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This report contains data on the origin, descriptive characteristics, agronomic performance, and seed composition for 200 wild soybean (<u>Glycine soja</u> Siebold & Zucc.) accessions in maturity groups 000 to IV from the USDA Wild Soybean Germplasm Collection. These accessions (PI 65.549 to PI 483.464) were introduced from China, Japan, South Korea, and the Soviet Union into the United States from 1925 to 1984. A total of 38 categories of data is presented for each entry. These accessions were evaluated at Urbana, IL, in 1984 and 1985.

KEYWORDS: Evaluation, germplasm, <u>Glycine</u> <u>soja</u> Siebold & Zucc., origin, seed composition, wild soybean.

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EVALUATION OF THE USDA WILD SOYBEAN GERMPLASM COLLECTION: MATURITY GROUPS 000 TO IV (PI 65.549 TO PI 483.464)

Gail A. Juvik, Richard L. Bernard, Ruzhen Chang, and James F. Cavins

This publication contains information on the origin, descriptive characteristics, agronomic performance, and seed composition of wild soybean (<u>Glycine soja</u> Siebold & Zucc.) germplasm accessions for PI 65.549 to PI 483.464 in maturity groups 000 through IV. These data can also be obtained through the Germplasm Resources Information Network (GRIN), Database Management Unit, USDA-ARS, BARC-West, Beltsville, MD 20705.

The accessions were tested on the Agronomy-Plant Pathology South Farm, University of Illinois, Urbana (40°8′ N. lat.), with one replication per year. Seeds were planted on May 14 and 15, 1984, and on May 20, 1985. Plots consisted of one row with four hills per row, 60 cm between hills, and 1 m between rows. In 1984, plots for maturity groups III and IV were two rows wide, two hills per row, 1 m between hills, and 1 m between rows. Data were collected on all plants in a plot. The accessions were blocked by maturity group in the field, but the data are reported numerically by PI number.

The growth of wild soybeans in central Illinois is highly variable. Seeds of wild soybeans, which are normally very impermeable, were scarified in concentrated sulfuric acid for 5 minutes, rinsed thoroughly in water, and air-dried before planting. Despite this treatment, hard seed coats still resulted in some delayed emergence and poor stands. The number of plants per plot ranged from 2 to 20. Most wild soybeans are very susceptible to soybean mosaic virus and leafhopper feeding, and these pests caused considerable yellowing, stunting, and leaf rugosity. The insecticide Pydrin was applied in July both years to help reduce insect feeding.

Some accessions in the collection appear to be of hybrid origin with $\underline{\text{Glycine }}\underline{\text{max}}$ and are identified as semiwild. Although their seed and plant size are larger and more vigorous than those of true wild soybeans, these semiwild accessions exhibit characteristics, such as excessive twining and shattering, which make them easier to maintain

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with other wild soybeans than with cultivated soybeans. These accessions are more similar to wild soybeans than those designated "semiwild" in the cultivated soybean collection.

The data in tables 3 and 4 are 2-year means (except data for PI numbers greater than PI 468.919, which are based on 1984 values only). An asterisk (*) following a mean indicates that the difference between the values for the 2 years exceeded a specified limit. The limits for the traits were as follows:

Twining date > 7 days Flowering date > 7 days Maturity date > 7 days Height > 30 cm > 15 mm Leaf shape > .15 unit Leaf length > 0.5 cg/seed Seed weight Pod length > 4 mm

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

To obtain protein and oil percentages of an accession, approximately 7 g of seeds was placed in a beaker and dried in a Thelco forced air oven for 3 hours at 130°C. The seeds were then transferred to a 50-g bottle, sealed, and allowed to cool for 1 hour. A sample was then ground in a Varco electric dry-food grinder and returned to the 50-g bottle. The ground meal was analyzed by near-infrared reflectance in a Pacific-Scientific feed-grain analyzer. The analyzer calibration was checked with two sealed standards (a wheatmeal and a soymeal) and a freshly ground soymeal standard before each batch of 100 samples was processed.

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 was placed in a 25-ml vial. and 5 ml of sodium methoxide was 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% acetic acid solution was added followed immediately by 10 ml of heptane. The sample was completely mixed after each reagent addition. After the final mixing the sample was allowed to stand for several minutes so that the layers could separate. The heptane layer was analyzed with a Varian gas chromotograph equipped with two autoinjectors and flame detectors. Columns were 2 m by 2 mm and packed with 100/200 mesh Gas-Chrom Q coated with 5% IAC-2R-446. Analysis was made isothermally at 180°C, with the injector at 230°C and the detector at 240°C. Gas flow rates for helium, hydrogen, and air were 25, 25, and 250 ml per minute, respectively. The autoinjectors were set to inject $0.5 \mu l$. Total analysis time per injection was 10 minutes. Integration, peak identification, data storage, and report printing were done by computer.

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

Table 1:

PI number:

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

Accession name and foreign or collector number:

Accession names and foreign or collector numbers are reported as received. An attempt was made to standardize transliterations and to correct obvious errors. When heterogeneous introductions were received, two or more sublines were preserved and are distinguished by a letter (A, B, C, etc.) suffixed to the PI number, except PI 407.018 to PI 407.307, to which different PI numbers were assigned after sublining.

Country of acquisition:

This is the country from which the seeds were obtained.

Country of origin:

This is the country from which the accession originated, based on information received from the country of acquisition.

Year introduced:

This is the year the introduction was assigned a PI number.

Maturity group:

Classification of relative time of maturity based on data previously collected at Urbana, IL. Maturity groups include 000 (earliest), 00, 0, I, II, III, and IV.

Table 2:

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Flower color:
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P = purple, W = white

Pubescence color:

Ng = near gray, T = tawny

Pubescence form:

A = appressed (most hairs flat on leaf surface)

E =erect on leaf surface

Sa = semiappressed (between erect and appressed)

Va = very appressed (all hairs flat on leaf surface)

Pubescence density:

N = normal, Sp = sparse

Pod color:

B1 = black, Br = brown, Dbr = dark brown

Seed coat luster:

B = bloom (heavy coating of a powdery substance adhering to the seed coat)

D = dull (trace amounts of bloom)

Db = dense bloom (heavy bloom)

I = intermediate (between dull and shiny)

Lb = light bloom (slight bloom)

S = shiny (absence of bloom)

Seed coat and hilum color:

B1 = black, Br = brown, Gn = green

Seed shape:

Nr = near round

Ob = oblong (near rectangular in lateral outline)

Ov = oval (elliptical in lateral outline)

Other seed traits:

Fleck = brown flecks on black seed coat

Other leaf traits:

Na = narrow leaflet

Other plant traits:

4sd = four-seeded pods

Sw = semiwild (visual classification based on plant and seed characteristics, between soybean and wild soybean)

Table 3:

Twining date:

Date that 50% of the plants have begun to twine, expressed as month (mm) and day (dd).

Flower date:

Date that 50% of the plants have begun to flower, expressed as month (mm) and day (dd).

Maturity date:

Date that 95% of the pods have reached final color, expressed as month (mm) and day (dd).

Height:

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

Leaflet length:

Length of a typical terminal leaflet from the upper third and from the lower third of plant, in millimeters.

Leaflet shape:

Ratio of width to length of a typical terminal leaflet from the upper third and from the lower third of plant.

Pod length:

Length of a typical three-seeded pod, in millimeters.

Seed weight:

Centigrams per seed based on a 200-seed sample.

SMV:

Reaction to soybean mosaic virus based on leaf symptoms. Scored 1 (moderately resistant) to 5 (highly susceptible). Data are for 1985 only.

Table 4:

Seed composition:

Protein and oil: Percentage of dry weight of seeds.

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

Table 1 Identification and origin information for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

		Foreign or	Country	Country		Matur-
PI	Accession	collector	of	of	Year	ity
No.	name	No.	acquisition	origin	introduced	group
65.549			China	China	1925	II
81.762			Japan	Soviet Union	1929	II
101.404A		T106-2	China	China	1932	II
101.404B		T106-6	China	China	1932	II
135.624		1100 0	China	China	1940	II
326.581		K-5820	Soviet Union	Soviet Union	1968	II
326.582A		5525	Soviet Union	Soviet Union	1968	II
326.582B			Soviet Union	Soviet Union	1968	I
339.732			South Korea	South Korea	1969	IV
339.735A			South Korea	South Korea	1969	IV
339.735B			South Korea	South Korea	1969	IV
342.618A			Soviet Union	Soviet Union	1969	II
342.618B			Soviet Union	Soviet Union	1969	I
342.619A			Soviet Union	Soviet Union	1969	0
342.619B			Soviet Union	Soviet Union	1969	00
342.620A			Soviet Union	Soviet Union	1969	I
342.620B			Soviet Union	Soviet Union	1969	II
342.621A			Soviet Union	Soviet Union	1969	
342.621B						00
342.621B			Soviet Union	Soviet Union	1969	00
342.621C			Soviet Union	Soviet Union	1969	00
342.622A 342.622B			Soviet Union	Soviet Union	1969	I -
366.120		A-2	Soviet Union	Soviet Union	1969	I
			Japan	Japan	1971	IV
366.121		A-4	Japan	Japan	1971	IV
366.122		A 00	Japan	Japan	1971	IV
366.123 378.692		A-20	Japan	Japan	1971	IV
378.792		A-21	Japan	Japan	1973	IV
391.587	Ye sheng tou		Japan China	Japan	1973	IV
406.684	Hidaka 1			China	1974	II
407.029	nidaka i	Ј8	Japan	Japan	1976	III
407.162		K1	Japan South Koros	Japan	1976	IV
407.166		K2	South Korea South Korea	South Korea South Korea	1976	IV
407.171		K2	South Korea	South Korea	1976	IV
407.175		K4	South Korea		1976	IV
407.176		K4	South Korea	South Korea South Korea	1976	IV
407.170		K8	South Korea		1976	IV
407.184		K29	South Korea	South Korea South Korea	1976	IV
407.104		K12	South Korea		1976	IV
				South Korea	1976	IV
407.196		K12	South Korea	South Korea	1976	IV
407.200		K14	South Korea	South Korea	1976	IV
407.205		K17	South Korea	South Korea	1976	IV
407.209		K21	South Korea	South Korea	1976	IV
407.217		K24	South Korea	South Korea	1976	IV
407.275		K101	South Korea	South Korea	1976	IV
407.277		K101	South Korea	South Korea	1976	IV
407.278		K102	South Korea	South Korea	1976	IV

Table 2
Descriptive data for USDA wild soybean germplasm in maturity groups
000 to IV, PI 65.549 to PI 483.464

	Matur-												
	ity	Flower	Pubes	cence		Pod	Seed co	at	Hilum	Seed	Other to	raits	
Entry	group	color	Color	Form	Density	color	Luster	Color	color	shape	Seed	Leaf	Plant
65.549	II	P	T	Sa	N	B1	Db	B1	B1	Nr			
81.762	II	P	T	Sa	N	B1	Db	B1	B1	Ov			
101.404A	II	P	T	Sa	N	B1	Db	B1	B1	Nr			
101.404B	II	P	T	Sa	N	B1	Db	B1	B1	Nr	Fleck		
135.624	II	P	T	Sa	N	В1	В	B1	B1	Ov			
326.581	II	P	T	Sa	N	B1	Db	B1	B1	Ob			
326.582A	II	P	T	Va	N	B1	Lb	B1	B1	Ov	Fleck		
326.582B	I	P	T	Va	N	B1	В	B1	B1	Ob			
339.732	IV	P	T	Va	N	B1	В	B1	B1	Ob	Fleck		
339.735A	IV	P	T	A	N	B1	Lb	B1	B1	Ov	Fleck		
339.735B	IV	P	T	A	N	B1	В	B1	B1	Ov	Fleck		
342.618A	II	P	T	и Va	N	B1	Lb	B1	B1	Ob	Fleck		
342.618B	I	P	T	Va Va	N	B1	В	B1	B1	0b	LIGUR		
342.619A	0	P	T	Va A	N	Br	Db	B1	B1	Ob	Fleck		Qr
342.619B	00	P	T	N Va	N	Br	Db	B1	B1	Ob			Sw
342.620A	I	P	T	Va Va	N	B1	Db				Fleck		Sw
342.620B		P	T					B1	B1	Ob	D1 - 1-		
	II			Va Va	N	B1	В	Bl Bl	B1	0v	Fleck		
342.621A	00	P	T	Va	N	B1	Db	B1	B1	Ob			
342.621B	00	P	T	Va 	Sp	B1	Db	B1	B1	Ob			
342.621C	00	P	T	Va Va	N	B1	В	B1	B1	Ob			
342.622A	I	P	T	Va	N	B1	Db	B1	Bl	0v	Fleck		
342.622B	I	P	T	Va •	N	B1	Dp	B1	B1	0v	Fleck		
366.120	IV	P	T	A	N	B1	D	B1	Bl	Ob	Fleck		
366.121	IV	P	T	Sa	N	B1	D	B1	B1	Ob	Fleck		
366.122	IV	P	T	Sa	N	B1	D	B1	B1	Ob	Fleck		
366.123	IV	P	T	Va	N	B1	В	B1	B1	Ob	Fleck		
378.692	IV	P	T	Va	N	B1	В	B1	B1	Ob	Fleck		
378.702	IV	P	T	Sa	N 	B1	В	B1	Bl	Ob	Fleck		
391.587	II	P	T	Α	N 	B1	Db	B1	B1	07	Fleck		
406.684	III	P	T -	Va	N	B1	Db	B1	B1	Ob			
407.029	IV	P	T	A	N	B1	Lb	B1	Bl	Ob	Fleck		
407.162	IV	P	T	Va V	N	B1	В	B1	B1	Ob	Fleck		
407.166	IV	P	T	Va •	N	B1	Lb	B1	B1	0v	Fleck		
407.171	IV	P	T	Α	N	B1	В	B1	B1	0v	Fleck		
407.175	IV	P	T	Va 	N	B1	В	B1	B1	0v	Fleck		
407.176	IV	P	T -	Va 	N	B1	Db -	B1	B1	0 v	Fleck		
407.182	IV	P	T -	Va	N	B1	В	B1	B1	Nr	Fleck		
407.184	IV	P	T	A	N	Bl.	Db	B1	B1	0v	Fleck		
407.195	IV	P -	T -	A .	N	B1	В	B1	B1	Ob	Fleck		
407.196	IV	P	T -	A	N	B1	Lb	B1	B1	Ob	Fleck		
407.200	IV	P	T	Va .	N	B1	В	B1	B1	Ob .	Fleck		
407.205	IA	P	T	A	N	B1	Lb	B1	B1	0v	Fleck		
407.209	IV	P	T	Va	N	B1	Lb	Bl	B1	Ob	Fleck		
407.217	IA	P	T	A	N	B1	В	B1	B1	0v	Fleck		
407.275	IV	P	T	Va	N	B1	В	B1	B1	0v	Fleck		
407.277	IV	P	T	Α	N	B1	Lb	B1	B1	Ob	Fleck		
407.278	IV	P	T	A	N	Bl	В	Bl	Bl	0v	Fleck		

Table 3 Agronomic data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Twining	Flower	Maturity		Leafle	t length			Pod	Seed	
	date	date	date	Height	lower	upper	Leaflet	shape	length	weight	SMV
Entry	(mmdd)	(mmdd)	(mmdd)	(cm)	(mm)	(mm)	lower	upper	(mm)	(cg/sd)	(score)
65.549	627	729	914	100*	50	45*	0.44	0.40	21	1.4	4
81.762	626	724	913	110	50	46	0.47*	0.37	21	1.4	3
101.404A	628*	727	914	100*	53*	46*	0.50	0.40	20	1.3	2
101.404B	618	724	913	102*	48	49*	0.49	0.35*	22	1.5	3
135.624	623	725	913	98*	43	41*	0.60	0.33	23	1.4	2
326.581	620	720	905	123*	40	44*	0.54*	0.40	24	1.4	3
326.582A	619	726	911	77	43	33	0.54*	0.42*	24	1.7	4
326.582B	625	727	912	89*	48*	45*	0.46*	0.37	23	1.5	3
339.732	624	817	1002*	55	34	29	0.65	0.47	26	1.6*	5
339.735A	625	818	1011	129	53	41	0.57	0.50	24	1.8*	3
339.735B	622	819	1009	81	50	44	0.50	0.41	27*	1.6	5
342.618A	701*	728	910	67	48	39	0.50*	0.39	24	1.6	4
342.618B	624	725	912	79*	44	41	0.46*	0.34	22	1.4	3
342.619A	622	626	821*	83*	61	65*	0.50	0.53*	35*	6.1*	1
342.619B	623	625	821*	58*	66	68*	0.56	0.41*	39*	6.7*	2
342.620A	624	725	909	75	55	42	0.40*	0.28	23	1.3	3
342.620B	619	724	912	71	54	49*	0.47*	0.32	22	1.6	4
342.621A	627*	625	813*	27	40	40	0.46	0.28	26	1.7	5
342.621B	626	627	811	45*	43	44*	0.37	0.25	24	2.0*	4
342.621C	623	627	812	55*	53*	61*	0.38	0.29	26*	2.1*	4
342.622A	624	717*	830	79*	40	43*	0.44	0.31	22	1.3	4
342.622B	620	709	828	54	33	23	0.39	0.30	24	1.1	4
366.120	619	821*	1012*	126	57	48	0.55*	0.38*	28	2.0	4
366.121	619	817	1012*	146	61*	46	0.49	0.39	27	1.8*	4
366.122	618	825*	1011*	135*	52	41	0.46	0.40	28	1.7*	4
366.123	625	817	1005*	117*	52	41	0.47*	0.37	24	1.5*	4
378.692	621	816	1006*	117*	45*	44	0.50	0.36	25	1.5	4
378.702	623	818	1009*	94*	55	45	0.58	0.34	24	2.2	4
391.587	622	730	912	66*	43	43	0.53*	0.37	22	1.4	4
406.684	625	805*	1002	139*	65*	52*	0.42	0.43	33	2.3*	3
407.029	623	815	1007*	79	47	38	0.50*	0.37	27	2.0	4
407.162	705	820	1009	91	45	40	0.66*	0.39	27	2.4	3
407.166	704	818	1007*	113*	53	43	0.56	0.51	26	1.9	3
407.171	704	821	1009	73	57	45	0.58	0.48	26	1.7	4
407.175	705	821	1008*	60	45	44	0.51*	0.33	23	1.7	4
407.176	629	820	1008*	73*	51	47*	0.57	0.38	25	1.9	3
407.182	629	818	1010	98*	61	46	0.44	0.40	23	1.6	3
407.184	630*	819	1008*	80*	49	42	0.50	0.34	26	1.9	4
407.195	625	814	1007*	99	57	44	0.65*	0.37	26	2.1	4
407.196	623	814	1007*	86*	51	35	0.48	0.45	29	1.9	4
407.200	706	818	1008*	68*	45	35	0.61	0.53	24	2.1*	3
407.205	623	817	1007*	91	45	35	0.64*	0.42	23	2.1	4
407.209	702	821	1010*	79	45	37	0.54	0.47	26	2.3	3
407.217	706	820	1006*	61	52*	55*	0.45	0.39*	26	1.9	4
407.275	701	817	1011	102*	52	49*	0.56*	0.38	24	1.6	3
407.277	622	818	1009	144*	67	52*	0.59	0.46	25	1.9	4
407.278	623	817	1010	103*	49	40	0.56	0.47	27	2.2	4
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Table 4 Seed composition data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur-			Pal-			Lino-	Lino-	
	ity	Protein	Oil	mitic	Stearic	Oleic	leic	lenic	Other
Entry	group	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
65.549	II	51.4	8.7	14.1	2.6	8.9	55.3	19.2	0.0
81.762	II	51.9	8.0	14.3	2.6	9.0	55.5	18.6	0.0
101.404A	II	50.9	8.3	14.2	2.8	9.7	55.3	18.1	0.0
101.404B	II	50.9	8.3	14.0	2.7	10.0	55.1	18.2	0.1
135.624	II	51.1	8.7	12.9	2.8	9.5	54.8	20.0	0.1
326.581	II	49.7	8.2	12.3	3.2	13.5	53.2	17.9	0.1
326.582A	II	48.6	10.2	12.9	2.8	15.4	53.8	15.3	0.0
326.582B	I	48.7	9.8	13.5	2.8	11.2	55.8	16.8	0.1
339.732	IV	50.5	8.1	14.5	3.0	11.5	54.3	16.8	0.1
339.735A	IV	49.4	9.3	14.1	3.2	11.6	54.6	16.7	0.0
339.735B	IV	47.5	9.2	13.7	3.0	12.7	54.7	16.0	0.0
342.618A	II	47.8	10.6	13.7	3.0	11.1	54.7	17.6	0.1
342.618B	I	49.0	9.9	13.4	2.7	11.0	55.7	17.2	0.0
342.619A	0	43.4	16.5	11.9	3.7	13.3	59.5	11.6	0.1
342.619B	00	45.1	16.0	12.1	3.7	13.7	59.6	11.0	0.1
342.620A	I	49.3	9.1	13.2	2.7	9.0	52.5	22.7	0.0
342.620B	II	51.6	8.1	13.4	3.2	11.8	54.9	16.7	0.1
342.621A	00	46.3	9.9	12.7	2.6	15.0	56.0	13.8	0.1
342.621B	00	46.7	11.5	12.5	2.6	11.8	57.5	15.5	0.1
342.621C	00	48.1	11.4	12.5	2.8	12.9	57.0	14.9	0.1
342.622A	I	49.0	8.3	13.8	3.5	11.6	52.3	18.8	0.1
342.622B	I	46.3	8.8	13.2	2.8	11.3	56.7	16.1	0.0
366.120	IV	51.2	8.2	14.3	2.8	10.5	54.3	19.1	0.0
366.121	IV	52.5	6.5	13.4	2.6	8.3	52.6	23.2	0.1
366.122	IV	52.2	6.8	14.1	3.0	8.8	52.2	22.2	0.1
366.123	IV	51.7	8.0	13.6	3.2	10.0	53.9	19.5	0.0
378.692	IV	52.8	7.0	13.4	3.2	9.9	53.6	20.0	0.1
378,702	IV	51.2	8.3	13.0	2.7	10.7	54.9	18.7	0.1
391.587	II	48.4	9.4	13.3	3.2	11.9	54.9	16.8	0.1
406.684	III	51.1	8.7	12.9	3.0	11.8	55.7	16.6	0.0
407.029	IV	50.4	8.5	13.8	3.2	10.9	54.1	18.2	0.1
407.162	IV	50.8	9.4	13.8	3.0	12.8	55.6	14.8	0.1
407.166	IV	50.1	9.7	13.9	3.0	11.8	55.7	15.9	0.0
407.171	IV	48.2	8.7	15.4	2.7	10.4	54.1	17.5	0.1
407.175	IV	49.3	9.7	12.6	3.0	12.5	57.8	14.2	0.0
407.176	IV	48.9	9.2	14.0	2.9	11.5	54.9	16.7	0.1
407.182	IV	49.1	9.2	13.7	2.7	11.5	53.5	18.7	0.0
407.184	IV	50.1	8.3	13.5	2.6	11.8	56.6	15.5	0.0
407.195	IV	50.9	8.7	14.3	2.9	11.0	55.7	16.2	0.1
407.196	IV	50.2	9.4	13.8	3.1	10.8	56.4	16.0	0.1
407.200	IV	49.4	10.1	12.9	2.4	12.1	57.1	15.7	0.1
407.205	IV	50.3	9.5	12.3	2.7	11.6	57.4	16.1	0.1
407.209	IV	49.0	10.9	13.5	2.4	13.1	55.7	15.5	0.0
407.217	IV	49.3	8.9	14.0	2.5	11.4	54.7	17.6	0.0
407.275	IV	49.1	9.2	13.3	2.5	11.2	54.6	18.6	0.0
407.277	IV	50.1	8.5	14.1	2.7	11.8	53,3	18.2	0.0
407.278	IV	48.0	10.6	12.2	2.7	13.9	57.0	14.2	0.0

Table 1 Identification and origin information for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

		Foreign or	Country	Country		Matur-
PI	Accession	collector	of	of	Year	ity
No.	name	No.	acquisition	origin	introduced	group
407.288		W1	China	China	1976	II
407.289		W1	China	China	1976	II
407.290		W2	China	China	1976	II
407.291		W2	China	China	1976	II
407.292		W3	China	China	1976	II
407.293		W3	China	China	1976	II
407.294		W3	China	China	1976	II
407.295		W3	China	China	1976	II
407.296		W4	China	China	1976	II
407.297		W4	China	China	1976	II
407.298		W4	China	China	1976	II
407.299		W4	China	China	1976	II
407.320			South Korea	South Korea	1976	IV
407.321			South Korea	South Korea	1976	IV
423.988	J-077630	F7	Soviet Union	Soviet Union	1978	00
423.989A	J-077631	F8	Soviet Union	Soviet Union	1978	00
423.989B	J-077631	F8	Soviet Union	Soviet Union	1978	0
423.990A	J-077632	F9	Soviet Union	Soviet Union	1978	0
423.990B	J-077632	F9	Soviet Union	Soviet Union	1978	0
423.991	J-077633	F10	Soviet Union	Soviet Union	1978	0
423.992	J-077634	F11	Soviet Union	Soviet Union	1978	00
423.993	J-077635	F12	Soviet Union	Soviet Union	1978	00
423.994	J-077636	F13	Soviet Union	Soviet Union	1978	0
423.995	J-077637	F14	Soviet Union	Soviet Union	1978	0
423.996	J-077638	F15	Soviet Union	Soviet Union	1978	00
423.997	J-077639	F16	Soviet Union	Soviet Union	1978	00
423.998	J-077640	F17	Soviet Union	Soviet Union	1978	00
423.999A	J-077641	F18	Soviet Union	Soviet Union	1978	00
423.999B	J-077641	F18	Soviet Union	Soviet Union	1978	00
424.000	J-077642	F19	Soviet Union	Soviet Union	1978	00
424.001	J-077643	F20	Soviet Union	Soviet Union	1978	00
424.002	J-077644	F21	Soviet Union	Soviet Union	1978	00
424.003	J-077645	F22	Soviet Union	Soviet Union	1978	00
424.004A		74001	South Korea	South Korea	1978	II
424.004B		74001	South Korea	South Korea	1978	II
424.005		74002	South Korea	South Korea	1978	IV
424.006A		74004	South Korea	South Korea	1978	ΙV
424.006B		74004	South Korea	South Korea	1978	IV
424.032		74035	South Korea	South Korea	1978	IV
424.033		74036	South Korea	South Korea	1978	IV
424.034		74037	South Korea	South Korea	1978	IV
424.036		74039	South Korea	South Korea	1978	IV
424.038A		74053	South Korea	South Korea	1978	IV
424.051A		74066	South Korea	South Korea	1978	IA
424.051B		74066	South Korea	South Korea	1978	IV
424.063		74043	South Korea	South Korea	1978	IV
424.067		74048	South Korea			
,27.00/		, 7070	Doddii Korea	South Korea	1978	IV

Table 2 Descriptive data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur-												
	ity	Flower	Pubes	cence		Pod	Seed co	at	Hilum	Seed	Other	traits	
Entry	group	color	Color	Form	Density	color	Luster		_	shape		Leaf	Plant
407.288	II	P	T	۷a	N	B1	В	B1	B1	Οv			
407.289	II	P	T	۷a	N	B1	В	B1	B1	Οv	Fleck		
407.290	II	P	T	Sa	N	B1	В	B1	Bl	Ob	Fleck		
407.291	II	P	T	Sa	N	B1	Db	Bl	Bl	Ob	Fleck		
407.292	II	P	T	Va	N	B1	В	B1	B1	Οv			
407.293	II	P	T	Va	N	B1	Dъ	Bl	B1	Ov			
407.294	II	P	T	Sa	N	B1	DЪ	Bl	B1	0v	Fleck		
407.295	II	P	T	۷a	N	B1	В	Bl	B1	Ov			
407.296	II	P	T	۷a	N	B1	В	B1	B1	Ov	Fleck		
407.297	II	P	T	۷a	N	B1	В	B1	B1	Ov	Fleck		
407.298	II	P	T	Va	N	B1	В	B1	B1	Ov	Fleck		
407.299	II	P	T	Va	N	B1	DЪ	B1	B1	Ov	Fleck		
407.320	IV	P	T	A	N	B1	В	Bl	Bl	Ob	Fleck		
407.321	IV	P	T	Α	N	B1	Lb	Bl	B1	Ob	Fleck		
423.988	00	P	T	۷a	N	B1	Db	Bl	B1	Ob			
423.989A	00	P	T	۷a	N	B1	DЪ	Bl	B1	Ob			
423.989B	0	P	T	Sa	N	Bl	I	B1	B1	Ob	Fleck		
423.990A	0	P	T	Α	N	Br	Db	B1	B1	Ob	Fleck		
423.990B	0	P	T	Α	N	Bl	Db	Bl	B1	Ob			
423.991	0	P	T	Α	N	B1	Db	B1	B1	Ob			
423.992	00	P	T	Va	N	B1	Db	Bl	B1	Ob			
423.993	00	P	T	۷a	N	B1	Dъ	Bl	B1	Ob			
423.994	0	P	T	A	N	B1	Db	Bl	B1	Ob			
423.995	0	P	T	Α	N	B1	В	B1	B1	Ob			
423.996	00	P	T	۷a	N	B1	Db	B1	B1	Ob			
423.997	00	P	T	۷a	N	B1	Dъ	B1	B1	Ob			
423.998	00	P	T	Va	N	Bl	Dъ	B1	B1	Ob			
423.999A	00	P	T	۷a	N	B1	Db	B1	Bl	Ob			
423.999B	00	P	T	Va	N	Bl	В	B1	B1	Ob			
424.000	00	P	T	۷a	N	Bl	Db	B1	Bl	Ob			
424.001	00	P	T	Α	N	Dbr	D	B1	B1	Ov	Fleck		
424.002	00	P	T	Va	N	Bl	В	B1	Bl	Ov			4sd
424.003	00	P	T	۷a	N	Bl	Db	Bl	Bl	Ob			
424.004A	II	P	T	E	N	B1	В	B1	Bl	Ob	Fleck		
424.004B	II	P	T	E	N	Bl	Lb	Bl	Bl	Ob	Fleck		
424.005	IV	W	T	Α	N	Bl	В	Gn	Bl	Ob			Sw
424.006A	IV	P	T	Sa	N	Bl	В	B1	Br	Ob	Fleck		
424.006B	IV	P	T	Sa	N	Bl	В	Bl	Br	Ob	Fleck		
424.032	IV	P	T	Α	N	B1	Db	B1	B1	Ob	Fleck		
424.033	IV	P	T	A	N	B1	В	Bl	Bl	Ob	Fleck		
424.034	IV	P	T	A	N	B1	В	B1	B1	Ob	Fleck		
424.036	IV	P	T	A	N	Bl	Lb	B1	Bl	Ov	Fleck		
424.038A	IV	P	T	Α	N	Bl	Lb	B1	B1	Ov	Fleck		
424.051A	IV	P	T	Va	N	B1	В	B1	B1	Ob			
424.051B	IV	P	T	Va	N	B1	Db	B1	Bl	Ob			
424.063	IV	P	T	Va	N	Bl	Lb	Bl	Bl	Ob	Fleck		
424.067	IV	P	T	A	N	Bl	Lb	Bl	B1	Ob	Fleck		

Table 3 Agronomic data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Twining	Flower	Maturity			t length	-	_	Pod	Seed	
	date	date	date	Height	lower	upper		shape	_	weight	SMV
Entry	(mmdd) 	(mmdd)	(mmdd) 	(cm)	(mm)	(mm)	lower	upper	(mm) 	(cg/sd)	(score)
407.288	628*	725*	910	54	38	39*	0.43*	0.42	22	1.2	4
407.289	624	724	907	118*	42	46	0.45*	0.27	22	1.2	4
407.290	625	725	910	74*	45	44	0.48*	0.30	25	2.0	3
407.291	626	721	908	63	39	39	0.47*	0.35	22	1.8	2
407.292	628	726*	910	62*	35	38	0.54*	0.33*	23	1.6	4
407.293	626	727*	909*	88*	45	43*	0.35*	0.29	23*	1.7*	4
407.294	619	722	906	70	29	33*	0.56*	0.40	22	1.7	4
407.295	627*	727	909	86	45	35	0.50*	0.38*	21	1.6	3
407.296	625	805	914	91*	48	54*	0.45*	0.28	22	1.3	3
407.297	624	718*	914	*08	49	43*	0.52*	0.41*	21	1.2	3
407.298	702*	724*	917	79*	48	51*	0.46*	0.32	22	1.2	2
407.299	626	727	913	76	54	48*	0.40	0.32	19	1.1	3
407.320	703	823	1009*	86	53	43	0.63*	0.33	26	2.0	4
407.321	705*	822	1012	73	51	44	0.46*	0.34	25	1.5	3
423.988	621	625*	811*	56*	56	59*	0.36*	0.22	24	2.1*	4
423.989A	620	623	812*	69*	47	55*	0.38	0.23	24	2.1*	3
423.989B	627*	701*	824*	60*	43	42*	0.44	0.34	26*	2.0	4
423.990A	629	701*	818	55*	41*	39	0.43	0.21	24	1.7*	4
423.990B	625	702	816	56*	28	36*	0.44	0.28*	23	1.4	4
423.991	625	701	817	38	31	32*	0.41	0.40*	22	1.4	4
423.992	625	626	811*	47	41	49*	0.41	0.28	25	2.0*	4
423.993	628*	627*	814*	38	40	37	0.47	0.22	23	1.5	5
423.994	623	701	816	68*	38	36*	0.43	0.29	24	1.5	4
423.995	619	625	812*	60*	40	50*	0.44	0.17	22	1.9	4
423.996	620	624*	813*	56	42	46*	0.39	0.29	24	1.9	4
423.997	621	625	810*	55*	45	56*	0.43	0.25	22	1.9*	4
423.998	624	626	811*	59*	41	54*	0.43	0.32	24	1.9*	5
423.999A	628	628	812*	42	45	56*	0.45	0.29	24	1.8*	4
423.999B	622	626	813*	55*	43	41*	0.47	0.30*	28	1.8*	5
424.000	626*	628	814*	28	38	43	0.48	0.29	24	1.9*	4
424.001	629*	630*	813*	42	42	49*	0.49	0.32	27*	3.3*	4
424.002	619	629	812	53*	40	44*	0.44*	0.26	23	1.6	4
424.003	620	626	812	47*	45	52*	0.41	0.24	24	1.9*	4
424.004A	625	816	925	127*	60	54*	0.55*	0.43	26	2.1	4
424.004B	625	814	925	120*	59	54*	0.54*	0.39	26	1.8	2
424.005	717*	730*	1006	81	83	62	0.41	0.32	30	3.7*	2
424.006A	702	830	1011*	121	49	42	0.65*	0.57*	26	1.6	4
424.006B	630	831	1011*	121	56	40	0.57	0.46	27	1.5	2
424.032	702	820	1008*	74	47	36	0.61	0.47	24	2.0	4
424.033	704	822	1006*	62	39	31	0.74*	0.42	24	1.8	5
424.034	630	823	1009	91*	52	38	0.68	0.46	25	1.8	4
424.036	630	820	1008*	93	51	37	0.63*	0.41	25	1.9	4
424.038A	707	824	1009	67	45	38	0.71	0.44	25	1.8	4
424.051A	626	819	1009*	84	41	34	0.64*	0.43	26	2.3	4
424.051B	623	817	1006*	82*	43	36	0.63	0.47	25	2.6	4
424.063	702	822	1011	104*	48	35	0.55	0.45	24	1.7	3
424.067	629	818	1011	83	54	44	0.55	0.45	25	1.8	4

Table 4 Seed composition data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur-			Pa	1-			Lino-	Lino-	
	ity	Protein	Oil	mi	tic	Stearic	Oleic	leic	lenic	Other
Entry	group	(%)	(%)	(%	()	(%)	(%)	(%)	(%)	(%)
407.288	II	49.8	8.9	13	3.1	3.1	11.1	55.3	17.4	0.1
407.289	II	49.6	9.5	13	3.3	2.9	12.1	54.7	17.0	0.1
407.290	II	49.9	10.0	14	. 0	2.9	13.3	53.6	16.3	0.1
407.291	II	49.0	10.6	13	3.4	3.1	15.1	53.6	14.8	0.1
407.292	II	48.8	10.1	12	2.7	3.0	14.7	54.3	15.3	0.1
407.293	II	49.1	10.2	13	3.1	2.8	12.1	54.5	17.5	0.1
407.294	II	51.2	8.7	13	3.5	2.9	12.2	53.8	17.7	0.1
407.295	II	48.4	10.4	13	3.5	2.9	11.8	55.4	16.5	0.1
407.296	II	47.9	9.0	12	2.7	2.8	11.2	55.6	17.9	0.0
407.297	II	49.6	8.6	12	2.9	2.8	10.3	56.1	18.0	0.1
407.298	II	48.3	9.3	12	2.7	2.9	10.7	56.2	17.5	0.1
407.299	II	48.8	8.9	13	.2	3.0	12.6	54.1	17.2	0.1
407.320	IV	49.5	9.8		3 . 4	2.9	13.9	55.9	13.9	0.2
407.321	IV	49.7	9.4	13	8.8	3.0	11.2	54.7	17.3	0.1
423.988	00	48.4	11.0		5	3.3	16.0	56.6	12.6	0.1
423.989A	00	48.1	10.9		5	3.2	15.2	57.7	12.6	0.1
423.989B	0	47.1	11.2		. 1	3.3	12.2	58.3	14.1	0.1
423.990A	0	47.6	10.0		2.8	3.3	12.2	57.0	14.8	0.0
423.990B	0	45.4	8.2		. 0	3.7	11.5	56.7	15.3	0.0
423.991	0	49.0	9.1		.0	3.4	11.9	56.7	15.3	0.0
423.992	00	47.6	11.3		2.6	2.9	12.8	56.4	15.3	0.1
423.993	00	46.5	11.0		8	3.7	18.3	55.3	11.0	0.0
423.994	0	48.5	9.8		.0	3.4	11.3	56.9	15.5	0.1
423.995	0	47.7	11.2		1.6	3.8	17.4	54.0	11.2	0.1
423.996	00	48.3	11.0		7	3.1	14.3	57.8	13.2	0.1
423.997	00	48.0	10.7		2.5	2.7	13.0	56.6	15.2	0.1
423.998	00	46.9	11.0		2.6	2.8	12.6	57.2	15.0	0.1
423.999A	00	47.9	10.2		2.6	2.7	11.8	57.4	15.7	0.1
423.999B	00	47.5	10.2		2.6	2.7	11.4	57.7	15.7	0.1
424.000	00	47.4	9.4		2.8	2.7	13.0	56.7	14.7	0.1
424.001	00	44.4	14.1		3.0	3.1	20.9	51.7	11.4	0.1
424.002	00	49.3	10.4		2.9	3.0	13.5	55.1	15.7	0.0
424.003	00	46.7	11.0		3.4	3.4	17.4	54.7	11.2	0.1
424.004A	II	49.9	9.2		3.9	2.9	13.2	52.9	17.2	0.1
424.004B	II	50.1	9.1		3.7	2.7	11.1	54.4	18.1	0.1
424.005	IV	46.3	12.6		. 4	3.4	12.7	56.5	13.1	0.1
424.006A	IV	50.3	9.0		. 3	3.0	10.1	52.7	20.0	0.0
424.006B	IV	50.9	8.9		.6	2.5	8.9	52.6	22.5	0.0
424.032	IV	52.0	8.5		5.3	3.1	11.0	53.8	17.0	0.0
424.033	IV	52.7	8.7		5.1	3.2	10.9	53.9	17.0	0.0
424.034	IV	50.6	9.3		. 1	3.1	11.7	54.7	16.5	0.0
424.036	IV	49.5	9.7		.0	3.0	12.6	54.2	16.2	0.0
424.038A	IV	49.1	10.7		5	3.1	11.7	59.9	13.0	0.0
424.050A	IV	49.9	9.3		.0	3.2	12.9	55.6	14.5	0.0
424.051R 424.051B	IV	49.8	9.7		.9	3.2	13.5	55.6	14.0	0.0
424.0518	IV	49.8	9.2		.1	3.1	11.7	54.7	16.6	0.0
424.067	IV	50.8	9.5	14		3.1	15.7	50.9	15.7	0.0
.2		55.5	5.5	7.4			/	55.5	10.7	0.0

Table 1 Identification and origin information for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

		Foreign or	Country	Country		Matur-
PI	Accession	collector	of	of	Year	ity
No.	name	No.	acquisition	origin	introduced	group
424.068		74049	South Korea	South Korea	1978	ΙV
424.000		74052	South Korea	South Korea		
424.071		74079	South Korea	South Korea	1978 1978	IV IV
424.088		74088	South Korea	South Korea		
424.000 424.091A		74091	South Korea	South Korea	1978	IV IV
424.091B		74091	South Korea	South Korea	1978	
424.116			South Korea		1978	IV
		74116		South Korea	1978	IV
440.913A			China	China	1980	II
440.913B		50001	China	China	1980	II
447.003A		50204	China	China	1980	0
447.003B		50204	China	China	1980	I
447.004		50368	China	China	1980	III
458.535			China	China	1981	0
458.536			China	China	1981	0
458.537A			China	China	1981	000
458.537B			China	China	1981	000
458.538			China	China	1981	000
458.539A			China	China	1981	000
458.539B			China	China	1981	0
458.540A			China	China	1981	0
458.540B			China	China	1981	0
458.540C			China	China	1981	0
458.540D			China	China	1981	0
464.866A		Long 79-0009	China	China	1982	00
464.866B		Long 79-0009	China	China	1982	00
464.867		Long 79-0304	China	China	1982	000
464.868A		Long 79-0402	China	China	1982	00
464.868B		Long 79-0402	China	China	1982	00
464.869A		Long 79-1809	China	China	1982	0
464.869B		Long 79-1809	China	China	1982	0
464.870		Long 79-3313	China	China	1982	000
464.871A						
464.871B		Long 79-5801 Long 79-5801	China	China	1982	0
464.871C		Long 79-5801	China	China	1982	0
		-	China	China	1982	0
464.889A		Gong di 685	China	China	1982	II
464.889B		Gong di 685	China	China	1982	II
464.889C		Gong di 685	China	China	1982	II
464.890A		Gong di 2019	China	China	1982	II
464.890B		Gong di 2019	China	China	1982	I
464.891A		Gong di 2022	China	China	1982	I
464.891B		Gong di 2022	China	China	1982	II
464.891C		Gong di 2022	China	China	1982	II
464.892		Gong di 2024	China	China	1982	I
464.925A		LS-001	China	China	1982	0
464.925B		LS-001	China	China	1982	0
464.925C		LS-001	China	China	1982	I
464.926		LS-004	China	China	1982	000

Table 2 Descriptive data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

Sect Plows Plows Plow Plow		Matur-												
		ity	Flower	Pubes	cence		Pod	Seed co	oat	_ Hilum	Seed	Other t	raits	
424,071 IV P T A N B1 B B1 B1 OV Fleck 424,079 IV P T Va N B1 Lb B1 B1 Ob Fleck 424,081A IV P T A N B1 Lb B1 B1 Ob Fleck 424,091A IV P T A N B1 Lb B1 D1 Ob Fleck 424,091A IV P T A N B1 Lb B1 D0 Pleck 440,913A II P T Va N B1 Db B1 B1 Ob Fleck 440,913B II P T Va N B1 B B1 B1 Ob Fleck 447,003A III P T Va N B1 B B1 B	Intry	group	color	Color	Form	Density	color	Luster	Color	color	shape	Seed	Leaf	Plant
424.071 IV P T A N B1 B B1 B1 ON Fleck 424.079 IV P T Va N B1 B B1 ON Fleck 424.081A IV P T A N B1 Lb B1 B1 Ob Fleck 424.091A IV P T A N B1 Lb B1 D1 Ob Fleck 424.091A II P T A N B1 Lb B1 Ob Pleck 440.913A II P T Va N B1 Db B1 B1 Ob Pleck 440.913B II P T Va N B1 B B1 D Ov Fleck 447.003A III P T Va N B1 B B1 D Ov	.24 069	737	ъ	T	٨	N	ום	ם	ום	ום	Oh	Flools		
424.079 IV P T Va N B1 B B1 D Ov Fleck 424.088 IV P T A N B1 Lb B1 B1 Ob Fleck 424.091A IV P T Va N B1 Lb B1 B1 Ob Fleck 424.091A IV P T Va N B1 Db B1 Db Ob Fleck 440.913A II P T Va N B1 Db B1 B1 Ov Fleck 447.003A O P T Va N B1 B B1 B1 Ob Fleck 447.003A O P T Va N B1 B B1 Db Ob Fleck 447.003A O P T Va N B1 B B1												LIGCK		
424,088 IV P T VA N B1 Lb B1 B1 Ob Fleck 424,091A IV P T VA N B1 Lb B1 B1 Ob Fleck 424,091B IV P T VA N B1 Lb B1 Ob Fleck 440,913A II P T VA N B1 Db B1 B1 Ov Fleck 447,003B I P T VA N B1 B B1 B1 Ov Fleck 447,003B I P T VA N B1 B B1 B1 Ob Fleck 447,003B I P T VA N B1 B B1 B1 Ob Fleck 447,004 B1 P T VA N B1 B B1 D												Floor		
424,091A IV P T Va N B1 B. B1 B1 Ob Fleck 424,091B IV P T Sa N B1 B B1 B1 Ob Fleck 440,913A II P T Va N B1 Db B1 B1 Ov Fleck 440,913A II P T Va N B1 Db B1 B1 Ov Fleck 447,033B II P T Va N B1 B B1 B1 Ob Fleck 447,03A III P T Va N B1 B B1 B1 Ob Fleck 458,535A O P T Va N B1 B B1 D Ob Fleck 458,537A O00 P T Va N B1 B B1														
424.091B IV P T A N B1 B B1 B1 Ob Fleck 424.116 IV P T Sa N B1 Lb B1 B1 Ob Fleck 440.913A II P T Va N B1 Db B1 B1 OV Fleck 447.003A 0 P T Va N B1 B B1 B1 OV Fleck 447.003B I P T Va N B1 B B1 B1 OV Fleck 447.004 III P T Va N B1 B B1 B1 Ob Fleck 447.004 III P T Va N B1 B B1 B1 Ob Fleck 4458.5358 O P T Va N B1 B B1														
424.116														
440,913A II P T Va N B1 Db B1 B1 Ov Fleck 440,913B II P T Va N B1 Db B1 B1 Ov Fleck 447,003A 0 P T Va N B1 B B1 B1 OV Fleck 447,004 III P T Va N B1 B B1 B1 Ob Fleck 458,5356 0 P T Va N B1 B B1 B1 Ob P 458,5378 000 P T Va N B1 B B1 B1 Ob 458,5378 000 P T Va N B1 B B1 Db D1 Ob 458,539B 0 P T Sa N B1 Db B1 B1 O														
440,913B II P T Va N B1 Db B1 B1 Ov Fleck 447,003A 0 P T A N B1 B B1 B1 Ov Fleck 447,003B I P T Va N B1 B B1 B1 Ob Fleck 447,004 IIII P T Va N B1 B B1 B1 Ob Fleck 458,535B 0 P T Va N B1 B B1 B1 Ob P 458,537B 000 P T Va N B1 B B1 B1 Ob 458,537B 000 P T Va N B1 B B1 B1 Ob 458,539B 00 P T Sa N B1 B B1 B1 Ob <														
447.003A 0 P T A N B1 B B1 D Youndary of the control														
447.003B I P T Va N B1 B B1 B1 Ob Fleck 447.004 III P T Va N B1 B B1 D1 Ob Fleck 458.5355 0 P T Va N B1 B B1 D1 Ob Fleck 458.537A 000 P T Va N B1 Lb B1 B1 Ob Fleck 458.537B 000 P T Va N B1 B B1 B1 Ob Fleck 458.538B 000 P T Va N B1 B B1 Db Db <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>														
447.004 III P T Va N B1 B B1 D D C <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
458.535 0 P T A N B1 B B1 D Cov Cov <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>LIECK</td><td></td><td></td></t<>												LIECK		
458.536 0 P T E N B1 B B1 D CV CV CV CV N B1 Lb B1 Db D CV														
458.537A 000 P T Va N B1 Lb B1 Ob Cob														
458.537B 000 P T Va N B1 B B1 B1 Ob 458.538A 000 P T Va N B1 B B1 Ob 458.539B 000 P T A N B1 B B1 Ob 458.540A 0 P T Sa N B1 Db B1 B1 Ob 458.540B 0 P T Sa N B1 Db B1 B1 Ov 458.540C 0 P T Sa N B1 B B1 Db Ov P C 464.866A 00 P T Va N B1 B B1 Db Ov P A64.866A 00 P T Va N B1 B B1 Db Ov A64.866A Ov P T Sa N B1														
458.538 000 P T Va N B1 B B1 D Ob A A N B1 B B1 D Ob A A N B1 B B1 Ob A A A N B1 B B1 Ob A A A N B1 Db B1 Db Db A A A A B1 Db B1 B1 Ob A A A N B1 Db B1 B1 Ob A A A N B1 Db B1 B1 Ob A A A N B1 B B1 B1 Ov A A A N B1 B B1 B1 Ov A A A A B1 B B1 B1 Ob A A A A B1 B B1														
458.539A 000 F T Va N B1 B B1 Ob H Ob H A N B1 B B1 Ob H Ob H C														
458.539B 0 F T A N B1 B B1 Ob H Ob H Ob H Db B1 Db B1 Ob H Ob H Db B1 Db B1 Db B1 Ob H Db B1 B1 Db B1 B1 Db Db B1 B1 Db Db B1 B1 Db														
458.540A 0 P T Sa N B1 Db B1 B1 Ob 458.540B O P T Sa N B1 Db B1 B1 Ov 458.540C O P T Sa N B1 Db B1 B1 Ov 458.540D O P T Sa N B1 B B1 B1 Ov 464.866A O0 P T Va N B1 B B1 B1 Ob 464.866B O0 P T Va N B1 B B1 B1 Ob A64.866B O0 P T Va N B1 B B1 B1 Ob A64.868B O0 P T Va N B1 B B1 B1 Ob A64.868B O0 P T E N B1 B B1 B1 Ov A64.869B O														
458.540B 0 P T Sa N B1 Db B1 B1 Ov 458.540C 0 P T Sa N B1 Db B1 B1 Ov 458.540D 0 P T Sa N B1 B B1 B1 Ov 464.866A 00 P T Va N B1 B B1 B1 Ob 464.866B 00 P T Va N B1 B B1 B1 Ob 464.868A 00 P T Va N B1 B B1 B1 Ob 464.868B 00 P T E N B1 B B1 B1 Ob 464.869A 0 P T E N B1 Db B1 B1 Ov 464.870 000 P T Sa														
458.540C 0 P T Sa N B1 Db B1 Dv P 458.540D O P T Sa N B1 B B1 Dv P C <td></td>														
458.540D 0 P T Sa N B1 B B1 Ov C C 464.866A 00 P T Va N B1 B B1 B1 Ob C <td></td>														
464.866A 00 P T Va N B1 B B1 Ob 464.866B 00 P T Va N B1 B B1 B1 Ob 464.867 000 P T Va N B1 B B1 B1 Ob 464.868A 00 P T Va N B1 B B1 B1 Ob 464.868B 00 P T E N B1 B B1 B1 Ob 464.869A 0 P T E N B1 B B1 D Ob 464.869A 0 P T E N B1 Db B1 D Ov 464.870 000 P T Sa N B1 B B1 D Ov 464.871B 0 P T Sa N B1 B B1 B1 Ov 464.889A II P T														4-4
464.866B 00 P T Va N B1 B B1 B1 Ob 464.867 000 P T Va N B1 B B1 B1 Ob 464.868A 00 P T Va N B1 B B1 B1 Ov 464.868B 00 P T Va N B1 B B1 B1 Ob 464.869A 0 P T E N B1 B B1 B1 Ov 464.869B 0 P T E N B1 B B1 B1 Ov 464.870 0000 P T Va N B1 B B1 B1 Ob 464.871B 0 P T Sa N B1 B B1 B1 Ov 464.889A II P T Va N B1 B B1 B1 Ov 464.889C II P														4sd
464.867 000 P T Va N Bl B Bl Ob D D A A B B B B B D <														
464.868A 00 P T Sa N B1 B B1 B1 Ov 464.868B 00 P T Va N B1 B B1 B1 Ob 464.869A 0 P T E N B1 B B1 B1 Ov 464.869B 0 P T E N B1 Db B1 B1 Ov 464.870 000 P T Sa N B1 B B1 B1 Ob 464.871A 0 P T Sa N B1 B B1 B1 Ov 464.871B 0 P T Sa N B1 B B1 B1 Ov 464.889A II P T Va N B1 Bb B1 Ov 464.889B II P T Va N B1 B B1 B1 Ov 464.890A II P T														
464.868B 00 P T Va N B1 B B1 B1 Ob 464.869A 0 P T E N B1 B B1 Ob B1 Ov 464.870 000 P T Va N B1 Db B1 Ob Ob A A A A B1 B B1 Ob Db B1 Ob A A A A B1 Db B1 B1 Ov A A A A B1 B B1 B1 Ov A A A A B1 B B1 B1 Ov A A A A B1 B B1 B1 Ov A A A A B1 B B1 B1 Ov A A A A B1 B B1 B1 Dv A A A A B1 B B1 B1 Dv A A A B1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
464.869A 0 P T E N B1 B B1 Ov P 464.869B O P T E N B1 Db B1 Ov P CV														
464.869B 0 P T E N B1 Db B1 D0 D0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
464.870 000 P T Va N Bl Db Bl Bl Ob 464.871A 0 P T Sa N Bl B Bl Bl Ov 464.871B 0 P T Sa N Bl B Bl Bl Ov 464.871C 0 P T Sa N Bl B Bl Dl Ov 464.889A II P T Va N Bl Db Bl Bl Ov 464.889B II P T Va N Bl Db Bl Bl Ov 464.889C II P T Sa N Bl B Bl Bl Ob Fleck 464.890B I P T Sa N Bl B Bl D Ob Fleck 464.891B II P T E N Bl B Bl Bl Ob Fleck														
464.871A 0 P T Sa N Bl B Bl Bl Ov 464.871B 0 P T Sa N Bl B Bl Bl Ov 464.871C 0 P T Sa N Bl B Bl Bl Ov 464.889A II P T Va N Bl Db Bl Bl Ov 464.889B II P T Va N Bl Db Bl Bl Ov 464.889C II P T Va N Bl B Bl Bl Ov 464.890A II P T Sa N Bl B Bl Bl Ob Fleck 464.890B I P T Va N Bl B Bl Bl Ov P 464.891B II P T E N Bl B Bl Bl Ov P														
464.871B 0 P T Sa N Bl B Bl Bl Ov 464.871C 0 P T Sa N Bl Bl Bl Bl Ov 464.889A II P T Va N Bl Db Bl Bl Ov 464.889B II P T Va N Bl Db Bl Bl Ov 464.889C II P T Sa N Bl Bl Bl Ov 464.890B I P T Sa N Bl Bl Bl Ov 564.890B I P T Sa N Bl Bl Bl Ov 564.890B I P T Va N Bl Bl Bl Ov 564.890B I P T Va N Bl Bl Bl Ov 564.890B I P T Va N Bl Bl Bl Ov 564.891B II P T E N Bl Bl Bl Ov 564.891B II P T E N Bl Bl Bl Ov 564.891C II P T E N Bl Bl Bl Ov 564.891C II P T E N Bl Bl Bl Db Bl Bl Ov 564.892B I P T Va N Bl Bl Bl Db Bl Db Bl Db Bl Db Bl Db Bl Db Fleck 564.892B O P T E N Bl Bl Bl Db Bl Db Bl Db Db Bl Db Db Bl Db Db Bl Db Dv 564.892B O P T E N Bl Bl Db Bl Db Db Bl Db Db Bl Db Dv 564.892B O P T E N Bl Bl Db Bl Db Db Bl Db Dv Dv 564.892B O P T E N Bl Db Bl Db Db Bl Db														
464.871C 0 P T Sa N Bl B Bl Bl Ov 464.889A II P T Va N Bl Db Bl Bl Ov 464.889B II P T Va N Bl Db Bl Bl Ov 464.889C II P T Sa N Bl Db Bl Bl Ov 464.890A II P T Sa N Bl Bl Bl Ov 464.890B I P T Sa N Bl Bl Bl Ob Fleck 464.891A I P T Va N Bl Bl Bl Db Bl Bl Ov 464.891B II P T E N Bl Bl Bl Ov 464.891C II P T Va N Bl B Bl Bl Db Bl Db Bl Db Bl Db Bl Db Bl Dv Fleck 464.892 I P T Va N Bl B Bl Bl Db Bl Dv Fleck 464.925B O P T E N Bl Bl Db Bl Db Db Bl Db Db Bl Db Db Bl Db Dv Fleck														
464.889A II P T Va N Bl Db Bl Bl Ov 464.889B II P T Va N Bl Db Bl Bl Ov 464.889C II P T Va N Bl Db Bl Bl Ov 464.890A II P T Sa N Bl Bl Bl Ov Fleck 464.890B I P T Sa N Bl Bl Bl Ob Fleck 464.891A I P T Sa N Bl Bl Bl Ov A64.891B II P T E N Bl Bl Bl Ov 464.891C II P T Va N Bl Bl Bl Db Bl Db Bl Db Bl Db Bl Db Bl Db Bl Ov 464.892 I P T Va N Bl Bl Bl Db Bl Db Bl Db Db Bl Db Db Bl Db Dv Fleck A64.925B O P T E N Bl Bl Db Bl Db Db Bl Db														
464.889B II P T Va N Bl Db Bl Ov 464.889C II P T Va N Bl Db Bl Ov 464.890A II P T Sa N Bl B Bl Bl Ob Fleck 464.890B I P T Sa N Bl B Bl Bl Ob Fleck 464.891A I P T E N Bl B Bl Bl Ov 464.891B II P T E N Bl B Bl D Ov 464.891C II P T E N Bl B Bl Bl Ov 464.892 I P T E N Bl B Bl Ov Fleck 464.925B O P T E N Bl B Bl O Ov Fleck														
464.889C II P T Va N Bl Db Bl Bl Ov 464.890A II P T Sa N Bl Bl Bl Db Bl Bl Ob Fleck 464.890B I P T Sa N Bl Bl Bl Ob Fleck 464.891B II P T E N Bl Bl Bl Ov 464.891C II P T Va N Bl Bl Bl Db Bl Db Bl Db Bl Db Bl Db Bl Db Fleck 464.892B O P T E N Bl Bl Bl Db Bl Db Bl Db Bl Db Db Bl Db Dv Fleck A64.892B O P T E N Bl Bl Db Bl Db Db Bl Db Dv Fleck														
464.890A II P T Sa N Bl Bl Bl Db Fleck 464.890B I P T Va N Bl B Bl Bl Ob Fleck 464.891A I P T E N Bl Bl Bl Ov 464.891C II P T E N Bl Bl Db Bl Ov 464.892 A B B B B B B B B B B B B B B B B B B														
464.890B I P T Sa N Bl Bl Bl Bl Ob Fleck 464.891A I P T Va N Bl Bl Bl Ov 464.891B II P T E N Bl Bl Bl Ov 464.891C II P T E N Bl Bl D Ov 464.892 I P T Va N Bl Bl Bl Ov 464.925A O P T E N Bl Bl Bl Ov 464.925B O P T E N Bl Bl Db Bl Ov												El cole		
464.891A I P T Va N Bl Bl Bl Ov 464.891B II P T E N Bl Bl Bl Ov 464.891C II P T E N Bl Bl Bl Ov 464.892 I P T Va N Bl Bl Bl Bl Ov 464.925A O P T E N Bl Bl Bl Ov 464.925B O P T E N Bl Bl Ob Bl Bl Ov 464.925B O P T E N Bl Bl Ob Bl Ov Ov 6464.925B														
464.891B II P T E N B1 B B1 Dv Dv 464.891C II P T E N B1 B1 B B1 Dv Fleck 464.892 I P T Va N B1 B B1 B1 Ov Fleck 464.925A O P T E N B1 B B1 Ov Ov Fleck												LIGCK		
464.891C II P T E N B1 B B1 Dv 464.892 I P T Va N B1 B B1 B1 Ov 464.925A O P T E N B1 B B1 Ov 464.925B O P T E N B1 Db B1 Db Cv														4 = 3
464.892 I P T Va N Bl B Bl Bl Ob Fleck 464.925A 0 P T E N Bl B Bl Ov 464.925B 0 P T E N Bl Db Bl Dv														4sd
464.925A 0 P T E N Bl B Bl Ov 464.925B 0 P T E N Bl Db Bl Bl Ov												Floor		
464.925B 0 P T E N Bl Db Bl Bl Ov												LIECK		
404.923C I P I San Bi K KI KI UV														
464.926 000 P T Va N B1 Db B1 B1 Ob														

Table 3 Agronomic data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Twining	Flower	Maturity		Leafle	t length			Pod	Seed	
	date	date	date	Height	lower	upper	Leaflet	shape		weight	SMV
Entry	(mmdd)	(mmdd)	(mmdd)	(cm)	(mm)	(mm)	lower	upper	(mm)	-	(score)
424.068	630	817	1008*	100*	43	37	0.70	0.49	24	2.0	4
	624	818		100**	50	35	0.70				4
424.071 424.079	629*	817	1007* 1007*	102**	49	40	0.63*	0.51 0.47	27 25	2.4	4
424.079		819	1010*	70	54	46	0.54	0.34	23 27	1.6 2.0	4
	625	824		85	53	40					
424.091A 424.091B	630	825*	1010*	107*	55	38	0.46 0.57	0.40	27 27	2.2	5
	630		1010*					0.43*		2.2	4
424.116	702	826	1017	92	57*	44	0.62*	0.45	25	1.8	4
440.913A	620	730	917	93*	41	40*	0.48*	0.35	24	1.4	3
440.913B	623	726	917	82	41	37	0.52*	0.36*	24	1.4	3
447.003A	623	707	825*	63*	37	37*	0.52	0.35*	23	1.2	4
447.003B	623	711	901	79*	31	47*	0.56	0.28	23	1.5	5
447.004	622	731	919	115	49	44*	0.53*	0.38	23	1.5	4
458.535	625	630	817	45	37	33	0.48	0.30	24	1.7*	5
458.536	623	717*	830*	68*	29	32*	0.67	0.31	23	1.4	2
458.537A	620	623	808*	61	45	49*	0.49	0.31	26*	1.8*	3
458.537B	621	624	808	55*	49	48*	0.39	0.27	25	2.0*	3
458.538	623	627	802	38	50	43	0.41	0.34	26	1.9*	4
458.539A	623	626	809*	54	47	44	0.39	0.33	24	1.9*	3
458.539B	625	628	816	51	36	34*	0.53	0.38	25	1.7	4
458.540A	620	709	825	87*	38*	37*	0.44	0.41	22	1.9	3
458.540B	618	711	826	72*	35	34*	0.60*	0.37	21*	1.8	4
458.540C	620	708	825	91*	42	40*	0.50	0.39	24	1.7	4
458.540D	621	708	823	84*	33	38*	0.54	0.36	22	1.5	4
464.866A	627	629	815	52*	39	44*	0.53	0.40*	24	1.6	5
464.866B	704	707*	817	15	23	24	0.57	0.49*	20	1.5	5
464.867	625	627	809*	43	44	42*	0.41	0.37*	25*	1.7*	4
464.868A	625	712	821	80*	38	36*	0.54	0.28	22	1.4	5
464.868B	625	629	815	55*	35	38*	0.52*	0.39	24	1.6	4
464.869A	623	718	830	93*	39	37*	0.51	0.36	22	1.2	2
464.869B	621	718	901	80*	39	42*	0.60	0.28	23	1.4	3
464.870	625	629	810*	50*	52*	55*	0.34	0.28	26	1.7*	4
464.871A	621.	715	830	87*	36*	38*	0.53	0.45	22	1.6	4
464.871B	623	715	829	66	41	43*	0.47*	0.33	22	1.6	4
464.871C	620	706*	826	87*	37*	41*	0.50*	0.39	23	1.7	
464.889A	623	728	913	93*	36	39*	0.55*	0.42	22	1.5	4
464.889B	624	730*	920*	88*	40	36		0.45*			3
464.889C							0.53*		23	1.5	3
	619	728	915	106*	47	42*	0.51*	0.42*	23	1.6	2
464.890A	625	725	913	90*	50	49*	0.49*	0.37*	22	1.7	2
464.890B	625	720	907	100*	41	46*	0.46*	0.34	25	1.9	2
464.891A	624	717	905	74*	39*	35*	0.42	0.40	22*	1.5	3
464.891B	620	726	913	105*	52	38*	0.55*	0.44	23	1.6	2
464.891C	621	725	912	92*	44	40	0.53	0.40*	24	1.6	2
464.892	626	719	906	85*	45*	63*	0.38*	0.31	23	1.3	2
464.925A	621	718	830*	100*	40	51*	0.53	0.33	23	1.4	3
464.925B	621	717	901	121*	40	52*	0.54	0.32	22	1.5	2
464.925C	622	720*	904	94*	44	39*	0.46	0.24	24	1.9	4
464.926	624	626	811*	34	44*	40	0.48	0.29	23	2.1	4

Table 4 Seed composition data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur-			Pal-			Lino-	Lino-	
	ity	Protein	Oil	mitic	Stearic	Oleic	leic	lenic	Other
Entry	group	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
424.068	IV	50.8	9.4	14.4	3.1	16.3	51.2	15.2	0.1
424.071	IV	49.7	9.4	13.7	3.0	12.8	55.4	15.2	0.0
424.079	IV	49.6	9.0	14.3	3.1	11.9	56.1	14.8	0.0
424.088	IV	51.8	8.4	13.9	2.9	11.8	55.1	16.3	0.1
424.091A	IV	50.3	9.5	13.5	3.3	12.4	56.3	14.5	0.0
424.091B	IV	49.9	9.6	13.4	3.2	12.5	56.3	14.8	0.0
424.116	IV	48.2	10.0	13.3	3.2	12.8	53.9	17.0	0.0
440.913A	II	47.8	9.1	13.0	2.6	10.0	56.0	18.6	0.0
440.913B	II	47.9	10.2	12.8	2.6	10.2	56.2	18.2	0.1
447.003A	0	48.9	9.6	14.1	2.9	11.0	55.2	16.8	0.0
447.003B	I	47.7	11.4	13.3	3.0	12.0	55.0	16.9	0.0
447.004	III	46.9	10.1	13.4	3.1	12.2	54.3	17.1	0.0
458.535	0	48.3	9.7	13.5	3.5	16.9	53.6	12.8	0.0
458.536	0	51.4	9.1	13.7	3.2	11.3	53.4	18.4	0.0
458.537A	000	50.1	10.3	12.3	2.6	12.3	57.1	15.8	0.1
458.537B	000	47.9	11.4	12.4	2.6	12.2	57.1	15.8	0.1
458.538	000	47.8	10.5	12.4	2.6	12.9	56.6	15.6	0.1
458.539A	000	48.2	11.4	12.4	2.7	11.6	57.6	15.8	0.0
458.539B	0	48.4	10.2	13.4	3.2	12.6	55.5	15.4	0.0
458.540A	0	49.4	9.2	13.9	3.2	11.9	55.3	15.8	0.0
458.540B	0	49.1	9.4	13.9	3.2	12.1	55.5	15.3	0.0
458.540C	0	49.0	9.3	13.6	3.2	12.3	55.3	15.6	0.1
458.540D	0	48.8	9.3	13.9	3.2	11.1	55.5	16.5	0.0
464.866A	00	48.0	8.9	13.3	3.0	16.5	54.0	13.2	0.1
464.866B	00	47.3	9.0	13.4	3.3	15.0	55.2	13.3	0.0
464.867	000	47.1	10.0	12.6	2.7	10.9	57.6	16.3	0.1
464.868A	00	46.0	8.5	13.7	3.1	10.8	56.4	16.2	0.1
464.868B	00	47.7	10.1	12.5	2.9	11.5	56.8	16.4	0.0
464.869A	0	50.4	9.6	13.6	3.0	11.1	54.0	18.5	0.0
464.869B	0	51.1	9.4	13.1	2.8	10.5	54.5	19.3	0.0
464.870	000	47.2	9.9	12.8	2.6	11.2	57.4	16.1	0.1
464.871A	0	48.5	9.1	13.8	3.2	12.0	54.5	16.7	0.0
464.871B	0	48.7	9.1	13.9	3.2	11.4	54.8	16.8	0.1
464.871C	0	48.1	10.6	13.7	3.2	11.6	55.6	15.9	0.0
464.889A	II	48.6	9.2	12.3	2.7	11.0	57.2	16.9	0.0
464.889B	II	47.8	9.8	12.4	2.7	11.2	56.8	17.0	0.0
464.889C	II	48.4	9.5	12.9	2.8	10.8	54.9	18.6	0.0
464.890A	II	51.0	8.8	13.6	2.8	10.2	52.6	20.8	0.1
464.890B	I	48.7	10.8	13.3	3.0	11.9	54.1	18.0	0.1
464.891A	I	50.3	9.1	13.7	3.1	12.7	53.5	17.1	0.0
464.891B	II	49.8	8.7	13.6	3.0	11.4	53.2	18.9	0.0
464.891C	II	51.4	8.9	13.0	2.8	11.6	55.0	17.8	0.0
464.892	I	47.5	10.3	13.4	3.1	13.6	53.9	16.1	0.0
464.925A	0	49.8	9.9	13.2	2.9	11.3	54.0	18.9	0.0
464.925B	0	50.2	9.3	13.3	2.9	11.4	54.0	18.4	0.0
464.925C	I	50.6	10.5	13.0	3.4	13.3	55.1	15.2	0.1
464.926	000	47.1	12.2	12.7	2.7	14.6	56.3	13.7	0.0

Table 1 Identification and origin information for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

		Foreign or	Country	Country		Matur-
PI	Accession	collector	of	of	Year	ity
No.	name	No.	acquisition	origin	introduced	group
464 0074		T S-005	China	China	1982	000
464.927A		LS-005	China			
464.927B		LS-005	China	China	1982	000
464.927C		LS-005	China	China	1982	000
464.928		LS-008	China	China	1982	00
464.929A		LS-009	China	China	1982	0
464.929B		LS-009	China	China	1982	0
468.396A			China	China	1982	IV
468.396B			China	China	1982	IV
468.397A			China	China	1982	IV
468.397B			China	China	1982	IV
468.398A			China	China	1982	IA
468.398B			China	China	1982	IV
468.398C			China	China	1982	IV
468.399A			China	China	1982	IV
468.399B			China	China	1982	IV
468.399C			China	China	1982	IV
468.400A			China	China	1982	IV
468.400B			China	China	1982	IV
468.904			China	China	1982	00
468.905			China	China	1982	0
468.906			China	China	1982	0
468.907			China	China	1982	I
468.908			China	China	1982	000
468.909			China	China	1982	00
468.910			China	China	1982	00
468.911			China	China	1982	00
468.912			China	China	1982	00
468.913			China	China	1982	00
468.916			China	China	1982	III
468.917			China	China	1982	III
468.918			China	China	1982	III
468.919			China	China	1982	III
479.744		Gong di 50003-2	China	China	1983	I
479.745		Gong di 50029-2	China	China	1983	I
479.746A		Gong di 50062	China	China	1983	II
479.746B		Gong di 50062	China	China	1983	II
479.747		Gong di 50093-1	China	China	1983	III
479.748		Gong di 50107-3	China	China	1983	II
479.749		Gong di 50326-2	China	China	1983	III
479.750		Gong di 50344	China	China	1983	I
479.751		Gong di 50351-1		China	1983	III
479.752		Gong di 50388-2		China	1983	I
479.752 479.753A		Gong di 50396-1		China	1983	II
				China	1983	II
479.753B		Gong di 50396-1				
479.767		Long 79-1809	China	China	1983	I
479.768		Long 79-3313-1	China	China	1983	0
479.769		Long 79-5801	China	China	1983	0
7/3./03		10116 / 9 JOUT	OHIH	Ollina	1000	U

Table 2 Descriptive data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur-	Flores	Pubos			Ded	Sood oo	.+	W. I.m	Cood	Other t	:+-	
Ent we	ity	Flower			Density	Pod	Seed co			shape	Other t	raits Leaf	Plant
Entry 	group											Lear	
464.927A	000	P	T	Va	N	B1	В	B1	Bl	Ob			
464.927B	000	P	T	Va	N	В1	Db	B1	Bl	Ob			
464.927C	000	P	T	Va	N	B1	В	B1	B1	Ob			
464.928	00	P	T	Va	N	B1	Db	B1	B1	Ob			
464.929A	0	P	T	Sa	N	В1	В	B1	B1	Ov			
464.929B	0	P	T	Sa	N	B1	В	B1	B1	Ov			
468.396A	IV	P	T	۷a	N	B1	В	B1	B1	Ov	Fleck		
468.396B	IV	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
468.397A	IV	P	T	Va	N	B1	В	B1	В1	Ob			
468.397B	IV	P	T	Va	N	B1	В	B1	B1	Ob			
468.398A	IV	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
468.398B	IV	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
468.398C	IV	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
468.399A	IV	P	T	Α	N	B1	Db	Bl	B1	Ov	Fleck		
468.399B	IV	P	T	Va	N	B1	Dъ	B1	B1	0v	Fleck		
468.399C	IV	P	T	Va	N	B1	В	B1	B1	0v	Fleck		
468.400A	IV	P	T	Va	N	B1	В	B1	B1	Ob	Fleck		
468.400B	IV	P	T	۷a	N	B1	В	B1	B1	0v	Fleck		
468.904	00	P	T	Va	N	Br	I	B1	B1	Ov		Na	Sw,4sd
468.905	0	P	T	Α	N	Br	s	B1	B1	Ov		Na	Sw,4sd
468.906	0	P	T	۷a	N	Br	S	B1	B1	Ov		Na	Sw
468.907	I	W	T	Sa	N	Br	В	B1	B1	Nr	Fleck	Na	Sw,4sd
468.908	000	W	T	E	N	Br	Db	B1	B1	Nr		Na	Sw
468.909	00	P	T	Sa	N	Br	I	B1	B1	Ov		Na	Sw
468.910	00	P	T	E	N	Br	Db	B1	B1	Ov		Na	Sw,4sd
468.911	00	P	T	Α	N	Br	I	B1	B1	Ov		Na	Sw
468.912	00	P	T	۷a	N	Br	Db	B1	B1	Nr		Na	Sw,4sd
468.913	00	P	Ng	Α	N	Br	D	Br	Br	Ov			Sw
468.916	III	P	T	۷a	N	B1	В	B1	B1	Ov	Fleck		
468.917	III	P	T	Α	N	B1	Db	B1	B1	Ob	Fleck		
468.918	III	P	T	Va	N	B1	В	B1	B1	Ov	Fleck		
468.919	III	P	T	Sa	N	B1	s	B1	B1	Ob	Fleck		
479.744	I	P	T	Sa	N	B1	В	B1	B1	Ov	Fleck		
479.745	I	P	T	Sa	N	B1	Db	B1	В1	Ob	Fleck		
479.746A	II	P	T	Α	N	B1	Lb	Bl	B1	Ov	Fleck		
479.746B	II	P	T	A	N	B1	В	Bl	B1	Ov	Fleck		
479.747	III	P	T	Va	N	B1	В	B1	B1	Ob			
479.748	II	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
479.749	III	P	T	Va	N	B1	Db	Bl	B1	Ob	Fleck		
479.750	I	P	T	E	N	B1	Dъ	B1	B1	Ov	Fleck		
479.751	III	P	T	Va	N	B1	Dъ	B1	B1	Ob	Fleck		
479.752	I	P	T	Va	N	Bl	В	B1	B1	Ov			
479.753A	II	P	T	Α	N	B1	В	B1	B1	Ov			
479.753B	II	P	T	Sa	N	B1	Db	B1	B1	Ob			
479.767	I	P	T	Sa	N.	B1	В	B1	B1	0v			
479.768	0	P	T	Va	N	B1	В	B1	B1	Ov	Fleck		
479.769	0	P	T	Va	N	B1	Db	B1	B1	Ov			
773.708	3	-	•	• •	••		22	A-1		J.			

Table 3 Agronomic data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Twining	Flower	Maturity		Leafle	t Length	3		Pod	Seed	
	date	date	date	Height	lower	upper	Leaflet	shape	_ length	weight	SMV
Entry	(mmdd)	(mmdd)	(mmdd)	(cm)	(mm)	(mm.)	lower	upper	(mm)	(cg/sd)	(score)
464.927A	625	627	812*	46*	42	41*	0.44	0.31	25	1.9*	3
464.927B	623	625	811*	50	55	60*	0.39	0.31	24	1.8*	4
464.927C	623	628	812	61*	48*	43*	0.38	0.33	26*	1.6*	3
464.928	625	628	817	78*	39	39*	0.47*	0.44*	24	1.6	4
464.929A	623	716	830*	70*	41	43*	0.54*	0.42*	22	1.6	4
464.929B	623	715	826	64*	33	36*	0.57	0.38	22	1.7	5
468.396A	702	817	1004	68	40	35	0.47	0.29	23	1.5	4
468.396B	702	817	1004	77	41	38	0.51*	0.27	24	1.6	4
468.397A	628	822*	1004	131*	51	42	0.50*	0.34	27	1.4	3
468.397B	627	822*	1004	93*	40	35	0.45*	0.30	25	1.4*	3
468.398A	Agronomi	c data n	ot availabl	Le							
468.398B	Agronomi	ic data n	ot availabl	Le							
468.398C	Agronomi	ic data n	ot availab	Le							
468.399A	703	820	1006	101*	40	36	0.49*	0.35	26	1.7	2
468.399B	705	819	1001	89	40	36	0.50	0.35	25	1.1	1
468.399C	707*	820	1002	96	40	35*	0.58*	0.33	25	1.2	1
468.400A	629	816	1001	101*	36	32	0.58*	0.30	25	1.5	3
468.400B	704	816	1004	128*	46	33	0.52	0.31	24	1.5	1
468.904	617	701	823*	104*	56	66*	0.43	0.38	30*	3.5*	1
468.905	618	703	825*	93*	47*	42*	0.30	0.29	28*	3.1*	2
468.906	620	706*	829*	69	49	48*	0.41	0.36	30	3.7*	4
468.907	628	712	903	110*	98	67*	0.39	0.29	35	4.1	2
468.908	618	622	811*	78	60*	58*	0.41	0.32	31	3.7*	2
468.909	618	704*	823*	105*	49	53*	0.32	0.32	32	3.1	2
468.910	618	626	822*	86	54	65*	0.37	0.30	32	4.3*	1
468.911	618	629	817*	93*	46	60*	0.41	0.28	31*	3.5*	1
468.912	617	623	815*	83*	45	55*	0.42*	0.32	31	3.6*	3
468.913	618	626	819*	87	48	50*	0.46	0.34	33	3.3*	3
468.916	628	806	920	93	39	37	0.55	0.33	20	1.3	3
468.917	624	807	921	95*	50	39	0.55*	0.47	22	2.0	4
468.918	625	803	920	71	45	38	0.45	0.31	20	1.3	3
468.919	626	728	918	152	66	64*	0.46*	0.31	28*	2.9	4
479.744	625	716	831	63	31	19	0.45	0.47	19	1.2	3
479.745	625	716	831	47	26	24	0.42	0.38	19	2.3	4
479.746A	625	720	908	58	39	31	0.36	0.35	24	1.4	3
479.746B	625	720	908	58	39	31	0.36	0.35	24	1.5	3
479.747	627	725	917	59	43	30	0.42	0.40	24	1.5	4
479.748	702	725	908	61	37	31	0.32	0.35	23	1.0	4
479.749	620	725	920	92	48	32	0.35	0.25	25	1.9	4
479.750	620	713	827	42	31	18	0.42	0.39	24	1.3	4
479.751	709	808	925	43	37	34	0.59	0.41	22	1.8	4
479.752	625	713	902	66	53	28	0.32	0.39	23	1.1	3
479.753A	702	725	915	61	46	32	0.33	0.25	23	1.8	4
479.753B	702	725	915	61	46	32	0.33	0.25	23	1.8	3
479.767	620	716	827	46	28	24	0.54	0.42	26	1.5	3
479.768	620	701	815	45	37	23	0.35	0.30	23	1.5	3
479.769	622	716	819	45	31	24	0.45	0.38	21	1.7	3

Table 4 Seed composition data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

Matura										
Entry From (x)		Matur-			Pal-			Lino-	Lino-	
464,927A 000 48.8 10.9 12.8 2.9 12.6 56.8 15.0 0.0 464,927B 000 47.6 10.4 12.6 2.6 11.6 57.1 16.2 0.1 464,927C 000 49.6 10.1 14.4 3.6 14.3 53.4 14.4 0.1 464,928D 00 47.9 9.8 13.4 3.2 11.1 58.6 15.4 0.1 464,928B 0 48.1 9.7 13.8 3.1 11.4 55.1 16.7 0.2 464,928B 0 45.1 7.3 14.0 3.0 12.2 55.3 15.5 0.0 468,396A IV 44.8 12.3 13.6 3.4 13.9 54.9 14.3 0.1 468,396B IV 45.1 12.1 13.6 3.3 14.1 55.0 16.3 0.0 468,397A IV 47.9 10.2 13.5 2.8 12.5 55.0 16.3 0.0 468,398B IV 47.7 10.5 13.5 2.8 12.5 55.0 16.3 0.0 468,398B IV 8ed composition data not available 468,398B IV 8ed composition data not available 468,398B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468,399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468,399C IV 46.2 9.2 13.1 3.3 11.3 54.2 18.1 0.0 468,400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468,400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468,904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468,906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468,907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468,909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468,909 1 47.9 11.8 12.7 2.7 16.5 55.4 16.3 0.1 468,909 1 47.9 11.8 12.7 2.7 16.5 55.3 16.8 0.1 468,901 1 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468,902 1 47.9 11.8 12.7 2.7 14.3 55.5 14.4 0.1 468,903 1 47.4 12.1 12.7 2.7 14.3 55.5 14.6 0.1 468,904 1 47.9 11.8 12.7 2.7 14.3 55.5 14.6 0.1 468,905 1 44.0 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468,906 1 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468,907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468,907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468,907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468,908 1 00 45.4 13.2 13.9 14.8 3.1 15.5 56.7 12.0 0.1 468,909 1 47.4 12.1 12.7 2.7 14.3 55.5 14.4 0.1 468,901 1 47.9 18.8 12.7 3.3 14.5 55.3 11.6 0.1 468,901 1 47.9 18.8 12.7 3.3 14.5 55.3 11.6 0.1 468,901 1 47.9 18.8 18.2 18.9 18.9 18.1 0.0 479.745 I 49.1 8.6 12.7 2.7 14.3 55.5 14.4 0.1 488,901 0 54.4 13.2 13.9 14.8 3.1 15.5 56.7 12.4 0.0 479.745 I 49.1 8.6 12.7 2.7 12.5 54.3 11.6 0.1 488,901 1 1 49.9 8.8 12.6 2.8 15.9 55.3 11.5 0.0 479.745 II 49.9 9.8 13.0 2.9 12.4 54.9 55.0		ity	Protein	Oil	mitic	Stearic	Oleic	leic	lenic	Other
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464.929B 0 45.1 7.3 14.0 3.0 12.2 55.3 15.5 0.0 468.396A IV 44.8 12.3 13.6 3.4 13.9 54.9 14.3 0.1 468.397A IV 47.9 10.2 13.5 2.8 12.5 55.0 16.3 0.0 468.397B IV 47.7 10.5 13.5 2.8 12.5 55.0 16.3 0.0 468.397B IV 87.7 10.5 13.5 2.8 12.9 55.1 15.8 0.1 468.398A IV Seed composition data not available 468.398B IV Seed composition data not available 468.399B IV 45.5 10.1 13.1 33.3 11.7 53.8 18.3 0.0 468.399B IV 45.5 10.1 13.1 33.3 11.7 53.8 18.3 0.0 468.399B IV 46.2 9.2 13.1 3.3 11.7 53.8 18.3 0.0 468.399B IV 46.2 9.2 13.1 3.3 11.7 53.8 18.1 0.0 468.400A IV 46.2 9.2 13.1 3.3 11.3 55.2 14.2 0.1 468.400B IV 46.1 0.1 13.7 3.7 13.4 55.2 14.2 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 16.8 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 16.8 0.1 468.906 0 45.0 13.4 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.909 0 47.4 12.1 12.7 2.7 14.3 55.5 10.7 0.1 468.901 0 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 0 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 0 46.8 14.4 12.2 3.2 16.5 55.7 14.4 0.1 468.913 0 0 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.913 0 0 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.913 1 0 47.9 11.8 12.7 2.7 16.5 53.6 10.4 0.1 468.914 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.915 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 479.744 I 49.1 8.6 12.7 2.7 16.5 53.6 14.4 0.1 468.919 III 49.4 10.0 13.9 2.9 12.4 54.6 17.1 0.0 479.746B III 47.8 9.0 14.6 2.9 14.6 55.7 2.1 0.0 479.746B III 47.8 9.0 14.6 2.9 14.6 55.7 2.1 0.0 479.746B II 49.7 8.8 12.7 3.3 11.5 53.0 15.9 0.0 479.746B II 49.9 9.8 13.0 2.9 12.4 54.6 15.9 0.0 479.746B II 49.0 9.0 14.5 2.9 14.6 55.7 12.4 0.0 479.746B II 49.0 9.0 14.5 2.8 13.0 12.2 53.3 16.7 0.0 479.750 I 49.9 7.5 12.8 2.8 13.0 15.5 53.5 20.4 0.0 479.750 I 49.9 7.5 12.8 2.8 13.0 15.5 53.5 20.4 0.0 479.753B II 5.0 6 9.8 13.2 3.1 12.5 53.5 53.5 20.4 0.0 479.753B II 5.0 6 8.6 13.2 3.1 12.5 53.5 53.5 20.4 0.0 479.753B II 5.0 6 8.6 13.2 3.1 12.5 53.5 53.5 10.6 0.0									15.4	0.1
468.396A IV 44.8 12.3 13.6 3.4 13.9 54.9 14.3 0.1 468.396B IV 45.1 12.1 13.6 3.3 14.1 55.0 14.1 0.0 468.397A IV 47.9 10.2 13.5 2.8 12.5 55.0 16.3 0.0 468.398A IV Seed composition data not available 468.398B IV 47.7 10.5 13.5 2.8 12.9 55.1 15.8 0.1 468.398B IV Seed composition data not available 468.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.399B IV 46.2 9.2 13.1 3.3 11.7 53.8 18.3 0.0 468.399B IV 46.8 10.6 13.7 3.7 13.4 55.2 18.1 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 18.1 0.0 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.908 00 45.1 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.909 0 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.901 0 47.9 11.8 12.7 2.7 14.3 55.5 14.8 0.1 468.901 0 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.911 0 0 47.9 11.8 12.7 2.7 16.5 53.6 14.0 0.1 468.912 0 0 46.8 14.4 12.2 3.2 13.9 2.4 16.9 55.3 11.6 0.1 468.913 0 0 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.913 11 47.8 9.0 14.0 12.8 2.8 16.5 57.2 11.0 0.1 468.918 111 47.8 9.0 14.0 13.9 2.9 12.4 54.9 16.0 0.0 468.917 111 48.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 468.918 111 47.8 9.0 14.0 13.9 2.9 12.4 54.9 16.0 0.0 479.745 I 50.7 9.3 14.5 2.9 14.6 55.7 12.4 0.0 479.746B II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.749 111 49.0 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.749 111 49.0 9.8 13.6 2.2 13.0 14.5 55.5 12.0 0.0 479.749 111 49.0 9.8 12.6 2.8 8.7 13.0 15.8 55.6 12.0 0.0 479.749 111 49.0 9.0 14.5 2.7 11.1 56.1 15.6 0.1 479.753B II 60.6 8.6 13.2 3.0 11.5 55.6 12.4 0.0 479.753B II 60.6 8.6 13.2 3.0 11.5 55.6 12.4 0.0							11.4		16.7	0.2
468.3968 IV 45.1 12.1 13.6 3.3 14.1 55.0 14.1 0.0 468.397A IV 47.7 10.5 13.5 2.8 12.9 55.1 15.8 0.1 468.397B IV 47.7 10.5 13.5 2.8 12.9 55.1 15.8 0.1 468.398B IV Seed composition data not available 468.398B IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.399B IV 48.5 9.2 13.1 3.3 11.7 53.8 18.3 0.0 468.399B IV 46.2 9.2 13.1 3.3 11.7 53.8 18.3 0.0 468.400A IV 46.2 9.2 13.1 3.3 11.2 55.3 16.8 0.1 468.905 O 44.0 12.0 12.6 2.6 15.3 55.4 14.4 0.1 468.906						3.0	12.2	55.3	15.5	0.0
468.397A IV 47.9 10.2 13.5 2.8 12.5 55.0 16.3 0.1 468.397B IV 47.7 10.5 13.5 2.8 12.9 55.1 15.8 0.1 468.398A IV Seed composition data not available 468.398C IV Seed composition data not available 468.398C IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.398B IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.398C IV 46.2 9.2 13.1 3.3 11.7 53.8 18.3 0.0 468.398C IV 46.2 9.2 13.1 3.3 11.2 55.3 16.8 0.0 468.400A IV 46.1 10.1 13.7 3.7 13.4 55.2 14.2 0.1 468.90B 0 45.0 13.4 13.4 13.6 15.3<	468.396A	IV	44.8	12.3	13.6	3.4	13.9	54.9	14.3	0.1
468.3978 IV 47.7 10.5 13.5 2.8 12.9 55.1 15.8 0.1 468.398A IV Seed composition data not available 468.398B IV Seed composition data not available 468.398B IV Seed composition data not available 468.398B IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.399B IV 46.2 9.2 13.1 3.3 11.7 53.8 18.3 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.1 3.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.908 000 45.1 13.9 11.8 3.2 11.9 55.4 16.3 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 55.6 14.8 0.1 468.912 00 46.8 14.4 12.2 3.1 25.7 49.5 10.7 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.914 10 47.9 11.8 12.7 2.7 16.5 55.0 14.8 0.1 468.915 10 47.9 11.8 12.7 2.7 16.5 55.0 14.8 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.6 17.1 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 55.7 21.1 0.0 0.1 468.919 III 47.8 9.0 14.0 2.9 12.4 54.6 17.1 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.746 II 49.7 8.8 12.7 2.7 12.3 54.3 17.9 0.0 479.746 II 49.7 8.8 12.6 2.9 14.6 55.7 12.4 0.0 479.746 II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.747 III 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.748 II 47.3 9.6 13.2 3.1 12.6 2.8 8.7 53.3 22.6 0.0 479.749 III 49.9 9.8 13.0 2.9 12.4 54.9 15.5 53.0 10.0 479.749 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.753A II 50.6 8.8 13.5 12.8 2.8 15.5 53.5 20.4 0.0 479.753B II 50.6 8.8 13.5 12.8 2.8 15.5 55.5 12.4 0.0 479.753B II 50.6 8.8 13.5 12.8 2.8 15.5 55.5 12.4 0.0 479.753B II 50.6 8.8 13.5 13.5 2.0 15.8 55.6 12.4 0.0	468.396B	IV	45.1	12.1	13.6	3.3	14.1	55.0	14.1	0.0
468.398A IV Seed composition data not available 468.398B IV Seed composition data not available 468.398C IV Seed composition data not available 468.399A IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.399C IV 46.2 9.2 13.1 3.3 11.3 54.2 18.1 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.9 16.0 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 468.918 III 47.8 9.0 14.0 3.0 12.4 54.9 16.0 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.746B III 49.9 9.8 13.0 2.9 12.4 54.9 16.0 0.0 479.746B III 49.9 9.8 13.0 2.9 12.4 55.0 15.9 0.0 479.746B III 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.747 III 51.6 8.7 13.6 12.7 2.7 11.1 56.1 15.5 0.0 479.748 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.745 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.746B III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.746B III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.747 III 51.6 8.7 13.6 12.6 2.8 8.7 53.3 2.6 0.0 479.748 III 49.9 9.8 13.0 2.9 10.9 56.4 16.8 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 2.6 0.0 479.751 III 49.9 9.8 13.0 2.9 10.9 56.4 16.8 0.0 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 8.5 13.2 3.2 11.5 56.5 12.4 0.0 479.753B II 50.6 8.5 13.2 3.2 11.5 55.5 12.4 0.0	468.397A	IV	47.9	10.2	13.5	2.8	12.5	55.0	16.3	0.0
468.398B IV Seed composition data not available 468.398C IV Seed composition data not available 468.398A IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.408A IV 46.2 9.2 13.1 3.3 11.3 54.2 18.1 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 00 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.6 17.1 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.745 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.746A II 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.746 II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746 II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746 II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746 II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.746 II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.746 II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746 II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.746 II 49.7 9.8 12.6 2.8 8.7 53.3 12.0 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.753 II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.754 II 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.755 I 49.9 7.5 12.8 2.8 10.5 53.5 12.4 0.0 479.756 I 49.9 7.5 12.8 2.8 10.5 53.5 12.4 0.0	468.397B	IV	47.7	10.5	13.5	2.8	12.9	55.1	15.8	0.1
468.398C IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 486.399A IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 486.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.399C IV 46.2 9.2 13.1 3.3 11.3 54.2 18.1 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 0 45.1 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.909 0 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.91 0 0 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.91 0 0 47.9 11.8 12.7 2.7 14.3 55.5 14.8 0.1 468.91 0 0 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.91 0 0 45.4 13.8 12.7 2.7 16.5 53.6 14.4 0.1 468.91 0 0 45.4 13.2 13.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.91 0 0 45.4 13.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.91 0 0 45.4 13.2 13.9 2.9 12.4 54.9 15.0 0.1 468.91 1 47.8 9.0 14.0 3.0 12.4 54.9 15.0 0.0 468.91 1 47.8 9.0 14.0 3.0 12.4 54.9 15.0 0.0 468.91 1 47.8 9.0 14.0 3.0 12.4 54.9 15.0 0.0 468.91 1 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.91 1 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.91 1 47.8 9.0 14.0 3.0 12.4 54.9 15.0 0.0 468.91 1 47.8 9.0 14.0 3.0 12.4 54.9 15.0 0.0 479.746 II 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746 II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.746 II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.746 II 50.7 9.8 12.6 2.8 8.7 53.3 12.2 53.3 16.7 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.753 II 50.6 8.5 13.2 3.2 3.1 14.5 53.5 50.5 12.4 0.0 479.753 II 50.6 8.5 13.2 3.2 3.2 11.7 54.3 16.8	468.398A	IV	Seed com	position	data not	available				
468.399A IV 48.1 9.3 14.0 2.9 11.0 54.7 17.4 0.0 468.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.400A IV 46.8 10.6 13.7 3.0 11.2 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.909 0 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 0 46.6 13.6 11.2 3.1	468.398B	IV	Seed com	position	data not	available				
468.399B IV 45.5 10.1 13.1 3.3 11.7 53.8 18.3 0.0 468.399C IV 46.2 9.2 13.1 3.3 11.3 54.2 18.1 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.910 0 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.7 468.911 0 47.4	468.398C	IV	Seed com	position	data not	available				
468.399C IV 46.2 9.2 13.1 3.3 11.3 54.2 18.1 0.0 468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 0 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 0 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 0 47.9	468.399A	IV	48.1	9.3	14.0	2.9	11.0	54.7	17.4	0.0
468.400A IV 46.8 10.6 13.7 3.7 13.4 55.2 14.2 0.1 468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.913 0 45.4	468.399B	IV	45.5	10.1	13.1	3.3	11.7	53.8	18.3	0.0
468.400B IV 49.1 10.1 13.7 3.0 11.2 55.3 16.8 0.1 468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.912 0 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 11 47.8	468.399C	IV	46.2	9.2	13.1	3.3	11.3	54.2	18.1	0.0
468.904 00 48.0 12.0 12.6 2.6 15.3 55.1 14.4 0.1 468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 46.8 14.4 12.2 3.2 16.5 55.6 11.0 0.1 468.913 0 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 479.745 I 49.4	468.400A	IV	46.8	10.6	13.7	3.7	13.4	55.2	14.2	0.1
468.905 0 44.3 12.7 13.6 2.9 14.3 55.8 13.4 0.1 468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 111 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.919 111 46.8	468.400B	IV	49.1	10.1	13.7	3.0	11.2	55.3	16.8	0.1
468.906 0 45.0 13.4 13.4 2.8 16.7 54.7 12.5 0.1 468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.9 16.0 0.0 468.917 III 49.4 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 47.2	468.904	00	48.0	12.0	12.6	2.6	15.3	55.1	14.4	0.1
468.907 I 46.6 13.9 13.1 3.2 11.9 55.4 16.3 0.1 468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 IIII 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 IIII 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 479.744 I 49.1	468.905	0	44.3	12.7	13.6	2.9	14.3	55.8	13.4	0.1
468.908 000 45.1 13.9 11.8 3.1 15.5 56.7 13.0 0.1 468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.918 IIII 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7	468.906	0	45.0	13.4	13.4	2.8	16.7	54.7	12.5	0.1
468.909 00 47.4 12.1 12.7 2.7 14.3 55.5 14.8 0.1 468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745b I 50.7	468.907	I	46.6	13.9	13.1	3.2	11.9	55.4	16.3	0.1
468.910 00 46.0 13.6 11.2 3.1 25.7 49.5 10.7 0.1 468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.7456 I 50.7	468.908	000	45.1	13.9	11.8	3.1	15.5	56.7	13.0	0.1
468.911 00 47.9 11.8 12.7 2.7 16.5 53.6 14.4 0.1 468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746B II 49.7	468.909	00	47.4	12.1	12.7	2.7	14.3	55.5	14.8	0.1
468.912 00 46.8 14.4 12.2 3.2 16.5 57.2 11.0 0.1 468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7	468.910	00	46.0	13.6	11.2	3.1	25.7	49.5	10.7	0.1
468.913 00 45.4 13.2 13.9 2.4 16.9 55.3 11.6 0.1 468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.7468 II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.749 III 49.9	468.911	00	47.9	11.8	12.7	2.7	16.5	53.6	14.4	0.1
468.916 III 47.8 9.0 14.0 3.0 12.4 54.6 17.1 0.0 468.917 III 49.4 10.0 13.9 2.9 12.4 54.9 16.0 0.0 468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.749 III 49.9	468.912	00	46.8	14.4	12.2	3.2	16.5	57.2	11.0	0.1
468.917	468.913	00	45.4	13.2	13.9	2.4	16.9	55.3	11.6	0.1
468.918 III 47.2 10.0 12.8 2.8 15.9 53.1 15.4 0.1 468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.9 <	468.916	III	47.8	9.0	14.0	3.0	12.4	54.6	17.1	0.0
468.919 III 46.8 13.5 14.6 2.9 14.6 55.7 12.4 0.0 479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.752 I 49.9	468.917	III	49.4	10.0	13.9	2.9	12.4	54.9	16.0	0.0
479.744 I 49.1 8.6 12.7 2.7 12.3 54.3 17.9 0.0 479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753B II 50.6 <td< td=""><td>468.918</td><td>III</td><td>47.2</td><td>10.0</td><td>12.8</td><td>2.8</td><td>15.9</td><td>53.1</td><td>15.4</td><td>0.1</td></td<>	468.918	III	47.2	10.0	12.8	2.8	15.9	53.1	15.4	0.1
479.745 I 50.7 10.6 12.6 3.1 8.9 56.2 19.1 0.0 479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753B II 50.6 <td< td=""><td></td><td></td><td></td><td></td><td>14.6</td><td>2.9</td><td>14.6</td><td>55.7</td><td>12.4</td><td>0.0</td></td<>					14.6	2.9	14.6	55.7	12.4	0.0
479.746A II 49.7 8.8 12.7 3.3 14.5 53.6 15.9 0.0 479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.768 0 49.5 <td< td=""><td></td><td></td><td>49.1</td><td>8.6</td><td>12.7</td><td>2.7</td><td>12.3</td><td>54.3</td><td>17.9</td><td>0.0</td></td<>			49.1	8.6	12.7	2.7	12.3	54.3	17.9	0.0
479.746B II 50.7 9.3 14.5 3.3 12.2 53.3 16.7 0.0 479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.768 0 49.5 <td< td=""><td>479.745</td><td>I</td><td>50.7</td><td>10.6</td><td>12.6</td><td>3.1</td><td>8.9</td><td>56.2</td><td>19.1</td><td>0.0</td></td<>	479.745	I	50.7	10.6	12.6	3.1	8.9	56.2	19.1	0.0
479.747 III 51.6 8.7 13.6 3.1 11.8 53.7 17.8 0.0 479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9					12.7	3.3	14.5	53.6	15.9	0.0
479.748 II 47.3 9.6 13.2 3.1 14.2 52.0 17.5 0.0 479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1			50.7	9.3	14.5	3.3	12.2	53.3	16.7	0.0
479.749 III 49.9 9.8 13.0 2.9 10.9 56.4 16.9 0.0 479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.747		51.6		13.6	3.1	11.8	53.7	17.8	0.0
479.750 I 47.7 9.8 12.6 2.8 8.7 53.3 22.6 0.0 479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.748	II	47.3	9.6	13.2	3.1	14.2	52.0	17.5	0.0
479.751 III 49.0 9.0 14.5 2.7 11.1 56.1 15.5 0.1 479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.749	III	49.9	9.8	13.0	2.9	10.9	56.4	16.9	0.0
479.752 I 49.9 7.5 12.8 2.8 10.5 53.5 20.4 0.0 479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.750	I	47.7	9.8	12.6	2.8	8.7	53.3	22.6	0.0
479.753A II 50.6 9.8 13.5 3.1 12.4 54.3 16.8 0.0 479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1			49.0	9.0	14.5	2.7	11.1	56.1	15.5	0.1
479.753B II 50.6 8.5 13.2 3.2 11.7 54.5 17.3 0.0 479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.752	I	49.9	7.5	12.8	2.8	10.5	53.5	20.4	0.0
479.767 I 50.6 8.6 13.2 3.0 15.8 55.6 12.4 0.0 479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.753A	II	50.6	9.8	13.5	3.1	12.4	54.3	16.8	0.0
479.768 0 49.5 9.7 12.8 3.2 9.9 55.3 18.7 0.1	479.753B	II	50.6	8.5	13.2	3.2	11.7	54.5	17.3	0.0
	479.767	I	50.6	8.6	13.2	3.0	15.8	55.6	12.4	0.0
479.769 0 47.8 7.2 13.4 3.0 10.6 55.1 17.9 0.0	479.768	0	49.5	9.7	12.8	3.2	9.9	55.3	18.7	0.1
	479.769	0	47.8	7.2	13.4	3.0	10.6	55.1	17.9	0.0

Table 1
Identification and origin information for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

PI No.	Accession name	Foreign or collector	Country of acquisition	Country of origin	Year introduced	Matur- ity group
483.071A			China	China	1983	IV
483.071B			China	China	1983	IV
483.459			China	China	1984	I
483.460A			China	China	1984	III
483.460B			China	China	1984	III
483.460C			China	China	1984	IV
483.461			China	China	1984	II
483.462A			China	China	1984	IV
483.462B			China	China	1984	IV
483.463			China	China	1984	III
483.464A			China	China	1984	III
483.464B			China	China	1984	III

Table 2 Descriptive data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur- ity	Flower	Pubes	Pubescence			Seed co	at	_ Hilum	Seed	Other '	traits	
Entry	group		Color	Form	Density	color	Luster	Color	color	shape	Seed	Leaf	Plant
483.071A	IV	P	T	Sa	N	B1	В	B1	B1	Ob			
483.071B	IV	P	T	Sa	N	B1	В	B1	B1	Ob	Fleck		
483.459	I	P	T	Sa	Sp	Br	I	B1	B1	Ov	Fleck		Sw
483.460A	III	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
483.460B	III	P	T	Α	N	B1	В	B1	B1	Nr	Fleck		
483.460C	IV	P	T	Α	N	B1	В	Bl	B1	Ov	Fleck		
483.461	II	P	T	Α	N	B1	В	B1	B1	Ov	Fleck		
483.462A	IV	P	T	Α	N	Bl	В	Bl	B1	Ov			
483.462B	IV	P	T	Α	N	B1	В	B1	B1	Ob			
483.463	III	P	T	Va	N	B1	Db	B1	B1	Ov	Fleck		
483.464A	III	P	T	Va	N	B1	В	B1	B1	Ob	Fleck		
483.464B	III	P	T	Va	N	B1	В	B1	B1	Ob	Fleck		

Table 3
Agronomic data for USDA wild soybean germplasm in maturity groups
000 to IV, PI 65.549 to PI 483.464

Entry	Twining date (mmdd)	Flower date (mmdd)	Maturity date (mmdd)	Height (cm)	Leaflet lower (mm)	length upper (mm)	Leaflet lower	shape	Pod length (mm)	Seed weight (cg/sd)	SMV (score)
483.071A	629	813	1006	76	32	28	0.38	0.29	23	1.3	3
483.071B	629	813	1006	76	32	28	0.38	0.29	23	1.3	3
483.459	623	713	903	58	51	47	0.71	0.47	33	5.9	2
483.460A	618	806	925	103	56	40	0.34	0.28	26	1.3	3
483.460B	618	806	925	103	56	40	0.34	0.28	26	1.0	2
483.460C	618	806	925	103	56	40	0.34	0.28	26	1.3	2
483.461	629	716	905	48	27	23	0.67	0.30	22	1.2	4
483.462A	622	808	927	72	54	37	0.35	0.30	24	1.6	3
483.462B	622	808	927	72	54	37	0.35	0.30	24	1.9	4
483.463	704	803	922	59	31	26	0.39	0.27	20	1.2	4
483.464A	627	725	1002	48	28	26	0.43	0.35	21	1.6	4
483.464B	627	725	1002	48	28	26	0.43	0.35	21	2.0	5

Table 4 Seed composition data for USDA wild soybean germplasm in maturity groups 000 to IV, PI 65.549 to PI 483.464

	Matur-			Pal-			Lino-	Lino-	
	ity	Protein	Oil	mitic	Stearic	Oleic	leic	lenic	Other
Entry	group	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
483.071A	IV	44.2	12.0	12.9	2.8	14.0	55.5	14.8	0.0
483.071B	IV	42.1	13.3	12.8	3.7	14.9	54.6	13.9	0.1
483.459	I	44.7	14.2	14.6	2.8	9.0	54.8	18.7	0.0
483.460A	III	47.6	10.4	13.1	3.1	11.8	55.8	16.1	0.0
483.460B	III	47.7	7.8	13.5	2.9	10.1	52.5	21.0	0.0
483.460C	IV	47.0	10.6	12.7	3.2	12.7	55.2	16.3	0.0
483.461	II	49.5	9.0	12.5	2.9	12.1	55.0	17.5	0.0
483.462A	IV	44.6	11.8	13.3	3.4	14.8	53.2	15.3	0.1
483.462B	IV	46.6	10.8	13.4	3.4	14.3	53.7	15.2	0.0
483.463	III	46.1	10.5	12.6	2.9	12.2	56.1	16.1	0.0
483.464A	III	47.3	11.6	14.8	3.2	15.5	53.4	13.0	0.0
483.464B	III	48.5	11.0	15.1	3.8	18.3	50.9	11.8	0.0