1956

Results of the Cooperative Uniform Soybean Tests Part I. North Central States 1956

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RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART I. NORTH CENTRAL STATES

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1956
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Compiled by:

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INTRODUCTION

The U. S. Regional Soybean Laboratory was organized in 1936 under the Bankhead-Jones Act, as a cooperative project by the U. S. Department of Agriculture and the twelve Agricultural Experiment Stations of the North Central Region. In 1942, the work of the Soybean Laboratory was expanded to include cooperation with twelve Agricultural Experiment Stations of the Southern Region also. The research program of the Laboratory has been directed toward the development of improved varieties and strains of soybeans for industrial use, and the obtaining of fundamental information necessary to the efficient breeding of strains to meet specific needs.

The Uniform Soybean Tests were initiated in 1938 on a limited basis but the work was rapidly expanded until nine test groups were established to measure the yield and range of adaptation of the better strains developed through the breeding program. The first five groups include strains of proper maturity for the North Central States. The other four groups contain strains adapted to the Southern States. The summary of performance of the first five groups is included in Part I of this report. Information on the last four groups adapted to the southern part of the United States is contained in Part II, which is issued separately.

The first Uniform Preliminary Test was grown in 1944 to gain regional information on a larger number of strains that could be entered in the Uniform Tests. These tests at a limited number of locations have been useful in the early screening of experimental strains, thus improving the quality of entries in the Uniform Tests. Four such Preliminary Tests were grown in 1956, covering Maturity Groups I through IV.

Uniform Test, Group 0, contains the strains that will bloom and mature under the longer days encountered during the summer in the Dakotas, Minnesota, and northern Wisconsin. Group I contains strains generally adapted to South Dakota, the southern parts of Minnesota, Wisconsin, and Michigan, and the northern parts of Iowa and Ohio. Groups II, III, and IV, respectively, include strains adapted to locations farther south in the North Central States and to other areas of similar latitude. In general, each group is arranged to include strains differing in maturity by about ten days. Maturity of the strains is expressed as so many days earlier or later than some well-known check or reference variety in the group.

Daily rainfall and maximum and minimum temperature graphs and a brief statement of growing conditions during the 1956 season are included for most nursery locations as an aid to interpretation of the agronomic and chemical data. Illinois had a cool dry spring with abundant moisture over the state during July and August, resulting in the highest state average (28.5 bushels) ever experienced. Contrasted to this was the drouth in the western part of the region. Severity of the drouth at Ames, Iowa is illustrated by the mean yield and plant height of the Group II strains. Mean yield was 16.2 bushels in 1956 contrasted to 27.8 in 1955, with plant heights of 22 inches and 40 inches, respectively. Rains occurring in the Ames area during the seed filling period resulted in good seed quality though moisture came too late to affect yield or plant growth.

COOPERATING AGENCIES AND PERSONNEL FOR THE NORTH CENTRAL REGION

Forage and Range Section, Beltsville, Maryland

D. F. Beard, Head of Section
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K. W. Kreitlow, Pathology Coordinator

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[1]Part time.

Collaborators in the North Central States

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Food Technology Department: R. T. Milner

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Agronomy Department: I. J. Johnson

Kansas Agricultural Experiment Station
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Agronomy Department: H. H. Kramer

South Dakota Agricultural Experiment Station
Agronomy Department: C. J. Franzke

Wisconsin Agricultural Experiment Station
Agronomy Department: J. H. Torrie

LOCATION OF COOPERATIVE NURSERIES, 1956

Location	Cooperator
Ottawa, Ontario, Canada	F. Dimmock, Central Exp. Farm
Guelph, Ontario, Canada	G. E. Jones, Ontario Agr. College
Ridgetown, Ontario, Canada	W. W. Snow, Western Ontario Agr. College
University Park, Pennsylvania	J. B. Washko, Pa. Agr. Exp. Sta.
Landisville, Pennsylvania	Tobacco Substation, Pa. State University
Freehold, New Jersey	Hugh Oakley
Mt. Holly, New Jersey	Wilbur Lippincott
Salem, New Jersey	Thomas Curley
Newark, Delaware	H. W. Indyk, Del. Agr. Exp. Sta.
Georgetown, Delaware	H. W. Indyk, Del. Agr. Exp. Sta.
Beltsville, Maryland	R. C. Leffel, Forage and Range Section, U. S. D. A.
Hoytville, Ohio	Northwestern Substation
Wooster, Ohio	Ohio Agr. Exp. Sta.
Columbus, Ohio	P. E. Smith, Ohio State Univ.
Ottawa Lake, Michigan	Edward Brodbeck
Walkerton, Indiana	Elburt F. Place, Farmer Cooperator
Bluffton, Indiana	Gerald Bayless, Farmer Cooperator
Lafayette, Indiana	O. W. Luetkemeier, Purdue Agr. Exp. Sta.
Greenfield, Indiana	Raymond Roney, Farmer Cooperator
Worthington, Indiana	Frederic Sloan, Farmer Cooperator
Evansville, Indiana	Bernard Wagner, Farmer Cooperator
Spooner, Wisconsin	Carl Rydberg, Spooner Br., Wis. Agr. Exp. Sta.
Durand, Wisconsin	Antoine Sam, Wis. Agr. Exp. Sta.
Madison, Wisconsin	W. L. Colville, Wis. Agr. Exp. Sta.
Shabbona, Illinois	R. R. Bell, N. Ill. Exp. Field
Dwight, Illinois	Fred Koenig, Farmer Cooperator
Urbana, Illinois	C. H. Farnham, Ill. Agr. Exp. Sta.
Girard, Illinois	T. H. Lloyd, Farmer Cooperator
Edgewood, Illinois	John Wilson, Farmer Cooperator
Eldorado, Illinois	Cyril Wagner, Farmer Cooperator
Carbondale, Illinois	Bob Hudson, Southern Ill. Univ.
Morris, Minnesota	J. W. Lambert, Minn. Northwest Exp. Sta.
St. Paul, Minnesota	J. W. Lambert, Minn. Agr. Exp. Sta.
Waseca, Minnesota	J. W. Lambert, Minn. Southern Exp. Sta.
Cresco, Iowa	Howard County Agr. Exp. Assoc.
Kanawha, Iowa	Northern Iowa Agr. Exp. Assoc.
Independence, Iowa	Carrington-Clyde Exp. Assoc.
Ames, Iowa	Iowa Agr. Exp. Sta.
Ottumwa, Iowa	A. E. Newquist, Farmer Cooperator
Kirksville, Missouri	Earl Shockey, Farmer Cooperator
Laddonia, Missouri	Carver Brown, Farmer Cooperator
Columbia, Missouri	Missouri Agr. Exp. Station
Jefferson City, Missouri	Lincoln University
Casselton, North Dakota	R. E. Bothun, N. D. Agr. Exp. Sta.
Fargo, North Dakota	R. E. Bothun, N. D. Agr. Exp. Sta.
Rosholt, South Dakota	C. J. Franzke, Agr. Exp. Sta.
Brookings, South Dakota	C. J. Franzke, Agr. Exp. Sta.
Menno, South Dakota	C. J. Franzke, Agr. Exp. Sta.
Lincoln, Nebraska	J. H. Williams, Nebr. Agr. Exp. Sta.
Powhattan, Kansas	L. P. Hertz, Corn Belt Exper. Field
Manhattan, Kansas	E. L. Mader, Kansas State College
Columbus, Kansas	Verlin Peterson, Columbus Exper. Field

LOCATION OF COOPERATIVE NURSERIES, 1956 (CONTINUED)

Location	Soil Type	Uniform Group Tests					Prelim. Tests			
		0	I	II	III	IV	I	II	III	IV
Ottawa, Ont., Can.	Grenville Sandy Loam	x								
Guelph, Ont., Can.	London Loam	x								
Ridgetown, Ont., Can.	Brookston Clay Loam		x	x						
University Park, Pa.	Hagerstown Silt Loam		x	x						
Landisville, Pa.	Dunsmore Silt Loam				x	x				
Freehold, N. J.	Colt's Neck Fine Sandy Loam			x						
Mt. Holly, N. J.	Collingston Sandy Loam			x						
Salem, N. J.	Matapeake Loam				x					
Newark, Del.	Sassafras Loam			x	x	x				
Georgetown, Del.	Norfolk Loamy Sand				x	x				
Beltsville, Md.	Riverdale Silt Loam				x	x			x	x
Hoytville, Ohio	Hoytville Clay	x	x	x			x	x		
Wooster, Ohio	Wooster Silt Loam	x	x	x						
Columbus, Ohio	Miami-Brookston Silt Loam	x	x	x	x		x	x	x	
Ottawa Lake, Mich.	Brookston Silty Clay Loam	x	x	x						
Walkerton, Ind.	Maumee Loam		x	x			x			
Bluffton, Ind.	Nappanee Silt Loam			x						
Lafayette, Ind.	Floyd-Raub Complex			x	x			x	x	
Greenfield, Ind.	Brookston-Crosby Complex			x	x					
Worthington, Ind.	Genesee Silt Loam				x	x				
Evansville, Ind.	Montgomery Silty Clay Loam					x				x
Spooner, Wis.	Omega Sandy Loam	x								
Durand, Wis.	Boone Fine Sandy Loam	x	x				x			
Madison, Wis.	Miami Silt Loam		x	x			x	x		
Shabbona, Ill.	Flanagan Silt Loam		x	x						
Dwight, Ill.	Elliott Silt Loam			x	x			x		
Urbana, Ill.	Flanagan Silt Loam			x	x	x				
Girard, Ill.	Harrison Silt Loam				x				x	
Edgewood, Ill.	Cisne Silt Loam				x	x				
Eldorado, Ill.	Beaucoup Silty Clay Loam				x	x				x
Carbondale, Ill.	Stoy Silt Loam					x				x
Morris, Minn.	Barnes Silt Loam	x								
St. Paul, Minn.	Waukegan Silt Loam	x	x				x			
Waseca, Minn.	LeSueur Silty Clay Loam		x	x			x			
Cresco, Iowa	Carrington Plastic Till Phase		x							
Kanawha, Iowa	Webster Silty Clay Loam		x	x			x	x		
Independence, Iowa	Carrington Silt Loam			x						
Ames, Iowa	Clarion Silt Loam			x	x			x		
Ottumwa, Iowa	Haig Silt Loam				x				x	
Kirksville, Mo.	Putnam Silt Loam				x					
Laddonia, Mo.	Mexico Silt Loam				x	x			x	
Columbia, Mo.	Putnam Silt Loam				x	x				x
Jefferson City, Mo.	Wabash Clay					x				
Casselton, N. D.	Bearden Silty Clay Loam	x								
Fargo, N. D.	Fargo Clay	x								
Rosholt, S. D.	Sandy Loam	x								
Brookings, S. D.	Barnes Sandy Loam		x				x			
Menno, S. D.	Silt Loam			x				x		
Lincoln, Nebr.	Wabash Silt Loam			x	x			x	x	
Powhattan, Kans.	Grundy Silt Loam				x					
Manhattan, Kans.	Elmo Silt Loam					x				x
Columbus, Kans.	Cherokee Silt Loam					x				

METHODS

All Uniform Tests are planted in replicated single rod-row plots, using either a lattice or a randomized block design with four replications. Row widths used at the different test locations vary from 21 to 42 inches, depending upon the width in common use or the equipment available for handling the crop. Usually 18 to 20 feet of row is planted and only 16 or 16½ feet harvested. Seeds have been planted on the basis of 200 viable seeds per row. The following data were taken for each plot.

Yield is measured after the seeds have been dried to a uniform moisture content and is reported in bushels per acre.

Maturity is taken as the date when approximately 95% of the pods are ripe and most of the leaves have dropped. Green stems are not to be considered in determining maturity but should be noted separately. Maturity is expressed as days earlier (-) or later (+) than the average of a standard reference variety. Reference varieties used for the Uniform Tests are as follows: Group 0, Mandarin (Ottawa); Group I, Chippewa; Group II, Hawkeye; Group III, Lincoln; and Group IV, Wabash.

Lodging notes are taken at maturity and recorded on a scale of 1 to 5 according to the following degrees of lodging:

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

Height is reported as the average length in inches of plants from the ground to the tip of the stem at time of maturity.

Seed quality is rated from 1 to 5 according to the following scale:

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

The factors considered in estimating seed quality are: seed development, wrinkling, damage, and objectionable color for the variety.

Seed weight is recorded as weight (in grams) per 100 seeds.

Chemical composition of the seed is determined on samples submitted to the Laboratory in Urbana. Percentages of oil and protein are expressed on a moisture-free basis. In the case of the Preliminary Tests, analysis is made on a composite sample of four replications for each strain.

Calculating Summary Means. In most cases where the lodging and seed quality notes are all 1 at a location, indicating no expression of strain differences, these locations are not included in the mean. Where the C. V. of yield is greater than 20% at a location, this location is not usually included in the strain means.

MAP OF THE NORTH CENTRAL STATES SHOWING LOCATION OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

Strain Designation. In order to simplify strain designations and indicate state of origin for entries in the Uniform Tests, the following code letters to precede strain numbers have been agreed upon in meetings of experiment station agronomists collaborating with the U. S. Regional Soybean Laboratory.

Code Letter	State	Code Letter	State
L	Illinois	Au	Alabama
C	Indiana	R	Arkansas
A	Iowa	B	California
K	Kansas	F	Florida
E	Michigan	Ga	Georgia
M	Minnesota	La	Louisiana
S	Missouri	Md	Maryland
U	Nebraska	D	Mississippi
ND	North Dakota	N	North Carolina
H	Ohio	Ok	Oklahoma
SD	South Dakota	SC	South Carolina
W	Wisconsin	UT	Tennessee
O	Ontario, Canada	TS	Texas
		V	Virginia

It is suggested that states cooperating in these Uniform Tests use these letters to designate their strains.

UNIFORM TEST, GROUP 0, 1956

Strain	Source or Originating Agency	Origin
Capital	Central Exp. Farm, Ottawa	Sel. from Strain 171 x A.K. (Harrow)
Chippewa	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
Comet	Central Exp. Farm, Ottawa	Sel. from Pagoda x Mandarin
Flambeau	Wis. Agr. Exp. Sta.	Sel. from Introduction from Russia
Grant	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Seneca
Hardome	Dominion Exp. Farm, Harrow	Sel. from Mandarin x (Mandarin x A.K.)
Mandarin (Ottawa)	Central Exp. Farm, Ottawa	Sel. from Mandarin
Norchief	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau
Renville	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
0-52-710	Central Exp. Farm, Ottawa	Sel. from Blackhawk x Mandarin (Ottawa)
0-52-793	Central Exp. Farm, Ottawa	Sel. from A45-251 x Flambeau
W9S-2703	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Flambeau
W0S-3138	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau
W0S-3147	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
W0S-3180	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
W0S-3257	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
W0S-3386	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Flambeau

This test was grown at thirteen locations in 1956 and the data are presented in Tables 1 through 11. Yields were generally lower in 1956 than in 1955, with an average of 28 bushels for nine locations in 1956 and 31 for the same locations in 1955. St. Paul was the only location showing a marked increase in yield in 1956.

The entries in this test were the same as in 1955. The nine named varieties have been in the test for five years or more and the five-year summary of their performance is presented in Tables 10 and 11. Grant has led all others in yield, averaging even slightly higher than the Group I varieties, Chippewa and Renville, in the area of this test. Capital has yielded fairly well but has the highest average lodging score in the test. Hardome was two days earlier than Capital but rather similar otherwise. Comet, Norchief, and Flambeau, the earliest strains in the test, yielded the lowest on the average but yielded relatively better at Fargo, the northernmost location. Flambeau, despite its short height, was very lodging susceptible and was low in oil content.

Considering the three-year means presented in Tables 8 and 9, W0S-3386 was outstanding among the experimental strains, being highest in yield and earliest in maturity. It was outyielded by only Chippewa and Grant and was 3 days earlier than Grant. Its drawbacks are its low oil content and not too high lodging resistance. W0S-3147 was similar in performance but a little more lodging resistant. W9S-2703 was of Norchief maturity and exceeded it in yield and lodging resistance. The remaining three "W" strains were not outstanding in yield.

Two strains were added to the test in 1955. 0-52-793 led all strains in yield in 1956 and was fourth in yield in 1955. Its major drawback is its proneness to

lodging, having the highest average lodging score in 1956. 0-52-710 is of about Chippewa maturity but was outyielded by Chippewa by 2.9 bushels in 1955 and 1.5 bushels in 1956.

Table 1. Summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1956..

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	11	8	10	11	10	11	11	11
0-52-793	33.7	+2.8	2.7	34	1.9	18.4	42.2	19.9
Chippewa	33.0	+3.3	1.9	35	1.6	14.7	41.1	19.8
Hardome	32.7	+0.1	2.6	35	2.1	16.8	42.1	19.7
Grant	32.6	+0.5	2.2	33	1.7	16.6	40.9	19.9
0-52-710	32.2	+4.4	1.5	37	1.8	17.6	41.4	19.3
Capital	31.6	+0.8	2.4	34	2.0	14.2	40.9	19.9
WOS-3147	31.4	-0.3	1.7	32	1.8	16.7	42.1	19.6
WOS-3386	31.4	-1.5	2.4	33	1.8	15.7	41.1	19.3
Comet	30.9	-1.0	1.4	34	1.6	16.9	40.8	19.9
Mandarin (Ottawa)	30.7	0	1.7	30	1.7	19.6	43.0	19.6
Renville	29.6	+4.8	1.9	33	1.9	16.7	40.8	20.4
W9S-2703	29.3	-1.9	1.9	31	1.8	17.1	42.4	19.8
WOS-3180	28.7	+0.5	2.0	31	1.9	17.3	42.5	19.3
WOS-3138	28.6	+0.8	1.8	31	2.0	17.6	42.0	19.7
WOS-3257	28.4	+1.5	2.1	33	1.9	16.4	42.8	19.1
Flambeau	27.8	-4.4	2.6	31	2.3	17.5	42.3	19.4
Norchief	27.8	-2.9	2.0	30	2.1	17.3	41.4	20.1
Mean	30.6	+4.4	2.0	33	1.9	16.9	41.8	19.7

[1]Days earlier (-) or later (+) than Mandarin (Ottawa). Mandarin (Ottawa) required 112 days to mature.

Table 2. Summary of yield in bushels per acre for the strains in the Uniform Test, Group 0, 1956.

Strain	Mean of 11 Tests[1]	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Ottawa Lake Mich.
0-52-793	33.7	34.4	24.6	29.6	36.4	41.2	43.5
Chippewa	33.0	29.2	21.4	36.3	40.7	39.2	45.6
Hardome	32.7	33.8	29.3	23.9	33.3	37.4	46.4
Grant	32.6	31.3	29.5	24.4	30.8	37.4	43.5
0-52-710	32.2	28.4	20.8	31.4	42.0	43.8	50.9
Capital	31.6	31.2	29.5	23.5	26.2	36.4	42.0
WOS-3147	31.4	34.4	31.4	23.3	33.8	32.6	42.3
WOS-3386	31.4	32.8	29.7	20.5	31.2	33.8	44.5
Comet	30.9	32.4	27.9	21.5	33.3	35.4	48.6
Mandarin (Ottawa)	30.7	23.8	25.4	17.2	33.5	34.9	49.4
Renville	29.6	25.5	15.9	26.5	32.8	37.4	43.4
W9S-2703	29.3	31.0	24.5	18.8	32.4	32.1	36.8
WOS-3180	28.7	33.0	21.7	17.1	30.5	33.9	40.7
WOS-3138	28.6	27.2	20.7	21.1	33.7	30.5	36.2
WOS-3257	28.4	27.8	16.7	19.7	31.9	33.5	39.9
Flambeau	27.8	31.8	26.0	17.1	32.3	27.9	31.5
Norchief	27.8	30.9	22.3	16.9	29.2	26.6	37.4
Mean	30.6	30.5	24.5	22.9	33.2	34.9	42.5
Coef. of Var. (%)		8.9	17.5	--	--	--	--
Bu. Nec. for Sig. (5%)		3.8	5.4	--	--	--	--
Row Spacing (In.)		30	24	36	28	28	28

[1]Spooner, Wisconsin and Casselton, North Dakota not included in the mean.

Table 2. (Continued)

Strain	Spooner Wis.	Durand Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.	Rosholt S.D.
0-52-793	26.1	31.7	34.3	50.8	10.4	20.9	22.9
Chippewa	20.5	26.2	34.4	46.1	6.0	19.8	24.0
Hardome	28.4	30.3	32.5	47.1	10.0	25.7	20.2
Grant	28.4	29.8	33.5	44.5	9.0	29.1	24.5
0-52-710	23.0	27.1	33.0	38.0	4.8	18.8	20.0
Capital	21.7	28.2	35.8	49.3	10.0	25.0	20.6
W0S-3147	25.9	28.5	33.7	41.3	9.4	24.0	20.3
W0S-3386	27.1	27.6	33.0	44.4	8.8	26.0	21.4
Comet	26.0	29.2	30.3	36.4	10.0	24.8	19.8
Mandarin (Ottawa)	24.2	28.4	32.8	44.4	8.5	27.3	20.8
Renville	24.3	28.4	33.3	40.3	7.9	20.3	22.3
W9S-2703	27.5	28.4	31.5	38.3	10.2	28.8	19.3
W0S-3180	28.9	28.3	29.8	37.1	10.1	25.5	18.0
W0S-3138	22.3	27.6	32.1	39.7	10.2	24.3	21.0
W0S-3257	24.3	27.7	30.4	42.4	9.2	22.7	19.7
Flambeau	22.6	29.6	30.0	40.0	6.9	24.8	15.3
Norchief	25.2	26.6	33.6	36.6	8.7	25.2	20.8
Mean	25.1	28.4	32.6	42.2	8.8	24.3	20.6
Coef. of Var. (%)	--	7.1	7.3	10.2	--	--	--
Bu. Nec. for Sig. (5%)	--	N.S.	3.3	6.1	--	--	--
Row Spacing (In.)	36	36	40	40	36	36	42

Table 3. Summary of yield rank for the strains in the Uniform Test, Group O, 1956.

Strain	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Ottawa Lake Mich.
O-52-793	1	9	3	3	2	7
Chippewa	12	13	1	2	3	5
Hardome	3	5	6	7	4	4
Grant	8	3	5	14	4	7
O-52-710	13	14	2	1	1	1
Capital	9	3	7	17	7	11
WOS-3147	1	1	8	4	13	10
WOS-3386	5	2	11	13	11	6
Comet	6	6	9	7	8	3
Mandarin (Ottawa)	17	8	14	6	9	2
Renville	16	17	4	9	4	9
W9S-2703	10	10	13	10	14	15
WOS-3180	4	12	15	15	10	12
WOS-3138	15	15	10	5	15	16
WOS-3257	14	16	12	12	12	13
Flambeau	7	7	15	11	16	17
Norchief	11	11	17	16	17	14

Table 3. (Continued)

Strain	Spooner Wis.	Durand Wis.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.	Rosholt S.D.
0-52-793	6	1	3	1	1	14	3
Chippewa	17	17	2	4	16	16	2
Hardome	2	2	11	3	5	5	11
Grant	2	3	6	5	10	1	1
0-52-710	13	15	8	14	17	17	12
Capital	16	11	1	2	5	8	9
WOS-3147	8	6	4	9	8	12	10
WOS-3386	5	13	8	6	11	4	5
Comet	7	5	15	17	5	9	13
Mandarin (Ottawa)	12	7	10	6	13	3	7
Renville	10	7	7	10	14	15	4
W9S-2703	4	7	13	13	2	2	15
WOS-3180	1	10	17	15	4	6	16
WOS-3138	15	13	12	12	2	11	6
WOS-3257	10	12	14	8	9	13	14
Flambeau	14	4	16	11	15	9	17
Norchief	9	16	5	16	12	7	7

Table 4. Summary of maturity data, days earlier (-) or later (+) than Mandarin (Ottawa), for the strains in the Uniform Test, Group 0, 1956.

Strain	Mean of 8 Tests[1]	Guelph Ontario	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio
0-52-793	+2.8	-2	+4	+4	0
Chippewa	+3.3	+2	+4	+4	+ 1
Hardome	+0.1	-3	0	+2	0
Grant	+0.5	-4	+2	0	0
0-52-710	+4.4	+2	+5	+5	+ 1
Capital	+0.8	+2	0	0	0
WOS-3147	-0.3	-3	-3	-1	0
WOS-3386	-1.5	-3	-3	-1	- 7
Comet	-1.0	-4	0	-2	0
Mandarin (Ottawa)	0	0	0	0	0
Renville	+4.8	+4	+4	+5	+ 3
W9S-2703	-1.9	-4	0	-1	- 6
WOS-3180	+0.5	-1	-1	-1	- 1
WOS-3138	+0.8	+1	+1	-1	- 6
WOS-3257	+1.5	-1	0	-1	0
Flambeau	-4.4	-4	0	-1	-11
Norchief	-2.9	-3	-2	-1	- 6
Date planted	5/28	5/26	5/25	6/11	5/26
Mandarin (Ottawa) matured	9/17	10/12	9/10	9/12	9/4
Days to mature	112	139	108	93	101

[1]Guelph, Ontario not included in the mean.

Table 4. (Continued)

Strain	Ottawa Lake Mich.	Morris Minn.	St. Paul Minn.	Fargo N.D.	Rosholt S.D.
0-52-793	+7	+ 4	0	+4	-1
Chippewa	+1	+ 9	+ 1	+7	-1
Hardome	0	+ 2	- 3	0	0
Grant	0	+ 6	- 5	+1	0
0-52-710	+2	+ 8	+ 5	+7	+2
Capital	+1	+ 5	- 2	+3	-1
WOS-3147	0	+ 3	- 1	0	0
WOS-3386	0	+ 3	- 8	+3	+1
Comet	+1	0	- 3	-4	0
Mandarin (Ottawa)	0	0	0	0	0
Renville	+2	+12	+ 3	+7	+2
W9S-2703	0	+ 2	-10	-2	+2
WOS-3180	+6	0	- 2	+2	+1
WOS-3138	+7	+ 2	- 1	+2	+2
WOS-3257	+7	0	+ 1	+3	+2
Flambeau	-3	- 4	-13	-5	+2
Norchief	-2	0	- 8	-3	-1
Date planted	6/1	5/25	5/23	6/1	5/22
Mandarin (Ottawa) matured	9/22	9/11	9/30	9/22	9/25
Days to mature	113	109	130	113	126

Table 5. Summary of lodging data for the strains in the Uniform Test, Group O, 1956.

Strain	Mean of 10 Tests[1]	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Ottawa Lake Mich.
O-52-793	2.7	3.3	1.8	2.0	1.0	2.0	4.0
Chippewa	1.9	2.3	1.3	2.0	1.0	1.0	2.2
Hardome	2.6	2.1	1.3	2.0	2.0	2.0	3.5
Grant	2.2	2.6	1.8	2.0	1.0	1.0	3.0
O-52-710	1.5	1.3	1.5	1.0	1.0	1.0	1.1
Capital	2.4	2.4	2.0	2.0	1.0	2.0	3.0
WOS-3147	1.7	1.9	1.5	2.0	1.0	1.0	1.5
WOS-3386	2.4	3.4	1.3	2.0	1.0	1.0	3.0
Comet	1.4	1.1	1.0	1.0	1.0	1.0	1.2
Mandarin (Ottawa)	1.7	1.0	1.0	2.0	1.0	1.0	2.0
Renville	1.9	2.1	2.3	2.0	1.0	1.0	2.2
W9S-2703	1.9	2.6	1.5	2.0	1.0	1.0	2.3
WOS-3180	2.0	1.5	1.3	2.0	1.0	1.0	3.1
WOS-3138	1.8	1.4	1.3	1.0	1.0	1.0	2.6
WOS-3257	2.1	1.8	1.5	2.0	1.0	1.0	3.5
Flambeau	2.6	2.4	2.3	2.0	2.0	1.0	4.5
Norchief	2.0	2.3	1.3	2.0	1.0	1.0	3.0
Mean	2.0	2.1	1.5	1.8	1.1	1.2	2.7

[1]Spooner, Wisconsin, Casselton, North Dakota, and Rosholt, South Dakota not included in the mean.

Table 5. (Continued)

Strain	Spooner Wis.	Durand Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.	Rosholt S.D.
0-52-793	2.5	2.0	3.0	4.0	1.0	4.0	1.0
Chippewa	2.7	2.0	2.0	3.0	1.0	2.0	1.0
Hardome	3.5	2.0	3.0	4.0	1.0	4.2	1.0
Grant	2.2	1.0	3.0	4.0	1.0	3.0	1.0
0-52-710	2.7	1.0	1.0	3.0	1.0	3.5	1.0
Capital	4.0	2.0	2.0	4.0	1.0	4.0	1.0
WOS-3147	1.5	1.0	2.0	3.0	1.0	2.5	1.0
WOS-3386	2.5	1.0	3.0	4.0	1.0	3.8	1.0
Comet	2.5	1.0	1.0	3.0	1.0	3.0	1.0
Mandarin (Ottawa)	1.0	2.0	1.0	3.0	1.0	2.5	1.0
Renville	2.0	1.0	2.0	3.0	1.0	2.0	1.0
W9S-2703	1.5	1.0	2.0	3.0	1.0	3.0	1.0
WOS-3180	2.2	1.0	2.0	4.0	1.0	3.2	1.0
WOS-3138	1.7	1.0	2.0	4.0	1.0	2.5	1.0
WOS-3257	2.7	1.0	2.0	4.0	1.0	3.0	1.0
Flambeau	1.7	1.0	3.0	4.0	1.0	4.2	1.0
Norchief	2.0	1.0	2.0	4.0	1.0	2.8	1.0
Mean	2.3	1.3	2.1	3.6	1.0	3.1	1.0

Table 6. Summary of height data for the strains in the Uniform Test, Group O, 1956.

Strain	Mean of 11 Tests[1]	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Ottawa Lake Mich.
O-52-793	34	35	47	26	25	31	34
Chippewa	35	36	40	26	27	33	36
Hardome	35	37	43	25	29	35	40
Grant	33	35	44	25	23	30	34
O-52-710	37	38	46	27	27	34	39
Capital	34	33	42	27	26	31	36
WOS-3147	32	31	42	21	21	26	32
WOS-3386	33	35	46	22	21	30	33
Comet	34	32	42	24	27	31	35
Mandarin (Ottawa)	30	30	36	22	22	27	30
Renville	33	37	38	23	21	30	32
W9S-2703	31	35	41	23	23	25	32
WOS-3180	31	34	44	22	21	26	32
WOS-3138	31	32	38	21	22	26	32
WOS-3257	33	33	45	25	22	28	32
Flambeau	31	34	40	20	22	24	32
Norchief	30	31	41	20	21	26	30
Mean	33	34	42	23	24	29	34

[1]Spooner, Wisconsin and Casselton, North Dakota not included in the mean.

Table 6. (Continued)

Strain	Spooner Wis.	Durand Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.	Rosholt S.D.
0-52-793	33	31	33	40	24	41	33
Chippewa	36	32	35	42	24	40	36
Hardome	36	35	29	42	26	44	29
Grant	31	30	32	37	21	40	31
0-52-710	36	36	39	42	27	44	34
Capital	35	30	34	39	27	43	34
W0S-3147	31	29	33	39	21	42	33
W0S-3386	32	29	33	37	22	44	34
Comet	33	32	33	39	23	44	32
Mandarin (Ottawa)	31	28	30	36	21	37	27
Renville	34	29	34	37	21	41	36
W9S-2703	31	26	32	35	22	38	29
W0S-3180	32	28	30	37	23	40	28
W0S-3138	32	26	32	38	20	42	30
W0S-3257	32	27	30	39	22	42	35
Flambeau	30	28	31	36	21	39	31
Norchief	29	27	32	33	18	38	29
Mean	33	30	32	38	23	41	32

Table 8. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1954-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	31	23	25	31	30	31	31	31
Chippewa	32.9	+3.2	1.8	34	1.7	14.7	40.0	20.3
Grant	32.3	+0.8	2.2	32	1.7	16.1	39.8	20.2
WOS-3386	31.8	-2.1	2.3	33	1.8	15.4	40.4	19.7
Hardome	31.4	-0.6	2.9	36	1.9	16.3	40.8	20.0
WOS-3147	30.9	-1.6	1.8	31	1.7	16.6	41.6	19.9
Capital	30.8	+1.5	2.8	34	1.9	13.6	40.0	20.2
Renville	30.6	+3.5	1.7	32	2.0	16.6	39.7	20.9
Comet	30.3	-1.7	1.7	33	1.7	16.4	39.9	20.1
Mandarin (Ottawa)	30.2	0	1.7	29	1.6	19.3	41.5	19.9
W9S-2703	29.5	-3.6	1.8	30	1.9	16.5	41.3	20.3
WOS-3257	29.2	-0.8	2.3	32	2.0	16.3	42.1	19.5
WOS-3180	29.0	-1.0	2.2	32	2.0	17.2	41.6	19.6
WOS-3138	28.5	-1.3	1.7	30	1.9	17.1	41.1	20.2
Norchief	27.9	-3.8	2.1	29	2.1	17.0	40.6	20.4
Flambeau	26.2	-7.0	2.7	30	2.2	16.7	41.5	19.5
Mean	30.1		2.1	32	1.9	16.4	40.8	20.0

[1]Days earlier (-) or later (+) than Mandarin (Ottawa). Mandarin (Ottawa) required 113 days to mature.

Table 9. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group O, 1954-56.

Strain	Mean of 31 Tests	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Ohio	Ottawa Lake Mich.
Years Tested		1954-1956	1954-1956	1954, 1956	1955-1956	1954, 1956
Chippewa	32.9	34.4	34.4	35.8	44.5	44.3
Grant	32.3	33.7	37.1	28.8	40.0	39.8
WOS-3386	31.8	35.6	34.1	26.6	36.7	38.9
Hardome	31.4	36.6	31.8	30.6	39.5	43.0
WOS-3147	30.9	33.1	35.6	26.2	35.4	34.7
Capital	30.8	32.5	33.0	28.8	40.2	38.1
Renville	30.6	32.3	30.1	28.5	41.9	40.7
Comet	30.3	31.3	32.2	27.2	37.9	41.3
Mandarin (Ottawa)	30.2	29.1	31.9	23.0	37.8	43.0
W9S-2703	29.5	31.7	31.1	24.6	32.1	34.0
WOS-3257	29.2	30.5	29.4	22.6	35.0	34.8
WOS-3180	29.0	33.0	29.6	21.8	37.0	33.8
WOS-3138	28.5	28.8	29.9	25.0	32.9	29.9
Norchief	27.9	29.4	30.6	21.5	29.7	31.5
Flambeau	26.2	29.5	27.9	20.9	26.7	25.7
Mean	30.1	32.1	31.9	26.1	36.5	36.9

	Yield Rank				
Chippewa	3	3	1	1	1
Grant	4	1	3	4	6
WOS-3386	2	4	7	9	7
Hardome	1	8	2	5	2
WOS-3147	5	2	8	10	10
Capital	7	5	3	3	8
Renville	8	11	5	2	5
Comet	10	6	6	6	4
Mandarin (Ottawa)	14	7	11	7	2
W9S-2703	9	9	10	13	11
WOS-3257	11	14	12	11	9
WOS-3180	6	13	13	8	12
WOS-3138	15	12	9	12	14
Norchief	13	10	14	14	13
Flambeau	12	15	15	15	15

Table 9. (Continued)

Strain	Spooner Wis.	Durand Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.	Rosholt S.D.
Years Tested	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954, 1956
Chippewa	32.4	22.1	37.5	46.2	13.4	23.5	23.1
Grant	31.5	22.4	36.8	44.0	16.9	28.0	23.5
WOS-3386	31.5	23.5	35.5	42.2	18.1	26.4	24.4
Hardome	30.9	24.1	34.1	39.6	16.9	27.0	21.2
WOS-3147	31.7	22.7	34.3	40.0	17.1	25.2	23.4
Capital	28.1	22.8	35.7	42.8	16.9	25.1	21.0
Renville	30.5	22.7	34.1	40.4	14.8	24.8	21.7
Comet	31.8	24.3	31.4	35.8	16.3	26.2	22.3
Mandarin (Ottawa)	31.6	23.9	34.1	37.7	15.8	25.6	20.9
W9S-2703	31.4	22.0	33.4	34.2	17.9	28.1	23.6
WOS-3257	29.9	23.2	33.3	37.2	16.9	25.9	21.9
WOS-3180	32.2	23.7	31.6	33.6	18.1	25.3	19.7
WOS-3138	28.5	23.3	34.0	33.5	16.8	25.4	22.1
Norchief	28.8	21.8	33.7	34.3	16.8	26.0	20.1
Flambeau	26.7	22.5	30.5	27.7	15.4	26.0	16.7
Mean	30.5	23.0	34.0	37.9	16.5	25.9	21.7
	Yield Rank						
Chippewa	1	13	1	1	15	15	5
Grant	6	12	2	2	5	2	3
WOS-3386	6	5	4	4	1	4	1
Hardome	9	2	6	7	5	3	10
WOS-3147	4	9	5	6	4	12	4
Capital	14	8	3	3	5	13	11
Renville	10	9	6	5	14	14	9
Comet	3	1	14	10	11	15	6
Mandarin (Ottawa)	5	3	6	8	12	9	12
W9S-2703	8	14	11	12	3	1	2
WOS-3257	11	7	12	9	5	8	8
WOS-3180	2	4	13	13	1	11	14
WOS-3138	13	6	9	14	9	10	7
Norchief	12	15	10	11	9	6	13
Flambeau	15	11	15	15	13	6	15

Table 10. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1952-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	54	38	41	53	51	53	57	57
Grant	33.9	+0.3	2.3	31	1.8	16.0	39.9	20.2
Chippewa	33.6	+3.2	1.8	34	1.8	14.5	40.4	20.2
Capital	32.3	+1.3	2.9	33	1.9	13.3	40.3	20.3
Renville	32.2	+3.4	1.7	31	2.1	16.6	39.8	21.0
Hardome	32.0	-0.5	2.8	36	2.0	16.2	40.9	19.9
Mandarin (Ottawa)	31.7	0	1.6	29	1.6	19.0	41.6	19.8
Comet	30.7	-2.0	1.7	33	1.8	16.3	40.0	20.1
Norchief	29.6	-3.6	1.9	29	2.1	16.7	40.7	20.3
Flambeau	26.6	-6.3	2.8	30	2.3	16.5	41.7	19.4
Mean	31.4		2.2	32	1.9	16.1	40.6	20.1

[1]Days earlier (-) or later (+) than Mandarin (Ottawa). Mandarin (Ottawa) required 115 days to mature.

Table 11. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group O, 1952-56.

Strain	Mean of 54 Tests	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Ohio	Ottawa Lake Mich.[1]
Years Tested		1952-1956	1952-1956	1952-54, 1956	1952-53, 1955-56	1952-54 1956
Grant	33.9	36.7	35.3	29.4	33.5	39.8
Chippewa	33.6	35.5	32.0	34.0	36.7	42.8
Capital	32.3	35.0	32.7	28.6	33.3	37.1
Renville	32.2	34.4	29.1	29.6	35.2	39.6
Hardome	32.0	38.4	30.2	29.7	30.5	40.0
Mandarin (Ottawa)	31.7	32.4	30.9	26.2	32.2	40.9
Comet	30.7	32.8	30.9	28.1	30.7	37.8
Norchief	29.6	31.7	30.1	22.5	25.3	32.2
Flambeau	26.6	32.1	28.0	20.5	21.0	25.9
Mean	31.4	34.3	31.0	27.6	30.9	37.3
		Yield Rank				
Grant		2	1	4	3	4
Chippewa		3	3	1	1	1
Capital		4	2	5	4	7
Renville		5	8	3	2	5
Hardome		1	6	2	7	3
Mandarin (Ottawa)		7	4	7	5	2
Comet		6	4	6	6	6
Norchief		9	7	8	8	8
Flambeau		8	9	9	9	9

[1]Deerfield, Michigan, 1952-53.
[2]Fall City, Wisconsin, 1952-53.

Table 11. (Continued)

Strain	Spooner Wis.	Durand Wis.[2]	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.	Rosholt S.D.
Years Tested	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952, 1954,1956
Grant	35.7	25.6	35.3	42.5	25.3	27.8	24.3
Chippewa	34.7	25.0	36.2	44.3	21.8	22.8	21.3
Capital	31.2	25.5	35.8	41.7	25.1	25.9	20.5
Renville	33.6	25.2	33.3	41.1	24.0	24.3	19.9
Hardome	33.0	26.4	34.2	39.0	22.7	24.7	18.9
Mandarin (Ottawa)	34.5	27.4	32.8	36.1	25.1	24.7	19.5
Comet	33.9	25.9	31.2	32.0	23.8	23.2	21.0
Norchief	32.4	24.7	31.8	34.6	23.8	27.9	19.3
Flambeau	26.4	23.1	29.8	27.7	21.5	26.6	15.0
Mean	32.8	25.4	33.4	37.7	23.7	25.3	20.0
	Yield Rank						
Grant	1	4	3	2	1	2	1
Chippewa	2	7	1	1	8	9	2
Capital	8	5	2	3	2	4	4
Renville	5	6	5	4	4	7	5
Hardome	6	2	4	5	7	5	8
Mandarin (Ottawa)	3	1	6	6	2	5	6
Comet	4	3	8	8	5	8	3
Norchief	7	8	7	7	5	1	7
Flambeau	9	9	9	9	9	3	9

UNIFORM TEST, GROUP I, 1956

Strain	Source or Originating Agency	Origin
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Chippewa	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Earlyana	Purdue Agr. Exp. Sta.	Sel. from a natural hybrid
Grant	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Seneca
Mandarin (Ottawa)	Central Exp. Farm, Ottawa	Sel. from Mandarin
Monroe	Ohio A.E.S. & U.S.R.S.L.	Sel. from Mukden x Mandarin
Renville	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
AOK-2206	Iowa A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Mandarin (Ottawa)
AOK-3808	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)

This test was grown at fifteen locations in 1956 and the data are presented in Tables 12 through 19. The general yield level for fourteen locations was up from an average of 29 bushels in 1955 to 32 bushels in 1956. The major exceptions to the general trend were Hoytville, Columbus, and Walkerton.

The same nine strains were in the test in both 1956 and 1955. Five of the varieties have been in the test eight years or more, and Tables 18 and 19 contain the eight-year means. Chippewa appears to be the outstanding variety of the group from the standpoint of yield, maturity, lodging, and oil content. Blackhawk has yielded slightly less than Chippewa and is several days later. Monroe has averaged a little earlier (2.3 days) than Blackhawk but is almost 2 bushels lower in yield and slightly poorer in oil content.

The four-year summaries in Tables 16 and 17 include comparisons of the two experimental strains. AOK-3808 has outyielded Chippewa by 0.6 bushel but is 4.8 days later. It compares very favorably with Blackhawk--2.6 bushels more yield, slightly earlier, better lodging resistance, and equal in other respects. AOK-2206 is very similar to AOK-3808 but one day later in maturity.

This year's results, with the exception of some minor shifts in yield rank, are very similar to the long-time averages. Chippewa again led all varieties in average yield. Grant, a Group O variety, was included in this test in 1955 and 1956 and has compared rather poorly in yield. Compared to Chippewa, it averaged one day earlier and 4.1 bushels lower in 1955 and 3.3 days earlier and 3.8 bushels lower in 1956.

Table 12. Summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	15	12	15	15	11	15	15	15
Chippewa	35.0	0	1.8	32	1.5	15.6	42.0	20.2
AOK-3808	35.0	+5.5	1.6	33	1.5	16.3	42.0	19.8
AOK-2206	34.3	+7.3	1.8	36	2.0	16.5	41.9	19.5
Monroe	32.4	+4.3	2.4	38	1.4	15.8	43.1	19.2
Blackhawk	32.3	+6.7	2.1	34	1.3	16.3	41.7	20.1
Renville	31.6	0	1.7	29	2.0	17.9	41.9	20.7
Earlyana	31.3	+6.8	3.2	38	2.0	16.5	43.0	19.6
Grant	31.2	-3.3	2.1	29	1.8	16.9	42.2	20.1
Mandarin (Ottawa)	29.2	-2.9	1.2	28	1.8	19.9	43.4	19.4
Mean	32.5	+2.7	2.0	33	1.7	16.9	42.4	19.8

[1]Days earlier (-) or later (+) than Chippewa. Chippewa required 115 days to mature.

Table 13. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1956.

Strain	Mean of 15 Tests	Ridge-town Ontario	Univ. Park Pa.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ottawa Lake Mich.	Walk-erton Ind.
Chippewa	35.0	38.4	32.3	29.9	35.9	38.8	47.0	35.0
AOK-3808	35.0	36.5	36.5	29.1	38.9	39.3	45.8	34.1
AOK-2206	34.3	37.6	43.9	33.0	35.8	36.1	46.3	36.7
Monroe	32.4	39.6	37.2	31.8	31.2	35.7	42.4	32.2
Blackhawk	32.3	32.5	34.6	33.3	36.3	33.4	42.5	31.2
Renville	31.6	35.8	28.1	26.6	30.9	33.8	43.1	29.6
Earlyana	31.3	32.5	31.3	31.6	26.4	36.0	39.5	29.2
Grant	31.2	36.5	30.8	25.0	29.6	29.8	41.5	28.1
Mandarin (Ottawa)	29.2	35.9	33.0	24.6	29.5	24.3	42.5	30.8
Mean	32.5	36.1	34.2	29.4	32.7	34.1	43.4	31.9
Coef. of Var. (%)		--	10.6	--	--	--	--	10.7
Bu. Nec. for Sig. (5%)		4.6	5.4	--	--	--	--	5.1
Row Spacing (In.)		24	36	36	28	28	28	36

	Yield Rank						
Chippewa	2	6	5	3	2	1	2
AOK-3808	4	3	6	1	1	3	3
AOK-2206	3	1	2	4	3	2	1
Monroe	1	2	3	5	5	7	4
Blackhawk	8	4	1	2	7	5	5
Renville	7	9	7	6	6	4	7
Earlyana	8	7	4	9	4	9	8
Grant	4	8	8	7	8	8	9
Mandarin (Ottawa)	6	5	9	8	9	5	6

Table 13. (Continued)

Strain	Durand Wis.	Madi-son Wis.	Shab-bona Ill.	St. Paul Minn.	Wa-seca Minn.	Cresco Iowa	Kana-wha Iowa	Brook-ings S.D.
Chippewa	23.9	37.8	39.2	48.8	42.4	22.8	32.4	20.3
AOK-3808	23.4	40.7	42.3	47.8	39.6	24.2	29.0	17.1
AOK-2206	24.8	38.0	39.5	39.1	32.6	24.9	30.1	15.4
Monroe	22.3	35.4	38.1	43.9	32.0	21.0	26.5	16.8
Blackhawk	23.3	38.0	36.6	43.9	29.8	23.9	29.3	15.5
Renville	27.9	34.0	33.7	42.1	38.9	21.2	30.0	18.0
Earlyana	24.5	34.8	40.1	40.9	33.1	22.7	31.4	15.6
Grant	28.9	33.2	37.5	45.8	34.9	17.6	28.8	20.4
Mandarin (Ottawa)	23.2	31.1	31.3	41.8	30.6	16.8	27.0	15.5
Mean	24.7	35.9	37.6	43.8	34.9	21.7	29.4	17.2
Coef. of Var. (%)	10.8	8.2	5.4	11.6	11.5	6.3	6.3	--
Bu. Nec. for Sig. (5%)	3.7	4.2	3.0	6.9	5.5	2.0	2.7	--
Row Spacing (In.)	36	36	40	40	24	42	40	42
	Yield Rank							
Chippewa	5	4	4	1	1	4	1	2
AOK-3808	6	1	1	2	2	2	6	4
AOK-2206	3	2	3	9	6	1	3	9
Monroe	9	5	5	4	7	7	9	5
Blackhawk	7	2	7	4	9	3	5	7
Renville	2	7	8	6	3	6	4	3
Earlyana	4	6	2	8	5	5	2	6
Grant	1	8	6	3	4	8	7	1
Mandarin (Ottawa)	8	9	9	7	8	9	8	7

Table 14. Summary of maturity data, days earlier (-) or later (+) than Chippewa, and lodging data for the strains in the Uniform Test, Group I, 1956.

Strain	Mean of 12 Tests	Ridge-town Ontario	Univ. Park Pa.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ottawa Lake Mich.	Walk-erton Ind.
Chippewa	0		0	0	0	0		0
AOK-3808	+5.5		+ 8	+6	+ 7	+ 4		+5
AOK-2206	+7.3		+ 9	+7	+11	+10		+5
Monroe	+4.3		+ 9	+2	+ 6	+ 3		+1
Blackhawk	+6.7		+10	+6	+ 9	+ 8		+4
Renville	0		+ 3	+1	0	+ 2		-4
Earlyana	+6.8		+ 5	+5	+ 6	+ 8		+3
Grant	-3.3		- 3	0	- 3	- 3		-4
Mandarin (Ottawa)	-2.9		+ 1	0	- 2	+ 1		-4
Date planted	5/26		5/29	5/25	6/11	5/26		6/5
Chippewa matured	9/18		10/5	9/16	9/15	9/7		9/21
Days to mature	115		129	114	96	104		108

	Mean of 15 Tests	Lodging						
Chippewa	1.8	1.6	2.7	2.0	1.0	1.0	2.1	1.0
AOK-3808	1.6	1.6	1.7	1.0	1.0	1.0	2.6	1.0
AOK-2206	1.8	1.6	2.0	2.0	1.0	1.0	3.6	1.0
Monroe	2.4	3.1	3.0	2.0	2.0	2.0	3.9	1.5
Blackhawk	2.1	2.2	3.0	2.0	1.0	1.0	4.0	1.0
Renville	1.7	1.3	2.0	2.0	1.0	1.0	3.6	1.0
Earlyana	3.2	3.8	3.5	2.0	2.0	3.0	4.5	2.5
Grant	2.1	2.2	3.5	1.0	1.0	1.0	3.5	2.0
Mandarin (Ottawa)	1.2	1.3	1.2	1.0	1.0	1.0	2.0	1.0
Mean	2.0	2.1	2.5	1.7	1.2	1.3	3.3	1.3

Table 14. (Continued)

Strain	Durand Wis.	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
Chippewa	0		0	0	0	0	0	0
AOK-3808	+ 8		+5	+5	+4	+ 7	+6	+1
AOK-2206	+11		+6	+7	+5	+ 6	+9	+1
Monroe	+ 5		+3	+6	+5	+ 6	+5	0
Blackhawk	+ 9		+6	+7	+6	+ 6	+7	+2
Renville	- 1		-1	+1	+1	- 2	0	0
Earlyana	+13		+6	+6	+8	+10	+9	+2
Grant	- 1		-2	-4	-3	- 8	-6	-2
Mandarin (Ottawa)	- 2		-3	-4	-8	-10	-3	-1
Date planted	5/28		5/18	5/23	5/22	5/24	5/22	5/17
Chippewa matured	9/10		9/12	10/3	9/19	9/20	9/10	9/22
Days to mature	105		117	133	120	119	111	128
	Lodging							
Chippewa	2.0	2.0	1.8	4.0	2.0	1.5	1.8	1.0
AOK-3808	1.0	2.0	1.6	3.0	2.0	1.6	2.0	1.0
AOK-2206	2.0	2.0	1.1	3.0	2.0	1.5	1.9	1.0
Monroe	2.0	2.0	3.0	4.0	3.0	1.5	2.4	1.0
Blackhawk	2.0	3.0	1.6	4.0	2.0	1.5	1.6	1.0
Renville	1.0	2.0	1.6	4.0	1.0	1.5	1.8	1.0
Earlyana	4.0	4.0	3.3	5.0	4.0	1.8	3.0	1.8
Grant	1.0	3.0	2.0	4.0	2.0	1.5	2.2	1.0
Mandarin (Ottawa)	1.0	1.0	1.3	2.0	1.0	1.4	1.4	1.0
Mean	1.8	2.3	1.9	3.7	2.1	1.5	2.0	1.1

Table 15. Summary of height data and percentage of oil for the strains in the Uniform Test, Group I, 1956.

Strain	Mean of 15 Tests	Ridge-town Ontario	Univ. Park Pa.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ottawa Lake Mich.	Walk-erton Ind.
Chippewa	32	32	33	27	26	33	36	32
AOK-3808	33	35	35	27	29	26	40	33
AOK-2206	36	37	37	28	28	36	40	34
Monroe	38	39	41	31	30	41	43	38
Blackhawk	34	36	34	29	27	34	38	33
Renville	29	30	30	24	22	29	33	27
Earlyana	38	38	42	31	31	39	45	36
Grant	29	33	32	23	23	30	34	28
Mandarin (Ottawa)	28	28	28	20	22	29	31	27
Mean	33	34	35	27	26	33	38	32

	Mean of 15 Tests	Percentage of Oil						
Chippewa	20.2	19.0	18.6	20.9	20.2	20.7	17.9	21.6
AOK-3808	19.8	18.7	18.4	20.5	19.6	20.6	19.5	20.7
AOK-2206	19.5	18.3	17.9	20.5	19.8	20.3	18.8	20.8
Monroe	19.2	18.3	18.0	19.7	18.7	20.1	17.1	21.0
Blackhawk	20.1	18.6	18.4	20.6	20.1	21.1	19.7	21.3
Renville	20.7	19.7	19.1	21.6	20.5	21.3	19.7	21.6
Earlyana	19.6	18.4	18.4	20.2	18.6	20.3	19.2	20.9
Grant	20.1	18.7	18.8	20.6	19.8	20.4	18.9	21.2
Mandarin (Ottawa)	19.4	18.0	17.0	20.4	18.8	19.5	18.4	20.9
Mean	19.8	18.6	18.3	20.6	19.6	20.5	18.8	21.1

Table 15. (Continued)

Strain	Durand Wis.	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
Chippewa	33	30	36	39	40	24	34	30
AOK-3808	35	32	38	40	41	25	34	28
AOK-2206	38	32	41	46	43	30	36	31
Monroe	39	36	47	43	49	27	36	34
Blackhawk	39	30	39	40	43	29	35	30
Renville	29	26	33	38	35	23	31	26
Earlyana	39	35	44	44	50	29	37	34
Grant	30	27	33	36	34	20	29	28
Mandarin (Ottawa)	28	24	31	36	33	22	30	25
Mean	34	30	38	40	41	25	34	30

	Percentage of Oil							
Chippewa	19.2	19.9	20.7	20.0	19.9	20.9	21.0	22.7
AOK-3808	18.8	19.5	19.9	19.7	19.2	19.9	20.3	21.6
AOK-2206	19.0	19.2	19.5	19.1	18.6	19.4	19.8	21.5
Monroe	17.8	19.2	19.8	18.7	18.9	19.2	19.9	21.7
Blackhawk	20.1	19.6	20.1	19.8	19.5	19.9	20.6	22.1
Renville	20.3	20.6	20.8	19.8	20.6	20.8	21.8	22.8
Earlyana	19.8	19.8	20.1	19.0	19.5	18.6	19.6	21.8
Grant	19.0	19.5	20.0	20.3	19.8	20.8	21.1	22.0
Mandarin (Ottawa)	17.9	18.5	19.3	19.5	19.8	20.1	20.5	22.8
Mean	19.1	19.5	20.0	19.5	19.5	20.0	20.5	22.1

Table 16. Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1953-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	59	46	52	56	51	60	60	60
AOK-3808	33.0	+4.8	1.8	35	1.6	15.6	41.2	20.3
AOK-2206	32.9	+5.8	1.9	37	1.9	15.8	41.0	19.9
Chippewa	32.4	0	1.7	33	1.8	15.0	41.0	20.7
Blackhawk	30.4	+5.4	2.2	35	1.6	15.8	40.5	20.7
Monroe	29.3	+3.4	2.6	40	1.7	15.1	41.9	19.9
Earlyana	28.7	+6.8	3.2	39	2.2	15.8	42.3	19.9
Mandarin (Ottawa)	27.3	-3.2	1.5	28	2.1	18.6	42.2	19.9
Mean	30.6		2.1	35	1.8	16.0	41.4	20.2

[1]Days earlier (-) or later (+) than Chippewa. Chippewa required 114 days to mature.

Table 17. Four-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1953-56.

Strain	Mean of 59 Tests	Ridgetown Ontario	Univ. Park Pa.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Ottawa Lake Mich.[1]	Walkerton Ind.
Years Tested		1955-1956	1953-1956	1953-1956	1953-1956	1953-1956	1953-54 1956	1953-1956
AOK-3808	33.0	33.8	29.8	34.3	28.5	36.5	40.0	38.7
AOK-2206	32.9	35.6	32.1	37.7	27.0	36.6	40.9	40.0
Chippewa	32.4	31.7	26.5	34.8	27.7	37.4	40.3	36.7
Blackhawk	30.4	31.6	28.5	33.8	26.5	35.7	38.6	32.3
Monroe	29.3	31.9	28.3	33.9	24.5	34.4	35.9	34.6
Earlyana	28.7	32.4	26.0	34.2	24.3	33.9	31.2	33.1
Mandarin (Ottawa)	27.3	27.1	25.1	29.3	21.6	27.8	35.5	32.6
Mean	30.6	32.0	28.0	34.0	25.7	34.6	37.5	35.4
		Yield Rank						
AOK-3808		2	2	3	1	3	3	2
AOK-2206		1	1	1	3	2	1	1
Chippewa		5	5	2	2	1	2	3
Blackhawk		6	3	6	4	4	4	7
Monroe		4	4	5	5	5	5	4
Earlyana		3	6	4	6	6	7	5
Mandarin (Ottawa)		7	7	7	7	7	6	6

[1]Deerfield, Michigan, 1953.
[2]Fall City, Wisconsin, 1953.

Table 17. (Continued)

Strain	Durand Wis.[2]	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
Years Tested	1953-1956	1954-1956	1953-1956	1953-1956	1953-1956	1953-1956	1953-1956	1954-1956
AOK-3808	23.7	40.3	36.5	40.8	40.1	24.2	32.4	23.2
AOK-2206	24.7	37.0	34.7	36.0	36.2	24.2	32.7	22.7
Chippewa	24.0	36.4	34.8	41.8	40.2	23.6	32.2	23.5
Blackhawk	24.3	35.5	33.8	33.1	33.4	22.4	30.4	21.8
Monroe	23.1	32.5	32.8	34.3	32.3	21.4	28.4	20.0
Earlyana	21.8	31.1	34.1	33.0	30.5	21.0	30.0	20.3
Mandarin (Ottawa)	24.4	30.0	28.2	34.2	31.2	18.7	25.9	21.1
Mean	23.7	34.7	33.6	36.2	34.8	22.2	30.3	21.8
	Yield Rank							
AOK-3808	5	1	1	2	2	1	2	2
AOK-2206	1	2	3	3	3	1	1	3
Chippewa	4	3	2	1	1	3	3	1
Blackhawk	3	4	5	6	4	4	4	4
Monroe	6	5	6	4	5	5	6	7
Earlyana	7	6	4	7	7	6	5	6
Mandarin (Ottawa)	2	7	7	5	6	7	7	5

Table 18. Eight-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1949-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	118	89	102	112	101	118	118	118
Chippewa	30.9	0	1.5	33	1.8	15.1	41.2	20.4
Blackhawk	30.1	+5.7	1.9	35	1.6	15.7	40.8	20.5
Earlyana	28.4	+7.1	3.0	38	2.2	15.9	42.6	19.8
Monroe	28.4	+3.4	2.4	39	1.6	15.1	42.2	19.6
Mandarin (Ottawa)	27.1	-2.9	1.3	28	2.0	18.6	42.6	19.6
Mean	29.0		2.0	35	1.8	16.1	41.9	20.0

[1]Days earlier (-) or later (+) than Chippewa. Chippewa required 113 days to mature.

Table 19. Eight-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1949-56.

Strain	Mean of 118 Tests	Guelph Ontario	Univ. Park Pa.	Hoytville Ohio[1]	Wooster Ohio	Columbus Ohio	Ottawa Lake Mich.[2]	Walkerton Ind.	Durand Wis.[3]
Years Tested		1949-1953	1949-1956	1949-50, 1952-56	1951-1956	1949-1956	1950-54, 1956	1949-1956	1949-1956
Chippewa	30.9	26.5	26.6	32.4	29.4	32.2	33.5	35.5	25.6
Blackhawk	30.1	26.4	28.2	33.5	28.9	31.1	34.8	34.6	24.3
Earlyana	28.4	23.3	26.9	33.5	27.2	29.9	28.8	36.6	21.2
Monroe	28.4	23.8	27.1	31.7	26.7	30.2	32.3	34.7	22.3
Mandarin (Ottawa)	27.1	25.7	25.7	28.6	23.0	26.3	31.0	33.5	24.2
Mean	29.0	25.1	26.9	31.9	27.0	29.9	32.1	35.0	23.5
		Yield Rank							
Chippewa		1	4	3	1	1	2	2	1
Blackhawk		2	1	1	2	2	1	4	2
Earlyana		5	3	1	3	4	5	1	5
Monroe		4	2	4	4	3	3	3	4
Mandarin (Ottawa)		3	5	5	5	5	4	5	3

[1]Holgate, Ohio, 1949-50.
[2]Deerfield, Michigan, 1950-53.
[3]Eau Claire, Wisconsin, 1949-50; Fall City, Wisconsin, 1951-53.
[4]Compton, Illinois, 1949-50.

Table 19. (Continued)

Strain	Madison Wis.	Shabbona Ill.[4]	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
Years Tested	1949-52, 1954-56	1949-1956	1949-50, 1952-56	1949-1956	1949-1956	1949-1956	1949-50, 1952,1954-56
Chippewa	34.6	32.6	39.2	36.4	24.0	33.4	21.3
Blackhawk	36.0	31.9	30.5	33.4	23.8	33.0	21.3
Earlyana	31.9	31.5	29.0	29.9	22.6	31.1	19.8
Monroe	32.6	30.7	31.4	29.6	22.3	28.9	19.2
Mandarin (Ottawa)	29.9	27.5	32.5	30.3	19.2	27.6	20.3
Mean	33.0	30.8	32.5	31.9	22.4	30.8	20.4
	Yield Rank						
Chippewa	2	1	1	1	1	1	1
Blackhawk	1	2	4	2	2	2	1
Earlyana	4	3	5	4	3	3	4
Monroe	3	4	3	5	4	4	5
Mandarin (Ottawa)	5	5	2	3	5	5	3

UNIFORM AND PRELIMINARY TESTS, GROUP I, 1956

Strain	Source or Originating Agency	Origin
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Chippewa	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
Earlyana	Purdue Agr. Exp. Sta.	Sel. from a natural hybrid
Grant	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Seneca
Mandarin (Ottawa)	Central Exp. Farm, Ottawa	Sel. from Mandarin
Monroe	Ohio A.E.S. & U.S.R.S.L.	Sel. from Mukden x Mandarin
Renville	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
AOK-2206	Iowa A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Mandarin (Ottawa)
AOK-3808	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
A2-4008*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Adams x Blackhawk
C1105*	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mand. (Ottawa)
C1106*	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mand. (Ottawa)
C1117*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mand. (Ottawa) x Lincoln
C1119*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mand. (Ottawa) x Lincoln
H15345*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x P. I. 68666
W9-1454*	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau
W9-1982-1*	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Manchu
W9-1982-32*	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Manchu

*Grown in the Preliminary Test, Group I, only.

Uniform and Preliminary Tests, Group I, were grown together as one test at nine locations in 1956, and the data are presented in Tables 20 through 23. The Preliminary Test consisted of nine strains. A2-4008, W9-1454, W9-1982-1, and W9-1982-32 are new, while C1105, C1106, C1117, and C1119 were in Preliminary Test, Group I, in 1954 and in Preliminary Test, Group II, in 1955. All except C1119 were in Uniform Test, Group II, in 1956. H15345 was in the 1955 Preliminary Test, Group II, and in the 1956 Uniform Test, Group II.

Strain C1105 equalled Chippewa in yield but was about nine days later in maturity. Strains C1117, A2-4008, C1106, H15345, and C1119 ranged from 7.8 to 10.6 days later than Chippewa but despite this late maturity were outyielded by Chippewa on the average in this test.

Strain W9-1982-32 and W9-1982-1 were of Blackhawk maturity and outyielded Blackhawk by 1.4 and 0.6 bushels but were outyielded by Chippewa. They were quite tall for this maturity group, 3 or 4 inches taller than Blackhawk, but withstood lodging better. W9-1454 was also Blackhawk maturity, yielded a little better, but was both short and susceptible to lodging.

Table 20. Summary of agronomic and chemical data for the strains in the Uniform and Preliminary Tests, Group I, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	9	9	9	9	8	9	9	9
C1105*	34.5	+ 8.8	2.2	37	1.3	18.4	41.6	20.3
Chippewa	34.4	0	1.9	33	1.5	15.0	41.1	20.4
C1117*	33.6	+ 8.5	2.2	36	1.4	15.4	41.0	21.1
AOK-3808	33.3	+ 4.9	1.6	33	1.4	15.7	40.8	20.7
A2-4008*	33.0	+ 8.4	2.2	36	1.9	17.1	40.9	21.0
W9-1982-32*	32.3	+ 6.4	1.9	39	1.1	17.4	40.4	20.3
C1106*	32.2	+ 8.3	2.1	39	1.1	17.2	41.4	20.2
H15345*	31.9	+10.6	2.4	35	1.6	14.4	40.4	20.2
AOK-2206	31.8	+ 6.9	1.8	36	1.8	15.9	40.7	20.9
W9-1454*	31.7	+ 5.6	2.4	33	1.8	17.6	40.5	21.1
W9-1982-1*	31.5	+ 6.3	1.7	38	1.1	17.5	40.2	20.6
Renville	31.2	0	1.6	29	1.9	17.5	40.9	21.4
C1119*	31.1	+ 7.8	2.5	37	1.8	17.5	43.1	20.4
Blackhawk	30.9	+ 6.1	2.0	35	1.2	15.8	40.6	20.9
Earlyana	30.8	+ 6.8	3.3	38	1.8	16.1	42.5	20.0
Monroe	30.7	+ 3.4	2.2	39	1.3	15.1	40.9	20.5
Grant	30.5	- 2.9	1.9	29	1.6	16.5	41.3	20.9
Mandarin (Ottawa)	27.7	- 2.6	1.2	28	1.6	19.2	41.5	20.4
Mean	31.8	+ 5.2	2.1	35	1.5	16.6	41.1	20.6

*Grown in the Preliminary Test, Group I, only.
[1]Days earlier (-) or later (+) than Chippewa. Chippewa required 115 days to mature.

Table 21. Summary of yield in bushels per acre for the strains in the Uniform and Preliminary Tests, Group I, 1956.

Strain	Mean of 9 Tests	Hoyt-ville Ohio	Colum-bus Ohio	Walk-erton Ind.	Durand Wis.	Madi-son Wis.	St. Paul Minn.	Wa-seca Minn.	Kana-wha Iowa	Brook-ings S.D.
C1105*	34.5	39.0	43.6	37.1	25.8	43.9	40.5	36.4	29.1	15.3
Chippewa	34.4	29.9	38.8	35.0	23.9	37.8	48.8	42.4	32.4	20.3
C1117*	33.6	36.6	44.0	34.0	26.1	41.7	42.2	30.5	31.8	15.7
AOK-3808	33.3	29.1	39.3	34.1	23.4	40.7	47.8	39.6	29.0	17.1
A2-4008*	33.0	33.6	40.7	39.9	24.7	38.0	39.6	31.0	35.4	13.7
W9-1982-32*	32.3	32.8	39.1	30.0	23.1	41.3	44.2	35.9	29.5	15.1
C1106*	32.2	38.7	40.6	34.7	26.3	39.2	34.1	33.4	28.0	14.4
H15345*	31.9	31.1	42.5	38.4	24.0	29.2	39.9	30.3	35.9	16.2
AOK-2206	31.8	33.0	36.1	36.7	24.8	38.0	39.1	32.6	30.1	15.4
W9-1454*	31.7	35.3	34.8	31.7	26.3	37.9	38.0	30.6	32.3	18.2
W9-1982-1*	31.5	32.6	36.9	31.2	22.1	41.5	42.5	33.2	28.8	14.6
Renville	31.2	26.6	33.8	29.6	27.9	34.0	42.1	38.9	30.0	18.0
C1119*	31.1	36.5	35.0	34.7	28.0	35.7	34.5	30.0	29.7	15.8
Blackhawk	30.9	33.3	33.4	31.2	23.3	38.0	43.9	29.8	29.3	15.5
Earlyana	30.8	31.6	36.0	29.2	24.5	34.8	40.9	33.1	31.4	15.6
Monroe	30.7	31.8	35.7	32.2	22.3	35.4	43.9	32.0	26.5	16.8
Grant	30.5	25.0	29.8	28.1	28.9	33.2	45.8	34.9	28.8	20.4
Mandarin (Ottawa)	27.7	24.6	24.3	30.8	23.2	31.1	41.8	30.6	27.0	15.5
Mean	31.8	32.3	36.9	33.3	24.9	37.3	41.6	33.6	30.3	16.3
Coef. of Var. (%)		--	--	10.7	10.8	8.2	11.6	11.5	5.9	--
Bu.N.F.S. (5%)		--	--	5.1	3.7	4.2	6.9	5.5	2.6	--
Row Spacing (In.)		36	28	36	36	36	40	24	40	42

*Grown in the Preliminary Test, Group I, only.

Table 22. Summary of yield rank for the strains in the Uniform and Preliminary Tests, Group I, 1956.

Strain	Hoyt-ville Ohio	Colum-bus Ohio	Walk-erton Ind.	Durand Wis.	Madi-son Wis.	St. Paul Minn.	Wa-seca Minn.	Kana-wha Iowa	Brook-ings S.D.
C1105*	1	2	3	7	1	12	4	12	14
Chippewa	14	8	5	12	11	1	1	3	2
C1117*	3	1	9	6	2	8	15	5	9
A0K-3808	15	6	8	13	5	2	2	13	5
A2-4008*	6	4	1	9	7	14	12	2	18
W9-1982-32*	9	7	15	16	4	4	5	10	15
C1106*	2	5	6	4	6	18	7	16	17
H15345*	13	3	2	11	18	13	16	1	7
A0K-2206	8	10	4	8	7	15	10	7	13
W9-1454*	5	14	11	4	10	16	13	4	3
W9-1982-1*	10	9	12	18	3	7	8	14	16
Renville	16	15	16	3	15	9	3	8	4
C1119*	4	13	6	2	12	17	17	9	8
Blackhawk	7	16	12	14	7	5	18	11	11
Earlyana	12	11	17	10	14	11	9	6	10
Monroe	11	12	10	17	13	5	11	18	6
Grant	17	17	18	1	16	3	6	14	1
Mandarin (Ottawa)	18	18	14	15	17	10	13	17	11

*Grown in the Preliminary Test, Group I, only.

Table 23. Summary of maturity data, days earlier (-) or later (+) than Chippewa for the strains in the Uniform and Preliminary Tests, Group I, 1956.

Strain	Mean of 8 Tests	Hoyt-ville Ohio	Colum-bus Ohio	Walk-erton Ind.	Durand Wis.	St. Paul Minn.	Wa-seca Minn.	Kána-wha Iowa	Brook-ings S.D.
C1105*	+ 8.8	+ 9	+13	+7	+13	+9	+ 6	+11	+2
Chippewa	0	0	0	0	0	0	0	0	0
C1117*	+ 8.5	+ 9	+14	+6	+10	+9	+ 6	+10	+4
AOK-3808	+ 4.9	+ 6	+ 4	+5	+ 8	+5	+ 4	+ 6	+1
A2-4008*	+ 8.4	+10	+14	+5	+13	+8	+ 7	+ 8	+2
W9-1982-32*	+ 6.4	+ 6	+10	+4	+ 9	+4	+ 4	+10	+4
C1106*	+ 8.3	+10	+15	+8	+ 9	+8	+ 5	+ 9	+2
H15345*	+10.6	+10	+16	+9	+14	+8	+10	+12	+6
AOK-2206	+ 6.9	+ 7	+10	+5	+11	+7	+ 5	+ 9	+1
W9-1454*	+ 5.6	+ 8	+ 6	+4	+ 9	+6	+ 4	+ 6	+2
W9-1982-1*	+ 6.3	+ 6	+ 9	+3	+ 9	+6	+ 6	+ 8	+3
Renville	0	+ 1	+ 2	-4	- 1	+1	+ 1	0	0
C1119*	+ 7.8	+ 8	+13	+3	+13	+8	+ 7	+ 7	+3
Blackhawk	+ 6.1	+ 6	+ 8	+4	+ 9	+7	+ 6	+ 7	+2
Earlyana	+ 6.8	+ 5	+ 8	+3	+13	+6	+ 8	+ 9	+2
Monroe	+ 3.4	+ 2	+ 3	+1	+ 5	+6	+ 5	+ 5	0
Grant	- 2.9	0	- 3	-4	- 1	-4	- 3	- 6	-2
Mandarin (Ottawa)	- 2.6	0	+ 1	-4	- 2	-4	- 8	- 3	-1
Date planted	5/25	5/25	5/26	6/5	5/28	5/23	5/22	5/22	5/17
Chippewa matured	9/17	9/16	9/7	9/21	9/10	10/3	9/19	9/10	9/22
Days to mature	115	114	104	108	105	133	120	111	128

*Grown in the Preliminary Test, Group I, only.

UNIFORM TEST, GROUP II, 1956

Strain	Source or Originating Agency	Origin
Adams	Iowa A.E.S. & U.S.R.S.L.	Sel. from Illini x Dunfield
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Harosoy	Harrow Exp. Sta., Harrow, Ont.	Sel. from Mandarin x (Mandarin x A.K.)
Hawkeye	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Lincoln	Ill. A.E.S. & U.S.R.S.L.	Sel. from Mandarin x Manchu
Richland	Purdue Agr. Exp. Sta.	Sel. from P. I. 70502-2
A0-8618	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
A0-8618-1	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
A0-8618-2	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
AX29-163-1-2	Iowa A.E.S. & U.S.R.S.L.	Sel. from Adams x Hawkeye
C1056	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x A45-251)
C1105	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mandarin (Ottawa)
C1106	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mandarin (Ottawa)
C1117	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mandarin (Ottawa) x Lincoln
C1121	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mandarin (Ottawa) x Lincoln
C1128	Purdue A.E.S. & U.S.R.S.L.	Sel. from Wabash x A4-107-12
H13116	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Richland x C11)
H13501	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Richland x C11)
H14025	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Quebec 92
H14521	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ontario
H15345	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x P. I. 68666
L9-5139	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Blend 1		Blend of 50% A0-8618-1 and 50% L9-5139

This test was grown at twenty-three locations, and the data are presented in Tables 24 through 34. The general yield level was much the same in 1956 as in 1955, averaging 34 bushels for 1956 and 33 for 1955 for the eighteen locations where the test was grown in both years. At individual locations there was very little change except for marked increases at Dwight and Urbana, Illinois, and Lincoln, Nebraska, and a considerable decrease at Ames, Iowa.

Strain A0-8618 and six varieties have been included in this test for five years, and the data are presented in Tables 33 and 34. A0-8618 has rather consistently outyielded the varieties but is later in maturity than all except Lincoln, the Group III tie-in variety. It has stood up as well or better than Lincoln, Adams, and Harosoy, and is acceptable in other respects. Harosoy has yielded exceptionally well considering its early maturity, averaging almost the same yield as Adams and Lincoln and slightly higher than Hawkeye.

Eight additional strains have been tested for at least three years, and these data are summarized in Tables 31 and 32. L9-5139 yielded 0.9 bushel less than A0-8618 in this test, but in Uniform Test, Group III, the reverse was true, L9-5139 outyielding

A0-8618 by 1.5 bushels (5-year mean). These strains have performed in this manner rather consistently through the years, with A0-8618 being superior at northern locations and L9-5139 at the more southern ones. C1128 was about the same maturity as Adams, outyielded it by 0.9 bushel, stood up better (equalling Hawkeye), and had the same high oil content as Adams. H13501 yielded as well as C1128 but was later and more prone to lodging. The remaining five strains, AX29-163-1-2, C1056, H14521, H13116, and H14025, ranged from a day to 5.5 days later in maturity than Hawkeye and all averaged less in yield.

Eight strains were in this test for the first time in 1956. A0-8618-1 and A0-8618-2 are purple- and white-flowered portions of A0-8618, respectively. The three strains appeared identical in most respects, but there was a surprising variation in yield, with A0-8618 averaging 0.7 and 1.7 bushels higher in yield than its derivatives. The blend of A0-8618-1 and L9-5139 outyielded both of its components in this test and almost equalled L9-5139 in Uniform Test, Group III.

The remaining strains C1105, C1121, C1106, C1117, and H15345 are all from the 1955 Preliminary Test, Group II. With the exception of H15345, they were in the 1954 Preliminary Test, Group I. With the exception of C1121, they are also in the 1956 Preliminary Test, Group I. C1105 was outstanding in all respects except its low oil content. C1121 was a day earlier than Harosoy (2.8 days later in 1955), averaged slightly better in yield in this test and in 1955, and was excellent in lodging resistance. C1106 was 2.3 days earlier than Harosoy and equalled it in yield, while in 1955 it matured the same as Harosoy and had a 0.5 bushel advantage. C1117 was a day later than C1106 and was otherwise similar in 1956 and 1955. The yield of H15345 was relatively poor in 1956.

Table 24. Summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	20	15	21	19	16	21	21	21
C1105	38.5	-4.6	1.9	37	2.0	19.7	43.1	19.4
Blend 1	37.2	+3.2	2.2	40	1.8	15.7	41.1	20.3
C1121	37.1	-4.7	2.0	34	1.9	18.0	42.1	20.4
A0-8618	37.0	+3.0	2.5	39	1.9	16.2	41.5	20.1
Harosoy	36.9	-3.8	2.5	39	2.3	17.9	42.1	20.2
C1106	36.9	-6.1	2.0	39	1.9	18.1	42.2	20.3
H13501	36.8	+3.6	2.4	42	2.1	15.2	40.7	20.8
C1128	36.5	+2.5	2.0	41	1.7	16.9	40.5	21.0
A0-8618-2	36.3	+3.5	2.5	40	1.9	16.2	41.5	20.0
L9-5139	36.2	+4.7	2.4	40	1.9	15.0	40.7	20.4
C1117	36.2	-5.3	2.1	35	1.8	16.1	42.2	20.6
AX29-163-1-2	35.8	+4.4	2.9	42	1.9	15.6	40.2	20.9
Adams	35.7	+1.8	2.4	41	1.7	14.8	40.3	20.8
Lincoln	35.5	+3.9	2.5	40	1.8	14.8	40.9	20.6
A0-8618-1	35.3	+3.5	2.3	40	1.9	16.4	41.6	20.0
Hawkeye	35.0	0	2.1	37	1.7	18.0	41.6	20.6
H14521	34.8	-0.5	2.1	39	2.0	18.6	40.4	20.9
C1056	34.4	+0.3	2.8	38	1.9	16.9	40.8	21.0
H13116	34.0	+1.2	2.6	39	2.2	16.6	40.9	20.2
H15345	33.6	-2.0	2.1	35	2.1	15.2	40.2	20.7
Blackhawk	32.1	-6.7	2.1	34	1.9	16.1	41.8	20.6
Richland	31.2	-0.1	2.4	35	2.3	17.1	41.4	19.9
H14025	27.3	-0.9	1.8	35	2.7	18.1	43.1	19.9
Mean	35.2	+0.6	2.3	38	2.0	16.7	41.3	20.4

[1]Days earlier (-) or later (+) than Hawkeye. Hawkeye required 122 days to mature.

Table 25. Summary of yield in bushels per acre for the strains in the Uniform Test, Group II, 1956.

Strain	Mean of 20 Tests[1]	Ridge-town Ont.	Univ. Park Pa.	Free-hold N.J.	Mt. Holly N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ot-tawa Lake Mich.	Walk-erton Ind.	Bluff-ton Ind.
C1105	38.5	30.5	36.8	41.2	42.8	45.0	38.9	40.7	41.6	45.5	34.2	44.3
Blend 1	37.2	21.3	34.7	45.9	57.2	44.9	40.3	39.7	43.6	37.5	45.1	45.5
C1121	37.1	27.8	41.7	45.0	55.7	49.0	38.3	38.1	36.8	48.8	35.9	38.2
A0-8618	37.0	21.4	33.0	43.6	46.6	46.8	40.5	41.7	44.1	40.0	42.5	44.8
Harosoy	36.9	35.4	36.9	39.4	40.0	42.6	39.4	35.4	39.1	42.0	41.4	41.3
C1106	36.9	33.9	33.5	43.7	43.4	36.9	37.5	39.4	38.1	49.4	37.4	39.0
H13501	36.8	25.4	28.4	40.9	50.6	44.3	40.8	40.0	40.2	44.4	40.2	43.2
C1128	36.5	21.2	37.1	43.0	42.9	42.0	37.1	41.0	40.3	40.7	45.8	36.2
A0-8618-2	36.3	21.5	28.3	40.5	50.8	39.9	39.0	44.3	42.5	39.2	39.7	42.3
L9-5139	36.2	21.2	31.2	41.6	45.4	43.9	39.4	39.2	39.1	40.4	41.2	41.9
C1117	36.2	27.1	39.1	42.6	45.1	46.3	35.0	29.4	40.8	40.6	41.1	41.6
AX29-163-1-2	35.8	17.7	30.1	43.1	19.0	42.7	37.9	33.5	46.0	32.2	40.9	39.2
Adams	35.7	23.3	37.2	36.5	46.1	45.1	40.0	38.3	40.3	39.8	41.2	38.7
Lincoln	35.5	23.0	27.1	42.8	36.8	46.7	35.3	36.7	43.8	38.1	37.8	43.6
A0-8618-1	35.3	20.0	32.3	40.3	48.7	43.7	35.5	40.8	42.7	38.6	36.1	41.2
Hawkeye	35.0	23.3	29.3	40.1	41.4	44.7	32.9	36.9	38.0	40.2	38.7	34.0
H14521	34.8	26.2	36.0	39.8	39.7	40.0	34.2	38.7	39.9	39.0	35.4	38.8
C1056	34.4	23.2	27.7	41.3	28.9	45.3	37.4	39.4	37.3	35.0	37.2	37.7
H13116	34.0	29.6	32.5	34.9	45.9	41.7	31.2	36.9	39.1	30.3	38.2	39.0
H15345	33.6	27.0	27.6	38.1	45.7	39.5	28.7	35.9	40.5	35.0	37.3	37.7
Blackhawk	32.1	25.5	34.6	35.2	41.2	32.9	33.1	34.6	33.7	39.1	33.5	33.0
Richland	31.2	23.8	30.4	40.5	33.5	37.4	31.5	33.4	35.8	26.3	34.1	34.1
H14025	27.3	21.3	26.6	34.2	40.8	31.2	23.2	35.5	32.8	35.4	31.7	33.2
Mean	35.2	24.8	32.7	40.6	43.0	42.3	36.0	37.8	39.8	39.0	38.5	39.5
C.V. (%)		14.7	12.0	13.3	19.7	12.6	--	--	--	--	13.2	9.1
Bu.N.F.S. (5%)		5.5	5.3	N.S.	11.8	7.5	--	--	--	--	7.2	5.0
Row Sp. (In.)		24	36	30	20	36	36	28	28	28	36	38

[1]Mt. Holly, New Jersey, Ames, Iowa, and Menno, South Dakota not included in the mean.

Table 25. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Independence Iowa	Ames Iowa	Menno S.D.	Lincoln Nebr.
C1105	37.0	28.7	37.8	43.0	43.2	52.7	31.5	27.4	28.6	15.0	18.5	40.8
Blend 1	38.5	30.9	34.6	36.4	39.3	48.4	27.6	26.3	20.8	19.0	10.9	42.8
C1121	33.4	28.9	37.2	42.3	37.1	48.6	29.5	26.3	23.1	12.6	17.7	36.0
A0-8618	38.7	29.7	33.3	36.8	44.8	45.4	24.9	29.2	21.1	19.2	14.3	38.5
Harosoy	38.0	27.5	34.4	41.3	41.9	45.8	29.9	25.2	27.1	14.6	15.0	34.9
C1106	35.6	27.6	38.2	36.8	38.6	47.3	36.2	24.7	25.8	15.3	15.9	38.2
H13501	38.4	32.2	35.0	34.6	43.3	47.4	26.2	27.0	22.4	22.5	15.2	41.9
C1128	36.9	32.2	37.1	37.8	41.8	48.2	25.5	25.2	24.6	16.0	17.2	37.0
A0-8618-2	36.6	29.4	33.1	35.9	43.1	49.4	28.1	29.6	21.2	18.0	15.1	41.6
L9-5139	36.1	31.9	28.5	37.7	46.9	45.7	24.9	27.5	22.4	18.9	10.7	43.2
C1117	34.0	26.2	33.0	43.1	39.7	46.4	28.3	24.6	25.8	15.8	19.0	38.5
AX29-163-1-2	42.8	30.5	31.8	36.3	41.1	48.4	25.0	28.5	20.5	16.2	16.0	46.9
Adams	34.6	25.0	32.6	36.3	43.2	49.1	24.3	27.1	21.0	16.2	12.9	39.9
Lincoln	34.8	30.4	33.7	36.4	38.5	48.9	26.1	26.3	20.7	18.7	12.3	38.7
A0-8618-1	36.1	26.3	28.5	35.7	43.5	46.5	26.5	28.6	21.8	18.4	13.8	40.4
Hawkeye	35.6	26.7	35.4	35.2	39.9	47.7	26.2	27.9	25.0	14.7	11.6	42.0
H14521	33.2	27.0	35.4	33.4	37.7	42.8	25.6	28.5	26.3	16.7	17.6	37.2
C1056	36.8	31.3	29.3	36.7	40.0	41.7	26.9	24.8	20.8	15.4	15.4	38.1
H13116	36.2	33.4	31.7	33.3	39.8	44.6	24.3	26.8	22.0	16.6	17.0	34.6
H15345	29.0	29.2	27.3	36.0	38.5	45.3	28.7	26.0	26.2	18.9	13.5	38.8
Blackhawk	30.5	23.4	32.1	34.3	35.4	43.5	27.1	24.6	22.9	12.7	15.2	33.5
Richland	32.9	25.1	27.4	31.4	35.4	41.2	20.8	24.9	22.2	13.0	14.6	35.5
H14025	24.4	26.0	21.7	25.3	27.9	33.0	22.5	15.2	19.9	9.2	12.2	24.5
Mean	35.2	28.7	32.6	36.3	40.0	46.0	26.8	26.2	23.1	16.2	14.9	38.4
C.V. (%)	6.9	10.1	10.4	6.8	8.1	6.1	13.8	9.1	10.2	16.6	--	9.2
Bu.N.F.S. (5%)	3.4	4.0	4.8	3.5	4.5	3.9	5.2	3.4	3.3	3.8	--	4.9
Row Sp. (In.)	40	38	36	40	40	40	24	40	40	40	42	38

Table 26. Summary of yield rank for the strains in the Uniform Test, Group II, 1956.

Strain	Ridge-town Ont.	Univ. Park Pa.	Free-hold N.J.	Mt. Holly N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ottawa Lake Mich.	Walk-erton Ind.	Bluff-ton Ind.
C1105	3	6	11	14	7	8	5	7	3	20	3
Blend 1	18	8	1	1	8	3	7	4	17	2	1
C1121	5	1	2	2	1	9	13	20	2	18	16
A0-8618	17	11	4	6	2	2	2	2	10	3	2
Harosoy	1	5	18	18	14	5	19	14	5	4	9
C1106	2	10	3	12	21	11	8	17	1	14	12
H13501	10	18	12	4	10	1	6	12	4	9	5
C1128	20	4	6	13	15	13	3	10	6	1	19
A0-8618-2	16	19	13	3	18	7	1	6	12	10	6
L9-5139	20	14	9	10	11	5	10	14	8	5	7
C1117	6	2	8	11	4	16	23	8	7	7	8
AX29-163-1-2	23	16	5	23	13	10	21	1	21	8	11
Adams	12	3	20	7	6	4	12	10	11	5	15
Lincoln	15	22	7	20	3	15	16	3	16	13	4
A0-8618-1	22	13	15	5	12	14	4	5	15	17	10
Hawkeye	12	17	16	15	9	19	14	18	9	11	21
H14521	8	7	17	19	17	17	11	13	14	19	14
C1056	14	20	10	22	5	12	8	19	19	16	17
H13116	4	12	22	8	16	21	14	14	22	12	12
H15345	7	21	19	9	19	22	17	9	19	15	17
Blackhawk	9	9	21	16	22	18	20	22	13	22	23
Richland	11	15	13	21	20	20	22	21	23	21	20
H14025	18	23	23	17	23	23	18	23	18	23	22

Table 26. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Independence Iowa	Ames Iowa	Menno S.D.	Lincoln Nebr.
C1105	6	13	2	2	5	1	2	8	1	17	2	7
Blend 1	3	6	8	10	15	6	8	12	19	3	22	3
C1121	18	12	3	3	20	5	4	12	9	22	3	18
A0-8618	2	9	11	7	2	16	18	2	17	2	15	12
Harosoy	5	15	9	4	8	14	3	16	2	19	13	20
C1106	13	14	1	7	16	11	1	20	5	16	8	14
H13501	4	2	7	18	4	10	12	10	11	1	10	5
C1128	7	2	4	5	9	8	16	16	8	13	5	17
A0-8618-2	9	10	12	15	7	2	7	1	16	8	12	6
L9-5139	11	4	19	6	1	15	18	7	11	4	23	2
C1117	17	19	13	1	14	13	6	21	5	14	1	12
AX29-163-1-2	1	7	16	12	10	6	17	4	22	11	7	1
Adams	16	22	14	12	5	3	20	9	18	11	18	9
Lincoln	15	8	10	10	17	4	14	12	21	6	19	11
A0-8618-1	11	18	19	16	3	12	11	3	15	7	16	8
Hawkeye	13	17	5	17	12	9	12	6	7	18	21	4
H14521	19	16	5	20	19	20	15	4	3	9	4	16
C1056	8	5	18	9	11	21	10	19	19	15	9	15
H13116	10	1	17	21	13	18	20	11	14	10	6	21
H15345	22	11	22	14	17	17	5	15	4	4	17	10
Blackhawk	21	23	15	19	21	19	9	21	10	21	10	22
Richland	20	21	21	22	21	22	23	18	13	20	14	19
H14025	23	20	23	23	23	23	22	23	23	23	20	23

Table 27. Summary of maturity data, days earlier (-) or later (+) than Hawkeye, for the strains in the Uniform Test, Group II, 1956.

Strain	Mean of 15 Tests[1]	Univ. Park Pa.	Free-hold N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Walk-erton Ind.	Bluff-ton Ind.
C1105	-4.6	+4	-6	-1	-4	-2	-6	-4	-5
Blend 1	+3.2	+1	0	+3	+2	+1	+3	+4	+2
C1121	-4.7	+6	-5	-1	-5	-2	-7	-6	-4
A0-8618	+3.0	+5	+1	+3	+2	+1	+2	+4	+3
Harosoy	-3.8	-1	-1	-3	-3	-6	-4	-2	-4
C1106	-6.1	0	-5	-3	-6	-3	-5	-6	-8
H13501	+3.6	+1	+3	+4	+1	+1	+4	+3	+2
C1128	+2.5	+6	+4	+4	+2	+2	+1	+4	+4
A0-8618-2	+3.5	+5	-1	+4	+4	+2	+3	+3	+3
L9-5139	+4.7	+2	+2	+4	+4	+1	+4	+6	+3
C1117	-5.3	0	-6	-3	-5	-4	-4	-6	-8
AX29-163-1-2	+4.4	+6	+5	+4	+4	0	+4	+6	+2
Adams	+1.8	+1	+1	+2	+3	0	-1	+3	+1
Lincoln	+3.9	0	0	+4	+5	+3	+3	+5	+3
A0-8618-1	+3.5	+2	+1	+4	+2	+2	+3	+5	+3
Hawkeye	0	0	0	0	0	0	0	0	0
H14521	-0.5	+5	0	+1	-1	-1	+1	+1	0
C1056	+0.3	+2	0	0	-3	+1	0	+1	-2
H13116	+1.2	+2	-4	+2	-1	-1	+2	+2	+2
H15345	-2.0	+2	-1	-1	-2	-3	-1	-6	-2
Blackhawk	-6.7	-4	-3	-2	-6	-4	-6	-8	-8
Richland	-0.1	+5	+5	+1	+2	0	+3	0	+1
H14025	-0.9	+7	+1	+2	-3	+2	+4	-2	+3
Date planted	5/24	5/29	6/1	5/25	5/25	6/11	5/26	6/5	5/26
Hawkeye matured	9/23	10/19	9/25	9/18	9/29	10/2	9/27	10/2	9/20
Days to mature	122	143	116	116	127	113	124	119	117

[1]University Park, Pennsylvania, Ames, Iowa, and Menno, South Dakota not included in the mean.

Table 27. (Continued)

Strain	Lafayette Ind.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Independence Iowa	Ames Iowa	Menno S.D.	Lincoln Nebr.
C1105	- 4	-2	-2	-3	-5	- 7	-10	- 8	-2	-8
Blend 1	+ 4	+5	+3	+5	+1	+ 5	+ 6	+ 8	+2	+4
C1121	- 4	-2	-6	-5	-3	- 7	-11	- 7	0	-2
A0-8618	+ 3	+5	+3	+4	+1	+ 3	+ 5	+ 7	+3	+5
Harosoy	- 2	-2	-3	-3	-3	- 7	- 8	- 6	-3	-6
C1106	- 7	-4	-6	-6	-6	- 8	-11	- 7	-1	-7
H13501	+ 5	+4	+4	+5	+2	+ 3	+ 7	+ 8	+1	+6
C1128	+ 3	+3	+4	+3	0	0	+ 1	+ 2	+1	+3
A0-8618-2	+ 5	+5	+3	+5	+3	+ 3	+ 6	+ 6	+3	+4
L9-5139	+ 7	+6	+4	+7	+2	+ 5	+ 8	+10	+3	+7
C1117	- 5	-3	-6	-4	-3	- 7	- 9	- 7	-1	-7
AX29-163-1-2	+ 4	+5	+4	+7	+5	+ 3	+ 5	+ 6	+1	+8
Adams	+ 4	+3	+1	+3	+1	- 1	+ 2	+ 4	+1	+5
Lincoln	+ 4	+4	+3	+5	+3	+ 4	+ 6	+10	+3	+7
A0-8618-1	+ 4	+5	+3	+4	+3	+ 3	+ 6	+ 4	+2	+5
Hawkeye	0	0	0	0	0	0	0	0	0	0
H14521	- 2	0	-2	0	-1	- 1	- 2	+ 1	+1	0
C1056	+ 1	+1	+1	+1	-1	- 1	0	+ 2	0	+5
H13116	+ 4	+4	+2	+2	+1	0	+ 1	+ 4	+2	+2
H15345	+ 1	+1	-4	-3	-1	- 2	+ 1	+ 1	+1	-7
Blackhawk	-10	-4	-6	-7	-7	-10	-10	-11	-2	-9
Richland	0	0	-1	0	-2	- 1	- 1	- 1	+1	-8
H14025	+ 1	0	-3	0	-2	- 7	- 4	+ 1	+2	-5
Date planted	5/15	5/18	5/22	5/11	5/22	5/22	5/15	5/14	5/21	5/22
Hawkeye matured	9/15	9/23	9/19	9/10	10/2	9/27	9/16	9/10	9/22	9/20
Days to mature	123	128	120	122	133	128	124	119	124	121

Table 28. Summary of lodging data for the strains in the Uniform Test, Group II, 1956.

Strain	Mean of 21 Tests[1]	Ridge-town Ont.	Univ. Park Pa.	Free-hold N.J.	Mt. Holly N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ot-tawa Lake Mich.	Walk-erton Ind.	Bluff-ton Ind.
C1105	1.9	2.2	2.2	2.5	4.7	3.0	1.0	1.0	1.0	2.4	1.3	1.3
Blend 1	2.2	2.2	2.7	2.2	3.7	2.8	2.0	1.0	2.0	3.6	2.0	1.8
C1121	2.0	2.2	2.7	2.0	5.0	1.8	1.0	1.0	1.0	2.1	1.5	1.8
A0-8618	2.5	2.5	3.0	3.2	4.2	3.5	2.0	2.0	2.0	3.1	2.0	2.0
Harosoy	2.5	2.2	3.7	4.0	5.0	4.0	2.0	1.0	2.0	3.9	1.8	1.3
C1106	2.0	1.6	3.0	2.5	4.0	3.8	2.0	1.0	2.0	1.5	1.0	1.0
H13501	2.4	2.2	3.2	2.7	4.5	2.8	2.0	2.0	2.0	2.3	2.0	1.8
C1128	2.0	2.2	2.5	2.2	3.5	3.0	2.0	2.0	2.0	1.4	1.0	2.0
A0-8618-2	2.5	2.2	3.5	2.7	3.2	3.5	2.0	2.0	2.0	3.9	1.8	1.8
L9-5139	2.4	2.8	2.7	2.7	4.0	2.8	2.0	1.0	2.0	2.6	2.0	1.8
C1117	2.1	2.2	2.7	2.7	4.5	2.8	2.0	1.0	2.0	2.6	1.3	1.0
AX29-163-1-2	2.9	2.2	3.5	4.0	5.0	3.5	2.0	2.0	2.0	3.9	2.3	2.3
Adams	2.4	2.2	3.2	2.2	4.0	3.3	2.0	1.0	2.0	2.4	2.0	1.3
Lincoln	2.5	2.8	3.0	3.0	4.2	3.3	2.0	2.0	2.0	3.0	2.0	1.8
A0-8618-1	2.3	2.2	3.0	2.5	3.2	3.0	2.0	1.0	2.0	2.9	1.8	1.8
Hawkeye	2.1	1.9	3.5	1.7	3.7	3.3	2.0	1.0	2.0	2.3	1.0	1.0
H14521	2.1	2.2	2.2	2.7	3.7	3.3	2.0	1.0	1.0	2.3	1.8	2.0
C1056	2.8	2.5	4.0	3.7	5.0	4.0	2.0	2.0	2.0	3.0	1.8	2.3
H13116	2.6	1.6	3.2	3.0	4.5	2.3	2.0	1.0	2.0	3.8	1.8	2.0
H15345	2.1	2.5	3.5	2.0	4.5	2.3	2.0	1.0	1.0	2.8	1.5	1.5
Blackhawk	2.1	2.8	3.0	2.0	5.0	3.8	1.0	1.0	2.0	2.6	1.0	1.5
Richland	2.4	2.8	4,0	2.5	3.7	4,0	1.0	2.0	2.0	3.5	1.3	1.5
H14025	1.8	1.0	2.0	1.5	2.5	2.8	1.0	1.0	1.0	1.0	1.0	1.0
Mean	2.3	2.2	3.0	2.6	4.1	3.2	1.8	1.3	1.8	2.7	1.6	1.6

[1]Ames, Iowa and Menno, South Dakota not included in the mean.

Table 28. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Independence Iowa	Ames Iowa	Menno S.D.	Lincoln Nebr.
C1105	1.3	1.0	2.0	1.9	2.3	2.3	2.0	2.0	1.2	1.0	1.0	2.0
Blend 1	2.0	1.0	2.0	2.0	1.9	2.4	3.0	2.6	1.5	1.4	1.0	2.8
C1121	1.0	1.0	2.0	2.4	2.0	1.8	3.0	1.7	1.2	1.0	1.0	3.2
A0-8618	1.3	1.0	3.0	2.9	2.3	2.8	3.0	2.2	1.5	1.4	1.0	3.8
Harosoy	1.0	1.0	2.0	2.6	2.4	2.8	3.0	1.8	1.5	1.0	1.0	3.2
C1106	1.0	1.0	2.0	1.9	2.4	1.9	2.0	2.0	1.2	1.0	1.0	2.5
H13501	2.0	1.3	3.0	2.1	2.1	2.4	3.0	2.9	1.6	1.3	1.0	3.2
C1128	1.0	1.0	2.0	1.8	2.4	2.0	2.0	1.9	1.6	1.2	1.0	2.5
A0-8618-2	1.3	1.3	3.0	2.4	2.6	3.0	3.0	2.2	1.4	1.4	1.0	3.0
L9-5139	1.8	1.3	2.0	2.1	2.1	2.5	3.0	2.7	1.8	1.3	1.0	3.8
C1117	1.0	1.0	2.0	1.9	2.0	2.5	3.0	2.2	1.4	1.0	1.0	3.0
AX29-163-1-2	2.8	1.0	4.0	2.6	3.9	3.6	3.0	2.8	2.2	1.4	1.0	2.5
Adams	2.3	1.0	3.0	2.5	2.9	3.1	3.0	1.9	1.4	1.4	1.0	3.8
Lincoln	1.8	1.0	3.0	2.5	2.4	3.0	3.0	2.9	1.9	1.5	1.0	2.8
A0-8618-1	2.0	1.0	3.0	2.9	2.3	3.0	3.0	2.1	1.4	1.2	1.0	3.2
Hawkeye	1.0	1.0	2.0	2.0	2.3	2.1	3.0	2.3	1.3	1.2	1.0	3.0
H14521	1.3	1.0	2.0	2.0	2.0	2.4	3.0	2.4	1.5	1.4	1.0	3.0
C1056	1.5	1.0	4.0	2.5	2.5	3.5	3.0	3.2	1.8	1.2	1.0	4.0
H13116	2.0	1.3	4.0	3.3	2.3	2.8	3.0	3.4	1.6	1.3	1.0	3.5
H15345	1.5	1.0	2.0	2.5	1.8	2.0	3.0	2.0	1.4	1.4	1.0	2.0
Blackhawk	1.0	1.0	3.0	2.3	2.5	1.9	2.0	1.6	1.2	1.0	1.0	2.2
Richland	1.3	1.0	4.0	2.0	2.4	2.3	3.0	2.2	1.2	1.2	1.0	2.0
H14025	1.0	1.0	2.0	2.3	2.5	2.3	3.0	3.0	1.3	1.1	1.0	3.8
Mean	1.5	1.1	2.7	2.3	2.4	2.5	2.8	2.3	1.5	1.2	1.0	3.0

Table 29. Summary of height data for the strains in the Uniform Test, Group II, 1956.

Strain	Mean of 19 Tests[1]	Ridge-town Ont.	Univ. Park Pa.	Free-hold N.J.	New-ark N.J.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Walk-erton Ind.	Bluff-ton Ind.	Lafay-ette Ind.
C1105	37	36	38	35	42	29	31	35	37	38	35
Blend 1	40	37	39	35	43	34	32	42	37	40	38
C1121	34	34	35	32	37	29	27	33	32	33	31
A0-8618	39	34	39	36	42	34	33	41	37	39	38
Harosoy	39	39	39	34	42	36	34	39	39	40	38
C1106	39	38	39	36	45	31	32	38	37	39	37
H13501	42	39	39	38	45	38	34	43	40	45	40
C1128	41	37	43	37	44	36	35	39	42	40	40
A0-8618-2	40	40	38	37	47	34	33	41	37	39	38
L9-5139	40	39	40	35	44	37	32	40	37	39	38
C1117	35	33	35	31	42	31	28	36	31	37	31
AX29-163-1-2	42	43	41	37	47	36	34	41	41	44	42
Adams	41	39	41	38	42	35	33	41	41	41	38
Lincoln	40	39	39	37	43	36	34	42	39	40	36
A0-8618-1	40	40	38	36	43	36	33	43	37	40	40
Hawkeye	37	38	35	32	41	29	31	37	36	40	35
H14521	39	40	42	34	41	36	33	39	35	39	36
C1056	38	36	38	36	40	33	32	38	36	39	38
H13116	39	35	39	35	42	33	31	40	38	39	37
H15345	35	36	34	32	36	31	29	36	35	34	31
Blackhawk	34	34	34	34	35	30	29	33	34	34	32
Richland	35	34	33	35	38	31	29	36	35	33	33
H14025	35	44	34	32	37	31	30	35	32	35	33
Mean	38	38	38	35	42	33	32	39	37	39	36

[1]Ames, Iowa and Menno, South Dakota not included in the mean.

Table 29. (Continued)

Strain	Green-field Ind.	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Wa-seca Minn.	Kana-wha Iowa	Inde-pen-dence Iowa	Ames Iowa	Menno S.D.	Lin-coln Nebr.
C1105	28	35	43	45	44	46	36	32	20	23	40
Blend 1	30	38	47	46	49	48	39	37	24	20	44
C1121	26	34	41	37	42	42	34	26	17	19	38
A0-8618	29	40	47	47	48	45	38	36	25	24	45
Harosoy	28	34	44	45	46	46	35	32	22	28	42
C1106	31	35	45	48	48	48	38	32	22	24	45
H13501	34	42	49	50	52	49	39	38	28	21	48
C1128	31	38	52	48	50	48	39	37	25	27	47
A0-8618-2	31	39	46	45	48	47	39	37	24	25	47
L9-5139	31	42	46	48	50	49	38	38	24	19	46
C1117	25	34	40	41	43	45	35	30	19	21	40
AX29-163-1-2	32	45	48	48	50	56	36	36	22	27	39
Adams	27	39	49	48	50	52	40	37	23	25	46
Lincoln	31	39	47	46	49	48	37	38	27	28	43
A0-8618-1	30	38	46	47	47	48	38	37	26	27	46
Hawkeye	27	33	44	45	45	48	34	34	20	27	41
H14521	29	37	47	45	46	49	38	36	23	23	44
C1056	30	41	44	43	45	48	36	35	22	27	42
H13116	33	40	46	45	45	49	37	34	22	24	43
H15345	27	30	40	40	39	46	32	34	24	22	37
Blackhawk	27	30	40	39	38	43	32	28	20	23	35
Richland	25	34	41	39	37	46	35	32	18	24	34
H14025	28	35	42	38	38	45	33	30	19	20	34
Mean	29	37	45	44	46	47	36	34	22	24	42

Table 30. Summary of percentage of oil for the strains in the Uniform Test, Group II, 1956.

Strain	Mean of 21 Tests[1]	Ridge-town Ont.	Univ. Park Pa.	Free-hold N.J.	Mt. Holly N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ot-tawa Lake Mich.	Walk-erton Ind.	Bluff-ton Ind.
C1105	19.4	16.5	16.3	20.6	19.4	21.7	19.0	18.6	20.2	18.4	20.6	19.9
Blend 1	20.3	15.8	17.5	21.3	20.3	21.5	20.1	19.3	21.2	19.3	21.6	20.7
C1121	20.4	17.8	17.7	21.5	20.7	22.6	20.6	19.4	21.2	19.3	22.3	21.1
A0-8618	20.1	15.9	18.5	21.0	20.1	21.6	20.0	19.4	21.0	19.0	21.3	20.7
Harosoy	20.2	18.2	17.6	21.7	20.6	21.1	19.8	19.3	21.6	19.1	20.8	20.9
C1106	20.3	17.7	17.7	20.3	20.5	21.5	20.5	19.5	21.3	19.9	21.8	21.1
H13501	20.8	17.3	18.7	20.7	20.9	21.7	20.7	20.2	21.6	19.4	21.9	21.5
C1128	21.0	16.7	17.9	22.1	22.0	22.7	20.8	20.1	22.1	19.3	21.9	21.6
A0-8618-2	20.0	15.7	17.1	21.5	19.8	21.0	19.9	19.3	20.9	19.0	21.3	20.8
L9-5139	20.4	16.0	17.5	19.9	21.0	21.6	20.3	19.7	21.3	19.4	21.8	21.4
C1117	20.6	17.9	17.7	22.4	20.6	22.5	20.7	19.6	21.1	19.4	21.6	22.2
AX29-163-1-2	20.9	16.5	18.0	21.4	21.3	22.0	21.0	20.3	21.7	19.6	22.5	22.1
Adams	20.8	16.7	18.8	21.7	21.5	22.0	20.8	19.8	22.1	19.4	22.0	21.9
Lincoln	20.6	16.5	17.5	21.9	20.8	21.6	20.6	19.3	21.1	19.6	21.7	21.4
A0-8618-1	20.0	15.0	16.9	21.4	19.9	21.6	20.1	19.5	21.1	18.9	20.7	21.2
Hawkeye	20.6	16.8	17.9	21.5	21.2	22.0	20.3	20.1	21.8	19.3	21.7	20.8
H14521	20.9	18.2	18.4	21.5	21.1	22.1	20.1	19.7	21.8	19.5	21.5	21.4
C1056	21.0	17.0	17.9	22.0	21.8	22.7	21.1	20.1	21.8	19.7	22.6	21.7
H13116	20.2	17.1	17.6	21.1	20.4	21.3	19.9	18.8	21.0	19.2	20.9	20.8
H15345	20.7	17.9	18.0	21.3	21.1	22.6	19.7	19.9	22.0	19.4	21.9	20.6
Blackhawk	20.6	18.2	18.4	21.4	20.6	21.4	20.6	19.8	21.6	19.9	21.7	21.2
Richland	19.9	17.0	17.3	21.8	20.2	21.0	19.7	19.3	20.5	18.9	21.0	20.6
H14025	19.9	17.6	18.5	21.2	20.4	20.8	19.7	19.4	19.9	18.9	20.4	20.4
Mean	20.4	17.0	17.8	21.4	20.7	21.8	20.3	19.6	21.3	19.3	21.5	21.1

[1]Ames, Iowa and Menno, South Dakota not included in the mean.

Table 30. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Independence Iowa	Ames Iowa	Menno S.D.	Lincoln Nebr.
C1105	20.4	19.6	18.7	19.2	20.2	20.1	18.2	19.1	19.1	18.7	20.7	21.0
Blend 1	21.2	20.3	19.2	20.6	22.1	21.2	19.0	21.1	20.0	21.3	19.2	22.0
C1121	21.6	21.2	18.9	20.6	21.4	20.8	19.2	20.7	19.2	20.5	22.0	20.9
A0-8618	21.1	20.0	18.7	20.5	21.4	20.6	18.8	20.6	19.8	20.6	20.0	22.1
Harosoy	21.1	20.4	18.9	20.0	21.3	20.6	19.3	19.8	19.5	19.9	21.6	22.2
C1106	20.4	20.5	19.6	20.3	20.6	20.4	19.5	20.2	20.4	20.7	21.6	22.2
H13501	22.0	21.1	19.7	21.6	22.3	21.6	19.6	21.4	20.8	21.9	20.6	22.6
C1128	21.9	21.5	20.5	21.0	22.0	22.3	19.4	20.5	21.5	21.0	22.0	22.7
A0-8618-2	20.7	20.2	19.0	20.4	20.6	21.4	19.0	20.6	19.3	20.5	19.4	22.0
L9-5139	20.9	20.4	18.8	21.1	21.8	21.4	19.5	20.5	21.1	21.2	19.2	22.2
C1117	21.7	20.6	19.4	20.4	21.9	21.1	19.2	20.6	19.3	20.7	21.6	22.6
AX29-163-1-2	22.3	21.7	19.5	21.5	22.6	21.9	19.3	21.2	20.4	21.9	20.7	22.8
Adams	21.9	21.6	20.0	20.6	22.1	21.3	19.1	20.8	21.3	22.1	21.0	22.1
Lincoln	22.0	20.5	19.6	21.1	22.1	21.1	19.1	21.1	20.7	20.9	20.1	22.4
A0-8618-1	21.1	19.8	18.7	20.2	21.1	20.9	19.1	20.8	19.9	21.0	20.0	21.8
Hawkeye	21.5	21.1	20.4	20.2	22.1	21.3	19.1	20.3	20.2	20.8	21.0	22.1
H14521	22.2	21.2	20.3	21.1	22.5	21.9	19.6	21.2	20.9	21.0	21.4	23.4
C1056	21.9	21.0	20.4	21.2	22.4	21.8	19.8	21.4	19.8	20.8	19.3	22.9
H13116	21.2	19.9	19.1	20.9	21.5	20.8	19.2	20.7	20.3	20.2	20.3	21.9
H15345	21.5	21.7	19.7	20.7	22.5	21.2	19.6	20.3	21.6	21.6	21.4	22.5
Blackhawk	21.8	20.9	19.5	20.3	22.0	21.0	19.4	20.2	20.9	20.8	22.6	21.6
Richland	20.6	20.0	18.6	19.9	21.4	20.8	18.7	19.9	19.8	20.1	20.9	21.6
H14025	20.3	19.7	19.3	19.8	21.2	19.7	19.0	19.9	20.0	19.4	20.7	21.3
Mean	21.4	20.6	19.4	20.6	21.7	21.1	19.2	20.6	20.3	20.8	20.8	22.1

Table 31. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1954-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	63	51	59	62	55	66	65	65
A0-8618	37.6	+4.1	2.2	39	1.9	16.3	41.2	20.5
L9-5139	36.7	+5.3	2.3	40	1.8	15.1	40.6	20.8
C1128	36.5	+3.2	1.9	41	1.8	16.8	40.2	21.5
H13501	36.3	+4.5	2.2	41	2.1	15.1	40.3	21.1
Harosoy	35.8	-3.1	2.4	38	2.1	17.4	41.5	20.5
Adams	35.6	+3.5	2.3	40	1.7	14.7	40.0	21.4
Lincoln	35.2	+5.5	2.4	40	1.9	14.5	40.6	20.9
Hawkeye	34.8	0	1.9	37	1.8	17.7	41.3	21.0
AX29-163-1-2	34.8	+5.5	2.8	41	2.0	15.6	39.7	21.5
C1056	34.7	+2.0	2.5	38	1.8	16.6	40.4	21.3
H14521	34.0	+1.2	2.0	38	2.2	18.5	40.1	21.3
H13116	33.9	+2.7	2.3	39	2.3	16.7	40.7	20.6
Blackhawk	32.0	-5.2	1.9	34	2.0	15.8	41.1	20.8
Richland	31.1	+0.5	2.0	34	2.2	17.0	41.0	20.3
H14025	28.7	+1.7	1.8	35	2.5	17.7	42.6	20.2
Mean	34.5		2.2	38	2.0	16.4	40.8	20.9

[1]Days earlier (-) or later (+) than Hawkeye. Hawkeye required 122 days to mature.

Table 32. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1954-56.

Strain	Mean of 63 Tests	Univ. Park Pa.	Free-hold N.J.[1]	Mt. Holly N.J.[2]	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Ottawa Lake Mich.	Walk-erton Ind.	Bluff-ton Ind.
Years Tested		1954-1956	1954-1956	1954, 1956	1954-1956	1954-1956	1954-1956	1954-1956	1954, 1956	1954-1956	1954-1956
A0-8618	37.6	33.7	33.7	43.7	43.9	40.8	34.0	44.6	39.1	42.8	49.1
L9-5139	36.7	34.6	32.7	42.3	46.0	38.5	32.5	41.4	39.6	41.5	44.2
C1128	36.5	36.0	30.9	42.7	41.6	38.1	31.9	42.6	40.0	45.1	46.2
H13501	36.3	32.7	33.7	42.4	44.4	38.7	33.1	42.2	41.6	38.3	46.6
Harosoy	35.8	34.0	29.4	37.5	40.9	39.0	30.5	39.6	41.9	41.3	48.4
Adams	35.6	36.0	30.7	38.1	41.0	39.2	32.8	41.1	37.8	40.7	45.2
Lincoln	35.2	36.4	32.5	39.3	45.4	36.0	32.0	40.3	36.9	38.8	46.5
Hawkeye	34.8	31.3	29.8	35.0	41.6	37.1	29.6	42.5	39.3	39.1	43.4
AX29-163-1-2	34.8	32.8	31.8	24.3	40.4	36.5	29.2	44.5	31.9	38.1	42.4
C1056	34.7	32.8	32.0	31.0	43.5	37.1	31.9	38.0	35.1	39.1	43.5
H14521	34.0	32.9	33.1	37.2	38.8	36.5	32.0	38.8	38.3	35.9	42.7
H13116	33.9	32.6	28.2	40.3	43.2	33.5	31.4	39.3	30.5	36.3	41.4
Blackhawk	32.0	31.5	25.9	37.3	34.1	33.8	28.2	34.4	36.2	33.3	41.9
Richland	31.1	28.9	28.7	33.3	35.9	32.7	30.3	35.8	29.8	32.9	38.0
H14025	28.7	25.4	27.2	36.3	32.5	30.1	29.4	30.5	32.1	33.8	39.1
Mean	34.5	32.8	30.7	37.4	40.9	36.5	31.3	39.7	36.7	38.5	43.9

	Yield Rank									
A0-8618	6	1	1	4	1	1	1	6	2	1
L9-5139	4	4	4	1	5	4	6	4	3	7
C1128	2	8	2	7	6	7	3	3	1	5
H13501	10	1	3	3	4	2	5	2	9	3
Harosoy	5	11	8	10	3	10	9	1	4	2
Adams	2	9	7	9	2	3	7	8	5	6
Lincoln	1	5	6	2	11	5	8	9	8	4
Hawkeye	13	10	12	7	7	12	4	5	6	9
AX29-163-1-2	8	7	15	11	9	14	2	3	10	11
C1056	8	6	14	5	7	7	12	11	6	8
H14521	7	3	10	12	9	5	11	7	12	10
H13116	11	13	5	6	13	9	10	14	11	13
Blackhawk	12	15	9	14	12	15	14	10	14	12
Richland	14	12	13	13	14	11	13	15	15	15
H14025	15	14	11	15	15	13	15	12	13	14

[1]Middlesex County, New Jersey, 1954; Englishtown, New Jersey, 1955.
[2]Burlington County, New Jersey, 1954.

Table 32. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Independence Iowa	Ames Iowa	Lincoln Nebr.
Years Tested	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956
A0-8618	45.5	34.3	36.2	35.4	36.8	38.3	32.6	32.7	25.0	30.2	36.2
L9-5139	43.4	35.8	35.3	36.2	37.4	37.5	31.0	30.8	24.8	30.3	39.3
C1128	43.2	33.7	37.8	37.4	36.6	38.7	30.4	30.4	26.3	25.7	33.4
H13501	43.1	35.1	35.3	34.5	37.5	38.1	29.3	31.3	25.3	30.4	36.6
Harosoy	43.0	28.8	35.3	37.8	36.3	36.3	35.1	28.2	27.5	23.7	33.8
Adams	42.7	30.2	33.2	36.4	36.8	38.4	29.1	30.4	25.6	26.9	34.8
Lincoln	41.3	33.5	34.9	34.1	33.7	36.4	29.9	29.0	23.8	29.2	34.2
Hawkeye	40.3	30.6	33.1	36.0	34.5	37.1	31.0	30.8	26.7	25.6	36.2
AX29-163-1-2	44.3	33.8	31.2	35.0	34.4	38.6	26.2	29.9	24.3	27.7	37.0
C1056	41.7	33.7	31.2	35.1	35.8	35.2	29.8	30.5	23.6	25.9	33.5
H14521	37.4	29.9	37.0	32.4	33.3	34.9	28.9	30.4	26.0	24.8	32.4
H13116	39.9	34.0	34.2	33.1	31.3	34.7	30.4	29.9	24.5	28.1	32.5
Blackhawk	34.0	26.3	34.2	34.4	31.2	33.8	31.1	29.1	25.2	23.5	30.8
Richland	34.6	28.0	29.2	30.9	30.7	32.3	26.5	27.0	22.7	24.1	32.8
H14025	31.5	26.4	30.5	27.2	26.0	29.0	25.8	22.1	22.0	20.5	25.0
Mean	40.4	31.6	33.9	34.4	34.2	36.0	29.8	29.5	24.9	26.4	33.9
	Yield Rank										
A0-8618	1	3	3	6	3	4	2	1	8	3	4
L9-5139	3	1	4	4	2	6	4	3	9	2	1
C1128	4	6	1	2	5	1	6	6	3	9	10
H13501	5	2	4	9	1	5	10	2	6	1	3
Harosoy	6	12	4	1	6	9	1	13	1	13	8
Adams	7	10	10	3	3	3	11	6	5	7	6
Lincoln	9	8	7	11	10	8	8	12	12	4	7
Hawkeye	10	9	11	5	8	7	4	3	2	10	4
AX29-163-1-2	2	5	12	8	9	2	14	9	11	6	2
C1056	8	6	12	7	7	10	9	5	13	8	9
H14521	12	11	2	13	11	11	12	6	4	11	13
H13116	11	4	8	12	12	12	6	9	10	5	12
Blackhawk	14	15	8	10	13	13	3	11	7	14	14
Richland	13	13	15	14	14	14	13	14	14	12	11
H14025	15	14	14	15	15	15	15	15	15	15	15

Table 33. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1952-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	108	78	99	104	92	111	111	111
A0-8618	36.6	+4.6	2.1	40	1.9	16.1	40.9	20.7
Lincoln	34.5	+5.8	2.3	40	1.8	14.4	40.5	21.0
Adams	34.5	+2.8	2.2	39	1.6	14.5	39.7	21.4
Harosoy	34.2	-3.4	2.2	38	1.9	17.1	41.2	20.6
Hawkeye	33.4	0	1.8	37	1.7	17.4	41.1	21.0
Blackhawk	30.4	-6.2	1.9	34	2.0	15.6	40.7	21.0
Richland	30.2	+0.5	1.9	33	2.1	16.8	40.8	20.5
Mean	33.4		2.1	37	1.9	16.0	40.7	20.9

[1]Days earlier (-) or later (+) than Hawkeye. Hawkeye required 120 days to mature.

Table 34. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1952-56.

Strain	Mean of 108 Tests	Univ. Park Pa.	Freehold N.J.[1]	Mt. Holly N.J.[2]	Newark Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Ottawa Lake Mich.[3]	Walkerton Ind.	Bluffton Ind.
Years Tested		1952-1956	1952-1956	1952-54, 1956	1953-1956	1952-1956	1952-1956	1952-1956	1952-54 1956	1952-1956	1952-1956
A0-8618	36.6	32.1	33.3	38.0	40.4	38.9	32.3	38.9	31.4	41.9	48.8
Lincoln	34.5	32.2	30.9	34.8	42.2	34.9	31.7	36.4	28.3	38.8	47.5
Adams	34.5	32.5	30.1	32.8	38.7	37.4	31.6	35.4	29.3	40.3	45.7
Harosoy	34.2	31.6	28.8	33.7	36.8	37.6	28.4	32.9	34.4	41.3	44.9
Hawkeye	33.4	29.8	30.0	30.8	37.5	34.9	28.7	35.5	32.2	37.9	42.9
Blackhawk	30.4	27.6	27.1	31.9	32.2	32.0	27.9	29.0	30.4	33.3	40.1
Richland	30.2	27.7	28.4	30.3	33.8	32.4	28.8	30.5	25.1	34.6	37.7
Mean	33.4	30.5	29.8	33.2	37.4	35.4	29.9	34.1	30.2	38.3	43.9
		Yield Rank									
A0-8618		3	1	1	2	1	1	1	3	1	1
Lincoln		2	2	2	1	4	2	2	6	4	2
Adams		1	3	4	3	3	3	4	5	3	3
Harosoy		4	5	3	5	2	6	5	1	2	4
Hawkeye		5	4	6	4	4	5	3	2	5	5
Blackhawk		7	7	5	7	7	7	7	4	7	6
Richland		6	6	7	6	6	4	6	7	6	7

[1]New Brunswick, New Jersey, 1952-53; Middlesex County, New Jersey, 1954; Englishtown, New Jersey, 1955.
[2]Columbus, New Jersey, 1952; Burlington County, New Jersey, 1953-54.
[3]Deerfield, Michigan, 1952-53.
[4]Centerville, South Dakota, 1952; Viborg, South Dakota, 1954.

Table 34. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Independence Iowa	Ames Iowa	Menno S.D.[4]	Lincoln Nebr.
Years Tested	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952, 1954, 1956	1952-1956
A0-8618	42.5	41.1	41.3	31.9	34.0	37.2	32.8	30.2	36.1	29.3	31.5
Lincoln	39.7	41.0	38.4	30.2	31.2	35.2	28.8	27.7	33.4	22.8	30.9
Adams	40.8	37.8	38.0	32.2	34.3	35.6	31.0	29.4	33.2	22.5	30.6
Harosoy	40.3	34.7	38.7	33.8	33.9	34.9	30.6	30.3	29.4	22.5	29.5
Hawkeye	38.5	36.1	36.4	30.6	31.7	33.8	32.2	29.5	31.9	20.4	30.4
Blackhawk	33.2	30.1	38.0	29.1	29.0	30.0	30.1	27.6	27.3	22.9	24.5
Richland	33.1	33.7	33.2	26.4	28.0	30.3	27.4	25.6	30.4	21.9	28.1
Mean	38.3	36.4	37.7	30.6	31.7	33.9	30.4	28.6	31.7	23.2	29.4
	Yield Rank										
A0-8618	1	1	1	3	2	1	1	2	1	1	1
Lincoln	4	2	3	5	5	3	6	5	2	3	2
Adams	2	3	4	2	1	2	3	4	3	4	3
Harosoy	3	5	2	1	3	4	4	1	6	4	5
Hawkeye	5	4	6	4	4	5	2	3	4	7	4
Blackhawk	6	7	4	6	6	7	5	6	7	2	7
Richland	7	6	7	7	7	6	7	7	5	6	6

UNIFORM AND PRELIMINARY TESTS, GROUP II, 1956

Strain	Source or Originating Agency	Origin
Adams	Iowa A.E.S. & U.S.R.S.L.	Sel. from Illini x Dunfield
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Harosoy	Harrow Exp. Sta., Harrow, Ont.	Sel. from Mandarin x (Mandarin x A.K.)
Hawkeye	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Lincoln	Ill. A.E.S. & U.S.R.S.L.	Sel. from Mandarin x Manchu
Richland	Purdue Agr. Exp. Sta.	Sel. from P. I. 70502-2
A0-8618	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
A0-8618-1	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
A0-8618-2	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
AX29-163-1-2	Iowa A.E.S. & U.S.R.S.L.	Sel. from Adams x Hawkeye
AX29-267-1-1-2*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Adams x Hawkeye
C1056	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x A45-251)
C1105	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mand. (Ottawa)
C1106	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mand. (Ottawa)
C1117	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mand. (Ottawa) x Lincoln
C1121	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mand. (Ottawa) x Lincoln
C1128	Purdue A.E.S. & U.S.R.S.L.	Sel. from Wabash x A4-107-12
C1147*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Wabash x Mand. (Ottawa)
H13116	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Richland x C11)
H13501	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Richland x C11)
H14025	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Quebec 92
H14521	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ontario
H14551*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ontario
H15345	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x P. I. 68666
H20771*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Monroe x Lincoln
H21162*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Monroe x Lincoln
H21793*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Richland x H2
H22218*	Ohio A.E.S. & U.S.R.S.L.	Sel. from H5 x A4-107-12
H24157*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Monroe x Lincoln
H24167*	Ohio A.E.S. & U.S.R.S.L.	Sel. from Monroe x Lincoln
L9-5139	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
S2-5437*	Missouri A.E.S. & U.S.R.S.L.	Sel. from Lincoln x A3-108
W9-1982-16*	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Manchu
Blend 1		Blend of 50% A0-8618-1 and 50% L9-5139

*Grown in the Preliminary Test, Group II, only.

The Uniform and Preliminary Tests, Group II, were grown together as one test at nine locations, and the data are presented in Tables 35 through 38. Eleven strains make up the Preliminary Test.

Six of the Ohio strains are resistant to the Phytophthora root and stem rot disease. Of these, H24157, H21162, and H24167 were later in maturity than Lincoln and are, therefore, in maturity Group III. They were otherwise similar to Lincoln in performance but H24157 and H24167 were low in oil. H24157 consists of both black and brown hilum strains. H22218, H20771, and H21793 were all intermediate in maturity between Harosoy and Hawkeye. They averaged 1 to 2 bushels lower in yield but were otherwise quite satisfactory. H20771, being better in lodging resistance, showed the most promise of the group as a replacement for Hawkeye and Harosoy in areas where the Phytophthora rot has been severe.

Strain AX29-267-1-1-2 was a day earlier than Harosoy and 0.6 bushel less in yield, had good agronomic traits, and was unusually high in oil content. C1147 and W9-1982-16 were intermediate in maturity between Harosoy and Hawkeye but about a bushel lower in average yield. S2-5437 and H14551 were of about Harosoy maturity but were several bushels lower in average yield.

Table 35. Summary of agronomic and chemical data for the strains in the Uniform and Preliminary Tests, Group II, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	7	6	7	7	6	7	4	4
AX29-163-1-2	39.3	+4.5	2.9	41	1.6	16.1	40.1	22.0
A0-8618	38.4	+3.0	2.4	40	1.6	16.7	41.5	21.0
C1105	38.1	-5.2	1.7	36	1.4	18.8	43.4	20.0
H13501	38.1	+3.8	2.5	43	1.9	15.2	40.9	21.8
A0-8618-2	37.9	+3.7	2.3	40	1.9	16.6	41.3	20.7
Blend 1	37.9	+3.5	2.2	40	1.7	16.0	40.8	21.4
L9-5139	37.2	+5.2	2.3	41	2.0	15.0	41.1	21.1
Adams	36.8	+1.8	2.6	41	1.4	15.4	40.4	21.7
C1128	36.5	+2.2	2.0	41	1.5	16.8	41.0	21.6
A0-8618-1	36.5	+3.3	2.4	41	1.8	16.8	42.0	21.0
H24157*	36.2	+5.8	2.6	42	2.2	14.5	42.2	20.0
Harosoy	36.1	-4.2	2.1	38	1.9	17.5	42.0	21.0
Hawkeye	36.0	0	2.1	36	1.4	18.1	41.9	21.4
Lincoln	35.9	+4.3	2.4	40	1.5	15.1	40.6	21.6
C1106	35.8	-6.5	2.0	39	1.4	17.6	41.9	20.6
H21162*	35.6	+6.3	2.7	45	1.7	13.7	40.7	21.2
AX29-267-1-1-2*	35.5	-5.3	2.1	38	1.5	16.2	41.1	22.2
H14521	35.2	-0.8	2.0	39	1.5	18.6	40.7	21.9
H22218*	35.1	-1.5	2.5	42	1.3	16.0	41.9	21.3
C1117	35.1	-5.7	2.0	35	1.5	16.1	42.1	21.3
H24167*	35.1	+5.2	2.7	42	1.6	14.7	42.5	20.1
C1121	35.0	-5.2	1.7	34	1.7	17.4	42.5	21.2
H20771*	35.0	-2.0	2.0	40	1.6	13.7	41.8	21.2
C1056	34.8	+0.5	2.7	39	1.5	17.2	40.9	21.9
C1147*	34.3	-2.3	2.1	39	1.7	18.1	42.0	21.6
H13116	34.2	+1.5	2.7	39	2.0	16.8	41.2	21.1
W9-1982-16*	33.9	-2.0	2.2	42	1.8	18.4	41.3	21.6
H21793*	33.7	-2.2	2.3	42	1.2	17.1	42.6	21.1
S2-5437*	33.2	-3.2	2.3	41	1.8	15.4	42.9	21.2
H15345	32.7	-2.5	1.8	34	2.0	15.4	40.3	21.6
Richland	31.9	-0.8	2.1	35	1.9	16.8	41.5	20.6
Blackhawk	31.8	-7.8	1.9	33	1.5	15.6	41.4	21.4
H14551*	30.1	-4.0	1.5	33	1.2	19.8	42.3	21.6
H14025	24.2	-2.2	2.0	34	2.4	17.7	43.6	20.3
Mean	35.1	-2.6	2.2	39	1.7	16.5	41.6	21.2

*Grown in the Preliminary Test, Group II, only.

[1]Days earlier (-) or later (+) than Hawkeye. Hawkeye required 124 days to mature.

Table 36. Summary of yield in bushels per acre for the strains in the Uniform and Preliminary Tests, Group II, 1956.

Strain	Mean of 7 Tests[1]	Hoyt-ville Ohio	Colum-bus Ohio	Lafay-ette Ind.	Madi-son Wis.	Dwight Ill.	Kana-wha Iowa	Ames Iowa	Menno S.D.	Lin-coln Nebr.
AX29-163-1-2	39.3	37.9	46.0	42.8	31.8	41.1	28.5	16.2	16.0	46.9
A0-8618	38.4	40.5	44.1	38.7	33.3	44.8	29.2	19.2	14.3	38.5
C1105	38.1	38.9	41.6	37.0	37.8	43.2	27.4	15.0	18.5	40.8
H13501	38.1	40.8	40.2	38.4	35.0	43.3	27.0	22.5	15.2	41.9
A0-8618-2	37.9	39.0	42.5	36.6	33.1	43.1	29.6	18.0	15.1	41.6
Blend 1	37.9	40.3	43.6	38.5	34.6	39.3	26.3	19.0	10.9	42.8
L9-5139	37.2	39.4	39.1	36.1	28.5	46.9	27.5	18.9	10.7	43.2
Adams	36.8	40.0	40.3	34.6	32.6	43.2	27.1	16.2	12.9	39.9
C1128	36.5	37.1	40.3	36.9	37.1	41.8	25.2	16.0	17.2	37.0
A0-8618-1	36.5	35.5	42.7	36.1	28.5	43.5	28.6	18.4	13.8	40.4
H24157*	36.2	37.8	42.1	33.5	32.7	41.0	24.8	15.7	9.6	41.6
Harosoy	36.1	39.4	39.1	38.0	34.4	41.9	25.2	14.6	15.0	34.9
Hawkeye	36.0	32.9	38.0	35.6	35.4	39.9	27.9	14.7	11.6	42.0
Lincoln	35.9	35.3	43.8	34.8	33.7	38.5	26.3	18.7	12.3	38.7
C1106	35.8	37.5	38.1	35.6	38.2	38.6	24.7	15.3	15.9	38.2
H21162*	35.6	41.0	41.9	38.7	32.7	36.5	23.9	17.8	10.6	34.5
AX29-267-1-1-2*	35.5	33.4	33.3	34.0	36.1	44.0	29.8	16.1	12.3	37.9
H14521	35.2	34.2	39.9	33.2	35.4	37.7	28.5	16.7	17.6	37.2
H22218*	35.1	36.6	39.2	35.3	34.8	36.8	28.5	16.0	11.6	34.8
C1117	35.1	35.0	40.8	34.0	33.0	39.7	24.6	15.8	19.0	38.5
H24167*	35.1	37.4	38.3	34.0	32.5	39.7	23.0	14.8	10.6	40.6
C1121	35.0	38.3	36.8	33.4	37.2	37.1	26.3	12.6	17.7	36.0
H20771*	35.0	35.4	41.5	35.1	32.8	38.3	25.6	15.1	12.5	36.4
C1056	34.8	37.4	37.3	36.8	29.3	40.0	24.8	15.4	15.4	38.1
C1147*	34.3	35.1	36.8	33.7	35.2	39.0	23.8	14.3	16.0	36.8
H13116	34.2	31.2	39.1	36.2	31.7	39.8	26.8	16.6	17.0	34.6
W9-1982-16*	33.9	36.0	42.1	33.8	32.7	37.1	21.7	13.4	11.4	33.8
H21793*	33.7	34.5	36.2	33.9	34.5	35.8	26.5	11.2	11.1	34.2
S2-5437*	33.2	31.2	36.5	34.1	31.9	40.8	23.9	13.6	13.1	34.0
H15345	32.7	28.7	40.5	29.0	27.3	38.5	26.0	18.9	13.5	38.8
Richland	31.9	31.5	35.8	32.9	27.4	35.4	24.9	13.0	14.6	35.5
Blackhawk	31.8	33.1	33.7	30.5	32.1	35.4	24.6	12.7	15.2	33.5
H14551*	30.1	29.9	38.3	28.0	25.8	36.2	17.5	14.0	13.2	34.9
H14025	24.2	23.2	32.8	24.4	21.7	27.9	15.2	9.2	12.2	24.5
Mean	35.1	35.7	39.5	34.8	32.7	39.6	25.6	15.8	13.9	37.7
Coef. of Var. (%)		--	--	6.9	10.4	8.1	9.1	16.6	--	9.2
Bu.N.F.S. (5%)		--	--	3.4	4.8	4.5	3.4	3.8	--	4.9
Row Spacing (In.)		36	28	40	36	40	40	40	42	38

*Grown in the Preliminary Test, Group II, only.

[1]Ames, Iowa and Menno, South Dakota not included in the mean.

Table 37. Summary of yield rank for the strains in the Uniform and Preliminary Tests, Group II, 1956.

Strain	Hoyt-ville Ohio	Colum-bus Ohio	Lafay-ette Ind.	Madi-son Wis.	Dwight Ill.	Kana-wha Iowa	Ames Iowa	Menno S.D.	Lin-coln Nebr.
AX29-163-1-2	11	1	1	26	11	5	12	7	1
A0-8618	3	2	2	15	2	3	2	16	14
C1105	9	10	7	2	6	10	22	2	8
H13501	2	16	5	9	5	12	1	11	5
A0-8618-2	8	6	10	16	8	2	8	13	6
Blend 1	4	4	4	11	19	15	3	30	3
L9-5139	6	19	12	29	1	9	4	31	2
Adams	5	14	19	22	6	11	12	21	11
C1128	16	14	8	4	10	20	15	5	20
A0-8618-1	19	5	12	29	4	4	7	17	10
H24157*	12	7	27	19	12	23	18	34	6
Harosoy	6	19	6	13	9	20	25	14	25
Hawkeye	28	25	14	6	15	8	24	26	4
Lincoln	21	3	18	14	22	15	6	23	13
C1106	13	24	14	1	21	25	20	9	16
H21162*	1	9	2	19	29	28	9	32	29
AX29-267-1-1-2*	26	33	21	5	3	1	14	23	18
H14521	25	17	29	6	25	5	10	4	19
H22218*	17	18	16	10	28	5	15	26	27
C1117	23	12	21	17	17	26	17	1	14
H24167*	14	22	21	23	17	31	23	32	9
C1121	10	27	28	3	26	15	32	3	23
H20771*	20	11	17	18	24	19	21	22	22
C1056	14	26	9	28	14	23	19	10	17
C1147*	22	27	26	8	20	30	26	7	21
H13116	30	19	11	27	16	13	11	6	28
W9-1982-16*	18	7	25	19	26	32	29	28	32
H21793*	24	30	24	12	31	14	33	29	30
S2-5437*	30	29	20	25	13	28	28	20	31
H15345	33	13	32	32	22	18	4	18	12
Richland	29	31	30	31	32	22	30	15	24
Blackhawk	27	32	31	24	32	26	31	11	33
H14551*	32	22	33	33	30	33	27	19	25
H14025	34	34	34	34	34	34	34	25	34

*Grown in the Preliminary Test, Group II, only.

Table 38. Summary of maturity data, days earlier (-) or later (+) than Hawkeye for the strains in the Uniform and Preliminary Tests, Group II, 1956.

Strain	Mean of 6 Tests[1]	Hoyt-ville Ohio	Colum-bus Ohio	Lafay-ette Ind.	Dwight Ill.	Kana-wha Iowa	Ames Iowa	Menno S.D.	Lin-coln Nebr.
AX29-163-1-2	+4.5	+4	+4	+ 4	+4	+ 3	+ 6	+1	+8
A0-8618	+3.0	+2	+2	+ 3	+3	+ 3	+ 7	+3	+5
C1105	-5.2	-4	-6	- 4	-2	- 7	- 8	-2	-8
H13501	+3.8	+1	+4	+ 5	+4	+ 3	+ 8	+1	+6
A0-8618-2	+3.7	+4	+3	+ 5	+3	+ 3	+ 6	+3	+4
Blend 1	+3.5	+2	+3	+ 4	+3	+ 5	+ 8	+2	+4
L9-5139	+5.2	+4	+4	+ 7	+4	+ 5	+10	+3	+7
Adams	+1.8	+3	-1	+ 4	+1	- 1	+ 4	+1	+5
C1128	+2.2	+2	+1	+ 3	+4	0	+ 2	+1	+3
A0-8618-1	+3.3	+2	+3	+ 4	+3	+ 3	+ 4	+2	+5
H24157*	+5.8	+5	+6	+ 8	+4	+ 5	+ 6	+2	+7
Harosoy	-4.2	-3	-4	- 2	-3	- 7	- 6	-3	-6
Hawkeye	0	0	0	0	0	0	0	0	0
Lincoln	+4.3	+5	+3	+ 4	+3	+ 4	+10	+3	+7
C1106	-6.5	-6	-5	- 7	-6	- 8	- 7	-1	-7
H21162*	+6.3	+5	+5	+ 7	+6	+ 7	+10	+3	+8
AX29-267-1-1-2*	-5.3	-5	-7	- 5	-4	- 6	- 2	+2	-5
H14521	-0.8	-1	+1	- 2	-2	- 1	+ 1	+1	0
H22218*	-1.5	0	-4	- 2	+1	- 1	- 3	+1	-3
C1117	-5.7	-5	-4	- 5	-6	- 7	- 7	-1	-7
H24167*	+5.2	+5	+3	+ 7	+5	+ 4	+ 5	+1	+7
C1121	-5.2	-5	-7	- 4	-6	- 7	- 7	0	-2
H20771*	-2.0	-2	-3	- 3	0	- 3	- 3	-1	-1
C1056	+0.5	-3	0	+ 1	+1	- 1	+ 2	0	+5
C1147*	-2.3	-2	-5	- 3	+1	- 2	- 8	+2	-3
H13116	+1.5	-1	+2	+ 4	+2	0	+ 4	+2	+2
W9-1982-16*	-2.0	-2	-4	- 3	-1	- 1	0	0	-1
H21793*	-2.2	+1	-3	- 3	-2	- 2	- 4	-2	-4
S2-5437*	-3.2	-3	-1	- 5	-3	- 4	- 3	+2	-3
H15345	-2.5	-2	-1	+ 1	-4	- 2	+ 1	+1	-7
Richland	-0.8	+2	+3	0	-1	- 1	- 1	+1	-8
Blackhawk	-7.8	-6	-6	-10	-6	-10	-11	-2	-9
H14551*	-4.0	-4	-4	- 4	-4	- 5	- 2	+1	-3
H14025	-2.2	-3	+4	+ 1	-3	- 7	+ 1	+2	-5
Date planted	5/22	5/25	5/26	5/15	5/22	5/22	5/14	5/21	5/22
Hawkeye matured	9/23	9/29	9/27	9/15	9/19	9/27	9/10	9/22	9/20
Days to mature	124	127	124	123	120	128	119	124	121

*Grown in the Preliminary Test, Group II, only.
[1]Ames, Iowa and Menno, South Dakota not included in the mean.

UNIFORM TEST, GROUP III, 1956

Strain	Source or Originating Agency	Origin
Clark	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Dunfield	Purdue Agr. Exp. Sta.	Sel. from P. I. 36846
Illini	Ill. Agr. Exp. Sta.	Sel. from A.K.
Lincoln	Ill. A.E.S. & U.S.R.S.L.	Sel. from Mandarin x Manchu
A0-8618	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
A0-8618-1	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
A0-8618-2	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
A3-7743-1	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Mandarin (Ottawa)
C859	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Lincoln
C1060	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x A45-251)
H24088	Ohio A.E.S. & U.S.R.S.L.	Sel. from Monroe x Lincoln
L6-2132-A14	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
L9-5139	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
U9-2	Nebr. A.E.S. & U.S.R.S.L.	Sel. from mixed seed
U0-41	Nebr. A.E.S. & U.S.R.S.L.	Sel. from U9-2
Blend 1		Blend of 50% A0-8618-1 and 50% L9-5139

This test was grown at 21 locations in 1956, and the data are presented in Tables 39 through 46. The general yield level was up in 1956 with an average yield of 36 bushels compared to 31 bushels in 1955, based on the 19 locations common to both years. Yields at most individual locations showed increases with the major exceptions being Landisville, Lafayette, Ames, and Columbia.

Considering the five-year means (Tables 45 and 46) the Group IV tie-in variety, Clark, well outyielded the others. Strains L9-5139 and A0-8618 appear very similar in all traits except yield and maturity. A0-8618 was 1.4 days earlier and L9-5139 was 1.5 bushels higher in yield in the area of this test (but see results of Uniform Test, Group II, Tables 31 and 32). Both strains have proved their superiority to Lincoln and should be considered for release to commercial growers as replacements for Lincoln.

Among the strains included in the three-year summary (Tables 43 and 44), U9-2 ranked second only to Clark in yield, had high oil and good lodging resistance. On the other hand, it had rather consistently poor seed quality and was perhaps too close in maturity to Clark to consider for release. A selection from it, U0-41, was similar and earlier in maturity but unfortunately has been lower in yield, being excelled by the earlier L9-5139. Strains C859 and C1060 were both about a day earlier than Clark but were outyielded by it by 2.3 and 3.3 bushels, respectively.

Looking at this year's tests, six new strains have been included. L6-2132-A14 from 1955 Preliminary Test, Group III, is from the same BC_1S_3 plant progeny as Clark and appears to be very similar to it, perhaps being a little earlier. A3-7743-1, a

selection from A3-7743 which was in the 1955 Preliminary Test, Group III, performed about the same as L9-5139 but was handicapped by its low oil content. H24088 from the 1955 Preliminary Test, Group II, was slightly inferior to L9-5139 in most of its attributes. The two selections from A0-8618, despite some local variation, have similar over-all averages for all traits.

The blend of A0-8618-1 and L9-5139 was included for the following reason. In the area of Uniform Test, Group III, L9-5139 has consistently had a definite yield advantage over A0-8618. Farther north in Uniform Test, Group II, A0-8618 has had a yield advantage. Since these strains are otherwise quite similar, it was proposed that we test a blend of the two strains, which might equal the yield of the better strain in all areas. One year of results appears promising. In this test, Blend 1 outyielded A0-8618 by an average of 1.1 bushels and was only slightly (.6 bushels) under L9-5139. In Uniform Test, Group II, Blend 1 equalled A0-8618 (actually 0.2 bushels higher) and outyielded L9-5139 by 1.0 bushels (Table 24).

Table 39. Summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	19	17	18	18	14	19	19	19
L6-2132-A14	39.1	+5.5	2.2	41	1.7	15.2	40.8	21.3
Clark	39.0	+6.6	2.0	42	1.9	15.5	41.1	21.0
U9-2	37.5	+3.9	1.9	40	2.3	17.6	39.8	21.5
C859	37.3	+6.1	2.3	44	1.6	13.7	38.8	21.4
A3-7743-1	36.7	+1.4	2.2	39	2.1	16.6	42.1	19.9
C1060	36.6	+5.8	2.3	41	2.0	14.8	39.9	21.2
L9-5139	36.5	+1.0	2.1	42	1.8	15.3	41.3	21.1
H24088	36.0	+1.9	2.0	44	2.4	15.0	41.1	20.6
Blend 1	35.9	+1.1	2.0	41	2.0	15.7	41.6	21.0
U0-41	35.6	+2.2	2.0	37	2.2	17.3	40.1	21.5
A0-8618-1	34.8	-1.6	1.9	40	2.0	16.0	42.1	20.7
A0-8618	34.8	-1.3	2.0	40	2.1	16.1	42.0	20.8
A0-8618-2	34.3	-1.2	2.1	40	2.1	15.9	41.8	20.6
Lincoln	33.3	0	2.1	41	2.1	14.3	41.4	21.0
Illini	31.3	+3.9	2.9	46	2.0	14.3	41.6	20.1
Dunfield	29.6	-1.0	2.9	41	2.1	15.2	40.4	21.5
Mean	35.5	+2.0	2.2	41	2.0	15.5	41.0	21.0

[1]Days earlier (-) or later (+) than Lincoln. Lincoln required 119 days to mature.

Table 40. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1956.

Strain	Mean of 19 Tests[1]	Landis-ville Pa.	Salem N.J.	New-ark Del.	George-town Del.	Belts-ville Md.	Colum-bus Ohio	Lafay-ette Ind.	Green-field Ind.	Worth-ing-ton Ind.	Dwight Ill.
L6-2132-A14	39.1	42.6	33.9	45.0	27.0	52.6	44.1	42.5	39.5	43.0	40.0
Clark	39.0	44.1	31.7	45.8	29.9	51.8	46.9	43.6	37.9	42.0	37.9
U9-2	37.5	43.5	31.1	47.2	24.1	47.4	38.0	43.2	35.3	37.4	38.8
C859	37.3	39.4	29.3	48.1	28.7	54.1	39.3	45.0	36.3	43.9	35.1
A3-7743-1	36.7	46.8	25.7	46.6	21.3	49.7	41.2	43.9	34.4	40.8	39.3
C1060	36.6	39.7	28.3	41.9	23.3	48.9	42.5	42.0	36.9	41.6	37.1
L9-5139	36.5	41.7	30.8	38.4	20.6	44.5	40.0	39.9	36.9	40.5	38.5
H24088	36.0	36.9	36.1	43.0	26.1	51.2	40.6	38.8	34.9	40.0	36.6
Blend 1	35.9	39.9	24.3	39.3	18.9	48.1	43.4	39.1	35.4	37.6	41.9
U0-41	35.6	42.1	27.5	41.6	21.3	44.8	36.1	41.5	34.1	36.7	34.8
A0-8618-1	34.8	39.8	29.3	40.9	20.0	47.0	39.3	39.5	30.3	35.6	37.5
A0-8618	34.8	42.8	24.6	38.7	22.2	45.0	41.3	39.7	31.2	36.5	40.3
A0-8618-2	34.3	43.8	23.9	35.5	21.3	45.9	40.4	38.7	34.3	35.1	39.0
Lincoln	33.3	40.3	18.5	38.1	18.7	41.5	42.3	36.7	32.7	35.0	37.0
Illini	31.3	37.3	18.4	35.4	22.6	39.8	35.8	36.8	28.1	30.2	33.4
Dunfield	29.6	38.3	25.5	29.7	15.2	39.4	31.5	32.5	29.7	29.8	31.9
Mean	35.5	41.2	27.4	41.0	22.6	47.0	40.2	40.2	34.2	37.9	37.4
C.V. (%)		9.1	17.2	10.6	16.1	7.4	--	4.8	10.5	6.4	7.1
B.N.F.S. (5%)		5.3	6.5	6.2	5.2	5.1	--	2.8	5.1	3.4	3.8
Row Sp. (In.)		40	32	36	36	40	28	40	38	38	40
		Yield Rank									
L6-2132-A14		6	2	5	3	2	2	5	1	2	3
Clark		2	3	4	1	3	1	3	2	3	8
U9-2		4	4	2	5	8	13	4	7	9	6
C859		13	6	1	2	1	11	1	5	1	13
A3-7743-1		1	10	3	9	5	7	2	9	5	4
C1060		12	8	7	6	6	4	6	3	4	10
L9-5139		8	5	12	12	13	10	8	3	6	7
H24088		16	1	6	4	4	8	12	8	7	12
Blend 1		10	13	10	14	7	3	11	6	8	1
U0-41		7	9	8	9	12	14	7	11	10	14
A0-8618-1		11	6	9	13	9	11	10	14	12	9
A0-8618		5	12	11	8	11	6	9	13	11	2
A0-8618-2		3	14	14	9	10	9	13	10	13	5
Lincoln		9	15	13	15	14	5	15	12	14	11
Illini		15	16	15	7	15	15	14	16	15	15
Dunfield		14	11	16	16	16	16	16	15	16	16

[1]Landisville, Pennsylvania and Powhattan, Kansas not included in the mean.

Table 40. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Kirksville Mo.	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Powhattan Kans.
L6-2132-A14	47.9	49.2	45.2	44.3	24.9	45.2	29.3	29.9	20.5	38.7	12.0
Clark	46.5	47.9	40.2	44.3	26.5	45.7	33.6	30.5	20.3	38.5	10.6
U9-2	52.5	44.4	40.7	44.2	23.7	44.7	30.5	32.5	21.7	34.3	8.7
C859	48.5	47.1	37.1	40.2	25.1	41.9	28.5	24.7	19.5	36.1	9.2
A3-7743-1	49.6	46.8	41.0	38.1	22.5	43.2	29.4	27.9	22.3	33.7	7.4
C1060	43.3	46.8	36.6	40.5	27.4	41.2	33.2	26.5	19.9	37.7	11.3
L9-5139	46.5	44.9	45.0	41.4	23.7	42.0	27.9	31.0	22.5	38.8	9.0
H24088	46.2	41.6	42.7	39.6	19.3	37.4	25.7	29.9	20.4	33.7	7.9
Blend 1	45.6	44.0	43.4	39.8	24.6	41.8	27.5	30.5	21.9	35.5	8.8
U0-41	51.2	41.3	42.8	39.9	26.7	45.5	28.1	29.6	21.6	32.2	11.4
A0-8618-1	45.7	41.5	41.3	39.2	21.0	40.4	26.9	29.8	22.1	33.4	8.8
A0-8618	42.9	44.9	40.0	38.5	22.0	42.7	26.1	28.3	22.2	33.4	9.0
A0-8618-2	44.2	41.7	41.7	38.2	24.0	41.9	25.5	26.7	21.4	31.8	9.3
Lincoln	42.1	40.6	37.2	36.8	22.4	42.2	25.7	28.6	21.7	34.7	9.2
Illini	42.0	38.5	39.8	33.4	22.4	33.8	28.6	27.2	19.3	29.6	8.4
Dunfield	39.3	35.4	35.5	34.1	17.9	35.6	28.5	25.8	19.5	24.9	8.9
Mean	45.9	43.5	40.6	39.5	23.4	41.6	28.4	28.7	21.1	34.2	9.4
C.V. (%)	6.3	6.3	9.0	4.9	11.3	5.7	--	9.0	7.3	11.0	18.4
B.N.F.S. (5%)	4.3	3.9	5.2	2.7	3.8	3.4	--	3.7	2.4	5.5	2.5
Row Sp. (In.)	40	40	37	40	40	40	40	40	36	38	40
	Yield Rank										
L6-2132-A14	5	1	1	1	5	3	5	5	10	2	1
Clark	6	2	10	1	3	1	1	3	12	3	4
U9-2	1	8	9	3	8	4	3	1	6	8	13
C859	4	3	14	6	4	9	7	16	14	5	6
A3-7743-1	3	4	8	13	10	5	4	11	2	9	16
C1060	12	4	15	5	1	12	2	14	13	4	3
L9-5139	6	6	2	4	8	8	10	2	1	1	8
H24088	8	11	5	9	15	14	14	5	11	9	15
Blend 1	10	9	3	8	6	11	11	3	5	6	11
U0-41	2	13	4	7	2	2	9	8	8	13	2
A0-8618-1	9	12	7	10	14	13	12	7	4	11	11
A0-8618	13	6	11	11	13	6	13	10	3	11	8
A0-8618-2	11	10	6	12	7	9	16	13	9	14	5
Lincoln	14	14	13	14	11	7	14	9	6	7	6
Illini	15	15	12	16	11	16	6	12	16	15	14
Dunfield	16	16	16	15	16	15	7	15	14	16	10

Table 41. Summary of maturity data, days earlier (-) or later (+) than Lincoln, and lodging for the strains in the Uniform Test, Group III, 1956.

Strain	Mean of 17 Tests[1]	Landis-ville Pa.	Salem N.J.	New-ark Del.	George-town Del.	Belts-ville Md.	Colum-bus Ohio	Lafay-ette Ind.	Green-field Ind.	Worth-ing-ton Ind.	Dwight Ill.
L6-2132-A14	+5.5	+2	-8	+5	+ 8	+5	+4	+7		+5	+5
Clark	+6.6	+3	+1	+7	+10	+4	+8	+8		+6	+5
U9-2	+3.9	+3	+1	+2	+ 6	+4	+5	+7		+4	+4
C859	+6.1	+4	-7	+7	+ 8	+6	+6	+8		+4	+6
A3-7743-1	+1.4	0	+5	+3	+ 4	+3	+3	+1		+4	0
C1060	+5.8	+4	-8	+8	+ 8	+5	+4	+8		+3	+5
L9-5139	+1.0	-2	0	-1	+ 4	0	+1	+3		-1	+1
H24088	+1.9	0	+1	+2	+ 6	+1	+1	+4		+5	+2
Blend 1	+1.1	-1	+1	-2	- 3	-1	0	-1		0	-1
U0-41	+2.2	0	+1	+1	+ 5	+3	+5	+4		+5	+2
A0-8618-1	-1.6	-3	0	-3	- 4	-1	-1	-1		-1	0
A0-8618	-1.3	-3	+1	-2	0	-1	0	-3		0	-1
A0-8618-2	-1.2	-2	+4	-3	- 2	0	+1	0		0	-1
Lincoln	0	0	0	0	0	0	0	0		0	0
Illini	+3.9	0	+5	+4	+ 7	+4	+6	+6		+9	+2
Dunfield	-1.0	-1	-8	-2	-11	-2	+4	+4		-1	+1
Date planted	5/22	6/1	5/22	5/25	5/24	5/21	5/26	5/15		6/9	5/22
Lincoln matured	9/18	10/5	9/25	9/24	9/10	9/20	10/1	9/18		9/27	9/22
Days to mature	119	126	126	122	109	122	128	126		110	123
	Mean of 18 Tests[2]	Lodging									
L6-2132-A14	2.2	3.0		3.5	2.3	2.8	1.0	2.0	1.0	2.8	2.5
Clark	2.0	3.2		3.0	1.5	2.2	1.0	1.5	1.0	2.0	2.0
U9-2	1.9	3.2		2.5	1.3	2.0	1.0	1.8	1.0	2.0	1.8
C859	2.3	4.0		2.3	2.3	2.5	2.0	2.0	1.0	3.0	2.3
A3-7743-1	2.2	2.7		3.3	3.0	3.0	1.0	1.8	1.0	2.5	1.9
C1060	2.3	3.0		3.5	2.0	2.5	1.0	2.0	1.0	2.8	2.3
L9-5139	2.1	2.0		3.0	3.0	2.8	2.0	1.5	1.0	1.8	1.8
H24088	2.0	1.5		2.3	3.0	2.8	1.0	1.3	1.0	1.8	1.9
Blend 1	2.0	1.7		3.0	3.0	2.2	1.0	1.3	1.0	2.0	1.9
U0-41	2.0	2.7		3.5	1.8	2.8	1.0	1.8	1.0	2.3	1.4
A0-8618-1	1.9	1.7		3.0	2.5	2.0	1.0	1.5	1.0	1.8	1.9
A0-8618	2.0	2.0		3.3	3.0	2.5	1.0	1.0	1.0	2.5	1.6
A0-8618-2	2.1	2.0		3.5	3.0	2.8	1.0	1.8	1.0	1.8	2.4
Lincoln	2.1	2.7		2.8	3.0	3.0	1.0	1.5	1.0	2.3	2.3
Illini	2.9	3.2		3.8	3.3	3.2	1.0	2.3	1.3	3.0	3.6
Dunfield	2.9	3.7		3.5	4.0	3.0	2.0	2.3	1.0	3.0	3.3
Mean	2.2	2.6		3.1	2.6	2.6	1.2	1.7	1.0	2.3	2.2

[1]Landisville, Pennsylvania and Salem, New Jersey not included in the mean.
[2]Landisville, Pennsylvania and Powhattan, Kansas not included in the mean.

Table 41. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Kirksville Mo.	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Powhattan Kans.
L6-2132-A14	+5	+7	+5	+4	+7	+7	+5	+5	+7	+3	
Clark	+7	+8	+7	+5	+8	+8	+6	+5	+8	+3	
U9-2	+3	+5	+3	+3	+4	+6	+3	+3	+4	+1	
C859	+6	+7	+7	+5	+7	+8	+6	+5	+7	+1	
A3-7743-1	0	+1	+3	0	-4	+2	+2	+2	+1	-1	
C1060	+7	+7	+8	+2	+7	+7	+5	+5	+7	+3	
L9-5139	+1	+1	+1	0	+2	+2	+1	0	+1	+1	
H24088	+2	+2	0	0	-1	0	+1	+3	+3	+1	
Blend 1	0	-2	-1	-1	-3	0	0	-1	-1	-2	
U0-41	+1	+1	+2	0	+3	+3	+2	+1	0	-1	
A0-8618-1	-1	-2	0	-2	-3	-2	0	-2	-1	-3	
A0-8618	-1	-3	-1	-2	-3	0	0	-1	-1	-3	
A0-8618-2	-1	-3	-1	-2	-2	-1	0	-1	-1	-3	
Lincoln	0	0	0	0	0	0	0	0	0	0	
Illini	+4	+2	+3	+2	-1	+6	+3	+3	+4	+3	
Dunfield	-1	-1	-1	-3	-4	+2	+1	0	0	-3	
Date planted	5/11	5/12	5/29	5/21	5/14	5/17	5/26	5/28	5/20	5/23	
Lincoln matured	9/15	9/10	9/16	9/5	9/21	9/14	9/15	9/15	9/8	9/27	
Days to mature	127	121	110	107	130	120	112	110	111	127	
	Lodging										
L6-2132-A14	2.4	3.1	2.4	1.3	1.4	2.2	2.5	1.6	1.4	3.8	1.0
Clark	2.3	3.1	2.4	1.5	1.5	2.2	2.5	1.6	1.2	3.8	1.0
U9-2	1.8	3.9	2.4	1.3	1.5	2.2	2.5	1.4	1.4	3.2	1.0
C859	2.1	3.8	2.8	2.1	1.7	2.5	2.5	1.8	1.5	3.2	1.0
A3-7743-1	3.0	3.3	2.6	1.0	1.2	2.2	2.3	1.8	1.4	4.0	1.0
C1060	3.3	2.8	2.8	1.6	1.7	2.6	2.3	2.0	1.4	4.2	1.0
L9-5139	2.0	3.5	1.9	1.4	1.5	2.3	2.0	1.7	1.4	3.8	1.0
H24088	2.1	3.5	1.9	1.0	1.4	2.2	2.3	1.5	1.2	3.8	1.0
Blend 1	2.5	3.4	2.3	1.1	1.3	2.2	2.0	1.6	1.4	3.2	1.0
U0-41	1.8	3.5	2.0	1.0	1.4	2.1	2.8	1.4	1.4	3.5	1.0
A0-8618-1	2.6	2.8	2.0	1.3	1.2	2.0	2.0	1.4	1.2	3.2	1.0
A0-8618	2.5	2.6	2.3	1.1	1.2	2.1	2.0	1.6	1.4	3.5	1.0
A0-8618-2	2.4	2.9	2.1	1.3	1.2	2.0	2.0	1.5	1.2	3.2	1.0
Lincoln	2.5	2.9	2.3	1.4	1.4	2.3	2.3	1.9	1.4	3.2	1.0
Illini	4.0	3.5	2.6	2.8	1.9	3.2	2.7	2.8	1.9	4.8	1.0
Dunfield	4.1	3.9	3.4	2.3	1.6	3.2	3.0	2.9	2.0	4.5	1.0
Mean	2.6	3.3	2.4	1.5	1.4	2.3	2.4	1.8	1.4	3.7	1.0

Table 42. Summary of height data and percentage of oil for the strains in the Uniform Test, Group III, 1956.

Strain	Mean of 18 Tests[1]	Landisville Pa.	Salem N.J.	Newark Del.	Georgetown Del.	Beltsville Md.	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.
L6-2132-A14	41	37		42	41	44	43	37	31	36	45
Clark	42	38		42	39	44	42	38	34	38	46
U9-2	40	38		41	38	43	39	38	31	35	44
C859	44	42		46	43	46	46	41	36	41	48
A3-7743-1	39	37		44	38	44	39	37	31	36	42
C1060	41	39		42	38	43	41	38	33	38	46
L9-5139	42	38		44	41	44	43	40	31	38	47
H24088	44	39		47	43	46	44	40	35	41	49
Blend 1	41	38		45	38	46	43	37	33	38	45
U0-41	37	35		38	35	40	38	34	28	34	39
A0-8618-1	40	37		42	38	44	43	36	33	37	46
A0-8618	40	38		42	37	43	41	38	31	35	45
A0-8618-2	40	38		42	38	42	40	38	32	36	45
Lincoln	41	39		43	40	44	43	38	33	37	45
Illini	46	41		47	47	46	46	47	37	43	50
Dunfield	41	36		39	38	42	39	40	32	38	47
Mean	41	38		43	40	44	42	39	33	38	46
	Mean of 19 Tests[2]	Percentage of Oil									
L6-2132-A14	21.3		20.4	22.0	21.3	21.4	21.1	21.4	21.7	19.5	22.2
Clark	21.0		20.2	21.3	21.7	21.3	21.0	21.2	20.9	19.6	21.4
U9-2	21.5		21.3	22.1	20.2	21.4	21.3	21.9	21.1	20.0	21.9
C859	21.4		21.0	21.8	22.0	22.1	21.1	21.4	21.1	20.6	21.9
A3-7743-1	19.9		19.0	20.4	17.8	21.3	19.9	20.8	19.8	18.3	20.1
C1060	21.2		21.4	22.2	21.0	22.1	21.0	21.3	21.1	20.3	21.5
L9-5139	21.1		21.3	21.1	20.3	21.6	20.7	21.7	20.8	19.5	21.7
H24088	20.6		19.8	20.6	19.5	20.3	20.5	21.2	20.6	18.1	21.4
Blend 1	21.0		20.4	21.5	19.4	22.0	20.5	21.6	20.4	19.3	21.3
U0-41	21.5		21.3	21.8	19.6	21.5	21.3	22.1	20.7	19.8	21.7
A0-8618-1	20.7		20.3	21.6	19.5	21.3	20.0	20.9	19.2	18.8	21.1
A0-8618	20.8		20.3	21.3	18.9	21.9	19.9	21.4	20.4	19.3	21.2
A0-8618-2	20.6		20.5	21.4	19.6	19.0	20.2	21.2	20.6	19.1	20.6
Lincoln	21.0		20.2	22.0	19.9	22.0	20.9	21.8	20.7	19.3	21.8
Illini	20.1		19.7	20.5	20.0	20.5	19.6	19.9	19.9	18.3	20.3
Dunfield	21.5		21.7	21.6	20.4	21.9	21.0	20.7	21.1	20.1	21.3
Mean	21.0		20.6	21.5	20.1	21.4	20.6	21.3	20.6	19.4	21.3

[1]Landisville, Pennsylvania and Powhattan, Kansas not included in the mean.
[2]Powhattan, Kansas not included in the mean.

Table 42. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edge-wood Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Kirks-ville Mo.	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Pow-hat-tan Kans.
L6-2132-A14	47	46	44	45	31	36	39	42	39	43	22
Clark	49	48	45	46	34	38	41	43	40	43	23
U9-2	46	43	42	45	32	36	39	41	39	42	24
C859	51	48	50	47	34	39	42	45	42	45	25
A3-7743-1	48	43	44	39	26	34	38	41	39	39	24
C1060	49	45	45	43	32	37	38	41	40	43	23
L9-5139	49	48	46	46	32	38	39	43	43	45	24
H24088	52	48	48	47	34	37	40	46	42	48	25
Blend 1	47	45	45	44	32	37	40	42	41	44	25
U0-41	44	40	41	42	32	36	36	38	37	39	23
A0-8618-1	47	44	45	44	29	36	38	43	40	43	24
A0-8618	47	44	45	45	29	36	38	40	41	44	25
A0-8618-2	46	44	45	44	32	36	37	42	40	44	25
Lincoln	47	45	45	44	32	37	38	42	41	44	25
Illini	55	49	52	49	36	42	48	43	43	50	26
Dunfield	50	44	45	43	30	38	40	41	41	43	26
Mean	48	45	45	45	32	37	39	42	41	44	24

	Percentage of Oil										
L6-2132-A14	21.3	20.9	20.6	22.2	21.6	22.7	21.0	20.7	19.9	22.2	19.5
Clark	20.8	20.8	19.9	22.2	21.1	21.5	21.7	20.7	19.4	22.0	19.4
U9-2	22.3	22.1	21.0	22.4	21.2	22.1	21.7	21.5	21.0	22.5	19.5
C859	21.2	21.9	20.2	22.6	21.7	21.4	20.8	21.2	20.4	22.1	20.1
A3-7743-1	20.2	20.7	19.6	19.6	20.6	20.5	19.2	19.6	19.0	21.2	17.6
C1060	20.8	21.6	19.2	22.0	21.4	22.0	21.1	20.8	20.2	22.5	19.5
L9-5139	21.3	21.2	20.9	22.2	21.3	21.2	20.1	21.4	20.7	21.8	18.6
H24088	21.7	21.0	20.3	21.4	20.6	21.2	20.3	22.1	19.5	21.2	18.7
Blend 1	20.9	21.2	20.8	21.9	21.0	21.4	20.2	21.6	20.5	22.4	19.2
U0-41	22.6	21.7	20.9	22.6	21.3	22.4	21.0	21.9	21.6	22.2	20.4
A0-8618-1	21.9	20.5	20.5	21.3	20.4	21.1	20.5	20.7	21.4	21.9	19.3
A0-8618	21.0	21.4	20.4	21.7	20.8	21.4	20.7	21.1	21.0	21.6	18.9
A0-8618-2	20.1	21.1	20.3	21.4	20.9	20.4	21.3	20.8	21.3	21.4	19.3
Lincoln	21.2	21.9	19.5	21.6	21.1	21.2	20.7	21.6	19.9	22.0	19.3
Illini	20.0	20.4	19.9	20.7	20.0	20.1	21.6	20.8	19.8	20.6	19.2
Dunfield	21.3	22.1	20.7	22.9	21.9	22.0	22.2	22.0	21.1	21.8	20.8
Mean	21.2	21.3	20.3	21.8	21.1	21.4	20.9	21.2	20.4	21.8	19.3

Table 43. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1954-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	60	52	54	59	51	59	59	59
Clark	37.7	+5.9	1.9	39	1.9	15.8	41.0	21.3
U9-2	35.8	+3.3	2.0	37	2.5	17.7	39.7	21.9
C859	35.4	+4.7	2.3	41	1.8	13.7	39.0	21.7
L9-5139	35.1	+0.1	2.1	39	2.0	15.3	41.0	21.4
U0-41	34.6	+1.9	2.1	36	2.5	17.4	39.9	22.0
C1060	34.4	+4.9	2.3	38	2.0	15.0	40.2	21.3
A0-8618	33.7	-1.6	2.0	38	2.2	16.2	41.6	21.1
Lincoln	32.5	0	2.2	39	2.3	14.2	41.1	21.3
Illini	29.6	+1.6	3.4	41	2.2	14.0	41.3	20.6
Dunfield	27.9	-2.5	3.0	37	2.4	15.2	40.1	21.8
Mean	33.7		2.3	39	2.2	15.5	40.5	21.4

[1]Days earlier (-) or later (+) than Lincoln. Lincoln required 121 days to mature.

Table 44. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1954-56.

Strain	Mean of 60 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.
Years Tested		1954-1956	1954-1956	1954, 1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956	1954-1956
Clark	37.7	50.8	46.6	26.1	43.7	43.2	45.9	35.5	44.9	34.2
U9-2	35.8	47.0	44.6	21.6	38.7	39.7	42.7	34.7	39.7	35.3
C859	35.4	44.9	43.4	24.2	43.2	37.1	43.5	34.2	46.6	34.4
L9-5139	35.1	43.8	40.5	19.8	36.4	41.3	43.6	36.8	43.6	34.2
U0-41	34.6	44.6	41.7	20.1	36.7	40.2	41.4	34.8	42.3	33.2
C1060	34.4	44.6	43.9	22.3	40.2	38.4	42.3	32.6	42.3	31.2
A0-8618	33.7	41.5	38.4	19.8	37.1	40.4	44.5	32.6	37.6	37.0
Lincoln	32.5	44.2	40.4	19.0	35.8	39.2	40.6	32.2	37.1	33.5
Illini	29.6	41.7	34.6	18.4	31.7	34.7	39.4	27.8	31.6	30.1
Dunfield	27.9	35.2	29.2	15.8	31.9	28.3	36.9	30.2	29.6	30.0
Mean	33.7	43.8	40.3	20.7	37.5	38.3	42.1	33.1	39.5	33.3

	Yield Rank								
Clark	1	1	1	1	1	1	2	2	4
U9-2	2	2	4	4	5	5	4	6	2
C859	3	4	2	2	8	4	5	1	3
L9-5139	7	6	6	7	2	3	1	3	4
U0-41	4	5	5	6	4	7	3	4	7
C1060	4	3	3	3	7	6	6	4	8
A0-8618	9	8	6	5	3	2	6	7	1
Lincoln	6	7	8	8	6	8	8	8	6
Illini	8	9	9	10	9	9	10	9	9
Dunfield	10	10	10	9	10	10	9	10	10

Table 44. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edge-wood Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Kirks-ville Mo.	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Pow-hat-tan Kans.
Years Tested	1954-1956	1955-1956	1955-1956	1954-1956	1954-1956	1954-1956	1955-1956	1954-1956	1954-1956	1954-1956	1955-1956
Clark	36.3	43.1	37.2	40.7	34.1	43.0	29.0	27.1	21.8	38.7	9.5
U9-2	39.4	41.6	38.4	38.2	30.2	39.8	26.3	29.3	21.2	34.6	8.5
C859	38.2	42.3	32.6	37.9	30.8	40.0	25.8	25.8	20.0	34.6	7.9
L9-5139	35.1	40.9	39.5	37.7	29.9	41.5	25.1	26.9	20.0	35.9	8.0
U0-41	39.1	38.6	38.9	35.4	33.4	40.2	23.3	27.7	21.1	33.7	7.6
C1060	35.0	41.8	34.5	36.3	32.3	40.3	27.6	24.8	18.8	35.5	8.8
A0-8618	35.8	40.3	36.6	35.0	29.3	39.8	23.5	26.4	20.6	34.8	7.8
Lincoln	32.6	36.6	34.9	32.3	28.3	39.9	23.7	26.0	19.5	31.1	7.7
Illini	33.7	33.2	34.9	30.7	27.2	32.1	24.0	23.3	17.0	27.4	7.4
Dunfield	31.1	31.4	22.8	27.9	24.3	32.0	22.8	23.9	17.6	26.6	8.2
Mean	35.6	39.0	35.0	35.2	30.0	38.9	25.1	26.1	19.8	33.3	8.1
	Yield Rank										
Clark	4	1	4	1	1	1	1	3	1	1	1
U9-2	1	4	3	2	5	7	3	1	2	5	3
C859	3	2	9	3	4	5	4	7	5	5	6
L9-5139	6	5	1	4	6	2	5	4	5	2	5
U0-41	2	7	2	6	2	4	9	2	3	7	9
C1060	7	3	8	5	3	3	2	8	8	3	2
A0-8618	5	6	5	7	7	7	8	5	4	4	7
Lincoln	9	8	6	8	8	6	7	6	7	8	8
Illini	8	9	6	9	9	9	6	10	10	9	10
Dunfield	10	10	10	10	10	10	10	9	9	10	4

Table 45. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1952-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	105	85	92	99	91	103	104	104
Clark	36.0	+5.6	1.8	40	1.8	15.7	40.5	21.4
L9-5139	33.7	0	2.1	40	2.0	15.1	40.6	21.4
A0-8618	32.2	-1.4	2.0	38	2.3	15.9	41.0	21.2
Lincoln	31.4	0	2.2	39	2.3	14.1	40.6	21.4
Illini	28.1	+0.8	3.5	42	2.2	13.7	40.9	20.6
Dunfield	26.4	-2.6	2.9	38	2.4	15.2	39.7	21.8
Mean	31.3		2.4	40	2.2	15.0	40.6	21.3

[1]Days earlier (-) or later (+) than Lincoln. Lincoln required 121 days to mature.

Table 46. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1952-56.

Strain	Mean of 105 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.
Years Tested		1952-1956	1952-1956	1953-54, 1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956
Clark	36.0	48.4	46.4	25.4	40.5	39.6	44.8	43.3	44.9
L9-5139	33.7	43.8	39.8	19.3	33.9	37.9	41.5	42.4	42.0
A0-8618	32.2	38.8	36.9	19.3	35.3	35.6	42.4	39.1	36.9
Lincoln	31.4	39.1	39.2	18.9	34.2	35.3	39.8	39.1	35.7
Illini	28.1	37.7	33.6	18.8	29.5	31.6	38.1	34.5	30.1
Dunfield	26.4	31.6	27.5	15.9	31.1	25.7	36.0	34.3	27.0
Mean	31.3	39.9	37.2	19.6	34.1	34.3	40.4	38.8	36.1
		Yield Rank							
Clark		1	1	1	1	1	1	1	1
L9-5139		2	2	2	4	2	3	2	2
A0-8618		4	4	2	2	3	2	3	3
Lincoln		3	3	4	3	4	4	3	4
Illini		5	5	5	6	5	5	5	5
Dunfield		6	6	6	5	6	6	6	6

Table 46. (Continued)

Strain	Dwight Ill.	Urbana Ill.	Edge-wood Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.
Years Tested	1952-1956	1952-1956	1952-53 1955-56	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956	1952-1956
Clark	29.6	33.4	28.1	38.4	37.1	39.7	27.5	25.8	33.9
L9-5139	31.0	33.5	30.2	35.4	34.3	38.5	27.2	22.6	31.3
A0-8618	33.6	34.3	28.0	32.7	34.6	37.6	26.4	22.0	30.2
Lincoln	30.4	32.3	25.8	30.7	31.1	36.9	25.7	22.3	28.9
Illini	27.3	30.9	25.4	27.2	30.3	31.6	23.2	18.3	26.3
Dunfield	27.6	28.0	25.6	26.3	27.3	31.5	23.2	17.6	25.2
Mean	29.9	32.1	27.2	31.8	32.5	36.0	25.5	21.4	29.3
	Yield Rank								
Clark	4	3	2	1	1	1	1	1	1
L9-5139	2	2	1	2	3	2	2	2	2
A0-8618	1	1	3	3	2	3	3	4	3
Lincoln	3	4	4	4	4	4	4	3	4
Illini	6	5	6	5	5	5	5	5	5
Dunfield	5	6	5	6	6	6	5	6	6

UNIFORM AND PRELIMINARY TESTS, GROUP III, 1956

Strain	Source or Originating Agency	Origin
Clark	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Dunfield	Purdue Agr. Exp. Sta.	Sel. from P. I. 36846
Illini	Ill. Agr. Exp. Sta.	Sel. from A.K.
Lincoln	Ill. A.E.S. & U.S.R.S.L.	Sel. from Mandarin x Manchu
A0-8618	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
A0-8618-1	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
A0-8618-2	Iowa A.E.S. & U.S.R.S.L.	Sel. from A0-8618
A3-6319*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Adams x (Adams x Hawkeye)
A3-7743-1	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Mandarin (Ottawa)
CX166-103N-1*	Purdue A.E.S. & U.S.R.S.L.	Sel. from L6-1503 x Bavender-2
CX168-46-5*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mandarin (Ottawa) x L6-2132
CX169-9-2*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mukden x L6-2132
CX184B-207-3*	Purdue A.E.S. & U.S.R.S.L.	Sel. from LX1061-9-9 x Blackhawk
CX192-27-2*	Purdue A.E.S. & U.S.R.S.L.	Sel. from C1070 x Adams
CX192-28-3*	Purdue A.E.S. & U.S.R.S.L.	Sel. from C1070 x Adams
C859	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Lincoln
C1060	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x A45-251)
H24088	Ohio A.E.S. & U.S.R.S.L.	Sel. from Monroe x Lincoln
L6-2132-A14	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
L9-5139	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
U9-2	Nebr. A.E.S. & U.S.R.S.L.	Sel. from mixed seed
U0-41	Nebr. A.E.S. & U.S.R.S.L.	Sel. from U9-2
U1-5*	Nebr. A.E.S. & U.S.R.S.L.	Sel. from U9-2
Blend 1		Blend of 50% A0-8618-1 and 50% L9-5139

*Grown in the Preliminary Test, Group III, only.

Preliminary Test, Group III, was grown as part of Uniform Test, Group III, at one location in each of seven states in 1956. It includes the eight strains indicated by asterisks. Data on all strains in the Preliminary and Uniform Tests, Group III, are presented in Tables 47 to 50.

Strain CX192-28-3 was outstanding in performance in this test, being highest in yield, lowest in lodging score, among the best in seed quality, and very good in composition. It was of the same maturity as L9-5139 but outyielded it by 6.3 bushels and even outyielded Clark, which is five days later, by 2.3 bushels. The strain is impure at present, having buff and imperfect black hilums and white and purple flowers. A3-6319, CX166-103N-1, and CX184B-207-3 (which has both tawny and gray pubescence) were intermediate in maturity between L9-5139 and Clark and yielded only slightly less than Clark. U1-5, a selection from U9-2, was similar to U9-2 in most respects but a bushel higher in yield. CX169-9-2 (having both purple and

white flowers), CX168-46-5, and CX192-27-2 were all of about the maturity of L9-5139 but excelled it in one or more respects. Strain CX192-27-2 was highest in oil content in this test.

Table 47. Summary of agronomic and chemical data for the strains in the Uniform and Preliminary Tests, Group III, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	6	7	6	7	5	7	4	4
CX192-28-3*	48.0	+1.4	1.6	40	1.5	16.5	40.1	21.7
Clark	45.7	+6.3	1.9	42	1.6	15.8	40.8	21.1
L6-2132-A14	45.4	+5.4	2.1	42	1.5	15.6	40.6	21.4
A3-6319*	44.8	+3.6	1.9	44	1.6	17.2	39.3	21.7
CX166-103N-1*	44.0	+4.0	2.2	41	2.3	17.1	39.5	22.4
C859	43.9	+5.9	2.4	44	1.4	14.1	38.8	21.5
CX184B-207-3*	43.6	+2.6	1.9	43	1.7	17.0	41.5	21.7
C1060	43.2	+5.6	2.2	41	2.0	14.8	39.9	21.4
A3-7743-1	43.1	+1.6	2.2	40	1.7	17.3	41.6	20.4
U1-5*	43.0	+4.6	2.2	41	2.2	18.2	39.8	21.6
CX169-9-2*	42.6	+1.9	2.0	43	1.6	15.5	40.5	20.5
CX168-46-5*	42.1	+1.7	2.3	41	2.3	16.8	39.5	21.4
U9-2	42.0	+4.4	2.1	40	2.0	17.9	39.5	21.9
Blend 1	42.0	-1.0	2.0	42	1.6	16.3	41.2	21.5
CX192-27-2*	41.9	+0.7	1.9	44	1.7	18.5	40.3	22.5
L9-5139	41.7	+1.1	2.3	43	1.4	16.0	40.8	21.4
A0-8618	41.2	-1.6	1.8	41	1.8	16.6	41.0	21.3
H24088	40.6	+1.7	2.1	44	2.1	15.4	40.4	21.4
U0-41	40.2	+2.3	2.1	38	1.9	17.8	39.3	22.0
A0-8618-1	40.2	-1.7	1.8	41	1.7	16.5	41.0	20.8
A0-8618-2	40.1	-1.0	2.0	41	1.7	16.4	40.6	20.9
Lincoln	39.7	0	2.1	42	1.8	14.8	40.8	21.6
Illini	35.7	+4.3	2.7	46	1.7	14.7	41.7	20.3
Dunfield	33.2	+0.6	2.9	41	1.6	15.8	40.2	21.7
Mean	42.0	+2.3	2.1	42	1.8	16.4	40.4	21.4

*Grown in the Preliminary Test, Group III, only.
[1]Days earlier (-) or later (+) than Lincoln. Lincoln required 122 days to mature.

Table 48. Summary of yield in bushels per acre for the strains in the Uniform and Preliminary Tests, Group III, 1956.

Strain	Mean of 6 Tests[1]	Belts-ville Md.	Colum-bus Ohio	Lafay-ette Ind.	Girard Ill.	Ottum-wa Iowa	Lad-donia Mo.	Lin-coln Nebr.
CX192-28-3*	48.0	52.3	53.1	44.6	47.6	48.2	21.1	42.2
Clark	45.7	51.8	46.9	43.6	47.9	45.7	30.5	38.5
L6-2132-A14	45.4	52.6	44.1	42.5	49.2	45.2	29.9	38.7
A3-6319*	44.8	53.7	47.1	42.8	43.6	40.2	22.6	41.4
CX166-103N-1*	44.0	53.5	43.9	43.9	44.8	42.6	23.2	35.0
C859	43.9	54.1	39.3	45.0	47.1	41.9	24.7	36.1
CX184B-207-3*[2]	43.6	56.0	44.0	43.0	43.6	41.6	8.6	33.5
C1060	43.2	48.9	42.5	42.0	46.8	41.2	26.5	37.7
A3-7743-1	43.1	49.7	41.2	43.9	46.8	43.2	27.9	33.7
U1-5*	43.0	47.4	45.7	42.7	41.9	44.2	26.2	36.1
CX169-9-2*	42.6	51.2	44.5	41.9	45.0	39.6	24.9	33.3
CX168-46-5*	42.1	51.8	42.6	40.7	40.5	41.2	27.1	35.7
U9-2	42.0	47.4	38.0	43.2	44.4	44.7	32.5	34.3
Blend 1	42.0	48.1	43.4	39.1	44.0	41.8	30.5	35.5
CX192-27-2*[2]	41.9	52.2	38.9	39.4	41.9	40.1	12.5	38.7
L9-5139	41.7	44.5	40.0	39.9	44.9	42.0	31.0	38.8
A0-8618	41.2	45.0	41.3	39.7	44.9	42.7	28.3	33.4
H24088	40.6	51.2	40.6	38.8	41.6	37.4	29.9	33.7
U0-41	40.2	44.8	36.1	41.5	41.3	45.5	29.6	32.2
A0-8618-1	40.2	47.0	39.3	39.5	41.5	40.4	29.8	33.4
A0-8618-2	40.1	45.9	40.4	38.7	41.7	41.9	26.7	31.8
Lincoln	39.7	41.5	42.3	36.7	40.6	42.2	28.6	34.7
Illini	35.7	39.8	35.8	36.8	38.5	33.8	27.2	29.6
Dunfield	33.2	39.4	31.5	32.5	35.4	35.6	25.8	24.9
Mean	42.0	48.7	41.8	40.9	43.6	41.8	26.1	35.1
C. V. (%)		7.4	--	4.8	6.3	5.7	--	11.0
Bu. Nec. for Sig. (5%)		5.1	--	2.8	3.9	3.4	--	5.5
Row Spacing (In.)		40	28	40	40	40	40	38

*Grown in the Preliminary Test, Group III, only.
[1]Laddonia, Missouri not included in the mean.
[2]Shattered heavily at Laddonia, Missouri.

Table 49. Summary of yield rank for the strains in the Uniform and Preliminary Tests, Group III, 1956.

Strain	Belts-ville Md.	Colum-bus Ohio	Lafay-ette Ind.	Girard Ill.	Ottum-wa Iowa	Lad-donia Mo.	Lin-coln Nebr.
CX192-28-3*	6	1	2	3	1	22	1
Clark	8	3	5	2	2	3	6
L6-2132-A14	5	6	10	1	4	5	4
A3-6319*	3	2	8	13	19	21	2
CX166-103N-1*	4	8	3	10	9	20	12
C859	2	18	1	4	12	19	8
CX184B-207-3*	1	7	7	13	15	24	17
C1060	13	11	11	5	16	15	7
A3-7743-1	12	14	3	5	7	11	15
U1-5*	15	4	9	15	6	16	8
CX169-9-2*	10	5	12	7	21	18	20
CX168-46-5*	8	10	14	22	16	13	10
U9-2	15	21	6	11	5	1	14
Blend 1	14	9	19	12	14	3	11
CX192-27-2*	7	20	18	15	20	23	4
L9-5139	21	17	15	8	11	2	3
AO-8618	19	13	16	8	8	10	18
H24088	10	15	20	18	22	5	15
UO-41	20	22	13	20	3	8	21
AO-8618-1	17	18	17	19	18	7	18
AO-8618-2	18	16	21	17	12	14	22
Lincoln	22	12	23	21	10	9	13
Illini	23	23	22	23	24	12	23
Dunfield	24	24	24	24	23	17	24

*Grown in the Preliminary Test, Group III, only.

Table 50. Summary of maturity data, days earlier (-) or later (+) than Lincoln, for the strains in the Uniform and Preliminary Tests, Group III, 1956.

Strain	Mean of 7 Tests	Belts-ville Md.	Colum-bus Ohio	Lafay-ette Ind.	Girard Ill.	Ottum-wa Iowa	Lad-donia Mo.	Lin-coln Nebr.
CX192-28-3*	+1.4	+1	+4	+5	0	+2	-1	-1
Clark	+6.3	+4	+8	+8	+8	+8	+5	+3
L6-2132-A14	+5.4	+5	+4	+7	+7	+7	+5	+3
A3-6319*	+3.6	+4	+4	+6	+3	+3	+4	+1
CX166-103N-1*	+4.0	+4	+5	+4	+5	+5	+4	+1
C859	+5.9	+6	+6	+8	+7	+8	+5	+1
CX184B-207-3*	+2.6	+5	+5	+2	+2	+1	+1	+2
C1060	+5.6	+5	+4	+8	+7	+7	+5	+3
A3-7743-1	+1.6	+3	+3	+1	+1	+2	+2	-1
U1-5*	+4.6	+4	+7	+7	+4	+5	+4	+1
CX169-9-2*	+1.9	+3	+2	+4	+2	+2	+2	-2
CX168-46-5*	+1.7	+2	+2	+5	0	+1	-1	+3
U9-2	+4.4	+4	+5	+7	+5	+6	+3	+1
Blend 1	-1.0	-1	0	-1	-2	0	-1	-2
CX192-27-2*	+0.7	+1	+4	+1	-1	+1	-1	0
L9-5139	+1.1	0	+1	+3	+1	+2	0	+1
A0-8618	-1.6	-1	0	-3	-3	0	-1	-3
H24088	+1.7	+1	+1	+4	+2	0	+3	+1
U0-41	+2.3	+3	+5	+4	+1	+3	+1	-1
A0-8618-1	-1.7	-1	-1	-1	-2	-2	-2	-3
A0-8618-2	-1.0	0	+1	0	-3	-1	-1	-3
Lincoln	0	0	0	0	0	0	0	0
Illini	+4.3	+4	+6	+6	+2	+6	+3	+3
Dunfield	+0.6	-2	+4	+4	-1	+2	0	-3
Date planted	5/20	5/21	5/26	5/15	5/12	5/17	5/28	5/23
Lincoln matured	9/19	9/20	10/1	9/18	9/10	9/14	9/15	9/27
Days to mature	122	122	128	126	121	120	110	127

*Grown in the Preliminary Test, Group III, only.

UNIFORM TEST, GROUP IV, 1956

Strain	Source or Originating Agency	Origin
Chief	Ill. Agr. Exp. Sta.	Sel. from Illini x Manchu
Clark	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Perry	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x L7-1355
Wabash	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Mansoy
C985	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ogden
C1048	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Dunfield x A45-251)
C1065	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1068	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1069	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1071	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1074	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1076	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1078	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1079	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
L6-2132-A14	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-7160	Missouri A.E.S. & U.S.R.S.L.	Sel. from D49-2525 x L6-5679

This test was grown at fifteen locations in 1956, and the data are presented in Tables 51 through 58. The average yield for fourteen locations was 31 in 1955 and 33 for the same locations in 1956. All of the increase occurred in Indiana and Illinois while to the east and west, yields were generally lower in 1956. For the six locations in Indiana and Illinois, the average yield increased from 27 in 1955 to 42 bushels in 1956.

The four named varieties and C985 have been in this test for six or more years, and six-year means are presented in Tables 57 and 58. Clark continued to show its superiority over the other varieties in this group, despite its relatively early maturity. C985 had only a slight over-all yield advantage but it outyielded Clark by an appreciable amount at the more southerly locations, while Clark led in yield at some of the more northerly locations.

Three-year summaries are presented in Tables 55 and 56. There are eight selections from C985 which ranged in average maturity from 1.5 days earlier to 2.0 days later than C985, from 33.1 to 34.4 bushels in average yield, and were similar in other respects. C1068 was the highest in average yield, earlier than most, and with good lodging score. C1048, a selection from Lincoln x (Dunfield x A45-251), was very similar to Perry in performance in all respects.

Two new strains were included this year. L6-2132-A14, from the 1955 Uniform Preliminary Test, Group III, did not excel Clark in yield in this test nor in Uniform Test, Group III, but was a day earlier in average maturity. S2-7160 has proved to be susceptible to bacterial pustule and not outstanding in other respects.

Table 51. Summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	13	13	13	13	12	13	13	13
C1068	38.9	+4.8	1.7	45	2.1	16.3	40.5	21.3
C1071	38.3	+5.2	2.2	44	2.0	14.7	39.0	21.9
C1079	38.1	+5.9	2.0	46	2.1	15.0	40.1	21.4
C1074	37.7	+5.7	1.8	48	2.2	16.2	40.0	21.6
C1078	37.5	+4.0	2.0	45	2.0	15.9	40.7	21.3
Clark	37.4	-3.0	2.2	43	2.2	15.3	40.7	21.2
C985	37.4	+5.9	2.1	45	2.3	15.2	40.0	21.4
C1069	37.3	+7.8	2.5	47	2.2	15.6	39.8	21.7
C1076	37.3	+5.8	2.6	46	2.0	15.8	40.9	21.1
L6-2132-A14	37.0	-3.9	2.5	42	2.4	14.9	40.4	21.3
C1065	36.9	+4.8	1.7	44	2.1	14.7	40.3	21.2
S2-7160	35.8	+2.4	2.1	48	2.0	12.2	39.9	19.7
C1048	35.7	+3.3	2.1	48	1.9	12.8	40.1	20.9
Perry	35.2	+2.8	2.1	44	2.7	15.6	41.4	21.0
Wabash	32.9	0	2.2	48	1.8	14.1	40.1	21.1
Chief	32.8	-1.1	2.9	53	2.3	12.5	40.3	20.2
Mean	36.6	+3.2	2.2	46	2.1	14.8	40.3	21.1

[1]Days earlier (-) or later (+) than Wabash. Wabash required 125 days to mature.

Table 52. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1956.

Strain	Mean of 13 Tests[1]	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.
C1068	38.9	38.8	41.2	36.9	48.3	55.1	47.0	44.0
C1071	38.3	39.9	43.4	37.6	44.5	49.5	52.3	44.8
C1079	38.1	33.1	43.0	38.0	43.9	49.0	55.9	39.3
C1074	37.7	39.0	43.3	38.9	50.4	49.0	46.2	41.7
C1078	37.5	38.3	38.8	36.3	48.9	43.5	53.6	42.3
Clark	37.4	44.1	36.3	36.2	38.6	40.7	51.4	42.7
C985	37.4	38.4	35.8	35.8	45.5	48.0	51.0	41.3
C1069	37.3	36.4	38.7	35.8	41.1	46.3	57.9	40.4
C1076	37.3	39.7	36.4	35.7	46.0	50.3	51.3	43.5
L6-2132-A14	37.0	42.6	37.2	30.8	39.0	40.3	49.8	39.4
C1065	36.9	40.2	37.6	34.8	44.5	45.7	48.5	41.0
S2-7160	35.8	28.9	37.0	34.5	39.2	45.5	56.2	36.7
C1048	35.7	36.9	43.1	37.3	42.3	45.0	50.1	38.5
Perry	35.2	32.7	41.0	33.6	40.8	37.7	47.3	40.0
Wabash	32.9	35.3	38.8	28.3	41.5	38.8	38.6	37.2
Chief	32.8	36.4	36.8	29.1	38.0	37.6	43.3	38.5
Mean	36.6	37.5	39.3	35.0	43.3	45.1	50.0	40.7
Coef. of Var. (%)		7.9	13.3	8.5	8.9	9.7	8.7	6.7
Bu. Nec. for Sig. (5%)		4.2	N.S.	4.2	5.2	6.2	5.9	3.9
Row Spacing (In.)		40	36	36	40	38	38	40
		Yield Rank						
C1068		7	5	5	3	1	13	2
C1071		4	1	3	6	3	5	1
C1079		14	4	2	8	4	3	12
C1074		6	2	1	1	4	14	6
C1078		9	7	6	2	11	4	5
Clark		1	15	7	15	12	6	4
C985		8	16	8	5	6	8	7
C1069		11	9	8	11	7	1	9
C1076		5	14	10	4	2	7	3
L6-2132-A14		2	11	14	14	13	10	11
C1065		3	10	11	6	8	11	8
S2-7160		16	12	12	13	9	2	16
C1048		10	3	4	9	10	9	13
Perry		15	6	13	12	15	12	10
Wabash		13	7	16	10	14	16	15
Chief		11	13	15	16	16	15	13

[1]Manhattan and Columbus, Kansas not included in the mean.

Table 52. (Continued)

Strain	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Laddonia Mo.	Columbia Mo.	Jefferson City Mo.	Manhattan Kans.	Columbus Kans.
C1068	42.6	43.3	39.7	18.3	19.0	31.3	13.7	10.1
C1071	41.7	42.7	38.0	17.2	18.0	28.2	11.2	12.4
C1079	38.4	46.1	40.0	17.3	18.3	33.3	12.2	11.9
C1074	40.9	41.7	34.6	16.3	17.8	30.1	12.3	9.7
C1078	38.8	42.2	37.3	19.9	18.0	29.6	18.0	9.5
Clark	40.4	41.0	36.6	23.6	22.5	32.7	16.3	16.6
C985	40.1	43.6	39.1	18.0	18.3	31.2	13.0	9.2
C1069	38.1	44.1	38.9	17.6	18.3	31.5	13.1	9.7
C1076	39.5	43.8	38.5	16.7	17.7	25.7	12.1	10.3
L6-2132-A14	42.4	42.0	35.9	24.1	23.6	34.0	20.7	12.9
C1065	39.7	43.5	38.0	16.4	18.1	31.7	12.9	9.3
S2-7160	37.0	38.6	34.4	24.0	20.7	33.1	18.1	11.4
C1048	36.9	37.5	34.4	19.0	16.4	27.2	11.5	8.2
Perry	40.2	36.4	35.1	24.2	21.1	27.3	13.0	11.2
Wabash	35.3	35.8	32.6	20.0	19.5	25.8	13.8	11.4
Chief	35.0	34.3	36.8	17.1	17.7	26.2	14.0	9.5
Mean	39.2	41.0	36.9	19.4	19.1	29.9	14.1	10.8
Coef. of Var. (%)	11.2	6.8	--	15.3	10.0	10.1	9.9	--
Bu. Nec. for Sig. (5%)	N.S.	3.9	--	4.2	2.8	4.3	4.0	--
Row Spacing (In.)	37	40	40	35	36	40	40	40
	Yield Rank							
C1068	1	6	2	8	6	7	7	9
C1071	3	7	6	12	11	11	16	3
C1079	11	1	1	11	7	2	13	4
C1074	4	10	13	16	13	9	12	10
C1078	10	8	8	6	11	10	3	12
Clark	5	11	10	4	2	4	4	1
C985	7	4	3	9	7	8	9	15
C1069	12	2	4	10	7	6	8	10
C1076	9	3	5	14	14	16	14	8
L6-2132-A14	2	9	11	2	1	1	1	2
C1065	8	5	6	15	10	5	11	14
S2-7160	13	12	14	3	4	3	2	5
C1048	14	13	14	7	16	13	15	16
Perry	6	14	12	1	3	12	9	7
Wabash	15	15	16	5	5	15	6	5
Chief	16	16	9	13	14	14	5	12

Table 53. (Continued)

Strain	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Laddonia Mo.	Columbia Mo.	Jefferson City Mo.	Manhattan Kans.
C1068	+ 6	+ 7	+ 7	+4	+6	+ 7	+5
C1071	+ 8	+ 7	+ 7	+5	+6	+ 8	+5
C1079	+ 9	+ 8	+ 8	+5	+7	+11	+3
C1074	+ 8	+ 7	+ 8	+5	+6	+11	+4
C1078	+ 6	+ 5	+ 6	+3	+5	+ 8	+5
Clark	- 1	- 1	0	-3	-1	+ 2	+3
C985	+ 9	+ 9	+ 9	+6	+6	+11	+7
C1069	+10	+11	+14	+7	+8	+13	+9
C1076	+ 9	+ 9	+ 9	+5	+6	+ 8	+6
L6-2132-A14	- 2	- 3	+ 1	-4	-1	0	0
C1065	+ 7	+ 6	+ 6	+4	+6	+10	+6
S2-7160	+ 4	+ 4	+ 5	+1	+3	+ 3	+9
C1048	+ 6	+ 7	+ 6	+3	+1	+ 2	+7
Perry	+ 6	+ 2	+ 1	+2	+3	+ 3	+5
Wabash	0	0	0	0	0	0	0
Chief	0	+ 1	0	-3	-2	0	-1
Date planted	5/29	5/21	5/17	5/27	5/20	6/3	6/5
Wabash matured	9/25	9/15	9/14	9/22	9/16	9/22	9/27
Days to mature	119	117	120	118	119	111	114
	Lodging						
C1068	2.0	1.0	2.0	1.4	1.2	1.4	1.0
C1071	2.3	1.5	3.0	1.5	1.4	1.9	1.2
C1079	2.6	1.5	2.0	1.4	1.2	1.5	1.0
C1074	2.5	1.1	2.0	1.5	1.3	1.7	1.1
C1078	2.5	1.4	2.0	1.5	1.2	1.4	1.4
Clark	2.4	1.9	2.0	1.5	1.4	1.8	1.0
C985	2.6	1.5	2.0	1.5	1.4	1.9	1.0
C1069	2.6	2.3	3.0	1.4	1.2	2.1	1.1
C1076	2.9	2.1	3.0	1.5	1.3	2.4	1.1
L6-2132-A14	2.5	2.0	2.0	1.5	1.3	1.7	1.0
C1065	2.0	1.1	2.0	1.4	1.3	1.4	1.0
S2-7160	2.6	1.5	2.0	1.5	1.5	1.6	1.1
C1048	2.8	1.5	2.0	1.5	1.5	1.5	1.0
Perry	2.8	1.5	2.0	1.5	1.4	1.7	1.1
Wabash	2.4	1.8	2.0	1.5	1.3	1.8	1.1
Chief	3.5	2.9	2.0	2.4	1.6	2.4	1.7
Mean	2.6	1.7	2.2	1.5	1.3	1.8	1.1

Table 53. Summary of maturity data, days earlier (-) or later (+) than Wabash, and lodging data for the strains in the Uniform Test, Group IV, 1956.

Strain	Mean of 13 Tests[1]	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.
C1068	+4.8	+ 1	+3	+5	+ 8	+5	+3	+1
C1071	+5.2	0	+4	+4	+ 7	+5	+4	+3
C1079	+5.9	+ 2	+3	+5	+ 7	+6	+3	+3
C1074	+5.7	+ 1	+4	+5	+ 7	+5	+4	+3
C1078	+4.0	+ 1	+3	+4	+ 3	+4	+2	+2
Clark	-3.0	- 9	-5	-3	- 8	-2	-3	-5
C985	+5.9	+ 1	+4	+6	+ 6	+4	+2	+4
C1069	+7.8	+ 2	+4	+7	+ 7	+7	+5	+6
C1076	+5.8	+ 2	+2	+6	+ 6	+5	+4	+4
L6-2132-A14	-3.9	-10	-6	-3	-10	-3	-5	-5
C1065	+4.8	+ 1	+4	+5	+ 6	+3	+3	+2
S2-7160	+2.4	- 2	0	+3	+ 1	+3	+3	+3
C1048	+3.3	+ 1	+3	+3	+ 2	+3	+2	+4
Perry	+2.8	- 2	+3	+4	+ 5	+3	+4	+2
Wabash	0	0	0	0	0	0	0	0
Chief	-1.1	- 5	-3	+1	- 4	+1	+3	-3
Date planted	5/25	6/1	5/25	5/24	5/21	6/9	5/22	5/11
Wabash matured	9/27	10/17	10/7	9/23	10/6	10/6	9/30	9/28
Days to mature	125	138	135	122	138	119	131	140
	Mean of 13 Tests[1]	Lodging						
C1068	1.7	2.7	2.0	2.0	2.0	1.0	2.0	1.4
C1071	2.2	3.0	3.0	2.3	2.0	2.3	1.8	2.4
C1079	2.0	3.5	2.5	2.8	2.0	1.0	2.0	2.3
C1074	1.8	2.7	2.0	1.8	2.0	1.5	1.8	2.1
C1078	2.0	2.2	3.3	2.8	2.0	1.8	1.8	2.0
Clark	2.2	3.2	3.8	2.3	2.5	2.0	1.8	2.3
C985	2.1	2.7	3.0	3.0	2.0	2.0	2.0	1.9
C1069	2.5	3.7	3.5	3.0	2.5	4.0	1.8	1.8
C1076	2.6	3.7	3.5	3.8	2.5	2.5	2.3	2.6
L6-2132-A14	2.5	3.0	4.3	2.8	3.0	2.0	3.0	3.1
C1065	1.7	2.7	1.8	2.0	2.0	1.0	1.5	1.5
S2-7160	2.1	2.5	2.8	3.0	2.0	1.5	1.3	4.1
C1048	2.1	2.7	2.5	2.5	2.0	1.8	1.5	3.3
Perry	2.1	2.2	3.0	2.5	2.0	2.0	1.3	3.3
Wabash	2.2	3.2	2.8	2.5	2.2	2.5	2.0	2.5
Chief	2.9	3.0	3.8	3.5	2.8	3.0	2.3	4.0
Mean	2.2	2.9	3.0	2.7	2.2	2.0	1.9	2.5

[1]Manhattan, Kansas not included in the mean.

Table 54. Summary of height data and percentage of oil for the strains in the Uniform Test, Group IV, 1956.

Strain	Mean of 13 Tests[1]	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.
C1068	45	40	46	45	50	43	44	48
C1071	44	41	47	45	49	42	44	49
C1079	46	40	48	45	50	41	47	49
C1074	48	44	51	45	54	45	47	52
C1078	45	42	48	46	51	43	45	49
Clark	43	38	43	40	45	41	42	47
C985	45	40	47	45	49	42	44	51
C1069	47	44	48	44	48	44	50	54
C1076	46	43	47	45	50	43	49	52
L6-2132-A14	42	37	42	40	43	38	42	46
C1065	44	41	48	42	49	39	42	50
S2-7160	48	43	52	46	50	46	48	58
C1048	48	46	50	46	52	48	51	53
Perry	44	42	49	44	50	40	42	49
Wabash	48	45	49	46	50	47	50	52
Chief	53	49	58	53	56	49	51	63
Mean	46	42	48	45	50	43	46	51
	Mean of 13 Tests	Percentage of Oil						
C1068	21.3	21.7	21.1	22.3	21.5	20.4	22.0	21.0
C1071	21.9	22.7	20.7	23.1	22.2	21.2	22.7	21.7
C1079	21.4	21.5	20.2	23.2	22.0	20.4	22.4	21.1
C1074	21.6	21.9	20.8	23.0	21.9	20.3	21.9	21.6
C1078	21.3	22.1	20.5	22.4	21.7	20.1	22.1	20.9
Clark	21.2	23.0	20.9	22.0	21.5	19.4	21.5	20.7
C985	21.4	22.0	19.5	22.7	21.9	20.5	22.2	21.0
C1069	21.7	21.8	20.9	23.2	22.0	20.5	22.3	21.3
C1076	21.1	21.6	20.2	22.1	21.8	19.9	22.0	20.7
L6-2132-A14	21.3	23.1	20.9	21.8	21.8	19.0	21.4	20.7
C1065	21.2	20.9	20.4	22.3	21.7	20.5	21.8	20.5
S2-7160	19.7	20.3	18.8	20.7	20.3	19.2	19.4	18.9
C1048	20.9	21.0	20.5	22.4	21.4	19.5	21.2	20.0
Perry	21.0	21.5	20.8	22.0	21.2	19.5	21.2	20.5
Wabash	21.1	20.5	20.6	22.5	21.6	19.5	21.2	20.3
Chief	20.2	20.8	20.1	20.4	20.8	18.5	20.8	19.5
Mean	21.1	21.7	20.4	22.3	21.6	19.9	21.6	20.7

[1]Manhattan, Kansas not included in the mean.

Table 54. (Continued)

Strain	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Laddonia Mo.	Columbia Mo.	Jefferson City Mo.	Manhattan Kans.
C1068	45	45	43	44	46	41	34
C1071	46	46	45	44	37	43	35
C1079	47	47	46	46	44	43	35
C1074	50	49	49	50	39	45	36
C1078	46	48	44	46	38	44	37
Clark	45	45	42	43	41	42	34
C985	46	49	46	46	42	43	37
C1069	48	51	48	48	39	44	39
C1076	49	50	47	45	38	42	34
L6-2132-A14	43	44	40	41	44	41	35
C1065	47	44	43	43	43	43	34
S2-7160	49	50	46	47	43	46	39
C1048	50	52	48	48	39	46	38
Perry	45	45	43	44	45	40	33
Wabash	49	49	46	47	44	44	35
Chief	55	56	55	52	41	47	42
Mean	48	48	46	46	41	43	36

	Percentage of Oil					
C1068	21.4	22.0	22.0	20.0	20.2	21.8
C1071	21.2	22.5	22.3	20.3	21.5	22.6
C1079	21.6	22.0	22.7	19.9	19.8	21.9
C1074	21.6	22.1	21.8	20.1	20.2	23.0
C1078	21.5	22.0	22.5	19.7	20.2	21.3
Clark	20.3	21.5	21.9	21.0	20.2	22.3
C985	20.9	22.0	23.0	19.3	20.1	23.1
C1069	21.4	22.5	22.5	20.1	20.5	22.8
C1076	21.6	21.7	21.4	18.9	20.2	22.8
L6-2132-A14	20.7	21.9	21.8	21.0	19.9	22.7
C1065	20.5	22.3	22.6	19.3	20.3	22.8
S2-7160	18.8	19.7	20.0	19.2	19.1	22.2
C1048	20.3	21.3	22.3	20.1	19.3	22.4
Perry	20.7	22.1	22.3	19.9	20.0	21.2
Wabash	19.9	22.1	22.0	21.0	20.6	22.2
Chief	19.5	20.2	21.0	20.5	19.0	21.3
Mean	20.7	21.7	22.0	20.0	20.1	22.3

Table 55. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1954-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	38	34	32	37	37	38	38	38
C1068	34.4	+7.0	1.7	41	2.2	16.0	41.2	21.5
C985	33.7	+7.6	2.1	42	2.4	15.3	40.9	21.6
Clark	33.7	-0.2	2.0	40	2.2	15.2	41.0	21.3
C1076	33.6	+7.9	2.4	44	2.3	15.7	41.6	21.1
C1069	33.6	+9.6	2.4	44	2.4	15.6	40.6	21.8
C1071	33.4	+7.1	2.1	41	2.2	14.8	39.7	22.2
C1065	33.3	+6.7	1.7	41	2.2	14.6	41.0	21.4
C1074	33.2	+7.9	1.9	45	2.3	16.2	40.9	21.7
C1078	33.1	+6.1	1.9	42	2.2	16.0	41.6	21.3
C1079	33.1	+7.3	1.9	42	2.2	14.9	41.0	21.4
Perry	31.2	+4.3	2.0	40	2.8	15.6	41.9	21.1
C1048	31.2	+4.6	2.0	45	2.0	12.8	41.1	21.0
Wabash	29.1	0	2.3	43	2.1	14.0	40.6	21.4
Chief	28.6	-0.2	3.2	49	2.4	12.4	41.1	20.3
Mean	32.5		2.1	43	2.3	14.9	41.0	21.4

[1]Days earlier (-) or later (+) than Wabash. Wabash required 123 days to mature.

Table 56. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1954-56.

Strain	Mean of 38 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.
Years Tested		1954-1956	1955-1956	1954, 1956	1954-1956	1954-1956	1954-1956	1954-1956
C1068	34.4	46.7	48.7	28.1	48.8	39.6	45.8	35.7
C985	33.7	49.7	44.1	28.7	45.9	41.5	44.2	33.2
Clark	33.7	50.8	38.7	26.7	39.7	39.4	48.3	34.2
C1076	33.6	50.6	44.4	28.6	46.3	42.1	45.4	33.6
C1069	33.6	46.7	46.6	28.4	40.5	41.4	47.0	32.2
C1071	33.4	48.5	46.2	27.7	44.5	38.2	45.9	33.9
C1065	33.3	47.3	45.9	27.1	46.0	37.7	45.7	33.4
C1074	33.2	48.5	48.3	29.1	49.7	37.4	43.2	32.8
C1078	33.1	48.0	43.5	26.2	48.2	37.6	46.7	33.6
C1079	33.1	43.9	47.8	29.1	46.0	35.8	47.9	30.6
Perry	31.2	43.6	42.7	23.3	41.0	34.8	43.4	32.4
C1048	31.2	44.5	44.0	29.6	42.0	37.0	41.6	28.4
Wabash	29.1	43.0	36.4	19.5	37.2	35.5	36.9	29.7
Chief	28.6	42.7	37.2	21.3	37.1	31.7	35.8	28.6
Mean	32.5	46.8	43.9	26.7	43.8	37.8	44.1	32.3

	Yield Rank						
C1068	8	1	7	2	4	6	1
C985	3	8	4	7	2	9	7
Clark	1	12	10	12	5	1	2
C1076	2	7	5	14	1	8	4
C1069	8	4	6	11	3	3	10
C1071	4	5	8	8	6	5	3
C1065	7	6	9	5	7	7	6
C1074	4	2	2	1	9	11	8
C1078	6	10	11	3	8	4	4
C1079	11	3	2	5	11	2	11
Perry	12	11	12	10	13	10	9
C1048	10	9	1	9	10	12	14
Wabash	13	14	14	13	12	13	12
Chief	14	13	13	14	14	14	13

Table 56. (Continued)

Strain	Edge-wood Ill.	Eldor-ado Ill.	Carbon-dale Ill.	Lad-donia Mo.	Colum-bia Mo.	Jefferson City Mo.	Man-hattan Kans.	Colum-bus Kans.
Years Tested	1955-1956	1954-1956	1954-1956	1954-1956	1954-1956	1955-1956	1954-1956	1954-1956
C1068	35.2	38.2	29.6	21.1	20.3	30.0	14.2	12.0
C985	34.1	38.9	29.0	20.4	19.8	30.7	15.4	12.1
Clark	38.0	38.7	29.6	22.9	20.5	32.0	15.6	14.7
C1076	33.3	40.1	28.4	21.0	20.0	29.0	14.7	12.5
C1069	35.8	39.1	29.5	20.6	20.6	33.0	15.3	12.3
C1071	34.2	39.2	29.3	20.4	19.8	29.3	15.3	12.9
C1065	32.6	37.7	29.0	19.4	20.0	29.7	15.0	11.9
C1074	34.7	36.6	27.7	20.2	18.4	30.2	13.4	11.9
C1078	33.8	39.1	29.0	20.8	18.7	29.5	13.9	11.3
C1079	33.3	36.8	29.6	20.7	20.3	32.8	12.7	13.7
Perry	35.4	33.2	28.2	20.9	19.5	26.7	14.1	11.6
C1048	32.7	34.0	27.0	20.5	17.9	28.4	11.5	11.2
Wabash	31.8	32.7	24.7	20.6	17.8	25.3	12.1	11.4
Chief	31.4	30.6	25.9	19.7	16.6	29.9	13.1	10.0
Mean	34.0	36.8	28.3	20.7	19.3	29.8	14.0	12.1
	Yield Rank							
C1068	4	7	1	2	3	6	7	7
C985	7	5	6	10	7	4	2	6
Clark	1	6	1	1	2	3	1	1
C1076	9	1	9	3	5	11	6	4
C1069	2	3	4	7	1	1	3	5
C1071	6	2	5	10	7	10	3	3
C1065	12	8	6	14	5	8	5	8
C1074	5	10	11	12	11	5	10	8
C1078	8	3	6	5	10	9	9	12
C1079	9	9	1	6	3	2	12	2
Perry	3	12	10	4	9	13	8	10
C1048	11	11	12	9	12	12	14	13
Wabash	13	13	14	7	13	14	13	11
Chief	14	14	13	13	14	7	11	14

Table 57. Six-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1951-56.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	86	73	73	84	79	86	86	86
C985	33.7	+7.5	2.0	42	2.2	15.6	40.5	21.7
Clark	33.3	-1.1	2.0	39	2.1	15.5	40.6	21.5
Perry	31.0	+4.6	2.0	40	2.5	15.9	41.3	21.3
Wabash	28.7	0	2.4	42	2.0	14.1	40.3	21.3
Chief	28.6	-1.1	3.0	48	2.4	12.4	41.1	20.4
Mean	31.1		2.3	42	2.2	14.7	40.8	21.2

[1]Days earlier (-) or later (+) than Wabash. Wabash required 126 days to mature.

Table 58. Six-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1951-56.

Strain	Mean of 86 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.
Years Tested		1951-1956	1952, 1955-56	1951-54 1956	1951-52 1954-56	1951-1956	1951-52 1954-56
C985	33.7	47.5	46.2	26.4	44.3	44.0	50.7
Clark	33.3	47.3	38.9	22.1	37.2	42.0	49.7
Perry	31.0	40.8	41.3	20.1	41.2	37.0	44.4
Wabash	28.7	39.7	37.7	18.2	33.9	37.2	40.8
Chief	28.6	39.6	39.9	19.6	35.1	34.0	40.7
Mean	31.1	43.0	40.8	21.3	38.3	38.8	45.3
		Yield Rank					
C985		1	1	1	1	1	1
Clark		2	4	2	3	2	2
Perry		3	2	3	2	4	3
Wabash		4	5	5	5	3	4
Chief		5	3	4	4	5	5

[1]Thayer, Kansas, 1952-53.

Table 58. (Continued)

Strain	Urbana Ill.	Edge-wood Ill.	Eldor-ado Ill.	Lad-donia Mo.	Colum-bia Mo.	Man-hattan Kans.	Colum-bus Kans.[1]
Years Tested	1951-1956	1951-53 1955-56	1951-1956	1951-1956	1951-1956	1951-1956	1952-1956
C985	34.1	27.5	41.9	24.1	25.8	19.0	11.5
Clark	37.5	30.9	41.0	26.6	25.1	19.0	13.6
Perry	34.8	28.3	35.5	25.7	25.0	18.3	11.4
Wabash	31.8	25.1	34.1	23.4	21.2	15.7	10.8
Chief	31.3	25.0	32.6	24.4	20.2	17.1	9.9
Mean	33.9	27.4	37.0	24.8	23.5	17.8	11.4
	Yield Rank						
C985	3	3	1	4	1	1	2
Clark	1	1	2	1	2	1	1
Perry	2	2	3	2	3	3	3
Wabash	4	4	4	5	4	5	4
Chief	5	5	5	3	5	4	5

UNIFORM AND PRELIMINARY TESTS, GROUP IV, 1956

Strain	Source or Originating Agency	Origin
Chief	Ill. Agr. Exp. Sta.	Sel. from Illini x Manchu
Clark	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Perry	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x L7-1355
Wabash	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Mansoy
C985	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ogden
C1048	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Dunfield x A45-251)
C1065	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1068	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1069	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1071	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1074	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1076	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1078	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
C1079	Purdue A.E.S. & U.S.R.S.L.	Sel. from C985
D52-212*	Delta Br. A.E.S. & U.S.R.S.L.	Sel. from N48-1248 x Perry
D53-184*	Delta Br. A.E.S. & U.S.R.S.L.	Sel. from D49-2525 x L6-5679
L6-2132-A14	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-5152*	Missouri A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-5164*	Missouri A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-7160	Missouri A.E.S. & U.S.R.S.L.	Sel. from D49-2525 x L6-5679
S2-7613*	Missouri A.E.S. & U.S.R.S.L.	Sel. from C985
S3-5180*	Missouri A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Hawkeye
S3-5191*	Missouri A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Hawkeye
S4-1714*	Missouri A.E.S. & U.S.R.S.L.	Sel. from L9-4091 x Clark

*Grown in the Preliminary Test, Group IV, only.

Uniform and Preliminary Tests, Group IV, were grown together as one test at five locations in 1956 and the data are presented in Tables 59 to 62. Preliminary Test, Group IV, consisted of eight strains. S2-7613 is a selection from C985, which was comparable in performance with the other late selections from C985. S2-5152 and S2-5164 are selections from Lincoln x (Lincoln x Richland) and performed much the same as Clark and L6-2132-A14, which are also from this cross.

Strains D53-184, S4-1714, and D52-212 are all reported as pustule resistant. However, at Eldorado with rather good natural infection, they were rated 3, 3, and 1, respectively. D53-184 was 10.2 days later than Clark but yielded 0.5 bushel less. It was rather good otherwise, although a little low in oil content. S4-1714 was similar in performance to Clark, while D52-212 was of low yield and low oil content in comparison with other strains in the test.

The two strains, S3-5180 and S3-5191, selections from Lincoln x Hawkeye, averaged two to three bushels less than Clark, were 3.6 to 5.2 days later, and were lower in oil content.

Table 59. Summary of agronomic and chemical data for the strains in the Uniform and Preliminary Tests, Group IV, 1956.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	5	5	5	5	4	5	3	3
C1079	40.8	+6.6	1.7	47	2.2	15.4	40.6	21.4
C1069	40.1	+9.0	2.2	47	2.2	16.1	40.6	21.8
C1078	40.0	+4.2	1.7	45	2.4	16.6	41.1	21.4
C985	39.5	+6.4	1.8	46	2.6	15.5	40.6	21.4
C1068	39.5	+6.2	1.6	46	2.4	16.9	41.3	21.4
C1076	39.5	+6.8	2.2	47	2.2	16.3	41.9	21.3
S2-7613*	39.3	+9.6	2.0	48	2.4	16.9	39.4	22.0
C1071	39.1	+6.2	1.9	44	2.2	15.3	39.6	22.2
C1065	38.5	+5.4	1.6	44	2.3	15.4	40.7	21.5
C1074	38.1	+6.4	1.6	48	2.5	16.4	40.7	21.4
S2-5164*	38.1	-3.0	1.9	42	2.3	15.4	39.9	21.5
L6-2132-A14	38.1	-3.6	2.3	43	2.2	15.6	40.4	21.1
Clark	38.0	-2.6	1.9	43	2.2	15.7	40.7	21.1
S2-7160	37.8	+3.2	1.7	47	2.3	12.5	40.4	19.4
D53-184*	37.5	+7.6	1.9	47	2.0	13.2	41.3	20.7
S4-1714*	37.4	-3.4	2.0	44	2.3	13.5	41.1	20.7
S2-5152*	37.4	-3.2	2.0	43	2.2	15.3	40.1	21.8
C1048	36.1	+3.6	1.7	48	2.1	13.1	41.4	20.6
Perry	36.1	+3.0	1.6	45	3.1	16.1	41.3	21.1
S3-5180*	35.9	+2.6	1.9	46	2.8	14.8	41.7	20.5
D52-212*	35.2	+7.2	2.1	45	2.7	13.8	41.6	20.0
S3-5191*	35.0	+1.0	2.0	46	2.4	13.4	39.7	20.5
Chief	34.0	-0.4	2.3	52	2.4	12.8	40.9	20.0
Wabash	33.6	0	1.9	48	2.2	14.6	40.4	21.3
Mean	37.7	+3.3	1.9	46	2.4	15.0	40.7	21.1

*Grown in the Preliminary Test, Group IV, only.
[1]Days earlier (-) or later (+) than Wabash. Wabash required 125 days to mature.

Table 60. Summary of yield in bushels per acre for the strains in the Uniform and Preliminary Tests, Group IV, 1956.

Strain	Mean of 5 Tests[1]	Belts-ville Md.	Evans-ville Ind.	Eldor-ado Ill.	Carbon-dale Ill.	Colum-bia Mo.	Man-hattan Kans.
C1079	40.8	43.9	55.9	46.1	40.0	18.3	12.2
C1069	40.1	41.1	57.9	44.1	38.9	18.3	13.1
C1078	40.0	48.9	53.6	42.2	37.3	18.0	18.0
C985	39.5	45.5	51.0	43.6	39.1	18.3	13.0
C1068	39.5	48.3	47.0	43.3	39.7	19.0	13.7
C1076	39.5	46.0	51.3	43.8	38.5	17.7	12.1
S2-7613*	39.3	42.6	53.7	43.5	37.9	18.9	10.8
C1071	39.1	44.5	52.3	42.7	38.0	18.0	11.2
C1065	38.5	44.5	48.5	43.5	38.0	18.1	12.9
C1074	38.1	50.4	46.2	41.7	34.6	17.8	12.3
S2-5164*	38.1	36.3	49.5	42.7	38.0	23.8	21.0
L6-2132-A14	38.1	39.0	49.8	42.0	35.9	23.6	20.7
Clark	38.0	38.6	51.4	41.0	36.6	22.5	16.3
S2-7160	37.8	39.2	56.2	38.6	34.4	20.7	18.1
D53-184*	37.5	36.4	54.1	41.1	37.3	18.7	13.8
S4-1714*	37.4	40.6	46.3	41.4	37.0	21.6	18.3
S2-5152*	37.4	34.1	50.9	41.1	37.4	23.3	17.1
C1048	36.1	42.3	50.1	37.5	34.4	16.4	11.5
Perry	36.1	40.8	47.3	36.4	35.1	21.1	13.0
S3-5180*	35.9	35.7	49.6	39.9	34.5	19.7	13.3
D52-212*	35.2	42.5	43.5	36.8	32.9	20.3	14.4
S3-5191*	35.0	35.0	47.6	37.8	35.6	18.8	15.1
Chief	34.0	38.0	43.3	34.3	36.8	17.7	14.0
Wabash	33.6	41.5	38.6	35.8	32.6	19.5	13.8
Mean	37.7	41.5	49.8	40.9	36.7	19.6	14.6
Coef. of Var. (%)		8.9	8.7	6.8	--	10.0	9.1
Bu. Nec. for Sig. (5%)		5.2	5.9	3.9	--	2.8	4.2
Row Spacing (In.)		40	38	40	40	36	40

*Grown in the Preliminary Test, Group IV, only.
[1]Manhattan, Kansas not included in the mean.

Table 61. Summary of yield rank for the strains in the Uniform and Preliminary Tests, Group IV, 1956.

Strain	Beltsville Md.	Evansville Ind.	Eldorado Ill.	Carbondale Ill.	Columbia Mo.	Manhattan Kans.
C1079	8	3	1	1	15	20
C1069	13	1	2	4	15	15
C1078	2	6	10	11	19	5
C985	5	10	4	3	15	16
C1068	3	19	7	2	11	13
C1076	4	9	3	5	22	21
S2-7613*	9	5	5	9	12	24
C1071	6	7	8	6	19	23
C1065	6	16	5	6	18	18
C1074	1	21	12	19	21	19
S2-5164*	21	15	8	6	1	2
L6-2132-A14	17	13	11	16	2	1
Clark	18	8	16	15	4	7
S2-7160	16	2	18	21	7	4
D53-184*	20	4	14	11	14	11
S4-1714*	15	20	13	13	5	3
S2-5152*	24	11	14	10	3	6
C1048	11	12	20	21	24	22
Perry	14	18	22	18	6	16
S3-5180*	22	14	17	20	9	14
D52-212*	10	22	21	23	8	9
S3-5191*	23	17	19	17	13	8
Chief	19	23	24	14	22	10
Wabash	12	24	23	24	10	11

*Grown in the Preliminary Test, Group IV, only.

Table 62. Summary of maturity data, days earlier (-) or later (+) than Wabash for the strains in the Uniform and Preliminary Tests, Group IV, 1956.

Strain	Mean of 5 Tests[1]	Belts-ville Md.	Evans-ville Ind.	Eldor-ado Ill.	Carbon-dale Ill.	Colum-bia Mo.	Man-hattan Kans.
C1079	+6.6	+ 7	+3	+ 8	+ 8	+7	+ 3
C1069	+9.0	+ 7	+5	+11	+14	+8	+ 9
C1078	+4.2	+ 3	+2	+ 5	+ 6	+5	+ 5
C985	+6.4	+ 6	+2	+ 9	+ 9	+6	+ 7
C1068	+6.2	+ 8	+3	+ 7	+ 7	+6	+ 5
C1076	+6.8	+ 6	+4	+ 9	+ 9	+6	+ 6
S2-7613*	+9.6	+ 8	+7	+11	+14	+8	+ 8
C1071	+6.2	+ 7	+4	+ 7	+ 7	+6	+ 5
C1065	+5.4	+ 6	+3	+ 6	+ 6	+6	+ 6
C1074	+6.4	+ 7	+4	+ 7	+ 8	+6	+ 4
S2-5164*	-3.0	- 8	-4	- 1	0	-2	- 1
L6-2132-A14	-3.6	-10	-5	- 3	+ 1	-1	0
Clark	-2.6	- 8	-3	- 1	0	-1	+ 3
S2-7160	+3.2	+ 1	+3	+ 4	+ 5	+3	+ 9
D53-184*	+7.6	+ 4	+7	+ 8	+12	+7	+11
S4-1714*	-3.4	- 9	-4	- 1	- 1	-2	+ 4
S2-5152*	-3.2	-10	-4	- 1	0	-1	- 2
C1048	+3.6	+ 2	+2	+ 7	+ 6	+1	+ 7
Perry	+3.0	+ 5	+4	+ 2	+ 1	+3	+ 5
S3-5180*	+2.6	- 1	+1	+ 5	+ 3	+5	+ 1
D52-212*	+7.2	+ 7	+5	+ 6	+13	+5	+ 9
S3-5191*	+1.0	- 2	+1	+ 3	0	+3	+ 2
Chief	-0.4	- 4	+3	+ 1	0	-2	- 1
Wabash	0	0	0	0	0	0	0
Date planted	5/20	5/21	5/22	5/21	5/17	5/20	6/5
Wabash matured	9/22	10/6	9/30	9/15	9/14	9/16	9/27
Days to mature	125	138	131	117	120	119	114

*Grown in the Preliminary Test, Group IV, only.
[1]Manhattan, Kansas not included in the mean.

Table 63. Chemical composition of soybean seed grown at each of the Uniform Test locations in 1956 and the three-year mean for 1954-56.

Location	1956		Three-Year Mean	
	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
Group 0 (Mean of 17 strains in 1956, 17 in 1955, and 15 in 1954)				
Ottawa, Ontario	42.3	18.4	42.0	19.1
Guelph, Ontario	38.8	18.4	40.1	19.2
Hoytville, Ohio	41.9	20.4	--	--
Wooster, Ohio	43.1	19.4	--	--
Columbus, Ohio	43.7	20.4	--	--
Ottawa Lake, Mich.	44.0	19.2	--	--
Spooner, Wis.	41.0	18.4	40.9	18.7
Durand, Wis.	44.9	18.8	43.0	19.2
Morris, Minn.	42.1	20.8	40.4	20.9
St. Paul, Minn.	41.2	20.1	40.9	20.8
Fargo, N. D.	37.9	19.5	39.0	20.2
Rosholt, S. D.	39.3	21.3	--	--
Group I (Mean of 9 strains in 1956, 9 in 1955, and 8 in 1954)				
Ridgetown, Ontario	43.6	18.6	--	--
University Park, Pa.	44.9	18.3	42.9	19.4
Hoytville, Ohio	41.6	20.6	40.7	20.9
Wooster, Ohio	42.4	19.6	41.6	20.5
Columbus, Ohio	42.7	20.5	41.3	20.8
Ottawa Lake, Mich.	43.7	18.8	--	--
Walkerton, Ind.	40.6	21.1	41.5	20.9
Durand, Wis.	44.1	19.1	42.2	19.3
Madison, Wis.	43.0	19.5	42.6	20.0
Shabbona, Ill.	42.8	20.0	41.8	20.7
St. Paul, Minn.	40.9	19.5	40.2	19.8
Waseca, Minn.	42.7	19.5	40.9	20.5
Cresco, Iowa	42.2	20.0	41.7	19.9
Kanawha, Iowa	42.0	20.5	41.7	20.5
Brookings, S. D.	38.2	22.1	39.8	21.2

Table 63. (Continued)

Location	1956		Three-Year Mean	
	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
Group II (Mean of 23 strains in 1956, 16 in 1955, and 16 in 1954)				
Ridgetown, Ontario	42.9	17.0	--	--
University Park, Pa.	43.9	17.8	41.4	19.4
Freehold, N. J.[1]	41.3	21.4	38.8	22.1
Mt. Holly, N. J.	42.2	20.7	--	--
Newark, Del.	40.8	21.8	40.2	21.7
Hoytville, Ohio	41.1	20.3	40.4	20.6
Wooster, Ohio	41.5	19.6	40.7	20.4
Columbus, Ohio	41.3	21.3	40.8	21.1
Ottawa Lake, Mich.	41.7	19.3	--	--
Walkerton, Ind.	40.0	21.5	40.8	21.1
Bluffton, Ind.	41.3	21.1	41.3	20.9
Lafayette, Ind.	42.6	21.4	40.9	21.9
Greenfield, Ind.	43.3	20.6	42.0	21.4
Madison, Wis.	40.3	19.4	40.7	20.0
Shabbona, Ill.	42.2	20.6	41.5	20.6
Dwight, Ill.	41.4	21.7	41.4	21.1
Urbana, Ill.	39.8	21.1	40.2	21.3
Waseca, Minn.	41.0	19.2	40.1	20.1
Kanawha, Iowa	40.5	20.6	40.7	20.8
Independence, Iowa	41.5	20.3	42.1	20.0
Ames, Iowa	44.0	20.8	41.5	21.7
Menno, S. D.	43.4	20.8	--	--
Lincoln, Nebr.	37.8	22.1	39.3	21.9
Group III (Mean of 16 strains in 1956, 10 in 1955, and 10 in 1954)				
Salem, N. J.	42.7	20.6	--	--
Newark, Del.	40.3	21.5	39.0	21.8
Georgetown, Del.	43.9	20.1	--	--
Beltsville, Md.	41.3	21.4	41.7	21.5
Columbus, Ohio	40.7	20.6	40.5	20.7
Lafayette, Ind.	40.1	21.3	40.1	21.7
Greenfield, Ind.	41.5	20.6	41.1	21.3
Worthington, Ind.	42.8	19.4	42.5	20.8

Table 63. (Continued)

Location	1956		Three-Year Mean	
	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
	(Group III Continued)			
Dwight, Ill.	39.8	21.3	40.3	21.2
Urbana, Ill.	39.9	21.2	39.7	21.6
Girard, Ill.	41.6	21.3	--	--
Edgewood, Ill.	41.4	20.3	--	--
Eldorado, Ill.	40.2	21.8	40.9	21.8
Ames, Iowa	42.2	21.1	41.0	21.6
Ottumwa, Iowa	40.2	21.4	38.9	22.1
Kirksville, Mo.	40.0	20.9	--	--
Laddonia, Mo.	40.0	21.2	40.7	21.4
Columbia, Mo.	42.1	20.4	--	--
Lincoln, Nebr.	38.0	21.8	39.0	21.8
Powhattan, Kans.	43.6	19.3	--	--
Group IV (Mean of 16 strains in 1956, 14 in 1955, and 14 in 1954)				
Landisville, Pa.	36.3	21.7	--	--
Newark, Del.	40.5	20.4	--	--
Georgetown, Del.	41.4	22.3	--	--
Beltsville, Md.	40.2	21.6	40.8	21.4
Worthington, Ind.	42.1	19.9	42.3	20.7
Evansville, Ind.	39.9	21.6	40.6	22.1
Urbana, Ill.	39.7	20.7	40.2	20.9
Edgewood, Ill.	41.0	20.7	--	--
Eldorado, Ill.	40.2	21.7	41.1	21.9
Carbondale, Ill.	40.0	22.0	40.6	22.2
Laddonia, Mo.	41.3	20.0	41.6	20.7
Columbia, Mo.	42.3	20.1	--	--
Jefferson City, Mo.	38.7	22.3	--	--

[1]Englishtown, New Jersey, 1955; Middlesex County, New Jersey, 1954.

SOYBEAN DISEASE INVESTIGATIONS IN 1956

Leaf spots were the most prevalent diseases of soybeans in the Midwest in 1956. Of these, bacterial pustule (Xanthomonas phaseoli var. sojensis) was the dominant disease in Illinois, Iowa, and Missouri. Downy mildew (Peronospora manshurica) was the most common disease in Indiana and Ohio, ranking second in Illinois and Missouri. Bacterial blight (Pseudomonas glycinea) was prevalent in Iowa and Ohio and of less importance elsewhere. Wildfire (Pseudomonas tabaci) was found in twelve fields in Missouri, in three fields in Illinois, and in a single field in Indiana. Brown spot (Septoria glycines) ranked second in prevalence in Indiana but occurred less frequently in other states. In general, the leaf spots did not seriously damage the midwestern soybean crop in 1956.

Brown stem rot (Cephalosporium gregatum) showed a marked drop in both incidence and intensity. In the past two seasons the disease has appeared later than usual and was consequently less damaging to the crop.

Stem canker (Diaporthe phaseolorum var. caulivora) was severe in limited areas of Indiana, Iowa, and Ohio. It was rather generally distributed with light intensity over most of the Midwest.

Root and stem rot was found over many areas of Ohio (caused by Phytophthora), Iowa (caused by Fusarium), Missouri (caused by Fusarium and Phytophthora), and to a very limited extent in Illinois (Phytophthora). In Ohio it was more widely distributed than in previous years, coinciding with the increasing distribution of the susceptible Harosoy. Observations again indicated that Blackhawk and Monroe are highly resistant, but not completely immune under some field conditions.

In some sections of the Midwest, large numbers of abnormally green, barren plants were noted at harvest time. These symptoms suggested bud blight caused by the tobacco ring spot virus. It appears, however, that more than one virus is involved, since the trouble has been identified as bud blight in Indiana while some virus other than ring spot seems to be involved in Illinois and in Iowa. While the overall effect on the soybean crop was negligible, the potential of this disease cannot be ignored. In localized areas of Illinois and Indiana, several fields were not worth harvesting because barren plants predominated. A similar or possibly an identical disease has been reported in the Northeastern States. Investigations on this problem are under way in Illinois, Indiana, and Iowa.

The soybean cyst nematode (Heterodera glycines) has been found in Southeastern Missouri but has not yet been found in other Midwestern states.

Information on the disease reaction of Uniform and Preliminary Test strains obtained during the past season is appended to this report, together with a reference list of varieties and Plant Introductions resistant to certain diseases.

GLOSSARY

Common Name of Disease	Causal Organism
Bacterial Blight	Pseudomonas glycinea
Bacterial Pustule	Xanthomonas phaseoli var. sojensis
Frogeye	Cercospora sojina
Brown Spot	Septoria glycines
Stem Canker	Diaporthe phaseolorum var. caulivora
Brown Stem Rot	Cephalosporium gregatum
Phytophthora Root Rot	Phytophthora sp.
Sphaceloma Scab Disease	Sphaceloma sp.
Target Spot	Corynespora cassiicola
Purple Seed Stain	Cercospora kikuchii
Root Knot Nematode	Meloidogyne incognita var. acrita

Disease reactions are listed according to the Soybean Disease Classification Standards, March, 1955, unless otherwise specified. They are listed as follows:

1 to 5 = disease reaction, followed by capital letter or letters to identify the state where test was made (these are code letters used to identify strains in the Uniform Tests--L = Illinois, C = Indiana, A = Iowa, etc.); small letter "a" or "n" after the code letter signifies artificial or natural infection, respectively.

Frogeye readings are listed as R (resistant), I (intermediate), and S (susceptible). Strains showing the intermediate reaction are susceptible in their breeding behavior.

Phytophthora root rot readings in 1956 were taken in two ways: (1) as a mean of the root rot rating (1-5) of 10 or more living plants from each of two replications where 1 = healthy plant, 2 = trace of internal discoloration, 3 = one-third of root discolored internally, 4 = two-thirds of root discolored internally, and 5 = entire root rotted, and (2) as mean percent post-emergence kill from each of two replications. The higher rating by either method was used to characterize the disease reaction for this report.

Downy mildew readings from Iowa were made in the greenhouse. Reactions 1-3 are grouped as R (resistant) and 4-5 as S (susceptible).

Disease reaction of Uniform and Preliminary Test strains evaluated during 1956.

Strain	Bacterial Blight	Bacterial Pustule	Frog-eye	Brown Spot	Downy Mildew Race 1	Downy Mildew Race 2	Downy Mildew Race 7	Downy Mildew Race 8	Phytophthora Root Rot
				Group O					
Capital				5Ca					5Hn
Comet			SCa	4Ca					2Hn
Flambeau				3Ca	RAa	SAa	SAa	RAa	5Hn
Goldsoy					SAa	RAa	SAa	SAa	
Grant			SCa	4Ca	SAa	SAa	SAa	SAa	5Hn
Hardome	4La			3Ca					4Hn
Kabott					RAa	RAa	SAa	SAa	
Mandarin (Ottawa)				3Ca	SAa	SAa	SAa	RAa	3Hn
Norchief			SCa	4Ca	RAa	SAa	SAa	RAa	5Hn
Pagoda					SAa	RAa	SAa	SAa	
Pridesoy					SAa	RAa	SAa	RAa	
Renville				4Ca		4Cn			5Hn
0-52-710	4La		SCa	3Ca					2Hn
0-52-793			SCa	4Ca					5Hn
W9S-2703		3La		3Ca					5Hn
W0S-3138	3La			3Ca					5Hn
W0S-3147			SCa	3Ca					4Hn
W0S-3180	4La			3Ca					4Hn
W0S-3257	3La		SCa	3Ca					4Hn
W0S-3386	1La			4Ca					5Hn
				Group I					
Blackhawk				3Ca		5Cn*			2Hn
Chippewa			SCa	4Ca	RAa	SAa,2Cn	SAa	RAa	3Hn
Earlyana				5Ca		2Cn			4-3Hn
Habaro					SAa	SAa	SAa	RAa	
Harly					SAa	SAa	SAa	SAa	
Manchukota					RAa	SAa	SAa	SAa	
Monroe				3Ca		2Cn			3-2Hn
Wis. Manchu 3					RAa	SAa	SAa	SAa	
A0K-2206		1La		3Ca		2-3Cn			3Hn
A0K-3808	2La	3-4La		3Ca		2Cn			5Hn
A2-4008	3La	3-4La	RCa	4Ca		2Cn			2Hn
C1105		3-4La	SCa	3Ca					
C1106		4La	SCa	5Ca					
C1117		4La	RCa	4Ca					
C1119		4La	SCa	4Ca		2-3Cn			

*Reaction at Walkerton, Indiana, 1955 and 1956, under natural infection; presumed to be Race 2 because of reaction on Richland, Dunfield, and Chief.

Disease reaction of Uniform and Preliminary Test strains evaluated during 1956.--(Continued)

Strain	Bacterial Blight	Bacterial Pustule	Frog-eye	Brown Spot	Downy Mildew Race 1	Downy Mildew Race 2	Downy Mildew Race 7	Downy Mildew Race 8	Phytophthora Root Rot
Group I (Continued)									
C1147		1La				2Cn			
H15345		4La	RCa	3Ca					
W9-1454	3-4La	3La	SCa	4Ca		2Cn			4Hn
W9-1982-1	3La	3-4La		4Ca		1Cn			5Hn
W9-1982-32	3La	4La		3Ca		2Cn			5Hn
Group II									
Adams				3Ca		SAa	SAa	SAa	4-3Hn
Bavender Sp.					RAa	SAa	SAa	SAa	
Blend 1	4La,5Aa	4La,5An							3Hn
Harosoy				4Ca	SAa	SAa	SAa	RAa	4Hn
Hawkeye				3Ca	SAa	SAa	SAa	RAa	5-3Hn
Jogun					SAa				
Korean					RAa	SAa	SAa	SAa	
Richland				3Ca					5Hn
A0-8618	5Aa			3Ca					4Hn
A0-8618-1	4Aa	3La,5An	RCa	3Ca		3Ca			4Hn
A0-8618-2	5Aa	4La,5An	RCa	2Ca		3Ca			4Hn
AX29-163-1-2			SCa	3Ca		4Ca			5-3Hn
AX29-267-1-1-2	5Aa	5An	RCa	2Ca					3Hn
C1056				4Ca		2-3Ca			4Hn
C1105		3La,5An	SCa			3Ca			4Hn
C1106		5An	SCa			4Ca			4Hn
C1117	4Aa	5An	RCa			2Ca			3Hn
C1119			SCa						4Hn
C1121	5Aa	5An	SCa	5Ca		2Ca			3Hn
C1128	4Aa	5An	RCa	3Ca		2Ca			4Hn
C1147	4La,5Aa	5An	SCa	3Ca					3Hn
H13116		5An	RCa	4Ca		2Ca			4Hn
H13501		5An	RCa	4Ca		5Ca			2Hn
H14025		5An	RCa	3Ca		5Ca			3-4Hn
H14521		5An	RCa	3Ca		3Ca			5Hn
H14551		5An	SCa	2Ca					4Hn
H15345		5An	RCa			2Ca			3Hn
H20771	4La,4Aa	4La,5An	RCa	3Ca					2Hn
H21162	4La,5Aa	4La,5An	RCa	4Ca					1-3Hn
H21793	4Aa	5An	SCa	3Ca					1-3Hn

Disease reaction of Uniform and Preliminary Test strains evaluated during 1956.--(Continued)

Strain	Bacterial Blight	Bacterial Pustule	Frog-eye	Brown Spot	Downy Mildew Race 1	Downy Mildew Race 2	Downy Mildew Race 7	Downy Mildew Race 8	Phytophthora Root Rot
Group II (Continued)									
H22218	4La,5Aa	5An	SCa	3Ca					1-2Hn
H24157	4La,4Aa	3La,5An	SCa	3Ca					1-2Hn
H24167	4La,4Aa	4La,5An	RCa	4Ca					2Hn
S2-5437		5An	RCa	4Ca					3Hn
W9-1982-16	3La,4Aa	5An	SCa	4Ca					4Hn
Group III									
Clark	5Aa	4An			SAa	SAa	SAa	SAa	4Hn
Dunfield	5Aa	5An		3Ca	RAa	SAa	SAa	SAa	4Hn
Illini				3Ca	SAa	SAa	SAa	SAa	2Hn
Lincoln					SAa	SAa	SAa	RAa	5-3Hn
Pennsoy					RAa	RAa	RAa	RAa	
Scioto					SAa	SAa	SAa	SAa	
A3-6319	3La,4Aa	3La,5An	SCa	3Ca					
A3-7743-1	4La,3Aa	4La,5An	SCa	4Ca					3Hn
C859	5Aa	5An	SCa	3Ca					3Hn
C1060	5Aa	5An		4Ca					4Hn
CX166-103N-1	4La,5Aa	5An	SCa	3Ca					
CX168-46-5	4La,4Aa	5An	SCa	4Ca					
CX169-9-2	3La,5Aa	5An		4Ca					
CX184B-207-3	4La,4Aa	5An	SCa	3Ca					
CX192-27-2	4La,4Aa	5An							
CX192-28-3	4La,5Aa	5An							
H24088	5Aa	5An	RCa	4Ca					5Hn
L6-2132-A14	4Aa	5An		4Ca					3Hn
L9-5139	3La,4Aa	5An							4Hn
U9-2	3Aa	5An		5Ca					4Hn
U0-41	3Aa	5An	RCa	2Ca					4Hn
U1-5	4La,5Aa	5An	RCa	5Ca					
Group IV									
Chief				3Ca	RAa	SAa	SAa	RAa	4Hn
Kingwa					SAa				
Macoupin						SAa	SAa	SAa	
Patoka					SAa	SAa	SAa	RAa	
Perry				3Ca	SAa	SAa	SAa	RAa	4Hn

Disease reaction of Uniform and Preliminary Test strains evaluated during 1956.--(Continued)

Strain	Bacterial Blight	Bacterial Pustule	Frog-eye	Brown Spot	Downy Mildew Race 1	Downy Mildew Race 2	Downy Mildew Race 7	Downy Mildew Race 8	Phytophthora Root Rot
Group IV (Continued)									
Wabash				2Ca	RAa	SAa	SAa	SAa	4Hn
C985				5Ca					4Hn
C1048	3-4La			3Ca					5Hn
C1065			RCa	4Ca					4Hn
C1068			RCa	5Ca					5Hn
C1069	3-4La		RCa	5Ca					3Hn
C1071			RCa	5Ca					4Hn
C1074			RCa	4Ca					5Hn
C1076			RCa	5Ca					4Hn
C1078			RCa	4Ca					4Hn
C1079			RCa	5Ca					3Hn
D52-212	2La	1La	ICa*	3Ca					
D53-184	3La	2La	RCa	4Ca					
S2-5152			RCa	5Ca					
S2-5164			RCa	3Ca					
S2-7160	3La	1La	RCa	5Ca					
S2-7613	3La		RCa	5Ca					
S3-5180	4La	1La	SCa	3Ca					
S3-5191	4La	4La	SCa	5Ca					
S4-1714	3La	2La	RCa	4Ca					
Group V, VI, and VII									
Dorman					RAa	RAa	RAa	RAa	
Jackson					RAa				
Lee					RAa				
Ogden					RAa				
Roanoke					RAa				
S-100					SAa	SAa	SAa	SAa	

*Strains showing an I (intermediate) reaction are susceptible in their breeding behavior.

Reference List of Soybean Varieties Resistant to One or More Diseases.

Variety	Maturity Group	Bacterial Blight	Bacterial Pustule	Brown Spot	Frog-eye	Stem Canker	Brown Stem Rot	Phytophthora Root Rot	Sphaceloma Scab Disease	Target Spot	Purple Seed Stain
Capital	0								R		
Flambeau	0	2									
Blackhawk	I							R	R		
Monroe	I							R			
Adams	II				R						
Harosoy	II					R					
Hawkeye	II								R		
Jogun	II								R		
Kanro	II								R		
Mukden	II							R			
H3665	II	2									
L8-7289	II	2									
Illini	III				R			R			
Lincoln	III				R						
L9-4091	III		2								
L9-4197	III		2								
Clark	IV				R						
Patoka	IV								R		
Wabash	IV				R				R		
L9-4196	IV	2	1								
A.K. (Kansas)	V							R			
Dorman	V				R						
Arksoy	VI							R			
Lee	VI		1		R					R	R
Ogden	VI								R		
CNS	VII		1					R			R
Jackson	VII				R					R	
Roanoke	VII				R						

Note.--Dorman and Lee appear to be more resistant than other varieties to the killing attributed to pod and stem blight.

Reference List of Plant Introductions Resistant to One or More Diseases.

Identity	Maturity Group	Bacterial Blight	Bacterial Pustule	Brown Spot	Frog-eye	Brown Stem Rot	Root Knot Nematode
P. I. 153239	0			2			
153252	0			3			
153252-1	0			2			
153262-1	0			2			
153300	0			2			
161988	0			2			
177100	0			2	R		
179822	0			1			
180524	0			3	R		
180525	0			2	R		
189859	0			2			
189923	0			3	R		
68521	I	1-2					
68554-1	I	1-2					
92625	I			1-2			
153213	I	1-2					
180498	I			2			
65338	II			2			
68708	II			2			
79609	II			1			
79726	II			1-2	R		
84673	II			1-2	R		
86031	II			1-2			
86069	II			1-2			
87628	II			2			
90567	II			3			
91114	II			1-2			
91341	II			1-2			
92733	II			1-2			
200595	II			2			
F. C. 33243	III						R
P. I. 54583	III			1-2			
84578	III			1-2			
84946-2	III					R*	
90180	III			2			
96188	III			1-2			

*Selections from this P. I. show 75-90% disease-free plants while Lincoln control rows show 100% infection.

Reference List of Plant Introductions Resistant to One or More Diseases.--(Continued)

Identity	Maturity Group	Bacterial Blight	Bacterial Pustule	Brown Spot	Frog-eye	Brown Stem Rot	Root Knot Nematode
P. I. 96322	III			1-2			
157416	III			1			
91153-1	IV			2			
91346	IV			1-2			
96333	IV		1	1			
157418	IV			1-2			
157448	IV			1			
171431	IV			1-2			
82200-1	V			1-2			
87968	VI				R		
166147	VI	1-2					
215693	VI		1				

WEATHER CONDITIONS AND GENERAL GROWTH RESPONSES AT MOST OF THE NURSERY LOCATIONS DURING THE 1956 SEASON

The following general notes compiled from information supplied by the cooperators may be helpful in interpreting performance of the nurseries at individual locations.

Temperature and rainfall at most of the nursery locations for the 1956 season are presented in graphs at the end of this section of the report. The daily maximum and minimum temperatures and rainfall are taken from "Climatological Data" published by the Weather Bureau.

Ottawa, Ontario, Canada. The past season was probably the coolest and wettest in history in this part of the country and quite unfavorable for soybeans. It was impossible to obtain reliable data on maturity. Ripening was very uneven but in spite of this the yields appeared to be reasonably good.

Guelph, Ontario, Canada. The 1956 season can best be described as extremely cool and wet. Planting was late and at no time through the season was there a good growth week. The mean temperature for July was 65° as compared with 77° for 1955, and 69° for an average season. August was likewise cool. Rainfall was well above normal with 7 inches in May, 4 in June, 3 in July, and 8 in August. Maturity was not normal, and only the very early maturing strains like Flambeau had nearly normal maturity. The varieties appeared to respond to this environment according to maturity listing. Any strain with a colored hilum and the saddling pattern was very much darker and more pronounced in color pattern than normal.

Ridgetown, Ontario, Canada. These tests were grown on a Brookston Clay Loam Soil fairly high in organic matter. Growing conditions were slow all year except for near maturity. The spring was late and cold. There was at no time a serious lack of moisture.

State College and Landisville, Pennsylvania. The Groups I and II tests at State College and the Groups III and IV tests at Landisville were planted on May 29, and June 1, respectively, in good seedbeds on Hagerstown silt loam. Stands were good. During the growing season, precipitation averaged much higher than normal while temperatures were below normal, generally. An earlier than normal killing frost occurred September 21 at both locations. Growth and yields were average at Landisville, and above average at State College. However, the combination of a wet growing season, lodging, and premature leaf drop due to cold temperatures, resulted in poor bean quality. In general, the wet growing season reduced the yields of the later varieties, whereas, the same seasonal effect increased the yields of the earlier varieties.

Freehold, Mt. Holly, and Salem, New Jersey. The weather was much the same at the three locations where the tests were completed. Temperatures were normal to slightly below from planting to ripening. Moisture was adequate for good uniform germination. Rainfall was slightly above normal but so well distributed over the growing season that weeds were a bit of a problem, especially in the Salem test.

All during the harvest period rain was frequent and humidity and temperatures generally high causing deterioration in seed quality in all tests.

Newark, Delaware. Rainfall for the May through October period was above normal. Approximately one-third or 8.6 inches of the total rainfall for this period was

received in July. Temperatures were below normal during May, September, and October and above normal during June and July.

In general, ideal growing conditions for soybean growth prevailed during the growing season. The luxuriant vegetative growth of the soybeans together with heavy rains, particularly during July, were conducive to severe early-season lodging. Seed quality in general was very good and did not reflect the very unfavorable weather conditions which predominated during the harvest season for commercial producers. Harvesting of the variety trials was completed before the onset of the prolonged rainy period.

Georgetown, Delaware. Although rainfall for the May through October period was about normal, a two-week period of serious moisture stress accompanied by high temperatures occurred in August. These unfavorable conditions prevailed during the critical pod filling stage of the entries in Group III and the early maturing ones in Group IV. Wilting of all entries was very evident but was particularly serious in the earlier maturing ones.

Beltsville, Maryland. April and May were months of deficient rainfall and below normal mean temperatures. Mean temperatures throughout the remainder of the season were approximately normal. A deficiency of rainfall continued through June. Rainfall during July was adequate but August was again a month of deficient rainfall. Soybean nurseries at this location were located on a soil of unusual moisture-retaining capacity and exhibited no visual consequences of drouth. Stands, weed control, plant growth, and harvest conditions were very good. There was but little evidence of soybean diseases throughout the season. Seed quality of both Groups III and IV maturity was good.

Hoytville, Wooster, and Columbus, Ohio. Soil moisture, which was excessive during May and the first week in June, tended to delay planting throughout the state but was ample for good growth and development for the remaining portion of the growing season. Temperatures were generally below normal throughout the growing season, and early fall frosts stopped growth and development of late plantings and late maturing varieties.

Ottawa Lake, Michigan. Generally, the 1956 growing season was cooler by 1 to 4 degrees per month than the long time average, with the July average being 4 degrees below normal. The season was characterized by dry and cool weather for the first two or three weeks (until June 15). Cooler weather continued, but rainfall was generally above the average from June 15 to August 31. During this period, rainfall was uniformly well distributed except for one heavy rain per month. September was relatively dry and slightly cooler than normal. Seedling emergence was fairly good despite dry weather. The plants made good growth and had a good pod set. A killing frost occurred on September 21, when early varieties were practically ripe and late varieties carried many green leaves and pods. The yields of the later varieties were reduced by this frost, but not to the extent anticipated. Harvest conditions were excellent.

Walkerton, Indiana. This was a poor nursery generally. Only Uniform Test, Group I, had good stands. Stands were very erratic in all other tests. There seemed to be no particular pattern of poor stands which could be traced to varieties or planting pattern. The cooperator experienced a similar situation in his fields of soybeans. A heavy hail inflicted considerable damage shortly after emergence when beans were four to five inches tall, and may have been a contributing factor to poor stands

and uneven growth. Considerable shattering occurred at harvest. Mildew was rather abundant but no other disease was prevalent. Only 1.24 inches of rain fell from August 18 through October. Temperatures were about 5 degrees above normal in June but about normal the remainder of the season.

Bluffton, Indiana. Manganese deficiency showed up in some areas of the plot early in the growing season and these areas were sprayed to overcome it. Planting and harvest conditions were very ideal. There was a light infection of downy mildew and bacterial pustule over most of the plot; stem canker was rather severe on Hawkeye in some areas. Precipitation was well above normal in May, June, and July, well below normal in August, and very dry in September. Temperature was about normal.

Lafayette, Indiana. This nursery was planted and harvested under ideal conditions. Growth was average, but yields were somewhat below average. Pustule, mildew and brown stem rot were present in small amounts only. Stem canker was rather abundant throughout the nursery and Hawkeye was affected most generally. Some experimental strains are highly susceptible to stem canker. Only twelve days had temperatures of 90° F. or higher, with 96° being the highest of the season. Temperatures were somewhat below normal in June.

Greenfield, Indiana. Unusually heavy rains and flooding occurred during the week following planting on May 31, and the plot was replanted June 8. Only sixteen days were 90° F. or above during the growing season. Growth was short and yields were well below average. The plot was free of disease except for a rather minor amount of downy mildew, brown spot, and stem canker.

Worthington, Indiana. This nursery was planted May 18 but was flooded and was replanted June 9. Thus it was somewhat late for best production of most Group III and all Group IV varieties. Growth was fairly good. Lodging was excessive by late August and there was an over-all yellowing of the plants. Maturity was somewhat uneven and green stemmed plants with ripe pods on them were very common. Seed quality was poor, especially in the Group III test. Yields were good considering the late planting. There was very little disease in the plot with only a trace of mildew and pustule.

Evansville, Indiana. Growth and yields, in general, were the best obtained at this location in a number of years. Except for an unidentified root rot which affected small portions of rows, diseases were almost negligible. Precipitation was somewhat below normal in each month during the growing season with a total deficiency of 4.40 inches for the period. Temperatures averaged somewhat below normal for the growing season.

Spooner, Wisconsin. The 1956 growing season was unique in that June was the only month with above normal temperatures. This favorable weather stimulated above normal growth which had some effect on rate of ripening in late August and September. Planting conditions were quite favorable. Irrigation was necessary only once on August 20 which eliminated any drouth damage that might have reduced yields. Due to adverse weather conditions the first three weeks of September, Mandarin (Ottawa) and the later varieties of soybeans failed to mature. The light frost September 6 nipped the top leaves and the most exposed lower leaves and below normal temperatures and cloudy weather caused very slow ripening. The killing frost September 20 completely killed all varieties and the maturity date was impossible to estimate with any degree of accuracy. The yields of varieties such as Chippewa were seriously affected.

Durand, Wisconsin. The tests were planted May 28. Good rains followed planting and excellent growing conditions existed throughout the season. Emergence and stands were excellent. All varieties matured and escaped the September 20 frost that damaged beans elsewhere in the state. Yields were average or above in this region.

Madison, Wisconsin. The tests were planted May 22. Rains, totaling 1.16 inches, on May 27 and 29, crusted a loose seedbed. Emergence was slow and spotted but cultivation loosened the soil and stands improved. No precipitation was noted after these dates until mid-June. June temperatures were above normal, while those of the rest of the season were nearly normal. Excellent growing conditions prevailed throughout the season except for a killing frost September 20. Frost damage was reduced considerably by warm drying weather in October. It was impossible to take maturity notes on Groups I and II. Seed size and yields were reduced on the later varieties; however, yields were generally better than expected.

Shabbona, Illinois. Planting was on May 18 in well-prepared soil of a permeable black prairie type. Seeding was shallow in soil moist to the surface, and nearly perfect stands resulted. This location, as well as all other test locations in Illinois, started the growing season with a subsoil moisture deficit, but due to frequent rains and cool weather, growth was very good with excellent yields and seed quality. There were frosts on September 17 and September 19 (about the date of Harosoy maturity), and yields and maturity dates on some of the late strains may have been affected.

Dwight, Illinois. This soil is a moderately permeable black prairie type. Planting was on May 22. The soil was dry but seeds were placed two inches deep and the field dragged after planting. Satisfactory stands resulted. The general growth for the season was good and despite periods of drouth tension during July and early August, good yields resulted. There was frost on September 19 (about the date of Adams maturity) which may have had some effect on the yields and maturities of late strains.

Urbana, Illinois. These tests were planted on May 11 in rather dry well-prepared soil of a fertile permeable black prairie type. Satisfactory stands were obtained. Despite the dry surface and subsoil at planting, frequent rains throughout the summer resulted in excellent growth and high yields.

Girard, Illinois. The soil here is a black prairie type with a moderately developed clay subsoil. Planting was on May 12 in an excellent moist seedbed. Nearly perfect stands resulted. Growth was good throughout the season with frequent rainfall. Rather heavy lodging followed wind and rain in mid-August but good yields were obtained.

Edgewood, Illinois. The soil here is a light-colored prairie soil with a strongly-developed claypan. It has been brought up to a good fertility level. The tests were planted on May 29 in moist soil. A rain following planting caused crusting, but by the use of the rotary hoe satisfactory stands were obtained. Frequent rains throughout the season resulted in rather good growth and very good yields for this soil type despite short periods of moisture shortage in late August and September.

Eldorado, Illinois. This soil is a heavy bottomland type which has been brought up to a high level of productivity. Planting was on May 21 in a well-prepared seedbed and good stands resulted. Moisture was deficient for short periods throughout the

summer, but growth was good and average yields were obtained. Rather heavy and uniform infection of both bacterial pustule and mildew occurred.

Carbondale, Illinois. Planting was on May 17 in an upland light-colored soil with a strongly developed claypan. No crusting occurred and stands were very good. The weather during the growing season was nearly ideal with temperatures slightly cooler than normal and rainfall adequate with excellent distribution.

Morris, Minnesota. The Group 0 nursery was planted on May 24 in 40-inch rows and good stands resulted. The weather was dry and warm for about two weeks. In fact, from June 9 to 14 the temperatures rose to 100° or more. The weather turned cool the middle of June and rainfall was adequate until late in the summer. Frost came on September 14, but most of the varieties were mature. Yields were very good, averaging over 30 bushels for the trial.

St. Paul, Minnesota. The Group 0 and Group I nurseries were planted in 40-inch rows on May 23. Excellent stands were obtained and growth was very good all during the wet, rather cool summer. In spite of the severe lodging, both trials averaged over 40 bushels per acre. Killing frost came September 30 after the varieties were nearly mature. The fertility level of the land was very high as a result of heavy applications of manure and a good rotation.

Waseca, Minnesota. The Group I and Group II nurseries were planted at Waseca on May 22 in 24-inch rows. Stands were very good. Weather conditions were similar to those at St. Paul except that there was somewhat less rainfall. Frost came on September 15 causing appreciable injury to the later strains in Group II. Group I, however, gave good average yields--about 35 bushels per acre. The soil at Waseca is fertile and has good moisture-holding capacity. This station is considered very good for breeding work and strain differentiation.

Cresco, Iowa. This nursery is located in northeast Iowa on Carrington Plastic Till Phase soil which is tight, cold, wet, slowly drained, and low in fertility. The nursery was planted on May 24 on corn land. Stands were good and weeds were controlled. During the growing season above normal temperatures (1.2° F.) prevailed except in July. The precipitation averaged below normal each month except May. The precipitation for May through September was 3.5 inches below normal. Growth, yields, and lodging were above normal for this location, which is usually lowest in the state. A moderately heavy frost occurred on September 20. This nursery was considered only fair for making strain comparisons.

Kanawha, Iowa. This nursery is located in north central Iowa on level, fertile Webster silty clay loam which had grown corn previously. Planting was completed on May 22. Stands were generally good to excellent and plots were kept weed-free. On July 1 (stage 3) hail topped about 50% of the plants. Another hail occurred on July 7. During the growing season temperatures averaged 1.1° F. above normal. Precipitation was particularly deficient in August and September and averaged nearly 2.5 inches below normal. These conditions permitted only reasonably good growth and fair yields. Moderately heavy bacterial blight occurred in the nursery. Although a light frost occurred in mid-September, a killing frost did not occur until after maturity. Harvesting was completed under good conditions. This nursery was considered fair for making strain comparisons.

Independence, Iowa. This nursery is located in northeast central Iowa on well drained Carrington silt loam, medium in fertility. Planting was completed on

May 15. Stands were excellent and plots were kept weed-free. Temperatures averaged near normal. Precipitation was near normal for all months with an average of 1.5 inches below normal for May through September. Stem canker appeared spasmodically in the nursery. Growth, yield, and general response were considered fair for this location. Frost occurred later than normal. This nursery was considered only fair for making strain comparisons.

Ames, Iowa. This nursery is centrally located on level reasonably fertile Clarion silt loam. Planting was completed on May 14 with subsequent stands poor for some of the "H" strains. Temperatures were generally above normal (1.0° F.) and average precipitation for May through September was 6.4 inches below normal. Growth, yield, and general response were fair to poor and strain comparisons were believed to be poor.

Ottumwa, Iowa. This nursery was in southeastern Iowa on flat, very fertile Haig silt loam. Planting was made May 17, an early date for this nursery. Stands were excellent and weeds were controlled. Temperatures averaged slightly above normal (0.6° F.). Precipitation average deficit for May through September was 4.1 inches. In spite of the precipitation deficit, growth, yield, and response were good to very good, and although depressed a little, yields were highest in the state. Frost occurred much later than normal. Strain comparisons are believed to be good to very good.

Kirksville, Missouri. The Kirksville tests had the most normal weather of any of the four northern Missouri tests and the yields in relation to maturity also were more normal. Stands were good but a few large weeds were present the first of September. Fertility is high for this type soil.

Laddonia, Missouri. Stands at Laddonia were somewhat heavier than is desirable when moisture is limited. Two inches of rain fell immediately after planting and rainfall was ample till mid-July but very little rain fell after that. As a result, the later strains were badly damaged. Group III averaged 28.7 bushels and Group IV only 19.3. Several strains in Preliminary Group III shattered badly.

Columbia, Missouri. The soil was extremely dry at Columbia in mid-April though 14 days in May had rain and this, with 1.49 on June 24, 2.33 July 3, and 1.12 July 16, kept the crop growing vigorously. There was little effective rainfall after August 10 and for most of the rest of the season the plants were under stress. Stands were heavy and this made the situation worse. Maturity was a week ahead of normal and the seed was very small.

Jefferson City, Missouri. This test was planted in June in a cloddy dry seedbed on heavy bottom soil. A light rain the next day gave fair stands. Growth was good and rainfall somewhat better than at Columbia. Rainfall in June was excessive and half of the field was drowned out. Thinner stands, more rain and greater moisture holding capacity of the soil resulted in fairly good yields. There were slight rugose symptoms generally and the seed showed much mottling and seed coat cracking.

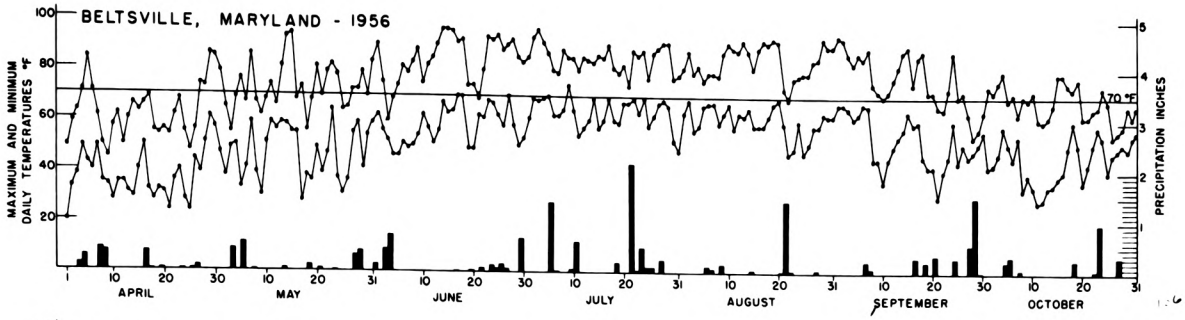
Casselton, North Dakota. Weather conditions were essentially the same as those for Fargo. Stands were very uniform. The strains were extremely short, averaging less than two feet tall. This was undoubtedly due to lack of soil moisture, especially during the early part of the growing season. Strain performance in this test was considered unsatisfactory.

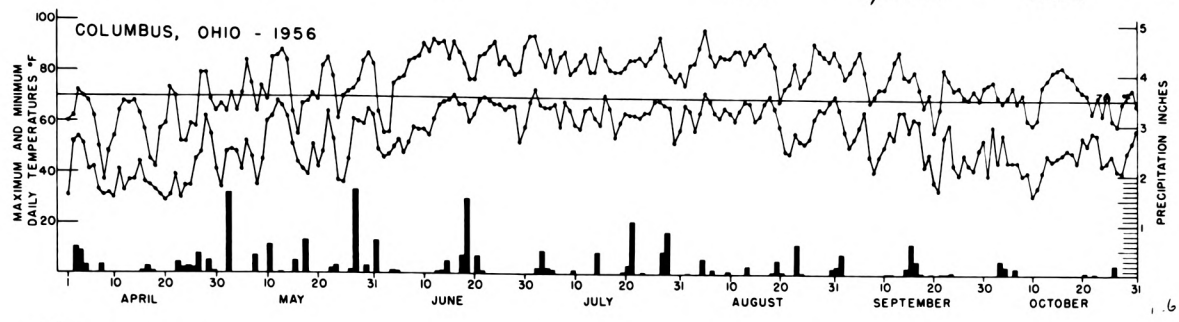
Fargo, North Dakota. Temperatures averaged slightly below normal during May through September except for the month of June when they averaged slightly above normal. Precipitation during this same period was also below normal except for the month of July. Stands were uniform while growth was very rank. None of the varieties were fully mature on September 14, when the temperature dropped to 27°. A very light frost occurred on September 6.

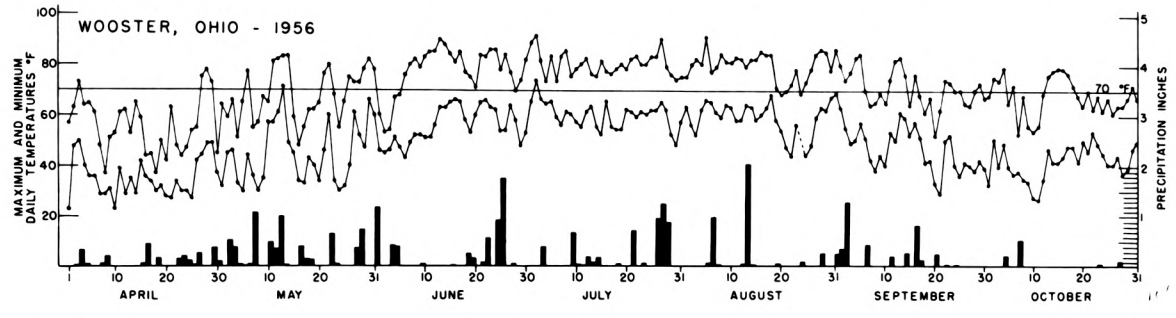
Rosholt, Brookings, and Menno, South Dakota. The growing season for Group 0 at Rosholt was normal. The season for Group I at Brookings was about normal, while for Group II at Menno, moisture was the limiting factor throughout the season.

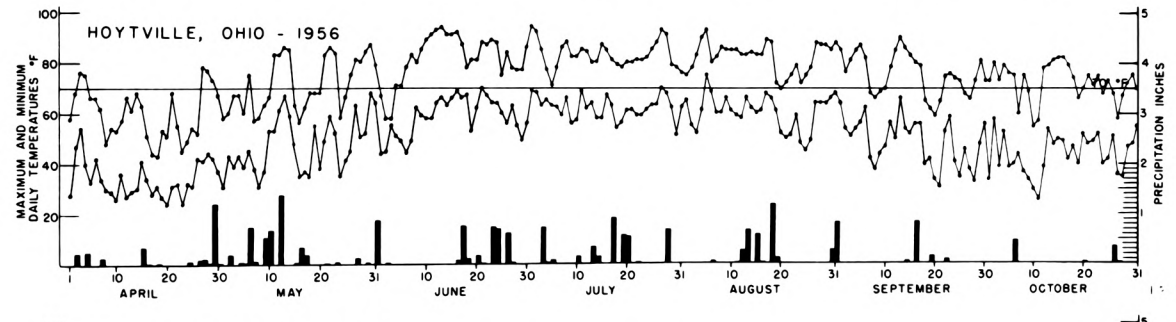
Lincoln, Nebraska. The Group II and III tests were planted in a good sedbed on May 22. Emergence and stands were good. June rainfall was below normal and temperatures were higher than usual. Irrigation of the nursery was started early, with the first on June 28 and two others on July 23 and August 16. The nursery was in excellent condition most of the season. Some bacterial blight was observed after a rain and cloudy period in July. Blister beetles and grasshoppers caused some damage. Excessive lodging was noted in most plots in 1956. All entries were mature before the first killing frost occurred on November 3.

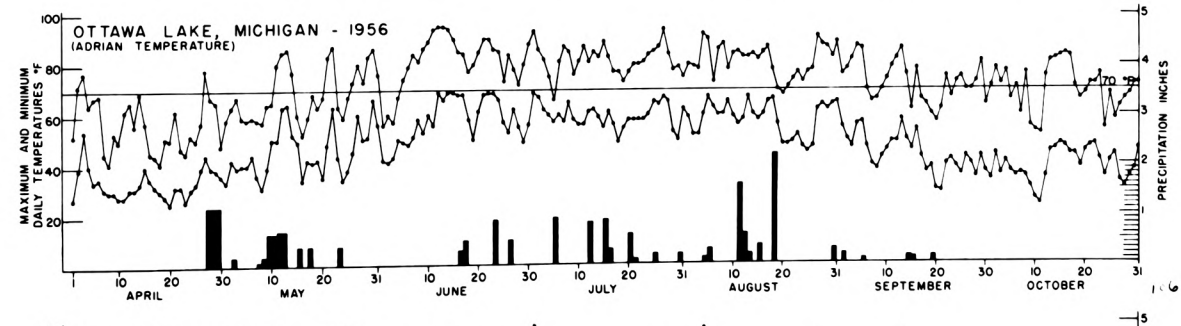
Columbus, Kansas. The months of June, July, and part of August were ideal for soybean growth. Precipitation after planting and until August 19 totaled 14.65 inches. Practically all of this moisture, however, came during the months of June and July. Only .61 inch of moisture fell in the form of several showers between August 19 and time of maturity. The hot, dry weather of September caused a major reduction in yield.

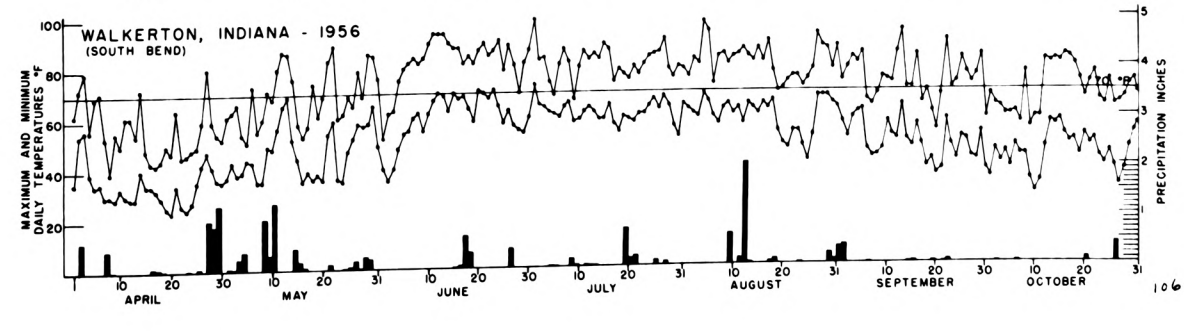

BELTSVILLE, MARYLAND - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

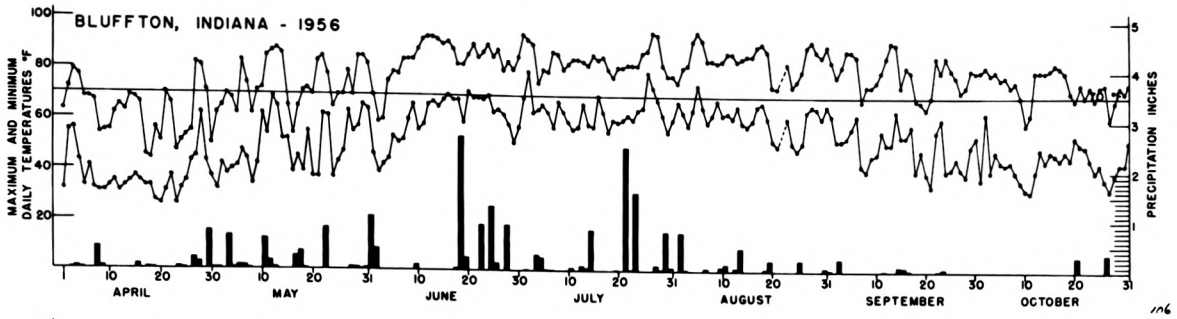

COLUMBUS, OHIO - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


WOOSTER, OHIO - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


HOYTVILLE, OHIO - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


OTTAWA LAKE, MICHIGAN - 1956
(ADRIAN TEMPERATURE)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


WALKERTON, INDIANA - 1956
(SOUTH BEND)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER



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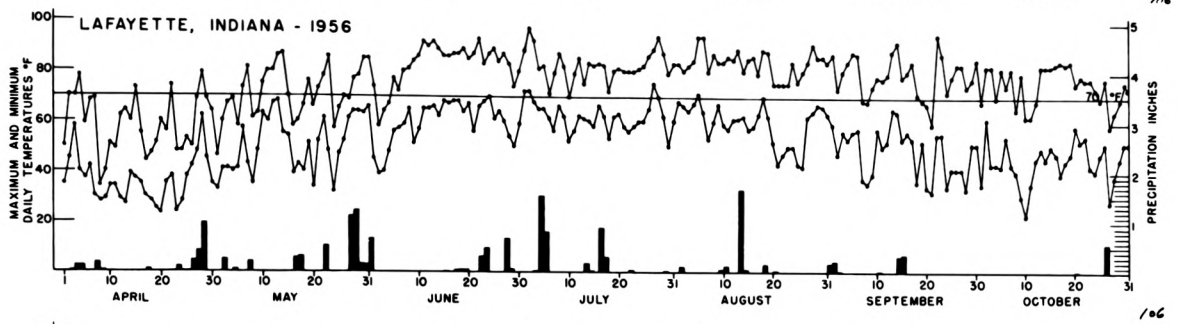

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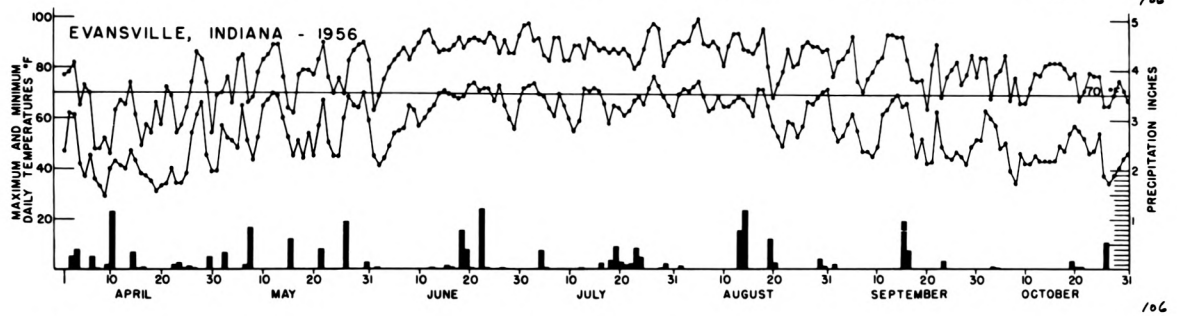

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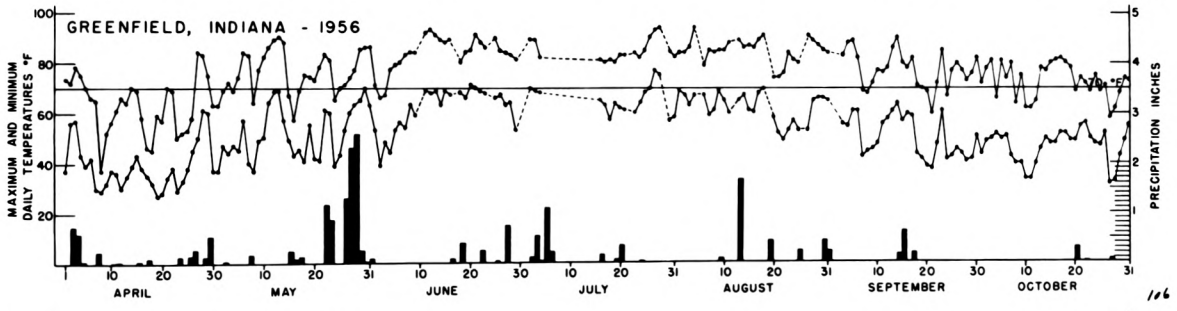

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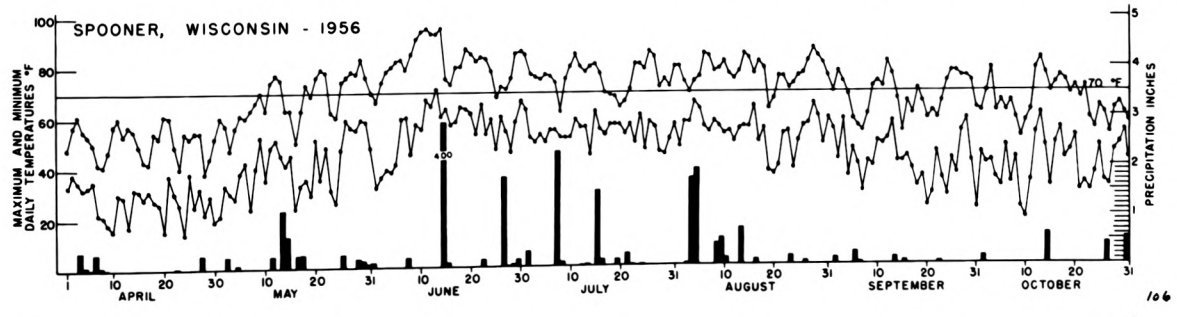

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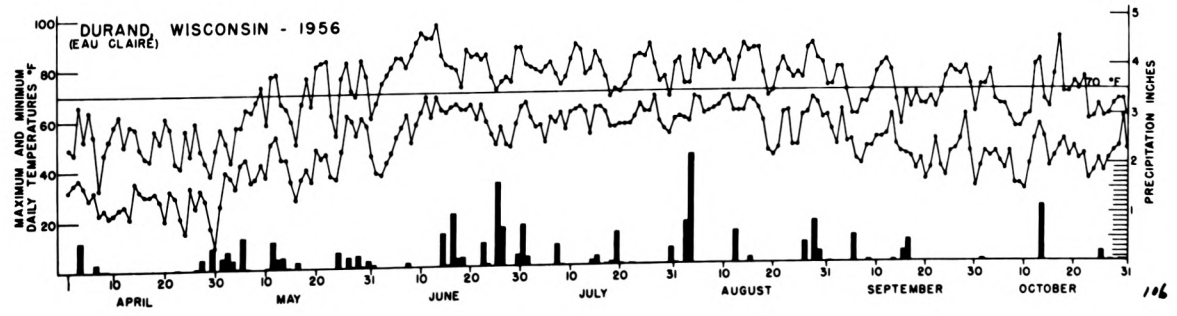

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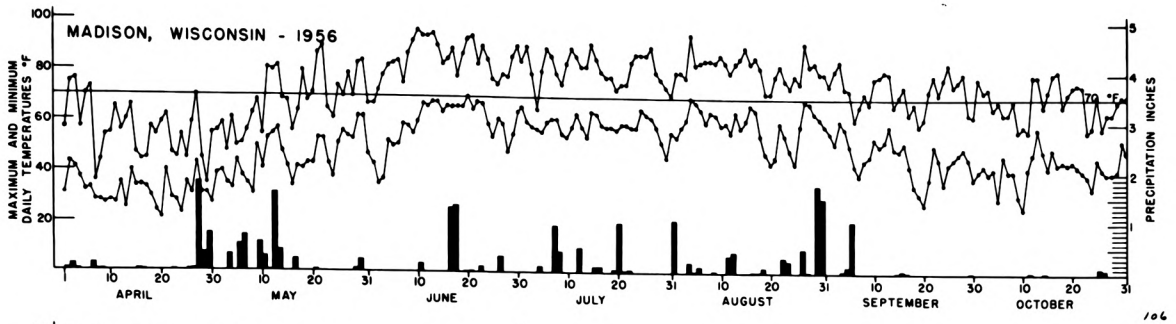

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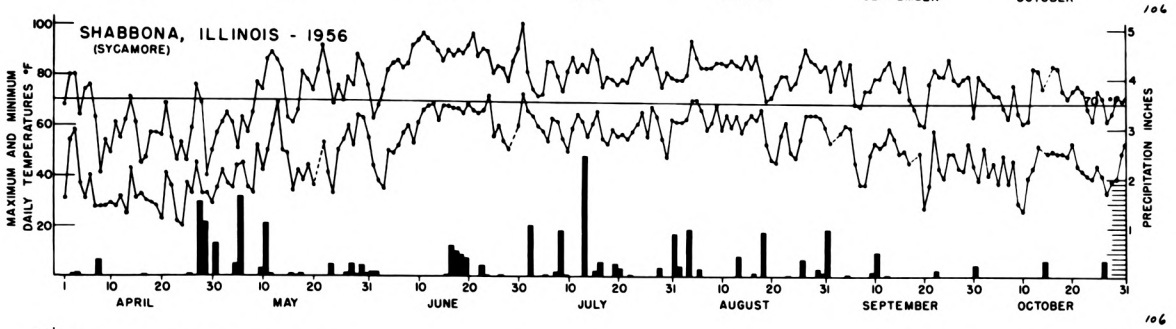

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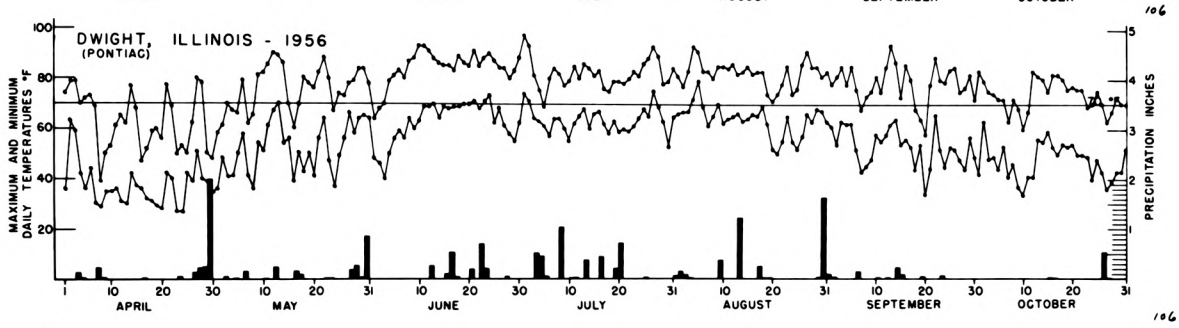

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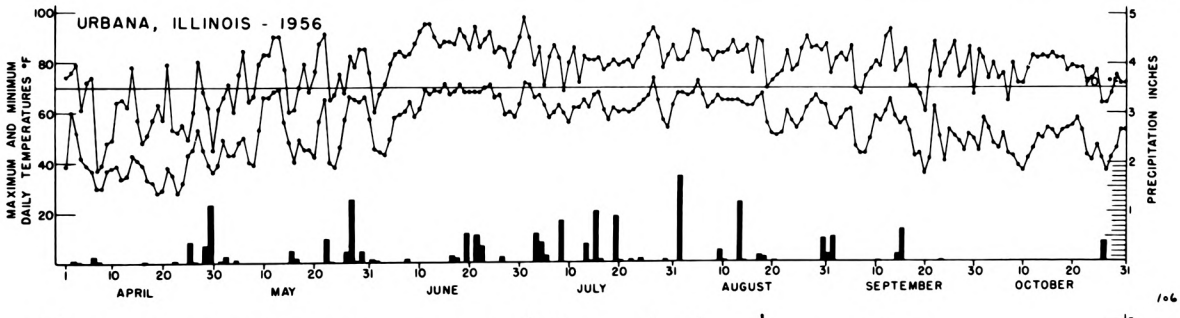

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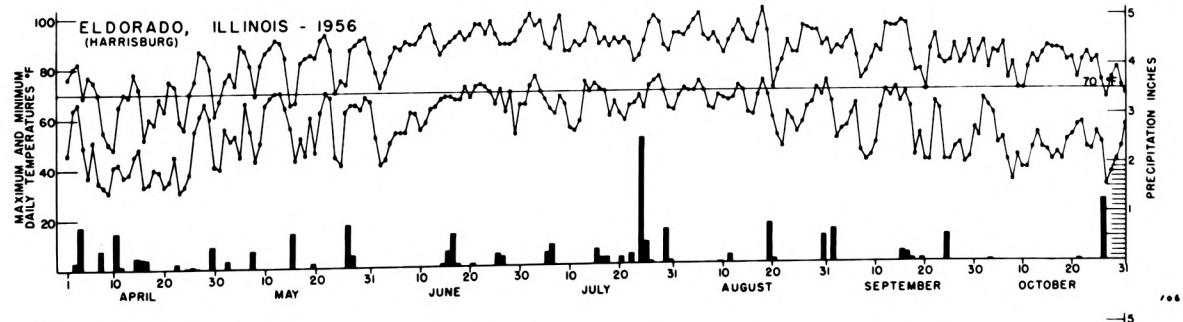

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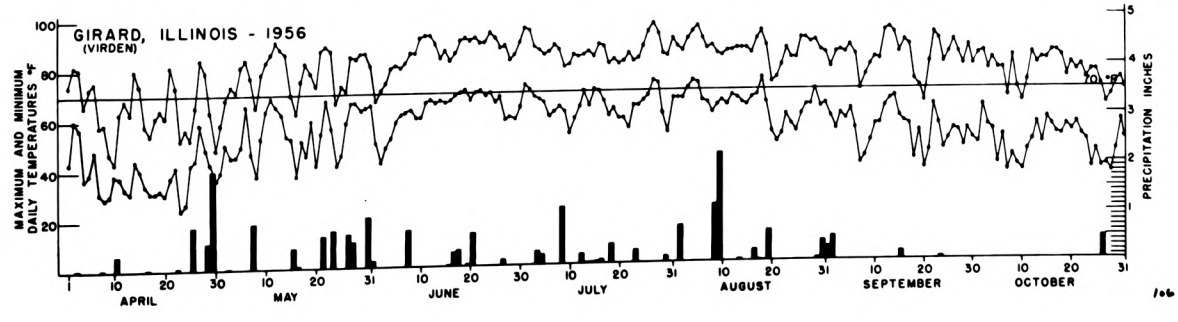

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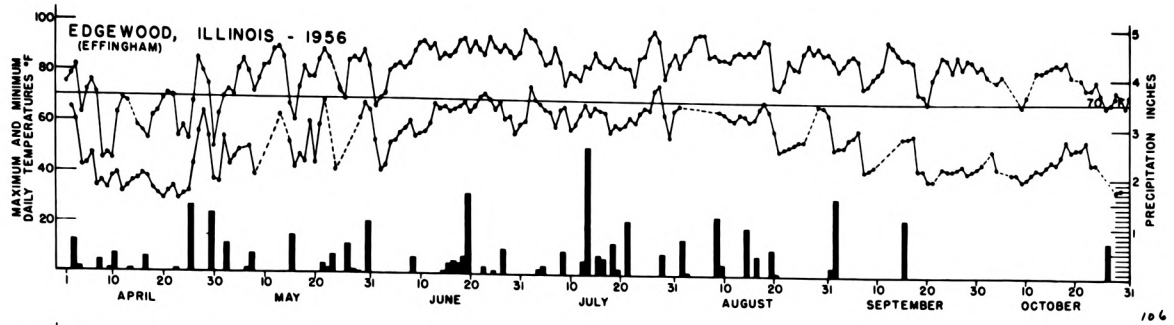

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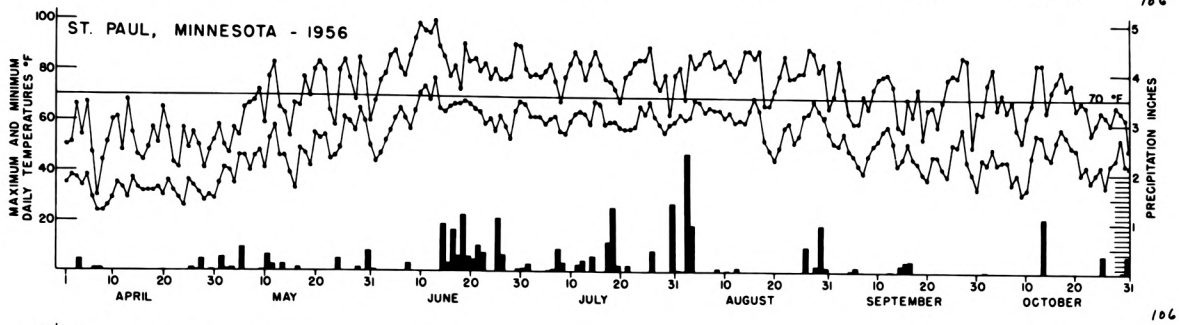

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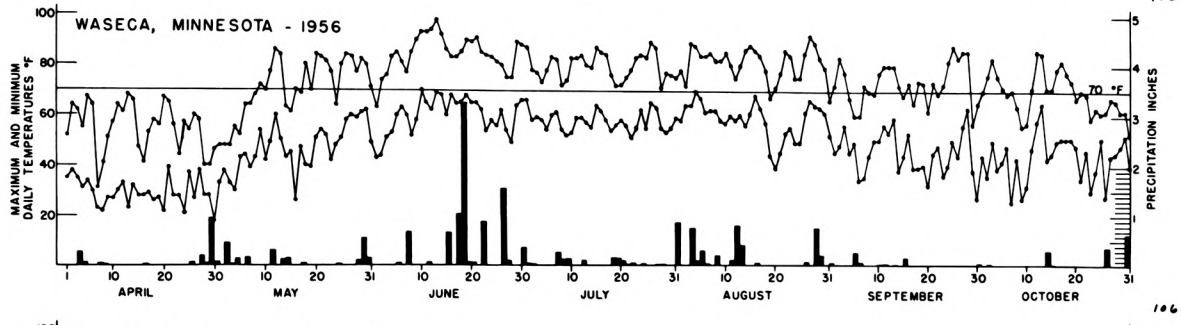

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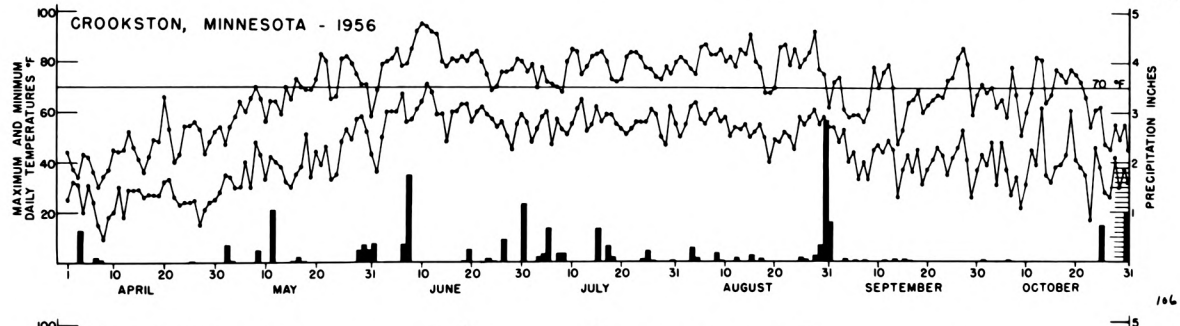

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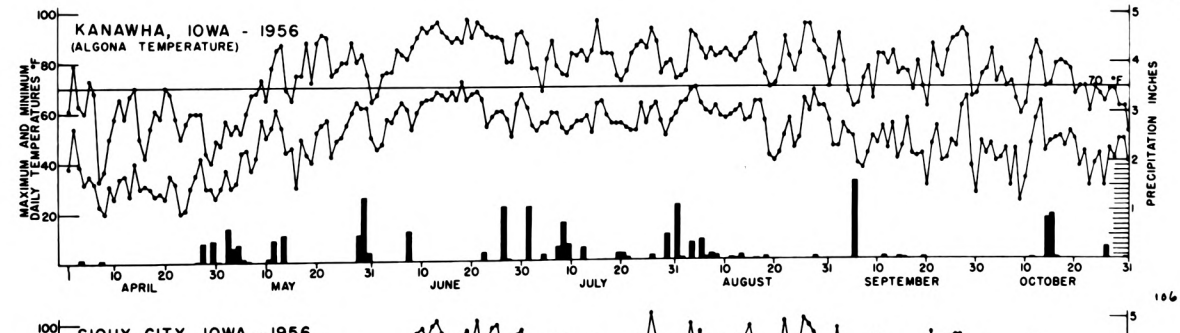

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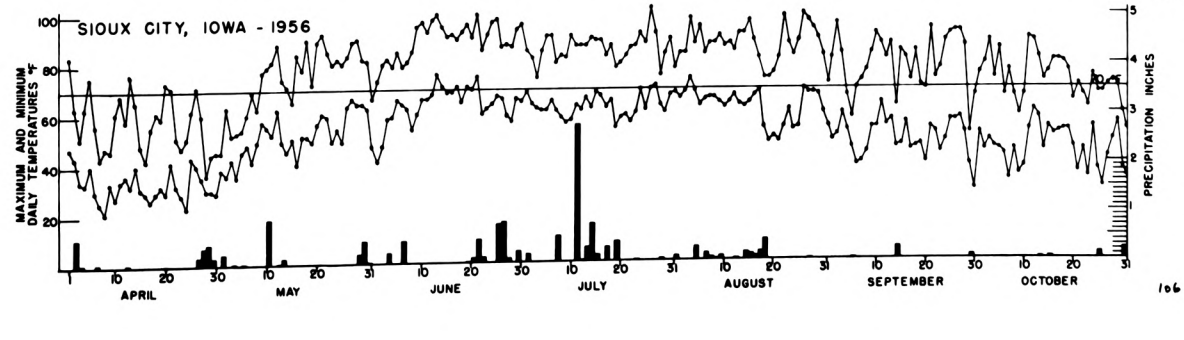

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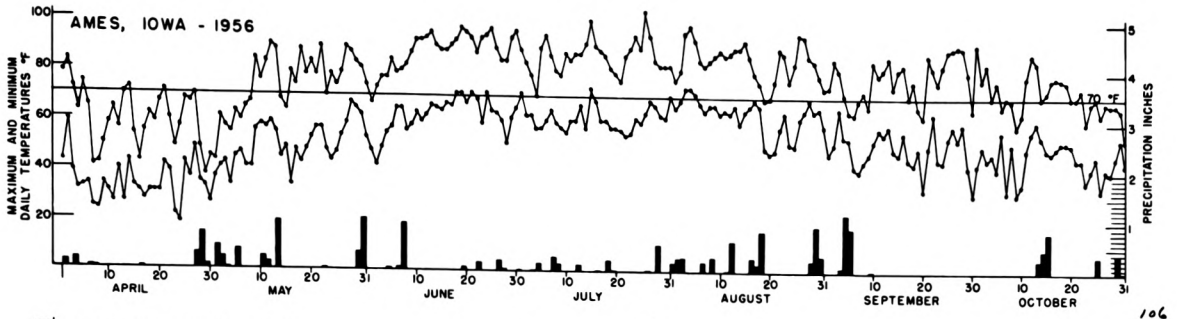

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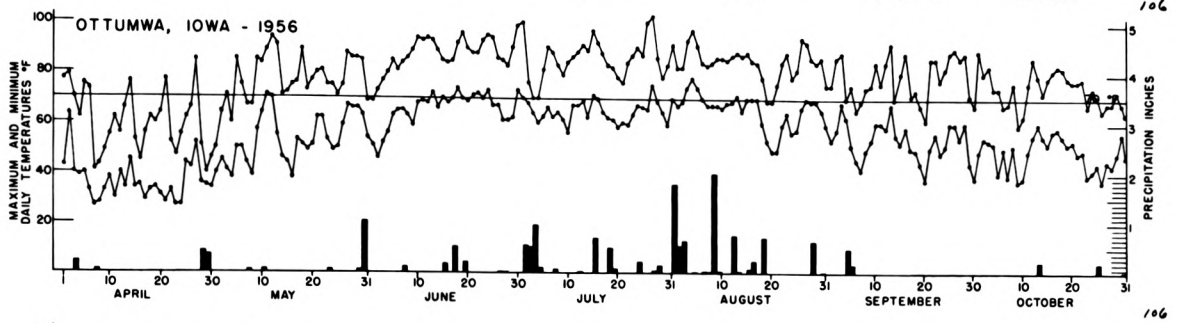

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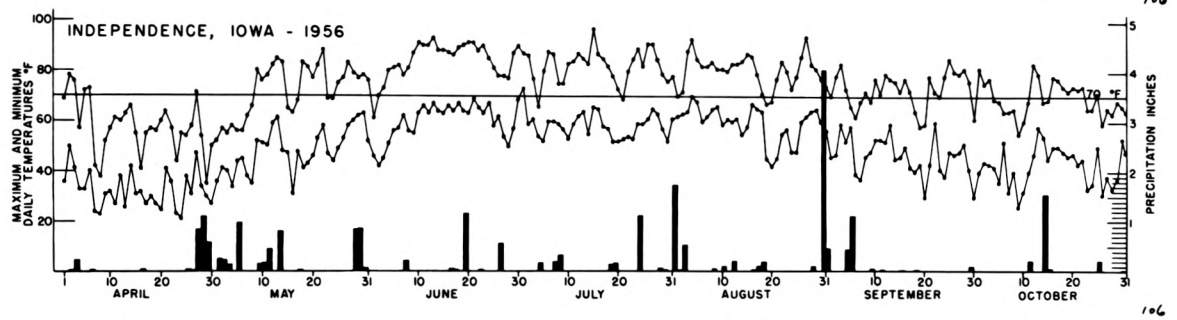

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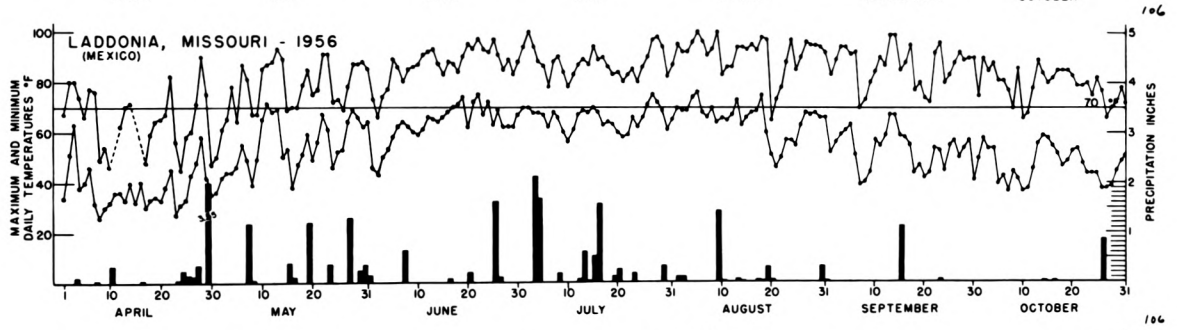

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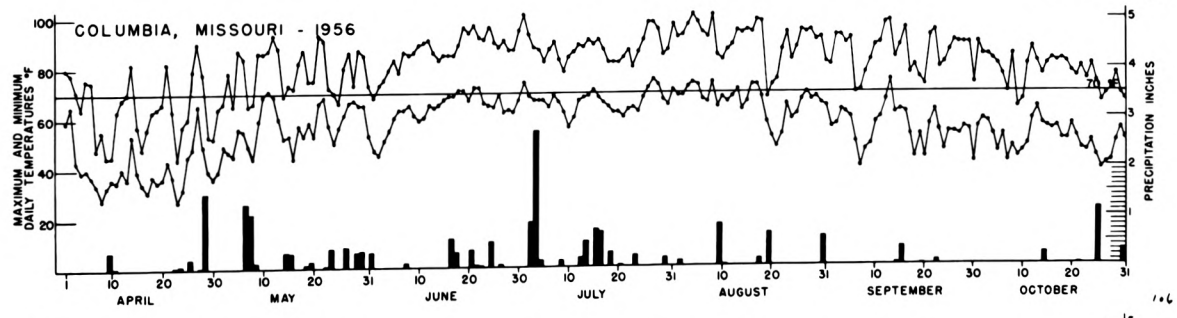

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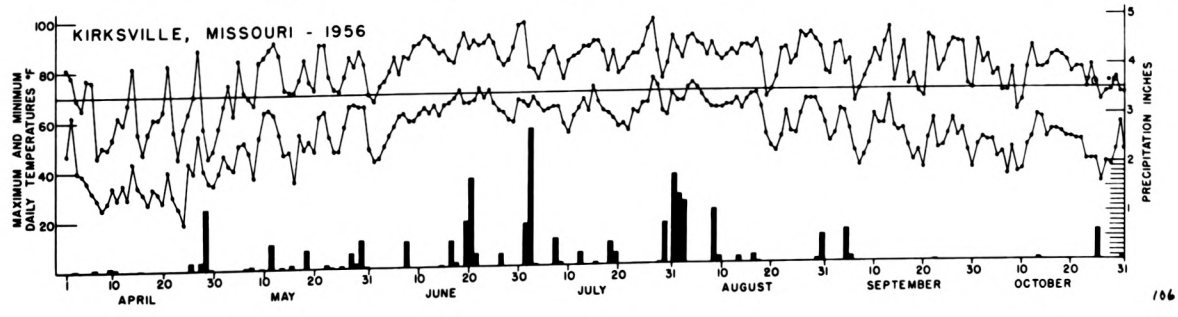

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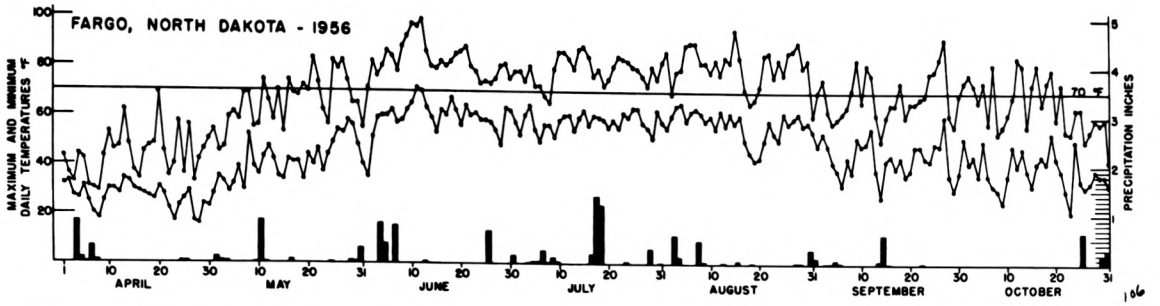
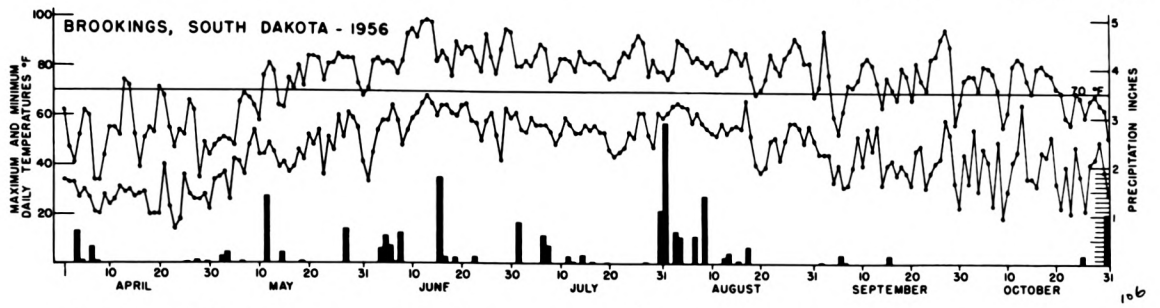

FARGO, NORTH DAKOTA - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


BROOKINGS, SOUTH DAKOTA - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
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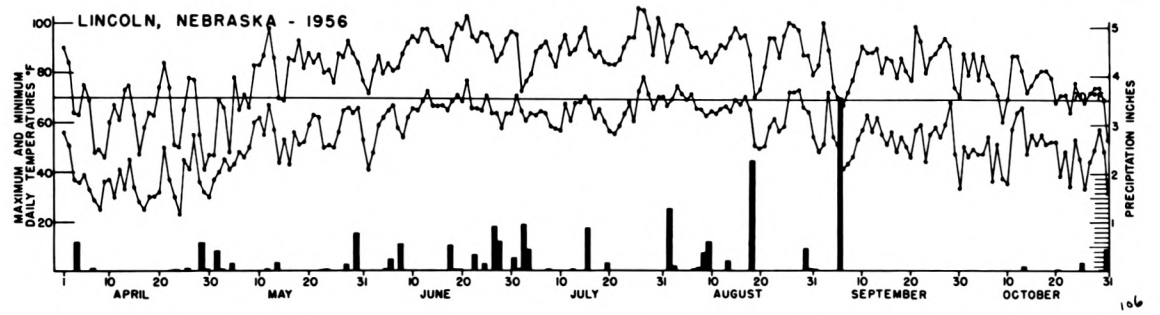
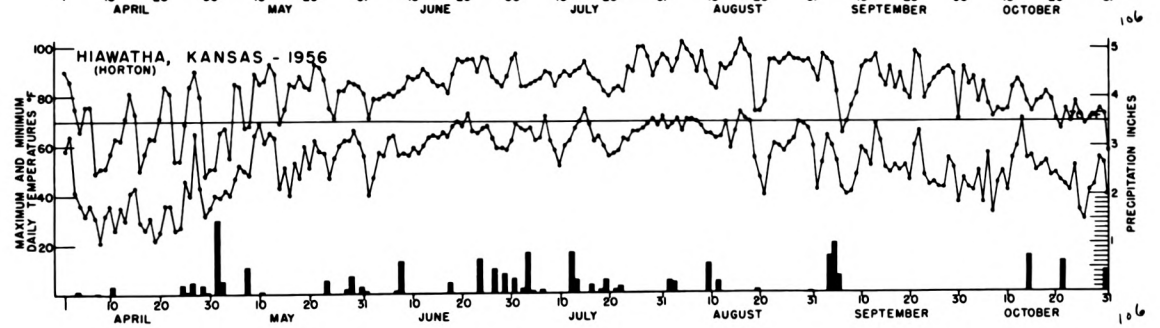
SEPTEMBER
OCTOBER


LINCOLN, NEBRASKA - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


HIAWATHA, KANSAS - 1956
(HORTON)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
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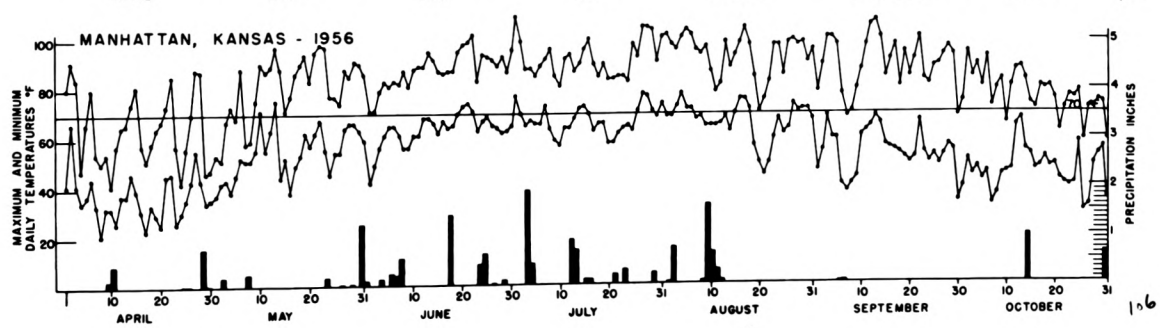
SEPTEMBER
OCTOBER


MANHATTAN, KANSAS - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
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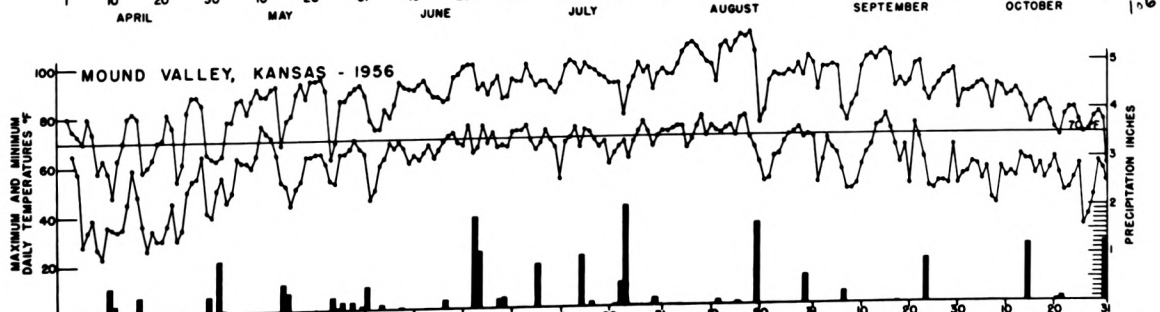
SEPTEMBER
OCTOBER


MOUND VALLEY, KANSAS - 1956
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER