	2.63
424.206	33	100	1.7	52*	3.0	1.0	1.0	2.5	1.0	19.9	3.01
424.209	30	99	2.6	109*	4.0	1.0	1.0	2.3	1.0	13.0	2.80
424.210	32	100	3.5	77*	3.0	1.0	1.0	3.0	1.5	12.9	2.69
424.247A	Tested in and reported with early group IV evaluation										
424.249A	49	120	1.8	73	1.0	1.5	2.5*	2.8*	2.5	23.0	2.54
424.261	49	118	2.8*	74	2.0	1.0	3.5*	2.3	2.0	21.8	2.78
424.297	48	115	1.5	67	1.5	3.0*	3.5*	2.3	2.0	21.8	2.74
424.319	49	120	3.0*	76*	1.0	2.0*	3.5*	2.5	2.5	23.4	2.03
424.339	Tested in and reported with early group IV evaluation										
424.353	48	119	2.8*	68*	1.5	1.5	3.5*	1.8	1.0	16.1	2.78
424.356	49	117	2.1	62	1.0	1.5	3.0*	2.3	-	20.0	2.73
424.358	49	119	2.3	75	1.0	1.0	2.5*	2.0	1.0	16.6	3.09
424.359	49	119	3.1*	69	1.0	2.0	3.5*	2.8*	2.5	23.6	2.18
424.366	49	117	2.6	69	1.0	2.0	3.5*	2.3	2.5	19.7	2.49
424.368A	49	121	3.3	75	2.0	1.5	3.0*	1.8	1.0	16.3	3.05
424.373	48	119	3.0	78	2.0	1.5	3.5*	1.8	1.0	16.6	2.86
424.382	49	116	1.8	69	1.5	2.0	4.0*	2.5	2.0	21.2	2.70
424.405A	38	117	1.5	103	3.0	1.0	1.0	3.0	2.0	16.3	3.16*
424.408	48	115	2.0	72	2.0	2.0	4.0*	2.5	2.0	23.4	2.53
424.422	48	117	2.6*	69	2.0	1.5	4.0*	2.5	2.0	22.1	2.46
424.423	47	116	2.3	70	1.5	1.5	3.5*	2.5	1.5	23.6	2.72
424.425	49	117	3.1*	70	1.5	2.5	3.5*	2.5	2.5	20.8*	2.44
424.444A	49	117	2.1	77	1.0	2.0	3.5*	2.3	2.0	23.3	2.58
424.463	49	116	1.6	59	1.0	1.0	4.0*	2.0	1.0	17.8	2.99
424.488A	49	119	2.1*	81	1.0	1.5	3.5*	3.0	2.5	25.4	3.09
424.540	48	118	3.1*	73	2.0	2.0	3.5*	2.8*	2.0	20.5*	2.63
424.541	48	118	2.8*	68*	2.0	2.5	3.5*	2.8	2.0	24.5	2.52
424.550	48	115	1.8	62	1.0	2.5	3.5*	2.5	2.0	23.3	2.30
424.563	48	118	3.1*	70	1.0	2.5	3.5*	2.5	2.0	24.1	2.54
424.568	49	118	2.6	73*	1.5	2.0	4.0*	2.3	2.0	23.3	2.47

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
423.987A	I	16.3	47.6	13.9	3.6	24.9	49.4	8.2	0.0	1	S
423.987B	III	18.7	44.2	13.8	2.8	22.5	52.9	8.1	0.0	1	R R R R
424.078	III	12.2	47.4	11.4	3.0	14.1	59.2	12.4	0.0	1	
424.134	III	17.4	46.1	11.3	2.9	26.4	51.8	7.7	0.0	1	
424.143	III	Tested in and reported with early group IV evaluation								1	
424.148	0	15.0	48.3	13.8	3.3	22.0	51.4	9.5	0.1	1	
424.155A	III	17.7	43.9	11.8	2.9	22.8	54.6	7.9	0.0		
424.159A	III	Tested in and reported with early group IV evaluation								2	
424.192A	II	16.6	44.6	11.6	3.4	26.2	50.8	7.9	0.1	1	S
424.192B	II	15.3	44.9	12.0	3.7	29.9	47.1	7.2	0.1	1	S
424.195B	I	20.2	43.1	12.8	3.3	22.2	54.4	7.3	0.0	5	S
424.199	I	18.2	45.9	10.8	3.5	28.1	51.0	6.6	0.0	5	S
424.201	II	18.8	46.0	10.4	3.5	35.3	44.8	5.9	0.0	5	S
424.202	I	19.1	45.1	12.9	3.3	16.9	57.5	9.4	0.0	4	S
424.203	I	21.4	42.5	11.7	4.0	28.0	50.7	5.6	0.0	2	S
424.204	I	20.5	41.9	12.1	3.8	20.1	56.8	7.1	0.0	5	S
424.206	I	18.8	46.1	11.8	3.8	25.8	52.8	5.8	0.0	4	
424.209	I	18.7	45.4	12.4	3.6	23.3	51.3	9.4	0.0	5	R R S S
424.210	I	18.7	47.8	12.1	2.7	18.2	58.3	8.7	0.0	5	S
424.247A	III	Tested in and reported with early group IV evaluation								1	R R R H
424.249A	III	17.1	46.7	12.9	2.5	21.1	54.6	8.9	0.0	1	S
424.261	III	17.2	45.6	11.6	3.3	20.5	56.5	8.2	0.0	1	S
424.297	III	17.7	45.5	12.2	2.6	20.4	56.4	8.4	0.0		
424.319	III	17.7	45.2	11.6	2.9	27.1	51.2	7.2	0.0	1	H
424.339	III	Tested in and reported with early group IV evaluation								1	R R R S
424.353	III	19.8	44.0	12.5	3.1	19.3	56.5	8.6	0.0	1	R R R S
424.356	III	17.4	43.5	12.9	3.3	22.6	53.2	8.0	0.0	1	S
424.358	III	19.4	43.1	12.3	3.0	18.8	57.0	8.9	0.0	1	R R R H
424.359	III	17.6	44.0	11.8	2.9	26.3	51.5	7.5	0.0	1	S
424.366	III	18.3	46.3	12.6	2.8	21.1	55.7	7.9	0.0	1	R R H H
424.368A	III	19.5	43.2	12.5	3.1	19.1	56.4	9.0	0.0	1	R R R S
424.373	III	19.2	44.3	12.5	3.1	18.9	56.7	8.8	0.1	1	R R R S
424.382	III	16.7	45.6	12.4	3.0	21.0	54.8	8.7	0.0		S
424.405A	III	19.9	45.0	11.0	3.8	19.5	57.8	8.0	0.0	4	S
424.408	III	18.1	44.5	12.3	2.8	23.8	53.1	8.0	0.0	1	S
424.422	III	18.0	46.2	12.3	2.7	23.3	53.8	7.9	0.0	1	R R H S
424.423	III	17.7	44.9	12.2	2.8	23.8	53.2	7.8	0.1	1	H
424.425	III	17.5	45.3	11.6	3.0	26.7	51.7	7.1	0.0	1	H
424.444A	III	17.5	46.6	12.5	3.0	25.0	52.0	7.5	0.0	1	
424.463	III	19.7	39.5	13.2	3.3	21.4	53.7	8.4	0.0	1	S
424.488A	III	17.9	45.1	12.4	2.7	22.7	53.2	8.8	0.0	1	R R R S
424.540	III	18.2	45.1	11.8	2.9	24.1	53.4	7.9	0.0	1	
424.541	III	17.1	46.7	11.5	2.9	27.1	51.1	7.5	0.0	1	
424.550	III	17.2	46.4	12.5	2.9	22.9	53.6	8.2	0.0	1	
424.563	III	16.9	45.5	11.9	2.9	23.5	53.4	8.2	0.0	1	S
424.568	III	17.0	45.0	11.5	2.8	25.3	52.3	8.1	0.0	1	

Table 1.2. Identification and origin information for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.569A		KAS 640-14	S. Korea		S. Korea	1978	III
424.570		KAS 640-15	S. Korea		S. Korea	1978	III
427.088A			China		China	1978	I
427.088B			China		China	1978	I
427.088C			China		China	1978	II
427.088D			China		China	1978	II
427.088E			China		China	1978	II
427.088F			China		China	1978	II
427.088G			China		China	1978	II
427.088H			China		China	1978	II
427.088I			China		China	1978	II
427.099	Jilin No. 3		China		China	1978	I
427.105A	Little Golden Yellow No. 1		China		China	1978	II
427.105B	(Little Golden Yellow No. 1)		China		China	1978	II
427.106	Kung chiao 6602-3		China		China	1978	II
427.107A	Kung chiao 6612-4 (Jilin No. 16)		China		China	1978	II
427.107B	(Kung chiao 6612-4)		China		China	1978	II
427.107C	(Kung chiao 6612-4)		China		China	1978	II

Table 2.2. Descriptive data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.569A	III	W	G	E	Ssp	Tn	D	Y	Bf	SDef		
424.570	III	P	G	E	Ssp	Tn	D	Y	Bf			
427.088A	I	P	G	E	N	Br	S	Y	Ib			
427.088B	I	W	G	E	N	Tn	S	Y	Bf			
427.088C	II	P	T	E	N	Br	I	Y	Br			
427.088D	II	W	G	E	N	Br	S	Y	Bf		Na	
427.088E	II	W	G	E	Ssp	Bl	S	Y	Bf		Na	
427.088F	II	W	T	E	Ssp	Br	S	Br	Bl	Saddle		
427.088G	II	W	G	E	N	Br	S	Y	Bf			
427.088H	II	W	G	E	N	Br	S	Y	Y		Na	
427.088I	II	W	G	E	Ssp	Br	S	Rbf	Rbf		Na	
427.099	I	W	G	E	N	Tn	S	Y	Lbf		Na	
427.105A	II	W	G	E	N	Br	S	Y	Bf			
427.105B	II	W	G	E	N	Br	S	Y	Bf			
427.106	II	P	G	E	Ssp	Br	I	Y	Bf			
427.107A	II	P	G	E	Ssp	Dbr	S	Y	Bf		Na	
427.107B	II	P	G	E	Ssp	Dbr	S	Y	Bf		Na	
427.107C	II	P	G	E	Ssp	Dbr	S	Y	Y		Na	

Table 3.2. Agronomic data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.569A	53	123	2.4	78*	2.0	2.0*	3.5*	2.3	1.0	17.4	2.30
424.570	50	118	2.2	71	1.0	1.0	2.5*	1.8	1.5	16.6	2.81
427.088A	35	103	3.9*	80	3.0	1.0	1.0	2.3	1.0	14.4	3.33
427.088B	35	102	2.1	71	3.0	1.0	1.0	2.3	1.0	15.0	3.02
427.088C	38	106	2.6*	88	3.5	1.0	1.0	2.3	1.0	14.8	2.92
427.088D	34	104	1.7	72	1.5	1.0	1.0	2.3	1.0	16.9	2.94
427.088E	35	104	2.5	95	3.0	1.0	1.0	2.5	2.0	14.5	2.69
427.088F	33	103	1.6	72*	3.0	1.0	1.0	2.3	-	21.3	3.15
427.088G	36	106	2.1	78	2.0	1.0	1.0	2.8	1.0	16.2*	3.23*
427.088H	34	107	2.5	89	3.0	1.0	1.0	2.5	1.0	17.6	3.01
427.088I	34	109	2.5	84*	3.0	1.0	1.0	2.0	-	17.5	3.05*
427.099	33	102	2.1	85	3.0	1.0	1.0	1.8	1.0	15.3	3.24
427.105A	38	104	2.5	85	2.5	1.0	1.0	2.8	1.0	14.8	3.10*
427.105B	39	106	2.5	81	3.0	1.0	1.0	3.0	1.0	15.4	3.06
427.106	39	101	1.4	55	1.0	1.0	1.0	2.5	1.0	17.5	2.41
427.107A	35	105	2.5	88	3.0	1.5	1.5	2.5	1.0	14.0	2.56
427.107B	41	109	2.3	92	3.0	1.0	1.0	2.5	1.0	15.0	2.64
427.107C	35	106	1.9	87*	3.0	1.0	1.0	2.8	1.0	14.7	2.47

Table 4.2. Seed composition and disease reaction data for USDA soybean germplasm in maturity groups I to III, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.569A	III	17.5	43.2	12.3	2.9	16.8	58.3	9.5	0.0	1	
424.570	III	18.6	43.7	12.7	3.4	22.1	53.9	7.9	0.1	3	
427.088A	I	19.1	43.7	11.9	3.5	21.4	55.5	7.7	0.0	5	
427.088B	I	19.4	42.8	11.2	3.5	29.2	49.9	6.3	0.0	5	
427.088C	II	18.8	47.9	12.1	3.2	25.7	52.3	6.6	0.1	5	
427.088D	II	20.1	45.6	11.2	3.5	22.9	55.6	6.7	0.1	1	
427.088E	II	19.4	45.1	12.6	3.6	22.0	54.5	7.3	0.0	5	
427.088F	II	19.1	45.2	11.9	3.3	25.0	54.0	5.7	0.0	4	
427.088G	II	20.2	44.3	11.4	3.6	26.5	51.9	6.4	0.1	5	
427.088H	II	19.4	43.8	12.4	3.8	24.5	51.6	7.6	0.1		
427.088I	II	17.5	44.7	12.7	3.8	20.9	54.2	8.3	0.1	5	
427.099	I	18.5	43.5	11.7	3.6	25.3	52.9	6.5	0.0	5	
427.105A	II	20.2	42.7	10.6	3.5	26.1	53.2	6.6	0.0	5	
427.105B	II	19.9	44.7	11.1	3.5	25.9	52.6	6.8	0.1	5	
427.106	II	19.2	44.2	11.8	3.1	23.8	54.0	7.1	0.1	1	
427.107A	II	19.7	44.0	11.4	3.4	29.8	49.2	6.2	0.0	1	
427.107B	II	19.8	43.8	11.4	3.2	29.5	49.8	6.1	0.0	2	
427.107C	II	19.7	43.6	11.4	3.3	31.9	47.5	6.0	0.0		

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
	Bonus		USA		USA	1971	IV
	Crawford		USA		USA	1977	IV
	Custer		USA		USA	1967	IV
	Cutler		USA		USA	1968	IV
	Cutler 71		USA		USA	1971	IV
	DeSoto		USA		USA	1979	IV
	Douglas		USA		USA	1980	IV
	Franklin		USA		USA	1977	IV
	Hahto (Michigan)		USA		Japan+	by 1940	IV
	Miles		USA		USA	1978	IV
	Oksoy		USA		USA	1971	IV
	Pixie		USA		USA	1980	IV
	Pomona		USA		USA	1974	IV
	Union		USA		USA	1977	IV
	Wilson 5B		USA		China	1967	IV
	Wilson 6		USA		China	1966	IV
	Wye		USA		USA	1971	IV
273.483C			S. Korea		S. Korea	1961	IV
273.483D			S. Korea		S. Korea	1961	IV
274.206	Choongpuk back		S. Korea		S. Korea	1961	III
274.212	Rikuw No. 3		S. Korea		S. Korea	1961	IV
274.423	Toshiken		Japan		Japan	1961	IV
283.330	Taichung Green Bean	CPI 26480	Australia		Taiwan	1962	IV
283.332	CNS-65F	CPI 26670	Australia		Morocco	1962	III
323.555			India		India	1967	IV
323.556			India		India	1967	IV
339.734			S. Korea		S. Korea	1969	IV
339.736			S. Korea		S. Korea	1969	IV
339.864A	Banchongdoo		S. Korea		S. Korea	1969	IV
339.868B	(Yuwoltae)		S. Korea		S. Korea	1969	IV
339.868C	(Yuwoltae)		S. Korea		S. Korea	1969	IV
339.868D	(Yuwoltae)		S. Korea		S. Korea	1969	IV
339.984			S. Korea		S. Korea	1969	IV
339.985			S. Korea		S. Korea	1969	III
339.990			S. Korea		S. Korea	1969	IV
339.994			S. Korea		S. Korea	1969	IV
340.005			S. Korea		S. Korea	1969	III
340.017			S. Korea		S. Korea	1969	III
340.020			S. Korea		S. Korea	1969	IV
340.021A			S. Korea		S. Korea	1969	III
340.038			S. Korea		S. Korea	1969	III
340.041			S. Korea		S. Korea	1969	III
340.046			S. Korea		S. Korea	1969	IV
340.047			S. Korea		S. Korea	1969	IV
340.049			S. Korea		S. Korea	1969	IV
340.053A			S. Korea		S. Korea	1969	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
Bonus	IV	P	G	E	N	Br	D	Y	Ib			
Crawford	IV	P	T	E	N	Br	S	Y	Bl			
Custer	IV	P	G	Sa	N	Br	S	Y	Ib			
Cutler	IV	P	T	E	N	Br	S	Y	Bl			
Cutler 71	IV	P	T	E	N	Br	S	Y	Bl			
DeSoto	IV	P	T	E	N	Br	D	Y	Bl			
Douglas	IV	W	T	E	N	Br	D	Y	Bl			
Franklin	IV	P	G	E	N	Br	D	Y	Ib			
Hahto (Mich.)	IV	P	T	E	N	Br	S	Gn	Br		Na	
Miles	IV	P	T	E	N	Br	D	Y	Bl			
Oksoy	IV	P	G	Sa	N	Br	S	Y	Ib			
Pixie	IV	P	T	E	N	Tn	S	Y	Bl			
Pomona	IV	P	T	E	N	Br	D	Y	Bl			
Union	IV	W	T	E	N	Tn	S	Y	Bl			
Wilson 5B	IV	P	Lt	E	N	Bl	S	Bl	Bl			
Wilson 6	IV	P	Lt	E	N	Br	S	Bl	Bl		Dab	
Wye	IV	W	T	E	N	Br	S	Y	Bl			
273.483C	IV	P	G	A	Ssp	Tn	S	Y	Bf			
273.483D	IV	P	G	E	Ssp	Br	D	Y	Y			
274.206	III	W	G	A	Ssp	Tn	D	Y	Y			
274.212	IV	P	G	A	Ssp	Br	D	Y	Bf			
274.423	IV	P	G	A	Ssp	Tn	S	Y	Bf			
283.330	IV	W	T	E	N	Tn	D	Y	Bl			
283.332	III	W	G	E	N	Br	D	G	G			
323.555	IV	W	Lt	E	N	Br	S	Y	Blbr			
323.556	IV	W	Lt	E	N	Br	S	Y	Blbr			
339.734	IV	P	T	E	Ssp	Bl	B	Bl	Bl			
339.736	IV	P	T	E	Ssp	Bl	B	Gnbr	Br			
339.864A	IV	P	G	A	Ssp	Br	S	Y	Bf			
339.868B	IV	W	T	E	N	Br	S	Bl	Bl			
339.868C	IV	W	G	A	Ssp	Br	D	Y	Bf			
339.868D	IV	W	T	A	Ssp	Tn	D	Y	Br			
339.984	IV	P	G	E	Ssp	Bl	I	Lgn	Lbf			
339.985	III	P	G	A	Ssp	Br	S	Y	Bf	SDef		
339.990	IV	P	T	E	Ssp	Br	S	Br	Br			
339.994	IV	P	T	E	Sp	Br	S	Bl	Bl	Net		
340.005	III	W	G	A	Ssp	Br	D	Y	Lbf			
340.017	III	P	G	E	Ssp	Br	D	Y	Bf			
340.020	IV	W	G	A	Ssp	Tn	D	Y	Y			
340.021A	III	W	G	A	Ssp	Tn	D	Y	Y			
340.038	III	P	G	Sa	Ssp	Br	S	Y	Bf			
340.041	III	W	G	A	Ssp	Tn	D	Y	Y			
340.046	IV	W	G	E	Ssp	Tn	D	Y	Bf			
340.047	IV	W	G	A	Ssp	Tn	D	Y	Y			
340.049	IV	Dp	G	A	Ssp	Tn	I	Y	Y			
340.053A	IV	W	G	A	Ssp	Tn	D	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
Bonus	41	122	1.6	131*	4.0	1.0	1.5	2.0	1.0	16.0*	3.12
Crawford	45	133	2.0	128	3.5	1.0	1.0	2.0	1.5	14.4*	3.10*
Custer	45	127	2.3*	136*	4.0	1.0	1.0	2.0	1.0	13.4*	2.92*
Cutler	42	125	1.8	126	4.0	1.5	1.5	2.0	2.0	17.4	2.31*
Cutler 71	42	125	2.1	125*	4.0	1.5	1.5	2.0	2.0	17.0	3.37
DeSoto	42	125	1.8	121	4.0	1.0	1.0	2.0	2.0	16.5	3.55*
Douglas	41	128	1.8	125*	4.0	1.0	1.0	2.5	1.0	17.6	3.41*
Franklin	44	127	2.3*	141*	4.0	1.0	1.0	2.0	1.0	14.5	2.62*
Hahto (M.)	39	128*	1.0	31	1.0	3.0	4.5	3.3*	1.5	21.7*	2.14
Miles	44	129	2.0	130	4.0	1.0	1.0	2.3	2.0	12.7	2.95
Oksoy	45	131	1.8	129	3.0	1.0	1.0	1.8	1.0	13.9	2.99*
Pixie	42	125	1.2	59	1.0	1.0	1.0	1.8	2.0	15.5	3.64
Pomona	44	127	1.8	118*	4.0	1.0	1.0	2.0	2.0	16.2	3.11*
Union	42	121	2.3*	124	4.0	1.0	1.5	2.3	2.0	18.0	3.45*
Wilson 5B	55	118	2.8	155*	4.5	1.0	2.5*	2.0	-	9.9	2.59*
Wilson 6	57	122	3.3	144*	4.5	1.0	1.0	1.8	-	9.4	2.42
Wye	42	124	1.8*	102	3.0	1.0	1.0	2.0	1.0	14.7	3.36*
273.483C	52	126	2.1	82	1.0	1.5	3.0*	2.0	2.5	13.6*	2.59
273.483D	55	119	2.0	76	1.5	1.5	2.0*	1.8	2.0*	16.2	2.81*
274.206	46	117	2.8*	78	1.5	1.5	3.5*	2.3	2.5	23.6	2.27
274.212	56	123	1.8	80	1.0	2.5*	3.5*	2.0	1.0	18.9	2.36
274.423	56	127	1.6	67	1.0	1.5	2.5*	2.3	1.0	23.1	2.46*
283.330	60	120	2.8	95	2.0	1.5	4.0*	1.8	4.0*	10.9	1.54
283.332	51	118	2.8	128*	4.0	1.0	2.5	2.3	1.0	14.0	2.84
323.555	54	131	3.3	132*	4.0	1.0	1.0	2.3	2.5	15.9*	2.44*
323.556	53	129	3.8	124	4.0	1.0	1.0	1.8	2.5	16.0*	3.05
339.734	65	125	4.5	123*	4.5	4.0*	5.0	2.3	-	5.4	1.37
339.736	68*	128	4.3	121*	4.0	3.5*	5.0	2.3	-	4.0	1.12
339.864A	56	123*	2.5	79	1.0	2.5*	3.5*	2.0	1.0	17.6	2.56
339.868B	65	127	2.3	94	1.5	2.0*	4.0*	1.8	-	7.5	2.00*
339.868C	52*	122	1.5	83	2.0	1.0	3.5*	2.0	1.0	12.7	2.65
339.868D	58	128	3.0	101	2.0	1.5	2.5	1.8	1.5	12.9	2.27
339.984	60	128	2.0	77	1.0	1.5	1.5	1.3	1.0	6.8	2.12
339.985	51	118	2.2	75	1.0	1.0	3.0*	2.0	2.5	15.6	2.41
339.990	52	124	2.0	59	1.0	1.0	1.5	2.3	-	31.8*	2.38
339.994	51	120	2.3	49*	1.0	1.0	1.5	2.3	-	22.6	2.32
340.005	49	117	1.3	61	1.5	1.5	3.5*	2.3	3.0*	23.1*	2.25
340.017	49	118	1.7	78	2.0	1.0	3.0*	1.8	1.0	16.4	2.89
340.020	51	123	2.1	76	1.0	1.5	3.5*	2.5	2.5	24.3	2.07
340.021A	48	118	2.8*	70	1.0	2.5	3.5*	2.3	2.5	24.1	2.73
340.038	50	117	2.1	65	1.5	1.0	3.5*	1.8	1.0	17.1	2.58
340.041	49	118	3.1*	74	2.0	1.5	3.5*	2.3	2.5	23.6	2.26
340.046	50	119	2.5	87	2.0	1.0	2.0	1.8	1.0	14.1	2.82
340.047	48*	119	2.0	74	1.0	1.5	3.5*	2.5	2.5	24.3	2.29
340.049	51	119	2.5	83	2.0	1.5	3.5*	2.5	2.0	16.9	2.52
340.053A	48	119	2.3	76	2.0	1.5	3.5*	2.3	2.5	23.4	2.17

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
Bonus	IV	17.8	47.0	11.6	3.2	21.1	55.0	7.4	1.7	4	R	R	S	S	S	S	S	S	S
Crawford	IV	17.7	44.3	10.6	3.9	20.9	55.2	7.8	1.6	5	S	S	S	S	S	S	S	S	S
Custer	IV	17.8	38.9	12.0	3.8	22.0	52.9	8.4	1.0		R	R	S	S	S	S	S	S	S
Cutler	IV	17.9	44.6	10.6	3.5	16.9	59.4	8.4	1.2	1	S	S	S	S	S	S	S	S	S
Cutler 71	IV	17.8	44.4	10.6	3.4	16.9	59.6	8.5	1.0	1	R	R	S	S	S	S	S	S	S
DeSoto	IV	17.5	44.9	11.1	4.0	18.9	57.1	8.0	0.8	3	S	S	S	S	S	S	S	S	S
Douglas	IV	17.6	43.8	9.6	3.5	18.1	60.0	8.5	0.2	3	R	R	S	S	S	S	S	S	S
Franklin	IV	17.8	43.7	11.7	3.7	18.5	57.2	8.4	0.6	5	R	R	S	S	S	S	S	S	S
Hahto (M.)	IV	15.7	45.9	12.3	2.7	16.3	59.7	8.3	0.6	1	R	R	S	S	S	S	S	S	S
Miles	IV	17.4	44.9	11.0	3.8	18.7	57.7	8.2	0.6	5	S	S	S	S	S	S	S	S	S
Oksoy	IV	17.6	40.2	11.5	4.2	22.8	53.2	8.0	0.3										
Pixie	IV	17.9	44.2	10.9	3.8	20.2	57.0	7.6	0.5	1	S	S	S	S	S	S	S	S	S
Pomona	IV	17.9	44.5	9.9	3.8	17.1	59.8	8.9	0.4										
Union	IV	18.0	44.7	10.9	3.5	21.1	57.0	7.3	0.3	5	R	R	S	S	S	S	S	S	S
Wilson 5B	IV	15.1	45.1	12.0	3.3	15.9	58.9	9.7	0.3	5	S	S	S	S	S	S	S	S	S
Wilson 6	IV	15.3	44.9	11.6	3.0	18.3	57.6	9.3	0.2										
Wye	IV	19.2	41.3	11.4	3.7	20.0	57.1	7.6	0.2										
273.483C	IV	15.7	47.1	13.2	3.6	25.3	49.1	8.6	0.2	1	R	R	R	R	R	R	R	H	
273.483D	IV	17.2	45.1	11.7	3.0	19.6	57.0	8.6	0.1	1	R	R	R	R	R	R	R	R	R
274.206	III	16.4	46.5	11.0	3.2	30.3	48.3	7.1	0.1	1	S								
274.212	IV	15.2	45.5	11.0	2.9	21.5	54.2	10.3	0.2	1	R	R	R	R	R	R	R	R	R
274.423	IV	16.2	45.5	12.6	3.2	17.8	57.6	8.7	0.1	1	R	R	R	S	H	R	R	R	R
283.330	IV	15.1	47.7	11.7	3.0	27.1	50.5	7.5	0.2	1	H								
283.332	III	17.2	43.8	11.7	3.7	20.2	55.6	8.7	0.0	1	S								
323.555	IV	16.8	45.0	11.7	2.8	20.1	56.5	8.8	0.0	1	S								
323.556	IV	16.7	45.2	11.0	2.8	21.8	55.8	8.7	0.0	1	S								
339.734	IV	10.9	50.4	11.3	2.9	16.4	57.3	12.1	0.0	1	S							S	
339.736	IV	11.6	48.7	11.7	3.0	14.9	58.1	12.4	0.0	1	S							S	
339.864A	IV	15.7	44.3	11.3	2.9	18.7	55.8	11.4	0.0	1	R	R	R	R	R	R	R	R	R
339.868B	IV	14.8	43.9	11.3	3.0	16.9	56.5	12.4	0.0	3	S								
339.868C	IV	15.9	46.7	12.0	2.7	17.1	56.8	11.5	0.0	2	S								
339.868D	IV	15.4	47.0	12.6	2.8	18.9	55.7	10.0	0.0	1	R	R	R	R	R	R	R		
339.984	IV	14.6	47.2	11.6	3.0	17.6	57.8	10.0	0.0	2	H								
339.985	III	16.1	47.3	12.7	3.2	21.3	53.7	9.0	0.0	1	H								
339.990	IV	16.8	47.9	12.3	3.2	25.1	51.6	7.9	0.0	1	H								
339.994	IV	16.2	46.5	10.5	3.3	24.3	53.2	8.7	0.0	1	S								
340.005	III	15.9	46.3	11.1	3.1	22.8	54.9	8.2	0.0	1	S								
340.017	III	17.1	46.2	12.2	3.2	19.6	56.0	9.0	0.0	1	R								
340.020	IV	15.1	47.8	11.8	3.1	21.3	55.2	8.5	0.0	1	S								
340.021A	III	16.4	45.1	11.4	3.2	26.3	51.5	7.6	0.0	1	S								
340.038	III	16.8	42.2	11.9	3.4	22.7	53.4	8.5	0.0	1	S								
340.041	III	16.2	44.8	11.5	3.3	25.5	51.8	7.9	0.0	1	S								
340.046	IV	15.5	45.1	11.8	2.8	17.6	57.7	10.0	0.0	1	R	R	R	R	R	R		R	R
340.047	IV	15.5	45.7	11.4	3.0	21.3	55.4	8.9	0.0	1	S								
340.049	IV	16.7	45.0	11.8	3.1	23.4	53.7	7.9	0.0	1	R	R	R	R	R	R	R	R	R
340.053A	IV	16.4	46.0	11.6	3.0	25.1	53.0	7.3	0.0	1	S								

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
360.838	Manshu		Canada		Japan	1971	IV
360.848	Tachisuzunari		Canada		Japan	1971	IV
377.574	Hakuto		Japan		Japan	1973	IV
378.682A			Japan		Japan	1973	IV
378.682B			Japan		Japan	1973	IV
378.682C			Japan		Japan	1973	IV
379.556	Yamashiratama		Japan		Japan	1973	IV
385.942	Enrei		Brazil		Japan	1974	IV
393.537	Hika anda		Japan		Japan	1975	III
393.538	Hika anda No. 4		Japan		Japan	1975	III
393.540	Taka anda		Japan		Japan	1975	IV
398.181		KAS 100-3-2	S. Korea		S. Korea	1975	IV
398.182		KAS 100-4-2	S. Korea		S. Korea	1975	IV
398.188		KAS 100-14-1	S. Korea		S. Korea	1975	IV
398.191		(KAS 100-14-1)	S. Korea		S. Korea	1975	IV
398.198		KAS 101-4-1	S. Korea		S. Korea	1975	IV
398.199		(KAS 101-4-1)	S. Korea		S. Korea	1975	IV
398.200		KAS 101-4-2	S. Korea		S. Korea	1975	IV
398.201		(KAS 101-4-2)	S. Korea		S. Korea	1975	IV
398.202		KAS 101-5	S. Korea		S. Korea	1975	IV
398.204		KAS 102-1-1	S. Korea		S. Korea	1975	IV
398.214		KAS 102-4-2	S. Korea		S. Korea	1975	IV
398.222		KAS 132-1	S. Korea		S. Korea	1975	IV
398.223		(KAS 132-1)	S. Korea		S. Korea	1975	IV
398.224		KAS 132-2	S. Korea		S. Korea	1975	IV
398.225		(KAS 132-2)	S. Korea		S. Korea	1975	IV
398.226		KAS 132-3	S. Korea		S. Korea	1975	IV
398.228		(KAS 132-3)	S. Korea		S. Korea	1975	IV
398.229		KAS 132-4	S. Korea		S. Korea	1975	IV
398.231		KAS 150-1-1	S. Korea		S. Korea	1975	IV
398.232		(KAS 150-1-1)	S. Korea		S. Korea	1975	IV
398.233		(KAS 150-1-1)	S. Korea		S. Korea	1975	IV
398.234		KAS 150-1-2	S. Korea		S. Korea	1975	IV
398.235		(KAS 150-1-2)	S. Korea		S. Korea	1975	IV
398.237		KAS 150-2	S. Korea		S. Korea	1975	IV
398.242		KAS 150-7-1	S. Korea		S. Korea	1975	IV
398.243		KAS 150-7-2	S. Korea		S. Korea	1975	IV
398.244		KAS 150-8	S. Korea		S. Korea	1975	IV
398.247		KAS 150-11	S. Korea		S. Korea	1975	IV
398.248		KAS 150-12	S. Korea		S. Korea	1975	IV
398.249		(KAS 150-12)	S. Korea		S. Korea	1975	IV
398.256		KAS 170-2	S. Korea		S. Korea	1975	IV
398.258		(KAS 170-2)	S. Korea		S. Korea	1975	IV
398.260		KAS 170-3	S. Korea		S. Korea	1975	IV
398.265		KAS 170-5	S. Korea		S. Korea	1975	IV
398.267		KAS 170-7	S. Korea		S. Korea	1975	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
360.838	IV	P	T	A	N	Tn	S	Y	Br			
360.848	IV	W	T	Sa	Ssp	Br	S	Y	Br			
377.574	IV	W	G	A	Ssp	Tn	I	Y	Bf			
378.682A	IV	P	T	Sa	Ssp	Tn	D	Bl	Bl			Sw
378.682B	IV	P	Lt	Sa	Ssp	Bl	D	Bl	Bl			Sw
378.682C	IV	P	T	Sa	Ssp	Bl	D	Bl	Bl			Sw
379.556	IV	W	G	Sa	Ssp	Tn	I	Y	Y			
385.942	IV	P	G	A	N	Br	S	Y	Y			
393.537	III	W	T	E	Ssp	Tn	D	Y	Br			
393.538	III	W	T	E	N	Tn	D	Y	Br			
393.540	IV	W	T	E	N	Tn	D	Y	Br			
398.181	IV	P	G	E	Ssp	Br	S	Y	Y			
398.182	IV	P	T	E	Ssp	Bl	S	Bl	Bl			
398.188	IV	P	G	E	Ssp	Br	S	Y	Y			
398.191	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.198	IV	P	T	E	Ssp	Br	S	Br	Br			
398.199	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.200	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.201	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.202	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.204	IV	P	G	E	Ssp	Br	S	Y	Y			
398.214	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.222	IV	P	T	E	Ssp	Br	S	Br	Br			
398.223	IV	P	T	E	Ssp	Tn	S	Br	Br			
398.224	IV	P	T	E	Ssp	Br	D	Y	Br			
398.225	IV	P	G	E	Ssp	Tn	D	Y	Bf			
398.226	IV	P	G	E	Ssp	Br	S	Lgn	Y			
398.228	IV	P	T	E	Ssp	Br	S	Y	Y			
398.229	IV	P	G	A	Ssp	Br	D	Y	Bf			
398.231	IV	P	T	E	Ssp	Br	S	Br	Br	Gncot		
398.232	IV	P	T	E	Ssp	Br	D	Br	Br			
398.233	IV	P	T	E	Ssp	Br	S	Br	Br			
398.234	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.235	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.237	IV	P	G	E	Ssp	Br	D	Gn	Lbf	Def		
398.242	IV	W	T	E	Ssp	Br	S	Br	Br			
398.243	IV	W	T	E	Ssp	Br	S	Br	Br			
398.244	IV	W	T	E	Ssp	Br	S	Br	Br			
398.247	IV	P	G	E	Ssp	Br	I	Gn	Gn	SDef		
398.248	IV	P	G	E	Ssp	Br	S	Y	Bf			
398.249	IV	P	T	E	Ssp	Br	I	Y	Y			
398.256	IV	P	T	E	Ssp	Br	S	Br	Br			
398.258	IV	W	T	E	Ssp	Br	S	Br	Br			
398.260	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
398.265	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.267	IV	P	G	E	Ssp	Br	S	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
360.838	59	124	2.3	79	1.0	1.5	3.5*	2.3	1.0	18.6	2.67
360.848	58	128	1.9	88	1.0	1.5	2.5	2.0	1.0	18.0	2.46
377.574	57	124	3.3	100	1.5	1.0	2.0	2.0	2.0	8.4	1.71
378.682A	63	133*	5.0	139	5.0	2.0	3.5	2.3	-	9.3	0.93
378.682B	57	127*	4.8	71*	2.0	4.5	5.0	2.3	-	10.2*	1.23
378.682C	61	129	4.9	107	2.0	4.0*	5.0	2.3	-	11.4*	1.25
379.556	58	128	1.5	73	1.0	1.5	2.0	2.0	2.5	24.7	2.45
385.942	56	131	2.5	93*	1.0	1.5	2.5	2.8	1.0	27.3	2.80
393.537	57	118	2.1	80*	1.5	1.5	3.0*	1.8	4.5	10.4	2.18
393.538	54	118	1.8	83	1.5	1.5	3.5*	1.8	3.5	10.9	2.33
393.540	56	119	1.8	78	1.5	1.5	3.5*	1.8	4.0	11.3	2.30
398.181	56	128	2.0	94	1.0	1.5	1.5	1.8	2.0	20.0*	2.40
398.182	60	128	1.8	72	1.0	1.5	2.0	2.0	-	17.8	2.18
398.188	55	123	1.9	87*	1.0	1.0	1.5	1.8	2.0	22.2	2.49*
398.191	46	119	2.3*	73	1.0	1.0	2.0*	1.3	1.0	16.7	2.84
398.198	52	126	3.1	72	1.0	1.0	1.0	2.5	-	30.9	2.78
398.199	52	123*	2.5	76*	1.0	1.0	3.5*	2.3	-	20.5	2.08
398.200	55	129	3.3	78*	1.0	1.5	2.5*	2.3	-	26.8*	2.32
398.201	53	129	3.0	66	1.0	1.0	1.0	2.3	-	31.6*	2.23*
398.202	54	124*	2.8*	74*	1.0	1.0	2.0*	2.3	-	19.8	2.33
398.204	54	127	2.3*	81	1.5	2.0*	3.5*	1.8	2.0	21.5	2.14
398.214	53	134	3.0	89	1.5	1.5	1.5	2.3	-	21.2	2.04
398.222	54	131	2.5	66	1.0	1.5	1.5	2.3	-	31.7*	2.16*
398.223	54	123*	2.1	72*	1.5	1.0	1.5	2.0	-	24.1	2.53*
398.224	63	134	3.1*	65	1.0	1.0	1.0	2.0	3.0	10.4	2.06
398.225	54	127	2.3*	80	1.0	1.5	1.5	1.8	1.0	13.5	2.56
398.226	57	132	2.6	86	1.0	1.5	1.5	2.0	1.0	20.4*	2.43*
398.228	55	127	2.8*	83	1.0	1.5	2.0*	1.8	3.5	18.0	2.17
398.229	49	120	1.8	54	1.0	1.0	2.0*	1.5	1.0	14.6*	2.58
398.231	53	127	2.3	83	1.0	1.5	1.5	2.3	-	20.5	2.64*
398.232	55	125*	2.1	75*	1.0	1.5	3.5*	1.8	-	19.7*	2.20*
398.233	55	123*	2.1	71*	1.5	1.5	3.0*	2.3	-	19.1*	2.14
398.234	57	131	2.4*	71	1.0	1.5	1.5	2.3	-	26.4*	1.86*
398.235	52	125	2.3*	75*	1.0	1.5	1.5	2.3	-	26.0	2.48
398.237	56	130	2.4*	80*	1.0	1.0	1.5	3.0	2.0	26.5*	2.75*
398.242	49*	127	2.3	82	1.0	1.5	2.0*	2.3	-	23.2	2.52
398.243	47	126	2.5	79	1.0	1.5	2.5	2.0	-	23.4	2.83
398.244	49	125	1.9	77	1.0	1.5	2.5	2.5	-	22.9	2.66
398.247	56	127	2.6*	81	1.0	1.5	1.5	2.5	2.0	22.2	2.52
398.248	51*	120	2.2	69	1.0	1.0	2.0*	2.3	2.0	18.6	2.52
398.249	56	128	2.1	89*	1.5	1.5	1.5	2.5	3.0	20.6	2.45*
398.256	54	130	2.5*	61*	1.0	1.5	1.5	2.3	-	31.9*	2.13*
398.258	54	131	3.0*	70*	1.0	1.5	1.5	2.0	-	25.5*	2.46
398.260	53	129	2.6*	67	1.0	1.5	1.5	2.0	-	23.7*	2.26
398.265	57	129	3.1*	76	1.0	1.5	1.5	2.3	-	20.7*	2.35
398.267	57	127	1.9	78	1.0	1.5	1.5	1.8	2.0*	16.9*	2.18

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
360.838	IV	15.6	40.7	11.7	2.8	24.1	52.8	8.5	0.0	1	R	R	S	S	S	S	S	S	
360.848	IV	15.1	46.2	11.6	3.2	20.5	55.4	9.4	0.0	1	R	R	R	R	S	R	S	S	
377.574	IV	15.5	45.8	11.0	3.3	24.9	50.1	10.7	0.0		R		S	R					
378.682A	IV	14.2	46.4	11.9	3.3	20.1	55.0	9.7	0.0	1	R	R	R				R	R	
378.682B	IV	14.4	47.6	12.7	2.9	16.0	58.0	10.4	0.0	1	R	R		R	R	R	R	R	
378.682C	IV	14.4	48.8	12.3	3.0	17.6	57.7	9.3	0.1	1	R		R	R					
379.556	IV	16.1	46.9	12.1	3.0	19.8	55.3	9.7	0.0	1	H		H	R					
385.942	IV	15.1	46.4	12.0	3.2	20.4	54.9	9.4	0.0	1	S								
393.537	III	15.4	47.6	12.8	3.1	21.8	52.9	9.5	0.0	1	R		R	H					
393.538	III	16.0	46.3	12.9	3.3	23.0	51.2	9.7	0.0	1	R		R	H					
393.540	IV	15.9	46.0	13.0	3.3	23.5	50.7	9.5	0.0	1	R		H	H					
398.181	IV	16.3	45.6	13.6	3.7	22.7	51.5	8.4	0.1	4	S								
398.182	IV	15.5	46.0	11.4	3.2	20.2	55.9	9.3	0.0	1	S								
398.188	IV	16.8	47.1	11.7	3.2	21.2	55.2	8.6	0.0	4	S								
398.191	IV	17.1	45.8	12.2	3.2	19.6	55.9	9.1	0.0	1	R		R	R					
398.198	IV	16.7	47.0	11.9	3.1	21.3	55.3	8.4	0.0	1	R		R	R					
398.199	IV	15.8	45.5	12.3	3.1	19.2	56.3	9.0	0.0	1	S								
398.200	IV	16.6	45.4	11.9	3.4	20.9	55.2	8.6	0.0	3	S								
398.201	IV	16.3	46.3	11.5	3.2	21.9	54.8	8.5	0.0	1	S								
398.202	IV	16.1	46.8	11.9	3.5	20.1	55.9	8.5	0.0	4	S								
398.204	IV	16.2	47.7	12.4	3.1	20.9	54.9	8.7	0.0	2	R		R	H					
398.214	IV	15.5	45.1	11.4	3.7	23.8	53.3	7.7	0.0	1	R		R	R					
398.222	IV	16.3	45.8	11.3	3.2	22.4	54.8	8.2	0.0	1	S								
398.223	IV	17.0	45.1	11.1	2.9	21.0	56.2	8.7	0.0	1	R		R	R					
398.224	IV	14.6	48.2	11.8	3.0	19.4	55.8	10.0	0.0	1	R		S	S					
398.225	IV	15.3	44.6	11.5	3.0	16.9	56.3	12.1	0.0	4	R		R	R					
398.226	IV	17.7	46.3	11.7	3.2	19.2	56.0	10.0	0.0	1	H								
398.228	IV	18.0	45.5	12.2	3.1	19.3	56.5	8.9	0.0	1	R		R	S					
398.229	IV	18.2	44.5	12.0	3.2	16.3	58.1	10.5	0.0	1	S								
398.231	IV	18.5	44.6	11.9	3.4	19.8	55.9	9.0	0.0	4	S								
398.232	IV	17.3	45.5	11.9	3.3	20.1	56.0	8.6	0.0	1	S								
398.233	IV	17.5	46.4	11.5	3.3	19.5	56.8	8.9	0.0	1	S								
398.234	IV	17.3	44.9	10.8	3.6	21.9	55.2	8.5	0.0	1	S								
398.235	IV	17.7	45.1	10.9	3.4	22.4	54.2	9.1	0.0	1	S								
398.237	IV	18.6	44.0	11.6	3.3	21.8	54.5	8.8	0.0	2	S								
398.242	IV	17.9	45.9	11.3	3.0	19.5	56.6	9.5	0.0	2	R		R	R					
398.243	IV	17.5	47.0	11.0	3.2	19.7	57.0	9.2	0.0	1	R		R	R					
398.244	IV	17.7	45.6	11.0	3.1	19.8	57.0	9.0	0.0	4	R		R	R					
398.247	IV	18.7	44.3	11.5	3.0	20.0	56.6	8.9	0.0	4	S								
398.248	IV	17.2	45.0	11.9	3.2	19.5	56.5	8.9	0.0	1	R		R	R					
398.249	IV	16.9	46.1	11.9	3.1	18.2	57.2	9.6	0.0	1	R		R	R					
398.256	IV	17.9	45.5	11.6	2.9	21.4	55.3	8.8	0.0	1	H								
398.258	IV	17.2	46.8	11.3	3.2	24.2	53.6	7.9	0.0	1	R		H	S					
398.260	IV	17.3	45.9	11.1	3.2	21.4	55.5	9.0	0.0	1	S								
398.265	IV	17.2	45.8	11.0	3.2	20.8	55.9	9.1	0.0	1	S								
398.267	IV	18.4	43.6	12.1	3.5	18.4	56.9	9.0	0.0	3	S								

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.268		(KAS 170-7)	S. Korea		S. Korea	1975	IV
398.271		(KAS 171-2)	S. Korea		S. Korea	1975	IV
398.272		KAS 171-3	S. Korea		S. Korea	1975	IV
398.273		(KAS 171-3)	S. Korea		S. Korea	1975	IV
398.274		(KAS 171-3)	S. Korea		S. Korea	1975	IV
398.276		KAS 171-4	S. Korea		S. Korea	1975	IV
398.278		(KAS 172-1)	S. Korea		S. Korea	1975	IV
398.283		KAS 172-6	S. Korea		S. Korea	1975	IV
398.291		(KAS 172-10)	S. Korea		S. Korea	1975	IV
398.293		KAS 173-1	S. Korea		S. Korea	1975	IV
398.294		KAS 173-2	S. Korea		S. Korea	1975	IV
398.298		KAS 173-4	S. Korea		S. Korea	1975	IV
398.306		KAS 180-2	S. Korea		S. Korea	1975	IV
398.310		KAS 180-4	S. Korea		S. Korea	1975	IV
398.313		KAS 180-5	S. Korea		S. Korea	1975	IV
398.314		(KAS 180-5)	S. Korea		S. Korea	1975	IV
398.315		KAS 181-1	S. Korea		S. Korea	1975	IV
398.317		KAS 181-3	S. Korea		S. Korea	1975	IV
398.318		(KAS 181-3)	S. Korea		S. Korea	1975	IV
398.319		KAS 181-4	S. Korea		S. Korea	1975	IV
398.320		(KAS 181-4)	S. Korea		S. Korea	1975	IV
398.321		KAS 181-5	S. Korea		S. Korea	1975	IV
398.322		(KAS 181-5)	S. Korea		S. Korea	1975	IV
398.325		KAS 181-7	S. Korea		S. Korea	1975	IV
398.326		KAS 181-9	S. Korea		S. Korea	1975	IV
398.329		KAS 200-1	S. Korea		S. Korea	1975	IV
398.334		KAS 200-5-1	S. Korea		S. Korea	1975	IV
398.356		KAS 200-15	S. Korea		S. Korea	1975	IV
398.359		(KAS 200-17-1)	S. Korea		S. Korea	1975	IV
398.366		KAS 200-22	S. Korea		S. Korea	1975	IV
398.367		(KAS 200-22)	S. Korea		S. Korea	1975	IV
398.368		KAS 200-23-1	S. Korea		S. Korea	1975	IV
398.374		KAS 200-23-2	S. Korea		S. Korea	1975	IV
398.382		KAS 200-27	S. Korea		S. Korea	1975	IV
398.383		KAS 200-28-1	S. Korea		S. Korea	1975	IV
398.384		KAS 200-28-2	S. Korea		S. Korea	1975	IV
398.385		KAS 200-29-1	S. Korea		S. Korea	1975	IV
398.386		(KAS 200-29-1)	S. Korea		S. Korea	1975	IV
398.388		KAS 200-29-2	S. Korea		S. Korea	1975	IV
398.394		(KAS 200-30-1)	S. Korea		S. Korea	1975	IV
398.396		(KAS 200-30-2)	S. Korea		S. Korea	1975	IV
398.397		KAS 200-30-3	S. Korea		S. Korea	1975	IV
398.398		(KAS 200-30-3)	S. Korea		S. Korea	1975	IV
398.404		(KAS 201-2-2)	S. Korea		S. Korea	1975	IV
398.405		KAS 201-3-1	S. Korea		S. Korea	1975	IV
398.406		KAS 201-3-2	S. Korea		S. Korea	1975	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.268	IV	P	G	E	Ssp	Br	S	Y	Y			
398.271	IV	Dp	T	E	Ssp	Tn	S	Br	Br			
398.272	IV	P	G	E	N	Br	I	Y	Bf			
398.273	IV	P	T	E	Ssp	Br	S	Br	Br			
398.274	IV	P	T	E	Ssp	Br	S	Y	Br			
398.276	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.278	IV	P	T	E	Ssp	Tn	I	Gn	G	Gncot		
398.283	IV	P	G	E	Ssp	Br	S	Y	Y			
398.291	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.293	IV	P	T	E	Ssp	Br	S	Br	Br			
398.294	IV	Dp	G	E	Ssp	Br	D	Y	Lbf			
398.298	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
398.306	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.310	IV	P	T	E	Ssp	Br	D	Y	Y			
398.313	IV	P	T	E	Ssp	Br	S	Br	Br			
398.314	IV	W	T	E	Ssp	Br	S	Br	Br			
398.315	IV	Dp	T	Sa	Ssp	Br	S	Br	Br			
398.317	IV	P	T	E	Ssp	Br	S	Bl	Bl	SDef		
398.318	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.319	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.320	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.321	IV	P	G	E	Ssp	Br	D	Y	Ib			
398.322	IV	P	G	Sa	Ssp	Br	D	Y	Ib			
398.325	IV	P	G	E	Ssp	Br	S	Y	Y			
398.326	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.329	IV	P	T	E	Ssp	Br	S	Br	Br	St		
398.334	IV	P	G	E	Ssp	Br	I	Y	Y			
398.356	IV	P	T	E	Ssp	Br	I	Gnbl	Bl			
398.359	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
398.366	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.367	IV	P	T	E	Ssp	Tn	S	Bl	Bl			
398.368	IV	P	G	E	Ssp	Bl	D	Y	Bf			
398.374	IV	P	G	E	Ssp	Bl	D	Y	Y			
398.382	IV	P	G	E	Ssp	Br	S	Y	Y			
398.383	IV	P	T	E	Ssp	Br	S	Br	Br			
398.384	IV	P	T	E	Ssp	Br	S	Br	Br			
398.385	IV	P	G	E	Ssp	Br	I	Y	Y	SDef		
398.386	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.388	IV	P	G	E	Ssp	Br	S	Y	Y			
398.394	IV	P	G	E	Ssp	Br	S	Y	Y			
398.396	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.397	IV	P	G	E	Ssp	Br	D	Y	Y			
398.398	IV	P	G	E	Ssp	Br	S	Y	Y			
398.404	IV	P	G	E	Ssp	Br	S	Y	Y			
398.405	IV	P	G	E	Ssp	Br	I	Y	Y			
398.406	IV	P	T	E	Ssp	Tn	D	Y	Br			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.268	56	120*	2.2	76	1.0	1.0	1.5	2.0	1.5	19.6	2.63*
398.271	55	120*	2.0	75*	1.0	1.0	2.5	2.0	-	17.1*	2.22
398.272	53	124	2.5	78	1.5	1.0	2.0*	2.3*	1.5	18.7	2.69*
398.273	53	130	2.0	64	1.0	1.5	1.5	2.0	-	23.1*	2.35*
398.274	56	119	2.3	85*	1.5	1.0	2.0*	2.0	2.0	15.0	2.55*
398.276	55	125	2.6*	63	1.0	1.0	2.5	2.0	-	20.8	2.43*
398.278	56	130	2.3	74	1.0	1.5	2.5	2.5	2.0	22.6	1.97
398.283	56	128	2.4*	84	1.5	1.5	1.5	1.8	2.0	20.0*	2.40*
398.291	57	128	2.4*	73	1.5	1.5	1.5	2.0	-	19.5	2.19
398.293	54	131	2.8*	67	1.0	1.5	1.5	2.3	-	32.9*	2.27*
398.294	52	122*	2.0	75*	1.0	1.5	3.0*	2.5	2.5	25.0	2.58
398.298	55	127*	2.8*	61	1.0	1.0	1.5	2.0	-	20.8*	2.58*
398.306	55	122*	3.0*	65	1.0	1.0	1.5	2.0	-	20.7	2.32
398.310	52*	126	2.6*	71	1.0	1.5	1.5	2.3	3.5	23.4*	2.57
398.313	54	131	3.0	77*	1.5	1.0	1.0	2.3	-	23.3*	2.12
398.314	56	132	3.0	72	1.0	1.5	1.5	2.3	-	24.2*	2.33*
398.315	56	122*	3.3*	73	1.5	1.0	3.0*	2.3	-	21.6*	2.37
398.317	54	130	2.8*	81*	1.0	1.5	1.5	2.3	-	27.0*	2.36
398.318	56	131	2.6*	82	1.0	1.5	1.5	2.0	-	20.2*	2.35
398.319	52	126	2.8*	67	1.0	1.5	1.5	2.3	-	30.8*	2.34*
398.320	53*	128	2.8*	66	1.5	1.5	1.5	2.3	-	32.5*	2.24*
398.321	52	120	2.1	78	1.0	1.0	2.0*	2.3	1.5	20.9	3.02
398.322	51	123	2.3*	61	1.0	1.5	3.0*	2.3	1.0	21.7	2.74
398.325	53	125	2.3	80	1.5	1.0	1.5	1.8	2.0	20.5	2.48
398.326	52	125	2.5	89	1.5	1.5	3.0*	2.3	-	21.6*	2.28
398.329	55	128*	2.1*	68*	1.0	1.5	1.5	1.8	-	17.8*	2.15
398.334	52	126	2.3*	82	1.0	1.0	1.5	1.5	1.5	19.9	2.35
398.356	59	134	2.3	87	1.0	1.0	1.5	2.3	-	23.6*	2.09*
398.359	60	132	2.4*	83	1.0	1.5	1.5	2.3	2.5	19.1	1.98
398.366	61	132	2.3*	84	1.0	1.0	1.0	2.5	-	27.6*	1.85
398.367	51	127*	2.3*	71	1.0	1.5	2.5*	2.3	-	26.4*	2.11*
398.368	65	132	3.9*	86	2.0	1.0	1.0	1.8*	2.5	8.6*	1.77
398.374	60	126	3.6*	77	1.0	1.5	2.0*	1.5	1.0	7.5	2.06
398.382	57	129	2.3*	81	1.0	1.5	1.5	2.3	2.5	16.3*	1.91
398.383	53*	125	2.3*	73	1.0	1.5	2.5*	2.5	-	25.4	2.20
398.384	52	124	2.3*	73	1.0	1.5	2.0*	2.3	-	25.4	2.47
398.385	52	127	2.3*	73	1.0	1.5	1.5	2.3*	2.0	20.6*	2.39*
398.386	51	122*	2.3*	73	1.0	1.5	2.5	2.0	1.0	17.6	2.74*
398.388	55	128	2.3*	78	1.0	1.5	1.5	1.8	2.5	17.2*	2.29*
398.394	54	125	2.0	79*	1.0	1.5	1.5	2.0	2.5	18.3*	2.36*
398.396	52	121	2.2	80	1.0	1.0	1.5	1.8	1.5	17.3	2.62
398.397	51	121	1.3	69	1.0	2.0*	3.0*	2.0	2.0	18.0	2.41*
398.398	54	124	2.1*	78*	1.0	1.0	1.5	2.3	3.0*	17.7	2.44
398.404	57	130	2.3	89	1.0	1.5	1.5	2.0	1.5	20.9*	2.13*
398.405	51	121	2.0	71	1.0	1.5	2.0*	2.0	2.0	21.3	2.53
398.406	57	128	2.0	85	1.5	1.5	1.5	2.0	2.0	17.1	2.39

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.268	IV	19.4	42.9	11.9	3.1	19.7	56.7	8.6	0.0	1	H								
398.271	IV	18.4	44.8	11.4	2.7	19.7	57.4	8.7	0.0	1	S								
398.272	IV	16.7	44.6	11.2	2.9	21.0	56.1	8.8	0.0	1	R		R	R					
398.273	IV	17.8	43.9	10.7	3.2	20.7	56.7	8.8	0.0	1									
398.274	IV	18.4	45.8	12.6	3.4	21.3	53.9	8.8	0.0	1	S								
398.276	IV	18.3	42.8	11.1	3.5	20.5	56.1	8.6	0.0	1	R		R	H					
398.278	IV	17.5	45.8	11.0	3.6	20.1	55.6	9.3	0.3	2	S								
398.283	IV	18.2	46.0	11.8	3.2	22.0	54.5	8.2	0.3	4	S								
398.291	IV	17.9	43.6	11.1	3.1	19.7	56.5	9.2	0.3	1	S								
398.293	IV	17.8	46.9	11.4	3.2	22.6	54.3	8.3	0.2	1	H								
398.294	IV	17.8	45.9	11.4	2.8	20.8	56.3	8.6	0.2	4	S								
398.298	IV	18.6	44.4	10.7	3.5	20.3	56.7	8.7	0.2	1	R		R	H					
398.306	IV	18.7	45.1	10.2	3.5	21.3	56.8	8.1	0.1	1	R		R	H					
398.310	IV	17.7	46.2	11.5	3.1	25.0	52.7	7.7	0.1	1	S								
398.313	IV	17.8	44.7	11.4	3.5	22.5	54.1	8.4	0.1	1	S								
398.314	IV	17.6	46.5	12.1	3.3	18.9	56.5	9.2	0.1	1	H								
398.315	IV	17.7	44.4	11.4	3.3	20.9	55.3	8.9	0.2	3	S								
398.317	IV	17.0	45.8	10.8	3.3	19.4	56.8	9.6	0.1	3	R		R	R					
398.318	IV	18.2	43.6	10.6	4.0	23.1	53.9	8.2	0.1	1	S								
398.319	IV	18.1	45.8	11.6	3.3	22.4	54.4	8.3	0.1	1	S								
398.320	IV	17.5	45.2	11.4	3.2	23.7	53.7	8.0	0.1	1	R		S	S					
398.321	IV	17.9	46.1	12.3	3.2	18.6	57.9	7.9	0.1	4	R		R	R					
398.322	IV	17.5	47.4	12.3	3.5	18.6	57.0	8.6	0.1	1	H								
398.325	IV	18.1	45.8	12.2	3.3	23.0	53.9	7.6	0.1	3	S								
398.326	IV	17.3	46.5	10.2	3.8	22.5	55.7	7.7	0.1	1	S								
398.329	IV	18.1	43.4	12.9	3.4	19.3	55.8	8.5	0.1	1	S								
398.334	IV	17.8	44.5	12.2	3.2	21.2	55.4	7.9	0.1	5	S								
398.356	IV	18.3	44.7	11.8	3.5	18.6	57.5	8.6	0.1	1	R		S	R					
398.359	IV	19.0	44.8	11.6	3.9	19.8	56.2	8.4	0.1	1	R		R	R					
398.366	IV	18.3	44.5	11.6	3.9	22.2	53.8	8.5	0.1	1	S								
398.367	IV	17.4	48.3	10.4	3.2	22.6	55.6	8.1	0.1	1	S								
398.368	IV	16.1	46.6	11.5	3.6	21.0	55.1	8.6	0.1	1	S								
398.374	IV	16.3	47.6	10.9	3.3	18.9	56.8	10.0	0.1	1	S								
398.382	IV	17.5	47.3	12.6	3.5	16.7	58.1	9.0	0.2	1	S								
398.383	IV	17.3	47.9	10.5	3.0	22.5	54.3	9.5	0.1	1	S								
398.384	IV	17.6	46.5	10.5	3.0	24.0	53.0	9.5	0.1	1	S								
398.385	IV	18.1	43.4	11.5	2.9	19.3	56.4	9.9	0.1	1	S								
398.386	IV	17.9	41.2	12.4	2.8	19.0	55.9	9.9	0.1	1	R		R	R					
398.388	IV	17.8	45.5	12.6	3.3	17.3	57.8	8.9	0.1	5	S								
398.394	IV	18.3	45.1	12.6	3.5	17.2	57.8	8.7	0.1	4	S								
398.396	IV	18.4	46.3	12.6	3.2	18.7	56.6	8.9	0.0	1	S								
398.397	IV	17.8	45.0	12.7	3.4	16.8	58.1	8.9	0.1	2	S								
398.398	IV	18.3	44.5	12.7	3.5	17.4	57.5	8.8	0.1	3	S								
398.404	IV	17.9	44.4	11.2	3.7	19.6	55.8	9.7	0.0	1	S								
398.405	IV	17.7	46.7	12.2	3.2	21.9	54.3	8.4	0.0	3	S								
398.406	IV	17.1	46.7	11.2	3.4	19.4	57.2	8.7	0.0	1	R		R	S					

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.410		(KAS 201-5-1)	S. Korea		S. Korea	1975	IV
398.414		KAS 201-7-1	S. Korea		S. Korea	1975	IV
398.415		(KAS 201-7-1)	S. Korea		S. Korea	1975	IV
398.419		(KAS 201-7-2)	S. Korea		S. Korea	1975	IV
398.420		(KAS 201-7-2)	S. Korea		S. Korea	1975	IV
398.431		(KAS 205-4-2)	S. Korea		S. Korea	1975	IV
398.440		(KAS 205-11)	S. Korea		S. Korea	1975	IV
398.442		KAS 205-13	S. Korea		S. Korea	1975	IV
398.446		KAS 210-2	S. Korea		S. Korea	1975	IV
398.470		KAS 220-2	S. Korea		S. Korea	1975	IV
398.475		KAS 220-5	S. Korea		S. Korea	1975	IV
398.490		(KAS 232-7)	S. Korea		S. Korea	1975	IV
398.492		KAS 232-8	S. Korea		S. Korea	1975	IV
398.495		KAS 232-9	S. Korea		S. Korea	1975	IV
398.522		KAS 310-4	S. Korea		S. Korea	1975	IV
398.531		KAS 312-4	S. Korea		S. Korea	1975	IV
398.532		(KAS 312-4)	S. Korea		S. Korea	1975	IV
398.549		KAS 370-11	S. Korea		S. Korea	1975	IV
398.565		(KAS 380-6)	S. Korea		S. Korea	1975	IV
398.566		KAS 380-7-1	S. Korea		S. Korea	1975	IV
398.572		(KAS 380-10)	S. Korea		S. Korea	1975	IV
398.599		KAS 390-6	S. Korea		S. Korea	1975	IV
398.601		(KAS 390-6)	S. Korea		S. Korea	1975	IV
398.604		(KAS 390-7)	S. Korea		S. Korea	1975	IV
398.617		KAS 390-11	S. Korea		S. Korea	1975	IV
398.619		(KAS 390-11)	S. Korea		S. Korea	1975	IV
398.626		(KAS 390-14-2)	S. Korea		S. Korea	1975	IV
398.636		KAS 390-18	S. Korea		S. Korea	1975	IV
398.640		KAS 390-19	S. Korea		S. Korea	1975	IV
398.642		KAS 390-21	S. Korea		S. Korea	1975	IV
398.655		(KAS 390-31)	S. Korea		S. Korea	1975	IV
398.656		KAS 390-32	S. Korea		S. Korea	1975	IV
398.664		KAS 391-2	S. Korea		S. Korea	1975	IV
398.666		KAS 391-4	S. Korea		S. Korea	1975	IV
398.685		(KAS 320-5)	S. Korea		S. Korea	1975	IV
398.695		KAS 330-2	S. Korea		S. Korea	1975	IV
398.696		(KAS 330-2)	S. Korea		S. Korea	1975	IV
398.700		KAS 330-8	S. Korea		S. Korea	1975	IV
398.701		(KAS 330-8)	S. Korea		S. Korea	1975	IV
398.704		(KAS 330-9-1)	S. Korea		S. Korea	1975	IV
398.706		(KAS 330-9-2)	S. Korea		S. Korea	1975	IV
398.707		KAS 330-10	S. Korea		S. Korea	1975	IV
398.728		(KAS 330-16-2)	S. Korea		S. Korea	1975	IV
398.730		(KAS 330-17-1)	S. Korea		S. Korea	1975	IV
398.735		(KAS 331-1)	S. Korea		S. Korea	1975	IV
398.739		KAS 331-7	S. Korea		S. Korea	1975	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.410	IV	P	T	E	Ssp	Tn	S	Br	Br	St		
398.414	IV	P	G	E	Ssp	Br	I	Y	Y			
398.415	IV	P	G	E	Ssp	Tn	I	Y	Y			
398.419	IV	P	G	E	Ssp	Br	S	Y	Y			
398.420	IV	P	G	E	Ssp	Tn	D	Y	Y			
398.431	IV	P	T	E	Ssp	Br	S	Br	Br	St		
398.440	IV	W	G	Sa	Ssp	Br	I	Y	Bf			
398.442	IV	Dp	T	E	Ssp	Br	S	Br	Br	St		
398.446	IV	P	T	E	N	Tn	I	Bl	Bl			
398.470	IV	P	T	I	Sp	Br	I	Bl	Bl	Net		
398.475	IV	P	T	E	Ssp	Br	D	Y	Tn			
398.490	IV	P	T	E	Ssp	Br	D	Y	Tn			
398.492	IV	P	T	E	Ssp	Br	D	Y	Br			
398.495	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.522	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
398.531	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.532	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.549	IV	P	T	E	Ssp	Br	S	Br	Br	St		
398.565	IV	W	T	Sa	Ssp	Tn	I	Y	Y			
398.566	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.572	IV	P	G	E	Ssp	Br	S	Y	Y			
398.599	IV	W	G	E	Ssp	Tn	D	Y	Y			
398.601	IV	W	G	A	Ssp	Br	D	Y	Y			
398.604	IV	P	T	E	Ssp	Br	D	Y	Br			
398.617	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.619	IV	P	G	E	Ssp	Br	S	Y	Y			
398.626	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.636	IV	W	G	E	Ssp	Tn	D	Y	Bf			
398.640	IV	W	G	E	Ssp	Tn	D	Y	Bf			
398.642	IV	P	T	E	Sp	Br	D	Y	Br			
398.655	IV	W	G	A	Ssp	Tn	D	Y	Y			
398.656	IV	P	T	E	Ssp	Br	D	Y	Tn			
398.664	IV	P	G	E	Ssp	Br	D	Y	Y			
398.666	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.685	IV	W	G	A	Ssp	Tn	D	Y	Y			
398.695	IV	W	G	E	Ssp	Tn	D	Y	Bf			
398.696	IV	W	T	E	Ssp	Br	S	Y	Br			
398.700	IV	P	T	E	Ssp	Br	D	Bl	Bl			
398.701	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.704	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.706	IV	W	T	E	N	Br	S	Y	Bl			
398.707	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.728	IV	P	G	E	Ssp	Tn	D	Y	Bf			
398.730	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.735	IV	P	T	E	Ssp	Br	S	Br	Br			
398.739	IV	P	T	E	Ssp	Br	S	Br	Br			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.410	57	131	2.4*	77*	1.0	1.5	1.5	2.0	-	22.0	2.18
398.414	51	124	2.6*	63	1.0	1.0	2.0*	2.0	2.0	19.8	2.43
398.415	53	125*	1.8	78	1.0	1.0	1.5	2.5	2.0	16.2	2.03
398.419	57	131	2.1*	71*	1.5	1.5	1.5	2.0	2.5	16.1	1.64
398.420	52	124*	2.1*	73	1.0	1.0	1.5	2.3	2.0	18.2	2.05
398.431	55	128	2.3*	75	1.0	2.0*	2.0*	2.3	-	20.2	1.88
398.440	54*	130	2.3*	91	1.0	1.5	1.5	1.8	4.0	18.9	1.98
398.442	57	131	2.3*	74*	1.5	1.5	1.5	2.3	-	20.5*	1.95
398.446	58	125	4.3	98*	4.0	1.0	1.5	2.0	-	11.1	2.42
398.470	53	127	2.1	57	1.0	1.0	1.0	2.3	-	24.8*	1.97
398.475	54	128	2.8*	69	1.0	2.0*	3.0*	1.8	3.0	22.0	1.93
398.490	59	129	2.5*	69	1.0	1.0	1.0	2.3*	2.5	18.7	2.17
398.492	57	126	1.6*	64	1.0	1.0	1.0	2.0	2.0	19.4	2.51
398.495	51	122	1.8*	63	1.0	1.0	2.5*	2.0	1.0	17.1	2.52
398.522	51	122	2.1	73	1.0	1.0	1.5	2.3	-	26.2*	2.02
398.531	51	127	1.8*	58	1.0	1.5	1.5	2.3	-	31.2*	2.43
398.532	54*	130	2.5*	63	1.0	1.5	1.5	2.3	-	31.8*	2.34
398.549	52	125*	2.3*	59	1.0	1.5	2.0*	1.8	-	22.0	1.86
398.565	56	130	2.3*	79	1.5	2.0*	2.5	2.3	4.0*	20.5	2.27
398.566	56	129	2.8*	77	1.0	1.5	1.5	2.0	-	21.2*	2.34
398.572	56	131	3.1*	85	1.5	1.5	1.5	1.8	2.0	19.7	2.46
398.599	52	126	2.8*	81	1.0	2.5*	3.5*	2.0	2.0	18.6	2.12
398.601	55	131	3.8	89	1.5	1.5	3.0*	2.0	2.0	22.7*	2.04
398.604	56	131	3.3*	86*	2.0	1.5	1.5	1.8	3.5	16.1*	2.62
398.617	57	134*	2.9*	83	1.5	1.5	1.5	2.3	2.0	22.3*	2.50
398.619	57	130	2.3*	80*	1.5	1.5	1.5	2.0	2.5	16.3*	2.04
398.626	54*	127	2.8*	64	1.0	1.5	1.5	2.3	-	26.0*	1.82
398.636	52	128	2.3*	76	1.5	1.5	1.5	1.8	2.5	20.2	2.14
398.640	54	127	2.0	69*	1.0	1.5	1.5	2.0	2.5	20.2	2.29
398.642	56	129	3.3*	85	1.5	1.5	1.5	1.8	3.0	16.2	2.21
398.655	53	129	3.3	71	1.0	2.5*	3.0*	2.3	2.0	26.1	2.03
398.656	60*	132*	2.7*	78	1.0	1.0	1.0	2.0	5.0	21.1*	1.60
398.664	57	134	2.3*	72*	1.0	1.0	1.0	2.0	2.5	19.6*	1.74
398.666	57	129	2.8*	77	1.0	1.5	1.5	1.8	3.0	19.3*	1.86*
398.685	50	123	2.5*	79	1.5	2.0*	3.0*	2.8	2.0	22.8	2.10
398.695	54	123*	1.6	76*	1.5	1.5	3.0*	1.8	1.0	19.3	2.47
398.696	52	131	2.5*	73*	1.0	1.5	1.5	2.0	2.0	23.0*	2.30
398.700	58	130	3.3*	59*	1.0	1.5	1.5	2.0	-	18.3	1.93
398.701	56	133	3.1*	79	2.0	1.5	1.5	1.8	-	17.8*	2.23
398.704	60	133	2.5*	72	1.0	1.0	1.0	2.0	2.5	8.4	2.32
398.706	58	130	3.3*	70	1.0	1.5	1.5	2.3*	3.0	10.7*	2.42
398.707	56	131	2.6*	65	1.0	1.5	1.5	2.0	-	25.6*	2.24
398.728	50	123	2.6*	80	1.0	1.0	3.0*	2.0	1.5	18.5	2.52
398.730	57	132	3.3*	69	1.0	1.5	1.5	2.0	-	18.7*	2.44
398.735	52	130	3.0*	67	1.0	1.5	1.5	2.3	-	31.1*	2.21
398.739	60	135	2.5*	63	1.0	1.0	1.0	2.3	-	24.3	1.74

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction								
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.410	IV	17.1	47.4	11.3	3.7	20.8	55.3	8.8	0.0	1	S								
398.414	IV	17.3	47.1	12.4	3.1	20.2	55.3	8.8	0.0	5	S								
398.415	IV	17.2	47.6	11.7	3.1	18.8	56.6	9.6	0.0	1	S								
398.419	IV	17.6	47.0	12.6	3.5	17.3	57.8	8.8	0.0	4	S								
398.420	IV	16.6	49.3	12.2	3.1	20.4	55.0	9.1	0.0	4	S								
398.431	IV	18.2	46.0	12.5	3.6	20.6	54.6	8.8	0.0	1	S								
398.440	IV	16.6	48.6	12.8	3.4	19.3	56.1	8.6	0.0	1	R		R	R					
398.442	IV	18.1	45.7	12.3	3.5	21.2	54.5	8.4	0.0	3	S								
398.446	IV	17.2	47.4	12.7	3.6	24.0	53.0	6.4	0.3	1	S								
398.470	IV	17.2	46.7	10.0	3.2	24.7	53.1	9.1	0.0	1	S								
398.475	IV	18.5	45.5	11.3	3.0	21.9	56.3	7.7	0.0	1	S								
398.490	IV	18.0	46.4	12.0	3.5	21.2	55.0	8.5	0.0	1	S								
398.492	IV	17.5	47.5	10.8	3.1	20.7	56.4	9.0	0.0	1	S								
398.495	IV	17.5	44.0	12.1	2.8	17.7	56.8	10.5	0.0	1	R		R	R					
398.522	IV	16.8	49.0	10.8	3.3	22.8	55.4	7.7	0.0	1	S								
398.531	IV	18.4	45.1	11.4	3.0	23.0	54.8	7.9	0.0	1	S								
398.532	IV	17.8	46.2	11.3	3.3	23.7	53.7	8.1	0.0	1	S								
398.549	IV	17.8	45.7	12.9	3.4	19.7	54.4	9.5	0.1	1	S								
398.565	IV	17.5	46.9	11.7	3.2	19.5	56.4	9.3	0.0	1	R		R	R					
398.566	IV	17.7	45.8	10.3	3.4	20.7	57.4	8.2	0.0	1	S								
398.572	IV	17.8	46.3	12.0	3.1	21.8	54.6	8.4	0.0	1	R		R	H					
398.599	IV	16.8	46.8	12.0	3.1	20.4	55.3	9.2	0.0	1	S								
398.601	IV	17.4	45.4	12.8	3.4	20.5	54.2	9.0	0.0	1	S								
398.604	IV	17.6	45.7	12.1	4.1	21.5	53.9	8.5	0.0	4	S								
398.617	IV	18.0	46.9	12.3	3.4	23.9	52.0	8.5	0.0	1	S								
398.619	IV	18.0	44.6	12.3	3.5	17.1	58.1	8.9	0.0	2	S								
398.626	IV	16.6	46.8	10.7	3.3	23.8	52.7	9.4	0.0	1	S								
398.636	IV	17.5	47.7	12.3	3.1	22.2	53.7	8.7	0.0	1	R		R	R					
398.640	IV	17.2	47.1	13.2	3.1	21.7	54.9	7.2	0.0	1	R		R	R					
398.642	IV	17.2	48.8	13.0	3.4	19.0	56.6	8.1	0.0	1	S								
398.655	IV	17.0	44.9	11.3	3.2	22.1	54.5	9.0	0.0	1	S								
398.656	IV	17.5	47.3	11.8	4.0	20.0	56.2	8.0	0.0		R		R	R					
398.664	IV	17.8	46.3	10.9	3.3	19.9	57.5	8.4	0.0	1	R		R	R					
398.666	IV	17.6	46.3	12.2	3.4	20.5	56.0	7.8	0.0	4	R		R	H					
398.685	IV	16.7	46.6	11.5	3.1	22.8	54.1	8.5	0.0	1	H								
398.695	IV	17.4	46.3	12.5	3.2	20.0	55.4	8.9	0.0	1	S								
398.696	IV	18.1	46.6	12.3	3.7	20.2	56.2	7.6	0.0	1	S								
398.700	IV	17.5	45.3	10.7	3.3	21.3	54.7	10.0	0.0										
398.701	IV	18.4	44.7	10.9	3.6	20.8	56.4	8.3	0.0	1	S								
398.704	IV	15.8	48.8	12.0	2.9	16.4	58.1	10.7	0.0	1	H								
398.706	IV	16.2	47.9	12.8	3.6	21.2	54.5	7.8	0.0	1	R		R	R					
398.707	IV	17.5	43.4	11.3	3.8	21.9	54.3	8.6	0.0	1	S								
398.728	IV	17.7	48.0	12.9	2.9	18.8	57.2	8.2	0.0	1	R		R	S					
398.730	IV	17.2	46.9	11.5	3.0	18.7	57.2	9.5	0.0	1	S								
398.735	IV	17.1	47.4	11.8	2.8	21.4	55.8	8.2	0.0	1	S								
398.739	IV	17.6	43.9	10.7	3.8	22.2	54.8	8.6	0.0	1	R		R	S					

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
398.741		(KAS 331-8-1)	S. Korea		S. Korea	1975	IV
398.744		KAS 331-8-2	S. Korea		S. Korea	1975	IV
398.746		KAS 339-4	S. Korea		S. Korea	1975	IV
398.750		KAS 339-6	S. Korea		S. Korea	1975	IV
398.754		(KAS 340-2)	S. Korea		S. Korea	1975	IV
398.757		(KAS 340-3)	S. Korea		S. Korea	1975	IV
398.764		KAS 350-6	S. Korea		S. Korea	1975	IV
398.765		(KAS 350-6)	S. Korea		S. Korea	1975	IV
398.766		KAS 350-7	S. Korea		S. Korea	1975	IV
398.772		KAS 352-1	S. Korea		S. Korea	1975	IV
398.773		KAS 352-2	S. Korea		S. Korea	1975	IV
398.774		KAS 352-3	S. Korea		S. Korea	1975	IV
398.775		KAS 352-4	S. Korea		S. Korea	1975	IV
398.790		KAS 353-7	S. Korea		S. Korea	1975	IV
398.791		(KAS 353-7)	S. Korea		S. Korea	1975	IV
398.804		KAS 360-1	S. Korea		S. Korea	1975	IV
398.805		(KAS 360-1)	S. Korea		S. Korea	1975	IV
398.806		KAS 360-2	S. Korea		S. Korea	1975	III
398.815		KAS 360-7	S. Korea		S. Korea	1975	IV
398.820		(KAS 360-9)	S. Korea		S. Korea	1975	IV
398.823		KAS 360-12	S. Korea		S. Korea	1975	IV
398.830		KAS 361-1	S. Korea		S. Korea	1975	IV
398.832		(KAS 361-1)	S. Korea		S. Korea	1975	III
398.839		KAS 361-6	S. Korea		S. Korea	1975	IV
398.847		KAS 361-14	S. Korea		S. Korea	1975	IV
398.854		KAS 362-1	S. Korea		S. Korea	1975	IV
398.856		KAS 363-2	S. Korea		S. Korea	1975	IV
398.857		KAS 363-3	S. Korea		S. Korea	1975	IV
398.858		KAS 363-4	S. Korea		S. Korea	1975	IV
398.871		KLS 109-2	S. Korea		S. Korea	1975	IV
398.872		KLS 111	S. Korea		S. Korea	1975	IV
398.879		KLS 123-1	S. Korea		S. Korea	1975	IV
398.883		KLS 129	S. Korea		S. Korea	1975	IV
398.884		KLS 130	S. Korea		S. Korea	1975	IV
398.887		KLS 135-1	S. Korea		S. Korea	1975	IV
398.888		KLS 137-1	S. Korea		S. Korea	1975	IV
398.890		KLS 202	S. Korea		S. Korea	1975	IV
398.899		KLS 212-1	S. Korea		S. Korea	1975	IV
398.903		(KLS 215)	S. Korea		S. Korea	1975	III
398.905		KLS 217	S. Korea		S. Korea	1975	IV
398.906		(KLS 217)	S. Korea		S. Korea	1975	IV
398.909		(KLS 219)	S. Korea		S. Korea	1975	IV
398.910		KLS 220	S. Korea		S. Korea	1975	IV
398.914		KLS 301-1	S. Korea		S. Korea	1975	IV
398.915		KLS 302-1	S. Korea		S. Korea	1975	IV
398.920		KLS 402-1	S. Korea		S. Korea	1975	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.741	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.744	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.746	IV	P	G	E	Ssp	Br	S	Y	Bf			
398.750	IV	P	G	E	Ssp	Br	S	Y	Y			
398.754	IV	W	T	E	Ssp	Br	S	Y	Br			
398.757	IV	P	T	E	Ssp	Br	D	Bl	Bl			
398.764	IV	W	T	E	Ssp	Tn	S	Y	Br			
398.765	IV	P	G	Sa	Ssp	Br	D	Y	Y			
398.766	IV	P	T	E	Ssp	Br	S	Br	Br			
398.772	IV	P	T	E	Ssp	Br	S	Y	Br			
398.773	IV	W	T	Sa	Ssp	Tn	S	Y	Y			
398.774	IV	W	T	Sa	Ssp	Tn	D	Y	Y			
398.775	IV	W	T	Sa	Ssp	Tn	I	Y	Y			
398.790	IV	W	T	Sa	Ssp	Tn	I	Y	Y			
398.791	IV	W	T	Sa	Ssp	Tn	I	Y	Y			
398.804	IV	P	T	E	Ssp	Tn	D	Bl	Bl			
398.805	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
398.806	III	W	G	A	Ssp	Tn	D	Y	Y			
398.815	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
398.820	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
398.823	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.830	IV	P	T	E	N	Br	D	Y	Br			
398.832	III	W	G	A	Ssp	Tn	D	Y	Y			
398.839	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.847	IV	P	T	E	Ssp	Br	D	Bl	Bl			
398.854	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
398.856	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.857	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.858	IV	P	G	E	Ssp	Br	I	Y	Y			
398.871	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.872	IV	P	T	E	Ssp	Br	S	Br	Br			
398.879	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
398.883	IV	P	T	I	Ssp	Br	D	Bl	Bl	Net		
398.884	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.887	IV	P	G	A	Ssp	Br	D	Y	Bf			
398.888	IV	P	G	E	Ssp	Br	S	Y	Y			
398.890	IV	Dp	G	E	Ssp	Br	I	Y	Y			
398.899	IV	P	G	E	Ssp	Br	S	Y	Y			
398.903	III	W	G	Sa	Ssp	Br	D	Y	Lbf			
398.905	IV	P	G	E	Ssp	Br	S	Y	Y			
398.906	IV	P	G	E	Ssp	Br	S	Y	Bf			
398.909	IV	W	G	A	Ssp	Br	I	Y	Y			
398.910	IV	P	G	E	Ssp	Br	S	Y	Bf			
398.914	IV	P	G	E	Ssp	Br	I	Y	Y	SDef		
398.915	IV	P	G	E	Ssp	Br	S	Y	Y			
398.920	IV	P	T	E	Ssp	Br	I	Br	Br	St		

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.741	57	136	2.3*	66	1.0	1.0	1.0	2.3	-	23.5*	2.34
398.744	57	131	3.1*	72	1.0	1.5	1.5	2.3	-	29.7*	2.20
398.746	50	121	1.8	64	1.0	1.0	2.5*	1.5	1.0	14.7	2.72
398.750	56	127	2.3*	80*	1.5	1.5	2.0*	1.5	2.0	20.7	2.39
398.754	51	128	2.5*	69*	1.5	1.0	1.0	1.8	2.5	22.4*	2.32
398.757	57	130	2.9*	71*	1.0	1.5	1.5	1.8	-	19.4*	2.57
398.764	59	132	2.6*	78	1.0	1.5	1.5	2.0	5.0	19.0*	2.29
398.765	57	127	2.2	83	1.5	1.0	1.0	2.3	2.0	18.1*	2.12
398.766	59	129	2.8*	82	1.0	1.5	2.0*	2.0	-	20.1*	2.09
398.772	54	129	3.0*	70*	1.0	1.5	1.5	1.8	2.0	22.6	2.40
398.773	58	130	2.4*	75*	1.0	1.5	1.5	2.3	4.5	20.7	2.36
398.774	57	131	2.1	80	1.5	1.5	1.5	2.3	4.5	20.8*	2.43
398.775	56	130	2.4*	77	1.0	1.5	2.0*	2.3	4.5	21.8	2.54
398.790	56	131	2.3	82	1.0	1.5	1.5	2.0	4.5	20.6	2.50
398.791	57	131	2.1	75	1.0	1.5	1.5	2.0	3.5	20.4	2.41
398.804	57	130	3.1*	79	1.0	1.5	1.5	2.0	-	22.3*	2.47*
398.805	55	129	2.6*	63*	1.0	1.5	2.0*	2.0	-	16.9*	2.12*
398.806	48	117	2.5	78	1.0	1.5	3.5*	2.5	2.0	23.2	2.07
398.815	58	135	3.0*	71	1.0	1.0	1.0	2.3	-	25.9*	1.87
398.820	57	137	2.9*	68*	1.0	1.0	1.0	2.5	-	23.4	1.56
398.823	55	130	3.0*	69*	1.0	1.5	1.5	2.3	-	22.9*	2.34
398.830	52	127	2.8	91	1.0	1.5	1.5	2.5	3.5	17.9	2.54
398.832	48	118	2.8*	79	1.5	2.0	3.0*	2.5	2.0	22.4	2.46
398.839	58	133	2.5*	68	1.0	1.0	1.5	2.0	-	20.9*	2.05
398.847	57	128	2.0	78	1.0	1.5	1.5	1.8	-	17.4	2.29
398.854	56	132	2.5	67	1.0	1.5	1.5	2.5	-	28.1*	1.66
398.856	58	133	3.5	78	1.0	1.5	1.5	2.0	-	19.6*	2.28
398.857	50	121	2.1	82	1.0	1.5	3.0*	1.8	1.5	16.8	2.86
398.858	58	134	2.4*	83	1.0	1.5	1.5	2.3	2.0	19.6*	2.06*
398.871	55	127	2.1	66	1.5	2.5*	3.0*	2.3	1.5	16.9	2.45
398.872	51	129	2.3*	65	1.0	1.0	1.5	2.3	-	31.3*	2.46*
398.879	51	129	2.8*	63	1.0	1.0	1.0	2.3	-	31.4*	2.37
398.883	51	124	3.1	60	1.0	1.0	1.5	2.5	-	23.2	2.41
398.884	66	132	2.3*	63	1.0	1.5	1.5	2.0	-	11.0	1.63
398.887	51	123	2.0	70	1.0	2.5*	3.5*	2.5	1.0	16.9*	2.17
398.888	58	134	3.0	86	1.0	1.5	1.5	1.8	2.0	20.8*	2.42
398.890	51	129	3.0*	88	1.0	1.0	1.0	2.5	2.0	24.6*	2.30
398.899	56	129	2.6*	84	1.0	1.0	1.0	2.0	2.0	19.3*	2.26
398.903	50	118	1.6	62*	1.0	2.5*	3.0*	2.3	2.5	21.4	2.74
398.905	54	127	2.5*	71	1.0	1.5	2.0*	1.8	2.0	17.7	2.39
398.906	57	129*	3.0*	85	1.5	1.5	2.0*	1.8	2.0	16.9*	2.07
398.909	50	127	3.0	85	1.0	1.5	1.5	2.3	2.0	19.5*	2.20
398.910	57	130	2.5*	79	1.5	1.5	1.5	2.0	4.0	12.5*	2.13
398.914	52	128	2.8*	85	1.0	1.0	1.5	2.8*	2.0	24.0	2.52
398.915	54	127	2.3*	79	1.0	1.0	1.5	2.0	1.5	20.0	2.49
398.920	56	128	3.5	92	2.0	1.0	1.5	2.0	-	22.9*	2.32

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic			Linoleic	Linolenic		F.L.	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	Stearic (%)	Oleic (%)	(%)	(%)	Other (%)	race 2	1	2	3	4	5	6	7	8	9
398.741	IV	17.3	44.9	10.0	3.4	20.3	57.4	8.8	0.0	1	R		R	H					
398.744	IV	17.1	45.8	10.6	3.6	23.4	54.1	8.3	0.0	1	S								
398.746	IV	17.7	44.7	13.4	3.3	17.3	55.6	10.4	0.0	1	S								
398.750	IV	18.1	46.6	12.3	3.0	22.0	54.8	7.9	0.0	2	S								
398.754	IV	18.3	45.6	12.1	3.5	20.7	56.2	7.3	0.0	1	S								
398.757	IV	16.5	48.4	11.0	3.3	19.4	57.4	8.9	0.0	1	S								
398.764	IV	17.2	46.4	11.9	3.4	19.4	55.7	9.5	0.0	1	R		R	R					
398.765	IV	17.6	47.2	10.9	3.3	22.0	55.3	8.5	0.0	1	R		R	H					
398.766	IV	17.0	46.2	11.2	3.4	19.9	55.8	9.7	0.0	1	S								
398.772	IV	18.1	45.2	12.5	3.3	20.2	55.7	8.2	0.0	1	R		R	H					
398.773	IV	17.6	47.0	11.8	3.1	20.5	55.8	8.9	0.0	1	R		R	R					
398.774	IV	17.7	46.7	11.6	3.1	19.5	56.9	8.9	0.0	2	R		R	R					
398.775	IV	17.3	46.7	11.6	3.2	20.7	55.9	8.6	0.0	2	R		R	R					
398.790	IV	17.5	47.1	11.8	3.1	19.6	56.5	9.1	0.0	1	R		R	R					
398.791	IV	17.2	47.0	11.5	3.1	18.6	57.4	9.3	0.0	3	R		R	R					
398.804	IV	16.4	46.4	11.2	3.5	20.6	55.9	8.9	0.0										
398.805	IV	16.8	46.6	12.0	3.4	19.3	56.7	8.7	0.0										
398.806	III	17.5	46.0	11.5	2.9	23.8	53.6	8.2	0.0										
398.815	IV	17.2	44.5	10.9	3.8	22.8	54.1	8.4	0.0										
398.820	IV	17.6	45.4	10.9	3.8	22.6	54.1	8.5	0.2										
398.823	IV	17.4	46.7	11.6	3.7	22.7	54.1	7.7	0.1	1	S								
398.830	IV	17.9	46.2	11.0	3.3	18.4	57.9	9.3	0.1	4	R		R	R					
398.832	III	17.4	46.0	12.1	3.0	23.9	52.7	8.3	0.1	1	S								
398.839	IV	16.7	49.1	11.7	3.3	20.7	55.1	9.1	0.1	1	S								
398.847	IV	16.2	45.2	10.3	3.4	20.0	57.9	8.3	0.0	1	R		R	R					
398.854	IV	17.1	46.9	11.1	3.7	22.3	54.4	8.4	0.0	1	R								
398.856	IV	17.5	45.0	10.6	3.6	21.3	56.4	8.1	0.0	5	S								
398.857	IV	18.3	46.2	12.4	3.1	18.6	56.8	9.1	0.0	1	R		R	R					
398.858	IV	17.3	46.2	12.1	3.2	21.5	54.8	8.3	0.0	4	S								
398.871	IV	17.4	43.5	12.6	2.9	17.0	56.9	10.5	0.0	1	S								
398.872	IV	17.9	44.4	11.5	3.0	23.1	54.3	8.2	0.0	1	S								
398.879	IV	18.1	46.7	11.7	3.0	22.1	54.8	8.4	0.0	1	S								
398.883	IV	17.6	44.7	10.1	3.1	22.2	55.0	9.6	0.0	1	S								
398.884	IV	14.2	47.9	11.8	3.0	13.8	60.0	11.4	0.0	1	R		R	H					
398.887	iV	16.9	44.6	11.3	2.9	19.3	56.0	10.5	0.0	1	R		R	R					
398.888	IV	18.1	47.1	11.8	3.2	19.8	56.9	8.4	0.0	5	S								
398.890	IV	17.9	44.3	11.2	3.6	20.8	55.8	8.7	0.0	4	S								
398.899	IV	17.9	46.4	12.3	3.1	21.3	55.2	8.0	0.0	5	S								
398.903	III	17.0	47.7	12.4	3.2	19.9	56.0	8.5	0.0	5	S								
398.905	IV	17.4	45.8	11.3	3.0	20.4	56.6	8.7	0.1	2	S								
398.906	IV	17.7	46.5	12.3	3.3	20.6	55.4	8.3	0.0	1	S								
398.909	IV	17.8	46.0	12.6	3.1	22.0	54.0	8.2	0.0	1	S								
398.910	IV	16.8	46.0	12.5	3.3	17.8	57.0	9.4	0.0	1	H								
398.914	IV	17.4	46.1	11.0	3.5	21.2	55.4	8.9	0.0	4	H								
398.915	IV	17.7	46.9	12.4	3.1	21.2	55.3	8.0	0.0	4	S								
398.920	IV	16.9	48.1	11.9	3.5	21.0	54.7	8.8	0.0	1	S								

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.921		KLS 404	S. Korea		S. Korea	1975	IV
398.922		KLS 405-1	S. Korea		S. Korea	1975	IV
398.924		KLS 408	S. Korea		S. Korea	1975	IV
398.929		KLS 417-1	S. Korea		S. Korea	1975	IV
398.931		(KLS 418)	S. Korea		S. Korea	1975	IV
398.933		KLS 502	S. Korea		S. Korea	1975	IV
398.934		(KLS 502)	S. Korea		S. Korea	1975	IV
398.935		KLS 505-1	S. Korea		S. Korea	1975	IV
398.936		KLS 507	S. Korea		S. Korea	1975	IV
398.937		KLS 508	S. Korea		S. Korea	1975	IV
398.938		(KLS 508)	S. Korea		S. Korea	1975	IV
398.939		KLS 510	S. Korea		S. Korea	1975	IV
398.940		KLS-602-1	S. Korea		S. Korea	1975	IV
398.953		KLS 616-1	S. Korea		S. Korea	1975	IV
398.959		KLS 622	S. Korea		S. Korea	1975	IV
398.960		KLS 623	S. Korea		S. Korea	1975	IV
398.965		KLS 628-1	S. Korea		S. Korea	1975	IV
398.970		KLS 630-1	S. Korea		S. Korea	1975	IV
398.981		KLS 709	S. Korea		S. Korea	1975	IV
398.982		KLS 710	S. Korea		S. Korea	1975	IV
398.990		KLS 719	S. Korea		S. Korea	1975	IV
398.994		KLS 724-1	S. Korea		S. Korea	1975	IV
398.995		KLS 725-1	S. Korea		S. Korea	1975	IV
398.996		KLS 726-1	S. Korea		S. Korea	1975	IV
398.997		(KLS 726-1)	S. Korea		S. Korea	1975	IV
399.001		(KLS 729-1)	S. Korea		S. Korea	1975	IV
399.005		KLS 734	S. Korea		S. Korea	1975	IV
399.010		KLS 740	S. Korea		S. Korea	1975	IV
399.011		KLS 741	S. Korea		S. Korea	1975	IV
399.016		KLS 803-1	S. Korea		S. Korea	1975	IV
399.027		KLS 810-1	S. Korea		S. Korea	1975	IV
399.030		KLS 813-3	S. Korea		S. Korea	1975	IV
399.034		KLS 820-1	S. Korea		S. Korea	1975	IV
399.036		(KLS 822-1)	S. Korea		S. Korea	1975	IV
399.039		KLS 824-1	S. Korea		S. Korea	1975	IV
399.051			S. Korea		S. Korea	1975	IV
399.072			S. Korea		S. Korea	1975	IV
399.073			S. Korea		S. Korea	1975	IV
399.091			S. Korea		S. Korea	1975	IV
399.092			S. Korea		S. Korea	1975	IV
399.093			S. Korea		S. Korea	1975	IV
399.094			S. Korea		S. Korea	1975	IV
399.119			S. Korea		S. Korea	1975	IV
404.153	Gurijskaja 0565	K 4993	USSR		USSR	1975	IV
404.159	Kolhida 4	K 6172	USSR		USSR	1975	IV
404.161	Mocinabe 7	K 6175	USSR		USSR	1975	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.921	IV	P	G	E	Ssp	Br	S	Y	Y			
398.922	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.924	IV	P	G	E	Ssp	Br	S	Y	Y			
398.929	IV	P	T	E	Ssp	Br	D	Bl	Bl			
398.931	IV	P	G	E	Ssp	Br	S	Y	Y			
398.933	IV	W	G	A	Ssp	Tn	D	Y	Y			
398.934	IV	W	G	A	Ssp	Tn	D	Y	Y			
398.935	IV	P	T	Sa	Ssp	Br	D	Gn	Br			
398.936	IV	P	G	E	Ssp	Br	S	Y	Y			
398.937	IV	P	G	E	Ssp	Tn	S	Y	Y			
398.938	IV	P	G	E	Ssp	Br	S	Y	Y			
398.939	IV	P	G	A	Ssp	Tn	I	Y	Bf			
398.940	IV	P	G	E	Ssp	Tn	S	Y	Bf			
398.953	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.959	IV	P	G	E	Ssp	Tn	I	Y	Bf			
398.960	IV	P	G	E	Ssp	Br	S	Y	Y			
398.965	IV	W	T	E	Ssp	Tn	D	Bl	Bl	Gncot		
398.970	IV	P	G	E	Ssp	Tn	D	Y	Lbf			
398.981	IV	P	G	E	Ssp	Br	S	Y	Y			
398.982	IV	P	G	E	Ssp	Tn	S	Y	Y			
398.990	IV	P	G	E	Ssp	Br	S	Y	Bf	SDef		
398.994	IV	P	G	E	Ssp	Br	I	Y	Y			
398.995	IV	P	T	E	Ssp	Br	S	Y	Y			
398.996	IV	W	G	Sa	N	Tn	I	Y	Bf			
398.997	IV	W	G	A	Ssp	Tn	D	Y	Y			
399.001	IV	P	G	E	Ssp	Tn	D	Y	Bf			
399.005	IV	P	G	E	Ssp	Br	S	Y	Bf	SDef		
399.010	IV	P	G	E	Ssp	Br	S	Y	Y			
399.011	IV	P	G	E	Ssp	Br	S	Y	Y			
399.016	IV	P	G	E	Ssp	Br	S	Y	Bf			
399.027	IV	P	G	E	Ssp	Br	S	Y	Bf			
399.030	IV	P	G	E	Ssp	Br	S	Y	Y			
399.034	IV	P	T	E	Ssp	Br	S	Y	Y			
399.036	IV	W	G	E	Ssp	Tn	D	Y	Y			
399.039	IV	P	G	E	Ssp	Br	S	Y	Bf	SDef		
399.051	IV	P	G	A	Ssp	Br	D	Y	Lbf			
399.072	IV	Dp	T	E	Ssp	Br	S	Br	Br	St		
399.073	IV	P	G	E	Ssp	Br	S	Y	Y			
399.091	IV	P	G	E	Ssp	Br	S	Y	Y			
399.092	IV	P	G	E	Ssp	Tn	I	Y	Y			
399.093	IV	P	G	E	Ssp	Br	S	Y	Y			
399.094	IV	W	T	E	Ssp	Br	S	Y	Br			
399.119	IV	P	T	Sa	Ssp	Br	D	Gn	Br	Gncot		
404.153	IV	W	Lt	E	N	Br	I	Y	Br			
404.159	IV	W	G	Sa	Ssp	Tn	S	Y	Y			
404.161	IV	W	G	E	N	Tn	I	Y	Bf			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.921	56	128	2.8*	80	1.0	1.5	1.5	1.8	1.5	20.3	2.25
398.922	62	132	3.5	83	1.5	1.5	1.5	2.0	3.0	15.2*	2.05
398.924	54	127	2.8*	86	1.5	1.5	1.5	1.8	2.0	20.7*	2.35
398.929	57	133	3.1	86	1.0	1.5	1.5	2.0	-	21.3*	2.32
398.931	56	129	2.3*	83	1.5	1.5	1.5	1.8	2.0	19.7*	2.55
398.933	50	121	2.6	72	1.5	2.0	3.5*	2.8*	3.0	20.5	2.09
398.934	50	126	3.0	81	1.5	2.5*	3.0*	2.5	2.0	24.7	1.93
398.935	57	132	2.8*	78	1.5	1.5	2.0*	1.8	2.5	16.8*	2.22
398.936	54	127	2.3*	85	1.0	1.0	1.5	1.8	2.0	19.9	2.36
398.937	50	125	2.4*	80	1.0	1.5	1.5	1.8	1.5	20.0	2.51
398.938	57	127	2.5*	81	1.0	1.5	1.5	2.0	2.0	18.9*	2.06
398.939	54	126	1.8	62	1.0	1.5	2.5*	2.0	2.0	22.0*	2.60
398.940	58	126	2.3	80	1.0	1.5	1.5	2.0	2.5	17.8*	2.23
398.953	49	120	2.3	76	1.0	1.0	3.0*	2.0	1.5	17.2	2.64*
398.959	58	131	3.8*	89*	2.0	2.0*	2.0*	2.3*	2.0	15.4*	2.18
398.960	58	128	2.3*	85	1.0	1.5	1.5	2.0	2.0	20.2	2.27
398.965	44	122	2.1*	120*	2.5	1.0	1.5	1.5	-	11.5	2.45
398.970	61	130*	2.2	79	1.0	1.0	1.0	1.8*	2.5	8.7	2.51*
398.981	56	127	2.4*	85	1.0	1.0	1.0	1.8	2.0	19.8*	2.33*
398.982	56	127	2.1	77	1.0	1.5	1.5	1.8	2.0	17.5*	2.47*
398.990	56	125	1.8	67	1.0	1.5	1.5	2.8*	1.0	21.0	2.38
398.994	59	129	2.1	70	1.0	1.5	1.5	2.3	3.0	16.9*	2.07
398.995	56	127	2.5	84	1.0	1.5	2.0*	2.0	3.5	21.5*	2.23
398.996	50	119	2.3	88*	1.0	1.0	3.0*	1.8	1.0	14.0*	2.52
398.997	49	120	2.5	77	1.0	2.0*	3.0*	2.3	2.0	20.3	2.41*
399.001	58	128	2.6*	89	1.0	1.5	2.0*	1.8	2.5	12.9*	2.31
399.005	57	127	1.8	65	1.0	1.5	1.5	2.8*	1.0	20.6	2.22
399.010	57	126	2.4*	84	1.0	1.5	1.5	1.8*	2.0	19.7	2.24
399.011	53	122	2.1	69	1.0	1.0	1.5	2.3*	2.0	21.2*	1.96*
399.016	55	130	2.5	82	1.0	1.5	1.5	2.3	2.5	19.4	2.70
399.027	60	128	2.0	88*	1.0	1.5	1.5	2.3	2.0	17.8*	2.47
399.030	53	128	2.0	81	1.0	1.5	1.5	1.5	2.0	20.3*	2.41
399.034	51	128	3.0	79	1.0	2.0*	3.0*	2.0	2.5	22.2*	2.54
399.036	51	128	2.3*	93	1.0	1.5	2.0*	2.3	2.5	22.6	2.40
399.039	56	126	2.0	70	1.0	1.5	1.5	2.8*	1.5	20.5	2.17*
399.051	55	124	2.5	78	1.0	3.0*	3.0*	2.0	1.0	19.3	2.62
399.072	57	129	2.7*	79	1.0	1.5	1.5	2.3	-	24.0*	2.21*
399.073	58	130	3.0	77	1.0	1.5	1.5	2.0	2.0	21.0*	2.23*
399.091	58	131	2.6	86	1.0	1.5	1.5	2.0	2.0	20.1*	2.37*
399.092	52	125	3.1	75	1.0	1.5	1.5	2.0	2.5	17.8*	2.50
399.093	57	129	2.5	85	1.0	1.5	1.5	2.3	2.0	20.0*	2.41*
399.094	50	129	3.0	75	1.0	1.5	1.5	2.3	2.5	25.1*	2.61*
399.119	64	129	2.8	98	3.0	1.5	1.5	2.0	2.5	11.7	2.08*
404.153	51	128	3.3*	120	4.0	1.5	1.5	2.0	3.0	20.2*	3.05
404.159	56	134	2.0	81	1.0	1.0	1.5	2.8*	4.0	14.9*	2.01
404.161	47	131	2.9*	109	3.0	1.0	1.0	2.0	2.0	17.6*	3.04*

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction								
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.921	IV	17.8	46.2	12.2	3.2	22.1	54.6	8.0	0.0	5	S								
398.922	IV	16.4	48.1	12.8	2.9	17.7	56.8	9.9	0.0	1	S								
398.924	IV	17.5	46.4	12.3	3.1	21.9	54.8	8.0	0.0	5	S								
398.929	IV	17.1	44.8	11.1	3.4	18.8	57.9	8.7	0.0	1	S								
398.931	IV	18.3	45.4	12.3	3.3	21.3	55.1	8.0	0.0	5	S								
398.933	IV	17.6	45.0	11.9	3.1	21.1	54.9	9.0	0.0	1	S								
398.934	IV	16.8	46.1	11.6	3.1	22.7	54.2	8.3	0.0	1	H								
398.935	IV	17.4	47.6	11.7	3.5	21.6	54.3	8.9	0.0	1	R	R	R						
398.936	IV	18.0	45.5	12.4	3.1	21.5	54.9	8.2	0.0	5	S								
398.937	IV	18.3	47.0	12.1	3.1	20.8	55.9	8.1	0.0	5	S								
398.938	IV	18.2	46.1	12.2	3.2	21.4	55.1	8.2	0.0	4	S								
398.939	IV	17.6	45.4	13.0	3.0	16.4	58.5	9.0	0.0	1	R	R	S						
398.940	IV	18.2	44.9	12.0	2.9	22.6	55.5	7.0	0.0	1	R	R	R						
398.953	IV	18.4	46.0	12.5	3.2	19.0	56.5	8.7	0.0	1	R	R	R						
398.959	IV	16.7	44.9	11.6	3.4	20.6	54.9	9.6	0.0	1	R	R	R						
398.960	IV	17.5	47.5	12.1	3.3	21.1	55.3	8.3	0.0	3	S								
398.965	IV	18.6	44.2	12.1	3.4	20.2	56.3	7.9	0.0	3	S								
398.970	IV	16.0	49.1	12.9	3.2	17.3	56.5	10.1	0.0	2	R	R	R						
398.981	IV	17.9	46.4	12.3	3.3	22.0	54.4	8.1	0.0	5	S								
398.982	IV	17.2	47.0	12.2	3.0	21.1	55.2	8.5	0.0	5	R	R	R						
398.990	IV	17.8	45.4	11.4	3.0	24.7	52.9	7.9	0.0	5	H								
398.994	IV	17.5	46.6	10.9	3.2	22.0	54.5	9.3	0.0	4	R	R	S						
398.995	IV	17.3	48.4	12.2	3.1	21.6	55.4	7.8	0.0	1	S								
398.996	IV	18.3	44.9	11.2	3.4	20.2	55.9	9.4	0.0	4	R	R	R						
398.997	IV	17.8	47.0	11.7	3.1	23.9	53.4	7.8	0.0	1	H								
399.001	IV	16.4	48.0	13.2	2.9	16.2	57.9	9.7	0.0	4	R	R	R						
399.005	IV	17.9	45.5	11.9	3.1	23.0	53.9	8.0	0.2	5	H								
399.010	IV	18.3	46.2	12.5	3.2	21.7	54.7	7.9	0.0	5	S								
399.011	IV	18.4	46.4	10.8	2.8	22.5	55.5	8.4	0.0	5	S								
399.016	IV	17.8	47.4	11.9	2.8	21.2	56.1	8.0	0.0	1	R	R	R						
399.027	IV	18.3	43.9	11.7	3.0	23.1	54.1	8.1	0.0	4	R	R	R						
399.030	IV	18.1	46.5	12.2	3.1	21.9	55.0	7.8	0.0	4	S								
399.034	IV	17.5	45.7	12.4	3.0	19.8	56.1	8.7	0.0	1	H								
399.036	IV	17.4	44.8	13.0	3.0	20.9	54.6	8.5	0.0	1	R	R	R						
399.039	IV	17.9	46.1	12.6	2.8	23.6	52.8	8.2	0.0	4	H								
399.051	IV	16.9	45.2	11.2	2.8	21.4	54.2	10.5	0.0	1	R	R	R						
399.072	IV	17.3	48.4	11.2	3.6	22.5	55.4	7.4	0.0	1	S								
399.073	IV	17.8	47.9	12.6	3.3	20.6	55.1	8.3	0.0	3	R	R	R						
399.091	IV	17.5	46.4	12.1	3.3	21.2	55.1	8.2	0.0	4	S								
399.092	IV	18.4	43.9	12.7	3.1	22.6	53.5	8.2	0.0	3	R	R	R						
399.093	IV	17.8	46.6	12.5	3.1	21.2	54.8	8.4	0.0	4	S								
399.094	IV	18.3	47.3	12.8	3.7	21.3	55.2	7.0	0.0	1	S								
399.119	IV	17.1	46.2	12.2	3.8	24.5	51.4	8.1	0.1	1	R	R	R						
404.153	IV	18.1	44.4	12.1	2.7	20.7	55.8	8.7	0.0	1	S								
404.159	IV	17.8	44.5	12.8	3.5	18.9	55.6	9.2	0.0	1	R								
404.161	IV	18.0	44.4	11.6	3.4	27.4	50.3	7.3	0.0	3	S								

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
404.163	Can li	K 4887	USSR		China	1975	IV
404.164	Tun czou	K 4889	USSR		China	1975	IV
404.165	Dun cuan	K 4894	USSR		China	1975	IV
404.167	Krasnoarmejskaja	K 5228	USSR		China	1975	IV
404.170	Tun san si he czao	K 5325	USSR		China	1975	IV
404.173A	Fyn sen baj pi	K 5328	USSR		China	1975	IV
404.173B	(Fyn sen baj pi)	(K 5328)	USSR		China	1975	IV
404.174	Fyn sen czen din da baj pi	K 5329	USSR		China	1975	IV
404.176	Tyn san da baj pi	K 5331	USSR		China	1975	IV
404.177	Tiu sen jan lj gu	K 5332	USSR		China	1975	IV
404.178	Tiu sen tian e dan	K 5333	USSR		China	1975	IV
404.179A	Tiu sen zyan tiao czi	K 5334	USSR		China	1975	IV
404.179B	(Tiu sen zyan tiao czi)	(K 5334)	USSR		China	1975	IV
404.181	Sin i hua da gou	K 5336	USSR		China	1975	IV
404.183	Gai juj pin din huan	K 5338	USSR		China	1975	IV
404.185	Dyn haj hun mao czy	K 5342	USSR		China	1975	IV
404.190	Pa dou	K 5362	USSR		China	1975	IV
404.191	Krest'ianskaja	K 5395	USSR		China	1975	IV
404.193	Pin dun huan	K 5423	USSR		China	1975	IV
404.194	Niu mao juan	K 5425	USSR		China	1975	IV
404.195	Te zu can	K 5430	USSR		China	1975	IV
404.197	Lian suj pin din huan	K 5446	USSR		China	1975	IV
404.199	Sin he do	K 5519	USSR		China	1975	IV
405.691	Tie feng No. 5		China		China	1975	III
406.707	Bong ui		S. Korea		S. Korea	1976	IV
406.710	Kwang kyo		S. Korea		S. Korea	1976	IV
407.658A	Dun haj czu ja czao	VIR 5339	USSR		China	1976	IV
407.658B	(Dun haj czu ja czao)	(VIR 5339)	USSR		China	1976	IV
407.658C	(Dun haj czu ja czao)	(VIR 5339)	USSR		China	1976	IV
407.727			China		China	1976	IV
407.729			China		China	1976	IV
407.730			China		China	1976	III
407.731			China		China	1976	IV
407.732			China		China	1976	IV
407.734			China		China	1976	IV
407.735			China		China	1976	IV
407.736			China		China	1976	IV
407.770		KAS 100-11-2	S. Korea		S. Korea	1976	IV
407.772A		KAS 302-4	S. Korea		S. Korea	1976	IV
407.772B		(KAS 302-4)	S. Korea		S. Korea	1976	IV
407.773A		KAS 330-9-2	S. Korea		S. Korea	1976	IV
407.773B		(KAS 330-9-2)	S. Korea		S. Korea	1976	IV
407.778A		KAS 8102	S. Korea		S. Korea	1976	IV
407.781B		(KAS 8105)	S. Korea		S. Korea	1976	IV
407.786A		KAS 8110	S. Korea		S. Korea	1976	IV
407.788A		KAS 8113	S. Korea		S. Korea	1976	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
404.163	IV	W	T	Sa	Ssp	Bl	D	Gn	Br			
404.164	IV	W	G	E	N	Br	I	Y	Bf			
404.165	IV	P	Lt	E	N	Br	S	Bl	Bl			
404.167	IV	W	G	E	N	Br	S	Y	Bf			
404.170	IV	P	T	E	Ssp	Br	I	Y	Blbr			
404.173A	IV	W	G	A	N	Tn	D	Y	Bf			
404.173B	IV	W	T	E	N	Br	D	Y	Br	Sph		
404.174	IV	W	G	A	N	Tn	D	Y	Bf			
404.176	IV	W	G	A	N	Tn	I	Y	Bf			
404.177	IV	P	G	E	N	Lbr	D	Y	Y			
404.178	IV	W	G	E	N	Br	I	Y	Bf			
404.179A	IV	W	G	E	Ssp	Br	D	Y	Bf			
404.179B	IV	P	G	A	N	Br	I	Y	Bf			
404.181	IV	W	G	A	N	Tn	D	Y	Bf			
404.183	IV	W	G	A	N	Tn	D	Y	Bf			
404.185	IV	W	T	E	N	Tn	D	Y	Bl			
404.190	IV	P	T	E	N	Br	S	Br	Br			
404.191	IV	W	Lt	A	N	Tn	I	Y	Br			
404.193	IV	W	G	E	N	Br	I	Y	Bf			
404.194	IV	W	T	A	Ssp	Br	I	Y	Br	Sph		
404.195	IV	W	T	E	Ssp	Br	D	Bl	Bl			
404.197	IV	W	G	A	N	Tn	D	Y	Bf			
404.199	IV	W	T	E	N	Bl	I	Bl	Bl			
405.691	III	W	G	E	Ssp	Br	S	Y	Y			
406.707	IV	P	G	Sa	Ssp	Br	I	Y	Bf			
406.710	IV	P	G	A	Ssp	Br	I	Y	Bf			
407.658A	IV	W	T	E	N	Tn	I	Y	Blbr			
407.658B	IV	W	G	E	Ssp	Br	I	G	G			
407.658C	IV	W	T	E	Ssp	Tn	D	Y	Blbr			
407.727	IV	P	G	E	N	Br	S	Y	Bf			
407.729	IV	W	Lt	E	N	Lbr	S	Bl	Bl		Dab	
407.730	III	P	Lt	E	N	Lbr	S	Y	Blbr			
407.731	IV	W	G	E	N	Br	S	Y	Bf			
407.732	IV	W	G	E	N	Br	I	Y	Bf			
407.734	IV	W	G	E	N	Br	S	Y	Bf			
407.735	IV	P	G	E	N	Br	S	Gn	Bf			
407.736	IV	W	G	E	N	Br	D	Y	Bf			
407.770	IV	W	T	E	Ssp	Tn	I	Lggn	Bl			
407.772A	IV	P	G	E	Ssp	Tn	I	Y	Y			
407.772B	IV	P	G	E	N	Tn	I	Y	Y			
407.773A	IV	W	T	E	N	Br	I	Y	Bl			
407.773B	IV	W	T	E	Ssp	Tn	I	Y	Bl			
407.778A	IV	P	T	Sa	Ssp	Tn	I	Bl	Bl			
407.781B	IV	P	G	E	Ssp	Tn	S	Y	Y			
407.786A	IV	W	Lt	E	Ssp	Tn	D	Y	Br			
407.788A	IV	P	G	E	Ssp	Tn	S	Y	Bf			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
404.163	54	129*	3.8	133	4.0	2.0	2.0	2.3	2.0*	16.3*	1.80
404.164	52	126	3.1	135	4.0	1.5	1.5	2.0	1.0	16.6*	2.24*
404.165	63	125	2.9	161*	5.0	1.5	1.5	2.0	-	9.0*	2.28*
404.167	49	125	3.1	125	2.5	1.5	2.0*	2.0	1.0	16.1*	2.54
404.170	56	128	3.8	164*	5.0	1.5	2.0*	1.5	1.5	11.9	2.50
404.173A	63	131	3.8	113	3.0	1.5	1.5	2.0	3.0	16.0*	2.25
404.173B	50	126	3.8	165*	4.0	1.5	1.5	1.8	1.5	15.1	2.30
404.174	63	131	3.8	117*	3.0	1.5	1.5	2.3	2.5	15.8*	2.08*
404.176	64	131	3.5*	118*	3.0	1.0	1.0	2.3	2.5	15.0*	2.16
404.177	55	127	2.9	105	3.0	1.0	1.0	2.3	2.5	14.9*	2.08
404.178	63	134	2.3	143*	4.0	1.0	1.0	3.0*	1.5	19.5	1.41
404.179A	59	127	3.6	130	4.0	1.5	1.5	2.0	1.5	12.6*	2.87*
404.179B	58	126	3.0	122*	4.0	1.0	1.0	1.8	1.5	15.3	2.74*
404.181	64	136*	4.0	127	2.0	1.0	1.0	2.0	3.0	12.0*	1.60
404.183	63	134	3.8	96	1.5	1.0	1.0	2.0	2.5	12.1	2.07
404.185	51	125	3.8	87*	1.5	1.5	1.5	1.5	1.5	14.6	3.01
404.190	56	127*	3.6	122*	2.0	1.5	3.5*	1.8	-	11.4	2.61
404.191	53*	130	3.4	97*	3.0	1.0	1.0	1.8	1.0	14.8*	2.43*
404.193	62	127	3.8	133*	2.0	2.0*	3.0*	2.0	1.0	14.6*	2.83
404.194	59	127	4.0	120*	1.5	1.5	1.5	1.8	2.5	11.3*	2.33*
404.195	61	128	3.1*	111	1.0	1.5	1.5	2.0	-	12.9	2.08
404.197	63	135	3.9	103	2.0	1.0	1.0	1.8*	2.0	12.1	2.08*
404.199	60	133	2.8*	74	1.0	1.0	1.0	2.3	-	12.2	2.46
405.691	43	117	1.8	84	1.0	1.0	1.0	2.8*	1.5	18.7	3.11
406.707	54	127	1.5	66	1.0	1.5	2.5*	2.3*	1.0	20.6*	2.36
406.710	52	123	2.6	69	1.0	1.5	3.5*	2.0	1.0	19.6	2.64
407.658A	56	128	3.8	102*	2.0	1.5	1.5	1.8	2.5	14.6	2.68
407.658B	62	138	3.5	137*	4.0	1.0	1.0	2.5	4.0	14.3*	1.94*
407.658C	51	125	3.1	86	2.0	1.5	1.5	1.8	2.0	14.6	2.96
407.727	57	125	2.1	77	1.0	1.5	3.0*	1.8	1.0	14.8*	2.48*
407.729	58	122	3.3	120	4.0	1.5	1.5	1.8	-	9.0	2.31*
407.730	55	117	2.5	94*	3.5	1.0	3.5*	2.0	1.0	18.0*	2.17
407.731	51	120	1.5	71	1.5	1.5	4.0*	2.0	1.0	19.3*	2.60
407.732	56	130	2.8	125	4.0	1.5	1.5	1.5	1.0	16.3*	2.57*
407.734	58	128	2.9	132*	4.0	1.5	1.5	2.0	1.0	15.3*	2.39*
407.735	54	121	2.8	84	1.5	1.5	1.5	1.8	1.0	15.0	2.89
407.736	56	122	1.7	104	3.5	2.0*	3.5*	2.3	1.5	19.2*	1.90
407.770	56	132	3.1*	123	4.0	1.0	1.0	2.3	4.0	9.7*	2.25*
407.772A	64	135*	3.0	85	1.0	1.0	1.0	2.3*	2.0	7.8	2.08*
407.772B	67	136	4.0	87	2.0	1.0	1.0	2.3*	2.0	7.2	1.71
407.773A	60	129	2.9*	61	1.0	1.5	1.5	2.5*	2.5	9.8	2.19
407.773B	65	134	3.1*	75	1.0	1.0	1.0	2.8*	2.0	8.8	1.86*
407.778A	66	137	3.3*	114	4.0	1.0	1.0	2.0	-	7.9	1.31
407.781B	62	130	2.8*	71	1.0	1.0	1.0	2.3*	3.5	7.8	2.05*
407.786A	59	132	2.3*	68	1.0	1.0	1.5	1.8	3.5	10.0	2.20*
407.788A	61	124	2.8*	89	1.0	1.5	1.5	1.8*	1.5	8.7	2.06

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
404.163	IV	16.8	47.3	12.5	3.1	22.4	53.9	8.3	0.0	1	R
404.164	IV	18.4	44.4	13.5	2.8	21.8	52.9	9.0	0.0	1	S
404.165	IV	15.5	45.4	13.2	2.8	16.2	56.8	11.1	0.0	1	S
404.167	IV	18.5	43.9	13.2	2.7	23.5	52.0	8.6	0.0	1	S
404.170	IV	17.8	45.9	11.9	3.1	18.6	57.0	9.2	0.0	3	S
404.173A	IV	17.3	46.2	10.9	3.5	22.2	55.9	7.5	0.0	5	H
404.173B	IV	18.0	45.7	12.8	3.3	22.1	51.6	10.1	0.0	2	S
404.174	IV	17.0	45.9	11.3	3.3	22.8	54.9	7.7	0.0	3	H
404.176	IV	16.8	45.9	11.5	3.6	22.8	54.5	7.6	0.0	3	H
404.177	IV	15.5	51.4	12.2	2.9	18.2	55.9	10.7	0.0	4	S
404.178	IV	17.4	45.5	12.5	3.7	21.9	53.0	8.9	0.0	3	S
404.179A	IV	16.8	46.8	12.4	3.3	18.8	55.6	9.8	0.0	1	S
404.179B	IV	17.4	45.7	13.0	2.8	19.1	56.2	8.9	0.0	3	S
404.181	IV	17.2	44.8	10.4	3.9	23.1	53.9	8.6	0.0	1	H
404.183	IV	17.5	46.2	11.0	3.4	21.8	54.7	9.0	0.0	1	R
404.185	IV	16.9	46.5	12.9	3.0	19.8	54.8	9.5	0.0	1	
404.190	IV	17.2	44.3	12.7	3.4	17.7	55.5	10.8	0.0	1	S
404.191	IV	17.5	43.5	12.3	3.5	18.8	55.7	9.6	0.0	3	S
404.193	IV	17.9	45.4	12.9	3.3	21.4	52.2	10.3	0.0	4	S
404.194	IV	17.4	44.8	11.5	2.4	15.4	60.5	10.1	0.0	1	S
404.195	IV	16.7	44.4	11.7	3.0	16.9	57.7	10.7	0.0	2	S
404.197	IV	17.7	45.2	10.7	3.3	20.8	55.8	9.2	0.1	1	R
404.199	IV	17.6	43.3	11.4	4.0	22.2	54.5	7.9	0.0	1	S
405.691	III	18.1	45.5	12.1	3.2	17.1	57.8	9.9	0.0	5	S
406.707	IV	16.4	46.6	10.0	3.1	26.0	52.4	8.6	0.0	1	H
406.710	IV	18.0	46.0	12.1	3.0	23.2	53.0	8.6	0.0	1	S
407.658A	IV	16.5	47.8	12.8	3.2	20.3	54.4	9.3	0.0	1	R
407.658B	IV	16.5	43.3	12.5	4.3	21.9	52.7	8.6	0.0	1	R
407.658C	IV	17.1	47.2	12.7	3.1	19.7	55.2	9.2	0.0		
407.727	IV	17.3	44.7	12.6	2.8	18.6	57.1	8.8	0.0	2	R
407.729	IV	16.2	46.9	12.0	3.2	17.1	57.3	10.4	0.0	3	S
407.730	III	17.9	45.1	11.7	3.1	26.0	50.6	8.6	0.0	4	S
407.731	IV	17.2	46.2	11.8	2.7	20.6	55.7	9.1	0.0	2	H
407.732	IV	17.5	45.7	12.4	2.7	22.5	54.2	8.2	0.0	3	H
407.734	IV	17.2	45.4	12.4	2.6	21.0	53.6	10.4	0.0	2	S
407.735	IV	18.4	43.7	12.7	3.1	21.0	55.0	8.3	0.0	1	S
407.736	IV	16.8	47.5	12.2	2.7	20.4	56.2	8.5	0.0	2	S
407.770	IV	16.9	46.3	12.1	3.3	17.4	56.8	10.3	0.1	3	R
407.772A	IV	16.6	45.1	11.8	3.9	21.5	54.7	8.1	0.0	1	R
407.772B	IV	16.6	43.6	11.8	3.8	21.0	55.2	8.2	0.0	1	R
407.773A	IV	16.5	47.5	13.0	3.6	20.1	55.1	8.1	0.0	2	R
407.773B	IV	16.1	49.2	11.4	4.2	23.0	53.2	8.1	0.0	2	R
407.778A	IV	16.6	45.8	10.0	3.8	22.4	55.0	8.8	0.0	1	R
407.781B	IV	16.5	46.1	12.5	3.1	17.8	57.0	9.6	0.0	1	R
407.786A	IV	17.8	46.4	11.2	3.4	18.9	57.7	8.9	0.0	1	R
407.788A	IV	15.1	50.7	12.4	3.6	16.7	56.8	10.5	0.0	1	R

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
407.788B		(KAS 8113)	S. Korea		S. Korea	1976	IV
407.795A		KAS 8129	S. Korea		S. Korea	1976	IV
407.795B		(KAS 8129)	S. Korea		S. Korea	1976	IV
407.796		KAS 8130	S. Korea		S. Korea	1976	IV
407.805A		KAS 8143	S. Korea		S. Korea	1976	IV
407.805B		(KAS 8143)	S. Korea		S. Korea	1976	IV
407.805C		(KAS 8143)	S. Korea		S. Korea	1976	IV
407.805D		(KAS 8143)	S. Korea		S. Korea	1976	IV
407.806A		KAS 8144	S. Korea		S. Korea	1976	IV
407.806B		(KAS 8144)	S. Korea		S. Korea	1976	IV
407.812		KAS 8157	S. Korea		S. Korea	1976	IV
407.817		KAS 8164	S. Korea		S. Korea	1976	IV
407.818A		KAS 8165	S. Korea		S. Korea	1976	IV
407.821A		KAS 8168	S. Korea		S. Korea	1976	IV
407.823		KAS 8170	S. Korea		S. Korea	1976	IV
407.827		KAS 8112	S. Korea		S. Korea	1976	IV
407.832A		KAS 8122	S. Korea		S. Korea	1976	IV
407.832B		(KAS 8122)	S. Korea		S. Korea	1976	IV
407.833A		KAS 8123	S. Korea		S. Korea	1976	IV
407.845A		KAS 8160	S. Korea		S. Korea	1976	IV
407.847		KAS 8198	S. Korea		S. Korea	1976	IV
407.848		KAS 8196	S. Korea		S. Korea	1976	IV
407.851		KAS 510-2-2	S. Korea		S. Korea	1976	III
407.862		KAS 510-9	S. Korea		S. Korea	1976	IV
407.868A		KAS 511-2	S. Korea		S. Korea	1976	IV
407.868B		(KAS 511-2)	S. Korea		S. Korea	1976	IV
407.875B		(KAS 511-9)	S. Korea		S. Korea	1976	IV
407.877A		KAS 511-11	S. Korea		S. Korea	1976	IV
407.877B		(KAS 511-11)	S. Korea		S. Korea	1976	IV
407.892A		KAS 523-4	S. Korea		S. Korea	1976	IV
407.897		KAS 524-3	S. Korea		S. Korea	1976	IV
407.898A		KAS 524-4	S. Korea		S. Korea	1976	IV
407.902A		KAS 524-8	S. Korea		S. Korea	1976	IV
407.905		KAS 530-3	S. Korea		S. Korea	1976	IV
407.907B		(KAS 530-5)	S. Korea		S. Korea	1976	IV
407.908		KAS 530-6	S. Korea		S. Korea	1976	IV
407.914A		KAS 532-1	S. Korea		S. Korea	1976	IV
407.914B		(KAS 532-1)	S. Korea		S. Korea	1976	IV
407.922		KAS 551-2	S. Korea		S. Korea	1976	III
407.927A		KAS 551-7	S. Korea		S. Korea	1976	IV
407.932A		KAS 552-4	S. Korea		S. Korea	1976	IV
407.939A		KAS 560-4	S. Korea		S. Korea	1976	IV
407.946-2		KAS 581-4	S. Korea		S. Korea	1976	IV
407.949		KAS 502-2	S. Korea		S. Korea	1976	IV
407.952A		KAS 503-1	S. Korea		S. Korea	1976	IV
407.952B		(KAS 503-1)	S. Korea		S. Korea	1976	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
407.788B	IV	P	Lt	E	Ssp	Tn	S	Y	Y			
407.795A	IV	P	G	E	Ssp	Bl	D	Lgn	Bf			
407.795B	IV	P	G	E	N	Bl	D	Y	Bf			
407.796	IV	P	T	E	N	Tn	I	Bl	Bl			
407.805A	IV	P	G	E	N	Tn	D	Y	Bf			
407.805B	IV	P	G	E	Ssp	Br	D	Y	Bf			
407.805C	IV	P	G	E	N	Tn	D	Y	Bf			
407.805D	IV	P	G	E	Ssp	Tn	S	Y	Y			
407.806A	IV	P	G	E	Ssp	Tn	I	Y	Bf			
407.806B	IV	P	G	E	Ssp	Br	I	Y	Bf			
407.812	IV	P	G	E	Ssp	Br	I	Y	Bf			
407.817	IV	P	G	E	Ssp	Tn	D	Y	Bf			
407.818A	IV	P	G	E	Ssp	Tn	I	Y	Bf			
407.821A	IV	P	G	E	Ssp	Tn	S	Y	Y			
407.823	IV	P	G	E	Ssp	Tn	I	Y	Bf			
407.827	IV	P	T	E	Ssp	Tn	S	Y	Br			
407.832A	IV	P	G	E	Ssp	Br	I	Y	Y			
407.832B	IV	P	G	E	Ssp	Tn	I	Y	Bf			
407.833A	IV	P	T	E	Ssp	Tn	D	Y	Br			
407.845A	IV	P	G	E	Ssp	Tn	S	Y	Y			
407.847	IV	P	G	E	Ssp	Tn	I	Y	Y			
407.848	IV	P	G	A	Ssp	Tn	I	Y	Bf			
407.851	III	W	G	A	Ssp	Tn	D	Y	Y			
407.862	IV	P	G	E	Ssp	Tn	I	Y	Bf			
407.868A	IV	P	T	E	Ssp	Bl	S	Bl	Bl			
407.868B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
407.875B	IV	W	G	A	Ssp	Tn	D	Y	Y			
407.877A	IV	P	G	E	Ssp	Br	D	Y	Bf			
407.877B	IV	P	G	E	Ssp	Br	D	Y	Bf			
407.892A	IV	W	G	E	Sdn	Tn	D	Y	Bf			
407.897	IV	P	G	E	Ssp	Br	S	Y	Bf			
407.898A	IV	P	G	E	Ssp	Br	S	Y	Y			
407.902A	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
407.905	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
407.907B	IV	P	G	Sa	Ssp	Tn	S	Y	Bf			
407.908	IV	W	T	E	Ssp	Tn	I	Bl	Bl			
407.914A	IV	P	G	E	Ssp	Tn	D	Y	Bf			
407.914B	IV	P	T	E	Ssp	Tn	D	Y	Tn			
407.922	III	P	G	E	Ssp	Br	S	Y	Bf			
407.927A	IV	P	T	E	Ssp	Bl	S	Bl	Bl			
407.932A	IV	P	G	E	Ssp	Tn	S	Y	Y			
407.939A	IV	P	G	E	Ssp	Br	D	Y	Bf			
407.946-2	IV	P	G	E	Ssp	Br	S	Y	Y			
407.949	IV	P	G	Sa	Ssp	Bl	I	Gn	Bf			
407.952A	IV	P	G	A	Ssp	Tn	I	Y	Bf			
407.952B	IV	P	G	E	Ssp	Br	S	Y	Bf			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
407.788B	69*	134	2.6	97	1.0	1.0	1.0	2.0	2.5	9.6	2.11*
407.795A	66	129*	1.5	86	1.5	1.0	1.0	3.0*	1.0	9.9	2.33*
407.795B	62	131	3.3	89	1.0	1.0	1.0	2.8*	2.0	7.8*	2.08*
407.796	63	133	3.1	70	1.0	1.0	1.0	2.0	-	10.1	1.81*
407.805A	62	128*	3.1*	76	1.0	1.0	1.0	2.0	3.0	7.6	2.34*
407.805B	62	133	3.1	70	1.0	1.0	1.0	2.0	2.0	8.6	2.22*
407.805C	63	135	3.8	75	1.0	1.0	1.0	2.0	3.0	7.4	2.34*
407.805D	58	129	2.9*	79	1.0	1.5	1.5	1.8	2.5	8.3	2.56*
407.806A	58	131	2.8	64	1.0	1.5	1.0	2.0	2.5	8.5	2.27
407.806B	56	125	2.4*	73	1.0	1.0	1.0	1.8	4.0*	7.7	2.31
407.812	54	125	2.4*	76	1.0	1.0	1.0	1.5	3.5	10.0*	2.26*
407.817	62	130*	2.8*	92	1.0	1.5	1.5	1.8	2.0	11.6	2.20*
407.818A	61	131*	2.3	67	1.0	1.0	1.0	1.8*	2.0	8.8	2.11*
407.821A	58	132	2.3*	84	1.0	1.0	1.0	2.0	1.5	13.5	2.45
407.823	59*	130*	2.6*	64*	1.0	1.5	1.5	2.0	2.5	8.6	2.10
407.827	59	128	3.3	76	1.0	1.5	1.5	2.0	2.5	7.3	2.21*
407.832A	51	122	1.8	74	1.0	1.5	1.5	1.8	3.5	8.2	2.47*
407.832B	57	130	2.1	80	1.0	1.5	1.5	1.8	3.0	9.4*	2.28*
407.833A	58	131	3.0	118	4.0	1.5	1.5	2.0	2.5	11.3*	2.01*
407.845A	56	129*	1.6	71	1.0	1.5	1.5	1.5	2.5	9.4	2.34
407.847	67	137	3.5	85	1.0	1.0	1.0	2.3*	2.0	7.6	2.20
407.848	62	133*	3.5	77	1.0	1.0	1.0	1.8	2.0	7.9	2.44
407.851	48	117	1.8*	69	1.0	1.0	3.5*	2.5	2.5	21.5	2.46
407.862	49	122	2.0	74	1.0	1.0	3.0*	2.3	2.0	18.9	2.31
407.868A	60	130	1.9	68	1.0	1.5	1.5	2.0	-	17.5*	1.87*
407.868B	60	131	2.0	67	1.0	1.5	1.5	2.0	-	17.4	2.24*
407.875B	49	123	3.5*	74	1.0	2.0*	3.0*	2.5	2.0	23.6	2.22
407.877A	50	120	2.3	78	1.0	1.5	3.0*	2.0	1.5	16.2	2.48
407.877B	57	127	1.6	72	1.0	1.5	2.5*	1.8	2.5	10.7	1.92
407.892A	55*	128*	2.6	84	1.0	1.0	1.0	1.8	2.5	13.0	2.53*
407.897	51	120	2.1	85	1.5	1.5	3.0*	2.3*	1.5	19.9*	2.12*
407.898A	52	126	2.3*	78	1.0	1.0	1.0	2.0	2.0	19.8*	2.25
407.902A	62	132	1.5	55	1.0	1.0	1.0	2.5	-	22.1*	1.69
407.905	61	132	1.6	54	1.0	1.0	1.0	2.8*	-	23.2*	1.67
407.907B	58	133	2.4*	76	1.0	1.0	1.5	2.3*	2.5	17.9*	2.09
407.908	62	131	3.0	77	1.0	1.0	1.0	2.0	-	10.3	1.97*
407.914A	53	126	2.0	65	1.0	2.0*	2.5*	2.0	3.5	11.2	2.15
407.914B	61	133	3.8	63	1.0	1.0	1.0	2.0	3.0	15.3	2.47
407.922	47	117	2.0	66	1.0	1.0	2.5*	2.0	2.0	17.0	2.52
407.927A	61	131	1.5	71	1.0	1.5	1.5	2.3	-	17.1	2.27*
407.932A	53	127	1.8	76	1.0	1.0	1.0	2.0	2.0	20.3*	2.59*
407.939A	48	120	2.0	75	1.0	1.5	3.0*	2.3	1.5	16.8	3.03
407.946-2	58	129	3.0	84	1.0	1.5	1.5	2.0	2.5	18.5*	2.19*
407.949	63	131	2.3	75	1.0	1.0	1.0	2.0	2.0	12.0	2.10*
407.952A	56	130	1.6	51	1.0	2.0*	2.0*	2.0	2.0	21.7*	1.97
407.952B	57	126	1.6	74*	1.0	1.5	2.0*	1.8	2.0	15.6*	2.05*

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
407.788B	IV	17.0	46.9	11.4	3.7	18.1	56.7	9.9	0.1	1	R
407.795A	IV	16.3	48.7	11.5	3.2	19.1	55.6	10.5	0.0	1	S
407.795B	IV	16.7	45.8	10.7	3.8	22.3	53.3	9.9	0.0	1	R
407.796	IV	16.1	46.5	11.9	3.4	17.2	57.8	9.7	0.1	2	R
407.805A	IV	15.9	47.0	10.1	3.2	18.4	58.8	9.6	0.0	1	R
407.805B	IV	16.5	47.5	10.8	3.0	18.0	57.9	10.3	0.0	1	S
407.805C	IV	16.6	47.3	9.9	3.2	18.1	59.3	9.5	0.0	1	R
407.805D	IV	17.2	45.6	12.9	3.4	19.6	54.6	9.5	0.0	1	R
407.806A	IV	16.0	49.3	11.6	3.7	18.4	56.8	9.5	0.0	1	R
407.806B	IV	15.9	45.1	11.8	3.3	17.9	56.9	10.0	0.1	1	R
407.812	IV	16.5	47.3	12.2	3.4	18.8	55.9	9.5	0.1	1	R
407.817	IV	17.0	46.3	10.8	3.3	17.9	58.5	9.5	0.0	1	R
407.818A	IV	16.2	46.1	12.1	3.5	19.8	55.6	8.9	0.0	1	R
407.821A	IV	16.5	46.6	12.5	3.5	21.4	54.4	8.1	0.1	1	R
407.823	IV	15.9	49.3	11.7	3.7	17.2	57.6	9.9	0.0	1	R
407.827	IV	16.8	46.8	11.8	3.8	19.8	55.1	9.4	0.0	1	R
407.832A	IV	15.9	46.5	13.0	3.1	16.3	56.9	10.7	0.0	1	R
407.832B	IV	16.5	46.3	13.7	3.4	17.9	54.3	10.7	0.0	1	R
407.833A	IV	17.7	46.2	12.5	3.8	18.8	56.2	8.7	0.0	1	R
407.845A	IV	16.6	49.1	13.0	3.3	19.2	56.5	8.1	0.0	1	R
407.847	IV	16.4	46.7	12.2	4.1	20.8	54.5	8.5	0.1	1	R
407.848	IV	17.2	45.7	12.1	3.5	20.0	55.9	8.4	0.1	1	R
407.851	III	17.7	47.0	11.9	3.2	22.1	54.8	7.9	0.0	1	S
407.862	IV	17.8	47.5	13.0	3.1	21.2	55.2	7.4	0.1	1	R
407.868A	IV	17.5	47.0	10.9	3.1	20.3	56.1	9.6	0.0	1	S
407.868B	IV	17.3	45.6	11.6	3.3	19.8	55.8	9.4	0.0		H
407.875B	IV	17.6	45.5	12.0	3.1	22.8	54.0	8.0	0.0		S
407.877A	IV	18.5	46.2	12.5	3.4	20.4	55.0	8.5	0.1		R
407.877B	IV	16.6	48.8	12.9	3.7	19.2	55.1	9.1	0.0	1	R
407.892A	IV	17.1	48.7	12.9	3.3	20.1	54.8	8.9	0.0	1	R
407.897	IV	18.3	43.7	12.2	3.2	20.7	55.4	8.6	0.0	2	R
407.898A	IV	17.9	47.8	12.2	3.0	21.9	55.0	8.0	0.0	1	S
407.902A	IV	18.0	45.1	10.8	3.0	20.1	56.7	9.2	0.1	1	S
407.905	IV	17.8	46.8	11.0	3.1	20.6	56.2	9.0	0.1	1	S
407.907B	IV	17.6	46.6	11.6	3.6	20.4	54.9	9.4	0.0	1	R
407.908	IV	16.2	47.5	13.1	3.9	20.7	53.7	8.7	0.0	1	R
407.914A	IV	16.7	47.3	10.7	3.2	23.7	53.6	8.9	0.0	1	R
407.914B	IV	17.5	47.4	11.2	3.2	20.4	56.0	9.1	0.0	1	S
407.922	III	18.5	48.0	12.2	3.2	24.2	52.9	7.5	0.0	1	R
407.927A	IV	17.3	45.5	10.8	2.9	19.3	56.7	10.2	0.0	1	S
407.932A	IV	18.2	46.5	12.0	3.4	20.8	55.7	8.1	0.0	4	S
407.939A	IV	19.2	45.3	12.4	3.4	19.7	55.9	8.6	0.0	1	R
407.946-2	IV	17.1	45.0	12.2	3.5	19.6	56.0	8.7	0.0	1	R
407.949	IV	17.9	46.6	12.2	3.8	19.8	54.9	9.3	0.0	1	R
407.952A	IV	17.7	45.0	12.8	3.1	17.5	58.0	8.6	0.0	1	R
407.952B	IV	17.3	46.9	12.6	3.5	17.5	57.5	8.8	0.1	1	R

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
407.958		KAS 503-7	S. Korea		S. Korea	1976	IV
407.959A		KAS 503-8	S. Korea		S. Korea	1976	IV
407.960A		KAS 503-9	S. Korea		S. Korea	1976	IV
407.960B		(KAS 503-9)	S. Korea		S. Korea	1976	IV
407.972A		KAS 540-1-2	S. Korea		S. Korea	1976	IV
407.973A		KAS 540-2	S. Korea		S. Korea	1976	IV
407.981A		KAS 542-1	S. Korea		S. Korea	1976	IV
408.016B		(KAS 548-9)	S. Korea		S. Korea	1976	IV
408.019B		(KAS 549-2)	S. Korea		S. Korea	1976	IV
408.020A		KAS 549-3	S. Korea		S. Korea	1976	IV
408.025		KAS 549-8	S. Korea		S. Korea	1976	III
408.028		KAS 549-11	S. Korea		S. Korea	1976	III
408.048A		KAS 575-6	S. Korea		S. Korea	1976	III
408.048B		(KAS 575-6)	S. Korea		S. Korea	1976	IV
408.050B		(KAS 575-8)	S. Korea		S. Korea	1976	IV
408.052C		(KAS 575-10)	S. Korea		S. Korea	1976	IV
408.055A		KAS 576-3	S. Korea		S. Korea	1976	IV
408.057		KAS 630-1	S. Korea		S. Korea	1976	IV
408.066A		KAS 630-12	S. Korea		S. Korea	1976	IV
408.068A		KAS 630-14	S. Korea		S. Korea	1976	IV
408.073		KAS 631-1	S. Korea		S. Korea	1976	IV
408.076A		KAS 631-4	S. Korea		S. Korea	1976	IV
408.079A		KAS 632-3	S. Korea		S. Korea	1976	IV
408.089		KAS 633-3	S. Korea		S. Korea	1976	IV
408.090		KAS 633-4	S. Korea		S. Korea	1976	IV
408.092A		KAS 633-6	S. Korea		S. Korea	1976	IV
408.092B		(KAS 633-6)	S. Korea		S. Korea	1976	IV
408.095A		KAS 633-9	S. Korea		S. Korea	1976	IV
408.105A		KAS 633-19	S. Korea		S. Korea	1976	IV
408.105B		(KAS 633-19)	S. Korea		S. Korea	1976	IV
408.108		KAS 633-22	S. Korea		S. Korea	1976	IV
408.110A		KAS 636-1	S. Korea		S. Korea	1976	IV
408.111		KAS 636-2	S. Korea		S. Korea	1976	IV
408.124A		KAS 638-5	S. Korea		S. Korea	1976	IV
408.126A		KAS 639-1	S. Korea		S. Korea	1976	IV
408.131A		KAS 639-6	S. Korea		S. Korea	1976	IV
408.131B		(KAS 639-6)	S. Korea		S. Korea	1976	IV
408.135B		(KAS 640-4)	S. Korea		S. Korea	1976	IV
408.136		KAS 640-5	S. Korea		S. Korea	1976	IV
408.137A		KAS 640-6	S. Korea		S. Korea	1976	IV
408.138A		KAS 640-7	S. Korea		S. Korea	1976	IV
408.138B		(KAS 640-7)	S. Korea		S. Korea	1976	IV
408.138C		(KAS 640-7)	S. Korea		S. Korea	1976	III
408.140A		KAS 640-9	S. Korea		S. Korea	1976	IV
408.140B		(KAS 640-9)	S. Korea		S. Korea	1976	IV
408.169A		KAS 660-11	S. Korea		S. Korea	1976	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
407.958	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
407.959A	IV	P	T	E	Ssp	Br	I	Y	Y			
407.960A	IV	P	T	E	Ssp	Tn	D	Tn	Tn			
407.960B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
407.972A	IV	Dp	G	E	N	Br	I	Gn	Bf			
407.973A	IV	P	T	A	Ssp	Br	I	Gn	Br	Gncot		
407.981A	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.016B	IV	P	G	E	N	Tn	I	Y	Y			
408.019B	IV	P	G	E	Ssp	Br	S	Y	Bf			
408.020A	IV	P	T	E	Ssp	Br	S	Y	Br			
408.025	III	W	G	A	Ssp	Tn	D	Y	Y			
408.028	III	W	G	A	Ssp	Tn	D	Y	Bf			
408.048A	III	W	G	A	Ssp	Tn	D	Y	Y			
408.048B	IV	W	G	A	Ssp	Tn	D	Y	Bf			
408.050B	IV	W	T	E	Ssp	Br	I	Bl	Bl			
408.052C	IV	W	G	E	Ssp	Tn	D	Y	Y			
408.055A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.057	IV	W	T	E	Ssp	Br	I	Bl	Bl			
408.066A	IV	P	G	E	Ssp	Br	I	Gn	Bf	Gncot		
408.068A	IV	P	G	E	Ssp	Br	I	Y	Bf			
408.073	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.076A	IV	P	G	E	Ssp	Bl	D	Gn	Ib			
408.079A	IV	W	G	E	Sdn	Tn	D	Y	Bf			
408.089	IV	P	G	E	Ssp	Br	S	Y	Bf	Def		
408.090	IV	P	G	E	Ssp	Br	S	Y	Bf	Def		
408.092A	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
408.092B	IV	P	T	E	Ssp	Tn	S	Br	Br			
408.095A	IV	P	T	E	Ssp	Bl	S	Br	Br			
408.105A	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
408.105B	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
408.108	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
408.110A	IV	P	G	A	Ssp	Br	I	Gn	Bf	Gncot		
408.111	IV	P	T	E	Ssp	Br	S	Br	Br	St		
408.124A	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.126A	IV	P	T	E	Ssp	Bl	S	Br	Br	St		
408.131A	IV	P	G	E	Ssp	Br	S	Lgn	Bf			
408.131B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.135B	IV	W	G	E	Ssp	Tn	S	Y	Bf			
408.136	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.137A	IV	W	G	A	Ssp	Br	D	Lgn	Bf	Gncot		
408.138A	IV	W	G	E	N	Tn	D	Y	Lbf			
408.138B	IV	W	G	A	Ssp	Tn	D	Y	Y			
408.138C	III	P	G	E	Ssp	Br	D	Y	Y			
408.140A	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
408.140B	IV	P	T	E	Ssp	Tn	S	Rbr	Rbr			
408.169A	IV	P	G	E	Ssp	Tn	S	Y	Lbf			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
407.958	61	134	1.7	53	1.0	1.0	1.0	3.0*	-	23.7*	1.78
407.959A	63	136	2.2*	74	1.0	1.0	1.0	2.5*	3.5	8.3	2.22
407.960A	57	126	1.6	57	1.0	1.5	1.5	1.8	3.5	8.9	2.42
407.960B	60*	133*	2.3	65	1.0	1.0	1.0	2.3*	3.0	8.6	2.39
407.972A	63	133	2.5	72	1.0	1.0	1.0	2.3	1.0	18.8*	1.94
407.973A	59	132	1.3	56	1.0	1.0	1.0	1.8	4.5	9.5	1.68*
407.981A	57	123	1.6	72	1.0	2.0*	2.5*	2.0	3.5	10.9	2.08
408.016B	67	136	3.1	76	1.0	1.0	1.0	1.8	2.0	7.4	2.34*
408.019B	58	127	2.1	72	1.0	1.5	1.5	2.0	1.5	14.4*	2.78
408.020A	65	136	3.5	70	1.0	1.0	1.0	2.8*	3.5	11.4	2.01*
408.025	50	118	2.0*	71	1.5	1.5	3.5*	2.3	2.5	24.1	1.78*
408.028	47	117	1.8	75	1.0	1.5	3.5*	2.5	2.5	22.9	2.23
408.048A	49	118	1.8	75	1.5	1.5	3.5*	2.3	2.5	23.4	2.40
408.048B	51	120	2.3	68	1.5	1.0	1.5	2.0	1.5	18.1	2.29
408.050B	54*	123	2.4	54	1.0	1.5	3.5*	2.3	-	23.6	2.19
408.052C	50	120	1.5	67	1.5	1.5	3.5*	2.5	3.0	21.0*	2.36
408.055A	51	120	2.3	76	1.0	1.0	1.5	2.3	-	24.8*	2.41
408.057	52	124	2.8	53	1.0	1.5	3.0*	2.3	-	24.9	2.51*
408.066A	57	134	1.6	79	1.0	1.0	1.0	2.0	2.0	21.6	2.16
408.068A	56	123	1.6	61	1.0	1.0	3.0*	1.8	2.0	15.4	2.17
408.073	59	133	2.1	81	1.0	1.0	1.0	2.0	-	21.5*	2.51
408.076A	59	131	2.9	76	1.0	1.5	1.5	2.3	2.0	19.6*	1.96*
408.079A	64	134	1.8	63	1.0	1.0	1.0	1.8	2.0	13.1	1.89*
408.089	54	121	1.5	66	1.0	1.5	2.0*	2.8	2.0	19.6	2.06*
408.090	52	121	1.8	68*	1.0	1.5	2.0*	2.8	2.0	20.9	2.17*
408.092A	63	134	3.8	85	1.0	1.0	1.0	2.0	-	18.5	2.23
408.092B	64	135	4.3	83	1.0	1.0	1.0	2.0	-	15.3	2.16
408.095A	64	134	2.8*	83	1.0	1.0	1.0	2.0	-	15.0	2.03
408.105A	61	132	2.9	78	1.0	1.5	1.5	2.0	-	14.0	2.18*
408.105B	64	132	3.5	78	1.0	1.0	1.0	2.3	-	17.3	2.07
408.108	63	130	3.0	88	1.0	1.0	1.0	2.0	-	15.1	2.42
408.110A	64	133	2.3	83	1.0	1.5	1.5	1.5	1.5	10.7	2.27
408.111	63	129	2.8	78	1.0	1.5	1.5	1.8	-	13.0	2.27*
408.124A	63	129*	2.1	76	1.5	1.0	1.0	1.5	1.5	8.9	2.44*
408.126A	66	133	3.3	73	1.0	1.0	1.0	2.0	-	17.2*	2.08*
408.131A	54	122	1.8	66	1.0	1.5	2.5*	3.0	1.5	20.0	2.22*
408.131B	50	121	1.9	68	1.0	1.5	3.0*	1.5	2.0	15.4	2.37
408.135B	64	136	3.3	81	1.0	1.0	1.0	2.5	2.5	23.9	1.97*
408.136	61*	133	2.1	76	1.0	1.0	1.0	2.0	-	22.7	2.31
408.137A	65	133	2.5	59	1.0	1.0	1.0	1.8	2.0	9.7	1.71
408.138A	60	125	1.9	68	1.0	1.0	1.0	2.0	3.0	13.6	1.94*
408.138B	51	123	2.3	66*	1.0	2.5	3.0*	2.5	3.0	22.2	2.01
408.138C	50	117	2.1	79	1.5	1.5	3.0*	2.0	4.0*	19.2	1.88
408.140A	64	128	3.3*	73	1.0	1.5	1.5	2.3	-	18.1*	1.89
408.140B	64	130*	2.9	76	1.0	1.0	1.0	2.0	-	16.2	2.20*
408.169A	65	133*	3.3	76	1.0	1.0	1.0	2.3*	2.0	8.0	1.93

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
407.958	IV	17.6	46.0	10.7	3.1	20.6	56.5	9.0	0.0	1	S
407.959A	IV	17.2	46.5	12.1	3.6	20.6	55.4	8.3	0.0	1	R
407.960A	IV	16.7	47.2	12.3	3.2	16.6	58.5	9.4	0.0	1	R
407.960B	IV	17.3	46.2	12.0	3.5	19.4	56.7	8.4	0.0	1	R
407.972A	IV	18.8	44.8	11.0	3.7	18.7	58.0	8.7	0.0	1	S
407.973A	IV	16.9	47.9	11.4	3.4	17.7	58.0	9.4	0.0	1	R
407.981A	IV	16.6	48.5	11.0	3.3	23.9	52.9	8.8	0.0	1	
408.016B	IV	17.1	45.2	12.0	3.4	20.3	55.5	8.7	0.0	1	R
408.019B	IV	16.6	43.6	12.7	2.7	14.8	58.2	11.6	0.0	1	R
408.020A	IV	17.3	48.3	11.1	3.4	18.6	57.2	9.6	0.0	1	R
408.025	III	17.6	47.9	11.5	3.3	19.7	56.7	8.9	0.0	1	S
408.028	III	17.4	46.9	11.7	3.0	22.4	54.4	8.5	0.0	1	S
408.048A	III	17.0	46.3	11.7	3.1	22.7	54.1	8.5	0.0	1	R
408.048B	IV	18.0	45.4	10.8	3.2	21.0	56.2	8.7	0.0	1	R
408.050B	IV	17.5	47.1	12.2	3.1	16.7	58.8	9.2	0.0	1	
408.052C	IV	16.9	46.3	12.5	3.1	20.4	54.7	9.3	0.0	3	H
408.055A	IV	18.0	46.7	12.2	3.3	24.1	53.3	7.0	0.0	1	R
408.057	IV	17.6	46.9	12.3	3.1	18.0	58.1	8.6	0.0	1	R
408.066A	IV	18.9	45.4	10.9	3.8	24.3	53.1	7.8	0.0	1	S
408.068A	IV	17.6	44.9	13.2	3.4	17.7	56.3	9.4	0.0	1	R
408.073	IV	18.0	43.7	11.6	3.7	22.3	53.9	8.6	0.0	1	H
408.076A	IV	18.8	43.3	11.1	3.9	21.6	54.6	8.7	0.0	1	R
408.079A	IV	17.1	48.4	12.1	3.3	19.3	55.7	9.5	0.0	1	R
408.089	IV	17.7	46.2	11.7	2.8	25.5	52.3	7.7	0.0	1	
408.090	IV	17.8	44.9	11.8	2.8	24.4	53.2	7.8	0.0	1	R
408.092A	IV	16.8	44.4	11.8	3.2	20.8	56.1	8.0	0.0	1	R
408.092B	IV	17.4	44.3	10.9	3.5	19.1	57.0	9.4	0.0	1	R
408.095A	IV	17.7	45.0	11.1	3.4	18.0	57.8	9.7	0.0	1	R
408.105A	IV	17.6	46.6	11.1	3.0	18.8	59.0	8.1	0.0	1	R
408.105B	IV	16.6	46.8	11.4	3.4	21.1	56.0	8.1	0.0	1	R
408.108	IV	17.3	45.2	10.6	3.0	18.2	59.2	9.0	0.0	1	R
408.110A	IV	17.4	44.6	12.3	3.6	20.3	54.7	9.1	0.0	1	R
408.111	IV	17.2	46.0	11.4	3.1	21.3	55.5	8.8	0.0	1	R
408.124A	IV	16.8	46.5	11.4	3.1	14.9	60.2	10.4	0.0	1	R
408.126A	IV	17.9	45.1	10.3	3.0	19.7	58.0	9.0	0.0	1	H
408.131A	IV	17.8	45.6	11.9	2.8	24.1	53.1	8.1	0.0	4	S
408.131B	IV	17.6	45.3	12.3	3.1	19.6	57.3	7.6	0.0	3	R
408.135B	IV	17.4	44.3	10.0	4.1	21.6	56.2	8.0	0.0	1	R
408.136	IV	17.7	45.2	12.1	3.5	20.3	55.1	9.1	0.0	1	S
408.137A	IV	17.1	45.5	11.3	3.5	19.1	55.7	10.4	0.0	1	R
408.138A	IV	17.5	46.0	11.3	3.0	19.5	57.3	9.0	0.0	1	R
408.138B	IV	16.2	47.5	12.0	2.9	19.3	56.7	9.1	0.0	1	S
408.138C	III	16.8	49.7	10.8	3.0	23.7	55.6	6.8	0.0	1	R
408.140A	IV	16.8	49.2	10.9	2.7	20.1	58.1	8.3	0.0	1	R
408.140B	IV	17.7	46.4	10.9	3.2	19.2	57.7	9.0	0.0	1	R
408.169A	IV	16.4	45.8	12.5	3.6	21.6	54.1	8.2	0.0	1	R

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
408.169D		(KAS 660-11)	S. Korea		S. Korea	1976	IV
408.172		KAS 661-2	S. Korea		S. Korea	1976	IV
408.175		KAS 661-5	S. Korea		S. Korea	1976	IV
408.194		KAS 681-9	S. Korea		S. Korea	1976	IV
408.199		KAS 600-4-1	S. Korea		S. Korea	1976	IV
408.200A		KAS 600-4-2	S. Korea		S. Korea	1976	IV
408.201B		(KAS 600-4-3)	S. Korea		S. Korea	1976	IV
408.209A		KAS 600-9	S. Korea		S. Korea	1976	IV
408.210		KAS 600-10-1	S. Korea		S. Korea	1976	IV
408.211A		KAS 600-10-2	S. Korea		S. Korea	1976	IV
408.211B		(KAS 600-10-2)	S. Korea		S. Korea	1976	IV
408.212A		KAS 601-1	S. Korea		S. Korea	1976	IV
408.214		KAS 601-3	S. Korea		S. Korea	1976	IV
408.216A		KAS 602-1	S. Korea		S. Korea	1976	IV
408.216B		(KAS 602-1)	S. Korea		S. Korea	1976	IV
408.217A		KAS 602-2	S. Korea		S. Korea	1976	IV
408.222A		KAS 603-2	S. Korea		S. Korea	1976	IV
408.224A		KAS 603-4	S. Korea		S. Korea	1976	IV
408.226A		KAS 604-2	S. Korea		S. Korea	1976	IV
408.234A		KAS 604-10	S. Korea		S. Korea	1976	IV
408.236		KAS 604-12	S. Korea		S. Korea	1976	IV
408.237		KAS 604-13	S. Korea		S. Korea	1976	IV
408.248A		KAS 605-10	S. Korea		S. Korea	1976	IV
408.255B		(KAS 611-2)	S. Korea		S. Korea	1976	IV
408.258		KAS 612-3	S. Korea		S. Korea	1976	IV
408.260A		KAS 612-5	S. Korea		S. Korea	1976	IV
408.261		KAS 612-6	S. Korea		S. Korea	1976	IV
408.262A		KAS 612-7	S. Korea		S. Korea	1976	III
408.262B		(KAS 612-7)	S. Korea		S. Korea	1976	IV
408.264		KAS 612-9	S. Korea		S. Korea	1976	IV
408.269A		KAS 613-3	S. Korea		S. Korea	1976	IV
408.269B		(KAS 613-3)	S. Korea		S. Korea	1976	IV
408.272A		KAS 613-6	S. Korea		S. Korea	1976	IV
408.272B		(KAS 613-6)	S. Korea		S. Korea	1976	IV
408.273		KAS 620-1	S. Korea		S. Korea	1976	IV
408.277		KAS 622-1	S. Korea		S. Korea	1976	IV
408.280		KAS 622-4	S. Korea		S. Korea	1976	IV
408.285A		KAS 624-4	S. Korea		S. Korea	1976	IV
408.287		KAS 624-6	S. Korea		S. Korea	1976	IV
408.292		KAS 624-11	S. Korea		S. Korea	1976	IV
408.295A		KAS 624-14	S. Korea		S. Korea	1976	IV
408.296A		KAS 624-15	S. Korea		S. Korea	1976	IV
408.306		KAS 625-7	S. Korea		S. Korea	1976	IV
408.307A		KAS 625-8	S. Korea		S. Korea	1976	IV
408.310A		KAS 626-1	S. Korea		S. Korea	1976	IV
408.312B		(KAS 626-4)	S. Korea		S. Korea	1976	III

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
408.169D	IV	P	G	E	N	Tn	D	Y	Lbf			
408.172	IV	W	T	E	Ssp	Br	S	Bl	Bl			
408.175	IV	P	T	E	Ssp	Tn	S	Br	Br			
408.194	IV	P	T	E	Ssp	Bl	S	Br	Br	St		
408.199	IV	W	G	A	Ssp	Tn	D	Y	Y			
408.200A	IV	W	G	E	N	Tn	D	Y	Bf			
408.201B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.209A	IV	P	Lt	I	Ssp	Br	I	Bl	Bl	Net		
408.210	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.211A	IV	P	T	E	Ssp	Tn	S	Bl	Bl			
408.211B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.212A	IV	P	G	E	Ssp	Br	S	Lgn	Bf			
408.214	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
408.216A	IV	P	G	E	Ssp	Br	I	Lgn	Bf			
408.216B	IV	P	T	E	Ssp	Tn	S	Y	Br			
408.217A	IV	P	G	E	Ssp	Br	S	Lgn	Lbf			
408.222A	IV	P	G	E	Ssp	Tn	S	Y	Bf			
408.224A	IV	P	T	E	Ssp	Tn	I	Br	Br			
408.226A	IV	P	G	E	Ssp	Br	S	Lgn	Bf			
408.234A	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
408.236	IV	P	G	E	Ssp	Bl	S	Gn	Lbf	Gncot		
408.237	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
408.248A	IV	P	G	E	Ssp	Br	S	Y	Bf			
408.255B	IV	P	G	E	Ssp	Br	S	Y	Y			
408.258	IV	P	T	E	Ssp	Tn	S	Bl	Bl			
408.260A	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
408.261	IV	P	T	I	Ssp	Br	S	Bl	Bl	Net		
408.262A	III	P	G	E	Ssp	Tn	D	Y	Y			
408.262B	IV	P	G	E	Ssp	Br	I	Y	Y			
408.264	IV	P	G	E	Ssp	Br	D	Gn	G	Gncot		
408.269A	IV	P	G	E	Ssp	Br	I	Y	Bf			
408.269B	IV	P	G	E	Ssp	Br	I	Y	Bf			
408.272A	IV	W	G	Sa	Ssp	Br	D	Lgn	Bf	Gncot		
408.272B	IV	P	G	E	Ssp	Bl	I	Gn	Bf	Gncot		
408.273	IV	P	T	E	Ssp	Bl	S	Br	Br	St		
408.277	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
408.280	IV	P	G	E	N	Tn	I	Y	Y			
408.285A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.287	IV	P	G	E	N	Tn	S	Y	Y			
408.292	IV	P	T	E	Ssp	Bl	I	Bl	Bl			
408.295A	IV	P	T	E	Ssp	Tn	D	Bl	Bl			
408.296A	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
408.306	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
408.307A	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
408.310A	IV	P	T	E	Ssp	Bl	S	Br	Br	St		
408.312B	III	W	G	A	Ssp	Tn	D	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
408.169D	65	133	2.5	75	1.0	1.0	1.0	2.0	2.0	8.7	2.24
408.172	49	120	2.3	54	1.0	1.5	3.5*	2.8	-	24.9*	2.50
408.175	63	132	2.3*	93	1.0	1.0	1.0	2.0	-	21.3	2.36*
408.194	65	130	3.1*	72	1.0	1.0	1.0	2.0	-	17.5	2.22
408.199	49	121	1.8	77	1.5	1.5	3.0*	2.5	2.5	23.4	2.26
408.200A	62	132	2.8*	81	1.0	1.0	1.0	2.0	2.0	15.4	2.39*
408.201B	57	126	2.3*	68*	1.0	2.0*	2.5*	1.8	4.0	10.8	2.34
408.209A	53	123	2.0	62	1.0	1.0	1.0	2.5	-	24.5*	2.18
408.210	60	129	2.8*	61	1.0	1.0	1.0	2.0	-	7.2	2.02
408.211A	60	129	2.3	63	1.0	1.0	1.0	2.0	-	7.4	2.10*
408.211B	59	129	2.5	62	1.0	1.0	1.0	1.8	-	7.4	2.32*
408.212A	57	123	1.6	70	1.5	1.0	1.5	2.5	2.0	20.4	2.31*
408.214	63	131	3.0	73	1.0	1.5	1.5	2.3	-	17.1	2.06
408.216A	61*	130	3.0	89	1.0	1.5	1.5	2.5	2.0	22.9	2.32
408.216B	60	135	3.3*	142*	3.5	1.0	1.0	3.5	3.0	15.9	2.09*
408.217A	59	130	2.3*	78	1.0	1.0	1.0	2.5	2.5	21.3	2.16
408.222A	59	134	3.3	91*	1.0	1.0	1.0	2.3	2.0	19.6	2.14*
408.224A	62	131	3.0	75	1.0	1.0	1.0	2.5	-	20.3	2.49
408.226A	55	124	2.0	67	1.0	1.5	2.0*	2.8	1.5	21.6	2.65*
408.234A	61	132	2.4*	82	1.0	1.5	1.5	2.3	2.5	23.8	1.81*
408.236	63	131	2.1*	68	1.0	1.0	1.0	2.5	3.0	9.7	2.01
408.237	63	132	2.6	83	1.0	1.0	1.0	2.5	3.5	21.5	1.98
408.248A	55	121	1.5	71	1.0	1.0	2.0*	2.8	1.5	21.3	2.47*
408.255B	57	121	1.8	79	1.5	1.0	1.5	2.0	3.5	14.3	2.58*
408.258	64	133	2.8*	60	1.0	1.0	1.0	2.0	-	7.5	1.94*
408.260A	63	133	4.0	62	1.0	1.0	1.0	2.0	-	18.4	2.20
408.261	64	133	1.6	58	1.0	1.0	1.0	2.8*	-	22.6	1.41
408.262A	48	117	1.6	59	1.0	1.0	2.0*	2.5	2.0*	22.3	2.45
408.262B	52	120	1.8	66	1.0	1.5	2.0*	2.3	2.5	19.4	2.00
408.264	60*	137	2.6*	57	1.0	1.0	1.0	2.5	1.5	24.1	1.88
408.269A	55	122	2.1*	71	1.5	1.0	1.5	2.0	1.0	16.8	2.38*
408.269B	51	121	2.1*	62	1.0	1.5	3.0*	2.0	2.0*	17.5	2.23*
408.272A	60	129	2.4*	66	1.0	1.0	1.0	1.8	2.0	12.3	1.94
408.272B	65	128*	1.8	66	1.5	1.0	1.0	2.0	2.0	10.9	1.71*
408.273	65	132	2.8*	68	1.0	1.0	1.0	1.8	-	17.1	1.87
408.277	64	131	3.3*	78	1.0	1.0	1.0	2.3	-	18.3	1.77
408.280	60	133	3.4*	76	1.0	1.0	1.0	1.8	2.5	10.2	2.24
408.285A	65	134	2.3*	72	1.0	1.0	1.0	2.3	-	18.2	1.98
408.287	62	130	3.0	77	1.0	1.0	1.0	2.0	2.0	7.9	2.19*
408.292	63	131	2.8*	68	1.0	1.0	1.0	2.0	-	8.4	2.25*
408.295A	55*	128	2.1	74	1.0	1.5	2.0	1.8	-	15.5	2.65
408.296A	60	132	2.5	56	1.0	1.0	1.0	2.3	-	23.5	1.86
408.306	59	130	2.8*	84	1.0	1.5	1.5	2.3	-	18.1	2.48*
408.307A	65	132	3.1*	77	1.0	1.5	1.0	2.0	-	16.3*	2.10
408.310A	66	132	2.8*	72	1.0	1.5	1.0	2.0	-	17.5	2.09
408.312B	47*	115	1.8	66	1.5	2.5	5.0	2.3	2.0	20.1	2.28

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
408.169D	IV	17.0	44.5	11.9	3.5	21.4	54.0	9.1	0.0	1	R
408.172	IV	17.4	46.5	12.6	3.1	18.8	57.2	8.4	0.0	1	R
408.175	IV	17.7	44.8	11.1	3.7	20.5	56.6	8.1	0.0	1	S
408.194	IV	17.6	46.7	10.7	3.0	20.0	57.3	9.0	0.0	1	R
408.199	IV	17.2	45.9	11.8	2.9	23.0	54.2	8.1	0.0	1	R
408.200A	IV	17.5	47.0	11.6	3.5	21.5	54.4	9.0	0.0	3	R
408.201B	IV	16.9	47.2	11.0	3.2	23.4	53.5	8.9	0.0	1	R
408.209A	IV	17.2	46.7	10.2	3.0	22.1	54.4	10.3	0.0	1	S
408.210	IV	15.1	46.8	11.9	3.5	18.7	55.3	10.6	0.0	1	R
408.211A	IV	14.8	47.7	11.8	3.4	17.5	56.1	11.2	0.0	1	R
408.211B	IV	15.4	48.1	11.6	3.5	17.8	56.0	11.1	0.0	1	R
408.212A	IV	18.3	45.4	11.8	3.0	24.6	52.9	7.8	0.0	3	S
408.214	IV	17.6	46.1	10.8	3.2	20.3	57.4	8.4	0.0	1	R
408.216A	IV	17.0	47.9	11.7	3.5	21.3	54.8	8.6	0.0	2	S
408.216B	IV	16.9	45.0	11.2	4.4	26.0	51.1	7.4	0.0	2	R
408.217A	IV	18.0	47.3	11.6	3.2	19.8	56.7	8.6	0.0	1	S
408.222A	IV	17.0	46.3	11.6	3.8	20.5	55.2	8.8	0.0	1	S
408.224A	IV	17.5	48.3	11.7	3.2	20.4	56.4	8.3	0.0	1	R
408.226A	IV	18.2	45.7	11.6	2.9	26.3	51.7	7.5	0.0	1	R
408.234A	IV	18.4	47.1	11.9	3.5	22.0	54.4	8.1	0.0	1	S
408.236	IV	16.9	43.2	12.0	3.8	23.6	52.2	8.4	0.0	1	R
408.237	IV	18.4	45.7	11.2	3.6	20.8	56.0	8.4	0.0	1	S
408.248A	IV	18.2	45.5	11.4	2.8	30.2	48.5	7.1	0.0	3	S
408.255B	IV	17.6	45.0	12.9	2.9	18.1	56.5	9.7	0.0	1	R
408.258	IV	15.5	47.7	12.3	4.4	19.4	55.5	8.4	0.0	1	R
408.260A	IV	17.4	46.7	11.4	4.1	19.8	55.6	9.2	0.0	1	S
408.261	IV	17.3	46.5	10.6	3.1	20.3	56.8	9.3	0.0	1	S
408.262A	III	17.8	45.3	12.1	2.8	25.3	51.6	8.1	0.0	1	S
408.262B	IV	17.6	47.3	12.4	3.1	22.3	53.9	8.5	0.0	1	S
408.264	IV	17.8	46.5	11.8	4.0	21.6	54.2	8.4	0.0	1	S
408.269A	IV	17.1	42.4	11.6	2.7	18.3	57.1	10.2	0.0	1	R
408.269B	IV	17.5	44.7	12.6	2.7	17.5	56.7	10.6	0.0	1	R
408.272A	IV	16.5	47.2	11.6	3.7	20.8	54.4	9.5	0.0	1	S
408.272B	IV	16.2	46.8	11.9	3.6	18.3	54.7	11.5	0.0	1	R
408.273	IV	17.5	47.2	11.1	3.1	20.7	55.7	9.3	0.0	1	H
408.277	IV	17.5	45.8	11.0	3.3	22.0	55.3	8.4	0.0	1	R
408.280	IV	16.9	46.5	11.0	3.6	21.8	55.6	8.1	0.0	1	R
408.285A	IV	17.1	45.3	11.5	3.6	19.6	55.2	10.1	0.0	1	S
408.287	IV	15.6	48.0	12.8	3.6	20.3	54.7	8.4	0.0	1	R
408.292	IV	16.9	46.0	10.4	3.8	18.2	57.2	10.4	0.0	1	R
408.295A	IV	17.1	45.8	12.2	2.9	17.9	58.1	8.9	0.0		
408.296A	IV	17.9	45.9	10.9	3.0	19.4	57.2	9.4	0.0		
408.306	IV	17.9	45.8	10.9	3.1	21.1	56.8	8.0	0.0	1	R
408.307A	IV	17.2	47.1	11.4	3.2	20.8	56.3	8.3	0.0	1	R
408.310A	IV	17.9	46.3	10.5	3.3	20.3	57.1	8.8	0.0	1	R
408.312B	III	17.3	47.0	11.3	2.8	22.7	55.1	8.1	0.0	1	H

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
408.318A		KAS 634-3	S. Korea		S. Korea	1976	IV
408.319A		KAS 634-4	S. Korea		S. Korea	1976	IV
408.327A		KAS 646-1	S. Korea		S. Korea	1976	IV
416.769B	(Akasaya chuusei)	(020099)	Japan		Japan	1977	IV
416.769C	(Akasaya chuusei)	(020099)	Japan		Japan	1977	IV
416.772	Akatsuka	010004	Japan		Japan	1977	IV
416.786	Ani 3	020325	Japan		Japan	1977	IV
416.829	Chiguito	020071	Japan		Japan	1977	IV
416.831	Chintaosan outou	040119	Japan		Japan	1977	IV
416.841	Choutan shirome	040099	Japan		Japan	1977	IV
416.854	Daioutou	110001	Japan		China	1977	IV
416.857	Daruma 2	020395	Japan		Japan	1977	IV
416.858	Daruma 30	020410	Japan		Japan	1977	IV
416.869	Fuku mejiro	040205	Japan		Japan	1977	IV
416.879	Genzoku	020452	Japan		Japan	1977	IV
416.884	Ginjiro	020088	Japan		Japan	1977	IV
416.913	Hatsukari	020311	Japan		Japan	1977	IV
416.914	Hayagin 1	040324	Japan		Japan	1977	IV
416.918	Head Green 3	060027	Japan		Japan	1977	III
416.934	Hoshi mame	040164	Japan		Japan	1977	IV
416.945	Ibaragi mame	020399	Japan		Japan	1977	IV
416.965	Jizou	020031	Japan		Japan	1977	IV
416.968	Jukkoku mame	040226	Japan		Japan	1977	IV
416.971	Kaifuu gyuumou ou 1	060090	Japan		Japan	1977	IV
416.983	Kanan 66-2	060087	Japan		Japan	1977	IV
416.984	Kanan seitou 76-2	060089	Japan		Japan	1977	IV
416.987	Kantou 9	040210	Japan		Japan	1977	IV
416.992	Kantou 18	040147	Japan		Japan	1977	IV
416.997	Kantou 39	040153	Japan		Japan	1977	IV
417.001	Kantou 51	040296	Japan		Japan	1977	IV
417.002	Kantou 52	040297	Japan		Japan	1977	IV
417.003	Kantou 54	040298	Japan		Japan	1977	IV
417.004	Kantou 57	040301	Japan		Japan	1977	IV
417.005	Kantou 63	040306	Japan		Japan	1977	IV
417.006	Kara mame	020033	Japan		Japan	1977	IV
417.007	Karasumame	020049	Japan		Japan	1977	IV
417.019	Kei mame	020166	Japan		Japan	1977	IV
417.021	Kikuchi 1	020212	Japan		Japan	1977	IV
417.022	Ki mame	020108	Japan		Japan	1977	IV
417.028	Kin daizu	040228	Japan		Japan	1977	IV
417.033A	Kinnari zairai	020385	Japan		Japan	1977	IV
417.033B	(Kinnari zairai)	(020385)	Japan		Japan	1977	IV
417.035	Kinoshita 5	020437	Japan		Japan	1977	IV
417.054	Kojiro	020021	Japan		Japan	1977	III
417.056	Kokeshi jiro	040220	Japan		Japan	1977	IV
417.057	Komame	040195	Japan		Japan	1977	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence			Pod color	Seed coat		Hilum color	Other traits		
			Color	Form	Density		Luster	Color		Seed	Leaf	Plant
408.318A	IV	P	G	E	Ssp	Br	S	Y	Bf			
408.319A	IV	P	G	A	N	Br	S	Y	Y			
408.327A	IV	P	G	E	Ssp	Bl	I	Gn	Ib			
416.769B	IV	P	G	A	Ssp	Br	S	Y	Bf			
416.769C	IV	P	T	A	Ssp	Br	D	Y	Br			
416.772	IV	W	T	E	Ssp	Br	D	Y	Tn			
416.786	IV	W	T	E	Ssp	Br	D	Y	Br			
416.829	IV	P	T	E	Ssp	Tn	I	Y	Br			
416.831	IV	P	T	A	Ssp	Br	I	Y	Br			
416.841	IV	P	G	E	Ssp	Br	D	Y	Y			
416.854	IV	P	G	E	N	Br	S	Y	Bf			
416.857	IV	P	T	E	N	Br	S	Y	Br			
416.858	IV	P	G	E	Ssp	Br	D	Y	Bf			
416.869	IV	W	G	A	Ssp	Br	I	Y	Y			
416.879	IV	P	T	E	N	Tn	D	Y	Tn			
416.884	IV	P	T	A	Ssp	Br	S	Y	Y			
416.913	IV	P	T	A	Ssp	Br	I	Y	Br			
416.914	IV	P	G	A	Ssp	Br	D	Y	Bf			
416.918	III	W	G	E	N	Br	S	Gn	Bf			
416.934	IV	W	T	E	Ssp	Br	S	Gn	Bl	Saddle		
416.945	IV	W	G	A	Ssp	Tn	D	Y	Y			
416.965	IV	P	T	A	Ssp	Br	I	Y	Br			
416.968	IV	P	G	A	Ssp	Br	S	Y	Bf			
416.971	IV	W	G	A	N	Br	I	Y	Bf			
416.983	IV	W	G	E	N	Br	D	Y	Bf			
416.984	IV	W	G	Sa	N	Br	S	Y	Bf			
416.987	IV	P	T	A	Ssp	Br	S	Y	Br			
416.992	IV	P	T	Sa	Ssp	Br	S	Y	Br			
416.997	IV	W	G	E	Ssp	Br	I	Y	Lbf			
417.001	IV	W	G	A	Ssp	Tn	D	Y	Y			
417.002	IV	P	T	A	N	Br	D	Tn	Tn			
417.003	IV	P	T	Sa	Ssp	Tn	D	Y	Y			
417.004	IV	P	G	A	Ssp	Br	D	Y	Y			
417.005	IV	P	G	Sa	Ssp	Br	S	Y	Y			
417.006	IV	W	G	E	N	Br	S	Y	Bf			
417.007	IV	P	T	E	Ssp	Br	I	Bl	Bl			
417.019	IV	P	G	E	Ssp	Br	S	Y	Bf			
417.021	IV	P	G	E	Ssp	Br	D	Y	Y			
417.022	IV	W	G	Sa	N	Br	D	Y	Bf			
417.028	IV	P	G	A	Ssp	Br	D	Y	Y			
417.033A	IV	P	T	A	Ssp	Tn	S	Y	Br			
417.033B	IV	P	T	A	Ssp	Tn	S	Y	Br			
417.035	IV	P	T	A	Ssp	Br	I	Y	Br			
417.054	III	W	-	-	G	Tn	I	Y	Bf			
417.056	IV	P	G	Sa	Ssp	Br	S	Y	Y			
417.057	IV	P	T	E	Ssp	Tn	I	Y	Br			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
408.318A	56	124	1.5	69	1.0	1.0	1.5	2.8*	1.5	19.6	2.59*
408.319A	56	128	2.1	80	1.0	1.5	2.0*	2.3	2.0	16.5	2.23
408.327A	57	128	2.6	82	1.0	2.0	2.0*	2.3	2.0	21.1*	2.50*
416.769B	49	123	2.2	74	1.0	2.0*	3.5*	2.8*	1.0	23.8*	2.21
416.769C	57	126	2.0	82	1.0	2.5	3.5*	2.3	1.0	18.6	1.70
416.772	50	119	1.5	64	1.0	2.0*	3.0*	2.3	4.0*	24.0	2.55
416.786	55	131	2.1	84	1.0	1.5	2.0	2.3	2.5	17.1	2.12
416.829	63	128	2.6*	74	1.0	1.5	2.5*	2.0	3.0*	13.7	2.07
416.831	57	126*	2.0	80	1.0	2.5	3.5*	2.3	1.0	18.4	1.95
416.841	50	120	1.7	82	2.0	1.5	3.0*	2.3	1.5	20.2	2.65
416.854	56	120	2.6	92*	1.5	1.5	1.5	2.0	1.0	16.2*	2.29*
416.857	54	123	3.1	76*	1.0	3.5	4.0*	2.3	2.5	19.0	1.64
416.858	59	132	2.6*	81*	1.0	1.0	1.0	2.5	1.5	25.8*	2.13*
416.869	54	125	2.9	75	1.0	4.5	4.5	2.3	1.0	21.3*	1.97
416.879	57	122	2.5	91	1.5	2.5*	3.5*	2.3	3.0*	15.0	2.31
416.884	54*	125	2.8	69	1.0	3.5*	3.5*	2.3	1.0	22.5	2.10*
416.913	51	124*	1.7	79	1.0	2.0	3.5*	2.0	1.0	18.5	2.03
416.914	53	120	1.5	74	1.0	3.0*	3.0*	2.3	1.0	19.3	2.11
416.918	55	118	3.1	94*	3.0	1.0	3.5*	1.5	1.5	11.8	2.47*
416.934	50	126	1.5	73	1.0	1.5	2.0*	2.3	-	24.7*	1.88*
416.945	51	123	1.8	71	1.5	1.5	3.0*	2.3	2.0	24.3*	2.24
416.965	63	126*	2.6	87	1.0	2.0*	3.0*	2.0	1.0	14.2	2.29
416.968	55	123*	2.6	72	1.0	2.5	3.5*	2.3	1.0	18.5	2.27
416.971	60	130	3.8*	128*	3.0*	2.5	3.0*	2.0	2.0	9.9	2.65*
416.983	62	132	3.5*	75	1.0	1.5	1.5	2.0	1.5	13.3	2.41*
416.984	59	128	3.8*	118*	1.5	2.0*	3.5*	1.8	1.0	10.4	3.01*
416.987	50	123*	2.1	65	1.0	2.0	3.5*	2.3	1.0	16.4	2.65
416.992	60	130	4.2*	75	1.0	3.5*	3.5*	3.0	1.0	22.7	1.45
416.997	56	132	1.5	83	1.0	1.5	1.5	1.8	1.0	18.2	2.36
417.001	50	125	2.0	66	1.5	2.5	3.5*	2.3	1.0	20.8	2.61
417.002	54	126	2.0	62*	1.0	2.5	3.5*	2.3	1.0	19.2	2.18
417.003	57	126*	2.0	83	1.0	2.5	3.5*	2.5	1.0	17.7	1.95
417.004	57	127*	1.8	71	1.0	2.5	3.5*	2.3*	1.0	21.4	2.14
417.005	63	132	3.0	87	1.0	2.0	2.5	2.5	1.0	20.7*	2.78*
417.006	58	133	1.3	75	1.0	1.0	1.0	2.5	1.0	32.2*	2.01
417.007	51	127	3.0*	81	1.0	2.0	3.5*	2.3	-	10.4*	1.43
417.019	54	122	1.5	65*	1.0	1.0	2.0*	2.5	1.5	20.7	2.33
417.021	46	126	1.6	72*	1.0	1.5	2.0	2.8*	1.5	31.6*	1.89
417.022	63	128	3.8*	113*	2.0	2.0	3.5	1.5	2.0	9.1	2.09*
417.028	51	125*	3.3*	69*	1.0	1.5	3.0*	2.0	1.5	21.3	2.53
417.033A	57	130	2.3*	86	1.0	2.5	2.5	2.5	3.0	18.4	1.95
417.033B	59	133	1.7	75	1.0	1.0	1.0	2.3	2.0	25.8	1.89
417.035	59*	131	2.3*	81	1.0	1.5	2.0*	2.8*	1.0	18.0	2.47
417.054	53	117	1.5	34	1.0	1.5	3.5*	3.0*	2.0	14.1	1.00*
417.056	51	120*	1.3	67	1.0	1.0	3.0*	2.3	1.0	21.2*	2.82
417.057	54	119	2.3	76	1.0	2.0*	3.0*	1.8	2.5	12.0	2.15

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
408.318A	IV	17.9	46.4	11.9	3.0	22.0	54.7	8.4	0.0	4	R
408.319A	IV	17.9	44.5	10.9	3.6	27.0	50.1	8.4	0.0	3	R
408.327A	IV	18.5	44.4	11.9	3.4	21.9	54.9	7.8	0.0	1	H
416.769B	IV	18.6	44.8	11.0	3.4	23.4	54.2	8.0	0.0	1	S
416.769C	IV	17.3	43.9	11.8	3.0	19.4	56.8	9.0	0.0	1	R
416.772	IV	17.5	48.2	11.4	3.3	19.7	56.9	8.6	0.0	1	H
416.786	IV	17.3	45.3	11.5	3.4	19.4	55.7	9.8	0.0	1	S
416.829	IV	17.0	47.1	11.5	3.0	19.8	56.2	9.5	0.0	1	R
416.831	IV	17.4	45.1	11.9	3.1	19.1	57.4	8.4	0.0	1	S
416.841	IV	18.3	45.0	12.1	2.8	21.7	55.4	8.1	0.0	1	R
416.854	IV	17.5	44.1	13.0	2.8	20.3	54.4	9.5	0.0	1	S
416.857	IV	17.1	46.1	11.7	3.5	23.2	53.1	8.5	0.0	1	R
416.858	IV	17.2	44.2	11.4	3.7	23.4	53.0	8.4	0.0	1	S
416.869	IV	16.8	42.6	10.5	2.8	22.3	54.4	9.9	0.0	1	R
416.879	IV	17.2	43.6	11.5	3.2	26.3	50.9	8.2	0.0	1	S
416.884	IV	18.0	44.3	10.8	2.8	23.2	55.7	7.5	0.0	1	S
416.913	IV	17.5	44.4	11.8	3.0	20.3	56.7	8.3	0.0	1	R
416.914	IV	17.4	43.4	11.4	2.8	23.0	52.9	9.8	0.0	1	R
416.918	III	17.9	45.4	11.9	3.1	17.9	58.0	9.1	0.0	1	R
416.934	IV	16.8	46.5	11.9	2.7	17.6	59.0	8.8	0.0	1	S
416.945	IV	16.5	45.9	11.2	3.0	24.9	51.7	9.2	0.0	1	S
416.965	IV	18.2	43.2	12.0	3.1	19.2	55.6	10.2	0.0	1	R
416.968	IV	16.8	44.0	11.0	3.1	21.0	54.8	10.1	0.0	1	R
416.971	IV	16.7	42.6	10.8	3.6	17.1	58.1	10.4	0.0	1	S
416.983	IV	18.1	46.0	11.9	3.5	20.1	56.0	8.5	0.0	1	R
416.984	IV	17.1	43.5	11.0	3.4	16.6	58.4	10.5	0.0	1	R
416.987	IV	17.9	44.8	12.1	3.0	19.3	55.9	9.7	0.0	1	R
416.992	IV	16.9	42.4	11.5	3.6	23.6	52.0	9.3	0.0	1	R
416.997	IV	16.6	47.3	13.1	3.0	18.5	55.3	10.1	0.0	1	R
417.001	IV	18.0	45.6	12.5	3.0	20.0	55.4	9.1	0.0	1	R
417.002	IV	15.8	41.3	10.4	3.0	18.6	55.7	12.3	0.0	1	R
417.003	IV	18.2	44.0	11.9	3.2	20.5	54.4	9.9	0.0	1	R
417.004	IV	17.7	44.5	11.6	3.3	22.3	54.0	8.8	0.0	1	R
417.005	IV	17.8	44.9	10.9	3.1	21.3	55.9	8.7	0.0	1	R
417.006	IV	16.6	45.3	11.6	3.5	21.9	54.1	8.9	0.0	1	S
417.007	IV	15.6	46.0	11.2	3.9	24.9	50.0	9.9	0.0	1	S
417.019	IV	17.9	45.0	11.6	2.9	26.1	51.9	7.7	0.0	1	H
417.021	IV	17.6	45.4	11.3	3.0	22.3	54.2	9.3	0.0	1	S
417.022	IV	16.5	46.7	11.1	3.2	21.5	54.6	9.5	0.0	1	R
417.028	IV	17.0	45.5	12.1	2.7	18.7	56.5	10.0	0.0	1	S
417.033A	IV	17.2	44.6	11.7	3.3	21.6	53.7	9.8	0.0	1	H
417.033B	IV	17.4	41.5	11.5	3.8	21.0	54.4	9.2	0.0	1	R
417.035	IV	17.8	44.3	11.6	3.3	20.3	55.1	9.8	0.0	1	R
417.054	III	16.5	45.4	11.1	3.1	36.5	41.8	7.5	0.0	1	S
417.056	IV	16.4	42.0	10.6	2.9	18.6	56.0	11.8	0.0	1	R
417.057	IV	17.0	45.1	11.6	2.8	20.1	55.9	9.7	0.0	1	S

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.065	Kou 103	030027	Japan		Japan	1977	IV
417.070	Kou kei 64	030024	Japan		Japan	1977	IV
417.071	Kou kei 74	030025	Japan		Japan	1977	IV
417.086A	Kurashina ban daizu	040031	Japan		Japan	1977	IV
417.092	Kuro mame	040096	Japan		Japan	1977	IV
417.096	Kuro shouryuu	020158	Japan		Japan	1977	IV
417.107	Kyousaku shirazu	020515	Japan		Japan	1977	IV
417.163	Mochi mame	020213	Japan		Japan	1977	IV
417.168	Mumou madara	020161	Japan		Japan	1977	IV
417.171	Mutsu shiratama	020340	Japan		Japan	1977	IV
417.176	N-B(B)	020250	Japan		Japan	1977	IV
417.179A	N-B (Katsuge)	020260	Japan		Japan	1977	IV
417.180	N-B (Shiroge)	020522	Japan		Japan	1977	IV
417.195	Niigata 4	020459	Japan		Japan	1977	IV
417.198	Nomoto shirohana	020215	Japan		Japan	1977	III
417.200	Nourin 3	040202	Japan		Japan	1977	IV
417.202	Obaka hikari	020334	Japan		Japan	1977	IV
417.217	Ookintou	020067	Japan		Japan	1977	IV
417.230	Ou kei 1	020286	Japan		Japan	1977	IV
417.231	Ou kei 2	020287	Japan		Japan	1977	IV
417.232	Ou kei 3	020288	Japan		Japan	1977	IV
417.233	Ou kei 9	020292	Japan		Japan	1977	IV
417.238	Ouu 11	020283	Japan		Japan	1977	IV
417.243	Pekin kuro daizu	110006	Japan		China	1977	IV
417.245	Raikou	020509	Japan		Japan	1977	IV
417.249	Rikuu 4	020265	Japan		Japan	1977	IV
417.254	Rikuu 17	020272	Japan		Japan	1977	IV
417.269	Santou shin tikukan	060085	Japan		Japan	1977	IV
417.278	Senbon	000001	Japan		Japan	1977	IV
417.279	Sennari	020323	Japan		Japan	1977	IV
417.283	Sennari komusume 1	020117	Japan		Japan	1977	IV
417.287	Shakkin nashi sen	040258	Japan		Japan	1977	IV
417.298	Shimokawa	020506	Japan		Japan	1977	IV
417.309A	Shirasaya 1	040197	Japan		Japan	1977	III
417.324A	Shiro mame	020023	Japan		Japan	1977	III
417.324B	(Shiro mame)	(020023)	Japan		Japan	1977	IV
417.336	Shirosota	020052	Japan		Japan	1977	IV
417.339	Shiro tsuru no ko	010049	Japan		Japan	1977	IV
417.340	Shiyuuou	020066	Japan		Japan	1977	III
417.345A	Shou outou	110002	Japan		China	1977	IV
417.367	Takiya (Waseshu)	040007	Japan		Japan	1977	IV
417.368	Tamana	020095	Japan		Japan	1977	IV
417.380	Tekkyou seitou	110010	Japan		China	1977	IV
417.382	Tenshin dai seitou	110003	Japan		China	1977	IV
417.397	Touhoku 11	020305	Japan		Japan	1977	IV
417.400	Toukichi 1	020200	Japan		Japan	1977	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.065	IV	P	-	C	N	Tn	D	Y	Bf			
417.070	IV	P	G	Sa	Ssp	Br	S	Y	Bf			
417.071	IV	P	T	Sa	Ssp	Br	I	Y	Br			
417.086A	IV	W	G	E	Ssp	Br	S	Lgn	Bf			
417.092	IV	Dp	T	E	Ssp	Tn	I	Bl	Bl		Dab	
417.096	IV	P	T	E	N	Bl	S	Bl	Bl			
417.107	IV	P	G	E	N	Tn	I	Y	Bf			
417.163	IV	P	G	E	Ssp	Br	D	Y	Y			
417.168	IV	W	-	-	G	Br	S	Bl	Br	St		
417.171	IV	W	G	E	N	Br	I	Y	Y			
417.176	IV	W	G	E	N	Br	I	Y	Y			
417.179A	IV	W	T	E	Ssp	Br	I	Y	G			
417.180	IV	W	G	E	N	Br	I	Y	Bf			
417.195	IV	W	G	A	Ssp	Tn	D	Y	Y			
417.198	III	P	T	Sa	Ssp	Lbr	S	Y	Br			
417.200	IV	P	T	A	Ssp	Br	S	Y	Br			
417.202	IV	P	G	A	Ssp	Tn	S	Y	Bf			
417.217	IV	W	G	E	N	Br	S	Y	Bf			
417.230	IV	P	T	Sa	Ssp	Br	S	Y	Br			
417.231	IV	P	T	A	Ssp	Br	S	Y	Br			
417.232	IV	W	T	A	Ssp	Br	S	Y	Br			
417.233	IV	W	G	Sa	Ssp	Br	S	Y	Lbf			
417.238	IV	W	G	E	Ssp	Br	D	Y	Y			
417.243	IV	W	T	E	N	Tn	I	Bl	Bl		Dab	
417.245	IV	P	G	A	Ssp	Br	D	Y	Y			
417.249	IV	W	T	Sa	N	Br	D	Y	Br			
417.254	IV	P	G	A	N	Tn	S	Y	Bf			
417.269	IV	W	T	E	Ssp	Br	D	Bl	Bl			
417.278	IV	P	G	E	N	Br	I	Y	Bf			
417.279	IV	P	T	A	Ssp	Br	S	Lgn	Br			
417.283	IV	P	G	A	Ssp	Br	D	Y	Bf			
417.287	IV	W	G	A	Ssp	Tn	D	Y	Y			
417.298	IV	P	G	E	N	Tn	S	Y	Bf			
417.309A	III	P	T	A	N	Br	I	Lgn	Br			
417.324A	III	W	G	A	N	Br	S	Y	Lbf			
417.324B	IV	W	G	A	Ssp	Tn	S	Y	Bf			
417.336	IV	P	G	A	Ssp	Br	D	Y	Bf			
417.339	IV	W	G	E	Ssp	Br	D	Y	Y			
417.340	III	W	G	Sa	Ssp	Br	D	Y	Y			
417.345A	IV	P	G	E	Ssp	Br	S	Y	Y			
417.367	IV	P	G	A	Ssp	Br	D	Y	Lbf			
417.368	IV	P	G	A	Ssp	Br	D	Y	Bf			
417.380	IV	W	T	E	Ssp	Br	S	Gn	Gn			
417.382	IV	P	G	A	N	Br	I	Gn	Ib	Gncot		
417.397	IV	W	G	A	Ssp	Br	S	Y	Y			
417.400	IV	P	G	A	Ssp	Tn	S	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.065	56	126*	1.5	59	1.0	1.5	3.0*	2.0	1.0	17.4	1.91
417.070	53	125	2.0	66*	1.0	1.5	3.0*	2.0	1.0	16.1	2.35
417.071	56*	123	1.6	80	1.0	1.5	3.0*	2.3	1.0	19.4	2.32
417.086A	56*	133	1.8	74	1.0	1.5	1.5	2.8*	2.0	27.4	2.20
417.092	65	133*	3.8	130*	4.0	1.5	2.0	2.5	-	8.9	2.01
417.096	51	127	1.5	69	1.0	2.0*	4.0*	2.0	-	10.5	1.99
417.107	58	131	2.4*	86*	1.0	1.5	2.5	2.5	2.5	13.5	2.37
417.163	47	128	1.8	77	1.0	1.5	2.0*	2.8	1.5	34.4	2.34*
417.168	52	123	1.3	35	1.0	1.5	3.0*	2.5	-	20.9*	1.15
417.171	55*	128	1.3	63*	1.0	1.5	1.5	2.3	2.0	24.3	2.40
417.176	57	128	1.8	70	1.0	2.5	3.5*	1.8	1.0	20.2	2.56
417.179A	58	127	1.3	88	1.0	1.0	1.0	2.0	3.0	16.5	2.35*
417.180	59	133	1.3	74	1.0	1.0	1.0	2.3	3.0	22.5	2.53
417.195	50	122	2.0	69	1.0	2.0*	3.5*	2.0	2.5	25.1*	2.54
417.198	56	116	2.1*	65	1.0	2.5	4.0*	1.5	4.0	11.5	1.96
417.200	56	122	1.8	79	1.0	1.5	3.0*	2.0	1.0	20.0	2.53
417.202	58	128	2.3*	75	1.0	1.5	3.0*	2.3	1.5	18.8*	2.37
417.217	56	124	2.5*	140*	4.0	1.0	1.0	2.3	1.5	16.4	2.64*
417.230	54*	131	2.1	78	1.0	1.5	1.5	2.8*	1.0	22.9	2.36
417.231	51	120*	1.8	66	1.0	1.5	3.0*	1.8	1.0	16.9*	2.21
417.232	59	129	1.3	85	1.0	1.5	1.5	2.8*	2.0	23.5*	2.46
417.233	49	124	2.0	76	1.0	2.5	3.5*	2.5	2.0	29.3*	1.47
417.238	51	127	2.8	81	1.0	1.5	1.5	2.5	2.0	28.4	2.09
417.243	58	131	3.2	135*	4.0	2.5	3.0*	2.0	-	12.3	2.44
417.245	54*	128	2.0	66	1.0	1.5	2.0*	1.8	1.0	18.2	2.54
417.249	60	129	1.5	57	1.0	1.5	2.0	1.8	2.0	15.2*	1.35*
417.254	57	123	1.8	83	1.0	1.5	3.5*	2.0	2.0	15.5*	2.19
417.269	63	129	3.8*	132*	1.5	1.5	2.5	2.3	-	11.9	2.38*
417.278	57	121	2.3*	93*	1.5	1.5	2.0	2.0	1.0	15.1	2.47
417.279	61	129	2.1*	80	1.0	1.5	1.5	2.3	1.0	16.9	2.11
417.283	53	119*	1.8	70	1.0	1.5	3.5*	2.0	1.0	17.9	2.45
417.287	50	119*	1.6	69	1.0	1.5	3.0*	2.8	2.5	23.4	2.10
417.298	56	124	2.3*	88	1.0	2.5	3.0*	1.8	4.0*	10.9	2.41
417.309A	52	117	1.8	77*	1.0	2.0	3.5*	2.3	1.5	17.4*	1.96
417.324A	50	118	2.3*	83	1.0	1.5	3.5*	1.8	2.5	12.2	2.13
417.324B	57	124	2.8	91	1.0	2.5*	3.0*	2.3	2.5	11.4	1.75
417.336	55	121	1.5	72	1.0	1.5	3.5*	2.3	1.0	19.1	2.35
417.339	40	119	1.2	56	1.0	1.5	3.0*	2.5	1.5	34.4*	2.38
417.340	46*	118	2.3	113*	3.5	1.5	3.0*	2.3	3.0*	21.2	2.69
417.345A	49	122	1.8	80	1.0	1.5	3.0*	2.5	1.0	20.1	2.92
417.367	55	121	1.5	71	1.0	1.5	3.5*	2.3	1.0	19.1	2.28
417.368	55	122	1.5	71	1.0	3.0*	3.5*	2.0	1.0	18.8	1.93
417.380	50	121	2.3*	76	1.0	1.0	1.5	1.8	3.0*	15.9	2.61*
417.382	63	131	1.8	70	1.0	2.0	2.0	2.0	1.5	25.8*	1.81
417.397	49	122*	2.5	57	1.0	2.0	3.5*	2.3	1.0	24.0	2.49*
417.400	53	125	2.6*	80	1.0	1.5	3.0*	2.5	2.5	21.3*	2.14

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.065	IV	16.3	43.4	10.0	3.0	22.5	53.6	10.9	0.0	1	S
417.070	IV	18.4	45.8	13.6	2.7	21.6	53.9	8.0	0.0	1	R
417.071	IV	17.0	48.0	12.0	2.8	21.2	56.4	7.5	0.0	1	R
417.086A	IV	17.4	42.0	10.5	4.3	23.7	53.0	8.5	0.0	1	H
417.092	IV	16.5	44.2	11.2	2.8	18.3	56.7	10.9	0.0	1	R
417.096	IV	17.3	46.0	12.4	2.8	16.7	58.7	9.5	0.0	1	S
417.107	IV	17.1	45.8	12.6	3.5	22.6	53.0	8.3	0.0	1	H
417.163	IV	17.0	45.8	11.2	3.2	21.9	54.1	9.5	0.0	1	S
417.168	IV	16.5	47.3	11.8	3.2	31.7	46.0	7.2	0.0	1	S
417.171	IV	17.8	43.5	11.4	3.2	21.0	54.7	9.8	0.0	1	H
417.176	IV	17.5	46.8	12.0	2.9	21.8	54.1	9.0	0.0	1	R
417.179A	IV	18.0	46.2	11.1	2.9	17.7	59.4	8.9	0.0	1	S
417.180	IV	17.3	45.1	11.8	3.3	18.5	56.5	9.9	0.0	1	R
417.195	IV	16.7	45.2	11.2	3.0	25.3	51.3	9.2	0.0	1	S
417.198	III	16.7	45.3	12.1	2.7	22.1	53.5	9.6	0.0	1	R
417.200	IV	17.6	46.7	12.4	2.8	19.4	57.5	8.0	0.0	1	R
417.202	IV	17.4	45.4	11.6	3.0	19.5	55.7	10.1	0.0	1	R
417.217	IV	19.5	40.5	12.2	3.0	19.0	56.9	8.8	0.0	1	S
417.230	IV	18.6	43.3	12.6	2.7	18.4	56.5	9.9	0.0	1	R R R R
417.231	IV	16.3	44.9	10.7	2.6	17.7	57.5	11.5	0.0	1	R
417.232	IV	17.9	43.8	10.8	3.2	23.6	52.9	9.5	0.0	1	S
417.233	IV	17.9	45.6	11.8	2.7	21.5	55.4	8.6	0.0	1	R
417.238	IV	17.1	45.2	11.2	3.1	23.3	54.1	8.3	0.0	1	S
417.243	IV	16.8	46.5	11.7	2.8	18.0	58.6	8.8	0.0	1	S
417.245	IV	18.2	44.7	11.2	2.9	18.8	58.2	8.8	0.0	1	R
417.249	IV	16.9	47.2	12.4	3.0	21.9	53.5	9.2	0.0	1	S
417.254	IV	17.0	45.9	10.8	3.1	25.1	51.7	9.3	0.0	1	R
417.269	IV	16.6	44.1	11.5	3.0	17.1	57.4	11.1	0.0	1	S
417.278	IV	17.2	45.8	12.6	2.5	18.5	56.0	10.2	0.0	1	S
417.279	IV	17.7	43.1	11.7	3.2	20.7	54.0	10.4	0.0	1	R
417.283	IV	16.8	44.4	11.3	2.8	21.4	54.2	10.4	0.0	1	R
417.287	IV	17.0	45.6	11.4	3.0	26.3	51.1	8.2	0.0	1	S
417.298	IV	17.5	46.8	11.4	2.6	26.5	52.3	7.1	0.0	1	R
417.309A	III	17.3	47.5	12.4	2.8	20.4	54.5	9.9	0.0	1	S
417.324A	III	17.4	43.4	12.5	3.7	27.1	48.1	8.8	0.0	1	H
417.324B	IV	18.1	44.1	11.7	3.3	21.3	55.2	8.4	0.0	1	R
417.336	IV	16.8	45.9	11.3	2.8	20.6	54.9	10.3	0.0	1	R
417.339	IV	18.0	46.2	10.7	2.7	26.4	52.4	7.8	0.0	1	S
417.340	III	17.8	46.2	12.1	3.1	27.6	49.8	7.4	0.0	1	H
417.345A	IV	17.3	46.7	14.4	2.9	19.0	55.8	7.8	0.0	1	S
417.367	IV	16.8	43.6	11.4	2.8	20.6	54.6	10.6	0.0	1	R
417.368	IV	16.9	44.2	11.3	2.8	20.4	54.9	10.6	0.0	1	R
417.380	IV	19.5	46.2	11.7	3.2	18.3	57.9	8.7	0.0	1	R
417.382	IV	17.6	46.7	10.8	3.3	22.3	54.3	9.5	0.0	1	S
417.397	IV	18.3	43.5	12.4	2.7	20.5	54.5	9.9	0.0	1	S
417.400	IV	17.9	46.7	11.1	3.2	22.9	53.6	9.1	0.0	1	R

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.414B	(Tousan 28)	(040405)	Japan		Japan	1977	IV
417.417	Tousan 37	040412	Japan		Japan	1977	IV
417.424	Tousan kei B248	040381	Japan		Japan	1977	IV
417.429	Tsuru no tomo	020448	Japan		Japan	1977	IV
417.432	Tsuru no tamago 2	020222	Japan		Japan	1977	IV
417.433	Tsuru no tamago 4	020223	Japan		Japan	1977	IV
417.457	Wase midori oosodefuri	010039	Japan		Japan	1977	IV
417.468	Yakumo meaka	040157	Japan		Japan	1977	IV
417.472A	Yatsufusa	040415	Japan		Japan	1977	IV
417.472B	(Yatsufusa)	(040415)	Japan		Japan	1977	IV
417.479	Yougetsu	020199	Japan		Japan	1977	IV
417.480	Yougetsu 1	020198	Japan		Japan	1977	IV
417.488	Zairaishu 1	020118	Japan		Japan	1977	IV
417.495	Zenkou mame	020030	Japan		Japan	1977	IV
417.577	Mikado	020077	Japan	USA	Japan+	1977	IV
417.580	Tokyo	020079	Japan	USA	Japan+	1977	III
420.338	Yue chin 4	FAO 44.358	FAO, Rome		China	1977	IV
423.705	Arlington	VIR 2690	USSR	USA+	China+	1978	IV
423.721		KAS 100-2	S. Korea		S. Korea	1978	IV
423.725		KAS 100-7	S. Korea		S. Korea	1978	IV
423.728A		KAS 100-9	S. Korea		S. Korea	1978	IV
423.728B		(KAS 100-9)	S. Korea		S. Korea	1978	IV
423.730A		KAS 100-10-2	S. Korea		S. Korea	1978	IV
423.733		KAS 101-1	S. Korea		S. Korea	1978	IV
423.735		KAS 130-2	S. Korea		S. Korea	1978	IV
423.736A		KAS 130-3	S. Korea		S. Korea	1978	IV
423.739		KAS 150-19-1	S. Korea		S. Korea	1978	IV
423.740		KAS 150-19-2	S. Korea		S. Korea	1978	IV
423.741		KAS 150-20	S. Korea		S. Korea	1978	IV
423.747B		(KAS 200-31)	S. Korea		S. Korea	1978	IV
423.748B		(KAS 200-32)	S. Korea		S. Korea	1978	IV
423.753A		KAS 205-16	S. Korea		S. Korea	1978	IV
423.756A		KAS 205-19	S. Korea		S. Korea	1978	IV
423.757		KAS 205-20	S. Korea		S. Korea	1978	IV
423.771		KAS 231-4	S. Korea		S. Korea	1978	IV
423.777		KAS 233-2	S. Korea		S. Korea	1978	IV
423.779		KAS 233-4	S. Korea		S. Korea	1978	IV
423.783		KAS 234-4	S. Korea		S. Korea	1978	IV
423.784		KAS 236-1	S. Korea		S. Korea	1978	IV
423.788		KAS 236-5	S. Korea		S. Korea	1978	IV
423.793		KAS 236-10	S. Korea		S. Korea	1978	IV
423.794		KAS 237-1	S. Korea		S. Korea	1978	IV
423.796A		KAS 237-3	S. Korea		S. Korea	1978	IV
423.796B		(KAS 237-3)	S. Korea		S. Korea	1978	IV
423.797		KAS 301-2	S. Korea		S. Korea	1978	IV
423.798B		(KAS 301-3)	S. Korea		S. Korea	1978	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.414B	IV	P	G	A	Ssp	Br	I	Lgn	Y			
417.417	IV	P	G	A	Ssp	Br	D	Y	Y			
417.424	IV	W	G	E	Ssp	Br	D	Y	Y			
417.429	IV	P	T	E	Ssp	Br	S	Y	Br			
417.432	IV	P	G	E	Ssp	Tn	I	Y	Y			
417.433	IV	P	G	E	Ssp	Tn	D	Y	Y			
417.457	IV	P	T	E	Ssp	Br	D	Y	Br			
417.468	IV	P	G	E	Ssp	Br	D	Y	Y			
417.472A	IV	P	T	E	Ssp	Br	I	Y	Br			
417.472B	IV	P	T	E	Ssp	Br	S	Y	Br			
417.479	IV	P	G	A	Ssp	Br	D	Y	Bf			
417.480	IV	P	G	A	Ssp	Br	D	Y	Bf			
417.488	IV	W	T	E	Ssp	Br	I	Y	Br			
417.495	IV	W	T	E	Ssp	Br	S	Y	Br			
417.577	IV	W	T	E	Ssp	Br	I	Y	Br			
417.580	III	W	G	A	Ssp	Br	I	Y	Bf			
420.338	IV	W	T	E	N	Br	I	Y	Br			
423.705	IV	P	Lt	E	N	Br	I	Bl	Bl			
423.721	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.725	IV	P	T	E	Ssp	Bl	I	Bl	Bl			
423.728A	IV	P	G	E	Ssp	Br	S	Y	Y			
423.728B	IV	P	G	E	Ssp	Br	I	Y	Y			
423.730A	IV	P	T	I	Ssp	Br	I	Bl	Bl	SNet		
423.733	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.735	IV	P	T	E	Ssp	Br	S	Br	Br	St		
423.736A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.739	IV	P	G	E	Ssp	Br	D	Gn	Gn	SDef		
423.740	IV	P	G	E	Ssp	Br	D	Gn	Gn	SDef		
423.741	IV	P	T	E	Ssp	Br	S	Gn	Br			
423.747B	IV	P	G	E	Ssp	Br	I	Y	Bf			
423.748B	IV	P	G	E	Ssp	Br	D	Y	Bf			
423.753A	IV	P	T	E	Ssp	Br	I	Gn	Br			
423.756A	IV	P	G	E	Ssp	Br	S	Y	Y			
423.757	IV	P	T	E	Ssp	Br	S	Br	Br	St		
423.771	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
423.777	IV	W	G	Sa	Ssp	Tn	D	Y	Y			
423.779	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
423.783	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
423.784	IV	W	T	Sa	Ssp	Br	I	Bl	Bl			
423.788	IV	W	T	E	Ssp	Br	I	Bl	Bl			
423.793	IV	P	T	E	Ssp	Bl	D	Gn	Gn			
423.794	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
423.796A	IV	P	G	A	Ssp	Tn	D	Y	Y	Gncot		
423.796B	IV	P	G	E	Ssp	Tn	D	Y	Y			
423.797	IV	P	T	E	Ssp	Br	I	Rbr	Rbr			
423.798B	IV	W	G	A	Ssp	Tn	D	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.414B	60*	130	4.0	78	1.0	2.5*	3.0*	2.3	1.0	18.5	1.98
417.417	60*	131	2.8*	85*	1.0	1.0	1.0	2.0	1.0	20.8	2.56*
417.424	56*	132	2.8*	80	1.0	1.5	1.5	2.3*	1.5	20.1*	2.35*
417.429	57	127	2.5*	86*	1.0	3.5*	3.5*	2.3	1.0	19.9	1.91
417.432	57	128	2.5*	75*	1.0	2.0*	3.0*	2.3	1.0	26.0	2.21
417.433	57	133	2.5*	71	1.0	1.5	1.5	2.5	2.0	27.7	1.74
417.457	57	124	2.3*	66*	1.0	3.0	4.5	2.3	2.0	16.8	1.87
417.468	44	126	1.5	78*	1.0	1.5	3.0*	2.8	2.0	34.4	2.21
417.472A	57	122	2.5	77	1.0	3.5*	4.0*	2.3	1.0	14.9	1.78*
417.472B	58	129	2.1	75	1.0	3.5*	3.5*	2.3	1.0	14.0	2.35
417.479	55	124	2.0	78	1.0	2.5	3.5*	2.0	1.0	19.8	2.29
417.480	55	124	1.8	72	1.0	3.0*	3.5*	1.8	1.0	20.8	2.25
417.488	50	130	2.0	72*	1.0	2.0	2.0	2.0	3.5	19.7	2.51
417.495	50	125*	2.5	66	1.0	3.0*	3.5*	2.0	3.0	17.5*	1.50*
417.577	50	124	2.8*	76	1.0	2.0	3.5*	1.8	3.0	18.9*	2.41
417.580	50	117	1.8	70*	1.0	3.0*	4.5	2.5	2.0	22.6	2.43
420.338	58	124	1.8	102	2.0	1.5	1.5	1.8	1.0	12.7	3.04
423.705	65	129	2.5	142*	2.0	1.0	1.5	1.8	-	9.0	1.87
423.721	58	130	2.6*	71	1.0	1.5	1.5	2.0	-	20.4*	2.39
423.725	59*	130	2.0	71	1.0	2.0	2.0	2.3	-	17.7	1.78
423.728A	57	125	2.4*	85	1.0	1.5	1.5	2.3	2.0	18.7*	2.26
423.728B	58	128	2.4*	79*	1.0	1.5	1.5	2.3	2.0	17.0*	1.68*
423.730A	58	132	1.8	58	1.0	1.0	1.0	2.5	-	19.2*	1.71
423.733	53	128	2.4*	74	1.0	1.0	1.0	2.3	-	27.8*	2.02*
423.735	56	127	1.8	66*	1.0	1.5	1.5	1.8	-	18.1*	2.08*
423.736A	61	133	2.3*	68	1.0	1.0	1.0	2.3	-	21.3*	1.61
423.739	55	128	1.9	80*	1.0	1.5	1.5	2.8*	2.5	28.8*	2.96*
423.740	55*	128	2.3	74*	1.0	1.0	1.0	2.8*	2.5	29.1*	3.05*
423.741	50	123	1.8	61	1.0	1.5	1.5	2.3	2.5	16.8	2.80
423.747B	57	127	2.1	70	1.0	2.0*	2.0*	1.8	1.5	15.0	2.20
423.748B	54	125	3.1	97*	1.5	1.5	2.0*	2.5	2.0	17.4*	2.30
423.753A	60	132	2.5	78	1.0	1.5	1.5	2.3	2.5	19.5	1.90
423.756A	57	129	2.0	76*	1.0	1.5	1.5	2.0	3.0	17.2*	2.03*
423.757	55	126	2.3*	72*	1.0	1.5	1.5	1.8	-	18.4*	2.09
423.771	58*	131	2.4*	79	1.0	1.5	1.5	2.8*	2.5	22.5	1.87
423.777	48	123	2.8	67	1.0	1.5	3.0*	2.5	2.0	29.1*	2.23
423.779	61*	133	2.0	76	1.0	1.0	1.0	2.8*	2.0	23.4	1.61
423.783	62*	133	2.0	78	1.0	1.5	1.5	3.0*	2.5	22.3	1.42
423.784	49	119	2.3	57	1.0	1.5	3.5*	2.0	-	24.0	2.31
423.788	49	119	2.5	72	1.0	1.5	3.5*	2.3	-	23.8	2.44
423.793	59	131	2.0	68	1.0	1.5	1.5	2.5	2.5	21.4	2.10
423.794	60	132	2.0	74	1.0	1.5	1.5	2.5	2.0	24.2	1.64
423.796A	55	124	1.5	79	1.0	1.5	1.5	2.8*	3.5	26.3	2.17
423.796B	51	126	1.8	80	1.0	1.5	2.0*	2.0	2.5	19.4*	2.27
423.797	51	125	2.3	72	1.0	1.5	2.0*	2.3	-	26.2*	2.39
423.798B	54	126	1.6	75	1.0	1.5	1.5	2.3	2.5	17.8	1.97

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.414B	IV	17.3	45.3	11.6	3.1	21.3	54.6	9.3	0.0	1	R
417.417	IV	17.3	44.7	11.5	3.1	19.3	56.0	10.2	0.0	1	R
417.424	IV	17.0	43.8	11.0	3.1	20.1	56.7	9.1	0.0	1	R
417.429	IV	17.5	45.2	10.8	3.1	21.2	55.1	9.8	0.0	1	S
417.432	IV	17.6	44.9	12.2	3.4	19.7	55.3	9.4	0.0	1	S
417.433	IV	16.8	45.8	11.8	3.7	19.9	55.5	9.1	0.0	1	S
417.457	IV	16.0	45.6	10.3	2.7	18.0	57.9	11.1	0.0	1	S
417.468	IV	17.6	46.5	11.2	3.1	23.5	53.2	9.0	0.0	1	S
417.472A	IV	17.3	45.3	11.5	2.7	18.3	56.7	10.7	0.0	1	S
417.472B	IV	17.9	44.7	11.4	3.1	21.4	55.1	9.0	0.0	1	S
417.479	IV	17.0	44.9	11.5	3.0	20.4	54.4	10.4	0.4	1	R
417.480	IV	16.8	45.1	11.1	2.8	21.0	54.9	9.7	0.5	1	R
417.488	IV	17.8	45.9	11.6	3.0	21.8	55.0	8.0	0.5	1	R
417.495	IV	17.3	45.2	11.7	3.2	20.4	54.1	9.5	1.2	1	S
417.577	IV	17.9	44.3	11.2	2.9	21.1	55.1	8.8	0.8	1	S
417.580	III	17.3	45.3	11.4	3.0	21.8	54.0	8.1	1.7	1	H
420.338	IV	17.6	45.7	11.6	3.2	19.6	56.2	8.5	1.0	2	
423.705	IV	15.8	44.6	11.7	3.0	19.5	55.3	9.8	0.6	4	S
423.721	IV	16.7	47.9	11.6	3.0	20.4	54.5	8.8	1.7	1	S
423.725	IV	17.2	45.5	11.0	3.1	20.4	55.3	9.6	0.6	4	S
423.728A	IV	17.8	47.0	11.4	3.3	21.9	54.2	8.8	0.4	4	S
423.728B	IV	17.4	46.6	11.7	3.2	21.5	54.1	8.6	1.0	1	S
423.730A	IV	16.9	45.5	10.8	3.5	21.2	54.3	9.3	0.9	1	S
423.733	IV	16.9	45.5	11.0	3.3	22.1	54.4	8.9	0.4	1	S
423.735	IV	17.5	44.7	11.9	3.2	19.7	55.5	9.0	0.7	1	S
423.736A	IV	17.5	46.4	10.7	3.2	20.3	55.7	9.5	0.7	1	S
423.739	IV	18.4	43.8	11.3	3.1	20.4	55.5	9.1	0.6	4	S
423.740	IV	18.1	44.8	11.3	3.3	20.4	55.5	9.0	0.5	1	S
423.741	IV	17.6	46.0	11.0	3.4	21.1	55.2	9.0	0.4	2	R R R H
423.747B	IV	18.2	43.4	12.1	3.2	19.4	55.4	9.3	0.7	1	S
423.748B	IV	16.7	46.3	11.6	3.3	19.6	55.7	9.2	0.6	2	R R R R
423.753A	IV	17.9	44.3	11.2	3.6	22.6	53.7	8.5	0.3	1	S
423.756A	IV	18.1	45.2	11.8	3.3	20.1	55.6	8.9	0.4	2	S
423.757	IV	17.8	45.5	12.1	3.4	20.9	54.6	8.5	0.5	1	S
423.771	IV	17.9	46.9	11.7	3.5	21.9	54.2	8.3	0.3	1	S
423.777	IV	18.0	45.8	11.1	3.2	21.7	55.3	8.3	0.4	1	S
423.779	IV	17.9	47.1	11.6	3.4	21.7	54.4	8.4	0.4	1	S
423.783	IV	18.0	45.9	11.6	3.4	21.2	54.8	8.6	0.5	1	S
423.784	IV	17.4	46.2	11.7	3.3	20.7	55.3	8.5	0.5	1	R R R H
423.788	IV	17.9	45.2	11.6	3.3	20.2	55.8	8.7	0.4	1	R R R R
423.793	IV	17.9	45.0	11.2	3.2	21.1	55.5	8.4	0.5	1	S
423.794	IV	18.2	46.2	11.5	3.7	22.2	53.9	8.1	0.6	1	S
423.796A	IV	16.8	47.3	11.6	3.3	20.7	54.9	9.1	0.5	1	S
423.796B	IV	17.2	46.8	12.0	3.0	19.7	55.6	9.2	0.4	1	S
423.797	IV	17.1	48.2	11.0	3.2	20.9	55.8	8.6	0.5	1	S
423.798B	IV	16.5	45.3	11.9	3.4	21.2	53.6	9.4	0.5	1	R R R S

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
423.799A		KAS 302-1	S. Korea		S. Korea	1978	IV
423.802		KAS 304-1	S. Korea		S. Korea	1978	IV
423.812		KAS 339-8	S. Korea		S. Korea	1978	IV
423.826C		(KAS 362-5)	S. Korea		S. Korea	1978	IV
423.830A		KAS 362-9	S. Korea		S. Korea	1978	IV
423.830B		(KAS 362-9)	S. Korea		S. Korea	1978	IV
423.845A		KAS 380-17	S. Korea		S. Korea	1978	IV
423.858		KAS 626-2	S. Korea		S. Korea	1978	IV
423.863A		KAS 680-4	S. Korea		S. Korea	1978	IV
423.882B	(Karikei 61)	(Bb 1153)	Japan		Japan	1978	IV
423.888	Okushirome	Bb 1148	Japan		Japan	1978	IV
423.890B	(Shirohigo)	(Be 1011)	Japan		Japan	1978	IV
423.890C	(Shirohigo)	(Be 1011)	Japan		Japan	1978	IV
423.893	Shirosennari	Df 1025	Japan		Japan	1978	IV
423.894	Shiro tsurunoko	Ao 1035	Japan		Japan	1978	IV
423.903	Enrei		Japan		Japan	1978	IV
423.914A	Nasu shirome		Japan		Japan	1978	IV
423.927	Tousan 93		Japan		Japan	1978	IV
423.930A	Wase hadaka		Japan		Japan	1978	IV
423.973	Chizuka ibaragi 1	Cc 1020	Japan		Japan	1978	III
423.977	Rikuu 27	Bb 1062	Japan		Japan	1978	IV
423.979	Tsurunoko	Ao 1038	Japan		Japan	1978	IV
423.980	Tsurunoko	Ao 1039	Japan		Japan	1978	IV
424.024		74022	S. Korea		S. Korea	1978	IV
424.143		KAS 641-2	S. Korea		S. Korea	1978	III
424.152		KAS 642-7	S. Korea		S. Korea	1978	IV
424.154A		KAS 643-2	S. Korea		S. Korea	1978	IV
424.155B		(KAS 643-2)	S. Korea		S. Korea	1978	IV
424.158		KAS 643-7	S. Korea		S. Korea	1978	IV
424.159A		KAS 643-8	S. Korea		S. Korea	1978	III
424.159B		(KAS 643-8)	S. Korea		S. Korea	1978	IV
424.159C		(KAS 643-8)	S. Korea		S. Korea	1978	IV
424.160		KAS 643-9	S. Korea		S. Korea	1978	IV
424.219A		KAS 131-4	S. Korea		S. Korea	1978	IV
424.221A		KAS 131-6	S. Korea		S. Korea	1978	IV
424.224		KAS 131-9	S. Korea		S. Korea	1978	IV
424.225		KAS 133-1	S. Korea		S. Korea	1978	IV
424.227A		KAS 133-3	S. Korea		S. Korea	1978	IV
424.229A		KAS 134-2	S. Korea		S. Korea	1978	IV
424.229B		(KAS 134-2)	S. Korea		S. Korea	1978	IV
424.231		KAS 134-4	S. Korea		S. Korea	1978	IV
424.232A		KAS 134-5	S. Korea		S. Korea	1978	IV
424.233		KAS 134-6	S. Korea		S. Korea	1978	IV
424.234A		KAS 134-7	S. Korea		S. Korea	1978	IV
424.234B		(KAS 134-7)	S. Korea		S. Korea	1978	IV
424.234C		(KAS 134-7)	S. Korea		S. Korea	1978	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
423.799A	IV	P	T	E	Ssp	Br	I	Gnbr	Br			
423.802	IV	P	T	I	Ssp	Br	I	Bl	Bl	SNet		
423.812	IV	W	T	E	Ssp	Br	I	Y	Br			
423.826C	IV	P	G	E	Ssp	Br	D	Y	Bf			
423.830A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.830B	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
423.845A	IV	P	G	E	Ssp	Br	S	Y	Y			
423.858	IV	P	G	A	Ssp	Br	D	Y	Bf			
423.863A	IV	P	G	E	Ssp	Br	I	Lgn	Y			
423.882B	IV	P	G	A	N	Br	D	Y	Y			
423.888	IV	P	G	A	Ssp	Br	D	Y	Y			
423.890B	IV	W	G	Sa	N	Tn	I	Y	Bf			
423.890C	IV	W	G	A	N	Tn	I	Y	Bf			
423.893	IV	W	G	Sa	N	Br	D	Y	Y			
423.894	IV	W	G	E	Ssp	Br	D	Y	Y			
423.903	IV	P	G	A	Ssp	Br	I	Y	Y			
423.914A	IV	W	G	Sa	Ssp	Br	D	Y	Y			
423.927	IV	P	G	Sa	Ssp	Tn	I	Y	Bf			
423.930A	IV	P	-	-	G	Lbr	I	Y	Bf			
423.973	III	P	T	Sa	Ssp	Br	S	Y	Br			
423.977	IV	W	T	Sa	Ssp	Br	S	Y	Br			
423.979	IV	W	G	E	N	Br	D	Y	Bf			
423.980	IV	P	G	E	Ssp	Br	D	Y	Y			
424.024	IV	P	T	E	Ssp	Bl	B	Bl	Bl			Sw
424.143	III	P	G	E	Ssp	Br	D	Y	Bf			
424.152	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.154A	IV	P	T	E	Ssp	Bl	D	Rbr	Rbr			
424.155B	IV	W	G	E	Ssp	Tn	I	Y	Bf			
424.158	IV	P	T	E	Ssp	Bl	S	Br	Br	St		
424.159A	III	P	G	E	Ssp	Br	D	Y	Bf			
424.159B	IV	W	T	E	N	Tn	S	Y	Y			
424.159C	IV	P	G	Sa	Ssp	Br	S	Y	Bf			
424.160	IV	P	T	E	Ssp	Bl	S	Br	Br	St		
424.219A	IV	P	G	E	Ssp	Tn	D	Y	Bf			
424.221A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.224	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.225	IV	P	G	E	Ssp	Br	S	Y	Y			
424.227A	IV	P	T	E	Ssp	Bl	S	Br	Br			
424.229A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.229B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.231	IV	P	T	E	Ssp	Br	S	Br	Br			
424.232A	IV	P	T	E	Ssp	Br	S	Br	Br	St		
424.233	IV	P	T	E	Ssp	Br	S	Br	Br	SNet		
424.234A	IV	P	G	A	Ssp	Br	D	Y	Bf			
424.234B	IV	P	G	E	Ssp	Br	I	Y	Bf			
424.234C	IV	P	G	E	Ssp	Br	S	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
423.799A	54	126	2.3	75	1.0	1.5	1.5	2.0	-	18.6*	2.51
423.802	54	123	2.2	68	1.0	1.5	1.5	2.0	-	19.1*	2.50*
423.812	51	126	2.4*	73	1.0	1.0	1.0	1.8	3.0	24.1*	2.57
423.826C	48	120	2.1	75	1.0	1.5	3.0*	2.0	2.0	16.1	2.59
423.830A	54	126	2.6	80	1.0	1.5	3.0*	2.3	-	17.7*	2.22
423.830B	56	132	2.8*	68	1.0	1.5	1.5	2.5	-	28.4*	1.70
423.845A	57	129	2.6*	77	1.0	1.5	2.0*	2.5*	2.0	22.1*	2.24
423.858	62	132	2.9	86	1.0	1.0	1.0	2.3*	2.0	13.9	2.06
423.863A	53	121	1.9	69	1.0	1.0	1.5	2.3	2.0	19.5	2.22
423.882B	44	122	2.0	43	1.0	1.0	3.0*	2.3	1.0	19.4	2.23
423.888	51*	127	2.0	73	1.0	1.0	1.5	2.0	1.0	15.3	2.70*
423.890B	59*	128	3.4*	83	1.0	1.5	3.0*	2.3*	1.0	26.4	2.34
423.890C	59*	130	2.5	86	1.0	1.5	1.5	2.3	1.0	22.3	2.66
423.893	51	128	1.3	79	1.0	3.0*	3.0*	1.8	1.0	20.2	2.41
423.894	41	119	1.1	60	1.0	1.5	3.0*	2.8	1.5	36.9*	2.73
423.903	59	132	1.8	83	1.0	1.5	2.0*	2.5	1.0	26.6	2.81
423.914A	58	134	1.6	85	1.0	1.5	1.5	2.0	1.0	20.3	2.45
423.927	60*	133	1.5	76*	1.0	1.0	1.0	2.8*	1.0	20.1	2.57
423.930A	61	128	2.8*	41	1.0	2.5*	2.5*	2.8*	1.0	17.9*	1.83
423.973	58	118	2.8	73	1.0	2.0	4.5	2.0	4.0	12.4	2.25
423.977	61*	130	2.1	88	1.0	2.0	2.0	2.8*	2.0	18.1	2.26
423.979	48	126	1.8	79	1.0	1.5	2.0*	2.0	3.5	13.0	2.24
423.980	44	125	2.1	84	1.0	1.5	2.5*	3.0	2.0	32.4*	2.31
424.024	62	127	3.8	127*	4.0	3.5*	5.0	2.5	-	5.3	1.23
424.143	47	118	2.2	81	1.5	1.0	3.0*	2.0	1.0	17.0	2.89
424.152	48	122	2.8	76	1.0	1.5	3.0*	2.3	1.5	16.9	2.69
424.154A	65	132	3.0*	88*	1.0	1.5	1.5	2.0	-	13.8	2.20
424.155B	49	125	1.8	77	1.0	2.0	3.5*	2.5	2.0	20.3	2.29
424.158	65	130	3.3*	76	1.0	1.5	1.5	1.8	-	16.4*	2.18
424.159A	47	118	2.1	76	1.5	1.0	3.0*	1.8	1.5	16.2	2.78
424.159B	42	123	2.2*	125*	3.0	1.0	1.0	2.0	2.5	15.2	3.46*
424.159C	53	119	2.8	85	1.0	1.0	1.5	1.5	3.5	12.3	2.69
424.160	64	133	3.3*	73	1.0	2.0	2.0	2.0	-	17.3	2.00
424.219A	50	121	2.0	73	1.0	1.0	3.0	2.0	2.0	15.9	2.90
424.221A	58	128	3.3*	61	1.0	2.0*	3.0*	2.0	-	19.1	2.16
424.224	50	123	3.0	71*	1.0	1.5	3.0*	2.0	-	21.7*	2.27
424.225	55	129	2.6*	86	1.0	1.0	1.0	1.8	2.0	20.2*	2.46*
424.227A	62	131	2.6*	71	1.0	1.5	2.0	2.3	-	20.8*	1.97
424.229A	50	124*	2.6*	61	1.0	1.0	2.0*	2.3	-	21.8*	2.55
424.229B	53	125	2.6*	60	1.0	1.5	1.5	2.3	-	20.8	2.31
424.231	55	130	2.8*	86	1.0	1.5	1.5	2.3	-	21.6*	2.53
424.232A	52	128	2.3	60*	1.0	1.5	2.0*	2.3*	-	25.1*	2.44
424.233	52	130	2.5	63	1.0	1.5	1.5	2.3	-	33.3*	2.47*
424.234A	56	124*	2.8	81	1.0	2.5	3.5*	2.0	1.0	18.9	2.51
424.234B	51	125	2.6*	72*	1.0	1.5	2.0*	2.3	1.0	18.5	2.44*
424.234C	55	127	2.5*	82	1.0	1.5	2.0*	1.8	2.5	18.3*	2.26

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
423.799A	IV	16.2	46.7	11.6	3.1	19.8	55.6	9.6	0.4	1	S
423.802	IV	17.1	45.3	11.4	3.0	19.0	56.6	9.6	0.4	1	R R R R
423.812	IV	18.1	46.2	11.8	3.4	21.0	55.1	8.3	0.4	1	S
423.826C	IV	18.5	45.9	11.8	3.2	20.2	55.3	9.2	0.4	1	R R R S
423.830A	IV	16.9	46.7	11.6	3.1	20.8	54.8	9.1	0.6	1	R R R S
423.830B	IV	17.4	44.9	11.1	3.3	21.9	54.4	8.8	0.5	1	S
423.845A	IV	18.1	46.6	12.2	3.2	21.3	54.5	8.3	0.5	1	R R R S
423.858	IV	17.5	46.7	12.0	3.6	23.4	51.8	8.6	0.6	1	R R R R
423.863A	IV	18.2	45.6	10.7	3.0	21.9	54.8	9.1	0.6	4	S
423.882B	IV	18.4	44.8	11.6	3.2	21.0	53.9	9.7	0.7	3	R R R S
423.888	IV	18.4	41.9	11.3	3.0	20.0	55.6	9.5	0.6	1	S
423.890B	IV	17.6	41.8	11.1	3.1	23.2	53.0	9.0	0.6	1	R R R R
423.890C	IV	17.9	43.0	11.4	3.3	21.5	53.6	9.5	0.6	1	H
423.893	IV	18.2	41.7	11.7	3.3	21.2	54.1	9.4	0.3	1	R R R R
423.894	IV	17.9	45.5	11.5	3.1	25.4	50.7	9.1	0.3	1	S
423.903	IV	17.1	46.6	11.9	3.1	21.6	54.5	8.7	0.2	1	S
423.914A	IV	17.8	42.3	12.1	3.2	20.2	55.0	9.5	0.0	1	R R R S
423.927	IV	18.2	42.7	12.5	3.5	21.3	52.4	10.3	0.1	1	R R H S
423.930A	IV	18.0	44.0	12.0	2.9	20.1	55.8	9.2	0.0	1	R R R H
423.973	III	16.8	44.6	12.0	3.0	20.8	54.5	9.7	0.0	1	R R R S
423.977	IV	16.8	42.0	10.9	3.3	20.2	55.0	10.7	0.0	1	R R R R
423.979	IV	16.8	47.7	12.3	2.8	19.1	56.4	9.4	0.0	1	R R R R
423.980	IV	17.5	45.8	11.7	3.1	22.0	53.9	9.3	0.0	1	S
424.024	IV	13.3	48.6	11.5	2.9	16.3	58.1	11.2	0.0	1	
424.143	III	18.7	45.8	12.3	3.2	20.3	55.1	9.2	0.1	1	
424.152	IV	18.9	45.3	11.7	3.2	20.0	55.9	9.0	0.1	1	
424.154A	IV	17.0	46.6	12.1	3.1	20.4	55.5	8.8	0.1	1	
424.155B	IV	16.8	45.7	11.6	3.3	20.1	55.5	9.5	0.1		
424.158	IV	17.8	45.2	11.1	3.0	19.1	57.1	9.6	0.1	1	
424.159A	III	18.8	44.2	11.9	2.9	19.6	56.4	9.2	0.1	2	
424.159B	IV	18.6	44.2	11.5	3.4	19.9	56.7	8.5	0.1	1	
424.159C	IV	17.6	46.8	12.4	3.2	19.1	56.3	9.1	0.1	1	
424.160	IV	18.3	45.6	10.8	3.1	19.9	56.8	9.4	0.0	1	
424.219A	IV	18.0	45.6	12.3	2.9	20.2	55.8	8.7	0.1	1	R R R R
424.221A	IV	17.5	46.6	11.7	3.2	19.7	56.2	9.1	0.1	1	R R R S
424.224	IV	17.9	44.4	10.9	3.3	22.4	54.4	8.8	0.0	1	R R R S
424.225	IV	18.2	45.2	11.8	3.1	20.9	55.4	8.7	0.1	3	S
424.227A	IV	17.5	44.1	11.6	3.1	19.3	56.4	9.6	0.1	1	S
424.229A	IV	18.2	43.9	11.2	3.2	22.6	54.0	9.0	0.1	1	R R R S
424.229B	IV	18.1	45.8	11.2	3.2	21.8	55.2	8.4	0.1	1	R R R S
424.231	IV	18.4	45.2	12.3	2.9	19.7	55.4	9.6	0.1	1	H
424.232A	IV	18.2	43.8	12.9	3.2	19.4	54.6	9.9	0.1	1	S
424.233	IV	17.8	47.2	12.0	2.8	22.1	54.4	8.6	0.1	1	S
424.234A	IV	16.6	44.3	11.5	2.8	21.5	54.1	9.9	0.2	1	R R R R
424.234B	IV	17.9	42.6	12.4	2.7	19.4	55.4	10.0	0.1	1	R R R R
424.234C	IV	17.5	46.4	12.7	3.0	19.5	55.5	9.3	0.1	1	S

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.247A		KAS 200-40	S. Korea		S. Korea	1978	III
424.247B		(KAS 200-40)	S. Korea		S. Korea	1978	IV
424.249B		(KAS 200-42)	S. Korea		S. Korea	1978	IV
424.249C		(KAS 200-42)	S. Korea		S. Korea	1978	IV
424.249D		(KAS 200-42)	S. Korea		S. Korea	1978	IV
424.249E		(KAS 200-42)	S. Korea		S. Korea	1978	IV
424.252		KAS 200-45	S. Korea		S. Korea	1978	IV
424.255A		KAS 202-3	S. Korea		S. Korea	1978	IV
424.255B		(KAS 202-3)	S. Korea		S. Korea	1978	IV
424.256		KAS 202-4	S. Korea		S. Korea	1978	IV
424.258		KAS 205-22	S. Korea		S. Korea	1978	IV
424.259		KAS 205-23	S. Korea		S. Korea	1978	IV
424.263		KAS 235-2	S. Korea		S. Korea	1978	IV
424.264		KAS 235-3	S. Korea		S. Korea	1978	IV
424.265		KAS 235-4	S. Korea		S. Korea	1978	IV
424.266		KAS 235-5	S. Korea		S. Korea	1978	IV
424.269A		KAS 235-8	S. Korea		S. Korea	1978	IV
424.272A		KAS 235-11	S. Korea		S. Korea	1978	IV
424.273A		KAS 235-12	S. Korea		S. Korea	1978	IV
424.273B		(KAS 235-12)	S. Korea		S. Korea	1978	IV
424.274A		KAS 235-13	S. Korea		S. Korea	1978	IV
424.277A		KAS 235-17	S. Korea		S. Korea	1978	IV
424.280		KAS 238-2	S. Korea		S. Korea	1978	IV
424.281A		KAS 238-3	S. Korea		S. Korea	1978	IV
424.281B		(KAS 238-3)	S. Korea		S. Korea	1978	IV
424.283		KAS 239-1	S. Korea		S. Korea	1978	IV
424.284A		KAS 239-2	S. Korea		S. Korea	1978	IV
424.285A		KAS 239-3	S. Korea		S. Korea	1978	IV
424.285B		(KAS 239-3)	S. Korea		S. Korea	1978	IV
424.285C		(KAS 239-3)	S. Korea		S. Korea	1978	IV
424.286		KAS 239-4	S. Korea		S. Korea	1978	IV
424.291		KAS 300-3	S. Korea		S. Korea	1978	IV
424.292		KAS 300-4	S. Korea		S. Korea	1978	IV
424.295		KAS 300-7	S. Korea		S. Korea	1978	IV
424.296A		KAS 300-8	S. Korea		S. Korea	1978	IV
424.299A		KAS 300-11	S. Korea		S. Korea	1978	IV
424.303		KAS 304-10	S. Korea		S. Korea	1978	IV
424.305		KAS 304-12	S. Korea		S. Korea	1978	IV
424.306		KAS 310-5	S. Korea		S. Korea	1978	IV
424.308		KAS 310-7	S. Korea		S. Korea	1978	IV
424.316		KAS 333-2	S. Korea		S. Korea	1978	IV
424.317		KAS 333-3	S. Korea		S. Korea	1978	IV
424.318		KAS 333-4	S. Korea		S. Korea	1978	IV
424.335A		KAS 351-3	S. Korea		S. Korea	1978	IV
424.335B		(KAS 351-3)	S. Korea		S. Korea	1978	IV
424.336		KAS 351-4	S. Korea		S. Korea	1978	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.247A	III	P	G	E	Ssp	Br	D	Y	Bf			
424.247B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
424.249B	IV	P	G	E	Ssp	Tn	I	Y	Bf			
424.249C	IV	W	G	E	Ssp	Br	D	Y	Y			
424.249D	IV	W	G	E	Ssp	Tn	D	Y	Y			
424.249E	IV	W	G	E	Ssp	Br	D	Y	Y			
424.252	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.255A	IV	P	G	E	Ssp	Br	I	Y	Y			
424.255B	IV	W	G	E	Ssp	Br	I	Y	Y			
424.256	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.258	IV	P	T	E	N	Tn	S	Rbr	Rbr			
424.259	IV	P	T	A	Ssp	Br	D	Gn	Br	Gncot		
424.263	IV	P	G	E	Ssp	Tn	D	Y	Y			
424.264	IV	W	G	A	Ssp	Tn	I	Y	Y	Def		
424.265	IV	W	G	A	Ssp	Br	D	Y	Bf	Def		
424.266	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
424.269A	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
424.272A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.273A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.273B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.274A	IV	P	T	E	Ssp	Br	S	Br	Br	St		
424.277A	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.280	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
424.281A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.281B	IV	P	T	E	Ssp	Bl	I	Bl	Bl			
424.283	IV	P	T	E	Ssp	Br	D	Bl	Bl	Gncot		
424.284A	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
424.285A	IV	P	G	E	Ssp	Br	I	Y	Y			
424.285B	IV	P	G	E	Ssp	Bl	I	Y	Y			
424.285C	IV	P	G	E	Ssp	Br	I	Y	Y			
424.286	IV	P	G	E	Ssp	Tn	D	Y	Bf			
424.291	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
424.292	IV	P	T	E	Ssp	Br	S	Br	Br	SNet		
424.295	IV	P	T	I	Ssp	Br	S	Bl	Bl	Net		
424.296A	IV	P	T	E	Ssp	Br	D	Bl	Bl	SDef		
424.299A	IV	P	G	E	Ssp	Br	I	Gn	G	Gncot		
424.303	IV	P	T	I	Ssp	Br	I	Bl	Bl	SNet		
424.305	IV	W	G	E	Sdn	Tn	D	Y	Y			
424.306	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.308	IV	P	G	E	Ssp	Br	S	Y	Y			
424.316	IV	P	G	E	Ssp	Br	I	Y	Y			
424.317	IV	W	G	A	Ssp	Tn	D	Y	Y			
424.318	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.335A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.335B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.336	IV	P	G	E	Ssp	Br	D	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.247A	47*	118	2.5	73	1.0	1.5	3.5*	1.8	2.5	15.5	2.60
424.247B	54	127	2.5	83	1.0	1.5	1.5	2.0	2.0	17.9*	2.54
424.249B	51	120	2.1	66	1.0	1.5	3.0*	2.3	2.0	15.3	2.54
424.249C	51	125*	1.8	68	1.0	1.0	2.0*	1.5	1.5	19.8	2.20
424.249D	51	127	2.0	78	1.0	2.0*	3.0*	2.3	2.5	24.0	2.46
424.249E	56	131	1.8	72	1.0	1.0	1.5	1.8	1.5	17.4*	2.20*
424.252	63	135	2.5	92	1.0	1.0	1.0	2.5	-	19.4	1.95
424.255A	52	124	2.3*	77	1.0	1.0	1.5	2.3	2.5	18.8	2.41
424.255B	51	132	2.6*	72	1.0	1.0	1.0	3.0*	2.0	28.0*	2.42
424.256	61*	133	2.6	67	1.0	1.0	1.0	2.5	-	24.2	1.94
424.258	63*	130	2.8*	67	1.0	1.0	1.0	2.0	-	8.0	2.15
424.259	63	132	2.3*	64	1.0	1.0	1.0	2.0	2.5	9.1	1.87
424.263	51	125	2.3*	76*	1.0	1.5	3.0*	2.5	2.0	20.6*	2.31
424.264	50	124	2.3	83	1.0	2.5*	3.0*	2.5	2.5	22.9	2.03
424.265	51	124	2.3*	75*	1.0	3.5*	3.5*	2.8*	1.5	22.1	1.69
424.266	62*	132	2.8*	91	1.0	1.5	1.5	2.8*	2.5	23.4	1.77
424.269A	63*	133	2.8	85	1.0	1.0	1.5	2.8*	2.5	23.2	1.80
424.272A	54*	128	2.1*	78	1.0	1.0	1.0	2.3	-	24.9	1.96
424.273A	52	125	2.0	72*	1.0	3.0*	3.0*	2.3	-	22.9	2.20
424.273B	54	127	1.9	79	1.5	2.5*	3.0*	2.0	-	22.9	2.10
424.274A	53	126*	2.1	63	1.0	2.0*	3.0*	2.3*	-	22.0	2.12
424.277A	64	134	2.5	98	1.0	1.0	1.0	2.3	2.0	14.3	2.12
424.280	61	132	1.8	77	1.0	1.5	1.5	2.5	2.5	23.6	1.79
424.281A	53	126	2.3*	72*	1.0	1.5	2.5*	2.0	-	24.5*	2.28
424.281B	61	130	2.3*	87	1.0	1.0	1.0	2.5	-	23.5	1.95
424.283	62	132	2.5*	82	1.0	1.5	1.5	2.5	-	24.2	1.98
424.284A	61	131	2.0	82	1.0	1.5	1.5	2.5	2.5	18.3	1.87*
424.285A	53	126	2.1*	74	1.5	1.5	1.5	2.0	2.5	18.9	2.58
424.285B	55	129*	2.3*	79*	1.0	2.0*	2.5*	2.3	3.0	22.7	2.30
424.285C	60	131	2.5*	75	1.0	1.5	1.5	2.3	2.0	17.3*	1.96*
424.286	64	132	2.6*	92*	1.0	1.5	1.5	2.3*	2.0	9.8	1.90
424.291	63	130	4.3	54*	1.0	1.5	3.0*	2.3	-	10.0	1.65
424.292	53*	128	2.8*	64	1.0	1.5	1.5	2.3	-	32.3*	2.40
424.295	64	132	1.9	62	1.0	1.0	1.0	2.5	-	20.7*	1.53
424.296A	65	130	2.3*	93	1.0	1.5	1.5	2.3	-	18.5	2.36
424.299A	60	137	3.1*	71	1.0	1.0	1.0	2.8*	2.0	22.9	1.87
424.303	52	123	2.0	52	1.0	1.0	2.0*	2.3	-	21.0	2.62
424.305	64	136	2.3	60	1.0	1.0	1.0	2.0	2.0	15.2	2.38
424.306	51	123	2.2	58	1.0	1.5	1.5	2.5	-	22.9*	2.56
424.308	57	130	2.3*	91	1.0	1.5	1.5	2.0	2.0	20.9*	2.39*
424.316	51	123*	2.0	73	1.0	1.0	1.5	1.5	3.0*	9.1	2.30
424.317	48	123	3.3*	74	1.0	2.5*	3.5*	1.8	3.0*	20.8	2.40*
424.318	56	130	2.4*	64	1.0	1.5	1.5	2.3	-	27.7*	2.10*
424.335A	58	128	2.1	65	1.0	1.0	1.0	2.8*	-	22.3*	1.12
424.335B	57	131	2.4*	64	1.0	1.5	1.5	2.5	-	27.2*	1.80
424.336	50	119	1.8	76*	1.0	1.5	3.5*	2.0	3.0*	14.5	2.35

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.247A	III	17.8	47.6	12.8	3.0	19.9	55.7	8.3	0.2	1	R R R H
424.247B	IV	17.5	47.5	12.5	2.8	19.8	55.9	8.9	0.1	1	R R R H
424.249B	IV	17.7	45.1	13.5	3.0	17.4	55.6	10.4	0.1	1	R H H S
424.249C	IV	17.5	47.5	12.8	3.1	17.3	56.7	10.1	0.1	1	R R R H
424.249D	IV	17.4	45.9	12.7	2.8	19.4	55.8	9.4	0.1	1	R R R H
424.249E	IV	17.6	46.1	12.8	3.0	17.2	56.7	10.3	0.1	1	H
424.252	IV	17.9	44.9	11.0	3.5	19.9	55.7	9.8	0.1	1	H
424.255A	IV	18.2	45.8	11.9	3.2	18.5	57.2	9.2	0.1	1	S
424.255B	IV	18.3	45.3	11.4	3.3	19.3	56.2	9.8	0.1	1	S
424.256	IV	17.9	43.8	11.2	3.2	24.2	52.4	8.9	0.1	1	S
424.258	IV	16.2	47.2	12.1	3.5	19.4	55.3	9.6	0.1	1	S
424.259	IV	17.6	44.7	11.8	3.0	18.0	56.6	10.5	0.1	1	R R R S
424.263	IV	17.1	45.8	12.1	3.0	24.6	51.6	8.6	0.1	1	S
424.264	IV	17.1	45.5	12.1	3.1	21.6	54.2	8.8	0.3	1	R R R H
424.265	IV	16.6	48.4	11.5	3.1	19.6	55.9	9.7	0.2	1	H
424.266	IV	18.4	46.2	11.7	3.4	19.4	56.1	9.3	0.1	1	S
424.269A	IV	18.0	45.4	11.6	3.5	19.9	55.8	8.9	0.2	1	S
424.272A	IV	17.9	45.5	12.0	3.7	21.8	53.5	8.8	0.2	1	S
424.273A	IV	16.5	46.7	11.0	3.4	18.2	57.2	10.0	0.2	1	S
424.273B	IV	16.6	45.7	11.1	3.4	18.2	57.5	9.7	0.1	1	S
424.274A	IV	17.7	45.2	12.6	3.4	21.0	54.0	9.0	0.1	1	S
424.277A	IV	17.5	44.7	10.8	3.6	21.8	53.5	10.1	0.2	1	R R R S
424.280	IV	18.0	46.1	11.8	3.5	21.4	54.3	8.9	0.1	1	S
424.281A	IV	17.4	48.5	11.3	3.3	20.7	56.1	8.5	0.2	1	S
424.281B	IV	17.1	45.6	11.3	3.3	22.5	53.9	8.8	0.2	1	S
424.283	IV	17.8	47.2	11.6	3.4	21.6	54.4	8.9	0.1	1	S
424.284A	IV	18.0	47.2	11.1	3.4	20.7	55.4	9.2	0.2	1	S
424.285A	IV	17.4	46.4	11.8	2.9	22.6	54.2	8.2	0.3	5	R R R R
424.285B	IV	18.0	45.8	11.1	3.3	22.1	54.3	9.0	0.1	3	S
424.285C	IV	18.2	46.8	11.2	3.4	21.8	54.3	9.1	0.2	1	R R R R
424.286	IV	15.5	49.3	12.4	3.3	21.9	52.8	9.3	0.4	1	S
424.291	IV	16.6	43.7	11.5	3.3	21.0	54.7	9.3	0.2	1	S
424.292	IV	17.8	46.3	11.6	3.6	22.2	53.9	8.6	0.2	1	
424.295	IV	17.3	44.0	13.7	3.3	21.6	51.2	9.8	0.3	1	S
424.296A	IV	16.6	45.5	12.0	3.3	19.2	55.5	9.8	0.1	1	S
424.299A	IV	18.3	46.3	11.0	3.6	21.9	54.2	9.2	0.2	1	S
424.303	IV	17.9	44.3	11.1	3.2	23.1	52.9	9.5	0.2	1	S
424.305	IV	17.2	46.5	12.0	2.6	16.4	58.4	10.5	0.0	4	R R R R
424.306	IV	17.8	43.4	10.3	2.8	24.9	53.0	8.8	0.2	1	S
424.308	IV	17.8	46.0	11.9	3.3	22.0	54.0	8.7	0.1	3	S
424.316	IV	16.5	45.8	12.8	3.0	16.2	57.6	10.3	0.1	1	R R R R
424.317	IV	17.8	46.4	11.7	3.3	23.4	53.4	8.0	0.2	1	R R R R
424.318	IV	17.6	44.3	11.6	3.5	21.5	54.3	9.1	0.1	1	H
424.335A	IV	15.8	45.9	12.0	3.6	20.4	54.4	9.4	0.2	1	S
424.335B	IV	16.9	44.3	11.6	4.0	22.9	52.9	8.5	0.2	1	S
424.336	IV	16.9	46.6	12.2	3.0	18.7	56.7	9.4	0.1	1	S

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
424.339		KAS 351-7	S. Korea		S. Korea	1978	III
424.342A		KAS 351-10	S. Korea		S. Korea	1978	IV
424.343		KAS 351-11	S. Korea		S. Korea	1978	IV
424.346		KAS 351-14	S. Korea		S. Korea	1978	IV
424.347A		KAS 351-15	S. Korea		S. Korea	1978	IV
424.347B		(KAS 351-15)	S. Korea		S. Korea	1978	IV
424.348A		KAS 351-16	S. Korea		S. Korea	1978	IV
424.349A		KAS 351-17	S. Korea		S. Korea	1978	IV
424.349B		(KAS 351-17)	S. Korea		S. Korea	1978	IV
424.349C		(KAS 351-17)	S. Korea		S. Korea	1978	IV
424.350		KAS 351-18	S. Korea		S. Korea	1978	IV
424.351		KAS 351-19	S. Korea		S. Korea	1978	IV
424.355		KAS 351-23	S. Korea		S. Korea	1978	IV
424.357A		KAS 351-25	S. Korea		S. Korea	1978	IV
424.364A		KAS 351-32	S. Korea		S. Korea	1978	IV
424.364B		(KAS 351-32)	S. Korea		S. Korea	1978	IV
424.368B		(KAS 351-36)	S. Korea		S. Korea	1978	IV
424.370A		KAS 351-38	S. Korea		S. Korea	1978	IV
424.372		KAS 351-40	S. Korea		S. Korea	1978	IV
424.377		KAS 353-16	S. Korea		S. Korea	1978	IV
424.380		KAS 355-7	S. Korea		S. Korea	1978	IV
424.381		KAS 371-1	S. Korea		S. Korea	1978	IV
424.385		KAS 503-12	S. Korea		S. Korea	1978	IV
424.386A		KAS 503-13	S. Korea		S. Korea	1978	IV
424.386B		(KAS 503-13)	S. Korea		S. Korea	1978	IV
424.388		KAS 503-15	S. Korea		S. Korea	1978	IV
424.389		KAS 503-16	S. Korea		S. Korea	1978	IV
424.396		KAS 521-20	S. Korea		S. Korea	1978	IV
424.397		KAS 521-21	S. Korea		S. Korea	1978	IV
424.402A		KAS 530-13	S. Korea		S. Korea	1978	IV
424.402B		(KAS 530-13)	S. Korea		S. Korea	1978	IV
424.405B		(KAS 530-16)	S. Korea		S. Korea	1978	IV
424.405C		(KAS 530-16)	S. Korea		S. Korea	1978	IV
424.410		KAS 531-4	S. Korea		S. Korea	1978	IV
424.411		KAS 540-5	S. Korea		S. Korea	1978	IV
424.413		KAS 540-7	S. Korea		S. Korea	1978	IV
424.419		KAS 540-13	S. Korea		S. Korea	1978	IV
424.424		KAS 540-18	S. Korea		S. Korea	1978	IV
424.429		KAS 542-13	S. Korea		S. Korea	1978	IV
424.432		KAS 544-14	S. Korea		S. Korea	1978	IV
424.435		KAS 544-17	S. Korea		S. Korea	1978	IV
424.443		KAS 571-10	S. Korea		S. Korea	1978	IV
424.444B		(KAS 571-11)	S. Korea		S. Korea	1978	IV
424.444C		(KAS 571-11)	S. Korea		S. Korea	1978	IV
424.459		KAS 581-7	S. Korea		S. Korea	1978	IV
424.462A		KAS 581-10	S. Korea		S. Korea	1978	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.339	III	P	G	E	Ssp	Br	D	Y	Bf			
424.342A	IV	W	G	Sa	Ssp	Tn	I	Y	Y			
424.343	IV	W	T	Sa	Ssp	Tn	I	Y	Tn			
424.346	IV	W	T	Sa	Ssp	Tn	I	Y	Tn			
424.347A	IV	P	T	E	Ssp	Br	S	Gnbr	Gnbr			
424.347B	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.348A	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.349A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.349B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.349C	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.350	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.351	IV	P	G	E	Ssp	Br	S	Y	Bf			
424.355	IV	W	T	Sa	Ssp	Tn	S	Y	Tn			
424.357A	IV	P	G	E	Ssp	Br	S	Y	Y			
424.364A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.364B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.368B	IV	P	G	E	Ssp	Br	S	Y	Bf			
424.370A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.372	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.377	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.380	IV	P	G	E	Ssp	Br	S	Y	Y			
424.381	IV	W	G	A	Ssp	Tn	D	Y	Y	SDef		
424.385	IV	P	T	E	Ssp	Br	S	Br	Br	SNet		
424.386A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.386B	IV	P	T	E	Ssp	Bl	S	Bl	Bl			
424.388	IV	P	G	A	Ssp	Br	I	Y	Y			
424.389	IV	W	G	E	Ssp	Tn	I	Y	Bf			
424.396	IV	P	G	E	Ssp	Br	S	Y	Y			
424.397	IV	P	G	Sa	Ssp	Br	S	Y	Bf			
424.402A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.402B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.405B	IV	P	T	E	N	Br	D	Y	Bl			
424.405C	IV	W	G	E	N	Tn	I	Y	Bf			
424.410	IV	P	G	E	Ssp	Br	S	Y	Y			
424.411	IV	P	T	E	Ssp	Br	I	Y	Br			
424.413	IV	P	G	E	Ssp	Tn	I	Y	Bf			
424.419	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.424	IV	P	G	E	Ssp	Br	S	Y	Y			
424.429	IV	P	G	E	Ssp	Tn	D	Y	Bf			
424.432	IV	P	T	E	Ssp	Bl	S	Bl	Bl			
424.435	IV	P	G	A	Ssp	Tn	I	Y	Bf			
424.443	IV	P	G	E	Ssp	Br	S	Y	Y			
424.444B	IV	P	G	Sa	N	Br	S	Y	Bf			
424.444C	IV	W	G	A	Ssp	Tn	D	Y	Bf			
424.459	IV	P	T	E	Ssp	Br	S	Br	Br	SNet		
424.462A	IV	P	G	E	Ssp	Br	S	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.339	46*	118	1.9	77	1.5	1.5	3.0*	2.0	1.5	16.3	2.69
424.342A	56	129	2.3*	81*	1.0	1.0	1.0	2.5	4.0	18.0*	2.44
424.343	55	130	2.0	77	1.0	1.5	1.5	2.3	5.0	17.6*	2.39
424.346	55	130	1.8	81	1.0	1.5	1.5	2.3	4.5	21.4*	2.65*
424.347A	53	125	2.3	80	1.0	1.0	1.5	2.3	-	18.8*	2.37
424.347B	55	129	3.1*	81	1.0	1.0	1.0	2.3	-	21.7*	2.50
424.348A	47	119	1.8	75	1.0	1.5	2.0*	1.5	1.5	15.6	2.71
424.349A	50	120	2.0	63	1.0	1.5	2.5*	2.3	-	25.3*	2.89
424.349B	52	129	2.5	75	1.0	1.5	1.5	2.0	-	20.0*	2.33
424.349C	56	132	2.1	67*	1.0	1.5	1.5	2.3	-	19.9*	2.19
424.350	47	119	2.0	78	1.5	1.5	3.5*	2.3	1.5	17.0	2.90
424.351	47	120	2.0	81	2.0	1.5	3.0*	2.3	1.5	16.6	2.60
424.355	56	132	2.6*	83	1.0	1.0	1.0	2.5	5.0	19.3*	2.49
424.357A	58	130	2.5	86	1.0	1.0	1.0	2.0	2.0	20.8*	2.36*
424.364A	57	130	2.1	74	1.0	1.5	1.5	2.3	-	31.0*	2.32
424.364B	58	130	2.1	67	1.0	1.5	1.5	2.5	-	29.7*	2.00
424.368B	58	123	2.3*	93*	1.0	1.5	3.0*	2.0	2.5	12.6*	1.95
424.370A	51	121*	2.1	64	1.0	1.0	2.5*	2.3	-	19.9	2.42
424.372	57	129*	3.1	79*	1.0	1.0	1.0	2.3	-	20.2*	2.28
424.377	57	131	2.8*	63	1.0	1.5	1.5	2.3	-	28.3*	2.03
424.380	57	129	2.5	85	1.0	1.5	1.5	1.8	2.0	19.4*	2.30*
424.381	58	129	2.6*	79	1.0	1.5	2.5	2.5	2.0	19.1	2.28
424.385	59	134	3.0	75	1.0	1.0	1.0	2.3	-	29.9*	2.17
424.386A	57	129	2.6*	63	1.0	1.0	1.5	2.0	-	19.7	2.17
424.386B	63	130	1.8	75	1.0	1.5	1.5	2.3	-	17.2	2.10
424.388	56	120	2.0	72	1.0	2.0*	3.5*	1.8	2.0	16.4	2.51
424.389	54	129	2.8	100	1.5	2.0*	3.0*	1.5	1.0	15.8	2.33
424.396	51	128	2.9	82	1.0	1.5	2.0*	1.8	2.0	22.6*	2.54
424.397	58	128	2.1	78	1.0	1.5	1.5	1.5	1.0	18.6	2.46
424.402A	56	124	2.8*	64*	1.0	1.5	1.5	2.0	-	16.5	2.27*
424.402B	57	127	2.8*	66	1.0	1.5	1.5	2.0	-	17.9*	2.02*
424.405B	42	126	2.6*	123	3.5	1.0	1.0	1.8	2.0	15.0*	2.60*
424.405C	56	128	2.5	92*	1.0	1.5	3.0*	1.8	1.0	16.0	2.22
424.410	56	129	2.3	88	1.0	1.5	1.5	1.8	2.5	20.3*	2.12
424.411	51	128	2.3*	81*	1.0	1.5	1.5	2.3	3.0	19.0*	2.21
424.413	62	134	2.3*	80	1.0	1.0	1.0	2.0	4.0	9.0	1.79
424.419	51	121*	3.0	62	1.0	1.0	3.0*	2.3	-	21.8*	2.28
424.424	53	126	3.0	85	1.0	1.0	1.5	2.3	2.0	20.9*	2.21
424.429	53	127	2.1	72*	1.5	1.5	2.5*	2.0	3.5	10.9	1.99
424.432	61	130	2.6	79	1.0	1.5	1.5	2.3	-	17.5	2.09*
424.435	58	127	1.8	61	1.0	1.5	2.5*	2.3	2.0	24.4*	2.62*
424.443	57	129	2.1	82*	1.0	1.5	1.5	2.0	2.5	19.8*	2.18*
424.444B	54	126	1.3	74	1.0	1.0	1.0	1.8	1.0	21.4*	2.67*
424.444C	60	131	2.1	84	1.0	1.5	1.5	2.5*	3.0	18.5	1.98
424.459	50	131	3.0	76	1.0	1.5	1.5	2.3	-	35.1*	2.13
424.462A	57	128	2.4	80	1.0	1.5	1.5	2.0	2.0	20.6*	2.49

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.339	III	18.3	45.2	12.3	3.1	19.3	55.8	9.3	0.2	1	R R R S
424.342A	IV	17.7	46.7	11.9	3.3	21.2	54.6	8.8	0.2	1	R R R R
424.343	IV	17.8	48.2	11.9	2.9	20.0	55.6	9.4	0.2	1	R R S R
424.346	IV	17.6	46.2	12.1	3.0	19.4	55.9	9.3	0.2	1	R R R S
424.347A	IV	16.3	46.4	12.3	3.1	19.5	55.4	9.5	0.2	1	S
424.347B	IV	16.8	45.6	11.8	3.2	20.8	54.9	9.2	0.2	1	S
424.348A	IV	18.8	45.8	12.3	3.2	20.1	55.2	8.9	0.2	1	H
424.349A	IV	18.1	46.2	12.0	2.6	21.4	55.3	8.6	0.1	1	R R R S
424.349B	IV	18.2	45.4	11.9	3.2	20.4	55.2	9.1	0.1	1	R R R R
424.349C	IV	17.9	45.8	11.7	3.5	20.1	55.2	9.3	0.2	1	R R R R
424.350	IV	18.6	45.3	12.2	2.6	18.9	56.9	9.3	0.1	1	R R R S
424.351	IV	18.6	45.8	12.2	3.3	20.6	54.8	8.8	0.2	1	R R R S
424.355	IV	17.8	45.9	11.6	3.6	20.6	54.8	9.2	0.2	1	R R R R
424.357A	IV	18.0	46.8	12.1	3.3	19.8	55.6	9.0	0.1	1	S
424.364A	IV	17.1	45.3	11.6	3.6	21.5	54.6	8.5	0.2	1	S
424.364B	IV	17.2	45.0	13.1	2.5	20.8	55.4	8.0	0.1	1	S
424.368B	IV	16.1	48.0	12.0	3.6	20.2	54.8	9.2	0.2	1	R R R S
424.370A	IV	17.9	45.6	12.3	3.3	20.0	55.4	8.9	0.1	2	S
424.372	IV	16.7	46.6	13.5	2.2	19.3	55.9	8.9	0.2	1	S
424.377	IV	17.0	46.5	11.1	3.6	22.1	54.0	9.0	0.2	1	S
424.380	IV	17.7	46.0	11.7	3.2	19.8	56.3	9.0	0.1	2	S
424.381	IV	16.5	45.7	11.7	3.4	20.7	54.2	9.7	0.3	1	R R R S
424.385	IV	17.2	45.2	11.1	3.4	20.9	55.0	9.3	0.2	1	S
424.386A	IV	16.7	46.5	10.7	3.1	18.0	58.4	9.6	0.1	1	S
424.386B	IV	17.1	45.9	11.3	2.9	21.0	55.3	9.4	0.1	1	S
424.388	IV	17.1	47.3	12.7	2.9	19.0	55.8	9.6	0.1	1	R R R S
424.389	IV	17.5	44.7	11.9	3.1	18.1	56.7	9.9	0.2	1	R R R R
424.396	IV	17.8	46.3	12.3	3.0	21.0	54.9	8.7	0.1	1	R R R R
424.397	IV	17.5	44.2	12.3	3.3	20.0	55.4	9.0	0.1	1	R R R R
424.402A	IV	17.4	45.1	11.8	3.0	18.7	56.5	9.7	0.4	1	S
424.402B	IV	17.0	45.9	11.9	3.1	19.3	56.0	9.5	0.1	1	S
424.405B	IV	18.5	43.7	11.1	3.8	18.2	58.0	8.9	0.2	5	S
424.405C	IV	17.6	44.6	11.6	3.3	18.6	56.1	10.1	0.4	3	R R R R
424.410	IV	17.8	45.5	12.3	3.2	22.8	53.6	8.1	0.0	2	S
424.411	IV	17.7	45.1	11.6	3.2	21.0	55.1	9.0	0.1	1	S
424.413	IV	15.7	48.3	11.7	3.2	18.9	55.8	10.3	0.0	1	R R R R
424.419	IV	17.9	46.8	11.8	3.1	21.9	54.5	8.6	0.0	1	R R R S
424.424	IV	17.9	46.7	12.3	3.0	21.3	54.9	8.3	0.1	2	S
424.429	IV	16.7	46.9	11.3	3.0	22.5	54.3	8.9	0.1	1	R R H H
424.432	IV	16.9	45.4	11.1	2.9	19.2	56.4	10.5	0.0	1	S
424.435	IV	17.4	45.5	12.9	3.0	17.6	56.5	9.8	0.2	1	R R R S
424.443	IV	17.8	46.9	11.6	2.9	22.9	54.2	8.4	0.1	5	H
424.444B	IV	16.1	43.2	11.4	2.8	20.0	55.4	10.3	0.1	1	R R R R
424.444C	IV	16.9	47.7	13.0	3.0	19.0	54.7	10.2	0.1	1	S
424.459	IV	18.1	45.1	11.5	3.1	23.3	53.7	8.3	0.0	1	S
424.462A	IV	18.0	45.9	12.2	2.9	21.6	54.5	8.7	0.1	1	H

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.462B		(KAS 581-10)	S. Korea		S. Korea	1978	IV
424.467		KAS 581-15	S. Korea		S. Korea	1978	IV
424.471		KAS 581-19	S. Korea		S. Korea	1978	IV
424.476		KAS 590-13	S. Korea		S. Korea	1978	IV
424.479		KAS 603-7	S. Korea		S. Korea	1978	IV
424.481A		KAS 603-9	S. Korea		S. Korea	1978	IV
424.481B		(KAS 603-9)	S. Korea		S. Korea	1978	IV
424.483		KAS 604-16	S. Korea		S. Korea	1978	IV
424.484A		KAS 604-17	S. Korea		S. Korea	1978	IV
424.485		KAS 604-18	S. Korea		S. Korea	1978	IV
424.486		KAS 604-19	S. Korea		S. Korea	1978	IV
424.487A		KAS 604-20	S. Korea		S. Korea	1978	IV
424.488B		(KAS 604-21)	S. Korea		S. Korea	1978	IV
424.489A		KAS 604-22	S. Korea		S. Korea	1978	IV
424.489B		(KAS 604-22)	S. Korea		S. Korea	1978	IV
424.490		KAS 604-23	S. Korea		S. Korea	1978	IV
424.499A		KAS 606-1	S. Korea		S. Korea	1978	IV
424.500		KAS 606-2	S. Korea		S. Korea	1978	IV
424.504A		KAS 606-6	S. Korea		S. Korea	1978	IV
424.504B		(KAS 606-6)	S. Korea		S. Korea	1978	IV
424.505		KAS 606-7	S. Korea		S. Korea	1978	IV
424.511		KAS 606-13	S. Korea		S. Korea	1978	IV
424.512		KAS 606-14	S. Korea		S. Korea	1978	IV
424.513		KAS 610-7	S. Korea		S. Korea	1978	IV
424.517A		KAS 621-3	S. Korea		S. Korea	1978	IV
424.519		KAS 621-5	S. Korea		S. Korea	1978	IV
424.520		KAS 621-6	S. Korea		S. Korea	1978	IV
424.524		KAS 622-7	S. Korea		S. Korea	1978	IV
424.528		KAS 622-11	S. Korea		S. Korea	1978	IV
424.533		KAS 624-22	S. Korea		S. Korea	1978	IV
424.535A		KAS 624-24	S. Korea		S. Korea	1978	IV
424.535B		(KAS 624-24)	S. Korea		S. Korea	1978	IV
424.546A		KAS 632-21	S. Korea		S. Korea	1978	IV
424.548		KAS 632-23	S. Korea		S. Korea	1978	IV
424.549A		KAS 632-24	S. Korea		S. Korea	1978	IV
424.549B		(KAS 632-24)	S. Korea		S. Korea	1978	IV
424.565		KAS 636-18	S. Korea		S. Korea	1978	IV
424.569B		(KAS 640-14)	S. Korea		S. Korea	1978	IV
424.575		KAS 640-20	S. Korea		S. Korea	1978	IV
424.597		KAS 651-32	S. Korea		S. Korea	1978	IV
424.600		KAS 681-13	S. Korea		S. Korea	1978	IV
424.604		KAS 681-17	S. Korea		S. Korea	1978	IV
424.605A		KAS 681-18	S. Korea		S. Korea	1978	IV
424.608A		KAS 681-21	S. Korea		S. Korea	1978	IV
424.609		KAS 681-22	S. Korea		S. Korea	1978	IV
424.610		KAS 681-23	S. Korea		S. Korea	1978	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.462B	IV	P	G	E	Ssp	Br	S	Y	Y			
424.467	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.471	IV	P	G	E	Ssp	Br	I	Y	Y			
424.476	IV	P	T	E	Ssp	Br	D	Gn	Br	Gncot		
424.479	IV	P	G	E	Ssp	Tn	I	Y	Y			
424.481A	IV	P	T	E	Ssp	Br	S	Br	Br	St		
424.481B	IV	P	T	E	Ssp	Br	S	Br	Br	St		
424.483	IV	P	G	E	Ssp	Br	S	Y	Y			
424.484A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.485	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.486	IV	P	G	E	Ssp	Br	D	Gn	Gn	Gncot		
424.487A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.488B	IV	P	G	E	Ssp	Br	D	Y	Y			
424.489A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.489B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.490	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.499A	IV	W	T	E	Ssp	Tn	D	Y	Br			
424.500	IV	P	G	E	Ssp	Br	S	Y	Y			
424.504A	IV	P	T	E	Ssp	Bl	S	Br	Br			
424.504B	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.505	IV	P	G	E	Ssp	Br	I	Y	Y			
424.511	IV	P	T	E	Ssp	Bl	S	Br	Br			
424.512	IV	P	T	E	Ssp	Bl	S	Br	Br			
424.513	IV	W	G	Sa	Ssp	Tn	D	Y	Y			
424.517A	IV	P	T	Sa	Ssp	Br	I	Gn	Br	Gncot		
424.519	IV	Dp	T	I	Ssp	Br	I	Bl	Bl	Net		
424.520	IV	P	G	E	Ssp	Br	S	Y	Y			
424.524	IV	P	G	E	Ssp	Br	S	Y	Y			
424.528	IV	P	T	E	Ssp	Bl	S	Br	Br			
424.533	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.535A	IV	P	G	E	Ssp	Br	S	Y	Bf			
424.535B	IV	P	G	E	Ssp	Br	S	Y	Bf			
424.546A	IV	P	T	E	Ssp	Br	S	Br	Br	SNet		
424.548	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
424.549A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.549B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.565	IV	P	G	E	Ssp	Br	I	Gn	Ib	Gncot		
424.569B	IV	W	G	E	Ssp	Tn	D	Y	Bf			
424.575	IV	P	G	Sa	Ssp	Br	I	Lgn	Bf	Gncot		
424.597	IV	P	G	E	Ssp	Br	S	Y	Y			
424.600	IV	P	T	E	Ssp	Bl	S	Br	Br	SSt		
424.604	IV	P	T	E	Ssp	Bl	S	Br	Br	SSt		
424.605A	IV	P	G	E	Ssp	Br	I	Lgn	Bf			
424.608A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.609	IV	P	G	E	Ssp	Br	S	Y	Y			
424.610	IV	P	G	E	Ssp	Br	S	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.462B	57	128	2.3*	85	1.0	1.5	1.5	2.0	2.0	19.4*	2.20*
424.467	51	123*	2.9*	66	1.0	1.5	2.5*	2.3	-	22.7	2.79
424.471	52	123	2.3*	64	1.0	1.5	2.0*	2.3	2.0	23.2*	2.08
424.476	63	135	2.5	78	1.0	1.0	1.0	2.0	3.5	16.9	2.36
424.479	64	133	2.5	82	1.0	1.0	1.0	2.0	2.0	8.7	2.28
424.481A	56	128	2.4*	74	1.0	1.5	2.5*	2.0	-	22.3*	2.28
424.481B	57	131	3.0	86	1.0	1.5	1.5	2.3	-	20.4*	2.16*
424.483	57	130	2.4*	79*	1.0	1.5	2.0*	2.0	2.0	20.4*	2.32
424.484A	56	127	2.3	69	1.0	1.5	1.5	2.3	-	27.9*	2.02
424.485	58	130	2.5*	65	1.0	1.0	1.5	2.0	-	20.9*	2.28*
424.486	59	138	3.3	72	1.0	1.0	1.0	2.3	2.0	20.9*	2.00
424.487A	47	121	2.5	73	1.0	1.5	2.0*	2.0	-	22.5	2.43*
424.488B	53	126	2.8	78	1.0	1.5	2.0*	2.0	3.0*	22.8	2.51
424.489A	54	124*	2.8	77	1.0	1.0	1.5	2.3	-	18.5*	2.39*
424.489B	58	130*	2.8	84	1.0	1.5	2.0*	2.3	-	17.5*	2.20*
424.490	52	127	2.9	77	1.0	1.5	1.5	2.3	-	24.6	2.54
424.499A	56	132	3.0	112	3.0	1.5	1.5	3.0*	4.0	14.1	2.17
424.500	54	128	2.8	85	1.0	1.5	1.5	2.0	2.5	19.5*	2.40*
424.504A	62	130	2.8*	79*	1.0	1.0	1.0	2.3	-	15.8	2.03*
424.504B	60*	132	3.3	111*	3.5	1.0	1.0	2.3	-	14.4	1.82
424.505	54	127	2.3	86	1.0	1.5	1.5	2.0	2.0	20.1*	2.36*
424.511	63	130	3.0	90	1.0	1.0	1.0	2.3	-	16.4	2.24*
424.512	63	129	2.8*	86	1.0	1.5	1.5	2.3	-	16.1	2.17*
424.513	48	123	2.3	71	1.0	1.5	3.0*	2.5	1.5	29.6	2.53
424.517A	64	131	2.8	68	1.0	1.0	1.0	2.0	2.5	14.2	1.88
424.519	59	131	2.0	67	1.0	1.0	1.0	2.8*	-	23.0	1.86
424.520	54	128	2.4*	78	1.0	1.0	1.0	1.8	2.5	20.7*	2.26
424.524	56	129	2.5	86	1.0	1.5	1.5	1.8	2.0	21.2*	2.23*
424.528	63	132	3.0*	74	1.0	1.5	1.5	2.3	-	16.1*	1.96
424.533	57*	130	2.6*	67	1.0	1.5	1.5	1.5	-	8.0	2.44
424.535A	56	125	1.8	77	2.0	1.5	2.5*	2.5	1.5	21.0	2.67
424.535B	60	130	2.0	86	1.5	1.0	1.0	2.3	2.0	15.1*	2.61*
424.546A	53	128	2.3*	66	1.0	1.0	1.0	2.5	-	32.2*	2.40*
424.548	63	132	2.1*	82	1.0	1.0	1.0	2.3	3.0	23.2	1.86
424.549A	54	126	2.8*	71	1.0	1.5	2.0*	2.0	-	21.6	2.24
424.549B	53	125	2.3	59	1.0	2.0*	3.0*	2.3	-	21.0	2.44
424.565	57*	133	2.3*	77	1.0	1.0	1.0	2.3	2.0	25.9	2.13*
424.569B	53	125	2.4*	94	2.0	1.5	3.0*	2.3	2.0	17.5	2.45
424.575	62	129	2.6	92	1.0	1.5	1.5	1.8	1.5	11.2	2.01
424.597	57	129	2.6*	86	1.0	1.5	1.5	2.3	2.0	16.4*	2.31*
424.600	65	131	2.6	69	1.0	1.5	1.5	2.3	-	15.2	1.82
424.604	65	131	2.6*	76	1.0	1.5	1.5	2.3	-	15.3	1.89
424.605A	51	121	1.5	76	1.0	1.5	3.0*	2.5	1.5	22.7	2.61
424.608A	62	130	2.8*	119	4.0	1.0	1.0	2.3	-	9.2	1.84
424.609	56	127	2.5	81	1.0	1.0	1.5	2.3	2.0	18.5*	2.29*
424.610	57	129	2.1	92	1.0	1.5	1.5	2.0	2.0	20.0*	2.28*

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.462B	IV	17.7	46.1	11.9	3.1	20.4	55.3	9.2	0.1	2	S
424.467	IV	17.8	47.3	12.1	3.3	21.1	54.8	8.7	0.1	1	S
424.471	IV	18.1	44.8	11.3	2.9	20.9	55.3	9.4	0.1	1	S
424.476	IV	17.2	43.6	11.4	3.4	21.0	54.7	9.4	0.1	1	R R R S
424.479	IV	16.2	45.7	12.1	3.3	21.3	54.2	8.9	0.1	1	R R R R
424.481A	IV	17.3	45.4	12.0	3.2	21.2	54.6	9.1	0.0	1	H
424.481B	IV	16.6	45.7	11.9	3.1	20.7	54.6	9.4	0.3	1	R S R R
424.483	IV	17.6	46.0	11.9	3.2	20.5	55.0	9.2	0.2	1	R R R S
424.484A	IV	17.5	44.8	11.4	3.3	22.2	54.2	8.9	0.0	1	H
424.485	IV	17.4	44.9	11.4	2.9	20.5	54.8	8.6	1.8	1	S
424.486	IV	17.8	44.4	11.6	3.3	20.1	55.5	9.4	0.1	1	R R S S
424.487A	IV	17.8	46.0	11.9	3.1	21.5	54.6	8.8	0.1	1	R R R S
424.488B	IV	17.7	46.5	12.2	3.0	20.8	54.1	8.3	1.6	1	S
424.489A	IV	18.3	46.0	11.9	3.0	20.9	55.2	8.9	0.1	1	R R R R
424.489B	IV	18.6	43.0	12.2	3.0	21.2	54.8	8.7	0.1	1	R R R R
424.490	IV	18.1	45.5	11.9	3.1	21.0	55.2	8.7	0.1	4	S S S S
424.499A	IV	17.3	46.8	11.4	3.3	22.5	53.9	8.6	0.1	1	
424.500	IV	17.4	45.5	12.0	3.0	20.9	55.4	8.8	0.0	4	
424.504A	IV	17.3	46.3	11.3	3.0	19.6	56.7	9.2	0.1	1	
424.504B	IV	17.2	46.0	10.9	3.3	21.9	55.0	8.7	0.2	1	
424.505	IV	17.6	45.1	11.5	3.0	21.1	55.5	8.6	0.1	3	
424.511	IV	17.4	45.6	11.4	3.1	20.4	55.8	9.1	0.1	1	
424.512	IV	17.1	46.1	11.0	3.2	20.0	56.2	9.5	0.1	1	
424.513	IV	17.6	45.2	11.0	3.1	21.6	55.8	8.5	0.1	1	
424.517A	IV	17.6	45.9	12.0	3.4	22.1	53.9	8.6	0.1	1	
424.519	IV	17.3	45.7	11.0	3.1	21.3	54.8	9.7	0.1	1	
424.520	IV	17.9	44.6	11.4	3.2	20.8	55.4	9.1	0.1	2	
424.524	IV	17.8	45.4	11.7	2.9	20.9	55.2	9.0	0.2	3	
424.528	IV	18.1	45.6	11.3	3.2	20.6	55.3	9.6	0.1	1	
424.533	IV	15.6	46.7	11.5	3.2	21.5	54.5	9.1	0.1	1	
424.535A	IV	17.8	45.7	11.6	3.1	21.5	54.9	8.8	0.1	2	
424.535B	IV	17.8	44.8	11.2	3.3	19.8	55.6	10.1	0.0	1	
424.546A	IV	17.8	45.4	11.1	3.0	21.8	55.8	8.3	0.0	1	
424.548	IV	17.7	46.7	11.2	3.5	20.6	55.7	8.8	0.1	1	
424.549A	IV	18.1	44.6	10.6	3.1	18.9	58.2	9.1	0.1	1	
424.549B	IV	18.2	43.5	11.0	3.3	19.7	57.2	8.8	0.1	1	
424.565	IV	17.9	45.0	11.5	3.5	20.1	55.9	8.9	0.1	1	R S R R
424.569B	IV	16.9	44.5	11.5	2.9	17.4	58.1	10.0	0.0	1	
424.575	IV	17.8	44.6	11.8	3.2	19.7	55.9	9.3	0.1	1	
424.597	IV	17.8	46.8	12.2	3.1	18.9	56.5	9.2	0.0	1	
424.600	IV	17.5	47.0	10.8	3.2	20.7	56.2	9.1	0.1	1	
424.604	IV	17.6	47.2	11.0	3.0	20.5	56.6	8.8	0.1	1	
424.605A	IV	18.1	45.5	12.1	3.0	19.9	56.2	8.8	0.0	2	
424.608A	IV	15.6	46.1	10.9	3.6	21.7	55.0	8.9	0.0	1	
424.609	IV	18.4	45.3	12.0	3.2	21.6	55.2	8.0	0.0	3	
424.610	IV	17.8	46.1	12.1	2.9	20.4	55.7	8.9	0.0	4	

Table 1.3. Identification and origin information for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.611A		KAS 681-24	S. Korea		S. Korea	1978	IV
424.611B		(KAS 681-24)	S. Korea		S. Korea	1978	IV
424.614		KAS 681-27	S. Korea		S. Korea	1978	IV
427.088J			China		China	1978	IV

Table 2.3. Descriptive data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence			Pod color	Seed coat		Hilum color	Other traits		
			Color	Form	Density		Luster	Color		Seed	Leaf	Plant
424.611A	IV	P	T	E	Ssp	Br	S	Gn	Gn	Gncot		
424.611B	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
424.614	IV	P	G	E	Ssp	Br	D	Y	Bf			
427.088J	IV	W	G	E	N	Br	S	Y	Y			

Table 3.3. Agronomic data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.611A	62	133	2.5	86	1.0	1.0	1.0	2.8	3.5	21.4	1.94
424.611B	63	135	2.0	88	1.0	1.0	1.0	2.8*	2.5	23.5	1.72
424.614	55	123	2.3	83	1.0	1.5	3.0*	1.8	2.0	17.1	2.42
427.088J	43	129	2.8*	118	3.0	1.5	1.5	2.5	1.0	18.5*	2.59*

Table 4.3. Seed composition and disease reaction data for USDA soybean germplasm in early maturity group IV, PI 273.483 to PI 427.107, grown at Urbana, IL

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.611A	IV	18.2	45.5	11.0	3.3	22.3	55.0	8.4	0.0	1	
424.611B	IV	17.9	45.8	11.9	3.4	21.1	55.2	8.4	0.0	1	
424.614	IV	16.8	47.1	11.7	2.7	18.4	57.6	9.5	0.0	1	
427.088J	IV	17.5	44.2	11.5	2.6	23.3	54.2	8.3	0.0	2	

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
	Columbus		USA		USA	1971	IV
	Emerald		USA		USA	1975	IV
	HP-963		USA		USA	1969	IV
	Kahala		USA		USA	1969	IV
	Kaikoo		USA		USA	1969	IV
	Kailua		USA		USA	1969	IV
	Mokapu Summer		USA		USA	1969	IV
	Ware		USA		USA	1978	IV
	Wilson B		USA		China	1909	IV
273.484			S. Korea		S. Korea	1961	IV
274.205	Boosuk		S. Korea		S. Korea	1961	IV
274.207	Choojun		S. Korea		S. Korea	1961	IV
274.208	Icksan		S. Korea		S. Korea	1961	IV
274.209	Kumdu		S. Korea		S. Korea	1961	IV
274.210	Kumkang dailip		S. Korea		S. Korea	1961	IV
274.211	Kumkang solip		S. Korea		S. Korea	1961	IV
274.420	Iwanuma No. 1		Japan		Japan	1961	IV
274.421	Kanenari No. 1		Japan		Japan	1961	IV
304.218	Taichung Green		Taiwan		Taiwan	1965	IV
339.865A	Baemking		S. Korea		S. Korea	1969	IV
339.865B	(Baemking)		S. Korea		S. Korea	1969	IV
339.868F	(Yuwoltae)		S. Korea		S. Korea	1969	IV
339.870			S. Korea		S. Korea	1969	IV
339.981			S. Korea		S. Korea	1969	IV
339.983			S. Korea		S. Korea	1969	IV
339.987			S. Korea		S. Korea	1969	IV
339.996			S. Korea		S. Korea	1969	IV
339.997			S. Korea		S. Korea	1969	IV
340.002			S. Korea		S. Korea	1969	IV
340.010			S. Korea		S. Korea	1969	IV
340.012			S. Korea		S. Korea	1969	IV
340.015			S. Korea		S. Korea	1969	IV
340.027			S. Korea		S. Korea	1969	IV
340.034			S. Korea		S. Korea	1969	IV
340.035			S. Korea		S. Korea	1969	IV
340.036			S. Korea		S. Korea	1969	IV
340.037			S. Korea		S. Korea	1969	IV
340.039			S. Korea		S. Korea	1969	IV
340.040			S. Korea		S. Korea	1969	IV
340.042			S. Korea		S. Korea	1969	IV
340.048			S. Korea		S. Korea	1969	IV
340.053B			S. Korea		S. Korea	1969	IV
340.054			S. Korea		S. Korea	1969	IV
342.004	Nemashirazu		Japan		Japan	1969	IV
342.005	Funimijiro		Japan		Japan	1969	IV
360.836	Fujiotome		Japan		Japan	1971	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
Columbus	IV	P	T	E	N	Br	D	Y	Bl			
Emerald	IV	P	T	E	N	Br	D	Gn	Bl	Gncot		
HP-963	IV	P	G	E	N	Br	S	Y	Ib			
Kahala	IV	P	G	E	N	Br	D	Y	Lbf			
Kaikoo	IV	W	G	E	N	Br	S	Y	Bf			
Kailua	IV	W	G	E	N	Br	S	Y	Bf			
Mokapu Summer	IV	P	G	E	N	Br	D	Y	G			
Ware	IV	P	G	E	N	Tn	S	Y	Y			
Wilson B	IV	W	Lt	E	Ssp	Br	S	Bl	Bl			
273.484	IV	Dp	T	E	Ssp	Br	D	Gn	Gn	Gncot		
274.205	IV	P	G	E	Dn	Br	D	Y	Y			
274.207	IV	P	G	E	Ssp	Br	I	Y	Y			
274.208	IV	P	G	E	Ssp	Br	I	Y	Y			
274.209	IV	W	G	E	N	Tn	D	Y	Bf			
274.210	IV	W	G	Sa	Ssp	Br	I	Y	Bf			
274.211	IV	P	G	E	Ssp	Br	S	Y	Y			
274.420	IV	P	G	E	N	Dbr	D	Y	Y			
274.421	IV	P	T	A	Ssp	Tn	D	Y	Br			
304.218	IV	W	T	E	N	Tn	D	Y	Bl			
339.865A	IV	P	T	E	Ssp	Br	D	Bl	Bl			
339.865B	IV	P	T	E	Ssp	Br	D	Bl	Bl			
339.868F	IV	W	G	A	Ssp	Br	D	Y	Bf			
339.870	IV	P	G	E	Ssp	Br	S	Bf	Bf			
339.981	IV	P	T	E	Ssp	Tn	I	Y	Y			
339.983	IV	P	T	E	Ssp	Br	S	Br	Br			
339.987	IV	P	G	Sa	Ssp	Br	S	Y	Bf			
339.996	IV	P	G	E	Ssp	Br	S	Y	Y			
339.997	IV	P	G	E	Ssp	Br	I	Y	Y			
340.002	IV	P	G	E	Ssp	Br	S	Y	Lbf			
340.010	IV	P	G	E	N	Br	I	Y	Lbf			
340.012	IV	P	G	E	Ssp	Br	S	Y	Y			
340.015	IV	P	G	E	Ssp	Br	S	Y	Y			
340.027	IV	P	G	E	Ssp	Br	S	Y	Y			
340.034	IV	P	G	A	Ssp	Bl	I	Gn	Bf			
340.035	IV	P	G	E	Ssp	Tn	D	Y	Bf			
340.036	IV	P	G	E	Ssp	Br	S	Y	Y			
340.037	IV	P	G	E	N	Tn	D	Y	Bf			
340.039	IV	P	G	A	Ssp	Br	I	Lgn	Bf			
340.040	IV	P	T	A	Ssp	Br	I	Gn	Bl	Gncot		
340.042	IV	P	T	E	N	Tn	S	Y	Bl			
340.048	IV	P	G	E	Ssp	Br	S	Y	Bf	Def		
340.053B	IV	P	G	E	Ssp	Br	S	Y	Bf	Def		
340.054	IV	P	G	E	N	Tn	I	Y	Y			
342.004	IV	P	G	A	Ssp	Br	I	Y	Y			
342.005	IV	P	G	A	Ssp	Tn	S	Y	Y			
360.836	IV	P	G	A	N	Br	I	Y	Lbf			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
Columbus	56*	135	1.8	107*	3.0	1.0	1.0	2.3	1.5	15.2*	1.91
Emerald	47*	124*	1.8*	91	3.0	1.0	1.0	3.3*	1.0	31.3	1.99
HP-963	58*	132	2.5	107*	3.0	1.0	1.0	2.3	1.0	11.2*	1.91
Kahala	59*	132	2.0	104*	3.0	1.0	1.5	2.5	2.0	22.1	2.07
Kaikoo	57*	127*	1.8*	98*	3.0	1.0	1.0	2.8	2.5	22.5	2.00
Kailua	56*	134	2.3*	102*	3.0	1.0	1.0	3.3*	2.0	20.4*	1.87
Mokapu Sum.	62*	134	1.3	85*	1.0	1.0	1.0	2.8	3.0	18.4	2.25
Ware	56*	132	1.5	84	1.0	1.0	1.0	2.3	2.0	19.1	2.40
Wilson B	66*	131	2.5	145	3.5	1.0	1.0	2.0	-	10.9	1.99*
273.484	64*	129	3.5	80	1.5	1.5	2.0	3.0	2.5	21.5*	1.68
274.205	64*	134	2.0*	58*	2.5	1.0	1.0	2.5	3.0	22.3*	1.93
274.207	63*	132	3.0	81*	1.5	1.0	1.0	2.0	2.0	20.3*	1.87*
274.208	61*	131*	2.0	66	1.5	1.0	1.0	2.3	2.5	20.3*	1.81*
274.209	62*	131	3.0*	77	1.5	1.5	2.5	2.3*	1.0	16.7*	2.17
274.210	61*	136	2.0*	61	1.0	1.0	1.0	3.0	2.5	31.4	1.81
274.211	62*	131	2.0	74	1.0	1.0	1.5	2.0	2.0	19.9*	1.85
274.420	61*	134	1.5	63	1.0	1.5	2.0*	3.0*	1.0	30.3	1.34*
274.421	63*	134	1.8*	71*	1.0	1.0	1.5	3.0*	2.0	24.8	1.60
304.218	64	137	3.3*	70	1.5	2.0	3.5	2.0	3.0	14.9	1.11*
339.865A	68*	133	2.8	65	1.5	1.5	1.5	2.5	-	23.0*	1.84
339.865B	70*	137	3.8*	69	1.5	1.0	1.5	2.5	-	22.4*	1.85*
339.868F	69*	136	2.8	89*	2.0	1.5	3.5	1.8	1.0	12.9*	1.78*
339.870	59*	132	2.8	75	1.5	1.0	1.5	1.8	-	21.4*	1.81
339.981	61*	132	3.5*	62	1.0	1.0	1.5	2.8*	3.5	21.7*	1.96*
339.983	61*	129	2.0*	62*	1.0	1.5	1.5	3.0	-	30.1	1.91
339.987	63*	132	2.0	76	1.0	1.5	1.5	2.0	2.5	14.2*	1.49
339.996	63*	134	2.0	79	1.0	1.0	2.0	2.5	3.0	18.4*	1.91*
339.997	60*	131	2.8	80	1.0	1.0	1.5	3.3*	2.0	25.4	2.03*
340.002	63*	127*	2.8	70	1.0	1.0	2.5	2.3	2.5	18.5*	1.84*
340.010	63*	128*	2.3*	74*	1.5	1.0	1.5	1.8	4.0	12.2*	1.90
340.012	63*	129*	2.3	70*	1.0	1.0	1.5	2.0	1.5	19.9*	2.12*
340.015	59*	128	2.5	79*	1.0	1.0	1.0	2.3	1.5	20.4*	1.94
340.027	62*	132	2.3	74*	1.5	1.0	1.0	2.3	2.0	20.8*	1.88*
340.034	70*	131	3.0*	81*	2.5	1.0	1.5	2.3	2.0	12.8	2.11
340.035	66*	132	3.5	80	2.5	1.0	1.5	2.0	2.0	13.9*	2.02*
340.036	60*	130	2.3	76*	1.0	1.0	1.0	2.3	2.0	21.0	1.82
340.037	70*	134	3.5	89	3.0	2.0	2.0	1.8	1.5	10.9	1.55
340.039	67*	135*	2.3*	76*	2.0	1.5	1.5	3.3*	2.0	15.1*	1.51
340.040	62	133	2.5	76	1.0	1.5	1.5	3.3	1.5	19.8	1.59
340.042	69*	135	3.8	83	2.5	1.5	2.0*	2.0	5.0	10.5*	1.20
340.048	62*	130	1.8	67	1.0	1.5	1.5	2.8	2.0	21.0	1.82
340.053B	64*	129	1.8	62	1.0	1.0	1.5	2.8	1.0	21.6	1.72
340.054	68*	136	3.5	66	2.0	1.0	2.0*	1.8	2.0	8.2	1.73
342.004	64*	136	2.5	71	1.0	1.5	2.0*	2.8*	1.5	22.4	1.43
342.005	66	134	2.3*	83*	2.5	1.5	3.0*	3.0	1.0	23.5*	1.76
360.836	61	133	2.3*	81*	1.5	1.5	1.5	2.3	3.0	23.9*	2.39

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
Columbus	IV	17.8	45.3	10.7	4.1	19.9	56.7	8.5	0.0										
Emerald	IV	17.5	42.5	10.7	4.0	23.1	53.5	8.6	0.0										
HP-963	IV	17.1	40.1	10.9	3.6	20.1	56.4	8.7	0.1										
Kahala	IV	16.6	44.5	11.2	5.0	23.3	52.1	8.1	0.1										
Kaikoo	IV	17.5	44.8	11.5	3.8	29.3	48.2	6.9	0.0										
Kailua	IV	16.7	46.3	10.4	3.9	25.1	52.9	7.6	0.0										
Mokapu Sum.	IV	16.8	44.8	11.2	4.3	22.8	53.4	8.1	0.0										
Ware	IV	17.8	42.7	11.4	3.6	24.6	53.1	7.0	0.0										
Wilson B	IV	16.8	42.9	12.6	3.3	19.1	55.8	8.9	0.1										
273.484	IV	17.5	46.3	12.0	3.9	21.8	54.2	7.9	0.1	1	S								
274.205	IV	16.4	45.8	11.8	3.4	22.6	53.6	8.4	0.1	1	R								
274.207	IV	17.4	45.5	11.9	4.0	23.3	53.1	7.6	0.1	2	S								
274.208	IV	17.5	46.0	12.1	3.9	24.2	52.6	7.0	0.1	3	S								
274.209	IV	16.9	45.3	11.4	3.7	20.3	56.3	8.0	0.1	2	R	R	R	R	R	S	S	R	R
274.210	IV	17.2	45.7	11.4	4.0	22.5	53.5	8.4	0.1	1	S								
274.211	IV	17.2	46.8	12.4	4.0	23.3	52.8	7.1	0.1	1	S								
274.420	IV	16.6	42.1	10.4	4.6	27.3	49.1	8.4	0.1	1	R		R	S					
274.421	IV	16.9	43.2	11.1	4.0	24.2	52.2	8.4	0.1	3	R		R	R					
304.218	IV	15.8	45.7	12.1	2.0	19.6	55.6	10.6	0.0	1	R	R	R	R	R	R	R	R	
339.865A	IV	16.2	45.4	11.5	3.7	20.5	54.8	9.3	0.1	1	S								
339.865B	IV	16.4	45.5	11.3	4.3	20.4	54.5	9.3	0.1	1	S								
339.868F	IV	16.6	42.9	12.2	3.4	19.7	54.0	10.4	0.1	3	H								
339.870	IV	17.5	44.4	12.2	3.8	25.1	51.6	7.2	0.1	3	S								
339.981	IV	17.7	44.1	11.5	4.3	23.9	52.6	7.5	0.1	1	R	R	R	R	R	R	R	R	
339.983	IV	17.3	44.3	11.9	4.3	23.6	52.0	7.9	0.1	2	S								
339.987	IV	16.7	45.9	11.0	3.8	23.0	53.8	8.0	0.2	1	H								
339.996	IV	17.5	43.8	12.6	4.3	21.4	54.1	7.4	0.2	3	S								
339.997	IV	16.8	44.4	11.3	4.3	24.6	52.0	7.2	0.5	1	S								
340.002	IV	17.2	44.0	12.3	4.0	21.3	54.0	8.2	0.1	3	S								
340.010	IV	16.5	44.4	12.0	3.8	22.1	53.9	7.9	0.0	2	H								
340.012	IV	17.4	46.0	12.3	3.7	24.5	52.4	6.8	0.1	4	S								
340.015	IV	16.9	46.8	12.3	4.1	24.2	52.0	7.2	0.2	3	S								
340.027	IV	16.9	45.5	12.2	4.1	23.9	51.7	7.8	0.2	4	S								
340.034	IV	17.1	43.6	12.1	4.3	22.0	53.5	8.0	0.1	1	R	R	R	R	R	R	R	R	
340.035	IV	16.7	44.1	11.2	3.8	23.2	52.6	9.0	0.1	1	R	R	R	R	R	R	R		
340.036	IV	17.1	44.8	12.0	4.2	22.5	53.4	7.5	0.2	4	S								
340.037	IV	15.8	45.4	12.3	4.0	23.3	53.0	7.2	0.1	1	R	R	R	R	R	R	R		
340.039	IV	15.8	46.0	12.0	4.6	24.9	51.2	7.1	0.0	1	H								
340.040	IV	16.8	44.5	10.7	3.8	19.6	57.1	8.7	0.0	1	S								
340.042	IV	14.9	45.4	11.4	4.1	21.2	52.8	10.3	0.0	1	H								
340.048	IV	17.5	44.0	11.9	3.8	24.9	51.8	7.4	0.1	3	S								
340.053B	IV	17.1	43.8	11.8	3.8	25.3	51.5	7.4	0.0	3	H								
340.054	IV	16.1	43.5	12.0	3.9	22.2	53.4	8.3	0.0	1	H								
342.004	IV	17.7	44.2	11.3	4.2	23.9	53.2	7.2	0.0	1	R	R	R	H	R	R	R	R	
342.005	IV	18.8	40.1	13.4	3.8	20.2	53.7	8.6	0.1	1	R	R	S	S	S	S	S	S	
360.836	IV	17.9	42.5	14.7	3.8	19.8	53.3	8.2	0.1	1	R	R	R	R	R	R	S	R	

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
360.842	Okumejiro		Japan		Japan	1971	IV
360.845	Shinanomejiro		Japan		Japan	1971	IV
360.846	Shiroge-9		Japan		Japan	1971	IV
360.847	Shiromeyutaka		Japan		Japan	1971	IV
361.103	Phek-The		Romania		Romania	1971	IV
379.560	Shijo-arashi		Japan		Japan	1973	IV
379.562A	Yamagata zairai		Japan		Japan	1973	IV
379.562B	(Yamagata zairai)		Japan		Japan	1973	IV
398.185		(KAS 100-4-2)	S. Korea		S. Korea	1975	IV
398.190		(KAS 100-14-1)	S. Korea		S. Korea	1975	IV
398.197		KAS 101-3-3	S. Korea		S. Korea	1975	IV
398.205		(KAS 102-1-1)	S. Korea		S. Korea	1975	IV
398.206		KAS 102-1-2	S. Korea		S. Korea	1975	IV
398.208		KAS 102-2	S. Korea		S. Korea	1975	IV
398.211		KAS 102-3	S. Korea		S. Korea	1975	IV
398.215		(KAS 102-4-2)	S. Korea		S. Korea	1975	IV
398.221		KAS 150-16	S. Korea		S. Korea	1975	IV
398.236		(KAS 150-1-2)	S. Korea		S. Korea	1975	IV
398.245		KAS 150-9	S. Korea		S. Korea	1975	IV
398.250		KAS 150-14	S. Korea		S. Korea	1975	IV
398.251		(KAS 150-14)	S. Korea		S. Korea	1975	IV
398.252		(KAS 150-14)	S. Korea		S. Korea	1975	IV
398.257		(KAS 170-2)	S. Korea		S. Korea	1975	IV
398.270		KAS 171-2	S. Korea		S. Korea	1975	IV
398.281		KAS 172-4	S. Korea		S. Korea	1975	IV
398.282		KAS 172-5-1	S. Korea		S. Korea	1975	IV
398.289		(KAS 172-9-2)	S. Korea		S. Korea	1975	IV
398.290		KAS 172-10	S. Korea		S. Korea	1975	IV
398.299		KAS 173-6	S. Korea		S. Korea	1975	IV
398.303		(KAS 180-1)	S. Korea		S. Korea	1975	IV
398.305		(KAS 180-1)	S. Korea		S. Korea	1975	IV
398.327		KAS 181-10	S. Korea		S. Korea	1975	IV
398.342		KAS 200-11	S. Korea		S. Korea	1975	IV
398.349		(KAS 200-13)	S. Korea		S. Korea	1975	IV
398.350		(KAS 200-13)	S. Korea		S. Korea	1975	IV
398.355		(KAS 200-14)	S. Korea		S. Korea	1975	IV
398.357		KAS 200-16	S. Korea		S. Korea	1975	IV
398.358		KAS 200-17-1	S. Korea		S. Korea	1975	IV
398.360		KAS 200-17-2	S. Korea		S. Korea	1975	IV
398.371		(KAS 200-23-1)	S. Korea		S. Korea	1975	IV
398.375		(KAS 200-23-2)	S. Korea		S. Korea	1975	IV
398.379		KAS 200-26-2	S. Korea		S. Korea	1975	IV
398.380		KAS 200-26-3	S. Korea		S. Korea	1975	IV
398.389		(KAS 200-29-2)	S. Korea		S. Korea	1975	IV
398.392		KAS 200-30-1	S. Korea		S. Korea	1975	IV
398.401		KAS 201-2-1	S. Korea		S. Korea	1975	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
360.842	IV	P	T	A	Ssp	Br	I	Y	Y			
360.845	IV	W	G	A	Ssp	Br	D	Y	Lbf			
360.846	IV	P	G	Sa	N	Tn	I	Y	Lbf			
360.847	IV	P	G	A	Ssp	Br	I	Y	Y			
361.103	IV	P	G	Sa	Ssp	Br	D	Y	Y			
379.560	IV	P	T	E	Ssp	Br	S	Gn	Bl			
379.562A	IV	Dp	T	E	Ssp	Br	D	Gn	Br	Gncot		
379.562B	IV	Dp	T	A	Ssp	Br	D	Gn	Br	Gncot		
398.185	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
398.190	IV	P	G	E	Ssp	Tn	D	Y	Y			
398.197	IV	P	G	E	Ssp	Br	D	Y	Y	Def		
398.205	IV	P	G	E	Ssp	Br	S	Y	Y			
398.206	IV	P	T	E	Ssp	Br	S	Y	Y			
398.208	IV	P	T	E	Ssp	Br	I	Gn	Br	Gncot		
398.211	IV	P	T	E	Ssp	Br	S	Br	Br			
398.215	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.221	IV	P	T	E	Ssp	Br	D	Br	Br			
398.236	IV	P	Lt	E	Ssp	Tn	I	Bl	Bl			
398.245	IV	P	T	E	Ssp	Br	D	Bl	Bl			
398.250	IV	P	G	E	Ssp	Br	I	Y	Ib			
398.251	IV	P	T	E	Ssp	Br	D	Y	Bl			
398.252	IV	P	T	E	Ssp	Br	S	Y	Bl			
398.257	IV	P	T	E	Ssp	Br	S	Br	Br			
398.270	IV	Dp	T	E	Ssp	Br	D	Br	Br			
398.281	IV	P	T	E	Ssp	Br	S	Br	Br			
398.282	IV	P	G	E	N	Br	D	Y	Bf			
398.289	IV	P	T	E	Ssp	Br	S	Br	Br			
398.290	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.299	IV	P	G	E	N	Br	I	Lgn	Bf			
398.303	IV	P	T	E	N	Br	S	Gn	Bl	Gncot		
398.305	IV	P	G	E	Ssp	Tn	D	Gn	Gn	Gncot		
398.327	IV	Dp	G	E	Ssp	Br	D	Gn	Ib	Gncot		
398.342	IV	P	T	E	Ssp	Br	D	Br	Br			
398.349	IV	P	T	E	Ssp	Tn	S	Br	Br	St		
398.350	IV	P	T	E	Ssp	Br	S	Gn	Bl			
398.355	IV	P	T	E	Ssp	Tn	S	Br	Br	St		
398.357	IV	P	T	E	Ssp	Tn	S	Br	Br	St		
398.358	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
398.360	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
398.371	IV	P	G	E	N	Tn	D	Y	Bf			
398.375	IV	P	G	E	Ssp	Tn	I	Y	Y			
398.379	IV	P	T	E	Ssp	Br	D	Ggn	Bl	SNet		
398.380	IV	P	T	E	Ssp	Br	I	Gn	Bl			
398.389	IV	P	G	E	Ssp	Br	S	Y	Y			
398.392	IV	P	G	E	Ssp	Br	I	Y	Y			
398.401	IV	W	G	E	Ssp	Br	D	Y	Lbf			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
360.842	58*	134	2.8*	88*	1.0	1.5	1.5	3.3	1.0	25.0*	1.33
360.845	61*	133	2.0*	75*	1.5	1.5	3.0*	3.0*	1.0	25.8*	1.71
360.846	64	135	2.3*	71	1.0	1.5	2.0	2.3	3.0	24.5*	2.43*
360.847	67*	133*	2.5*	89*	1.5	1.0	2.5	2.3	1.0	19.9*	1.56
361.103	65	133	2.5	77	1.0	1.0	1.5	2.3	1.5	23.3*	2.32
379.560	61*	137	2.0*	48*	1.0	1.0	1.0	2.5	1.0	34.9	1.29
379.562A	66*	136	3.3	79*	2.0	1.0	1.5	3.3	1.5	31.4*	1.40
379.562B	67*	137	2.5	77	1.5	1.0	1.5	4.0	1.0	23.8*	0.84*
398.185	65	131	2.5	71	1.0	1.0	1.5	2.0	-	17.4	2.21
398.190	65*	138	2.8*	81	1.5	1.0	2.0*	2.5	3.0	13.1	1.87
398.197	63*	135*	2.0*	62*	1.0	1.0	1.5	3.5	3.0	30.0*	1.79
398.205	63	133	2.8*	84*	2.5	1.0	1.5	2.0	1.5	19.8*	1.70
398.206	62*	131	4.0	90	3.0	1.0	1.5	2.8*	2.5	22.4*	1.85
398.208	68	135	2.8	83*	1.5	1.5	1.5	2.5	2.0	19.5	1.55
398.211	65*	133	1.8*	55	1.0	1.0	1.5	3.0	-	24.2*	1.73
398.215	68	137	2.0	76	1.0	1.5	1.5	2.3	-	19.1*	1.73
398.221	65*	132	2.8	69	1.5	1.5	1.5	2.5	-	21.1*	2.04*
398.236	63*	133	4.3	63	1.0	1.5	1.5	2.5	-	22.7*	1.85
398.245	64*	135	1.8	72	1.0	1.0	1.5	2.3	-	19.1*	2.04*
398.250	56*	134	2.5	65	1.5	1.0	1.5	2.3	1.5	17.7	2.07
398.251	57*	134	1.9	63	1.0	1.0	1.5	1.8	2.5	17.6*	1.91
398.252	56*	132	2.0	71	1.5	1.0	2.0	2.3	4.5	23.9*	2.06
398.257	64	134	3.5	80*	2.5	1.0	2.0	2.8	-	23.0*	2.01
398.270	70*	136	2.3*	71*	1.0	1.5	1.5	2.3	-	23.0*	1.52*
398.281	65	136	3.3*	66	1.0	1.0	1.5	2.3	-	26.7*	2.52
398.282	64*	130	3.5	81*	2.0	1.0	1.5	2.0	1.0	14.6	2.13
398.289	66*	132	2.0*	60*	1.5	1.0	1.5	2.5	-	21.4	2.15*
398.290	59*	138	4.3	81	1.5	1.0	1.5	2.3	-	18.3*	1.71*
398.299	70*	134	2.3*	70*	1.5	1.0	1.0	1.8	2.5	7.7	1.42
398.303	65*	137	2.3*	80	2.0	1.0	1.5	2.5	2.0	20.1*	1.68
398.305	70*	136	3.5	84*	2.5	1.0	1.5	3.0	3.0	17.1*	1.79
398.327	65*	134	4.0	81*	2.5	1.0	1.5	2.8	1.0	22.9*	2.20
398.342	57*	132	1.8	60	1.0	1.5	2.5	2.5	-	30.3*	1.87
398.349	66*	137	2.3*	76	1.5	1.0	1.5	1.8	-	20.8*	1.37
398.350	67*	134	2.5	76	1.0	1.0	1.5	2.3	3.0	25.8*	1.77
398.355	66*	137	3.0*	77*	2.5	1.0	1.5	2.0	-	20.6*	1.70
398.357	63*	137	2.3*	74	1.0	1.0	1.0	2.0	-	21.5*	2.02
398.358	66*	134	2.5	80	1.0	1.0	1.5	2.5	2.0	24.5*	1.69
398.360	68	135	2.0	77	2.0	1.5	1.5	2.5	2.0	21.3*	1.75
398.371	69	134	4.0	65	1.5	1.0	1.0	1.5	2.0	10.7	2.07*
398.375	67*	137	2.3	90	1.0	1.5	1.5	1.8	3.5	12.3	2.01
398.379	65*	134	2.3*	86*	2.5	1.0	1.0	2.8	4.5	28.9*	1.99
398.380	66*	135	3.8*	99	3.5	1.0	1.5	2.8*	1.5	24.0*	1.57*
398.389	61*	134	2.8*	80*	1.5	1.0	1.5	2.3	2.0	17.8*	1.94*
398.392	63*	132	3.0	79*	1.5	1.0	1.5	2.3	2.0	18.5	2.10*
398.401	61*	134	2.3*	62	1.0	1.5	1.5	2.3	1.0	32.0	2.34

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction								
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race							
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
360.842	IV	18.0	39.8	10.9	4.0	23.2	52.5	9.2	0.0	1	R	R	R	S	S	R	R	R
360.845	IV	18.0	42.7	12.1	3.5	21.3	53.8	9.2	0.0	1	R	R	R	R	R	R	R	R
360.846	IV	17.9	42.8	14.2	3.6	20.3	53.2	8.6	0.0	1	R	R	R	R	R	R	R	R
360.847	IV	17.0	42.3	13.5	3.9	20.1	52.9	9.6	0.0	1	S							
361.103	IV	17.4	43.7	11.8	4.0	23.6	52.3	8.1	0.1	1	R	R	R	R	R	R	R	R
379.560	IV	16.7	41.7	11.0	4.6	25.1	51.3	7.8	0.1	1	R		R	R				
379.562A	IV	17.5	41.9	10.8	4.1	23.0	53.8	8.3	0.0	1	R		S	S				
379.562B	IV	17.0	42.5	10.5	4.5	22.4	54.0	8.5	0.1	1	R		S	S				
398.185	IV	16.0	43.0	11.7	3.7	21.3	54.3	8.9	0.0		S							
398.190	IV	15.6	45.6	11.0	4.0	23.2	53.5	8.1	0.0	3	S							
398.197	IV	16.5	46.1	11.9	4.0	22.0	53.4	8.5	0.1	1	S							
398.205	IV	16.9	45.9	12.1	3.9	23.0	53.8	6.9	0.0	5	S							
398.206	IV	18.4	43.7	11.5	4.3	27.9	49.8	6.2	0.1	1	R		R	R				
398.208	IV	15.9	47.2	12.1	3.6	23.5	52.8	7.8	0.1									
398.211	IV	17.2	43.8	11.7	3.8	21.6	54.3	8.4	0.0	1	S							
398.215	IV	16.6	44.9	12.2	3.9	21.6	54.2	8.0	0.1									
398.221	IV	16.3	44.3	10.1	3.6	20.6	56.9	8.7	0.0	1	S							
398.236	IV	16.7	44.9	11.3	4.4	21.0	55.8	7.3	0.2	1	S							
398.245	IV	16.7	43.7	10.2	3.6	22.5	54.7	8.7	0.1	1	R		R	R				
398.250	IV	17.6	44.7	10.3	3.8	24.7	54.2	6.7	0.2	1	R		R	R				
398.251	IV	16.9	45.9	9.9	3.7	24.0	55.5	6.6	0.1	1	R		R	R				
398.252	IV	17.4	43.8	11.8	4.0	22.6	53.3	7.8	0.2	1	R		R	R				
398.257	IV	17.4	43.3	12.1	3.9	24.9	52.0	6.8	0.1	1	H							
398.270	IV	16.6	45.5	11.1	3.1	22.3	54.4	9.1	0.0	1	R		R	S				
398.281	IV	17.2	43.2	10.0	3.3	21.6	56.2	8.6	0.1	1	R		R	S				
398.282	IV	16.5	43.9	11.7	4.0	19.8	54.9	9.4	0.1									
398.289	IV	16.5	43.4	10.6	3.7	23.8	54.1	7.5	0.2	1	S							
398.290	IV	17.7	40.6	10.5	4.4	24.2	52.4	8.3	0.2	3	H							
398.299	IV	13.2	48.5	12.6	4.0	18.5	54.7	9.9	0.1	1	R		R	H				
398.303	IV	17.3	44.7	10.2	3.4	18.8	58.0	9.3	0.1									
398.305	IV	16.3	46.9	11.1	3.3	17.1	60.3	8.5	0.3	1	R		R	H				
398.327	IV	17.4	43.1	11.5	4.1	22.9	53.3	7.9	0.2	1	S							
398.342	IV	17.9	43.3	11.1	3.4	23.8	54.7	6.7	0.2	1	S							
398.349	IV	17.3	43.6	10.9	4.5	24.6	51.8	7.7	0.4									
398.350	IV	17.5	44.0	11.7	4.5	22.7	52.9	7.7	0.3	1	S							
398.355	IV	17.0	44.2	10.8	4.2	24.2	52.8	7.8	0.2									
398.357	IV	17.9	43.1	10.8	4.1	23.6	53.4	7.8	0.2	1	S							
398.358	IV	17.1	46.2	11.7	3.7	23.0	53.7	7.5	0.2	1	S							
398.360	IV	18.4	44.9	11.7	4.0	22.8	53.7	7.4	0.3	1	S							
398.371	IV	16.8	41.9	11.5	3.6	22.2	53.5	9.0	0.2	1	R		R	R				
398.375	IV	15.9	45.1	12.8	4.1	21.6	53.0	8.3	0.1	1	R		R	R				
398.379	IV	16.4	44.3	12.1	3.7	20.1	55.7	8.2	0.0	1	S							
398.380	IV	17.4	41.3	11.1	4.2	23.1	53.5	8.0	0.0									
398.389	IV	17.4	45.0	11.5	3.9	22.1	54.3	7.8	0.1	1	R		R	R				
398.392	IV	17.0	45.8	12.1	3.9	21.6	55.5	6.8	0.1	1	S							
398.401	IV	17.4	44.9	10.9	4.0	21.1	55.7	8.2	0.1	5	S							

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.408		KAS 201-4	S. Korea		S. Korea	1975	IV
398.412		KAS 201-6-1	S. Korea		S. Korea	1975	IV
398.417		KAS 201-7-2	S. Korea		S. Korea	1975	IV
398.421		KAS 201-8-2	S. Korea		S. Korea	1975	IV
398.425		KAS 201-10	S. Korea		S. Korea	1975	IV
398.426		KAS 205-3	S. Korea		S. Korea	1975	IV
398.429		(KAS 205-4-1)	S. Korea		S. Korea	1975	IV
398.430		KAS 205-4-2	S. Korea		S. Korea	1975	IV
398.439		KAS 205-11	S. Korea		S. Korea	1975	IV
398.441		(KAS 205-11)	S. Korea		S. Korea	1975	IV
398.443		KAS 205-15	S. Korea		S. Korea	1975	IV
398.444		(KAS 205-15)	S. Korea		S. Korea	1975	IV
398.450		KAS 210-5	S. Korea		S. Korea	1975	IV
398.463		KAS 210-13	S. Korea		S. Korea	1975	IV
398.464		KAS 210-14	S. Korea		S. Korea	1975	IV
398.472		(KAS 220-3)	S. Korea		S. Korea	1975	IV
398.482		(KAS 230-6)	S. Korea		S. Korea	1975	IV
398.484		(KAS 230-7)	S. Korea		S. Korea	1975	IV
398.486		(KAS 230-7)	S. Korea		S. Korea	1975	IV
398.489		KAS 232-7	S. Korea		S. Korea	1975	IV
398.499		(KAS 232-9)	S. Korea		S. Korea	1975	IV
398.501		KAS 232-11	S. Korea		S. Korea	1975	IV
398.503		KAS 287-1	S. Korea		S. Korea	1975	IV
398.519		(KAS 310-2)	S. Korea		S. Korea	1975	IV
398.523		(KAS 310-4)	S. Korea		S. Korea	1975	IV
398.529		KAS 311-9	S. Korea		S. Korea	1975	IV
398.537		KAS 333-1	S. Korea		S. Korea	1975	IV
398.540		KAS 370-4	S. Korea		S. Korea	1975	IV
398.551		(KAS 370-13)	S. Korea		S. Korea	1975	IV
398.558		KAS 380-4-2	S. Korea		S. Korea	1975	IV
398.559		(KAS 380-4-2)	S. Korea		S. Korea	1975	IV
398.588		(KAS 390-1-2)	S. Korea		S. Korea	1975	IV
398.609		(KAS 390-8)	S. Korea		S. Korea	1975	IV
398.615		KAS 390-10	S. Korea		S. Korea	1975	IV
398.621		KAS 390-12	S. Korea		S. Korea	1975	IV
398.631		KAS 390-17-2	S. Korea		S. Korea	1975	IV
398.634		(KAS 390-17-2)	S. Korea		S. Korea	1975	IV
398.644		KAS 390-23	S. Korea		S. Korea	1975	IV
398.652		KAS 390-30	S. Korea		S. Korea	1975	IV
398.657		(KAS 390-32)	S. Korea		S. Korea	1975	IV
398.667		(KAS 391-4)	S. Korea		S. Korea	1975	IV
398.674		KAS 302-4	S. Korea		S. Korea	1975	IV
398.680		KAS 320-1	S. Korea		S. Korea	1975	IV
398.681		(KAS 320-1)	S. Korea		S. Korea	1975	IV
398.682		KAS 320-3	S. Korea		S. Korea	1975	IV
398.698		KAS 330-5	S. Korea		S. Korea	1975	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.408	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
398.412	IV	Dp	T	E	Ssp	Br	I	Gn	Gn	Gncot		
398.417	IV	P	G	Sa	Ssp	Bl	D	Y	Bf			
398.421	IV	P	G	E	N	Bl	D	Y	Y			
398.425	IV	P	T	E	N	Br	I	Bl	Bl			
398.426	IV	P	T	E	Ssp	Br	I	Rbr	Rbr			
398.429	IV	P	T	E	Ssp	Tn	D	Y	Br			
398.430	IV	P	T	E	Ssp	Br	D	Bl	Bl			
398.439	IV	W	G	E	Ssp	Br	D	Y	Bf			
398.441	IV	W	G	E	Ssp	Tn	D	Y	Bf			
398.443	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
398.444	IV	P	T	E	Ssp	Tn	I	Rbr	Rbr			
398.450	IV	P	T	E	Ssp	Br	I	Br	Br	St		
398.463	IV	W	T	E	Ssp	Br	D	Y	Y			
398.464	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.472	IV	P	T	E	Ssp	Br	I	Bl	Bl	Net		
398.482	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.484	IV	P	G	E	Ssp	Br	D	Y	Y			
398.486	IV	P	G	E	Ssp	Tn	I	Y	Y			
398.489	IV	P	T	E	Ssp	Br	D	Y	Y			
398.499	IV	P	T	E	Ssp	Tn	D	Y	Br			
398.501	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
398.503	IV	W	G	A	Ssp	Br	D	Y	Y			
398.519	IV	W	G	E	N	Br	I	Y	Bf			
398.523	IV	P	T	E	Ssp	Tn	I	Rbr	Rbr			
398.529	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.537	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.540	IV	P	G	E	N	Tn	D	Y	Bf			
398.551	IV	P	T	E	Ssp	Tn	S	Br	Br	St		
398.558	IV	P	G	E	Ssp	Br	D	Gn	G	Gncot		
398.559	IV	P	G	E	Ssp	Bl	D	Gn	G	Gncot		
398.588	IV	P	G	E	Ssp	Br	I	Y	Bf			
398.609	IV	P	T	E	Ssp	Tn	D	Y	Br			
398.615	IV	W	G	E	Ssp	Br	I	Y	Bf			
398.621	IV	W	G	E	Dn	Tn	I	Y	Bf			
398.631	IV	P	T	E	Ssp	Tn	I	Y	Br			
398.634	IV	P	G	E	Ssp	Br	D	Y	Y			
398.644	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.652	IV	P	T	E	Ssp	Br	D	Br	Br	SNet		
398.657	IV	P	T	E	Ssp	Br	D	Y	Br			
398.667	IV	P	G	E	Ssp	Tn	D	Y	Bf			
398.674	IV	P	G	E	Ssp	Tn	D	Y	Y			
398.680	IV	P	G	E	Ssp	Br	S	Gn	Bf	Gncot		
398.681	IV	P	T	E	N	Br	D	Gn	Br	Gncot		
398.682	IV	P	Lt	E	Ssp	Br	I	Bl	Bl			
398.698	IV	P	G	E	Ssp	Br	I	Gn	Bf	Gncot		

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.408	67*	130	2.3	53*	1.0	1.5	1.5	2.3	-	24.4*	2.08*
398.412	66*	133	2.8	75	1.5	1.5	1.5	3.0	2.0	23.0*	1.70
398.417	64	131	1.8*	79	2.5	1.0	2.0*	2.3	2.0	16.1*	1.87
398.421	63*	130	2.0	79	1.0	1.0	1.5	2.0	3.0*	12.1	2.02
398.425	63*	129	3.0*	63	1.0	1.0	1.0	1.8	-	9.4	2.33
398.426	63*	132	2.0	65	1.0	1.5	1.5	2.5	-	25.1*	2.26
398.429	58*	129	2.3	94	3.5	1.5	1.5	1.8	2.5	13.5	1.73
398.430	63*	133	1.5	72	1.0	1.0	1.0	2.5	-	19.2	2.01
398.439	64	132	3.3	74	2.0	2.5*	3.0*	2.8	1.0	19.7*	1.79
398.441	59*	133	2.3	70	1.0	2.5*	2.5*	2.5	1.0	20.8*	1.84*
398.443	67*	133	1.5	58	1.0	1.5	1.5	3.3	-	24.4*	1.68
398.444	62*	134	3.0*	63	1.0	1.5	1.5	2.5	-	21.6*	1.85
398.450	64*	135	4.5	60	1.5	1.0	1.0	3.3	-	31.4*	1.90
398.463	60*	135	1.0	47*	1.0	1.0	1.0	2.5*	3.0	25.0*	2.11
398.464	65*	132	2.5	77*	1.5	1.0	1.5	2.3	2.5	19.8*	2.06
398.472	63*	134	1.3	57	1.0	1.0	1.5	2.8	-	26.3	2.01
398.482	55*	131	2.5	76	1.0	1.5	1.5	3.0	2.0	16.9*	2.14
398.484	63*	132	3.5	67	1.5	1.0	1.5	2.8	2.0	24.0*	1.88
398.486	64	131	3.5*	89	1.0	1.0	1.5	2.8	2.0	23.5*	1.90*
398.489	60*	133	3.3*	80	1.0	1.0	1.0	2.5	4.0	20.4	2.23
398.499	60*	131	2.0	100	3.0	1.0	1.5	1.8	2.5	11.9	2.01
398.501	63*	131	3.0	81*	1.0	1.5	2.0	2.8	2.0	24.0*	1.84
398.503	63*	132	3.3	84*	3.0	2.5	2.5	2.5	3.0	20.3*	2.13
398.519	60*	135	1.5	66	1.0	1.0	1.5	2.0	1.0	18.8*	2.12
398.523	62*	133	3.3*	60*	1.0	1.5	1.5	2.3	-	22.8*	1.89
398.529	65*	134*	1.8	56*	1.0	1.0	1.0	2.5	-	25.4*	1.63*
398.537	65	134	1.8	72	1.5	1.0	1.5	2.8	-	17.9*	1.88*
398.540	72*	136	2.8	84	1.5	1.0	1.5	3.0	2.0	12.4*	1.56*
398.551	66	133	2.3*	100	2.5	1.0	1.0	2.5	-	20.9*	1.85
398.558	61*	132	2.3	57	1.0	1.5	1.5	2.8	1.0	25.4	1.76
398.559	68	133	3.0	74*	2.5	2.0*	2.5	3.5	2.0	19.3	1.89
398.588	61*	133	2.5	63*	1.0	1.0	1.5	2.8	2.0	22.5*	1.74
398.609	60*	133	2.5	72	1.0	1.5	2.0	2.3	2.5	13.5	1.85
398.615	58*	135	1.8	63*	1.0	1.0	1.0	2.8	1.0	32.5*	1.95
398.621	66*	136	2.3	65	1.0	1.0	1.0	2.3	2.0	23.5*	1.58*
398.631	65*	134	3.5	95*	3.0	1.5	1.5	2.0	3.0	11.2	2.15
398.634	70*	135	3.3	79	1.5	1.0	1.0	2.0	3.5	13.3*	1.85*
398.644	65*	134	2.3	88	1.5	1.5	1.5	3.0	-	22.1*	2.15
398.652	70*	133	2.3	66	1.5	1.5	1.5	3.0	-	22.4*	2.05
398.657	69*	136	3.5	88*	2.5	1.0	1.5	2.0	4.0	20.4*	1.75
398.667	68*	140	2.8*	91*	1.0	1.0	1.5	2.5	2.0*	18.8*	2.12*
398.674	70	133	4.0	69	2.5	1.0	1.0	1.5	2.5	8.5	2.09
398.680	75	135	3.5	95	3.0	1.0	1.5	2.3	3.0	14.4*	1.76
398.681	65*	135	1.5	62*	1.0	1.5	1.5	2.5	3.0	20.2*	1.96*
398.682	68*	133	3.3*	62	2.5	1.0	1.0	2.3	-	21.6*	2.10
398.698	57*	135	1.5	79*	1.5	1.0	1.5	2.3	2.0	20.8*	2.11

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction									
	Maturity			Palmitic	Stearic	Oleic	Linoleic	Linolenic	Other	F.L. race	Phytophthora race								
Entry	group	Oil (%)	Protein (%)	(%)	(%)	(%)	(%)	(%)	(%)	2	1	2	3	4	5	6	7	8	9
398.408	IV	17.0	43.2	10.9	3.5	21.1	55.8	8.5	0.1	1	S								
398.412	IV	17.3	44.8	11.9	3.5	21.9	55.6	7.0	0.0	1	S								
398.417	IV	16.6	45.3	11.3	3.1	19.9	57.0	8.7	0.1	1	R		R	S					
398.421	IV	14.9	44.7	11.5	3.7	24.2	52.9	7.4	0.1	1	S								
398.425	IV	16.8	44.8	11.3	4.1	19.9	56.0	8.5	0.0	1	S								
398.426	IV	17.1	41.7	11.3	4.0	23.6	53.9	6.8	0.1	1	S								
398.429	IV	16.5	45.0	12.2	4.5	20.7	55.1	7.1	0.2	1	R		S	S					
398.430	IV	16.7	43.3	10.8	3.6	21.8	55.3	8.3	0.1	1	S								
398.439	IV	16.6	45.7	12.2	4.5	21.1	53.3	8.8	0.1	1	S								
398.441	IV	16.1	46.2	11.7	4.5	21.2	53.5	8.8	0.1	1	S								
398.443	IV	16.9	43.8	10.8	3.9	23.6	53.9	7.5	0.2	1	S								
398.444	IV	16.6	45.8	12.6	3.8	20.8	54.9	7.8	0.2	3	S								
398.450	IV	16.1	43.8	11.7	4.2	25.3	51.7	6.9	0.1	1	S								
398.463	IV	17.7	45.6	12.4	3.7	21.3	54.4	8.0	0.1	2	S								
398.464	IV	17.9	43.7	11.5	3.9	23.9	53.2	7.2	0.1										
398.472	IV	15.4	46.0	10.8	3.5	21.1	55.4	8.9	0.1	1	S								
398.482	IV	17.5	45.8	10.4	3.8	22.4	56.6	6.7	0.0	4	S								
398.484	IV	18.5	43.1	12.3	4.1	23.2	53.8	6.4	0.2	4	S								
398.486	IV	18.1	42.1	10.5	4.8	24.3	53.5	6.6	0.2	5	S								
398.489	IV	17.5	45.2	11.5	3.8	18.9	56.9	8.7	0.1	1	S								
398.499	IV	17.2	43.5	12.2	4.2	19.1	56.3	8.1	0.0	1	R		S	H					
398.501	IV	17.0	45.1	11.8	3.8	22.5	54.2	7.5	0.0	1	S								
398.503	IV	16.1	44.9	12.1	4.6	23.7	52.3	7.6	0.3	1	R		R	S					
398.519	IV	16.1	43.3	11.8	3.3	19.9	56.4	8.4	0.0	1	S								
398.523	IV	16.8	45.2	12.4	3.9	20.9	54.4	8.2	0.1	1	S								
398.529	IV	16.3	43.5	11.3	4.5	23.2	52.8	8.1	0.2	1	S								
398.537	IV	17.0	45.1	10.7	4.0	24.1	54.1	6.9	0.1	1	S								
398.540	IV	16.5	45.1	12.5	3.9	19.8	54.6	9.0	0.0										
398.551	IV	16.9	44.9	11.7	3.9	21.9	54.1	8.0	0.2										
398.558	IV	18.6	43.4	11.8	3.8	20.4	55.8	7.9	0.1	1	S								
398.559	IV	17.4	43.1	11.7	4.1	22.0	54.0	8.1	0.1	1	S								
398.588	IV	16.9	45.9	12.3	4.3	25.3	50.2	7.7	0.1	1	S								
398.609	IV	16.3	45.2	10.4	3.1	19.3	58.8	8.2	0.0	1	R		R	R					
398.615	IV	16.6	46.7	10.8	4.0	22.1	54.7	8.1	0.1	3	S								
398.621	IV	17.1	44.8	12.2	3.1	21.5	54.8	8.2	0.1	1	R		R	R					
398.631	IV	16.2	43.6	11.3	4.0	23.0	53.1	8.4	0.1	1	R		R	R					
398.634	IV	15.4	46.9	11.7	3.5	21.3	54.3	9.0	0.0	1	R		R	S					
398.644	IV	17.2	43.2	10.9	3.9	22.6	54.3	8.2	0.0	1	S								
398.652	IV	16.5	42.9	12.0	3.7	22.0	53.5	8.6	0.0	1	S								
398.657	IV	16.1	45.3	11.7	3.9	22.5	53.5	8.2	0.0	1	S								
398.667	IV	16.7	43.4	11.6	3.9	23.2	52.0	9.1	0.0										
398.674	IV	15.9	42.5	12.3	3.7	22.8	53.3	7.7	0.0	1	R		R	R					
398.680	IV	17.3	43.8	10.1	3.5	23.4	54.1	8.8	0.0	1	R		R	R					
398.681	IV	17.3	45.0	12.5	3.1	21.6	55.0	7.5	0.1										
398.682	IV	16.5	44.0	12.1	3.7	19.8	55.7	8.5	0.0	1	R		R	S					
398.698	IV	18.5	42.7	11.4	3.9	23.8	53.3	7.4	0.0	1	S								

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.705		KAS 330-9-2	S. Korea		S. Korea	1975	IV
398.716		(KAS 330-14-1)	S. Korea		S. Korea	1975	IV
398.717		KAS 330-14-2	S. Korea		S. Korea	1975	IV
398.720		(KAS 330-15-2)	S. Korea		S. Korea	1975	IV
398.737		KAS 331-5	S. Korea		S. Korea	1975	IV
398.738		KAS 331-6	S. Korea		S. Korea	1975	IV
398.743		(KAS 331-8-1)	S. Korea		S. Korea	1975	IV
398.753		KAS 340-2	S. Korea		S. Korea	1975	IV
398.758		KAS 340-4	S. Korea		S. Korea	1975	IV
398.759		KAS 341-1	S. Korea		S. Korea	1975	IV
398.761		(KAS 341-1)	S. Korea		S. Korea	1975	IV
398.762		KAS 341-3	S. Korea		S. Korea	1975	IV
398.767		KAS 350-8	S. Korea		S. Korea	1975	IV
398.768		KAS 350-9	S. Korea		S. Korea	1975	IV
398.788		(KAS 353-4)	S. Korea		S. Korea	1975	IV
398.801		KAS 353-13	S. Korea		S. Korea	1975	IV
398.802		KAS 354-1	S. Korea		S. Korea	1975	IV
398.803		KAS 354-2	S. Korea		S. Korea	1975	IV
398.807		KAS 360-3	S. Korea		S. Korea	1975	IV
398.808		KAS 360-4	S. Korea		S. Korea	1975	IV
398.816		(KAS 360-7)	S. Korea		S. Korea	1975	IV
398.838		KAS 361-5	S. Korea		S. Korea	1975	IV
398.842		KAS 361-11	S. Korea		S. Korea	1975	IV
398.843		KAS 361-12	S. Korea		S. Korea	1975	IV
398.848		(KAS 361-14)	S. Korea		S. Korea	1975	IV
398.849		(KAS 361-14)	S. Korea		S. Korea	1975	IV
398.867		KLS 104-1	S. Korea		S. Korea	1975	IV
398.868		KLS 104-2	S. Korea		S. Korea	1975	IV
398.873		KLS 112-1	S. Korea		S. Korea	1975	IV
398.875		KLS 117	S. Korea		S. Korea	1975	IV
398.877		KLS 121	S. Korea		S. Korea	1975	IV
398.878		(KLS 121)	S. Korea		S. Korea	1975	IV
398.880		KLS 125-1	S. Korea		S. Korea	1975	IV
398.886		KLS 134-1	S. Korea		S. Korea	1975	IV
398.889		KLS 201-1	S. Korea		S. Korea	1975	IV
398.891		KLS 203	S. Korea		S. Korea	1975	IV
398.901		KLS 214-1	S. Korea		S. Korea	1975	IV
398.904		KLS 216-1	S. Korea		S. Korea	1975	IV
398.912		(KLS 223)	S. Korea		S. Korea	1975	IV
398.913		(KLS 223)	S. Korea		S. Korea	1975	IV
398.916		(KLS 302-1)	S. Korea		S. Korea	1975	IV
398.919		KLS 401	S. Korea		S. Korea	1975	IV
398.923		KLS 406	S. Korea		S. Korea	1975	IV
398.926		KLS 411-1	S. Korea		S. Korea	1975	IV
398.941		(KLS 602-1)	S. Korea		S. Korea	1975	IV
398.942		(KLS 602-1)	S. Korea		S. Korea	1975	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.705	IV	P	T	E	N	Tn	D	Y	Bl			
398.716	IV	P	T	E	Ssp	Br	S	Br	Br			
398.717	IV	P	T	I	Sp	Br	I	Br	Br	Net		
398.720	IV	P	T	E	Ssp	Br	S	Bl	Bl	SNet		
398.737	IV	P	T	E	Ssp	Br	S	Bl	Bl	SNet		
398.738	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.743	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.753	IV	W	T	E	Ssp	Br	I	Y	Br			
398.758	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.759	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.761	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.762	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.767	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.768	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.788	IV	P	G	E	Ssp	Br	D	Gn	Ib	Gncot		
398.801	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.802	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.803	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
398.807	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.808	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.816	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.838	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.842	IV	P	G	E	Ssp	Br	I	Y	Y			
398.843	IV	P	T	E	Ssp	Br	I	Lgn	Bl	Saddle		
398.848	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.849	IV	P	T	E	Ssp	Br	I	Bl	Bl			
398.867	IV	P	T	E	Ssp	Br	I	Lgn	Br			
398.868	IV	P	T	Sa	Ssp	Br	I	Lgn	Br			
398.873	IV	P	G	E	Ssp	Bl	I	Y	Y			
398.875	IV	P	Lt	E	Ssp	Br	I	Y	Y			
398.877	IV	P	G	E	N	Bl	D	Y	Y			
398.878	IV	P	G	E	N	Bl	D	Y	Y			
398.880	IV	P	G	E	N	Tn	D	Y	Y			
398.886	IV	P	G	E	Ssp	Br	I	Y	Y			
398.889	IV	P	G	E	Ssp	Br	S	Y	Y			
398.891	IV	W	G	E	Ssp	Br	I	Y	Bf			
398.901	IV	W	G	E	Ssp	Br	I	Y	Bf			
398.904	IV	W	G	E	Ssp	Tn	I	Y	Bf			
398.912	IV	W	G	E	Ssp	Br	I	Y	Y			
398.913	IV	W	G	E	Ssp	Br	I	Y	Y	Def		
398.916	IV	W	T	E	N	Br	D	Y	Y			
398.919	IV	P	G	Sa	Ssp	Br	I	Y	Bf			
398.923	IV	P	T	E	Ssp	Br	I	Gn	Bl	Saddle		
398.926	IV	P	T	E	Ssp	Br	S	Bl	Bl			
398.941	IV	P	G	E	Ssp	Br	I	Y	Y			
398.942	IV	P	G	E	Ssp	Br	D	Y	Y			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.705	70*	134	3.8*	86*	2.5	1.0	1.0	2.0	3.0	9.7	1.59
398.716	67*	135	2.0	77	1.0	1.0	1.5	2.5	2.0	18.7*	1.93
398.717	68	137	2.3*	56*	1.0	1.5	1.5	2.8	-	20.4*	1.78*
398.720	63*	132	2.5*	62*	1.5	1.5	1.5	2.5	-	25.6	1.63
398.737	63*	137	3.5	93	3.5	1.5	1.5	2.8	-	21.3*	1.70
398.738	63*	134	1.8	55*	1.0	1.5	1.5	3.0	-	29.7*	1.56
398.743	66*	135	3.5	90	3.0	1.5	1.5	2.5	-	20.3*	1.45
398.753	60*	131	2.8	71	1.5	1.0	2.0	1.8	2.0	21.9*	2.02
398.758	65*	135	2.0*	57*	1.0	1.0	1.5	3.0	-	27.3*	1.54*
398.759	63*	137	2.5*	56*	1.5	1.0	1.5	3.3	-	29.6*	1.82
398.761	65*	138	3.0	76*	1.5	1.5	1.5	2.5	-	22.5*	1.73*
398.762	65*	135*	3.8*	72*	1.0	1.0	1.5	2.5	-	20.8*	1.81*
398.767	66*	138	2.3*	52*	1.0	1.0	1.0	2.8	-	29.0*	1.70*
398.768	66	134	2.5*	56*	1.5	1.5	1.5	2.5	-	24.8*	1.90*
398.788	65*	131	2.0	66	1.0	1.5	1.5	2.5	1.0	21.8*	1.94
398.801	62*	132	2.8*	55*	2.0	1.0	1.5	3.3	-	28.9*	1.76*
398.802	63*	131	2.5*	55*	1.5	1.5	1.5	3.8	-	30.3*	1.71*
398.803	67*	131*	2.5*	62*	1.5	1.5	1.5	3.5	-	27.7*	1.79*
398.807	64*	127	4.5	63	2.0	2.5	2.5	2.5	-	19.8*	2.35
398.808	65*	130*	3.3*	67	1.0	2.0*	2.5	2.3	-	20.6*	1.82*
398.816	69*	133*	2.0	69	1.0	1.5	1.5	2.5	-	20.0*	2.01*
398.838	68*	133	4.0	74*	1.5	1.5	1.5	2.8	-	20.4*	1.86*
398.842	61*	132	1.5	77	1.5	1.5	2.0	2.3	2.5	23.6*	2.13
398.843	66*	138	2.3	85*	2.0	2.0*	2.5	2.5	-	24.5*	1.85
398.848	65	133	2.8*	69*	1.0	2.0*	2.0*	2.5	-	19.1*	1.65*
398.849	69*	135*	2.3	77	1.0	2.0*	2.0*	3.3	-	21.3*	1.75
398.867	67*	135	2.3	86*	1.5	1.5	2.0*	2.8	3.5	18.2*	1.88
398.868	68	136	1.8	85	1.5	2.0*	2.0*	2.8	3.5	17.8	1.68
398.873	65*	127	3.0	76	1.5	1.0	2.0	1.8	3.0*	7.5	1.91
398.875	65*	137	2.5	84	1.5	1.0	1.5	2.0	1.0	22.7*	1.76
398.877	65*	129	3.5	77	1.0	1.0	2.0	2.0	3.5	8.5	1.87*
398.878	66*	129	3.5	63	1.5	1.5	2.0	1.8	3.5	8.6	2.16*
398.880	70	133	5.0	67	2.0	1.0	1.5	2.0	3.0	8.7	1.91*
398.886	64*	134	2.8	67	1.0	1.0	1.0	2.3	1.0	19.7*	1.93*
398.889	63	135	1.8	74	1.5	1.0	1.0	2.5	2.5	17.1*	1.79*
398.891	59*	133	2.0*	74*	1.5	1.0	1.0	2.8	1.0	33.0	2.20
398.901	58*	132	1.5	66*	1.0	1.5	1.5	2.5	1.0	31.1	2.25
398.904	59*	133	2.6	63*	1.0	1.5	1.5	2.8	1.0	28.6*	2.21*
398.912	65*	132	2.3	70	1.0	1.5	2.0	3.5	4.5	22.1*	1.75
398.913	59*	131	2.8	80	1.0	1.5	1.5	3.3	1.0	23.9	1.94
398.916	57*	123	1.5	70	2.0	1.0	1.0	2.5	2.5	17.3	1.85
398.919	63*	129	2.3	70	1.0	2.5*	3.5	2.3	1.0	17.2	1.52
398.923	70*	137	2.8	61	1.0	2.0*	2.0*	2.5	-	22.6*	1.31*
398.926	65*	135	3.0	62*	1.0	1.5	2.0	2.5	-	21.6*	1.61
398.941	63*	135*	2.0	76*	1.0	2.0*	2.5	2.8	2.0	19.3*	1.62
398.942	65*	135	2.0	74	1.0	1.0	1.5	2.5	2.0	22.6*	1.45

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction									
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.705	IV	15.5	46.2	11.8	4.3	24.2	51.5	8.0	0.0	1	H								
398.716	IV	17.6	43.9	11.3	4.0	21.7	53.9	8.9	0.0	1	S								
398.717	IV	16.5	43.6	10.3	3.9	22.6	54.2	8.7	0.0										
398.720	IV	16.7	42.5	11.4	4.6	22.5	53.5	7.9	0.0	1	S								
398.737	IV	15.7	44.9	12.2	4.5	24.1	51.9	7.1	0.0	1	R	R	R						
398.738	IV	15.8	44.1	10.8	4.8	24.5	52.1	7.5	0.0	1	S								
398.743	IV	16.4	43.7	11.8	4.8	24.4	52.1	6.6	0.1	1	H								
398.753	IV	17.4	44.9	12.4	4.2	22.9	53.2	7.1	0.1	1	S								
398.758	IV	15.7	43.5	11.0	4.5	22.8	53.5	8.1	0.0	1	S								
398.759	IV	16.3	43.5	10.9	4.5	24.3	52.5	7.6	0.0	1	S								
398.761	IV	16.0	43.8	11.8	4.1	22.8	53.0	8.1	0.0	4	S								
398.762	IV	16.4	43.5	11.6	4.4	21.5	53.6	8.9	0.0	2	S								
398.767	IV	15.7	41.9	10.9	4.3	23.0	53.2	8.4	0.1	1	S								
398.768	IV	16.0	43.8	11.6	4.4	23.0	52.8	8.0	0.0	1	S								
398.788	IV	17.7	45.3	11.5	4.3	23.5	53.6	6.8	0.2	1	H								
398.801	IV	16.4	44.3	11.0	4.6	24.5	52.4	7.2	0.1	1	S								
398.802	IV	15.9	43.6	10.9	4.9	25.2	51.9	7.0	0.1	1	S								
398.803	IV	16.5	43.3	11.3	4.6	23.5	53.1	7.4	0.1										
398.807	IV	17.2	42.8	10.8	4.3	23.4	53.8	7.5	0.1										
398.808	IV	16.5	43.7	10.6	4.4	23.6	53.8	7.4	0.1										
398.816	IV	16.6	42.8	10.7	3.8	21.6	55.6	8.1	0.1										
398.838	IV	17.0	43.8	12.1	4.3	22.6	53.8	7.1	0.1	1	S								
398.842	IV	17.5	45.3	10.6	3.9	24.9	52.8	7.6	0.1	5	S								
398.843	IV	16.5	42.6	11.4	4.5	24.1	52.1	7.6	0.1	1	R	R	R						
398.848	IV	17.1	43.0	10.6	4.0	23.2	54.9	7.2	0.0	3	S								
398.849	IV	17.2	44.8	11.9	4.4	24.1	51.9	7.5	0.1	4	S								
398.867	IV	16.4	46.0	11.8	4.6	25.3	50.7	7.4	0.1	1	R	R	H						
398.868	IV	16.3	46.2	11.7	4.5	24.9	51.0	7.4	0.2	1	R	R	H						
398.873	IV	15.0	44.7	11.1	3.5	21.0	55.8	8.3	0.1	1	R	R	S						
398.875	IV	16.7	46.5	11.8	3.7	21.6	55.6	7.0	0.1	1									
398.877	IV	15.7	45.2	10.9	4.2	22.3	53.7	8.6	0.1	1	R	R	S						
398.878	IV	15.6	45.9	10.9	3.7	21.8	54.4	9.0	0.0	1	R	R	S						
398.880	IV	15.8	42.9	12.4	3.5	21.7	54.3	8.0	0.0	1	R	R	R						
398.886	IV	16.2	46.7	12.2	3.3	20.9	55.3	8.1	0.0	5	S								
398.889	IV	17.3	44.3	12.9	3.9	20.2	55.1	7.7	0.1	5	S								
398.891	IV	17.1	45.6	11.3	3.7	22.1	54.6	8.1	0.0	4	S								
398.901	IV	17.5	45.6	11.4	3.8	21.9	54.7	8.1	0.0	5	S								
398.904	IV	16.5	45.4	10.9	3.9	21.7	55.0	8.4	0.0	4	S								
398.912	IV	15.9	46.9	12.2	3.7	20.5	55.1	8.3	0.1	1	S								
398.913	IV	16.0	45.5	10.7	3.8	23.5	54.4	7.5	0.0	4	S								
398.916	IV	17.8	45.0	12.6	3.9	23.5	53.3	6.6	0.0	1	S								
398.919	IV	16.2	42.7	11.3	4.1	24.7	51.4	8.4	0.0	1	R								
398.923	IV	15.9	44.9	11.3	3.9	23.1	53.4	8.2	0.0	1	H								
398.926	IV	15.5	44.0	11.6	3.9	24.0	53.3	7.1	0.0	1	S								
398.941	IV	16.2	45.9	12.8	3.9	22.6	52.9	7.7	0.1	4	R	R	R						
398.942	IV	16.4	45.6	11.5	3.3	21.4	55.4	8.3	0.0	3	S								

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
398.944		KLS 605-1	S. Korea		S. Korea	1975	IV
398.946		KLS 607-3	S. Korea		S. Korea	1975	IV
398.963		KLS 627-1	S. Korea		S. Korea	1975	IV
398.964		(KLS 627-1)	S. Korea		S. Korea	1975	IV
398.975		KLS 701-1	S. Korea		S. Korea	1975	IV
398.985		KLS 714-1	S. Korea		S. Korea	1975	IV
398.987		KLS 716-1	S. Korea		S. Korea	1975	IV
398.988		KLS 717-1	S. Korea		S. Korea	1975	IV
399.004		KLS 733-1	S. Korea		S. Korea	1975	IV
399.006		KLS 735-1	S. Korea		S. Korea	1975	IV
399.015		KLS 802-1	S. Korea		S. Korea	1975	IV
399.017		(KLS 803-1)	S. Korea		S. Korea	1975	IV
399.018		KLS 804-1	S. Korea		S. Korea	1975	IV
399.019		(KLS 804-1)	S. Korea		S. Korea	1975	IV
399.020		KLS 805-1	S. Korea		S. Korea	1975	IV
399.022		KLS 806-1	S. Korea		S. Korea	1975	IV
399.023		(KLS 806-1)	S. Korea		S. Korea	1975	IV
399.028		KLS 811	S. Korea		S. Korea	1975	IV
399.031		KLS 814	S. Korea		S. Korea	1975	IV
399.035		KLS 822-1	S. Korea		S. Korea	1975	IV
399.046			S. Korea		S. Korea	1975	IV
399.054			S. Korea		S. Korea	1975	IV
399.066			S. Korea		S. Korea	1975	IV
399.069			S. Korea		S. Korea	1975	IV
399.070			S. Korea		S. Korea	1975	IV
399.079			S. Korea		S. Korea	1975	IV
399.106			S. Korea		S. Korea	1975	IV
399.112			S. Korea		S. Korea	1975	IV
404.172	Tej sen da baj pi	K-5327	USSR		China	1975	IV
404.198A	Sun huan do	K-5518	USSR		China	1975	IV
404.198B	(Sun huan do)	(K-5518)	USSR		China	1975	IV
406.708	Ham ahn		S. Korea		S. Korea	1976	IV
406.709	Kang lim		S. Korea		S. Korea	1976	IV
407.733			China		China	1976	IV
407.776		KAS 361-2	S. Korea		S. Korea	1976	IV
407.778B		(ORD 8102)	S. Korea		S. Korea	1976	IV
407.778C		(ORD 8102)	S. Korea		S. Korea	1976	IV
407.781A		ORD 8105	S. Korea		S. Korea	1976	IV
407.783		ORD 8107	S. Korea		S. Korea	1976	IV
407.818B		(ORD 8165)	S. Korea		S. Korea	1976	IV
407.820		ORD 8167	S. Korea		S. Korea	1976	IV
407.845B		(ORD 8160)	S. Korea		S. Korea	1976	IV
407.858		KAS 510-5	S. Korea		S. Korea	1976	IV
407.860		KAS 510-7	S. Korea		S. Korea	1976	IV
407.861C		(KAS 510-8)	S. Korea		S. Korea	1976	IV
407.863		KAS 510-10	S. Korea		S. Korea	1976	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
398.944	IV	P	G	A	Ssp	Tn	D	Y	Bf			
398.946	IV	W	G	A	Ssp	Tn	D	Y	Y			
398.963	IV	W	T	E	N	Tn	S	Lgn	Lbr			
398.964	IV	P	G	A	Ssp	Br	S	Lgn	Bf			
398.975	IV	P	G	E	Sdn	Tn	D	Y	Y			
398.985	IV	P	G	E	Sdn	Tn	D	Y	Y			
398.987	IV	P	G	E	Ssp	Br	D	Y	Bf			
398.988	IV	W	G	E	Ssp	Tn	D	Y	Y			
399.004	IV	P	T	E	Ssp	Br	S	Br	Br	St		
399.006	IV	W	G	Sa	Ssp	Tn	D	Y	Bf			
399.015	IV	P	G	E	Ssp	Br	D	Y	Bf			
399.017	IV	P	G	E	Ssp	Br	I	Y	Bf			
399.018	IV	W	G	Sa	Ssp	Tn	I	Y	Bf	Def		
399.019	IV	W	G	A	Ssp	Tn	I	Y	Bf			
399.020	IV	P	G	E	Ssp	Tn	D	Y	Y			
399.022	IV	Dp	G	E	Ssp	Tn	I	Y	Bf			
399.023	IV	Dp	G	E	Sdn	Tn	D	Y	Bf			
399.028	IV	P	G	E	Ssp	Br	D	Y	Y			
399.031	IV	P	G	E	Ssp	Br	D	Y	Y			
399.035	IV	W	T	E	N	Tn	I	Y	Br			
399.046	IV	P	T	E	Ssp	Br	S	Br	Br			
399.054	IV	P	G	E	Ssp	Br	D	Gn	G	Gncot		
399.066	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
399.069	IV	W	G	E	Ssp	Br	I	Y	Bf	SDef		
399.070	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
399.079	IV	P	G	E	N	Tn	I	Y	Bf			
399.106	IV	P	T	E	Ssp	Bl	S	Rbr	Rbr			
399.112	IV	P	T	E	Ssp	Bl	S	Br	Br			
404.172	IV	P	G	E	N	Tn	I	Y	Ib			
404.198A	IV	P	T	E	N	Bl	I	Bl	Bl			
404.198B	IV	P	T	E	N	Tn	I	Bl	Bl			
406.708	IV	P	G	E	Ssp	Br	I	Y	Bf			
406.709	IV	W	T	E	Ssp	Br	I	Y	Bl			
407.733	IV	P	G	Sa	N	Br	D	Y	Ib			
407.776	IV	P	G	E	N	Tn	D	Y	Y			
407.778B	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
407.778C	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
407.781A	IV	P	G	E	N	Tn	D	Y	Y			
407.783	IV	P	G	E	N	Tn	D	Y	Bf			
407.818B	IV	P	G	E	N	Tn	I	Y	Lbf			
407.820	IV	P	G	E	Ssp	Tn	I	Y	Bf			
407.845B	IV	P	G	E	N	Br	D	Y	Y			
407.858	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
407.860	IV	P	T	E	Ssp	Br	S	Bl	Bl			
407.861C	IV	W	G	E	Ssp	Br	D	Y	Bf			
407.863	IV	P	T	E	Ssp	Br	S	Bl	Bl			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
398.944	65	132	4.5	61*	2.5	1.5	2.0	1.5	1.5	9.3	1.86
398.946	70*	133	2.5	60	1.0	1.0	1.0	2.0	3.0	13.8	2.04
398.963	64*	133	1.5	84	1.0	1.0	1.0	1.8	1.0	11.3	1.93*
398.964	66*	132	3.0*	80*	2.5	1.0	1.5	3.0	2.5	16.6*	1.68
398.975	71*	132	3.3	72*	2.0	1.0	1.5	2.0	2.0	9.6	1.99*
398.985	68*	135	2.5*	63	1.0	1.0	2.0	2.0	3.5	14.5	1.96
398.987	70*	135	3.5	86*	2.0	1.0	1.5	2.3	1.5	15.6*	2.23
398.988	59*	134	3.3*	79*	1.5	2.0*	2.5	1.8	2.5	15.0	1.86
399.004	64*	131*	2.0	67	1.0	1.5	3.0*	2.0	-	15.1	2.08
399.006	70*	137	3.5	67*	2.0	1.0	1.0	2.0	4.0*	12.9*	1.55
399.015	67*	130*	3.3	75*	2.5	1.0	2.5	3.0*	2.0	18.1	1.49
399.017	66*	130*	1.5	74	1.5	1.5	1.5	2.5	2.0	19.0	1.64
399.018	67*	132	2.3	72	1.5	1.0	1.5	3.0	3.0	14.0*	1.91
399.019	66*	133	2.8	71	1.0	1.0	1.5	3.0	3.0	14.8*	1.95
399.020	66*	138	2.0	69	1.5	1.0	1.5	2.8	4.0	13.5*	1.20
399.022	67*	135	1.8	86	1.0	1.0	2.0	2.5	1.5	18.8*	2.04
399.023	65*	136	2.3	67	1.0	1.0	1.5	2.3	2.0	20.8*	1.98
399.028	67*	136	1.5	80	1.5	1.5	1.5	2.5	3.0	16.4*	2.01*
399.031	64*	134	2.0	81	2.0	1.5	2.0	2.5	2.0	19.5*	1.98*
399.035	69*	135	2.0	95	2.0	1.0	1.0	2.0	1.5	10.6*	2.02*
399.046	66*	138	3.8	67	1.0	1.5	1.5	2.3	-	26.1*	2.28
399.054	63*	134	4.3*	67	1.5	1.5	1.5	3.3	1.0	27.9*	1.81
399.066	71	131	3.5	76*	1.0	1.0	2.5	2.5	-	18.1	2.12
399.069	60*	135	1.8*	70*	1.5	1.0	1.5	2.8	1.5	30.7	1.82
399.070	64*	133	2.0	53*	1.0	1.5	2.0	3.0	-	27.0*	1.54*
399.079	73	133	3.5	83	2.5	1.0	1.0	2.0	2.5	7.9	1.68
399.106	68*	131	3.3	77	1.0	1.5	1.5	2.3	-	16.8	1.81
399.112	70*	131	3.8	67	1.5	1.0	2.0*	2.5	-	15.9*	1.78*
404.172	66*	136	3.5	110*	3.5	1.0	1.0	2.5	2.0	19.6*	1.69
404.198A	67	133	3.8*	88	3.5	1.0	1.5	3.0	-	9.7*	1.94
404.198B	72	133	5.0	155*	4.5	1.0	1.5	3.0	-	8.5*	1.53
406.708	61*	126	1.5	61	1.0	1.0	1.5	3.0	1.5	20.7	2.17
406.709	56*	133	1.8*	91	2.5	2.5*	3.0*	3.3*	1.0	23.1	1.43*
407.733	67*	129*	2.8	95*	3.5	1.0	3.0*	2.5	1.0	18.9*	1.59
407.776	72	132	4.0	76	2.5	1.0	1.0	1.5	1.0	9.2*	1.77
407.778B	69*	134	2.8	70*	1.0	2.0*	2.5	2.5	-	7.7	1.56*
407.778C	69*	132	2.3	72*	1.5	1.0	2.0*	2.3	-	9.9	1.93
407.781A	74	134	4.3	72	2.5	1.0	1.0	1.8	2.5	8.4	1.82
407.783	65	128*	3.8	69*	1.5	1.5	1.5	2.0	2.0	9.0	1.73
407.818B	74	133	4.0	69	2.0	1.5	1.5	1.8	2.5	8.3	1.83
407.820	69*	132	3.5*	60	1.5	1.0	1.5	2.3	1.0	10.0	2.00
407.845B	64*	131*	3.5	65	1.5	1.0	1.5	2.0	5.0	8.6	1.60*
407.858	65*	134	2.5	81	1.0	1.0	1.5	3.3	2.0	23.4*	1.68
407.860	63*	127*	3.3*	66*	1.0	1.5	2.0	2.5	-	20.0*	1.54
407.861C	61*	132	2.3	75	1.5	2.0*	2.0*	2.3	2.0	19.2*	1.61
407.863	63*	130*	3.3*	71*	1.0	1.0	1.5	2.5	-	20.3*	1.79

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction								
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1	2	3	4	5	6	7	8	9
398.944	IV	16.4	44.1	12.3	3.8	21.4	55.0	7.3	0.0	1	R	R	R						
398.946	IV	16.0	45.9	11.7	2.8	20.8	54.7	9.8	0.0	1	R	R	R						
398.963	IV	16.7	43.8	12.8	3.3	18.1	56.7	8.9	0.1	4	S								
398.964	IV	16.9	43.6	11.8	4.1	24.6	52.1	7.4	0.0	2	H								
398.975	IV	15.6	43.8	11.4	3.9	23.3	52.3	8.8	0.0	1	R								
398.985	IV	15.9	45.2	12.4	3.4	18.9	56.1	9.0	0.0	4	R	R	R						
398.987	IV	16.6	42.2	11.8	3.4	20.5	55.5	8.7	0.0										
398.988	IV	17.1	43.3	11.5	4.2	23.1	53.4	7.6	0.0	5	R	R	R						
399.004	IV	16.0	42.4	11.0	3.6	23.1	52.7	9.4	0.0	1	R	R	H						
399.006	IV	16.1	43.3	11.3	3.6	22.7	53.3	8.9	0.1										
399.015	IV	17.2	45.3	11.1	3.8	23.3	54.1	7.6	0.0	5	R	R	R						
399.017	IV	16.5	46.0	12.5	4.0	23.8	51.7	7.8	0.0	1	R	R	R						
399.018	IV	16.6	43.9	10.8	3.6	22.4	55.1	8.0	0.0	2	R	R	R						
399.019	IV	16.6	45.0	10.6	3.5	22.3	55.2	8.2	0.0	2	R	R	R						
399.020	IV	14.9	44.3	10.6	3.7	22.6	54.6	8.5	0.0										
399.022	IV	16.8	46.6	12.4	3.1	20.5	55.0	8.9	0.0	1									
399.023	IV	16.6	45.8	12.5	3.4	21.3	53.9	8.7	0.1	1	R	R	R						
399.028	IV	16.2	45.4	11.8	3.2	20.5	55.0	9.2	0.1	1	R	R	R						
399.031	IV	16.9	45.2	10.9	3.5	23.4	53.6	8.4	0.0	3	R	R	S						
399.035	IV	17.2	42.4	12.3	3.3	17.9	57.2	9.1	0.1										
399.046	IV	17.1	43.4	10.1	3.5	21.4	55.8	9.1	0.0	1	S								
399.054	IV	18.8	43.2	11.7	4.1	21.7	54.6	7.7	0.1	1	S								
399.066	IV	15.8	44.8	11.0	3.6	20.4	56.7	8.1	0.0										
399.069	IV	17.1	46.3	10.9	3.9	21.5	54.9	8.6	0.0	3	S								
399.070	IV	16.3	44.3	11.4	4.4	23.5	52.8	7.8	0.0	1	S								
399.079	IV	16.2	45.0	11.8	3.8	23.0	52.8	8.3	0.1	1	R	R	R						
399.106	IV	15.7	44.3	11.9	3.8	19.8	56.0	8.3	0.0	1	R	S	S						
399.112	IV	16.1	45.5	11.1	3.4	22.0	55.3	8.0	0.0	1	R	R	S						
404.172	IV	16.2	44.8	12.9	3.6	21.1	53.3	9.0	0.0	1	S								
404.198A	IV	15.6	42.5	11.9	3.0	17.2	58.5	9.3	0.0	3	S								
404.198B	IV	14.3	42.9	12.0	3.0	19.0	55.6	10.2	0.0	1	S								
406.708	IV	16.4	44.6	12.1	3.5	23.8	52.6	7.7	0.1	2	R								
406.709	IV	15.8	44.8	11.6	3.6	20.3	55.6	8.8	0.0	1	S								
407.733	IV	16.0	45.5	12.2	3.7	22.3	54.0	7.5	0.0	4	S								
407.776	IV	16.0	44.3	11.7	3.1	19.8	55.9	9.2	0.1	1	R								
407.778B	IV	13.3	45.6	11.3	4.3	26.7	50.2	7.4	0.0	1	R								
407.778C	IV	14.5	46.3	13.1	3.1	17.9	56.5	9.0	0.2	1	R								
407.781A	IV	15.3	43.8	12.1	3.5	21.1	54.4	8.7	0.1	1	R								
407.783	IV	16.0	44.8	11.5	3.8	22.5	54.3	7.8	0.0										
407.818B	IV	15.4	44.8	12.1	3.0	20.7	55.1	8.9	0.0	1	R								
407.820	IV	15.3	45.5	11.6	3.8	22.2	53.3	8.8	0.1	1	R								
407.845B	IV	15.5	44.7	12.5	3.3	17.7	56.4	10.0	0.1	1	R								
407.858	IV	17.6	44.3	11.7	3.7	22.5	54.1	7.9	0.0	1	S								
407.860	IV	16.1	44.5	11.3	4.0	23.7	53.3	7.5	0.1	1	S								
407.861C	IV	15.4	45.6	11.4	4.4	22.9	52.9	8.1	0.2	1	R								
407.863	IV	15.9	45.6	11.5	4.0	22.8	53.8	7.6	0.1	1									

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
407.867A		KAS 511-1	S. Korea		S. Korea	1976	IV
407.867B		(KAS 511-1)	S. Korea		S. Korea	1976	IV
407.869A		KAS 511-3	S. Korea		S. Korea	1976	IV
407.869B		(KAS 511-3)	S. Korea		S. Korea	1976	IV
407.872A		KAS 511-6	S. Korea		S. Korea	1976	IV
407.872C		(KAS 511-6)	S. Korea		S. Korea	1976	IV
407.873		KAS 511-7	S. Korea		S. Korea	1976	IV
407.883		KAS 521-4	S. Korea		S. Korea	1976	IV
407.886		KAS 521-8	S. Korea		S. Korea	1976	IV
407.892C		(KAS 523-4)	S. Korea		S. Korea	1976	IV
407.895		KAS 524-1	S. Korea		S. Korea	1976	IV
407.900		KAS 524-6	S. Korea		S. Korea	1976	IV
407.902B		(KAS 524-8)	S. Korea		S. Korea	1976	IV
407.904		KAS 530-2	S. Korea		S. Korea	1976	IV
407.906		KAS 530-4	S. Korea		S. Korea	1976	IV
407.913A		KAS 530-10	S. Korea		S. Korea	1976	IV
407.913B		(KAS 530-10)	S. Korea		S. Korea	1976	IV
407.914C		(KAS 532-1)	S. Korea		S. Korea	1976	IV
407.914D		(KAS 532-1)	S. Korea		S. Korea	1976	IV
407.917		KAS 532-4	S. Korea		S. Korea	1976	IV
407.918A		KAS 550-1-1	S. Korea		S. Korea	1976	IV
407.918B		(KAS 550-1-1)	S. Korea		S. Korea	1976	IV
407.924		KAS 551-4	S. Korea		S. Korea	1976	IV
407.927B		(KAS 551-7)	S. Korea		S. Korea	1976	IV
407.928		KAS 551-8	S. Korea		S. Korea	1976	IV
407.932B		(KAS 552-4)	S. Korea		S. Korea	1976	IV
407.934		KAS 552-6	S. Korea		S. Korea	1976	IV
407.937-1		KAS 560-2	S. Korea		S. Korea	1976	IV
407.939B		(KAS 560-4)	S. Korea		S. Korea	1976	IV
407.947		KAS 582-1	S. Korea		S. Korea	1976	IV
407.959B		(KAS 503-8)	S. Korea		S. Korea	1976	IV
407.966A		KAS 504-5	S. Korea		S. Korea	1976	IV
407.966B		(KAS 504-5)	S. Korea		S. Korea	1976	IV
407.972B		(KAS 540-1-2)	S. Korea		S. Korea	1976	IV
407.972C		(KAS 540-1-2)	S. Korea		S. Korea	1976	IV
407.975A		KAS 540-4	S. Korea		S. Korea	1976	IV
407.976A		KAS 541-1	S. Korea		S. Korea	1976	IV
407.976B		(KAS 541-1)	S. Korea		S. Korea	1976	IV
407.977		KAS 541-2	S. Korea		S. Korea	1976	IV
407.979		KAS 541-4	S. Korea		S. Korea	1976	IV
407.981B		(KAS 542-1)	S. Korea		S. Korea	1976	IV
407.981C		(KAS 542-1)	S. Korea		S. Korea	1976	IV
407.985		KAS 542-4	S. Korea		S. Korea	1976	IV
407.986A		KAS 542-5	S. Korea		S. Korea	1976	IV
407.988A		KAS 542-7	S. Korea		S. Korea	1976	IV
407.988B		(KAS 542-7)	S. Korea		S. Korea	1976	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
407.867A	IV	W	T	E	Ssp	Br	I	Bl	Bl			
407.867B	IV	P	T	E	N	Br	D	Bl	Bl			
407.869A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
407.869B	IV	P	T	E	Ssp	Br	D	Bl	Bl			
407.872A	IV	P	T	I	Ssp	Br	S	Bl	Bl	Net		
407.872C	IV	P	T	E	Ssp	Br	I	Bl	Bl			
407.873	IV	P	T	E	Ssp	Br	D	Bl	Bl			
407.883	IV	P	G	E	Ssp	Br	I	Y	Y			
407.886	IV	P	Lt	Sa	Ssp	Tn	D	Y	Br			
407.892C	IV	W	G	E	N	Tn	D	Y	Y			
407.895	IV	P	T	E	N	Br	D	Br	Br			
407.900	IV	P	G	Sa	Ssp	Bl	S	Gn	Bf	Gncot		
407.902B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
407.904	IV	P	G	E	Ssp	Br	S	Y	Bf			
407.906	IV	P	T	E	Ssp	Bl	I	Gn	Br			
407.913A	IV	P	G	E	N	Tn	D	Y	Y			
407.913B	IV	P	G	E	Ssp	Br	D	Y	Y			
407.914C	IV	P	T	E	N	Br	D	Y	Br			
407.914D	IV	P	G	E	N	Tn	D	Y	Y			
407.917	IV	P	G	E	N	Br	D	Gn	Lbf			
407.918A	IV	P	G	E	Ssp	Tn	D	Y	Bf			
407.918B	IV	P	T	E	N	Tn	D	Y	Br			
407.924	IV	P	G	E	Ssp	Tn	I	Y	Y			
407.927B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
407.928	IV	P	T	E	Ssp	Br	I	Bl	Bl			
407.932B	IV	P	G	E	Ssp	Br	S	Y	Y			
407.934	IV	P	G	E	Ssp	Tn	D	Y	Y			
407.937-1	IV	P	T	E	Ssp	Br	I	Gn	Br			
407.939B	IV	P	G	E	Ssp	Br	I	Y	Y			
407.947	IV	P	G	E	N	Br	I	Y	Y			
407.959B	IV	P	G	E	N	Tn	D	Y	Y			
407.966A	IV	P	G	E	Ssp	Br	I	Y	Y			
407.966B	IV	P	G	E	Ssp	Br	I	Y	Y			
407.972B	IV	P	T	E	Ssp	Br	D	Y	Br			
407.972C	IV	P	G	E	Ssp	Br	I	Y	Lbf			
407.975A	IV	P	G	E	Ssp	Br	D	Y	Bf			
407.976A	IV	P	G	E	Ssp	Br	I	Y	Y			
407.976B	IV	P	G	E	Ssp	Br	I	Y	Y			
407.977	IV	P	G	E	N	Tn	D	Y	Bf			
407.979	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
407.981B	IV	P	T	E	N	Br	D	Y	Br			
407.981C	IV	P	G	E	Ssp	Br	D	Y	Bf			
407.985	IV	P	G	E	Ssp	Tn	D	Y	Bf			
407.986A	IV	W	T	E	Ssp	Tn	D	Gn	Bl			
407.988A	IV	P	G	E	Ssp	Br	I	Y	Y			
407.988B	IV	P	G	Sa	Ssp	Tn	I	Y	Bf			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
407.867A	64	128*	3.3*	76	1.0	1.5	2.0*	2.3	-	22.6*	1.94
407.867B	69*	136	4.3	67*	1.5	1.5	2.0*	2.5	-	15.9*	1.46*
407.869A	60*	128	3.0	67	1.0	3.0*	4.0	2.5	-	19.7	1.60
407.869B	67*	134	3.0	62*	1.5	2.5*	3.0*	2.5	-	20.4*	1.75*
407.872A	65	132	2.3*	63*	1.0	1.0	1.0	3.0	-	25.4	1.88
407.872C	67*	132*	2.0	70	1.0	1.0	2.0*	2.5	-	19.6*	1.90*
407.873	67*	133	3.0	77	2.5	2.0*	2.0*	2.3	-	20.0	1.70
407.883	60*	131*	2.3	77	1.0	1.0	2.0	2.3	1.5	18.5	1.71
407.886	72	135	2.8	75	1.5	1.0	1.0	2.0	3.5	11.4	2.02
407.892C	71*	137	1.8*	60	1.0	1.0	1.5	2.5	2.5	15.2	1.74
407.895	71*	136	4.5	71	1.0	2.0*	2.5	3.0	-	17.8*	1.36
407.900	72	134	2.5	71*	1.5	1.0	1.5	2.5	2.0	11.2	1.31
407.902B	68	133	2.3	66*	1.0	1.5	1.5	2.8	-	23.2	1.83
407.904	62*	130	2.8*	74	1.5	1.0	1.5	2.3	1.0	19.3	1.90
407.906	68*	134	3.0	76	1.5	1.0	1.5	2.3	4.5	11.8	1.77*
407.913A	63	136	2.3*	86*	1.0	1.5	1.5	2.5	4.0	24.3*	2.29
407.913B	62*	137	2.3*	66*	1.5	1.0	1.5	2.5	3.0	19.3*	1.86
407.914C	63*	124*	2.8	72	2.5	1.5	1.5	1.8	3.5	12.4	1.63
407.914D	70	132	4.0	72	2.0	1.0	1.5	2.0	2.5	8.8	1.70
407.917	65	131	2.0	71	1.0	2.0*	2.0*	2.8	2.0	19.0*	1.51
407.918A	67*	133	3.5	61	1.5	1.5	1.5	2.3	3.5	12.5	1.46*
407.918B	67*	130*	2.8*	72	1.0	1.0	1.0	2.0	4.0	12.3	1.59*
407.924	67	132	3.8*	70	1.5	1.0	1.0	2.0	3.0	19.4*	2.06
407.927B	67*	131*	2.8*	55	1.0	1.0	1.0	2.5	-	19.4*	2.00
407.928	64*	125*	2.0	50	1.0	2.0*	2.0*	2.8	-	21.0*	1.87
407.932B	61*	129*	2.8*	69	1.0	1.0	1.5	2.5	1.5	20.9	1.81
407.934	72	134	4.0	79	1.5	1.5	1.5	1.8	2.5	8.6	2.09
407.937-1	69*	134	2.8	66	1.0	2.0*	2.5	2.5	2.0	13.5*	1.73*
407.939B	63*	132	2.3	72*	1.5	1.5	2.0	2.3	2.5	19.4*	1.79
407.947	58*	135	2.8	72	2.0	1.0	1.5	2.5	2.0	19.4*	1.70
407.959B	65	136	5.0	71	2.5	1.0	1.5	2.3	2.5	8.8	2.32*
407.966A	60*	131	2.5	79*	1.5	1.0	1.5	2.0	1.5	23.4*	1.94
407.966B	64	136	2.5	81*	2.5	1.0	1.5	2.3	1.5	22.6*	2.10
407.972B	68	133	4.0	77	2.5	1.5	2.0	2.5	3.5	22.8*	1.81
407.972C	68*	133	3.5	76	1.5	1.0	2.0	2.5	2.0	22.3*	2.12
407.975A	70*	133	2.3	74	1.5	1.5	1.5	2.0	2.0	13.6*	1.80
407.976A	61*	130	2.0	80	1.5	1.0	1.5	2.0	3.0	21.1*	1.71
407.976B	64	131*	2.5	81	2.5	1.0	2.0	2.0	1.0	19.5*	1.81*
407.977	68*	136	3.5	83	2.5	1.5	1.5	2.0	2.5	11.6	1.68*
407.979	66*	136	1.8	65	1.0	1.0	1.0	2.8	-	22.6*	1.82
407.981B	65	130*	3.5	75*	2.5	2.0*	2.0*	1.8	3.5	12.7	1.58
407.981C	64	134	2.3*	80*	2.0	1.0	1.5	2.0	4.0	12.3	1.70
407.985	65	130	2.8	83	2.0	2.0*	2.0*	2.3	2.0	15.1*	1.89
407.986A	64*	130*	2.3*	81*	1.5	1.5	1.5	2.0	3.0	12.8*	1.52
407.988A	63	131	2.8	75*	1.5	1.0	1.5	2.3	1.5	22.5*	1.82
407.988B	61*	133	1.8*	85	2.5	2.0*	2.5	2.3	1.0	24.4*	1.81

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
407.867A	IV	16.4	43.9	10.9	4.9	27.7	49.2	7.0	0.2	1	R
407.867B	IV	16.1	45.5	11.8	4.0	20.3	55.3	8.3	0.1	1	R
407.869A	IV	16.4	44.0	11.5	4.8	23.3	53.0	7.1	0.2		R
407.869B	IV	16.1	44.0	11.2	3.9	20.9	55.6	8.1	0.1		
407.872A	IV	16.1	43.9	11.1	3.0	20.1	56.3	9.3	0.1		S
407.872C	IV	15.9	42.4	10.8	3.8	21.3	55.4	8.4	0.2		
407.873	IV	16.5	43.4	10.9	3.9	21.2	56.0	7.9	0.0		
407.883	IV	17.0	45.6	12.0	3.7	23.0	53.5	7.4	0.2	4	
407.886	IV	16.3	45.3	12.0	3.5	19.6	55.4	9.3	0.1		S
407.892C	IV	16.6	45.1	11.9	3.2	19.5	55.5	9.8	0.1	2	R
407.895	IV	16.2	42.3	11.6	4.2	22.8	52.5	8.8	0.1	1	R
407.900	IV	16.6	45.0	11.2	3.7	19.6	55.2	10.1	0.1	1	R
407.902B	IV	15.9	45.9	12.1	3.7	21.9	54.3	8.1	0.1	1	S
407.904	IV	18.0	44.5	12.0	4.3	22.1	54.7	6.9	0.1	3	R
407.906	IV	15.8	43.3	11.5	3.7	20.2	55.7	9.1	0.2	3	R
407.913A	IV	17.6	45.3	11.7	3.4	22.8	54.7	7.6	0.1	1	R
407.913B	IV	18.9	41.6	10.9	4.4	23.0	54.0	7.8	0.0		
407.914C	IV	14.9	47.1	12.2	4.4	21.2	53.0	9.2	0.1	1	R
407.914D	IV	16.5	43.1	12.2	3.8	22.3	53.7	8.1	0.1	1	R
407.917	IV	17.3	44.2	12.2	4.1	18.4	56.2	9.1	0.1	1	R
407.918A	IV	15.0	46.4	11.0	4.1	22.7	53.6	8.8	0.1	1	R
407.918B	IV	15.0	46.9	12.1	3.9	20.2	54.6	9.2	0.1	1	R
407.924	IV	16.5	42.8	12.4	3.7	21.7	53.8	8.4	0.1	1	R
407.927B	IV	16.2	44.8	12.2	4.2	23.0	52.4	8.0	0.1	1	R
407.928	IV	16.5	45.1	11.1	3.2	21.0	55.7	8.7	0.2		R
407.932B	IV	16.7	46.8	11.9	4.2	25.9	51.0	6.8	0.1	3	S
407.934	IV	15.9	44.2	12.1	3.6	22.3	53.3	8.5	0.1	1	R
407.937-1	IV	16.4	44.8	10.3	3.5	20.1	56.5	9.4	0.1	1	
407.939B	IV	17.2	43.6	12.3	3.5	22.3	53.7	8.1	0.1		
407.947	IV	16.6	46.4	11.9	3.7	23.7	53.3	7.3	0.1	5	
407.959B	IV	15.1	44.3	12.2	3.9	23.9	52.4	7.4	0.1	1	R
407.966A	IV	16.9	45.0	12.1	3.8	23.6	52.8	7.6	0.0	3	S
407.966B	IV	16.8	44.6	11.7	3.7	23.5	53.5	7.4	0.1	3	
407.972B	IV	18.7	42.1	11.6	4.3	23.0	53.0	7.8	0.2	1	S
407.972C	IV	18.5	42.3	11.6	4.3	24.1	52.1	7.7	0.1	1	S
407.975A	IV	17.8	44.2	10.7	3.3	22.4	55.4	8.0	0.1	1	
407.976A	IV	16.8	43.8	11.6	3.5	25.0	52.7	7.0	0.1	1	
407.976B	IV	16.8	44.6	11.3	3.8	22.8	54.0	7.9	0.1	5	
407.977	IV	16.9	43.6	11.2	3.7	21.6	55.1	8.2	0.1	1	
407.979	IV	16.8	41.9	10.9	3.7	21.9	54.0	9.1	0.1	1	
407.981B	IV	15.0	45.4	11.8	4.3	21.1	53.7	8.8	0.1	1	
407.981C	IV	15.3	45.1	10.5	4.0	24.0	53.1	8.1	0.1	1	
407.985	IV	16.5	43.3	11.2	4.0	23.5	52.6	8.6	0.0	1	
407.986A	IV	15.5	46.9	12.7	3.6	19.8	53.6	10.0	0.1	1	R
407.988A	IV	17.0	44.8	12.3	3.8	24.7	51.9	7.0	0.0	1	R
407.988B	IV	17.5	44.1	12.8	4.1	22.0	52.4	8.5	0.0	1	

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
407.991		KAS 542-10	S. Korea		S. Korea	1976	IV
407.992		KAS 543-1	S. Korea		S. Korea	1976	IV
407.996		KAS 544-2	S. Korea		S. Korea	1976	IV
407.998A		KAS 544-4	S. Korea		S. Korea	1976	IV
407.998C		(KAS 544-4)	S. Korea		S. Korea	1976	IV
408.004-1		KAS 544-10	S. Korea		S. Korea	1976	IV
408.006		KAS 547-2	S. Korea		S. Korea	1976	IV
408.008		KAS 548-1	S. Korea		S. Korea	1976	IV
408.010-1		KAS 548-3	S. Korea		S. Korea	1976	IV
408.013		KAS 548-6	S. Korea		S. Korea	1976	IV
408.014		KAS 548-7	S. Korea		S. Korea	1976	IV
408.015		KAS 548-8	S. Korea		S. Korea	1976	IV
408.016A		KAS 548-9	S. Korea		S. Korea	1976	IV
408.017		KAS 548-10	S. Korea		S. Korea	1976	IV
408.018		KAS 549-1	S. Korea		S. Korea	1976	IV
408.019C		(KAS 549-2)	S. Korea		S. Korea	1976	IV
408.020B		(KAS 549-3)	S. Korea		S. Korea	1976	IV
408.020C		(KAS 549-3)	S. Korea		S. Korea	1976	IV
408.020D		(KAS 549-3)	S. Korea		S. Korea	1976	IV
408.021		KAS 549-4	S. Korea		S. Korea	1976	IV
408.029		KAS 570-1	S. Korea		S. Korea	1976	IV
408.032A		KAS 571-3	S. Korea		S. Korea	1976	IV
408.032B		(KAS 571-3)	S. Korea		S. Korea	1976	IV
408.033		KAS 571-4	S. Korea		S. Korea	1976	IV
408.036		KAS 571-7	S. Korea		S. Korea	1976	IV
408.039		KAS 572-2	S. Korea		S. Korea	1976	IV
408.055B		(KAS 576-3)	S. Korea		S. Korea	1976	IV
408.055C		(KAS 576-3)	S. Korea		S. Korea	1976	IV
408.058		KAS 630-2	S. Korea		S. Korea	1976	IV
408.062		KAS 630-7	S. Korea		S. Korea	1976	IV
408.064		KAS 630-9	S. Korea		S. Korea	1976	IV
408.065		KAS 630-11	S. Korea		S. Korea	1976	IV
408.067A		KAS 630-13	S. Korea		S. Korea	1976	IV
408.068B		(KAS 630-14)	S. Korea		S. Korea	1976	IV
408.069		KAS 630-15	S. Korea		S. Korea	1976	IV
408.070A		KAS 630-16	S. Korea		S. Korea	1976	IV
408.070B		(KAS 630-16)	S. Korea		S. Korea	1976	IV
408.071		KAS 630-17-1	S. Korea		S. Korea	1976	IV
408.072		KAS 630-19	S. Korea		S. Korea	1976	IV
408.074A		KAS 631-2	S. Korea		S. Korea	1976	IV
408.074B		(KAS 631-2)	S. Korea		S. Korea	1976	IV
408.074C		(KAS 631-2)	S. Korea		S. Korea	1976	IV
408.076B		(KAS 631-4)	S. Korea		S. Korea	1976	IV
408.083A		KAS 632-7	S. Korea		S. Korea	1976	IV
408.084B		(KAS 632-8)	S. Korea		S. Korea	1976	IV
408.095B		(KAS 633-9)	S. Korea		S. Korea	1976	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
407.991	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
407.992	IV	P	T	E	Ssp	Br	S	Bl	Bl			
407.996	IV	P	G	Sa	Ssp	Bl	D	Gn	Bf			
407.998A	IV	P	G	Sa	Ssp	Bl	D	Gn	Bf			
407.998C	IV	P	T	Sa	Ssp	Tn	D	Y	Br			
408.004-1	IV	P	G	E	N	Tn	I	Y	Y			
408.006	IV	P	G	E	Ssp	Br	I	Y	Y			
408.008	IV	W	T	E	Ssp	Br	D	Br	Br			
408.010-1	IV	P	G	E	Ssp	Tn	I	Y	Bf			
408.013	IV	P	G	E	Ssp	Br	D	Y	Bf			
408.014	IV	P	G	E	Ssp	Bl	D	Gn	Bf			
408.015	IV	P	T	E	Ssp	Bl	D	Gn	Br			
408.016A	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.017	IV	P	G	E	N	Tn	I	Y	Y			
408.018	IV	P	G	E	Ssp	Br	S	Y	Lbf			
408.019C	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.020B	IV	W	G	E	N	Br	D	Y	Bf			
408.020C	IV	W	G	Sa	N	Br	D	Y	Bf			
408.020D	IV	P	G	E	Ssp	Br	S	Y	Bf			
408.021	IV	P	G	E	Ssp	Br	S	Y	Y			
408.029	IV	P	T	E	Ssp	Bl	D	Gn	Br			
408.032A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.032B	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
408.033	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.036	IV	P	G	E	Ssp	Br	S	Y	Y			
408.039	IV	P	T	E	Ssp	Br	I	Br	Br			
408.055B	IV	P	T	E	N	Br	I	Bl	Bl			
408.055C	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.058	IV	P	T	E	Ssp	Br	I	Br	Br	SNet		
408.062	IV	P	G	E	N	Tn	D	Y	Y			
408.064	IV	P	G	E	Ssp	Br	I	Y	Y			
408.065	IV	W	G	E	Ssp	Br	D	Y	Rbf	Saddle		
408.067A	IV	P	T	E	Ssp	Br	D	Bl	Bl			
408.068B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.069	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.070A	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
408.070B	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
408.071	IV	P	T	E	N	Br	D	Ggn	G			
408.072	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.074A	IV	P	G	Sa	Ssp	Br	S	Gn	Ib	Gncot		
408.074B	IV	W	G	A	Ssp	Br	D	Gn	Bf	Gncot		
408.074C	IV	P	T	A	Ssp	Bl	D	Gn	Br	Gncot		
408.076B	IV	P	T	E	Ssp	Br	D	Gn	Bl			
408.083A	IV	W	T	E	N	Tn	D	Lgn	Br			
408.084B	IV	P	G	E	Ssp	Br	I	Gn	Bf	Gncot		
408.095B	IV	P	T	I	Ssp	Br	I	Rbr	Rbr	Net		

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
407.991	63*	134	2.0*	55*	1.0	1.0	1.5	2.8	-	25.1*	1.84
407.992	64	134	2.0*	67	1.0	1.5	1.5	2.5	-	20.5*	1.93*
407.996	70	132	3.5	84*	2.5	1.0	1.5	2.5	2.5	13.7*	1.61
407.998A	68	133	2.5	79	1.5	1.0	1.5	2.0	2.0	13.3	2.06
407.998C	69	136	2.5	74*	1.5	1.0	1.5	2.0	3.0	12.7*	1.74
408.004-1	67*	133	3.8*	76*	2.0	1.0	1.0	1.8	2.5	8.0	1.98*
408.006	63*	131*	2.0	72*	1.0	1.0	1.0	2.3	2.0	16.5*	1.79*
408.008	68*	134	3.3*	75*	2.5	1.0	1.5	2.5	-	12.0*	1.57*
408.010-1	68	138	2.3	74	1.0	1.0	1.5	2.5	2.0	17.4*	1.68
408.013	66	135	1.3	66	1.5	1.0	1.5	2.0	2.5	16.9*	2.20
408.014	68*	132	3.0	85	2.0	1.5	1.5	2.0	3.5	11.8	1.74
408.015	70*	135	2.8	77	1.0	1.0	2.5	2.0	4.0	11.5	1.91
408.016A	63*	132	2.0	67*	2.0	2.0*	2.0*	1.8	3.0	12.3*	1.79
408.017	75*	134	4.0	72*	1.5	1.0	1.0	2.0	3.0	8.6	1.59
408.018	58*	130	2.0	71*	1.5	1.0	1.5	2.3	2.0	25.9	1.85
408.019C	64	132	3.0	74*	1.5	1.5	1.5	2.5	2.5	17.0*	1.87
408.020B	71	136	2.5*	62	1.0	1.5	2.0	2.5	3.0	15.5*	2.04
408.020C	71*	137	3.5	77	2.0	1.0	1.0	2.3	2.5	14.8*	1.99
408.020D	63*	131	1.8	80	2.0	1.0	1.0	2.3	2.0	17.8*	1.68
408.021	62*	131	2.5	72	1.0	1.0	2.0	2.3	1.5	21.7	1.97*
408.029	73*	134	3.0	84*	2.0	1.0	1.5	2.0	4.5	11.4*	1.85*
408.032A	65*	133	2.5	67	1.0	1.5	1.5	2.5	-	21.4	2.37
408.032B	61*	130*	1.8	62	1.0	1.5	2.0*	2.5	-	24.5	2.07*
408.033	61*	134	1.8*	62	1.0	1.0	1.5	2.3	1.0	30.9	2.23
408.036	62	132	2.0	70	1.0	1.0	1.5	2.3	2.0	21.2*	1.96
408.039	62*	125*	2.5*	57	1.0	1.5	1.5	2.8	-	27.9	1.99
408.055B	61*	124*	1.5	63	1.0	2.0*	2.0*	2.3	-	20.4*	1.60
408.055C	63*	135	1.8*	62*	1.5	1.0	1.5	3.3	-	26.8*	1.67
408.058	59*	123	3.0	58	2.0	1.5	1.5	3.3	-	31.4*	2.01
408.062	72	134	4.0	72	2.0	1.0	1.0	1.8	2.0	9.3	1.91
408.064	63*	136	1.8*	66*	1.5	1.0	2.0	3.8	1.5	32.0*	1.62
408.065	64*	135	1.9*	57	1.0	1.0	1.5	3.0	-	31.5*	1.77
408.067A	68*	135	2.8*	75	1.5	1.0	1.5	3.0	-	22.9*	1.85
408.068B	71*	137	3.5	79	2.5	1.0	1.0	2.0	2.0	11.7*	1.96
408.069	68	136	3.3	66*	1.5	1.0	1.0	2.8	-	24.8*	1.95
408.070A	64*	132	1.5	58*	1.0	1.0	1.5	3.0	-	24.7*	2.00
408.070B	67*	133	1.8*	65*	1.0	1.0	1.5	3.0	-	26.0*	1.82
408.071	70*	136	1.8*	63	1.5	1.0	1.0	3.3	4.0	27.6*	2.20
408.072	65*	136	1.5	62	1.0	1.0	1.5	2.8	1.0	30.2	2.05
408.074A	73	132	3.5*	76*	2.5	1.5	1.5	2.5	2.0	13.0	1.73
408.074B	73	135	3.0*	65*	1.5	1.0	1.5	2.3	1.5	9.7	1.52*
408.074C	71*	133	3.5	75*	2.5	1.0	2.0*	2.0	2.0	8.8	1.63
408.076B	66	136	2.0	69	1.0	2.0*	2.5	3.3	1.0	34.2*	1.78
408.083A	75*	135	3.5	72	1.0	1.5	2.0	2.5	2.5	10.2	1.48
408.084B	65*	136	2.3	81	1.0	1.5	1.5	2.5	1.5	20.6	1.69
408.095B	64*	133	3.3*	60*	1.5	1.0	1.5	2.3	2.0	21.3	1.70

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
407.991	IV	16.0	43.7	10.9	3.4	20.9	55.1	9.6	0.0	1	R
407.992	IV	16.2	44.2	11.8	4.1	24.8	52.2	7.1	0.0	1	
407.996	IV	17.7	42.5	12.3	4.1	23.2	51.7	8.5	0.0	1	R
407.998A	IV	16.5	42.8	12.4	3.7	21.7	53.8	8.4	0.1	1	R
407.998C	IV	15.8	45.7	12.2	2.9	20.6	54.2	9.7	0.0	1	R
408.004-1	IV	16.4	42.2	12.3	3.6	21.0	54.5	8.4	0.0	1	
408.006	IV	17.1	45.4	12.0	3.5	21.3	54.9	8.0	0.0	1	S
408.008	IV	15.3	44.1	13.3	3.8	20.3	53.5	8.9	0.0	1	
408.010-1	IV	17.1	42.7	11.8	3.9	23.7	52.6	8.1	0.1	1	
408.013	IV	16.4	42.6	11.8	3.5	24.1	52.5	7.9	0.0	1	S
408.014	IV	16.5	44.5	11.8	3.7	22.3	52.7	9.3	0.1	1	R
408.015	IV	16.2	43.9	11.5	3.6	20.1	55.6	9.1	0.0	3	R
408.016A	IV	16.3	44.9	11.0	4.0	24.8	52.1	8.0	0.0	1	R
408.017	IV	15.4	43.7	12.4	3.7	22.6	53.1	8.1	0.0		
408.018	IV	18.4	45.3	11.8	4.3	26.5	50.6	6.7	0.0	4	S
408.019C	IV	16.0	44.8	12.0	3.8	22.2	53.5	8.3	0.0	1	R
408.020B	IV	16.6	44.1	11.7	3.5	21.5	54.1	9.3	0.0	1	R
408.020C	IV	16.6	41.7	12.3	3.6	23.2	52.4	8.3	0.0	1	R
408.020D	IV	16.8	46.0	13.1	3.8	22.4	52.8	7.7	0.0	1	
408.021	IV	16.6	45.6	12.3	3.7	23.6	53.0	7.2	0.1	3	
408.029	IV	16.1	43.9	11.5	3.4	19.9	55.7	9.4	0.0	1	R
408.032A	IV	16.9	43.7	11.3	4.6	23.4	53.2	7.4	0.0	1	H
408.032B	IV	16.9	44.5	12.1	4.0	21.8	53.8	8.1	0.0	1	R
408.033	IV	17.3	45.6	11.3	3.9	22.1	54.8	7.7	0.0	1	S
408.036	IV	17.4	44.9	12.0	4.1	24.2	52.9	6.7	0.0	4	
408.039	IV	16.4	45.2	12.0	4.2	22.3	53.3	8.1	0.0	1	S
408.055B	IV	16.2	45.0	12.7	4.0	21.5	53.8	7.8	0.0	3	R
408.055C	IV	16.4	43.6	14.2	4.1	22.1	52.1	7.4	0.0	1	
408.058	IV	16.5	45.5	11.6	3.6	21.8	54.0	8.8	0.0	1	
408.062	IV	15.6	43.9	12.5	4.0	22.1	53.4	7.9	0.1	1	R
408.064	IV	18.2	44.6	11.3	4.1	23.4	51.8	8.8	0.5	1	R
408.065	IV	16.6	45.6	11.1	4.2	22.0	54.5	8.1	0.0	1	S
408.067A	IV	16.8	44.3	11.5	3.2	20.6	56.1	8.4	0.0	1	R
408.068B	IV	16.5	42.9	12.3	4.0	22.1	52.6	8.8	0.1	1	R
408.069	IV	17.0	43.6	10.9	3.3	21.0	56.4	8.3	0.0	1	S
408.070A	IV	16.3	44.9	11.2	2.8	19.0	57.4	9.5	0.0	1	S
408.070B	IV	15.4	44.0	11.9	3.0	18.7	55.5	10.8	0.0	1	S
408.071	IV	16.5	44.3	11.6	3.6	21.7	54.4	8.5	0.1	1	H
408.072	IV	17.6	45.4	11.6	3.5	21.6	54.5	8.5	0.0	2	S
408.074A	IV	17.7	40.8	10.9	3.9	21.8	55.2	8.1	0.0	3	R
408.074B	IV	16.3	43.4	11.0	3.6	23.6	53.1	8.6	0.0	1	R
408.074C	IV	16.1	43.5	11.1	3.4	20.5	54.9	10.0	0.0	1	R
408.076B	IV	17.1	42.8	12.5	3.7	23.4	51.2	9.0	0.0	1	
408.083A	IV	15.5	46.2	11.9	3.9	23.5	51.5	9.0	0.0	1	R
408.084B	IV	17.5	44.3	11.3	3.3	23.5	53.6	8.1	0.1	1	S
408.095B	IV	17.3	43.8	11.8	3.7	23.6	52.8	8.0	0.0	1	R

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
408.097		KAS 633-11	S. Korea		S. Korea	1976	IV
408.100B		(KAS 633-14)	S. Korea		S. Korea	1976	IV
408.103		KAS 633-17	S. Korea		S. Korea	1976	IV
408.109A		KAS 633-23	S. Korea		S. Korea	1976	IV
408.114		KAS 636-5	S. Korea		S. Korea	1976	IV
408.116		KAS 637-2	S. Korea		S. Korea	1976	IV
408.119		KAS 637-5	S. Korea		S. Korea	1976	IV
408.124B		(KAS 638-5)	S. Korea		S. Korea	1976	IV
408.124C		(KAS 638-5)	S. Korea		S. Korea	1976	IV
408.124D		(KAS 638-5)	S. Korea		S. Korea	1976	IV
408.125A		KAS 638-6	S. Korea		S. Korea	1976	IV
408.125B		(KAS 638-6)	S. Korea		S. Korea	1976	IV
408.126B		(KAS 639-1)	S. Korea		S. Korea	1976	IV
408.132		KAS 640-1	S. Korea		S. Korea	1976	IV
408.133		KAS 640-2	S. Korea		S. Korea	1976	IV
408.134A		KAS 640-3	S. Korea		S. Korea	1976	IV
408.137B		(KAS 640-6)	S. Korea		S. Korea	1976	IV
408.138D		(KAS 640-7)	S. Korea		S. Korea	1976	IV
408.166A		KAS 660-8	S. Korea		S. Korea	1976	IV
408.166B		(KAS 660-8)	S. Korea		S. Korea	1976	IV
408.169B		(KAS 660-11)	S. Korea		S. Korea	1976	IV
408.170		KAS 660-12	S. Korea		S. Korea	1976	IV
408.171		KAS 661-1	S. Korea		S. Korea	1976	IV
408.173		KAS 661-3	S. Korea		S. Korea	1976	IV
408.174		KAS 661-4	S. Korea		S. Korea	1976	IV
408.178		KAS 661-8	S. Korea		S. Korea	1976	IV
408.179		KAS 661-9	S. Korea		S. Korea	1976	IV
408.181A		KAS 680-2	S. Korea		S. Korea	1976	IV
408.181D		(KAS 680-2)	S. Korea		S. Korea	1976	IV
408.184A		KAS 680-6	S. Korea		S. Korea	1976	IV
408.186B		(KAS 681-1)	S. Korea		S. Korea	1976	IV
408.187		KAS 681-2	S. Korea		S. Korea	1976	IV
408.189		KAS 681-4	S. Korea		S. Korea	1976	IV
408.196A		KAS 600-1	S. Korea		S. Korea	1976	IV
408.196B		(KAS 600-1)	S. Korea		S. Korea	1976	IV
408.197A		KAS 600-2	S. Korea		S. Korea	1976	IV
408.197B		(KAS 600-2)	S. Korea		S. Korea	1976	IV
408.198		KAS 600-3	S. Korea		S. Korea	1976	IV
408.201A		KAS 600-4-3	S. Korea		S. Korea	1976	IV
408.203A		KAS 600-5-2	S. Korea		S. Korea	1976	IV
408.203B		(KAS 600-5-2)	S. Korea		S. Korea	1976	IV
408.209B		(KAS 600-9)	S. Korea		S. Korea	1976	IV
408.209C		(KAS 600-9)	S. Korea		S. Korea	1976	IV
408.212B		(KAS 601-1)	S. Korea		S. Korea	1976	IV
408.215A		KAS 601-5	S. Korea		S. Korea	1976	IV
408.217B		(KAS 602-2)	S. Korea		S. Korea	1976	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
408.097	IV	P	T	E	N	Lbr	D	Br	Br			
408.100B	IV	P	G	E	Ssp	Br	I	Y	Y			
408.103	IV	P	G	E	Ssp	Br	I	Y	Y			
408.109A	IV	P	T	E	Ssp	Br	D	Bl	Bl			
408.114	IV	P	T	E	Ssp	Bl	I	Br	Br	St		
408.116	IV	P	G	E	Ssp	Br	I	Y	G			
408.119	IV	P	G	E	Ssp	Br	S	Y	Y			
408.124B	IV	P	G	E	N	Tn	D	Y	Bf			
408.124C	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.124D	IV	P	T	E	N	Br	S	Y	Br			
408.125A	IV	W	G	E	N	Tn	I	Y	Lbf			
408.125B	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.126B	IV	P	T	E	Ssp	Bl	I	Br	Br	St		
408.132	IV	P	T	E	Ssp	Br	D	Bl	Bl			
408.133	IV	P	G	E	Ssp	Br	D	Gn	Ib	Gncot		
408.134A	IV	P	G	E	Ssp	Bl	I	Gn	Bf	Gncot		
408.137B	IV	P	T	E	Ssp	Bl	S	Gn	Br	Gncot		
408.138D	IV	P	G	E	Ssp	Br	S	Y	Y			
408.166A	IV	W	G	E	Ssp	Tn	I	Y	Bf			
408.166B	IV	W	G	E	N	Br	I	Y	Bf			
408.169B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
408.170	IV	W	G	E	Ssp	Tn	I	Y	Bf			
408.171	IV	P	T	E	Ssp	Br	D	Gn	Gn	Gncot		
408.173	IV	P	T	E	Ssp	Br	S	Br	Br			
408.174	IV	P	T	E	Ssp	Tn	S	Br	Br			
408.178	IV	P	G	E	N	Br	I	Y	Y			
408.179	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.181A	IV	P	G	E	Ssp	Br	S	Y	Y			
408.181D	IV	P	G	E	Ssp	Br	I	Y	Y			
408.184A	IV	P	G	E	Ssp	Br	I	Y	Y			
408.186B	IV	W	G	E	Ssp	Tn	S	Y	Bf			
408.187	IV	W	G	E	Ssp	Tn	I	Y	Bf			
408.189	IV	P	T	E	Ssp	Tn	I	Bl	Bl			
408.196A	IV	P	T	A	Ssp	Tn	D	Gn	Br	Gncot		
408.196B	IV	P	T	A	Ssp	Br	D	Gn	Br	Gncot		
408.197A	IV	P	T	E	N	Br	I	Bl	Bl			
408.197B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.198	IV	P	G	E	Ssp	Br	S	Lgn	Bf			
408.201A	IV	P	T	E	N	Br	D	Y	Br			
408.203A	IV	P	G	E	Ssp	Br	D	Gn	G	Gncot		
408.203B	IV	P	T	E	Ssp	Br	D	Gn	Bl	Gncot		
408.209B	IV	P	Lt	E	Ssp	Br	I	Bl	Bl			
408.209C	IV	P	Lt	E	Ssp	Br	I	Bl	Bl			
408.212B	IV	P	G	E	Ssp	Br	D	Y	Y			
408.215A	IV	P	G	E	Ssp	Br	I	Y	Y			
408.217B	IV	P	G	E	Ssp	Br	D	Lgn	Y			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
408.097	70*	135	5.0	98*	1.0	2.5*	4.5	1.8	-	13.3*	2.18*
408.100B	58*	134	3.3	74	1.5	1.0	1.5	2.0	2.0	22.3	2.17
408.103	60*	133	2.8	76*	1.0	1.0	1.0	2.3	2.0	21.1	1.87
408.109A	63*	135	2.3*	70*	1.0	1.0	1.5	2.8	-	29.5*	2.05*
408.114	69*	130	4.5	67	1.5	1.0	1.0	2.0	-	16.9*	1.77
408.116	61*	135	2.3	69	1.0	1.0	1.0	2.0	2.5	24.7*	2.01
408.119	62*	132	2.0	76*	1.0	1.0	1.0	2.3	2.0	21.2*	1.76
408.124B	71	133	3.8	76	2.0	1.0	1.0	2.0	2.0	10.0	2.13
408.124C	73*	136	4.8	77	2.5	1.0	1.0	1.8	1.5	9.7	1.86*
408.124D	68*	128	2.8	65*	1.0	1.5	2.5	2.3	2.0	11.8	1.85*
408.125A	66*	134	2.0	50	1.0	1.0	1.0	2.5	3.5	21.1*	2.27
408.125B	61*	135	2.0	63	1.0	1.0	1.5	3.0	1.0	31.1	2.12
408.126B	72	134	4.0	72*	2.5	2.0*	3.5	2.3	-	17.4	1.79
408.132	64*	134	1.3	70	1.5	1.0	1.5	2.8	-	19.0*	2.01
408.133	66*	133	2.6*	66*	1.0	1.0	1.5	3.3	1.0	26.4*	1.81
408.134A	70	133	2.3*	89*	2.0	1.0	2.0	2.3	2.5	10.1	1.60
408.137B	68*	132	2.8*	74	2.5	1.5	1.5	2.5	2.0	13.9*	1.88
408.138D	60*	131	2.8	70	1.0	1.0	1.5	2.3	2.0	19.9	2.00
408.166A	63*	128*	3.3	72*	1.0	1.0	1.0	1.8	1.0	12.8	1.94*
408.166B	67*	135*	3.5	81	1.0	1.0	2.0	2.3	1.5	16.6*	2.06*
408.169B	72	133	3.8*	71	2.5	1.0	1.5	2.0	1.0	11.0	1.86
408.170	65*	134	3.8*	65	1.5	1.0	1.0	2.0	1.0	13.3	1.81*
408.171	65	133	2.5	72	1.0	1.5	1.5	2.8	2.0	23.6*	1.95
408.173	63*	136	2.8*	72	1.0	1.5	1.5	2.5	-	26.6	2.34
408.174	67*	135	2.5	86	1.5	1.5	1.5	2.5	-	19.7*	2.04
408.178	60*	130	1.8	75	1.0	1.5	1.5	3.0	1.5	25.7	2.10*
408.179	62*	136	1.5	53*	1.0	1.5	2.0	2.8	1.0	29.3*	2.07*
408.181A	63*	130	1.5	67	1.0	1.0	1.5	2.5	2.0	22.7*	2.13*
408.181D	60*	131	1.8	71*	1.0	1.0	2.0*	3.0	2.0	24.4*	1.72
408.184A	63*	132	2.8*	74	1.5	1.0	1.5	3.0	1.5	24.6*	1.71
408.186B	65*	132	3.3	85*	2.5	1.0	1.5	1.8	1.0	14.0*	1.54*
408.187	64*	134*	2.5	81*	1.0	1.0	1.5	2.0	1.5	14.3*	1.73
408.189	64	135	4.3	72*	1.5	1.0	1.0	2.5	-	22.1*	2.00
408.196A	70*	134	2.5	72	1.0	1.0	1.0	2.3	3.5	11.3	1.88
408.196B	69	135	2.0	63	1.0	1.0	1.5	2.0	2.5	11.9	1.66
408.197A	70*	136	3.3*	77	3.0	1.5	1.5	2.5	-	21.5*	1.77
408.197B	70*	136	2.0	74	1.0	1.5	1.5	2.8	-	21.8*	1.84
408.198	62*	128	1.3	69*	1.0	1.0	1.5	3.0	1.5	20.8	1.87
408.201A	65	131*	2.3*	70	1.5	2.0*	2.0*	1.8	4.0	12.3*	1.70*
408.203A	63*	133	4.0	58	1.0	2.0*	2.5	3.8*	1.0	26.9*	1.96
408.203B	59*	130	2.3	88	1.5	2.5*	2.5*	2.8	1.0	26.8*	1.63
408.209B	67*	130*	3.5*	67	2.5	2.0*	2.0*	2.5	-	18.2	1.98
408.209C	64	139	3.3*	84	2.5	1.5	1.5	2.5	-	21.3*	1.87*
408.212B	63*	134	2.3	83	1.5	1.0	1.5	2.8	3.0	20.4*	1.66
408.215A	59*	128	2.3	75	1.0	1.0	1.5	2.3	2.0	21.2	1.79
408.217B	61*	132	2.0	65	1.0	1.5	1.5	3.0	1.5	24.4*	1.93

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
408.097	IV	15.5	46.2	11.1	3.1	18.8	57.5	9.3	0.0	1	
408.100B	IV	16.6	46.5	12.6	3.8	25.4	51.4	6.5	0.1	3	H
408.103	IV	16.7	44.7	12.3	3.6	24.3	52.3	7.2	0.1	3	
408.109A	IV	17.6	43.4	11.5	3.3	21.0	55.0	8.8	0.1	1	S
408.114	IV	16.5	44.3	11.0	3.5	22.2	55.1	8.0	0.1	1	R
408.116	IV	17.7	44.9	10.8	3.8	21.5	55.3	8.5	0.0	1	S
408.119	IV	17.4	44.4	11.7	4.1	22.4	53.8	7.8	0.1	2	
408.124B	IV	16.9	42.5	12.1	3.7	20.4	55.2	8.4	0.1	1	R
408.124C	IV	15.5	44.4	11.7	3.6	21.2	55.1	8.2	0.1	1	R
408.124D	IV	17.0	44.9	10.6	3.8	20.9	55.6	8.8	0.0	1	R
408.125A	IV	16.8	46.1	11.3	3.5	20.9	55.7	8.5	0.1	1	R
408.125B	IV	16.8	46.5	11.5	3.3	21.1	55.7	8.3	0.1	1	
408.126B	IV	17.2	43.9	11.0	3.4	20.9	55.5	9.0	0.0	1	S
408.132	IV	17.0	45.1	11.7	3.7	21.3	54.8	8.3	0.2	1	R
408.133	IV	17.7	44.9	11.6	3.7	20.9	55.4	8.3	0.0	1	S
408.134A	IV	15.8	44.8	11.3	3.3	19.2	58.4	7.7	0.0	1	R
408.137B	IV	15.6	46.1	11.6	3.8	20.6	54.9	9.0	0.0	1	H
408.138D	IV	17.4	46.0	12.2	3.6	24.0	52.5	7.4	0.0	1	
408.166A	IV	17.0	45.0	11.3	4.0	21.4	54.5	8.7	0.1	1	R
408.166B	IV	16.8	43.4	11.1	4.1	22.4	54.5	7.8	0.0	1	
408.169B	IV	16.2	45.0	11.7	3.2	18.4	54.6	8.7	3.2	1	R
408.170	IV	16.5	43.8	11.2	4.1	21.3	54.5	8.6	0.0	1	
408.171	IV	17.3	45.8	12.0	3.6	22.0	54.7	7.6	0.0	1	S
408.173	IV	17.2	42.2	11.1	3.8	22.3	54.9	7.8	0.0	1	R
408.174	IV	17.3	44.1	11.2	3.5	20.7	56.8	7.7	0.0	1	S
408.178	IV	17.8	43.5	11.8	3.4	22.3	53.5	8.8	0.0	1	
408.179	IV	17.1	45.7	10.8	4.1	22.2	54.7	8.0	0.0	1	S
408.181A	IV	17.1	44.7	11.8	4.0	24.0	52.6	7.3	0.0	3	
408.181D	IV	17.3	44.3	11.0	3.3	22.6	54.6	8.3	0.0	2	
408.184A	IV	17.6	45.0	11.4	3.6	22.8	53.5	8.5	0.0	1	
408.186B	IV	17.3	44.8	11.4	3.9	22.2	53.8	8.6	0.0	3	
408.187	IV	17.0	44.3	11.3	3.9	22.8	53.3	8.5	0.0	1	
408.189	IV	16.7	44.1	11.2	3.7	24.9	52.8	7.2	0.0	1	
408.196A	IV	17.2	42.3	10.8	3.6	23.1	53.5	8.8	0.0	1	R
408.196B	IV	17.4	42.9	11.8	3.1	20.1	56.8	7.9	0.0	1	R
408.197A	IV	16.9	44.6	11.1	3.6	23.1	54.5	7.5	0.0	1	R
408.197B	IV	16.5	44.5	10.6	3.6	20.4	56.1	9.1	0.0	1	S
408.198	IV	17.0	44.2	11.8	3.4	23.5	53.6	7.5	0.0	1	R
408.201A	IV	15.3	46.3	12.1	4.4	21.3	53.6	8.6	0.0	3	R
408.203A	IV	19.1	42.9	11.8	4.1	21.0	55.2	7.6	0.1	1	S
408.203B	IV	17.3	41.6	11.3	4.3	22.2	54.4	7.6	0.0	1	R
408.209B	IV	16.1	44.3	10.2	3.5	21.7	56.0	8.4	0.0	1	S
408.209C	IV	16.5	43.1	11.1	3.8	21.8	55.6	7.5	0.0	1	
408.212B	IV	16.6	46.1	11.7	3.2	21.7	54.8	8.6	0.0	1	
408.215A	IV	17.2	45.4	12.2	3.5	24.4	52.9	6.9	0.0	2	S
408.217B	IV	16.1	44.4	11.9	3.6	22.1	53.3	8.9	0.0	1	S

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
408.217C		(KAS 602-2)	S. Korea		S. Korea	1976	IV
408.221A		KAS 603-1	S. Korea		S. Korea	1976	IV
408.221B		(KAS 603-1)	S. Korea		S. Korea	1976	IV
408.222B		(KAS 603-2)	S. Korea		S. Korea	1976	IV
408.222C		(KAS 603-2)	S. Korea		S. Korea	1976	IV
408.224B		(KAS 603-4)	S. Korea		S. Korea	1976	IV
408.225A		KAS 604-1-1	S. Korea		S. Korea	1976	IV
408.225B		(KAS 604-1-1)	S. Korea		S. Korea	1976	IV
408.227		KAS 604-3-1	S. Korea		S. Korea	1976	IV
408.228B		(KAS 604-4)	S. Korea		S. Korea	1976	IV
408.229A		KAS 604-5-1	S. Korea		S. Korea	1976	IV
408.229C		(KAS 604-5-1)	S. Korea		S. Korea	1976	IV
408.230		KAS 604-6-1	S. Korea		S. Korea	1976	IV
408.231		KAS 604-7	S. Korea		S. Korea	1976	IV
408.232		KAS 604-8	S. Korea		S. Korea	1976	IV
408.233A		KAS 604-9	S. Korea		S. Korea	1976	IV
408.233B		(KAS 604-9)	S. Korea		S. Korea	1976	IV
408.234B		(KAS 604-10)	S. Korea		S. Korea	1976	IV
408.235		KAS 604-11	S. Korea		S. Korea	1976	IV
408.245		KAS 605-7	S. Korea		S. Korea	1976	IV
408.248B		(KAS 605-10)	S. Korea		S. Korea	1976	IV
408.249		KAS 610-1	S. Korea		S. Korea	1976	IV
408.256		KAS 612-1	S. Korea		S. Korea	1976	IV
408.259A		KAS 612-4	S. Korea		S. Korea	1976	IV
408.260B		(KAS 612-5)	S. Korea		S. Korea	1976	IV
408.260C		(KAS 612-5)	S. Korea		S. Korea	1976	IV
408.262C		(KAS 612-7)	S. Korea		S. Korea	1976	IV
408.262D		(KAS 612-7)	S. Korea		S. Korea	1976	IV
408.263		(KAS 612-8)	S. Korea		S. Korea	1976	IV
408.265A		(KAS 612-11)	S. Korea		S. Korea	1976	IV
408.265B		(KAS 612-11)	S. Korea		S. Korea	1976	IV
408.269D		(KAS 613-3)	S. Korea		S. Korea	1976	IV
408.270B		(KAS 613-4)	S. Korea		S. Korea	1976	IV
408.271		KAS 613-5	S. Korea		S. Korea	1976	IV
408.272C		(KAS 613-6)	S. Korea		S. Korea	1976	IV
408.275		KAS 620-3	S. Korea		S. Korea	1976	IV
408.281A		KAS 622-5	S. Korea		S. Korea	1976	IV
408.281B		(KAS 622-5)	S. Korea		S. Korea	1976	IV
408.284		KAS 624-3	S. Korea		S. Korea	1976	IV
408.285B		(KAS 624-4)	S. Korea		S. Korea	1976	IV
408.288		KAS 624-7	S. Korea		S. Korea	1976	IV
408.289		KAS 624-8	S. Korea		S. Korea	1976	IV
408.290		KAS 624-9	S. Korea		S. Korea	1976	IV
408.291		KAS 624-10	S. Korea		S. Korea	1976	IV
408.293-1		KAS 624-12	S. Korea		S. Korea	1976	IV
408.294A		KAS 624-13	S. Korea		S. Korea	1976	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
408.217C	IV	P	G	E	Ssp	Br	I	Y	Y			
408.221A	IV	P	G	E	Ssp	Br	D	Y	Y			
408.221B	IV	P	G	E	Ssp	Br	I	Y	Y			
408.222B	IV	P	G	E	Ssp	Br	I	Y	Y			
408.222C	IV	P	G	E	Ssp	Br	I	Y	Bf			
408.224B	IV	P	Lt	E	Ssp	Bl	S	Br	Br			
408.225A	IV	W	G	A	Ssp	Br	D	Lgn	Bf			
408.225B	IV	P	G	E	Ssp	Br	D	Y	Bf			
408.227	IV	P	G	E	Ssp	Br	S	Lgn	Bf			
408.228B	IV	P	G	E	Ssp	Br	I	Y	Bf			
408.229A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.229C	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.230	IV	P	G	E	Ssp	Br	I	Y	Y			
408.231	IV	P	G	E	Ssp	Br	I	Y	Y			
408.232	IV	P	G	E	Ssp	Br	I	Y	Y			
408.233A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.233B	IV	P	T	E	Ssp	Br	I	Bl	Bl	SNet		
408.234B	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
408.235	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
408.245	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.248B	IV	P	G	E	Ssp	Br	I	Y	Y			
408.249	IV	P	T	I	Sp	Br	I	Bl	Bl	Net		
408.256	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.259A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.260B	IV	P	Lt	E	Ssp	Br	I	Bl	Bl			
408.260C	IV	P	T	E	Ssp	Br	D	Bl	Bl			
408.262C	IV	P	G	E	Ssp	Tn	I	Y	Y			
408.262D	IV	P	G	E	Ssp	Br	I	Lgn	Y			
408.263	IV	W	G	E	Ssp	Br	D	Y	Bf			
408.265A	IV	P	T	E	Ssp	Tn	D	Bl	Bl			
408.265B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
408.269D	IV	P	G	E	Ssp	Br	D	Y	Bf			
408.270B	IV	P	G	E	Ssp	Br	I	Lgn	Y			
408.271	IV	P	G	E	Ssp	Br	I	Gn	G	Gncot		
408.272C	IV	P	T	Sa	Ssp	Bl	I	Gn	Br	Gncot		
408.275	IV	W	G	Sa	N	Br	D	Y	Bf			
408.281A	IV	W	G	Sa	N	Br	D	Y	Bf			
408.281B	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.284	IV	P	G	E	Ssp	Br	I	Y	Y			
408.285B	IV	P	T	E	Ssp	Br	D	Bl	Bl			
408.288	IV	P	G	E	N	Tn	I	Y	Lbf			
408.289	IV	P	G	E	Ssp	Tn	I	Y	Lbf			
408.290	IV	P	G	E	Ssp	Br	I	Y	Lbf			
408.291	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.293-1	IV	W	T	A	N	Tn	I	Lgn	Br			
408.294A	IV	P	T	Sa	Ssp	Br	I	Gn	Br	Gncot		

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
408.217C	69	136	3.0	84*	1.5	1.0	1.0	2.3	4.0	20.6*	1.98
408.221A	59*	130	2.3	79*	2.0	1.5	1.5				1.63
408.221B	61*	132	2.5	77	1.0	1.0	1.5	2.3	2.0	21.4	1.87
408.222B	63*	134	2.5	74*	2.5	1.0	1.0	2.3	2.0	20.3*	1.90*
408.222C	66	135	3.0	71*	1.0	1.5	1.5	2.0	2.5	15.1*	1.68
408.224B	69*	132	2.5	90	1.5	1.0	2.0*	2.5	-	14.1	1.85
408.225A	73*	135	2.3	67	1.0	1.5	1.5	1.8	1.0	15.4	1.85
408.225B	67*	136	2.3*	77	1.0	1.5	1.5	2.5	2.5	19.7*	1.84*
408.227	63*	129	2.8	67	1.5	2.0*	2.5	2.5	2.0	19.6*	1.76
408.228B	66	133	1.8	69*	1.0	1.0	1.5	3.0	1.0	31.8	2.20
408.229A	59*	126*	2.3	63	1.0	3.0*	4.0*	2.5	-	24.0	1.82
408.229C	69*	136	1.5	74	1.0	1.0	1.0	2.3	-	18.5*	1.88
408.230	62*	136	1.8	77	1.5	1.0	1.5	2.3	2.0	21.4*	1.62
408.231	62*	135	3.0	70	1.0	1.0	1.5	2.5	2.0	22.1*	1.74
408.232	62*	131	2.3	72*	1.5	1.0	1.5	2.3	2.0	21.8*	2.01*
408.233A	60*	131*	2.5*	63	1.0	1.0	1.5	2.5	-	22.0*	2.01
408.233B	62*	135	2.3*	50*	1.0	1.0	1.5	3.0	-	29.9	1.78
408.234B	71*	137	2.0	88	1.5	1.0	1.5	3.0	2.5	22.2*	2.07
408.235	67*	133	2.5	70	1.0	1.0	2.0	3.0	3.5	21.9	1.93*
408.245	62*	125*	2.8	72	1.5	2.0*	2.0*	2.5	-	20.8	1.66
408.248B	63*	132	2.5	76	1.0	1.0	1.0	2.3	2.0	21.0	1.94*
408.249	67*	134	2.5*	71*	1.5	1.0	1.0	2.8	-	23.9*	2.15
408.256	64	128*	3.5	63	1.0	2.0*	2.0*	2.5	-	19.8	1.70
408.259A	65	132*	1.8*	63*	1.0	1.5	1.5	2.3	-	20.1*	1.77
408.260B	72	138	3.0*	83	2.0	1.0	1.0	2.5	-	19.2*	1.52
408.260C	69*	131*	1.5	56*	1.0	2.0*	2.5*	2.0	-	20.1	1.96
408.262C	62*	131*	2.5*	71	1.5	1.0	1.5	2.0	2.0	17.9*	1.86
408.262D	65	128	2.8*	60*	1.0	1.5	1.5	2.0	2.5	17.1	1.40
408.263	58*	136	1.5	62	1.0	1.0	1.5	2.5	1.0	32.0	2.01
408.265A	68	135	2.3	69	1.0	1.5	1.5	2.3	-	20.9	1.85
408.265B	67	135	2.0	63*	1.0	2.5*	2.5*	2.8	-	22.0*	1.79
408.269D	65*	135	2.0	77	1.5	1.5	1.5	2.8	1.5	20.1*	1.97
408.270B	59*	130	2.5	66*	1.5	1.0	1.5	2.3	2.0	19.1	1.61
408.271	61*	134	2.5	71*	2.5	1.0	1.5	3.3	1.5	27.7*	1.62
408.272C	68	134	3.3	71	1.5	1.0	1.0	2.3	2.0	9.8	1.62
408.275	71*	134	3.3*	81	1.0	1.5	2.0*	2.5	2.0	14.8*	1.70
408.281A	70	132	3.0	89*	2.5	1.0	1.5	2.0	2.0	13.4	1.72
408.281B	69	136	2.8*	90	1.5	1.0	1.5	2.3	2.0	14.8*	1.62
408.284	61*	131*	2.0	81*	1.0	1.0	1.0	2.5	2.0	19.4	1.86*
408.285B	70*	135	3.0	62	1.0	1.5	1.5	3.0	-	23.6*	2.10
408.288	72*	133	3.8*	76*	2.5	1.0	1.5	2.3	2.5	8.5	1.91
408.289	70*	133	3.8*	65	2.0	1.0	1.0	2.0	2.0	8.3	1.80
408.290	61*	133	1.5	65	1.0	1.0	1.0	3.5	1.0	23.1*	2.04
408.291	61*	134	2.3*	62	1.0	1.0	1.5	3.3	1.0	30.4	2.12
408.293-1	70*	137	2.3*	67	1.0	1.5	2.0*	2.5	2.5	9.4*	1.25*
408.294A	70*	133	2.5	76*	1.5	2.0*	2.0*	2.3	3.5	11.6	1.99

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
408.217C	IV	17.2	43.9	11.8	3.9	21.8	54.3	8.0	0.0	3	S
408.221A	IV									1	R
408.221B	IV	17.3	44.9	12.2	3.8	24.0	52.6	7.2	0.0	1	
408.222B	IV	16.4	44.6	11.8	3.6	23.5	53.4	7.6	0.0	1	
408.222C	IV	16.9	44.4	10.8	3.5	21.8	55.0	8.8	0.0	1	
408.224B	IV	15.9	44.8	11.2	2.8	18.6	58.0	9.2	0.0	1	R
408.225A	IV	16.5	42.2	11.7	3.3	21.2	54.7	9.1	0.0	1	R
408.225B	IV	16.7	46.5	11.9	3.5	21.6	53.9	8.9	0.0	2	
408.227	IV	16.4	45.0	12.4	3.3	21.2	55.1	7.8	0.0	1	R
408.228B	IV	17.8	45.1	11.0	3.9	21.5	55.1	8.3	0.0	1	S
408.229A	IV	17.5	43.7	11.9	3.6	23.8	52.6	7.9	0.0	1	S
408.229C	IV	17.5	43.0	10.9	3.9	24.6	53.1	7.4	0.0	1	
408.230	IV	16.7	45.6	12.0	3.7	24.0	53.1	7.1	0.0	2	
408.231	IV	16.7	46.7	12.7	3.7	23.1	52.9	7.4	0.0	1	
408.232	IV	17.3	44.9	12.3	3.7	24.1	52.6	7.1	0.0	1	S
408.233A	IV	16.8	45.4	13.0	4.3	20.4	54.8	7.5	0.0	1	S
408.233B	IV	15.7	44.2	11.4	4.3	22.5	53.5	8.1	0.0	1	S
408.234B	IV	17.7	44.3	11.5	3.9	21.2	55.0	8.3	0.0	1	S
408.235	IV	18.0	43.5	11.4	3.3	20.1	56.7	8.3	0.0	1	S
408.245	IV	16.5	44.6	12.8	4.6	23.6	52.0	6.9	0.0	1	R
408.248B	IV	17.0	44.3	12.9	3.8	23.4	52.6	7.3	0.0	3	S
408.249	IV	16.3	40.9	10.9	3.6	22.9	53.1	9.2	0.0	1	S
408.256	IV	16.9	44.8	11.6	4.0	22.4	54.1	7.8	0.0	1	S
408.259A	IV	16.2	44.3	11.7	3.7	23.5	53.3	7.6	0.0	1	
408.260B	IV	16.3	42.8	10.0	3.6	19.5	58.7	8.1	0.0	1	R
408.260C	IV	16.9	43.6	11.3	3.7	21.4	55.3	8.2	0.0	1	S
408.262C	IV	16.8	43.7	12.2	4.2	20.4	54.8	8.4	0.1	1	S
408.262D	IV	17.0	45.6	12.9	3.7	19.6	55.7	7.8	0.2	1	S
408.263	IV	17.3	45.8	11.2	4.0	22.1	54.4	8.1	0.0	1	S
408.265A	IV	16.7	41.9	11.0	3.4	23.9	54.5	7.1	0.1	1	R
408.265B	IV	16.5	43.6	11.0	3.6	21.8	55.3	8.0	0.2	1	
408.269D	IV	17.7	45.1	11.4	3.3	20.5	55.0	9.6	0.0	3	S
408.270B	IV	17.2	44.3	12.5	3.6	24.1	52.7	7.1	0.0	3	S
408.271	IV	17.6	43.9	12.2	4.3	23.0	53.2	7.3	0.0	1	S
408.272C	IV	16.7	44.3	11.2	3.4	18.4	57.3	9.5	0.1	1	R
408.275	IV	16.2	44.4	10.9	4.1	24.0	52.5	8.2	0.0	1	R
408.281A	IV	16.5	44.5	11.8	4.2	22.2	53.6	8.0	0.0	1	R
408.281B	IV	17.2	43.0	12.0	3.5	19.9	55.8	8.6	0.1		
408.284	IV	16.9	44.9	11.9	3.6	22.9	53.8	7.6	0.1	3	S
408.285B	IV	16.3	44.0	11.4	3.6	20.6	54.8	9.3	0.2	1	S
408.288	IV	16.4	43.6	11.9	3.7	21.8	54.3	8.1	0.1	1	R
408.289	IV	16.4	42.6	11.7	4.5	22.5	53.9	7.1	0.1	1	R
408.290	IV	17.3	45.4	11.8	3.7	21.9	54.4	7.7	0.2	1	S
408.291	IV	17.5	45.7	10.9	3.9	22.2	54.8	8.1	0.1	3	S
408.293-1	IV	16.3	42.3	10.9	3.7	21.4	54.7	9.0	0.1		
408.294A	IV	15.8	45.2	11.8	3.4	23.1	53.6	8.0	0.0		

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
408.295B		(KAS 624-14)	S. Korea		S. Korea	1976	IV
408.298A		KAS 624-17	S. Korea		S. Korea	1976	IV
408.298B		(KAS 624-17)	S. Korea		S. Korea	1976	IV
408.299		KAS 624-18	S. Korea		S. Korea	1976	IV
408.300		KAS 625-1	S. Korea		S. Korea	1976	IV
408.301		KAS 625-2	S. Korea		S. Korea	1976	IV
408.302		KAS 625-3	S. Korea		S. Korea	1976	IV
408.307C		(KAS 625-8)	S. Korea		S. Korea	1976	IV
408.309		KAS 625-10	S. Korea		S. Korea	1976	IV
408.310B		(KAS 626-1)	S. Korea		S. Korea	1976	IV
408.311-1		KAS 626-3	S. Korea		S. Korea	1976	IV
408.314		KAS 626-6	S. Korea		S. Korea	1976	IV
408.316		KAS 634-1	S. Korea		S. Korea	1976	IV
408.319B		(KAS 634-4)	S. Korea		S. Korea	1976	IV
408.319C		(KAS 634-4)	S. Korea		S. Korea	1976	IV
408.320		KAS 635-1-1	S. Korea		S. Korea	1976	IV
408.329		KAS 646-3	S. Korea		S. Korea	1976	IV
408.332A		KAS 646-6	S. Korea		S. Korea	1976	IV
408.333		KAS 646-7	S. Korea		S. Korea	1976	IV
408.334		KAS 646-8	S. Korea		S. Korea	1976	IV
408.335A		KAS 646-9	S. Korea		S. Korea	1976	IV
408.335B		(KAS 646-9)	S. Korea		S. Korea	1976	IV
408.338		KAS 590-2	S. Korea		S. Korea	1976	IV
416.755	Akaao D165	040110	Japan		Japan	1977	IV
416.756	Aka aota 5	040109	Japan		Japan	1977	IV
416.769A	Akasaya chuusei	020099	Japan		Japan	1977	IV
416.779	Akita ani	020423	Japan		Japan	1977	IV
416.801	Ao nyuudou	040090	Japan		Japan	1977	IV
416.837	Choutan	030051	Japan		Japan	1977	IV
416.839	Choutan cha	040100	Japan		Japan	1977	IV
416.840	Choutan mejiro	100011	Japan		Korea	1977	IV
416.842	Chuusei 11	070004	Japan		Japan	1977	IV
416.855	Daizu 2	030039	Japan		Japan	1977	IV
416.859	Date koshichi	040170	Japan		Japan	1977	IV
416.864	Enomoto	020029	Japan		Japan	1977	IV
416.872	Fusanari	030032	Japan		Japan	1977	IV
416.882	Gin daizu	020043	Japan		Japan	1977	IV
416.888	Goishi shirohana	020232	Japan		Japan	1977	IV
416.919	Heijou	040102	Japan		Japan	1977	IV
416.939	Hounen mame	020136	Japan		Japan	1977	IV
416.942	Ian daizu	090037	Japan		Japan	1977	IV
416.950	Ichiryuu	020024	Japan		Japan	1977	IV
416.958	Iwafune takiya	040253	Japan		Japan	1977	IV
416.959	Iwate 1	020351	Japan		Japan	1977	IV
416.995	Kantou 32	040151	Japan		Japan	1977	IV
417.086B	(Kurashina ban daizu)	(040031)	Japan		Japan	1977	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
408.295B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
408.298A	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.298B	IV	P	G	E	Ssp	Br	I	Lgn	Y			
408.299	IV	W	G	E	Ssp	Br	I	Y	Bf			
408.300	IV	W	G	E	N	Br	D	Y	Bf			
408.301	IV	P	G	E	Ssp	Br	D	Y	Bf			
408.302	IV	P	G	E	Ssp	Br	I	Y	Y			
408.307C	IV	P	T	E	Ssp	Bl	S	Br	Br			
408.309	IV	P	T	E	Ssp	Bl	S	Br	Br			
408.310B	IV	P	T	E	Ssp	Bl	I	Gnbr	Br	St		
408.311-1	IV	P	G	E	Ssp	Br	D	Y	Bf			
408.314	IV	P	G	E	N	Br	D	Gn	G	Gncot		
408.316	IV	W	G	Sa	Ssp	Br	D	Y	Bf			
408.319B	IV	P	G	E	Ssp	Br	S	Y	Lbf			
408.319C	IV	P	G	E	Ssp	Br	S	Y	Lbf			
408.320	IV	W	G	Sa	Ssp	Br	D	Y	Bf			
408.329	IV	P	G	E	Ssp	Br	I	Lgn	Bf			
408.332A	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
408.333	IV	W	G	E	Ssp	Tn	D	Y	Bf			
408.334	IV	W	G	E	Ssp	Br	I	Y	Lbf			
408.335A	IV	P	G	E	Ssp	Bl	S	Gn	Bf	Gncot		
408.335B	IV	W	T	E	Ssp	Bl	I	Gn	Br	Gncot		
408.338	IV	W	T	E	Ssp	Tn	D	Lgn	Tn			
416.755	IV	P	T	E	Ssp	Br	I	Br	Br	Gncot		
416.756	IV	P	T	E	Ssp	Br	I	Br	Br	Gncot		
416.769A	IV	P	G	A	Ssp	Tn	I	Y	Y			
416.779	IV	P	T	A	Ssp	Br	I	Y	Br			
416.801	IV	P	T	A	Ssp	Br	D	Gn	Br			
416.837	IV	P	G	E	Ssp	Br	S	Y	Lbf			
416.839	IV	P	T	E	Ssp	Br	I	Y	Br			
416.840	IV	P	G	E	Ssp	Br	I	Y	Y			
416.842	IV	P	T	A	Ssp	Tn	I	Y	Br			
416.855	IV	P	G	A	Ssp	Br	I	Y	Lbf			
416.859	IV	P	T	A	Ssp	Br	S	Y	Br			
416.864	IV	P	G	E	N	Br	S	Y	Lbf			
416.872	IV	P	G	E	N	Br	S	Y	Lbf			
416.882	IV	W	T	E	N	Br	S	Gn	Gn			
416.888	IV	W	T	E	Ssp	Br	D	Bl	Bl			
416.919	IV	P	G	E	Ssp	Br	I	Y	Y			
416.939	IV	W	T	A	Ssp	Br	D	Lgn	Br			
416.942	IV	P	G	E	Ssp	Br	S	Lgn	Y			
416.950	IV	P	Lt	E	Ssp	Br	I	Y	Br			
416.958	IV	P	G	Sa	Ssp	Tn	I	Y	Bf			
416.959	IV	P	G	E	Ssp	Br	D	Y	Y			
416.995	IV	W	T	Sa	Ssp	Br	S	Y	Tn			
417.086B	IV	W	G	E	Ssp	Br	I	Lgn	Bf			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
408.295B	65*	136	3.3*	66	1.5	1.0	1.5	2.8	-	23.2*	2.11
408.298A	62*	135	2.3*	60	1.5	1.0	1.5	3.0	1.0	30.1	1.98
408.298B	67*	136	2.5	84	1.5	1.0	1.5	3.0	2.0	18.1	1.66
408.299	61*	133	1.8*	66	1.0	1.5	1.5	2.8	1.0	31.2	1.90
408.300	70*	134	3.3	76	1.5	1.0	2.5	2.0	2.5	13.1*	1.81*
408.301	60*	137	2.0	71	1.0	2.0*	3.0*	2.8*	2.0	19.8	1.88
408.302	66*	134	1.5	74	1.0	1.0	1.5	2.5	2.5	20.1*	2.46*
408.307C	67*	136	3.3	84	1.0	1.5	1.5	2.5	-	16.6*	1.56
408.309	66*	133	3.3*	83*	1.5	2.5	2.5	2.0	-	16.1*	1.86
408.310B	68*	130	2.8*	72	1.5	1.0	2.0	2.5	-	17.0*	1.54
408.311-1	69*	136	2.5*	71*	1.0	1.5	2.0*	2.8*	2.5	13.3*	1.37
408.314	65	134	2.8	66	1.5	1.0	1.5	3.5	1.5	26.1*	1.40
408.316	69	134	2.5	71*	1.5	1.0	2.0	2.3	2.5	14.8*	1.75
408.319B	66*	134	1.5	79*	1.5	1.0	1.0	2.5	2.5	21.2*	1.91
408.319C	71*	139	3.5*	93*	2.5	1.0	1.5	2.5	3.0	16.2*	1.50
408.320	67	135	4.0	72*	1.0	1.0	1.5	2.3	3.5	14.1	2.00
408.329	57*	124*	2.0	83	1.0	2.0*	2.0*	2.5	1.5	19.5*	1.69
408.332A	66*	135	2.0*	63*	1.5	1.0	1.0	3.0	-	24.0*	1.84
408.333	68*	135	1.8	85	2.5	1.5	1.5	2.8	3.0	20.1*	1.70
408.334	57*	133	1.5	61	1.0	1.0	1.5	3.0	1.0	31.8	2.19
408.335A	69	131	3.0	76	1.0	1.0	1.5	2.5	2.5	9.4	1.91
408.335B	72*	136	2.8*	76	2.0	1.5	3.0*	2.8	4.0	14.2	1.66
408.338	70*	133	3.0	86	1.5	2.5*	2.5*	2.5	1.5	15.2*	1.74
416.755	65*	128*	3.0*	65	1.0	1.0	1.5	2.5	-	20.6	1.88
416.756	63*	128*	2.3*	67	1.0	2.5*	2.5*	2.5	-	18.1	1.62
416.769A	62*	130	1.8	74	1.0	2.5*	3.0*	3.0	1.0	22.3*	1.81
416.779	59*	124	1.3	70	1.0	4.0	5.0	2.8	1.0	17.9	1.28
416.801	59*	132	1.3	60*	1.5	3.5*	4.0*	2.3	2.0	23.4*	1.35
416.837	59*	131	2.3*	81	1.5	1.0	1.0	2.5	2.0	20.2	1.71
416.839	59*	129*	4.0	91*	2.5	1.0	1.5	3.0	2.0	22.2*	1.47
416.840	59*	131	1.8	71*	1.5	1.0	1.5	3.3*	2.0	25.2	1.65
416.842	69	138	2.0*	79	2.0	1.5	2.0*	2.8	1.0	18.2*	1.57
416.855	61*	125*	1.8*	76*	1.5	2.5*	3.5*	2.5	1.0	18.6	1.29*
416.859	61*	123	1.5	79*	2.5	4.5	5.0	3.3*	1.0	16.4	1.23*
416.864	64	129	3.0*	72	2.5	2.5*	4.5	3.0	2.0	13.5*	2.16
416.872	62*	133	2.0	76	1.0	1.5	2.0	2.0	1.0	16.4	1.63
416.882	60*	124	3.3*	86	2.5	1.0	2.0*	2.5	4.0	16.6	2.30
416.888	56*	132*	1.5	76	1.5	2.5*	3.5	3.3	-	33.9	2.07*
416.919	60*	130	3.0	69*	2.5	1.0	1.5	2.5	1.5	19.2	1.88
416.939	63*	133	1.8	77*	1.5	3.0*	3.5	3.0	1.5	21.8*	1.56
416.942	65*	131*	2.0	63*	1.5	1.0	1.0	2.8	2.0	24.1	2.13*
416.950	69	136	2.3	83	1.0	1.0	1.5	2.5	2.5	15.6*	1.71
416.958	65	130*	4.8	100*	2.5	3.5*	4.0*	2.3	2.0	14.9	1.58
416.959	60*	133	2.0	70*	2.5	1.5	1.5	2.3	4.0	17.9*	1.66
416.995	67*	135	2.0*	76*	1.5	1.5	2.0*	3.0	2.0*	20.7*	1.51
417.086B	64*	135	2.5	84*	1.0	3.0*	3.0*	3.5	1.5	30.5*	1.81

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
408.295B	IV	17.8	40.5	11.9	3.5	19.1	57.8	7.5	0.1		
408.298A	IV	18.4	43.9	11.4	3.7	21.7	55.0	7.9	0.1		
408.298B	IV	18.2	43.1	11.5	3.0	22.1	54.7	8.5	0.1		
408.299	IV	17.5	45.7	10.8	4.0	22.3	54.8	7.9	0.1		
408.300	IV	15.8	44.9	11.1	3.9	21.4	54.3	8.9	0.2		
408.301	IV	16.3	45.8	12.0	4.0	24.6	52.0	7.3	0.1		
408.302	IV	16.6	45.4	12.0	4.0	22.6	53.8	7.5	0.1	1	
408.307C	IV	17.0	44.5	11.3	4.1	24.9	52.6	6.9	0.1	1	
408.309	IV	17.4	42.5	11.5	3.7	24.3	53.3	6.8	0.3	1	
408.310B	IV	16.4	43.5	11.7	3.4	22.7	54.2	8.0	0.1	1	R
408.311-1	IV	15.1	45.8	11.8	3.4	20.6	54.8	9.2	0.1	1	
408.314	IV	18.5	42.9	11.4	4.0	21.1	55.2	8.1	0.1	1	S
408.316	IV	16.4	42.9	10.6	3.8	22.6	54.4	8.5	0.0	1	R
408.319B	IV	17.4	43.9	10.2	3.4	26.3	52.0	7.9	0.1	1	R
408.319C	IV	17.3	43.5	10.3	3.6	22.7	54.6	8.5	0.1	3	R
408.320	IV	16.3	44.6	10.7	3.9	21.9	54.5	8.8	0.1	1	R
408.329	IV	17.4	44.2	12.1	3.8	22.7	53.5	7.6	0.1	3	R
408.332A	IV	16.3	45.9	10.8	3.0	20.1	56.7	9.2	0.1	1	S
408.333	IV	18.0	45.0	11.9	3.6	21.4	54.9	8.0	0.0	4	
408.334	IV	17.8	45.1	11.0	4.1	22.6	54.4	7.7	0.0	2	
408.335A	IV	16.1	46.2	11.3	3.4	18.7	58.7	7.8	0.0	1	R
408.335B	IV	15.5	45.7	10.7	4.3	22.8	53.5	8.5	0.0	1	R
408.338	IV	16.8	44.5	11.1	3.9	21.6	55.1	8.1	0.1	1	R
416.755	IV	17.8	44.3	12.7	3.9	20.6	55.3	7.4	0.0	1	S
416.756	IV	17.1	45.0	12.4	4.1	20.8	55.0	7.5	0.0	1	S
416.769A	IV	17.8	43.2	10.8	3.8	20.7	55.7	8.8	0.0	1	R
416.779	IV	17.1	43.6	12.4	3.6	22.3	54.2	7.3	0.2	1	R
416.801	IV	16.2	41.3	11.6	4.0	25.6	50.8	7.7	0.2	1	R
416.837	IV	17.8	45.4	12.1	3.8	25.3	51.9	6.8	0.0	1	S
416.839	IV	16.6	45.3	11.5	4.3	23.6	53.7	6.5	0.3	1	R
416.840	IV	16.5	43.4	11.0	3.8	27.2	51.3	6.6	0.0	1	R
416.842	IV	18.1	41.8	11.2	4.2	22.9	53.7	7.8	0.1	1	S
416.855	IV	15.9	42.8	11.3	3.8	22.4	53.8	8.2	0.2	1	H
416.859	IV	16.3	44.5	12.4	3.6	21.9	55.0	7.1	0.0	1	R
416.864	IV	15.9	45.6	12.5	3.8	22.6	52.8	8.0	0.2	1	R
416.872	IV	16.3	44.9	12.7	3.6	21.6	54.4	7.7	0.0	1	R
416.882	IV	18.4	41.9	12.0	3.5	23.0	54.0	7.2	0.0	1	S
416.888	IV	16.4	42.8	11.2	3.5	21.9	55.6	7.7	0.0	1	S
416.919	IV	17.1	47.1	12.4	3.7	22.6	54.1	6.9	0.1	1	S
416.939	IV	16.9	42.7	11.0	3.6	25.6	52.7	7.0	0.0	1	S
416.942	IV	17.1	44.7	11.6	3.6	22.9	53.9	7.7	0.2	3	S
416.950	IV	16.6	44.4	11.7	4.0	24.9	52.1	7.2	0.0	1	R
416.958	IV	16.4	43.1	10.7	3.4	20.7	56.8	8.2	0.0	1	R
416.959	IV	16.2	46.1	12.2	3.4	22.6	53.4	8.2	0.0	1	R
416.995	IV	16.3	40.8	10.6	4.2	23.2	51.3	10.5	0.1	1	S
417.086B	IV	17.0	41.0	10.3	4.9	25.3	51.1	8.1	0.0	5	R

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
417.102A	Kurometa	020056	Japan		Japan	1977	IV
417.102B	(Kurometa)	(020056)	Japan		Japan	1977	IV
417.135A	Mamyo 50-2	060075	Japan		Japan	1977	IV
417.147	Mejiro 1	020500	Japan		Japan	1977	IV
417.179B	(N-B [Katsugel)	(020260)	Japan		Japan	1977	IV
417.199	Noucha taitai	040111	Japan		Japan	1977	IV
417.207	Oiarugon	040103	Japan		Japan	1977	IV
417.276	Seisen	020053	Japan		Japan	1977	IV
417.293	Shijika	020034	Japan		Japan	1977	IV
417.301	Shimotsuki	020032	Japan		Japan	1977	IV
417.302	Shin-ei daizu	060025	Japan		Japan	1977	IV
417.305	Shinroku	020002	Japan		Japan	1977	IV
417.345B	(Shou outou)	(110002)	Japan		China	1977	IV
417.371	Tamaniwashu 1	020116	Japan		Japan	1977	IV
417.412	Tousan 26	040403	Japan		Japan	1977	IV
417.413	Tousan 27	040404	Japan		Japan	1977	IV
417.431	Tsuru no tamago 1	020221	Japan		Japan	1977	IV
417.434	Tsura no tamago 5	020224	Japan		Japan	1977	IV
417.435	Tsuru no tamago 7	020226	Japan		Japan	1977	IV
417.437	Tsuushuu zairai	040120	Japan		Japan	1977	IV
417.471	Yashirogi (Yamagata)	020428	Japan		Japan	1977	IV
417.472C	(Yatsufusa)	(040415)	Japan		Japan	1977	IV
417.578	Sherwood	040127	Japan		USA	1977	IV
419.043	Liyipa		China		China	1977	IV
423.729		KAS 100-10-1	S. Korea		S. Korea	1978	IV
423.731		KAS 100-13-1	S. Korea		S. Korea	1978	IV
423.734		KAS 130-1	S. Korea		S. Korea	1978	IV
423.737		KAS 150-3	S. Korea		S. Korea	1978	IV
423.746		KAS 200-9	S. Korea		S. Korea	1978	IV
423.748C		(KAS 200-32)	S. Korea		S. Korea	1978	IV
423.749		KAS 200-33	S. Korea		S. Korea	1978	IV
423.750		KAS 200-34	S. Korea		S. Korea	1978	IV
423.752A		KAS 205-15-2	S. Korea		S. Korea	1978	IV
423.752B		(KAS 205-15-2)	S. Korea		S. Korea	1978	IV
423.753B		(KAS 205-16)	S. Korea		S. Korea	1978	IV
423.756B		(KAS 205-19)	S. Korea		S. Korea	1978	IV
423.763		KAS 220-11	S. Korea		S. Korea	1978	IV
423.765		KAS 230-3	S. Korea		S. Korea	1978	IV
423.766		KAS 230-4	S. Korea		S. Korea	1978	IV
423.768		KAS 231-1	S. Korea		S. Korea	1978	IV
423.769B		(KAS 231-2)	S. Korea		S. Korea	1978	IV
423.770		KAS 231-3	S. Korea		S. Korea	1978	IV
423.778		KAS 233-3	S. Korea		S. Korea	1978	IV
423.787		KAS 236-4	S. Korea		S. Korea	1978	IV
423.789		KAS 236-6	S. Korea		S. Korea	1978	IV
423.790		KAS 236-7	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
417.102A	IV	P	T	A	Ssp	Br	S	Y	Bl			
417.102B	IV	P	T	Sa	Ssp	Br	S	Y	Bl			
417.135A	IV	P	T	E	N	Br	S	Y	Bl			
417.147	IV	W	T	A	Ssp	Br	I	Y	Tn			
417.179B	IV	W	T	E	Ssp	Br	I	Y	G			
417.199	IV	P	T	E	Ssp	Br	I	Br	Br	Gncot		
417.207	IV	P	G	E	Ssp	Br	I	Y	Bf			
417.276	IV	P	G	E	Ssp	Br	S	Y	Y			
417.293	IV	P	T	E	N	Br	S	Y	Br			
417.301	IV	P	G	E	Ssp	Tn	D	Y	Y			
417.302	IV	W	G	E	Ssp	Br	S	Y	Bf			
417.305	IV	P	T	A	Ssp	Br	I	Y	Br			
417.345B	IV	P	G	E	Ssp	Br	S	Y	Bf			
417.371	IV	P	T	A	Ssp	Br	S	Y	Br			
417.412	IV	W	G	E	N	Br	S	Y	Y			
417.413	IV	W	G	Sa	Ssp	Br	I	Y	Y			
417.431	IV	P	G	E	Ssp	Br	I	Y	Y			
417.434	IV	W	G	A	Ssp	Tn	I	Y	Y			
417.435	IV	W	G	A	Ssp	Tn	I	Y	Y			
417.437	IV	P	T	E	N	Tn	I	Bl	Bl			
417.471	IV	P	Lt	E	N	Tn	I	Y	Br			
417.472C	IV	P	T	Sa	Ssp	Br	I	Y	Br			
417.578	IV	W	G	E	N	Br	D	Y	Bf			
419.043	IV	W	G	A	N	Tn	I	Y	Bf			
423.729	IV	P	T	E	N	Br	D	Bl	Bl			
423.731	IV	P	G	E	Ssp	Bl	I	Gn	Bf			
423.734	IV	P	G	E	Ssp	Br	I	Gn	Gn			
423.737	IV	P	T	E	Ssp	Br	D	Bl	Bl			
423.746	IV	P	T	E	Ssp	Br	D	Bl	Bl			
423.748C	IV	P	G	E	Ssp	Br	I	Y	Bf			
423.749	IV	P	T	E	Ssp	Br	I	Br	Br			
423.750	IV	P	T	E	Ssp	Br	I	Lgn	Bl	Saddle		
423.752A	IV	P	T	E	Ssp	Tn	I	Br	Br			
423.752B	IV	P	T	E	Ssp	Br	S	Br	Br			
423.753B	IV	P	G	E	Ssp	Br	D	Gn	Ib			
423.756B	IV	P	T	E	Ssp	Br	I	Y	Tn			
423.763	IV	W	G	E	Ssp	Br	I	Y	Rbf	Saddle		
423.765	IV	P	T	I	Ssp	Br	I	Br	Br	Net		
423.766	IV	P	T	E	Ssp	Br	D	Br	Br			
423.768	IV	W	T	E	Ssp	Br	D	Y	Tn			
423.769B	IV	P	G	E	Ssp	Br	I	Y	Y			
423.770	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.778	IV	P	T	E	Ssp	Br	D	Gn	Br			
423.787	IV	P	T	E	Ssp	Tn	D	Y	Br			
423.789	IV	P	T	E	Ssp	Tn	I	Br	Br			
423.790	IV	P	G	E	Ssp	Br	S	Y	Y			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
417.102A	67*	132	2.0	65*	1.0	2.0*	2.0*	2.5	2.0	21.9*	2.09
417.102B	67	131	2.0	62	1.0	2.0*	2.0*	2.3	2.0	21.8	2.15
417.135A	69*	135	3.0	108	3.5	1.5	2.0	2.3	2.5	18.1*	1.56
417.147	66*	137	1.8*	75*	2.0	2.0*	3.0	3.3*	2.5	20.3	1.45
417.179B	64*	135	1.5	88	2.0	1.0	1.0	2.8	2.5	18.5	2.16
417.199	64	128*	3.8	80*	2.5	1.0	2.5	2.5	-	19.7	1.51
417.207	67	134	2.3	86	1.5	1.0	2.5	2.5	2.0	20.3	1.57
417.276	62*	131	2.0	75	1.5	1.0	1.5	2.3	2.0	19.4	1.54
417.293	77	136	2.3	80*	2.5	1.5	3.5	2.0	2.0	12.4*	1.37*
417.301	61*	132	2.6*	72*	1.5	1.5	2.0*	2.8*	1.5	30.4*	1.67
417.302	56*	128*	2.0	114*	3.0	1.0	1.5	2.0	1.0	13.7	1.82
417.305	59*	124	1.5	72*	1.5	3.5*	5.0	2.5	1.0	17.6	1.26
417.345B	61*	117*	2.5	90*	2.5	1.0	1.0	2.0	1.0	13.1	1.56
417.371	59*	120	1.5	84	2.5	3.5*	5.0	2.8*	1.0	15.7	1.05*
417.412	64	133	1.5	81	1.5	2.5*	3.0*	2.5*	1.0	22.0	1.26*
417.413	63*	133	2.3	79	1.5	3.0*	3.5*	3.0	1.0	23.9*	1.46*
417.431	65	134	1.8	70	1.0	2.5	3.0	2.5	1.5	22.4*	2.19
417.434	64	133	1.3	66*	1.0	2.0*	2.5	2.5	2.0	24.9*	1.99
417.435	64	134	1.3	63	1.0	2.5*	4.0	2.8	2.0	24.7*	1.98
417.437	65	128	3.5	114*	3.5	1.5	3.0*	2.5	-	13.1	1.69
417.471	65	134	2.8	83	1.5	3.0	4.0	2.3	1.0	13.3*	1.25
417.472C	65	134	2.5	90	1.0	2.5*	3.5*	2.8	1.0	16.6	0.90
417.578	61	130	2.3	113*	3.5	2.0*	3.0	2.3	2.0	12.4	1.65
419.043	69*	139	1.8	51	1.0	1.0	1.5	2.0	2.0	17.9*	1.25
423.729	65*	133	2.5	70	1.5	1.5	2.0*	2.5	-	17.3	1.81
423.731	70*	132	2.3	69	1.0	1.0	1.0	2.5	3.0	10.9	1.76
423.734	63*	132	1.8	66*	1.0	1.5	2.5	3.3	1.0	22.9*	1.54
423.737	63*	135	1.8*	74*	1.5	1.5	2.0*	2.5	-	23.0*	1.67
423.746	64	131	2.0	75	1.5	1.0	1.5	2.5	-	26.4	2.16
423.748C	69*	136	2.3*	79*	2.5	1.0	1.0	2.5	2.0	19.4*	1.64
423.749	64*	134	1.8*	60	1.5	1.0	1.5	2.8	-	26.0*	2.37*
423.750	64*	136	2.5	84	2.0	1.0	1.0	2.5	-	29.4*	1.98
423.752A	59*	132	2.5	74	1.0	1.0	1.5	2.5	-	22.6	1.87
423.752B	66*	132	2.3*	63*	2.5	1.0	1.5	2.5	-	24.4*	1.76
423.753B	66*	137	2.8	71*	2.5	1.0	1.5	3.0	1.0	20.9	1.62
423.756B	65	136	2.3	86*	2.5	1.0	1.0	2.3	3.5	21.2	1.97
423.763	61*	134	1.8	67	1.5	1.0	1.0	2.8	-	31.0	1.82
423.765	65	133	1.8*	50*	1.0	1.0	1.0	2.5	-	25.0	2.03
423.766	66	134	4.8	81	2.0	1.5	1.5	2.8	-	26.5*	1.84
423.768	61*	134	1.0	58	1.0	1.5	1.5	2.5	3.0	27.4	2.03
423.769B	65*	133	2.8*	83*	2.5	1.5	1.5	3.0	2.5	24.5	2.08
423.770	65*	134	2.5	74*	1.5	1.5	1.5	2.5	-	24.2*	2.08
423.778	64	136	2.3*	72*	1.0	1.5	1.5	2.5	2.0	25.9*	2.37*
423.787	60*	133	3.5	98	3.5	1.5	2.0	3.0	4.0*	16.5	1.80
423.789	64*	132*	3.5	94*	2.5	2.0*	2.5	2.0	-	13.4	1.90
423.790	69	134	2.3	77	1.0	1.0	1.5	2.8	2.0	19.4*	1.78

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
417.102A	IV	16.7	43.9	10.9	3.9	22.8	54.5	7.7	0.0	1	R
417.102B	IV	16.6	45.1	11.0	3.8	22.6	54.5	7.9	0.0	1	R
417.135A	IV	14.6	46.1	11.3	2.8	26.9	48.9	10.0	0.0	1	
417.147	IV	16.4	43.5	11.1	4.1	21.2	54.0	9.3	0.0	1	R R R S
417.179B	IV	16.9	45.1	10.9	3.1	20.0	58.1	7.5	0.2	1	S
417.199	IV	16.6	45.7	12.4	3.8	20.6	55.3	7.7	0.1	1	S
417.207	IV	14.6	44.6	12.2	3.7	23.3	52.8	7.7	0.1	1	R
417.276	IV	16.4	46.5	12.8	3.9	23.4	52.8	7.0	0.0	1	S
417.293	IV	15.6	44.7	13.0	3.7	21.4	53.4	8.3	0.3	1	S
417.301	IV	16.1	46.2	11.3	4.0	21.4	54.7	8.4	0.0	1	S
417.302	IV	17.4	45.8	11.6	3.9	24.8	51.3	7.9	0.1	3	S
417.305	IV	16.4	42.1	11.7	3.6	22.1	54.6	7.8	0.0	1	H
417.345B	IV	16.4	46.2	13.1	3.3	20.4	53.8	9.4	0.0	1	S
417.371	IV	16.0	42.9	12.3	3.5	22.1	54.6	7.3	0.0	1	R
417.412	IV	16.7	42.7	12.3	3.5	22.5	53.8	7.8	0.0	1	R
417.413	IV	17.2	43.3	11.4	4.1	23.4	53.3	7.6	0.0	1	S
417.431	IV	16.0	41.9	10.6	4.0	24.0	52.9	8.4	0.0	1	R
417.434	IV	16.5	44.3	12.9	3.5	20.5	54.6	8.4	0.0	1	S
417.435	IV	16.3	44.4	12.7	3.6	21.4	54.2	7.9	0.1	1	S
417.437	IV	15.0	44.9	11.9	3.8	19.7	55.5	8.8	0.1	1	S
417.471	IV	16.5	43.5	12.3	2.8	23.4	54.0	7.4	0.0	1	S
417.472C	IV	15.2	44.9	12.7	3.7	23.1	52.3	8.1	0.1	1	S
417.578	IV	16.6	42.7	12.2	3.6	24.1	51.7	8.1	0.1	1	S
419.043	IV	15.9	42.0	10.4	3.2	23.7	53.8	9.0	0.1		
423.729	IV	17.3	42.7	10.8	4.1	21.0	55.3	8.7	0.0	1	H
423.731	IV	16.6	42.5	10.9	4.2	24.5	52.3	7.9	0.1	1	R R R S
423.734	IV	17.8	45.6	11.2	3.7	20.7	56.8	7.5	0.0	1	R R R R
423.737	IV	16.5	43.5	11.7	4.3	21.5	54.7	7.5	0.1	2	S
423.746	IV	17.4	43.8	11.6	3.9	24.3	53.0	7.0	0.0	1	S
423.748C	IV	16.9	45.1	12.5	3.1	20.3	54.7	9.2	0.0	1	S
423.749	IV	16.6	44.7	10.5	3.5	21.5	55.8	8.5	0.0	1	S
423.750	IV	17.5	43.0	11.5	4.2	22.5	54.2	7.4	0.0	1	S
423.752A	IV	16.7	44.9	12.8	4.0	20.4	54.5	8.2	0.0	1	S
423.752B	IV	17.7	42.1	10.9	3.5	22.1	55.2	8.2	0.0	1	R R H S
423.753B	IV	17.5	43.3	11.3	4.1	21.8	55.1	7.5	0.0	1	R R R S
423.756B	IV	17.1	43.8	11.0	4.4	25.2	52.0	7.4	0.0	1	R
423.763	IV	16.8	44.1	11.1	3.8	21.6	55.1	8.1	0.1	1	S
423.765	IV	16.9	44.6	10.8	3.8	23.2	53.6	8.4	0.0	1	S
423.766	IV	17.8	42.4	10.3	4.0	24.2	53.9	7.4	0.1	1	H
423.768	IV	18.1	43.0	11.8	3.5	21.6	54.9	7.9	0.0	1	S
423.769B	IV	17.3	45.0	11.9	3.7	24.3	53.0	7.0	0.0	1	R R R S
423.770	IV	17.9	41.4	11.3	4.4	26.4	50.6	7.0	0.1	1	S
423.778	IV	17.4	43.6	11.1	4.1	24.4	52.5	7.8	0.1	1	H
423.787	IV	15.8	43.7	11.3	4.7	26.7	50.0	7.0	0.2	2	R H S S
423.789	IV	16.0	44.0	12.3	3.7	19.5	55.2	9.1	0.0	1	R R R R
423.790	IV	17.2	44.6	11.2	3.8	22.6	53.7	8.5	0.0	1	R R R R

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
423.791		KAS 236-8	S. Korea		S. Korea	1978	IV
423.792		KAS 236-9	S. Korea		S. Korea	1978	IV
423.795		KAS 237-2	S. Korea		S. Korea	1978	IV
423.799B		(KAS 302-1)	S. Korea		S. Korea	1978	IV
423.800		KAS 302-2	S. Korea		S. Korea	1978	IV
423.803		KAS 304-2	S. Korea		S. Korea	1978	IV
423.808A		KAS 331-4	S. Korea		S. Korea	1978	IV
423.808B		(KAS 331-4)	S. Korea		S. Korea	1978	IV
423.809		KAS 339-1	S. Korea		S. Korea	1978	IV
423.811		KAS 339-7	S. Korea		S. Korea	1978	IV
423.813		KAS 339-9	S. Korea		S. Korea	1978	IV
423.816		KAS 355-1	S. Korea		S. Korea	1978	IV
423.819		KAS 355-4	S. Korea		S. Korea	1978	IV
423.825		KAS 362-4	S. Korea		S. Korea	1978	IV
423.827A		KAS 362-6	S. Korea		S. Korea	1978	IV
423.833A		KAS 370-14	S. Korea		S. Korea	1978	IV
423.833B		(KAS 370-14)	S. Korea		S. Korea	1978	IV
423.835		KAS 370-16	S. Korea		S. Korea	1978	IV
423.836		KAS 370-17	S. Korea		S. Korea	1978	IV
423.837A		KAS 370-18	S. Korea		S. Korea	1978	IV
423.839		KAS 370-20	S. Korea		S. Korea	1978	IV
423.841		KAS 370-22	S. Korea		S. Korea	1978	IV
423.842		KAS 370-23	S. Korea		S. Korea	1978	IV
423.843		KAS 370-24	S. Korea		S. Korea	1978	IV
423.845B		(KAS 380-17)	S. Korea		S. Korea	1978	IV
423.846		KAS 390-1-1	S. Korea		S. Korea	1978	IV
423.848		KAS 390-24	S. Korea		S. Korea	1978	IV
423.850		KAS 391-7	S. Korea		S. Korea	1978	IV
423.851		KAS 521-11	S. Korea		S. Korea	1978	IV
423.863B		(KAS 680-4)	S. Korea		S. Korea	1978	IV
423.877	Aokotsubu	Jo 1023	Japan		Japan	1978	IV
423.887A	Miyagishirome	Be 1025	Japan		Japan	1978	IV
423.887B	(Miyagishirome)	(Be 1025)	Japan		Japan	1978	IV
423.897	Tamahikari	Df 1029	Japan		Japan	1978	IV
423.902	Asajiro		Japan		Japan	1978	IV
423.910	Kakushin 1		Japan		Japan	1978	IV
423.926	Tousan 72		Japan		Japan	1978	IV
423.929	Wase asajiro		Japan		Japan	1978	IV
423.975	Iyodaizu	Gh 2001	Japan		Japan	1978	IV
423.983	Akasaya (Oita)		Japan		Japan	1978	IV
424.135		KAS 629-2	S. Korea		S. Korea	1978	IV
424.140		KAS 629-7	S. Korea		S. Korea	1978	IV
424.149		KAS 642-3	S. Korea		S. Korea	1978	IV
424.150		KAS 642-5	S. Korea		S. Korea	1978	IV
424.151		KAS 642-6	S. Korea		S. Korea	1978	IV
424.153		KAS 643-1	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
423.791	IV	P	T	E	Ssp	Br	I	Br	Br			
423.792	IV	P	G	Sa	Ssp	Bl	D	Gn	Bf			
423.795	IV	P	T	E	Ssp	Br	D	Br	Br			
423.799B	IV	P	T	E	Ssp	Br	I	Br	Br			
423.800	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
423.803	IV	P	T	E	Ssp	Br	I	Lgn	Bl	Saddle		
423.808A	IV	P	T	E	Ssp	Br	I	Gn	Bl	Saddle		
423.808B	IV	P	G	A	Ssp	Bl	D	Gn	Bf			
423.809	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.811	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
423.813	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
423.816	IV	P	T	E	Ssp	Br	D	Bl	Bl			
423.819	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.825	IV	P	T	E	Ssp	Br	I	Bl	Bl	SDef		
423.827A	IV	P	G	E	N	Tn	D	Y	Lbf			
423.833A	IV	W	T	E	N	Tn	S	Ggn	Bl			
423.833B	IV	P	T	E	Ssp	Br	D	Gn	Bl	Saddle		
423.835	IV	P	G	E	N	Br	I	Y	Y			
423.836	IV	W	T	E	N	Tn	I	Ggn	Bl			
423.837A	IV	W	T	E	Ssp	Tn	I	Ggn	Bl			
423.839	IV	W	G	E	Ssp	Br	I	Y	Bf			
423.841	IV	P	G	Sa	Ssp	Tn	D	Y	Bf			
423.842	IV	W	T	E	N	Tn	I	Ggn	Bl			
423.843	IV	P	G	E	N	Tn	I	Y	Bf			
423.845B	IV	P	G	E	Ssp	Br	I	Y	Y			
423.846	IV	P	G	E	Ssp	Br	D	Gn	G	Gncot		
423.848	IV	P	T	E	Ssp	Br	I	Bl	Bl			
423.850	IV	P	G	E	N	Tn	I	Y	Y			
423.851	IV	P	T	E	Ssp	Tn	D	Y	Br			
423.863B	IV	W	G	E	N	Tn	I	Y	Y			
423.877	IV	P	T	A	N	Tn	I	Y	Br			
423.887A	IV	P	G	E	N	Br	D	Y	Y			
423.887B	IV	P	G	E	N	Br	D	Y	Y			
423.897	IV	W	G	A	N	Br	I	Y	Y			
423.902	IV	W	T	E	N	Tn	D	Y	Br			
423.910	IV	P	T	A	N	Br	I	Y	Br			
423.926	IV	P	G	E	Ssp	Tn	D	Y	Bf			
423.929	IV	W	T	A	Ssp	Tn	I	Y	Br			
423.975	IV	P	T	E	Ssp	Br	I	Gn	Br	Gncot		
423.983	IV	W	T	E	N	Tn	D	Y	Br			
424.135	IV	P	G	E	N	Tn	I	Y	Y			
424.140	IV	P	T	I	Sp	Br	I	Br	Br	Net		
424.149	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.150	IV	P	G	E	Ssp	Br	D	Gn	Gn	Gncot		
424.151	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.153	IV	P	G	E	Ssp	Br	I	Y	Y			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
423.791	65*	134	2.8*	76*	1.5	1.0	1.5	2.8	-	20.5*	1.93
423.792	71*	130	2.5	81*	2.0	1.0	2.0*	2.3	2.5	16.1	1.74
423.795	66*	132	1.5	60*	1.0	1.0	2.0	2.8	-	23.5*	1.70
423.799B	70*	135	2.5	75	1.5	1.0	1.0	2.5	-	16.0*	1.55*
423.800	66*	134	2.5*	67*	1.5	1.0	1.5	2.8	-	25.5	1.62
423.803	66*	134	2.8	84	2.5	1.5	1.5	2.8	-	26.3*	2.16*
423.808A	67*	138	3.3*	84	1.5	1.0	1.0	2.5	-	22.1*	1.40*
423.808B	71	130	3.8	77*	2.5	1.0	1.5	2.3	2.5	13.1*	1.63
423.809	66*	137	2.8*	88	1.5	1.0	1.5	2.0	-	17.6*	1.49
423.811	67	136	2.5*	65*	1.5	1.0	1.5	3.0	-	26.7*	1.70
423.813	66*	136	1.8*	65*	2.5	1.0	1.5	3.3*	-	26.6	1.42*
423.816	66	134	2.5	63*	2.5	1.0	2.0	2.5	-	21.9	1.68
423.819	65	134	3.5	75*	2.5	1.5	1.5	2.3	-	18.6*	1.46
423.825	62*	134	2.5*	61*	1.5	1.0	1.5	3.0	-	26.8	1.84
423.827A	72	135	5.0	90*	2.5	1.0	1.0	1.8	2.5	8.4	1.81*
423.833A	73*	135	4.5	86*	2.5	1.5	2.0*	2.3	3.5	9.8	1.74
423.833B	68*	137	3.5	69*	1.0	1.5	1.5	2.8	-	26.6*	1.55
423.835	64	134	2.8*	84	1.5	1.5	1.5	3.3	2.0	20.3*	1.82
423.836	70*	133	3.5	77	1.5	1.5	1.5	2.3	3.0	9.7*	1.57
423.837A	73*	134	3.5	76*	2.0	1.5	2.0*	2.5	4.0*	8.8	1.40
423.839	62	136	1.3	65	1.0	2.0*	2.5	3.0	1.5	26.6*	2.04
423.841	73	135	4.0	95*	2.5	1.0	1.5	2.0	4.5	10.2	1.65
423.842	72	133	4.0	81*	2.0	1.0	1.0	2.5	3.5	9.4*	0.98
423.843	65*	134	1.5	62	1.5	1.0	1.5	2.3	1.0	21.8	2.04
423.845B	66*	136	2.3*	79	1.5	1.0	2.0	2.3	2.0	19.1*	1.52
423.846	65*	134	3.5	62	2.0	1.5	1.5	3.5	1.0	25.5*	1.46
423.848	68*	135	2.5	74*	1.5	1.0	1.5	2.5	-	23.8*	1.69
423.850	70*	134	3.5	88	2.5	1.0	1.5	1.8	2.0	10.0	1.71
423.851	69	136	2.5	75	2.5	1.0	1.5	2.3	3.5	11.9	1.66
423.863B	71*	135	2.0	61	1.5	1.0	1.0	2.5	3.0	16.0*	1.97
423.877	67*	133	3.3	84*	2.5	3.0*	3.5	2.8	1.0	13.5	1.28
423.887A	59*	134	1.5	77	2.5	1.5	2.0*	3.3*	1.0	30.1*	1.10
423.887B	63*	134	1.3	70*	1.5	1.5	3.0	3.3	1.0	30.3*	1.07
423.897	66*	133	2.0*	79*	1.5	1.0	2.0*	3.5	1.0	25.0*	2.42
423.902	68*	136	2.3	69	1.5	1.5	2.5	2.5	1.0	17.8*	1.17
423.910	66*	136	1.8*	85	1.5	3.0*	4.0	2.8*	1.0	20.9*	1.13*
423.926	67*	137	2.3	85	2.0	1.0	1.5	2.5	1.5	18.4	1.49
423.929	66*	134	1.8	62	1.0	1.5	1.5	2.3	2.5	19.1*	2.02
423.975	68*	135	2.8	74	2.0	1.5	2.0*	2.3	2.0*	11.3	1.74
423.983	68*	137	2.3	77*	1.5	1.0	3.0*	2.8	1.0	16.9*	0.95
424.135	67	132	3.5	74*	2.5	1.0	1.5	2.0	2.5	9.0	1.91*
424.140	68	137	1.8*	65*	1.5	1.0	1.0	2.5	-	22.2*	1.43
424.149	63*	132	2.5*	75*	2.5	1.5	2.0*	2.5	-	22.6*	2.34*
424.150	66*	135	3.3	84*	2.5	1.0	1.5	3.3	2.5	25.0*	2.24
424.151	64*	134	2.0	62*	1.5	1.0	1.0	3.3	-	29.5*	1.70
424.153	62*	131	3.0	74*	2.5	1.0	2.0	2.5	2.0	20.2*	2.13

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
423.791	IV	17.6	41.4	11.0	3.7	23.5	53.4	8.1	0.2	1	R R R H
423.792	IV	16.8	44.5	12.3	3.8	21.7	54.1	7.9	0.0	1	R R R H
423.795	IV	17.1	42.8	11.2	3.0	20.6	54.9	10.2	0.0	1	H
423.799B	IV	15.6	45.3	12.1	3.0	19.3	56.3	9.1	0.0	1	R
423.800	IV	16.1	45.3	10.9	2.8	19.3	57.6	9.2	0.0	1	S
423.803	IV	16.4	43.3	10.9	4.3	23.4	53.5	7.8	0.1	1	S
423.808A	IV	16.0	45.1	11.0	4.1	21.4	55.7	7.6	0.0	1	R R R H
423.808B	IV	17.2	42.7	12.3	4.4	23.4	51.7	8.0	0.1	1	R R R H
423.809	IV	15.6	43.7	10.8	4.0	21.0	55.8	8.2	0.0	1	S
423.811	IV	15.9	42.8	10.1	4.3	23.0	53.7	8.6	0.0	1	
423.813	IV	16.4	42.9	10.7	4.7	23.9	52.8	7.7	0.0	1	S
423.816	IV	16.1	42.9	12.0	4.3	22.7	52.6	8.2	0.0	1	S
423.819	IV	16.5	43.5	11.6	4.1	22.1	54.5	7.6	0.0	1	S
423.825	IV	16.8	44.5	11.1	4.4	23.7	53.4	7.2	0.0	1	H
423.827A	IV	15.9	43.4	12.4	3.8	21.8	54.0	8.0	0.0	1	R R R R
423.833A	IV	14.6	47.5	12.4	4.1	25.1	50.7	7.6	0.0	1	R H R
423.833B	IV	17.4	43.4	11.3	4.4	23.6	53.2	7.5	0.0	1	S
423.835	IV	17.0	42.6	10.8	3.7	23.0	54.1	8.1	0.0	1	S
423.836	IV	15.7	46.2	12.4	4.5	25.6	50.1	7.2	0.0	1	R H R R
423.837A	IV	15.2	47.6	12.6	4.4	23.8	50.9	8.3	0.0	1	R R R R
423.839	IV	17.3	43.6	12.3	4.1	22.1	53.7	7.6	0.1	1	R S R S
423.841	IV	16.2	44.4	11.9	3.8	24.2	52.1	7.8	0.0	1	S
423.842	IV	15.8	45.8	12.4	4.3	26.8	49.3	7.0	0.0	1	R R R R
423.843	IV	17.4	46.0	11.8	3.1	22.3	54.9	7.8	0.0	1	R R S
423.845B	IV	16.7	44.8	11.7	4.0	23.6	53.1	7.5	0.0	1	S
423.846	IV	19.9	43.0	11.6	4.2	22.1	54.8	7.2	0.1	1	S
423.848	IV	15.7	45.2	11.4	3.9	23.3	53.3	8.0	0.0	1	R R R
423.850	IV	14.8	46.7	12.2	3.4	19.3	54.8	10.1	0.1	1	R
423.851	IV	17.0	45.3	11.5	3.8	20.1	55.9	8.6	0.1	1	S
423.863B	IV	16.9	46.0	11.5	3.6	21.1	54.9	8.7	0.0	4	R R R S
423.877	IV	17.8	40.2	12.1	3.9	22.6	52.8	8.4	0.0	1	R R R R
423.887A	IV	17.5	41.2	10.6	4.1	27.4	49.9	7.7	0.1	1	R R R S
423.887B	IV	17.2	41.6	11.6	3.8	27.1	50.6	6.8	0.0	2	R R R S
423.897	IV	16.2	41.6	11.0	4.1	23.8	51.8	8.8	0.3	1	S
423.902	IV	17.4	40.9	11.7	4.5	22.9	51.2	9.3	0.4	1	R R R R
423.910	IV	17.0	43.8	11.7	4.0	20.5	56.0	7.6	0.1	1	R R R R
423.926	IV	15.8	45.2	10.8	4.2	22.6	54.7	7.3	0.3	1	S
423.929	IV	16.9	42.1	10.4	3.7	21.4	55.3	8.7	0.3	1	R
423.975	IV	17.0	44.3	11.9	3.8	21.4	53.6	8.9	0.1	2	R R R R
423.983	IV	17.7	41.1	11.4	4.4	23.3	51.3	9.3	0.0	1	R R R R
424.135	IV	16.4	43.5	12.5	4.0	22.3	53.9	6.9	0.3	3	
424.140	IV	18.0	42.8	10.0	4.5	24.4	52.4	8.4	0.2	1	
424.149	IV	15.9	43.6	10.8	3.9	25.7	51.8	7.2	0.4	1	
424.150	IV	17.6	45.8	11.9	4.2	23.7	53.1	6.8	0.1	1	
424.151	IV	15.8	43.7	10.9	4.8	24.7	52.2	7.2	0.1	1	
424.153	IV	16.5	46.0	12.1	4.0	24.4	52.0	7.0	0.4	4	

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.154B		(KAS 643-2)	S. Korea		S. Korea	1978	IV
424.156A		KAS 643-4	S. Korea		S. Korea	1978	IV
424.162		KAS 644-1	S. Korea		S. Korea	1978	IV
424.164A		KAS 644-3	S. Korea		S. Korea	1978	IV
424.165		KAS 644-4	S. Korea		S. Korea	1978	IV
424.167		KAS 644-6	S. Korea		S. Korea	1978	IV
424.168A		KAS 644-7	S. Korea		S. Korea	1978	IV
424.168B		(KAS 644-7)	S. Korea		S. Korea	1978	IV
424.168C		(KAS 644-7)	S. Korea		S. Korea	1978	IV
424.169A		KAS 644-9	S. Korea		S. Korea	1978	IV
424.169B		(KAS 644-9)	S. Korea		S. Korea	1978	IV
424.171A		KAS 662-2	S. Korea		S. Korea	1978	IV
424.171B		(KAS 622-2)	S. Korea		S. Korea	1978	IV
424.172A		KAS 662-3	S. Korea		S. Korea	1978	IV
424.173		KAS 662-4	S. Korea		S. Korea	1978	IV
424.175		KAS 662-6	S. Korea		S. Korea	1978	IV
424.177		KAS 663-1	S. Korea		S. Korea	1978	IV
424.179A		KAS 663-3	S. Korea		S. Korea	1978	IV
424.179B		(KAS 663-3)	S. Korea		S. Korea	1978	IV
424.180		KAS 663-4	S. Korea		S. Korea	1978	IV
424.181		KAS 663-5	S. Korea		S. Korea	1978	IV
424.184		KAS 670-1	S. Korea		S. Korea	1978	IV
424.188A		KAS 670-5	S. Korea		S. Korea	1978	IV
424.188B		(KAS 670-5)	S. Korea		S. Korea	1978	IV
424.189		KAS 670-6	S. Korea		S. Korea	1978	IV
424.211		KAS 130-4	S. Korea		S. Korea	1978	IV
424.214A		KAS 130-7	S. Korea		S. Korea	1978	IV
424.214B		(KAS 130-7)	S. Korea		S. Korea	1978	IV
424.214C		(KAS 130-7)	S. Korea		S. Korea	1978	IV
424.215		KAS 130-8	S. Korea		S. Korea	1978	IV
424.216		KAS 131-1	S. Korea		S. Korea	1978	IV
424.217A		KAS 131-2	S. Korea		S. Korea	1978	IV
424.217B		(KAS 131-2)	S. Korea		S. Korea	1978	IV
424.219B		(KAS 131-4)	S. Korea		S. Korea	1978	IV
424.220A		KAS 131-5	S. Korea		S. Korea	1978	IV
424.220B		(KAS 131-5)	S. Korea		S. Korea	1978	IV
424.221B		(KAS 131-6)	S. Korea		S. Korea	1978	IV
424.222A		KAS 131-7	S. Korea		S. Korea	1978	IV
424.223		KAS 131-8	S. Korea		S. Korea	1978	IV
424.226		KAS 133-2	S. Korea		S. Korea	1978	IV
424.227B		(KAS 133-3)	S. Korea		S. Korea	1978	IV
424.228		KAS 134-1	S. Korea		S. Korea	1978	IV
424.230		KAS 134-3	S. Korea		S. Korea	1978	IV
424.232B		(KAS 134-5)	S. Korea		S. Korea	1978	IV
424.235		KAS 150-17-1	S. Korea		S. Korea	1978	IV
424.236		KAS 150-17-2	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.154B	IV	P	T	Sa	Ssp	Br	I	Rbr	Rbr			
424.156A	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.162	IV	P	G	E	Ssp	Br	S	Y	Y			
424.164A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.165	IV	P	G	E	N	Br	I	Y	Y			
424.167	IV	P	T	E	N	Br	D	Bl	Bl			
424.168A	IV	P	G	E	Ssp	Br	I	Y	Y			
424.168B	IV	P	G	E	Ssp	Br	I	Y	Y			
424.168C	IV	P	G	E	Ssp	Br	S	Y	Y			
424.169A	IV	W	G	A	Ssp	Tn	I	Y	Bf			
424.169B	IV	P	G	A	Ssp	Br	I	Y	Bf			
424.171A	IV	P	G	E	N	Tn	D	Y	Lbf			
424.171B	IV	P	G	E	N	Tn	D	Y	Lbf			
424.172A	IV	P	G	E	N	Br	D	Y	Bf			
424.173	IV	P	G	E	Ssp	Br	I	Y	Y			
424.175	IV	P	G	E	Ssp	Br	S	Y	Y			
424.177	IV	P	G	E	Ssp	Br	S	Y	Y			
424.179A	IV	P	G	E	Ssp	Br	S	Y	Y			
424.179B	IV	P	G	E	Ssp	Br	S	Y	Y			
424.180	IV	P	T	E	Ssp	Dbr	S	Br	Br	Gncot		
424.181	IV	W	T	E	Ssp	Bl	S	Br	Br			
424.184	IV	P	G	E	Ssp	Br	S	Y	Y			
424.188A	IV	P	T	E	Ssp	Bl	D	Bl	Bl			
424.188B	IV	P	G	E	Ssp	Bl	D	Bl	Bl			
424.189	IV	W	G	E	Ssp	Lbr	I	Y	Bf			
424.211	IV	P	T	E	Ssp	Br	I	Gn	Bl	Saddle		
424.214A	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.214B	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.214C	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.215	IV	P	G	E	Ssp	Br	I	Y	Y			
424.216	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.217A	IV	P	G	E	Ssp	Br	I	Gn	Bf	Gncot		
424.217B	IV	P	G	E	Ssp	Br	I	Gn	Bf	Gncot		
424.219B	IV	P	G	E	Ssp	Br	I	Y	Y			
424.220A	IV	P	T	E	Ssp	Br	I	Gn	Gn	Gncot		
424.220B	IV	P	G	E	Ssp	Br	I	Gn	Gn	Gncot		
424.221B	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.222A	IV	W	G	E	Dn	Tn	D	Y	Y			
424.223	IV	P	T	E	Ssp	Br	S	Br	Br			
424.226	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.227B	IV	P	T	E	Ssp	Br	S	Br	Br			
424.228	IV	P	G	E	Ssp	Br	S	Y	Y			
424.230	IV	P	G	E	Ssp	Br	S	Y	Y			
424.232B	IV	P	T	E	Ssp	Br	S	Br	Br	SSt		
424.235	IV	P	T	E	Ssp	Br	S	Br	Br			
424.236	IV	P	T	E	Ssp	Br	S	Br	Br			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.154B	64	133	1.5	65*	2.5	1.5	2.0	2.8	-	15.6*	1.36
424.156A	67*	135	2.8	71*	1.5	1.0	1.5	2.3	-	20.1*	1.77
424.162	63*	132	2.5	83*	1.5	1.0	1.5	2.0	2.0	19.8	1.74
424.164A	66*	134	2.3*	74*	2.5	1.5	1.5	3.0	-	27.4*	1.54
424.165	63*	131	2.8	77*	1.5	1.0	2.5*	3.0	2.5	23.6*	1.84
424.167	66*	134	2.5*	67*	2.5	2.0*	2.5	3.0	-	27.6*	1.57
424.168A	61	134	2.5	79*	2.0	1.0	1.5	2.5	2.0	20.4	1.80
424.168B	62*	129*	2.3*	80	1.0	1.0	1.5	2.5	2.5	21.7*	1.71
424.168C	65*	138	3.8	79*	1.0	1.0	1.5	2.5	3.0	19.2*	1.85
424.169A	64*	133	2.0	63*	1.0	1.0	1.0	3.0	2.5	16.3*	2.06
424.169B	65*	135	2.5	75*	1.5	1.0	1.5	2.3*	1.5	17.9*	2.09
424.171A	59*	135	4.5	76	2.5	1.0	1.0	1.8	2.0	11.3	2.06
424.171B	72	136	4.0	76	2.5	1.0	2.0	2.0	2.5	8.6	1.93
424.172A	69*	134	3.8*	117*	3.5	1.0	1.5	2.5	2.0	12.8	2.12
424.173	62*	133	2.8	76	2.5	1.0	2.0	2.3	2.0	22.0*	1.65
424.175	63*	133	2.8	70	2.0	1.0	2.0	2.3	2.0	19.6*	2.05*
424.177	63*	131	2.5	74	1.5	1.0	1.0	2.3	2.0	20.5	1.84
424.179A	60*	131	2.8	74*	2.5	1.0	1.5	2.0	2.0	20.9*	1.88*
424.179B	63*	134	2.8	74*	1.5	1.0	1.5	2.3	2.0	20.1*	1.77
424.180	63*	125*	3.0	70*	1.5	1.5	2.0*	2.5	-	19.4	1.68
424.181	69	133	3.5	97*	2.5	1.0	2.5*	2.0	-	14.7	1.92
424.184	60*	134*	2.8	76*	2.5	1.0	1.5	2.3	2.0	20.1	1.76
424.188A	67*	130	2.5	89*	2.5	1.5	2.0	2.5	-	16.3	1.68
424.188B	70	133	3.8	85*	2.5	1.0	2.0	2.5	-	15.9	2.10
424.189	62*	135	2.1*	63*	1.0	1.0	1.0	2.8*	1.0	29.8*	2.01
424.211	70*	133*	2.3*	80*	1.5	1.0	1.0	2.8	-	21.9*	1.46
424.214A	61*	129	3.3	62*	1.5	1.0	1.5	2.5	-	19.5*	1.88*
424.214B	67*	133	3.5	75*	2.5	1.5	2.0	2.5	-	19.0*	1.93*
424.214C	69*	135	2.5	79*	1.5	1.0	2.0	2.3	-	20.2*	1.78
424.215	67*	136	2.8*	80*	1.5	1.0	1.5	1.8	2.0	20.6*	1.86
424.216	67*	134	2.5*	75*	2.5	1.0	1.5	2.8	-	24.0*	1.74
424.217A	59*	134	2.0	84	2.5	1.0	1.5	2.0	2.0	18.6*	1.85
424.217B	63*	134	1.8	79	2.0	1.0	1.0	2.0	2.0	20.8*	1.77
424.219B	65	135*	3.3	75*	2.5	1.0	1.5	2.3	1.5	19.9	1.87*
424.220A	66*	136	2.3*	89*	2.5	1.0	1.5	3.0	2.0	22.9*	1.78
424.220B	68	135	3.0	77*	2.5	1.0	2.0	3.3	2.0	22.7*	1.70
424.221B	66*	135	2.3*	75	1.0	1.0	2.0	2.3	-	19.8	2.00
424.222A	70*	136	2.3	79*	2.0	1.0	1.5	1.8	4.0	13.8*	1.66
424.223	64*	133	2.3	61*	1.0	1.0	1.5	2.8	-	25.2	1.91
424.226	66*	132	1.8*	60*	1.5	1.0	1.5	2.3	-	24.9	1.74
424.227B	67*	134	3.3	71*	1.5	1.0	1.5	2.8	-	21.3*	1.83
424.228	59*	131	2.5	75*	1.5	1.0	1.5	2.3*	2.0	19.6	1.61
424.230	63*	132	2.5	86*	2.5	1.0	1.5	2.0	1.5	20.1*	1.86
424.232B	60*	128	2.3*	60*	1.0	1.5	1.5	2.3	-	26.2*	1.74
424.235	67*	136	3.3*	69*	1.5	1.0	1.0	2.5	-	24.5	1.85
424.236	70*	136	4.0	77*	2.5	1.0	1.5	2.5	-	20.4	1.88

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.154B	IV	14.7	46.3	12.5	3.5	21.3	55.4	6.8	0.5	1	
424.156A	IV	15.9	43.8	10.7	4.1	22.3	54.7	7.8	0.2	1	
424.162	IV	17.3	43.2	12.2	3.8	23.4	52.7	7.3	0.3	4	
424.164A	IV	15.5	44.6	10.9	3.5	23.4	54.2	7.5	0.4	1	
424.165	IV	17.9	42.9	11.1	3.6	23.9	53.3	7.7	0.2	1	
424.167	IV	15.2	44.6	11.0	3.6	23.0	54.9	7.4	0.0	1	
424.168A	IV	16.6	45.4	12.2	3.9	24.2	52.2	7.0	0.3	4	
424.168B	IV	16.7	45.1	12.1	4.2	22.9	53.0	6.8	0.8	3	
424.168C	IV	15.7	42.7	11.6	4.9	20.7	54.6	8.2	0.1		
424.169A	IV	16.7	43.1	12.4	3.4	20.0	55.4	8.3	0.3	2	
424.169B	IV	16.6	45.1	11.6	3.6	20.9	54.9	8.6	0.2	2	
424.171A	IV	15.5	45.4	12.5	4.1	22.9	52.5	7.8	0.1	1	
424.171B	IV	15.6	44.6	12.6	3.8	21.6	53.7	8.0	0.1	1	
424.172A	IV	16.7	45.3	11.6	4.4	20.6	55.0	8.1	0.2	1	
424.173	IV	17.7	44.5	11.9	3.8	23.3	53.4	7.4	0.0	4	
424.175	IV	16.2	44.6	12.6	3.8	22.8	53.3	7.3	0.3	1	
424.177	IV	16.8	45.2	12.1	4.0	24.1	51.8	7.3	0.4	3	
424.179A	IV	16.8	46.4	12.3	3.3	21.8	54.9	7.7	0.0	1	
424.179B	IV	16.9	45.6	12.5	3.9	24.0	52.3	7.0	0.2		
424.180	IV	16.9	45.5	12.5	4.0	21.1	55.1	7.1	0.1	2	
424.181	IV	16.0	43.0	10.5	3.7	22.1	55.4	8.1	0.2	1	
424.184	IV	16.6	45.2	12.2	3.7	23.5	53.4	7.0	0.0	3	
424.188A	IV	14.9	47.1	11.9	3.6	22.0	54.9	7.4	0.1	1	
424.188B	IV	15.0	44.9	11.0	3.7	19.4	57.6	8.1	0.0	1	
424.189	IV	17.3	46.1	11.0	4.3	23.3	53.4	7.6	0.2	3	
424.211	IV	17.5	42.1	11.0	4.6	23.6	52.8	7.8	0.1	1	S
424.214A	IV	16.3	45.4	11.8	3.4	21.6	54.7	8.1	0.3	1	R R R R
424.214B	IV	16.1	44.6	12.6	3.0	18.5	57.9	7.8	0.0	1	R R R S
424.214C	IV	16.0	43.5	10.6	4.1	21.6	55.5	7.8	0.2	1	R R R H
424.215	IV	16.8	45.2	11.4	3.6	22.9	54.1	7.7	0.0	3	S
424.216	IV	17.0	45.7	11.1	3.5	21.1	55.8	8.1	0.3	1	S
424.217A	IV	16.7	45.6	11.1	3.8	24.0	53.1	7.8	0.1	1	S
424.217B	IV	18.3	42.4	11.1	3.7	23.8	53.4	7.8	0.0	1	S
424.219B	IV	16.6	45.4	11.9	3.6	21.5	55.1	7.6	0.1	4	R
424.220A	IV	17.5	44.6	11.8	3.6	22.5	54.3	7.7	0.1	1	S
424.220B	IV	17.6	44.0	11.5	4.0	22.2	54.5	7.7	0.0	1	S
424.221B	IV	16.3	45.0	11.6	3.8	21.6	54.2	8.6	0.1	1	R R R R
424.222A	IV	16.2	46.9	10.9	4.0	22.9	53.9	8.2	0.0	1	R R R R
424.223	IV	17.4	43.9	10.8	3.8	22.8	54.8	7.4	0.2	1	R H S S
424.226	IV	15.6	46.2	11.5	4.1	22.4	53.9	7.9	0.1	3	S
424.227B	IV	16.6	43.0	12.0	3.7	20.9	54.5	8.7	0.1	1	S
424.228	IV	16.0	46.6	11.5	4.3	24.0	53.3	6.8	0.1	4	S
424.230	IV	17.0	45.5	12.1	4.0	23.7	52.9	7.1	0.1	3	S
424.232B	IV	17.1	44.5	13.2	4.2	22.8	51.7	7.6	0.4	1	S
424.235	IV	17.4	43.7	11.3	3.5	21.1	55.8	8.0	0.1	1	S
424.236	IV	16.6	41.9	11.9	4.0	21.1	54.3	8.3	0.2	1	H

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.237A		KAS 150-18	S. Korea		S. Korea	1978	IV
424.238		KAS 150-24	S. Korea		S. Korea	1978	IV
424.239		KAS 150-25	S. Korea		S. Korea	1978	IV
424.241		KAS 150-27	S. Korea		S. Korea	1978	IV
424.243		KAS 200-36	S. Korea		S. Korea	1978	IV
424.244		KAS 200-37	S. Korea		S. Korea	1978	IV
424.245		KAS 200-38	S. Korea		S. Korea	1978	IV
424.246		KAS 200-39	S. Korea		S. Korea	1978	IV
424.250A		KAS 200-43	S. Korea		S. Korea	1978	IV
424.250B		(KAS 200-43)	S. Korea		S. Korea	1978	IV
424.251A		KAS 200-44	S. Korea		S. Korea	1978	IV
424.253		KAS 202-1	S. Korea		S. Korea	1978	IV
424.254		KAS 202-2	S. Korea		S. Korea	1978	IV
424.255C		(KAS 202-3)	S. Korea		S. Korea	1978	IV
424.257A		KAS 205-21	S. Korea		S. Korea	1978	IV
424.257B		(KAS 205-21)	S. Korea		S. Korea	1978	IV
424.260		KAS 205-24	S. Korea		S. Korea	1978	IV
424.262		KAS 235-1	S. Korea		S. Korea	1978	IV
424.267		KAS 235-6	S. Korea		S. Korea	1978	IV
424.268		KAS 235-7	S. Korea		S. Korea	1978	IV
424.270A		KAS 235-9	S. Korea		S. Korea	1978	IV
424.270B		(KAS 235-9)	S. Korea		S. Korea	1978	IV
424.270C		(KAS 235-9)	S. Korea		S. Korea	1978	IV
424.271		KAS 235-10	S. Korea		S. Korea	1978	IV
424.272B		(KAS 235-11)	S. Korea		S. Korea	1978	IV
424.274B		(KAS 235-13)	S. Korea		S. Korea	1978	IV
424.275		KAS 235-14	S. Korea		S. Korea	1978	IV
424.276		KAS 235-16	S. Korea		S. Korea	1978	IV
424.277B		(KAS 235-17)	S. Korea		S. Korea	1978	IV
424.278A		KAS 235-18	S. Korea		S. Korea	1978	IV
424.278B		(KAS 235-18)	S. Korea		S. Korea	1978	IV
424.279		KAS 238-1	S. Korea		S. Korea	1978	IV
424.282		KAS 238-4	S. Korea		S. Korea	1978	IV
424.284B		(KAS 239-2)	S. Korea		S. Korea	1978	IV
424.285D		(KAS 239-3)	S. Korea		S. Korea	1978	IV
424.287		KAS 239-5	S. Korea		S. Korea	1978	IV
424.288		KAS 239-6	S. Korea		S. Korea	1978	IV
424.289		KAS 300-1	S. Korea		S. Korea	1978	IV
424.293		KAS 300-5	S. Korea		S. Korea	1978	IV
424.294A		KAS 300-6	S. Korea		S. Korea	1978	IV
424.294B		(KAS 300-6)	S. Korea		S. Korea	1978	IV
424.296B		(KAS 300-8)	S. Korea		S. Korea	1978	IV
424.298		KAS 300-10	S. Korea		S. Korea	1978	IV
424.299B		(KAS 300-11)	S. Korea		S. Korea	1978	IV
424.299C		(KAS 300-11)	S. Korea		S. Korea	1978	IV
424.300A		KAS 300-12	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.237A	IV	P	T	E	Ssp	Br	I	Gn	Bl			
424.238	IV	P	T	E	Ssp	Br	I	Gn	Bl			
424.239	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.241	IV	P	T	E	Ssp	Br	I	Gn	Br			
424.243	IV	P	T	E	Ssp	Br	D	Gn	Bl	Gncot		
424.244	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.245	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.246	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.250A	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.250B	IV	P	T	E	Ssp	Br	D	Bl	Bl	SDef		
424.251A	IV	P	G	E	Ssp	Br	I	Gn	Ib	Gncot		
424.253	IV	P	T	E	Ssp	Br	S	Br	Br			
424.254	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.255C	IV	P	G	E	Ssp	Br	D	Y	Y			
424.257A	IV	P	T	E	Ssp	Tn	S	Rbr	Rbr			
424.257B	IV	P	T	E	Ssp	Br	S	Br	Br			
424.260	IV	P	T	E	Ssp	Br	S	Br	Br	SDef		
424.262	IV	P	T	I	Sp	Br	I	Br	Br	Net		
424.267	IV	P	T	E	Ssp	Br	I	Br	Br			
424.268	IV	W	G	E	Sdn	Tn	I	Y	Y			
424.270A	IV	P	G	E	Ssp	Br	I	Y	Bf			
424.270B	IV	P	G	E	Ssp	Br	I	Y	Y			
424.270C	IV	P	G	E	Ssp	Br	I	Y	Y			
424.271	IV	P	T	E	Ssp	Br	S	Br	Br			
424.272B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.274B	IV	P	T	E	Ssp	Br	S	Br	Br	St		
424.275	IV	W	T	E	N	Bl	I	Gn	Bl			
424.276	IV	P	G	Sa	Ssp	Bl	I	Gn	Bf			
424.277B	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.278A	IV	W	G	E	N	Tn	I	Y	Bf			
424.278B	IV	P	G	E	Ssp	Tn	I	Y	Lbf			
424.279	IV	W	T	E	Ssp	Br	I	Rbr	Rbr			
424.282	IV	W	G	E	Ssp	Br	D	Y	Bf			
424.284B	IV	P	G	E	Ssp	Br	I	Gn	Gn			
424.285D	IV	W	G	E	Ssp	Tn	I	Y	Y			
424.287	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.288	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.289	IV	P	T	I	Ssp	Br	I	Br	Br	Net		
424.293	IV	W	G	A	Ssp	Tn	I	Y	Bf			
424.294A	IV	W	T	E	Ssp	Tn	S	G	Bl			
424.294B	IV	W	T	E	Ssp	Bl	S	Ggn	Bl			
424.296B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.298	IV	P	T	E	N	Br	S	Bl	Bl			
424.299B	IV	P	G	E	Ssp	Br	I	Gn	Bf	Gncot		
424.299C	IV	P	G	E	Ssp	Br	I	Gn	Lbf	Gncot		
424.300A	IV	P	G	E	Ssp	Bl	I	Gn	Bf	Gncot		

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.237A	64*	133	2.0*	75*	1.5	2.0*	2.5	3.0	1.0	32.8*	2.04
424.238	64*	137	1.5	65	1.5	1.5	2.0*	2.8	1.0	32.6*	1.49
424.239	65	137	2.3*	76*	1.5	1.0	1.5	2.5	-	18.9*	1.68
424.241	66*	133	2.3	85*	2.5	1.5	1.5	2.5	1.0	22.5*	1.65
424.243	68	134	2.3	83	1.5	1.0	1.5	3.0	2.0	23.8*	1.72
424.244	68	136	3.5	70*	1.5	1.0	1.5	2.8	-	27.4*	1.76
424.245	65*	134	3.0	71*	1.5	1.5	1.5	2.5	-	23.9	2.09
424.246	67*	136	2.5	84	2.5	1.0	1.5	2.5	-	22.5*	1.94
424.250A	68*	136	3.0*	86	2.5	1.0	1.5	2.8	-	28.1*	1.91
424.250B	75	139	3.8	77	2.5	1.0	1.5	2.5	-	21.7*	1.65
424.251A	70*	131*	2.5	86	2.5	1.0	1.5	2.0	1.5	20.9*	2.00
424.253	66*	135	2.0*	60*	1.5	1.0	1.5	2.5	-	23.4*	1.94*
424.254	65*	136	2.0*	79*	2.5	1.0	1.0	2.0	-	17.7*	1.73*
424.255C	64	134	2.5	84*	1.5	1.0	1.5	2.3	2.5	17.4*	1.81*
424.257A	73	135	3.0*	98*	2.5	1.0	1.5	2.8	-	21.8*	1.89*
424.257B	68*	136	2.8	76	1.5	1.0	1.0	2.5	-	22.5*	1.99
424.260	69	136	4.3	86*	2.5	1.0	1.5	2.5	-	23.3*	1.66*
424.262	68	136	1.5	44	1.0	1.0	1.5	2.5	-	24.3	1.42
424.267	67*	136	2.5*	63*	1.0	1.0	1.5	3.0	-	24.4*	1.52*
424.268	70*	136	1.8	67*	1.0	1.0	1.0	2.3	2.5	14.7*	2.12
424.270A	64*	135	2.8	85	2.5	1.0	1.5	2.3	2.0	18.1*	1.77
424.270B	68	136	3.0	84*	1.5	1.0	1.5	2.5	3.0	23.0*	1.98
424.270C	66*	135	2.5	75	1.5	1.0	1.5	3.3*	3.0	26.5*	1.79
424.271	66*	133	2.5*	66*	1.5	1.0	1.5	2.8	-	24.9*	2.01
424.272B	64*	135	1.8	85	1.5	1.0	1.5	2.8	-	26.2	2.21
424.274B	62*	133	2.0	60*	1.5	1.0	1.5	2.3	-	24.6	1.93
424.275	71*	135	4.5	84*	2.5	1.0	1.0	1.8	3.0	8.4*	1.51*
424.276	70*	132	3.3	90*	3.0	1.0	1.5	2.3	2.0	15.3	1.67
424.277B	63*	133	2.8	97*	2.5	1.0	1.5	2.3	1.0	12.8*	1.89*
424.278A	72*	136	3.3	72	2.5	1.0	1.5	2.0	2.0	7.8	1.62
424.278B	71*	135	4.3	84*	2.5	1.0	1.0	2.0	2.0	8.8	1.66
424.279	67*	137	2.8	71	2.5	1.0	1.5	2.3	-	26.8*	2.24*
424.282	59*	131	1.8*	67*	1.5	1.0	1.5	3.0	1.0	31.7	1.95
424.284B	67	132	1.3	69*	1.0	1.0	1.5	2.8	2.5	19.6*	1.46
424.285D	63*	135*	4.8	91*	2.5	1.0	1.5	2.3	3.0	15.9*	1.84
424.287	65*	131	2.0	62*	1.0	1.0	1.0	2.8	-	26.8	1.79
424.288	66*	133	2.0	60	1.0	1.0	1.5	2.5	-	24.9	1.99
424.289	66*	133	1.8*	47*	1.0	1.0	1.5	2.8	-	26.4*	1.72
424.293	53*	120	1.8	65*	1.5	3.0*	4.5	2.5	1.0	21.6	1.29*
424.294A	71*	134	3.3*	97	3.5	1.0	1.5	2.3	2.5	10.1	1.53
424.294B	80*	135	4.3	81*	2.5	1.0	1.5	2.3	3.5	7.6	1.65*
424.296B	64	135	3.3*	85*	2.5	1.5	1.5	2.8	-	19.9*	1.65*
424.298	74*	134	4.5	81	3.5	1.0	1.5	2.0	-	8.1	1.64
424.299B	59*	134	1.8	84*	2.5	1.0	1.5	2.3	1.5	20.4	1.98
424.299C	64	134	2.0	76*	2.5	1.0	2.0	2.8	3.5	19.6	1.60
424.300A	73	134	3.5	74*	1.0	1.0	1.5	2.3	1.5	11.5	1.62

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.237A	IV	17.8	42.1	12.8	3.8	27.0	47.7	8.5	0.0	1	R R R R
424.238	IV	16.6	43.7	12.4	4.3	26.7	48.2	8.3	0.0	1	
424.239	IV	16.6	43.2	10.5	3.7	23.5	53.9	8.2	0.0	1	R R R R
424.241	IV	16.7	45.5	11.8	3.4	22.4	54.2	8.2	0.0	1	R R S H
424.243	IV	17.8	44.5	12.1	3.8	22.7	53.7	7.5	0.0	1	S
424.244	IV	17.1	42.7	10.3	4.2	23.8	53.8	7.7	0.1	1	R R R R
424.245	IV	15.6	42.4	12.4	3.8	21.5	53.4	8.6	0.1	1	S
424.246	IV	16.0	42.8	11.3	4.5	24.3	51.4	8.3	0.1	2	S
424.250A	IV	17.8	42.1	11.9	4.6	23.9	52.8	6.8	0.0	1	S
424.250B	IV	16.7	42.5	11.6	4.8	20.3	53.8	9.1	0.3	1	R R R R
424.251A	IV	15.8	44.6	13.2	4.1	19.1	54.1	9.4	0.1	1	R R R S
424.253	IV	16.7	42.6	11.0	3.8	23.0	54.1	7.8	0.1	1	H
424.254	IV	15.6	42.5	11.4	3.8	21.1	55.6	7.9	0.0	1	
424.255C	IV	16.9	44.9	10.8	4.3	22.1	54.5	8.2	0.0	1	R R R R
424.257A	IV	17.3	41.9	10.1	3.9	21.9	55.2	8.7	0.0	1	S
424.257B	IV	16.9	41.1	10.1	4.0	23.1	54.5	8.1	0.0	1	
424.260	IV	17.0	41.8	10.7	3.8	21.6	54.9	9.0	0.0	1	S
424.262	IV	16.7	43.6	10.6	4.0	21.8	54.2	9.3	0.1	1	S
424.267	IV	16.1	42.4	10.7	4.2	23.7	53.4	7.8	0.1	1	S
424.268	IV	15.8	44.7	11.9	3.7	20.9	54.8	8.5	0.0	1	R R R S
424.270A	IV	16.4	44.5	10.8	4.0	20.0	56.1	8.9	0.1	1	S
424.270B	IV	17.5	43.3	11.9	4.3	23.3	52.9	7.5	0.0	1	S
424.270C	IV	18.2	44.1	11.5	4.3	24.1	53.0	7.0	0.0	2	S
424.271	IV	17.1	42.2	10.7	3.0	21.1	55.6	9.3	0.1	1	S
424.272B	IV	17.2	44.6	11.9	3.8	22.9	53.3	8.0	0.0	1	S
424.274B	IV	16.7	44.3	13.2	3.2	20.6	53.6	9.1	0.3	1	S
424.275	IV	14.9	46.1	11.7	3.1	19.7	55.9	9.5	0.0	1	R S R R
424.276	IV	17.1	42.7	11.7	4.2	23.0	53.1	8.0	0.0	1	R R R H
424.277B	IV	17.0	42.8	11.4	4.2	22.0	53.8	8.5	0.0	4	S
424.278A	IV	15.2	43.9	12.1	3.8	20.3	53.9	9.7	0.0	1	R R R S
424.278B	IV	15.7	43.8	12.1	3.9	22.4	53.5	8.0	0.0	1	R R R R
424.279	IV	16.8	43.9	11.1	3.4	20.3	56.5	8.5	0.0	1	R R R S
424.282	IV	17.9	44.9	11.0	3.8	22.6	54.7	7.8	0.0	1	S
424.284B	IV	17.5	43.3	11.5	3.4	22.1	54.8	7.9	0.0	1	S
424.285D	IV	16.5	44.6	12.7	4.0	20.6	54.3	8.2	0.0	2	H
424.287	IV	16.8	42.1	11.0	3.9	23.4	53.6	7.9	0.0	1	S
424.288	IV	17.3	43.7	11.1	3.7	23.3	53.7	8.0	0.0	1	S
424.289	IV	17.3	44.0	10.6	4.3	23.8	52.5	8.8	0.0	1	S
424.293	IV	15.5	46.1	12.7	3.6	24.5	51.2	7.9	0.0	1	
424.294A	IV	15.1	47.3	11.6	3.3	21.4	54.3	9.3	0.0	1	
424.294B	IV	13.5	47.0	12.1	3.1	19.1	55.2	10.4	0.0	1	
424.296B	IV	17.4	42.1	10.8	4.2	24.1	53.7	7.1	0.0	1	S
424.298	IV	15.1	43.2	11.4	3.7	19.1	56.3	9.5	0.0	1	
424.299B	IV	18.3	43.5	11.4	4.0	25.0	52.2	7.3	0.0	1	S
424.299C	IV	16.7	43.6	13.4	4.2	22.3	52.5	7.4	0.0	2	S
424.300A	IV	17.7	40.8	10.4	3.8	21.7	53.4	10.6	0.0	1	R R R S

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
424.301		KAS 304-8	S. Korea		S. Korea	1978	IV
424.302		KAS 304-9	S. Korea		S. Korea	1978	IV
424.307		KAS 310-6	S. Korea		S. Korea	1978	IV
424.309A		KAS 310-8	S. Korea		S. Korea	1978	IV
424.310		KAS 310-9	S. Korea		S. Korea	1978	IV
424.311		KAS 311-2	S. Korea		S. Korea	1978	IV
424.312		KAS 311-4	S. Korea		S. Korea	1978	IV
424.313		KAS 311-5	S. Korea		S. Korea	1978	IV
424.314		KAS 311-6	S. Korea		S. Korea	1978	IV
424.315		KAS 312-1	S. Korea		S. Korea	1978	IV
424.320		KAS 333-6	S. Korea		S. Korea	1978	IV
424.321		KAS 333-7	S. Korea		S. Korea	1978	IV
424.322		KAS 333-8	S. Korea		S. Korea	1978	IV
424.323		KAS 333-9	S. Korea		S. Korea	1978	IV
424.324A		KAS 333-10	S. Korea		S. Korea	1978	IV
424.326		KAS 333-12	S. Korea		S. Korea	1978	IV
424.327		KAS 333-13	S. Korea		S. Korea	1978	IV
424.328		KAS 350-1	S. Korea		S. Korea	1978	IV
424.329		KAS 350-2	S. Korea		S. Korea	1978	IV
424.330		KAS 350-3	S. Korea		S. Korea	1978	IV
424.332		KAS 350-5	S. Korea		S. Korea	1978	IV
424.338		KAS 351-6	S. Korea		S. Korea	1978	IV
424.342B		(KAS 351-10)	S. Korea		S. Korea	1978	IV
424.344		KAS 351-12	S. Korea		S. Korea	1978	IV
424.345		KAS 351-13	S. Korea		S. Korea	1978	IV
424.348B		(KAS 351-16)	S. Korea		S. Korea	1978	IV
424.348C		(KAS 351-16)	S. Korea		S. Korea	1978	IV
424.352		KAS 351-20	S. Korea		S. Korea	1978	IV
424.354		KAS 351-22	S. Korea		S. Korea	1978	IV
424.357B		(KAS 351-25)	S. Korea		S. Korea	1978	IV
424.367		KAS 351-35	S. Korea		S. Korea	1978	IV
424.369		KAS 351-37	S. Korea		S. Korea	1978	IV
424.370B		(KAS 351-38)	S. Korea		S. Korea	1978	IV
424.374		KAS 353-8	S. Korea		S. Korea	1978	IV
424.379		KAS 353-18	S. Korea		S. Korea	1978	IV
424.383		KAS 371-3	S. Korea		S. Korea	1978	IV
424.384		KAS 503-11	S. Korea		S. Korea	1978	IV
424.387		KAS 503-14	S. Korea		S. Korea	1978	IV
424.395		KAS 521-19	S. Korea		S. Korea	1978	IV
424.399		KAS 521-24	S. Korea		S. Korea	1978	IV
424.400		KAS 530-11	S. Korea		S. Korea	1978	IV
424.401		KAS 530-12	S. Korea		S. Korea	1978	IV
424.403		KAS 530-14	S. Korea		S. Korea	1978	IV
424.406A		KAS 530-17	S. Korea		S. Korea	1978	IV
424.406B		(KAS 530-17)	S. Korea		S. Korea	1978	IV
424.407		KAS 531-1	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.301	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.302	IV	P	T	E	Dn	Br	I	Bl	Bl			
424.307	IV	P	T	I	Sp	Br	I	Br	Br	Net		
424.309A	IV	P	T	E	Ssp	Br	I	Br	Br	Gncot		
424.310	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.311	IV	P	G	E	Ssp	Br	I	Gn	Ib	Gncot		
424.312	IV	P	T	E	Ssp	Br	I	Gn	Bl			
424.313	IV	W	G	E	Ssp	Br	I	Y	Bf			
424.314	IV	W	G	E	Ssp	Br	I	Y	Bf			
424.315	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.320	IV	P	T	E	Ssp	Br	S	Br	Br			
424.321	IV	W	T	E	N	Bl	I	Ggn	Bl			
424.322	IV	P	T	E	Ssp	Br	I	Rbr	Rbr			
424.323	IV	P	T	I	Ssp	Br	I	Br	Br	Net		
424.324A	IV	P	G	E	N	Bl	I	Gn	Bf	Gncot		
424.326	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.327	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.328	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.329	IV	P	T	E	Ssp	Br	I	Gn	Br			
424.330	IV	P	T	E	Ssp	Br	S	Br	Br			
424.332	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.338	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.342B	IV	W	T	Sa	Ssp	Tn	D	Y	Y			
424.344	IV	P	G	E	Ssp	Tn	I	Y	Bf			
424.345	IV	P	G	E	Ssp	Tn	I	Lgn	Bf			
424.348B	IV	P	G	E	Ssp	Tn	D	Y	Bf			
424.348C	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.352	IV	P	G	Sa	N	Bl	S	Gn	Bf			
424.354	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.357B	IV	P	G	E	Ssp	Br	I	Y	Y			
424.367	IV	W	T	E	N	Bl	S	Ggn	Bl			
424.369	IV	P	T	E	Ssp	Br	S	Br	Br			
424.370B	IV	P	T	E	Ssp	Br	S	Bl	Bl			
424.374	IV	W	T	E	N	Bl	I	Ggn	Bl			
424.379	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.383	IV	P	T	E	Ssp	Bl	I	Bl	Bl			
424.384	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.387	IV	P	T	E	Ssp	Br	S	Br	Br			
424.395	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.399	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.400	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.401	IV	W	G	E	Dn	Tn	D	Y	Bf			
424.403	IV	W	G	E	N	Tn	D	Y	Y			
424.406A	IV	P	G	E	Ssp	Tn	D	Y	Lbf			
424.406B	IV	P	G	E	Dn	Tn	I	Y	Y			
424.407	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.301	68	136	1.5	71*	1.5	1.0	1.0	2.8	-	23.5*	1.46
424.302	74*	137	3.0	76	1.0	1.0	2.5	2.5	-	14.0*	1.53
424.307	67*	134	2.3*	65*	2.0	1.0	1.0	2.5	-	18.1	1.73
424.309A	68	136	4.3	76*	2.5	1.0	1.5	3.0	-	25.0*	1.35
424.310	66*	134	3.3	71	2.0	1.0	1.5	2.5	-	20.9*	1.85
424.311	64	135	4.0	89*	2.0	1.0	1.5	2.8	1.5	20.4*	1.84
424.312	67*	137	1.5	70	1.0	1.0	1.5	3.0	1.0	34.3*	1.71
424.313	62*	135	1.6	70*	1.5	1.0	1.5	2.5	1.0	31.3*	1.99
424.314	62*	133	1.5	67*	1.0	1.0	1.0	2.3	1.0	30.2*	1.90
424.315	65	133	2.3*	58*	1.5	1.0	1.5	2.8	-	25.2	1.65
424.320	71*	136	4.8	89*	2.5	1.0	1.5	2.3	-	9.2	1.96
424.321	70*	136	3.8*	72*	2.5	1.0	1.5	2.0	2.5	8.3	1.43
424.322	64*	133	2.0	71	1.5	1.0	1.5	3.0	-	29.0	2.23*
424.323	65*	135	1.5	48*	1.5	1.0	1.5	2.8	-	25.2	1.57
424.324A	71	133	3.0	80*	1.5	1.0	1.5	2.3	2.0	12.0	1.77
424.326	74*	135	3.3*	86*	2.5	1.0	1.0	2.5	-	15.2*	1.42
424.327	73*	134	3.3*	79*	2.5	1.0	1.0	2.5	-	15.3*	1.40
424.328	66*	135	2.8	75	1.5	1.0	2.0*	2.8	-	22.0	1.90
424.329	65*	135	3.0	69	2.0	1.0	2.5	2.8	3.0	19.6*	2.37
424.330	64*	130*	4.0	72	1.5	1.0	1.0	2.8	-	24.0*	1.77*
424.332	68*	134	3.0	62*	2.0	1.5	1.5	2.5	-	23.5*	2.04*
424.338											
424.342B	63*	131	2.3	74*	2.0	1.5	1.5	2.0	4.0	21.6	1.95
424.344	71*	133	2.8	90*	2.5	1.0	1.5	2.0	2.5	12.5	1.90
424.345	66*	133	3.5	76*	2.5	1.0	1.5	2.0	2.0	11.6	2.09*
424.348B	66*	135	3.8	86*	2.5	1.5	2.0	2.0	1.5	12.9	1.62
424.348C	68	135	2.8*	89	2.5	1.5	1.5	2.0	2.0	13.5*	1.73
424.352	72*	137	2.5	75*	2.5	1.0	2.0	2.8	2.0	12.6	1.59
424.354	66*	134	2.3	89*	1.5	1.5	1.5	3.0	-	22.4*	1.74
424.357B	65	134	3.0	81	2.0	1.0	1.5	2.3	1.0	20.1*	1.76
424.367	75*	136	3.5*	84*	1.5	1.0	3.0	2.3	2.5	8.3*	1.45*
424.369	63*	129*	4.5	79	1.5	1.0	1.0	2.8	-	26.1*	1.73*
424.370B	61*	126*	2.3*	63	1.0	2.0*	2.5*	2.5	-	19.4*	1.42
424.374	70*	133	4.5	84*	2.5	1.5	2.5*	2.3	3.0	8.1	1.52*
424.379	64	133	3.0*	61*	1.5	1.5	2.0	2.8	-	29.2*	1.84*
424.383	69	135	4.0	89*	2.5	1.5	1.5	2.8	-	20.1*	1.75
424.384	69	136	2.5	77	1.5	1.5	1.5	2.8	-	22.8*	1.84
424.387	70*	138	4.8	75*	2.0	1.0	1.0	3.0	-	21.9*	1.63*
424.395	70*	135	2.8*	60*	1.5	1.0	1.5	2.8	-	24.2*	1.90
424.399	65*	137	2.8	77	1.5	1.0	1.5	2.8	-	19.6	1.84*
424.400	72*	136	3.8	77	2.5	1.0	1.5	2.8	-	9.1*	1.58
424.401	77*	138	2.5	84*	3.0	1.5	2.0*	2.3	1.5	11.5*	1.43
424.403	71*	138	2.5	69	1.5	1.0	1.0	2.8	2.5	14.6*	1.76
424.406A	71*	131	3.3*	70*	1.5	1.5	1.5	1.8	3.5	9.6*	1.57
424.406B	70*	135	2.8	70	1.5	1.0	1.0	2.0	1.5	11.2	1.92
424.407	68*	136	4.0	85	2.0	1.0	1.0	2.8	-	17.0	1.81

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.301	IV	15.7	44.6	11.5	3.2	20.7	55.5	8.8	0.1	1	S
424.302	IV	16.5	43.3	10.5	4.0	21.7	54.4	8.6	0.6	1	R R R S
424.307	IV	16.7	43.1	10.5	4.3	22.3	54.8	8.0	0.1	1	R R H S
424.309A	IV	15.1	45.3	11.0	3.6	20.2	56.0	8.9	0.1	1	S
424.310	IV	17.8	43.1	11.3	3.6	20.7	55.4	8.8	0.0	1	H
424.311	IV	18.1	44.4	11.5	4.1	22.0	53.9	8.2	0.1	1	S
424.312	IV	16.8	43.0	12.1	4.1	24.1	51.3	8.3	0.1	1	R R R S
424.313	IV	17.1	45.9	12.0	4.0	24.9	50.4	8.5	0.1	2	S
424.314	IV	16.5	45.4	10.9	4.1	23.1	53.7	8.0	0.1	1	S
424.315	IV	17.3	42.9	10.4	3.3	20.2	56.1	9.9	0.0	1	S
424.320	IV	15.7	41.9	11.1	4.0	20.8	54.2	9.7	0.0	1	R R R H
424.321	IV	14.8	46.0	11.6	3.9	21.0	54.3	9.1	0.0	1	R S R S
424.322	IV	17.0	42.0	11.2	3.8	22.6	53.7	8.5	0.1	1	R R H S
424.323	IV	17.1	43.4	10.8	4.0	22.4	54.5	8.0	0.1	1	S
424.324A	IV	16.3	43.4	10.6	3.9	21.8	54.5	9.0	0.0	1	R R R S
424.326	IV	16.3	45.6	11.6	3.4	19.9	54.4	8.5	1.8	1	S
424.327	IV	16.8	44.1	11.6	4.0	20.8	55.1	8.3	0.0	1	S
424.328	IV	16.9	44.0	11.0	4.3	22.4	54.1	8.1	0.0	1	S
424.329	IV	17.3	42.4	11.1	3.7	22.8	53.3	7.7	1.2	1	R R R S
424.330	IV	17.4	44.0	11.3	4.3	22.8	53.6	7.7	0.1	1	S
424.332	IV	16.1	42.9	11.6	3.8	22.4	53.3	8.5	0.2	1	R R R S
424.338	IV									1	R R R R
424.342B	IV	16.4	45.1	11.7	3.7	21.5	54.4	8.4	0.1	1	R R R R
424.344	IV	16.0	44.0	12.1	3.7	21.2	53.8	9.0	0.1	1	R R R R
424.345	IV	16.7	43.3	12.3	3.8	19.5	54.8	9.3	0.1	1	R R R R
424.348B	IV	16.6	44.5	12.4	3.9	20.0	54.2	9.3	0.0	1	R
424.348C	IV	16.4	42.5	11.2	3.4	21.6	54.5	9.0	0.1	1	R
424.352	IV	17.0	43.3	11.6	3.9	21.8	54.0	8.4	0.1	1	R R R R
424.354	IV	17.4	41.7	12.3	4.0	26.9	48.5	7.9	0.1	1	R R R R
424.357B	IV	16.3	45.8	11.9	4.1	23.0	53.5	7.4	0.1	3	S
424.367	IV	14.6	46.3	11.8	3.6	21.9	53.5	8.9	0.1	1	R H R R
424.369	IV	18.2	44.5	11.3	3.5	23.7	53.5	7.9	0.1	1	S
424.370B	IV	16.5	45.3	12.3	3.7	21.0	54.7	7.9	0.1	1	S
424.374	IV	15.2	45.1	11.5	3.6	21.3	54.9	8.6	0.0	1	R S R H
424.379	IV	16.6	44.1	11.2	4.4	24.2	52.4	7.6	0.1	1	S
424.383	IV	16.3	42.8	11.5	3.9	23.3	52.9	8.2	0.1	1	S
424.384	IV	17.1	43.4	11.3	3.6	21.9	53.8	9.0	0.2	1	S
424.387	IV	16.7	41.6	10.9	3.6	20.3	54.6	10.5	0.0	1	S
424.395	IV	15.5	45.3	11.1	3.1	19.6	56.3	9.6	0.1	1	S
424.399	IV	16.6	42.6	11.4	3.6	20.4	55.3	9.2	0.0	1	S
424.400	IV	15.5	43.0	11.7	4.0	24.4	50.5	9.3	0.1	1	R R R R
424.401	IV	16.3	45.5	11.5	3.9	19.9	55.4	9.0	0.0	1	H
424.403	IV	15.8	45.8	11.7	3.5	20.7	54.8	9.1	0.1	1	R R R S
424.406A	IV	15.6	43.2	12.4	3.6	20.7	53.8	9.4	0.0	1	R R R R
424.406B	IV	15.1	43.8	12.0	3.7	20.4	54.9	8.9	0.0	1	R R R S
424.407	IV	16.4	44.2	12.1	3.7	20.8	54.4	8.9	0.0	1	H

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year introduced or released	Maturity group
424.409		KAS 531-3	S. Korea		S. Korea	1978	IV
424.412		KAS 540-6	S. Korea		S. Korea	1978	IV
424.414		KAS 540-8	S. Korea		S. Korea	1978	IV
424.420		KAS 540-14	S. Korea		S. Korea	1978	IV
424.421		KAS 540-15	S. Korea		S. Korea	1978	IV
424.426		KAS 540-20	S. Korea		S. Korea	1978	IV
424.427		KAS 542-11-1	S. Korea		S. Korea	1978	IV
424.428		KAS 542-12	S. Korea		S. Korea	1978	IV
424.430		KAS 544-12	S. Korea		S. Korea	1978	IV
424.431		KAS 544-13	S. Korea		S. Korea	1978	IV
424.436		KAS 544-18	S. Korea		S. Korea	1978	IV
424.449		KAS 571-16	S. Korea		S. Korea	1978	IV
424.450		KAS 571-17	S. Korea		S. Korea	1978	IV
424.452		KAS 575-11	S. Korea		S. Korea	1978	IV
424.454		KAS 575-13	S. Korea		S. Korea	1978	IV
424.458		KAS 581-6	S. Korea		S. Korea	1978	IV
424.460		KAS 581-8	S. Korea		S. Korea	1978	IV
424.462C		(KAS 581-10)	S. Korea		S. Korea	1978	IV
424.465		KAS 581-13	S. Korea		S. Korea	1978	IV
424.466		KAS 581-14	S. Korea		S. Korea	1978	IV
424.468		KAS 581-16	S. Korea		S. Korea	1978	IV
424.469		KAS 581-17	S. Korea		S. Korea	1978	IV
424.470		KAS 581-18	S. Korea		S. Korea	1978	IV
424.472A		KAS 581-20	S. Korea		S. Korea	1978	IV
424.472B		(KAS 581-20)	S. Korea		S. Korea	1978	IV
424.477		KAS 603-5	S. Korea		S. Korea	1978	IV
424.484B		(KAS 604-17)	S. Korea		S. Korea	1978	IV
424.487B		(KAS 604-20)	S. Korea		S. Korea	1978	IV
424.491A		KAS 604-24	S. Korea		S. Korea	1978	IV
424.492		KAS 605-11	S. Korea		S. Korea	1978	IV
424.493A		KAS 605-12	S. Korea		S. Korea	1978	IV
424.494		KAS 605-13	S. Korea		S. Korea	1978	IV
424.495		KAS 605-14	S. Korea		S. Korea	1978	IV
424.497		KAS 605-16	S. Korea		S. Korea	1978	IV
424.498		KAS 605-17	S. Korea		S. Korea	1978	IV
424.499B		(KAS 606-1)	S. Korea		S. Korea	1978	IV
424.499C		(KAS 606-1)	S. Korea		S. Korea	1978	IV
424.499D		(KAS 606-1)	S. Korea		S. Korea	1978	IV
424.503		KAS 606-5	S. Korea		S. Korea	1978	IV
424.506		KAS 606-8	S. Korea		S. Korea	1978	IV
424.509		KAS 606-11	S. Korea		S. Korea	1978	IV
424.516		KAS 621-2	S. Korea		S. Korea	1978	IV
424.517B		(KAS 621-3)	S. Korea		S. Korea	1978	IV
424.518		KAS 621-4	S. Korea		S. Korea	1978	IV
424.521A		KAS 621-7	S. Korea		S. Korea	1978	IV
424.522		KAS 621-8	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.409	IV	W	G	E	Ssp	Tn	I	Y	Bf			
424.412	IV	P	T	I	Sp	Br	I	Br	Br	Net		
424.414	IV	P	G	E	N	Tn	I	Y	Lbf			
424.420	IV	W	T	E	N	Br	S	Ggn	Bl			
424.421	IV	P	T	E	Ssp	Br	S	Gn	Br			
424.426	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.427	IV	P	T	E	Ssp	Br	S	Br	Br			
424.428	IV	P	T	E	Ssp	Br	S	Br	Br			
424.430	IV	P	G	E	N	Tn	S	Y	Lbf			
424.431	IV	P	T	E	N	Br	S	Bl	Bl			
424.436	IV	P	T	E	Ssp	Br	I	Gn	Bl	Gncot		
424.449	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.450	IV	P	T	E	Ssp	Br	I	Gn	Bl			
424.452	IV	P	G	E	Ssp	Tn	D	Y	Bf			
424.454	IV	P	T	E	Ssp	Br	I	Gn	Br			
424.458	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.460	IV	W	T	E	N	Bl	S	Ggn	Bl			
424.462C	IV	P	G	E	Ssp	Br	I	Y	Y			
424.465	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.466	IV	P	G	E	Ssp	Bl	I	Gn	Bf	Gncot		
424.468	IV	P	T	E	Ssp	Tn	S	Rbr	Rbr			
424.469	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.470	IV	W	G	E	Ssp	Br	I	Y	Lbf			
424.472A	IV	P	T	E	Ssp	Br	I	Rbr	Rbr			
424.472B	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.477	IV	P	T	E	N	Br	D	Bl	Bl			
424.484B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.487B	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.491A	IV	P	T	E	Ssp	Bl	D	Gn	Br	Gncot		
424.492	IV	P	T	E	Ssp	Br	D	Ggn	Bl			
424.493A	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.494	IV	P	T	E	Ssp	Br	I	Br	Br	Def		
424.495	IV	P	T	E	Ssp	Br	I	Br	Br	Def		
424.497	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.498	IV	W	T	E	N	Tn	D	Ggn	Bl			
424.499B	IV	P	G	E	Ssp	Br	I	Y	Bf			
424.499C	IV	P	G	E	Ssp	Tn	I	Y	Bf			
424.499D	IV	P	G	E	Ssp	Br	I	Y	Bf			
424.503	IV	P	T	E	Ssp	Br	S	Rbr	Rbr			
424.506	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.509	IV	P	G	E	Ssp	Tn	D	Y	Lbf			
424.516	IV	W	G	E	Ssp	Br	I	Y	Rbf	Saddle,SDef		
424.517B	IV	P	T	Sa	Ssp	Br	S	Gn	Br	Gncot		
424.518	IV	W	G	E	Ssp	Br	I	Y	Lbf			
424.521A	IV	P	T	E	Ssp	Br	D	Lgn	Bl			
424.522	IV	P	T	E	Ssp	Dbr	I	Bl	Bl			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.409	72*	137	4.3	99*	2.5	1.5	2.0	2.3	2.0	10.6	1.86
424.412	71*	136	3.5*	75*	2.5	1.0	2.5	2.8	-	20.8*	1.39
424.414	72*	134	3.8*	80	2.5	1.0	1.5	2.0	2.0	8.9	1.84
424.420	73*	136	4.0	81*	2.5	1.0	1.5	2.5	3.5	9.0	1.48*
424.421	75*	138	4.3	83	2.5	1.0	1.5	3.0	1.0	22.2*	1.32
424.426	67*	137	4.0	84	3.5	1.0	2.5	2.8	-	11.0	1.48
424.427	68*	136	4.8	70	1.5	1.0	1.0	2.8	-	24.3*	1.90
424.428	68*	139	4.0	71*	2.5	1.0	1.5	3.0	-	21.9*	1.55*
424.430	72*	133	4.0	81	2.5	1.0	1.5	2.0	3.0	8.1	1.83
424.431	72	134	3.3*	81*	2.5	1.0	1.5	2.5	-	11.4	1.51
424.436	66*	133	2.5	74*	1.5	1.5	2.0	2.5	2.5	22.8	1.45
424.449	65*	133	2.3*	53*	1.0	1.5	1.5	2.8	-	24.3*	2.05
424.450	68*	137	2.0	65	1.0	1.0	1.0	3.5	1.0	30.0*	1.29
424.452	64	134	2.5	79*	1.0	1.5	2.0*	2.0	1.5	12.6	1.74
424.454	69	134	4.0	80*	2.5	1.5	2.5*	2.3	2.5	14.0	1.65*
424.458	70*	129	2.0	63	1.5	1.0	2.0	2.0	-	8.1	1.46
424.460	73*	136	4.0	88*	2.5	1.5	2.0*	2.5	2.5	8.5	1.31
424.462C	65	136	2.5	85	2.0	1.0	1.5	2.3	1.5	20.2*	1.82*
424.465	65*	134	2.5	83	1.5	1.0	1.5	3.0	-	25.8	2.26
424.466	70	133	3.0*	85*	2.5	1.0	2.0*	2.8	2.0	17.5*	1.87*
424.468	71*	135	4.3	85	2.5	1.0	1.5	3.0	-	10.9*	1.73
424.469	67*	136	3.5	76*	2.0	1.0	1.5	2.5	-	20.0	1.85
424.470	62*	134	1.6	62*	1.5	1.0	1.5	3.5	1.0	28.5	1.85
424.472A	69*	135	2.3	66*	1.5	1.5	1.5	3.3	-	24.1	1.87
424.472B	69*	136	2.8	86	2.0	1.5	1.5	3.3	-	20.0	1.57
424.477	73*	138	3.5	91*	3.0	1.0	1.5	3.0	-	15.4*	1.00
424.484B	66	135	2.0*	58*	1.0	1.5	1.5	3.0	-	29.7*	1.58
424.487B	66*	137	2.8	76*	1.0	1.0	4.5	3.0	-	20.8	1.82
424.491A	73	136	3.8	97*	3.0	1.5	1.5	4.0	2.0	17.0*	1.38
424.492	69	136	2.5*	56*	1.5	1.0	2.5	3.8	3.5	31.0*	1.68
424.493A	67*	136	3.0	67	1.5	1.5	1.5	2.5	-	29.0*	1.63
424.494	65	134	3.5	79*	1.5	1.0	1.5	3.0	-	24.8*	1.62
424.495	69*	135	3.3*	81	2.0	1.0	1.5	3.0	-	24.5*	1.89
424.497	69*	134	2.5*	56*	1.5	2.0*	2.0*	2.8	-	22.9*	1.66
424.498	74*	134	4.5	72	2.5	1.0	2.0	2.5	4.5	11.3*	1.81*
424.499B	63*	136	2.3	90*	2.0	1.0	2.0	2.3	2.0	19.4*	1.48
424.499C	72*	132	2.8*	71*	1.5	1.5	1.5	1.5	2.5	9.7	1.38
424.499D	73*	135	3.5	83*	2.5	1.0	2.0*	2.0	2.5	11.8*	1.57
424.503	64*	131	4.0	88*	3.5	1.0	1.5	2.3	-	15.0	1.50
424.506	73*	137	3.5	61	1.5	2.0*	2.0*	2.8	-	11.5	1.26
424.509	73	132	3.5	65	1.0	1.0	1.5	1.8	2.5	8.5	1.75
424.516	62*	136	2.0	66*	1.0	1.0	1.5	3.3	-	28.6*	1.82
424.517B	72	133	4.5	72*	2.0	1.0	1.5	2.8	2.5	14.0*	1.55
424.518	63*	137	1.8*	67*	1.5	1.0	1.0	3.5	1.0	28.3*	1.98*
424.521A	66*	133	4.5	71*	2.0	1.0	2.0	2.8	1.0	25.1*	1.95
424.522	72	132	3.3*	95*	3.5	1.5	2.5*	2.5	-	8.2	1.65

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.409	IV	15.3	46.1	12.0	3.6	18.9	56.1	9.3	0.0	1	R R R R
424.412	IV	17.0	44.1	11.1	3.5	20.2	56.3	8.8	0.0	1	R R R H
424.414	IV	15.8	43.3	12.8	3.7	22.4	52.9	7.9	0.1	1	R R R R
424.420	IV	15.6	45.8	12.4	3.9	22.5	52.3	8.7	0.0	1	R R H R
424.421	IV	16.0	42.9	10.4	3.7	23.3	53.5	9.0	0.0	1	S
424.426	IV	16.8	43.4	10.9	3.8	23.0	54.1	7.9	0.0	1	R
424.427	IV	16.5	42.1	10.5	3.8	21.0	54.4	10.2	0.0	1	S
424.428	IV	16.9	42.4	10.6	3.7	20.4	54.9	10.3	0.0	1	S
424.430	IV	15.8	44.5	12.6	3.7	22.3	53.3	7.9	0.0	1	R R R R
424.431	IV	14.3	45.8	12.5	3.8	18.7	55.3	9.5	0.0	1	R R H H
424.436	IV	16.0	44.1	12.0	3.4	22.8	53.3	8.4	0.0	1	R R R S
424.449	IV	16.3	44.0	11.3	3.0	20.9	55.7	9.0	0.0	1	S
424.450	IV	16.8	44.1	12.8	4.2	25.7	48.0	9.2	0.0	1	R R R R
424.452	IV	16.1	44.8	12.9	3.7	20.1	54.2	9.0	0.0	1	R R R H
424.454	IV	15.9	45.2	10.8	4.0	21.4	54.9	8.7	0.0	2	S
424.458	IV	14.7	45.9	12.1	4.1	21.7	53.1	8.8	0.0	1	R R R R
424.460	IV	14.5	45.2	11.9	3.8	22.0	53.5	8.7	0.0	1	R S R H
424.462C	IV	17.0	45.4	12.0	3.9	23.2	53.4	7.4	0.0	3	S
424.465	IV	16.5	43.0	11.0	3.9	23.6	53.5	7.9	0.0	1	H
424.466	IV	17.4	42.4	12.2	4.1	19.1	55.1	9.3	0.0	1	R R R S
424.468	IV	16.4	43.4	12.3	4.2	19.8	53.7	9.8	0.0	1	R R R H
424.469	IV	17.4	42.0	11.4	3.5	23.2	53.6	8.1	0.0	1	H
424.470	IV	17.2	45.3	11.0	4.1	22.1	54.6	8.0	0.0	1	S
424.472A	IV	17.2	42.8	10.8	3.9	22.3	54.8	8.2	0.0	1	H
424.472B	IV	18.7	40.9	11.1	4.1	23.4	53.3	8.0	0.0	1	H
424.477	IV	15.8	42.7	11.0	3.3	21.6	54.3	9.7	0.0	1	R R R R
424.484B	IV	16.1	44.1	10.9	4.2	22.4	53.5	8.7	0.0	1	R S R S
424.487B	IV	17.0	44.2	10.4	3.8	20.8	56.1	8.8	0.0	1	R R R R
424.491A	IV	18.6	42.4	10.4	4.3	22.8	54.8	7.6	0.0	1	H H H S
424.492	IV	17.8	44.3	10.7	4.1	23.7	53.3	8.1	0.0	1	S H H S
424.493A	IV	16.6	44.4	11.4	3.7	22.4	54.2	8.2	0.0	1	S S S S
424.494	IV	17.8	43.1	10.9	3.9	21.6	55.1	8.4	0.0	1	R H R H
424.495	IV	16.5	41.8	10.3	3.9	22.4	54.8	8.5	0.0	1	R R R R
424.497	IV	16.9	45.6	10.9	4.1	23.0	54.1	7.8	0.0	1	S
424.498	IV	15.2	45.2	11.2	3.7	23.8	53.8	7.4	0.0	1	R R R R
424.499B	IV	17.5	44.1	10.6	4.1	25.3	52.8	7.0	0.0	1	
424.499C	IV	16.0	45.9	11.6	4.0	21.4	54.8	8.0	0.0	1	
424.499D	IV	16.1	44.2	12.1	3.5	19.6	55.0	9.7	0.0	1	
424.503	IV	17.0	44.2	11.2	3.9	23.2	53.3	8.1	0.0	1	
424.506	IV	16.6	42.0	11.2	4.0	25.2	51.5	8.0	0.0	1	
424.509	IV	15.6	44.0	11.5	4.0	24.7	51.3	8.4	0.0	1	
424.516	IV	16.4	46.1	12.0	4.1	22.3	53.7	7.7	0.0	3	
424.517B	IV	16.9	43.1	12.1	4.3	25.9	50.1	7.4	0.0	1	
424.518	IV	16.9	45.4	10.8	4.3	22.7	53.9	8.1	0.0	1	
424.521A	IV	17.0	44.3	11.6	4.1	22.1	54.5	7.5	0.0	1	
424.522	IV	15.8	44.2	12.4	3.3	21.4	53.9	8.8	0.0	1	

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.523A		KAS 622-6	S. Korea		S. Korea	1978	IV
424.523B		(KAS 622-6)	S. Korea		S. Korea	1978	IV
424.525		KAS 622-8	S. Korea		S. Korea	1978	IV
424.527		KAS 622-10	S. Korea		S. Korea	1978	IV
424.529		KAS 622-12	S. Korea		S. Korea	1978	IV
424.530		KAS 624-19	S. Korea		S. Korea	1978	IV
424.531		KAS 624-20	S. Korea		S. Korea	1978	IV
424.532		KAS 624-21	S. Korea		S. Korea	1978	IV
424.536		KAS 624-25	S. Korea		S. Korea	1978	IV
424.537		KAS 624-26	S. Korea		S. Korea	1978	IV
424.538		KAS 624-27	S. Korea		S. Korea	1978	IV
424.539		KAS 624-28	S. Korea		S. Korea	1978	IV
424.542		KAS 624-31	S. Korea		S. Korea	1978	IV
424.543		KAS 632-12	S. Korea		S. Korea	1978	IV
424.544		KAS 632-13	S. Korea		S. Korea	1978	IV
424.545		KAS 632-20	S. Korea		S. Korea	1978	IV
424.546B		(KAS 632-21)	S. Korea		S. Korea	1978	IV
424.547		KAS 632-22	S. Korea		S. Korea	1978	IV
424.552		KAS 632-27	S. Korea		S. Korea	1978	IV
424.554		KAS 636-7	S. Korea		S. Korea	1978	IV
424.555A		KAS 636-8	S. Korea		S. Korea	1978	IV
424.555B		(KAS 636-8)	S. Korea		S. Korea	1978	IV
424.556		KAS 636-9	S. Korea		S. Korea	1978	IV
424.557		KAS 636-10	S. Korea		S. Korea	1978	IV
424.558A		KAS 636-11	S. Korea		S. Korea	1978	IV
424.559		KAS 636-12	S. Korea		S. Korea	1978	IV
424.561		KAS 636-14	S. Korea		S. Korea	1978	IV
424.564		KAS 636-17	S. Korea		S. Korea	1978	IV
424.566		KAS 640-11	S. Korea		S. Korea	1978	IV
424.567		KAS 640-12	S. Korea		S. Korea	1978	IV
424.571		KAS 640-16	S. Korea		S. Korea	1978	IV
424.572		KAS 640-17	S. Korea		S. Korea	1978	IV
424.573		KAS 640-18	S. Korea		S. Korea	1978	IV
424.574		KAS 640-19	S. Korea		S. Korea	1978	IV
424.579		KAS 651-14	S. Korea		S. Korea	1978	IV
424.580		KAS 651-15	S. Korea		S. Korea	1978	IV
424.581		KAS 651-16	S. Korea		S. Korea	1978	IV
424.582		KAS 651-17	S. Korea		S. Korea	1978	IV
424.583		KAS 651-18	S. Korea		S. Korea	1978	IV
424.584		KAS 651-19	S. Korea		S. Korea	1978	IV
424.587		KAS 651-22	S. Korea		S. Korea	1978	IV
424.588		KAS 651-23	S. Korea		S. Korea	1978	IV
424.590A		KAS 651-25	S. Korea		S. Korea	1978	IV
424.590B		(KAS 651-25)	S. Korea		S. Korea	1978	IV
424.592		KAS 651-27	S. Korea		S. Korea	1978	IV
424.596		KAS 651-31	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence Color	Pubescence Form	Pubescence Density	Pod color	Seed coat Luster	Seed coat Color	Hilum color	Other traits Seed	Other traits Leaf	Other traits Plant
424.523A	IV	P	G	E	Ssp	Tn	I	Y	Lbf			
424.523B	IV	P	G	E	Ssp	Br	I	Y	Y			
424.525	IV	P	G	E	Ssp	Bl	I	Gn	Bf	Gncot		
424.527	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.529	IV	P	G	E	Ssp	Tn	I	Y	Y			
424.530	IV	P	T	Sa	Ssp	Br	I	Br	Br			
424.531	IV	P	T	E	Ssp	Bl	I	Bl	Bl			
424.532	IV	P	G	E	Ssp	Br	I	Gn	Ib	Gncot		
424.536	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.537	IV	W	G	E	Ssp	Br	I	Y	Lbf			
424.538	IV	P	T	E	Ssp	Br	D	Gn	Gn			
424.539	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.542	IV	P	T	E	Ssp	Br	D	Bl	Bl			
424.543	IV	P	G	E	Ssp	Br	I	Y	Y			
424.544	IV	P	T	E	Ssp	Bl	I	Br	Br			
424.545	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.546B	IV	P	T	E	Ssp	Br	S	Br	Br			
424.547	IV	P	T	E	Ssp	Br	S	Br	Br			
424.552	IV	P	T	E	Ssp	Br	S	Br	Br			
424.554	IV	P	T	E	Ssp	Br	I	Br	Br			
424.555A	IV	P	G	E	Ssp	Br	D	Y	Bf			
424.555B	IV	P	G	E	N	Br	I	Lgn	Bf			
424.556	IV	P	T	I	Ssp	Br	I	Bl	Bl	Net		
424.557	IV	P	G	E	Ssp	Br	S	Y	Bf			
424.558A	IV	P	T	E	N	Br	I	Ggn	Bl			
424.559	IV	P	G	E	N	Tn	D	Y	Y			
424.561	IV	P	T	E	N	Br	I	Br	Br	St		
424.564	IV	P	T	E	Ssp	Br	D	Gn	Bl			
424.566	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.567	IV	W	G	E	N	Tn	I	Y	Bf			
424.571	IV	W	G	E	Ssp	Br	I	Y	Rbf	Saddle,SDef		
424.572	IV	P	T	E	Ssp	Br	I	Br	Br			
424.573	IV	P	T	E	Ssp	Br	I	Lgn	Bl	Saddle		
424.574	IV	W	G	E	Ssp	Br	I	Y	Bf			
424.579	IV	P	T	E	Ssp	Tn	I	Y	Br			
424.580	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.581	IV	P	T	E	N	Br	I	Rbr	Rbr	SDef		
424.582	IV	W	T	E	Dn	Tn	I	Ggn	Bl			
424.583	IV	W	T	E	N	Tn	I	Ggn	Bl			
424.584	IV	P	T	I	Sp	Br	I	Bl	Bl	Net		
424.587	IV	P	T	E	Ssp	Br	I	Gn	Bl	Saddle		
424.588	IV	P	T	E	Ssp	Br	S	Lgn	Bl	Saddle		
424.590A	IV	P	T	E	Ssp	Br	I	Gn	Bl	Saddle		
424.590B	IV	P	T	E	Ssp	Br	I	Gn	Bl	Saddle		
424.592	IV	W	T	E	N	Tn	I	Ggn	Bl			
424.596	IV	P	G	E	Ssp	Br	I	Y	Bf			

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering Early (score)	Shattering Late (score)	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.523A	67*	136	3.0	67*	1.5	1.0	1.5	4.0	2.5	27.4	1.73
424.523B	64	133	2.5	81*	2.5	1.0	1.5	2.5	3.0	17.4*	1.72
424.525	69	136	3.0	110*	3.5	1.5	2.5	2.5	2.0	12.7	1.46
424.527	68*	137	2.8*	80*	1.5	1.0	1.5	3.0	-	18.5	1.54
424.529	74	135	4.5	89*	2.5	1.0	2.0	2.0	2.5	7.8	1.66
424.530	69*	135	1.5	70*	1.5	1.0	1.0	2.8	-	12.1	1.77
424.531	65*	131	4.3	67	2.0	1.5	3.5	2.0	-	8.9	1.66
424.532	65	133	2.0	65*	1.5	1.0	1.0	3.3	2.5	26.2	1.96
424.536	69*	135	2.0*	65*	1.5	1.0	1.5	3.0	-	23.7*	1.57
424.537	60*	133	1.0	60	1.0	1.0	1.5	3.0	1.0	33.4	1.79
424.538	68	136	2.5*	67*	1.5	1.5	3.0	3.0	2.5	26.0*	1.86*
424.539	68*	133	2.3*	74*	1.5	1.0	1.0	3.0	-	23.0	2.07
424.542	68*	134	3.0	79*	2.5	1.0	1.5	3.0	-	18.2	2.04
424.543	66*	133	2.3	81*	2.0	1.0	1.5	2.0	1.5	20.4*	1.64
424.544	66	129*	3.0	85*	2.5	2.0*	3.0*	2.5	-	16.3	1.88
424.545	65	133	3.3	70*	1.0	1.0	1.5	2.5	-	20.8	1.81
424.546B	67*	133	1.8	61*	1.0	1.5	1.5	2.5	-	25.1	1.88
424.547	65*	133	3.0*	71	1.5	2.0*	2.5	2.8	-	25.6	1.84
424.552	66*	132	3.3	63*	1.5	1.0	1.5	2.5	-	25.2	1.88
424.554	69*	137	4.5	76*	2.0	1.0	1.0	2.8	-	21.3*	1.82*
424.555A	70*	136	3.3	99*	3.5	1.0	1.0	2.0	2.5	13.1	1.97
424.555B	69*	138	2.5	85*	2.5	1.0	1.5	1.8	1.5	13.9*	1.77
424.556	65*	135	1.5	51*	1.0	1.5	1.5	2.8*	-	23.1	1.33
424.557	66*	135	2.3	60	1.0	1.5	1.5	3.0	1.0	23.8*	1.62
424.558A	69*	136	2.5*	61*	1.0	1.0	1.0	3.5	3.5	30.2*	1.87
424.559	72*	134	4.0	76*	2.5	1.0	1.0	2.0	2.5	8.9	1.63
424.561	67*	131	4.3	81	1.5	1.0	2.0	2.0	-	12.1	1.54
424.564	67	136	1.8*	74*	1.5	1.0	1.5	3.5	1.0	29.9	1.58*
424.566	70*	136	4.3	85*	2.0	1.0	3.0	2.8	-	24.1*	1.32
424.567	75*	137	3.8	74*	2.0	1.0	1.5	2.0	1.5	7.5	1.37
424.571	61*	134	2.0*	65	1.0	1.0	1.5	2.8	-	29.3*	1.79
424.572	72*	139	4.8	74*	2.5	1.0	1.5	3.0	-	24.8*	1.52
424.573	68	136	3.3*	89*	2.5	1.0	1.5	2.5	-	27.0	2.13*
424.574	61*	135	2.0	71*	1.5	1.0	1.5	3.0	1.0	30.5	1.75
424.579	70*	136	3.3	86	2.5	1.0	1.5	2.5	2.0	16.9*	1.91
424.580	68	136	3.5	74*	1.0	2.0*	2.5	2.8	-	18.7	1.61
424.581	64*	136	4.3	65	1.5	1.0	1.5	3.5	-	27.5*	1.73
424.582	71*	135	4.0	83	2.5	2.0*	2.0*	2.5	2.5	9.1	1.18
424.583	76*	134	3.5	81	2.0	1.5	2.0	2.5	2.5	9.3	1.96*
424.584	69	136	3.5	74*	1.5	1.0	1.5	2.8	-	25.8	1.73
424.587	71*	137	2.0*	76	1.5	1.0	1.5	2.8	4.0	25.5*	1.33*
424.588	68*	134	2.3*	83	2.0	1.5	2.0	2.5	-	26.9*	1.60
424.590A	66*	137	3.3*	79*	1.5	1.0	1.5	2.8	-	31.0*	1.96
424.590B	66*	138	3.3*	86*	1.5	1.0	1.5	3.0	-	30.6*	1.85
424.592	64*	135	4.0*	90*	2.5	1.0	2.0	2.3	3.0	9.0	1.54
424.596	73	137	3.8*	89	2.5	1.0	1.5	2.8	1.5	15.3*	1.45*

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.523A	IV	17.5	43.1	11.4	3.9	22.8	52.9	8.8	0.1	2	
424.523B	IV	16.7	44.8	12.9	4.0	20.9	54.4	7.6	0.0	2	
424.525	IV	18.9	41.5	10.1	4.2	26.0	51.2	8.4	0.0		
424.527	IV	16.7	43.7	11.1	3.5	23.3	53.2	8.8	0.0		
424.529	IV	15.5	43.2	12.5	3.9	22.8	52.7	8.0	0.0	1	
424.530	IV	17.4	42.5	12.3	3.7	20.6	53.5	9.8	0.0	1	
424.531	IV	15.6	44.6	10.6	4.3	20.8	54.9	9.3	0.0	1	
424.532	IV	17.5	44.1	12.5	4.3	22.1	53.5	7.4	0.1	1	
424.536	IV	16.2	44.7	11.4	3.5	19.9	56.0	9.0	0.1	1	
424.537	IV	17.0	46.7	11.4	4.0	22.6	53.5	8.3	0.0	2	
424.538	IV	17.4	42.7	11.9	4.1	23.1	52.8	8.0	0.0		
424.539	IV	16.9	43.5	11.9	3.5	19.2	56.0	9.2	0.0	1	
424.542	IV	15.8	43.9	11.4	3.6	22.4	54.4	8.0	0.0	1	
424.543	IV	16.8	44.9	12.5	3.8	23.0	53.5	7.1	0.0	3	
424.544	IV	17.4	44.2	11.1	3.3	19.1	58.2	8.1	0.0	1	
424.545	IV	17.8	42.0	12.0	3.2	23.0	53.6	8.0	0.0	1	
424.546B	IV	17.2	41.6	11.5	3.4	21.7	55.1	8.2	0.0	1	
424.547	IV	17.8	42.5	11.2	3.7	22.3	54.6	8.1	0.0	1	
424.552	IV	17.2	42.5	11.3	3.5	22.1	55.1	8.0	0.0	1	
424.554	IV	16.5	42.0	10.8	3.5	21.5	55.4	8.7	0.0	1	
424.555A	IV	15.8	44.2	13.0	3.4	18.3	54.6	10.6	0.0	1	
424.555B	IV	15.8	45.6	11.5	3.8	19.3	56.0	9.3	0.0	1	
424.556	IV	15.9	45.9	10.9	2.9	19.7	57.4	8.9	0.0	1	
424.557	IV	16.8	45.9	12.4	3.9	21.7	53.9	7.9	0.0	1	
424.558A	IV	17.5	44.0	11.3	3.2	21.3	54.9	9.0	0.3	1	
424.559	IV	15.8	43.8	12.6	3.8	22.7	53.2	7.6	0.0	1	
424.561	IV	17.0	45.0	11.8	3.3	21.1	54.9	8.6	0.1	1	
424.564	IV	18.1	42.1	13.0	3.9	27.3	47.1	8.5	0.1	1	S
424.566	IV	16.8	43.5	9.9	3.8	21.0	56.4	8.8	0.0	1	
424.567	IV	14.4	45.4	12.2	3.5	18.0	55.7	10.5	0.0	1	
424.571	IV	16.7	44.8	11.3	3.8	21.2	55.3	8.3	0.0	1	
424.572	IV	16.8	45.3	9.9	3.4	21.0	56.1	9.5	0.0		
424.573	IV	16.6	43.6	11.5	3.6	22.4	54.2	8.1	0.0		
424.574	IV	17.0	45.3	11.1	3.8	21.6	54.8	8.5	0.0	2	
424.579	IV	17.2	40.8	11.7	4.4	21.6	52.8	9.4	0.0	1	
424.580	IV	18.2	41.8	11.6	3.2	21.3	55.1	8.7	0.0	1	
424.581	IV	16.8	41.7	12.4	3.2	19.0	55.7	9.5	0.0	1	
424.582	IV	14.8	45.6	12.0	4.0	25.4	50.8	7.6	0.0	1	
424.583	IV	14.8	47.6	12.1	4.0	25.0	50.4	8.1	0.1	1	
424.584	IV	16.8	43.5	11.1	3.7	24.6	51.4	9.0	0.1	1	
424.587	IV	17.7	41.2	12.2	4.6	22.4	51.8	8.5	0.2		
424.588	IV	16.7	42.9	11.3	4.4	24.6	51.9	7.5	0.0	1	
424.590A	IV	17.9	42.7	11.9	4.1	23.8	53.0	7.0	0.0	1	
424.590B	IV	18.2	40.6	11.8	4.0	22.7	54.0	7.4	0.0	1	
424.592	IV	15.2	46.7	12.5	3.6	23.6	51.8	8.3	0.0	1	
424.596	IV	17.1	43.0	13.3	3.7	20.3	52.5	10.0	0.1	2	

Table 1.4. Identification and origin information for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

PI No.	Accession name	Foreign collection No.	Primary seed source	Secondary seed source	Origin of genotype	Year intro-duced or released	Matur-ity group
424.599		KAS 681-12	S. Korea		S. Korea	1978	IV
424.607		KAS 681-20	S. Korea		S. Korea	1978	IV
424.608B		(KAS 681-21)	S. Korea		S. Korea	1978	IV
424.612		KAS 681-25	S. Korea		S. Korea	1978	IV
424.613		KAS 681-26	S. Korea		S. Korea	1978	IV
424.615		KAS 681-28	S. Korea		S. Korea	1978	IV
424.617		KAS 681-30	S. Korea		S. Korea	1978	IV

Table 2.4. Descriptive data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107

Entry	Maturity group	Flower color	Pubescence			Pod color	Seed coat		Hilum color	Other traits		
			Color	Form	Density		Luster	Color		Seed	Leaf	Plant
424.599	IV	P	T	I	Ssp	Br	I	Br	Br	Net		
424.607	IV	P	T	E	N	Tn	I	Br	Br			
424.608B	IV	P	T	E	N	Br	I	Bl	Bl			
424.612	IV	P	T	I	Ssp	Br	I	Br	Br	Net		
424.613	IV	P	T	E	Ssp	Br	I	Bl	Bl			
424.615	IV	P	T	Sa	Ssp	Br	I	Gn	Bl	Saddle		
424.617	IV	P	T	E	N	Br	I	Rbr	Rbr	SDef		

Table 3.4. Agronomic data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

Entry	Flowering (days after May 31)	Maturity (days after May 31)	Lodging (score)	Height (cm)	Stem termination (score)	Shattering (score) Early	Shattering (score) Late	Seed quality (score)	Mottling (score)	Seed weight (cg/seed)	Seed yield (Mg/ha)
424.599	63*	133	2.0*	52*	1.5	1.5	1.5	2.8	-	24.2*	2.14
424.607	69	137	3.5	103	3.5	1.0	2.5	2.5	-	12.4*	1.45
424.608B	75*	132	3.3	114*	3.5	1.0	1.0	2.5	-	8.8	1.90
424.612	68	135	2.0	60*	1.5	1.0	1.0	2.8	-	24.5	1.59
424.613	70*	136	2.8*	72*	2.0	1.5	1.5	3.0	-	19.3*	1.46
424.615	67*	136	3.0*	60*	1.5	1.0	1.5	2.5	-	26.7*	1.72
424.617	69*	136	4.0	79*	1.5	1.0	1.5	3.3	-	25.8*	1.66

Table 4.4. Seed composition and disease reaction data for USDA soybean germplasm in late maturity group IV, PI 273.483 to PI 427.107, grown at Lexington, KY

		Seed composition		Oil composition						Disease reaction	
Entry	Maturity group	Oil (%)	Protein (%)	Palmitic (%)	Stearic (%)	Oleic (%)	Linoleic (%)	Linolenic (%)	Other (%)	F.L. race 2	Phytophthora race 1 2 3 4 5 6 7 8 9
424.599	IV	16.9	44.2	10.9	3.4	21.8	54.8	8.9	0.0	1	
424.607	IV	15.2	45.1	12.1	3.2	18.8	56.2	9.6	0.0	1	
424.608B	IV	14.3	45.0	11.3	3.3	18.6	56.8	9.8	0.0	1	
424.612	IV	17.2	43.5	10.6	3.9	23.5	52.9	9.0	0.1		
424.613	IV	16.1	42.3	12.3	3.5	20.8	54.5	8.8	0.0	1	
424.615	IV	16.8	44.2	11.1	4.3	23.8	52.6	8.1	0.0		
424.617	IV	15.7	43.1	11.9	3.2	19.8	56.1	8.8	0.1	1	

EXCHANGE Rec'd

MAY 29 1987