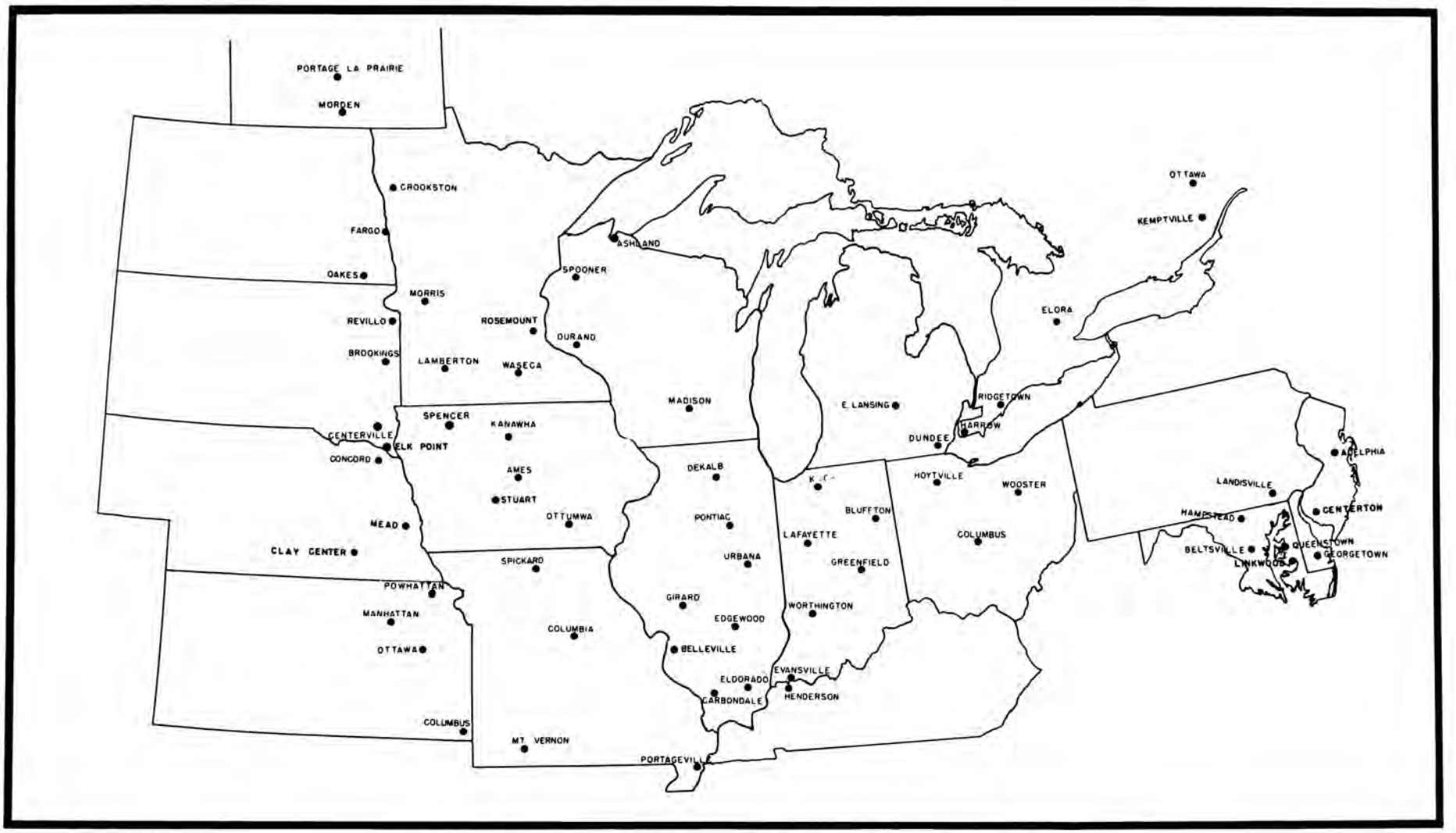

LOCATIONS OF UNIFORM SOYBEAN TESTS, NORTHERN STATES, 1973

THE UNIFORM SOYBEAN TESTS

NORTHERN STATES

1973

RSLM 252

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The U. S. Regional Soybean Laboratory conducts research directed toward breeding better varieties of soybeans in cooperation with federal and state research personnel in all important soybean producing states and with research workers in two provinces in Canada. The purpose of the Uniform Soybean Tests is to evaluate critically the best of the experimental soybean lines developed by these researchers.

A test is established for each of ten maturity groups. Uniform Test 00 includes maturity Group 00 strains for the northern fringe of the present area of soybean production. Uniform Tests 0 through IV include later strains adapted to locations progressively farther south in the North Central States and areas of similar latitude. Each year new selections are added and others that have been sufficiently tested are dropped. The summary of performance of strains in Uniform Tests 00 through IV in the northern states is included in this report. The report on Uniform Tests IVS through VIII in the southern states is issued separately.

Data from the Uniform Tests form the basis for decisions on the regional release of soybean varieties. Preliminary Tests are grown at a limited number of locations throughout the region to screen the experimental strains for maturity and general agronomic performance for one year before they are entered in the Uniform Tests.

Unreleased strains in this report are not available for general distribution. For further information on them contact the originating agencies listed on page 9.

The following strains have been recently released or have been increased for possible release:

Group 0: M61-96
Group I: M63-217Bf, OX643
Group II: C1470 released as Wells in 1972 August, M63-194
Group III: SL11, L66L-172, L67U-1842 (in 1972 Uniform Test III)
Group IV: K1003, K1004, K1007, L66-1359

STRAIN DESIGNATION

Experimental (i.e., unreleased) strains are identified by a number with a code letter prefix. The code letters have been agreed upon in meetings of experiment station agronomists cooperating with the U. S. Regional Soybean Laboratory. They indicate the location of the originating agencies as follows:

A	Iowa A.E.S.
Ar	Arizona A.E.S.
Au	Alabama A.E.S.
B	California A.E.S.
C	Purdue (Indiana) A.E.S.
CM	Canada Dept. of Agriculture, Morden, Manitoba
D	Mississippi A.E.S.
E	Michigan A.E.S.
F	Florida A.E.S.
FC	Forage and Range Research Branch, U.S.D.A.
Ga	Georgia A.E.S.
H	Ohio A.R.D.C.
K	Kansas A.E.S.
L	Illinois A.E.S.
La	Louisiana A.E.S.
M	Minnesota A.E.S.
Md	Maryland A.E.S.
Me	Maine A.E.S.
N	North Carolina A.E.S.
ND	North Dakota A.E.S.
O	Central Experiment Farm, Ottawa, Ontario
O	Research Station, Harrow, Ontario
OAC	University of Guelph, Guelph, Ontario
Ok	Oklahoma A.E.S.
PI	Plant Introduction, Germplasm Resources Laboratory, U.S.D.A., Beltsville, MD.
R	Arkansas A.E.S.
S	Missouri A.E.S.
SC	South Carolina A.E.S.
SD	South Dakota A.E.S.
SL	Two or more states cooperatively
TS	Texas A.E.S.
T	Soybean Genetic Type Collection, U.S.R.S.L.
U	Nebraska A.E.S.
UD	Delaware A.E.S.
UM	University of Manitoba, Winnipeg, Manitoba
UT	Tennessee A.E.S.
V	Virginia A.E.S.
W	Wisconsin A.E.S.

Uniform Tests are usually planted in four-row plots with three replications or three-row plots with four replications and the center one or two rows are harvested. Preliminary Tests are usually planted in three-row plots (the center row harvested) with two replications. More rows are desirable where unusually narrow (under 30 inch) row spacing is used. Usually 18 to 20 feet of row are planted and 16 feet harvested, to eliminate end-of-row effects. Seeds are packeted at approximately 180 viable seeds per packet for each row.

Parentage. Parent strains other than named varieties are identified on page 12.

Generation Composited is the generation after the final single-plant selection.

Previous Testing. The number of previous years in the same Uniform Test is given, or, in the case of new entries, a reference to last year's test abbreviated UT 0 for Uniform Test 0, PT III for Preliminary Test III, etc.

Yield is measured after the seeds have been dried to a uniform moisture content and is recorded in bushels (60 pounds) per acre. [To convert to kilograms per are (or quintals per hectare) multiply by .6725; 1 kg/are = 1.487 bu/acre.]

Maturity is the date when 95% of the pods have ripened. Delayed leaf drop and green stems are not considered in assigning maturity. Maturity is expressed as days earlier (-) or later (+) than the average date of the reference variety. To aid in maturity group classification, one earlier and one later "tie" variety are given on the maturity table for each test. Current reference and tie varieties and the maturity group limits relative to the reference varieties are:

Group	Reference	Range	Early Tie	Late Tie
00	Portage	-2 to +6		Clay (0)
0	Swift	-5 to +3	Altona (00)	Steele (I)
I	Steele	-3 to +5	Merit (0)	Corsoy (II)
II	Corsoy	-3 to +5	Hark (I)	Wayne (III)
III	Wayne	-4 to +4	Beeson (II)	Cutler 71 (IV)
IV	Cutler 71	-4 to +7	Williams (III)	Hill (V)

These maturity group ranges are based on long-time means over many locations. When using data from other environments, the interval between reference varieties may vary, and the division between maturity groups should be estimated in proportion to the above figures.

Lodging is rated at maturity according to the following scores:

1 Almost all plants erect
2 All plants leaning slightly or a few plants down
3 All plants leaning moderately (45°), or 25% to 50% of the plants down
4 All plants leaning considerably, or 50% to 80% of the plants down
5 Almost all plants down

Height is the average length in inches of plants from the ground to the tip of the main stem at the time of maturity. [To convert to centimeters, multiply by 2.54.]

Seed Quality is rated according to the following scores considering the amount and degree of wrinkling, defective seed coat (growth cracks), greenishness, and moldy or rotten seeds. (Threshing or handling damage is not considered, nor is mottling or other pigment.)

1 Very good 2 Good 3 Fair 4 Poor 5 Very poor

Seed Size (i.e. weight per seed) in grams per 100 is based on a 100 or 200-seed sample. [To convert to seeds per pound divide this into 45,359.2].

Seed Composition is measured on samples submitted to the Laboratory. A 60 to 70-gram sample of clean seeds is prepared by taking an equal volume or weight of seeds from each replication. Protein percentage is measured using the Kjeldahl method, and oil percentage is measured using nuclear magnetic resonance. These percentages are expressed on a moisture-free basis.

Descriptive Code: 1234 567, abbreviated as underlined below:

1 = Flower Color: Purple, White
2 = Pubescence Color: Tawny, Gray, Light tawny
3 = Pubescence Type: Normal, Appressed, Semi-appressed
4 = Pod Color: Brown, Tan
5 = Seed Coat Luster: Dull, Shiny, Intermediate
6 = Seed Coat Color: Yellow, Gray, Light gray, Green
7 = Hilum Color: Black, Imperfect black, Brown, Buff, Gray, Tan, Yellow; prefixes indicate Light or Dark shades, e.g., Lbf = light buff, Dib = dark imperfect black.

Peroxidase Activity: H = high, L = low activity in seed coat.

Fluorescent Light Response: E = early flowering (about 35 days), L = late flowering (about 70 days) under 20-hour cool white fluorescent photoperiod.

Shattering is scored at a specified time after maturity and is based on estimates of the percent of open pods as follows:

1 No shattering 3 10% to 25% shattered 5 Over 50% shattered
2 1% to 10% shattered 4 25% to 50% shattered

Iron Chlorosis is rated from 1, no chlorosis, to 5, severe chlorosis.

Hypocotyl elongation was measured at Ames, Iowa, on germination at 25° C (a critical temperature for differentiating strains).

Germination tests on 1972 seeds from several Illinois locations were made for carryover strains of Uniform Tests I to IV. The seeds were planted in the field at Urbana in May and counted at emergence. Two reps of 100 seeds each were used.

Disease reactions are listed according to "Soybean Classification Standards", March 1955, unless otherwise specified. Disease reaction is scored from 1 (healthy) to 5 (heavily infected) or in some cases as percent infected or simply as + (present) or o (absent). The location where the test was made is identified in the column heading, and the letter "a" or "n" signifies artificial or natural infection. Clearcut and consistent reactions are given by letter instead of number: R = resistant, S = susceptible, I = intermediate, and H = heterogeneous. Natural infection ratings are from agronomic tests in some instances and from special disease plantings in others. Absence of symptoms under natural infection does not necessarily mean high resistance.

Abbreviation	Disease	Pathogen
BB	Bacterial blight	Pseudomonas glycinea
BBV	Bud blight	Tobacco ringspot virus
BP	Bacterial pustule	Xanthomonas phaseoli var. sojensis
BS	Brown spot	Septoria glycines
BSR	Brown stem rot	Cephalosporium gregatum
CN	Cyst nematode	Heterodera glycines
CR	Charcoal rot	Macrophomina phaseoli
DM	Downy mildew	Peronospora manshurica
FE_1, FE_2	Frogeye race 1, 2	Cercospora sojina
PM	Powdery mildew	Microsphaera diffusa
PR	Phytophthora rot	Phytophthora sojae
PS	Purple stain	Cercospora kikuchii
PSB	Pod and stem blight	Diaporthe phaseolorum var. sojae
Pyd	Pythium root rot	Pythium debaryanum
Pyu	Pythium root rot	Pythium ultimum
RK	Root knot nematode	Meloidogyne spp.
RR	Rhizoctonia root rot	Rhizoctonia solani
SB	Sclerotial blight	Sclerotium rolfsii
SC	Stem canker	Diaporthe phaseolorum var caulivora
SMV	Soybean mosaic	Soja virus 1
TS	Target spot	Corynespora cassiicola
WF	Wildfire	Pseudomonas tabaci
YMV	Yellow mosaic	Phaseolus virus 2

Ratings for BB, BP, BS, DM, FE_2, PM, and SMV were based on leaf symptoms; those for PS on the amount of seed stain; those for BSR on percent of plants with stem browning, or percent of stem length browned, and those for PR on seedling rotting and/or stunting; and those for PSB are the percentage of infected seeds.

Location*		Tests Conducted by	Uniform Tests						Preliminary Tests				
			00	0	I	II	III	IV	0	I	II	III	IV
Pa.	Landisville	R. H. Cole				x	x	x					
N. J.	Hopewell	J. R. Justin				o							
	Adelphia	"					x						
	Centerton	"						x					
Del.	Georgetown I	E. L. Wisk						x					x
Md.	Hampstead	J. A. Schillinger				x	x						
	Beltsville	R. C. Leffel				x	x	x			x	x	x
	Queenstown B	J. A. Schillinger					x	x					
	Queenstown	R. C. Leffel &						x					
	Linkwood	V. L. Miller						x					x
Ont.	Ottawa	L. S. Donovan	x										
	Kemptville	C. Moore	x										
	Elora	J. W. Tanner	x	x					x				
	Ridgetown	D. A. Littlejohns		x	x	x			x	x			
	Harrow	L. J. Anderson			x	x					x		
Ohio	Hoytville	P. E. Smith			x	x	x			x	x		
	Wooster	"			x	x	x						
	Columbus	"			x	x	x	x				x	x
Mich.	Traverse City	T. J. Johnston		o									
	E. Lansing	"			o	o							
	Dundee	"			x	x				x			
Ind.	Knox	J. R. Wilcox &			o	o							
	Bluffton	R. J. Martin				x	x				x		
	Lafayette	"			x	x	x	x			x	x	
	Greenfield	"				x	x						
	Worthington	"				x	x	x				x	x
	Evansville	"					x	x					x
Ky.	Henderson	D. B. Egli					x	x					
Wis.	Ashland	G. H. Tenpas	o										
	Spooner	C. O. Rydberg		x					x				
	Durand	J. H. Torrie		o	o								
	Madison	"			o	o				o	o		
Ill.	Dekalb	R. L. Cooper			x	x				x			
	Pontiac	"			x	x					x		
	Urbana	R. L. Bernard				x	x				x		
	Girard	"				x	x					x	
	Edgewood	"				x	x	x					
	Belleville	"					x	x					
	Eldorado	"					x	x					x
	Carbondale	D. R. Browning					x	x					x
Minn.	Crookston	J. W. Lambert	x										
	Morris	"	x	x					x				
	Rosemount	"	x	x					x				
	Lamberton	"			x	x				x			
	Waseca	"			x	x				x			
Iowa	Spencer	R. C. Clark			x					x			
	Kanawha	"			x	x				x	x		

Location*		Tests Conducted by	Uniform Tests 00	0	I	II	III	IV	Preliminary Tests 0	I	II	III	IV
Iowa	Ames	R. C. Clark				x					x		
	Stuart	"					x	x				x	x
	Ottumwa	"					x	x				x	x
Mo.	Spickard	V. D. Luedders				x	x						
	Columbia	"				x	x	x			x	x	x
	Mt. Vernon	"					x	x					
Man.	Portage la Prairie	J. E. Giesbrecht	x										
	Morden	"	x										
N. D.	Fargo	D. A. Whited	x	x					x				
	Oakes I	"			o								
S. D.	Revillo	A. O. Lunden		x	x				x				
	Brookings	"			x	x				x			
	Centerville	"				x					x		
	Elk Point	"					x						
Neb.	Concord	R. S Moomaw				x							
	Mead I	J. H. Williams			x	x	x	x		x	x	x	
	Clay Center I	G. M. Dornhoff				x	x						
Kansas	Powhattan	C. D. Nickell					x	x					
	Manhattan I	"					x	x				x	x
	Ottawa	"					x	x					
	Columbus	L. J. Meyer					x	x					
Tex.	Lubbock I	R. D. Brigham						x					
No. of locations with agronomic data (x,x)			9	7	16	29	32	26	7	10	12	10	12
No. with seed composition data (x)			6	6	9	13	15	13	5	4	5	6	7

1972 Disease and Shattering Tests

				U.T.	P.T.
Ont.	Harrow	PM, Peroxidase, Fluorescent Light	R.I. Buzzell	00-IV	---
Ind.	Lafayette	CR, FE_2, PR, Pyu, BSR	F.A. Laviolette & K.L. Athow	00-IV	0-IV
	Worthington	DM		00-IV	0-IV
Ill.	Urbana	BP	D.W. Chamberlain	I-IV	I-IV
	"	BSR	"	III-IV	II-IV
	"	Shattering	C.R. Cremeens	00-I	0
Minn.	St. Paul	BSR	J.W. Lambert	00-IV	---
	Crookston	Chlorosis	"	00-IV	---
	Lamberton	"	"	00-IV	---
Iowa	Ames	BSR, PR	H. Tachibana & L.C. Card	00-IV	0-IV
	"	BB, BP, BS	J. M. Dunleavy	00-IV	---
	"	Chlorosis	W.R. Fehr	00-IV	0-IV
	"	Hypocotyl	"	00-IV	---
Miss.	Stoneville	PR, Shattering	E.E. Hartwig	II-IV	II-IV
Kansas	Manhattan	Shattering	C.D. Nickell	00-III	0-III
Tex.	Lubbock	Shattering	R.D. Brigham	III-IV	---

* B = after Barley, I = irrigated

Strain	Parentage or Source	Uniform Testing
Clark 63-I r (L12)	Clark 63 BC with I from Richland and r from T145	65-66 IV
Kent-Rps rxp (SL5)	Kent BC with resistance to PR from Mukden and to BP from CNS	65 IV
Wayne-I r Rps	Wayne BC with PR resistance and yellow hilum from Clark 63-I r	(69 P III)
Wayne-Rps (L15)	Wayne^{6} x Clark 63	67-68 III
II-54-139	Renville x Capital	----
II-54-240	(Lincoln^{2} x Richland) x Korean	----
C1070	Lincoln x Ogden; same F_3 plant as Kent	53 P IV
C1079	Lincoln x Ogden; same F_3 plant as Kent	54-56 IV
C1128	Wabash x Hawkeye	54-58 II, 58 & 62 III
C1223	C1070 x Adams; same F_2 plant as Adelphia	60-61 III
C1253	Blackhawk x Harosoy. PR resistant	64 P II
C1264	Harosoy x C1079	62-63 II
C1265	"	62-63 II
C1266	"	62-63 IV
C1317-71	C1223^{8} x Mukden	64 III
C1421	Adelphia^{8} x Mukden	66 III
C1426	C1253 x Kent	67-69 II
C1430	"	67 II
C1432	"	67 III
C1436	"	----
D49-2491	S100 x CNS. Sib of Lee	52-53 VI
D64-3077	D49-2491^{5} x Hawkeye	66 P IV S
D64-3146	"	66,67 IV S
L4	C1128 BC with resistance to PR from Monroe and to pustule from CNS	62 III
L49-4091	(F_3 Lincoln^{2} x Richland) x (F_1 Lincoln x CNS)	51 IV,52-53 III
L57-0034	Clark x Adams	60-62 IV
L61-1112	Clark^{3} x T117 ($\underline{Dt_2}$)	64-65 III
L62-361	Semi-det. ($\underline{Dt_2}$) from Harosoy^{6} x T117	64 P II
L62-1251	Semi-det. ($\underline{Dt_2}$) from Clark^{6} x T117	65 IV
L62-1926	Clark-$\underline{e_2}$ (early) from Clark^{6} x T245	----
L62-1932	Clark-$\underline{e_2}$ (early) from Clark^{6} x T245	65 II
L63-1212	Harosoy-ln (narrow leaf) from Harosoy^{6} x T204	----
L65-1324	Wayne^{2} x Clark-$\underline{e_2}$ (L62-1926)	68 P II
L66-531	Clark-$\underline{dt_1}\underline{E_1}\underline{t}$ $\underline{e_2}$ from $\underline{dt_1}\underline{e_2}$(Clark^{6} x T245 x $\underline{E_1}\underline{t}$ (Clark^{6} x T175)	

M10	Lincoln^{2} x Richland	49-51 I
M372	M10 x PI 180.501	61 I
M384	Capital x Renville	63-66 OO
M387	Renville x Capital	63 OO, 64 O
M406	Harosoy x Norchief	64-65 O
M433	Acme x Chippewa	64 O, 65 OO
O-52-903	Strain 753-1 from Sven A. Holmberg, Norrkoping, Sweden, same as PI 194.654 from Pagoda-2 x Fiskeby III	60-61 OO
OX383	Corsoy x Harosoy 63	70 P II
PI 68.708	From Yaomyn, Manchuria, China, in 1925	----
PI 132.207	No. D14 from Dr. L. Koch, Zeist, Netherlands in 1939	----
PI 180.501	Strain No. 18 from Frankfurt, Germany, in 1949; from a Manchurian strain x PI 54.616	----
R64-500	Hill^{6} x Arksoy	66-67 V
Kizaya-1	From Japan to Iowa State University	----

Strain	Parentage	Previous Testing*	Line
1. Altona	0-52-903(Holmberg 753-1) x Flambeau	9	F_5
2. Norman	Acme x Hardome	8	F_5
3. Portage	Acme x Comet	13	F_5
4. CM119	Acme x Blackhawk	2	F_5
5. CM145	"	1	F_7
6. M62-173	M387(Renville x Capital) x M406(Harosoy x Norchief)	1	F_5
7. M64-105	Chippewa 64 x M433(Acme x Chippewa)	1	F_5
8. M65-217	M433(Acme x Chippewa) x Hark	-	F_5

* Number of years in this test.

The 3-year means show CM119 to be only slightly earlier than Altona in maturity but almost 2 bushels lower in yield. It is otherwise similar in growth and seed characteristics. Three of the strains have been in the test for 2 years. Of these only M62-173 showed a yield superior to the check varieties. However it is quite late for this maturity group and should probably be considered to belong to Group 0. The one new entry in 1973, M65-217, had excellent seed yield for its maturity along with superior seed quality and lodging resistance.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
				1973					
No. of Tests	8	8	8	7	8	8	8	6	6
Altona	39.4	3	+6.9	2.5	28	2.9	20.2	41.7	20.9
Norman	37.3	4	+3.8	2.5	27	2.4	18.4	41.3	20.8
Portage	34.5	8	9-3.6†	1.4	26	2.6	19.5	40.6	21.5
CM119	34.7	7	+6.9	2.1	29	2.9	20.7	41.3	21.0
CM145	35.0	6	+1.9	1.9	25	2.9	20.2	40.4	21.1
M62-173	43.8	1	+9.4	2.2	29	2.2	16.1	39.2	22.0
M64-105	37.1	5	+6.1	1.9	30	2.3	17.8	41.8	20.8
M65-217	41.8	2	+4.4	1.7	28	2.0	16.6	40.4	20.9

† 109 days after planting

				1972-73, 2-year mean					
No. of Tests	17	17	17	14	15	17	17	11	11
Altona	37.9	2	+6.4	2.7	29	2.5	19.6	41.0	20.6
Norman	36.0	3	+2.8	2.7	29	2.3	17.9	40.8	20.6
Portage	34.2	7	9-9.3†	1.4	27	2.5	18.8	39.9	21.2
CM119	35.2	6	+6.3	2.5	30	2.8	20.4	40.6	20.6
CM145	35.3	5	+2.1	2.2	26	2.8	19.9	39.4	21.1
M62-173	41.8	1	+9.8	2.5	30	2.4	15.6	38.5	21.6
M64-105	35.9	4	+5.6	1.9	31	2.1	17.2	41.0	20.7

† 111 days after planting

				1971-73, 3-year mean					
No. of Tests	27	27	25	24	25	26	25	17	17
Altona	35.5	1	+6.9	2.6	29	2.5	19.4	41.5	20.2
Norman	33.9	2	+3.2	2.4	28	2.3	17.5	41.1	20.1
Portage	32.0	4	9-9.2†	1.4	27	2.6	18.3	40.2	20.6
CM119	33.8	3	+5.6	2.4	30	2.8	19.6	40.7	20.3

† 112 days after planting

				1965-73, 9-year mean					
No. of Tests	82	82	75	66	78	75	71	49	49
Altona	31.6	1	+5.0	2.5	29	2.5	18.6	40.6	20.1
Norman	30.6	2	+2.8	2.3	29	2.1	17.2	40.2	20.1
Portage	29.3	3	9-12†	1.5	27	2.3	18.1	39.5	20.3

†113 days after planting

Disease Data

Strain	BB	BP		BS	DM	FE_2	PM	BSR				CR	PR		Pyu
	Ames Iowa	Ames Iowa		Ames Iowa	Worth. Ind.	Laf. Ind.	Har. Ont.	Laf. Ind.	Lamb. Minn.	Ames Iowa		Laf. Ind.	Laf. Ind.	Ames Iowa	Laf. Ind.
	n	n	a	n	n	a	a	n %	n %	n % stem	% plants	n %	a	a	a
Altona	1	4	4	4	1	3	R	0	70	23	60	100	R	R	S
Norman	4	4	4	3	1	4	S	0	75	45	10	77	S	S	S
Portage	5	5	4	3	1	5	S	0	95	37	80	100	S	S	S
CM119	3	5	4	3	2	5	R	0	95	32	90	82	R	R	S
CM145	3	5	4	4	3	4	R	14	95	35	80	100	R	R	H
M62-173	1	4	4	2	1	5	R	7	90	42	50	100	S	S	S
M64-105	3	4	3	3	2	5	R	15	85	29	40	100	R	R	S
M65-217	5	4	4	4	2	4	S	0	85	17	40	100	S	H	S

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis			Fluor-escent Light	Hypo-cotyl	Perox-idase	Urbana Ill.	Manhattan Kansas
		Crkstn. Minn.	Lamb. Minn.	Ames Iowa					
Altona	PTNBr SYB1	2.5	4.3	5	E	1	H	2.0	1.5
Norman	PGNBr SYY	1.5	2.3	4	E	1	H	1.0	1.2
Portage	PGNBr D+SYY	2.0	3.0	5	E	1	H	4.5	4.5
CM119	PGNBr D+SYG	2.2	4.7	5	E	1	H	4.0	3.0
CM145	PGNBr DYY	4.0	4.0	4	E	2	H	5.0	5.0
M62-173	PGNBr DYY	2.0	1.7	5	L	1	L	1.0	1.0
M64-105	PTNBr SYBr	1.0	3.3	5	E	2	L	1.5	1.0
M65-217	PGNBr DYY	2.0	3.3	4	E	1	H	1.5	2.0

Strain	Mean	Ontario			Minnesota			Manitoba		North Dak.
		Ottawa	Kemptville	Elora	Crookston	Morris	Rosemount	Portage la Prairie	Morden	Fargo
	8 Tests			1973 YIELD (bu/a)						
Altona	39.4	55.7	31.9 *	41.7	25.1	40.8	35.7	44.1	44.1	27.8
Norman	37.3	53.0	39.0	38.8	23.2	38.8	35.3	42.3	41.5	25.5
Portage	34.5	48.0	25.8	42.8	22.5	34.8	30.5	37.7	35.7	24.3
CM119	34.7	41.1	45.9	38.1	22.9	39.3	34.7	37.6	37.7	26.5
CM145	35.0	49.9	44.4	41.9	20.4	34.6	32.0	42.1	35.6	23.3
M62-173	43.8	65.5	43.5	47.7	26.5	46.6	41.4	49.0	42.5	30.8
M64-105	37.1	48.6	36.8	42.9	26.8	38.2	35.5	40.8	37.3	27.0
M65-217	41.8	62.2	43.0	46.1	26.7	43.6	40.2	48.2	35.5	31.5
C.V. (%)		9.3	16.0	6.5	7.6	5.7	5.0	8.2	8.2	10.7
L.S.D. (5%)		7.2	8.9	4.1	4.5	3.9	3.1	5.1	4.6	4.2
Row Sp. (in.)		30	21	12	28	30	30	30	30	24
Rows/Plot		3	2	4	4	4	4	3	3	3
Reps		4	3	4	3	3	3	4	4	4
				YIELD RANK						
Altona	3	3	7	6	4	3	3	3	1	3
Norman	4	4	5	7	5	5	5	4	3	6
Portage	8	7	8	4	7	7	8	7	6	7
CM119	7	8	1	8	6	4	6	8	4	5
CM145	6	5	2	5	8	8	7	5	7	8
M62-173	1	1	3	1	3	1	1	1	2	2
M64-105	5	6	6	3	1	6	4	6	5	4
M65-217	2	2	4	2	2	2	2	2	8	1
	27 Tests			1971-73, 3-YEAR MEAN YIELD					72,73	
Altona	35.5	42.4	35.3	41.7	23.7	37.0	38.0	36.2	36.1	30.9
Norman	33.9	42.6	38.5	39.8	21.4	33.4	35.4	33.5	34.0	30.6
Portage	32.0	38.3	28.4	40.0	22.5	31.2	33.3	32.0	30.3	30.1
CM119	33.8	36.9	39.5	40.7	23.3	36.1	37.4	33.1	31.4	32.1
				YIELD RANK						
Altona	1	2	3	1	1	1	1	1	1	2
Norman	2	1	2	4	4	3	3	2	2	3
Portage	4	3	4	3	3	4	4	4	4	4
CM119	3	4	1	2	2	2	2	3	3	1

* Not included in the mean

Strain	Mean	Ontario			Minnesota			Manitoba		North Dak.
		Ottawa	Kemptville	Elora	Crookston	Morris	Rosemount	Portage la Prairie	Morden	Fargo
	8 Tests		MATURITY (relative date)							
			*							
Altona	+6.9	+6	+ 5	+ 9	+3	+ 7	+8	+10	+ 9	+3
Norman	+3.8	+7	0	+ 7	+2	+ 5	+4	+ 1	+ 3	+1
Portage†	9-3.6	9-8	9-17	9-2	9-10	8-23	8-25	9-11	9-15	8-28
CM119	+6.9	+9	+ 5	+12	+7	+ 6	+6	+ 5	+ 8	+2
CM145	+1.9	+2	0	- 1	+7	0	+1	+ 4	+ 2	0
M62-173	+9.4	+6	+15	+ 8	+5	+12	+8	+18	+15	+3
M64-105	+6.1	+7	+ 5	+ 9	+3	+ 5	+6	+10	+ 6	+3
M65-217	+4.4	+7	+15	+ 2	+2	+ 5	+7	+ 4	+ 4	+4
Clay (0)				+ 9	+5	+11	+9			+8
Date Planted	5-18	5-25	6-8	5-24	5-24	5-8	5-15	5-14	5-17	5-16
†Days to mat.	109	106	101	101	109	107	102	120	121	104
	7 Tests		LODGING (score)							
			*							
Altona	2.5	2.5	1	3.3	1.7	4.0	2.7	2.3		1
Norman	2.5	3.0	1	3.6	2.3	3.0	2.7	1.8		1
Portage	1.4	1.8	1	2.6	1.0	1.3	1.3	1.0		1
CM119	2.1	2.5	1	4.3	1.3	2.3	2.0	1.0		1
CM145	1.9	2.3	1	4.3	1.0	1.3	1.3	1.8		1
M62-173	2.2	3.0	1	2.4	1.0	2.0	1.7	4.0		1
M64-105	1.9	1.8	1	3.1	1.0	2.0	2.0	2.3		1
M65-217	1.7	2.0	1	2.1	1.0	2.3	2.0	1.3		1
	8 Tests		PLANT HEIGHT (inches)							
			*							
Altona	28	32	28	32	18	27	27	33	34	23
Norman	27	32	25	31	19	25	27	31	30	21
Portage	26	29	24	31	19	26	25	29	29	20
CM119	29	34	27	33	20	29	30	28	30	24
CM145	25	32	24	29	18	24	24	30	26	18
M62-173	29	31	27	28	21	28	27	36	37	24
M64-105	30	32	26	31	21	28	31	33	35	25
M65-217	28	33	27	30	18	27	27	33	33	23

Strain	Mean	Ontario			Minnesota			Manitoba		North Dak.
		Ottawa	Kemptville	Elora	Crookston	Morris	Rosemount	Portage la Prairie	Morden	Fargo
	8 Tests		*	SEED QUALITY (score)						
Altona	2.9	2	1	4.0	3.7	3.3	3.3	1.0	1.5	4
Norman	2.4	2	1	3.5	4.0	2.7	2.7	1.5	1.0	2
Portage	2.6	2	1	3.5	3.7	3.0	3.3	1.8	1.8	2
CM119	2.9	2	1	3.0	3.7	3.3	3.3	3.0	3.0	2
CM145	2.9	2	1	3.5	4.3	2.7	3.0	2.5	2.3	3
M62-173	2.2	2	1	2.0	3.3	2.3	2.3	2.0	2.3	1
M64-105	2.3	2	1	2.5	3.3	3.3	2.7	1.3	1.3	2
M65-217	2.0	2	1	2.5	3.3	2.0	2.3	1.3	1.5	1
	8 Tests		*	SEED SIZE (g/100)						
Altona	20.2	25.0	18.5	20.0	20.7	21.0	19.1	20.2	20.3	15.0
Norman	18.4	23.7	17.5	18.3	17.2	18.8	17.7	18.8	19.0	13.5
Portage	19.5	25.2	18.8	18.2	21.6	19.1	17.5	19.3	20.9	14.0
CM119	20.7	23.8	20.5	19.2	22.7	21.4	19.4	21.2	22.0	15.5
CM145	20.2	23.7	21.4	17.2	22.9	21.0	17.9	20.7	22.4	15.5
M62-173	16.1	20.7	14.9	15.1	15.9	17.7	15.4	15.8	15.6	12.5
M64-105	17.8	22.3	15.3	16.4	19.1	18.8	16.5	18.1	17.4	13.5
M65-217	16.6	19.8	15.2	15.1	17.7	18.6	16.3	17.4	16.2	12.0
	6 Tests			PROTEIN (%)						
Altona	41.7	41.1		41.4	43.4	41.7			42.2	40.3
Norman	41.3	39.8		43.6	41.9	40.9			41.5	40.2
Portage	40.6	39.5		41.2	43.5	39.1			41.9	38.1
CM119	41.3	40.4		42.3	44.0	40.0			43.0	38.1
CM145	40.4	38.1		41.5	42.9	39.0			41.9	38.7
M62-173	39.2	37.9		40.2	39.5	39.5			39.4	38.6
M64-105	41.8	40.6		43.4	42.6	40.6			42.4	41.0
M65-217	40.4	39.8		42.1	41.1	39.6			40.8	39.2
	6 Tests			OIL (%)						
Altona	20.9	21.9		20.0	20.1	21.6			20.3	21.5
Norman	20.8	21.7		19.4	21.0	21.8			20.2	20.9
Portage	21.5	23.0		20.5	20.0	22.6			21.9	21.0
CM119	21.0	22.2		20.0	19.7	22.3			19.4	22.1
CM145	21.1	22.5		19.9	20.3	22.4			19.7	21.9
M62-173	22.0	23.7		21.6	22.0	22.9			20.0	21.9
M64-105	20.8	22.4		19.0	20.6	22.2			19.6	21.1
M65-217	20.9	21.6		20.2	21.0	21.8			19.5	21.0

Strain	Parentage	Previous Testing*	Line
1. Clay	Capital x Renville	6	F_5
2. Merit	Blackhawk x Capital	15	F_8
3. Swift	II-54-240[(Lincoln^2 x Richland) x Korean] x II-54-139(Renville x Capital)	5	F_5
4. Wilkin	Merit x Harosoy	3	F_5
5. M61-96	"	3	F_5
6. M64-157	Merit x Amsoy	PO	F_5
7. M65-74	M384(Capital x Renville) x Corsoy	PO	F_5
8. M65-94	" "	PO	F_5

* Number of years in this test or name of 1972 test.

The regional 6-year means for the three check varieties show Clay to have very good yield for its early maturity. Lodging resistance and seed composition were also very good. Wilkin and M61-96 are included in the 4-year mean table. Wilkin, which is similar to Clay in maturity, has averaged slightly lower in yield, oil, and protein but is resistant to Phytophthora root rot. M61-96 continued to be a consistently good yielder relative to Swift and Merit and also had good lodging resistance and seed quality.

The remaining three entries were new to the test this year. The two early ones, M65-74 and M65-94, appeared to be competitive with Clay. The third one, M64-157, was similar to Merit and Swift in maturity, showed no advantage in yield, but had excellent lodging resistance and seed quality.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
				1973					
No. of Tests	6	6	5	6	6	6	6	6	6
Clay	39.9	5	-7.8	1.5	25	2.3	16.3	40.1	23.5
Merit	39.2	7	+0.6	1.8	33	2.1	14.1	40.6	22.5
Swift	40.3	4	9-14.4†	2.4	33	2.3	15.3	39.0	22.4
Wilkin	36.8	8	-7.8	1.1	25	1.8	15.4	39.7	22.0
M61-96	40.4	2-3	-2.2	1.6	33	1.8	15.4	40.0	23.0
M64-157	39.7	6	-0.8	1.3	30	1.8	16.0	39.6	22.8
M65-74	40.6	1	-4.4	1.5	27	2.3	15.5	40.8	22.4
M65-94	40.4	2-3	-5.8	1.4	26	2.5	16.8	39.7	22.8

† 120 days after planting

				1970-73, 4-year mean					
No. of Tests	30	30	26	28	29	27	28	23	23
Clay	36.6	3	-7.2	1.5	27	2.5	16.6	40.8	22.2
Merit	35.5	4	-0.3	2.0	35	2.0	14.4	40.5	21.6
Swift	37.2	2	9-20.5†	2.5	35	2.2	15.6	38.9	21.7
Wilkin	35.3	5	-6.9	1.2	27	2.0	16.4	40.2	21.2
M61-96	38.5	1	-1.6	1.8	34	1.8	15.5	39.7	22.1

† 122 days after planting

				1968-73, 6 year mean					
No. of Tests	46	46	41	42	44	41	38	36	36
Clay	35.7	2	-6.8	1.4	27	2.3	16.6	40.9	22.0
Merit	35.2	3	-0.6	2.1	34	2.1	14.4	40.4	21.4
Swift	37.0	1	9-20.6†	2.4	36	2.2	15.7	39.2	21.6

† 123 days after planting

Disease Data

Strain	BB	BP		BS	DM	FE2	PM	BSR				CR	PR		Pyu
	Ames Iowa	Ames Iowa		Ames Iowa	Worth. Ind.	Laf. Ind.	Har. Ont.	Laf. Ind.	Lamb. Minn.	Ames Iowa		Laf. Ind.	Laf. Ind.	Ames Iowa	Laf. Ind.
	n	n	a	n	n	a	a	n %	n %	n % stem	% plants	n %	a	a	a
Clay	3	3	4	5	3	5	S	0	95	53	80	100	S	S	S
Merit	3	3	4	5	4	5	R	0	95	28	50	95	H	H	S
Swift	1	4	4	4	2	5	R	0	80	59	40	57	S	S	S
Wilkin	4	4	3	4	2	5	R	0	80	45	90	94	R	R	S
M61-96	3	4	4	2	3	5	R	10	85	52	90	100	R	R	S
M64-157	4	4	4	4	3	5	S	10	85	59	90	100	R	R	S
M65-74	3	3	4	4	4	5	S	0	65	44	90	100	S	S	S
M65-94					4	5	S	0	45	66	100	100	S	H	S

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis			Fluor-escent Light	Hypo-cotyl	Perox-idase	Shattering	
			Crkstn. Minn.	Lamb. Minn.	Ames Iowa				Urbana Ill.	Manhattan Kansas
Clay	PGNBr	SYY	1.5	2.7	5	E	1	L+H	1.5	1.0
Merit	WGNBr	DYBf	1.5	3.0	5	E	1	L	1.5	2.8
Swift	WTNBr	DYBl	1.0	2.0	5	E	4	H	1.5	1.5
Wilkin	WGNBr	DYY	1.0	3.3	5	E	1	L	1.0	2.0
M61-96	WGNBr	DYY	3.0	1.7	5	E+L	1	H	1.5	3.5
M64-157	WGNBr	DYY	2.5	4.0	4	E	1	H	1.0	1.0
M65-74	WGNDbr	DYY	2.0	3.0	5	E	1	H	1.0	1.5
M65-94	WGNBr	D+SYY	2.0	2.3	5	E	2	H	1.5	1.0

Strain	Mean	Ontario Elora	Ontario Ridgetown	Wisconsin Spooner	Wisconsin Durand	Minnesota Morris	Minnesota Rosemount	North Dakota Fargo	South Dakota Revillo
	6 Tests			1973 YIELD (bu/a)					
				*	*				
Clay	39.9	44.6	50.1	32.6		46.3	37.7	29.5	31.2
Merit	39.2	35.9	47.8	36.4		47.9	38.1	33.5	31.8
Swift	40.3	39.4	50.8	42.3		49.1	39.0	30.0	33.5
Wilkin	36.8	46.5	44.0	32.4		42.4	32.8	24.0	31.2
M61-96	40.4	47.2	51.5	38.8		49.4	37.6	28.5	28.4
M64-157	39.7	39.6	47.8	37.6		46.3	42.1	32.5	29.7
M65-74	40.6	44.1	50.4	34.7		44.9	41.2	31.5	31.2
M65-94	40.4	45.0	47.2	30.4		44.3	36.5	33.0	36.3
C.V. (%)		13.3	10.5			8.8	3.7	10.5	10.1
L.S.D. (5%)		n.s.	n.s.			7.2	2.2	7.6	n.s.
Row Sp. (in.)		12	24	36		30	30	24	30
Rows/Plot		4	4	1		4	4	3	4
Reps		4	4	2		3	3	2	3
				YIELD RANK					
Clay	5	4	4	6		4-5	5	6	4-6
Merit	7	8	5-6	4		3	4	1	3
Swift	4	7	2	1		2	3	5	2
Wilkin	8	2	8	7		8	8	8	4-6
M61-96	2-3	1	1	2		1	6	7	8
M64-157	6	6	5-6	3		4-5	1	3	7
M65-74	1	5	3	5		6	2	4	4-6
M65-94	2-3	3	7	8		7	7	2	1
	30 Tests			1970-73, 4-YEAR MEAN YIELD					
					70-72		70,72-73		
Clay	36.6	37.3	46.9	26.5	21.5	41.3	44.1	31.2	31.4
Merit	35.5	34.1	46.5	27.9	20.9	38.0	38.7	31.2	32.2
Swift	37.2	36.1	49.6	30.7	23.8	41.6	40.4	29.3	33.6
Wilkin	35.3	40.6	43.9	26.3	21.0	39.0	40.9	28.9	29.2
M61-96	38.5	44.2	49.3	30.5	23.5	42.1	41.4	29.9	31.9
				YIELD RANK					
Clay	3	3	3	4	3	3	1	1-2	4
Merit	4	5	4	3	5	5	5	1-2	2
Swift	2	4	1	1	1	2	4	4	1
Wilkin	5	2	5	5	4	4	3	5	5
M61-96	1	1	2	2	2	1	2	3	3

* Not included in the mean

Strain	Mean	Ontario		Wisconsin		Minnesota		North Dakota	South Dakota
		Elora	Ridgetown	Spooner	Durand	Morris	Rosemount	Fargo	Revillo
	5 Tests			MATURITY (relative date)					
				*				*	
Clay	-7.8	-8	-6	-10		-13	- 7		- 5
Merit	+0.6	+1	-1	+ 1		+ 2	0		+ 1
Swift†	9-14.4	9-19	9-11	9-16		9-15	9-12		9-15
Wilkin	-7.8	-8	-5	-10		-13	-10		- 3
M61-96	-2.2	-3	-2	0		- 2	- 2		- 2
M64-157	-0.8	-1	-2	+ 1		0	- 1		0
M65-74	-4.4	-6	-4	- 5		- 5	- 4		- 3
M65-94	-5.8	-7	-4	- 8		- 9	- 5		- 4
Altona (00)		-8	-5			-16	-13		
Steele (I)			+1			+ 2	+ 6		+11
Date Planted	5-17	5-23	5-22	5-29		5-8	5-15	6-2	5-18
†Days to mat.	120	119	112	110		130	120		120
	6 Tests			LODGING (scoring)					
				*					
Clay	1.5	1.4	1.5	1.0		2.0	1.7	1	1.3
Merit	1.8	3.4	1.3	1.0		2.0	2.0	1	1.2
Swift	2.4	3.9	1.5	1.3		2.7	3.0	1	2.2
Wilkin	1.1	1.3	1.0	1.0		1.0	1.0	1	1.2
M61-96	1.6	2.5	1.0	1.0		2.0	2.0	1	1.3
M64-157	1.3	1.4	1.0	1.0		1.0	2.0	1	1.3
M65-74	1.5	1.1	1.1	1.0		2.0	2.0	1	1.5
M65-94	1.4	1.0	1.1	1.0		1.7	2.0	1	1.3
	6 Tests			PLANT HEIGHT (inches)					
				*					
Clay	25	25	21	24		28	27	22	27
Merit	33	38	28	31		35	32	31	33
Swift	33	36	29	32		37	32	29	35
Wilkin	25	27	22	23		27	24	19	29
M61-96	33	35	28	30		38	32	29	35
M64-157	30	29	24	28		32	31	26	35
M65-74	27	29	23	25		31	29	22	30
M65-94	26	26	23	24		29	27	21	29

Strain	Mean	Ontario		Wisconsin	Minnesota		North Dakota	South Dakota
		Elora	Ridgetown	Spooner	Durand	Morris	Rosemount	Fargo	Revillo
	6 Tests			SEED QUALITY (score) *				
Clay	2.3	3.0	2	1.5	3.3	2.3	1	2.0
Merit	2.1	3.0	1	2.0	3.3	3.3	1	1.2
Swift	2.3	2.5	2	1.3	3.0	3.0	2	1.5
Wilkin	1.8	2.0	2	1.0	2.7	2.0	1	1.3
M61-96	1.8	2.0	2	1.8	2.0	1.7	2	1.2
M64-157	1.8	2.5	2	1.3	2.3	1.3	1	1.4
M65-74	2.3	2.0	2	1.0	3.7	2.7	2	1.6
M65-94	2.5	2.0	2	1.0	3.7	2.3	2	3.0
	6 Tests			SEED SIZE (g/100) *				
Clay	16.3	15.2	16.8	16.4	18.9	17.2	13.5	16.3
Merit	14.1	12.9	16.6	14.3	14.9	14.5	11.8	13.6
Swift	15.3	14.4	15.9	15.9	16.0	16.8	13.4	15.3
Wilkin	15.4	13.2	18.8	14.7	17.4	14.7	11.9	16.2
M61-96	15.4	14.3	19.5	16.1	16.2	16.0	13.1	13.0
M64-157	16.0	13.9	17.9	17.8	18.5	16.9	13.6	15.2
M65-74	15.5	13.8	17.9	14.9	18.3	16.0	12.5	14.6
M65-94	16.8	14.8	19.0	14.7	19.4	16.8	14.0	17.0
	6 Tests			PROTEIN (%)				
Clay	40.1	41.0		40.3	41.5	40.0	38.3	39.7
Merit	40.6	41.9		39.9	40.7	41.3	39.1	40.5
Swift	39.0	41.2		39.0	38.9	38.2	37.2	39.5
Wilkin	39.7	40.4		39.8	41.5	39.1	37.6	40.0
M61-96	40.0	41.7		39.1	40.7	39.7	38.5	40.1
M64-157	39.6	39.9		38.2	40.0	40.4	39.0	40.3
M65-74	40.8	41.1		40.2	42.3	41.1	39.3	40.8
M65-94	39.7	40.0		39.3	39.8	40.3	38.7	40.0
	6 Tests			OIL (%)				
Clay	23.5	21.8		23.4	23.6	23.9	23.4	24.7
Merit	22.5	20.7		23.0	22.6	22.7	22.7	23.3
Swift	22.4	19.9		23.1	22.6	23.5	22.8	22.4
Wilkin	22.0	20.8		22.2	22.5	22.4	22.2	22.1
M61-96	23.0	21.5		24.4	22.3	24.5	22.9	22.3
M64-157	22.8	21.8		23.9	22.9	23.2	22.7	22.3
M65-74	22.4	21.5		22.9	23.2	22.5	21.9	22.6
M65-94	22.8	21.7		23.2	23.0	22.6	24.4	22.4

Strain	Parentage	Line
1. Swift		
2. Wilkin		
3. M65-207	Clay x Hark	F_5
4. M65-270	"	F_5
5. M65-295	Anoka x Magna	F_5

This small test contained 3 rather promising strains. All 3 averaged above the two check varieties in mean yield and were intermediate in maturity, although two of them were almost as late as Swift. They were similar to the checks in other traits except for the tendency to poor seed quality in M65-295 and the excellent protein and oil content of M65-270. M65-207 had the top yield in the test, yet was quite early in maturity. An important shortcoming may be its tendency to shatter.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
No. of Tests	5	5	4	5	4	5	5	5	5
Swift	40.2	4	9-12.3	1.9	32	2.8	15.2	37.9	22.7
Wilkin	34.6	5	-7.8	1.0	26	2.2	15.5	38.8	22.6
M65-207	42.8	1	-4.3	1.6	26	2.6	16.1	39.1	22.5
M65-270	41.8	2	-0.3	1.5	27	2.7	18.2	39.2	23.4
M65-295	41.0	3	-0.8	1.8	29	3.2	21.6	37.2	22.3

Disease Data

Strain	DM	FE_2	BSR		CR	PR		Pyu
	Worthington Indiana	Lafayette Indiana	Lafayette Indiana	Ames Iowa	Lafayette Indiana	Lafayette Indiana	Ames Iowa	Lafayette Indiana
	n	a	n %	n % stem*	n %	a	a	a
Swift	2	5	0	82	57	S	S	S
Wilkin	2	5	0	72	94	R	R	S
M65-207	3	5	0	82	100	S	S	S
M65-270	3	5	0	82	100	S	H	S
M65-295	4	4	24	88	67	S	S	S

* All plants were infected

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis	Shattering	
		Ames Iowa	Urbana Ill.	Manhattan Kansas
Swift	WTNBr DYBl	5	1.5	1.5
Wilkin	WGNBr DYY	5	1.0	2.0
M65-207	PGNBr DYY	5	2.5	3.0
M65-270	PGNBr SYY	4	1.0	1.5
M65-295	PTNBr DYTn	4	1.5	1.5

Strain	Mean	Ontario Elora	Ontario Ridgetown	Wisconsin Spooner	Minnesota Morris	Minnesota Rosemount	North Dakota Fargo	South Dakota Revillo
	5 Tests	*		*				
				YIELD (bu/a)				
Swift	40.2	37.1	46.6	41.6	50.9	36.3	37.0	30.3
Wilkin	34.6	45.2	40.3	33.9	38.5	26.3	41.5	26.4
M65-207	42.8	42.8	49.8	33.5	48.2	34.6	42.0	39.2
M65-270	41.8	38.7	49.5	33.4	44.9	37.2	38.5	38.7
M65-295	41.0	39.0	49.1	43.4	41.6	36.8	41.5	36.1
C.V. (%)		24.4	4.7		5.7	8.2	7.6	8.5
L.S.D. (5%)		n.s.	6.1		7.0	7.8	8.5	8.0
Row Spacing (in.)		12	24	36	30	30	24	30
Rows/Plot		4	4	1	2	2	3	3
Reps		2	2	2	2	2	2	2
				YIELD RANK				
Swift	4	5	4	2	1	3	5	4
Wilkin	5	1	5	3	5	5	2-3	5
M65-207	1	2	1	4	2	4	1	1
M65-270	2	4	2	5	3	1	4	2
M65-295	3	3	3	1	4	2	2-3	3
	4 Tests	*		*			*	
			MATURITY (relative date)					
Swift	9-12.3	9-21	9-9	9-17	9-14	9-10		9-16
Wilkin	- 7.8	- 6	-5	- 8	-12	- 9		- 5
M65-207	- 4.3	- 7	-3	- 5	-10	- 4		0
M65-270	- 0.3	- 6	+1	- 3	- 4	0		+ 2
M65-295	- 0.8	- 1	0	- 1	- 5	- 1		+ 3
Altona (00)		-10	-5		-15	-11		
Steele (I)	+ 6.0		+3		+ 3	+ 8		+10
Date Planted	5-16	5-25	5-22	5-29	5-8	5-15	6-2	5-18

* Not included in the mean

Strain	Parentage	Previous Testing*	Line
1. Chippewa 64	Chippewa^{6} x Blackhawk	11	29 F_3
2. Hark	Hawkeye x Harosoy	9	F_9
3. Steele	Blackhawk x Harosoy	5	F_5
4. M63-217Bf	Corsoy x M372(M10 x PI 180.501)	1	F_5
5. M64-165	M384(Capital x Renville) x L62-1932(Clark-e_2)	PI	F_5
6. M65-69	M384 x Corsoy	PI	F_5
7. M65-115	Ancka x Amsoy	PI	F_5
8. M65-122	"	PI	F_5
9. CX643	Blackhawk x Harosoy 63	PI	F_5

* Number of years in test or name of 1972 test.

A table of 6-year regional means is presented for the three check varieties and shows them yielding in order of maturity with Chippewa 64, the earliest, averaging over 4 bushels less than Hark, which is 6 to 7 days later. M63-217Bf has been in the test two years and averaged appreciably higher than the check varieties in yield despite its early maturity. It averaged 1.5% higher in oil and was only moderately lower in protein. M63-217 as tested in 1972 included both yellow and buff hilum colors, but M63-217Bf is from a bulk seedlot from which the yellow hilum type has been removed. It is being increased for release to farmers.

The remaining 5 strains were advanced from last year's preliminary test. The earliest one, CX643, was 2 days earlier than Chippewa 64 but had excellent yield for this early maturity and in addition it is Phytophthora resistant. Two strains, M65-115 and M65-122, were of about the same maturity as Steele, averaged higher in yield, and had very high oil content. In addition M65-122 had the best lodging resistance in the test. The two late strains, M64-165 and M65-69, were almost as late as Hark. M65-69 topped the test in average yield, 2.2 bushels above Hark, but M64-165 showed no advantage over the check.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
				1973					
No. of Tests	13	13	12	13	13	12	12	9	9
Chippewa 64	36.7	9	-2.3	1.8	36	1.7	15.4	41.3	22.0
Hark	43.1	5	+5.3	1.9	38	1.3	16.8	42.2	21.9
Steele	41.7	7	9-14.4†	2.0	37	1.4	17.5	40.6	22.0
M63-217Bf	44.6	2	-0.3	2.0	34	1.6	17.2	39.7	23.4
M64-165	43.0	6	+4.0	2.2	34	1.5	17.6	41.4	22.3
M65-69	45.3	1	+3.3	2.5	36	1.5	16.7	39.5	23.2
M65-115	43.9	4	-0.5	1.9	33	1.8	17.6	39.2	24.3
M65-122	44.5	3	-0.8	1.3	34	1.7	19.7	40.8	24.3
OX643	41.0	8	-4.4	1.8	35	1.6	17.1	39.7	23.3

† 116 days after planting

				1972-73, 2-year mean					
No. of Tests	29	29	26	29	28	26	26	20	20
Chippewa 64	37.6	4	-1.9	2.0	37	1.8	15.6	41.5	21.6
Hark	43.5	2	+5.1	2.0	38	1.5	16.9	42.3	21.3
Steele	41.2	3	9-17.7†	2.3	37	1.7	17.7	40.6	21.6
M63-217Bf	45.2	1	-0.8	2.1	35	1.8	17.3	39.8	23.1

† 119 days after planting

				1968-73, 6-year mean					
No. of Tests	107	107	96	98	104	87	84	65	65
Chippewa 64	36.2	3	-2.1	1.8	35	1.9	15.3	41.3	21.4
Hark	40.9	1	+4.5	1.8	37	1.7	16.5	41.9	21.2
Steele	39.4	2	9-16.6†	1.9	35	1.8	17.1	40.4	21.5

† 114 days after planting

Disease Data

Strain	BB	BP				BS	DM	FE_2	PM	BSR			CR	PR		Pyu
	Ames Iowa	Urb. Ill.	Ames Iowa			Ames Iowa	Worth. Ind.	Laf. Ind.	Har. Ont.	Laf. Ind.	Lamb. Minn.	Ames Iowa	Laf. Ind.	Laf. Ind.	Ames Iowa	Laf. Ind.
	n	a	n	a		n	n	a	a	n %	n %	% stem*	n %	a	a	a
Chippewa 64	1	3	3	4		3	5	5	R	73	100	68	100	R	H	S
Hark	1	3	3	4		3	3	4	S	27	65	53	100	S	S	S
Steele	1	3	3	4		3	4	5	S	21	85	63	71	R	R	S
M63-217Bf	1	2	5	4		3	2	5	S	38	90	55	56	S	H	S
M64-165	3	2	4	3		4	3	5	S	8	90	79	100	S	S	H
M65-69	3	3	3	3		4	5	5	S	8	65	58	61	S	S	H
M65-115	3	1	4	1		5	2	4	R	69	100	71	100	S	S	S
M65-122	1	1	4	4		4	2	4	S	27	80	77	90	S	S	S
OX643	3	1	4	3		3	3	5	R	12	100	72	96	R	R	S

* All plants were infected

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis			Fluor-escent Light	Hypo-cotyl	Perox-idase	Shattering	
		Crkstn. Minn.	Lamb. Minn.	Ames Iowa				Urbana Ill.	Manhattan Kansas
Chippewa 64	PTNBr SYBl	2.0	2.0	5	E	4	L	1.0	2.0
Hark	PGNBr DYY	4.5	3.7	5	L	2	H	1.0	2.0
Steele	PGNBr DYY	2.0	3.3	5	E	1	L	1.0	2.0
M63-217Bf	PGNBr SYBf	2.0	1.0	4	L	5	H	1.0	2.5
M64-165	WGNBr DYY	1.0	2.3	4	L	1	H	1.0	1.5
M65-69	WGNBr DYY	3.5	3.0	4	E	4	H	1.0	1.0
M65-115	PGNTn SYIb	3.5	3.3	5	E	3	H	1.0	1.0
M65-122	PGNTn SYIb+Bf	2.5	1.7	5	E	5	H	1.0	1.0
OX643	WGNBr DYY	4.0	1.7	5	E	1	L	2.5	2.0

Strain	Mean	Ontario		Ohio			Mich.	Indiana
		Ridgetown	Harrow	Hoytville	Wooster	Columbus	Dundee	Lafayette
	13 Tests	1973 YIELD (bu/a)						
				*	*	*		
Chippewa 64	36.7	46.6	37.0	15.4	24.3	32.9	38.3	37.2
Hark	43.1	47.0	40.3	19.7	29.2	37.8	50.6	47.7
Steele	41.7	49.4	40.0	15.4	24.9	30.7	45.9	40.1
M63-217Bf	44.6	56.3	41.8	18.8	28.8	39.8	49.0	40.9
M64-165	43.0	52.0	42.6	21.3	24.8	35.3	49.5	41.8
M65-69	45.3	52.6	44.2	20.1	26.8	42.2	48.6	48.8
M65-115	43.9	53.3	42.7	16.8	27.7	26.6	47.7	37.7
M65-122	44.5	53.1	45.4	16.4	29.9	33.6	50.9	40.8
OX643	41.0	54.4	39.6	13.4	30.1	37.2	44.6	38.5
C.V. (%)		4.7	7.0				10.1	9.2
L.S.D. (5%)		3.5	n.s.				5.5	6.6
Row Spacing (in.)		24	24	32	32	28	30	30
Rows/Plot		4	4	3	3	3	4	3
Reps		4	3	4	4	4	3	3
		YIELD RANK						
Chippewa 64	9	9	9	7-8	9	7	9	9
Hark	5	8	6	3	3	3	2	2
Steele	7	7	7	7-8	7	8	7	6
M63-217Bf	2	1	5	4	4	2	4	4
M64-165	6	6	4	1	8	5	3	3
M65-69	1	5	2	2	6	1	5	1
M65-115	4	3	3	5	5	9	6	8
M65-122	3	4	1	6	2	6	1	5
OX643	8	2	8	9	1	4	8	7
	29 Tests	1972-73, 2-YEAR MEAN YIELD						
Chippewa 64	37.6	45.7	34.8	23.7	24.3	33.9	40.0	38.1
Hark	43.5	48.2	42.6	28.0	28.4	34.6	49.2	44.2
Steele	41.2	47.2	36.9	22.2	23.7	30.3	45.3	40.2
M63-217Bf	45.2	57.7	41.1	25.5	32.4	36.4	48.7	42.0
		YIELD RANK						
Chippewa 64	4	4	4	3	3	3	4	4
Hark	2	2	1	1	2	2	1	1
Steele	3	3	3	4	4	4	3	3
M63-217Bf	1	1	2	2	1	1	2	2

* Not included in the mean

Illinois		Minnesota		Iowa		South Dakota		Neb.
Dekalb	Pontiac	Lamberton	Waseca	Spencer	Kanawha	Revillo	Brookings	Mead I
				1973 YIELD (bu/a)				
35.8	36.5	38.7	43.1	35.2	36.0	31.3	23.6	37.5
47.7	42.9	44.3	51.0	44.0	45.9	29.2	25.5	44.3
45.0	42.5	41.5	52.6	40.4	43.5	32.3	25.7	43.2
48.9	42.3	53.0	55.3	44.6	45.0	35.6	27.4	39.5
46.6	42.3	49.6	49.4	38.2	41.8	37.1	27.2	41.2
48.6	49.0	49.9	52.2	42.7	45.6	37.4	27.7	41.3
47.1	40.5	50.2	54.8	45.2	47.5	41.9	26.8	35.3
46.0	41.9	51.1	52.6	42.1	45.4	34.1	28.4	46.6
40.1	39.8	43.9	51.8	42.7	37.7	32.4	26.2	40.8
3.5	5.8	9.5	6.3	7.2	6.7	13.6	4.3	6.8
2.8	4.2	7.7	5.6	4.4	4.2	n.s.	2.6	4.8
30	38	30	30	27	27	30	30	30
4	4	4	4	4	4	4	4	4
3	3	3	2	4	4	3	3	3
				YIELD RANK				
9	9	9	9	9	9	8	9	8
3	2	6	7	3	2	9	8	2
7	3	8	3-4	7	6	7	7	3
1	4-5	1	1	2	5	4	3	7
5	4-5	5	8	8	7	3	4	5
2	1	4	5	4-5	3	2	2	4
4	7	3	2	1	1	1	5	9
6	6	2	3-4	6	4	5	1	1
8	8	7	6	4-5	8	6	6	6
				1972-73, 2-YEAR MEAN YIELD				
38.0	38.8	34.6	35.0	40.3	37.8	26.0	27.6	38.4
47.1	42.9	38.6	44.2	49.0	47.6	27.5	29.1	45.4
44.7	41.3	36.5	41.6	43.8	43.2	27.2	30.1	44.6
49.5	41.5	47.5	45.8	46.5	46.8	27.7	33.6	43.5
				YIELD RANK				
4	4	4	4	4	4	4	4	4
2	1	2	2	1	1	2	3	1
3	3	3	3	3	3	3	2	2
1	2	1	1	2	2	1	1	3

Strain	Mean	Ontario		Ohio			Mich.	Indiana
		Ridgetown	Harrow	Hoytville	Wooster	Columbus	Dundee	Lafayette
	12 Tests	MATURITY (relative date)						
				*	*	*		
Chippewa 64	-2.3	-1	-5	-1	-2	-5	-4	+1
Hark	+5.3	+3	-2	+1	-1	-1	+6	+6
Steele†	9-14.4	9-11	9-16	9-29	9-2	9-2	9-14	9-4
M63-217Bf	-0.3	+2	-7	+3	+3	-4	-4	+1
M64-165	+4.0	+5	0	+3	+7	+1	+5	+2
M65-69	+3.3	+2	+1	+1	+6	-1	+3	+2
M65-115	-0.5	-1	-4	+3	0	+3	+1	0
M65-122	-0.8	0	-8	+3	+2	+1	0	+1
OX643	-4.4	-4	-4	+3	0	-1	+1	-2
Merit (0)		-2	-8	+2				-5
Corsoy (II)		+9	+1	+4	+12	+7	+14	+6
Date Planted	5-21	5-22	5-31	6-20	5-17	5-21	5-16	5-21
†Days to mat.	116	112	108	101	108	104	121	106
	13 Tests	LODGING (score)						
				*	*	*		
Chippewa 64	1.8	1.5	4.0	1	1	1.0	1.8	1.0
Hark	1.9	1.1	2.3	1	1	1.2	2.1	1.2
Steele	2.0	1.4	3.3	1	1	1.0	2.3	1.0
M63-217Bf	2.0	1.4	3.3	1	1	1.0	2.0	1.0
M64-165	2.2	1.5	4.0	1	1	1.0	2.8	1.3
M65-69	2.5	1.4	4.7	1	1	1.2	2.0	1.7
M65-115	1.9	1.3	3.0	1	1	1.0	1.5	1.0
M65-122	1.3	1.0	1.0	1	1	1.0	1.0	1.0
OX643	1.8	1.5	1.7	1	1	1.0	1.5	1.0
	13 Tests	PLANT HEIGHT (inches)						
				*	*	*		
Chippewa 64	36	36	34	19	25	26	38	30
Hark	38	35	35	18	25	27	41	32
Steele	37	34	36	16	21	25	39	31
M63-217Bf	34	33	35	17	24	22	36	27
M64-165	34	31	33	18	24	24	37	28
M65-69	36	31	35	16	22	27	38	30
M65-115	33	30	31	17	23	25	34	26
M65-122	34	29	30	16	23	27	36	27
OX643	35	34	34	17	24	25	37	30

Illinois		Minnesota		Iowa		South Dakota		Neb.
Dekalb	Pontiac	Lamberton	Waseca	Spencer	Kanawha	Revillo	Brookings	Mead I
			MATURITY (relative date)					
-2	-2	-2	-4		-5	-1	+1	-4
+9	+3	+7	+5		+9	+2	+6	+10
9-13	9-6	9-12	9-23		9-11	9-26	9-23	9-14
+2	+2	+4	-2		-3	-2	0	+4
+8	+4	+7	+2		+3	+1	+2	+9
+9	+5	+3	+2		+1	-3	+3	+12
-1	+1	-3	+2		-1	-3	-1	+4
-2	-2	-2	-1		-1	0	+1	+5
-6	-6	-6	-8		-9	-6	-2	-1
-4	-3	-17	-11			-10		
+15	+7	+7	+7		+5		+4	+16
6-1	5-26	5-9	5-11	5-18	5-11	5-18	5-25	5-31
104	103	126	135		123	131	121	106
			LODGING (score)					
2.0	1.0	1.3	2.0	2.0	2.0	1.7	1.3	1.2
2.0	1.2	3.0	2.0	3.0	2.4	2.5	1.0	1.3
2.3	1.0	2.3	2.0	2.5	2.3	3.5	1.0	1.2
2.0	1.5	2.7	2.0	2.3	2.0	2.3	2.3	1.1
2.2	1.3	3.0	2.3	2.3	2.2	2.5	1.6	1.2
2.8	1.5	3.7	3.0	2.8	2.6	2.5	2.0	2.4
2.3	1.0	2.0	2.0	2.4	2.2	3.5	1.6	1.2
1.5	1.0	1.0	1.3	2.2	1.4	1.3	1.6	1.0
2.3	1.0	2.3	2.0	2.2	2.1	2.3	2.0	1.4
			PLANT HEIGHT (inches)					
34	30	42	36	41	38	42	30	37
37	33	44	39	46	42	43	32	40
35	30	40	37	42	38	44	33	38
34	28	38	33	40	36	38	30	33
34	30	41	34	39	37	38	28	38
34	31	42	34	42	39	37	31	39
32	29	39	32	39	37	38	29	33
32	29	39	35	38	39	39	29	34
32	29	39	34	43	36	40	30	35

Strain	Mean	Ontario		Ohio			Mich.	Indiana
		Ridgetown	Harrow	Hoytville	Wooster	Columbus	Dundee	Lafayette
	12 Tests			SEED QUALITY (score)				
				*	*	*		
Chippewa 64	1.7	2	2.0	2.0	1.7	1.8		1.5
Hark	1.3	2	1.3	1.0	1.0	1.3		1.0
Steele	1.4	2	1.3	1.3	1.2	2.0		1.5
M63-217Bf	1.6	2	1.0	1.5	1.2	2.0		1.0
M64-165	1.5	2	1.7	1.0	1.0	1.3		1.5
M65-69	1.5	2	1.3	1.5	1.0	1.8		1.5
M65-115	1.8	2	2.0	1.3	1.7	1.3		1.0
M65-122	1.7	2	1.0	1.3	1.2	1.3		1.5
OX643	1.6	2	1.0	1.8	1.2	1.3		1.5
	12 Tests			SEED SIZE (g/100)				
				*	*	*		
Chippewa 64	15.4	15.0	15.3	12.8	15.1	14.2	17.3	14.3
Hark	16.8	15.2	16.4	12.6	15.7	14.8	18.7	14.9
Steele	17.5	17.2	18.8	14.0	17.1	15.3	17.7	16.6
M63-217Bf	17.2	17.9	16.5	14.3	17.1	15.3	18.4	15.2
M64-165	17.6	17.0	17.2	14.3	17.1	15.9	20.8	15.5
M65-69	16.7	16.1	15.5	12.7	15.4	14.5	17.3	15.3
M65-115	17.6	16.2	16.9	14.4	17.1	14.8	19.5	14.9
M65-122	19.7	19.9	19.6	14.9	19.2	17.7	22.0	17.4
OX643	17.1	19.2	17.0	13.3	15.9	14.8	17.6	15.4
	9 Tests			PROTEIN (%)				
Chippewa 64	41.3	40.9				41.4	43.2	40.6
Hark	42.2	43.1				42.0	43.3	40.6
Steele	40.6	40.1				41.8	41.4	41.0
M63-217Bf	39.7	39.3				39.9	40.9	39.6
M64-165	41.4	41.2				42.3	42.1	41.4
M65-69	39.5	39.8				39.6	40.3	39.4
M65-115	39.2	38.4				38.5	41.8	39.1
M65-122	40.8	41.1				41.1	41.7	40.0
OX643	39.7	40.0				40.0	40.1	39.6
	9 Tests			OIL (%)				
Chippewa 64	22.0	21.9				21.9	21.5	22.9
Hark	21.9	21.1				22.0	21.3	22.8
Steele	22.0	22.5				21.1	21.3	22.8
M63-217Bf	23.4	24.5				22.7	23.6	23.3
M64-165	22.3	22.0				21.6	22.2	22.5
M65-69	23.2	24.0				22.8	22.6	23.9
M65-115	24.3	24.6				24.3	22.4	25.0
M65-122	24.3	24.9				23.7	23.6	24.7
OX643	23.3	23.4				23.4	22.7	23.0

Illinois		Minnesota		Iowa		South Dakota		Neb.
Dekalb	Pontiac	Lamberton	Waseca	Spencer	Nanawha	Revillo	Brookings	Mead I
				SEED QUALITY (score)				
1.7	1.5	2.7	2.3	1.0	1.0	1.1	1.6	1.5
1.3	1.0	1.7	1.3	1.2	1.0	1.0	1.0	1.5
1.3	1.3	1.7	1.7	1.0	1.0	1.2	1.3	1.5
1.2	1.2	3.0	3.0	1.0	1.0	1.2	1.2	1.8
1.5	1.2	1.7	2.0	1.0	1.0	1.3	1.2	2.2
1.3	1.7	1.7	1.7	1.0	1.0	1.1	1.3	2.5
2.0	1.3	2.7	2.7	1.5	1.3	1.1	1.3	3.0
1.7	1.5	2.7	2.3	1.0	1.0	1.3	1.3	2.5
2.0	1.5	2.3	1.7	1.0	1.2	1.3	1.3	2.0
				SEED SIZE (g/100)				
13.5	15.2	15.7	16.6		15.0	14.6	14.2	18.1
15.3	15.5	17.7	19.0		17.9	15.7	16.1	19.5
15.3	16.9	18.0	19.2		17.4	17.5	15.7	20.0
15.6	17.9	17.6	19.5		16.3	15.7	15.2	20.0
16.0	18.2	18.2	19.5		17.0	16.4	15.0	20.1
14.9	18.2	17.8	18.9		16.0	15.1	14.7	21.0
16.5	19.0	17.7	20.6		16.8	17.0	15.2	20.6
16.6	20.9	20.0	21.6		20.0	17.2	17.5	23.5
14.9	17.5	17.4	18.1		15.4	16.4	15.5	20.6
				PROTEIN (%)				
38.6			40.8		40.1		43.7	42.0
39.8			42.4		41.4		45.9	41.4
38.3			40.2		39.5		42.2	40.6
37.2			40.3		37.7		42.4	39.6
39.0			41.5		40.6		42.8	41.8
37.8			39.2		37.3		42.3	39.6
37.2			39.1		37.8		40.9	40.2
38.4			41.4		39.6		42.1	41.7
37.3			40.0		38.1		42.6	39.7
				OIL (%)				
22.9			22.3		22.4		19.7	22.6
23.6			22.2		20.9		20.2	23.1
23.4			21.6		21.0		20.7	23.4
24.1			22.8		23.4		21.5	25.0
22.9			22.3		22.6		20.8	23.7
24.1			22.5		23.6		20.6	24.5
25.7			23.7		24.4		22.4	26.1
25.1			24.5		24.8		22.9	24.5
24.5			22.8		23.8		21.4	24.6

Strain	Parentage	Line
1. Hark		
2. Steele		
3. A72-101	Corsoy x Wayne	F_5
4. A72-102	"	"
5. A72-105	"	"
6. A72-106	"	"
7. A72-107	"	"
8. A72-108	"	"
9. A72-109	Amsoy x Provar	"
10. A72-110	"	"
11. A72-111	"	"
12. A72-114	"	"
13. A72-119	Corsoy x Provar	"
14. A72-125	Amsoy x Wayne	"
15. A72-130	"	"
16. A72-131	"	"
17. A72-133	"	"
18. L70D19-4	C1426(C1253 x Kent) x L62-361(Harosoy-$\underline{Dt}_2$)	F_3
19. M64-175	Chippewa 64 x Hark	F_5
20. M65-258	Traverse x Corsoy	"
21. M65-442	Anoka x Amsoy	"
22. M67-8	Hark x Chippewa 64	"

The 15 A entries may be classified into two groups: selections from Amsoy or Corsoy x Wayne and selections from Amsoy or Corsoy x Provar. None of these had a regional mean yield higher than Hark but a few were somewhat earlier and yield almost as well. Of those with Wayne as a parent, A72-102,106,107, and 125 may merit retesting. In addition A72-125 was high in oil content. Of those with Provar as a parent, A72-109 and 119 yielded satisfactorily for their maturity. A72-119 appears to have the high protein content of Provar.

Of the remaining five strains, M65-442 had the highest mean yield in the test and very high oil content, and in addition is resistant to Phytophthora rot. L70D19-4 ranked second in mean yield but is fairly late in maturity, less than 2 days earlier than Corsoy, which makes it Group II maturity. The other three lines ranked low in mean yield but M65-258, because of its earliness might be further tested with Group 0.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
No. of Tests	7	7	6	7	7	6	6	4	4
Hark	44.2	3	+6.0	1.8	38	1.3	17.2	41.5	21.9
Steele	42.3	11-12	9-14.7	1.8	36	1.2	17.0	39.5	22.1
A72-101	42.0	15	+4.7	1.8	38	1.1	20.9	42.5	22.2
A72-102	43.3	6	+2.8	1.7	36	1.3	18.9	39.7	22.8
A72-105	42.1	13-14	+0.5	2.4	37	1.5	18.9	41.6	22.6
A72-106	43.9	4	+2.5	1.5	35	1.3	19.4	42.0	21.7
A72-107	43.1	7	+1.5	2.1	36	1.6	20.2	41.2	21.5
A72-108	42.3	11-12	+6.2	2.1	37	1.8	20.5	41.0	21.7
A72-109	42.4	10	+1.7	1.9	39	1.4	18.9	40.0	22.9
A72-110	38.2	21	+1.8	2.4	38	1.4	18.6	41.9	22.4
A72-111	40.7	20	+0.7	2.2	39	1.2	17.9	40.8	22.9
A72-114	41.8	16	+3.3	2.0	39	1.4	20.7	41.2	22.7
A72-119	43.0	8	+5.2	1.8	34	1.6	19.7	43.9	21.2
A72-125	43.7	5	+3.7	2.1	34	1.6	17.3	40.1	23.3
A72-130	42.8	9	+4.7	1.8	38	1.5	18.5	40.2	23.4
A72-131	42.1	13-14	+6.5	2.3	40	1.6	18.4	39.9	23.3
A72-133	41.7	17	+6.7	2.6	42	1.4	17.2	39.4	23.5
L70D19-4	44.6	2	+7.7	2.3	37	1.7	18.2	39.2	22.6
M64-175	41.2	19	0.0	1.6	30	1.3	15.7	40.3	23.0
M65-258	37.5	22	-4.2	1.9	31	1.7	17.9	41.8	22.2
M65-442	44.9	1	+1.7	1.7	33	1.7	17.7	38.2	25.4
M67-8	41.6	18	+3.5	1.4	35	1.6	17.6	40.5	23.0

Disease Data

Strain	BP	DM	FE_2	BSR		CR	PR		Pyu
	Urbana Ill.	Worthington Indiana	Lafayette Indiana	Laf. Ind.	Ames Iowa	Lafayette Indiana	Laf. Ind.	Ames Iowa	Lafayette Indiana
	a	n	n	n	n	n	a	a	a
				%	% stem*	%			
Hark	1	3	4	27	61	100	S	H	S
Steele	1	4	5	21	77	71	R	R	S
A72-101	1	3	5	4	78	100	S	H	S
A72-102	1	5	5	43	87	79	S	H	S
A72-105	1	4	5	42	85	100	S	H	R
A72-106	1	4	4	8	63	100	S	H	S
A72-107	1	3	4	26	87	53	S	H	H
A72-108	1	4	3	6	65	100	S	H	H
A72-109	1	2	5	23	85	100	S	S	S
A72-110	2	3	5	6	79	92	S	S	S
A72-111	2	3	5	0	78	82	S	S	S
A72-114	3	4	5	4	86	88	S	S	H
A72-119	1	3	5	22	58	86	S	H	S
A72-125	1	3	3	13	83	69	S	S	S
A72-130	1	2	2	0	78	100	S	H	H
A72-131	3	2	2	20	76	100	S	S	S
A72-133	2	2	4	24	69	100	S	S	S
L70D19-4	1	3	5	53	70	100	H	H	S
M64-175	1	4	5	44	80	100	R	R	S
M65-258	1	3	5	0	52	100	S	H	H
M65-442	1	2	5	0	59	100	S	S	S
M67-8	1	5	5	20	78	100	R	R	S

* All plants were infected

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Ames Iowa	Shattering Manhattan Kansas
Hark	PGNBr	DYY	5	2.5
Steele	PGNBr	DYY	5	2.0
A72-101	PGNBr	DYIb	4	3.0
A72-102	WGNBr	SYY	5	2.0
A72-105	PT+GNBr	DLgG	4	1.5
A72-106	PT+GNBr	DYY	3	2.5
A72-107	WTNBr	SYY	4	3.0
A72-108	WTNBr	SYY	5	3.0
A72-109	PTNTn	SYBr	5	1.5
A72-110	PTNTn+Br	DYY	4	1.5
A72-111	PTNTn	SYBr	5	1.0
A72-114	PTNBr	DYBr	4	1.0
A72-119	PTNTn	DYY	5	2.5
A72-125	WGNTn	SYBf	5	3.0
A72-130	WTNTn	SYY	5	2.5
A72-131	PTNTn	SYY	5	3.0
A72-133	PTNTn	SYY	5	3.0
L70D19-4	PGNBr	SYG+Y+Ib+Bf	5	2.0
M64-175	PGNBr	DYY	4	2.0
M65-258	PGNBr	DYY	4	3.0
M65-442	PGNTn	-YY	4	1.0
M67-8	PGNBr	-YY	5	2.0

Strain	Mean	Ont. Ridge-town	Ohio Hoyt-ville	Mich. Dun-dee	Ill. De-kalb	Minnesota Lamb-erton	Minnesota Wa-seca	Iowa Spen-cer	Iowa Kana-wha	S.Dak. Brook-ings	Neb. Mead I
	7 Tests			YIELD (bu/a)							
			*			*	*				
Hark	44.2	51.5	9.0	54.9	46.7	36.1	49.0	43.3	43.8	26.1	43.3
Steele	42.3	50.4	20.0	47.1	45.5	34.5	50.4	40.4	48.5	26.6	37.4
A72-101	42.0	47.3	19.6	49.3	44.2	39.0	42.2	40.1	43.8	25.2	43.8
A72-102	43.3	48.7	13.3	51.6	46.4	44.5	53.2	42.5	48.0	25.1	41.0
A72-105	42.1	51.4	15.4	48.7	43.8	40.7	45.1	43.7	44.6	25.5	37.0
A72-106	43.9	48.9	15.2	51.0	44.2	38.3	53.2	44.5	50.4	26.5	42.0
A72-107	43.1	48.1	15.0	55.5	42.3	36.3	44.8	42.0	45.7	24.1	44.3
A72-108	42.3	44.9	16.3	49.3	43.4	37.9	43.2	48.2	43.2	25.7	41.6
A72-109	42.4	52.4	11.9	49.6	43.1	38.6	45.0	40.2	43.2	26.9	41.3
A72-110	38.2	44.4	20.0	49.6	42.3	35.3	43.5	37.4	36.3	22.7	35.0
A72-111	40.7	51.9	11.7	45.8	43.6	39.2	49.0	36.5	41.4	25.9	39.8
A72-114	41.8	47.2	19.0	45.8	44.7	34.6	51.8	39.8	44.2	26.3	44.4
A72-119	43.0	47.8	10.9	53.1	47.8	36.5	46.8	39.8	46.0	24.1	42.2
A72-125	43.7	51.6	12.2	51.2	45.2	39.1	47.2	42.0	42.6	27.9	45.6
A72-130	42.8	47.9	17.6	49.9	41.5	34.5	51.3	43.7	46.0	26.1	44.6
A72-131	42.1	47.1	16.5	48.3	44.1	41.0	45.3	41.8	48.2	26.5	38.8
A72-133	41.7	48.5	15.7	46.2	46.1	38.2	50.5	41.3	41.7	26.1	42.0
L70D19-4	44.6	53.1	20.5	55.7	47.2	38.1	47.4	42.8	42.5	26.5	44.4
M64-175	41.2	46.9	10.8	50.7	43.0	37.8	51.0	40.5	43.3	25.3	38.7
M65-258	37.5	52.9	10.3	37.5	38.3	39.0	42.6	37.1	34.5	25.7	36.4
M65-442	44.9	50.5	7.9	51.7	45.7	39.4	54.2	43.3	46.1	30.3	46.6
M67-8	41.6	45.5	13.2	48.9	44.1	38.6	55.0	39.1	42.3	26.6	44.6
C.V. (%)		6.4		9.2	5.6	6.1	9.5	6.0	8.6	6.4	7.0
L.S.D. (5%)		n.s.		6.4	5.1	4.8	9.6	5.2	7.8	n.s.	6.0
Row Spacing (in.)		24	32	30	30	30	30	27	27	30	30
Rows/Plot		4	3	3	4	2	2	4	4	3	4
Reps		2	2	2	2	2	2	2	2	2	2

* Not included in the mean

Strain	Mean	Ont. Ridgetown	Ohio Hoytville	Mich. Dundee	Ill. Dekalb	Minnesota Lamberton	Minnesota Waseca	Iowa Spencer	Iowa Kanawha	S.Dak. Brookings	Neb. Mead I
	7 Tests				YIELD RANK						
			*			*	*				
Hark	3	6	21	3	3	18	10-11	5-6	11-12	10-12	9
Steele	11-12	9	2-3	18	7	21-22	9	14	2	4-5	19
A72-101	15	16	4	13-14	10-11	7-8	22	16	11-12	18	8
A72-102	6	11	13	6	4	1	3-4	8	4	19	15
A72-105	13-14	7	10	16	14	3	16	3-4	9	16	20
A72-106	4	10	11	8	10-11	11	3-4	2	1	6-8	11-12
A72-107	7	13	12	2	19-20	17	18	9-10	8	20-21	7
A72-108	11-12	21	8	13-14	16	14	20	1	14-15	14-15	13
A72-109	10	3	16	11-12	17	9-10	17	15	14-15	3	14
A72-110	21	22	2-3	11-12	19-20	19	19	20	21	22	22
A72-111	20	4	17	20-21	15	5	10-11	22	20	13	16
A72-114	16	17	5	20-21	9	20	5	17-18	10	9	5-6
A72-119	8	15	18	4	1	16	14	17-18	6-7	20-21	10
A72-125	5	5	15	7	8	6	13	9-10	16	2	2
A72-130	9	14	6	10	21	21-22	6	3-4	6-7	10-12	3-4
A72-131	13-14	18	7	17	12-13	2	15	11	3	6-8	17
A72-133	17	12	9	19	5	12	8	12	19	10-12	11-12
L70D19-4	2	1	1	1	2	13	12	7	17	6-8	5-6
M64-175	19	19	19	9	18	15	7	13	13	17	18
M65-258	22	2	20	22	22	7-8	21	21	22	14-15	21
M65-442	1	8	22	5	6	4	2	5-6	5	1	1
M67-8	18	20	14	15	12-13	9-10	1	19	18	4-5	3-4

Strain	Mean	Ont. Ridge-town	Ohio Hoyt-ville	Mich. Dun-dee	Ill. De-kalb	Minnesota Lamb-erton	Minnesota Wa-seca	Iowa Spen-cer	Iowa Kana-wha	S.Dak. Brook-ings	Neb. Mead I
	6 Tests		MATURITY (relative date)								
			*			*	*	*			
Hark	+6.0	+1	-2	+6	+8	+2	+5		+6	+5	+10
Steele	9-14.7	9-12	9-30	9-14	9-14	9-9	9-23		9-10	9-24	9-14
A72-101	+4.7	+2	-4	+7	+5	+3	+1		+5	+2	+7
A72-102	+2.8	0	-3	+5	+1	-1	+1		+4	0	+7
A72-105	+0.5	-2	-4	+3	+1	+1	+1		+2	+1	-2
A72-106	+2.5	+1	-4	+3	+2	+1	+1		+2	+3	+4
A72-107	+1.5	-2	-3	+2	+2	-1	+1		+3	+2	+2
A72-108	+6.2	+3	-3	+7	+9	+1	+6		+6	+5	+7
A72-109	+1.7	-3	+1	+2	+1	-2	+1		+4	+3	+3
A72-110	+1.8	-1	0	+4	+5	-3	+1		+4	+3	-4
A72-111	+0.7	-2	+1	+1	+2	-3	+3		+1	+2	0
A72-114	+3.3	+1	0	+6	+3	0	+2		+3	+3	+4
A72-119	+5.2	+2	-2	+5	+8	+5	+3		+6	+4	+6
A72-125	+3.7	0	0	+4	+6	0	+2		+6	+1	+5
A72-130	+4.7	+2	0	+5	+4	+2	+5		+6	+5	+6
A72-131	+6.5	+1	0	+7	+9	+3	+7		+8	+6	+8
A72-133	+6.7	+3	0	+9	+8	+5	+7		+8	+4	+8
L70D19-4	+7.7	+3	+1	+9	+13	+3	+7		+6	+5	+10
M64-175	0.0	-2	0	0	-1	-5	-1		0	-1	+4
M65-258	-4.2	-6	0	+1	-7	-10	-11		-8	-1	-4
M65-442	+1.7	+1	-2	+2	+1	-5	+1		0	+1	+5
M67-8	+3.5	+1	-2	+4	+3	-1	+1		+4	+2	+7
Merit (0)		-3	+1		-5	-14	-11				
Corsoy (II)	+9.3	+8	+3	+14	+14	+10	+7		+5	+3	+12
Date Plntd.	5-23	5-22	6-20	5-16	6-1	5-11	5-11	5-18	5-11	5-25	5-31

Strain	Parentage	Previous Testing*	Line
1. Amsoy 71	Amsoy^{8} x C1253(Blackhawk x Harosoy)	4	4 F_3
2. Beeson	C1253 x Kent	6	F_7
3. Corsoy	Harosoy x Capital	9	F_9
4. Wells	C1266R(Harosoy x C1079) x C1253	4	F_7
5. C1512	(F_1 Amsoy x C1253) x (F_1 Wayne x C1317-71)	PII	F_{10}
6. L69D-133	Chippewa 64 x Corsoy	PII	F_5
7. M63-194	Corsoy x PI132.207	I	F_5

* Number of years in this test or name of 1972 test.

The 5-year means for the four check varieties are presented on pages 46 and 48-51. As an overall mean of 137 tests the four average less than a bushel apart in yield, although Corsoy and Wells are several days earlier than the other two. Wells was outstanding in lodging resistance. At times Corsoy has had superior seed quality but in the overall mean it is scarcely better than the other three. Wells was somewhat higher than others in protein.

The three experimental strains are new to this test this year. M63-194 was in Uniform Test I last year and 2-year means based on locations where both I and II tests were grown is presented in the back of this report. These data show it to average about the same maturity as Wells and 1.5 days earlier than Corsoy. It averaged slightly below Corsoy in mean yield and very similar to it in other traits. The remaining two, C1512 and L69D-133 were both PR-resistant but showed no yield advantage over the checks. C1512 was consistently good in lodging resistance and seed quality and composition.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
No. of Tests	21	21	20	21	21	20	17	13	13
				1973					
Amsoy 71	47.3	2	+3.7	2.2	43	2.2	16.8	39.1	23.4
Beeson	45.6	5-7	+3.7	1.9	39	2.2	18.0	40.3	22.3
Corsoy	48.6	1	9-19.2†	2.7	39	1.9	15.6	40.2	22.8
Wells	45.6	5-7	-1.2	1.5	38	2.1	15.7	40.7	22.6
C1512	45.9	4	+4.2	1.6	40	1.9	19.4	40.3	22.7
L69D-133	45.6	5-7	+2.5	3.2	43	2.0	15.0	40.8	21.7
M63-194	47.2	3	-0.1	2.6	39	1.9	15.7	40.1	22.7

† 119 days after planting

1969-73, 5-year mean

No. of Tests	137	137	112	131	135	119	108	73	73
Amsoy 71	45.1	2	+3.2	2.4	42	2.2	17.2	39.7	22.7
Beeson	44.9	3	+4.1	2.1	40	2.2	19.0	40.5	21.7
Corsoy	45.2	1	9-19.0†	2.6	39	2.1	15.8	40.4	22.1
Wells	44.6	4	-0.6	1.6	38	2.3	16.1	41.2	22.0

†118 days after planting

Disease Data

Strain	BB	BP					BS	DM	FE_2	PM	BSR		
	Ames Iowa	Urb. Ill.	Urb. Ill.	Girard Ill.	Ames Iowa		Ames Iowa	Worth. Ind.	Laf. Ind.	Harrow Ont.	Laf. Ind.	Lamb. Minn.	Ames Iowa
	n	a	n	n	n	a	n	n	a	a	n %	n %	% stem*
Amsoy 71	3	2	3.0	3.0	4	4	4	2	5	S	24	95	56
Beeson	3	1	3.0	3.3	4	4	3	2	2	R	10	95	68
Corsoy	4	1	3.7	3.0	4	4	3	2	5	S	4	90	76
Wells	3	1	2.9	3.0	4	3	3	2	2	S	0	100	84
C1512	3	1	3.7	3.3	1	3	5	2	5	R	0	90	78
L69D-133	1	2	3.7	3.3	3	5	4	3	5	S	5	85	56
M63-194	3	1	3.0	3.3	4	4	3	2	5	S	5	75	75

* All plants were infected

Strain	CR			PR			Pyu
	Laf. Ind. n %	Girard Ill. n	Edg. Ill. n	Laf. Ind. a	Ames Iowa a	Stnv. Miss. n	Laf. Ind. a
Amsoy 71	100	3.2	4.3	R	R	1	S
Beeson	100	3.0	4.0	R	R	1	H
Corsoy	100	1.0	2.7	S	S	4	S
Wells	100	1.6	3.3	R		1	S
C1512	100	3.6	1.7	S	R	1	S
L69D-133	100	3.0	1.7	R	R	1	S
M63-194	100	1.3	2.7	S	H	2	S

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis			Fluor-escent Light	Hypo-cotyl	Perox-idase	Shattering	
		Crstn. Minn.	Lamb. Minn.	Ames Iowa				Stnv. Miss.	Manhat. Kansas
Amsoy 71	PGNTn SYY	2.5	2.3	5	L	5	H	3	2.5
Beeson	PGNBr SYIb	4.5	2.3	5	L	5	L	3	2.5
Corsoy	PGNBr DYY	2.5	2.7	5	E	1	H	3	2.5
Wells	PGNBr DYIb	3.5	1.7	5	L	4	L	3	2.5
C1512	PTNTn SYBl	4.0	2.3	5	L	3	H	4	1.5
L69D-133	PTNBr SYY	4.0	1.7	4	E	1	H	2	1.5
M63-194	PGNBr DYY	3.0	1.3	5	E	2	H	3	2.0

Strain	Mean	Penn.	Maryland		Ontario		Ohio			Michigan
		Landis-ville	Hamp-stead	Belts-ville	Ridge-town	Har-row	Hoyt-ville	Woos-ter	Col-umbus	Dun-dee
	21 Tests			1973 YIELD (bu/a)						
		*	*	*			*	*	*	
Amsoy 71	47.3	45.4	50.0	34.8	50.8	39.9	26.4	35.0	35.6	47.4
Beeson	45.6	43.6	49.0	37.6	43.5	37.5	25.7	29.7	38.6	47.7
Corsoy	48.6	42.2	54.7	37.3	58.0	48.3	26.1	29.4	38.6	56.8
Wells	45.6	43.9	53.7	43.9	50.7	43.4	22.6	32.4	38.7	50.2
C1512	45.9	43.1	48.3	39.1	45.2	41.1	23.5	34.6	33.2	47.8
L69D-133	45.6	41.0	42.1	38.6	47.4	36.0	24.8	33.5	39.7	46.3
M63-194	47.2	41.8	52.8	37.2	57.5	46.0	23.7	29.6	34.9	52.0
C.V. (%)		5.4	12.0	12.6	4.7	14.3				8.6
L.S.D. (5%)		n.s.	5.3	n.s.	3.5	n.s.				4.0
Row Spacing (in.)		30	20	40	24	24	32	32	28	30
Rows/Plot		3	5	4	4	4	3	3	3	4
Reps		4	3	3	4	3	4	4	4	3
				YIELD RANK						
Amsoy 71	2	1	4	7	3	5	1	1	5	6
Beeson	5-7	3	5	4	7	6	3	5	3-4	5
Corsoy	1	5	1	5	1	1	2	7	3-4	1
Wells	5-7	2	2	1	4	3	7	4	2	3
C1512	4	4	6	2	6	4	6	2	7	4
L69D-133	5-7	7	7	3	5	7	4	3	1	7
M63-194	3	6	3	6	2	2	5	6	6	2
	137 Tests			1969-73, 5-YEAR MEAN YIELD						69,71-73
Amsoy 71	45.1				56.2	38.7	32.7	31.6	48.1	44.0
Beeson	44.9				51.7	39.4	31.5	33.5	49.0	45.8
Corsoy	45.2				57.4	40.0	30.0	28.8	40.9	49.0
Wells	44.6				53.3	41.4	32.9	30.9	46.2	44.7
				YIELD RANK						
Amsoy 71	2				2	4	2	2	2	4
Beeson	3				4	3	3	1	1	2
Corsoy	1				1	2	4	4	4	1
Wells	4				3	1	1	3	3	3

* Not included in the mean

Indiana				Wis.
Bluff-ton	Lafay-ette	Green-field	Worth-ington	Madi-son
		1973 YIELD (bu/a)		
54.3	56.6	50.4	38.4	
59.3	53.7	47.8	36.7	
56.6	54.5	51.0	40.2	
53.5	47.0	47.3	37.0	
58.5	50.1	48.9	43.4	
56.6	52.1	47.6	26.3	
60.3	50.5	44.0	32.9	
8.3	5.8	6.1	15.4	
8.4	5.4	5.2	10.0	
30	30	38	38	
3	3	3	3	
3	3	3	3	
		YIELD RANK		
6	1	2	3	
2	3	4	5	
4-5	2	1	2	
7	7	6	4	
3	6	3	1	
4-5	4	5	7	
1	5	7	6	
		5-YEAR MEAN YIELD		69-72
50.1	53.6	43.4	48.3	38.1
50.3	51.3	44.4	47.4	41.8
48.4	51.8	36.8	43.6	39.2
49.7	51.7	40.7	46.6	42.1
		YIELD RANK		
2	1	2	1	4
1	4	1	2	2
4	2	4	4	3
3	3	3	3	1

Illinois				
De-kalb	Pon-tiac	Ur-bana	Gi-rard	Edge-wood
1973 YIELD (bu/a)				
53.1	43.6	60.3	41.6	36.5
51.1	43.9	59.1	40.1	34.8
53.0	45.5	64.2	47.3	37.3
52.6	43.1	54.0	46.3	35.1
52.3	40.6	55.8	40.6	33.3
52.2	43.2	56.8	40.8	38.2
50.6	45.9	60.4	43.8	36.0
3.7	4.5	8.5	5.7	7.5
3.4	3.5	8.9	4.3	4.4
30	38	30	36	38
4	4	4	4	4
3	3	3	3	3
YIELD RANK				
1	4	3	4	3
6	3	4	7	6
2	2	1	1	2
3	6	7	2	5
4	7	6	6	7
5	5	5	5	1
7	1	2	3	4
5-YEAR MEAN YIELD				
51.7	39.5	51.9	48.9	43.5
51.0	41.3	53.8	47.0	42.3
52.0	41.5	55.0	51.9	39.9
50.4	42.0	52.2	49.8	43.0
YIELD RANK				
2	4	4	3	1
3	3	2	4	3
1	2	1	1	4
4	1	3	2	2

Minnesota		Iowa		Missouri		South Dakota		Nebraska		
Lamb-erton	Wa-seca	Kan-awha	Ames	Spick-ard	Colum-bia	Brook-ings	Center-ville	Con-cord	Mead I	Clay Center I
					1973 YIELD (bu/a)					
41.2	43.4	48.4	56.4	49.7	50.1	25.9	38.9	33.5*	41.7	62.2
35.5	44.1	45.4	56.5	47.9	49.0	25.2	39.7	36.2	44.2	51.5
39.4	53.2	44.0	59.4	49.1	50.8	27.4	37.5	35.9	35.6	52.7
37.5	46.9	42.8	54.2	49.0	43.0	25.7	39.1		45.4	50.4
36.0	46.4	46.0	57.6	48.4	45.8	26.3	46.3	39.7	40.6	57.0
38.4	51.9	45.8	54.8	48.6	47.6	24.9	37.3	35.9	34.3	57.2
44.6	49.6	46.3	57.0	39.4	49.9	26.7	39.1	37.5	35.9	55.3
5.3	7.6	5.0	4.0	9.4	4.1	5.5	13.7	4.9	10.3	8.5
3.7	6.5	3.4	3.4	6.6	2.9	n.s.	n.s.	3.2	7.1	n.s.
30	30	27	27	15	15	30	30	30	30	30
4	4	4	4	4	4	4	4	4	4	4
3	3	4	4	4	4	3	3	3	3	3
					YIELD RANK					
2	7	1	5	1	2	4	5	6	3	1
7	6	5	4	6	4	6	2	3	2	6
3	1	6	1	2	1	1	6	4-5	6	5
5	4	7	7	3	7	5	3-4		1	7
6	5	3	2	5	6	3	1	1	4	3
4	2	4	6	4	5	7	7	4-5	7	2
1	3	2	3	7	3	2	3-4	2	5	4
					1969-73, 5- YEAR MEAN YIELD					
					69,71-73		70-73		70-73	
40.6	38.6	43.1	49.9	45.0	42.3	26.8	34.6	38.1	44.3	
39.6	40.0	42.4	50.5	42.1	45.2	27.2	34.2	38.3	44.4	
46.7	42.0	46.6	52.4	42.1	39.6	32.8	37.1	38.9	46.6	
41.3	41.6	45.7	49.9	42.3	38.7	30.3	34.5		45.3	
					YIELD RANK					
3	4	3	3-4	1	2	4	2	3	4	
4	3	4	2	3-4	1	3	4	2	3	
1	1	1	1	3-4	3	1	1	1	1	
2	2	2	3-4	2	4	2	3		2	

Strain	Mean	Penn.	Maryland		Ontario		Ohio			Michigan
		Landis-ville	Hamps-tead	Belts-ville	Ridge-town	Har-row	Hoyt-ville	Woos-ter	Col-umbus	Dun-dee
	20 Tests		MATURITY (relative date)							
		*	*	*			*	*	*	
Amsoy 71	+3.7	+4	+2	-1	0	+3	+2	+7	+3	+4
Beeson	+3.7	-1	+3	+5	0	0	+1	+6	-1	+2
Corsoy†	9-19.2	9-13	9-19	9-13	9-20	9-17	10-3	9-14	9-9	9-28
Wells	-1.2	-1	+1	-1	-4	-3	+1	0	-1	-4
C1512	+4.2	+4	+2	+3	+1	+1	+2	+6	+2	0
L69D-133	+2.5	+4	+3	+4	+4	+2	0	+7	+5	-2
M63-194	-0.1	-1	0	+3	-1	-2	0	+2	-1	+1
Hark (I)					-6	-3	-3	-13	-8	-8
Wayne (III)		+7	+7	+9		+7	+3	+2?	+26	
Date Planted	5-23	6-2	6-4	6-4	5-22	5-31	6-20	5-17	5-21	5-16
†Days to Mat.	119	103	107	101	121	109	105	120	111	135
	21 Tests		LODGING (score)							
		*	*	*			*	*	*	
Amsoy 71	2.2	1.5	2.0	1.7	1.5	4.0	1	1.2	1.7	2.8
Beeson	1.9	1.5	2.5	1.7	2.0	3.0	1	1.0	1.5	3.0
Corsoy	2.7	1.9	2.0	2.7	2.3	4.0	1	1.7	2.0	3.5
Wells	1.5	1.0	1.5	1.0	1.4	2.0	1	1.0	1.5	2.2
C1512	1.6	1.5	2.0	1.0	1.4	2.3	1	1.0	1.0	2.5
L69D-133	3.2	3.3	2.5	3.0	3.8	4.7	1	2.7	2.5	4.5
M63-194	2.6	1.5	2.0	2.7	2.1	4.3	1	2.0	2.0	3.8
	21 Tests		PLANT HEIGHT (inches)							
		*	*	*			*	*	*	
Amsoy 71	43	37	33	35	46	47	23	31	36	47
Beeson	39	34	34	34	42	41	22	29	33	46
Corsoy	39	35	31	34	41	41	22	29	32	44
Wells	38	31	32	33	39	40	17	27	29	38
C1512	40	36	33	36	42	42	21	29	33	47
L69D-133	43	38	30	39	47	45	24	32	37	52
M63-194	39	33	30	35	44	38	21	26	33	48

Indiana			
Bluff-ton	Lafay-ette	Green-field	Worth-ington
	MATURITY (relative date)		
			*
+2	+5	+4	+2
-1	+4	+2	0
9-21	9·10	9·23	9-12
-4	0	+2	-2
+1	+5	+4	0
-1	+5	+3	0
-1	+1	+2	-1
	0		
+8	+14	+13	+6
5-16	5-21	6-11	6-8
128	112	104	96
	LODGING (score)		
			*
4.3	1.5	2.3	2.8
4.0	1.2	1.3	2.0
4.0	1.8	2.5	3.0
4.0	1.0	1.0	1.2
2.5	1.0	1.0	1.5
4.5	2.5	2.8	3.2
4.3	1.7	2.3	2.5
	PLANT HEIGHT (inches)		
43	40	39	41
40	36	36	36
39	36	38	39
38	35	32	37
43	37	37	38
42	41	39	38
38	38	33	35

Illinois				
De-kalb	Pon-tiac	Ur-bana	Gi-rard	Edge-wood
MATURITY (relative date)				
+3	+1	+1	+3	+1
+4	+4	-1	+4	-1
9-28	9-13	9-16	9-3	9-17
-3	+2	-6	-1	-2
+4	+4	-2	+4	+3
+2	+7	-2	+1	+3
-1	+1	0	0	-1
-6	-4	-8	-2	-3
+13	+11	+9	+16	+6
6-1	5-26	5-17	5-31	6-14
119	110	122	95	95
LODGING (score)				
2.5	1.8	1.9	2.0	1.3
2.2	1.7	1.4	1.5	1.1
3.3	2.0	3.2	2.5	1.4
1.3	1.0	1.3	1.0	1.0
1.5	1.5	1.6	1.0	1.0
3.5	3.2	3.4	3.7	2.7
3.5	2.0	3.4	2.0	1.4
PLANT HEIGHT (inches)				
41	39	47	43	35
37	37	43	36	28
37	37	43	36	31
37	35	42	36	26
39	36	45	39	30
39	41	47	39	38
38	36	45	36	30

Minnesota		Iowa		Missouri		South Dakota		Nebraska		
Lamb-erton	Wa-seca	Kan-awha	Ames	Spick-ard	Colum-bia	Brook-ings	Center-ville	Con-cord	Mead I	Clay Center I
					MATURITY (relative date)					
				*				*		
+9	+6	+10	+4		0	+5	+5	+2	-1	+9
+10	+5	+10	+6		+2	+9	+5	+7	+1	+8
9-13	9-30	9-16	9-21		8-28	9-27	9-30	9-24	9-30	9-24
0	0	+2	-2		-1	+3	0		-4	+2
+10	+6	+9	+5		+3	+9	+7	+7	0	+9
+4	+3	+4	+1		+3	+6	+2	+7	-1	+5
-1	+1	+2	0		-2	0	+1	0	-2	0
+3	0	+4	-2			+1	+2	0	-6	+4
	+7		+11		+9		+9	+16	+5	+11
5-9	5-11	5-11	5-12	5-11	5-17	5-25	5-22	5-25	5-31	5-22
127	142	128	132		103	125	131	122	122	125
					LODGING (score)					
								*		
1.7	2.7	2.8	2.1	3.4	1.0	1.0	1.2	1.0	2.4	3.3
1.3	2.0	2.1	2.1	2.6	1.0	1.0	1.1	1.2	1.3	2.7
2.3	3.7	2.8	2.9	4.6	1.1	2.0	1.8	1.8	2.1	2.3
1.0	2.0	2.4	1.8	2.3	1.0	1.0	1.0		1.2	1.0
1.0	2.0	2.1	1.9	1.5	1.0	2.0	1.1	1.3	1.6	2.0
3.3	4.0	3.3	2.9	4.7	1.5	1.3	1.8	2.0	3.5	2.3
2.7	3.3	3.0	2.6	4.1	1.1	1.3	2.0	2.0	1.5	2.7
					PLANT HEIGHT (inches)					
								*		
49	43	45	42	46	35	35	44	46	48	47
40	42	42	42	40	32	33	39	41	42	44
40	40	42	39	39	31	35	42	44	44	40
40	42	43	40	40	30	32	41		42	44
42	42	42	39	42	32	33	39	40	44	44
42	41	44	43	40	37	38	41	43	47	46
41	39	44	40	41	32	36	42	44	44	41

Strain	Mean	Penn.	Maryland		Ontario		Ohio			Michigan
		Landis-ville	Hamp-stead	Belts-ville	Ridge-town	Har-row	Hoyt-ville	Woos-ter	Col-umbus	Dun-dee
	20 Tests			SEED QUALITY (score)						
		*	*	*			*	*	*	
Amsoy 71	2.2	3.0	2.7	3.0	2	3.0	2.0	1.5	2.3	
Beeson	2.2	2.0	2.7	3.0	2	1.3	1.3	1.0	1.8	
Corsoy	1.9	2.0	2.0	3.0	2	1.3	1.5	1.2	2.3	
Wells	2.1	3.0	2.7	3.0	2	1.0	2.0	1.7	1.8	
C1512	1.9	1.8	2.7	3.7	2	1.3	2.0	2.0	1.5	
L69D-133	2.0	2.0	2.0	3.0	2	1.0	2.0	1.2	1.5	
M63-194	1.9	1.8	2.0	3.3	2	1.7	1.8	1.0	1.5	
	17 Tests			SEED SIZE (g/100)						
		*	*	*			*	*	*	
Amsoy 71	16.8	17.4	15.0	17.2	16.8	17.0	13.4	17.9	16.5	18.9
Beeson	18.0	18.5	15.0	18.4	16.7	15.9	16.3	18.2	15.7	19.6
Corsoy	15.6	16.4	15.5	16.8	16.0	15.5	12.5	16.3	14.3	17.6
Wells	15.7	16.5	15.0	15.9	14.1	14.5	13.7	15.3	14.7	17.8
C1512	19.4	20.7	18.0	20.3	18.4	17.9	16.7	18.7	18.6	21.2
L69D-133	15.0	15.9	14.5	17.2	14.6	13.7	12.5	14.8	14.0	15.2
M63-194	15.7	16.4	15.5	16.4	15.6	15.3	12.5	16.4	15.1	17.7
	13 Tests			PROTEIN (%)						
Amsoy 71	39.1			38.4		41.0			39.9	41.0
Beeson	40.3			40.3		43.5			40.3	42.8
Corsoy	40.2			39.8		43.0			40.7	41.8
Wells	40.7			40.5		43.2			40.6	42.6
C1512	40.3			40.5		42.7			41.0	42.4
L69D-133	40.8			41.2		43.2			41.4	41.6
M63-194	40.1			40.0		42.3			40.4	41.5
	13 Tests			OIL (%)						
Amsoy 71	23.4			24.5		22.0			23.1	21.5
Beeson	22.3			23.8		21.5			22.6	20.4
Corsoy	22.8			25.1		21.4			22.4	21.2
Wells	22.6			23.6		21.9			23.2	21.1
C1512	22.7			24.9		21.8			22.9	20.5
L69D-133	21.7			22.7		20.3			22.0	20.4
M63-194	22.7			22.6		22.4			23.1	21.5

Indiana			
Bluff-ton	Lafay-ette	Green-field	Worth-ington
	SEED QUALITY (score)		
			*
2.0	1.5	1.5	2.5
2.0	1.0	1.5	2.5
1.5	1.0	1.0	2.0
2.0	1.5	1.5	2.5
2.0	1.5	1.5	2.0
1.0	1.5	1.5	1.5
1.5	1.5	1.5	2.0
	SEED SIZE (g/100)		
			*
18.5	16.5	18.2	15.7
20.2	19.4	20.3	18.9
17.7	16.0	16.8	14.9
15.9	15.7	16.4	14.4
22.4	19.8	21.2	18.0
17.4	15.0	16.7	13.8
16.8	14.8	16.6	13.0
	PROTEIN (%)		
38.9	38.3		
40.3	40.4		
42.0	39.0		
41.9	39.9		
41.5	39.6		
42.0	40.5		
41.0	39.0		
	OIL (%)		
22.9	24.9		
22.5	22.6		
22.1	23.4		
22.5	23.4		
22.3	23.5		
21.8	22.8		
22.0	23.6		

Illinois				
De-kalb	Pon-tiac	Ur-bana	Gi-rard	Edge-wood
SEED QUALITY (score)				
2.3	2.0	2.3	2.3	2.7
1.7	1.8	2.3	3.2	3.3
1.5	1.7	1.5	2.2	2.2
1.3	2.0	2.0	2.7	2.5
1.7	1.7	2.0	2.5	2.3
1.7	1.7	1.5	2.5	2.2
1.8	1.5	1.3	2.3	2.0
SEED SIZE (g/100)				
17.6	14.4	16.2	12.1	14.2
18.0	17.8	18.0	14.3	15.8
15.2	16.2	14.9	12.7	13.0
14.7	15.5	14.9	12.9	18.6
19.4	17.9	18.7	14.3	19.1
15.2	13.9	13.8	11.4	14.4
14.7	15.5	15.4	12.1	13.6
PROTEIN (%)				
38.5		40.1		
40.0		41.1		
38.9		40.2		
39.2		41.1		
38.4		40.8		
39.6		41.6		
38.6		40.6		
OIL (%)				
24.1		23.2		
22.9		22.0		
23.2		22.6		
22.4		22.4		
22.9		22.8		
22.6		21.0		
23.2		22.8		

Minnesota		Iowa		Missouri		South Dakota		Nebraska		
Lamb-erton	Wa-seca	Kan-awha	Ames	Spick-ard	Colum-bia	Brook-ings	Center-ville	Con-cord	Mead I	Clay Center I
					SEED QUALITY (score)					
2.7	1.7	1.6	3.5	3.0	2.5	1.3	1.7		3.0	2.7
3.0	3.0	1.0	1.8	3.5	2.5	1.6	1.5		2.0	2.7
2.0	1.7	1.0	3.0	3.5	2.2	1.2	1.1		2.7	3.3
3.0	2.7	1.0	2.3	3.3	3.0	1.3	1.2		2.7	2.0
3.0	2.3	1.4	2.0	2.5	1.7	2.0	1.9		1.5	2.0
3.3	3.0	1.0	3.5	3.5	2.0	1.2	1.1		1.8	2.0
1.7	1.3	1.0	3.2	3.0	2.0	1.3	1.1		2.8	3.0
					SEED SIZE (g/100)					
16.5	18.7		18.2			15.7	15.7		18.9	20.6
16.6	18.5		18.0			18.2	17.1		21.1	21.0
14.0	17.3		15.8			14.8	13.4		17.0	19.2
13.8	16.9		16.2			15.4	14.0		19.3	17.8
17.6	18.8		19.1			18.8	20.6		21.8	22.8
13.6	16.1		15.8			14.2	14.1		17.5	18.7
14.2	16.6		16.1			15.2	16.3		17.5	20.1
					PROTEIN (%)					
36.2			39.3		38.2		38.3		39.6	
38.0			39.5		40.8		37.4		39.9	
39.4			39.0		38.5		40.4		40.3	
39.0			40.7		39.9		39.0		41.4	
36.9			40.4		39.5		39.6		40.5	
38.3			40.2		39.5		39.5		41.5	
38.8			39.8		38.3		40.2		40.2	
					OIL (%)					
23.5			23.1		23.6		23.1		24.2	
21.7			22.1		22.4		22.8		23.2	
21.9			23.5		23.9		21.7		23.7	
21.3			22.7		23.0		21.8		24.1	
23.3			21.9		22.5		22.5		23.3	
21.3			22.0		22.0		21.1		22.7	
21.9			22.8		23.4		22.0		23.6	

Strain		Parentage	Line
1.	Beeson		
2.	Corsoy		
3.	A72-120	Corsoy x Provar	F_5
4.	A72-212	Hark x [(D49-2491^4 x Hawkeye) x (Ford x PI68.708)]	"5
5.	A72-224	Hark x AX248-12-1(Hawkeye 63 x Kizaya-1)	"
6.	A72-225	"	"
7.	L67D423-1	Chippewa 64 x Corsoy	F_7
8.	L70-2635	L4 x Kent-*Rps rxp* (SL5)	"5
9.	L70-2768	Wayne-*Rps*(L15) x Adelphia-*Rps* (C1421)	F_6
10.	L70D-1341	Chippewa 64 x Corsoy	"6
11.	L70D-1363	"	"
12.	L70D-1407	"	"
13.	L70D-2022	Provar x Magna	F_3
14.	L70D19-7	C1426(C1253 x Kent) x L62-361(Harosoy-*Dt*$_2$)	"3
15.	L70D3-14	L63-1212(Harosoy-1n) x C1426	"
16.	L70D6-16	"	F_5
17.	L70T-543	Wayne-Rps(L15)$_2$x Amsoy 71	F_5
18.	L71D52-10	L65-1324(Wayne^2 x Clark-*e*$_2$) x Cutler	F_3
19.	OX-271	Corsoy x OX-383(Corsoy x Harosoy 63)	F_4

Of the 17 strains in this test only L70T-543 was higher than both check varieties in mean yield, but it was almost 4 days later than Beeson and only 2 days earlier than Wayne and should be tested with Group III lines next year. The next highest in yield rank was OX-271 which is closely related to Corsoy and similar to it in performance but was somewhat higher in yield and slightly later in maturity. It has the Mukden resistance to Phytophthora but showed some stunting under natural PR-attack at Stoneville. The two selections from Harosoy-1n x C1426 ranked next, equalling Corsoy in mean yield but were several days later. The semi-determinate L70D19-7 ranked next in yield but was too far below the checks to have much merit as a variety, and the same can be said for the remaining 12 lines. A72-225 and L71D52-10 were moderately high in protein, but A72-225 appeared to be a mixture of two genotypes (at least at Urbana), one about 20 days later than the other.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
No. of Tests	10	10	10	10	10	10	8	5	5
Beeson	49.8	2	+3.0	2.0	38	1.7	18.5	40.5	22.1
Corsoy	48.3	5-6	9-17.2	2.3	38	1.5	15.7	40.3	22.8
A72-120	42.0	17	-3.4	2.7	38	1.8	15.8	43.7	21.1
A72-212	41.9	18-19	-2.3	1.9	34	1.5	13.6	40.7	22.2
A72-224	43.8	12	-1.7	2.2	35	1.7	15.9	41.1	21.6
A72-225	41.9	18-19	+7.4	2.4	36	1.7	14.1	42.4	20.3
L67D423-1	42.1	16	+3.1	3.0	41	1.5	13.0	41.1	21.1
L70-2635	45.3	10	+7.0	1.8	40	1.7	17.9	41.1	22.1
L70-2768	45.0	11	-1.8	2.2	40	1.7	15.0	39.7	22.4
L70D-1341	45.8	9	+2.1	2.4	39	1.7	13.2	40.4	21.6
L70D-1363	43.7	13-14	+3.2	1.7	35	1.8	13.9	38.7	23.0
L70D-1407	43.7	13-14	+2.4	1.8	41	1.8	14.2	41.2	21.0
L70D-2022	42.6	15	-0.8	2.2	38	1.4	15.5	40.3	22.5
L70D19-7	46.2	8	+2.0	2.2	37	1.7	16.0	41.0	22.1
L70D3-14	48.3	5-6	+5.8	2.5	43	1.7	17.5	40.8	22.3
L70D6-16	49.5	4	+3.8	2.1	40	1.9	17.2	40.8	22.4
L70T-543	50.6	1	+6.8	2.6	42	2.1	18.8	40.8	23.2
L71D52-10	46.8	7	+4.5	2.2	39	1.8	18.2	42.9	21.8
OX-271	49.7	3	+1.2	2.5	40	1.7	14.8	40.3	22.9

Disease Data

Strain	BP		DM	FE_2	BSR			CR	PR			Pyu	PS
	Urbana Ill.		Worth. Ind.	Laf. Ind.	Laf. Ind.	Urb. Ill.	Ames Iowa	Laf. Ind.	Laf. Ind.	Ames Iowa	Stonev. Miss.	Laf. Ind.	Belts. Md.
	a	n	n	a	n %	n %	n % stem*	n %	a	a	n	a	n
Beeson	1	3.5	2	2	10	3 50	68	100	R	R	1.0	H	1.0
Corsoy	1	3.5	2	5	4	3 60	69	100	S	S	3.0	S	2.5
A72-120	1	3.0	2	5	0	3 70	72	89	S	S	2.5	S	0
A72-212	1	1.0	3	5	22	3 20	79	100	S	S	2.5	S	0
A72-224	1	3.0	1	5	15	3 60	61	100	S	H	1.0	S	0
A72-225	3	3.0	1	5	4	3 30	57	100	S	H	1.0	S	2.5
L67D423-1	3	3.7	3	5	19	4 90	59	86	H	H	1.0	S	1.5
L70-2635	1	1.0	2	2	42	3 50	63	100	R	R	1.0	S	1.5
L70-2768	1	1.0	5	4	36	3 50	75	80	R	R	1.0	S	0.5
L70D-1341	3	3.5	2	5	19	3 60	61	100	S	S	1.0	S	0
L70D-1363	3	4.0	4	5	0	3 40	64	100	S	S	1.0	S	2.0
L70D-1407	4	3.3	3	5	38	3 80	72	100	S	S	1.0	S	1.0
L70D-2022	2	3.5	2	5	21	3 50	79	94	R	R	1.0	H	0
L70D19-7	1	4.0	3	5	17	3 80	74	100	S	S	1.5	S	0
L70D3-14	1	3.0	4	5	55	3 70	67	100	S	H	1.0	S	0
L70D6-16	1	3.2	3	5	19	3 60	68	95	R	R	1.0	S	0.5
L70T-543	2	1.0	4	5	82	3 70	54	100	R	R	1.5	S	1.5
L71D52-10	1	1.0	3	5	50	3 90	67	94	S	S	1.5	S	1.5
OX-271	3	4.0	2	5	5	3 50	75	100	R	R	3.0	S	0.5

* All plants were infected

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis	Shattering	
			Ames Iowa	Stoneville Mississippi	Manhattan Kansas
Beeson	PGNBr	SYIb	5	4	2.5
Corsoy	PGNBr	DYY	5	3	2.0
A72-120	PTNBr	DYY	4	3	1.0
A72-212	PGNTn	DYY+G	4	5	5.0
A72-224	PGNBr	DYBf	5	4	4.0
A72-225	PT+GNBr	DYY	5	2	5.0
L67D423-1	PGNBr	SYG	5	1	1.0
L70-2635	WGNTn	SYBf	4	2	2.5
L70-2768	WGNBr	DYBf	4	3	2.5
L70D-1341	PGNBr	SYY	3	1	2.5
L70D-1363	PTNBr	DYG	5	1	2.5
L70D-1407	PGNBr	DYBf	5	2	2.0
L70D-2022	PT+GNBr	DYBl	5	1	2.5
L70D19-7[a]	PGNBr	DYIb+G	5	2	1.0
L70D3-14[b]	PGNBr	DYY	4	3	2.0
L70D6-16	PGNBr	D+SYG+Y	5	1	1.5
L70T-543	WT+GNBr	SYBr+Bf	4	3	3.0
L71D52-10	W+PTNBr	SYBl	5	3	1.0
OX-271	PGNBr	SYY	5	2	3.0

[a] Semi determinate (Dt_2)

[b] Narrow leaflet (ln)

Strain	Mean	Md. Belts-ville	Ont. Har-row	Ohio Hoyt-ville	Indiana Bluff-ton	Indiana Lafay-ette	Illinois Pon-tiac	Illinois Ur-bana	Iowa Kan-awha	Iowa Ames	Mo. Col-umbia	S.Dak. Center-ville	Neb. Mead I
	10 Tests	*		*	YIELD (bu/a)								
Beeson	49.8	42.1	39.2	24.7	59.7	55.3	43.3	62.3	44.9	59.0	50.4	41.5	42.2
Corsoy	48.3	36.2	47.0	28.5	60.5	54.2	42.5	65.9	49.2	55.6	45.5	37.5	24.7
A72-120	42.0	37.9	39.6	26.7	52.2	44.9	35.5	53.7	39.2	44.9	45.2	33.1	32.0
A72-212	41.9	34.9	36.8	23.7	43.8	41.5	35.8	61.2	43.7	50.8	42.6	36.3	26.7
A72-224	43.8	41.0	40.3	21.1	55.7	49.0	38.0	56.4	45.3	50.6	39.6	30.8	31.8
A72-225	41.9	43.4	39.5	26.9	50.6	48.0	37.9	55.3	41.2	47.6	38.1	33.8	27.1
L67D423-1	42.1	43.0	31.4	21.5	52.9	44.4	36.8	59.7	41.1	46.4	41.5	38.4	28.3
L70-2635	45.3	44.3	38.8	23.0	55.6	53.6	38.2	62.6	41.5	54.6	42.6	36.1	29.7
L70-2768	45.0	40.9	37.6	21.6	52.3	48.5	37.4	62.8	45.1	56.8	40.5	34.3	34.3
L70D-1341	45.8	41.7	43.6	24.8	49.6	49.3	40.9	58.4	45.2	56.9	48.2	33.3	32.6
L70D-1363	43.7	44.2	39.1	19.2	45.8	45.1	42.5	57.1	38.7	54.0	37.5	45.0	32.4
L70D-1407	43.7	44.5	37.3	26.6	53.8	47.5	38.1	58.5	42.0	48.2	42.6	35.9	33.3
L70D-2022	42.6	43.3	33.9	24.9	52.1	48.5	39.2	54.9	38.1	52.8	41.5	40.7	24.6
L70D19-7	46.2	51.0	40.8	23.7	65.3	48.1	42.8	57.4	43.1	54.2	44.6	34.3	31.4
L70D3-14	48.3	45.9	42.7	24.8	58.9	51.7	40.3	60.3	46.7	54.1	51.1	38.9	38.6
L70D6-16	49.5	53.1	40.0	27.5	60.3	53.4	40.9	64.1	50.7	61.3	43.5	42.9	38.0
L70T-543	50.6	55.8	40.1	25.9	67.6	57.7	44.5	71.2	45.3	60.2	46.0	36.1	37.3
L71D52-10	46.8	51.7	40.2	22.8	56.6	56.6	39.9	57.9	45.8	55.0	49.2	30.5	36.7
OX-271	49.7	49.0	46.6	28.3	63.6	52.5	46.3	68.4	47.1	55.8	51.6	36.4	28.7
C.V. (%)		10.5	9.3		7.8	5.5	3.9	4.9	6.6	3.3	9.4	10.9	11.0
L.S.D. (5%)		9.8	n.s.		9.1	5.8	3.3	6.2	6.1	3.8	8.7	n.s.	7.5
Row Spacing(In.)		40	24	32	30	30	38	30	27	27	15	30	30
Rows/Plot		3	4	3	3	3	4	4	4	4	4	3	4
Reps		2	2	2	2	2	2	2	2	2	2	2	2

* Not included in the mean

Strain	Mean	Md. Belts-ville	Ont. Har-row	Ohio Hoyt-ville	Indiana Bluff-ton	Indiana Lafay-ette	Illinois Pon-tiac	Illinois Ur-bana	Iowa Kan-awha	Iowa Ames	Mo. Col-umbia	S.Dak. Center ville	Neb. Mead I
10 Tests		*		*	YIELD RANK								
Beeson	2	13	12	11	6	3	3	7	10	3	3	3	1
Corsoy	5-6	18	1	1	4	4	5-6	3	2	7	7	7	18
A72-120	17	17	10	5	14	17	19	19	17	19	8	17	10
A72-212	18-19	19	17	12-13	19	19	18	8	11	14	11-13	9	17
A72-224	12	15	6	18	9	10	14	16	6-7	15	17	18	11
A72-225	18-19	10	11	4	16	14	15	17	15	17	18	15	16
L67D423-1	16	12	19	17	12	18	17	10	16	18	14-15	6	15
L70-2635	10	8	14	14	10	5	12	6	14	9	11-13	10-11	13
L70-2768	11	16	15	16	13	11-12	16	5	9	5	16	13-14	6
L70D-1341	9	14	3	9-10	17	9	7-8	12	8	4	5	16	8
L70D-1363	13-14	9	13	19	18	16	5-6	15	18	12	19	1	9
L70D-1407	13-14	7	16	6	11	15	13	11	13	16	11-13	12	7
L70D-2022	15	11	18	8	15	11-12	11	18	19	13	14-15	4	19
L70D19-7	8	4	5	12-13	2	13	4	14	12	10	9	13-14	12
L70D3-14	5-6	6	4	9-10	7	8	9	9	4	11	2	5	2
L70D6-16	4	2	9	3	5	6	7-8	4	1	1	10	2	3
L70T-543	1	1	8	7	1	1	2	1	6-7	2	6	10-11	4
L71D52-10	7	3	7	15	8	2	10	13	5	8	4	19	5
OX-271	3	5	2	2	3	7	1	2	3	6	1	8	14

Strain	Mean	Md. Belts-ville	Ont. Har-row	Ohio Hoyt-ville	Indiana Bluff-ton	Indiana Lafay-ette	Illinois Pon-tiac	Illinois Ur-bana	Iowa Kan-awha	Iowa Ames	Mo. Col-umbia	S.Dak. Center-ville	Neb. Mead I
	10 Tests	*		*	MATURITY (relative date)								
Beeson	+3.0	0	0	0	-1	+2	+3	+2	+5	+6	+2	+7	+4
Corsoy	9-17.2	9-17	9-18	10-1	9-22	9-12	9-14	9-13	9-22	9-20	8-27	9-29	9-26
A72-120	-3.4	-6	-3	0	-5	-4	-5	-6	-3	-6	0	+2	-4
A72-212	-2.3	-7	-4	+2	-2	-6	-6	-5	+2	0	-1	+3	-4
A72-224	-1.7	-7	-4	0	-1	-4	-4	-6	+2	+2	0	+2	-4
A72-225	+7.4	+2	+8	+6	+8	+11	+13	(-8 to +13)	+4	-7	+10	+5	+9
L67D423-1	+3.1	+2	0	+1	-3	+2	+6	+5	+4	+7	+3	+5	+2
L70-2635	+7.0	+3	+5	+5	+8	+5	+9	+5	+4	+11	+6	+8	+9
L70-2768	-1.8	-5	-6	0	-4	+1	-3	-2	+1	0	-2	+1	-4
L70D-1341	+2.1	0	+1	0	-3	+2	+3	0	+3	+4	+1	+6	+4
L70D-1363	+3.2	+1	+1	+3	0	+3	+6	+5	+2	+5	+4	+4	+2
L70D-1407	+2.4	-1	0	+2	0	0	+2	+3	+3	+5	+1	+6	+4
L70D-2022	-0.8	-5	-3	+2	-3	-2	+3	0	-2	-1	-1	+3	-2
L70D19-7	+2.0	0	+2	+1	+1	+2	+4	+1	+4	+2	-1	+3	+2
L70D3-14	+5.8	+1	+6	0	+7	+4	+5	+5	+5	+9	+4	+6	+7
L70D6-16	+3.8	+2	+1	+2	+7	+2	+6	+1	+4	+5	0	+6	+6
L70T-543	+6.8	+3	+5	0	+5	+6	+8	+7	+5	+12	+4	+8	+8
L71D52-10	+4.5	0	0	0	+5	+4	+6	+4	+3	+8	+2	+6	+7
OX-271	+1.2	+1	0	-1	0	0	+3	+2	+1	+2	+2	0	+2
Hark (I)			-4	-3		-2	-5	+2	+4	-2		+1	-2
Wayne (III)		+6	+6	+5	+7	+12	+10	+12		+11	+9	+8	+8
Date Plntd.	5-20	6-4	5-31	6-20	5-16	5-21	5-26	5-17	5-11	5-12	5-17	5-22	5-25

Strain	Parentage	Previous Testing*	Line
1. Calland	C1253(Blackhawk x Harosoy) x Kent	6	F_7
2. Wayne	L49-4091 x Clark	12	F_7
3. SL11	Wayne-I r Rps x (Wayne^{10} x Kanrich)	1	3 F_5
4. Williams	Wayne x L57-0034(Clark x Adams)	4	F_4
5. C1504	C1317-71(C1223^{8} x Mukden) x Amsoy	P III	F_6
6. C1506Y	"	P III	F_8
7. C1508	" x C1253	P III	F_7
8. L66L-172	Wayne x L57-0034	3	F_7
9. L69-20	Hark x Wayne	P III	F_6
10. L69D-227	Hark x Disoy	P II	F_4 F_5

* Years in this test or name of 1972 test.

The 5-year mean table on page 68 shows Williams to be superior to the other two varieties in yield, lodging resistance, seed quality, and oil content. The shattering data on page 69 show it to be better in this also. L66L-172 appears in the 4-year mean table, page 68 and 70 to 73, where it has a mean yield almost as high as Williams and is 3.4 days earlier (about the same as Wayne) and good in lodging resistance and seed quality and oil content. L66L-172 is being increased for release.

SL11 is a BC Wayne with resistance to downy mildew (Rpm) and phytophthora rot (Rps) and brown hilum (r) transferred to it from Kanrich, Clark 63 (Mukden originally), and T145, respectively. In the 2-year regional means it outyielded Calland and Wayne but was a day later than Wayne and more lodging susceptible. It may fill a need in areas prone to phytophthora rot since it is resistant to most races and perhaps not highly susceptible to any.

The remaining 5 strains were new entries this year. C1504 is earlier than the checks and had satisfactory yield considering this early maturity. It also had excellent lodging resistance but rather poor seed quality. C1508 yielded as well as the checks and had the best lodging resistance in the test.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition: Protein	Seed Composition: Oil
				1973, Central					
No. of Tests	22	22	19	22	22	22	19	13	13
Calland	45.3	4	+2.2	2.1	42	2.2	17.3	40.3	21.7
Wayne	44.5	7-8	9-24.3†	2.2	41	2.1	16.7	41.4	22.6
SL11	45.6	3	+1.0	2.6	43	2.2	17.4	42.3	22.4
Williams	47.8	1	+4.5	1.7	41	1.6	17.1	40.8	22.9
C1504	44.5	7-8	-1.6	1.7	41	2.5	16.8	40.2	23.2
C1506Y	44.4	9	+1.3	2.1	43	2.2	16.2	39.6	23.0
C1508	45.1	5	+0.5	1.5	40	2.2	17.3	39.2	23.3
L66L-172	46.9	2	+0.8	1.7	39	1.7	14.9	39.8	22.9
L69-20	45.0	6	+6.2	2.2	38	2.0	13.9	41.3	22.0
L69D-227	41.2	10	-4.2	2.0	43	2.6	20.3	42.5	22.0
† 119 Days after planting									
				1972-73, 2-year mean, Central					
No. of Tests	41	41	34	41	40	41	35	25	25
Calland	45.2	5	+2.2	2.3	43	2.4	17.8	40.1	21.8
Wayne	45.4	4	9-23.7†	2.4	42	2.3	17.4	41.5	22.4
SL11	46.3	3	+1.0	2.6	43	2.4	17.8	42.1	22.2
Williams	48.5	1	+4.0	1.9	42	1.8	17.8	40.5	22.9
L66L-172	47.4	2	+0.3	1.9	40	2.0	15.6	39.7	22.8
† 123 days after planting									
				1970-73, 4-year mean, Central					
No. of Tests	86	86	73	82	84	82	71	50	50
Calland	45.2	3	+2.1	2.2	42	2.3	17.7	39.9	21.3
Wayne	44.7	4	9-22.6†	2.4	41	2.2	17.3	41.4	21.9
Williams	47.0	1	+3.8	1.8	41	1.8	17.5	40.6	22.5
L66L-172	46.8	2	+0.4	1.8	40	2.0	15.3	39.7	22.4
† 123 days after planting									
				1969-73, 5-year mean, Central					
No. of Tests	116	116	97	107	112	108	97	65	65
Calland	45.5	2	+2.0	2.3	42	2.4	17.5	39.9	21.4
Wayne	45.1	3	9-22.5†	2.4	41	2.2	17.3	41.5	22.0
Williams	47.3	1	+3.5	1.9	41	1.8	17.6	40.7	22.6
† 122 days after planting									
				1973, East Coast					
No. of Tests	5	5	5	5	5	5	5	2	2
Calland	42.5	8	+2.2	2.2	39	2.7	16.4	41.0	20.9
Wayne	44.5	1	9-22.4†	2.3	38	2.2	16.2	42.9	21.5
SL11	43.3	5	+1.6	2.7	39	2.3	17.0	42.6	21.7
Williams	43.7	4	+3.0	1.6	36	1.9	16.8	42.6	21.6
C1504	44.4	2	-0.4	1.6	38	2.4	17.0	39.9	22.5
C1506Y	42.4	9	-0.4	2.2	40	2.2	15.0	40.2	22.3
C1508	44.1	3	-0.6	1.3	38	2.4	15.9	39.4	22.5
L66L-172	42.9	6	+0.4	1.6	37	2.1	14.3	40.6	21.8
L69-20	40.5	10	+3.6	1.8	36	2.5	13.1	42.0	20.6
L69D-227	42.8	7	-1.8	1.7	39	2.6	20.4	43.2	21.8
† 108 days after planting									

Disease Data

Strain	BB	BP					BS	DM			FE_2	PM
	Ames Iowa	Urbana Ill.		Gir. Ill.	Bellv. Ill.	Ames Iowa	Ames Iowa	Worth. Ind.	Edge. Ill.	Eld. Ill.	Laf. Ind.	Harrow Ontario
	n	a	n	n	n	n a	n	n	n	n	a	a
Calland	1	2	4.0	3.0	3.7	1 3	2	3	2.6	2.9	5	R
Wayne	1	1	1.0	1.0	1.0	1 1	4	4	4.0	4.8	3	R
SL11	1	1	1.0	1.0	1.0	1 1	2	1	1.0	1.0	3	R
Williams	3	1	1.0	1.0	1.0	1 1	4	4	4.0	4.0	5	R
C1504	3	3	3.7	3.0	3.3	4 3	4	4	2.9	4.3	1	R
C1506Y	4	4	4.1	3.2	4.7	3 4	5	3	2.8	3.3	1	R
C1508	3	2	3.7	3.0	3.3	1 3	4	3	3.4	4.1	5	R
L66L-172	1	1	1.0	1.0	1.0	1 1	3	4	4.0	3.8	5	R
L69-20	1	1	1.0	1.0	1.0	1 1	2	4	3.8	4.3	5	S
L69D-227	3	2	3.6	3.5	4.0	4 4	4	4	3.8	4.0	4	S

Strain	BSR					CR				PR			Pyu	PS
	Laf. Ind.	Urb. Ill.		Lamb. Minn.	Ames Iowa	Laf. Ind.	Girard Ill.	Edgewood Ill.	Eld. Ill.	Laf. Ind.	Ames Iowa	Stnv. Miss.	Laf. Ind.	Queens. Md.
	n %	n	%	n %	% stem*	n %	n	n	n	a	a	n	a	n %
Calland	0	3	90	100	90	100	4.4	3.1	4.4	R	R	1	S	1
Wayne	63	3	80	90	84	100	3.0	2.2	2.3	S	S	1	S	1
SL11	60	4	90	90	76	100	3.2	2.7	2.4	R	R	1	S	3
Williams	19	4	80	90	97	100	2.9	1.7	2.3	S	S	1	S	1
C1504	44	4	50	95	80	100	3.8	3.9	4.7	R	R	1	S	3
C1506Y	59	4	60	100	79	100	4.0	2.0	3.1	R	R	1	S	3
C1508	50	4	70	100	93	100	3.7	3.2	3.5	R	R	1	S	0
L66L-172	79	4	100	100	86	93	3.3	2.3	3.4	S	S	1	S	0
L69-20	68	4	80	100	83	100	4.0	3.3	4.0	S	H	1	S	0
L69D-227	74	4	90	95	88	100	1.7	1.7	2.0	S	S	1	S	0

* All plants were infected

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis			Fluor-escent Light	Hypo-cotyl	Perox-idase	Shattering		
		Crstn. Minn.	Lamb. Minn.	Ames Iowa				Stnv. Miss.	Manhat. Kansas	Lubbock Texas
Calland	PTNBr DYBl	4.0	2.3	4	L	1	L	1.5	2.0	3.0
Wayne	WTNBr SYBl	5.0	4.3	4	L	1	L	3.0	1.5	4.2
SL11	WTNBr SYBr	5.0	4.3	5	L	2	L	2.0	1.5	4.5
Williams	WTNTn SYLbl	2.5	3.7	4	L	4	H	1.0	1.0	1.8
C1504	WGNTn SYBf	2.0	4.7	5	L	3	H	2.5	2.0	5.0
C1506Y	WGNTn SYY	3.8	3.0	4	L	5	H	2.0	1.5	3.0
C1508	PGNTn SYIb	2.0	3.0	4	L	5	L	2.0	1.5	2.5
L66L-172	WTNTn DYBl	3.0	3.3	4	L	5	L	1.5	1.0	5.0
L69-20	PTNBr DYBr	3.0	4.7	5	L	3	L	1.0	1.0	2.8
L69D-227	PGNBr DYY	2.0	3.3	5	L	2	L	4.5	4.0	5.0

Strain	East Coast Mean	Penn. Landis-ville	N.J. Adel-phia	Maryland Hamp-stead	Maryland Belts-ville	Maryland Queens-town B	Cen-tral Mean	Ohio Hoyt-ville	Ohio Woos-ter	Ohio Col-umbus	Ind. Bluff-ton
	5 Tests	1973 YIELD (bu/a)					22 Tests				
								*	*	*	
Calland	42.5	46.1	33.2	50.3	53.0	30.1	45.3	22.7	35.9	41.8	51.5
Wayne	44.5	48.5	36.5	53.7	48.8	34.9	44.5	27.2	43.0	42.5	54.0
SL11	43.3	43.9	33.9	53.4	50.3	35.1	45.6	29.0	38.6	39.1	58.2
Williams	43.7	47.3	33.2	52.7	53.8	31.5	47.8	27.2	37.1	39.3	56.2
C1504	44.4	44.7	38.2	58.4	50.3	30.2	44.5	26.2	30.5	42.6	59.8
C1506Y	42.4	45.6	38.3	48.0	51.0	28.9	44.4	28.3	31.9	49.2	55.4
C1508	44.1	45.6	39.5	50.5	52.9	31.9	45.1	22.7	36.0	42.8	57.7
L66L-172	42.9	47.5	35.2	46.9	51.7	33.2	46.9	24.1	37.3	44.0	52.4
L69-20	40.5	45.3	32.3	45.1	52.0	28.0	45.0	25.4	27.1	41.9	55.3
L69D-227	42.8	45.5	39.8	49.6	46.9	32.1	41.2	26.0	36.8	40.3	50.7
C.V. (%)		8.3	9.5	10.5	5.0	14.2					7.4
L.S.D. (5%)		n.s.	6.2	8.2	n.s.	7.6					7.0
Row Sp. (in.)		30	30	20	40	30		32	32	28	30
Rows/Plot		3	3	5	4	4		3	3	3	3
Reps		4	4	3	3	3		4	4	4	3
		YIELD RANK									
Calland	8	4	8-9	6	2	8	4	9-10	7	7	9
Wayne	1	1	5	2	9	2	7-8	3-4	1	5	7
SL11	5	10	7	3	7-8	1	3	1	2	10	2
Williams	4	3	8-9	4	1	6	1	3-4	4	9	4
C1504	2	9	4	1	7-8	7	7-8	5	9	4	1
C1506Y	9	5-6	3	8	6	9	9	2	8	1	5
C1508	3	5-6	2	5	3	5	5	9-10	6	3	3
L66L-172	6	2	6	9	5	3	2	8	3	2	8
L69-20	10	8	10	10	4	10	6	7	10	6	6
L69D-227	7	7	1	7	10	4	10	6	5	8	10
	19 Tests	1970-73, 4-YEAR MEAN YIELD					86 Tests				
		71-73				71-73					
Calland	42.1	46.4	36.1			35.1	45.2	25.8		50.1	50.7
Wayne	39.4	46.0	33.4			36.0	44.7	30.2		48.7	50.4
Williams	42.1	45.5	37.0			34.7	47.0	31.4		50.4	50.8
L66L-172	39.8	45.2	33.9			33.2	46.8	28.2		46.4	50.8
		YIELD RANK									
Calland	1-2	1	2			2	3	4		2	3
Wayne	4	2	4			1	4	2		3	4
Williams	1-2	3	1			3	1	1		1	1-2
L66L-172	3	4	3			4	2	3		4	1-2

* Not included in the mean

Indiana				Ky.
Lafayette	Greenfield	Worthington	Evansville	Henderson
1973 YIELD (bu/a)				
49.2	54.2	42.3	44.2	59.2
54.0	46.9	45.5	39.4	52.1
50.6	50.1	47.5	47.6	55.0
56.8	50.1	43.7	42.9	54.0
51.4	50.8	38.5	40.6	54.2
53.5	55.0	41.3	39.7	51.5
51.1	48.3	41.7	40.1	54.9
54.9	51.8	46.5	39.6	55.6
48.6	50.1	41.9	37.8	50.0
49.1	41.9	44.0	37.7	51.2
5.3	5.6	8.5	10.8	11.5
4.8	4.8	6.3	7.6	9.0
30	38	38	40	30
3	3	3	3	3
3	3	3	3	4
YIELD RANK				
8	2	6	2	1
3	9	3	8	7
7	5-7	1	1	3
1	5-7	5	3	6
5	4	10	4	5
4	1	9	6	8
6	8	8	5	4
2	3	2	7	2
10	5-7	7	9	10
9	10	4	10	9
4-YEAR MEAN YIELD				
45.3	44.5	44.9	42.8	53.8
48.8	39.3	45.8	41.6	50.6
50.7	42.4	48.8	44.3	54.3
50.4	42.6	51.2	39.5	52.5
YIELD RANK				
4	1	4	2	2
3	4	3	3	4
1	3	2	1	1
2	2	1	4	3

Illinois				
Urbana	Girard	Edgewood	Belleville	Eldorado
1973 YIELD (bu/a)				
54.0	38.6	42.3	55.1	33.3
51.5	45.4	39.9	57.9	30.1
56.7	44.3	41.1	58.7	28.4
56.8	45.4	42.3	59.6	37.0
54.5	38.5	33.0	52.3	29.3
52.7	37.1	38.0	51.7	30.5
57.1	40.3	38.5	56.4	27.7
54.9	44.0	47.1	57.5	29.1
59.7	41.7	40.7	56.0	29.1
49.6	39.1	34.4	48.8	25.6
7.3	4.1	13.3	8.2	12.4
6.9	2.9	9.1	7.8	6.4
30	36	38	30	30
4	4	4	4	4
3	3	3	3	3
YIELD RANK				
7	8	2-3	7	2
9	1-2	6	3	4
4	3	4	2	8
3	1-2	2-3	1	1
6	9	10	8	5
8	10	8	9	3
2	6	7	5	9
5	4	1	4	6-7
1	5	5	6	6-7
10	7	9	10	10
4-YEAR MEAN YIELD				
			b	
53.3	43.2	45.5	49.5	48.4
50.5	49.0	45.3	49.3	43.1
55.8	48.3	46.5	52.6	50.0
56.0	47.9	46.3	51.3	45.8
YIELD RANK				
3	4	3	3	2
4	1	4	4	4
2	2	1	1	1
1	3	2	2	3

[b] Trenton in 1970

Ill.	Iowa		Missouri			S.Dak.	Nebraska		Kansas			
Carbon-dale	Stuart	Ottum-wa	Spick-ard	Colum-bia	Mt. Vernon	Elk Point	Mead I	Clay Center I	Pow-hattan	Manhat-tan I	Ot-tawa	Col-umbus
						1973 YIELD (bu/a)						
					*							*
38.3	35.8	46.5	43.2	44.7	36.7	40.3	47.8	53.7	39.6	55.7	27.6	4.5
28.9	39.8	43.4	41.5	48.4	34.7	41.3	41.8	51.4	43.8	49.0	32.9	6.7
33.6	39.6	47.4	42.7	45.9	42.7	36.0	40.6	55.9	43.6	50.8	28.9	7.5
36.9	40.3	52.5	47.0	48.1	39.8	39.4	46.1	57.8	48.7	59.7	31.0	5.7
32.8	40.2	45.0	46.1	47.1	31.3	38.1	44.1	55.8	44.8	51.1	30.8	3.9
30.9	40.0	42.7	41.4	47.9	32.6	37.6	48.1	63.0	42.1	45.7	30.7	5.2
27.5	40.8	47.0	46.3	51.8	26.8	38.6	44.9	53.0	45.1	52.2	31.8	6.3
30.0	41.3	49.5	45.3	43.7	31.7	44.7	49.3	60.7	45.0	56.2	31.7	6.2
29.1	42.0	50.9	41.8	39.8	41.5	43.7	43.3	56.2	45.6	57.1	30.1	5.6
23.3	38.8	41.1	41.4	44.8	32.5	34.7	40.3	58.3	42.7	40.6	28.1	8.3
11.2	4.6	8.3	10.5	9.8	19.1	7.6	8.3	6.6	7.9	8.5	10.1	21.9
6.0	2.7	5.6	6.7	6.5	9.0	6.3	6.4	6.4	n.s.	7.5	n.s.	2.2
30	27	27	15	15	15	30	30	30	30	30	30	30
4	4	4	4	4	4	4	4	4	4	4	4	4
3	4	4	4	4	4	3	3	3	3	3	3	3
						YIELD RANK						
1	10	6	5	8	4	4	3	8	10	4	10	9
8	7	8	8	2	5	3	8	10	6	8	1	3
3	8	4	6	6	1	9	9	6	7	7	8	2
2	4	1	1	3	3	5	4	4	1	1	4	6
4	5	7	3	5	9	7	6	7	5	6	5	10
5	6	9	9-10	4	6	8	2	1	9	9	6	8
9	3	5	2	1	10	6	5	9	3	5	2	4
6	2	3	4	9	8	1	1	2	4	3	3	5
7	1	2	7	10	2	2	7	5	2	2	7	7
10	9	10	9-10	7	7	10	10	3	8	10	9	1
						1970-73, 4-YEAR MEAN YIELD						
45.1	38.2	45.5	38.4		39.0	34.5	45.9		42.4	69.1	38.3	14.8
38.2	38.9	46.3	38.9		42.2	35.5	46.6		41.4	61.6	41.2	17.0
46.4	40.6	49.4	41.2		42.9	32.1	44.0		45.3	68.2	41.4	18.6
41.7	40.7	49.3	39.2		42.4	37.9	47.2		43.2	68.9	41.7	15.6
						YIELD RANK						
2	4	4	4		4	3	3		3	1	4	4
4	3	3	3		3	2	2		4	4	3	2
1	2	1	1		1	4	4		1	3	2	1
3	1	2	2		2	1	1		2	2	1	3

Strain	East Coast Mean	Penn. Landis-ville	N.J. Adel-phia	Maryland Hamp-stead	Maryland Belts-ville	Maryland Queens-town B	Cen-tral Mean	Ohio Hoyt-ville	Ohio Woos-ter	Ohio Col-umbus	Ind. Bluff-ton
	5 Tests	MATURITY (relative date)					19 Tests				
								*	*	*	
Calland	+2.2	+2	-1	-1	+6	+5	+2.2	+1	0	-1	-1
Wayne†	9-22.4	9-20	9-14	9-30	9-22	9-26	9-24.3	10-16	10-6	10-5	9-29
SL11	+1.6	+2	+1	0	+2	+3	+1.0	0	0	-1	+1
Williams	+3.0	+4	+5	0	+5	+1	+4.5	+2	0	+4	+3
C1504	-0.4	0	-1	-2	-1	+2	-1.6	+2	0	-3	-2
C1506Y	-0.4	0	-3	-1	+2	0	+1.3	+3	0	-1	+1
C1508	-0.6	-1	-1	-2	+1	0	+0.5	+2	0	+1	+1
L66L-172	+0.4	0	0	0	0	+2	+0.8	0	0	+3	+1
L69-20	+3.6	+4	+6	0	+6	+2	+6.2	+2	0	+6	+2
L69D-227	-1.8	-3	-2	-1	-5	+2	-4.2	0	-11	-4	-2
Beeson (II)		-8	-5	-8	-4			-2	-16	-27	-9
Cutler71(IV)	+9.4	+14	+10	+4	+9	+10				+2	
Date Planted	6-7	6-2	5-30	6-4	6-4	6-24	5-28	6-20	5-17	5-21	5-16
†Days to Mat.	108	110	107	118	110	94	119	118	142	137	136
	5 Tests	LODGING (score)					22 Tests				
								*	*	*	
Calland	2.2	2.2	1.4	1.3	3.0	3.0	2.1	1	2.5	1	3.8
Wayne	2.3	2.4	1.6	1.3	3.0	3.0	2.2	1	2.5	1	4.0
SL11	2.7	3.1	1.6	1.7	3.0	4.0	2.6	1	2.5	1	4.7
Williams	1.6	1.9	1.0	1.0	2.7	1.6	1.7	1	1.7	1	3.2
C1504	1.6	1.5	1.6	1.0	2.0	2.0	1.7	1	1.5	1	2.8
C1506Y	2.2	2.1	1.5	2.0	3.0	2.6	2.1	1	2.2	1	3.5
C1508	1.3	1.0	1.1	1.0	2.0	1.3	1.5	1	1.0	1	2.2
L66L-172	1.6	1.8	1.1	1.0	2.0	2.0	1.7	1	1.7	1	3.0
L69-20	1.8	2.5	1.0	1.0	3.3	1.0	2.2	1	2.7	1	3.5
L69D-227	1.7	1.2	1.4	1.0	2.7	2.0	2.0	1	2.7	1	3.7
	5 Tests	PLANT HEIGHT (inches)					22 Tests				
								*	*	*	
Calland	39	37	41	35	45	35	42	27	33	36	46
Wayne	38	37	41	34	43	36	41	25	34	37	43
SL11	39	38	41	34	43	37	43	27	35	37	46
Williams	36	34	39	30	41	36	41	26	34	36	43
C1504	38	39	44	33	45	30	41	26	34	36	45
C1506Y	40	41	45	33	47	33	43	28	37	40	49
C1508	38	37	42	31	45	33	40	23	32	34	41
L66L-172	37	37	40	33	39	36	39	24	31	34	40
L69-20	36	36	37	29	42	35	38	25	33	33	43
L69D-227	39	40	44	31	45	33	43	28	37	39	43

Indiana				Ky.
Lafayette	Greenfield	Worthington	Evansville	Henderson
	MATURITY (relative date)			*
0	+1	+1	+2	
9-24	10-6	9-18	9-29	
0	+1	+2	-1	
+2	+4	+6	+2	
-3	-2	+2	+2	
0	+2	+1	+2	
-4	-1	0	+2	
0	+1	0	-1	
+3	+4	+6	+3	
-5	-3	-3	0	
-10	-11	-6		
+6		+7	+6	
5-21	6-11	6-8	6-26	6-12
126	117	102	95	
	LODGING (score)			
1.8	2.5	2.2	1.2	1.8
2.0	2.2	2.8	1.0	1.9
2.7	2.5	2.3	1.5	1.8
2.2	1.8	1.7	1.0	1.6
1.3	1.7	1.7	1.0	2.0
2.2	2.0	2.3	1.0	2.4
1.3	1.2	1.7	1.0	1.2
2.0	1.5	1.7	1.0	1.4
3.8	2.2	1.8	1.0	2.2
1.7	1.3	2.0	1.0	1.9
	PLANT HEIGHT (inches)			
43	42	40	36	43
43	36	38	34	42
44	38	40	39	46
44	39	35	33	42
41	42	36	36	44
45	43	42	36	44
41	40	40	33	41
44	38	36	34	40
42	36	33	30	39
45	42	42	35	44

Illinois				
Urbana	Girard	Edgewood	Belleville	Eldorado
	MATURITY (relative date)			
+3	0	+6	+4	+6
9-25	9-19	9-23	9-19	9-22
+2	0	0	+2	+1
+6	+4	+4	+5	+4
-4	-10	0	-2	-2
+2	-4	+1	+1	-1
-1	-5	0	0	-1
+2	0	+2	+2	0
+5	+4	+4	+7	+2
-7	-11	-3	-7	-6
-10	-12	-7	-7	-6
+8	+6	+9	+11	+8
5-17	5-31	6-14	5-24	6-15
131	111	101	118	99
	LODGING (score)			
2.1	2.2	1.4	2.6	1
2.7	2.2	1.5	3.2	1
3.5	2.5	1.5	3.2	1
1.9	1.5	1.2	1.7	1
1.5	1.8	1.1	1.2	1
3.0	2.3	1.5	2.1	1
1.5	1.5	1.0	1.1	1
1.8	1.7	1.5	2.4	1
2.1	2.2	1.0	2.0	1
2.7	2.2	1.0	1.5	1
	PLANT HEIGHT (inches)			
48	43	35	41	31
46	43	35	41	30
48	44	35	44	31
49	45	34	40	32
48	44	35	40	31
53	44	37	43	30
48	42	35	38	26
47	44	35	39	30
44	42	34	40	28
50	44	34	41	30

Ill.	Iowa		Missouri			S.Dak.	Nebraska		Kansas			
Carbon-dale	Stuart	Ottum-wa	Spick-ard	Colum-bia	Mt. Vernon	Elk Point	Mead I	Clay Center I	Pow-hattan	Manhat-tan I	Ot-tawa	Col-umbus
MATURITY (relative date)												
		*	*		*							*
+7	+1			0		+5	+2	+3	+2	-1	0	+6
9-20	9-30			9-6		10-6	10-5	10-5	9-25	9-23	9-8	9-17
+4	0			-1		+1	+1	+2	+2	0	+2	+2
+6	+5			+4		+4	+4	+6	+5	+3	+8	+7
+2	0			-4		-1	+1	+2	+2	-13	+1	-2
+2	+4			-3		+2	+1	+7	+3	-1	+4	-3
+1	0			-3		+4	+2	+8	+3	0	+3	0
+1	-2			+1		+1	+1	+1	+1	-1	+5	+2
+3	+6			+5		+4	+7	+6	+6	+1	+8	+5
-2	-4			-4		-2	-2	+1	-1	-18	0	-1
	-8			-6		-3	-4	-3	-12	-16	-7	
+10	+7			+5			+7	+10	+9	+8	+12	+9
6-18	5-17	5-23	5-11	5-17	6-1	5-22	5-31	5-22	5-17	5-9	5-16	6-8
94	136			112		137	127	136	131	137	115	101
LODGING (score)												
					*							*
1	2.6	4.0	2.9	1.1	1	1.5	2.4	4.0	1.5	2.3	1	1
1	2.5	3.7	2.3	1.6	1	1.8	2.6	3.7	1.9	2.8	1	1
1	3.0	4.0	2.9	1.9	1	2.5	3.0	4.0	2.4	3.4	1	1
1	2.4	3.0	1.6	1.0	1	1.3	1.6	2.7	1.9	1.8	1	1
1	2.2	3.8	2.2	1.3	1	1.0	1.8	2.3	1.7	1.3	1	1
1	2.5	4.0	1.9	1.6	1	1.7	2.4	3.3	2.1	2.2	1	1
1	2.1	3.2	1.9	1.0	1	1.5	2.0	2.3	1.1	1.7	1	1
1	2.1	3.0	2.1	1.1	1	1.7	1.3	2.3	1.5	2.0	1	1
1	2.6	3.2	2.6	2.4	1	1.8	1.9	4.0	2.2	3.8	1	1
1	2.5	3.6	2.8	1.0	1	2.0	2.2	3.3	2.3	2.3	1	1
PLANT HEIGHT (inches)												
					*							*
29	48	48	44	38	28	33	45	48	44	49	43	23
26	48	44	43	38	29	33	46	49	45	49	39	24
28	58	45	45	39	30	33	47	49	46	49	42	24
27	48	48	47	37	29	32	48	46	44	51	41	23
25	48	47	44	38	28	35	45	45	46	50	36	22
22	51	46	48	39	29	38	48	51	48	55	39	23
21	47	45	44	36	28	33	47	44	47	47	38	21
23	43	43	46	36	29	29	45	41	42	50	41	24
22	42	42	42	37	27	31	45	43	40	49	38	22
23	52	46	47	39	31	36	50	50	50	51	42	24

Strain	East Coast Mean	Penn.	N.J.	Maryland			Central Mean	Ohio			Ind.
		Landis-ville	Adel-phia	Hamp-stead	Belts-ville	Queens-town B		Hoyt-ville	Woos-ter	Colum-bus	Bluff-ton
	5 Tests	SEED QUALITY (score)					22 Tests				
								*	*	*	
Calland	2.7	2.5	1.8	3.0	2.7	3.6	2.2	1.8	1.7	1.8	1.5
Wayne	2.2	2.2	1.0	1.7	3.0	3.3	2.1	2.0	1.7	1.8	1.5
SL11	2.3	2.0	1.0	2.7	3.0	3.0	2.2	1.3	1.0	1.3	1.5
Williams	1.9	2.0	1.0	2.3	2.0	2.0	1.6	1.8	1.7	1.8	1.0
C1504	2.4	2.2	1.3	2.7	3.0	3.0	2.5	1.0	1.5	1.8	1.5
C1506Y	2.2	2.0	1.0	2.0	3.0	3.0	2.2	1.0	1.2	1.0	1.5
C1508	2.4	3.0	1.0	2.0	3.0	3.0	2.2	1.3	1.2	1.5	1.5
L66L-172	2.1	2.2	1.0	2.3	2.7	2.3	1.7	2.0	1.7	1.8	1.5
L69-20	2.5	2.8	1.0	2.7	2.7	3.3	2.0	1.8	1.7	1.8	2.0
L69D-227	2.6	2.5	1.0	3.3	3.0	3.0	2.6	1.3	1.5	1.3	2.0
	5 Tests	SEED SIZE (g/100)					19 Tests				
								*	*	*	
Calland	16.4	17.6	15.0	15.3	19.8	14.3	17.3	13.5	17.4	15.6	20.2
Wayne	16.2	17.6	14.6	15.3	19.2	14.3	16.7	12.9	16.1	16.1	18.9
SL11	17.0	17.8	15.2	15.7	19.7	16.6	17.4	13.5	17.8	16.4	20.1
Williams	16.8	17.6	14.6	16.3	19.9	15.6	17.1	14.5	17.4	16.8	20.1
C1504	17.0	17.6	17.0	17.0	18.4	15.0	16.8	13.5	17.7	16.0	19.8
C1506Y	15.0	16.1	13.6	14.0	18.1	13.0	16.2	12.9	16.7	15.4	20.1
C1508	15.9	16.3	15.0	15.3	18.6	14.3	17.3	12.9	15.4	15.5	18.4
L66L-172	14.3	15.3	12.5	13.3	17.2	13.3	14.9	11.9	14.8	14.7	16.7
L69-20	13.1	13.0	11.8	13.3	16.4	11.0	13.9	10.9	13.9	13.5	16.0
L69D-227	20.4	21.7	20.9	19.7	22.1	17.6	20.3	15.1	21.1	19.5	25.0
	2 Tests	PROTEIN (%)					13 Tests				
Calland	41.0		40.8		41.1		40.3			40.1	
Wayne	42.9		42.6		43.1		41.4			42.2	
SL11	42.6		41.8		43.4		42.3			42.6	
Williams	42.6		42.6		42.5		40.8			41.6	
C1504	39.9		39.1		40.6		40.2			39.9	
C1506Y	40.2		40.2		40.1		39.6			39.7	
C1508	39.4		38.8		39.9		39.2			39.5	
L66L-172	40.6		41.2		40.0		39.8			41.3	
L69-20	42.0		42.1		41.8		41.3			42.3	
L69D-227	43.2		43.1		43.2		42.5			42.7	
	2 Tests	OIL (%)					13 Tests				
Calland	20.9		20.7		21.0		21.7			20.7	
Wayne	21.5		21.0		21.9		22.6			21.5	
SL11	21.7		21.4		22.0		22.4			21.2	
Williams	21.6		20.8		22.3		22.9			21.8	
C1504	22.5		22.0		22.9		23.2			22.0	
C1506Y	22.3		21.9		22.6		23.0			21.6	
C1508	22.5		22.3		22.7		23.3			22.0	
L66L-172	21.8		20.7		22.8		22.9			22.1	
L69-20	20.6		19.4		21.8		22.0			20.8	
L69D-227	21.8		21.5		22.1		22.0			20.4	

Indiana				Ky.
Lafayette	Greenfield	Worthington	Evansville	Henderson
SEED QUALITY (score)				
1.5	1.5	2.5	1.5	3
1.5	1.5	2.5	1.5	2
1.5	1.5	2.0	1.5	4
1.5	1.5	1.5	1.5	2
1.5	1.5	2.0	2.0	4
1.0	1.5	2.5	2.0	3
2.0	1.5	2.0	2.0	3
1.5	1.0	1.5	1.5	1
1.5	1.5	2.5	1.5	2
1.5	2.0	2.0	2.0	3
SEED SIZE (g/100)				
17.2	19.2	14.3	18.4	18.9
16.7	16.4	14.4	16.0	17.2
18.4	18.2	15.3	17.7	19.1
17.7	18.9	15.1	16.6	17.7
16.8	19.0	14.4	18.0	18.8
16.9	18.0	14.2	15.9	17.5
18.8	17.8	14.2	17.0	16.7
15.5	14.8	13.0	13.8	15.3
14.0	14.6	11.5	13.6	12.9
22.2	21.1	19.2	20.0	20.4
PROTEIN (%)				
41.3		41.1		40.5
41.9		42.0		41.3
42.7		42.5		41.9
40.8		41.2		42.0
38.8		40.3		40.2
39.5		40.7		39.7
39.4		38.4		37.4
40.5		40.3		39.4
41.1		41.1		41.3
42.3		42.2		42.0
OIL (%)				
21.6		21.6		22.1
22.3		22.6		22.8
22.1		22.4		22.5
23.5		23.4		23.4
23.8		23.0		23.7
21.5		23.1		24.1
23.5		23.9		24.5
22.8		23.2		22.9
22.1		21.3		22.3
22.5		23.2		22.0

Illinois				
Urbana	Girard	Edgewood	Belleville	Eldorado
SEED QUALITY (score)				
1.8	2.5	2.2	2.2	2.3
1.8	2.0	2.3	2.2	3.0
1.8	2.0	2.3	2.0	2.5
1.8	1.0	1.0	1.5	1.8
1.7	2.5	2.3	2.5	3.0
1.5	2.5	1.3	1.5	2.5
1.7	2.0	2.0	2.5	3.0
1.3	1.0	1.0	1.5	2.5
1.5	1.2	1.5	1.3	2.0
2.0	2.2	2.3	2.8	3.0
SEED SIZE (g/100)				
16.7	13.1	15.6	15.7	14.7
17.4	14.1	14.5	16.4	13.6
18.1	13.8	15.3	17.4	14.4
14.6	13.9	15.7	16.4	14.2
16.1	12.5	14.0	15.3	13.4
15.6	11.6	14.1	14.6	12.7
16.9	17.7	14.7	16.7	14.4
15.5	12.2	13.4	14.7	11.4
13.8	11.1	13.2	14.0	10.6
20.0	16.9	18.1	18.9	15.7
PROTEIN (%)				
40.5			40.2	41.2
42.0			40.7	41.4
41.6			41.8	41.8
41.3			40.4	40.8
40.1			39.8	42.3
39.0			39.7	40.2
39.9			39.0	39.2
40.1			40.0	39.6
42.0			39.1	41.3
43.5			43.0	42.9
OIL (%)				
20.8			21.8	21.9
22.3			23.4	23.2
21.9			23.4	23.5
22.6			23.7	24.2
23.1			24.6	23.4
23.1			23.4	24.0
22.1			24.6	24.7
22.5			23.6	23.9
21.1			23.6	22.9
21.1			22.3	22.0

Ill.	Iowa		Missouri			S.Dak.	Nebraska		Kansas			
Carbon-dale	Stuart	Ottum-wa	Spick-ard	Colum-bia	Mt. Vernon	Elk Point	Mead I	Clay Center I	Pow-hattan	Manhat-tan I	Ot-tawa	Colum-bus
					SEED QUALITY (score)							
					*							*
2.0	2.0	1.4	3.0	2.5	1.5	2.0	2.7	1.0	2.4	3.0	4.0	3.3
2.0	2.3	3.0	2.5	2.2	2.2	1.5	2.5	1.7	1.9	2.7	2.9	3.1
2.0	2.3	3.0	2.5	1.5	2.0	1.4	2.5	2.0	2.2	2.8	2.9	3.5
2.0	1.4	1.8	2.0	1.5	2.2	1.2	2.3	1.0	2.0	2.0	2.6	2.3
3.0	3.0	3.3	3.0	2.0	2.5	3.0	3.0	2.0	2.1	3.1	3.9	3.6
2.0	3.0	3.0	2.5	1.2	2.0	1.4	2.5	2.0	2.6	2.9	3.4	3.2
2.0	1.5	2.5	2.5	1.7	3.5	1.8	3.0	1.3	2.3	2.9	3.5	3.3
2.0	2.0	1.2	2.0	1.3	2.0	1.3	2.7	2.0	1.8	2.4	2.9	2.8
2.0	3.0	3.0	2.0	2.0	2.0	1.7	2.7	1.3	1.9	2.5	3.1	3.4
3.0	3.0	1.5	3.5	2.5	2.5	2.8	3.2	3.0	2.6	3.2	3.7	3.1
					SEED SIZE (g/100)							
												*
18.1		17.7				18.8	18.5	21.0	18.1	18.0	14.5	13.4
15.6		17.7				17.8	18.4	21.1	17.3	18.7	14.2	12.3
15.6		17.2				18.1	19.5	21.4	17.9	19.5	14.1	12.1
16.7		17.9				18.6	19.0	20.5	18.5	18.7	14.7	12.4
16.4		17.7				18.2	18.9	20.3	17.7	17.5	14.1	11.4
15.0		16.6				17.0	18.3	20.5	16.9	17.7	13.9	11.4
16.5		17.8				17.2	19.4	19.0	18.4	21.3	15.0	12.7
14.2		15.4				15.7	17.1	17.5	15.8	17.2	13.3	10.7
12.5		14.8				15.6	15.6	16.4	15.2	16.9	11.5	10.3
17.8		20.9				21.5	23.5	25.6	22.2	20.2	17.4	15.1
					PROTEIN (%)							
		39.0		40.0		39.3	40.0		40.6	40.0		
		41.3		40.4		40.2	41.3		42.3	41.7		
		42.1		41.5		41.1	42.7		43.9	43.5		
		40.8		40.1		41.3	40.0		40.7	39.8		
		40.2		39.5		39.8	39.1		41.8	40.5		
		37.8		39.9		39.3	39.3		41.1	39.4		
		39.0		39.4		38.1	39.2		40.3	40.5		
		39.4		39.4		38.8	38.9		40.9	39.0		
		40.7		42.0		41.0	40.3		44.4	40.6		
		42.1		41.5		42.3	42.0		42.3	43.1		
					OIL (%)							
		21.3		21.4		21.1	22.0		22.6	22.8		
		23.1		21.4		21.8	23.0		23.0	23.7		
		22.2		21.5		21.4	22.8		22.6	23.2		
		21.9		21.6		21.7	22.7		23.8	23.7		
		21.4		22.6		21.6	23.7		23.7	24.6		
		22.5		22.9		21.4	23.5		23.4	24.3		
		21.7		22.5		22.1	23.1		24.6	24.2		
		22.7		22.1		21.8	22.8		23.6	24.3		
		21.5		20.9		21.2	22.0		22.7	23.3		
		21.6		21.6		21.0	22.2		22.8	23.7		

Strain		Parentage	Line
1.	Calland		
2.	Wayne		
3.	Williams		
4.	A72-407	Corsoy x Wayne	F_5
5.	A72-413	"	"5
6.	A72-417	"	"
7.	A72-423	Amsoy x Wayne	"
8.	A72-425	"	"
9.	A72-428	"	"
10.	A72-431	"	"
11.	A72-507	"	"
12.	A72-509	"	"
13.	A72-510	"	"
14.	A72-513	Hark x Wayne	"
15.	A72-520	"	"
16.	A72-522	"	"
17.	A72-523	"	"
18.	A72-525	"	"
19.	C1514	C1432(C1253 x Kent) x C1430(C1253 x Kent)	F_7
20.	C1515	"	"7
21.	C1516	"	"
22.	C1517	C1430 x C1436(C1253 x Kent)	"
23.	L67U175-18-13	Chippewa 64 x Corsoy	F_7
24.	L67U181-6-18	"	"7
25.	L69U-116	"	F_5
26.	L70-522	R64-500(Hill-*Rps*) x L66-531(Clark-*dt*$_1$ *E*$_1$ *t* *e*$_2$)	F_4
27.	L70-548	"	"4
28.	L70L-2755	Wayne-Rps(L15) x Delmar	F_5
29.	L70U35-4	Corsoy x L62-1251(Clark-*Dt*$_2$)	F_3
30.	L70U-517	Chippewa 64 x Corsoy	F_6
31.	L70U-539	"	"6
32.	L70U-578	"	"
33.	L70U-1409	"	"
34.	L71U54-6	L65-1324(Wayne^2 x Clark-*e*$_2$) x Kent-*Rps rxp* (SL5)	F_3

This test was characterized by a large number of strains outyielding the check varieties, notably the Iowa selections from Amsoy x Wayne and Hark x Wayne. Only one was as lodging resistant as Williams and none had as high seed quality but they were as good as Calland and Wayne in plant and seed traits. Because of their high yield several of these should be advanced to the Uniform Test. C1515 was also high yield and quite early in maturity. The remaining strains were below the checks in yield including the two determinate (L70-522 and 548) and one semi-determinate entries. The determinate lines showed no advantage in lodging resistance but were among the very best in average seed quality.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
No. of Tests	9	9	9	10	10	10	8	6	6
Calland	44.0	22	+0.9	2.4	45	2.5	16.7	40.3	21.7
Wayne	45.2	15	9-22.9	2.4	42	2.4	17.0	41.7	22.7
Williams	46.7	10	+4.3	1.7	42	1.7	17.2	41.1	23.0
A72-407	46.3	12	+2.8	2.6	45	1.7	13.2	41.8	21.6
A72-413	46.9	9	+1.2	3.4	46	1.8	14.0	41.3	21.2
A72-417	44.4	20	-0.4	3.0	46	2.2	14.2	41.1	22.4
A72-423	43.3	26	+3.6	2.0	39	2.6	16.5	41.3	22.7
A72-425	46.2	13	+0.7	3.1	44	2.8	16.2	39.4	23.7
A72-428	46.4	11	+1.0	2.6	48	2.8	16.1	40.3	23.5
A72-431	48.0	8	+3.0	3.5	48	2.2	13.7	40.3	22.7
A72-507	49.6	1	+1.8	2.3	41	2.5	17.2	40.8	22.9
A72-509	48.4	6	+1.3	2.5	41	2.2	17.2	41.3	23.0
A72-510	48.9	3	+0.1	2.2	40	2.4	17.1	40.8	22.9
A72-513	48.8	4	-1.6	1.6	38	2.3	15.5	41.4	22.8
A72-520	49.0	2	+5.2	2.7	43	2.2	15.9	41.4	22.8
A72-522	45.0	17	-3.6	2.9	41	2.3	16.0	40.0	24.5
A72-523	45.4	14	-3.0	3.1	44	2.2	15.6	40.2	23.9
A72-525	48.3	7	-0.7	2.5	38	2.5	15.9	39.7	23.2
C1514	44.7	18	-3.8	1.7	39	2.5	16.9	40.9	23.4
C1515	48.5	5	-2.8	1.4	39	2.4	17.8	40.9	23.1
C1516	44.5	19	0.0	1.7	43	2.3	18.4	42.6	22.7
C1517	45.1	16	+2.3	2.3	44	2.0	14.9	41.7	22.0
L67U175-18-13	38.1	33	-7.6	3.5	43	2.6	13.8	41.2	22.3
L67U181-6-18	43.7	24-25	-3.1	3.0	42	2.9	17.0	41.0	22.2
L69U-116	40.1	30-31	-2.9	3.0	45	2.5	13.9	40.9	22.6
L70-522	41.0	29	+4.4	2.4	37	1.7	14.0	40.8	21.5
L70-548	41.3	28	+4.8	2.2	35	1.7	15.2	40.2	22.0
L70L-2755	44.3	21	+5.7	2.3	42	2.0	17.2	41.1	22.5
L70U35-4	43.7	24-25	+1.6	2.0	31	2.2	14.9	40.2	22.9
L70U-517	40.1	30-31	-3.9	2.7	45	2.3	14.1	40.7	22.4
L70U-539	42.6	27	-4.6	2.5	41	2.2	13.1	39.6	22.7
L70U-578	38.3	32	-3.4	3.2	42	3.0	13.1	40.0	22.9
L70U-1409	36.5	34	-4.3	3.4	43	2.2	12.7	40.6	22.3
L71U54-6	43.8	23	+6.0	2.4	41	2.4	17.5	41.5	22.9

Disease Data

Strain	BP		DM	FE_2	BSR				CR		PR			Pyu
	Urb. Ill.	Gir. Ill.	Worth. Ind.	Laf. Ind.	Laf. Ind.	Urb. Ill.	Ames Iowa		Laf. Ind.	Gir. Ill.	Laf. Ind.	Ames Iowa	Stnv. Miss.	Laf. Ind.
	a	n	n	a	n %	n %	n % stem*		n %	n	a	a	n	a
Calland	1	3.2	3	5	0	4 80	91		100	3.7	R	R	1.0	S
Wayne	1	1.0	4	3	63	4 80	92		100	3.0	S	S	1.0	S
Williams	1	1.0	4	5	19	4 50	92		100	3.4	S	S	1.0	S
A72-407	1	1.0	3	4	85	4 100	91		100	3.5	S	H	1.0	S
A72-413	2	3.2	3	4	72	4 80	95		100	2.4	S	H	1.0	S
A72-417	3	3.2	2	4	100	4 70	86		94	3.5	S	S	2.0	H
A72-423	4	3.0	2	5	100	4 80	86		100	3.9	S	S	1.0	H
A72-425	1	1.0	3	4	95	4 100	89		100	4.0	S	H	1.0	H
A72-428	1	1.0	4	5	90	4 80	84		100	4.5	S	S	1.0	S
A72-431	1	1.9	4	5	100	4 70	72		100	4.0	S	S	3.0	H
A72-507	2	3.0	3	5	55	4 90	76		100	3.5	S	S	2.5	S
A72-509	3	3.0	3	5	35	4 70	87		100	3.3	S	H	1.0	S
A72-510	3	3.7	4	5	59	4 50	83		100	3.5	S	H	1.0	S
A72-513	3	3.5	4	5	16	4 50	82		94	2.5	S	H	1.0	S
A72-520	3	3.2	2	5	45	4 50	90		100	3.0	S	S	1.0	S
A72-522	2	4.0	4	4	13	3 20	53		100	3.5	S	S	1.0	S
A72-523	3	3.5	3	5	0	3 20	54		100	4.2	S	S	1.0	S
A72-525	1	1.0	4	5	24	3 50	91		58	2.4	S	S	1.0	S
C1514	2	3.0	2	1	41	3 50	74		100	3.5	R	R	1.0	S
C1515	1	3.0	3	5	50	3 70	92		100	3.2	R	R	1.0	S
C1516	3	3.5	3	1	84	3 80	91		29	3.0	R	R	1.0	S
C1517	3	3.0	3	5	7	3 50	90		87	3.5	R	R	1.0	S
L67U175-18-13	3	3.0	5	5	8	3 50	75		50	4.0	R	R	3.0	H
L67U181-6-18	3	3.0	2	5	19	3 60	81		22	4.2	S	H	1.0	H
L69U-116	3	3.5	3	5	46	3 70	78		25	3.9	S	H	1.0	S
L70-522	1	1.0	5	5	62	3 50	88		50	3.7	H	H	1.0	S
L70-548	2	4.2	3	5	42	4 40	98		61	2.7	R	R	1.0	S
L70L-2755	3	3.5	5	2	100	4 50	97		56	2.9	R	R	1.0	S
L70U35-4	3	3.0	4	4	65	3 40	99		75	1.9	S	S	1.0	S
L70U-517	3	3.5	4	5	4	3 70	90		75	4.0	S	H	1.0	S
L70U-539	3	3.5	4	5	16	3 50	80		76	4.0	S	H	1.0	S
L70U-578	4	3.2	3	5	15	4 70	90		71	3.5	S	S	1.0	H
L70U-1409	3	3.5	2	5	0	4 50	78		83	3.9	R	R	1.0	S
L71U54-6	3	1.0		4	18	4 70	90		92	3.7	S	H	1.0	S

* All plants were infected

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis	Shattering	
			Ames Iowa	Stoneville Miss.	Manhattan Kansas
Calland	PTNBr	DYBl	4	1.0	1.5
Wayne	WTNBr	SYBl	4	3.0	1.5
Williams	WTNTn	SYLbl	4	1.0	1.0
A72-407	PGNBr	DYBf	5	1.0	3.0
A72-413	PTNBr	DYBr	4	2.0	2.5
A72-417	PTNBr	DYBr	4	3.5	1.5
A72-423	PTNBr	SYG	5	1.5	2.0
A72-425	PGNBr	DYY+G	5	1.0	1.5
A72-428	WTNBr	IYBr	5	3.0	1.5
A72-431	WTNTn	SYY	4	2.5	1.0
A72-507	PGNBr	SYY	5	1.0	1.5
A72-509	W+PGNBr	SYY	5	2.5	1.5
A72-510	W+PGNBr	SYY	5	1.0	1.0
A72-513	WTNBr	DYBr	5	2.5	1.0
A72-520	WTNBr	SYBr	5	1.0	2.0
A72-522	PTNBr	DYBl	5	2.5	1.0
A72-523	PTNBr	SYBl	5	2.5	2.0
A72-525	WGNBr	DYBf	4	2.5	1.0
C1514	PTNBr	IYBl	5	3.5	2.0
C1515	PTNBr	IYBl	5	3.0	2.5
C1516	PTNBr	DYBl	5	3.0	2.0
C1517	PTNTn	DYBl	4	1.0	1.0
L67U175-18-13	PTNBr	SYG	5	1.0	1.0
L67U181-6-18	PTNBr	SYBl	5	1.0	2.0
L69U-116	PTNBr	DYBl+Br	4	1.0	1.0
L70-522[a]	W+PGNTn	SYBf	5	1.0	1.0
L70-548[a]	PGNTn	SYBf	5	1.0	1.0
L70L-2755	WGNBr	S+DYY	5	1.0	1.0
L70U35-4[b]	PGNBr	DYBf+G+Y+Ibl	5	1.0	1.0
L70U-517	PTNBr	DYBr	4	1.0	1.0
L70U-539	PTNBr	DYBr	5	3.0	2.0
L70U-578	PTNBr	DYY	5	1.0	1.0
L70U-1409	PTNBr	SYBr	5	2.0	1.0
L71U54-6	PTNBr	DYBl	5	2.0	2.0

[a] Determinate

[b] Semi-determinate

Strain	Mean	Md. Belts-ville	Ohio Col-umbus	Indiana Lafay-ette	Indiana Worth-ington	Ill. Gi-rard	Iowa Stuart	Iowa Ot-tumwa	Mo. Colum-bia	Neb. Mead I	Kansas Manhat-tan I
	9 Tests			YIELD (bu/a)							
			*								
Calland	44.0	47.5	34.1	53.4	38.3	37.4	39.2	40.6	42.5	41.8	54.9
Wayne	45.2	47.6	36.9	49.8	42.9	45.3	40.6	42.4	46.1	40.7	51.8
Williams	46.7	49.9	26.9	59.8	37.5	42.0	39.6	46.7	46.0	46.2	52.5
A72-407	46.3	44.8	40.1	57.7	35.6	39.1	39.7	46.3	45.7	49.4	58.1
A72-413	46.9	52.2	47.1	55.1	39.8	42.5	38.8	49.7	49.3	48.6	46.5
A72-417	44.4	47.2	36.7	56.9	41.9	41.0	37.2	43.1	47.4	40.0	44.9
A72-423	43.3	43.7	32.9	53.8	38.6	35.4	35.8	41.2	45.2	41.0	54.8
A72-425	46.2	48.1	32.1	55.3	45.3	42.2	38.0	42.6	46.5	47.2	50.3
A72-428	46.4	49.3	35.5	56.5	46.3	40.2	40.4	39.8	48.4	46.7	49.9
A72-431	48.0	56.1	35.2	57.3	45.6	43.8	44.2	45.3	36.3	46.8	56.3
A72-507	49.6	49.3	33.5	60.4	39.4	39.5	42.5	52.7	50.9	49.0	62.5
A72-509	48.4	47.0	36.5	59.7	46.7	37.9	42.9	45.6	47.9	50.3	57.4
A72-510	48.9	49.2	37.6	54.8	37.0	42.3	43.0	57.4	46.2	53.1	57.4
A72-513	48.8	49.7	43.1	61.4	41.1	43.3	41.5	47.7	50.8	50.3	53.7
A72-520	49.0	57.3	39.3	59.3	43.6	46.3	41.9	43.1	50.1	48.2	51.3
A72-522	45.0	53.3	41.0	51.2	32.7	40.0	41.7	44.5	47.5	43.8	50.0
A72-523	45.4	53.7	40.0	51.0	38.0	37.4	41.9	44.5	44.9	43.8	53.3
A72-525	48.3	52.9	45.0	57.5	36.8	46.1	40.8	47.6	53.6	45.5	53.8
C1514	44.7	45.4	33.8	54.5	35.7	40.7	37.9	47.5	44.3	47.1	48.8
C1515	48.5	53.7	42.2	55.8	37.8	41.0	43.9	55.8	45.7	47.6	54.8
C1516	44.5	46.0	34.7	49.3	40.0	39.3	40.7	47.4	45.3	44.5	48.2
C1517	45.1	50.9	37.5	47.1	43.9	36.9	36.1	44.4	45.0	46.1	55.1
L67U175-18-13	38.1	33.2	40.2	45.2	28.9	39.3	37.3	30.7	49.7	34.6	44.1
L67U181-6-18	43.7	46.7	31.6	54.0	35.9	40.7	37.4	38.7	46.1	44.7	49.0
L69U-116	40.1	46.6	40.0	47.2	31.8	36.1	35.2	37.6	44.8	38.0	44.0
L70-522	41.0	44.5	29.5	51.3	40.2	39.4	30.4	40.8	42.2	33.9	45.9
L70-548	41.3	43.6	34.2	45.8	35.1	38.2	37.6	39.5	44.3	40.1	47.4
L70L-2755	44.3	48.2	31.9	50.8	37.7	43.2	37.8	44.6	42.1	44.7	49.6
L70U35-4	43.7	50.1	46.8	48.2	31.0	39.2	40.9	38.3	44.9	45.2	55.7
L70U-517	40.1	45.4	33.3	48.6	30.9	36.9	33.1	39.8	41.1	41.0	44.0
L70U-539	42.6	53.3	43.2	49.2	27.5	35.2	38.4	44.2	46.6	41.6	47.0
L70U-578	38.3	44.2	27.9	49.5	23.5	37.6	34.1	35.5	40.0	32.3	47.8
L70U-1409	36.5	39.9	36.0	41.7	35.4	31.4	29.8	34.0	35.0	41.6	39.8
L71U54-6	43.8	45.3	45.3	54.8	40.2	43.2	37.6	47.7	37.9	38.6	48.8
C.V. (%)		8.0		6.0	11.8	6.1	7.2	8.5	10.2	7.0	7.3
L.S.D. (5%)		7.8		6.5	9.0	5.0	5.7	7.5	9.4	6.2	7.5
Row Spacing (In.)		40	28	30	38	36	27	27	15	30	30
Rows/Plot		3	3	3	3	4	4	4	4	4	4
Reps		2	2	2	2	2	2	2	2	2	3

* Not included in the mean

Strain	Mean	Md. Belts-ville	Ohio Col-umbus	Indiana Lafay-ette	Indiana Worth-ington	Ill. Gi-rard	Iowa Stuart	Iowa Ot-tumwa	Mo. Colum-bia	Neb. Mead I	Kansas Manhat-tan I
	9 Tests		*		YIELD RANK						
Calland	22	19	24	19	16	27-28	17	25	27	22	8
Wayne	15	18	16	24	7	3	13	22	14-15	27	15
Williams	10	11	34	3	20	11	16	10	16	13	14
A72-407	12	28	10	6	25	23	15	11	17-18	4	2
A72-413	9	8	1	13	13	8	18	4	6	6	28
A72-417	20	20	17	9	8	12-13	27	19-20	10	29	30
A72-423	26	31	28	18	15	32	29	23	20	25-26	9-10
A72-425	13	17	29	12	4	10	20	21	12	9	17
A72-428	11	13-14	20	10	2	16	14	26-27	7	12	19
A72-431	8	2	21	8	3	4	1	13	33	11	5
A72-507	1	13-14	26	2	14	18	5	3	2	5	1
A72-509	6	21	18	4	1	25	4	12	8	2-3	3-4
A72-510	3	15	14	14-15	21	9	3	1	13	1	3-4
A72-513	4	12	6	1	9	5	9	5-6	3	2-3	12
A72-520	2	1	13	5	6	1	6-7	19-20	4	7	16
A72-522	17	5-6	8	21	28	17	8	15-16	9	20-21	18
A72-523	14	3-4	11-12	22	17	27-28	6-7	15-16	22-23	20-21	13
A72-525	7	7	4	7	22	2	11	7	1	15	11
C1514	18	25-26	25	16	24	14-15	21	8	25-26	10	22-23
C1515	5	3-4	7	11	18	12-13	2	2	17-18	8	9-10
C1516	19	24	22	26	12	20-21	12	9	19	19	24
C1517	16	9	15	31	5	29-30	28	17	21	14	7
L67U175-18-13	33	34	9	33	32	20-21	26	34	5	32	31
L67U181-6-18	24-25	22	31	17	23	14-15	25	29	14-15	17-18	21
L69U-116	30-31	23	11-12	30	29	31	30	31	24	31	32-33
L70-522	29	29	32	20	10-11	19	33	24	28	33	29
L70-548	28	32	23	32	27	24	23-24	28	25-26	28	26
L70L-2755	21	16	30	23	19	6-7	22	14	29	17-18	20
L70U35-4	24-25	10	2	29	30	22	10	30	22-23	16	6
L70U-517	30-31	25-26	27	28	31	29-30	32	26-27	30	25-26	32-33
L70U-539	27	5-6	5	27	33	33	19	18	11	23-24	27
L70U-578	32	30	33	25	34	26	31	32	31	34	25
L70U-1409	34	33	19	34	26	34	34	33	34	23-24	34
L71U54-6	23	27	3	14-15	10-11	6-7	23-24	5-6	32	30	22-23

Strain	Mean	Md. Belts-ville	Ohio Col-umbus	Indiana Lafay-ette	Indiana Worth-ington	Ill. Gi-rard	Iowa Stuart	Iowa Ot-tumwa *	Mo. Colum-bia	Neb. Mead I	Kansas Manhat-tan I
	9 Tests			MATURITY (relative date)							
Calland	+0.9	+5	+2	-2	+1	-1	+2		0	+1	0
Wayne	9-22.9	9-23	10-5	9-24	9-19	9-17	9-28		9-5	10-4	9-21
Williams	+4.3	+3	0	+2	+5	+6	+7		+3	+9	+4
A72-407	+2.8	+4	0	0	+3	0	+6		+2	+5	+5
A72-413	+1.2	+4	0	-1	+3	+1	+1		+1	0	+2
A72-417	-0.4	+1	0	-4	-1	0	+2		0	0	-2
A72-423	+3.6	+3	0	0	+5	-14to+6	+6		+2	+6	+4
A72-425	+0.7	+2	0	-2	+1	+2	+4		-1	+2	-2
A72-428	+1.0	0	+2	0	+1	0	+4		0	+2	0
A72-431	+3.0	+5	0	0	+3	+7	+7		0	+2	+3
A72-507	+1.8	+1	+2	-2	+1	+1	+6		0	+5	+2
A72-509	+1.3	+4	0	0	0	0	+4		-1	+3	+2
A72-510	+0.1	+1	0	-2	+1	-7	+4		-3	+5	+2
A72-513	-1.6	-2	0	-4	-1	-12to+2	-1		0	-2	-6
A72-520	+5.2	+6	+3	+2	+6	+7	+9		+2	+8	+4
A72-522	-3.6	-1	-3	-6	-1	-7	-2		0	0	-12
A72-523	-3.0	+1	0	-6	-1	-4	-2		-2	-2	-11
A72-525	-0.7	+4	+2	-4	-1	-2	0		-2	0	-3
C1514	-3.8	-5	0	-6	-2	-8	+1		-3	-1	-10
C1515	-2.8	-2	-1	-7	-2	-5	+2		-3	0	-7
C1516	0.0	0	+1	0	-1	0	+6		-1	0	-5
C1517	+2.3	+5	+2	+1	+3	+3	+6		0	+1	0
L67U175-18-13	-7.6	-7	0	-10	-7	-9	-6		-7	-2	-20
L67U181-6-18	-3.1	-2	0	-5	-2	-6	-2		-3	-1	-7
L69U-116	-2.9	0	0	-7	-1	-2	-2		-3	-1	-10
L70-522	+4.4	+3	0	+2	+3	+7	+10		+2	+8	+5
L70-548	+4.8	+3	0	+3	+5	+8	+10		+4	+8	+2
L70L-2755	+5.7	+7	+4	+2	+5	+8	+8		+5	+8	+4
L70U35-4	+1.6	+1	+3	-4	+1	+4	+6		0	+6	-3
L70U-517	-3.9	-3	-1	-8	-2	-4	-4		-2	-1	-10
L70U-539	-4.6	-2	0	-9	-2	-7	-5		-3	-2	-11
L70U-578	-3.4	-2	0	-8	0	-5	-1		-2	-2	-11
L70U-1409	-4.3	-4	+1	-8	-2	-6	-4		-3	-2	-11
L71U54-6	+6.0	+7	-1	+4	+6	-14to+8	+10		+5	+8	+7
Beeson (II)	-9.9	-4	-27	-10	-5	-10	-8		-7	-4	-14
Cutler 71 (IV)	+6.7	+9	0	+6	+6	+6	+7		+8	+8	+10
Date Planted	5-24	6-4	5-21	5-21	6-8	5-31	5-17	5-23	5-17	5-25	5-9

Strain	Parentage	Previous Testing*	Line
1. Bonus	C1266R(Harosoy x C1079) x C1253(Blackhawk x Harosoy)	4	F_6
2. Cutler 71	Cutler[4] x Kent-Rps rxp (SL5)	4 6	F_3
3. Kent	Lincoln x Ogden	19	F_7
4. K1003	C1266 x C1264(Harosoy x C1079)	P IV	F_4
5. K1004	" x C1265(")	P IV	F_4
6. K1007	Bonus x Cutler	P IV	F_4
7. L66-1359	Wayne x L57-0034(Clark x Adams)	3	F_6
8. L70-4180	Clark 63-I r(L12) x (Clark 63[7] x Kanrich)	P IV	F_4

* Years in this test or name of 1972 test.

Once again the early strain L66-1359 topped the test in mean yield. Its release has been held up because of its similarity to the late Group III variety Williams, but in the 4-year regional means it outyields the check varieties by 2 to 3 bushels. Its low protein content, especially compared to Bonus, is its major drawback.

The other four strains were advanced from last year's Preliminary IV. K1003, K1004, and L70-4180 yielded well above Cutler 71 and almost as high as Bonus and Kent. K1004 was equal to Kent in lodging resistance. L70-4180 was poor in lodging resistance but has good seed quality and excellent shattering resistance.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
No. of Tests	13	13	11	13	13	13	11	10	10
Bonus	44.8	2	-2.6	2.0	47	1.9	16.5	43.3	22.3
Cutler 71	41.5	8	9-29.8†	2.0	44	2.1	17.4	40.8	22.5
Kent	44.4	3	+4.8	1.7	42	2.1	16.8	40.5	22.7
K1003	43.8	6	+4.1	2.0	46	2.3	15.0	41.7	21.4
K1004	43.9	4-5	+4.4	1.7	42	2.2	16.9	40.5	22.7
K1007	42.2	7	+1.6	2.2	46	1.9	15.6	40.8	22.4
L66-1359	45.9	1	-2.4	1.8	41	2.0	17.5	39.5	23.5
L70-4180	43.9	4-5	+0.6	2.3	43	1.9	16.4	40.4	22.7

† 126 days after planting

1970-73, 4-year mean

No. of Tests	67	67	59	65	66	67	57	42	42
Bonus	44.7	2	-2.9	2.2	46	2.1	16.8	42.9	22.2
Cutler 71	43.5	3	9-27.7†	2.2	44	2.3	17.6	41.0	22.1
Kent	43.3	4	+5.0	1.9	41	2.3	17.3	40.6	22.4
L66-1359	46.3	1	-3.1	2.0	40	2.2	17.9	39.9	23.4

† 129 days after planting

Disease Data

Strain	BB	BP				BS	DM			FE_2	PM	BSR			
	Ames Iowa	Urb. Ill.	Belle. Ill.	Ames Iowa		Ames Iowa	Worth. Ind.	Edge. Ill.	Eld. Ill.	Laf. Ind.	Harrow Ont.	Laf. Ind.	Urb. Ill.	Lamb. Minn.	Ames Iowa
	n	a	n	n	a	n	n	n	n	a	a	n %	n %	n %	% stem*
Bonus	1	1	2.9	1	3	3	2	4.0	5.0	5	S	26	3 30	95	85
Cutler 71	3	3	2.0	1	4	3		3.5	4.7	1	R	36	4 50	55	87
Kent	3	1	3.0	1	4	3	1	2.3	3.2	1	R	75	4 60	100	87
K1003	3	2	2.8	1	3	4	1	3.0	4.3	2	S	83	4 40	90	84
K1004	4	2	2.9	1	4	3	1	2.4	3.9	1	R	73	4 50	90	86
K1007	4	2	1.7	1	3	3	2	3.3	4.3	5	S	75	4 80	80	92
L66-1359	4	2	1.0	1	1	4	2	4.0	4.7	3	R	83	4 50	100	82
L70-4180	3	2	1.0	1	1	3	2	1.0	1.0	5	R	63	4 70	100	83

* All plants were infected

Strain	CR		PR			Pyu	PS		
	Laf. Ind.	Eld. Ill.	Laf. Ind.	Ames Iowa	Stnv. Miss.	Laf. Ind.	Queens. Md. B	Queens. Md.	Link. Md.
	n %	n	a	a	n	a	n	n	n
Bonus	87	4.8	R	R	1	S	1.3	5.7	9.3
Cutler 71	100	1.7	R	R	1	S	1.5	3.3	1.7
Kent	58	2.6	S	S	1	S	2.3	3.7	3.7
K1003	60	3.0	S	S	1	S	3.7	9.3	4.7
K1004	80	2.8	S	S	1	S	3.0	6.0	3.7
K1007	38	2.7	R	R	1	S	2.3	2.3	10.0
L66-1359	27	2.8	S	S	1	S	0	3.0	1.7
L70-4180	77	3.2	H	H	1	S	3.7	4.5	6.0

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis			Fluor-escent	Hypo-cotyl	Perox-idase	Shattering	
		Crstn. Minn.	Lamb. Minn.	Ames Iowa				Stnv. Miss.	Lubbock Texas
Bonus	PGNBr DYIb	1.0	4.0	5	L	5	L	2	5.0
Cutler 71	PTNBr SYBl	1.0	3.3	5	L	5	L+H	2	2.0
Kent	PTNBr IYBl	2.0	3.0	4	L	4	H	3	2.3
K1003	PGNBr DYBf	2.0	4.0	5	L	1	H	1	2.5
K1004	PTNBr DYBl	2.5	3.3	5	L	3	H	1	2.7
K1007	PTNBr SYBl	1.0	2.3	5	L	5	L	2	3.0
L66-1359	WTNTn DYBl	4.0	4.3	5	L	1	L	1	2.7
L70-4180	PTNBr DYBl	2.0	4.7	5	L	5	L	1	1.3

Strain	Mean	Penn. Landisville	N. J. Centerton	Del. Georgetown I	Maryland Beltsville	Maryland Queenstown B	Maryland Queenstown	Maryland Linkwood
	13 Tests		1973 YIELD (bu/a)					
		*	*	*	*	*	*	*
Bonus	44.8	35.8	35.8	47.3	52.7	30.4	47.2	47.7
Cutler 71	41.5	37.6	24.6	45.7	53.7	31.3	45.9	51.7
Kent	44.4	35.8	31.9	43.5	51.4	31.2	45.8	43.1
K1003	43.8	34.4	38.1	46.0	52.6	35.6	46.2	50.1
K1004	43.9	39.0	30.8	45.8	51.6	31.3	43.0	46.9
K1007	42.2	35.8	37.1	42.8	48.6	31.1	49.0	50.4
L66-1359	45.9	41.9	35.9	48.5	52.8	37.5	48.2	49.9
L70-4180	43.9	35.2	33.2	48.5	51.7	35.3	46.5	50.6
C.V. (%)		18.4	15.2	8.9	5.1	8.1	8.1	7.5
L.S.D. (5%)		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Row Sp. (in.)		30	30	36	40	30	30	30
Rows/Plot		3	3	3	4	4	4	4
Reps		4	4	4	3	3	3	3
			YIELD RANK					
Bonus	2	4-6	4	3	3	8	3	6
Cutler 71	8	3	8	6	1	4-5	6	1
Kent	3	4-6	6	7	7	6	7	8
K1003	6	8	1	4	4	2	5	4
K1004	4-5	2	7	5	6	4-5	8	7
K1007	7	4-6	2	8	8	7	1	3
L66-1359	1	1	3	1-2	2	1	2	5
L70-4180	4-5	7	5	1-2	5	3	4	2
	67 Tests	1970-73, 4-YEAR MEAN YIELD						
		71-73						
Bonus	44.7	43.0	34.9	49.6		32.7	38.8	41.6
Cutler 71	43.5	44.9	31.0	46.6		32.8	40.1	44.8
Kent	43.3	46.1	32.4	47.5		34.7	42.4	40.4
L66-1359	46.3	46.6	34.7	50.8		37.0	40.5	43.9
			YIELD RANK					
Bonus	2	4	1	2		4	4	3
Cutler 71	3	3	4	4		3	3	1
Kent	4	2	3	3		2	1	4
L66-1359	1	1	2	1		1	2	2

* Not included in the mean

Ohio	Indiana		
Columbus	Lafayette	Worthington	Evansville
	1973 YIELD (bu/a)		
*		*	*
43.1	51.4	41.8	53.5
46.5	52.8	37.4	43.3
42.7	48.0	40.7	30.8
40.9	48.9	34.8	28.8
35.9	47.9	32.0	29.4
41.2	49.7	33.5	46.8
45.7	52.5	44.9	45.3
45.2	55.0	39.0	45.4
	6.3	18.6	18.8
	5.6	12.4	13.3
	30	38	40
3	3	3	3
4	3	3	3
	YIELD RANK		
4	4	2	1
1	2	5	5
5	7	3	6
7	6	6	8
8	8	8	7
6	5	7	2
2	3	1	4
3	1	4	3
	1970-73, 4-YEAR MEAN YIELD		
49.9	44.5	45.0	47.1
46.8	48.7	46.6	45.6
49.4	44.1	46.1	39.7
45.2	48.9	50.2	46.7
	YIELD RANK		
1	3	4	1
3	2	2	3
2	4	3	4
4	1	1	2

Ky. Henderson	Illinois Edgewood	Illinois Belleville	Illinois Eldorado
	1973 YIELD (bu/a)		
54.5	46.1	55.7	27.9
60.2	48.8	56.0	31.5
52.4	48.1	60.2	35.0
58.4	49.0	55.4	31.4
56.6	48.3	58.2	35.4
51.3	46.4	52.7	36.1
62.1	44.8	59.4	31.5
61.8	42.9	58.5	31.5
11.7	7.3	6.8	9.5
9.8	6.0	6.8	5.4
30	38	30	30
3	4	4	4
4	3	3	3
	YIELD RANK		
6	6	6	8
3	2	5	4-6
7	4	1	3
4	1	7	7
5	3	4	2
8	5	8	1
1	7	2	4-6
2	8	3	4-6
	1970-73, 4-YEAR MEAN YIELD		
50.6	47.5	50.9[a]	44.7
52.2	46.1	50.5	46.8
48.3	45.5	51.4	48.6
53.6	45.9	52.6	47.1
	YIELD RANK		
3	1	3	4
2	2	4	3
4	4	2	1
1	3	1	2

[a] Trenton in 1970

Ill.	Iowa		Missouri		Neb.	Kansas				Texas
Carbon-dale	Stuart	Ottum-wa	Colum-bia	Mt. Vernon	Mead I	Pow-hattan	Manhat-tan I	Ottawa	Col-umbus	Lub-bock I
				1973 YIELD (bu/a)						
				*					*	*
36.6	35.4	46.8	42.6	37.0	48.1	47.1	58.3	31.3	7.3	52.8
36.6	38.0	45.4	38.4	36.7	38.2	41.8	52.1	26.1	6.4	50.5
39.4	38.5	49.9	36.5	58.2	36.4	45.6	57.4	30.3	8.6	53.3
42.2	36.8	43.7	37.7	53.5	37.3	41.6	56.3	30.7	11.2	52.3
40.3	35.9	48.0	35.6	59.8	35.7	44.1	54.4	30.8	8.5	53.1
38.7	33.6	40.6	36.6	43.8	39.3	43.8	50.8	29.0	9.2	54.1
38.8	40.5	47.9	41.4	48.9	47.2	47.2	54.0	29.5	8.8	48.9
37.3	38.5	48.8	36.6	46.3	43.8	41.6	52.8	21.8	5.3	54.7
10.4	7.4	8.0	6.7	16.3	9.4	4.5	8.4	5.8	20.3	
7.0	4.0	5.5	3.8	11.3	6.6	3.4	n.s.	2.9	2.9	
30	27	27	15	15	30	30	30	30	30	40
4	4	4	4	4	4	4	4	4	4	4
3	4	4	4	4	3	3	3	3	3	3
				YIELD RANK						
7-8	7	5	1	7	1	2	1	1	6	5
7-8	4	6	3	8	5	6	7	7	7	7
3	2-3	1	7	2	7	3	2	4	4	3
1	5	7	4	3	6	7-8	3	3	1	6
2	6	3	8	1	8	4	4	2	5	4
5	8	8	5-6	6	4	5	8	6	2	2
4	1	4	2	4	2	1	5	5	3	8
6	2-3	2	5-6	5	3	7-8	6	8	8	1
				1970-73, 4-YEAR MEAN YIELD						
	71-73	71-73								70,72-73
44.4	35.5	47.7		37.8		42.2	65.9	40.5	20.2	47.4
43.7	36.9	44.5		39.9		41.4	62.2	36.5	17.5	47.0
44.3	36.4	43.3		47.6		42.4	60.6	37.8	18.6	49.8
46.3	39.5	45.2		44.3		43.4	65.4	42.6	20.7	45.6
				YIELD RANK						
2	4	1		4		3	1	2	2	2
4	2	3		3		4	3	4	4	3
3	3	4		1		2	4	3	3	1
1	1	2		2		1	2	1	1	4

Strain	Mean	Penn. Landis-ville	N. J. Center-ton	Del. George-town I	Maryland Belts-ville	Maryland Queens-town B	Maryland Queens-town	Maryland Link-wood
	11 Tests		MATURITY (relative date)					
		*	*	*	*	*	*	*
Bonus	-2.6	-2	0	-1	0	-1	-3	-2
Cutler 71†	9-29.8	10-4	9-24	9-24	10-1	10-6	9-16	9-23
Kent	+4.8	+5	+5	+2	+11	+3	+5	+3
K1003	+4.1	+14	+9	+2	+10	+5	+3	+2
K1004	+4.4	+4	+7	+2	+11	+4	+4	+2
K1007	+1.6	+5	+4	+1	+3	+1	+2	+1
L66-1359	-2.4	-10	+1	-1	-2	-2	0	-3
L70-4180	+0.6	-3	+2	0	-1	+2	0	+2
Williams (III)	-3.2	-10			-4	-4	-3	-3
Hill (V)					+20	+8	+13	+11
Date Planted	5-27	6-2	6-6	5-31	6-4	6-24	5-22	6-1
†Days to Mat.	126	124	110	116	119	104	117	114
	13 Tests		LODGING (score)					
		*	*	*	*	*	*	*
Bonus	2.0	1.6	3.5	2.3	2.0	2.6	1.0	3.3
Cutler 71	2.0	2.4	2.3	2.4	2.0	3.3	1.0	3.7
Kent	1.7	1.9	2.3	2.3	1.7	2.3	1.0	3.0
K1003	2.0	2.9	3.1	2.3	3.0	3.0	1.0	3.0
K1004	1.7	2.0	2.6	2.3	1.7	2.6	1.0	3.0
K1007	2.2	2.5	3.3	2.4	2.7	3.0	1.7	3.0
L66-1359	1.8	1.5	2.6	1.9	2.0	2.6	1.0	2.3
L70-4180	2.3	1.9	3.1	2.0	2.7	3.0	1.1	4.0
	13 Tests		PLANT HEIGHT (inches)					
		*	*	*	*	*	*	*
Bonus	47	38	46	41	52	38	29	42
Cutler 71	44	36	41	41	42	36	28	39
Kent	42	34	40	37	43	37	30	37
K1003	46	38	43	42	48	38	30	44
K1004	42	34	40	38	39	38	28	40
K1007	46	38	43	43	49	38	32	41
L66-1359	41	34	37	36	50	37	27	36
L70-4180	43	33	39	39	44	37	29	42

Ohio	Indiana		
Columbus	Lafayette	Worthington	Evansville
	MATURITY (relative date)		
*		*	*
0	-3	-1	-2
10-7	9-30	9-25	10-5
+5	+4	+6	+7
+6	+4	+5	+5
+6	+4	+4	+5
+8	+2	+2	+1
+8	-3	-1	-2
+8	+1	+1	+1
+2	-4	-1	-4
5-21	5-21	6-8	6-26
139	132	109	101
	LODGING (score)		
*		*	*
2.2	2.3	2.0	1.0
3.0	2.5	2.7	1.2
3.2	2.7	1.7	1.0
3.2	2.8	2.8	1.0
3.2	2.5	1.8	1.0
3.0	2.8	2.2	1.0
2.7	2.0	2.0	1.0
3.2	3.2	3.3	1.5
	PLANT HEIGHT (inches)		
*		*	*
30	47	44	40
33	45	41	37
31	41	39	31
35	45	42	34
30	41	40	31
33	42	43	44
32	42	39	32
31	44	43	38

Ky.	Illinois		
Hend-erson	Edge-wood	Belle-ville	Eldo-rado
	MATURITY (relative date)		
*			
	-3	-3	-6
	10-2	9-30	9-30
	+5	+4	+7
	+3	+5	+2
	+5	+5	+5
	+1	+3	-1
	-4	-4	-3
	0	0	+1
	+5	-6	-4
	+17	+12	+19
6-12	6-14	5-24	6-15
	110	129	107
	LODGING (score)		
1.2	1.5	2.0	1.0
2.2	1.8	2.5	1.0
2.2	1.2	1.7	1.0
3.1	1.5	2.7	1.0
2.5	1.3	1.4	1.0
2.4	1.7	2.2	1.0
1.9	1.2	1.5	1.0
2.9	1.3	3.2	1.0
	PLANT HEIGHT (inches)		
48	42	50	33
44	40	46	36
43	37	46	33
46	41	51	33
44	38	45	33
48	47	51	38
43	36	41	32
45	38	46	32

Ill.	Iowa		Missouri		Neb.	Kansas				Texas
Carbon-dale	Stuart	Ottum-wa	Colum-bia	Mt. Vernon	Mead I	Pow-hattan	Manhat-tan I	Ottawa	Col-umbus	Lub-bock I
				MATURITY (relative date)						
		*		*					*	*
-3	+1		-1		0	-1	-3	-7	-7	-2
9-30	10-7		9-11		10-12	10-5	10-1	9-20	9-26	9-18
+4	+4		+5		+3	+6	+3	+8	+6	+7
+2	+6		+5		+3	+3	+4	+8	+1	+3
+2	+4		+4		+2	+6	+3	+8	+5	+8
-1	+3		+3		+1	+1	+1	+5	-1	+5
-5	-2		-2		-1	0	-2	0	+1	-5
0	+1		+1		+1	+3	-1	0	-1	+4
-6	-2		-1		-3	-5	-5	-4	-2	-9
										+16
6-18	5-17	5-23	5-17	. 6-1	5-31	5-17	5-9	5-16	6-8	5-21
104	143		117		134	141	145	127	110	120
				LODGING (score)						
				*					*	*
1	2.8	3.8	1.9	1.0	2.7	1.7	3.5	1	1	1.2
1	2.4	3.8	1.7	1.0	1.8	1.7	2.7	1	1	2.5
1	2.4	3.0	1.7	1.0	1.5	1.0	1.7	1	1	1.2
1	2.9	3.5	1.5	1.2	1.7	1.3	2.3	1	1	1.7
1	2.7	3.2	1.6	1.0	1.4	1.0	1.6	1	1	1.5
1	2.9	3.8	1.9	1.0	2.5	1.5	3.5	1	1	1.7
1	2.3	3.6	1.3	1.0	2.0	1.3	2.8	1	1	2.0
1	3.0	3.9	1.6	1.0	2.4	1.8	3.9	1	1	2.0
				PLANT HEIGHT (inches)						
				*					*	*
30	57	54	41	28	50	50	57	47	23	37
31	50	49	40	32	48	47	53	42	25	35
31	46	47	38	30	46	44	49	42	23	36
34	48	49	42	35	49	50	58	46	28	40
30	44	45	39	31	47	45	51	43	24	36
31	50	44	42	34	49	52	53	48	26	37
28	46	48	39	30	46	44	51	40	23	32
31	47	49	40	33	47	45	54	42	24	35

Strain	Mean	Penn. Landisville	N. J. Centerton	Del. Georgetown I	Maryland Beltsville	Maryland Queenstown B	Maryland Queenstown	Maryland Linkwood
	13 Tests		SEED QUALITY (score)					
		*	*	*	*	*	*	*
Bonus	1.9	2.5	1.3	2.1	3.0	2.0	3.0	3.0
Cutler 71	2.1	2.0	1.3	2.5	3.0	2.7	3.0	3.0
Kent	2.1	3.0	1.5	2.3	3.0	3.0	3.0	2.0
K1003	2.3	4.0	1.8	2.6	3.0	3.0	3.0	3.0
K1004	2.2	3.0	2.0	2.4	3.0	3.0	3.0	2.0
K1007	1.9	2.8	1.0	2.3	2.0	2.3	2.0	2.0
L66-1359	2.0	2.0	1.0	2.9	2.7	2.6	2.0	2.0
L70-4180	1.9	3.0	1.0	3.4	3.0	2.3	2.8	3.0
	11 Tests		SEED SIZE (g/100)					
		*	*	*	*	*	*	*
Bonus	16.5	14.5	19.4	18.5	19.2	15.3	18.4	19.2
Cutler 71	17.4	16.7	19.7	19.1	20.5	16.0	19.1	19.8
Kent	16.8	16.5	19.1	18.5	19.6	16.0	18.9	18.1
K1003	15.0	17.5	18.8	17.7	18.2	15.7	18.3	17.8
K1004	16.9	16.5	20.5	18.2	19.6	16.7	19.0	18.5
K1007	15.6	15.3	18.4	17.1	18.5	15.0	17.0	16.5
L66-1359	17.5	17.0	21.9	21.9	21.2	16.3	20.4	19.2
L70-4180	16.4	15.8	19.6	18.7	19.4	16.7	18.7	19.4
	10 Tests		PROTEIN (%)					
			*	*	*			
Bonus	43.3		44.0	44.8	44.7			
Cutler 71	40.8		41.6	43.3	42.6			
Kent	40.5		41.1	43.0	42.0			
K1003	41.7		44.5	43.8	43.5			
K1004	40.5		41.5	43.2	40.5			
K1007	40.8		41.5	42.8	41.4			
L66-1359	39.5		39.5	43.2	41.0			
L70-4180	40.4		39.8	42.2	42.3			
	10 Tests		OIL (%)					
			*	*	*			
Bonus	22.3		21.8	22.4	22.8			
Cutler 71	22.5		21.6	22.2	21.9			
Kent	22.7		21.1	22.1	23.1			
K1003	21.4		20.2	21.8	21.1			
K1004	22.7		21.7	21.5	23.1			
K1007	22.4		21.5	22.1	22.2			
L66-1359	23.5		23.4	23.3	24.6			
L70-4180	22.7		21.6	22.4	22.2			

Ohio	Indiana		
Columbus	Lafayette	Worthington	Evansville
	SEED QUALITY (score)		
*		*	*
1.8	1.0	2.5	1.5
1.3	1.5	2.0	1.5
1.3	1.5	2.5	1.5
2.0	2.0	3.0	2.5
1.8	1.5	2.5	2.5
1.8	1.5	2.0	1.5
1.5	1.0	2.0	1.5
1.0	1.0	1.5	1.0
	SEED SIZE (g/100)		
*		*	*
15.1	17.4	14.6	17.3
16.9	18.6	15.5	16.5
15.8	17.4	15.4	17.1
14.1	15.8	13.4	16.8
16.2	17.8	14.7	17.2
15.0	17.3	14.1	16.3
17.5	18.8	16.6	16.4
16.2	17.9	15.5	16.4
	PROTEIN (%)		
45.0			43.5
43.0			41.0
42.9			40.7
44.7			41.8
43.5			40.2
43.9			41.5
41.0			38.6
43.2			39.1
	OIL (%)		
21.2			22.5
20.2			22.6
20.8			22.5
18.9			22.4
20.4			23.2
20.5			22.9
20.9			24.6
20.8			23.1

Ky.	Illinois			
Hend-erson	Edge-wood	Belle-ville	Eldo-rado	Carbon-dale
	SEED QUALITY (score)			
1	1.0	1.7	2.2	3.0
2	1.5	1.7	2.7	3.0
3	1.2	2.0	2.5	3.0
3	1.5	2.2	2.2	3.0
3	2.0	1.7	2.5	2.0
2	1.2	1.2	2.3	2.0
2	1.5	1.2	2.5	1.0
2	1.3	1.8	2.5	2.0
	SEED SIZE (g/100)			
18.4	16.4	16.6	13.7	17.4
20.4	17.3	17.4	15.5	16.1
18.1	16.4	16.9	16.5	16.9
16.5	15.4	14.9	13.3	15.5
19.8	17.5	16.7	15.6	16.6
18.1	15.9	14.1	13.3	16.0
18.3	15.6	16.7	14.1	18.0
18.4	15.8	16.6	13.6	16.8
	PROTEIN (%)			
43.5		41.2	43.0	
41.0		40.2	41.5	
40.8		39.7	42.1	
41.3		41.9	42.1	
40.5		39.6	42.3	
40.2		39.6	40.6	
39.1		37.8	40.9	
40.6		39.9	39.0	
	OIL (%)			
22.5		23.1	23.1	
22.4		22.9	23.1	
23.2		23.4	23.1	
22.1		21.4	22.4	
23.5		23.1	22.9	
22.5		23.3	23.3	
24.6		24.3	23.6	
23.1		23.4	24.8	

Iowa		Missouri		Neb.	Kansas				Texas
Stuart	Ottumwa	Columbia	Mt. Vernon	Mead I	Powhattan	Manhattan I	Ottawa	Columbus	Lubbock I
				SEED QUALITY (score)					
			*					*	
3.0	1.1	1.5	2.0	1.8	2.3	2.8	2.9	2.7	
2.5	1.3	1.3	1.8	2.7	2.4	2.2	2.7	2.3	
1.7	1.5	2.0	1.8	2.0	2.5	2.0	2.8	2.0	
3.0	1.3	2.0	2.0	2.0	2.9	2.2	3.0	2.0	
2.4	1.8	2.3	1.5	2.3	2.3	1.9	2.7	1.9	
2.0	1.0	1.3	2.2	2.2	2.6	2.3	2.6	2.5	
3.0	1.7	2.0	2.5	2.0	2.5	2.3	2.8	2.5	
2.0	1.5	1.5	2.0	2.0	2.4	2.1	2.6	2.1	
				SEED SIZE (g/100)					
								*	
	16.9			17.2	17.6	17.5	12.7	12.5	
	17.2			17.7	18.3	18.1	14.3	14.0	
	18.0			15.9	18.1	16.6	13.8	16.5	
	15.2			14.7	15.1	16.0	12.1	14.8	
	17.8			15.8	18.2	16.4	14.1	16.3	
	16.0			15.8	15.9	16.8	12.7	12.5	
	18.1			19.2	19.0	20.9	14.3	12.8	
	16.2			16.7	17.2	18.9	12.4	13.1	
				PROTEIN (%)					
	42.8	44.0		43.1	43.8	42.6			
	39.3	40.6		40.0	40.6	40.7			
	41.0	40.0		39.6	38.2	39.7			
	40.5	41.7		40.2	41.7	41.0			
	40.4	40.1		39.9	39.2	39.1			
	40.1	40.2		40.3	41.0	40.6			
	38.1	39.7		39.9	39.9	39.9			
	39.8	40.0		40.8	41.1	40.6			
				OIL (%)					
	21.3	21.3		22.0	22.6	23.7			
	22.8	21.8		22.3	23.6	23.1			
	21.5	21.3		22.7	23.9	24.1			
	20.8	20.6		20.5	21.8	22.7			
	21.6	21.6		22.7	24.2	23.9			
	21.0	22.7		22.1	22.8	23.1			
	22.2	22.7		23.2	24.2	25.1			
	21.4	21.9		21.7	23.4	23.6			

Strain	Parentage	Line
1. Cutler 71		
2. Kent		
3. A72-409	Corsoy x Wayne	F_5
4. A72-410	"	"
5. A72-426	Amsoy x Wayne	"
6. A72-508	"	"
7. A72-511	"	"
8. A72-512	"	"
9. K1008	$C1264^2$(Harosoy$_8$ x C1079) x Wayne	F_5
10. K1009	C1317-71($C1223^8$ x Mukden) x Amsoy	F_7
11. K1010	"	"
12. L70L-2887	Wayne-Rps(L15) x D64-3077($D49\text{-}2491^5$ x Hawkeye)	F_5
13. L70L-2912	"	"
14. L70L-2947	L12(Clark 63-I r) x D64-3077($D49\text{-}2491^5$ x Hawkeye)	"
15. L70L-3175	Adelphia x D64-3146($D49\text{-}2491^5$ x Hawkeye)	"
16. L71U11-22	L66-531(Clark-dt_1E_1t e_2) x Amsoy 71	F_3
17. L71U17-22	" x C1426(C1253 x Kent)	"
18. S6	L61-1112 x [$Wayne^4$ x ($Clark^3$ x Kanrich]	F_3
19. S7	"	F_3

Several lines in this test outyielded the check varieties. Considering the mean of nine locations A72-512, A72-511, K1009, and K1008 were the high four in yield ranging from 1½ to 2 bushels above the checks. Several other strains yielded as well as the check varieties. The four L70L strains showed some improvement in seed quality and two or three of them were competitive in yield. Two of these carry the Mukden source of Phytophthora resistance. The two determinate selections (L71U11-22 and L71U17-22) were low in mean yield as was one of the two semi-determinate selections (S6). The other one (S7) equalled the checks and seemed to have quite good lodging resistance.

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition	
								Protein	Oil
No. of Tests	9	9	8	9	9	9	7	7	7
Cutler 71	45.2	8-9	9-27.6	1.9	43	2.1	18.1	41.0	22.4
Kent	44.9	10-11	+5.4	1.7	42	2.1	17.4	40.7	22.6
A72-409	46.0	7	-2.3	1.8	40	2.5	16.9	41.5	22.8
A72-410	43.1	15	-1.6	3.2	39	2.2	17.5	41.1	22.5
A72-426	44.2	12-14	-2.3	2.4	47	2.3	17.1	40.6	22.9
A72-508	46.1	6	-3.8	2.6	42	2.9	16.0	40.9	22.4
A72-511	46.9	3	-0.9	2.1	42	2.4	16.2	41.8	22.4
A72-512	47.2	1	-0.8	3.0	44	2.0	14.9	40.3	23.0
K1008	46.6	4	+1.6	1.8	44	2.3	16.1	40.2	22.3
K1009	47.1	2	+1.6	2.3	44	2.6	15.4	39.1	22.9
K1010	44.2	12-14	+2.3	2.4	44	2.3	14.8	41.4	21.9
L70L-2887	42.4	17	+0.6	2.1	46	1.8	16.3	41.7	22.4
L70L-2912	44.9	10-11	-2.1	2.1	44	1.8	14.2	41.9	21.7
L70L-2947	46.4	5	-0.4	2.5	43	1.7	14.8	40.7	22.4
L70L-3175	44.2	12-14	+3.1	2.6	46	1.9	15.5	41.2	22.3
L71U11-22	40.7	19	-0.4	1.7	32	2.0	15.4	41.1	22.1
L71U17-22	41.3	18	0.0	1.5	31	1.9	17.0	40.3	22.2
S6	42.9	16	-0.1	2.0	32	2.0	13.6	40.7	22.3
S7	45.2	8-9	+0.3	1.7	35	2.0	13.9	40.5	22.1

Disease Data

Strain	BP	DM		FE_2		BSR			CR	PR			Pyu	PS
	Urbana Ill. a	Worthington Ind. n	Eldorado Ill. n	Lafayette Ind. a	Lafayette Ind. n %	Urbana Ill. n %	Ames Iowa n % stem*		Lafayette Ind. n %	Lafayette Ind. a	Ames Iowa a	Stoneville Miss. n	Lafayette Ind. a	Linkwood Md. n %
Cutler 71	2		4.2	1	36	4 80	75		100	R	R	1	S	2.0
Kent	2	1	3.0	1	75	4 100	85		58	S	S	1	S	3.0
A72-409	1	4	4.7	5	54	4 80			91	S		2	S	2.0
A72-410	3	4	4.7	4	100	4 50	91		100	S	H	1	S	1.0
A72-426	3	3	3.2	4	83	3 20			73	S	R	1	S	1.5
A72-508	1	3	3.2	4	86	4 80	76		90	S	R	1	S	3.0
A72-511	4	2	3.2	3	41	3 50	87		78	S	H	1	S	1.5
A72-512	1	2	2.7	3	46	3 70	92		89	S	H	2	S	4.0
K1008	2	3	4.0	1	86	3 60	84		83	S	S	2	S	4.0
K1009	1	2	3.0	5	100	4 80	83		100	S	S	2	S	8.0
K1010	4	2	4.5	5	100	4 60	88		100	S	H	1	S	2.5
L70L-2887	1	3	4.2	5	93	4 50	81		100	S	S	1	S	2.5
L70L-2912	1	3	3.5	4	95	4 60	93		100	R	R	1	S	3.5
L70L-2947	1	4	3.0	5	100	4 90	83		89	R	R	1	S	2.0
L70L-3175	3	3	4.0	4	100	4 100	97		27	S	S	1	S	3.0
L71U11-22	3	5	5.0	5	100	4 90	99		100	S	S	1	S	3.5
L71U17-22	4	4	3.4	5	100	4 60	100		100	S	H	1	S	1.5
S6	3	2	4.0	5	100	4 80	99		100	S	S	2	S	1.5
S7	2	4	4.2	5	50	4 90	94		100	S	S	1	S	0.5

* All plants were infected.

Descriptive and Other Data

Strain	Descriptive Code	Chlorosis Ames Iowa	Shattering Stoneville Miss.
Cutler 71	PTNBr SYBl	5	1
Kent	PTNBr IYBl	4	3
A72-409	WGNBr D+SYY	5	1
A72-410	WTNBr DYBr	5	1
A72-426	WTNTn SYBr	5	1
A72-508	WTNTn SLgG	5	1
A72-511	PGNTn DYIbl	5	2
A72-512	WGNTn DYBf	5	2
K1008	PGNTn DYY	3	1
K1009	WTNTn D+SYY	5	1
K1010	WGNTn DYBf	5	1
L70L-2887	PTNTn SYBl	5	2
L70L-2912	WTNTn SYBl	3	2
L70L-2947	PTNTn DYBl	5	2
L70L-3175	WGNTn SYBf	5	2
L71U11-22[a]	PGNBr SYIbl	4	1
L71U17-22[a]	PGNBr SYIbl	5	1
S6[b]	WTNBr SYBl	5	2
S7[b]	WTNBr SYBl	5	1

[a] Determinate

[b] Semi-determinate

Strain	Mean	Del. George-town I	Md. Belts-ville	Md. Link-wood *	Ohio Colum-bus *	Indiana Worth-ington	Indiana Evans-ville *	Illinois Eldo-rado	Illinois Carbon-dale	Iowa Stu-art	Iowa Ottum-wa	Mo. Colum-bia	Kansas Manhat-tan I
9 Tests						YIELD (bu/a)							
Cutler 71	45.2	48.4	46.9	47.3	40.0	45.2	42.1	33.7	43.6	40.6	47.9	44.6	55.6
Kent	44.9	51.2	50.1	42.9	43.3	42.9	29.1	38.5	44.8	32.7	50.0	39.6	54.4
A72-409	46.0	50.0	51.4	47.1	38.2	43.3	29.8	34.7	35.5	40.7	53.2	48.4	56.7
A72-410	43.1	50.0	47.1	47.2	35.1	39.3	28.0	30.5	39.6	37.1	50.5	41.0	53.0
A72-426	44.2	52.5	45.3	49.4	41.5	41.3	37.6	34.2	46.6	37.6	41.3	46.1	52.6
A72-508	46.1	49.6	50.3	51.5	33.3	43.8	32.1	34.2	45.3	42.0	49.7	42.0	57.6
A72-511	46.9	51.6	50.4	50.0	34.9	44.3	38.2	37.7	43.0	41.7	53.0	47.4	53.2
A72-512	47.2	54.0	50.2	51.2	44.5	44.6	22.1	35.7	42.7	41.0	50.6	40.5	65.1
K1008	46.6	58.4	53.5	60.4	29.4	48.0	25.5	31.6	43.7	40.0	48.2	36.1	59.7
K1009	47.1	52.3	57.6	55.7	34.9	40.3	16.3	31.0	45.5	46.2	47.5	41.5	62.0
K1010	44.2	47.1	49.0	51.6	36.6	43.1	44.2	31.8	40.5	43.0	45.3	41.7	56.0
L70L-2887	42.4	51.7	51.2	45.5	38.1	32.7	40.7	35.0	40.2	39.1	42.9	39.2	49.6
L70L-2912	44.9	53.2	49.2	50.8	42.6	45.1	37.6	39.8	39.9	35.0	46.0	39.5	56.3
L70L-2947	46.4	57.5	56.7	46.5	40.0	42.2	43.6	32.3	45.0	35.9	50.0	45.9	51.8
L70L-3175	44.2	51.0	50.0	40.0	36.9	38.4	24.5	34.9	43.5	38.2	50.9	36.9	54.0
L71U11-22	40.7	47.1	45.1	43.6	37.3	40.3	28.1	31.5	38.2	31.9	39.2	41.9	50.8
L71U17-22	41.3	43.9	48.4	48.2	33.8	42.4	34.9	34.1	40.6	32.0	41.8	37.0	51.6
S6	42.9	53.7	49.8	44.7	34.4	39.5	17.3	31.9	38.5	37.4	38.1	40.8	56.8
S7	45.2	47.0	51.1	42.8	34.4	48.3	29.7	30.8	45.5	38.4	45.2	41.6	58.5
C.V.(%)		10.9	7.9	12.1		13.5	25.5	11.5	8.9	7.4	5.4	10.5	7.0
L.S.D.(5%)		10.9	n.s.	n.s.		12.0	16.9	8.2	7.9	6.0	5.3	9.1	n.s.
Row Sp. (In.)		36	40	30	28	38	40	30	30	27	27	15	30
Rows/Plots		3	3	3	3	3	3	4	4	4	4	4	4
Reps		2	2	2	2	2	2	2	2	2	2	2	3

* Not included in the mean

Strain	Mean	Del. George-town I	Md. Belts-ville	Md. Link-wood	Ohio Colum-bus	Indiana Worth-ington	Indiana Evans-ville	Illinois Eldo-rado	Illinois Carbon-dale	Iowa Stu-art	Iowa Ot-tumwa	Mo. Colum-bia	Kansas Manhat-tan I
9 Tests						YIELD RANK							
				*	*		*						
Cutler 71	8-9	15	17	10	5-6	3	3	11	8	7	10	5	10
Kent	10-11	10	10	17	2	10	12	2	6	17	6-7	14	11
A72-409	7	12-13	4	12	7	8	10	7	19	6	1	1	7
A72-410	15	12-13	16	11	12	17	14	19	16	14	5	11	14
A72-426	12-14	6	18	8	4	13	6-7	8-9	1	12	17	3	15
A72-508	6	14	8	4	18	7	9	8-9	4	3	8	6	5
A72-511	3	9	7	7	13-14	6	5	3	10	4	2	2	13
A72-512	1	3	9	5	1	5	17	4	11	5	4	13	1
K1008	4	1	3	1	19	2	15	15	7	8	9	19	3
K1009	2	7	1	2	13-14	14-15	19	17	2-3	1	11	10	2
K1010	12-14	16-17	14	3	11	9	1	14	13	2	13	8	9
L70L-2887	17	8	5	14	8	19	4	5	14	9	15	16	19
L70L-2912	10-11	5	13	6	3	4	6-7	1	15	16	12	15	8
L70L-2947	5	2	2	13	5-6	12	2	12	5	15	6-7	4	16
L70L-3175	12-14	11	11	19	10	18	16	6	9	11	3	18	12
L71U11-22	19	16-17	19	16	9	14-15	13	16	18	19	18	7	18
L71U17-22	18	19	15	9	17	11	8	10	12	18	16	17	17
S6	16	4	12	15	15-16	16	18	13	17	13	19	12	6
S7	8-9	18	6	18	15-16	1	11	18	2-3	10	14	9	4

Strain	Mean	Del. George-town I	Md. Belts-ville	Md. Link-wood	Ohio Colum-bus	Indiana Worth-ington	Indiana Evans-ville	Illinois Eldo-rado	Illinois Carbon-dale	Iowa Stu-art	Iowa Ottum-wa	Mo. Colum-bia	Kansas Manhat-tan I
8 Tests					MATURITY (relative date)								
				*	*		*				*		
Cutler71	9-27.6	9-24	9-30	9-23	10-5	9-24	10-4	9-30	9-29	10-8		9-13	10-3
Kent	+5.4	+4	+11	+2	+2	+6	+8	+6	+3	+2		+6	+5
A72-409	-2.3	-2	-1	-6	+4	-3	0	-5	-6	-2		-2	+3
A72-410	-1.6	-2	+1	-2	+4	0	0	-4	-6	-2		0	0
A72-426	-2.3	-1	-2	-3	+3	-1	-2	-7	-5	-3		+1	0
A72-508	-3.8	-1	+1	-1	+3	0	0	-5	-2	0		0	+4
A72-511	-0.9	+1	-1	0	+6	0	0	-4	-3	-2		-1	+3
A72-512	-0.8	0	-1	-2	+2	0	-1	-2	-3	-2		0	+2
K1008	+1.6	0	+6	+2	0	+4	+1	-3	-1	+2		+1	+4
K1009	+1.6	+1	+1	+1	+4	+1	+2	0	-2	+3		+4	+5
K1010	+2.3	+2	+7	0	+6	+3	-1	-3	-2	+1		+2	+4
L70L-2887	+0.6	+2	+2	+1	0	+1	-2	-1	-2	0		+3	0
L70L-2912	-2.1	0	-2	-4	0	-2	-2	-7	-3	-3		-1	+1
L70L-2947	-0.4	0	+1	-3	+2	0	-2	-1	-3	0		0	0
L70L-3175	+3.1	+3	+5	+1	+6	+4	0	+2	+1	+2		+4	+4
L71U11-22	-0.4	0	-1	-3	0	-1	0	-2	-2	+1		0	+2
L71U17-22	0.0	-1	0	-2	0	0	+1	+1	0	+1		-1	0
S6	-0.1	+1	0	-4	+3	+1	-1	-2	-2	-2		-1	+4
S7	+0.3	0	0	+1	+4	+2	0	-1	-2	-2		+1	+2
Williams (III)			-3	-3	0	0	-3	-4	-5	-2		-2	-3
Hill (V)		-12	+21	+11				+19					
Date Plt.		5-30	6-1	6-4	6-1	5-21	6-8	6-26	6-15	6-14	5-17	5-23	5-17	5-9

Regional Summary of locations growing both tests

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
				1972					
No. of Tests	16	16	14	16	15	14	13	7	7
Chippewa 64	37.9	9	-1.3	2.2	37	2.0	15.7	41.4	21.5
Hark	42.8	7	+4.8	2.1	38	1.8	17.0	42.0	21.2
Steele	39.9	8	9-21.8	2.5	37	2.0	17.9	40.6	21.5
M63-217Bf	45.3	4	-1.2	2.2	36	2.0	17.3	39.4	23.3
Amsoy 71	43.7	6	+12.2	3.0	43	2.3	18.3	40.0	22.3
Beeson	44.1	5	+13.5	2.5	40	2.0	19.7	41.0	20.9
Corsoy	47.6	1	+9.1	2.9	40	1.8	16.7	40.7	21.4
Wells	45.4	3	+6.5	2.0	40	2.3	17.0	42.0	21.5
M63-194*	46.2	2	+6.2	2.9	41	2.2	16.7	40.8	21.6
				1973					
No. of Tests	11	11	11	11	11	10	10	5	5
Chippewa 64	37.3	9	-1.3	1.7	35	1.8	15.5	41.2	22.4
Hark	44.3	5	+5.6	1.8	37	1.3	17.0	41.4	22.6
Steele	42.7	8	9-13.4	1.8	36	1.5	17.5	40.6	22.4
M63-217Bf	45.4	3	-0.1	1.9	33	1.6	17.2	39.4	23.7
Amsoy 71	44.7	4	+11.8	2.2	44	2.1	17.1	39.5	23.6
Beeson	42.9	7	+12.2	1.9	40	1.8	18.2	40.7	22.3
Corsoy	46.9	1	+7.7	2.7	40	1.6	16.0	40.1	22.8
Wells	44.1	6	+6.7	1.5	38	1.9	15.8	40.7	22.8
M63-194*	46.0	2	+7.6	2.7	41	1.7	15.7	39.9	23.0
				1972-73, 2-YEAR MEAN					
No. of Tests	27	27	25	27	26	24	23	12	12
Chippewa 64	37.6	9	-1.3	2.0	36	1.9	15.6	41.3	22.0
Hark	43.6	6	+5.2	2.0	38	1.6	17.0	41.7	21.9
Steele	41.3	8	9-17.6	2.2	37	1.8	17.7	40.6	22.0
M63-217Bf	45.4	3	-0.7	2.1	35	1.8	17.3	39.4	23.5
Amsoy 71	44.2	5	+12.0	2.6	44	2.2	17.7	39.8	23.0
Beeson	43.5	7	+12.9	2.2	40	1.9	19.0	40.9	21.6
Corsoy	47.3	1	+8.4	2.8	40	1.7	16.4	40.4	22.1
Wells	44.8	4	+6.6	1.8	39	2.1	16.4	41.4	22.2
M63-194*	46.1	2	+6.9	2.8	41	2.0	16.2	40.4	22.3

* M63-194 in Uniform Test I in 1972 and Uniform Test II in 1973

1972-73, 2-YEAR MEAN YIELD AND RANK

Strain	Mean	Ontario		Ohio			Mich.	Indiana
		Ridgetown	Harrow	Hoytville	Wooster	Columbus	Dundee	Lafayette
	27 Tests							
Chippewa 64	37.6 9	45.7 9	34.8 9	23.7 8	24.3 8	33.9 8	40.0 9	38.1 9
Hark	43.6 6	48.2 7	42.6 2	28.0 5	28.4 7	34.6 6	49.2 3	44.2 6
Steele	41.3 8	47.2 8	36.9 8	22.2 9	23.7 9	30.3 9	45.3 8	40.2 8
M63-217Bf	45.4 3	57.7 1	41.1 4	25.5 7	32.4 3	36.4 5	48.7 5	42.0 7
Amsoy 71	44.2 5	53.4 4	39.5 6	32.5 2	33.0 2	40.9 2	48.6 6	52.6 1
Beeson	43.5 7	48.7 6	39.2 7	32.6 1	31.0 5	45.0 1	49.1 4	50.0 3
Corsoy	47.3 1	54.4 3	43.1 1	29.6 3	30.6 6	38.9 4	56.2 1	50.1 2
Wells	44.8 4	49.3 5	41.7 3	29.0 4	31.4 4	40.8 3	46.3 7	44.7 5
M63-194	46.1 2	56.3 2	39.6 5	27.6 6	34.5 1	34.0 7	51.9 2	46.4 4

Strain	Illinois		Minnesota		Iowa	S. Dakota	Nebraska
	Dekalb	Pontiac	Lamberton	Waseca	Kanawha	Brookings	Mead I
Chippewa 64	38.0 9	38.8 9	34.6 9	35.0 9	37.8 9	27.6 6	38.4 9
Hark	47.1 7	42.9 5	38.6 7	44.2 3	47.6 3	29.1 5	45.4 2-3
Steele	44.7 8	41.3 8	36.5 8	41.6 5	43.2 7	30.1 4	44.6 4
M63-217Bf	49.5 5	41.5 7	48.0 1	45.8 1-2	46.8 4	33.6 1	43.5 8
Amsoy 71	51.2 2	43.2 4	43.5 3	36.3 8	46.6 5	22.4 9	44.1 7
Beeson	50.1 4	44.0 3	41.4 6	37.9 6	45.5 6	24.2 8	45.6 1
Corsoy	53.0 1	46.4 1	47.3 2	43.7 4	49.9 1	30.6 3	45.4 2-3
Wells	48.0 6	42.5 6	43.0 4	37.2 7	42.2 8	25.9 7	44.2 6
M63-194	50.8 3	45.6 2	42.2 5	45.8 1-2	48.8 2	31.0 2	44.5 5

Strain	1972 Uniform Test	1972 Source of Seeds							Mean[b]		
		De-kalb A	Pon-tiac A,C	Ur-bana A,B,C	Gir-ard B,D	Edge-wood B	Belle-ville B,D,E	Eldo-rado B,E	3 loc's A	5 loc's B	2 loc's
		Germination Percentage									
Chippewa 64	I	92	83	86					87.0		
Hark	"	91	90	90					90.3		
Steele	"	87	78	83					82.7		
M63-194	"	96	85	89					90.0		
217	"	88	89	78					85.0		
											C
Amsoy 71	II	86	70	74	82	67	34	64	76.7	64.2	72.0
Beeson	"	90	75	72	71	68	27	59	79.0	59.4	73.5
Corsoy	"	91	95	73	83	76	55	81	86.3	73.6	84.0
Wells	"	91	86	86	68	59	55	70	87.7	67.6	86.0
C1512	Prel.II		81	80							80.5
L69D-133	"		82	88							85.0[c]
											D
Calland	III			81	80	83	49	51		68.8	64.5
Wayne	"			83	81	68	50	49		66.2	65.5
Williams	"			79	88	88	65	71		78.2	76.5
L66L-172	"			56	79	82	47	42		61.2	63.0
SL11	"			87	84	71	34	42		63.6	59.0
C1504	Prel.III				87		15				51.0
C1506	"				88		23				55.5
C1508	"				92		18				55.0
L69-20	"				90		18				54.0[c]
											E
Bonus	IV			76	85	74	82	62		75.8	72.0
Cutler 71	"			72	75	62	45	73		65.4	59.0
Kent	"			71	88	68	69	63		71.8	66.0
L66-1359	"			88	91	86	56	65		77.2	60.5
K1003	Prel.IV						30	48			39.0
K1004	"						27	74			50.5
K1007	"						25	72			48.5
L70-4180	"						16	40			28.0
Columbus	IVS						67	42			54.5
D66-5566	"						62	81			71.5
D67-3297	"						78	57			67.5
D68-4466	"						78	68			73.0
D69-3871	"						91	59			75.0
D69-3955	"						86	71			78.5
D69-4073	"						74	61			67.5
S63-5328S	"						76	56			66.0
S65-3339	"						59	66			62.5
V68-1242	"						74	41			57.5

[a] Planted in June, 1973, in Urbana Field 1204. Mean of 2 replications of 100 seeds each.

[b] Locations included are indicated by letters A, B, C, D, E.

[c] Comparisons cannot be made across this line.