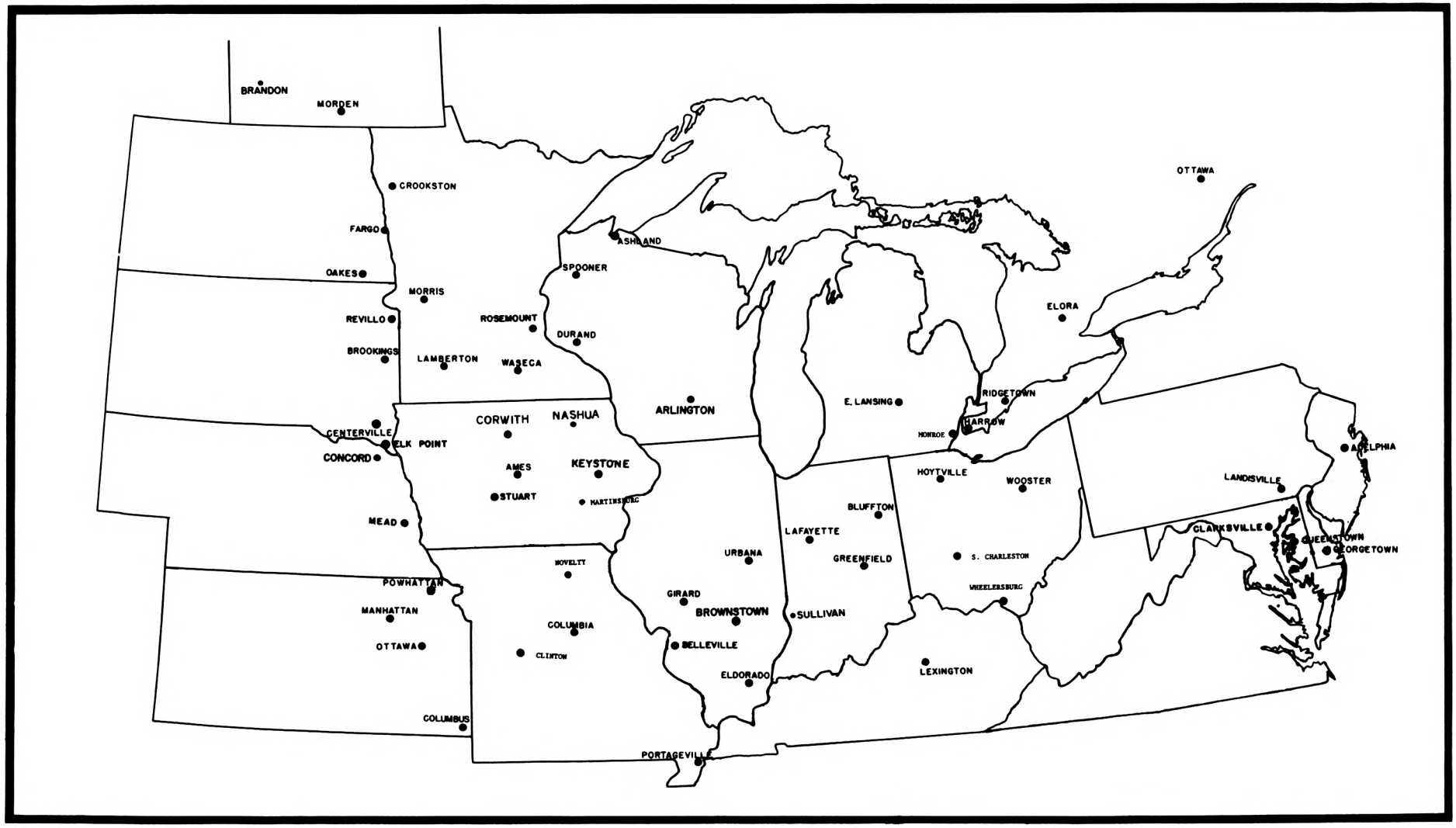

LOCATIONS OF UNIFORM SOYBEAN TESTS, NORTHERN STATES, 1978

THE UNIFORM SOYBEAN TESTS

NORTHERN STATES

1978

Compiled by:

J.R. Wilcox and W.T. Schapaugh, Jr.
Science and Education Administration, USDA
Agronomy Department
Rm 2-318 Lilly Hall, Purdue University
West Lafayette, Indiana 47907
Tel. 317-749-2891

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Acknowledgements

The cooperation of Dr. Robert Kleiman and Thomas D. Simpson, Horticultural Crops Laboratory, Northern Regional Research Center, Peoria, Illinois, in their analyses of Uniform Test samples for protein and oil content of the seeds is gratefully acknowledged. The assistance of Gary Nowling, Michael Roach and Patrick Williams in packeting and distributing seed for the Uniform Tests is sincerely appreciated.

INTRODUCTION

The purpose of the Uniform Soybean Tests is to critically evaluate the best of the experimental soybean lines developed by federal and state research personnel in the U.S. and Canada, for their potential as new varieties.

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.

Experimental lines entered in the uniform tests should be labelled "Experimental Line" and not identified by code numbers when grown in demonstration plots or when the uniform tests are shown on field days or farm tours.

Seed of experimental lines entered in the uniform tests should not be sent to non participants. Requests for seed of unreleased lines or experimental strains should be referred to the breeder or agency originating the strain listed on page 6.

The Uniform Test Report is a progress report containing statements which may or may not be verified by subsequent experiments. Statements or data in the report, therefore, should not be published unless permission has been obtained previously by those concerned.

UNIFORM TEST PARTICIPANTS--1978

T. S. Abney, SEA, USDA
Department of Botany
and Plant Pathology
Purdue University
W. Lafayette, IN 47907
Ph. 317-749-6460

K. L. Athow
Department of Botany
and Plant Pathology
Purdue University
W. Lafayette, IN 47907
Ph. 317-749-6466

R. L. Bernard, SEA, USDA
Department of Agronomy
University of Illinois
Urbana, Illinois 61801
Ph. 217-333-4639

~~W. Beversdorf~~
~~Department of Crop Science~~
~~South Dakota State University~~
~~Brookings, South Dakota 57006~~
~~Ph. 605-688-5121~~

R. D. Brigham
Texas Agricultural Experiment
Station
Route #3
Lubbock, Texas 79401
Ph. 806-746-6101

R. I. Buzzell
Canada Dept. of Agriculture
Research Station
Harrow, Ontario, Canada NOR 1GO
Ph. 519-738-2251

R. L. Cooper, SEA, USDA
Department of Agronomy
OARDC
Wooster, Ohio 44691
Ph. 216-264-1021 ext. 191

Thomas E. Devine, SEA, USDA
USDA-ARS-NER
Room 218, Building 001
BARC-West
Beltsville, MD 20705

W. R. Fehr
Department of Agronomy
Iowa State University
Ames, Iowa 50010
Ph. 515-294-2072
FTS 865-2072

E. T. Gritton
Rm. 245, Moore Hall
Department of Agronomy
University of Wisconsin
Madison, Wisconsin 53706
Ph. 608-262~~0~~6527

D. E. Green
Department of Agronomy
Iowa State University
Ames, Iowa 50011

E. Hatley
106 Agr. Admin. Bldg.
Pennsylvania State University
University Park, Penn. 16802
Ph. 814-865-2543

J. R. Justin
Department of Soils and Farm Crops
Lipman Hall
Cook College
Box 231
New Brunswick, New Jersey 08903
Ph. 201-932-9872

W. J. Kenworthy
Department of Agronomy
University of Maryland
College Park, Maryland 20742
Ph. 301-454-4695

J. W. Lambert
Department of Agronomy
University of Minnesota
St. Paul. Minnesota 55101
Ph. 612-373-1516

S. M. Lim, SEA, USDA
Department of Plant Pathology
University of Illinois
Urbana, IL 61801

UNIFORM TEST PARTICIPANTS--1978

F. A. Laviolette
Department of Botany
and Plant Pathology
Purdue University
W. Lafayette, Indiana 47907
Ph. 317-749-6467

V. D. Luedders, SEA, USDA
Department of Agronomy
University of Missouri
Columbia, Missouri 65201
Ph. 314-883-2405
FTS 276-3218

A. R. Mc Elroy
Research Station
Agriculture Canada
P.O. Box 610
Brandon, Manitoba
R7A 527
Canada
Ph. 204-728-7234

Oval Myers, Jr.
Southern Ill. Univ. at
Carbondale
Dept. of Plant & Soil Science
Carbondale, IL 62901

C. D. Nickell
Department of Agronomy
University of Illinois
217-333-1279 Urbana, Illinois 61801

J. H. Orf ~~D. A. Reicosky~~
Department of Agronomy
University of Kentucky
Lexington, Kentucky 40506
Ph. 606-258~~-56-5624~~
7-4678

J. C. Schleihauf
Ridgetown College of
Agricultural Technology
Ridgetown, Ontario
Canada NOP 2C0
Ph. 519-674-5456

A. G. Schmitthenner
Ohio Agricultural Center
Department of Plant Pathology
Wooster, Ohio 44691
Ph. 614-422-1865

S. Anand
~~J. G. Shannon~~
University of Missouri
Delta Research Center
Portageville, Missouri 63873
Ph. 314-379-5431

M. D. Stauffer
Research Station
Agriculture Canada
Box 3001
Morden, Manitoba, Canada ROG 1J0
Ph. 204-822-4471

H. Tachibana, SEA, USDA
Department of Botany
and Plant Pathology
Iowa State University
Ames, Iowa 50010
Ph. 515-294-3660

H. Voldeng
Agriculture Canada
Ottawa Research Station
Ottawa, Ontario
Canada KLA 0C6
Ph. 613-995-8728

A. K. Walker
Dept. of Agronomy
OARDC
Wooster, Ohio 44691
Ph. 216-264-1021

D. A. Whited
Department of Agronomy
North Dakota State University
Fargo, North Dakota 58102
Ph. 701-237-7971

J. R. Wilcox, SEA, USDA
Department of Agronomy
Purdue University
W. Lafayette, Indiana 47907
Ph. 317-749-2891

J. H. Williams
342 Keim Hall
East Campus
UN-L
Lincoln, Nebraska 68583
Ph. 402-472-1537

UNIFORM TEST PARTICIPANTS--1978

E. L. Wisk
University of Delaware
Substation
R. D. 2, Box 47
Georgetown, Delaware 11947
Ph. 302-856-5254

J. O. Yocum
Southeastern Field
Research Lab.
Box 308
Landisville, Pa. 17538
Ph. 717-653-4728

~~A. K. Walker~~
~~Department of Agronomy~~
~~OARDC~~
~~Wooster, Ohio 44691~~
~~Ph. 216-264-1021~~

~~Dr. J. R. Wilcox~~
U.S. DEPARTMENT OF AGRICULTURE
Agronomy Dept., Purdue Univ.
W. Lafayette, IN 47907

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

T. J. Johnston
Department of Crop and Soil Science
Michigan State University
East Lansing, Michigan 48824
Ph. 517-353-1784

W. T. Schapaugh, Jr.
Department of Agronomy
Kansas State University
Manhatten, Kansas 66506
Ph. 913-532-6101

~~Richard W. Zobel~~
~~USDA-AR Cornell~~
~~Agronomy Department~~
~~Ithaca, NY 14853~~
~~607-256-4573~~

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101

U.S.MAIL

Dr. W. Beversdorf
Department of Crop Science
University of Guelph
Guelph, Ontario
CANADA NIG 2WI

FORM AD-414-S
(9-77)

Dr. J. R. Wilcox
U.S. DEPARTMENT OF AGRICULTURE
Agronomy Dept., Purdue Univ.
W. Lafayette, IN 47907

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101

U.S.MAIL

Dr. Joseph J. Bonnemann
Plant Science Department
South Dakota State University
Brookings, SD 57007
Ph 605-688-5121

FORM AD-414-S
(9-77)

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. Department of Agriculture.

A	Iowa A.E.S.
Ar	Arizona A.E.S.
Au	Alabama A.E.S.
B	California
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 Brancc, 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 Caroline 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, 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.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.

METHODS - 1978

Uniform Tests are planted in multiple row plots with three or four replications and the center rows are harvested. Preliminary Test are multiple row plots (the center rows harvested) with two replications. Usually 15 to 20 feet of row are planted and 12 to 16 feet harvested, to eliminate end-of-row effects. At the Soybean Workers Conference in Memphis, Tennessee on February 24 and 25, 1976, the Northern breeders discussed and made the following recommendation: Only data from bordered row plots will be included in the regional means. Yield means will not be included in regional means if they do not have a CV value. We will use discretion when including values that have a high CV. If the CV value is high (greater than 15), we hope you will include the reason, such as disease or enviornmental conditions. Lines will be allowed to be heterogeneous the first year in the Uniform tests but must be a pure line the second year of testing. It is up to the breeder to clean up his hetergeneous line.If the breeder plans on purifying the line let us know so we can star the line so when you breeders vote on the line for further testing you know it will be purified.

Generation Composited is the generation after the final single-plant selection in which the line is composited.

Previous Testing. The number of pervious 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 acre (or quintals per hectare) multiply by .6725; 1 kg/acre=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	Evans	-5 to +3	Altona (00)	Hodgson (I)
I	Hodgson 78	-3 to +5	Evans (0)	Corsoy (II)
II	Corsoy	-3 to +5	Coles (I)	Woodworth (III)
III	Woodworth	-4 to +4	Beeson (II)	Union (IV)
IV	Union	-3 to +8	Williams (III)	Essex (V)

These maturity group ranges are based on long-time means over many locations. When using data from other enviroments, 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 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 sample 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 and oil percentages are measured using Infrared reflectance.

Descriptive Code: 1 2 3 4 5 6, abbreviated as underlined below:

1 = Flower Color: Purple, White
2 = Pubescence Color: Tawny, Gray, Light tawny
= Pod Color: Brown, Tan
4 = Seed Coat Luster: Dull, Shiny, Intermediate
5 = Seed Coat Color: Yellow, Gray, Light gray, Green
6 = 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.

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
2 1% to 10% shattered
3 10% to 25% shattered
4 25% to 50% shattered
5 Over 50% shattered

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

Emergence Score is related to Hypocotyl elongation and was measured at Ames, Iowa by germination at 25° c. (a critical temperature for differentiating strains). Four replications of 25 seeds/entry are planted in a 5-inch plastic pot, at a 4 1/2 - inch depth in sand. Only the seedlings which have emerged by 12 days after planting are counted. Emergence score in relation to % of seeds which germinate and emerge are as follows:

1 $\geq$ 85%
2 = 70 - 84%
3 = 45 - 69%
4 = 20 - 44%
5 = 0 - 19%

DISEASE

Disease reactions are listed according to "Soybean Disease Survey Standards", March 1960, unless otherwise specified. Disease reaction is scored from 1 (no disease) to 5 (very severe), or in some cases as percent infected or simply as + (present) or 0 (absent). Purple seed stain and seed mottling follow the disease severity class rating:

Disease severity class rating	1	2	3	4	5
Number of diseased seed in sample	0	1-3%	4-8%	4-19%	20-100%

An additional classification to describe the extent of seedcoat mottling as M (mild), E (extensive), or S (severe), if included, Pod and stem blight is rated as percent of infected seed on a four-week delayed harvest sample. 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 planting in others. Absence of symptoms under natural infection does not necessarily mean high resistance.

Abbreviation	Disease	Pathogen
BB	Bacterial blight	*Pseudomonas glycines*
BBV	Bud blight	T obacco 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	*Macrophomi-a 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	*Cercespora kikuchii*
PSB	Pod & stem blight	*Diaporthe phaseolorum* var. *sojae*
Pyd	Pythium root rot	*Pythium debaryanum*
Pyu	Pythium root rot	*Pythium ultimum*
RK	Root knot nematode	*Meloidogyne spp.*
RP	Rhizoctonia root rot	*Rhizoctonia solani*
SB	Sclerotial blight	*Sclerotium rolfsii*
SC	Stem canker	*Disporthe phaseolorum* var. *caulivora*
SMV	Soybean mosaic	*Soja* varus 1
TS	Target spot	*Corynespora cassilicola*
WF	Wildfire	*Pseudomonas tabaci*
YMV	Yellow mosaic	*Phaseolus* virus 2

Ratings for BB, BP, DM, FE_2, and PM were based on leaf symptoms; 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. Tolerance ratings with PR races 1 and 3 present are: 1=none-trace dead plants; 2=up to 2% dead plants, no stunting or chlorosis; 3=up to 10% dead plants, slight stunting or chlorosis; 4= up to 50% dead plants, moderate stunting and chlorosis; 5=over 50% dead plants, severe stunting and chlorosis.

POLICY ON TESTING AND RELEASE OF STRAINS

This policy on testing and release of soybean strains evaluated in the Uniform Soybean Tests, Northern States, has been agreed upon by public soybean breeders. The policy was developed to assist breeders in preparing schedules for seed increases and to assist individuals and committees responsible for approving releases. The policy will aid private breeders in the U.S. and in foreign countries to understand how releases will be made that may affect their programs.

Development and release of soybean strains is carried out by many public institutions. The programs at these institutions operate independently until strains are available for advanced testing in the Uniform Soybean Tests. The Uniform Soybean Tests are coordinated by Agricultural Research, Science and Education Administration, U.S. Department of Agriculture. The tests are divided into those in the Northeren States, for strains in maturity groups 00 to IV and those in the Southern States for strains in maturity groups V to VIII. Group IV maturity strains are divided into a IV N test for the northern states and a IV S test for the southern states.

Public soybean breeders are encouraged to enter superior strains they develop into the Uniform Soybean Tests. Strains entered in these tests must have been evaluated by the breeder in a minimum of four environments of replicated yield tests. Strains developed by four or more backcrosses to a released cultivar may be entered without prior yield evaluations.

Strains are evaluated for one year in the Preliminary Tests (PT) which are conducted at eight or more locations in several states. When the tests are completed, each public breeder is given an opportunity to review the results and to decide which strains merit further testing. In instances where there is little concenses among the breeders on the merits of a strain, the originator of the strain generally makes the final decision.

Strains that merit further testing are evaluated in the Uniform Tests (UT) conducted at more locations and with more replications than the PT. Lines developed by four or more backcrosses to a released cultivar may be entered directly in the UT without prior evaluation in the PT.

Strains may be considered for release after they have been evaluated for two years in the UT. Exceptions to this are special purpose strains or strains derivied from four or more backcrosses to a released cultivar; these may be considered for release after one year in the UT. Consideration for release of any strains in the UT

may be requested by any institution or breeder participating in the Uniform Soybean Tests, however it is generally intiated by the institution that developed the strain.

A strain should be released only if it is distinctly superior to existing varieties in one or more characteristics important for the crop, or it is superior in overall performance in areas where adapted. A single major production hazard which a new cultivar can overcome, e.g. a highly destructive disease, may become the overriding consideration in releasing a variety. Strains with a very limited range in adaptation should not be released unless performance in that limited range is outstandingly superior, or the strain possesses important use values not otherwise available, including diversification of the germplasm base for the species.

Where a dicision has been made to multiply a strain for release, the originating institution will inform other UT participants of the decision by February 15. This will give each UT participant the opportunity to participate in the multiplication and release of the strains. By March 15 all institutions intending to participate in the multiplication of the strain must notify the originating institution of their intent. A final decision to participate in the release of the strain may be delayed until an additional year's data are available for review. By April 1 the orginiating institution should notify all UT participants what states will be participating in the multiplication and are considering participating in the release of the strain. Breeders seed is distributed to foundation seed organizations in participating states for production during the summer. At this time, if a final decision to release has been made, a sample of seed may be distributed to non-participants in the UT, including private soybean breeders, in accordance with a states experiment station policy, for use in making crosses. This distribution is made only by the originating institution.

A release notice to soybean seed producers listing all institutions participating in the release of the cultivar is prepared by the originating institutions. This notice is circulated for signature by all participating institutions. Assistance in the preparation and circulation of this release notice may be obtained from R.C. Leffel, Oilseed Specialist, National Program Staff, Room 111, Bldg. 005, Beltsville Agricultural Research Center West, Beltsville, Maryland, 20705. The date for simultaneous publicity release on the new cultivar by participating states usually August 1, but the date may be delayed until April 1 of the following year if additional UT data are being reviewed and a final decision to release has not been made.

If an additional year of UT data are being reviewed prior to a final decision on release, states producing foundation seed must notify the originating state by February 15 of their intent to participate in the release of the cultivar. The release notice to soybean seed producers should by distributed for signature by the participating institutions by April 1.

Foundation seed under the name of the new cultivar is distributed to qualified certified seed producers in states releasing the new cultivar by April 1. At this time a sample of seed may be distributed to non-participants in the UT including private plant breeders, for testing and for crossing if this distribution has not been made previously.

UNIFORM TEST LOCATIONS - 1978

Location*		Tests Conducted by	Uniform Tests 00	0	I	II	III	IV	Preliminary Tests I	II	III	IV
Del.	Georgetown	E. L. Wisk					x	x				
Ill.	Urbana	R. L. Bernard				x	x			x	x	
	Girard	"				x	x					
	Brownstown	"					x	x				
	Belleville	"					x	x			x	x
	Eldorado	"					x	x				x
Ind.	Bluffton	J. R. Wilcox				x						
	Lafayette	"			x	x	x	x		x	x	
	Greenfield	"				x	x					
	Sullivan	"					x	x				x
Iowa	Corwith	W. R. Fehr			x				x			
	Nashua	"			x				x			
	Ames	"				x				x		
	Keystone	"				x				x		
	Stuart	"					x				x	
	Martinsburg	"					x				x	
Kan.	Manhatten I	C. D. Nickell					x	x			x	x
	Powhatten	"					x	x				
	Ottawa	"					x	x				
	Columbus	"						x				
Ky.	Lexington	D. A. Reicosky					x	x				
Man.	Morden	M. D. Stauffer	x									
	Brandon	A. R. Mc Elroy	x									
Md.	Clarksville	W. J. Kenworthy					x	x				
	Queenstown	& P. B. Gregan						x				x
Mich.	E. Lansing	T. J. Johnston		x	x	x			x	x		
	Monroe	"			x	x			x	x		
Minn.	Crookston	J. W. Lambert	x									
	Morris	"	x	x								
	Rosemount	"	x	x								
	Waseca	"			x	x			x			
	Lamberton	"			x	x			x	x		
Mo.	Novelty	V. D. Luedders					x	x				
	Columbia	"					x	x				
	Clifton	"						x				
	Portageville:											
	Loan I	J. G. Shannon						x				x
	Clay I	"						x				
Neb.	Concord	R. S. Moomaw				x						
	Mead	J. W. Williams			x	x	x			x	x	
N.J.	Adelphia	J. R. Justin				x	x	x		x		
N.D.	Fargo	D. A. Whited		x								
	Oakes	"			x							

UNIFORM TEST LOCATIONS - 1978

Location*		Tests Conducted by:	Uniform Tests 00	0	I	II	III	IV	Preliminary Tests I	II	III	IV
Ohio	Wooster	A. K. Walker				x	x					
	Hoytville	"				x	x			x		
	S. Charleston	R. L. Cooper					x	x			x	
	Wheelersburg	"					x	x				x
Ont.	Ottawa	H. Voldeng	x									
	Elora	W. D. Beversdorf	x	x								
	Ridgetown	J. C. Schleihauf		x	x	x			x			
	Harrow	R. I. Buzzell				x						
Pa.	Landisville	J.O. Yocum				x	x	x				
S.D.	Revillo	J.J. Bonnemann		x	x							
	Brookings	"			x	x			x			
	Elk Point	"					x				x	
Tex.	Lubbock	R. D. Brigham						x				
Wisc.	Ashland	E. T. Gritton	x									
	Durand	"		x	x							
	Spooner	"		x								
	Arlington	"			x	x			x	x		
No. locations with agronomic data (x, x)			8	9	14	21	26	23	9	11	9	7
No. with seed composition data (x)			5	5	6	8	14	9	4	4	4	4

I=Irrigation

1978 Disease and Shattering Tests

Location		Tests Conducted by:	Test	U.T.	P.T.
Ill.	Girard	R. L. Bernard	BP	II-III	I-IV
	Belleville	"	DM	III-IV	III
Ind.	Lafayette	K. L. Athow & F. A. Laviolotte	PR, FE_2, BSR	00-IV	I-IV
	Lafayette	T. S. Abney & T. L. Richards	PS, PSB, SMV	00-IV	I-IV
Iowa	Ames	W. R. Fehr	Chlorosis	00-IV	I-IV
			Hypocotyl	00-IV	
		H. Tachibana & L. C. Card	PR, BSR	00-IV	I-IV
Kans.	Manhatten	C. D. Nickell	Shattering	00-IV	I-IV
Ohio	Vickery	A. F. Schmitthenner	PR(Tolerance)	00-III	I-III

UNIFORM TEST 00, 1978

Strain	Parentage	Previous Testing*	Generation Composited
1. Altona	0-52-903 X Flambeau	14	F_5
2. Clay (0)	Capital X Renville	1	F_5
3. Maple Arrow	Harosoy X 840-7-3	1	F_7
4. Portage (00)	Acme X Comet	18	F_5
5. BC 1413	(Amsoy X Portage) X 840-73	-	F_6
6. BD 2117	(Amsoy X Portage) X 827-4	-	F_5
7. M 65-217	M433 (Acme X Chippewa) X Hark	5	F_5
8. M68-201	Evans X Steele	2	F_5

* Number of years in this test, or name of 1977 test.

Regional data have shown that the strain M65-217 has consistently been the highest yielding Group 00 strain in the test. The strain M68-201 has yielded more than the check varieties over the years, but this should be classified as a Group 0 strain.

UNIFORM TEST 00, 1978

Descriptive and other Data

Strain	Descriptive Code		Chlorosis Score Ames	Hypocotyl Score Ames	Shattering Manhatten 2 weeks
Altona	PTBr	SYB1	3	1	4
Clay (0)	PGBr	SYY	3	1	3
Maple Arrow	PTBr	SYBr	2	1	5
Portage (00)	PGBr	SYY	2	1	5
BC 1413	PTTr	SYBr	2	1	5
BD 2117	PTBr	DYG	4	1	5
M 65-217	PGBr	DYY	2	1	3
M 69-201	PGBr	DYY	2	1	2

Disease Data

Strain	FE_2 Laf. Ind. a	BSR Laf. Ind. n	BSR Ames Ia. Stem n	BSR Ames Ia. Plants n	PSB Laf. Ind. d	PS Laf. Ind. a	PR Vickery Ohio a	PR Laf. Ind. a	race 1 Ames Ia. a
	Score	%	%	%	%	%	------Reaction-------		
Altona	2	20	50	80	23	3	3.5	R	R
Clay (0)	5	0	57	100	7	1	4.5	S	S
Maple Arrow	2	80	41	70	3	0	3.0	R	R
Portage (00)	4	40	65	100	4	1	3.5	S	S
BC 1413	3	60	47	80	-	-	3.5	S	S
BD 2117	2	0	49	90	9	1	4.0	R	R
M65-217	4	60	52	100	1	1	3.5	S	S
M68-201	5	0	60	100	5	1	3.5	R	R

UNIFORM TEST 00, 1978

Regional Summary

Strain	Yield Bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
No. of Tests	8	8	8	8	8	8	8	6	6
Altona	34.8	4	+6.9	2.1	28	2.1	18.6	41.5	19.0
Clay (0)	39.4	1	+15.0	1.7	27	2.3	17.2	40.8	20.6
Maple Arrow	32.5	5	+8.0	1.5	28	2.0	17.8	40.5	20.4
Portage (00)	29.6	7	9-2*	1.4	27	2.1	16.2	39.8	19.5
BC 1413	29.7	6	-2.4	1.7	26	2.4	17.5	38.6	20.7
BD 2117	26.9	8	-9.5	1.4	24	2.8	14.9	39.2	20.1
M65-217	36.5	3	+4.0	1.4	28	2.0	15.4	39.7	19.5
M68-201	38.2	2	+14.9	1.3	28	2.0	16.5	40.6	20.3

* 106 days after planting

1977-1978, 2-year mean

No. of Tests	15	15	14	16	16	15	16	10	10
Altona	35.1	4	+6.1	2.4	28	2.2	18.2	41.5	18.3
Clay (0)	36.8	1	+14.3	1.8	28	2.3	16.8	40.9	19.6
Maple Arrow	33.6	5	+8.3	1.8	28	1.9	17.4	40.2	19.9
Portage (00)	30.6	6	9-1.2*	1.4	27	2.2	16.8	39.6	18.9
M65-217	36.8	1	+5.2	1.6	28	2.1	15.2	39.4	19.4
M68-201	36.3	3	+13.7	1.4	28	2.3	16.0	40.6	19.5

* 106 days after planting

1976-1978, 3-year mean

No. of Tests	23	23	22	24	23	24	25	16	16
Altona	34.9	3	+5.7	2.2	29	2.2	18.2	41.4	18.4
Portage	30.1	4	9-3.6*	1.4	27	2.3	16.9	39.7	19.0
M65-217	36.8	1	+4.5	1.5	29	2.1	15.2	39.8	19.2
M68-201	35.8	2	+12.0	1.4	28	2.3	15.7	40.8	19.6

* 107 days after planting

1973-1978, 6-year mean

No. of Tests	51	51	47	50	51	51	52	34	34
Altona	34.0	2	+5.6	2.2	28	2.4	18.3	41.2	19.0
Portage	30.4	3	9-4.9*	1.3	27	2.4	17.5	39.9	19.5
M65-217	36.5	1	+4.6	1.6	29	2.0	15.3	39.8	19.6

* 107 days after planting

UNIFORM TEST 00, 1978

Strain	Mean 8 Tests	Ont. Ottawa	Ont. Elora	Wisc. Ash-land	Minn. Crook-ston	Minn. Morris	Minn. Rose-Mount	Man. Morden	Man. Brandon
				YIELD (bu/a)					
Altona	34.8	36.8	30.1	36.2	24.4	34.3	37.4	42.5	37.1
Clay (0)	39.4	39.0	40.6	29.3	33.0	41.0	40.8	48.1	43.4
Maple Arrow	32.5	23.8	34.4	32.8	22.6	29.3	34.6	39.5	42.8
Portage (00)	29.6	31.2	28.4	33.3	22.4	23.9	29.7	28.4	39.9
BC 1413	29.7	36.6	30.4	32.2	21.6	22.5	26.1	28.2	40.0
BD 2117	26.9	28.3	30.3	29.1	19.1	18.2	22.4	31.7	35.8
M65-217	36.5	38.8	34.5	33.3	29.6	31.5	34.7	45.0	44.5
M68-201	38.2	29.7	40.9	35.3	32.7	42.8	38.2	44.3	41.3
C.V. (%)		11.9	8.5	8.6	16.4	7.4	9.1	20.5	5.1
L.S.D. (5%)		5.8	4.2	4.9	7.4	3.9	5.2	11.9	3.6
Row sp (in.)		9"	7"	24"	22"	30"	30"	12"	9"
Rows/plot		4	8	4	4	4	4	4	4
Reps		4	4	3	3	3	3	3	3
				YIELD RANK					
Altona	4	3	7	1	4	3	3	4	7
Clay (0)	1	1	2	7	1	2	1	1	2
Maple Arrow	5	8	4	5	5	5	5	5	3
Portage (00)	7	5	8	3	6	6	6	7	6
BC 1413	6	4	5	6	7	7	7	8	5
BD 2117	8	7	6	8	8	8	8	6	8
M65-217	3	2	3	3	3	4	4	2	1
M68-201	2	6	1	2	2	1	2	3	4
				MATURITY (relative date)					
Altona	+6.9	+2	+3	+10	+12	+12	+7	+4	+5
Clay (0)	+15.0	+21	+14	+16	+13	+15	+8	+15	+18
Maple Arrow	+8.0	+9	+6	+9	+9	+12	+7	+4	+8
Portage(00)*	9-2	8-29	9-3	9-12	9-2	8-25	8-26	8-31	9-11
BC 1413	-2.4	-5	-1	-4	-1	+3	-5	0	-6
BD 2117	-9.5	-11	-10	-11	-9	-7	-11	-6	-11
M65-217	+4.0	0	+3	+10	+2	+4	+4	+4	+5
M68-201	+14.9	+27	+11	+13	+13	+15	+7	+15	+18
Date planted	5-19	5-17	5-24	5-22	5-24	5-23	5-17	5-12	5-16
* Days to mat.	106	104	102	113	101	94	101	111	118

UNIFORM TEST 00, 1978

Strain	Mean 8 Tests	Ont. Ottawa	Ont. Elora	Wisc. Ash-land	Minn. Crook-ston	Minn. Morris	Minn. Rose-Mount	Man. Morden	Man. Bran-don
				LODGING (score)					
Altona	2.1	1.0	1.0	2.7	2.7	3.3	3.0	1.0	2.0
Clay (0)	1.7	1.0	1.0	2.3	2.0	1.7	2.0	1.3	2.0
Maple Arrow	1.5	1.0	1.0	3.0	2.3	1.0	1.0	1.0	2.0
Portage (00)	1.4	1.0	1.0	2.7	2.7	1.0	1.0	1.0	1.0
BC 1413	1.7	1.0	1.0	3.0	3.0	2.0	1.7	1.0	1.0
BD 2117	1.4	1.0	1.0	2.7	2.3	1.0	1.0	1.0	1.0
M65-217	1.4	1.0	1.0	2.7	2.0	1.0	1.3	1.0	1.0
M68-201	1.3	1.0	1.0	2.0	1.7	1.0	1.0	1.0	2.0
				PLANT HEIGHT (inches)					
Altona	28	31	20	27	28	28	27	27	36
Clay (0)	27	28	20	25	28	25	26	28	35
Maple Arrow	28	32	19	29	31	24	30	26	36
Portage(00)	27	32	20	28	28	22	26	23	35
BC 1413	26	31	19	29	27	21	22	24	36
BD 2117	24	30	20	29	24	22	19	21	30
M65-217	28	31	19	30	30	23	29	25	37
M68-201	28	28	17	28	30	27	30	26	36
				SEED QUALITY (score)					
Altona	2.1	2.3	2.0	2.7	2.8	2.0	2.0	1.3	2.0
Clay (0)	2.3	2.0	3.0	2.7	2.3	2.0	2.3	1.3	3.0
Maple Arrow	2.0	2.0	2.0	2.0	2.3	2.0	1.7	2.0	2.0
Portage (00)	2.1	2.3	1.5	2.7	2.8	2.0	1.7	2.0	2.0
BC 1413	2.4	3.0	3.0	2.6	2.3	2.3	2.0	2.0	2.0
BD 2117	2.8	3.0	3.5	4.0	2.8	2.3	2.3	2.7	2.0
M65-217	2.0	2.0	2.5	3.3	2.3	2.3	1.3	1.0	1.0
M68-201	2.0	2.3	2.5	2.3	2.0	2.0	1.7	1.3	2.0

UNIFORM TEST 00, 1978

Strain	Mean 8 Tests	Ont. Ottawa	Ont. Elora	Wisc. Ash-land	Minn. Crook-ston	Minn. Morris	Minn. Rose-Mount	Man. Morden	Man. Bran-don
				SEED SIZE (g/100)					
Altona	18.6	21.8	18.9	19.7	18.0	18.0	18.4	18.4	15.9
Clay (0)	17.2	19.8	16.6	19.7	16.5	16.7	16.0	17.5	14.6
Maple Arrow	17.8	22.3	20.0	18.0	14.5	17.7	17.3	18.0	14.9
Portage (00)	16.2	19.8	17.0	18.6	13.8	14.4	17.3	15.2	13.4
BC 1413	17.5	21.0	17.7	19.8	16.7	16.7	18.0	16.4	13.6
BD 2117	14.9	17.8	15.9	16.8	15.0	13.3	14.0	14.0	12.4
M65-217	15.4	17.8	17.0	17.7	14.1	15.0	14.2	13.9	13.2
M68-201	16.5	20.5	16.9	16.9	15.5	15.8	15.4	16.5	14.4
	6 Tests			PROTEIN (%)					
Altona	41.5	40.4	42.0		41.5		42.5	40.4	42.1
Clay (0)	40.8	38.2	40.8		42.1		41.8	40.1	41.8
Maple Arrow	40.5	39.1	42.2		42.3		39.8	38.5	40.9
Portage (00)	39.8	39.0	40.0		40.4		38.5	38.6	42.1
BC 1413	38.6	39.0	39.7		37.7		38.3	36.7	39.9
BD 2117	39.2	39.1	38.2		40.0		38.6	38.7	40.9
M65-217	39.7	39.3	40.2		39.1		39.2	38.6	42.0
M68-201	40.6	39.2	40.9		41.5		39.6	39.2	43.0
	6 Tests			OIL (%)					
Altona	19.0	18.0	18.7		19.6		19.3	20.3	17.8
Clay (0)	20.6	19.6	21.4		20.9		21.0	21.9	18.8
Maple Arrow	20.4	18.9	19.7		20.3		21.7	21.9	19.6
Portage (00)	19.5	18.7	19.8		19.4		21.1	20.6	17.6
BC 1413	20.7	19.0	20.5		21.4		21.6	22.0	19.6
BD 2117	20.1	19.4	21.1		19.7		21.4	20.8	18.0
M65-217	19.5	18.3	19.7		20.3		20.1	20.4	18.0
M68-201	20.3	18.4	20.6		21.4		21.9	21.4	18.3

UNIFORM TEST 0, 1978

Strain	Parentage	Previous Testing*	Generation Composited
1. Altona (00)	0-52-903 x Flambeau	1	F_5
2. Clay	Capital x Renville	11	F_5
3. Evans (0)	Merit x Herosoy	8	F_5
4. Hodgson 78 (I)	Hodgson[7] x Merit	1	F_5
5. M70-74	Evans x PI 291,322	-	F_5
6. M70-77	Ja 53-7-6 x Hodgson	-	F_5
7. M70-127	Evans x II-63-217Y	-	F_5
8. M70-153	Steele x Hodgson	-	F_5
9. M70-330	M62-93 x M64-3	-	F_5
10. M70-334	M62-93 x M64-3	-	F_5

* Number of years in this test, or name of 1977 test.

REGIONAL SUMMARY

Strain	Yield bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
1978									
No. of Tests	8	8	8	8	8	7	8	5	5
Altona (00)	26.1	10	-7.9	1.4	25	2.9	18.1	42.1	19.5
Clay	31.3	9	-5.4	1.2	24	3.0	16.3	42.0	21.2
Evans (0)	33.7	8	9-17*	1.1	30	2.4	16.3	40.6	21.3
Hodgson 78 (I)	37.3	2	+7.2	1.5	33	2.3	17.5	40.1	21.8
M70-74	35.8	4	+4.6	1.4	31	2.5	17.9	40.4	21.5
M70-77	34.1	7	+0.8	1.2	30	2.5	17.4	39.2	22.5
M70-127	35.8	4	+1.1	1.1	28	2.6	18.1	40.3	21.4
M70-153	37.6	1	+2.8	1.0	29	2.5	16.5	40.2	22.0
M70-330	36.8	3	+4.2	1.2	29	2.6	16.6	37.1	22.2
M70-334	34.4	6	+3.9	1.0	27	2.6	17.8	40.0	22.0

* 116 days after planting

All of the experimental strains in this test were superior to the Group 0 check varieties in yield, in resistance to shattering, and were equal to the checks in lodging resistance. The highest yielding strain in the test, M70-153, was resistant to race 1 of phytophthora root rot.

UNIFORM TEST 0, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Hypocotyl Score Ames	Shattering Score Manhatten 2 weeks
Altona (00)	PTBr	SYB1	3	1	4.0
Clay	PGBr	SYY	3	1	3.0
Evans (0)	WGBr	DYY	2	1	2.0
Hodgson 78 (I)	PGBr	DYBf	2	5	5.0
M70-74	WGBr	DYBf	1	2	1.0
M70-77	PGBr	DYY	2	1	1.5
M70-127	PGBr	DYY	2	1	1.5
M70-153	PGBr	DYBf	2	4	1.5
M70-330	WGBr	DYY	2	2	1.0
M70-334	WGBr	DYY	2	5	1.5

Disease Data

Strain	FE_2	BSR			SMV	PSB	PS	PR	PR	Race 1
			Ames, Iowa							
	Laf. Ind. a	Laf. Ind. n	Stem n	Plants n	Laf. Ind. a	Laf. Ind. d	Laf. Ind. a	Vickery Ohio a	Laf. Ind. a	Ames Iowa a
	Score	%	%	%	Score	%	%	------Reaction		--------
Altona (00)	2	20	46	100	5E	23	1	4.5	R	R
Clay	5	0	68	100	5E	7	5	4.5	S	S
Evans (0)	5	40	72	100	1	11	6	3	R	R
Hodgson 78(I)	5	0	62	90	3E	7	3	2	R	R
M70-74	5	20	89	100	1	7	6	3.5	R	R
M70-77	5	40	69	100	2M	7	8	2.5	R	R
M70-127	5	100	61	100	2E	6	3	3	H	S
M70-153	5	0	54	100	1	4	4	4.5	R	R
M70-330	5	20	66	100	1	4	8	4.5	S	S
M70-334	5	20	89	100	1	4	3	4.5	S	S

UNIFORM TEST O, 1978

Strain	Mean 8 Tests	Ont. Elora	Ont. Ridge-town	Mich. E. Lan-sing	Wisc. Spooner	Wisc. Dur-and	Minn. Mor-ris	Minn. Rose-mount	N.D. Far-go +	S.D. Re-villo
				YIELD (bu/a)						
Altona (00)	26.1	32.2	37.0	23.3	14.0	13.2	28.8	33.0	30.9	27.3
Clay	31.3	39.2	40.4	26.9	18.5	13.2	38.9	38.5	37.0	34.8
Evans (0)	33.7	43.8	44.1	29.1	22.2	11.0	40.0	44.9	39.2	34.7
Hodgson 78 (I)	37.3	47.7	46.3	32.7	31.3	9.5	44.8	47.1	41.6	39.0
M70-74	35.8	46.9	48.3	29.4	22.5	13.9	42.5	44.7	40.8	38.2
M70-77	34.1	43.5	46.8	30.6	22.7	11.3	38.3	45.4	39.0	34.2
M70-127	35.8	47.6	48.7	30.1	20.8	11.1	44.6	46.5	38.5	36.5
M70-153	37.6	47.6	46.7	35.7	22.9	14.2	45.8	49.8	44.7	38.1
M70-330	36.8	44.7	47.5	36.2	22.6	12.0	43.9	48.8	39.9	38.8
M70-334	34.4	43.1	44.7	30.0	21.1	12.6	40.1	47.0	40.5	36.7
C.V. (%)		8.1	5.9	14.8	11.1	27.8	9.4	6.0	10.8	12.4
L.S.D. (5%)		5.1	3.9	7.7	4.3	5.7	6.5	4.6	6.1	6.3
Row Sp. (in.)		7"	24"	-	36"	38"	30"	30"	30"	38"
Rows/Plot		8	4	-	4	4	4	4	3	3
Reps		4	4	-	3	3	3	3	4	4
				YIELD RANK						
Altona (00)	10	10	10	10	10	3	10	10	10	10
Clay	9	9	9	9	9	3	8	9	9	7
Evans (0)	8	6	8	8	6	9	7	7	6	8
Hodgson 78 (I)	2	1	6	3	1	10	2	3	2	1
M70-74	4	4	2	7	5	2	5	8	3	3
M70-77	7	7	4	4	3	7	9	6	7	9
M70-127	4	2	1	5	8	8	3	5	8	6
M70-153	1	3	5	2	2	1	1	1	1	4
M70-330	3	5	3	1	4	6	4	2	5	2
M70-334	6	8	7	6	7	5	6	4	4	5
				MATURITY (relative date)						
Altona (00)	-7.9	-12	-9	-10	-3	-6	-14	-4	-12	-5
Clay	-5.4	-1	-6	-10	-3	-6	-11	-4	-9	-2
Evans * (0)	9-17	9-17	9-14	9-14	9-18	9-16	9-20	9-6	9-18	10-1
Hodgson 78 (I)	+7.2	+9	+5	+2	+8	+9	+6	+14	+11	+5
M70-74	+4.6	+8	+5	-6	+7	+9	+5	+6	+6	+3
M70-77	+0.8	+2	+4	-6	+2	+1	+2	0	+2	+1
M70-127	+1.1	+2	+1	-3	+5	+1	+3	-2	+4	+2
M70-153	+2.8	+6	0	-1	+2	+2	+5	+5	+8	+3
M70-330	+4.2	+11	+5	-1	+3	+2	+5	+6	+9	+3
M70-334	+3.9	+10	+3	0	+1	+2	+5	+6	+10	+4
Date planted		5-24	5-25	-	5-15	5-25	5-23	5-17	5-17	6-10
* Days to mature		116	112	-	126	114	120	112	124	113

+ Not included in the mean

UNIFORM TEST 0, 1978

Strain	Mean 8 Tests	Ont. Elora	Ont. Ridge-town	Mich. E. Lan-sing	Wisc. Spooner	Wisc. Dur-and	Minn. Mor-ris	Minn. Rose-mount	N.D. Far-go +	S.D. Re-villo
				LODGING (score)						
Altona (00)	1.4	1.0	1.5	1.0	1.0	1.0	3.0	2.0	2.5	1.0
Clay	1.2	1.0	1.0	1.2	1.0	1.0	2.0	1.0	1.0	1.0
Evans (0)	1.1	1.0	1.0	1.2	1.0	1.0	1.3	1.0	1.0	1.0
Hodgson 78 (I)	1.5	1.0	1.0	1.5	1.7	1.0	2.3	2.3	2.0	1.0
M70-74	1.4	1.0	1.0	1.5	1.7	1.0	2.0	1.7	1.5	1.0
M70-77	1.2	1.0	1.0	1.0	1.3	1.0	1.3	1.7	1.5	1.0
M70-127	1.1	1.0	1.0	1.0	1.0	1.0	1.3	1.3	1.0	1.0
M70-153	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.0	1.0	1.0
M70-330	1.2	1.0	1.3	1.0	1.0	1.0	2.0	1.7	1.5	1.0
M70-334	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.0	1.0	1.0
				PLANT HEIGHT (inches)						
Altona (00)	25	20	25	26	28	24	25	25	27	26
Clay	24	21	21	25	23	21	28	26	31	29
Evans (0)	30	24	27	29	32	28	32	34	41	34
Hodgson 78 (I)	33	29	29	34	32	31	35	38	40	36
M70-74	31	24	30	28	32	32	30	35	35	36
M70-77	30	25	30	28	33	29	31	32	37	35
M70-127	28	21	24	26	30	26	31	30	34	34
M70-153	29	23	24	30	30	26	31	32	34	34
M70-330	29	23	26	29	29	26	31	32	34	35
M70-334	27	22	23	28	26	26	28	30	31	30
				SEED QUALITY (score)						
	7 Tests									
Altona (00)	2.9	2.5	3.0		3.7	4.0	2.7	2.7	3.0	2.0
Clay (0)	3.0	3.0	2.0		4.3	3.0	3.0	2.7	2.0	3.0
Evans	2.4	2.0	2.0		3.0	3.0	2.7	2.3	1.0	2.0
Hodgson 78 (I)	2.3	2.5	2.0		2.0	4.0	1.7	2.0	1.0	2.0
M70-74	2.5	2.0	2.0		3.3	4.0	1.3	1.7	1.0	3.0
M70-77	2.5	3.0	2.0		3.7	3.0	2.3	1.7	1.0	2.0
M70-127	2.6	2.0	3.0		3.7	3.0	2.0	2.3	1.0	2.0
M70-153	2.5	2.5	2.0		4.0	3.3	1.3	2.7	1.0	2.0
M70-330	2.6	3.0	2.0		4.3	3.0	2.0	2.0	1.0	2.0
M70-334	2.6	2.5	2.0		4.3	3.0	1.7	2.5	1.0	2.0

+ Not included in the mean

UNIFORM TEST O, 1978

Strain	Mean 8 Tests	Ont. Elora	Ont. Ridge-town	Mich. E. Lan-sing	Wisc. Spooner	Wisc. Dur-and	Minn. Mor-ris	Minn. Rose-mount	N.D. Far-go +	S.D. Re-villo
				SEED SIZE (g/100)						
Altona (00)	18.1	18.2	20.3	22.0	16.8	13.3	19.2	17.0	17.6	17.9
Clay	16.3	16.2	17.9	19.0	15.0	12.1	17.0	16.0	15.6	17.1
Evans (0)	16.3	16.5	17.5	20.0	16.4	11.2	17.1	15.5	15.8	16.0
Hodgson 78 (I)	17.5	18.9	17.4	21.0	17.5	13.4	17.2	16.7	15.6	17.9
M70-74	17.9	17.9	18.2	19.5	17.3	15.0	18.6	17.6	17.7	19.4
M70-77	17.4	19.2	18.7	20.0	17.6	11.9	18.5	15.7	16.4	17.7
M70-127	18.1	19.2	19.6	21.5	18.6	12.5	19.6	15.6	18.3	18.1
M70-153	16.5	17.1	18.0	20.1	17.0	12.9	16.2	14.3	14.8	16.2
M70-330	16.6	16.5	16.0	20.0	15.5	13.4	17.0	17.2	16.1	17.1
M70-334	17.8	17.9	17.4	20.0	16.0	14.4	19.4	17.3	17.7	19.8
				PROTEIN (%)						
	5 Tests									
Altona	42.1	41.3			42.5		42.6	42.8		41.4
Clay	42.0	40.8			44.9		42.0	41.2		41.2
Evans (0)	40.6	40.4			42.8		40.3	39.4		40.2
Hodgson 78 (I)	40.1	40.0			41.7		39.0	40.5		39.1
M70-74	40.4	39.7			41.6		40.7	40.6		39.3
M70-77	39.2	40.1			42.4		38.0	37.0		38.4
M70-127	40.3	40.3			42.9		40.4	38.9		39.0
M70-153	40.2	40.3			42.0		40.5	38.2		39.8
M70-330	37.1	37.9			39.3		35.4	36.4		36.3
M70-334	40.0	40.3			42.5		39.6	37.8		39.9
				OIL (%)						
	5 Tests									
Altona (00)	19.5	19.3			18.5		20.3	18.9		20.4
Clay	21.2	21.5			18.5		22.0	21.8		22.4
Evans (0)	21.3	20.8			19.8		22.6	21.9		21.3
Hodgson 78 (I)	21.8	21.0			19.8		23.2	22.6		22.6
M70-74	21.5	21.2			20.6		22.1	21.9		21.6
M70-77	22.5	21.3			20.4		24.0	24.2		22.5
M70-127	21.4	20.2			19.0		22.2	22.4		23.2
M70-153	22.0	21.3			20.9		22.0	23.2		22.5
M70-330	22.2	21.0			20.9		23.7	23.2		22.2
M70-334	22.0	20.7			19.8		22.7	24.8		22.0

+ Not included in the mean

UNIFORM TEST I, 1978

Strain	Parentage	Previous Testing*	Generation Composited
1. Coles	Hark x (Provar x (Magna x Disoy)	3	F_5
2. Corsoy (II)	Harosoy x Capital	1	F_9
3. Evans (0)	Merit x Harosoy	1	F_5
4. Harlon	Blackhawk x Harosoy 63	5	F_5
5. Hodgson 78 (I)	Hodgson^7 x Merit	1	F_3
6. A75-102032	AP6 (40 lines intermated 3 times)	1	F_5
7. A75-103019	AP 6	1	F_4
8. A76-101019	AP 6	PI	F_6
9. A76-101024	AP 6	PI	F_6
10. A76-102009	Corsoy^3 x Cutler 71	PI	F_3
11. A76-102013	AP 6	PI	F_6
12. A76-103002	AP 6	PI	F_6
13. A76-103003	AP 6	PI	F_6

* Number of years in this test or names of 1977 test.

The two-year test data shows that A75-102032 and A75-103019 are two to three bushels higher in yield than the Group I check varieties. The first of these strains is susceptible to phytophthora root rot, the second is either heterogeneous or susceptible in reaction to race 1 of this disease. Both strains yield slightly above Corsoy, the Group II check variety.

The yields of two strains, A76-102009 and A76-103002 are slightly higher than the two Iowa strains previously tested. A76-102009 was also the highest yielding strains in the Preliminary I Test in 1977. It is resistant to race 1 of phytophthora.

UNIFORM TEST I, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Hypocotyl Score Ames	Shattering Manhatten 2 Weeks
Coles	PGBr	SYY	2	1	5
Corsoy (II)	PGBr	SYY	4	1	3
Evans (0)	WGBr	DYY	2	1	2
Harlon	WGBr	DYY	2	1	5
Hodgson 78 (I)	PGBr	DYBf	2	5	5
A75-102032	WTBr	DYB1	2	2	3
A75-103019	PTBr	SYB1	2	5	5
A76-101019	WGBr	SYY	3	1	5
A76-101024	PGBr	DYIb	4	5	5
A76-102009	PGBr	DYY	3	1	4
A76-102013	PTBr	SYG	4	1	5
A76-103002	WTBr	SYG	4	1	5
A76-103003	PTBr	SYB1	3	4	5

Disease Data

Strain	FE_2 Laf. Ind. a	BSR Laf. Ind. n	BSR Ames, Ia. Stem n	BSR Ames, Ia. Plants n	PSB Laf. Ind. d	PS Laf. Ind. a	PR Vickery Ohio a	PR Laf. Ind. a	Race 1 Ames Ia. a
	Score	%	%	%	%	%	------Reaction----------		
Coles	4	0	49	100	4	2	4	S	S
Corsoy (II)	5	20	48	100	4	1	4	S	S
Evans (0)	5	40	63	90	11	6	3	R	R
Harlon	5	20	61	100	4	2	4.5	R	R
Hodgson 78 (I)	5	0	59	100	7	3	2	R	R
A75-102032	3	40	61	100	2	0	4	S	S
A75-103019	4	10	71	100	5	1	3	H	S
A76-101019	4	80	53	100	0	1	5	S	S
A76-101024	4	30	74	100	0	0	2.5	S	S
A76-102009	4	30	-	-	2	3	3.5	R	R
A76-102013	5	0	81	100	0	1	2.5	S	S
A76-103002	5	40	92	100	1	2	3	S	S
A76-103003	2	30	71	100	3	0	2	S	S

REGIONAL SUMMARY

Strain	Yield bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
1978									
No. of Tests	13	13	12	13	12	9	12	6	6
Coles	40.1	11	+6.2	2.2	38	2.1	19.5	42.3	20.2
Corsoy (II)	40.5	10	+7.8	2.0	37	2.4	16.3	41.4	20.5
Evans (0)	34.9	13	-6.3	1.2	30	2.9	16.2	40.3	22.2
Harlon	36.8	12	-5.2	1.6	34	2.5	17.4	39.6	21.8
Hodgson 78 (I)	41.7	5	9-20*	1.5	34	2.2	17.6	39.4	22.1
eber A75-102032	42.8	3	+4.2	1.8	36	2.3	13.7	40.2	21.4
A75-193019	41.7	5	+1.7	1.8	30	2.6	16.9	40.4	21.2
A76-101019	40.8	8	+0.3	1.6	31	2.3	14.6	40.8	20.6
A76-101024	40.6	9	+1.2	1.6	33	2.6	17.5	41.2	21.2
A76-102009	44.7	1	+3.6	1.9	36	2.3	15.8	41.0	21.0
A76-102013	42.0	4	+1.8	2.2	35	2.6	15.8	42.9	20.0
A76-103002	43.6	2	+1.6	1.9	37	2.7	17.1	41.1	21.2
A76-103003	41.6	7	+1.0	1.9	37	2.1	18.0	42.1	20.2

* 118 days after planting

1977-1978, 2-YEAR MEAN

No. of Tests	28	28	25	28	26	20	24	12	12
Coles	41.4	5	+6.9	2.3	39	2.1	19.2	41.1	20.2
Corsoy (II)	42.5	3	+7.4	2.2	38	2.3	16.1	40.0	20.6
Evans (0)	34.3	7	-7.8	1.4	31	2.5	15.6	39.2	22.2
Harlon	36.3	6	-5.6	1.8	35	2.4	16.8	38.7	21.8
Hodgson 78 (I)	41.5	4	9-17.5*	1.7	34	2.1	17.0	38.4	22.2
A75-102032	44.6	1	+4.8	2.0	36	2.1	14.0	39.0	21.4
A75-103019	43.2	2	+3.0	1.9	31	2.3	17.0	39.2	21.3

* 119 days after planting

UNIFORM TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Monroe	Mich. E. Lansing	Ind. Lafay-ette	Wisc. Arling-ton	Wisc. Durand
	13 Tests	YIELD (bu/a)					
Coles	40.1	47.9	22.3	39.1	47.5	33.4	19.7
Corsoy (II)	40.5	46.9	17.3	34.4	49.6	31.4	18.0
Evans (0)	34.9	42.3	12.0	28.2	32.3	34.0	9.6
Harlon	36.8	43.3	15.0	29.4	39.3	30.2	13.6
Hodgson 78 (I)	41.7	49.9	21.4	34.6	47.3	36.4	13.7
A75-102032	42.8	45.2	17.8	41.0	50.3	35.4	14.8
A75-103019	41.7	47.2	20.3	36.3	46.0	38.6	21.1
A76-101019	40.8	45.0	9.3	38.3	44.0	35.5	16.1
A76-101024	40.6	44.9	21.3	39.4	47.7	36.3	11.9
A76-102009	44.7	48.1	22.2	44.1	50.9	42.1	19.2
A76-102013	42.0	40.9	19.1	40.6	49.4	37.1	13.5
A76-103002	43.6	46.5	18.2	42.6	49.3	37.2	17.9
A76-103003	41.6	46.1	23.0	41.4	50.0	35.3	13.0
C.V. (%)		5.1	24.1	7.8	8.8	9.0	27.7
L.S.D. (5%)		3.3	7.5	4.9	6.7	5.1	7.0
Row sp (in.)		24"	-	-	30"	30"	38"
Rows/plot		4	-	-	4	4	4
Reps		4	-	-	3	3	3
	13 Tests	YIELD RANK					
Coles	11	3	2	7	8	11	2
Corsoy (II)	10	5	10	11	4	12	4
Evans (0)	13	12	12	13	13	10	13
Harlon	12	11	11	12	12	13	9
Hodgson 78 (I)	5	1	4	10	9	5	8
A75-102032	3	8	9	4	2	8	7
A75-103019	5	4	6	9	10	2	1
A76-101019	8	9	13	8	11	7	6
A76-101024	9	10	5	6	7	6	12
A76-102009	1	2	3	1	1	1	3
A76-102013	4	13	7	5	5	4	10
A76-103002	2	6	8	2	6	3	5
A76-103003	7	7	1	3	3	9	11

UNIFORM TEST I, 1978

Strain	Minn. Waseca	Minn. Lamberton	Iowa Nashua	Iowa Corwith	N.D. + Oakes	S.D. Revillo	S.D. Brookings	Neb. Mead
			YIELD (bu/a)					
Coles	49.3	54.0	48.7	55.3	47.1	28.3	27.2	48.9
Corsoy (II)	53.2	47.9	50.3	51.3	55.3	33.9	42.6	50.2
Evans (0)	42.1	46.2	40.3	42.4	47.2	36.8	52.7	35.3
Harlon	48.7	49.2	45.4	44.9	46.6	35.0	42.0	42.6
Hodgson 78 (I)	53.3	54.4	51.8	48.1	45.2	39.7	43.6	47.9
A75-102032	53.0	57.3	49.4	57.9	45.8	39.5	43.5	51.6
A75-103019	51.8	49.0	44.5	54.1	43.4	37.6	42.6	53.4
A76-101019	54.5	53.7	44.3	52.8	51.1	37.7	44.2	54.8
A76-101024	52.2	58.1	47.7	50.8	49.8	37.2	31.2	49.5
A76-102009	56.4	55.0	52.6	52.7	50.4	41.3	42.1	54.2
A76-102013	52.5	54.9	51.4	53.4	50.5	41.9	40.9	50.0
A76-103002	55.8	56.5	48.8	54.8	48.0	42.7	45.2	51.4
A76-103003	52.0	54.4	47.4	51.8	46.4	32.6	42.8	50.7
C.V.	6.8	6.8	6.1	6.2	13.8	6.8	15.2	6.1
L.S.D. (5%)	5.8	6.0	4.1	4.5	9.3	3.6	9.1	5.0
Row sp (in.)	30"	30"	13.5"	27"	12"	38"	30"	30"
Rows/plot	4	4	5	4	4	3	3	4
Reps	3	3	4	4	4	4	4	3
			YIELD RANK					
Coles	11	8	7	2	8	13	13	10
Corsoy (II)	5	12	4	9	1	11	8	7
Evans (0)	13	13	13	13	7	9	1	13
Harlon	12	10	10	12	9	10	10	12
Hodgson 78 (I)	4	6	2	11	12	4	4	11
A75-102032	6	2	5	1	11	5	5	4
A75-103019	10	11	11	4	13	7	7	3
A76-101019	3	9	12	6	2	6	3	1
A76-101024	8	1	8	10	5	8	12	9
A76-102009	1	4	1	7	4	3	9	2
A76-102013	7	5	3	5	3	2	11	8
A76-103002	2	3	6	3	6	1	2	5
A76-103003	9	6	9	8	10	12	6	6

+ Not included in the mean

UNIFORM TEST I, 1978

Strain	Mean 12 Tests	Ont. Ridge-town	Mich. Monroe	Mich. E. Lansing	Ind. Lafay-ette	Wisc. Arling-ton	Wisc. Durand
		MATURITY (relative date)					
Coles	+6.2	+1	+2	+5	+7	+12	+5
Corsoy (0)	+7.8	+6	+4	+12	+9	+10	+20
Evans (0)	-6.3	-8	-1	-3	-5	-1	-12
Harlon	-5.2	-5	0	0	-4	-2	-11
Hodgson 78* (I)	9-20	9-17	9-19	9-18	9-7	9-19	9-26
A75-102032	+4.2	+1	0	+3	+4	+5	+20
A75-103019	+1.7	-1	0	0	+2	+2	+8
A76-101019	+0.3	+1	0	+2	+5	+1	0
A76-101024	+1.2	-2	0	+3	+1	+4	+4
A76-102009	+3.6	+1	0	+5	+4	+3	+11
A76-102013	+1.8	-1	-1	+3	+4	+6	+3
A76-103002	+1.6	+1	-1	+3	+2	+5	+4
A76-103003	+1.0	-1	0	+3	+1	+3	+1
Date planted	5-24	5-25	-	-	5-27	5-23	5-25
* days to mat.	118	115	-	-	103	119	124

	13 Tests						
		LODGING (score)					
Coles	2.2	2.0	1.2	3.0	2.7	3.0	1.0
Corsoy (II)	2.0	2.0	1.0	2.0	2.5	3.0	1.3
Evans (0)	1.2	1.0	1.0	1.5	1.0	1.7	1.0
Harlon	1.6	2.0	1.0	1.7	1.3	2.0	1.0
Hodgson (I)	1.5	1.3	1.2	1.5	2.0	1.3	1.0
A75-102032	1.8	1.5	1.0	1.4	2.2	2.3	1.0
A75-103019	1.8	2.3	1.5	1.2	2.8	2.0	1.0
A76-101019	1.6	1.8	1.0	1.5	1.8	2.3	1.0
A76-101024	1.6	2.3	1.3	1.7	1.5	2.3	1.0
A76-102009	1.9	2.0	1.0	1.6	3.2	2.3	1.7
A76-102013	2.2	2.0	1.7	2.5	2.8	2.7	1.0
A76-103002	1.9	1.8	1.4	1.7	3.0	2.3	1.0
A76-103003	1.9	2.0	1.2	2.0	2.5	2.7	1.0

UNIFORM TEST I, 1978

Strain	Minn. Waseca	Minn. Lamberton	Iowa Nashua	Iowa Corwith	N.D. + Oakes	S.D. Revillo	S.D. Brookings	Neb. Mead
			MATURITY (relative date)					
Coles	+6	+8	+8			+6	+4	+10
Corsoy (II)	+5	+5	+6			+2	+3	+11
Evans (0)	-11	-7	-10			-6	-6	-6
Harlon	-10	-7	-8			-5	-3	-7
Hodgson 78 (I)	9-18	9-12	9-13			10-6	10-10	9-12
A75-102032	+3	+2	+4			+3	+1	+4
A75-103019	-1	0	+1			+3	+3	+3
A76-101019	-2	-1	+1			-3	-2	+2
A76-101024	0	0	+1			+2	+1	0
A76-102009	+4	+1	+2			+1	0	+11
A76-102013	+1	0	+2			+1	0	+4
A76-103002	+3	0	+1			-1	0	+2
A76-103003	+1	+1	+3			0	-1	+1
Date planted	5-15	5-11	5-23	5-15	5-20	6-10	6-5	5-22
* days to mat.	126	124	113	-	-	119	128	113
			LODGING (score)					
Coles	3.0	4.0	2.2	2.7	3.3	1.0	1.0	1.3
Corsoy (II)	2.0	3.0	2.2	2.9	2.8	1.0	1.0	1.5
Evans (0)	1.0	1.3	2.0	1.6	2.0	1.0	1.0	1.0
Harlon	2.0	2.3	1.9	2.2	2.5	1.0	1.0	1.0
Hodgson 78 (I)	1.3	2.3	1.9	2.1	2.8	1.0	1.0	1.3
A75-102032	2.3	3.0	2.0	2.9	3.0	1.0	1.0	1.5
A75-103019	2.0	3.0	2.2	2.4	2.0	1.0	1.0	1.3
A76-101019	1.7	1.7	2.2	2.4	1.8	1.0	1.0	1.2
A76-101024	1.0	2.3	1.9	2.4	1.8	1.0	1.0	1.0
A76-102009	2.0	2.7	2.0	3.0	3.0	1.0	1.0	1.3
A76-102013	3.0	3.3	2.0	3.2	3.3	1.0	1.0	1.7
A76-103002	2.0	3.0	2.0	3.0	2.8	1.0	1.0	1.5
A76-103003	2.0	3.0	2.0	2.8	3.0	1.0	1.0	1.2

+ Not included in the mean

UNIFORM TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Monroe	Mich. E. Lansing	Ind. Lafay-ette	Wisc. Arling-ton	Wisc. Durand
	12 Tests	HEIGHT (inches)					
Coles	38	38	27	33	35	43	37
Corsoy (II)	37	38	28	33	36	43	35
Evans (0)	30	26	21	32	26	36	26
Harlon	34	33	27	33	30	40	31
Hodgson 78 (I)	34	29	26	32	32	38	34
A75-102032	36	32	28	32	34	40	36
A75-103019	30	30	23	27	30	32	27
A76-101019	31	29	23	32	27	34	29
A76-101024	33	31	26	32	29	38	30
A76-102009	36	36	28	36	34	40	36
A76-102013	35	33	30	34	35	41	29
A76-103002	37	34	27	36	38	42	36
A76-103003	37	36	31	36	37	40	35

SEED QUALITY (score)

	9 Tests						
Coles	2.1	2			1.0	2.3	3.0
Corsoy (II)	2.4	2			1.5	3.3	3.0
Evans (0)	2.9	2			1.5	3.0	4.0
Harlon	2.5	2			2.0	2.7	2.7
Hodgson 78 (I)	2.2	2			1.0	2.3	3.3
A75-102032	2.3	2			2.0	2.0	3.0
A75-103019	2.6	2			1.5	2.0	3.0
A76-101019	2.3	2			1.5	3.0	3.3
A76-101024	2.6	2			2.0	1.7	3.3
A76-102009	2.3	2			1.5	2.3	3.0
A76-102013	2.6	2			1.5	2.3	3.7
A76-103002	2.7	2			2.0	3.3	3.3
A76-103003	2.1	2			1.0	1.3	3.0

UNIFORM TEST I, 1978

Strain	Minn. Waseca	Minn. Lamberton	Iowa Nashua	Iowa Corwith	N.D. + Oakes	S.D. Revillo	S.D. Brookings	Neb. Mead
			PLANT HEIGHT (inches)					
Coles		40	39	40	62	42	44	40
Corsoy (II)		40	38	37	54	40	43	38
Evans (0)		29	32	33	51	35	39	29
Harlon		34	34	36	52	39	44	32
Hodgson 78 (I)		34	35	34	50	38	39	35
A75-102032		36	37	36	52	36	43	36
A75-103019		33	31	29	40	35	36	28
A76-101019		33	32	33	42	34	39	30
A76-101024		35	34	33	48	37	36	31
A76-102009		36	38	37	56	40	40	36
A76-102013		35	35	36	58	35	42	35
A76-103002		38	38	38	56	37	40	37
A76-103003		38	36	36	60	38	41	37
			SEED QUALITY (score)					
Coles	1.7	1.7		1.3			4	2.2
Corsoy (II)	2.7	2.3		1.2			3	2.7
Evans (0)	3.0	3.0		1.6			5	2.8
Harlon	2.7	3.0		1.7			3	2.5
Hodgson 78 (I)	2.3	2.3		1.3			3	2.3
A75-102032	2.0	1.7		1.5			4	2.2
A75-103019	2.7	2.7		2.0			5	2.3
A76-101019	2.3	1.7		1.8			2	3.0
A76-101024	2.7	2.7		1.4			5	3.0
A76-102009	2.0	2.7		1.5			3	2.8
A76-102013	2.3	2.7		1.5			5	2.2
A76-103002	2.7	2.7		1.6			4	2.5
A76-103003	2.0	2.3		1.3			4	2.3

+ Not included in the mean

UNIFORM TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Monroe	Mich. E. Lansing	Ind. Lafay-ette	Wisc. Arling-ton	Wisc. Durand
	12 Tests	SEED SIZE (g/100)					
Coles	19.5	18.3	20.0	24.8	18.3	19.2	20.2
Corsoy (II)	16.3	15.7	16.5	20.5	16.6	15.3	15.9
Evans (0)	16.2	16.5	19.0	18.0	17.0	15.2	9.6
Harlon	17.4	17.6	21.0	21.0	17.5	16.4	13.3
Hodgson 78 (I)	17.6	17.4	20.0	21.5	17.9	16.0	15.7
A75-102032	13.7	12.9	13.0	15.0	13.2	14.4	13.8
A75-103019	16.9	16.1	13.3	19.0	17.1	15.9	18.7
A76-101019	14.6	13.7	15.1	17.0	14.6	14.0	13.4
A76-101024	17.5	16.9	17.5	20.0	18.4	18.0	15.9
A76-102009	15.8	15.0	15.5	18.0	16.1	14.1	15.7
A76-102013	15.8	14.0	15.0	23.0	14.9	15.6	16.0
A76-103002	17.1	15.4	17.0	20.5	17.1	16.1	16.2
A76-103003	18.0	17.3	18.5	21.0	18.2	17.7	15.8

PROTEIN (%)

	6 Tests						
Coles	42.3	41.8			42.4		
Corsoy (II)	41.4	41.7			40.5		
Evans (0)	40.3	39.8			39.3		
Harlon	39.6	39.5			39.4		
Hodgson 78 (I)	39.4	38.3			39.8		
A75-102032	40.2	40.4			41.0		
A75-103019	40.4	42.2			40.1		
A76-101019	40.8	42.1			39.7		
A76-101024	41.2	42.4			40.9		
A76-102009	41.0	40.5			40.8		
A76-102013	42.9	43.8			41.9		
A76-103002	41.1	42.2			40.6		
A76-103003	42.1	42.1			42.5		

UNIFORM TEST I, 1978

Strain	Minn. Waseca	Minn. Lamberton	Iowa Nashua	Iowa Corwith	N.D. Oaks	S.D. Revillo	S.D. Brookings	Neb. Mead
				SEED SIZE (g/100)				
Coles	20.0	17.7		19.3		18.5	19.4	18.4
Corsoy (II)	16.5	16.0		16.6		14.8	15.3	16.3
Evans (0)	18.2	16.2		14.2		15.6	16.7	17.6
Harlon	17.3	15.9		14.4		18.1	18.6	17.8
Hodgson 78 (I)	17.7	15.8		15.7		17.9	17.3	18.3
A75-102032	14.0	12.7		13.6		14.4	14.0	13.7
A75-103019	17.1	16.7		17.3		16.8	16.1	18.3
A76-101019	15.3	14.7		14.2		13.8	13.9	15.9
A76-101024	18.4	16.0		17.2		15.7	16.8	19.3
A76-102009	16.4	16.1		15.4		15.9	15.7	16.2
A76-102013	16.6	14.5		15.6		14.0	15.0	15.2
A76-103002	18.0	17.7		16.4		17.0	16.2	17.2
A76-103003	18.7	17.5		18.2		18.4	16.8	18.4
				PROTEIN (%)				
Coles	41.7			42.1			43.1	42.8
Corsoy (II)	40.6			41.7			42.3	41.7
Evans (0)	40.4			39.8			42.1	40.4
Harlon	38.0			39.4			41.9	39.4
Hodgson 78 (I)	38.7			38.8			41.5	39.5
A75-102032	40.3			39.5			41.0	38.7
A75-103019	41.4			39.7			40.7	38.5
A76-101019	41.0			40.1			41.7	40.5
A76-101024	41.5			39.3			42.4	40.8
A76-102009	41.3			40.3			42.3	40.8
A76-102013	42.4			42.7			43.3	43.5
A76-103002	40.2			40.6			41.2	41.6
A76-103003	42.0			41.5			41.8	42.7

UNIFORM TEST I, 1978

Strain	Mean	Minn. Waseca	Ont. Ridge-town	Iowa Corwith	Ind. Lafay-ette	S.D. Brook-ings	Neb. Mead
	6 Tests		OIL (%)				
Coles	20.2	20.0	20.5	20.5	20.6	18.9	20.7
Corsoy (II)	20.5	20.8	20.5	20.7	20.4	19.3	21.1
Evans (0)	22.2	21.6	22.2	22.2	24.3	20.1	22.5
Harlon	21.8	22.4	21.4	21.5	22.5	20.0	22.9
Hodgson 78 (I)	22.1	22.3	22.9	22.5	22.1	19.8	23.0
A75-102032	21.4	21.8	21.2	21.5	21.8	19.8	22.3
A75-103019	21.2	20.7	20.5	22.0	21.9	19.7	22.7
A76-101019	20.6	20.7	20.2	21.0	21.2	19.0	21.6
A76-101024	21.2	20.5	20.1	22.8	22.2	19.2	22.3
A76-102009	21.0	20.9	20.8	21.8	21.1	19.5	21.9
A76-102013	20.0	20.2	19.2	20.2	21.2	18.8	20.7
A76-103002	21.2	21.9	20.5	21.4	21.7	19.8	21.6
A76-103003	20.2	20.1	20.3	20.7	20.5	19.1	20.6

PRELIMINARY TEST I, 1978

Strain	Parentage	Generation Composited
1. Coles	Hark x (Provar x (Magna x Disoy))	F_5
2. Corsoy (II)	Harosoy x Capital	F_9
3. Evans (0)	Merit x Harosoy	F_5
4. Hodgson 78 (I)	Hodgson[7] x Merit	F_3
5. A77-111019	Washington x A72-512	F_4
6. A77-112008	Washington x A72-512	F_4
7. A77-112016	AP6E(S1)C1	S_4
8. A77-112023	AP6M(S1)C1	S_4
9. A77-112028	AP61YT(F4)C1	F_4
10. A77-112029	AP61YT(F4)C1	F_4
11. A77-112030	AP61YT(F4)C1	F_4
12. A77-113018	AP6E(S1)C1	S_4
13. A77-114015	Washington x Steele	F_4
14. A77-114020	AP6E(S1)C1	S_4
15. A77-114030	A72-106 x Williams	F_4
16. A77-114033	AP61YT(F4)C1	F_4
17. A77-116013	AX990	S_3
18. A77-116028	M62-275 x Beeson	F_4
19. L74-3897	Williams x Beeson	F_6
20. L75-3632	Corsoy[6] x Lee 68	F_3
21. L75-9162	Amsoy 71 x L2-Dt_2	F_6
22. L75-9164	Amsoy 71 x L2-Dt_2	F_6
23. M69-318	Ja 53-1 x Hark	F_5
24. M70-121	Evans x M63-217Y	F_5
25. M70-128	Evans x M63-217Y	F_5
26. M70-150	Merit x M64-3	F_5
27. M70-179	Hill x Steele	F_5
28. M70-242	Evans x M64-3	F_5
29. M70-259	M62-93 x M63-217Y	F_5
30. M70-260	M62-93 x M63-217Y	F_5

Several strains in this test were superior in performance to Hodgson 78, the Group I check. The highest yielding strain, M70-128, is resistant to races 1 and 2 of phytophthora root rot. The strains L75-3632, which ranked 8 in yield, is resistant to all races but 4 and 5 of phytophthora and also had the best phytophthora tolerance score of any strains in this test. Two high yielding Iowa strains, A77-112023, resistant to phytophthora races 1 and 2, and A77-113018 had good resistance to shattering.

PRELIMINARY TEST I, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Shattering Manhatton 2 Weeks
Coles	PGBr	SYY	2	5
Corsoy (II)	PGBr	SYY	4	3
Evans (0)	WGBr	DYY	2	2
Hodgson 78 (I)	PGBr	DYBf	2	5
A77-111019	PGBr	DYY	2	5
A77-112008	PGTn	DYY	3	5
A77-112016	WTBr	SYY	4	5
A77-112023	PTBr+Tn	DYBl	1	2
A77-112028	PGBr	DYIb	5	4
A77-112029	PGBr	DYIb	3	5
A77-112030	WTBr	SYBl	3	3
A77-113018	PTBr	SYBr	3	2
A77-114015	PTBr	SYBr	5	5
A77-114020	PTBr	SYBl	3	4
A77-114030	P+WTTn	SYG	3	5
A77-114033	WGBr	DYBf	1	5
A77-116013	PTBr	DYBl	3	3
A77-116028	PGBr	DYY	2	5
L74-3897	PT+GTn	SYBl	3	3
L75-3632	PGBr	DYY	4	2
L75-9162	PGTn	SYY	2	5
L75-9164	PGTn	DYY	2	5
M69-318	P+WGTn	DYBf	2	3
M70-121	PGBr	DYY+G	1	5
M70-128	PGBr	DYY	1	3
M70-150	WGBr	DYY	1	3
M70-179	WGTn	DYY	3	5
M70-242	WTBr	DYY	1	5
M70-259	WGBr	DYY	1	5
M70-260	P+WGBr	DYY	2	5

PRELIMINARY TEST I, 1978

Disease Data

Strain	FE2 Laf. Ind. a	BSR Laf. Ind. n	BSR Ames Ia. Stem n	BSR Ames Ia. Plants n	PSB Laf. Ind. d	PS Laf. Ind. a	PR Vickery Ohio n	PR Laf. Ind. a	Race 1 Ames. Ia. a
	Score	%	%	%	%	%	-----Reaction-------		
Coles	4	0	76	100	4	2	3.5	S	S
Corsoy (II)	5	20	72	100	4	1	3.5	S	S
Evans (0)	5	40	69	100	11	6	3.5	R	R
Hodgson 78 (I)	5	0	60	90	7	3	3.0	R	R
A77-111019	4	20	87	100	4	2	4.5	S	S
A77-112008	4	20	76	100	3	1	4.5	S	S
A77-112016	5	20	65	100	2	0	4.0	S	S
A77-112023	3	0	76	100	2	0	2.5	R	R
A77-112028	4	20	81	100	0	0	3.0	S	S
A77-112029	4	60	75	100	8	0	3.0	S	S
A77-112030	5	20	69	100	1	0	2.5	H	H
A77-113018	4	100	80	90	6	2	3.0	S	S
A77-114015	3	0	74	100	2	0	3.0	S	S
A77-114020	5	50	74	100	0	0	2.5	S	S
A77-114030	5	10	69	100	1	0	3.0	S	S
A77-114033	5	0	64	100	4	5	4.0	S	S
A77-116013	4	0	26	70	0	0	4.0	R	R
A77-116028	1	0	42	100	8	2	3.5	H	H
L74-3897	4	0	76	100	0	1	3.5	H	S
L75-3632	4	0	81	100	1	1	2.0	R	R
L75-9162	4	20	96	100	0	0	5.0	R	R
L75-9164	5	0	82	100	2	0	5.0	R	R
M69-318	4	10	82	100	1	1	2.5	R	R
M70-121	5	20	71	100	4	0	3.5	R	R
M70-128	5	10	56	90	1	0	4.5	R	R
M70-150	5	30	73	100	0	0	5.0	R	R
M70-179	3	40	62	100	0	0	2.5	R	R
M70-242	5	50	68	100	3	4	4.0	R	R
M70-259	5	20	57	100	11	1	4.0	R	R
M70-260	5	0	67	100	6	2	4.0	R	R

PRELIMINARY TEST I, 1978

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
No. of Tests	9	9	8	9	8	5	8	4	4
	bu/a	No.	Date	Score	In.	Score	g/100	%	%
Coles	43.8	19	+6.4	2.6	38	2.4	20.1	44.0	19.2
Corsoy (II)	45.2	5	+5.5	2.0	39	2.3	16.0	42.0	20.3
Evans (0)	38.7	30	-5.2	1.4	32	2.5	16.6	41.1	21.0
Hodgson 78 (I)	44.5	10	9-19*	1.8	34	2.2	17.1	40.0	21.8
A77-111019	45.0	6	+1.1	1.5	37	2.4	20.3	40.2	20.0
A77-112008	46.3	3	+2.0	1.5	33	2.1	20.0	42.9	19.2
A77-112016	43.5	21	+2.0	2.8	40	2.6	15.8	42.6	19.8
A77-112023	46.2	4	-0.2	2.7	40	2.6	16.3	43.2	19.8
A77-112028	41.5	27	+2.6	1.5	37	2.5	18.9	43.3	20.6
A77-112029	42.6	25	+4.8	2.2	34	2.4	17.6	41.8	20.3
A77-112030	44.0	17	+2.1	1.6	32	2.4	18.2	42.3	20.4
A77-113018	45.0	6	+2.4	1.5	35	3.0	18.0	42.7	20.0
A77-114015	42.9	24	+2.1	2.7	38	2.5	15.8	43.2	19.8
A77-114020	44.0	17	+3.4	2.0	34	1.8	18.5	42.6	19.8
A77-114030	44.2	14	+2.2	1.5	34	2.4	18.2	44.5	19.3
A77-114033	44.2	14	+4.5	1.6	40	2.6	17.0	43.1	20.5
A77-116013	44.4	11	+4.1	1.7	35	2.2	18.4	42.4	19.8
A77-116028	43.1	23	-2.0	1.9	36	3.0	21.7	41.1	20.2
L74-3897	47.0	2	+3.0	1.5	34	2.3	20.1	41.6	20.7
L75-3632	44.7	8	+3.1	2.1	38	2.5	16.6	41.2	20.7
L75-9162	42.4	26	+2.6	1.8	35	2.4	18.3	41.8	20.3
L75-9164	43.7	20	+0.1	1.8	36	2.8	18.7	40.5	20.9
M69-318	39.6	29	-0.4	1.4	31	2.3	20.9	40.4	22.4
M70-121	44.6	9	-1.8	2.2	38	2.6	17.4	39.9	21.6
M70-128	47.4	1	-1.9	1.8	32	2.4	17.4	39.2	22.4
M70-150	44.3	12	+2.4	1.4	32	2.3	15.7	38.7	22.8
M70-179	41.5	27	+1.0	1.9	38	2.7	17.7	42.4	20.1
M70-242	43.3	22	+0.1	1.7	36	2.7	16.4	41.0	21.8
M70-259	44.3	12	-0.2	1.9	36	2.6	18.8	40.7	22.2
M70-260	44.2	14	-1.8	1.7	33	2.3	18.9	40.8	21.4

* 120 Days after planting

PRELIMINARY TEST I. 1978

Strain	Mean 9 Tests	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
		YIELD (bu/a)			
Coles	43.8	45.9	27.2	42.1	31.5
Corsoy (II)	45.2	50.1	26.8	42.4	35.8
Evans (0)	38.7	51.6	20.2	28.1	33.3
Hodgson 78 (I)	44.5	51.3	26.2	44.9	36.6
A77-111019	45.0	53.8	27.0	39.0	37.6
A77-112008	46.3	50.8	24.3	44.8	38.9
A77-112016	43.5	47.2	28.8	41.3	34.9
A77-112023	46.2	51.3	32.7	42.7	36.6
A77-112028	41.5	47.5	24.6	43.4	35.3
A77-112029	42.6	43.6	18.5	49.1	35.5
A77-112030	44.0	48.7	22.2	40.6	37.2
A77-113018	45.0	47.6	25.5	42.5	43.2
A77-114015	42.9	49.1	28.1	37.9	34.3
A77-114020	44.0	47.2	28.7	41.4	35.8
A77-114030	44.2	45.9	30.8	41.4	33.6
A77-114033	44.2	45.3	21.3	43.9	33.8
A77-116013	44.4	45.9	31.6	45.5	36.0
A77-116028	43.1	47.5	23.2	36.5	35.6
L74-3897	47.0	51.5	25.5	49.5	40.4
L75-3632	44.7	49.8	24.7	33.1	38.3
L75-9162	42.4	45.9	24.3	31.2	35.9
L75-9164	43.7	44.3	25.0	40.4	38.0
M69-318	39.6	46.9	20.6	31.0	34.7
M70-121	44.6	48.4	29.0	41.8	35.6
M70-128	47.4	54.9	28.0	44.6	38.3
M70-150	44.3	46.4	30.3	35.4	34.3
M70-179	41.5	40.5	29.4	35.5	36.0
M70-242	43.3	43.1	30.0	43.8	35.2
M70-259	44.3	55.0	26.7	35.4	36.3
M70-260	44.2	57.6	26.1	36.9	39.3
C.V. (%)		5.5	15.2	12.1	6.0
L.S.D. (5%)		5.5	6.6	8.1	4.4
Row sp (in.)		24"	-	-	30"
Rows/plot		4	-	-	4
Reps		4	-	-	2

PRELIMINARY TEST I, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		YIELD (bu/a)		
54.1	53.5	50.8	53.1	36.2
57.8	53.4	51.8	45.6	43.3
49.8	40.4	43.0	35.5	46.5
57.0	50.3	49.8	43.9	40.1
51.8	49.6	56.9	47.5	41.7
50.2	49.8	56.5	57.0	44.1
48.2	49.6	50.3	51.5	40.0
54.1	53.8	54.1	44.6	46.1
51.5	47.3	49.2	41.5	32.9
49.8	52.2	48.2	47.5	39.3
51.8	59.0	48.4	45.6	42.1
56.8	54.4	48.1	43.2	43.5
47.0	51.6	49.2	51.3	37.7
46.2	53.7	53.1	49.1	41.0
45.6	52.1	52.0	52.2	44.0
56.2	52.0	48.5	51.5	45.1
43.5	51.0	49.8	56.7	40.0
55.0	52.0	48.6	47.5	42.1
52.6	54.2	50.0	54.3	44.8
54.2	52.8	56.4	44.8	48.2
51.9	49.0	51.1	50.1	42.2
53.0	50.4	48.3	47.4	46.7
44.6	49.4	47.5	40.2	41.7
55.6	47.9	49.6	47.8	45.6
57.0	57.8	51.0	47.8	47.4
51.2	51.2	46.6	54.8	48.2
49.2	48.4	44.2	49.6	41.0
53.2	49.0	43.4	49.4	42.6
50.6	52.4	51.4	46.5	44.1
48.4	48.8	52.7	42.4	45.3
7.5	5.2	5.3	9.3	N.S.
7.9	5.5	5.3	8.9	12.1
30"	30"	13.5"	27"	30"
2	2	5	4	3
2	2	2	2	3

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
	9 Tests		YIELD RANK		
Coles	19	22	12	13	30
Corsoy (II)	5	10	14	12	16
Evans (0)	30	5	29	30	29
Hodgson 78 (I)	10	7	16	4	10
A77-111019	6	4	13	20	8
A77-112008	3	9	23	5	4
A77-112016	21	18	8	17	23
A77-112023	4	7	1	10	10
A77-112028	27	16	22	9	21
A77-112029	25	28	30	2	20
A77-112030	17	13	26	18	9
A77-113018	6	15	18	11	1
A77-114015	24	12	10	21	25
A77-114020	17	18	9	15	16
A77-114030	14	22	3	15	28
A77-114033	14	26	27	7	27
A77-116013	11	22	2	3	13
A77-116028	23	16	25	23	18
L74-3897	2	6	18	1	2
L75-3632	8	11	21	27	5
L75-9162	26	22	23	28	15
L75-9164	20	27	20	19	7
M69-318	29	20	28	29	24
M70-121	9	14	7	14	18
M70-128	1	3	11	6	5
M70-150	12	21	4	25	25
M70-179	27	30	6	24	13
M70-242	22	29	5	8	22
M70-259	12	2	15	25	12
M70-260	14	1	17	22	3

PRELIMINARY TEST 1, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		YIELD RANK		
9	7	12	5	29
1	8	8	21	15
21	30	30	30	5
2	19	15	25	24
15	21	1	16	20
20	20	2	1	11
25	21	13	7	26
9	5	4	24	6
17	29	18	28	30
21	11	24	16	27
15	1	22	21	18
4	3	25	26	14
26	15	18	9	28
27	6	5	13	22
28	12	7	6	13
5	13	21	7	9
30	17	15	2	25
7	13	20	16	19
13	4	14	4	10
8	9	3	23	2
14	24	10	10	17
12	18	23	19	4
29	23	26	29	21
6	28	17	14	7
2	2	11	14	3
18	16	27	3	1
23	27	28	11	23
11	24	29	12	16
19	10	9	20	12
24	26	6	27	8

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
	8 Tests		MATURITY (relative data)		
Coles	+6.4	+5	+1	+8	+5
Corsoy (II)	+5.5	+7	0	+13	+5
Evans (0)	-5.2	-4	-3	-2	-1
Hodgson 78* (I)	9-19	9-18	9-20	9-19	9-18
A77-111019	+1.1	-1	+1	+3	+5
A77-112008	+2.0	0	0	+6	+3
A77-112016	+2.0	+2	-5	+4	+5
A77-112023	-0.2	-1	-5	+1	+3
A77-112028	+2.6	0	+1	+4	+3
A77-112029	+4.8	+2	0	+11	+5
A77-112030	+2.1	+2	-1	+4	+3
A77-113018	+2.4	+2	-1	+2	+4
A77-114015	+2.1	0	-2	+1	+3
A77-114020	+3.4	+3	-1	+6	+5
A77-114030	+2.2	+2	0	+4	+3
A77-114033	+4.5	+7	-1	+11	+7
A77-116013	+4.1	+5	-2	+12	+5
A77-116028	-2.0	-1	-5	+1	+2
L74-3897	+3.0	+2	+2	+8	+3
L75-3632	+3.1	+1	-1	+4	+5
L75-9162	+2.6	+3	0	+5	+3
L75-9164	+0.1	+1	-1	+3	+2
M69-318	-0.4	+1	+1	+3	+3
M70-121	-1.8	-1	0	0	0
M70-128	-1.9	-2	-1	+3	+2
M70-150	+2.4	+5	-1	+11	+2
M70-179	+1.0	+5	-4	+3	+5
M70-242	+0.1	+1	0	+6	+4
M70-259	-0.2	+2	+1	+4	+2
M70-260	-1.8	+3	+1	+1	+1
Date planted	5-21	5-25	-	-	5-23
*Days to mat.	120	116	-	-	118

PRELIMINARY TEST I, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		MATURITY (relative data)		
+4	+9	+12		+7
+4	+7	+7		+1
-9	-6	-10		-7
9-18	9-11	9-12		10-8
-4	+1	+2		+2
+1	+1	+1		+4
0	+5	+2		+3
-3	0	0		+3
-2	+3	+4		+8
+2	+6	+4		+8
+2	+4	0		+3
+2	+5	+1		+4
+1	+6	+4		+4
+2	+4	+4		+4
+1	+3	+2		+3
+2	+3	+2		+5
0	+5	+2		+6
-6	-3	-4		0
-1	+2	+2		+6
+6	+3	+4		+3
0	+1	+6		+3
-3	0	0		-1
-6	-5	-2		+2
-6	-5	0		-2
-3	-5	-5		-4
-1	+1	+4		-2
-2	+1	0		0
-6	0	-3		-1
-6	-5	0		0
-6	-6	-5		-3
5-15	5-11	5-23	5-15	6-5
126	123	112	-	125

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
	9 Tests		LODGING (score)		
Coles	2.6	3.0	1.2	3.5	3.0
Corsoy (II)	2.0	2.0	1.1	2.5	2.0
Evans (0)	1.4	1.5	1.0	1.0	1.0
Hodgson 78 (I)	1.8	1.5	1.6	1.7	1.5
A77-111019	1.5	1.0	1.0	1.5	1.5
A77-112008	1.5	1.0	1.5	1.7	1.0
A77-112016	2.8	3.0	1.6	2.7	3.5
A77-112023	2.7	3.0	2.0	3.0	2.5
A77-112028	1.5	2.0	1.2	1.0	1.0
A77-112029	2.2	2.5	1.4	3.0	2.5
A77-112030	1.6	2.0	1.5	1.6	1.5
A77-113018	1.5	1.0	1.0	1.2	1.0
A77-114015	2.7	2.5	1.8	2.7	3.0
A77-114020	2.0	1.5	1.6	2.2	2.5
A77-114030	1.5	1.0	1.0	1.3	1.0
A77-114033	1.6	1.5	1.0	2.0	1.0
A77-116013	1.7	2.0	1.6	1.3	1.5
A77-116028	1.9	2.0	1.2	1.7	2.0
L74-3897	1.5	1.5	1.6	1.7	1.0
L75-3632	2.1	1.5	1.5	1.8	2.0
L75-9162	1.8	1.5	1.0	1.8	2.0
L75-9164	1.8	1.5	1.0	1.9	1.5
M69-318	1.4	1.5	1.0	1.0	1.0
M70-121	2.2	2.0	1.2	2.0	2.0
M70-128	1.8	2.0	1.1	1.4	1.5
M70-150	1.4	1.0	1.1	1.2	1.0
M70-179	1.9	1.5	1.4	2.6	1.5
M70-242	1.7	1.5	1.2	1.8	1.5
M70-259	1.9	2.5	1.1	1.6	2.5
M70-260	1.7	2.0	1.1	1.8	1.0

PRELIMINARY TEST I, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		LODGING (score)		
2.5	4.5	2.3	2.7	1.0
2.0	3.0	2.0	2.2	1.0
1.5	2.0	2.2	1.6	1.0
2.0	3.0	2.2	2.0	1.0
1.5	2.5	2.0	1.8	1.0
1.5	2.5	2.0	1.7	1.0
3.0	5.0	2.4	3.2	1.0
3.0	4.0	2.6	3.0	1.0
1.5	2.0	1.8	1.7	1.0
2.0	3.0	2.2	2.4	1.0
1.0	2.0	2.0	1.4	1.0
2.0	2.5	1.8	2.0	1.0
3.0	4.5	2.3	3.2	1.0
2.0	2.5	2.0	2.4	1.0
1.5	2.5	2.0	2.0	1.0
1.8	2.5	1.8	2.2	1.0
1.5	2.5	1.9	2.0	1.0
2.0	2.5	2.2	2.8	1.0
1.2	2.0	1.9	1.9	1.0
2.0	3.5	2.2	3.0	1.0
1.5	3.0	2.2	2.1	1.0
2.0	3.0	2.2	1.8	1.0
1.0	2.0	2.4	1.6	1.0
3.0	3.5	2.2	2.8	1.0
1.5	3.0	2.4	2.2	1.0
1.0	2.0	2.2	1.8	1.0
2.0	3.0	1.8	2.4	1.0
2.0	2.0	2.2	1.8	1.0
2.0	2.5	2.2	2.0	1.0
1.5	3.0	2.0	1.8	1.0

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
	8 Tests		PLANT HEIGHT (inches)		
Coles	38	36	32	36	42
Corsoy (II)	39	39	29	37	43
Evans (0)	32	33	26	29	36
Hodgson 78 (I)	34	34	29	35	40
A77-111019	37	37	29	34	42
A77-112008	33	30	29	32	34
A77-112016	40	41	36	38	48
A77-112023	40	40	37	40	42
A77-112028	37	38	29	38	40
A77-112029	34	36	27	33	35
A77-112030	32	31	28	29	32
A77-113018	35	31	31	34	37
A77-114015	38	39	36	37	42
A77-114020	34	32	31	33	34
A77-114030	34	32	29	33	35
A77-114033	40	39	34	39	44
A77-116013	35	35	33	34	38
A77-116028	36	37	32	35	36
L74-3897	34	36	29	34	36
L75-3632	38	38	33	34	41
L75-9162	35	33	32	34	38
L75-9164	36	34	33	35	42
M69-318	31	31	28	30	30
M70-121	38	34	34	35	42
M70-128	32	30	28	31	36
M70-150	32	29	27	30	34
M70-179	38	36	38	38	40
M70-242	36	34	31	34	40
M70-259	36	37	31	33	39
M70-260	33	34	30	32	37

PRELIMINARY TEST I, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		PLANT HEIGHT (inches)		
	42	38	36	42
	40	42	38	42
	36	34	29	36
	33	36	32	33
	40	38	34	40
	37	35	32	35
	40	38	39	44
	41	37	41	44
	40	38	36	39
	37	34	34	38
	32	32	31	37
	36	36	34	38
	39	38	37	37
	37	34	32	38
	36	34	36	38
	40	38	43	42
	34	31	33	39
	36	37	33	39
	36	31	32	39
	38	40	38	39
	36	36	34	38
	36	37	34	40
	32	32	31	32
	37	40	38	41
	34	32	32	37
	35	32	32	35
	38	38	38	40
	41	36	38	37
	38	36	37	39
	34	34	31	35

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
	5 Tests		SEED QUALITY (score)		
Coles	2.4	2.0			4.0
Corsoy (II)	2.3	2.0			2.5
Evans (0)	2.5	2.0			3.0
Hodgson 78 (I)	2.2	2.0			2.0
A77-111019	2.4	2.0			3.0
A77-112008	2.1	2.0			2.5
A77-112016	2.6	2.0			3.0
A77-112023	2.6	2.0			3.0
A77-112028	2.5	2.0			2.5
A77-112029	2.4	2.0			3.0
A77-112030	2.4	2.0			2.0
A77-113018	3.0	3.0			3.0
A77-114015	2.5	2.0			3.0
A77-114020	1.8	2.0			2.5
A77-114030	2.4	2.0			3.5
A77-114033	2.6	2.0			3.5
A77-116013	2.2	2.0			2.0
A77-116028	3.0	2.0			3.0
L74-3897	2.3	2.0			2.5
L75-3632	2.5	2.0			3.0
L75-9162	2.4	2.0			3.0
L75-9164	2.8	3.0			3.5
M69-318	2.3	2.0			2.5
M70-121	2.6	2.0			3.5
M70-128	2.4	3.0			2.0
M70-150	2.3	2.0			3.0
M70-179	2.7	2.0			3.5
M70-242	2.7	3.0			3.5
M70-259	2.6	2.0			2.5
M70-260	2.3	2.0			2.5

PRELIMINARY TEST I, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		SEED QUALITY (score)		
2.0	3.0		1.2	
2.5	3.0		1.4	
2.5	3.5		1.3	
2.5	3.0		1.3	
2.0	3.5		1.3	
2.0	3.0		1.2	
2.5	3.5		2.0	
2.5	4.0		1.5	
2.5	3.5		1.8	
2.5	3.0		1.7	
3.0	3.0		2.0	
3.0	4.0		1.8	
2.5	2.5		2.5	
1.5	2.0		1.2	
2.0	3.0		1.5	
3.0	3.0		1.7	
2.5	3.0		1.4	
4.0	4.5		1.7	
2.5	3.0		1.3	
3.0	3.0		1.4	
2.5	3.0		1.4	
3.0	3.0		1.3	
2.5	3.0		1.6	
3.0	3.0		1.5	
2.5	3.0		1.5	
2.0	3.0		1.4	
3.5	3.0		1.6	
2.5	3.0		1.3	
3.0	3.5		1.9	
2.5	3.0		1.3	

PRELIMINARY TEST I. 1978

Strain	Mean	Ont. Ridge-town	Mich. Dundee	Mich. E. Lan-sing	Wisc. Arling-ton
	8 Tests		SEED SIZE (g/100)		
Coles	20.1	21.1	20.0	24.5	18.6
Corsoy (II)	16.0	16.4	15.5	-	14.7
Evans (0)	16.6	16.7	16.5	20.2	15.2
Hodgson 78 (I)	17.1	18.3	18.1	20.9	15.8
A77-111019	20.3	19.5	21.0	23.0	20.8
A77-112008	20.0	20.6	20.0	23.2	18.4
A77-112016	15.8	17.2	16.1	18.5	15.1
A77-112023	16.3	15.6	15.9	20.0	15.0
A77-112028	18.9	20.4	20.0	22.0	17.6
A77-112029	17.6	16.3	16.0	21.5	16.3
A77-112030	18.2	18.7	18.0	20.1	18.1
A77-113018	18.0	19.3	17.5	20.0	18.1
A77-114015	15.8	15.8	16.1	19.3	14.8
A77-114020	18.5	17.5	18.8	21.0	18.2
A77-114030	18.2	18.2	18.5	22.5	17.3
A77-114033	17.0	16.4	17.0	21.0	16.4
A77-116013	18.4	18.9	18.9	23.0	17.0
A77-116028	21.7	22.4	22.0	23.8	21.8
L74-3897	20.1	21.2	20.5	23.0	19.7
L75-3632	16.6	17.0	16.0	20.0	15.3
L75-9162	18.3	19.4	18.1	22.5	17.4
L75-9164	18.7	20.7	18.1	23.0	18.0
M69-318	20.9	22.6	22.0	26.0	20.9
M70-121	17.4	16.5	18.8	22.0	15.8
M70-128	17.4	19.0	19.0	21.0	15.6
M70-150	15.7	16.0	16.5	19.9	14.1
M70-179	17.7	18.3	19.5	20.5	17.0
M70-242	16.4	15.7	17.0	20.0	15.8
M70-259	18.8	21.1	19.0	22.7	17.3
M70-260	18.9	22.3	21.0	22.2	17.5

PRELIMINARY TEST I, 1978

Minn.		Iowa		S.D.
Waseca	Lamber-ton	Nashua	Corwith	Brook-ings
		SEED SIZE (g/100)		
18.4	18.9		20.2	18.8
17.1	16.4		16.1	15.8
18.3	15.3		13.2	17.1
17.0	15.7		14.8	16.2
20.0	18.7		20.7	19.0
20.6	18.4		19.4	19.0
14.8	14.4		14.8	15.1
16.8	17.7		13.4	15.8
17.8	16.9		16.8	18.0
18.9	16.3		17.2	18.3
18.5	17.7		16.3	17.9
18.5	16.6		15.7	18.3
15.2	15.4		15.0	14.7
19.2	18.0		17.0	18.5
17.8	16.6		17.8	16.9
16.5	16.0		16.6	16.1
16.7	17.0		17.9	17.4
21.9	21.3		20.0	20.7
19.5	18.8		20.5	17.5
17.2	15.9		15.6	15.8
18.3	16.4		17.8	16.8
18.2	16.8		16.6	17.9
20.8	18.0		17.0	19.6
18.6	15.9		15.2	16.2
16.5	16.2		14.2	17.5
15.3	13.7		13.8	16.5
18.2	15.1		16.1	16.8
18.8	14.6		13.9	15.0
19.5	17.0		16.0	17.6
17.6	17.1		14.8	19.0

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Wisc. Arling-ton	Minn. Waseca	Iowa Corwith
	4 Tests	PROTEIN (%)			
Coles	44.0	45.7	45.1	43.4	41.8
Corsoy (II)	42.0	43.0	44.4	40.8	40.0
Evans (0)	41.1	39.7	43.0	39.9	41.7
Hodgson 78 (I)	40.0	41.2	41.5	38.7	38.6
A77-111019	40.2	39.0	43.0	39.3	39.4
A77-112008	42.9	43.6	44.6	41.8	41.7
A77-112016	42.6	43.1	44.3	41.6	41.2
A77-112023	43.2	42.8	45.8	43.0	41.1
A77-112028	43.3	43.6	45.5	42.0	42.0
A77-112029	41.8	42.9	43.5	40.6	40.4
A77-112030	42.3	42.8	44.6	41.0	40.9
A77-113018	42.7	42.6	44.6	42.6	41.1
A77-114015	43.2	43.0	45.3	42.4	42.3
A77-114020	42.6	42.7	44.5	41.9	41.2
A77-114030	44.5	45.0	46.1	43.4	43.5
A77-114033	43.1	44.9	45.1	41.8	40.7
A77-116013	42.4	44.1	44.9	40.5	40.2
A77-116028	41.1	41.5	42.8	40.6	39.6
L74-3897	41.6	42.6	43.4	40.7	39.8
L75-3632	41.2	39.9	43.7	40.9	40.3
L75-9162	41.8	41.4	44.5	41.1	40.1
L75-9164	40.5	42.8	42.7	38.3	38.1
M69-318	40.4	42.1	42.2	39.1	38.4
M70-121	39.9	40.3	42.6	39.2	37.4
M70-128	39.2	39.8	42.1	37.6	37.3
M70-150	38.7	38.2	42.8	37.6	36.3
M70-179	42.4	43.7	45.0	41.3	39.7
M70-242	41.0	42.6	44.3	39.4	37.6
M70-259	40.7	41.4	44.1	38.8	38.4
M70-260	40.8	42.7	42.5	39.0	39.0

PRELIMINARY TEST I, 1978

Strain	Mean	Ont. Ridge-town	Wisc. Arling-ton	Minn. Waseca	Iowa Corwith
	4 Tests		OIL (%)		
Coles	19.2	18.3	18.1	20.2	20.3
Corsoy (II)	20.3	19.9	19.0	20.5	21.7
Evans (O)	21.0	22.0	19.8	22.1	20.2
Hodgson 78 (I)	21.8	20.5	22.1	22.2	22.3
A77-111019	20.0	20.6	18.4	20.7	20.4
A77-112008	19.2	18.8	18.2	19.5	20.1
A77-112016	19.8	19.8	19.1	20.4	20.1
A77-112023	19.8	20.3	19.1	19.6	20.4
A77-112028	20.6	20.0	19.8	21.4	21.2
A77-112029	20.3	19.8	19.2	20.6	21.5
A77-112030	20.4	21.3	18.5	21.2	20.5
A77-113018	20.0	19.8	19.0	20.3	20.8
A77-114015	19.8	20.0	18.7	19.9	20.6
A77-114020	19.8	19.4	19.0	20.0	21.0
A77-114030	19.3	18.9	18.8	19.3	20.1
A77-114033	20.5	19.1	19.6	21.5	21.9
A77-116013	19.8	18.9	18.5	20.5	21.2
A77-116028	20.2	20.1	19.5	19.9	21.3
L74-3897	20.7	20.1	20.2	21.1	21.3
L75-3632	20.7	20.6	19.7	20.7	21.8
L75-9162	20.3	20.1	19.0	20.8	21.4
L75-9164	20.9	19.1	20.3	22.0	22.2
M69-318	22.4	21.3	21.8	23.4	23.2
M70-121	21.6	21.5	20.2	21.2	23.5
M70-128	22.4	22.4	20.9	24.3	22.2
M70-150	22.8	22.7	20.8	22.9	24.8
M70-179	20.1	19.2	19.1	20.8	21.4
M70-242	21.8	20.3	20.2	23.2	23.6
M70-259	22.2	21.1	20.2	23.2	24.1
M70-260	21.4	20.9	20.7	21.7	22.2

UNIFORM TEST II, 1978

Strain	Parentage	Previous Testing*	Generation Composited
1. Beeson	C1253 x Kent	11	F_7
2. Coles	Hark x (Provar x (Magna x Disoy))	1	F_5
3. Corsoy	Harosoy x Capital	14	F_9
4. Harcor	Corsoy x OX383 (Corsoy x Harosoy 63)	4	F_4
5. Sloan[1]	M59-120 x IVR Ex 4731	3	F_4
6. Vickery[2]	Corsoy^4 x (Mack x L65-1342 or Anoka)	1	F_4
7. Wells	C1266R (Harosoy x C1079) x C1253	6	F_7
8. Wells II[3]	Wells^8 x Arksoy	1	F_3
9. Woodworth	Wayne x L57-0034 (Clark x Adams)	1	F_6
10. A76-201009	AP6	P II	F_6
11. A76-201010	AP6	P II	F_6
12. A76-202015	AP6	P II	F_6
13. C Beeson PR_3	Beeson^8 x Arksoy	0	F_3
14. C1545	Calland x Bonus	1	F_6
15. C1553	Williams x Beeson	P II	F_8
16. HW6942-15-6	Calland x Beeson	P II	F_4
17. HW74-618	Williams x Ransom (dt.)	P III	F_4
18. L73D-195	C1477 (Amsoy^8 x C1253) x Corsoy	2	F_6
19. L73-6084	L15 (Wayne Rps) x Amsoy 71	1	F_7
20. L75-3674	Corsoy^6 x Lee 68	P II	F_3
21. M68-333	M60-406 x Beeson	P I	F_5
22. U11406	C1432 x C1430	1	F_7
23. U11532	Wayne x C1317-71	P II	F_4

* Number of years in this test, or name of 1977 test.

[1] A73-25050 in 1977 UT II
[2] A75-Corsoy R3 in 1977 UT II
[3] Wells BC_6 in 1977 UT II

UNIFORM TEST II, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Hypocotyl Score Ames	Shattering Manhatten 2 weeks
Beeson	PGBr	SYIb	3	5	4
Coles (I)	PGBr	DYY	2	1	5
Corsoy (II)	PGBr	DYY	4	1	3
Harcor	PGBr	SYY	4	1	3
Sloan	WTBr	SYBr	2	5	3
Vickery	PGBr	DYY	4	1	4
Wells	PGBr	DYIb	3	4	5
Wells II	PGBr	DYIb	3	5	5
Woodworth (III)	WTTn	DYB1	4	5	2
A76-201009	PGBr	DYY	1	3	3
A76-201010	PTBr	DYB1	4	1	3
A76-202015	WTBr	DYB1	2	1	2
C Beeson PR_3	PGBr	DYIb	2	5	3
C1545	PTBr	DYB1	2	5	4
C1553	WGTn	DYBf	4	5	4
HW6942-15-6	PTBr	DYB1	2	5	4
HW74-618	PTTn	SYB1	3	1	2
L73D-195	PGBr	SYY	3	1	2
L73-6084	WTBr	SYBr	3	1	3
L75-3674	PGBr	DYY	4	1	2
M68-333	WGBr	SYBf	2	5	3
U11406	WGBr	SYBf	4	1	3
U11532	WGTn	SYBf	3	1	3

UNIFORM TEST II, 1978

Disease Data

Strain	FE2 Laf. Ind. a	BP Girard Ill. n	BSR Laf. Ind. n	BSR Ames, Ia Stem n	BSR Ames, Ia Plants n	PSB Laf. Ind. d	PS Laf. Ind. a	PR Vickery Ohio n	PR race 1 Laf. Ind. a	PR race 1 Ames Ia. a
	Score	Score	%	%	%	%	%	------Reaction--------		
Beeson	1	3	100	81	100			4.0	R	R
Coles (I)	4	3	0	59	100			4.5	S	S
Corsoy (II)	5	3	20	52	100			4.0	S	S
Harcor	5	3	20	58	100			3.5	R	H
Sloan	4	3	0	88	100			5.0	S	S
Vickery	5	3	0	57	100			2.5	R	R
Wells	1	3	40	69	100			4.0	R	R
Wells II	1	3	0	62	100			3.0	R	R
Woodworth (III)	4	1	0	76	100			3.5	S	S
A76-201009	4	3	20	66	100			5.0	S	S
A76-201010	5	1	60	75	100			3.0	S	S
A76-202015	5	3	80	67	100			3.0	S	S
C Beeson PR_3	1	3	0	61	100			2.5	R	R
C1545	4	2	20	69	100			3.0	R	R
C1553	1	3	20	75	100			3.5	H	S
HW6942-15-6	5	3	20	65	100			3.5	R	R
HW74-618	1	1	0	100	100			3.5	S	S
L73D-195	5	3	70	68	100			3.0	R	R
L73-6084	4	1	80	77	100			2.5	R	R
L75-3674	5	3	0	61	100			3.0	R	R
M68-333	5	3	30	66	100			4.0	R	R
U11406	4	3	30	82	100			4.0	R	R
U11532	5	3	20	88	100			3.5	R	R

UNIFORM TEST II, 1978

Regional Summary

	Strain	Yield bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
	No. of Tests	21	21	20	21	20	17	19	8	8
	Beeson	42.6	21	+3.0	2.2	37	2.5	19.2	42.3	20.4
	Coles (I)	43.2	18	-0.6	2.5	38	2.1	19.1	43.0	20.2
	Corsoy (II)	44.9	9	9-22*	2.4	37	2.1	16.3	41.0	21.3
	Harcor	45.7	3	+0.9	2.5	38	2.1	15.9	41.2	20.8
	Sloan	42.5	22	+3.5	2.6	37	2.3	17.2	41.2	22.2
	Vickery	44.9	9	-0.4	2.4	37	2.1	16.1	41.1	21.0
	Wells	44.1	15	+0.2	1.7	37	2.7	17.1	42.7	21.0
	Wells II	44.1	15	+0.2	1.7	37	2.6	17.1	42.9	20.8
	Woodworth (III)	43.2	18	+7.2	2.2	38	1.8	16.0	41.4	20.9
	A76-201009	41.9	23	-1.4	2.0	34	2.2	17.4	41.8	21.4
	A76-201010	45.0	8	+2.0	3.1	35	2.4	17.1	40.4	20.7
	A76-202015	44.9	9	+2.8	3.0	36	2.1	17.4	41.3	20.2
Beeson 80	C Beeson PR_3	45.6	4	+2.0	2.0	36	2.1	19.6	42.3	20.5
Century	C1545	45.6	4	+4.0	1.8	36	2.3	19.1	43.5	19.8
	C1553	45.3	7	-0.3	1.8	34	2.2	20.6	41.2	21.7
	HW6942-15-6	44.9	9	+3.2	2.1	37	2.3	19.4	41.5	20.8
Gnome	HW74-618	44.3	13	+4.0	1.7	26	1.6	16.2	43.3	20.4
Amcor	L73D-195	46.4	1	+4.5	2.6	41	2.3	17.1	40.0	20.9
	L73-6084	45.8	2	+3.2	2.3	42	2.3	18.8	41.5	21.5
Corsoy 79	L75-3674	45.6	4	-0.4	2.3	38	2.1	16.2	41.2	21.2
	M68-333	43.4	17	-3.7	2.4	36	2.2	18.0	41.9	21.0
Nebsoy	U11406	42.8	20	+1.2	1.6	35	2.4	17.6	41.5	20.3
	U11532	44.3	13	+2.2	2.1	37	2.3	18.0	42.0	20.3

* 118 days after planting

The 3-year means show the similarity in yield of Harcor and L73D-195, though L73D-195 is 4 days later maturing than Harcor.

Results of the 2-year analysis show very similar yields for Harcor, C1545, L73D-195, and L73-6084. All of these strains are resistant to race 1 of phytophthora, and the experimental strains mature 3 to 4 days after Harcor. C1545 has somewhat better lodging resistance than the other strains.

The 1978 summary shows similar results but with C Beeson PR_3 and L75-3674 yielding about the same as the above strains. These two strains are resistant to races 1,2,3,6,7,8, and 9 of phytophthora while the above strains are resistant only to races 1 and 2. The determinate strain HW74-618 was similar in yield to Corsoy but about 4 days later in maturity than Corsoy.

UNIFORM TEST II, 1978

Regional Summary

Strain	Yield bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
1977-1978, 2-Year Mean									
No. of Tests	43	43	39	43	42	38	40	17	17
Beeson	43.6	12	+3.6	2.1	36	2.6	19.1	40.9	20.4
Coles (I)	43.0	13	-0.7	2.4	37	2.3	18.4	41.4	20.4
Corsoy (II)	44.5	6	9-21.4*	2.5	37	2.3	15.9	39.8	21.2
Harcor	46.4	3	+1.7	2.7	39	2.3	15.4	39.7	20.8
Sloan	44.1	10	+4.3	2.5	36	2.4	16.8	39.6	22.2
Vickery	44.6	5	-0.5	2.6	37	2.2	15.6	39.8	21.1
Wells	44.4	8	-0.3	1.8	36	2.7	16.3	41.0	21.1
Wells II	44.4	8	-0.1	1.8	36	2.7	16.4	41.2	21.0
Woodworth (III)	43.7	11	+8.9	2.2	38	2.1	15.4	40.4	20.5
C1545	46.7	2	+4.5	1.9	36	2.3	18.8	41.8	20.2
L73D-195	46.9	1	+5.6	2.8	40	2.5	16.7	39.0	20.8
L73-6084	46.4	3	+4.7	2.4	41	2.4	18.5	40.1	21.4
U11406	44.5	6	+1.7	1.6	34	2.6	16.7	40.0	20.3

* 121 days after planting

1976-1978, 3-Year Mean									
No. of Tests	67	67	62	68	68	62	61	28	28
Beeson	41.4	5	+4.0	2.0	36	2.5	18.5	40.9	20.3
Corsoy (II)	42.8	3	9-19	2.3	36	2.2	15.5	39.7	21.1
Harcor	44.5	1	+1.5	2.5	37	2.2	15.0	39.6	20.7
Sloan	42.6	4	+4.2	2.4	36	2.4	16.5	39.6	22.1
L73D-195	44.4	2	+5.5	2.7	40	2.4	16.2	38.7	20.9

* 120 days after planting

1975-1978, 4-Year Mean									
No. of Tests	93	93	86	93	94	85	84	39	39
Beeson	42.2	4	+4.0	1.9	35	2.5	18.7	40.9	20.4
Corsoy (II)	43.0	3	9-18.4	2.3	35	2.3	15.7	40.0	21.2
Harcor	44.6	1	+1.9	2.5	37	2.3	15.1	39.8	20.8
Sloan	43.3	2	+4.4	2.4	35	2.4	16.7	39.5	21.4

* 120 days after planting

UNIFORM TEST II, 1978

Strain	Mean 21 Tests	N.J. Adelphia	Penn. Landisville	Ont. Ridgetown	Ont. Harrow	Ohio Wooster	Ohio Hoytville
			YIELD (bu/a)				
Beeson	42.6	30.8	43.3	48.6	43.4	26.4	47.1
Coles (I)	43.2	33.2	40.2	52.6	45.0	30.2	45.0
Corsoy (II)	44.9	28.5	47.4	60.2	44.2	28.0	45.3
Harcor	45.7	36.4	48.7	56.9	44.7	29.8	46.4
Sloan	42.5	28.8	45.0	53.5	41.1	27.3	44.9
Vickery	44.9	34.8	42.0	56.1	44.6	23.9	43.3
Wells	44.1	29.3	41.8	59.8	45.4	23.2	48.9
Wells II	44.1	29.1	43.5	57.3	46.7	21.4	48.3
Woodworth (III)	43.2	32.2	46.4	51.3	40.8	27.1	45.6
A76-201009	41.9	30.8	42.7	57.6	45.1	22.3	49.5
A76-201010	45.0	29.8	46.0	50.1	41.9	30.6	47.5
A76-202015	44.9	36.2	43.9	47.7	44.1	33.1	49.8
C Beeson PR_3	45.6	31.2	46.2	56.3	43.4	28.2	48.6
C1545	45.6	32.1	45.8	55.1	44.5	30.5	47.1
C1553	45.3	31.8	41.1	55.3	43.5	26.1	48.5
HW6942-15-6	44.9	35.0	47.0	50.8	43.4	27.2	48.1
HW74-618	44.3	41.6	47.1	46.7	41.6	28.1	47.4
L73D-195	46.4	43.2	50.6	54.7	44.4	32.7	46.2
L73-6084	45.8	35.7	46.6	53.0	44.6	28.2	47.6
L75-3674	45.6	34.6	46.2	56.5	41.6	27.4	43.8
M68-333	43.4	34.4	41.5	60.6	48.3	27.3	43.9
U11406	42.8	29.4	40.8	52.4	45.7	23.3	47.3
U11532	44.3	31.8	41.4	48.4	44.4	30.5	46.9
C.V. (%)		10.0	5.9	10.1	5.2	13.3	5.6
L.S.D. (5%)		6.4	4.4	7.7	3.2	6.0	4.2
Row sp (in.)		30"	30"	24"	24"	30"	30"
Rows/plot		3	4	4	4	4	4
Reps		4	3	4	4	3	3

UNIFORM TEST II, 1978

Strain	Mich. Dundee	Mich. E. Lansing	Ind. Bluffton	Ind. Lafayette	Ind. Greenfield	Wisc. Arlington	Ill. Urbana
			YIELD (bu/a)				
Beeson	21.6	52.0	38.7	50.6	31.0	32.5	53.8
Coles (I)	22.5	35.0	36.5	48.9	33.3	26.1	55.0
Corsoy (II)	20.5	38.9	40.7	54.6	21.5	35.5	56.0
Harcor	33.3	43.0	35.0	49.6	27.8	35.0	56.2
Sloan	22.9	43.6	32.8	51.1	30.6	33.0	50.4
Vickery	25.8	43.9	42.1	46.1	23.5	30.6	55.0
Wells	26.7	42.2	32.0	54.8	34.1	35.6	56.6
Wells II	23.0	38.1	44.0	55.9	36.9	34.4	50.2
Woodworth (III)	29.5	45.3	42.2	56.0	27.3	30.0	52.4
A76-201009	7.4	39.8	33.8	53.1	26.1	34.6	54.0
A76-201010	26.7	47.5	47.4	47.5	39.5	33.4	55.4
A76-202015	29.7	53.1	47.7	51.0	24.6	27.7	55.2
C Beeson PR_3	31.7	51.1	48.1	46.4	35.0	34.0	53.4
C1545	27.5	48.3	39.3	51.4	39.4	28.0	57.6
C1553	26.1	43.9	40.5	54.4	29.3	36.4	57.6
HW6942-15-6	31.6	40.9	43.8	51.6	36.4	32.5	53.3
HW74-618	27.9	45.2	40.8	47.1	27.8	28.8	58.8
L73D-195	27.2	46.5	39.1	54.9	39.8	31.7	55.8
L73-6084	31.8	43.8	39.4	60.2	43.7	32.5	56.2
L75-3674	30.2	41.5	43.0	46.2	26.3	33.0	54.4
M68-333	24.7	35.3	40.9	47.7	28.9	36.2	53.0
U11406	24.0	40.5	41.9	48.7	28.5	34.7	56.4
U11532	24.4	44.7	37.8	48.1	30.5	34.3	53.0
C.V. (%)	16.7	12.7	15.9	8.7	17.4	9.4	4.2
L.S.D. (5%)	7.1	9.1	10.5	7.2	9.2	5.0	4.8
Row sp (in.)	-	-	30"	30"	30"	30"	30"
Rows/plot	-	-	3	4	3	4	4
Reps	-	-	3	3	3	3	2

UNIFORM TEST II, 1978

Ill.	Minn.		Iowa		Neb.		S.D.
Girard	Waseca	Lamber-ton	Key-stone	Ames	Mead	Concord	Brook-ings
			YIELD (bu/a)				
40.8	49.1	42.3	56.6	54.3	48.5	47.9	36.2
42.9	53.3	55.6	54.9	61.8	50.0	43.1	41.4
44.4	56.9	60.0	54.9	64.1	52.3	50.1	38.7
42.4	58.8	54.1	54.2	66.8	46.7	51.2	42.8
47.4	52.4	42.8	54.3	58.0	44.4	46.3	42.3
46.7	57.3	58.4	51.3	67.8	50.1	52.3	46.7
43.7	53.1	49.9	54.9	53.1	52.3	48.2	39.7
44.6	54.8	48.6	54.9	55.8	52.6	47.9	39.0
44.4	52.5	44.0	54.7	55.5	48.3	46.7	35.7
45.9	38.0	47.4	53.6	55.2	52.2	49.8	40.5
44.5	53.9	48.2	53.0	68.9	48.9	43.6	40.5
41.7	49.1	48.9	57.1	64.9	51.7	42.6	42.5
45.6	55.2	47.0	55.8	62.2	54.9	46.6	36.1
46.5	55.8	48.5	57.7	56.7	53.0	52.2	41.4
43.0	52.2	51.7	55.8	62.2	58.4	50.2	42.4
44.4	51.0	49.9	59.2	63.5	47.7	48.4	37.4
40.4	47.4	42.7	50.3	60.9	57.0	41.8	40.3
47.2	53.9	50.4	54.2	62.7	51.0	50.3	37.4
47.8	51.7	46.8	52.8	63.5	49.4	46.9	38.8
47.5	60.9	57.1	53.6	66.5	52.9	53.1	42.0
39.5	56.5	55.4	49.5	56.3	48.4	48.0	34.8
42.8	48.7	46.0	52.6	56.1	50.4	49.4	40.1
43.9	49.3	48.5	50.3	51.5	43.0	44.1	40.6
5.1	9.2	7.5	5.7	6.7	7.6	7.3	12.6
4.7	8.0	6.9	4.3	5.8	6.4	5.8	N.S
36"	30"	30"	27"	13.5"	30"	30"	30"
4	4	4	4	5	4	4	3
2	3	3	4	4	3	3	4

UNIFORM TEST II, 1978

Strain	Mean 21 Tests	N.J. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Wooster	Ohio Hoyt-ville
			YIELD RANK				
Beeson	21	16	15	20	16	17	12
Coles (I)	18	10	23	15	6	6	19
Corsoy (II)	9	23	3	2	13	11	18
Harcor	3	3	2	6	7	7	15
Sloan	22	22	12	13	22	13	20
Vickery	9	7	17	9	8	19	23
Wells	15	20	18	3	4	21	3
Wells II	15	21	14	5	2	23	6
Woodworth (III)	18	11	7	17	23	16	17
A76-201009	23	16	16	4	5	22	2
A76-201010	8	18	10	19	19	3	9
A76-202015	9	4	13	22	14	1	1
C Beeson PR_3	4	15	8	8	16	8	4
C1545	4	12	11	11	10	4	12
C1553	7	13	21	10	15	18	5
HW6942-15-6	9	6	5	18	16	15	7
HW74-618	13	2	4	23	20	10	10
L73D-195	1	1	1	12	11	2	16
L73-6084	2	5	6	14	8	8	8
L75-3674	4	8	8	7	20	12	22
M68-333	17	9	19	1	1	13	21
U11406	20	19	22	16	3	20	11
U11532	13	13	20	21	11	4	14

UNIFORM TEST II, 1978

Mich.		Ind.			Wisc.	Ill.	
Dundee	E. Lansing	Bluffton	Lafayette	Greenfield	Arlington	Urbana	Girard
			YIELD RANK				
21	2	17	13	10	14	16	21
20	23	19	15	9	23	12	17
22	20	12	7	23	4	8	11
1	14	20	14	16	5	6	9
19	13	22	11	11	12	22	3
14	10	8	23	22	18	12	5
11	15	23	5	8	3	4	15
18	21	4	3	5	8	23	9
7	7	6	2	18	19	21	11
23	19	21	8	20	7	15	7
11	5	3	19	3	11	10	10
6	1	2	12	21	22	11	20
3	3	1	21	7	10	17	8
9	4	15	10	4	21	2	6
13	10	13	6	13	1	2	16
4	17	5	9	6	14	18	11
8	8	11	20	16	20	1	22
10	6	16	4	2	17	9	4
2	12	14	1	1	14	6	1
5	16	6	22	19	12	14	2
15	22	10	18	14	2	19	23
17	18	9	16	15	6	5	18
16	9	18	17	12	9	19	14

UNIFORM TEST II, 1978

Strain	Minn. Waseca	Minn. Lamberton	Iowa Keystone	Iowa Ames	Neb. Mead	Neb. Concord	S.D. Brookings
			YIELD RANK				
Beeson	19	23	4	21	17	13	20
Coles (I)	11	4	7	12	14	21	7
Corsoy (II)	4	1	7	6	7	7	17
Harcor	2	6	13	3	21	4	2
Sloan	14	21	12	14	22	18	5
Vickery	3	2	20	2	13	2	1
Wells	12	9	7	22	7	11	14
Wells II	8	12	7	18	6	13	15
Woodworth (III)	13	20	11	19	19	16	22
A76-201009	23	16	15	20	9	8	10
A76-201010	9	15	17	1	16	20	11
A76-202015	19	11	3	5	10	22	3
C Beeson PR_3	7	17	5	10	3	17	21
C1545	6	13	2	15	4	3	8
C1553	15	7	5	10	1	6	4
HW6942-15-6	17	9	1	7	20	10	19
HW74-618	22	22	21	13	2	23	12
L73D-195	9	8	13	9	11	5	18
L73-6084	16	18	18	7	15	15	16
L75-3674	1	3	15	4	5	1	6
M68-333	5	5	23	16	18	12	23
U11406	21	19	19	17	12	9	13
U11532	18	13	21	23	23	19	19

UNIFORM TEST II, 1978

Strain	Mean 20 Tests	N.J. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Wooster	Ohio Hoyt-ville
		MATURITY (relative date)					
Beeson	+3.0	0	-1	-2	-3	+4	+2
Coles (I)	-0.6	0	-1	-1	-2	+1	-2
Corsoy* (II)	9-22	9-25	9-26	10-1	9-26	9-13	9-13
Harcor	+0.9	0	0	0	-2	+2	+3
Sloan	+3.5	+1	+4	+1	0	+4	+1
Vickery	-0.4	0	0	+1	-3	0	-1
Wells	+0.2	-2	-4	-1	0	+2	0
Wells II	+0.2	-4	-4	0	0	0	+1
Woodworth (III)	+7.2	+2	+6	+7	+2	+7	+6
A76-201009	-1.4	-1	0	-3	-6	0	-2
A76-201010	+2.0	0	0	0	-8	+3	+2
A76-202015	+2.8	+1	0	+3	+1	+4	+2
C Beeson PR_3	+2.0	-1	0	-2	-3	+3	+2
C1545	+4.0	+2	+6	0	+1	+5	+3
C1553	-0.3	+1	-1	-1	-10	+2	-2
HW6942-15-6	+3.2	+2	+3	+2	0	+5	+3
HW74-618	+4.0	+3	+3	+4	+2	+5	+5
L73D-195	+4.5	+2	+8	+4	+1	+4	+2
L73-6084	+3.2	+2	+2	+3	-1	+5	+3
L75-3674	-0.4	0	0	-1	-1	0	+1
M68-333	-3.7	-2	-1	-3	-7	-2	-3
U11406	+1.2	-4	-1	0	+1	+2	+1
U11532	+2.2	+1	-1	+3	0	+3	0
Date planted	5-26	6-6	6-8	5-19	5-29	5-26	5-10
* Days to mature	118	112	110	135	120	110	126

UNIFORM TEST II, 1978

Strain	Mich. Dundee	Mich. E. Lansing	Ind. Bluffton	Ind. Lafayette	Ind. Greenfield	Wisc. Arlington	Ill. Urbana
			MATURITY (relative date)				
Beeson	+4	+5	+2	+1	+6	+3	+2
Coles (I)	-1	-9	-1	-1	+4	-1	0
Corsoy* (II)	9-22	10-5	9-20	9-14	9-19	9-23	9-14
Harcor	-1	0	+1	-1	+2	+1	+3
Sloan	+3	-3	+2	+3	+5	+7	+5
Vickery	-1	-4	0	-1	-3	0	-1
Wells	+1	-1	-1	+1	+1	+1	-1
Wells II	+3	-3	+1	+1	+2	0	0
Woodworth (III)	+6	+7	+4	+3	+9	+11	+9
A76-201009	+1	-12	0	0	+2	-1	-3
A76-201010	0	-3	+2	+3	+8	+4	+4
A76-202015	+3	-1	+2	+3	+3	+4	+4
C Beeson PR_3	+3	+3	+2	+2	+2	+3	+1
C1545	+4	+4	+3	+2	+8	+12	+3
C1553	-1	-2	+1	+1	+2	+1	-2
HW6942-15-6	+3	+4	+3	+3	+6	+3	+3
HW74-618	0	+2	+2	+2	+8	+5	+6
L73-195	0	+5	+2	+3	+8	+8	+7
L73-6084	-1	-3	+1	+2	+4	+5	+6
L75-3674	-2	-3	+1	-3	0	+1	-1
M68-333	-3	-10	-1	-1	0	-3	-4
U11406	0	-1	+1	0	+5	0	0
U11532	-1	+1	+2	0	+5	+3	+2
Date planted	-	-	6-2	5-27	6-5	5-23	5-27
* Days to mature	-	-	110	110	106	123	110

UNIFORM TEST II, 1978

Ill.	Minn.		Iowa		Neb.		S.D.
Girard	Waseca	Lamber-ton	Key-stone	Ames	Mead	Concord	Brook-ings
			MATURITY (relative date)				
+1	+11	+3		+8	+1	+6	+6
0	0	-1		+2	0	0	+2
9-14	9-22	9-20		9-14	9-23	9-19	10-10
+1	+1	-1		+3	+2	+2	+2
+2	+10	+2		+8	+2	+6	+7
+1	+1	-1		+1	+1	+2	0
0	+1	-1		0	0	+3	+4
0	+1	-2		+2	0	+4	+3
+7	+14	+7		+13	+4	+10	+9
+1	-4	-4		0	0	+2	+2
+2	+4	+1		+5	+3	+4	+6
+1	+8	+2		+7	+2	+5	+3
+1	+2	+2		+6	0	+6	+7
+1	-1	+3		+7	+2	+6	+8
0	-5	-1		+3	0	+5	+3
0	0	+2		+6	+1	+7	+8
+1	+9	+2		+7	+2	+4	+7
+2	+5	+3		+9	+3	+6	+8
+1	+5	+3		+6	+3	+10	+8
0	0	-2		0	-1	+1	+2
-5	-2	-9		-6	-6	-4	-2
-1	+5	+3		+2	+1	+6	+5
+1	+5	+3		+5	+1	+5	+6
6-4	5-15	5-11	5-18	5-25	5-22	5-25	6-5
102	130	132	-	112	124	117	127

UNIFORM TEST II, 1978

Strain	Mean 21 Tests	N.S. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Wooster	Ohio Hoyt-ville
			LODGING (score)				
Beeson	2.2	4.4	1.5	2.0	1.5	1.1	1.5
Coles (I)	2.5	3.5	2.0	2.8	1.5	1.3	2.4
Corsoy (II)	2.4	3.6	2.3	3.0	1.5	1.3	2.0
Harcor	2.5	4.0	2.7	3.5	1.5	1.3	2.5
Sloan	2.6	3.9	3.0	3.0	2.0	1.3	1.5
Vickery	2.4	3.4	2.5	2.8	1.5	1.2	1.7
Wells	1.7	2.9	1.0	1.3	1.0	1.1	1.2
Wells II	1.7	2.5	1.3	1.3	1.0	1.0	1.2
Woodworth (III)	2.2	3.6	1.5	2.8	1.0	1.3	1.5
A76-201009	2.0	3.4	1.3	1.3	1.0	1.1	1.4
A76-201010	3.1	4.4	3.7	4.0	2.5	1.6	3.3
A76-202015	3.0	4.4	3.5	3.3	2.5	1.6	2.2
C Beeson PR_3	2.0	3.0	1.7	1.8	1.5	1.1	1.3
C1545	1.8	3.1	1.0	1.5	1.0	1.3	1.4
C1553	1.8	2.9	1.0	1.3	1.0	1.2	1.3
HW6942-15-6	2.1	3.1	1.7	2.3	1.5	1.4	1.5
HW74-618	1.7	2.3	1.3	3.3	2.0	1.4	1.5
L73D-195	2.6	3.9	2.3	2.5	2.0	1.3	1.9
L73-6084	2.3	3.9	1.7	2.5	1.5	1.3	2.2
L75-3674	2.3	3.9	2.7	2.5	1.5	1.2	1.6
M68-333	2.4	4.4	3.2	2.8	2.0	1.2	1.4
U11406	1.6	2.4	1.0	1.3	1.0	1.0	1.4
U11532	2.1	3.4	3.0	2.5	1.5	1.2	1.4

UNIFORM TEST II, 1978

Mich.		Ind.			Wisc.	Ill.	
Dundee	E. Lansing	Bluffton	Lafayette	Greenfield	Arlington	Urbana	Girard
			LODGING (score)				
1.5	2.9	1.3	2.8	3.3	2.7	2.7	1.8
1.0	3.3	1.3	3.8	3.2	3.0	3.2	2.1
1.1	2.0	1.7	3.7	2.7	2.7	3.0	2.3
1.1	2.5	1.3	3.7	3.3	3.0	3.2	2.7
1.5	2.7	1.3	3.2	3.5	3.3	3.6	2.9
1.2	2.0	1.7	3.3	2.5	2.7	3.5	2.5
1.2	1.5	1.0	2.8	2.5	2.0	2.9	1.0
1.1	1.5	1.2	2.5	2.0	2.0	3.0	1.2
1.9	2.9	1.5	4.2	2.5	2.3	2.0	1.3
1.1	1.5	1.2	4.2	1.5	2.3	4.3	1.4
1.7	3.8	1.8	2.6	3.5	4.0	3.6	3.4
1.7	4.9	1.3	3.3	3.3	3.3	3.8	3.6
1.5	2.7	1.2	1.8	2.2	2.3	2.7	1.5
1.5	2.0	1.5	2.2	2.0	2.0	2.5	1.1
1.5	2.2	1.5	2.2	2.5	2.0	2.5	1.3
1.5	3.0	1.3	2.2	2.0	3.3	2.3	1.2
1.5	1.9	1.2	2.7	1.7	2.0	1.8	1.0
1.5	3.6	1.7	3.3	2.5	3.3	2.9	2.4
1.5	2.8	1.3	3.5	2.0	2.7	2.5	1.4
1.2	1.9	1.7	3.5	2.5	3.0	2.8	2.0
1.3	1.7	1.7	2.7	3.2	2.3	3.4	2.1
1.2	1.5	1.3	2.7	2.3	2.0	2.4	1.0
1.2	2.6	1.2	3.3	2.2	2.6	2.5	2.0

UNIFORM TEST II, 1978

Strain	Minn.		Iowa		Neb.		S.D.
	Waseca	Lamber-ton	Key-stone	Ames	Mead	Concord	Brook-ings
			LODGING (score)				
Beeson	3.0	3.0	2.5	2.8	1.2	2.4	1.0
Coles (I)	2.8	3.7	3.1	3.2	1.5	3.4	1.0
Corsoy (II)	2.0	3.3	2.9	2.8	1.7	2.8	1.0
Harcor	2.3	3.3	3.4	3.0	1.5	2.6	1.0
Sloan	2.3	3.3	3.2	3.5	1.7	3.0	1.0
Vickery	2.0	3.7	3.3	3.4	1.8	3.0	1.0
Wells	1.5	2.3	1.8	2.8	1.0	2.3	1.0
Wells II	1.3	3.0	1.5	2.9	1.0	1.5	1.0
Woodworth (III)	2.7	2.7	2.4	3.1	1.3	2.0	1.0
A76-201009	1.7	3.0	2.1	2.9	1.0	2.2	1.0
A76-201010	3.3	4.3	3.6	3.9	1.8	2.5	1.0
A76-202015	2.0	4.0	3.4	3.5	2.0	3.3	1.0
C Beeson PR_3	2.0	3.0	1.8	3.0	1.0	2.8	1.0
C1545	2.0	2.3	2.0	2.5	1.0	2.2	1.0
C1553	1.0	2.7	1.6	2.8	1.0	2.2	1.0
HW6942-15-6	2.0	3.3	2.4	2.9	1.3	2.0	1.0
HW74-618	2.0	3.0	1.2	1.3	1.2	1.0	1.0
L73D-195	2.7	4.0	3.4	3.2	1.7	2.5	1.0
L73-6084	2.7	3.3	3.1	3.0	1.5	3.2	1.0
L75-3674	2.0	3.0	3.0	2.9	1.7	2.5	1.0
M68-333	2.0	3.7	3.0	3.7	1.3	2.4	1.0
U11406	2.0	2.3	1.9	2.1	1.0	1.9	1.0
U11532	2.0	2.3	2.8	3.0	1.3	2.0	1.0

UNIFORM TEST II, 1978

Strain	Mean 20 Tests	N.J. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Wooster	Ohio Hoyt-ville
			HEIGHT (inches)				
Beeson	37	36	32	40	36	24	33
Coles (I)	38	36	32	45	40	26	35
Corsoy (II)	37	34	34	40	37	24	36
Harcor	38	37	36	41	38	26	36
Sloan	37	39	36	45	38	23	32
Vickery	37	36	32	42	38	23	33
Wells	37	36	29	39	35	23	34
Wells II	37	33	31	41	35	22	34
Woodworth (III)	38	36	32	41	38	29	34
A76-201009	34	35	29	37	32	19	32
A76-201010	35	34	31	38	34	22	37
A76-202015	36	35	32	36	34	28	32
C Beeson PR_3	36	34	34	36	34	25	32
C1545	36	36	31	41	35	26	35
C1553	34	32	27	35	32	21	31
HW6942-15-6	37	38	34	40	36	27	32
HW74-618	26	24	24	27	28	18	25
L73D-195	41	40	39	46	40	28	36
L73-6084	42	42	36	44	41	27	39
L75-3674	38	36	37	42	37	23	35
M68-333	36	35	31	36	39	23	29
U11406	35	35	28	34	34	20	34
U11532	37	36	33	38	38	26	36

UNIFORM TEST II, 1978

Strain	Mich. Dundee	Mich. E. Lansing	Ind. Bluffton	Ind. Lafayette	Ind. Greenfield	Wisc. Arlington	Ill. Urbana
			HEIGHT (inches)				
Beeson	32	40	30	37	30	41	45
Coles (I)	30	38	28	36	34	41	48
Corsoy (II)	31	37	25	35	29	41	44
Harcor	31	40	28	35	30	40	48
Sloan	30	38	25	34	32	42	45
Vickery	30	38	31	33	29	41	46
Wells	30	38	25	37	30	39	45
Wells II	26	38	29	36	32	38	44
Woodworth (III)	33	41	32	40	34	40	45
A76-201009	27	31	25	36	26	37	41
A76-201010	28	37	29	31	32	38	42
A76-202015	31	40	30	35	31	39	42
C Beeson PR_3	30	40	29	33	30	38	43
C1545	30	39	28	33	28	39	42
C1553	26	37	28	32	28	37	40
HW6942-15-6	34	38	29	29	33	42	45
HW74-618	26	31	22	~~30~~ 22	18	35	24
L73D-195	34	41	33	40	35	46	49
L73-6084	36	42	33	44	38	42	51
L75-3674	34	38	31	35	33	43	46
M68-333	33	35	28	31	27	40	42
U11406	28	31	28	33	28	37	42
U11532	33	39	29	36	29	38	45

UNIFORM TEST II, 1978

Ill.	Minn.		Iowa		Neb.		S.D.
Girard	Waseca	Lamber-ton	Key-stone	Ames	Mead	Concord	Brook-ings
			HEIGHT (inches)				
37		40	48	46	40	44	37
42		40	47	47	40	44	41
38		40	46	44	38	41	40
39		40	48	48	38	43	41
37		37	47	46	35	41	42
39		39	45	44	39	41	39
38		44	46	46	38	42	42
40		42	46	46	38	42	41
39		41	49	47	40	40	40
35		37	43	44	34	38	37
35		36	43	45	36	37	40
35		35	44	43	35	39	38
38		39	44	44	36	42	41
37		37	46	46	34	40	42
35		36	44	43	34	37	36
39		40	45	46	38	42	39
22		29	26	28	23	24	27
44		39	50	48	42	46	44
44		40	50	50	41	46	44
40		41	46	46	38	42	42
37		38	43	44	35	42	41
36		41	44	44	33	40	41
40		41	47	46	36	40	41

UNIFORM TEST II, 1978

Strain	Mean 17 Tests	N.J. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Wooster	Ohio Hoyt-ville
			SEED QUALITY (score)				
Beeson	2.5	2.0	2.4	2.0	3.0	2.0	3.0
Coles (I)	2.1	2.5	2.2	2.0	2.0	3.0	3.0
Corsoy (II)	2.1	2.0	2.2	2.0	2.0	2.0	3.0
Harcor	2.1	1.8	2.2	3.0	2.0	2.0	3.0
Sloan	2.3	2.0	2.4	2.0	4.0	2.0	3.0
Vickery	2.1	2.0	2.2	2.0	2.0	2.0	2.0
Wells	2.7	3.0	3.0	2.0	3.0	4.0	3.0
Wells II	2.6	3.0	3.0	3.0	3.0	3.0	3.0
Woodworth (III)	1.8	2.0	2.8	2.0	1.0	1.0	1.0
A76-201009	2.2	2.5	2.5	2.0	2.0	2.0	2.0
A76-201010	2.4	1.8	2.2	3.0	2.0	2.0	2.0
A76-202015	2.1	2.0	2.4	3.0	1.0	2.0	2.0
C Beeson PR_3	2.1	2.0	2.3	2.0	1.0	2.0	3.0
C1545	2.3	2.0	3.0	2.0	2.0	4.0	3.0
C1553	2.2	2.3	2.4	2.0	1.0	2.0	3.0
HW6942-15-6	2.3	2.0	2.7	2.0	1.0	3.0	3.0
HW74-618	1.6	1.0	1.4	2.0	1.0	1.0	2.0
L73D-195	2.3	2.0	2.8	3.0	2.0	1.0	3.0
L73-6084	2.3	2.3	2.5	2.0	2.0	2.0	3.0
L75-3674	2.1	2.3	2.2	2.0	2.0	2.0	3.0
M68-333	2.2	2.0	2.0	3.0	1.0	2.0	2.0
U11406	2.4	2.0	2.2	2.0	2.0	2.0	4.0
U11532	2.3	2.0	2.1	2.0	2.0	3.0	3.0

UNIFORM TEST II, 1978

Mich.		Ind.			Wisc.	Ill.	
Dundee	E. Lansing	Bluffton	Lafayette	Greenfield	Arlington	Urbana	Girard
			SEED QUALITY				
		1.5	1.5	2.0	2.3	3.3	4.0
		1.0	1.5	1.5	2.7	2.5	2.8
		1.5	2.0	1.5	2.7	1.5	2.8
		1.5	1.0	1.5	3.0	1.8	3.0
		2.0	1.0	1.5	2.3	2.3	2.8
		1.5	1.5	1.5	2.7	2.0	2.5
		2.0	2.0	2.5	2.7	3.0	4.0
		1.5	2.0	1.5	2.7	3.0	3.8
		1.0	1.0	2.0	3.0	1.8	2.0
		1.5	1.5	1.5	2.3	2.3	3.5
		1.5	2.0	1.5	2.7	2.8	4.0
		1.0	1.5	1.5	3.0	2.0	3.3
		1.5	1.0	1.5	2.7	2.8	3.0
		1.5	1.5	1.5	3.0	2.3	3.0
		2.0	1.5	2.0	2.3	2.5	3.0
		1.5	1.5	2.0	3.0	3.0	3.3
		1.0	1.5	1.0	2.3	1.8	2.0
		1.5	1.5	1.5	3.3	2.0	3.5
		1.0	1.5	2.0	3.0	2.8	2.8
		1.5	1.5	1.0	2.7	1.8	2.5
		1.5	1.5	2.5	2.0	2.5	3.0
		1.5	3.0	2.0	2.3	3.0	3.0
		1.5	2.5	1.5	2.3	2.5	2.8

UNIFORM TEST II, 1978

Strain	Minn. Waseca	Minn. Lamberton	Iowa Keystone	Iowa Ames	Neb. Mead	Neb. Concord	S.D. Brookings
			QUALITY (score)				
Beeson	2.7	2.7		1.3	3.8	2.3	
Coles (I)	1.7	1.7		1.3	2.8	2.0	
Corsoy (II)	2.3	2.3		1.4	2.7	2.1	
Harcor	2.0	2.0		1.2	3.3	2.1	
Sloan	2.7	2.3		1.3	3.5	2.0	
Vickery	2.7	2.0		1.3	3.2	2.0	
Wells	2.3	2.7		1.7	3.2	2.3	
Wells II	2.7	2.7		1.6	3.3	2.3	
Woodworth (III)	2.0	2.0		1.3	3.7	1.9	
A76-201009	2.0	2.7		1.3	3.2	2.0	
A76-201010	2.7	2.3		1.5	4.1	2.0	
A76-202015	2.3	2.0		1.5	3.1	2.0	
C Beeson PR_3	2.0	2.3		1.8	3.5	2.0	
C1545	1.7	2.0		1.5	3.7	1.8	
C1553	2.3	2.3		1.9	2.8	2.2	
HW6942-15-6	2.7	2.3		1.4	3.3	2.0	
HW74-618	1.7	1.7		1.3	1.6	2.0	
L73D-195	2.7	2.0		1.4	3.3	2.3	
L73-6084	2.7	2.3		1.5	4.0	2.2	
L75-3674	2.3	2.7		1.3	2.5	2.0	
M68-333	2.7	2.7		1.9	2.8	2.0	
U11406	2.0	2.7		1.8	3.5	2.1	
U11532	2.7	2.3		1.5	3.8	1.9	

UNIFORM TEST II, 1978

Strain	Mean 19 Tests	N.J. Adel-phia	Penn- Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Wooster	Ohio Hoyt-ville
			SEED SIZE (g/100)				
Beeson	19.2	16	20.8	18.9	19.1	18.3	19.1
Coles (I)	19.1	16	19.6	21.8	20.4	17.8	19.8
Corsoy (II)	16.3	14	15.8	18.7	16.9	14.5	17.0
Harcor	15.9	12	16.1	17.5	16.0	14.4	17.1
Sloan	17.2	14	17.8	17.5	17.5	15.1	17.4
Vickery	16.1	13	15.3	18.8	16.7	13.5	16.8
Wells	17.1	15	15.8	17.4	17.8	15.6	17.6
Wells II	17.1	15	16.0	19.9	17.7	15.2	17.9
Woodworth (III)	16.0	14	16.1	18.2	15.5	13.8	15.8
A76-201009	17.4	16	19.4	20.3	18.9	15.3	18.3
A76-201010	17.1	15	16.8	16.5	16.3	14.6	16.9
A76-202015	17.4	15	17.8	16.7	18.0	14.7	17.2
C Beeson PR_3	19.6	16	20.6	19.5	19.3	18.3	20.1
C1545	19.1	16	20.8	19.5	19.6	17.2	19.1
C1553	20.6	18	20.1	20.7	20.8	19.1	20.5
HW6942-15-6	19.4	18	21.1	19.7	19.9	16.4	19.2
HW74-618	16.2	16	18.0	15.3	15.6	14.7	16.4
L73D-195	17.1	15	18.9	17.5	17.3	15.7	17.7
L73-6084	18.8	17	20.4	20.7	18.9	14.7	18.4
L75-3674	16.2	14	15.4	17.5	16.3	14.3	17.4
M68-333	18.0	17	18.1	18.8	17.9	16.8	18.0
U11406	17.6	14	18.1	18.2	17.0	16.7	17.3
U11532	18.0	15	17.9	18.1	17.0	16.0	18.6

UNIFORM TEST II, 1978

Strain	Mich. Dun-dee	Mich. E. Lansing	Ind. Bluff-ton	Ind. Lafay-ette	Ind. Green-field	Wisc. Arling-ton	Ill. Urbana
			SEED SIZE (g/100)				
Beeson	18.5	23.5	22.0	20.0	19.9	17.7	20.0
Coles (I)	18.5	24.6	19.4	18.0	19.4	17.6	19.0
Corsoy (II)	15.5	20.0	17.8	17.8	15.0	15.2	16.4
Harcor	16.0	19.2	17.4	16.5	15.7	15.3	16.5
Sloan	16.9	21.0	18.2	17.7	17.1	16.4	19.3
Vickery	16.0	19.5	17.1	16.1	14.4	15.0	16.0
Wells	17.5	22.0	18.1	18.1	17.3	16.3	16.6
Wells II	17.0	20.5	18.6	18.2	16.6	16.4	17.6
Woodworth (III)	17.0	18.0	16.7	17.1	16.0	14.8	17.8
A76-201009	17.0	21.5	19.3	17.2	17.5	16.8	16.3
A76-201010	16.0	20.0	19.2	17.9	18.4	14.6	19.4
A76-202015	17.5	23.0	20.0	19.1	16.9	16.5	17.9
C Beeson PR_3	20.0	24.6	22.8	20.3	19.2	18.1	20.2
C1545	19.4	23.9	21.5	19.7	19.4	18.3	18.8
C1553	19.5	25.5	22.5	22.2	21.8	19.0	21.1
HW6942-15-6	20.0	25.0	20.9	19.7	20.8	18.4	19.2
HW74-618	16.0	19.5	17.8	16.3	16.3	15.1	18.3
L73D-195	11.8	21.5	20.4	18.2	19.0	16.5	16.8
L73-6084	19.0	22.2	19.6	19.8	18.1	16.5	21.1
L75-3674	15.5	20.0	17.6	17.1	14.5	15.2	16.3
M68-333	17.5	22.5	20.7	19.0	17.5	17.6	19.2
U11406	17.5	20.5	19.3	19.5	18.2	15.7	17.8
U11532	17.0	21.5	19.9	20.1	17.7	16.6	19.3

UNIFORM TEST II, 1978

Ill.	Minn.		Iowa		Neb.		S.D.
Girard	Waseca	Lamber-ton	Key-stone	Ames	Mead	Concord	Brook-ings
			SEED SIZE (g/100)				
	20.0	18.8		21.6	17.6	15.7	16.9
	18.5	18.9		18.8	18.6	16.8	18.9
	16.8	17.2		16.4	15.5	15.3	14.5
	16.7	15.2		16.0	14.6	14.8	15.0
	18.2	16.3		18.8	16.2	15.7	15.9
	17.2	16.8		16.8	15.6	14.8	15.9
	17.0	16.9		17.8	17.5	15.4	15.3
	17.3	16.3		17.8	16.9	15.2	15.0
	16.7	15.7		17.6	15.6	14.4	12.9
	17.0	15.5		17.0	15.9	14.7	15.7
	18.1	17.5		19.0	16.5	15.0	16.9
	16.7	17.3		19.5	16.0	15.9	15.8
	20.0	18.8		21.4	19.8	16.2	16.9
	19.4	19.0		18.9	18.3	16.3	17.1
	20.0	20.0		23.0	22.3	17.6	18.1
	18.2	19.0		19.9	18.2	16.3	18.6
	16.0	14.5		16.7	15.9	13.8	15.4
	16.4	17.2		18.6	15.2	14.9	15.8
	19.5	18.5		19.8	17.9	17.5	17.5
	17.5	16.4		16.4	15.5	14.9	15.1
	17.7	17.8		16.6	17.7	15.4	16.5
	16.0	18.4		19.0	17.4	16.3	17.1
	17.7	18.0		19.0	17.8	18.1	16.5

UNIFORM TEST II, 1978

Strain	Mean 8 Tests	N.J. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Woo-ster	Ohio Hoyt-ville	Mich. Dun-dee	Mich. E. Lan-sing	Ind. Bluff-ton
					PROTIEN (%)					
Beeson	42.3				42.2		40.9			43.3
Coles (I)	43.0				44.7		42.3			42.9
Corsoy (II)	41.0				42.3		40.9			41.1
Harcor	41.2				42.1		40.8			41.7
Sloan	41.2				41.9		40.2			38.1
Vickery	41.1				42.0		40.5			41.6
Wells	42.7				44.3		41.9			43.6
Wells II	42.9				43.6		43.3			43.8
Woodworth (III)	41.4				41.7		40.6			41.2
A76-201009	41.8				43.6		40.7			40.8
A76-201010	40.4				41.9		38.9			40.0
A76-202015	41.3				42.6		40.1			41.3
C Beeson PR_3	42.3				43.0		39.6			43.8
C1545	43.5				44.7		41.7			43.4
C1553	41.2				41.1		40.5			42.1
HW6942-15-6	41.5				43.2		39.0			41.2
HW74-618	43.3				44.8		42.0			42.7
L73D-195	40.0				40.2		37.6			40.2
L73-6084	41.5				42.4		39.1			41.3
L75-3674	41.2				42.6		40.2			41.3
M68-333	41.9				41.9		41.6			41.8
U11406	41.5				42.9		40.5			42.0
U11532	42.0				43.3		40.5			43.0

UNIFORM TEST II, 1978

Ind.		Wisc.	Ill.		Minn.		Iowa		Neb.	S.D.
Lafay-ette	Green-field	Arling-ton	Urbana	Girard	Waseca	Lamber-ton	Key-stone	Ames	Mead	Brook-ings
					PROTEIN (%)					
42.5			43.2			41.2		42.4	42.8	
43.2			43.7			42.3		42.4	42.6	
40.1			41.5			39.9		41.4	40.6	
40.2			41.3			40.2		41.0	41.9	
41.5			42.7			40.6		42.7	42.1	
40.0			42.2			40.9		41.1	40.8	
41.3			44.1			41.1		43.3	42.2	
41.8			43.3			42.2		42.8	42.2	
42.2			43.2			39.7		41.5	41.4	
41.4			42.2			41.4		42.0	42.6	
39.7			41.1			39.8		40.3	41.9	
41.4			41.4			40.9		41.3	41.2	
41.6			44.0			41.8		43.0	41.8	
43.6			44.6			41.7		43.6	44.4	
40.7			41.7			41.1		41.5	41.3	
42.3			42.2			39.7		42.1	42.4	
44.2			43.6			43.7		43.7	41.7	
40.3			41.6			38.8		40.5	40.9	
41.6			42.7			40.6		41.8	42.4	
41.6			42.5			40.8		40.8	40.3	
43.3			43.3			41.2		41.0	41.4	
40.0			43.8			40.5		42.5	40.1	
41.4			42.9			40.7		41.6	42.6	

UNIFORM TEST II, 1978

Strain	Mean 8 Tests	N.J. Adel-phia	Penn. Landis-ville	Ont. Ridge-town	Ont. Har-row	Ohio Woo-ster	Ohio Hoyt-ville	Mich. Dun-dee	Mich. E. Lan-sing	Ind. Bluff-ton
					OIL (%)					
Beeson	20.4				20.7		21.2			20.3
Coles (I)	20.2				19.4		20.3			20.3
Corsoy (II)	21.3				21.1		20.6			22.3
Harcor	20.8				20.1		20.7			20.5
Sloan	22.2				21.7		23.2			22.8
Vickery	21.0				21.0		20.6			20.7
Wells	21.0				20.2		21.3			20.7
Wells II	20.8				20.4		20.4			20.1
Woodworth (III)	20.9				20.4		21.2			21.4
A76-201009	21.4				20.1		22.3			21.6
A76-201010	20.7				19.7		21.6			20.9
A76-202015	20.2				20.0		20.2			19.8
C Beeson PR_3	20.5				20.3		21.9			19.2
C1545	19.8				19.1		20.3			19.9
C1553	21.7				22.0		21.8			22.3
HW6942-15-6	20.8				19.8		21.7			21.2
HW74-618	20.4				19.4		21.1			20.2
L73D-195	20.9				21.3		21.4			21.2
L73-6084	21.5				21.0		22.8			21.8
L75-3674	21.2				20.6		21.4			21.3
M68-333	21.0				21.5		20.5			22.2
U11406	20.3				19.5		20.2			20.8
U11532	20.3				19.5		21.1			19.6

UNIFORM TEST II, 1978

Ind.		Wisc.	Ill.		Minn.		Iowa		Neb.	S.D.
Lafay-ette	Green-field	Arling-ton	Urbana	Girard	Waseca	Lamber-ton	Key-stone	Ames	Mead	Brook-ings
					OIL (%)					
20.0			19.7			20.7		20.0	20.6	
19.9			20.3			20.1		20.6	20.7	
21.7			20.9			21.0		20.8	22.2	
21.7			21.0			20.9		20.5	21.0	
22.5			21.5			21.8		21.4	22.5	
22.2			20.5			20.6		21.4	21.1	
22.1			20.2			21.5		20.6	21.2	
21.4			20.8			20.6		21.1	21.3	
21.1			19.6			20.8		20.9	21.5	
22.2			20.9			21.3		21.2	21.3	
21.1			20.3			20.6		20.8	20.3	
20.9			20.2			19.4		20.8	20.6	
21.2			19.6			20.4		20.4	20.9	
20.2			19.1			20.2		19.7	19.9	
21.8			21.1			21.2		21.4	21.8	
21.0			20.6			21.1		20.8	20.6	
20.3			21.2			19.8		20.1	20.8	
20.7			20.2			20.8		21.0	20.9	
21.6			20.9			21.3		21.4	21.2	
21.1			20.8			20.9		21.8	22.0	
20.3			20.1			20.8		20.9	21.3	
21.1			19.2			20.6		19.8	21.5	
20.5			20.2			20.7		20.5	20.4	

PRELIMINARY TEST II, 1978

Strain	Parentage	Generation Composited
1. Beeson	C1253 x Kent	F_7
2. Coles (I)	Hark x (Provar x(Magna x Disoy))	F_5
3. Corsoy (II)	Harosoy x Capital	F_9
4. Woodworth (III)	Wayne x L57-0034 (Clark x Adams)	F_6
5. A77-116012	AX990	S_3
6. A77-211021	Beeson x A72-507	F_4
7. A77-212006	Hodgson x M65-69	F_4
8. A77-212008	Hodgson x A72-511	F_4
9. A77-214005	AP6M (S1) C1	S_4
10. A77-214015	AP6M (S1) C1	S_4
11. A77-214019	A73-25088 x Woodworth	F_4
12. A77-214022	L70T-543 x Harcor	F_4
13. A77-214035	AP6	S_4
14. A77-215009	L69D-133 x C1515	F_4
15. A77-215030	AP61YT (F_4) C1	F_4
16. A77-216006	AX1390	S_3
17. A77-312017	Coles x A72-507	F_4
18. C1566	Beeson x P.I. 68788	F_7
19. C1568	Williams x Beeson	F_6
20. C1574	C1421 x Williams	F_8
21. C1576	Williams x Bonus	F_7
22. C1579	Williams x CX407BC$_7$-255	F_6
23. H75-729	L66-531 x Williams	F_5
24. H75-796	L66-531 x Williams	F_5
25. H7703	Beeson x Wells	F_5
26. L73-4673	Corsoy x L66L-154	F_5
27. L76-129	Beeson x L70-2283	F_5
28. L76-141	Beeson x L70-2283	F_5
29. M70-203	Evans x 5565-5701	F_5
30. M70-341	Steele x AP68-1016	F_5
31. U11239	Amsoy x Wayne	F_4
32. U11632	C1432 x C1430	F_7
33. U20325	C1371-71 x C1253	F_5
34. U20439	C1371-71 x C1253	F_5
35. U36344	C1266 x C1264	F_5
36. U46734	Merit x C1474	F_5

Three strains L73-4673, A77-212006, and A77-211021 were about two bushels higher in yield than the check variety Corsoy. The strain L73-4673 has excellent shattering resistance but was rated either heterogeneous or susceptable in its reaction to phytophthora races 1 and 2. The two cyst nematode race 3 resistant strains, L76-129 and L76-141, did not perform as well as the check varieties. The determinate strains H75-729 and H75-796 did not perform as well as the check varieties and are too late in average maturity to be included in the Group II Tests.

PRELIMINARY TEST II, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Shattering Manhatten 2 weeks
Beeson	PGBr	SYIb	3	4
Coles (I)	PGBr	DYY	2	5
Corsoy (II)	PGBr	DYY	4	3
Woodworth (III)	WTTn	DYBl	4	2
A77-116012	PTBr	DYBr	3	1
A77-211021	WGBr	DYBf	4	4
A77-212006	WGBr	DYBf	3	2
A77-212008	PGBr	SYIb	4	3
A77-214005	PGBr	SYIb	2	3
A77-214015	PGBr	SYIb	3	3
A77-214019	WTTn	SYBr	3	2
A77-214022	P+WT+GBr	SYY	3	3
A77-214035	WGBr	DYY	3	5
A77-215009	PTBr	DYBr	4	3
A77-215030	PTBr	SYBl	4	2
A77-216006	PTBr	DYBl	2	1
A77-312017	WGBr	DYY	4	4
C1566	PGBr	SYIb	3	2
C1568	WGBr	SYBf	2	3
C1574	WTTn	SYBl	2	2
C1576	PT+GTn	DYBl	2	3
C1579	WGTn	SYBf	3	3
H75-729	WGBr	DYBf	3	2
H75-796	PGTn	DYIb	4	2
H7703	PGBr	DYY	3	3
L73-4673	PGTn	DYY	4	1
L76-129	PGBr	SYBf	1	5
L76-141	PGBr	SYBf	2	5
M70-203	WGBr	DYY+Bf	2	5
M70-341	PGBr	DYY+Bf	2	2
U11239	PTBr	DYBl	4	5
U11632	WGBr	SYBf	4	3
U20325	PGBr	SYIb	2	3
U20439	PGBr	SYIb	4	4
U36344	PGBr	DYBf+Y	3	5
U46734	WGTn	DYBf	2	1

PRELIMINARY TEST II, 1978

Disease Data

Strain	FE_2 Laf. Ind. a	BSR Laf. Ind. n	BSR Ames, Ia. Stem n	BSR Ames, Ia. Plants n	SMV Laf. Ind. a	PSB Laf. Ind. d	PS Laf. Ind. a	PR Vickery Ohio n	PR race 1 Laf. Ind. a	PR race 1 Ames Ia. a
	Score	%	%	%	Score	%	%	------Reaction-------		
Beeson	1	100	67	100	3M	4	3	4.0	R	R
Coles (I)	4	0	55	100	5E	4	2	4.0	S	S
Corsoy (II)	5	20	60	100	5E	4	1	3.5	S	S
Woodworth (III)	4	0	94	100	4E	5	2	3.5	S	S
A77-116012	3	20	39	100	5E	0	3	3.5	R	R
A77-211021	4	20	65	100	4E	0	1	3.5	R	R
A77-212006	5	20	49	100	3E	22	4	4.0	S	S
A77-212008	1	80	67	100	2E	5	4	4.0	S	S
A77-214005	5	20	58	100	3E	1	2	3.0	R	R
A77-214015	3	0	58	100	4E	1	1	3.0	S	S
A77-214019	4	20	73	100	3E	0	1	4.5	S	S
A77-214022	4	0	89	100	5E	2	2	4.0	R	R
A77-214035	2	0	59	100	3E	3	3	2.5	S	S
A77-215009	3	100	62	100	5E	3	5	3.0	R	R
A77-215030	5	60	88	100	4E	1	0	4.0	S	S
A77-216006	4	80	45	80	3E	1	1	3.5	S	S
A77-312017	4	0	97	100	5E	2	5	4.5	S	S
C1566	2	40	79	100	4E	2	1	3.5	R	R
C1568	1	0	80	100	3M	0	5	3.0	S	S
C1574	5	0	88	100	3E	2	1	3.5	S	S
C1576	5	80	94	100	5E	1	2	4.5	R	S
C1579	5	0	81	100	5E	5	4	3.5	H	S
H75-729	5	40	98	100	2M	1	0	3.0	S	S
H75-796	5	0	95	100	4M	10	0	3.0	S	S
H7703	4	40	77	100	5E	4	1	3.5	R	R
L73-4673	5	20	76	90	5M	11	5	4.5	H	S
L76-129	4	0	79	100	1	1	0	4.0	R	R
L76-141	1	100	70	100	3M	0	0	4.0	R	H
M70-203	5	30	74	100	1	0	1	4.0	H	H
M70-341	5	0	50	100	1	0	0	3.5	R	R
U11239	4	20	71	100	5E	2	3	4.0	R	R
U11632	3	0	89	100	3M	0	2	3.0	R	R
U20325	4	60	90	100	1	3	2	3.5	R	R
U20439	4	0	71	100	3M	2	0	4.0	R	R
U36344	1	0	67	100	5S	0	1	3.5	S	S
U46734	4	100	81	100	3M	2	2	4.5	R	R

PRELIMINARY TEST II, 1978

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
No. of Tests	11	11	10	11	11	8			
	bu/a	No.	Date	Score	In.	Score	g/100	%	%
Beeson	43.2	21	+3.3	2.4	39	2.3	19.5	42.2	20.6
Coles (I)	44.2	13	-0.6	2.9	40	2.0	19.2	42.7	20.6
Corsoy (II)	45.1	7	9-20*	2.6	38	2.1	16.3	41.4	21.2
Woodworth (III)	44.9	9	+8.2	2.5	40	1.8	15.8	41.2	21.1
A77-116012	43.4	19	-0.3	2.7	38	2.2	19.3	41.1	21.7
A77-211021	47.0	3	+1.1	2.7	39	2.6	19.6	42.0	20.4
A77-212006	47.2	2	+3.0	3.1	43	2.3	17.3	40.6	21.8
A77-212008	43.9	17	+4.2	3.0	42	2.2	15.9	41.0	22.0
A77-214005	44.0	15	+0.3	2.2	38	2.7	16.2	41.2	20.8
A77-214015	43.2	21	-1.7	2.7	36	2.1	15.5	43.7	20.1
A77-214019	43.3	20	+6.8	2.8	41	2.2	16.3	40.3	20.9
A77-214022	45.7	5	+6.1	3.1	45	2.3	14.6	40.6	20.8
A77-214035	45.8	4	+6.6	3.1	40	2.1	18.0	41.9	20.3
A77-215009	44.8	10	+4.9	3.0	43	2.2	17.3	41.8	20.7
A77-215030	41.8	29	+5.6	2.8	39	2.0	16.7	43.3	19.6
A77-216006	44.0	15	+4.4	2.1	35	2.3	18.8	43.8	21.2
A77-312017	41.0	33	+7.7	2.8	41	2.7	18.4	41.4	20.4
C1566	45.1	7	+6.4	2.9	37	2.2	18.4	41.9	20.8
C1568	42.5	26	+7.7	2.5	41	2.3	18.9	43.2	20.8
C1574	44.2	13	+5.5	2.1	39	2.2	17.5	42.5	20.7
C1576	41.7	30	+9.0	2.0	39	2.0	18.6	44.1	19.8
C1579	44.3	12	+3.8	2.1	36	2.3	18.3	42.4	20.8
H75-729	41.2	32	+9.4	1.9	32	1.9	16.2	43.4	20.2
H75-796	42.9	23	+10.7	1.7	32	1.9	18.5	44.3	20.0
H7703	45.3	6	+2.6	3.0	39	2.7	18.2	41.0	20.5
L73-4673	47.7	1	+4.0	2.6	38	1.8	17.5	42.9	20.2
L76-129	41.3	31	+2.6	2.4	39	2.3	16.6	40.8	20.2
L76-141	40.3	36	-1.6	2.1	37	2.5	18.1	39.2	22.2
M70-203	40.7	34	-2.5	2.1	35	2.1	16.0	40.4	21.4
M70-341	40.4	35	+0.4	2.5	38	2.3	17.0	42.8	20.5
U11239	42.4	27	+1.1	2.2	37	2.5	19.5	44.2	21.0
U11632	43.5	18	+4.2	2.0	38	2.5	17.8	41.0	21.1
U20325	44.4	11	+4.3	2.0	39	2.3	18.8	41.8	20.4
U20439	42.2	28	+4.3	1.9	39	1.9	17.5	41.6	21.2
U36344	42.8	24	+3.0	1.9	39	2.7	17.1	42.2	20.9
U46734	42.7	25	+7.9	2.0	39	2.1	16.3	42.9	21.6

* 119 Days after planting.

PRELIMINARY TEST II, 1978

Strain	Mean 11 Tests	MN Lamber-ton	NJ Adel-phia	Mich. Dundee	Mich. E. Lan-sing
		YIELD (bu/a)			
Beeson	43.2	42.0	27.7	25.8	36.2
Coles (I)	44.2	47.8	34.2	27.0	38.8
Corsoy (II)	45.1	51.4	30.8	27.9	36.2
Woodworth (III)	44.9	47.6	28.8	26.8	51.4
A77-116012	43.4	46.6	34.2	32.1	37.8
A77-211021	47.0	48.0	30.1	29.9	42.6
A77-212006	47.2	51.0	35.8	26.6	40.7
A77-212008	43.9	48.8	28.3	23.5	42.2
A77-214005	44.0	44.4	34.2	31.2	41.7
A77-214015	43.2	45.5	25.2	36.5	36.7
A77-214019	43.3	46.0	33.8	27.8	46.2
A77-214022	45.7	48.0	38.3	32.4	34.8
A77-214035	45.8	49.8	39.0	28.0	43.4
A77-215009	44.8	45.4	35.8	25.9	41.2
A77-215030	41.8	44.5	25.0	28.6	42.9
A77-216006	44.0	48.0	33.3	21.8	39.5
A77-312017	41.0	43.9	28.2	20.6	41.5
C1566	45.1	42.9	34.7	31.6	44.5
C1568	42.5	45.5	32.5	32.8	40.0
C1574	44.2	47.5	30.3	27.5	47.0
C1576	41.7	42.0	31.0	25.3	44.7
C1579	44.3	49.7	28.4	23.5	39.5
H75-729	41.2	41.8	27.1	24.0	46.4
H75-796	42.9	36.0	28.1	26.7	48.0
H7703	45.3	42.2	27.7	31.5	42.0
L73-4673	47.7	53.4	36.1	30.6	38.6
L76-129	41.3	41.0	36.4	16.4	38.3
L76-141	40.3	43.9	29.6	22.9	30.6
M70-203	40.7	50.6	31.1	22.9	36.9
M70-341	40.4	46.3	29.6	21.7	30.1
U11239	42.4	50.3	26.1	20.5	32.2
U11632	43.5	50.4	24.5	27.5	43.1
U20325	44.4	44.0	27.4	30.0	38.1
U20439	42.2	47.4	28.3	23.6	38.9
U36344	42.8	42.0	31.9	25.3	43.6
U46734	42.7	44.4	27.1	20.4	41.3
C.V. (%)		7.4	16.0	17.0	12.4
L.S.D. (5%)		7.0	10.05	7.5	8.3
Row sp (in.)		30"	30"		
Rows/plot		2	3		
Reps		2	2		

PRELIMINARY TEST II, 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			YIELD (bu/a)			
46.5	45.7	30.5	53.9	53.9	62.2	50.9
45.2	42.8	26.8	52.5	55.9	65.7	50.0
39.9	51.2	35.6	56.6	51.7	62.2	52.2
44.1	53.0	30.2	52.1	51.6	62.6	45.7
41.3	47.2	23.0	51.5	49.4	62.2	52.6
47.4	51.1	30.3	61.1	59.7	59.8	56.9
46.4	54.2	27.2	56.8	55.8	70.0	54.4
43.5	44.9	28.5	51.4	55.9	65.7	50.5
43.3	48.6	30.2	52.6	52.0	51.6	53.9
46.9	42.3	30.7	48.5	50.3	58.2	54.1
47.2	53.6	26.5	51.8	50.3	49.4	44.2
43.8	52.1	33.6	56.5	54.2	64.2	45.1
45.0	37.0	25.5	59.7	57.1	65.4	54.0
47.5	47.7	28.5	56.7	50.3	61.1	53.0
43.7	46.5	30.7	46.2	49.6	58.9	43.5
47.0	46.2	30.7	54.8	55.1	56.2	51.3
47.1	41.9	20.8	52.3	52.1	53.1	49.8
47.4	39.4	26.2	56.7	59.6	65.2	47.8
47.3	49.2	24.3	48.9	46.3	50.5	50.3
48.8	50.2	30.7	49.6	51.9	54.9	48.0
43.2	49.8	22.1	47.4	51.1	56.3	46.0
46.3	51.5	26.4	54.3	51.5	58.9	56.8
46.2	48.0	18.6	48.3	49.5	52.8	50.1
45.5	50.6	21.8	47.3	56.1	59.7	52.5
49.7	46.7	28.4	56.6	60.5	62.9	50.6
48.2	53.4	33.3	58.2	56.4	58.4	57.9
41.8	46.2	29.4	49.5	46.5	60.5	48.6
38.2	47.9	30.2	49.1	48.7	52.7	49.7
38.8	44.7	31.7	47.3	48.6	52.1	43.4
42.6	46.0	25.8	50.4	46.7	51.4	53.8
48.6	44.8	26.0	49.4	52.1	63.4	52.5
49.0	49.6	32.9	52.1	48.3	54.6	46.6
49.6	51.1	28.3	51.0	54.6	61.7	52.4
49.7	49.0	29.0	48.8	49.5	52.6	47.5
48.5	47.1	30.9	51.7	52.6	54.1	43.3
45.9	50.7	30.5	55.7	49.0	55.0	49.4
60.0	8.2	16.0	6.0	6.8	7.2	7.6
5.5	7.9	9.0	6.4	7.2	8.6	6.3
30"	30"	30"	30"	27"	13.5"	30"
4	4	4	4	4	5	4
2	2	2	2	2	2	2

PRELIMINARY TEST II, 1978

Strain	Mean 11 Tests	MN Lamber-ton	NJ Adel-phia	Mich. Dundee	Mich. E. Lan-sing
		YIELD RANK			
Beeson	21	31	28	22	31
Coles (I)	13	13	8	17	24
Corsoy (II)	7	2	17	13	31
Woodworth (III)	9	14	22	18	1
A77-116012	19	17	8	4	28
A77-211021	3	10	19	10	12
A77-212006	2	3	5	20	19
A77-212008	17	9	24	27	13
A77-214005	15	24	8	7	15
A77-214015	21	20	34	1	30
A77-214019	20	19	11	14	5
A77-214022	5	10	2	3	33
A77-214035	4	7	1	12	9
A77-215009	10	22	5	21	18
A77-215030	29	23	35	11	11
A77-216006	15	10	12	31	21
A77-312017	33	27	26	33	16
C1566	7	29	7	5	7
C1568	26	20	13	2	20
C1574	13	15	18	15	3
C1576	30	31	16	23	6
C1579	12	8	23	27	21
H75-729	32	34	31	25	4
H75-796	23	36	27	19	2
H7703	6	30	28	6	14
L73-4673	1	1	4	8	25
L76-129	31	35	3	36	26
L76-141	36	27	20	29	35
M70-203	34	4	15	29	29
M70-341	35	18	20	32	36
U11239	27	6	33	34	34
U11632	18	5	36	15	10
U20325	11	26	30	9	27
U20439	28	16	24	26	23
U36344	24	31	14	23	8
U46734	25	24	31	35	17

PRELIMINARY TEST II. 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			YIELD RANK			
17	28	11	13	13	10	16
23	32	24	15	7	2	21
34	7	1	7	19	10	14
25	4	14	17	20	9	31
33	21	32	21	29	10	10
10	8	13	1	2	16	2
18	1	23	4	9	1	4
28	29	19	22	7	2	18
29	17	14	14	17	33	7
16	33	7	31	23	21	5
13	2	25	19	23	36	33
26	5	2	9	12	6	32
24	36	30	2	4	4	6
9	20	19	5	23	14	9
27	24	7	36	26	18	34
15	25	7	11	10	23	15
14	34	35	16	15	28	22
10	35	27	5	3	5	27
12	15	31	29	36	35	19
5	12	7	25	18	25	26
30	13	33	33	22	22	30
19	6	26	12	21	18	3
20	18	36	32	27	29	20
22	11	34	34	6	17	11
1	23	21	7	1	8	17
8	3	3	3	5	20	1
32	25	17	26	35	15	25
36	19	14	28	31	30	23
35	31	5	34	32	32	35
31	27	29	24	34	34	8
6	30	28	27	15	7	12
4	14	4	17	33	26	29
3	8	22	23	11	13	13
1	16	18	30	27	31	28
7	22	6	20	14	27	36
21	10	11	10	30	24	24

PRELIMINARY TEST II. 1978

Strain	Mean	MN Lamber-ton	NJ Adel-phia	Mich. Dundee	Mich. E. Lan-sing
	10 Tests		MATURITY (relative data)		
Beeson	+3.3	+3	+3	+8	+1
Coles * (I)	-0.6	+1	-3	+3	-10
Corsoy (II)	9-20	9-19	9-22	9-19	10-8
Woodworth (III)	+8.2	+8	+10	+8	+2
A77-116012	-0.3	+1	+2	0	-3
A77-211021	+1.1	+1	-1	+2	+1
A77-212006	+3.0	+3	+1	+6	-2
A77-212008	+4.2	+5	+4	+3	-2
A77-214005	+0.3	+1	+1	+3	-11
A77-214015	-1.7	0	-3	+1	-10
A77-214019	+6.8	+9	+6	+4	-2
A77-214022	+6.1	+9	+10	+2	+1
A77-214035	+6.6	+7	+10	+2	-3
A77-215009	+4.9	+4	+8	+9	+3
A77-215030	+5.6	+4	+5	+5	+2
A77-216006	+4.4	+3	+4	+6	+1
A77-312017	+7.7	+5	+6	+13	+2
C1566	+6.4	+7	+5	+10	0
C1568	+7.7	+5	+5	+12	+4
C1574	+5.5	+6	+6	+7	+1
C1576	+9.0	+7	+11	+8	+2
C1579	+3.8	+3	+8	+7	-3
H75-729	+9.4	+11	+6	+18	-2
H75-796	+10.7	+11	+7	+18	+9
H7703	+2.6	+5	-1	+5	+1
L73-4673	+4.0	+5	+5	+5	+2
L76-129	+2.6	+2	+3	+3	0
L76-141	-1.6	-1	-5	0	-1
M70-203	-2.5	-1	-6	-1	-9
M70-341	+0.4	+3	+8	+1	-7
U11239	+1.1	+5	+3	+3	-6
U11632	+4.2	+9	+2	+6	0
U20325	+4.3	+3	+1	+10	+3
U20439	+4.3	+3	+3	+7	+4
U36344	+3.0	+3	+2	+6	+1
U46734	+7.9	+9	+6	+10	+1
Date planted	5-23	5-11	6-6	-	-
*Days to mat.	119	131	108	-	-

PRELIMINARY TEST II, 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-Ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			MATURITY (relative data)			
+3	+2	+4	+2		+6	+1
-1	0	+3	0		+2	-1
9-12	9-15	9-21	9-15		9-15	9-24
+7	+5	+16	+9		+12	+5
-1	0	+2	-2		-1	-1
0	0	+4	0		+4	0
+3	+1	+6	+4		+6	+2
+4	+3	+6	+6		+12	+1
0	0	+9	-2		+3	-1
-1	0	+3	-3		+2	-6
+2	+5	+24	+6		+10	+4
+4	+5	+12	+8		+8	+2
+4	+7	+14	+8		+12	+5
+3	+3	+8	+6		+5	0
+3	+3	+14	+6		+12	+2
+4	+3	+12	+3		+5	+3
+5	+6	+15	+8		+12	+5
+5	+3	+18	+3		+11	+2
+6	+5	+21	+5		+10	+4
+4	+4	+11	+6		+8	+2
+5	+5	+28	+8		+12	+4
+1	+1	+14	+2		+3	+2
+12	+5	+26	+6		+10	+2
+11	+5	+29	+6		+8	+3
+1	+1	+3	+3		+5	+3
0	+3	+7	+4		+6	+3
0	+1	+7	+5		+5	0
-2	0	0	-3		-3	-1
+1	-2	0	-5		-6	-6
-1	0	+2	-2		+1	-1
-1	+2	+2	+2		+2	-1
+4	+3	+10	+1		+4	+3
+4	+3	+6	+4		+8	+1
+4	+3	+11	+2		+5	+1
+2	+3	+5	+2		+4	+2
+4	+5	+24	+6		+12	+2
5-10	5-27	5-23	5-27		5-25	5-24
125	123	121	111		113	123

PRELIMINARY TEST II, 1978

Strain	Mean	MN Lamber-ton	NJ Adel-phia	Mich. Dundee	Mich. E. Lan-sing
	11 Tests		LODGING (score)		
Beeson	2.4	3.0	3.5	1.5	2.1
Coles (I)	2.9	4.0	3.5	1.6	2.4
Corsoy (II)	2.6	3.5	3.8	1.1	2.1
Woodworth (III)	2.5	3.0	3.3	2.0	3.0
A77-116012	2.7	4.0	3.8	1.5	2.7
A77-211021	2.7	3.5	3.8	1.0	2.1
A77-212006	3.1	3.5	4.3	1.8	3.0
A77-212008	3.0	3.5	4.3	1.1	2.5
A77-214005	2.2	2.5	3.3	1.3	2.1
A77-214015	2.7	4.0	4.0	1.3	1.4
A77-214019	2.8	3.5	3.5	1.6	2.4
A77-214022	3.1	4.0	4.0	1.7	3.3
A77-214035	3.1	3.5	4.5	1.7	2.4
A77-215009	3.0	4.0	4.5	1.7	3.4
A77-215030	2.8	3.0	3.5	1.8	2.2
A77-216006	2.1	2.5	2.8	1.5	2.0
A77-312017	2.8	3.5	3.8	1.6	2.3
C1566	2.9	4.0	3.5	1.5	3.5
C1568	2.5	2.5	3.5	1.7	2.1
C1574	2.1	2.5	2.8	1.8	2.5
C1576	2.0	2.0	2.3	1.7	2.1
C1579	2.1	3.0	1.8	1.7	1.8
H75-729	1.9	2.5	2.3	1.8	3.0
H75-796	1.7	2.0	2.0	1.8	-
H7703	3.0	4.0	4.5	1.4	3.2
L73-4673	2.6	4.0	4.0	1.6	2.3
L76-129	2.4	3.5	3.3	1.4	2.4
L76-141	2.1	3.0	2.8	1.0	2.7
M70-203	2.1	2.5	2.5	1.1	1.4
M70-341	2.5	3.5	3.0	1.0	1.5
U11239	2.2	3.0	3.3	1.6	1.9
U11632	2.0	3.5	2.5	1.4	1.5
U20325	2.0	3.0	2.5	1.4	1.5
U20439	1.9	2.5	2.3	1.1	2.0
U36344	1.9	2.5	2.3	1.5	1.5
U46734	2.0	3.0	2.8	1.0	1.4

PRELIMINARY TEST II, 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			LODGING (score)			
1.4	2.5	3.0	2.6	3.0	2.2	1.5
1.7	3.8	3.0	3.4	3.6	3.1	2.3
1.7	3.3	2.5	2.8	3.3	2.4	2.0
1.4	3.3	2.0	2.7	2.8	2.9	1.5
1.4	3.0	2.5	2.9	3.4	3.4	1.3
1.5	3.3	2.5	3.5	3.5	3.6	1.8
1.8	3.8	3.5	2.5	4.0	3.4	2.3
2.2	4.0	3.0	2.9	3.4	3.7	2.3
1.2	2.0	2.5	3.2	2.6	2.8	1.0
1.3	3.8	2.0	3.4	3.8	3.8	1.3
1.7	3.5	3.5	3.0	3.4	3.2	1.5
2.0	3.3	3.5	3.2	3.5	3.0	2.5
2.1	3.8	4.0	2.9	3.8	3.4	2.5
2.2	3.3	3.0	2.4	3.4	3.0	2.0
1.6	3.8	3.5	2.7	3.0	3.6	1.8
1.4	2.5	2.0	2.3	2.9	2.2	1.0
1.5	3.3	3.5	3.3	2.6	3.4	2.3
1.4	3.8	3.0	3.4	3.2	3.6	1.5
1.5	2.8	4.0	2.6	2.6	3.0	1.5
1.5	2.8	2.0	2.4	1.8	2.2	1.3
1.5	2.5	2.0	2.1	2.0	2.0	1.5
1.4	2.3	2.5	2.3	2.3	2.6	1.3
1.5	2.3	2.0	2.0	1.4	1.6	1.0
1.4	1.5	2.0	2.0	1.3	1.6	1.0
1.9	3.8	3.0	2.9	3.1	3.0	2.5
2.1	3.3	2.0	2.5	2.8	2.6	1.8
1.7	2.3	3.0	2.3	2.8	2.2	1.5
1.4	2.5	2.0	2.2	2.4	2.0	1.0
1.5	1.8	2.0	3.5	3.4	2.0	1.0
2.6	3.0	2.5	2.7	3.0	3.1	1.3
1.6	2.8	2.5	2.2	2.1	2.0	1.3
1.4	2.5	2.0	2.4	2.0	2.0	1.3
1.6	2.3	2.0	2.1	2.7	2.0	1.5
1.5	1.8	1.5	2.4	2.2	1.9	1.5
1.3	1.8	2.0	2.6	2.1	2.0	1.0
1.2	2.3	3.0	2.6	2.0	2.2	1.0

PRELIMINARY TEST II. 1978

Strain	Mean	MN Lamber-ton	NJ Adel-phia	Mich. Dundee	Mich. E. Lan-sing
	11 Tests		PLANT HEIGHT (inches)		
Beeson	39	42	36	33	35
Coles (I)	40	43	34	33	33
Corsoy (II)	38	42	38	31	35
Woodworth (III)	40	44	34	35	39
A77-116012	38	39	35	34	34
A77-211021	39	40	33	33	36
A77-212006	43	42	44	33	36
A77-212008	42	42	38	33	35
A77-214005	38	42	34	33	36
A77-214015	36	38	32	30	30
A77-214019	41	42	37	34	38
A77-214022	45	44	44	41	42
A77-214035	40	40	41	35	35
A77-215009	43	38	49	34	44
A77-215030	39	42	36	30	35
A77-216006	35	36	34	24	31
A77-312017	41	41	36	32	37
C1566	37	40	32	33	36
C1568	41	41	36	34	38
C1574	39	39	36	31	38
C1576	39	40	34	32	38
C1579	36	40	31	27	30
H75-729	32	35	30	31	36
H75-796	32	36	26	33	-
H7703	39	36	30	32	43
L73-4673	38	42	32	32	36
L76-129	39	42	36	31	36
L76-141	37	38	36	32	36
M70-203	35	38	28	28	33
M70-341	38	42	32	30	32
U11239	37	40	32	28	31
U11632	38	40	32	32	35
U20325	39	44	34	31	30
U20439	39	44	34	28	34
U36344	39	42	37	29	32
U46734	39	42	36	26	37

PRELIMINARY TEST II, 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			PLANT HEIGHT (inches)			
34	36	40	46	50	44	38
36	36	40	49	50	47	42
30	34	38	46	47	44	38
30	40	39	44	51	46	39
30	36	38	45	44	46	38
33	34	42	45	49	46	40
36	38	44	49	53	54	42
36	42	42	47	51	53	43
30	36	41	45	44	46	34
32	33	36	41	48	43	33
34	42	42	47	49	46	39
37	43	47	50	52	48	44
32	40	38	44	47	44	39
37	38	40	53	50	46	42
34	36	38	44	49	46	37
28	32	34	42	44	43	34
34	40	40	51	52	48	42
35	34	41	40	42	42	36
36	36	41	49	53	48	41
34	36	38	47	50	44	37
35	38	40	42	52	44	37
31	34	35	41	46	42	36
31	27	36	30	36	34	29
30	27	40	30	38	35	30
36	34	39	45	48	46	40
35	35	38	44	46	44	36
32	32	42	46	47	42	39
33	28	38	44	46	42	38
32	30	37	38	46	42	33
36	35	38	42	50	44	38
33	34	37	42	50	44	34
36	34	40	43	50	45	36
32	38	40	46	47	46	38
37	33	40	44	50	48	39
36	36	40	44	48	44	36
37	32	42	47	50	46	38

PRELIMINARY TEST II. 1978

Strain	Mean	MN Lamberton	NJ Adelphia	Mich. Dundee	Mich. E. Lansing
	8 Tests		SEED QUALITY (score)		
Beeson	2.3	2.5	1.5		
Coles (I)	2.0	2.0	1.5		
Corsoy (II)	2.1	3.0	1.5		
Woodworth (III)	1.8	2.0	1.0		
A77-116012	2.2	2.5	2.0		
A77-211021	2.6	3.0	3.0		
A77-212006	2.3	2.5	2.0		
A77-212008	2.2	3.0	1.0		
A77-214005	2.7	3.0	2.5		
A77-214015	2.1	2.0	1.5		
A77-214019	2.2	3.0	1.5		
A77-214022	2.3	3.0	2.0		
A77-214035	2.1	3.0	1.5		
A77-215009	2.2	3.0	1.5		
A77-215030	2.0	2.0	1.0		
A77-216006	2.3	3.0	1.5		
A77-212017	2.7	3.0	2.0		
C1566	2.2	3.0	1.0		
C1568	2.3	3.0	1.5		
C1574	2.2	2.0	2.0		
C1576	2.0	2.0	1.5		
C1579	2.3	3.0	2.0		
H75-729	1.9	2.0	1.0		
H75-796	1.9	2.0	1.0		
H7703	2.7	3.0	2.0		
L73-4673	1.8	2.0	1.5		
L76-129	2.3	3.0	1.0		
L76-141	2.5	3.0	1.5		
M70-203	2.1	3.0	1.5		
M70-341	2.3	3.0	2.0		
U11239	2.5	3.0	1.5		
U11632	2.5	3.0	2.0		
U20325	2.3	2.5	2.0		
U20439	1.9	2.5	1.5		
U36344	2.7	2.5	2.0		
U46734	2.1	3.0	2.0		

PRELIMINARY TEST II, 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			SEED QUALITY (score)			
3.0	1.5	2.0	3.0		1.3	3.8
2.0	1.5	3.5	2.5		1.3	2.0
2.0	1.5	3.0	1.8		1.3	2.8
1.0	1.0	3.0	1.8		1.4	3.0
2.0	2.0	2.5	2.3		1.5	2.5
3.0	2.0	1.5	3.0		1.7	3.3
2.0	2.0	3.0	2.8		1.5	2.8
2.0	1.5	3.5	2.3		1.3	2.8
3.0	2.5	3.5	2.5		1.7	3.0
2.0	1.5	3.0	2.8		1.3	2.8
2.0	1.5	3.0	1.8		1.3	3.5
2.0	1.0	3.0	1.8		1.9	3.5
2.0	1.5	3.0	1.5		1.5	3.0
3.0	1.5	2.5	1.5		1.3	3.0
2.0	1.0	3.0	2.5		1.3	3.0
3.0	2.0	2.0	1.8		1.8	3.3
2.0	1.5	5.0	2.8		1.5	3.5
2.0	1.5	4.0	2.5		1.4	2.3
3.0	1.0	3.5	1.8		2.1	2.8
2.0	1.0	3.5	1.8		1.8	3.3
2.0	1.5	3.0	1.5		1.5	3.3
3.0	1.5	3.0	2.0		1.3	2.8
2.0	1.0	4.5	1.3		1.3	2.0
2.0	1.0	4.5	1.3		1.3	2.3
3.0	3.0	2.5	2.8		2.0	3.5
2.0	1.0	2.0	1.5		2.0	2.8
4.0	2.0	2.0	2.8		1.5	2.3
3.0	3.0	2.0	3.3		1.9	2.5
3.0	1.5	2.0	2.3		1.5	2.0
3.0	2.0	1.5	2.3		2.1	2.8
3.0	2.0	2.5	2.5		2.2	3.0
3.0	2.0	2.5	2.0		2.0	3.5
2.0	1.5	3.0	2.5		2.4	2.5
2.0	1.5	1.5	2.5		1.4	2.5
3.0	2.0	3.0	3.0		2.0	4.0
2.0	2.0	2.0	1.5		1.4	2.8

PRELIMINARY TEST II, 1978

Strain	Mean	MN Lamber-ton	NJ Adel-phia	Mich. Dundee	Mich. E. Lan-sing
	10 Tests		SEED SIZE (g/100)		
Beeson	19.5	17.6	17	19.5	23.9
Coles (I)	19.5	18.5	15	21.5	25.0
Corsoy (II)	16.3	16.1	13	16.0	19.5
Woodworth (III)	15.8	15.4	13	15.0	18.5
A77-116012	19.3	17.3	17	21.0	24.3
A77-211031	19.6	18.4	16	19.5	25.0
A77-212006	17.3	16.2	14	18.1	21.0
A77-212008	15.9	15.3	12	16.0	20.5
A77-214005	16.2	16.5	14	16.9	19.2
A77-214015	15.5	16.4	11	15.0	18.2
A77-214019	16.3	16.6	14	16.0	18.5
A77-214022	14.6	14.1	12	15.5	17.1
A77-214035	18.0	18.4	16	17.0	20.0
A77-215009	17.3	16.6	14	18.0	20.0
A77-215030	16.7	17.1	15	11.8	20.0
A77-216006	18.8	17.7	16	20.0	21.8
A77-312017	18.4	17.5	13	18.0	22.5
C1566	18.4	18.5	16	16.5	21.0
C1568	18.9	17.2	16	19.5	24.0
C1574	17.5	17.1	15	17.5	21.0
C1576	18.6	17.8	17	18.0	20.0
C1579	18.3	17.3	15	18.0	21.9
H75-729	16.2	14.7	13	16.0	18.0
H75-796	18.5	17.3	16	19.0	20.0
H7703	18.2	16.8	15	17.0	24.0
L73-4673	17.5	16.7	15	17.0	20.5
L76-129	16.6	15.7	14	16.0	19.5
L76-141	18.1	16.0	16	17.7	22.0
M70-203	16.0	15.7	13	16.1	19.0
M70-341	17.0	15.7	14	17.3	21.9
U11239	19.5	18.7	18	19.0	24.0
U11632	17.8	17.6	15	17.9	22.0
U20325	18.8	17.1	15	20.1	21.8
U20439	17.5	17.8	14	18.0	22.8
U36344	17.1	16.3	16	17.2	21.1
U46734	16.3	16.1	14	16.1	19.0

PRELIMINARY TEST II, 1978

Ohio	Ind.	Wisc.	Ill.	Iowa		Neb.
Hoyt-ville	Lafay-ette	Arling-ton	Urbana	Key-stone	Ames	Mead
			SEED SIZE (g/100)			
18.7	21.3	17.0	20.6		20.2	19.6
19.8	18.2	17.5	19.7		18.8	17.8
17.3	17.1	14.7	17.0		16.0	15.9
14.9	16.5	14.3	18.1		17.6	15.0
18.7	18.8	16.9	20.0		18.8	20.3
19.2	19.8	17.5	21.1		20.4	19.3
17.4	18.7	16.0	17.8		16.6	17.4
16.0	16.8	14.1	16.3		16.8	15.3
16.8	16.1	14.9	15.6		16.2	15.6
15.3	18.0	13.0	15.4		16.0	16.6
15.1	17.3	15.0	18.1		17.4	15.1
14.3	14.6	15.2	15.3		15.0	13.2
16.7	19.0	16.8	19.7		19.2	16.8
18.0	18.9	14.7	18.1		17.5	17.4
16.5	15.7	16.5	18.2		19.7	16.1
18.3	18.7	16.6	18.7		19.2	20.6
18.5	18.6	17.9	19.8		20.4	17.9
18.3	19.6	16.5	20.2		20.8	16.9
17.8	19.0	17.5	20.2		20.2	18.0
16.6	18.9	16.1	19.2		17.7	16.3
18.3	20.4	17.0	20.8		20.5	16.3
18.3	18.7	18.0	18.6		18.4	18.5
16.4	17.7	15.0	18.4		16.8	15.8
17.6	19.8	17.1	21.1		19.0	18.3
17.6	19.9	15.5	18.9		19.3	17.9
18.3	17.8	15.7	18.3		17.6	18.1
16.3	16.3	15.4	17.5		17.8	17.4
16.8	19.3	17.4	19.0		16.4	20.1
16.4	16.8	16.4	15.6		15.0	16.2
17.3	17.0	15.5	17.3		17.4	16.7
18.8	19.1	18.0	18.7		21.5	19.5
17.8	18.0	16.5	17.8		18.6	16.5
18.9	20.2	16.1	20.1		19.7	18.6
18.1	18.1	15.0	16.7		17.8	17.0
16.6	17.9	16.3	17.5		16.4	15.7
15.7	18.4	15.3	16.4		17.6	14.8

PRELIMINARY TEST II, 1978

Strain	Mean 4 Tests	Ohio Hoyt-ville	Ind. Lafay-ette	Ill. Urbana	Iowa Ames
		PROTEIN (%)			
Beeson	42.2	40.5	43.1	43.6	41.6
Coles (I)	42.7	42.5	42.7	43.6	42.2
Corsoy (II)	41.4	41.4	41.6	42.3	40.1
Woodworth (III)	41.2	40.6	40.7	42.9	40.4
A77-116012	41.1	41.0	40.7	43.2	39.6
A77-211021	42.0	41.8	41.6	42.4	42.4
A77-212006	40.6	39.8	41.1	41.1	40.5
A77-212008	41.0	40.5	41.5	41.7	40.5
A77-214005	41.2	40.3	40.1	42.5	41.7
A77-214015	43.7	42.0	43.1	45.5	44.3
A77-214019	40.3	39.3	40.5	40.9	40.5
A77-214022	40.6	38.9	41.6	41.1	40.9
A77-214035	41.9	40.7	41.7	43.5	41.8
A77-215009	41.8	42.2	41.7	42.2	41.0
A77-215030	43.3	42.9	43.1	44.1	43.1
A77-216006	43.8	43.7	42.8	44.6	44.1
A77-312017	41.4	40.6	40.6	42.8	41.7
C1566	41.9	41.8	41.6	42.1	42.0
C1568	43.2	42.2	43.2	44.0	43.4
C1574	42.5	41.6	42.6	43.3	42.6
C1576	44.1	43.8	44.0	44.7	43.9
C1579	42.4	41.3	41.6	43.7	42.9
H75-729	43.4	43.4	42.9	44.1	43.1
H75-796	44.3	43.7	44.3	45.8	43.4
H7703	41.0	39.2	41.5	42.2	41.3
L73-4673	42.9	41.5	43.1	43.3	43.6
L76-129	40.8	38.5	40.4	43.3	40.9
L76-141	39.2	37.6	39.1	41.2	38.7
M70-203	40.4	40.9	39.4	41.6	39.7
M70-341	42.8	42.9	42.9	42.6	42.9
U11239	44.2	43.6	44.3	44.4	44.5
U11632	41.0	40.5	40.8	42.2	40.6
U20325	41.8	42.5	40.9	42.6	41.0
U20439	41.6	40.6	41.9	42.2	41.5
U36344	42.2	42.4	41.8	42.7	42.0
U46734	42.9	42.5	42.7	43.5	43.0

PRELIMINARY TEST II, 1978

Strain	Mean 4 Tests	Ohio Hoyt-ville	Ind. Lafay-ette	Ill. Urbana	Iowa Ames
		OIL (%)			
Beeson	20.6	22.0	20.3	19.8	20.5
Coles (I)	20.6	20.3	20.5	20.2	21.2
Corsoy (II)	21.2	21.2	21.4	20.4	21.9
Woodworth (III)	21.1	21.2	21.5	19.8	21.8
A77-116012	21.7	21.8	22.3	20.7	22.1
A77-211021	20.4	20.6	20.3	20.2	20.6
A77-212006	21.8	23.0	22.2	20.5	21.3
A77-212008	22.0	22.2	21.7	21.6	22.3
A77-214005	20.8	21.3	21.6	19.7	20.6
A77-214015	20.1	20.9	20.9	19.0	19.5
A77-214019	20.9	21.5	21.0	20.0	21.1
A77-214022	20.8	21.4	20.4	20.1	21.3
A77-214035	20.3	21.1	20.4	19.3	20.5
A77-215009	20.7	20.1	20.5	20.6	21.7
A77-215030	19.6	19.9	19.5	19.5	19.6
A77-216006	21.2	21.5	21.9	20.4	21.0
A77-312017	20.4	21.1	20.7	19.5	20.3
C1566	20.8	20.4	20.8	21.0	21.0
C1568	20.8	21.3	21.2	20.2	20.4
C1574	20.7	20.5	20.6	20.4	21.3
C1576	19.8	19.8	20.0	19.1	20.1
C1579	20.8	21.1	22.1	19.6	20.3
H75-729	20.2	20.2	20.7	19.5	20.6
H75-796	20.0	19.5	19.8	19.5	21.0
H7703	20.5	21.6	20.5	19.9	19.9
L73-4673	20.2	20.6	20.2	20.1	19.9
L76-129	20.2	20.9	21.0	18.8	20.3
L76-141	22.2	23.3	22.3	20.9	22.3
M70-203	21.4	21.6	22.1	20.0	21.7
M70-341	20.5	19.5	20.7	20.9	20.9
U11239	21.0	21.8	21.1	20.1	21.0
U11632	21.1	20.7	21.1	20.8	21.9
U20325	20.4	19.5	21.0	20.0	21.0
U20439	21.2	21.8	21.2	20.7	20.9
U36344	20.9	21.1	20.9	20.6	21.0
U46734	21.6	21.5	21.4	21.2	22.1

UNIFORM TEST III, 1978

Strain	Parentage	Previous Testing*	Generation Composited
1. Beeson (II)	C1253 x Kent	1	F_7
2. Cumberland [1]	Corsoy x Williams	2	F_4
3. Elf	Williams x Ransom	2	F_4
4. Oakland [2]	L66L-137 x Calland	2	F_4
5. Union (IV)	Williams^5 x SL11 (Wayne Rpm Rps)	0	F_3
6. Williams	Wayne x L57-0034 (Clark x Adams)	9	F_6
7. Woodworth (III)	Wayne x L57-0034 (Clark x Adams)	8	F_6
8. A74-302012	L66L-137 x Calland	2	F_4
9. A75-302005	L15 x AP68-1016	1	F_4
10. A75-305022	Wye x IVR Ex 4731	1	F_4
11. A76-303035	M60-92 x IVR Ex 4428	P III	F_4
12. A76-304002	AP6	P II	F_6
13. A76-304019	(Beeson x AP68-1016) x (L15 x Calland)	P III	F_4
14. A76-304020	(Beeson x AP68-1016) x (L15 x Calland)	P III	F_4
15. C1558	Williams x L69L-6-1	P III	F_8
16. C1559	Williams x L69L-6-1	P III	F_8
17. HW74-3384	Williams x Ransom	P III	F_4
18. HW74-3385	Williams x Ransom	P III	F_4
19. L22	Williams^6 x (Clark^6 x T117) Williams Dt_2	1	$4F_3$
20. L23	Williams^6 x Lee 68	1	$10F_3$
21. L69U37-17-5	Calland x Corsoy	3	F_5
22. L74L-71	Calland x Williams	P III	F_6
23. L75-6857	Williams^6 x L69-5343 (Clark Im)	P III	F_3
24. U10727	Wayne x C1317-71	P III	F_4

* Number of years in this test, or name of 1977 test.

[1] A74-303012 in 1977 UT III
[2] A74-303013 in 1977 UT III

UNIFORM TEST III, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Hypocotyl Score Ames	Shattering Manhatten 2 weeks
Beeson (II)	PGBr	SYIb	3	5	5
Cumberland	PGBr	SYIb	5	2	2
Elf	PTTn	SYB1	3	1	1
Oakland	PTBr	DYB1	5	1	2
Union (IV)	WTTn	SYB1	4	5	2
Williams	WTTn	SYB1	4	5	1
Woodworth (III)	WTTn	DYB1	4	5	2
A74-302012	PTTn	DYB1	5	3	2
A75-302005	WTBr	DYBr	4	5	1
A75-305022	WTBr	SYBr	2	5	3
A76-303035	PGBr	DYY	4	5	2
A76-304002	WTBr	DYBr	2	3	4
A76-304019	PTBr	DYB1	4	1	5
A76-304020	PTBr	DYB1	4	1	5
C1558	PTTn	DYB1	4	5	1
C1559	WTBr	DYBr	5	5	2
HW74-3384	WTTn	DYB1	3	1	1
HW74-3385	P+WTTn	DYB1	3	1	1
L22	WTTn	SYB1	4	5	1
L23	WTTn	DYB1	4	5	2
L69U37-17-5	PGBr	DYBf	4	2	5
L74L-71	PTBr	DYB1	3	4	2
L75-6857	WTTn	SYB1	3	5	2
U10727	WGTn	SYBf	5	1	4

UNIFORM TEST III, 1978

Disease Data

Strain	FE2 Laf. Ind. a	BP Girard Ill. n	BSR Laf. Ind. n	BSR Ames, Ia. Stem n	BSR Ames, Ia. Plants n	DM Belle-ville Ill. n	SMV Laf. Ind. a	PSB Laf. Ind. d	PS Laf. Ind. a	PR Vic-kery Ohio n	PR Laf. Ind. a	race 1 Ames Ia. a
	Score	Score	%	%	%	Score	Score	%	%	-----Reaction------		
Beeson (II)	1	3	100	73	100	2.3	3M	4	3	3.0	R	R
Cumberland	4	1	0	91	100	2.8	5E	9	8	3.0	S	S
Elf	1	1	20	100	100	3.5	5E	0	0	3.5	S	S
Oakland	5	3	100	89	100	2.3	5E	0	3	3.5	R	R
Union (IV)	4	1	40	91	100	1.0	5E	3	1	4.0	R	R
Williams	5	1	100	87	100	3.5	5E	3	2	2.5	S	S
Woodworth (III)	4	1	0	97	100	3.3	5E	5	2	3.5	S	S
A74-302012	3	2	40	91	100	3.0	5E	0	0	3.0	R	R
A75-302005	1	3	80	60	100	4.0	5E	3	2	3.0	R	R
A75-305022	1	1	60	96	100	1.5	1	1	1	3.0	S	S
A76-303035	4	1	60	92	100	2.8	5E	5	0	4.0	S	S
A76-304002	1	1	40	97	100	4.0	1	1	0	3.5	S	S
A76-304019	5	1	80	59	100	2.3	5E	1	2	2.5	R	H
A76-304020	5	1	80	48	100	1.8	5E	1	5	2.5	R	H
C1558	4	1	0	87	100	2.3	3M	1	0	4.5	H	S
C1559	4	4	60	98	100	2.0	5M	1	4	3.0	H	S
HW74-3384	3	1	100	96	100	2.0	1	0	2	4.5	H	S
HW74-3385	4	1	100	97	100	2.0	1	0	0	3.0	S	S
L22	5	1	100	100	100	4.0	5E	0	0	3.0	S	S
L23	5	1	100	91	100	3.5	4E	1	1	2.0	R	R
L69U37-17-5	5	3	100	89	100	2.3	5E	4	2	3.0	S	S
L74L-71	4	1	60	96	100	3.0	4E	4	0	2.5	S	S
L75-6857	3	1	40	91	100	3.3	2E	1	1	2.5	S	S
U10727	3	1	40	95	100	4.0	3M	2	2	3.0	R	R

UNIFORM TEST III, 1978

Regional Summary

Strain	Yield bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protien %	Seed Composition Oil %
No. of Tests	26	26	23	23	26	25	20	15	15
Beeson (II)	37.3	24	-6.2	2.2	35	2.8	17.6	42.2	20.5
Cumberland	42.1	12	+1.6	2.1	35	2.1	17.7	41.7	21.6
Elf	42.5	10	+5.0	1.4	22	1.8	15.7	42.9	20.1
Oakland	40.8	19	+0.6	1.8	37	2.1	17.3	41.2	20.9
Union (IV)	42.9	6	+6.3	2.4	42	1.8	18.2	42.6	20.5
Williams	42.3	11	+4.0	2.0	39	1.7	16.8	42.7	20.7
Woodworth (III)	41.3	16	9-21*	2.0	37	1.9	14.7	41.4	21.1
Pella A74-302012	42.6	8	-0.1	1.8	37	2.2	18.9	40.6	21.2
BSR 301 A75-302005	41.0	18	+2.7	2.1	39	2.2	16.6	41.9	20.4
A75-305022	43.2	4	+2.9	2.1	38	1.9	14.5	41.7	21.4
A76-303035	41.3	16	+0.9	3.3	34	2.0	14.5	41.4	20.8
A76-304002	40.7	20	-1.7	2.5	36	2.3	15.9	42.2	20.7
A76-304019	40.7	20	+3.1	3.0	41	2.2	16.5	42.5	19.8
A76-304020	39.9	22	+2.7	2.9	40	2.4	15.9	42.5	20.0
C1558	42.8	7	+4.2	2.4	38	2.3	16.7	41.7	20.6
C1559	42.0	13	+2.3	2.1	40	1.8	16.4	41.8	21.3
HW74-3384	43.3	3	+1.0	1.4	22	2.0	17.1	40.6	22.6
HW74-3385	45.0	1	+0.9	1.3	23	1.8	15.7	39.8	22.2
Will L22	41.7	14	-1.0	1.6	32	1.8	15.9	42.5	20.8
Williams 79 L23	42.6	8	+2.9	1.9	39	1.7	16.6	42.5	20.6
L69U37-17-5	43.9	2	+1.7	2.4	39	2.7	16.8	41.0	20.7
L74L-71	43.0	5	+0.4	1.7	40	2.1	17.9	41.9	21.2
L75-6857	41.6	15	+3.8	1.9	39	1.7	16.7	42.5	20.9
U10727	39.4	23	-1.4	1.7	34	2.2	15.6	41.6	20.5

*118 days after planting

Both the 4-year and 3-year means show that the experimental strains L69U37-17-5 and A74-302012 are not superior in performance to the check varieties Williams or Cumberland.

The 2-year summary has the mean yield of A75-305022 about 1 bushel higher than that of Cumberland. In other characteristics these two entries are very similar.

In the 1978 regional summary the two determinate strains HW74-3385 and HW74-3384 ranked 1 and 3 in yield, averaging 0.5 to 2.5 bushels above the Group III check varieties. The strains L69U-17-5 ranked second in yield, about 1 bushel above that of the highest yielding check variety. The semi-determinate strains L22 was similar in performance to the check varieties. L23, with resistance to races 1, 2,3,6,7,8, and 9 of phytophthora also had the best phytophthora tolerance score of any of the Group III strains. This strain was very similar in performance to Williams, its recurrent parent.

UNIFORM TEST III, 1978

Regional Summary

Strain	Yield bu/a	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protien %	Seed Composition Oil %
			1977-1978, 2-Year Mean						
No. of Tests	47	47	41	45	48	45	37	26	26
Beeson (II)	38.1	12	-6.4	2.2	35	2.8	18.3	41.1	21.0
Cumberland	44.8	2	+1.3	2.1	36	2.2	18.3	40.4	22.2
Elf	43.6	8	+4.2	1.4	22	1.8	16.2	41.6	20.3
Oakland	43.3	9	+0.7	1.8	37	2.2	18.1	40.1	21.1
Williams	44.3	6	+3.5	2.0	39	1.9	17.4	41.4	21.0
Woodworth (III)	43.0	10	9-22.3*	2.0	37	2.1	15.1	40.3	21.5
A74-302012	44.8	2	-0.6	1.9	37	2.3	19.7	39.3	21.7
A75-302005	42.8	11	+2.1	2.2	39	2.3	17.4	41.0	20.7
A75-305022	45.9	1	+2.0	2.1	38	2.0	14.8	40.3	21.8
L22	43.8	7	-1.3	1.6	32	1.8	16.4	41.2	21.1
L23	44.4	5	+2.3	2.0	39	1.9	17.3	41.2	21.0
L69U37-17-5	44.7	4	+1.5	2.4	39	2.9	17.4	39.9	21.0

*123 days after planting

			1976-1978, 3-Year Mean						
No. of Tests	68	68	61	67	71	67	51	40	40
Cumberland	44.5	1	+1.1	2.0	34	2.1	18.2	40.3	22.0
Elf	42.7	6	+4.3	1.6	22	1.9	16.1	41.5	20.2
Oakland	43.1	5	+1.1	1.8	35	2.1	17.9	40.1	21.0
Williams	43.6	4	+3.6	2.0	37	1.9	17.2	41.2	21.0
Woodworth (III)	42.6	7	9-21.4*	2.0	36	2.0	15.0	40.1	21.4
A74-302012	44.3	2	-0.5	1.8	36	2.2	19.5	39.3	21.7
L69U37-17-5	44.3	2	+1.6	2.4	38	2.8	17.1	39.9	20.8

*124 days after planting

			1975-1977, 4-Year Mean						
No. of Tests	96	96	85	94	99	93	75	54	54
Williams	45.4	1	+3.8	1.9	37	1.8	17.4	41.1	21.2
Woodworth (III)	43.9	3	0-21.7*	2.0	36	2.0	15.3	40.2	21.4
L69U37-17-5	45.4	1	+1.7	2.4	37	2.9	17.6	39.9	20.9

*124 days after planting

UNIFORM TEST III, 1978

Strain	Mean 26 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woos-ter	Ohio Hoyt-ville	Ohio S. Charles-ton	Ohio Wheeler-sburg
				YIELD (bu/a)					
Beeson (II)	37.3	32.1	30.6	43.1	47.4	31.9	47.3	64.4	40.2
Cumberland	42.1	29.5	33.4	45.6	48.4	27.8	46.6	61.9	56.0
Elf	42.5	38.2	36.1	49.1	46.9	31.5	45.1	63.1	57.0
Oakland	40.8	26.9	40.4	42.9	48.5	30.2	43.6	56.0	52.4
Union (IV)	42.9	35.4	42.4	46.6	57.5	32.0	44.0	60.1	55.3
Williams	42.3	28.9	43.9	44.8	50.1	28.9	43.7	61.8	49.3
Woodworth (III)	41.3	31.8	41.2	45.0	45.3	32.6	45.8	56.3	49.5
A74-302012	42.6	32.5	34.8	46.5	49.7	29.2	48.4	65.8	54.8
A75-302005	41.0	34.4	36.9	45.8	46.7	34.1	43.7	56.8	47.8
A75-305022	43.2	30.8	38.0	48.4	51.2	31.8	48.0	63.3	55.5
A76-303035	41.3	27.3	35.8	47.4	45.7	29.2	50.4	59.7	38.2
A76-304002	40.7	29.9	31.1	43.3	44.9	35.9	47.5	60.1	45.7
A76-304019	40.7	41.0	28.1	45.9	47.8	30.9	43.8	58.0	58.5
A76-304020	39.9	38.5	34.5	47.2	43.5	31.9	43.3	55.2	50.8
C1558	42.8	33.0	43.3	45.4	51.6	30.9	46.3	61.4	55.0
C1559	42.0	33.3	37.9	47.8	50.2	30.9	46.6	63.6	51.2
HW74-3384	43.3	39.4	39.6	51.5	50.1	30.1	46.0	68.2	54.2
HW74-3385	45.0	42.1	40.6	56.8	52.6	29.8	47.7	63.3	52.6
L22	41.7	30.9	39.2	44.5	43.5	31.0	45.2	59.9	52.8
L23	42.6	29.2	44.1	41.7	51.6	33.2	46.4	62.5	51.0
L69U37-17-5	43.9	34.4	34.4	49.2	48.5	34.6	45.5	63.9	54.0
L74L-71	43.0	33.4	34.1	48.9	43.6	32.5	48.0	65.2	57.2
L75-6857	41.6	36.4	36.2	45.7	43.3	30.8	46.5	57.1	44.8
U10727	39.4	25.0	36.8	43.5	45.5	29.9	47.8	56.3	46.2
C.V. (%)		12.0	15.6	6.3	7.93	11.16	5.0	8.5	9.6
L.S.D. (5%)		7.9	NS	4.8	6.27	NS	3.8	NS	10.1
Row sp (in.)		30"	30"	30"	30"	30"	30"	30"	30"
Rows/plot		3	4	4	4	4	4	4	4
Reps		1	3	3	3	3	3	3	2

UNIFORM TEST III, 1978

Strain	Mean 26 Tests	Ken. Lexington	Ind. Lafayette	Ind. Greenfield	Ind. Sullivan	Ind. Urbana	Ind. Girard	Ill. Brownstown	Ill. Belleville	Ill. Eldorado
					YIELD (bu/a)					
Beeson (II)	37.3	47.5	50.6	31.0	20.8	53.8	40.8	13.4	34.9	18.5
Cumberland	42.1	54.2	49.8	38.0	37.8	53.9	47.9	23.5	48.2	41.2
Elf	42.5	54.7	49.3	40.6	41.8	55.0	43.4	17.6	43.4	44.8
Oakland	40.8	46.0	51.1	37.2	38.8	51.8	43.7	25.2	45.8	36.9
Union (IV)	42.9	51.7	49.0	36.1	41.7	59.1	45.3	30.2	51.8	41.2
Williams	42.3	52.8	48.6	39.5	43.9	54.0	46.6	26.7	44.7	43.1
Woodworth (III)	41.3	51.9	49.2	37.9	39.2	52.4	44.4	24.4	50.3	36.4
A74-302012	42.6	50.7	51.3	41.9	39.4	52.9	41.9	22.6	50.3	38.8
A75-302005	41.0	46.7	50.5	43.9	39.0	46.6	44.5	24.1	48.6	37.9
A75-305022	43.2	57.1	52.5	41.6	42.4	50.1	45.0	25.6	45.7	39.4
A76-303035	41.3	52.2	53.3	37.4	35.7	57.8	40.2	18.7	51.5	34.2
A76-304002	40.7	51.0	54.7	38.4	36.1	55.0	44.1	18.0	40.0	31.9
A76-304019	40.7	49.5	51.8	39.4	32.7	59.9	40.5	24.9	49.7	32.8
A76-304020	39.9	47.0	54.0	39.3	38.1	55.8	43.5	25.0	42.6	30.9
C1558	42.8	49.9	52.9	37.9	37.5	51.9	46.9	25.9	46.4	40.9
C1559	42.0	50.4	52.7	40.8	44.9	53.8	44.5	19.6	46.2	33.7
HW74-3384	43.3	51.4	46.6	35.2	45.3	65.4	45.9	28.9	54.4	36.6
HW74-3385	45.0	57.0	51.9	34.1	44.9	62.9	48.9	25.6	46.1	42.8
L22	41.7	51.4	47.7	40.5	43.1	51.6	41.7	22.9	48.3	35.9
L23	42.6	47.0	52.6	40.1	40.3	53.1	46.1	33.7	47.7	41.2
L69U37-17-5	43.9	53.1	52.6	38.8	39.4	54.9	47.9	29.3	52.9	40.3
L74L-71	43.0	50.9	54.9	48.1	36.5	56.8	47.4	15.3	54.0	34.6
L75-6857	41.6	53.6	51.5	43.1	36.9	52.8	48.6	29.2	48.1	41.1
U10727	39.4	51.4	48.4	35.3	35.5	47.5	41.7	17.7	45.1	27.8
C.V. (%)		-	5.9	16.1	13.0	5.8	4.4	13.6	7.8	9.0
L.S.D. (5%)		5.6	4.9	NS	8.2	6.6	4.1	6.7	7.7	6.9
Rows Sp. (in.)		30"	30"	30"	28"	30"	36"	30"	30"	30"
Rows/Plot		4	4	3	3	4	4	4	4	4
Reps.		3	3	3	3	2	2	2	2	2

UNIFORM TEST III, 1978

Iowa		Mo.		S.D.	Kans.			Neb.
Stuart	Martins-burg	Edina	Colum-bia	Elk Point	Man-hatten	Pow-hatten	Ott-awa	Mead
				YIELD (bu/a)				
45.5	52.6	34.4	22.9	35.7	47.3	24.8	3.1	56.1
44.6	46.4	35.1	30.5	30.6	60.2	34.4	14.2	53.8
39.2	60.6	37.8	29.3	34.0	40.4	30.8	14.2	61.1
45.6	53.9	37.7	26.3	34.0	51.6	28.6	13.8	51.5
39.8	55.1	36.9	28.8	26.7	52.7	28.6	20.6	47.5
40.5	53.3	38.4	28.6	26.6	53.9	33.5	21.9	52.1
42.5	54.2	30.2	25.4	31.4	53.3	31.7	14.6	57.8
46.8	57.4	41.0	26.9	33.6	51.8	31.0	13.6	54.6
45.2	58.6	34.7	27.2	26.5	47.3	29.5	22.1	48.2
41.6	55.3	37.9	27.4	37.6	56.1	32.5	12.8	54.3
48.6	60.1	38.3	23.3	32.8	52.7	35.1	15.8	53.2
44.3	51.4	42.3	25.9	38.0	54.2	29.1	13.2	51.9
43.1	56.2	36.1	27.0	32.2	50.7	21.8	5.2	49.7
40.4	57.6	38.1	24.8	29.1	52.6	21.1	4.4	47.4
40.9	58.8	33.1	26.2	33.7	61.0	31.4	17.4	54.3
41.4	55.7	36.1	27.6	31.4	52.4	32.0	16.4	51.5
46.1	55.1	31.6	31.4	34.0	31.7	28.6	17.4	60.4
43.0	54.3	36.0	34.0	39.9	47.2	31.4	21.2	62.7
43.3	50.8	36.5	28.3	32.6	57.2	32.5	15.2	56.6
40.4	55.4	35.8	29.6	27.8	53.8	32.1	20.7	51.7
46.6	63.3	38.1	30.9	45.0	46.6	30.6	15.0	52.7
44.2	56.8	40.1	26.8	34.9	56.1	32.2	15.0	51.5
39.1	49.9	35.0	29.0	24.9	51.8	31.8	23.7	50.1
47.3	48.4	37.4	28.6	33.4	50.9	32.3	11.3	52.0
6.1	6.1	11.2	7.7	13.2	5.4	6.9	15.7	6.1
3.7	7.9	5.8	3.0	6.1	4.6	3.4	3.9	5.0
27"	13.5"	30"	30"	30"	30"	30"	30"	30"
4	5	2	2	3	4	4	4	4
4	4	4	4	4	3	3	3	3

UNIFORM TEST III, 1978

Strain	Mean 26 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woos-ter	Hoyt-ville	S. Charles-ton	Wheeler-sburg
				YIELD RANK					
Beeson (II)	24	14	14	22	14	8	8	4	23
Cumberland	12	19	22	15	12	24	9	11	4
Elf	10	5	16	4	15	11	18	9	3
Oalkand	19	23	7	23	10	17	23	23	13
Union (IV)	6	7	4	10	1	7	19	14	6
Williams	11	21	2	18	7	23	21	12	18
Woodworth (III)	16	15	5	17	19	5	15	21	17
A74-3C2012	8	13	18	11	9	21	2	2	8
A75-202005	18	8	12	13	16	3	21	20	19
A75-305022	4	17	10	6	5	10	3	7	5
A76-303035	16	22	17	8	17	21	1	17	24
A76-304002	20	18	23	21	20	1	7	14	21
A76-304019	20	2	24	12	13	13	20	18	1
A76-304020	22	4	19	9	22	8	24	24	16
C1558	7	12	3	16	3	13	13	13	7
C1559	13	11	11	7	6	13	9	6	14
HW74-3384	3	3	8	2	7	18	14	1	9
HW74-3385	1	1	6	1	2	20	6	7	12
L22	14	16	9	19	22	12	17	16	11
L23	8	20	1	24	3	4	12	10	15
L69U37-17-5	2	8	20	3	10	2	16	5	10
L74L-71	5	10	21	5	21	6	3	3	2
L75-6857	15	6	15	14	24	16	11	19	22
U10727	23	24	13	20	18	19	5	21	20

UNIFORM TEST III, 1978

Ken.	Ind.			Ill.				
Lexing-ton	Lafay-ette	Green-field	Sull-ivan	Urbana	Girard	Browns-town	Bell-ville	Eld-orado
				YIELD RANK				
20	15	24	24	13	22	24	24	24
4	17	15	16	12	3	15	11	4
3	18	7	7	8	18	22	21	1
24	14	19	14	20	16	10	17	13
10	20	20	8	4	10	2	4	4
7	21	10	4	11	7	6	20	2
9	19	16	12	18	14	13	6	15
16	13	4	10	16	19	17	6	11
23	16	2	13	24	12	14	9	12
1	9	5	6	22	11	8	18	10
8	4	18	21	5	24	19	5	18
14	2	14	20	8	15	20	23	21
19	11	12	23	3	23	12	8	20
21	3	11	15	7	17	11	22	22
18	5	16	17	19	6	7	14	8
17	6	6	2	13	12	18	15	19
11	24	22	1	1	9	5	1	14
2	10	23	2	2	1	8	16	3
11	23	8	5	21	20	16	10	16
21	7	9	9	15	8	1	13	4
6	7	13	10	10	3	3	3	9
15	1	1	19	6	5	23	2	17
5	12	3	18	17	2	4	12	7
11	22	21	22	23	20	21	19	23

UNIFORM TEST III, 1978

Strain	Mean 26 Tests	Iowa Stuart	Iowa Martinsburg	Mo. Edina	Mo. Columbia	S.D. Elk Point	Kans. Manhatten	Kans. Powhatten	Kans. Ottawa	Neb. Mead
				YIELD RANK						
Beeson (II)	24	7	19	21	24	5	19	22	24	6
Cumberland	12	9	24	18	4	18	2	2	15	10
Elf	10	23	2	9	6	7	23	15	15	2
Oakland	19	6	17	10	18	9	16	19	17	17
Union (IV)	6	22	13	12	8	21	10	19	6	23
Williams	11	19	18	4	9	22	7	3	3	13
Woodworth (III)	16	15	16	24	21	17	9	11	14	4
A74-302012	8	3	7	2	16	11	14	14	18	7
A75-302005	18	8	5	20	14	23	19	17	2	22
A75-305022	4	16	12	8	13	4	4	4	20	8
A76-303035	16	1	3	5	23	13	11	1	10	11
A76-304002	20	10	20	1	20	3	6	18	19	15
A76-304019	20	13	9	14	15	15	18	23	22	21
A76-304020	22	20	6	6	22	19	12	24	23	24
C1558	7	18	4	22	19	10	1	12	7	8
C1559	13	17	10	14	12	16	13	9	9	17
HW74-3384	3	5	13	23	2	8	24	19	7	3
HW74-3385	1	14	15	16	1	2	21	12	4	1
L22	14	12	21	13	11	14	3	4	11	5
L23	8	20	11	17	5	20	8	8	5	16
L69U37-17-5	2	4	1	6	3	1	22	16	12	12
L74L-71	5	11	8	3	17	6	4	7	12	17
L75-6857	15	24	22	19	7	24	15	10	1	20
U10727	23	2	23	11	9	12	17	6	21	14

UNIFORM TEST III, 1978

Strain	Mean 23 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woo-ster	Ohio Hoyt-ville	Ohio S. Charles-ton	Ohio Wheeler-sburg
				MATURITY (relative date)					
Beeson (II)	-6.2	-2	-6	-7	-3	-3	-3	-7	-5
Cumberland	+1.6	0	-1	0	+7	+1	+3	+2	+2
Elf	+5.0	+7	+3	+3	+3	+3	+6	+8	+4
Oakland	+0.6	-2	0	0	+4	+1	+3	+1	-1
Union (IV)	+6.3	+7	+6	+8	+7	+4	+5	+8	+3
Williams	+4.0	+3	+2	+6	+6	+3	+4	+5	+1
Woodworth* (III)	9-21	9-29	9-21	10-3	9-19	9-22	9-18	9-19	9-13
A74-302012	-0.1	+1	-2	+1	+7	-1	0	0	+1
A75-302005	+2.7	+7	+2	+6	+2	+3	+4	+4	0
A75-305022	+2.9	+2	+2	-1	+6	+1	+3	+3	+3
A76-303035	+0.9	+2	-1	+1	+1	+1	+3	+3	-1
A76-304002	-1.7	-1	-2	-3	-2	-2	0	-3	+1
A76-304019	+3.1	+6	+1	+6	+9	+4	+5	+6	+2
A76-304020	+2.7	+7	-1	+6	+7	+3	+4	+4	+1
C1558	+4.2	+5	+2	+6	+7	+3	+5	+4	+3
C1559	+2.3	+2	+1	+4	+3	+2	+1	+2	+4
HW74-3384	+1.0	-1	-1	-1	+4	-1	+4	+3	+1
HW74-3385	+0.9	0	-2	-1	+3	0	+5	+3	+1
L22	-1.0	+2	-2	0	0	0	0	0	-1
L23	+2.9	+4	+2	+6	+3	+2	+2	+3	+1
H69U37-17-5	+1.7	+3	0	+6	+6	-1	+2	+3	+1
L74L-71	+0.4	+1	-1	+7	+4	+2	+1	+1	-1
L75-6857	+3.8	+5	+2	+6	+5	+4	+4	+4	+1
U10727	-1.4	-2	-2	0	0	-1	+3	-1	-3
Date planted	5-26	6-6	6-1	6-8	5-26	5-26	5-10	5-1	5-3
*Days to mature	118	115	112	117	116	119	131	141	133

UNIFORM TEST III, 1978

Strain	Ken. Lexington	Ind. Lafayette	Ind. Greenfield	Ind. Sullivan	Ill. Urbana	Ill. Girard	Ill. Brownstown	Ill. Belleville	Ill. Eldorado
	MATURITY (relative date)								
Beeson (II)	-5	-3	-5	-10	-7	-6	-9	-8	-4
Cumberland	+3	+1	+5	+2	+2	0	+1	0	+5
Elf	+3	+6	+9	+5	+7	+1	+7	+5	+4
Oakland	-5	0	+2	+2	-2	-1	+2	0	+5
Union (IV)	+3	+4	+9	+5	+6	+5	+8	+6	+9
Williams	+2	+1	+7	+4	+5	+2	+6	+3	+6
Woodworth (III)	9-26	9-18	9-30	9-13	9-23	9-21	9-14	9-18	9-10
A74-302012	-4	-1	0	-1	-2	-3	-1	-2	+3
A75-302005	-4	+4	+4	+3	+2	0	+5	+1	+3
A75-305022	+3	+4	+7	+3	+2	0	+7	+2	+5
A76-303035	-5	+3	+3	+2	+1	0	-1	+1	-4
A76-304002	-5	+1	+1	-3	-2	-5	-2	-4	-3
A76-304019	+1	+4	+6	+3	+3	+1	+3	+2	+5
A76-304020	+2	+4	+3	+3	+3	+1	+5	+3	+3
C1558	+3	+3	+7	+4	+5	+3	+6	+4	+6
C1559	+3	+2	+3	+1	+2	-1	+4	+2	+2
HW74-3384	-5	0	0	-1	0	-3	+6	+1	+11
HW74-3385	-5	+1	+4	-2	+1	-3	+3	-1	+6
L22	+2	-1	-3	0	-2	-3	-1	-3	0
L23	+3	+1	+5	+1	+4	+1	+6	+2	+4
L69U37-17-5	+3	+2	+3	-3	+2	-3	+7	0	+3
L74L-71	+1	+1	-1	-1	+1	0	+1	+1	+2
L75-6857	+3	+2	+3	+2	+5	+2	+7	+2	+5
U10727	-5	+1	+1	-4	-2	-5	-5	-4	-4
Date planted	6-2	5-27	6-5	5-30	5-27	6-4	6-10	5-28	5-24
*Days to mature	116	114	117	106	119	109	96	113	109

UNIFORM TEST III, 1978

Iowa		Mo.		S.D.	Kans.			Neb.
Stuart	Martins-burg	Edina	Colum-bia	Elk Point	Man-hatten	Pow-hatten	Ott-awa	Mead
			MATURITY (relative date)					
	-10		-8	-6	-12	-12		-2
	+2		+2	-3	+1	-2		+4
	+7		+3	-1	+8	+6		+8
	0		-1	0	+1	+1		+3
	+10		+6	+6	+6	+4		+9
	+6		+5	+1	+6	+3		+5
	9-28		9-17	10-1	9-18	9-21		9-27
	-2		+2	-1	0	0		+2
	+3		+3	-1	+2	+4		+5
	+2		0	0	+7	+3		+2
	+3		+5	-3	+1	-1		+6
	-2		-5	-7	+4	0		+5
	+2		0	0	0	-2		+4
	+3		0	-2	+1	-2		+4
	+5		+5	0	+3	+3		+4
	+2		+4	-2	+4	+3		+5
	+2		+2	-6	+3	+2		+3
	+2		+3	-5	+3	+2		+3
	+1		0	-4	-6	-2		0
	+2		+5	0	+3	+1		+5
	+1		+2	-4	+2	+1		+4
	-1		+2	-2	-3	-6		0
	+7		+4	0	+6	+4		+5
	0		-5	-2	+3	+2		+4
5-19	5-28		6-16	5-22	5-3	5-27		5-24
-	123		94	141	138	117		126

UNIFORM TEST III, 1978

Strain	Mean 23 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woo-ster	Hoyt-ville	S. Charles-ton	Wheeler-sburg
				LODGING (score)					
Beeson (II)	2.2	3.6	1.7	1.7	3.0	1.3	1.4	2.3	3.8
Cumberland	2.1	3.1	1.2	1.2	2.0	1.3	1.4	3.2	3.0
Elf	1.4	1.6	1.3	1.5	1.7	1.4	1.6	2.3	1.2
Oakland	1.8	2.3	1.5	1.2	2.0	1.5	1.6	2.0	2.5
Union (IV)	2.4	3.6	2.2	2.8	3.0	1.8	2.1	3.8	3.0
Williams	2.0	3.3	1.7	1.8	2.0	1.4	1.7	2.5	3.0
Woodworth (III)	2.0	3.6	1.8	2.2	2.0	1.4	1.6	2.3	3.5
A74-302012	1.8	2.6	1.3	1.7	2.3	1.4	1.4	2.0	2.8
A75-302005	2.1	3.3	1.3	2.0	3.0	1.5	1.9	3.3	3.5
A75-305022	2.1	3.1	1.3	2.3	2.0	1.4	1.5	2.8	3.0
A76-303035	3.3	3.8	2.0	3.5	3.7	1.6	2.5	4.3	4.5
A76-304002	2.5	3.9	1.7	3.3	3.0	1.3	1.7	2.7	4.5
A76-304019	3.0	3.8	2.2	3.3	4.0	1.6	3.5	4.3	4.5
A76-304020	2.9	3.8	2.3	3.2	3.7	1.7	3.1	4.2	4.5
C1558	2.4	3.3	1.8	3.2	2.7	1.5	2.1	3.2	3.8
C1559	2.1	3.3	1.5	2.3	2.3	1.4	2.1	2.5	3.2
HW74-3384	1.4	2.5	1.8	1.5	1.3	1.4	1.5	2.8	1.2
HW74-3385	1.3	2.0	1.5	1.3	1.3	1.5	1.4	2.0	1.2
L22	1.6	2.9	1.3	1.5	2.0	1.4	1.4	2.3	1.2
L23	1.9	3.1	1.7	1.8	2.7	1.5	1.5	3.2	2.0
L69U37-17-5	2.4	4.1	1.2	2.5	2.7	1.8	2.2	3.8	3.5
L74L-71	1.7	2.8	1.5	1.7	2.0	1.5	1.5	2.0	2.0
L75-6857	1.9	3.3	1.5	2.0	2.0	1.4	1.6	2.7	2.5
U10727	1.7	2.6	1.3	1.7	2.3	1.3	1.6	2.2	1.5

UNIFORM TEST III, 1978

Ken.	Ind.			Ill.				
Lexing-ton	Lafay-ette	Green-field	Sull-ivan	Urbana	Girard	Browns-town	Belle-ville	Eld-orado
				LODGING (score)				
3.2	2.8	3.3	2.7	2.7	1.8	1.0	2.0	1.4
2.2	3.2	2.5	3.8	3.7	1.3	1.0	2.8	1.2
1.3	1.0	2.2	1.3	1.4	1.0	1.0	1.0	1.1
1.5	2.5	2.0	3.7	1.9	1.6	1.0	2.0	1.1
3.0	2.3	2.8	3.7	2.9	1.5	1.0	2.4	1.8
2.2	2.7	2.8	3.7	2.1	1.3	1.0	2.1	1.1
2.5	3.2	2.5	3.5	2.0	1.3	1.0	1.8	1.3
1.5	2.0	2.3	2.3	1.8	1.2	1.0	1.3	1.1
1.7	2.8	2.7	3.7	2.3	1.4	1.0	2.0	1.4
2.2	3.0	3.3	3.2	2.9	1.3	1.0	2.5	1.4
4.3	4.3	3.0	5.0	4.5	3.1	1.0	3.3	4.0
2.5	3.8	3.0	4.2	2.9	2.0	1.0	2.8	1.3
3.8	3.3	3.7	4.3	3.8	2.9	1.0	3.3	3.0
3.5	3.5	3.0	4.0	3.0	2.6	1.0	3.3	3.0
2.2	3.2	3.2	4.5	3.5	1.5	1.0	2.5	1.6
2.2	2.8	2.7	3.7	1.9	1.3	1.0	2.3	1.4
1.5	1.0	1.5	1.7	1.7	1.0	1.0	1.0	1.1
1.7	1.2	1.5	1.2	1.4	1.0	1.0	1.3	1.1
1.8	2.0	1.7	3.0	2.4	1.2	1.0	1.5	1.2
2.2	2.3	2.5	3.0	2.6	1.3	1.0	2.0	1.2
2.2	3.7	2.7	3.0	2.7	1.9	1.0	2.7	1.5
1.5	2.2	1.7	3.0	1.8	1.2	1.0	1.8	1.1
2.2	2.5	1.8	2.8	2.7	1.2	1.0	2.0	1.2
2.0	1.7	2.2	3.0	1.9	1.3	1.0	1.8	1.1

UNIFORM TEST III, 1978

Strain	Iowa Stuart	Iowa Martinsburg	Mo. Edina	Mo. Columbia	S.D. Elk Point	Kans. Manhatten	Kans. Powhatten	Kans. Ottawa	Neb. Mead
				LODGING (score)					
Beeson (II)	2.4	2.4			1.0	2.0	1.0		1.0
Cumberland	1.9	2.4			1.0	1.8	1.0		1.2
Elf	1.3	1.8			1.0	1.0	1.0		1.0
Oakland	1.8	2.4			1.0	1.7	1.0		1.3
Union (IV)	1.9	2.7			3.0	1.8	1.0		1.7
Williams	1.6	2.5			1.0	1.5	1.0		1.3
Woodworth (III)	1.5	2.2			1.0	1.5	1.0		1.5
A74-302012	1.6	2.2			3.0	1.4	1.0		1.2
A75-302005	1.8	2.5			2.0	1.6	1.0		1.5
A75-305022	1.8	2.6			2.0	1.7	1.0		1.2
A76-303035	3.1	3.6			3.0	3.2	1.0		3.0
A76-304002	2.5	2.8			2.0	1.9	1.0		1.7
A76-304019	1.9	2.9			3.0	2.8	1.0		1.8
A76-304020	1.8	2.7			3.0	2.2	1.0		1.8
C1558	2.0	2.6			2.0	1.7	1.0		1.5
C1559	1.8	2.4			1.0	1.8	1.0		1.5
HW74-3384	1.4	1.7			1.0	1.0	1.0		1.0
HW 74-3385	1.3	1.4			1.0	1.0	1.0		1.0
L22	1.5	2.3			1.0	1.0	1.0		1.2
L23	1.6	2.3			1.0	1.2	1.0		1.2
L69U37-17-5	2.2	2.6			3.0	2.3	1.0		2.1
L74L-71	1.7	2.1			1.0	1.4	1.0		1.2
L75-6857	1.6	2.4			1.0	1.2	1.0		1.3
U10727	1.9	2.3			1.0	1.7	1.0		1.3

UNIFORM TEST III, 1978

Strain	Mean 28 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woo-ster	Hoyt-ville	S. Charles-ton	Wheeler-sburg
				HEIGHT (inches)					
Beeson (II)	35	36	26	32	43	27	35	36	24
Cumberland	35	33	26	30	40	26	34	35	34
Elf	22	22	19	24	27	20	25	25	22
Oakland	37	36	32	33	43	29	33	40	36
Union (IV)	42	41	38	36	51	33	38	50	44
Williams	39	36	35	32	45	31	35	41	39
Woodworth (III)	37	36	33	33	44	31	36	38	36
A74-302012	37	34	30	32	44	27	34	39	36
A75-302005	39	35	34	34	45	31	37	43	41
A75-305022	38	35	31	33	44	30	35	41	39
A76-303035	34	32	28	29	40	24	31	38	33
A76-304002	36	37	27	34	42	32	31	37	35
A76-304019	41	40	34	35	50	33	42	43	38
A76-304020	40	40	36	34	48	31	37	43	34
C1558	38	36	31	32	43	29	33	41	38
C1559	40	38	31	34	46	30	36	44	36
HW74-3384	22	22	19	26	26	19	24	26	26
HW74-3385	23	21	21	25	27	17	28	26	24
L22	32	31	27	30	36	27	32	34	27
L23	39	34	34	32	42	29	37	41	38
L69U37-17-5	39	39	26	36	47	32	32	39	41
L74L-71	40	37	32	35	44	32	38	43	37
L75-6857	39	37	31	34	41	31	37	41	39
U10727	34	33	26	31	40	26	34	39	31

UNIFORM TEST III, 1978

Strain	Ken. Lexington	Ind. Lafayette	Ind. Greenfield	Ind. Sullivan	Ill. Urbana	Ill. Girard	Ill. Brownstown	Ill. Bellville	Ill. Eldorado
				HEIGHT (inches)					
Beeson (II)	33	37	30	42	45	37	26	37	35
Cumberland	34	41	33	40	45	39	25	40	38
Elf	24	22	19	24	25	21	18	21	21
Oakland	37	41	36	43	47	41	26	40	36
Union (IV)	36	45	40	49	51	45	33	46	44
Williams	34	45	36	44	51	43	28	42	40
Woodworth (III)	36	42	31	44	45	39	28	40	39
A74-302012	38	41	35	44	46	38	28	42	37
A75-302005	38	43	36	44	49	43	29	44	38
A75-305022	36	41	33	43	46	40	25	42	38
A76-303035	33	42	29	40	43	36	26	39	37
A76-304002	36	42	32	43	45	39	25	39	35
A76-304019	38	47	42	40	51	42	31	49	42
A76-304020	40	43	35	45	51	43	31	43	40
C1558	36	41	34	44	49	41	28	41	40
C1559	38	44	35	45	50	45	27	46	40
HW74-3384	21	21	17	25	23	20	20	23	22
HW74-3385	22	23	19	25	25	22	21	20	19
L22	38	32	30	34	40	34	24	33	34
L23	37	43	34	44	51	42	29	43	40
L69U37-17-5	37	44	36	47	50	43	29	44	40
L74L-71	41	43	36	47	50	44	28	44	37
L75-6857	37	47	34	45	51	41	29	42	38
U10727	32	38	30	39	45	37	24	39	31

UNIFORM TEST III, 1978

Iowa		Mo.		S.D.	Kans.			Neb.
Stuart	Martins-burg	Edina	Colum-bia	Elk Point	Man-hatten	Pow-hatten	Ott-awa	Mead
			HEIGHT (inches)					
43	42	31	28	40	42	36	27	38
40	40	30	30	42	43	36	26	36
25	28	19	19	28	17	22	16	22
42	43	32	29	43	44	38	29	37
45	50	35	31	47	50	44	31	44
41	45	32	30	46	49	40	30	40
41	42	31	28	43	46	37	33	40
41	43	30	26	43	43	35	27	38
43	47	31	31	44	49	39	32	42
42	43	33	30	44	46	37	31	38
38	38	30	26	40	42	36	28	38
41	42	34	30	40	44	36	29	38
45	50	36	33	44	49	43	33	43
44	50	36	32	45	48	41	30	41
42	45	31	29	44	47	37	29	40
45	50	34	31	45	50	42	33	42
28	27	21	20	30	13	23	15	24
25	27	20	24	29	15	23	17	25
35	40	29	27	40	31	37	23	34
43	46	34	31	44	48	39	31	41
43	46	35	32	44	46	38	29	42
44	46	36	31	46	46	39	31	41
42	46	34	32	45	49	40	33	43
41	40	30	28	40	43	34	26	36

UNIFORM TEST III, 1978

Strain	Mean 25 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woo-ster	Hoyt-ville	S. Charles-ton	Wheeler-sburg
				SEED QUALITY (score)					
Beeson (II)	2.8	2.0	2.3	2.3	2.5	3.0	3.0	2.0	4.0
Cumberland	2.1	1.5	2.3	1.8	2.0	2.0	2.0	1.2	2.0
Elf	1.8	1.0	2.0	1.7	2.0	1.0	2.0	1.0	1.0
Oakland	2.1	1.5	2.0	2.0	2.0	2.0	3.0	2.0	1.2
Union (IV)	1.8	1.3	2.3	2.0	2.0	1.0	2.0	1.3	1.0
Williams	1.7	1.5	2.0	2.0	2.0	1.0	1.0	1.3	1.0
Woodworth (III)	1.9	1.8	2.2	2.1	2.0	1.0	1.0	1.5	1.8
A74-302012	2.2	2.3	2.2	2.2	2.0	2.0	2.0	1.3	2.5
A75-302005	2.2	1.5	3.0	2.4	2.0	2.0	2.0	2.0	2.0
A75-305022	1.9	1.3	2.2	1.8	2.0	1.0	2.0	1.7	2.0
A76-303035	2.0	1.8	2.2	2.0	2.2	2.0	2.0	2.0	1.0
A76-304002	2.3	1.8	2.2	1.7	2.5	2.0	2.0	1.2	1.5
A76-304019	2.2	1.5	2.2	1.8	2.0	2.0	2.0	1.3	1.5
A76-304020	2.4	1.8	2.0	2.1	2.0	2.0	2.0	1.5	2.0
C1558	2.3	2.0	2.7	2.1	2.0	3.0	3.0	1.7	1.8
C1559	1.8	1.5	2.5	2.1	2.0	2.0	2.0	1.5	1.2
HW74-3384	2.0	1.0	2.2	1.5	2.0	2.0	1.0	1.2	1.2
HW74-3385	1.8	1.3	2.0	1.7	2.0	2.0	2.0	1.0	1.0
L22	1.8	1.5	2.0	1.7	2.0	2.0	2.0	1.0	1.2
L23	1.7	2.0	2.0	1.5	2.0	1.0	2.0	1.2	1.0
L69U37-17-5	2.7	2.3	3.5	2.5	2.7	3.0	3.0	2.2	3.0
L74L-71	2.1	1.5	2.3	2.1	2.0	2.0	2.0	1.0	1.8
L75-6857	1.7	1.3	2.2	1.5	2.0	1.0	2.0	1.0	1.0
U10727	2.2	1.8	2.3	2.1	2.3	1.0	2.0	1.5	2.0

UNIFORM TEST III, 1978

Ken.	Ind.			Ill.				
Lexing-ton	Lafay-ette	Green-field	Sull-ivan	Urbana	Girard	Browns-town	Belle-ville	Eld-orado
			SEED QUALITY (score)					
3.0	1.5	1.5	3.0	3.3	4.0	4.0	3.5	4.3
2.0	1.5	1.0	2.0	2.2	2.0	3.5	2.3	3.5
2.0	2.0	1.0	2.0	1.5	1.8	3.3	1.3	3.3
2.0	1.5	1.0	2.0	1.8	2.0	3.5	2.0	3.8
2.0	1.5	1.0	1.5	1.8	1.8	2.3	2.5	2.5
2.0	1.5	1.0	2.0	1.5	2.0	2.0	1.5	2.5
2.0	1.5	1.5	2.0	1.8	2.0	2.8	1.5	3.0
3.0	1.5	1.0	2.0	2.0	2.3	3.5	2.5	3.8
2.0	1.5	1.5	2.0	1.8	2.0	3.3	2.3	3.3
3.0	1.0	1.5	1.5	1.8	2.0	2.8	2.0	2.8
2.0	1.0	1.0	2.0	2.0	2.0	3.3	1.8	3.3
3.0	1.5	1.5	3.0	2.0	2.8	3.8	2.5	3.5
4.0	1.0	1.0	2.5	2.3	2.5	3.3	2.5	3.8
3.0	1.5	1.0	3.5	2.0	2.5	3.8	2.5	3.5
4.0	1.5	1.5	2.5	2.0	2.3	3.3	2.0	3.3
3.0	1.0	1.0	1.5	1.8	2.0	2.3	1.8	2.0
2.0	1.5	1.0	2.0	2.3	2.5	3.5	2.0	4.0
1.0	1.5	1.0	2.5	1.8	2.0	4.0	2.0	3.0
1.0	1.0	1.0	1.5	2.3	2.0	3.3	1.5	3.0
1.0	1.0	1.0	1.5	2.3	2.0	2.0	1.3	2.8
2.0	2.0	1.5	2.5	2.5	2.8	3.5	2.8	4.3
3.0	1.5	1.5	2.0	2.3	2.3	3.3	2.5	3.0
1.0	1.5	1.0	3.0	1.5	2.0	2.0	1.8	2.3
2.0	1.5	1.0	3.0	1.8	2.5	3.5	2.5	3.3

UNIFORM TEST III, 1978

Strain	Iowa Stuart	Iowa Martinsburg	Mo. Edina	Mo. Columbia	S.D. Elk Point	Kans. Manhatten	Kans. Powhatten	Kans. Ottawa	Neb. Mead
				SEED QUALITY (score)					
Beeson (II)	1.3		2.0	3.0	3.0	2.0	2.1	3.2	3.0
Cumberland	1.2		1.8	2.0	3.0	1.8	1.7	2.1	3.2
Elf	1.8		1.5	2.3	3.0	1.7	1.5	1.9	1.5
Oakland	2.0		2.0	2.0	3.0	1.9	1.6	1.9	3.2
Union (IV)	1.7		1.5	2.0	3.0	1.7	1.5	1.9	2.3
Williams	1.2		1.5	1.8	3.0	1.4	1.4	1.9	3.0
Woodworth (III)	1.3		1.8	2.3	3.0	1.7	1.5	2.1	2.5
A74-302012	1.9		2.0	2.5	2.0	1.9	1.7	2.3	3.2
A75-302005	1.5		1.8	1.8	3.0	1.9	1.7	2.3	3.2
A75-305022	1.5		1.5	2.3	3.0	1.5	1.8	2.2	2.2
A76-303035	1.3		1.5	2.0	3.0	1.9	1.9	2.4	3.2
A76-304002	2.1		1.8	2.5	4.0	2.4	1.8	2.0	2.7
A76-304019	1.5		1.5	2.3	3.0	2.3	1.9	3.5	2.7
A76-304020	1.6		2.0	2.5	4.0	2.2	1.9	3.3	2.8
C1558	1.3		1.8	2.0	2.0	1.4	1.7	2.2	3.3
C1559	1.2		1.3	1.5	3.0	1.5	1.5	1.7	2.3
HW74-3384	1.7		2.0	2.5	3.0	1.5	1.9	2.2	1.7
HW74-3385	1.4		2.0	2.0	2.0	1.3	1.6	1.9	1.7
L22	1.2		1.8	2.0	2.0	1.3	1.5	1.7	2.3
L23	1.2		1.8	2.0	2.0	1.5	1.4	1.9	2.3
L69U37-17-5	2.5		2.0	3.0	3.0	2.8	2.0	2.9	3.3
L74L-71	1.3		1.3	2.3	2.0	2.2	1.6	2.1	2.8
L75-6857	1.3		1.5	2.0	2.0	1.5	1.5	1.6	3.0
U10727	1.4		2.0	1.8	3.0	2.1	1.9	2.2	3.3

UNIFORM TEST III, 1978

Strain	Mean 20 Tests	N.J. Adel-phia	Del. George-town	Penn. Landis-ville	Md. Clark-ville	Ohio Woo-ster	Hoyt-ville	S. Charles-ton	Wheeler-sburg
				SEED SIZE (g/100)					
Beeson (II)	17.6	17.0		21.8	17.5	17.7	18.6	22.0	19.0
Cumberland	17.7	18.0		20.5	17.2	17.2	18.0	19.0	17.0
Elf	15.7	17.0		19.6	16.5	16.9	16.3	18.0	15.0
Oakland	17.3	17.0		18.9	17.6	15.9	18.8	20.0	16.0
Union (IV)	18.2	21.0		21.2	19.7	17.1	18.9	20.0	17.0
Williams	16.8	17.0		19.1	16.9	15.7	17.1	18.0	14.0
Woodworth (III)	14.7	14.0		16.7	13.8	14.3	14.9	16.0	15.0
A74-302012	18.9	19.0		21.8	19.0	17.6	20.4	21.0	21.0
A75-302005	16.6	18.0		18.0	17.2	16.2	17.1	19.0	16.0
A75-305022	14.5	14.0		16.2	14.3	12.1	14.9	17.0	14.0
A76-303035	14.5	18.0		17.7	14.3	13.0	14.9	17.0	13.0
A76-304002	15.9	16.0		18.4	15.2	15.4	16.5	18.0	16.0
A76-304019	16.5	18.0		21.4	18.0	16.0	16.9	18.0	16.0
A76-304020	15.9	18.0		21.1	16.9	14.8	15.9	18.0	16.0
C1558	16.7	20.0		19.9	16.7	15.1	16.7	20.0	16.0
C1559	16.4	17.0		20.4	16.4	16.0	16.9	19.0	16.0
HW74-3384	17.1	17.0		20.4	17.7	16.4	17.8	20.0	18.0
HW74-3385	15.7	17.0		18.5	16.2	15.7	15.2	17.0	15.0
L22	15.9	16.0		18.0	14.6	15.1	16.9	18.0	15.0
L23	16.6	17.0		18.5	16.3	15.8	17.2	18.0	15.0
L69U37-17-5	16.8	18.0		19.0	16.6	14.7	18.6	19.0	16.0
L74L-71	17.9	18.0		23.5	17.0	16.4	18.5	19.0	17.0
L75-6857	16.7	17.0		19.6	16.3	15.5	17.8	18.0	15.0
U10727	15.6	13.0		17.7	15.5	15.2	17.0	18.0	14.0

UNIFORM TEST III, 1978

Strain	Ken. Lexington	Ind. Lafayette	Ind. Greenfield	Ind. Sullivan	Ill. Urbana	Ill. Girard	Ill. Brownstown	Ill. Belleville	Ill. Eldorado
				SEED SIZE (g/100)					
Beeson (II)	18.9	20.0	14.0	14.6	20.0			16.1	14.4
Cumberland	20.7	20.8	20.1	14.2	22.8			16.5	16.9
Elf	19.0	17.3	17.3	16.0	18.7			16.1	16.1
Oakland	17.3	20.0	19.8	14.0	19.2			16.7	16.6
Union (IV)	19.6	20.8	19.8	17.1	21.3			18.2	16.1
Williams	19.0	18.3	19.9	16.4	20.9			16.3	15.6
Woodworth (III)	16.8	16.2	16.5	13.8	17.8			14.6	12.8
A74-302012	20.3	20.8	22.2	17.3	21.5			18.2	16.9
A75-302005	18.6	18.7	18.0	16.0	19.2			15.7	14.9
A75-305022	16.2	17.1	17.4	13.6	17.7			13.7	12.0
A76-303035	16.6	16.9	15.9	13.1	17.5			13.2	10.8
A76-304002	17.6	18.3	19.5	12.9	18.5			14.4	13.1
A76-304019	19.9	17.9	17.9	13.5	18.6			16.5	14.8
A76-304020	17.9	17.6	17.2	13.3	18.3			16.1	14.0
C1558	19.0	19.7	19.4	13.9	20.6			15.8	14.3
C1559	16.7	19.3	19.3	14.8	19.1			16.2	12.4
HW74-3384	20.6	19.4	18.4	15.8	19.8			17.0	18.4
HW74-3385	18.4	18.1	17.7	13.0	17.6			13.5	16.4
L22	18.8	17.3	17.7	14.7	19.7			14.5	13.1
L23	18.8	18.4	18.7	15.5	21.2			15.8	14.9
L69U37-17-5	18.4	20.1	18.4	14.2	18.6			15.8	15.5
L74L-71	21.2	20.2	22.7	14.0	22.0			18.9	13.9
75-6857	20.1	19.0	19.3	14.8	21.2			15.3	15.1
U10727	17.1	18.2	17.5	13.7	17.9			15.4	13.9

UNIFORM TEST III, 1978

Iowa		Mo.		S.D.	Kans.			Neb.
Stuart	Martins-burg	Edina	Colum-bia	Elk Point	Man-hatten	Pow-hatten	Ott-awa	Mead
				SEED SIZE (g/100)				
17.6				15.0	17.6	16.4	13.8	20.4
17.4				13.9	16.5	15.4	13.3	18.4
14.8				12.9	19.6	13.2	13.2	16.4
17.2				15.2	17.8	14.7	14.4	18.4
17.7				15.4	17.5	14.2	13.2	18.5
17.0				13.6	16.5	14.1	13.3	17.4
14.4				11.3	14.4	12.8	12.0	15.7
18.8				15.2	18.4	15.9	14.6	18.9
16.2				12.3	15.4	14.2	14.1	16.5
14.4				12.2	15.2	11.7	10.9	15.3
14.3				11.2	15.1	11.5	10.7	15.6
15.6				13.1	16.9	12.5	12.8	16.9
15.7				14.7	16.1	13.3	12.2	15.3
15.2				12.9	15.9	13.0	10.8	15.2
16.0				12.9	16.6	12.9	12.5	16.7
16.2				14.2	16.0	13.1	11.8	16.9
16.6				13.6	19.2	13.7	15.4	17.9
14.0				11.9	17.4	12.2	12.9	16.2
16.1				13.3	16.1	14.2	12.4	17.3
16.5				13.5	16.0	14.7	13.0	17.4
14.9				14.8	16.9	14.1	13.9	17.8
17.5				14.1	17.1	14.2	14.3	18.8
16.8				12.8	15.7	14.1	13.8	16.7
16.2				11.8	16.6	13.8	13.2	16.1

UNIFORM TEST III, 1978

Strain	Mean 15 Tests	N.J. Adel-phia	Md. Clark-ville	Ohio Hoyt-ville	Ohio S. Charles-ton	Ken. Lexing-ton	Ind. Lafay-ette	Ill. Urbana
				PROTEIN (%)				
Beeson (II)	42.2	43.0	40.2	41.3	41.9	43.6	42.5	43.2
Cumberland	41.7	42.1	39.5	41.9	41.0	41.9	41.8	44.5
Elf	42.9	42.5	42.2	41.0	42.6	43.6	44.1	44.8
Oakland	41.2	42.5	40.9	40.2	39.3	42.9	41.7	42.1
Union (IV)	42.6	42.4	42.2	42.5	41.6	44.1	43.0	44.3
Williams	42.7	41.9	42.3	42.4	41.7	43.1	42.7	44.2
Woodworth (III)	41.4	42.1	41.8	41.1	40.4	41.8	41.1	43.2
A74-302012	40.6	41.0	39.5	40.8	38.6	40.8	41.8	41.7
A75-302005	41.9	42.0	42.1	42.1	41.0	43.1	42.3	43.8
A75-305022	41.7	42.7	40.2	41.5	41.5	39.7	42.3	43.5
A76-303035	41.4	41.2	40.6	40.9	41.0	40.8	42.1	43.1
A76-304002	42.2	43.2	41.0	41.5	41.6	40.5	42.9	43.0
A76-304019	42.5	42.5	42.5	41.7	41.3	43.7	42.7	43.3
A76-304020	42.5	43.0	42.2	42.2	41.2	43.0	42.1	43.6
C1558	41.7	41.5	40.7	41.7	41.5	42.9	42.2	43.7
C1159	41.8	42.0	41.1	40.8	42.1	42.4	42.3	43.6
HW74-3384	40.6	39.3	40.6	40.1	39.6	41.3	40.7	42.3
HW74-3385	39.8	40.3	39.2	40.3	39.5	39.7	41.0	41.1
L22	42.5	42.4	41.4	41.9	41.0	43.2	42.0	44.8
L23	42.5	42.9	42.7	42.5	41.3	43.5	42.8	44.6
L69U37-17-5	41.0	41.8	39.3	40.7	40.3	40.3	41.9	42.9
L74L-71	41.9	42.6	43.0	41.5	40.9	43.6	42.6	44.3
L75-6857	42.5	41.5	43.2	42.8	40.5	42.8	43.6	44.1
U10727	41.6	41.2	40.6	42.8	40.2	40.9	41.8	43.1

UNIFORM TEST III, 1978

Ill.		Iowa	Mo.	S.D.	Kans.		Neb.
Bell-ville	Eld-orado	Stuart	Colum-bia	Elk Point	Man-hatten	Pow-hatten	Mead
			PROTEIN (%)				
42.4	43.0	40.4	44.1	43.6	41.3	42.3	41.5
41.0	41.1	41.1	42.9	43.3	38.1	42.6	42.5
44.8	41.8	43.1	44.0	43.8	40.6	43.5	41.8
41.4	39.9	40.5	42.4	42.1	40.6	42.4	41.0
42.8	41.6	42.4	43.6	42.2	41.3	44.2	42.9
43.6	41.1	42.5	44.4	43.3	40.3	44.4	42.5
40.9	40.2	41.1	42.6	41.5	39.7	42.5	40.9
40.2	38.9	39.6	43.4	41.8	39.2	40.5	40.8
42.9	40.1	41.5	42.7	42.3	41.0	42.2	41.2
41.5	39.5	41.9	43.2	42.3	40.7	43.1	40.3
41.8	40.3	40.5	42.1	42.1	40.2	42.1	41.4
42.5	41.3	40.6	43.6	42.4	40.3	43.6	42.8
44.1	42.0	41.1	44.9	42.4	41.3	43.1	42.0
43.5	41.8	41.0	44.9	42.5	41.3	43.7	41.7
41.9	40.8	41.0	43.4	41.7	39.6	42.2	41.4
42.9	41.0	41.4	42.4	42.6	39.6	41.2	42.4
41.7	41.4	40.0	42.5	41.4	38.5	41.9	38.4
40.9	39.5	38.4	41.7	39.4	36.9	41.4	37.6
42.5	42.6	42.9	44.2	43.2	39.2	43.9	42.8
42.9	40.7	42.7	44.0	43.1	40.3	42.0	42.0
41.9	39.4	39.4	40.9	42.1	41.6	40.5	41.1
42.1	40.7	40.9	43.4	42.7	39.6	41.5	40.7
42.6	41.5	42.7	43.9	42.9	40.5	42.9	42.4
40.9	42.8	40.6	42.2	41.9	41.3	40.8	41.6

UNIFORM TEST III, 1978

Strain	Mean 15 Tests	N.J. Adel-phia	Md. Clark-ville	Ohio Hoyt-ville	Ohio S. Charles-ton	Ken. Lexing-ton	Ind. Lafay-ette	Ill. Urbana
				OIL (%)				
Beeson (II)	20.5	19.8	21.4	21.3	21.2	19.9	20.0	19.7
Cumberland	21.6	20.4	23.4	20.9	22.4	21.6	21.6	19.9
Elf	20.1	19.6	21.6	20.0	20.3	20.2	19.8	19.4
Oakland	20.9	19.5	21.5	21.6	20.9	20.2	20.6	20.3
Union (IV)	20.5	19.8	21.5	20.3	21.1	20.3	20.2	19.8
Williams	20.7	20.2	21.4	19.8	21.1	21.0	20.7	19.2
Woodworth (III)	21.1	19.5	20.3	21.3	21.4	20.9	21.7	19.6
A74-302012	21.2	20.1	21.7	20.6	21.7	20.9	20.2	20.6
A75-302005	20.4	19.7	21.0	19.9	20.7	20.9	19.9	19.8
A75-305022	21.4	19.9	22.5	21.6	20.5	22.9	20.8	20.0
A76-303035	20.8	19.6	21.3	20.9	20.8	21.4	20.8	20.8
A76-304002	20.7	19.2	21.0	20.2	20.3	21.1	19.8	20.0
A76-304019	19.8	18.6	19.6	20.6	21.0	19.6	20.6	19.7
A76-304020	20.0	18.5	20.3	19.3	20.7	19.9	20.3	19.8
C1558	20.6	19.8	21.3	20.1	20.5	20.4	20.8	20.3
C1559	21.3	20.5	22.1	21.8	20.0	21.2	21.1	20.4
HW74-3384	22.6	22.4	22.6	22.8	23.0	22.7	23.2	21.4
HW74-3385	22.2	21.3	22.4	20.9	22.0	23.0	21.3	21.6
L22	20.8	19.4	21.3	21.5	21.7	20.2	21.1	19.4
L23	20.6	19.4	20.5	20.2	21.2	20.1	20.3	19.2
L69U37-17-5	20.7	19.2	21.7	20.7	20.6	21.2	20.2	19.7
L74L-71	21.2	20.4	20.7	21.6	21.6	20.8	21.3	20.1
L75-6857	20.9	20.3	20.6	20.1	21.5	21.2	20.6	20.4
U10727	20.5	19.8	20.9	19.7	20.9	21.1	19.9	19.2

UNIFORM TEST III, 1978

Iowa	Mo.	S.D.	Kans.		Neb.	Ill.	
Stuart	Columbia	Elk Point	Manhatten	Powhatten	Mead	Belleville	Eldorado
			OIL (%)				
21.0	18.8	19.0	22.1	20.9	20.8	21.6	20.5
22.6	22.0	19.2	24.0	21.2	20.7	22.3	21.8
19.7	19.2	19.4	21.9	19.7	20.7	19.8	20.7
21.3	20.6	19.2	22.5	20.8	21.0	21.6	22.3
20.5	19.7	19.5	21.9	20.2	20.2	20.8	21.8
21.3	19.7	19.5	22.7	20.0	20.5	21.1	22.5
20.9	20.4	19.6	23.5	21.3	21.4	22.3	22.6
22.1	20.1	19.5	22.5	21.3	20.9	22.6	23.0
20.4	19.9	19.0	21.6	19.9	21.0	20.5	21.3
21.3	20.7	20.1	22.6	21.6	22.4	21.4	23.2
21.2	19.5	19.4	22.4	20.5	20.6	21.1	21.9
22.0	21.0	19.6	22.0	21.5	20.0	21.3	22.1
19.4	18.5	19.5	20.8	19.2	20.1	19.9	20.6
20.8	18.7	18.7	21.1	18.8	20.1	21.0	21.3
20.9	20.3	19.6	22.6	20.1	20.8	20.5	21.6
21.3	21.5	19.4	23.6	21.9	21.3	21.1	22.5
22.8	20.6	21.1	24.8	21.6	24.3	22.9	22.8
23.2	22.2	21.2	24.4	21.3	23.0	22.2	23.8
20.4	20.2	18.8	23.5	20.7	20.5	21.0	21.6
21.0	19.7	18.5	22.4	21.0	21.0	21.9	22.6
21.2	20.9	19.5	21.6	20.9	21.2	20.8	21.7
21.7	20.0	19.5	23.0	21.2	22.7	21.2	21.4
20.8	19.8	19.2	23.1	21.1	21.0	21.6	22.3
21.2	21.1	18.9	21.5	21.2	20.0	21.1	20.9

PRELIMINARY TEST III, 1978

Strain	Parentage	Generation Composited
1. Beeson (II)	C1253 x Kent	F_7
2. Union (IV)	Williams[5] x SL11 (Wayne Rpm Rps)	F_3
3. Williams	Wayne x 157-0034 (Clark x Adams)	F_6
4. Woodworth (III)	Wayne x 157-0034 (Clark x Adams)	F_6
5. A77-311031	AP6	S_4
6. A77-313012	AP61YT(F_4)C1	F_4
7. A77-313032	AP6	S_4
8. A77-314013	A73-21030 x Williams	F_4
9. A77-314017	Coles x A72-507	F_4
10. A77-315012	L70T543 x A73-25088	F_4
11. A77-315024	A72-512 x Agripro Ex 50734	F_4
12. C1567	Williams x Beeson	F_6
13. C1570	C1421 x Williams	F_7
14. C1571	C1421 x Williams	F_7
15. C1575	C1421 x Williams	F_7
16. C1577	Williams x Bonus	F_6
17. H74-620	Williams x Ransom	F_5
18. H74-3382	Williams x Ransom	F_5
19. H74-3398	Williams x Ransom	F_5
20. H75-9	Williams x Ransom	F_5
21. H75-5605	L67L-172 x V68-1034	F_5
22. H7751	Beeson x Md66-1258	F_5
23. K1039	L66L-144 x Calland	F_3
24. K1041	Williams x Calland	F_6
25. L74-3534	Williams x L2-Dt_2	F_7
26. L75-8221	Williams x L70-2450	F_4
27. L75-8234	Williams x L70-2450	F_4
28. L75-8291	Williams x L70-2450	F_4
29. L75-8388	Williams x L70-2450	F_4
30. L76-0022	Williams[4] x PI171451	F_5
31. U21408	C1371-71 x Amsoy	F_5
32. U36276	Bonus x Wayne	F_4
33. U37219	C1430 x Calland	F_5
34. U37710	L15 x C1517	F_4
35. U37729	L15 x C1517	F_4
36. U46484	Merit x Bonus	F_5

Four strains in this test, L75-8221, -8234, -8291, and -8388 are resistant to race 3 of the soybean cyst nematode. Yields of two of these, L75-8221 and L75-8388 were only slightly below the yields of the Group III check varieties. Yield of the Mexican bean beetle resistant strain L76-0022, was slightly below those of the check varieties. All five of the determinate strains, H74-620, -3382, -3398, H75-9, and -5605 have excellent shattering resistance. Yields of three of these, H74-620, -3382, and -3398 are equal to that of the check variety Woodworth.

PRELIMINARY TEST III, 1978

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Shattering Manhatten 2 weeks
Beeson (II)	PGBr	SYIb	3	4
Union (V)	WTTn	SYB1	4	1
Williams	WTTn	SYB1	4	1
Woodworth (III)	WTTn	DYB1	4	2
A77-311031	WTBr	DYG+Y	3	4
A77-313012	PGBr	DYIb	5	3
A77-313032	WTTn+Br	DYB1	4	2
A77-314013	WTBr	SYB1	3	3
A77-314017	P+WGBr	SYY	3	2
A77-315012	WTTn+Br	SYBf	1	2
A77-315024	WTBr	SYB1	3	2
C1567	WTBr	SYB1	3	2
C1570	WTTn	SYB1	4	2
C1571	WGTn	SYBf	3	1
C1575	WTTn	SYB1	2	4
C1577	WTBr	SYB1	2	4
H74-620	P+WTTn	SYB1	2	1
H74-3382	PTTn	SYB1	3	1
H74-3398	WTTn	SYB1	2	1
H75-9	PTTn	SYB1	2	1
H75-5605	WTTn	DYB1	3	1
H7751	PTBr	SYB1	4	2
K1039	WTBr	SYB1	4	2
K1041	WTTn	SYB1	2	2
L74-3534	PGBr	SYBf	3	1
L75-8221	PTBr	SYB1	3	4
L75-8234	WTTn+Br	SYB1	4	4
L75-8291	WTBr	SYB1	3	4
L75-8388	P+WTTn	SYB1	4	4
L76-0022	WTTn	SYB1	4	2
U21408	PGTn	SYBf	4	5
U36276	PTBr	SYB1	3	4
U37219	PTBr	DYB1	3	5
U37710	WTTn	SYB1	4	2
U37729	WTBr	SYB1	5	2
U46484	WGBr	DYBf	3	4

PRELIMINARY TEST III, 1978

Disease Data

Strain	FE_2 Laf. Ind. a	BSR Laf. Ind. n	BSR Ames, Ia. Stem n	BSR Ames, Ia. Plants n	DM Belle-ville Ill. n	PSB Laf. Ind. d	PS Laf. Ind. a	SMV Laf. Ind. a	PR Vick-ery Ohio n	PR Laf. Ind. a	race 1 Ames, Ia. a
	Score	%	%	%	Score	%	%	Score	----Reaction-----		
Beeson (II)	1	100	69	100	3.0	4	3	3M	4.0	R	R
Union (IV)	4	40	91	100	1.0	1	1	5E	3.5	R	R
Williams	5	100	87	100	3.5	4	2	5E	3.0	S	S
Woodworth (III)	4	0	90	100	3.0	5	2	5E	4.0	S	S
A77-311031	5	40	87	100	3.0	2	1	5S	3.0	H	S
A77-313012	3	100	65	100	4.0	5	4	5E	4.5	R	R
A77-313032	1	100	95	100	4.0	4	4	5S	3.0	S	S
A77-314013	4	20	81	100	5.0	1	1	5E	3.5	H	H
A77-314017	3	20	78	100	3.0	0	1	5S	3.5	S	S
A77-315012	5	0	64	100	3.5	0	1	5E	2.5	R	H
A77-315024	1	40	100	100	2.5	2	1	5E	3.0	H	S
C1567	4	20	78	100	4.5	1	0	3M	4.0	R	R
C1570	4	60	83	100	4.0	1	0	5E	2.5	R	R
C1571	3	20	97	100	5.0	0	2	3M	3.0	R	R
C1575	5	80	97	100	3.0	0	1	5E	3.0	R	R
C1577	4	40	90	100	3.5	0	0	5E	2.5	R	R
H74-620	5	60	100	100	1.5	1	0	1	3.0	H	S
H74-3382	5	0	100	100	2.5	0	0	2E	3.5	H	S
H74-3398	5	20	96	100	1.0	1	0	1	3.5	S	S
H75-9	5	40	98	100	1.0	0	0	5E	4.0	S	S
H75-5605	1	60	97	100	1.0	2	0	5E	3.5	S	S
H7751	1	80	92	100	3.0	0	2	4E	5.0	S	S
K1039	5	20	98	100	3.0	9	1	5E	3.0	R	R
K1041	4	40	74	100	3.0	3	1	5E	2.5	R	H
L74-3534	4	40	100	100	2.5	1	1	5E	4.0	R	R
L75-8221	4	20	89	100	4.0	0	2	5E	4.0	R	H
L75-8234	4	60	95	100	4.0	2	1	5E	2.5	S	H
L75-8291	5	80	87	100	3.5	0	1	5E	3.5	S	S
L75-8388	5	80	94	100	4.5	0	0	5E	3.5	S	S
L76-0022	4	80	95	100	3.5	1	2	4M	2.5	H	S
U21408	4	40	96	100	3.5	0	3	4M	2.5	R	H
U36276	4	20	95	100	4.0	11	3	5M	3.0	H	H
U37219	5	0	75	100	1.0	4	1	5E	3.0	R	R
U37710	3	80	100	100	4.0	4	0	5E	3.0	R	H
U37729	1	60	89	100	4.0	1	0	4M	3.0	R	H
U46484	5	20	88	100	3.5	0	1	2M	2.5	R	H

PRELIMINARY TEST III, 1978

Regional Summary

Strain	Yield	Rank	Maturity	Lodging	Height	Seed Quality	Seed Size	Seed Composition Protein	Seed Composition Oil
No. of Tests	9	9	8	9	9	7	8	4	4
	bu/a	No.	Date	Score	In.	Score	g/100	%	%
Beeson (II)	49.5	12	-7.8	2.1	40	2.5	18.7	41.7	20.5
Union (IV)	47.2	27	+6.4	2.5	48	1.7	18.3	42.7	20.8
Williams	48.6	20	+3.9	2.0	44	1.7	17.6	42.4	21.0
Woodworth (III)	50.3	9	9-26*	1.9	43	1.6	15.0	40.8	21.3
A77-311031	51.4	4	-2.9	2.4	39	2.2	15.0	42.2	21.6
A77-313012	48.9	15	+0.4	2.9	42	2.0	15.9	41.7	21.0
A77-313032	48.8	18	+1.2	2.3	38	2.2	16.7	42.5	20.1
A77-314013	52.3	1	+2.1	2.0	45	1.8	18.3	42.3	21.3
A77-314017	50.9	6	+2.6	3.1	48	1.9	16.6	41.9	21.1
A77-315012	48.9	15	+4.0	3.4	50	2.0	15.6	42.4	20.4
A77-315024	51.6	3	+4.2	2.9	45	1.8	15.3	41.6	21.1
C1567	47.2	27	+1.0	2.0	42	2.3	17.8	42.0	20.6
C1570	48.1	22	+5.4	2.1	45	1.5	16.4	41.9	20.7
C1571	49.4	13	+0.1	1.4	40	1.9	17.0	41.1	21.7
C1575	47.3	26	-2.2	2.0	42	2.0	16.0	40.3	20.6
C1577	46.2	31	+3.2	2.1	48	1.8	16.8	44.2	20.3
H74-620	50.2	10	+5.0	1.5	26	1.5	18.0	40.9	22.7
H74-3382	50.5	8	+1.8	1.3	25	1.3	15.7	39.9	22.4
H74-3398	50.2	10	+2.6	1.4	24	1.3	16.5	40.9	21.8
H75-9	36.3	36	+2.4	1.2	19	1.8	17.4	43.8	21.5
H75-5605	48.7	19	-3.9	1.4	26	1.5	13.3	40.4	21.0
H7751	47.9	23	+3.1	2.2	44	2.1	17.0	40.9	21.2
K1039	45.7	33	+3.5	3.0	48	2.3	18.9	41.7	20.6
K1041	51.1	5	+8.4	2.9	48	2.0	17.1	40.0	21.7
L74-3534	46.8	29	+3.9	2.1	41	2.0	17.2	42.6	20.7
L75-8221	46.3	30	-3.2	2.3	43	1.8	15.7	41.2	21.3
L75-8234	42.5	35	+4.8	2.2	50	2.0	18.3	41.1	21.0
L75-8291	43.1	34	+3.9	2.3	46	1.8	17.7	42.5	20.4
L75-8388	48.9	15	-0.2	2.2	42	1.7	17.6	41.9	20.6
L76-0022	46.2	31	+5.1	2.4	45	1.6	17.1	43.6	20.4
U21408	47.5	24	-0.8	2.5	45	2.1	15.5	40.2	21.3
U36276	50.7	7	-2.0	1.6	37	2.1	15.1	42.9	20.4
U37219	51.8	2	+1.9	1.7	42	2.1	18.3	44.1	19.3
U37710	49.3	14	+3.8	1.8	41	1.9	14.6	41.3	20.2
U37729	48.3	21	-0.4	2.1	46	1.9	17.4	42.0	21.1
U46484	47.5	24	+1.2	2.2	45	1.7	15.5	41.5	22.7

PRELIMINARY TEST III, 1978

Strain	Mean 9 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
		YIELD (bu/a)			
Beeson (II)	49.5	67.0	47.9	50.6	39.7
Union (IV)	47.2	56.6	51.2	50.8	50.5
Williams	48.6	63.0	52.7	49.9	53.0
Woodworth (III)	50.3	67.6	50.5	48.5	48.4
A77-311031	51.4	63.6	50.3	51.8	52.3
A77-313012	48.9	54.6	48.2	51.0	53.0
A77-313032	48.8	63.1	46.1	45.0	47.9
A77-314013	52.3	59.6	52.2	56.5	52.8
A77-314017	50.9	61.8	53.1	50.8	45.6
A77-315012	48.9	56.9	53.4	50.5	44.6
A77-315024	51.6	60.6	52.3	48.5	50.5
C1567	47.2	60.0	45.0	47.4	47.2
C1570	48.1	57.2	49.1	45.0	52.7
C1571	49.4	59.4	48.1	47.7	42.9
C1575	47.3	59.5	51.7	48.1	47.2
C1577	46.2	57.4	47.4	47.1	48.8
H74-620	50.2	60.4	44.4	51.2	52.9
H74-3382	50.5	64.1	46.3	52.2	52.7
H74-3398	50.2	64.9	46.4	53.1	52.9
H75-9	36.3	60.4	35.8	41.0	35.6
H75-5605	48.7	64.2	48.3	52.0	44.3
H7751	47.9	59.5	35.6	51.6	53.2
K1039	45.7	56.0	45.8	49.6	37.5
K1041	51.1	66.8	56.9	54.3	49.8
L74-3534	46.8	63.0	48.4	48.1	49.1
L75-8221	46.3	55.2	45.0	52.0	44.1
L75-8234	42.5	49.2	45.9	44.3	44.4
L75-8291	43.1	55.5	49.2	40.9	46.9
L75-8388	48.9	58.4	51.1	45.2	46.8
L76-0022	46.2	60.8	47.7	47.7	42.5
U21408	47.5	61.6	46.6	44.7	49.1
U36276	50.7	67.8	45.2	44.2	51.4
U37219	51.8	63.3	52.8	51.6	52.5
U37710	49.3	60.6	51.9	45.3	50.8
U37729	48.3	60.4	52.6	46.9	44.8
U46484	47.5	57.8	51.7	41.2	43.5
C.V. (%)		7.7	7.4	5.6	8.3
L.S.D. (5%)		NS	7.2	5.6	8.1
Row Sp. (in.)		30"	30"	30"	30"
Rows/Plot		4	4	4	4
Reps.		2	2	2	2

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kans
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		YIELD (bu/a)		
44.9	57.3	40.4	52.3	45.3
39.0	51.1	35.1	41.8	48.9
40.4	54.3	31.1	46.6	46.2
40.6	56.2	37.7	52.1	51.3
46.5	54.0	43.9	52.4	47.4
43.3	54.6	34.2	52.3	48.8
40.3	52.2	39.1	56.2	49.0
45.8	62.7	44.1	46.1	51.0
45.2	60.3	38.4	51.8	51.0
36.4	57.4	32.4	53.3	55.6
45.4	57.8	44.3	53.1	51.5
41.4	52.2	32.7	44.7	54.3
41.8	56.1	33.5	42.0	55.4
44.7	55.1	42.5	51.1	52.9
43.0	54.4	30.4	46.2	45.1
38.2	50.9	35.4	41.9	49.1
44.4	51.4	47.5	62.4	36.9
41.4	60.7	35.7	60.8	40.7
45.0	53.9	42.8	55.3	37.3
23.5	38.4	40.0	42.5	9.5
43.4	48.0	42.3	55.4	40.6
41.8	58.4	37.0	41.6	52.2
43.5	52.3	33.4	40.4	52.6
45.1	50.6	37.9	44.3	54.6
39.1	48.3	32.0	40.0	53.5
39.1	54.8	34.3	45.9	46.2
37.6	46.5	35.1	38.1	41.8
37.4	43.8	25.7	45.2	43.7
41.7	48.3	39.9	59.4	49.2
40.7	48.7	37.0	40.1	50.8
42.3	58.1	36.4	45.1	43.8
49.2	54.3	42.7	55.4	46.3
47.3	65.1	42.1	46.9	45.0
39.6	57.0	35.8	48.0	54.3
42.9	56.4	38.8	47.9	43.2
43.3	53.1	44.3	44.4	48.6
6.7	7.6	14.8	8.6	6.9
5.7	8.1	9.0	6.9	6.6
27"	13.5"	30"	30"	30"
4	5	3	4	4
2	2	3	2	3

PRELIMINARY TEST III, 1978

Strain	Mean 9 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
		YIELD RANK			
Beeson (II)	12	3	22	14	34
Union (IV)	27	31	12	12	13
Williams	20	11	5	16	2
Woodworth (III)	9	2	14	18	19
A77-311031	4	8	15	7	10
A77-313012	15	35	20	11	2
A77-313032	18	10	28	29	20
A77-314013	1	22	8	1	6
A77-314017	6	13	3	12	25
A77-315012	15	30	2	15	27
A77-315024	3	16	7	18	13
C1567	27	21	32	24	21
C1570	22	29	17	29	7
C1571	13	25	21	22	32
C1575	26	23	10	20	21
C1577	31	28	24	25	18
H74-620	10	18	34	10	4
H74-3382	8	7	27	4	7
H74-3398	10	5	26	3	4
H75-9	36	18	35	35	36
H75-5605	19	6	19	5	29
H7751	23	23	36	8	1
K1039	33	32	30	17	35
K1041	5	4	1	2	15
L74-3534	29	11	18	20	16
L75-8221	30	34	32	5	30
L75-8234	35	36	29	32	28
L75-8291	34	33	16	36	23
L75-8388	15	26	13	28	24
L76-0022	31	15	23	22	33
U21408	24	14	25	31	16
U36276	7	1	31	33	11
U37219	2	9	4	8	9
U37710	14	16	9	27	12
U37729	21	18	6	26	26
U46484	24	27	10	34	31

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kans.
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		YIELD RANK		
9	9	11	12	25
31	27	25	31	18
26	18	34	19	23
25	12	18	13	11
3	20	5	10	21
14	16	28	11	19
27	24	14	4	17
4	2	4	21	12
6	4	16	14	12
35	8	32	8	1
5	7	3	9	10
22	24	31	25	4
19	13	29	29	2
10	14	8	15	7
16	17	35	20	26
32	28	24	30	16
11	26	1	1	35
22	3	23	2	32
8	21	6	7	34
36	36	12	28	36
13	33	9	5	33
19	5	19	32	9
12	23	30	33	8
7	29	17	27	3
29	31	33	35	6
29	15	27	22	23
33	34	26	36	31
34	35	36	23	29
21	31	13	3	15
24	30	20	34	14
18	6	21	24	28
1	18	7	5	22
2	1	10	18	27
28	10	22	16	4
17	11	15	17	30
14	22	2	26	20

PRELIMINARY TEST III, 1978

Strain	Mean 8 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
		MATURITY (relative date)			
Beeson (II)	-7.8	-3	-2	-6	-11
Union (IV)	+6.4	+8	+6	+3	+5
Williams	+3.9	+6	+6	+2	+3
Woodworth (III)	9-26	9-18	9-18	9-23	9-17
A77-311031	-2.9	0	+1	-4	-3
A77-313012	+0.4	+3	+2	0	-1
A77-313032	+1.2	+4	+3	-1	-1
A77-314013	+2.1	+2	+6	+1	+2
A77-314017	+2.6	+3	+6	0	+2
A77-315012	+4.0	+6	+6	+2	+3
A77-315024	+4.2	+4	+5	+3	+4
C1567	+1.0	+2	+4	0	0
C1570	+5.4	+8	+2	+3	+3
C1571	+0.1	0	+2	-1	-4
C1575	-2.2	+2	0	-2	-6
C1577	+3.2	+3	+4	+1	+4
H74-620	+5.0	+10	+6	+4	+5
H74-3382	+1.8	+4	+4	+1	+4
H74-3398	+2.6	+6	+4	+3	+4
H75-9	+2.4	+3	+5	+4	+5
H75-5605	-3.9	0	-2	-2	-4
H7751	+3.1	+6	+5	+3	+3
K1039	+3.5	+4	+4	+1	+2
K1041	+8.4	+12	+8	+9	+5
L74-3534	+3.9	+4	+2	+3	+2
L75-8221	-3.2	0	-1	-2	-3
175-8234	+4.8	+4	+6	+5	+3
L75-8291	+3.9	+5	+6	+1	+2
L75-8388	-0.2	0	+2	0	-2
L76-0022	+5.1	+8	+2	+3	+3
U21408	-0.8	+4	+2	-1	-4
U36276	-2.0	0	+2	-1	-3
U37219	+1.9	+2	+3	+3	+3
U37710	+3.8	+4	+4	+2	+3
U37729	-0.4	+3	+2	-2	-3
U46484	+1.2	+3	+5	+1	+1
Date planted	5-11	5-1	5-27	5-27	5-28
*Days to mat.	126	140	114	119	112

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kans.
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		MATURITY (relative date)		
	-10	-7	-7	-16
	+10	+5	+9	+5
	+6	+4	+2	+2
	9-28	10-1	10-2	9/20
	-6	-6	-3	-2
	+2	-2	-1	0
	0	-1	-1	+7
	+2	+3	0	+1
	+2	+3	+1	+4
	+2	+2	+4	+7
	+4	+6	+1	+7
	0	+2	0	0
	+8	+5	+6	+8
	-2	+5	-1	+2
	-4	-4	-1	-3
	+2	+3	+3	+6
	+4	-1	+7	+5
	0	-2	+2	+1
	+2	-2	0	+4
	+2	-1	0	+1
	-6	-7	-7	-3
	+1	+1	+2	+4
	+2	+7	+7	+1
	+10	+11	+10	+2
	+8	+2	+7	+3
	-5	-4	-4	-7
	+4	+3	+7	+6
	+2	+4	+4	+7
	0	-3	0	+1
	+10	+8	+3	+4
	-1	-3	+3	-6
	-2	+1	-6	-7
	+2	+4	+1	-3
	+4	+2	+4	+7
	0	-1	-2	0
	0	+1	-2	+1
5-19	5-28	5-22	5-24	5-3
	123	131	131	141

PRELIMINARY TEST III, 1978

Strain	Mean 9 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
		LODGING (score)			
Beeson (II)	2.1	2.0	1.8	2.4	3.3
Union (IV)	2.5	4.0	2.8	2.6	2.5
Williams	2.0	2.8	2.0	2.4	2.1
Woodworth (III)	1.9	2.2	3.0	2.3	2.0
A77-311031	2.4	2.8	2.8	3.2	2.0
A77-313012	2.9	4.0	3.8	3.4	2.8
A77-313032	2.3	2.5	3.3	2.7	1.5
A77-314013	2.0	2.2	2.3	2.1	2.3
A77-314017	3.1	3.8	4.0	3.0	3.0
A77-315012	3.4	4.5	3.5	3.6	4.0
A77-315024	2.9	3.8	3.5	2.8	2.8
C1567	2.0	2.2	2.3	3.0	2.2
C1570	2.1	3.8	2.5	2.4	1.8
C1571	1.4	1.8	1.5	1.5	1.8
C1575	2.0	2.2	2.5	2.1	2.3
C1577	2.1	2.5	2.3	1.9	1.8
H74-620	1.5	3.2	1.3	2.0	1.0
H74-3382	1.3	2.0	1.3	1.8	1.0
H74-3398	1.4	2.5	1.3	1.8	1.3
H75-9	1.2	1.8	1.0	1.2	1.0
H75-5605	1.4	2.0	1.0	1.6	2.5
H7751	2.2	3.5	2.3	2.4	1.8
K1039	3.0	4.0	2.0	3.8	3.3
K1041	2.9	4.2	2.8	3.0	3.0
L74-3534	2.1	2.8	2.3	2.6	2.5
L75-8221	2.3	3.0	2.3	2.7	3.3
L75-8234	2.2	3.5	2.0	2.7	2.8
L75-8291	2.3	3.5	2.5	2.6	2.0
L75-8388	2.2	3.0	2.0	2.6	3.0
L76-0022	2.4	3.0	2.8	2.8	2.4
U21408	2.5	2.8	2.5	3.4	3.0
U36276	1.6	1.8	1.8	2.1	1.0
U37219	1.7	2.2	1.5	1.7	2.0
U37710	1.8	2.2	2.0	2.0	1.5
U37729	2.1	3.0	2.0	2.1	2.8
U46484	2.2	2.0	2.0	2.8	2.8

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kan.
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		LODGING (score)		
1.7	2.4	1	2.0	2.0
2.0	2.8	2	1.8	1.7
1.4	2.4	2	1.8	1.5
1.5	2.4	1	1.5	1.4
1.7	2.5	2	2.3	2.3
2.2	3.0	2	1.8	3.0
1.9	2.2	2	1.8	2.8
1.5	2.3	2	1.5	1.5
2.3	2.9	3	2.5	3.3
2.5	2.8	3	3.5	2.8
2.4	2.6	2	3.3	3.0
1.9	2.4	1	1.5	1.9
1.6	2.6	1	1.5	1.7
1.3	1.6	1	1.3	1.0
1.7	2.3	2	1.5	1.8
1.7	2.4	3	1.5	1.9
1.3	1.4	1	1.0	1.0
1.4	1.5	1	1.0	1.0
1.4	1.5	1	1.0	1.0
1.2	1.4	1	1.0	1.0
1.3	1.6	1	1.0	1.0
1.8	2.4	2	2.0	1.9
2.4	2.6	4	2.5	2.0
2.4	2.7	4	2.0	1.8
1.5	2.6	1	2.5	1.1
1.8	2.4	1	2.0	1.8
1.9	2.4	1	1.5	1.7
1.9	2.5	2	2.0	2.0
1.8	2.3	2	2.0	1.5
1.9	2.7	2	2.0	1.7
1.8	2.4	2	1.8	2.4
1.4	2.0	1	1.3	1.9
1.6	1.8	1	1.5	1.8
1.6	2.4	1	1.8	2.0
1.9	2.2	2	1.5	1.8
2.1	2.2	2	1.8	2.3

PRELIMINARY TEST III, 1978

Strain	Mean 9 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
			PLANT HEIGHT (inches)		
Beeson (II)	40	34	36	41	42
Union (IV)	48	47	48	51	47
Williams	44	40	42	48	46
Woodworth (III)	43	42	40	45	43
A77-311031	39	37	38	42	41
A77-313012	42	39	40	44	40
A77-313032	38	36	36	40	39
A77-314013	45	42	41	50	47
A77-314017	48	42	51	49	49
A77-315012	50	50	52	54	50
A77-315024	45	43	46	42	46
C1567	42	40	38	45	45
C1570	45	44	44	49	46
C1571	40	38	38	42	40
C1575	42	40	40	45	45
C1577	48	42	48	54	48
H74-620	26	29	28	26	20
H74-3382	25	27	28	26	18
H74-3398	24	26	24	25	22
H75-9	19	24	19	17	14
H75-5605	26	30	24	28	22
H7751	44	42	43	48	42
K1039	48	50	45	52	51
K1041	48	45	50	55	51
L74-3534	41	39	40	45	42
L75-8221	43	42	41	48	44
L75-8234	50	50	46	53	47
L75-8291	46	42	46	49	47
L75-8388	42	37	44	48	40
L76-0022	45	42	46	49	46
U21408	45	42	42	50	44
U36276	37	37	34	39	38
U37219	42	40	41	43	42
U37710	41	38	40	43	41
U37729	46	45	42	49	49
U46484	45	42	44	52	47

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kans.
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		PLANT HEIGHT (inches)		
39	41	41	42	42
42	51	46	51	47
40	44	44	47	46
40	43	43	46	44
34	36	40	39	41
38	42	44	41	47
36	38	41	37	43
41	48	47	44	49
44	50	46	52	52
47	50	44	51	53
44	44	44	46	52
38	42	44	40	46
41	47	45	47	46
38	40	42	40	44
38	46	41	41	44
42	54	46	48	52
26	28	29	28	17
26	30	28	28	15
23	24	26	27	17
14	22	26	24	10
28	30	30	26	20
40	44	44	44	46
44	48	49	48	49
43	48	49	43	45
40	42	44	43	35
42	44	43	41	45
48	56	50	50	50
44	43	46	48	49
43	45	42	41	42
40	46	45	44	50
43	50	47	42	47
35	36	39	34	39
40	44	43	41	45
40	44	40	42	42
44	50	44	46	49
44	44	45	47	44

PRELIMINARY TEST III, 1978

Strain	Mean 7 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
		SEED QUALITY			
Beeson (II)	2.5	2.0	1.5	3.3	3.5
Union (IV)	1.7	1.0	1.5	1.8	2.0
Williams	1.7	1.8	1.0	1.8	2.0
Woodworth (III)	1.6	1.2	1.0	1.3	1.8
A77-311031	2.2	1.8	1.5	2.0	2.8
A77-313012	2.0	1.8	1.5	2.3	2.3
A77-313032	2.2	1.8	2.0	2.8	2.0
A77-314013	1.8	1.2	2.0	1.8	2.0
A77-314017	1.9	2.0	2.0	1.8	2.0
A77-315012	2.0	1.0	2.0	2.0	2.5
A77-315024	1.8	1.0	1.0	2.3	2.3
C1567	2.3	2.0	1.5	2.3	3.0
C1570	1.5	1.0	1.0	1.5	1.8
C1571	1.9	1.2	1.5	2.0	2.5
C1575	2.0	2.0	1.0	2.3	2.8
C1577	1.8	1.0	1.5	1.5	2.3
H74-620	1.5	1.0	1.5	1.5	2.3
H74-3382	1.3	1.0	1.0	1.3	1.5
H74-3398	1.3	1.2	1.0	1.3	1.8
H75-9	1.8	1.2	1.5	1.8	2.5
H75-5605	1.5	1.0	1.5	1.5	2.0
H7751	2.1	1.2	1.5	2.5	3.0
K1039	2.3	2.0	2.0	2.3	3.0
K1041	2.0	1.0	2.0	2.0	2.5
L74-3534	2.0	2.0	1.0	1.8	2.8
L75-8221	1.8	1.5	1.0	2.0	2.5
L75-8234	2.0	1.5	1.0	2.5	2.8
L75-8291	1.8	1.5	1.0	2.5	2.3
L75-8388	1.7	1.0	1.0	2.0	2.5
L76-0022	1.6	1.0	1.0	1.8	1.8
U21408	2.1	2.0	1.5	2.3	2.5
U36276	2.1	2.0	1.0	2.5	2.8
U37219	2.1	2.0	1.0	2.0	2.5
U37710	1.9	1.5	1.5	2.0	2.0
U37729	1.9	1.2	1.5	2.0	2.8
U46484	1.7	1.0	2.0	1.5	2.3

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kans.
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		SEED QUALITY		
1.8			3.3	2.4
1.4			2.8	1.7
1.5			2.5	1.4
1.6			2.8	1.4
1.9			3.3	2.0
1.3			3.3	1.8
1.8			3.3	2.0
1.3			2.8	1.4
1.2			2.8	1.7
1.7			3.0	1.7
1.5			2.8	1.5
1.6			3.8	1.8
1.2			2.8	1.5
1.3			3.0	1.7
1.4			2.8	1.8
1.3			3.5	1.6
1.4			1.8	1.4
1.4			1.5	1.4
1.2			1.5	1.4
1.6			2.3	1.4
1.4			1.5	1.4
1.7			3.0	1.6
1.7			3.5	1.9
1.6			3.0	1.8
1.9			3.0	1.6
1.2			2.8	1.5
1.2			3.0	1.7
1.3			2.5	1.6
1.6			2.3	1.8
1.4			2.8	1.6
1.6			3.0	1.9
1.3			3.0	1.8
1.7			3.5	1.7
1.3			3.3	1.9
1.3			3.0	1.6
1.4			2.5	1.5

PRELIMINARY TEST III, 1978

Strain	Mean 8 Tests	Ohio S. Charleston	Ind. Lafayette	Ill. Urbana	Ill. Belleville
		SEED SIZE (g/100)			
Beeson (II)	18.7	20.0	22.1	20.6	16.4
Union (IV)	18.3	19.0	19.9	21.1	17.9
Williams	17.6	18.0	19.3	20.8	16.1
Woodworth (III)	15.0	16.0	15.8	17.9	13.8
A77-311031	15.0	17.0	16.5	17.8	13.7
A77-313012	15.9	17.0	17.2	18.8	14.1
A77-313032	16.7	18.0	17.7	18.4	14.8
A77-314013	18.3	19.0	19.2	22.9	16.9
A77-314017	16.6	19.0	18.4	18.0	14.8
A77-315012	15.6	16.0	16.7	18.1	14.4
A77-315024	15.3	16.0	17.3	17.7	13.6
C1567	17.8	18.0	19.4	21.3	17.8
C1570	16.4	17.0	17.5	18.8	16.4
C1571	17.0	16.0	19.4	19.9	14.7
C1575	16.0	18.0	18.2	19.1	15.0
C1577	16.8	18.0	18.5	18.7	16.9
H74-620	18.0	20.0	18.2	19.9	16.9
H74-3382	15.7	18.0	16.0	17.2	14.1
H74-3398	16.5	18.0	17.2	19.2	15.6
H75-9	17.4	19.0	18.8	19.9	17.0
H75-5605	13.3	14.0	14.3	14.2	11.3
H7751	17.0	18.0	18.7	20.1	16.6
K1039	18.9	21.0	20.3	20.9	17.7
K1041	17.1	18.0	19.1	19.6	15.5
L74-3534	17.2	19.0	18.5	19.5	16.3
L75-8221	15.7	17.0	16.6	18.0	14.1
L75-8234	18.3	19.0	19.7	21.7	16.4
L75-8291	17.7	19.0	19.1	19.7	16.3
L75-8388	17.6	18.0	19.4	19.0	15.3
L76-0022	17.1	18.0	18.6	20.3	15.5
U21408	15.5	18.0	17.4	17.5	13.7
U36276	15.1	17.0	17.0	16.1	14.5
U37219	18.3	20.0	19.9	20.9	18.5
U37710	14.6	16.0	16.4	16.0	13.8
U37729	17.4	20.0	20.0	19.0	14.8
U46484	15.5	16.0	17.0	15.5	14.7

PRELIMINARY TEST III, 1978

Iowa		S.D.	Neb.	Kans.
Stuart	Martins-burg	Elk Point	Mead	Man-hatten
		SEED SIZE (g/100)		
17.4		14.7	20.0	16.8
17.6		16.0	18.4	16.6
17.8		14.7	19.0	15.0
14.2		12.4	15.8	13.7
14.2		12.5	16.1	12.5
14.8		11.6	15.9	17.5
16.4		14.4	17.8	16.0
18.4		16.9	17.6	15.8
16.5		14.3	16.2	15.9
15.0		12.7	16.1	15.9
14.3		12.5	16.3	14.7
18.2		15.1	16.2	16.2
16.8		14.2	15.3	15.4
17.3		13.4	18.9	16.2
16.0		12.1	15.9	14.1
17.4		13.6	15.4	16.2
17.6		14.8	18.5	18.0
15.2		12.4	16.2	16.8
16.0		13.4	16.2	16.3
15.8		15.0	16.8	17.1
14.6		10.5	14.3	13.3
17.7		13.8	15.7	15.8
18.0		15.1	19.6	18.7
16.9		14.8	17.0	15.9
16.0		13.7	16.8	17.5
14.7		13.0	17.4	14.9
18.8		16.5	17.9	16.6
17.2		15.3	18.8	15.9
17.0		14.8	20.8	16.7
17.4		15.2	16.0	15.9
15.2		13.0	15.0	14.3
15.2		13.0	15.5	12.2
18.5		16.1	16.8	15.9
14.6		11.7	14.1	14.1
16.2		15.0	18.3	16.0
15.8		15.2	15.4	14.6

PRELIMINARY TEST III, 1978

Strain	Mean 4 Tests	Ind. Lafay-ette	Ill. Urbana	Iowa Stuart	Kans. Man-hatten
		PROTEIN (%)			
Beeson (II)	41.7	42.8	43.1	39.3	41.5
Union (IV)	42.7	43.5	43.6	42.8	40.8
Williams	42.4	42.5	43.8	43.1	40.3
Woodworth (III)	40.8	41.4	41.6	40.4	40.0
A77-311031	42.2	43.7	44.5	39.9	40.7
A77-313012	41.7	42.6	43.2	40.2	40.7
A77-313032	42.5	43.2	43.2	41.7	41.8
A77-314013	42.3	43.2	44.0	41.8	40.3
A77-314017	41.9	43.4	42.5	42.1	39.5
A77-315012	42.4	42.9	42.8	43.2	40.5
A77-315024	41.6	43.2	43.2	40.6	39.6
C1567	42.0	42.8	43.9	41.7	39.8
C1570	41.9	42.5	43.3	41.9	39.9
C1571	41.1	43.3	42.4	40.4	38.2
C1575	40.3	41.4	42.2	38.8	38.9
C1577	44.2	45.2	46.1	43.6	42.0
H74-620	40.9	41.9	43.0	39.4	39.2
H74-3382	39.9	41.1	41.5	38.9	38.1
H74-3398	40.9	41.7	42.4	40.5	39.1
H75-9	43.8	45.1	44.3	42.8	42.8
H75-5605	40.4	41.6	42.6	38.5	39.1
H7751	40.9	42.7	42.4	40.5	38.1
K1039	41.7	41.7	43.9	40.2	41.0
K1041	40.0	40.2	41.8	39.7	38.3
L74-3534	42.6	42.6	44.9	42.1	40.9
L75-8221	41.2	42.2	42.6	39.7	40.1
L75-8234	41.1	40.3	42.5	41.8	39.9
L75-8291	42.5	42.8	44.6	42.2	40.4
L75-8388	41.9	42.7	43.9	40.3	40.8
L76-0022	43.6	43.7	45.7	42.6	42.3
U21408	40.2	40.8	42.7	39.5	37.8
U36276	42.9	44.1	45.1	41.4	41.0
U37219	44.1	45.5	47.0	42.4	41.5
U37710	41.3	42.7	43.0	40.9	38.5
U37729	42.0	43.6	43.4	40.4	40.5
U46484	41.5	42.9	43.7	39.0	40.4

PRELIMINARY TEST III, 1978

Strain	Mean 4 Tests	Ind. Lafayette	Ill. Urbana	Iowa Stuart	Kans. Manhatten
		Oil (%)			
Beeson (II)	20.5	20.5	19.4	21.0	21.2
Union (IV)	20.8	20.0	20.3	20.6	22.4
Williams	21.0	20.9	20.6	20.0	22.7
Woodworth (III)	21.3	20.7	20.6	21.1	22.9
A77-311031	21.6	20.0	21.3	21.6	23.5
A77-313012	21.0	20.3	20.3	21.7	21.9
A77-313032	20.1	19.9	19.4	19.9	21.3
A77-314013	21.3	20.3	20.6	21.9	22.4
A77-314017	21.1	20.1	20.7	20.6	23.1
A77-315012	20.4	20.1	20.3	19.1	21.9
A77-315024	21.1	20.5	20.2	21.1	22.7
C1567	20.6	20.4	19.7	20.6	21.6
C1570	20.7	20.6	19.9	20.5	21.8
C1571	21.7	19.5	20.5	22.7	24.0
C1575	20.6	20.1	19.8	21.1	21.5
C1577	20.3	19.7	19.5	20.3	21.6
H74-620	22.7	22.0	21.3	23.2	24.3
H74-3382	22.4	21.9	21.5	22.6	23.6
H74-3398	21.8	22.2	20.8	21.0	23.3
H75-9	21.5	19.7	21.7	22.5	22.1
H75-5605	21.0	19.9	20.1	21.9	21.9
H7751	21.2	20.3	20.4	20.8	23.2
K1039	20.6	20.5	19.4	21.0	21.4
K1041	21.7	21.5	20.6	22.1	22.5
L74-3534	20.7	20.8	19.4	20.1	22.4
L75-8221	21.3	19.8	20.8	22.2	22.5
L75-8234	21.0	21.1	19.5	20.6	22.7
L75-8291	20.4	20.0	19.2	20.2	22.1
L75-8388	20.6	19.6	19.2	21.2	22.5
L76-0022	20.4	19.8	19.2	21.0	21.7
U21408	21.3	21.3	20.1	21.2	22.7
U36276	20.4	19.4	19.3	21.3	21.4
U37219	19.3	18.4	18.3	19.5	21.1
U37710	20.2	19.7	19.0	20.0	22.2
U37729	21.1	20.3	20.3	21.7	22.2
U46484	22.7	21.9	20.9	23.9	24.0

Strain	Parentage	Previous Testing*	Generation Composited
1. Essex (V)	Lee x S5-7075	1	F_6
2. Union (IV)	Williams[5] x SL11 (Wayne Rpm Rps)	2	F_3
3. Williams (III)	Wayne x L57-0034 (Clark & Adams)	1	F_6
4. K1024	L66L-140 x Columbus	1	F_4
5. K1033	Williams x Calland	PIV	F_5
6. K1035	Williams x Calland	PIV	F_5
7. K1036	Williams x Calland	PIV	F_5
8. L70L-3048	L15 x D64-3146	3	F_7
9. L74D-609	Williams x Ransom	1	F_5
10. L74D-634	Williams x Ransom	1	F_5
11. L74D-674	Amsoy 71 x Ransom	1	F_5
12. L74L-125	Calland x Williams	PIV	F_6
13. L74L-228	L68-4096 (Wayne Rpm Rps) x Williams	PIV	F_6
14. Miles (Md71-407)	Clark x D64-4731	2	F_6

*Number of years in this test, or name of 1977 test.

The three-year summary shows the similarity in performance of Union and L70L-3048, both of which yield about two bushels more than Miles. Union is resistant to race 1 of phytophthora and to downy mildew and L70L-3048 is susceptible to both these diseases.

The two-year summary has the three determinate strains L74D-609, -634, and -674 lower in yield than Union, K1024, and L707-3048 but superior to these strains in lodging resistance.

In 1978 the highest yielding strain in the test was K1033, which was about one bushel higher in yield than Union but matured eight days later than Union. K1033 is resistant to race 1 of phytophthora but is susceptible to downy mildew.

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Hypocotyl Score Ames	Shattering Manhattan 2 weeks
Essex (V)	PGTn	SYBf	3	2	1.0
Union (IV)	WTTn	SYB1	4	5	2.0
Williams (III)	WTTn	SYB1	4	5	2.0
K1024	PTBr	DYB1	4	5	2.0
K1033	WTBr	SYB1	3	4	1.0
K1035	WTBr	DYG	3	1	1.5
K1036	WTBr	DYB1	3	2	1.0
L70L-3048	WGTn	SYBf	4	5	2.5
L74D-609	PTTn	DYB1	3	1	3.0
L74D-634	WTBr	SYB1	3	1	1.0
L74D-674	PTBr	SYG	2	1	2.5
L74L-125	PTTn	SYB1	2	4	2.0
L74L-228	WTBr	SYG	4	5	3.0
Miles (Md71-407)	PTTn	SYB1	3	1	3.0

Disease Data

Strain	FEZ	BSR			DM	PSB	PS	SMV	PR race 1	
			Ames, Ia.							
	Laf. Ind.	Laf. Ind.	stem	plants	Belle-ville Ill.	Laf. Ind.	Laf. Ind.	Laf. Ind.	Laf. Ind.	Ames Ia.
	a	n	n	n	n	d	a	a	a	a
	score	%	%	%	score	%	%	-----reaction------		
Essex (V)	4	100	92	100	1.3	1	0	5E	S	S
Union (IV)	4	40	92	100	1.0	1	1	5E	R	R
Williams (III)	5	100	97	100	3.5	4	2	5E	S	S
K1024	3	80	100	100	3.3	3	1	5E	S	S
K1033	4	0	100	100	3.5	9	1	4E	R	R
K1035	5	40	98	100	3.0	4	1	4E	R	R
K1036	4	40	100	100	3.8	0	0	5M	R	R
L70L-3048	2	100	86	100	2.3	1	3	3M	S	S
L74D-609	1	60	85	100	1.0	0	0	5E	S	S
L74D-634	3	100	100	100	1.5	0	0	1	S	S
L74D-674	1	40	98	100	2.5	0	2	1	S	S
L74L-125	4	40	100	100	3.0	0	0	5E	S	S
L74L-228	5	100	99	100	1.0	3	0	5E	R	R
Miles (Md71-407)	5	100	91	100	1.0	3	0	4E	S	S

Regional Summary

Strain	Yield Bu/A	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
1978									
No. of Tests	23	23	20	20	23	23	20	9	9
Essex (V)	38.1	14	+19.0	2.4	33	1.8	12.7	42.6	20.3
Union (IV)	41.7	3	9-24*	2.5	40	2.0	17.9	42.4	21.0
Williams (III)	39.1	12	-2.4	2.0	37	1.8	16.8	42.4	21.3
K1024 Desoto	40.1	10	+2.4	2.2	38	2.0	16.2	41.5	20.9
K1033	42.9	1	+7.9	2.2	38	2.5	18.0	42.2	20.9
K1035	40.3	8	+5.4	2.4	37	2.4	16.2	41.0	21.3
K1036	39.5	11	+9.5	2.2	39	2.1	16.0	41.0	21.0
L70L-3048	41.6	4	+3.1	2.4	39	2.3	15.5	42.0	21.4
L74D-609	41.6	4	+1.2	1.4	21	1.8	16.5	42.8	21.2
L74D-634	40.2	9	+9.2	1.2	22	1.8	18.5	43.4	20.8
L74D-674	41.3	6	-0.9	1.5	28	2.2	15.8	39.8	22.3
L74L-125	41.9	2	+0.4	1.6	37	2.2	17.1	42.2	20.8
L74L-228	40.9	7	+1.2	2.2	37	2.1	17.9	43.1	20.6
Miles (Md71-407)	38.4	13	+6.1	2.5	39	1.7	14.4	42.8	20.3

* 121 days after planting

1977-1978, 2-YEAR MEAN									
No. of Tests	43	43	39	43	46	44	38	19	19
Essex (V)	39.2	9	+18.4	2.3	33	2.0	13.2	41.8	20.5
Union (IV)	41.8	2	9-24.6	2.4	39	2.3	18.5	41.7	20.9
Williams (III)	40.1	7	-2.2	1.9	36	2.1	17.3	41.5	21.4
K1024	41.6	3	+2.9	2.0	37	2.2	16.9	40.7	20.8
L70L-3048	42.0	1	+2.7	2.2	38	2.6	15.8	41.2	21.6
L74D-609	40.8	5	+0.9	1.3	20	1.9	16.8	41.7	21.4
L74D-634	39.8	8	+9.7	1.2	21	2.1	18.9	41.9	21.2
L74D-674	41.4	4	-1.6	1.5	27	2.4	16.1	39.3	22.6
Miles (Md71-407)	40.2	6	+6.6	2.3	38	2.0	14.9	41.7	20.5

* 125 days after planting

1976-1978, 3-YEAR MEAN									
No. of Tests	66	66	60	67	71	68	56	30	30
Union	41.1	1	9-23*	2.3	38	2.2	18.3	41.4	20.8
L70L-3048	41.0	2	+3.1	2.1	37	2.5	15.5	41.0	21.2
Miles (Md71-407)	39.0	3	+6.7	2.2	37	1.9	14.6	41.4	20.4

* 125 days after planting

Strain	Mean	Del. George-town	N.J. Adelphia	Md. Queens-town	Md. Clarks-ville	Pa. Landis-ville	Ohio S. Charleston	Ohio Wheelers-burg
	23 Tests			YIELD (bu/a)				
Essex (V)	38.1	38.9	28.2	46.3	42.8	38.7	59.7	29.3
Union (IV)	41.7	42.8	34.9	54.7	51.4	45.0	58.0	58.1
Williams (III)	39.1	42.2	31.0	52.2	50.0	39.5	61.2	52.9
K1024	40.1	40.7	23.7	47.9	48.5	45.7	65.0	46.2
K1033	42.9	45.5	30.7	56.1	50.8	42.9	69.5	49.7
K1035	40.3	39.7	30.0	48.9	47.0	45.1	62.7	49.7
K1036	39.5	35.9	30.0	47.0	44.8	41.0	59.8	40.7
L70L-3048	41.6	42.4	30.3	52.1	49.2	43.2	66.6	53.8
L74D-609	41.6	38.1	40.3	53.8	49.9	51.0	65.1	59.4
L74D-634	40.2	38.5	34.3	49.7	54.3	48.9	67.5	51.1
L74D-674	41.3	40.0	37.1	58.4	50.1	47.3	59.5	52.5
L74L-125	41.9	42.4	28.1	55.7	50.3	44.8	64.2	56.3
L74L-228	40.9	43.1	30.9	51.3	52.5	41.7	61.6	49.8
Miles (Md71-407)	38.4	36.6	33.0	44.0	53.8	36.1	63.7	40.3
C.V. (%)		10.4	9.00	5.87	8.65	8.25	8.2	8.8
L.S.D. (5%)		5.8	5.47	5.06	N.S.	6.0	N.S.	7.3
Row Sp. (in.)		30	30	30	30	30	30	30
Rows/plot		4	3	4	4	4	4	4
Reps.		3	4	3	3	3	3	3
	23 Tests			YIELD RANK				
Essex (V)	14	10	12	13	14	13	12	14
Union (IV)	3	3	3	4	4	6	14	2
Williams (III)	12	6	6	6	8	12	10	5
K1024	10	7	14	11	11	4	5	11
K1033	1	1	8	2	5	9	1	9
K1035	8	9	10	10	12	5	8	9
K1036	11	14	10	12	13	11	11	12
L70L-3048	4	4	9	7	10	8	3	4
L74D-609	4	12	1	5	9	1	4	1
L74D-634	9	11	4	9	1	2	2	7
L74D-674	6	8	2	1	7	3	13	6
L74L-125	2	4	13	3	6	7	6	3
L74L-228	7	2	7	8	3	10	9	8
Miles (Md71-407)	13	13	5	14	2	14	7	13

	Ken.	Ind.		Ill.				
Strain	Lexing-ton	Lafay-ette	Sulli-van	Browns-town	Belle-ville	Eldor-ado	Edina	Columbia
				YIELD (bu/a)				
Essex (V)	49.3	24.2	40.5	32.9	45.3	50.8	34.3	27.9
Union (IV)	50.6	49.0	45.1	30.2	51.8	41.2	38.7	28.0
Williams (III)	51.2	52.9	37.7	26.7	44.7	43.1	36.1	27.6
K1024	53.3	51.1	42.9	28.4	48.2	47.5	37.4	24.6
K1033	53.5	55.8	45.9	37.2	52.2	46.3	38.8	27.2
K1035	53.4	49.2	39.2	31.8	50.0	46.7	37.0	25.3
K1036	49.7	46.8	46.7	35.5	51.2	47.6	33.2	24.1
L70L-3048	51.0	48.4	43.4	35.6	53.7	43.9	34.3	29.1
L74D-609	59.3	49.2	51.5	33.9	49.1	43.2	36.9	29.0
L74D-634	59.5	45.3	49.9	35.6	45.5	42.8	35.7	32.2
L74D-674	58.1	48.3	42.8	30.4	51.3	44.9	38.4	31.6
L74L-125	54.2	52.4	43.8	29.7	56.4	46.5	37.2	29.2
L74L-228	55.6	48.9	39.6	33.1	48.6	40.9	39.2	27.4
Miles (Md71-407)	49.6	49.2	43.7	29.8	46.2	42.2	34.0	28.4
C.V. (%)	-	7.7	12.1	9.8	6.8	4.8	9.2	7.7
L.S.D. (5%)	5.6	6.0	8.3	6.8	7.6	4.6	N.S.	3.1
Row Sp. (in.)	30	30	28	30	30	30	30	30
Rows/plot	4	4	3	4	4	4	2	2
Reps.	3	3	3	2	2	2	4	4
				YIELD RANK				
Essex (V)	16	14	11	7	13	1	11	8
Union (IV)	13	8	5	10	4	13	3	7
Williams (III)	11	2	14	14	14	10	9	9
K1024	10	4	9	13	10	3	5	13
K1033	8	1	4	1	3	6	2	11
K1035	9	5	13	8	7	4	7	12
K1036	14	12	3	4	6	2	14	14
L70L-3048	12	10	8	2	2	8	11	4
L74D-609	4	5	1	5	8	9	8	5
L74D-634	3	13	2	2	12	11	10	1
L74D-674	5	11	10	9	5	7	4	2
L74L-125	7	3	6	12	1	5	6	3
L74L-228	6	9	12	6	9	14	1	10
Miles (Md71-407)	15	5	7	11	11	12	13	6

Mo.			Kans.				Tex.
Clinton	Portage-ville loam	Portage-ville clay	Pow-hattan	Man-hattan	Ottawa	Columbus	Lub-bock
			YIELD (bu/a)				
42.4	52.8	30.8	29.7	47.5	18.8	18.8	46.3
31.6	50.0	31.4	28.0	43.7	21.1	11.5	51.3
26.3	48.5	23.8	32.0	44.3	18.3	9.4	47.1
35.8	49.5	24.1	33.9	45.3	17.8	11.2	54.3
40.7	58.1	22.9	30.7	48.2	16.3	9.1	57.7
33.5	53.7	27.7	28.9	45.2	15.5	8.5	58.4
38.5	57.1	20.4	29.0	50.4	13.6	9.7	55.6
35.5	47.2	31.4	30.3	45.2	21.3	13.6	54.1
43.0	35.1	24.0	28.1	40.0	19.7	12.4	44.8
41.6	26.3	20.8	33.3	37.5	14.7	16.0	42.5
37.5	43.8	22.2	32.2	50.2	18.4	11.8	43.4
38.0	47.1	22.8	32.9	46.1	17.2	11.5	57.7
37.6	52.1	27.6	32.2	41.1	21.1	12.7	52.0
38.4	43.1	26.2	27.8	37.9	17.4	11.5	49.3
8.5	7.0	17.1	7.7	7.3	8.1	16.0	8.9
4.5	5.5	7.4	4.0	5.5	2.5	3.2	7.6
30	38	38	30	30	30	30	40
2	3	3	4	4	4	4	4
4	3	3	3	3	3	3	3
			YIELD RANK				
2	4	3	9	4	5	1	11
13	6	1	13	10	2	7	8
14	8	9	6	9	7	12	10
10	7	7	1	6	8	10	5
4	1	10	7	3	11	13	3
12	3	4	11	7	12	14	1
5	2	14	10	1	14	11	4
11	9	1	8	7	1	3	6
1	13	8	12	12	4	5	12
3	14	13	2	14	13	2	14
9	11	12	4	2	6	6	13
7	10	11	3	5	10	7	2
8	5	5	4	11	2	4	7
6	12	6	14	13	9	7	9

		Del.	N.J.	Md.		Pa.	Ohio	
Strain	Mean	George-town	Adelphia	Queens-town	Clarks-ville	Landis-ville	S. Charleston	Wheelers-burg
	20 Tests			MATURITY (relative date)				
Essex (V)	+19.0	+15	+11	+20	+25	+12	+23	+9
Union (IV)	* 9-24	9-27	10-7	9-26	9-29	10-11	9-27	9-18
Williams (III)	-2.4	-2	-1	-3	-4	-2	-5	-4
K1024	+2.4	+2	0	+3	+2	+1	+2	+2
K1033	+7.9	+6	+4	+11	+10	+2	+7	+3
K1035	+5.4	+3	+2	+4	+6	+2	+8	+3
K1036	+9.5	+7	+6	+10	+6	+3	+10	+5
L70L-3048	+3.1	+1	-1	+1	+10	+3	+2	+2
L74D-609	+1.2	-1	+4	-2	+2	-2	+1	+3
L74D-634	+9.2	+9	+5	+12	+3	+3	+6	+4
L74D-674	-0.9	-2	-1	-1	+3	-5	+1	-3
L74L-125	+0.4	+1	0	-1	+2	+1	+1	+2
L74L-228	+1.2	+1	+2	+1	+2	+2	-1	+2
Miles (Md71-407)	+6.1	+3	+4	+7	+7	+2	+8	+4
Date planted	5-26	6-1	6-6	5-30	5-26	6-8	5-1	5-3
*Days to mat.	121	118	123	119	126	125	149	138
	20 Tests			LODGING (score)				
Essex (V)	2.4	2.3	3.3	2.3	3.3	3.0	4.7	2.3
Union (IV)	2.5	2.0	3.5	2.7	3.0	3.0	4.8	3.2
Williams (III)	2.0	1.7	2.9	2.3	2.0	2.7	2.5	2.7
K1024	2.2	2.2	3.0	2.5	2.7	3.3	3.0	3.2
K1033	2.2	2.2	2.9	2.5	2.0	2.7	3.3	3.2
K1035	2.4	2.2	3.4	2.7	2.5	3.2	4.3	2.5
K1036	2.2	1.7	3.0	2.8	2.2	2.8	4.3	2.5
L70L-3048	2.4	1.8	3.5	2.7	2.5	3.2	3.2	3.0
L74D-609	1.4	1.3	2.1	1.0	2.3	1.8	2.7	1.5
L74D-634	1.2	1.2	1.5	1.0	2.0	1.0	1.5	1.0
L74D-674	1.5	1.2	3.0	1.0	2.2	2.0	2.8	1.7
L74L-125	1.6	1.5	2.8	2.0	2.0	1.8	2.3	1.8
L74L-228	2.2	1.8	3.4	2.7	2.5	2.5	2.5	2.7
Miles (Md71-407)	2.5	1.8	3.5	2.3	3.0	3.5	4.2	2.8

Ken.	Ind.		Ill.			Mo.	
Lexing-ton	Lafay-ette	Sulli-van	Browns-town	Belle-ville	Eldor-ado	Edina	Columbia
			MATURITY (relative date)				
+8	+18	+25	+23	+24	+35		-
9-30	9-22	9-17	9-22	9-24	9-19		9-25
-1	-3	-2	-2	-3	-3		-3
0	+5	+4	+2	+2	+4		0
+16	+10	+5	+8	+5	+15		+3
+10	+7	+3	+4	+2	+9		+1
+14	+5	+8	+10	+8	+21		+4
+9	+3	+3	+2	-1	+2		0
+2	+1	+4	+3	0	+2		-1
+9	+7	+9	+8	+9	+21		+3
-1	+1	-2	+3	-4	-1		-2
+1	+2	-1	0	-1	+4		-1
+4	+2	+1	+1	0	+3		0
+14	+5	+7	+4	+5	+9		+3
6-2	5-27	5-30	6-10	5-28	5-24		6-16
120	118	110	104	120	118		102
			LODGING (score)				
2.2	3.2	2.3	1.4	3.1	2.0		
2.8	2.3	3.7	1.0	2.4	1.8		
1.8	2.0	3.0	1.0	2.1	1.1		
1.7	3.0	3.3	1.0	2.3	1.3		
2.0	2.8	3.8	1.0	1.9	1.3		
2.5	3.2	2.7	1.0	2.8	1.7		
1.7	2.3	2.7	1.0	2.3	1.2		
2.3	3.3	3.3	1.3	2.6	1.9		
2.2	1.0	1.5	1.0	1.2	1.0		
1.3	1.0	1.2	1.0	1.0	1.1		
1.3	2.3	1.8	1.0	1.1	1.2		
1.0	1.5	2.2	1.0	1.5	1.0		
2.0	2.2	3.5	1.0	2.4	1.3		
2.8	3.3	2.7	1.0	2.7	2.2		

Strain	Mo. Clinton	Mo. Loam Portage-ville	Mo. Clay Portage-ville	Kans. Pow-hattan	Kans. Man-hattan	Kans. Ottawa	Kans. Columbus	Tex. Lub-bock
			MATURITY (relative date)					
Essex (V)		+15	+11	+25	+15		+16	+32
Union (IV)		* 9-12	9-17	9-25	9-23		9-19	9-14
Williams (III)		-2	-2	-1	0		-5	-1
K1024		+1	-1	+9	+9		-1	+2
K1033		+8	+6	+16	+14		+2	+7
K1035		+3	+3	+17	+17		+2	+6
K1036		+10	+7	+21	+17		+11	+7
L70L-3048		-1	-1	+11	+15		+1	+1
L74D-609		-1	0	+6	+1		-1	+3
L74D-634		+11	+8	+20	+13		+13	+10
L74D-674		-1	-2	0	+1		-1	-1
L74L-125		-1	0	0	-2		0	0
L74L-228		+1	0	+2	-2		+1	+2
Miles (Md71-407)		+4	0	+20	+11		+1	+4
Date planted		5-10	5-23	5-27	5-3	5-18	6-9	5-22
*Days to mat.		125	117	121	143		102	115
			LODGING (score)					
Essex (V)	2.4	3.3	2.0	1.0	1.1		1.0	1.0
Union (IV)	3.1	3.0	2.0	1.0	1.7		1.0	1.5
Williams (III)	2.4	2.7	1.7	1.0	1.5		1.0	1.5
K1024	2.0	2.8	1.5	1.0	1.5		1.0	1.7
K1033	2.6	2.5	1.7	1.0	1.7		1.0	1.5
K1035	2.8	2.7	1.7	1.0	1.7		1.0	1.5
K1036	2.5	3.2	1.7	1.0	1.9		1.0	1.7
L70L-3048	3.0	3.0	2.0	1.0	1.6		1.0	1.5
L74D-609	1.0	1.0	1.2	1.0	1.0		1.0	1.2
L74D-634	1.0	1.0	1.2	1.0	1.0		1.0	1.2
L74D-674	1.8	1.0	1.3	1.0	1.0		1.0	1.0
L74L-125	2.3	2.3	1.3	1.0	1.2		1.0	1.2
L74L-228	3.1	3.2	1.7	1.0	1.2		1.0	1.7
Miles (Md71-407)	2.6	4.0	2.2	1.0	1.7		1.0	1.5

		Del.	N.J.	Md.		Pa.	Ohio	
Strain	Mean	George-town	Adelphia	Queens-town	Clarks-ville	Landis-ville	S. Charleston	Wheelers-burg
	23 Tests		PLANT HEIGHT (inches)					
Essex (V)	33	35	33	38	43	36	41	35
Union (IV)	40	39	36	46	50	40	50	42
Williams (III)	37	36	34	44	46	37	41	38
K1024	38	40	34	44	50	37	45	39
K1033	38	38	36	45	47	37	41	38
K1035	37	36	34	43	48	37	42	39
K1036	39	37	35	48	49	39	44	39
L70L-3048	39	38	34	45	51	36	44	39
L74D-609	21	19	21	22	31	26	27	25
L74D-634	22	20	23	22	31	30	26	23
L74D-674	28	24	28	26	43	35	36	29
L74L-125	37	36	34	46	47	37	43	38
L74L-228	37	37	34	44	48	35	43	41
Miles	39	38	35	46	50	39	42	40
	23 Tests		SEED QUALITY (score)					
Essex (V)	1.8	1.8	1.0	2.0	2.2	1.5	1.2	1.0
Union (IV)	2.0	2.3	1.8	2.0	2.0	1.7	1.3	1.2
Williams (III)	1.8	2.3	1.3	2.0	2.0	1.7	1.3	1.2
K1024	2.0	2.2	1.8	2.0	2.0	1.8	1.2	1.0
K1033	2.5	3.2	2.0	3.0	2.2	2.2	2.7	2.0
K1035	2.4	3.5	2.0	3.0	2.0	2.2	2.0	2.3
K1036	2.1	2.5	1.8	2.3	2.0	1.9	2.3	1.5
L70L-3048	2.3	2.7	1.5	2.2	2.2	2.7	1.3	2.3
L74D-609	1.8	2.0	1.0	2.0	2.0	1.7	1.0	1.0
L74D-634	1.8	2.2	1.3	2.0	2.0	1.5	1.0	1.0
L74D-674	2.2	2.2	1.0	2.0	2.0	1.6	1.3	2.0
L74L-125	2.2	2.3	1.3	2.0	2.0	1.9	2.0	1.0
L74L-228	2.1	2.5	1.5	2.2	2.2	1.8	1.3	1.3
Miles	1.7	2.2	1.0	2.0	2.0	1.8	1.0	1.0

	Ken.	Ind.		Ill.				
Strain	Lexing-ton	Lafay-ette	Sulli-van	Browns-ville	Belle-ville	Eldor-ado	Edina	Columbia
				PLANT HEIGHT (inches)				
Essex (V)	33	41	39	31	35	36	32	30
Union (IV)	41	45	47	33	46	44	37	32
Williams (III)	38	46	45	28	42	40	33	31
K1024	37	47	45	28	44	41	33	30
K1033	42	44	47	30	42	38	35	31
K1035	39	47	46	30	44	38	34	32
K1036	42	45	49	31	43	39	36	32
L70L-3048	38	42	44	33	44	41	35	31
L74D-609	25	24	24	19	21	21	20	21
L74D-634	26	22	27	23	19	22	24	25
L74D-674	30	35	33	21	29	35	23	27
L74L-125	38	45	47	28	42	38	33	31
L74L-228	36	44	43	29	42	39	33	32
Miles (Md71-407)	40	45	48	28	43	43	34	33
				SEED QUALITY (score)				
Essex (V)	1.0	2.5	1.5	2.5	2.0	3.0	1.8	1.8
Union (IV)	2.0	1.5	1.5	2.3	2.5	2.5	1.5	2.3
Williams (III)	1.0	1.0	1.5	2.0	1.5	2.5	1.5	2.5
K1024	2.0	1.0	1.5	2.5	2.0	3.3	2.0	2.0
K1033	2.0	1.5	1.5	3.5	2.0	4.0	2.0	2.0
K1035	2.0	1.5	1.5	3.3	2.5	3.8	2.0	2.0
K1036	1.0	1.5	1.5	3.0	2.0	3.5	2.0	2.0
L70L-3048	2.0	1.5	1.5	2.8	2.5	4.0	1.5	2.0
L74D-609	2.0	1.5	1.0	2.3	1.8	3.0	1.8	2.3
L74D-634	1.0	1.0	1.5	2.0	1.8	3.5	1.3	2.0
L74D-674	2.0	1.0	1.5	3.8	2.8	3.5	1.5	2.3
L74L-125	3.0	1.5	1.0	2.5	2.0	4.0	1.8	2.0
L74L-228	3.0	1.5	1.0	2.0	2.3	3.8	2.0	2.3
Miles (Md71-407)	2.0	1.0	1.0	2.0	1.5	3.5	2.3	2.0

Mo.			Kans.				Tex.
Clinton	Loam Portage-ville	Clay Portage-ville	Pow-hattan	Man-hattan	Ottawa	Columbus	Lub-bock
			PLANT HEIGHT (inches)				
34	29	27	35	36	25	20	20
40	41	34	43	51	33	21	31
36	39	32	39	48	29	20	30
37	40	33	40	49	30	20	30
38	37	33	40	46	31	17	30
37	39	31	39	46	30	17	31
38	41	35	43	48	27	21	33
39	44	35	42	47	34	22	34
22	14	19	23	18	17	16	14
23	12	19	33	17	15	17	12
29	22	22	32	25	20	17	16
37	40	30	37	50	28	20	30
38	41	33	36	47	30	20	29
35	42	34	41	52	32	23	32
			SEED QUALITY (score)				
1.8	1.5	2.0	2.0	1.4	2.1	1.5	1.7
3.0	2.5	3.0	1.5	1.5	2.1	2.1	2.5
2.3	2.0	2.5	1.5	1.6	2.1	2.5	2.7
2.3	2.5	3.0	1.5	1.6	2.0	1.6	2.5
2.8	3.2	3.0	1.8	1.9	2.2	2.3	3.5
3.0	2.5	3.0	1.6	1.9	2.0	2.3	3.0
2.6	2.5	3.0	1.9	1.7	1.9	2.2	2.5
3.0	2.5	3.5	1.7	1.7	2.3	2.3	3.0
2.0	1.5	2.0	1.7	1.5	1.9	1.7	2.5
2.0	2.0	2.5	1.4	1.5	2.1	1.6	2.5
2.5	2.5	3.0	2.0	1.8	2.5	2.7	4.0
3.0	2.0	3.0	1.9	1.8	2.2	2.0	3.5
2.5	2.5	3.0	1.6	1.5	2.3	2.5	2.5
2.0	1.5	2.0	1.5	1.0	1.7	1.7	2.2

		Del.	N.J.	Md.		Pa.	Ohio	
Strain	Mean	George-town	Adelphia	Queens-town	Clarks-ville	Landis-ville	S. Charleston	Wheelers-burg
	20 Tests			SEED SIZE (g/100)				
Essex (V)	12.7	12.4	13	14.0	14.0	13.6	14.0	9.0
Union (IV)	17.9	17.5	19	18.4	21.1	20.3	19.0	18.0
Williams (III)	16.8	19.3	18	17.2	18.2	18.2	19.0	15.0
K1024	16.2	16.0	16	16.8	18.8	17.9	18.0	14.0
K1033	18.0	18.5	17	18.9	18.9	19.3	21.0	15.0
K1035	16.2	16.8	15	16.1	17.0	18.7	18.0	12.0
K1036	16.0	15.7	15	16.1	17.3	17.7	19.0	11.0
L70L-3048	15.5	16.3	16	16.5	17.6	17.4	18.0	14.0
L74D-609	16.5	15.1	18	16.4	18.0	18.1	18.0	15.0
L74D-634	18.5	18.5	17	17.8	19.7	19.7	23.0	15.0
L74D-674	15.8	15.5	18	18.0	16.7	18.2	16.0	15.0
L74L-125	17.1	17.1	16	18.4	18.3	19.9	20.0	16.0
L74L-228	17.9	18.8	17	18.0	21.6	19.9	20.0	17.0
Miles (Md71-407)	14.4	15.0	16	14.1	17.0	16.2	17.0	11.0
	9 Tests			PROTEIN (%)				
Essex (V)	42.6				41.6		41.5	
Union (IV)	42.4				42.2		41.1	
Williams (III)	42.4				42.8		40.3	
K1024	41.5				42.4		39.8	
K1033	42.2				42.3		41.4	
K1035	41.0				40.7		40.3	
K1036	41.0				40.9		39.8	
L70L-3048	42.0				42.0		41.4	
L74D-609	42.8				42.6		40.9	
L74D-634	43.4				41.7		41.9	
L74D-674	39.8				38.7		38.6	
L74L-125	42.2				42.9		41.8	
L74L-228	43.1				43.2		41.1	
Miles (Md71-407)	42.8				41.5		41.8	

Ken.	Ind.		Ill.			Mo.	
Lexing-ton	Lafay-ette	Sulli-van	Browns-town	Belle-ville	Eldor-ado	Edina	Columbia
			SEED SIZE (g/100)				
12.7	13.3	13.1	12.4	12.4	15.6		
20.3	20.8	17.6	18.2	18.2	16.1		
18.9	19.2	16.8	16.3	16.3	15.6		
17.8	18.7	17.3	15.8	15.8	15.7		
20.4	19.9	19.0	17.3	17.3	19.4		
19.4	19.0	15.2	16.3	16.3	17.7		
17.4	17.4	16.7	15.3	15.3	17.8		
16.3	16.9	15.3	16.1	16.1	14.5		
18.0	17.0	17.3	16.1	16.1	17.7		
20.5	19.8	18.6	18.2	18.2	19.3		
16.6	16.9	17.1	15.2	15.2	14.3		
19.1	18.9	14.0	16.4	16.4	17.8		
20.1	19.3	17.9	17.5	17.5	16.2		
15.6	14.3	15.0	13.0	13.0	15.8		
			PROTEIN (%)				
42.6		43.8		44.5	44.1		42.9
43.8		41.4		42.8	41.6		43.1
41.0		43.8		43.6	41.1		44.3
41.0		42.1		42.4	39.7		43.2
41.7		42.0		43.1	43.5		42.8
41.6		41.1		41.8	41.3		41.8
39.3		40.7		41.3	42.5		42.6
41.2		42.8		41.9	41.3		43.5
41.6		43.9		45.4	40.2		43.7
43.7		44.1		45.0	43.9		43.9
40.5		40.2		41.1	38.0		41.1
42.6		42.8		43.0	40.8		43.0
44.1		44.1		42.8	43.2		44.0
41.7		43.8		42.8	43.3		43.0

	Mo.			Kans.				Tex.
Strain	Clinton	Loam Portage-ville	Clay Portage-ville	Pow-hattan	Man-hattan	Ottawa	Columbus	Lub-bock
			SEED SIZE (g/100)					
Essex (V)		11.5	12.1	11.3	11.8	11.7	11.7	14.7
Union (IV)		16.3	18.0	14.6	17.0	13.3	13.7	21.1
Williams (III)		15.0	16.8	14.6	16.2	12.4	12.4	20.5
K1024		15.9	15.2	13.9	15.8	12.5	13.9	19.0
K1033		17.0	17.1	15.0	16.9	14.1	16.1	21.4
K1035		15.8	16.0	13.3	15.4	11.9	15.4	19.4
K1036		15.5	14.9	14.2	16.2	13.0	15.7	18.9
L70L-3048		14.2	14.8	12.5	15.2	11.7	12.6	17.9
L74D-609		14.7	15.6	13.5	17.1	13.6	12.6	21.9
L74D-634		17.8	17.7	15.8	19.3	15.0	16.1	23.6
L74D-674		16.2	13.9	12.9	16.9	11.8	12.5	18.3
L74L-125		17.5	17.4	14.3	15.9	13.5	14.5	21.5
L74L-228		16.9	18.2	15.1	15.8	13.5	16.0	21.2
Miles (Md71-407)		13.7	14.1	11.9	13.9	12.4	12.7	17.1
			PROTEIN (%)					
Essex (V)				41.2	41.3			
Union (IV)				43.7	41.7			
Williams (III)				42.8	41.8			
K1024				42.0	41.2			
K1033				42.0	40.7			
K1035				41.5	39.1			
K1036				41.5	40.2			
L70L-3048				42.4	41.3			
L74D-609				44.8	41.9			
L74D-634				43.6	42.9			
L74D-674				40.4	40.0			
L74L-125				42.2	40.5			
L74L-228				43.8	41.8			
Miles (Md71-407)				42.9	44.0			

Strain	Mean	Md. Clarksville	Ohio S. Charleston	Ken. Lexington	Ind. Sullivan	Ill. Belleville	Ill. Eldorado	Mo. Columbia	Kans. Pottawattan	Kans. Manhattan
	9 Tests				OIL (%)					
Essex (V)	20.3	20.7	20.8	20.5	19.2	20.1	19.2	20.7	20.8	21.0
Union (IV)	21.0	20.6	21.1	20.3	21.3	20.8	21.8	20.1	20.4	22.2
Williams (III)	21.3	21.0	22.1	21.8	20.6	21.1	22.5	20.2	20.8	21.9
K1024	20.9	19.8	21.5	20.6	20.8	20.7	22.0	20.4	21.0	21.4
K1033	20.9	21.2	21.3	20.6	21.1	20.7	20.3	19.7	20.7	22.6
K1035	21.3	21.7	20.8	21.1	21.3	21.5	21.2	21.3	20.2	22.4
K1036	21.0	20.9	21.5	22.1	20.7	21.4	20.3	19.8	20.3	21.6
L70L-3048	21.4	21.2	21.0	21.6	20.9	22.4	22.2	20.0	20.6	22.3
L74D-609	21.2	20.8	22.0	21.6	20.6	20.3	23.8	20.0	19.6	21.9
L74D-634	20.8	21.8	21.8	20.2	20.1	20.3	20.5	20.5	20.5	21.3
L74D-674	22.3	22.7	22.5	22.0	22.5	22.1	23.7	20.7	21.7	22.9
L74L-125	20.8	20.9	20.3	20.3	20.6	20.8	22.1	20.2	20.1	21.6
L74L-228	20.6	20.7	21.2	20.3	20.1	21.1	20.8	19.6	20.3	21.1
Miles (Md71-407)	20.3	20.4	20.6	20.9	19.5	20.7	20.6	20.3	19.7	19.7

Strain	Parentage	Generation Composited
1. Franklin	L12 x Custer	F_5
2. Essex (V)	Lee x S5-7075	F_6
3. Union (IV)	Williams[5] x SL11 (Wayne Rpm Rps)	F_3
4. Williams (III)	Wayne x L57-0034 (Clark x Adams)	F_6
5. A77-305025	AP6	S_4
6. A77-314014	Coles x A72-507	F_4
7. A77-315011	L69D-133 x C1515	F_4
8. A77-315023	A72-512 x Amsoy 71	F_4
9. A77-316004	A x 990	S_3
10. A77-316013	A x 1390	S_3
11. C1569	C1421 x Williams	F_7
12. C1572	C1421 x Williams	F_7
13. C1573	C1421 x Williams	F_7
14. C1578	Beeson x L69L-6-1	F_7
15. H72-247	L63-3297 x L66L-140	F_5
16. H75-121	Williams x Ransom	F_5
17. H75-4211	Wells x York	F_5
18. H75-4212	Wells x York	F_5
19. H7772	L66L-137 x Calland	F_5
20. K1037	Williams x Bonus	F_4
21. K1038	Williams x Cutler 71	F_3
22. K1040	L66-1359 x Calland	F_3
23. K1042	L66L-140 x Cutler 71	F_3
24. L74L-116	Calland x Williams	F_6
25. L74L-497	Wayne Ir x Coker Hampton 266A	F_5
26. L75-8064	Williams x L70-2283 (Chippewa x Custer)	F_4
27. L75-8073	Williams x L70-2283 (Chippewa x Custer)	F_4
28. L75-8366	Williams x L70-2450 (Wayne x Custer)	F_4
29. L75-8381	Williams x L70-2450 (Wayne x Custer)	F_4
30. Md70-1626-67	3rd cycle intercross of 8-parent diallel	F_8
31. Md70-2221-71	3rd cycle intercross of 8-parent diallel	F_8
32. S76-2052	D67-3297 x L73-827	F_4
33. S76-2102	D67-3297 x Essex	F_4
34. S76-2109	D67-3297 x Essex	F_4
35. S76-2145	D67-3297 x Essex	F_4
36. S76-2169	D67-3297 x Essex	F_4

Yields of the four cyst nematode, race 3, resistant strains L75-8064, -8073, -8366, and -8381 were considerably lower than yields of the Group III check varieties. However, the yield of L75-8381 was nearly 5 bushels above that of Franklin, the cust nematode resistant check. The yields of the four determinate strains, H72-247, H75-121, -4211, and -4212 were well below the yields of the check varieties. These strains were among the highest yielding entries in Ohio but were the lowest yielding strains in Illinois, Missouri, and Kansas.

Descriptive and Other Data

Strain	Descriptive Code		Chlorosis Score Ames	Shattering Manhattan 2 weeks
Franklin	PGBr	DYIb	3	3
Essex (V)	PGTn	SYBf	3	1
Union (IV)	WTTn	SYBl	4	2
Williams (III)	WTTn	SYBl	4	1
A76-305025	WT + GTn	DYBr	4	2
A77-314014	WGBr	SYY	4	4
A77-315011	PTBr	DYG	5	3
A77-315023	WGBr	SYY	3	2
A77-316004	PTBr	DYY	2	2
A77-316013	PGBr	DYY	4	2
C1569	WTTn	SYBl	3	1
C1572	WTTn	SYBl	2	2
C1573	WTTn	SYBl	4	2
C1578	PGBr	DYBf	4	4
H72-247	PTBr	DYBl	4	1
H75-121	PTTn	SYBl	3	1
H75-4211	PGBr + Tn	SYBf	3	1
H75-4212	PGTn	SYBf	4	1
K7772	WTTn	DYBl	5	1
K1037	PGBr	SYIb	3	4
K1038	WTBr	SYBl	3	2
K1040	WTBr	DYBl	4	1
K1042	WTTn	SYBl	4	1
L74L-116	WTBr	SYBl	4	2
L74L-497	PTBr	SYBr	4	2
L75-8064	PGBr	SYIb	4	1
L75-8073	PTTn	SYG	3	1
L75-8366	WTTn	SYBl	3	1
L75-8381	WTTn	SYBl	3	1
Md70-1626-67	WGTn	SYBf	2	1
Md70-2221-71	PTBr + Tn	SYBl	3	1
S76-2052	PGTn	DYBl	5	1
S76-2102	PGTn	SYG + Y	3	1
S76-2109	WGTn	SYBf	3	1
S76-2145	PGTn	SYBf	3	1
S76-2169	PGTn	SYBf	3	1

Disease Date

Strain	FE_2	BSR			SMV	PSB	PS	PR race 1	
	Laf. Ind.	Laf. Ind.	Ames, Ia. stem	Ames, Ia. plants	Laf. Ind.	Laf. Ind.	Laf. Ind.	Laf. Ind.	Ames, Ia.
	a	n	n	n	n	d	a	a	a
	score	%	%	%	score	%	%	--reaction--	
Franklin	5	80	100	100	3M	1	0	R	R
Essex (V)	4	100	92	100	5E	1	0	S	S
Union (IV)	4	40	80	100	5E	1	1	R	R
Williams (III)	5	100	98	100	5E	4	2	S	S
A76-305025	4	60	68	100	5E	4	1	H	H
A77-314014	3	80	96	100	5S	0	0	H	S
A77-315011	5	80	70	100	5S	1	2	R	R
A77-315023	5	100	96	100	5M	2	2	H	R
A77-316004	3	0	54	100	5E	1	0	R	R
A77-316013	5	20	47	100	1	3	2	S	S
C1569	4	80	83	100	5M	1	2	S	S
C1572	5	100	88	100	5E	0	0	S	S
C1573	5	40	97	100	4E	0	0	R	R
C1578	1	20	98	100	3M	0	0	S	S
H72-247	5	0	100	100	4E	2	3	H	S
H75-121	1	20	95	100	2M	0	1	S	S
H75-4211	3	60	100	100	3M	7	1	R	H
H75-4212	1	20	96	100	1	3	0	S	S
H7772	5	20	96	100	4E	0	2	S	S
K1037	5	0	96	100	2E	2	5	H	H
K1038	5	20	93	100	5E	3	1	R	R
K1040	3	20	100	100	5E	0	0	S	S
K1042	1	0	100	100	5M	1	0	R	R
L74L-116	4	80	100	100	5E	2	2	H	S
L74L-497	5	100	100	100	3E	2	0	S	S
L75-8064	3	100	96	100	2M	3	2	R	H
L75-8073	4	60	96	100	3E	4	0	S	S
L75-8366	4	40	95	100	5E	1	0	S	H
L75-8381	5	40	99	100	5E	2	2	S	S
Md70-1626-67	1	40	100	100	1	1	0	S	S
Md70-2221-71	1	60	99	100	1	0	0	S	S
S76-2052	1	40	100	100	4E	0	0	H	S
S76-2102	1	80	-	-	1	0	0	S	S
S76-2109	3	80	-	-	1	0	0	S	S
S76-2145	4	100	-	-	1	0	0	S	S
S76-2169	4	100	-	-	1	1	0	H	S

Regional Summary

Strain	Yield Bu/A	Rank No.	Maturity Date	Lodging Score	Height In.	Seed Quality Score	Seed Size g/100	Seed Composition Protein %	Seed Composition Oil %
No. of Tests	7	7	7	7	7	7	7	4	4
Franklin	39.0	32	+4.1	2.7	47	2.0	14.0	39.1	22.1
Essex (V)	46.0	7	+21.4	2.8	35	1.7	12.5	43.2	20.2
Union (IV)	46.6	5	9-20*	2.6	45	1.9	17.2	41.2	21.8
Williams (III)	46.0	7	-2.1	2.2	43	2.0	15.6	41.4	22.1
A76-305025	40.2	27	-0.3	3.1	44	2.3	15.8	42.5	21.5
A77-314014	47.5	3	+4.6	3.0	44	2.3	16.3	43.2	20.0
A77-315011	43.7	16	+1.4	2.9	44	2.1	15.3	42.0	20.8
A77-315023	45.2	11	+1.1	3.8	46	2.4	13.7	40.6	21.7
A77-316004	40.1	28	+2.6	3.1	47	1.8	13.8	43.5	21.0
A77-316013	39.9	30	-1.9	3.9	42	2.3	16.8	40.5	22.5
C1569	45.0	12	+1.6	2.0	45	1.8	16.2	43.0	20.8
C1572	45.8	9	+3.7	2.3	44	1.7	15.2	41.2	22.1
C1573	48.2	1	+6.3	2.8	45	1.5	15.9	41.9	21.0
C1578	39.9	30	-2.3	2.5	34	2.1	17.3	42.4	21.3
H72-247	33.6	35	-3.7	1.2	18	2.1	15.7	44.3	20.6
H75-121	40.0	29	+5.1	1.2	19	1.8	15.0	42.2	22.0
H75-4211	32.2	36	-0.1	1.0	22	2.7	17.9	42.8	20.6
H75-4212	35.1	34	+1.3	1.1	22	3.0	19.3	44.0	19.5
H7772	45.0	12	+6.3	2.2	44	2.1	14.8	41.7	19.9
K1037	40.8	24	-2.4	1.6	45	2.0	16.1	42.2	22.4
K1038	41.5	23	+0.6	2.5	44	2.0	16.3	42.7	21.0
K1040	45.0	12	+6.4	3.1	43	2.0	13.2	41.3	21.5
K1042	47.4	4	+2.4	2.1	45	2.2	17.9	41.2	22.1
L74L-116	45.8	9	+3.0	2.8	44	2.3	17.5	42.4	20.9
L74L-497	46.6	5	+12.6	2.8	45	2.2	16.2	43.5	20.0
L75-8064	38.4	33	+4.6	2.6	46	2.1	14.5	40.2	21.4
L75-8073	40.3	25	+3.9	2.5	46	1.8	14.8	42.8	20.2
L75-8366	40.3	25	-2.0	2.5	44	1.9	14.0	41.4	21.5
L75-8381	44.3	15	+0.1	2.5	44	1.8	13.8	39.8	21.8
Md70-1626-67	42.5	19	+7.9	2.8	46	1.9	17.6	40.0	22.3
Md70-2221-71	42.2	21	+7.6	2.0	43	1.9	14.3	41.8	21.2
S76-2052	42.7	18	+12.0	2.7	33	1.7	12.3	42.8	19.8
S65-2102	42.1	22	+12.6	2.2	36	1.8	10.2	42.7	19.8
S76-2109	48.0	2	+19.0	1.8	36	1.8	11.6	42.8	19.3
S76-2145	42.4	20	+15.9	2.7	38	1.5	11.2	42.8	19.6
S76-2169	42.8	17	+17.1	2.8	32	1.7	12.7	42.7	20.0

* 125 days after planting.

PRELIMINARY TEST IV, 1978

Strain	Mean 7 Tests	Md. Queens town	Ohio Wheelers-burg
		YIELD (bu/a)	
Franklin	39.0	43.2	35.7
Essex (V)	46.0	49.6	27.9
Union (IV)	46.6	48.5	57.2
Williams (III)	46.0	48.5	53.0
A76-305025	40.2	49.2	32.8
A77-314014	47.5	53.4	57.0
A77-315011	43.7	50.6	48.4
A77-315023	45.2	46.6	54.1
A77-316004	40.1	41.8	48.2
A77-316013	39.9	39.2	39.0
C1569	45.0	51.6	48.3
C1572	45.8	52.2	56.3
C1573	48.2	52.9	49.6
C1578	39.9	40.2	59.8
H72-247	33.6	44.0	58.4
H75-121	40.0	55.0	62.4
H75-4211	32.2	40.3	57.3
H75-4212	35.1	51.5	57.8
H7772	45.0	47.0	48.3
K1037	40.8	45.4	38.1
K1038	41.5	46.1	56.2
K1040	45.0	52.2	42.8
K1042	47.4	49.7	53.4
L74L-116	45.8	51.6	46.6
L74L-497	46.6	50.7	37.2
L75-8064	38.4	37.9	31.4
L75-8073	40.3	42.1	45.2
L75-8366	40.3	44.7	50.0
L75-8381	44.3	47.3	56.5
Md70-1626-67	42.5	44.3	44.8
Md70-2221-71	42.2	38.0	42.8
S76-2052	42.7	41.8	28.4
S76-2102	42.1	43.9	31.4
S76-2109	48.0	47.3	29.8
S76-2145	42.4	45.7	27.1
S76-2169	42.8	42.3	20.6
C.V. (%)		7.85	11.9
L.S.D. (5%)		7.42	10.9
Row sp (in.)		30"	30"
Rows/plot		4	4
Reps		2	2

Ind.	Ill.		Mo.	Kans.
Sull-ivan	Belle-ville	Eld-orado	Portageville Loam	Man-hatten
		YIELD (bu/a)		
29.9	43.5	39.4	42.3	38.7
35.3	50.0	50.5	54.5	54.5
42.6	47.0	43.2	45.7	42.0
38.8	46.7	44.6	46.5	43.6
37.1	44.1	33.8	40.1	44.0
41.1	53.7	42.1	42.2	42.7
36.0	38.2	40.9	48.1	43.6
41.4	49.1	39.2	44.8	41.1
29.8	42.3	34.8	42.3	41.3
37.5	45.9	37.8	38.7	41.3
37.5	47.3	39.8	47.1	43.2
39.1	41.2	42.3	47.7	41.8
38.4	56.6	42.2	48.0	49.7
22.8	47.5	24.8	39.7	44.2
37.0	27.1	23.4	26.8	18.5
34.8	42.5	30.5	26.6	28.3
32.9	34.9	20.3	27.2	12.4
37.3	35.3	25.9	23.6	14.5
38.1	49.7	43.5	49.9	38.4
34.7	48.0	36.6	41.5	41.3
30.8	38.3	34.9	41.9	42.4
33.1	52.1	41.5	46.5	46.7
40.7	51.1	44.8	48.6	43.8
33.7	48.3	43.1	51.8	45.4
44.0	48.8	45.9	54.0	45.6
35.9	43.9	39.2	44.7	36.0
34.6	40.2	40.0	45.2	35.0
33.3	41.0	30.3	46.2	36.3
33.9	42.1	34.3	46.9	49.1
41.2	43.5	40.8	41.2	42.0
34.8	48.5	46.5	40.9	44.4
40.0	44.8	51.0	43.2	49.4
37.3	43.4	44.8	44.5	49.4
41.3	54.8	54.3	54.9	53.5
31.8	44.3	45.6	50.5	52.1
40.3	47.7	48.5	50.7	49.3
10.3	8.2	7.3	-	6.9
7.6	7.6	5.8	-	5.8
28"	30"	30"	38"	30"
3	4	4	3	4
2	2	2	3	3

Strain	Mean 7 Tests	Md. Queens	Ohio Wheelers-burg
	YIELD RANK		
Franklin	32	27	28
Essex (V)	7	12	34
Union (IV)	5	14	6
Williams (III)	7	14	13
A76-305025	27	13	29
A77-314014	3	2	7
A77-315011	16	10	16
A77-315023	11	19	11
A77-316004	28	31	19
A77-316013	30	34	25
C1569	12	6	17
C1572	9	4	9
C1573	1	3	15
C1578	30	33	2
H72-247	35	25	3
H75-121	29	1	1
H75-4211	36	32	5
H75-4212	34	8	4
H7772	12	18	17
K1037	24	22	26
K1038	23	20	10
K1040	12	4	23
K1042	4	11	12
L74L-116	9	6	20
L74L-497	3	9	27
L75-8064	33	36	30
L75-8073	25	29	21
L75-8366	25	23	14
L75-8381	15	16	8
Md70-1626-67	19	24	22
Md70-2221-71	21	35	23
S76-2052	18	30	33
S76-2102	22	26	30
S76-2109	2	16	32
S76-2145	20	21	35
S76-2169	17	28	36

Ind.	Ill.		MO	Kans.
Sull-ivan	Belle-ville	El-dorado	Portage-ville	Man-hatten
		YIELD RANK		
34	23	22	23	28
22	6	3	2	1
2	16	12	17	21
11	17	10	14	16
18	21	30	30	14
6	3	16	25	19
20	33	18	9	16
3	8	23	19	27
35	27	28	23	24
14	18	25	32	24
14	15	21	12	18
10	29	14	11	23
12	1	15	10	4
36	14	34	31	13
19	36	35	34	34
23	26	31	35	33
31	35	36	33	36
16	34	33	36	35
13	7	11	7	29
25	12	26	27	24
33	32	27	26	20
30	4	17	14	9
7	5	8	8	15
28	11	13	4	11
1	9	6	3	10
21	22	23	20	31
26	31	20	18	32
29	30	32	16	30
27	28	29	13	8
5	23	19	28	21
23	10	5	29	12
9	19	2	22	5
16	25	8	21	5
4	2	1	1	2
32	20	7	6	3
8	13	4	5	7

Strain	Mean 7 Tests	Md. Queens	Ohio Wheelers-burg
	MATURITY (relative date)		
Franklin	+4.1	+9	+1
Essex (V)	+ 21.4	+20	+9
Union (IV)*	9-20	9-27	9-19
Williams (III)	-2.1	-3	-3
A76-305025	-0.3	+1	-3
A77-314014	+4.6	+5	+2
A77-315011	+1.4	+3	-1
A77-315023	+1.1	-4	+1
A77-316004	+2.6	+5	+1
A77-310613	-1.9	-4	-5
C1569	+1.6	+1	-1
C1572	+3.7	+5	+1
C1573	+6.3	+11	+3
C1578	-2.3	-2	-2
H72-247	-3.7	-4	-5
H75-121	+5.1	-4	-5
H75-4211	-0.1	0	-3
H75-4212	+1.3	-1	-1
H7772	+6.3	+9	+1
K1037	-2.4	-2	-7
K1038	+0.6	-1	-1
K1040	+6.4	+7	+2
K1042	+2.4	+1	-1
L74L-116	+3.0	-3	+2
L74L-497	+12.6	+14	+3
L75-8064	+4.6	+5	0
L75-8073	+3.9	+7	0
L75-8366	-2.0	-3	-5
L75-8381	+0.1	+1	-3
Md70-1626-67	+7.9	+9	-1
Md70-2221-71	+7.6	+9	+3
S76-2052	+12.0	+9	+6
S76-2102	+12.6	+11	+4
S76-2109	+19.0	+14	+9
S76-2145	+15.9	+14	+7
S76-2169	+17.1	+14	+9
Date planted	5-18	3-30	5-3
*Days to mat.	125	120	139

Ind.	Ill.		MO	Kans.
Sull-ivan	Belle-ville	El-dorado	Portage-ville	Man-hatten
		MATURITY (relative date)		
+1	+2	+5	+3	+8
+16	+29	+35	+17	+24
9-18	9-22	9-20	9-11	9-24
-2	-2	-4	0	-1
-1	-2	-1	+1	+3
+1	+3	+5	+3	+13
-2	-1	+1	0	+10
-1	+2	-1	+1	+10
+2	0	+1	+1	+8
-2	-2	-3	-2	+5
-2	-1	-1	+2	+13
-2	+1	+3	+5	+13
0	+5	+7	+5	+13
-6	-2	-1	-2	-1
-6	-3	-1	-4	-3
-6	-4	-5	-10	-2
-5	-1	+12	-3	-1
-4	-1	+13	-3	+6
0	+5	+8	+7	+14
-4	-1	-4	-1	+2
-4	0	0	+1	+9
+3	+4	+7	+6	+16
-2	-1	+2	+3	+15
-1	+4	+7	+3	+9
+10	+13	+18	+14	+16
+4	+4	+5	+4	+10
+3	+2	+1	+4	+10
-4	-1	-6	0	+5
-2	-1	-5	0	+11
+6	+7	+11	+8	+15
+1	+7	+12	+7	+14
+10	+17	+21	+7	+14
+10	+15	+23	+8	+17
+14	+25	+31	+16	+24
+11	+20	+24	+10	+18
+14	+23	+29	+13	+18
5-30	5-28	5-24	5-10	5-3
111	117	119	124	144

PRELIMINARY TEST IV, 1978

Strain	Mean 7 Tests	Md. Queens	Ohio Wheelers-burg
	LODGING (score)		
Franklin	2.7	3.2	2.8
Essex (V)	2.8	2.5	3.5
Union (IV)	2.6	2.5	3.0
Williams (III)	2.2	2.0	2.5
A76-305025	3.1	3.5	3.5
A77-314014	3.0	2.8	3.5
A77-315011	2.9	3.8	2.8
A77-315023	3.8	3.5	4.0
A77-316004	3.1	4.2	3.8
A77-316013	3.9	4.0	4.5
C1569	2.0	2.0	2.0
C1572	2.3	2.2	3.0
C1573	2.8	3.0	3.8
C1578	2.5	3.0	2.8
H72-247	1.2	1.0	1.8
H75-121	1.2	1.0	1.5
H75-4211	1.0	1.0	1.0
H75-4212	1.1	1.0	1.0
H7772	2.2	2.5	2.2
K1037	1.6	2.0	1.2
K1038	2.5	4.0	2.2
K1040	3.1	3.0	4.0
K1042	2.1	2.5	2.0
L74L-116	2.8	2.5	3.2
L74L-497	2.8	3.0	3.0
L75-8064	2.6	2.5	2.8
L75-8073	2.5	3.2	2.0
L75-8366	2.5	2.5	3.0
L75-8381	2.5	3.0	2.5
Md70-1626-67	2.8	3.8	2.5
Md70-2221-71	2.0	2.5	1.8
S76-2052	2.7	2.2	3.2
S76-2102	2.2	2.2	3.2
S76-2109	1.8	2.5	1.8
S76-2145	2.7	3.0	3.8
S76-2169	2.8	3.0	3.5

Ind.	Ill.		MO	Kans.
Sull-ivan	Belle-ville	El-dorado	Portage-ville	Man-hatten
		LODGING (score)		
3.3	2.6	1.9	2.8	2.5
3.8	2.7	2.3	3.3	1.3
3.3	2.3	2.3	3.3	1.8
3.3	1.9	1.5	2.5	1.7
4.0	2.5	1.7	3.0	3.3
3.3	2.9	2.0	4.0	2.5
3.8	2.5	1.8	2.5	3.3
3.8	3.5	3.5	4.3	3.8
4.0	2.4	2.3	3.3	1.9
3.5	3.8	2.8	4.5	4.0
2.5	1.4	1.3	2.8	1.8
3.3	1.5	1.2	3.3	1.9
3.5	2.3	1.9	3.3	2.0
4.3	2.5	2.5	1.5	1.0
1.5	1.1	1.0	1.0	1.0
1.8	1.1	1.0	1.0	1.0
1.3	1.0	1.0	1.0	1.0
1.5	1.0	1.0	1.0	1.0
2.5	1.9	1.3	2.5	2.5
2.3	1.4	1.4	2.0	1.0
3.0	2.2	2.0	2.5	1.9
2.8	2.7	1.8	4.3	2.8
3.0	1.5	1.3	3.0	1.4
3.5	3.0	2.1	3.3	2.3
3.3	2.4	2.0	3.3	2.5
3.0	2.3	1.7	3.8	1.8
3.3	2.8	1.6	3.0	1.9
2.8	2.4	2.0	3.8	1.7
3.3	1.9	1.6	3.0	2.3
2.5	4.5	1.7	3.0	1.7
1.8	1.8	1.1	3.3	2.0
2.0	3.0	3.1	4.0	1.3
1.8	2.3	2.2	2.5	1.0
1.8	1.5	1.3	2.3	1.2
2.5	2.5	2.4	3.3	1.6
2.3	3.4	2.3	4.0	1.1

Strain	Mean 7 Tests	Md. Queens-town	Ohio Wheelers-burg
		PLANT HEIGHT (inches)	
Franklin	47	46	49
Essex (V)	35	36	36
Union (IV)	45	50	40
Williams (III)	43	44	38
A76-305025	44	45	37
A77-314014	44	45	40
A77-315011	44	46	39
A77-315023	46	49	40
A77-316004	47	48	39
A77-316013	42	40	35
C1569	45	49	38
C1572	44	46	40
C1573	45	49	39
C1578	34	33	36
H72-247	18	20	24
H75-121	19	20	24
H75-4211	22	24	30
H75-4212	22	25	29
H7772	44	46	40
K1037	45	47	39
K1038	44	46	40
K1040	43	48	39
K1042	45	48	42
L74L-116	44	45	39
L74L-497	45	49	39
L75-8064	46	46	43
L75-8073	46	45	42
L75-8366	44	45	40
L75-8381	44	46	38
Md70-1626-67	46	48	39
Md70-2221-71	43	44	41
S76-2052	33	35	37
S76-2102	36	38	36
S76-2109	36	39	36
S76-2145	38	39	38
S76-2169	32	34	36

Ind.	Ill.		MO	Kans.
Sull-ivan	Belle-ville	El-dorado	Portage-ville	Man-hatten
		PLANT HEIGHT (inches)		
46	50	45	43	51
38	34	38	28	37
46	48	44	41	48
44	44	42	38	49
46	46	45	44	47
43	47	46	38	48
44	43	46	40	47
44	45	46	42	54
48	48	47	47	52
42	42	42	37	47
46	47	43	42	48
44	46	44	42	47
43	50	44	41	52
38	34	36	23	35
24	12	17	14	15
23	18	20	13	13
30	20	22	16	14
28	19	22	16	16
47	43	42	42	50
46	49	42	38	51
43	46	43	39	49
43	43	42	38	48
46	47	43	39	49
45	46	43	39	49
47	47	44	43	46
50	47	44	44	50
47	48	46	39	54
44	46	46	38	48
45	46	40	43	47
48	46	47	45	52
46	42	42	39	45
30	32	36	29	33
36	37	40	33	35
38	34	33	27	36
40	37	40	34	38
34	29	34	29	31

Strain	Mean 7 Tests	Md. Queens town	Ohio Wheelers-burg
		SEED QUALITY	
Franklin	2.0	2.0	1.0
Essex (V)	1.7	2.0	1.0
Union (IV)	1.9	2.0	1.0
Williams (III)	2.0	2.0	1.0
A76-305025	2.3	2.0	1.8
A77-314014	2.3	2.0	2.5
A77-315011	2.1	2.5	1.5
A77-315023	2.4	2.2	3.0
A77-316004	1.8	2.2	1.2
A77-316013	2.3	2.0	2.0
C1569	1.8	2.0	1.0
C1572	1.7	2.0	1.5
C1573	1.5	2.2	1.0
C1578	2.1	2.0	1.8
H72-247	2.1	3.0	1.0
H75-121	1.8	2.0	1.0
H75-4211	2.7	3.0	2.0
H75-4212	3.0	3.0	2.5
H7772	2.1	2.0	1.2
K1037	2.0	2.0	1.0
K1038	2.0	2.0	1.0
K1040	2.0	2.0	1.5
K1042	2.2	2.2	2.0
L74L-116	2.3	2.2	1.5
L74L-497	2.2	2.8	1.0
L75-8064	2.1	2.0	1.5
L75-8073	1.8	2.0	1.0
L75-8366	1.9	2.0	1.2
L75-8381	1.8	2.0	1.0
Md70-1626-67	1.9	2.0	1.0
Md70-2221-71	1.9	2.0	1.0
S76-2052	1.7	2.0	1.0
S76-2102	1.8	2.0	1.0
S76-2109	1.8	2.0	1.0
S76-2145	1.5	2.0	1.2
S76-2169	1.7	2.0	1.0

Ind.	Ill.		MO	Kans.
Sulli-ivan	Belle-ville	El-dorado	Portage-ville	Man-hatten
		SEED QUALITY		
1.5	2.5	2.8	2.8	1.5
1.0	1.8	3.0	1.5	1.3
1.5	2.0	3.3	2.0	1.5
2.0	1.5	4.0	1.8	1.5
2.0	2.5	3.0	3.0	1.6
2.0	2.0	3.0	3.0	1.7
2.0	2.0	2.5	2.5	1.9
2.0	2.8	2.0	3.0	1.7
1.5	1.8	2.0	2.0	1.8
1.5	2.0	3.8	3.0	1.7
1.0	2.3	2.3	2.3	1.5
1.0	1.8	2.3	1.5	1.5
1.0	1.5	2.0	1.5	1.5
1.0	3.0	2.3	3.0	1.5
1.5	2.5	2.5	2.8	1.7
1.5	1.5	3.0	2.0	1.4
1.5	3.0	3.8	3.5	1.8
2.0	3.3	3.5	3.5	3.3
2.0	2.5	2.5	2.5	1.7
1.5	2.3	2.3	2.8	1.9
1.5	1.8	4.0	2.0	1.5
1.5	1.8	3.8	2.0	1.4
1.5	2.3	3.3	2.3	1.9
2.5	2.5	3.3	2.5	1.8
2.5	2.0	2.8	2.5	1.7
1.5	2.5	3.3	2.0	1.7
1.5	1.8	3.0	1.5	1.5
1.5	1.8	3.3	2.0	1.6
1.5	1.5	3.0	2.0	1.6
1.5	2.0	3.0	2.5	1.5
1.5	2.0	3.8	1.5	1.5
1.0	2.3	3.0	1.0	1.3
1.0	1.5	4.5	1.0	1.3
1.0	2.0	4.3	1.0	1.4
1.0	1.5	2.8	1.0	1.3
1.0	1.8	3.0	1.5	1.7

Strain	Mean 7 Tests	Md. Queens town	Ohio Wheelers-burg
	SEED SIZE (g/100)		
Franklin	14.0	15.0	11.0
Essex (V)	12.5	14.7	9.0
Union (IV)	17.2	17.8	18.0
Williams (III)	15.6	16.2	14.0
A76-305025	15.8	17.6	13.0
A77-314014	16.3	17.0	16.0
A77-315011	15.3	17.0	15.0
A77-315023	13.7	13.6	14.0
A77-316004	13.8	15.9	13.0
A77-316013	16.8	17.2	16.0
C1569	16.2	17.3	15.0
C1572	15.2	16.8	14.0
C1573	15.9	17.1	14.0
C1578	17.3	17.4	20.0
H72-247	15.7	17.0	15.0
H75-121	15.0	15.0	15.0
H75-4211	17.9	18.4	19.0
H75-4212	19.3	20.8	20.0
H7772	14.8	15.0	13.0
K1037	16.1	16.4	13.0
K1038	16.3	16.3	18.0
K1040	13.2	13.7	12.0
K1042	17.9	16.9	18.0
L74L-116	17.5	17.8	16.0
L74L-497	16.2	17.6	12.0
L75-8064	14.5	13.8	13.0
L75-8073	14.8	15.6	14.0
L75-8366	14.0	15.2	14.0
L75-8381	13.8	15.0	13.0
Md70-1626-67	17.6	16.8	14.0
Md70-2221-71	14.3	14.9	12.0
S76-2052	12.3	13.2	10.0
S76-2102	10.2	10.8	9.0
S76-2109	11.6	12.8	10.0
S76-2145	11.2	12.4	9.0
S76-2169	12.7	14.2	9.0

Ind.	Ill.		MO	Kans.
Sull-ivan	Belle-ville	El-dorado	Portage-ville	Man-hatten
		SEED SIZE (g/100)		
14.9	14.3	14.5	14.0	14.1
12.3	11.5	14.6	12.0	13.4
17.0	17.8	16.9	16.0	17.2
15.9	16.3	15.8	15.3	15.6
15.9	16.8	14.6	15.0	17.5
15.8	16.6	16.7	15.4	16.8
15.3	14.9	15.1	14.0	16.1
13.2	13.3	14.2	13.2	14.3
14.5	13.3	12.9	12.3	14.6
17.8	16.9	16.8	14.6	18.0
15.3	16.1	16.6	15.3	17.6
16.4	14.7	15.4	14.1	15.0
16.1	15.6	16.9	15.1	16.5
14.8	17.2	15.4	17.8	18.7
12.8	15.2	16.7	16.0	17.3
12.8	13.7	17.4	14.1	16.9
16.4	15.5	22.1	17.0	16.8
16.8	17.0	21.3	20.0	19.3
15.1	14.4	15.5	14.7	15.6
15.7	17.0	15.2	17.7	17.7
15.7	16.7	15.4	15.0	17.1
12.8	13.4	14.0	12.8	13.6
17.2	18.0	17.9	17.3	19.9
17.7	17.7	18.8	17.1	17.3
17.2	16.9	16.3	16.2	17.3
15.8	15.0	15.2	13.8	15.1
14.9	15.3	14.9	13.2	15.6
13.3	14.7	13.1	13.1	14.9
12.9	13.8	12.8	13.8	15.1
18.8	18.6	20.8	16.3	18.0
13.7	13.9	16.4	13.2	15.7
12.5	11.5	15.0	11.2	12.5
10.1	10.0	11.6	9.6	10.4
11.3	11.0	13.8	11.0	11.6
10.3	10.8	13.5	10.5	11.6
12.7	12.3	15.3	12.7	12.7

Strain	Mean 4 Tests	Md. Queens-town	Ind. Sulli-van	Ill. El-dorado	Kans. Man-hattan
			PROTEIN		
Franklin	39.1	39.4	40.2	38.3	38.4
Essex (V)	43.2	43.5	43.3	44.0	41.8
Union (IV)	41.2	42.6	39.3	41.1	41.8
Williams (III)	41.4	41.8	42.9	39.6	41.3
A76-305025	42.5	42.9	44.5	41.8	40.7
A77-314014	43.2	43.6	44.3	43.4	41.6
A77-315011	42.0	42.8	43.5	40.1	41.4
A77-315023	40.6	40.6	41.8	40.0	40.2
A77-316004	43.5	44.1	43.8	44.1	42.1
A77-316013	40.5	42.7	39.9	39.6	39.9
C1569	43.0	43.9	44.6	42.1	41.3
C1572	41.2	42.1	41.9	41.8	39.1
C1573	41.9	43.0	40.2	42.8	41.5
C1578	42.4	44.0	44.2	40.2	41.4
H72-247	44.3	45.1	47.2	41.6	43.2
H75-121	42.2	42.0	45.0	40.8	41.0
H75-4211	42.8	43.0	44.0	43.4	41.0
H75-4212	44.0	44.4	45.1	43.7	42.9
H7772	41.7	42.4	42.9	41.2	40.4
K1037	42.2	43.4	41.1	42.7	41.5
K1038	42.7	43.6	44.9	41.0	41.2
K1040	41.3	41.6	42.4	40.9	40.3
K1042	41.2	42.2	40.8	40.7	40.9
L74L-116	42.4	43.1	42.7	42.6	41.3
L74L-497	43.5	43.4	44.1	43.3	43.2
L75-8064	40.2	40.7	40.5	40.0	39.7
L75-8073	42.8	43.5	44.1	42.5	41.0
L75-8366	41.4	41.7	43.4	40.9	39.4
L75-8381	39.8	40.3	41.5	38.6	38.6
Md70-1626-67	40.0	41.3	39.2	40.0	39.7
Md70-2221-71	41.8	41.4	42.7	42.5	40.7
S76-2052	42.8	43.6	43.3	43.1	41.1
S76-2102	42.7	43.5	43.2	43.2	40.8
S76-2109	42.8	43.0	43.6	44.5	40.2
S76-2145	42.8	43.8	42.7	43.0	41.5
S76-2169	42.7	43.2	44.4	42.4	40.9

Strain	Mean 4 Tests	Md. Queens-town	Ind. Sulli-van	Ill. El-dorado	Kans. Man-hattan
			OIL		
Franklin	22.1	21.4	21.9	22.5	22.7
Essex (V)	20.2	19.6	20.3	20.3	20.4
Union (IV)	21.8	21.0	22.7	21.3	22.0
Williams (III)	22.1	22.0	21.6	22.8	22.1
A76-305025	21.5	21.8	20.2	21.9	22.1
A77-314014	20.0	19.2	19.4	20.5	20.8
A77-315011	20.8	20.2	20.1	21.7	21.2
A77-315023	21.7	21.0	21.2	22.6	21.9
A77-316004	21.0	20.2	21.3	20.7	21.8
A77-316013	22.5	21.5	22.7	23.0	22.9
C1569	20.8	20.3	19.6	22.0	21.5
C1572	22.1	21.0	22.0	21.7	23.8
C1573	21.0	19.9	21.6	20.7	21.6
C1578	21.3	20.1	20.0	23.2	21.9
H72-247	20.6	20.5	18.4	21.6	21.8
H75-121	22.0	22.7	20.4	22.6	22.5
H75-4211	20.6	20.7	19.6	20.7	21.3
H75-4212	19.5	19.1	18.6	19.9	20.3
H7772	19.9	18.9	19.4	19.8	21.4
K1037	22.4	21.1	22.2	22.9	23.3
K1038	21.0	20.5	19.5	21.4	22.4
K1040	21.5	21.3	21.3	21.5	21.8
K1042	22.1	20.9	21.3	23.3	22.9
L74L-116	20.9	20.1	20.5	21.6	21.5
L74L-497	20.0	19.7	19.5	19.8	21.0
L75-8064	21.4	20.5	20.8	21.7	22.4
L75-8073	20.2	19.9	19.2	20.1	21.8
L75-8366	21.5	21.1	20.6	21.9	22.5
L75-8381	21.8	21.6	20.1	23.2	22.4
Md70-1626-67	22.3	21.2	22.0	22.9	23.2
Md70-2221-71	21.2	20.7	20.3	20.8	23.0
S76-2052	19.8	18.8	19.3	20.1	20.9
S76-2102	19.8	19.4	18.9	19.6	21.4
S76-2109	19.3	19.7	18.8	18.3	20.4
S76-2145	19.6	19.2	18.8	20.4	20.2
S76-2169	20.0	19.2	19.1	20.5	21.0

Origin and Development of

Wells II Soybean

1973-Wells (rps rps) x Arksoy (Rps^c Rps^c) Cross made in the spring greenhouse.

1973-Wells x F_1 cross made in the field to produce BC_1 generation (1Rps^c rps: 1rps rps).

1973-BC_1 seedlings inoculated with race 3 of Phytophthora megasperma var. sojae, suseptible rps rps plants killed, resistant Rps^c rps plants crossed back to Wells in the fall greenhouse to produce BC_2.

1974-BC_3 produced as above in spring greenhouse.
-BC_4 produced as above in the field.
-BC_5 produced as above in fall greenhouse.

1975-BC_6 produced as above in spring greenhouse.
-BC_7 produced as above in the field.
-BC_7 seedlings inoculated as above in the fall greenhouse and resistant plants (Rps^c rps) grown to maturity.

1976-BC_7-F_2 seeds sown one per 6" pot in the spring greenhouse, inoculated as above, and resistant plants (1 Rps^c Rps^c : 2 Rps^c rps) grown to maturity, seed harvested from 270 individual plants.

1976-Seed from resistant plants sown in 270 6'-rows at the Purdue Agronomy Farm, 30 seeds per row. One 3-seeded pod picked from each plant in each row, then each row harvested separately.

1976-In the fall greenhouse, one seed per pod inoculated with race 1, one with race 3, and one with race 6 of P. megasperma var. sojae. Seed from 71 homogeneous resistant rows bulked to produce breeder seed.

1977-The 71 line composite grown in UT II in 13 states and Ontario, Canada. Fiftly-nine pounds of breeder seed increased to 68 bushels at the Purdue Agronomy Farm.

1978-Breeder seed divided among the releasing states of Indiana (28 bu), Illinois (28 bu), Michigan (3 bu) and non-releasing South Dakota (5 bu). Plant variety protection applied for and on August 1, 1978 publicity released on Wells II.