RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART I. NORTH CENTRAL STATES

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1955
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Compiled by:

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This annual report of activity at the U. S. Regional Soybean Laboratory, as well as of that at the state stations with which the Laboratory cooperates, is a progress report and as such may contain statements which may or may not be verified by subsequent experiments. The fact that any statement has been made herein does not necessarily constitute publication. For this reason, citation to particular statements in the Report should not be published unless permission has been granted previously by the cooperating agencies concerned.

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.

Grant, a new soybean variety intermediate in maturity between Norchief and Chippewa, was named and released in the fall of 1955. This strain is the sixteenth in a series of soybean varieties developed cooperatively by the State Agricultural Experiment Stations and the Soybean Laboratory. Grant is adapted in the area of northern South Dakota and through central Minnesota. One of its parents is Lincoln, which has contributed high yield to so many of the strains in production or under test at the present time.

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 of the report, which is issued separately.

Uniform Test, Group 0, contains the strains that will bloom and mature under the longer days encountered during 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 part of 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 not over ten to fifteen 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.

Temperature and rainfall graphs and a brief statement of weather conditions during the 1955 season are included as an aid to interpretation of the agronomic and chemical data. Conditions in the northern part of the North Central States were more favorable for soybeans this year than in 1954. In the central part of the region the conditions up to blooming time were very favorable, resulting in heavy plant growth, but a late summer drouth reduced yields and severely lowered seed quality. This was especially true in parts of Illinois, Iowa, Nebraska, and Kansas. As in the 1953 and 1954 seasons, the seed quality was too poor, due mainly to green drouth damaged seed, to permit determination of iodine number from the refractive index of the extracted oil.

COOPERATING AGENCIES AND PERSONNEL FOR THE NORTH CENTRAL REGION

Forage and Range Section, Beltsville, Maryland

D. F. Beard, Head of Section
H. W. Johnson, Soybean Project Leader
K. W. Kreitlow, Pathology Coordinator

Laboratory Headquarters, Urbana, Illinois

J. L. Cartter, Director
Geraldine E. Miller, Clerk-Stenographer
Carolyn J. Younger, Clerk-Stenographer

Breeding and Genetics

R. L. Bernard, Research Agronomist
Elizabeth M. Berreis, Biological Science Aid[1]
S. J. Gibbons, Agricultural Aid
Ruth E. Lawrence, Statistical Assistant
Marie J. Demlow, Clerk[1]
D. E. Rosenbery, Agricultural Aid

Plant Physiology

R. W. Howell, Plant Physiologist
C. E. Burt, Agricultural Aid
D. J. Stein, Physical Science Aid

Chemical Analysis

F. I. Collins, Chemist
J. H. Conerty, Physical Science Aid
Marjorie L. Pedrotti, Physical Science Aid
O. A. Krober, Chemist
Betty L. Pankey, Physical Science Aid
V. E. Sedgwick, Physical Science Aid

Plant Pathology

D. W. Chamberlain, Plant Pathologist

Lafayette, Indiana

A. H. Probst, Research Agronomist
K. L. Athow, Plant Pathologist

Ames, Iowa

C. R. Weber, Research Agronomist
J. M. Dunleavy, Plant Pathologist

College Park, Maryland

R. C. Leffel, Research Agronomist

St. Paul, Minnesota

J. C. Sentz, Research Agronomist

Columbia, Missouri

L. F. Williams, Research Agronomist

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[1]Part time.

Collaborators in the North Central States

Illinois Agricultural Experiment Station
Agronomy Department: C. M. Woodworth
Food Technology Department: R. T. Milner

Iowa Agricultural Experiment Station
Agronomy Department: I. J. Johnson

Kansas Agricultural Experiment Station
Agronomy Department: E. L. Mader

Michigan Agricultural Experiment Station
Farm Crops Department: S. C. Hildebrand

Minnesota Agricultural Experiment Station
Agronomy and Plant Genetics Department: J. W. Lambert

Missouri Agricultural Experiment Station
Field Crops Department: M. S. Offutt

Nebraska Agricultural Experiment Station
Agronomy Department: D. G. Hanway

North Dakota Agricultural Experiment Station
Agronomy Department: R. E. Bothun

Ohio Agricultural Experiment Station
Agronomy Department: L. C. Saboe

Purdue Agricultural Experiment Station
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, 1955

Location	Cooperator
Ottawa, Ontario, Canada	F. Dimmock, Central Exp. Farm
Guelph, Ontario, Canada	G. E. Jones, Ontario Agr. College
Ridgetown, Ontario, Canada	Western Ontario Agr. College
State College, Pennsylvania	J. B. Washko, Pa. Agr. Exp. Sta.
Landisville, Pennsylvania	Tobacco Substation, Pa. State University
Englishtown, New Jersey	Jurgelski Brothers
Freehold, New Jersey	Hugh Oakley
Newark, Delaware	H. W. Indyk, Del. Agr. Exp. Sta.
Beltsville, Maryland	R. C. Leffel, Forage and Range Section, U. S. D. A.
Hoytville, Ohio	Don Herr, Northwestern Substation
Wooster, Ohio	Glen Gerber, Ohio Agr. Exp. Sta.
Columbus, Ohio	L. C. Saboe, Ohio State Univ.
Mt. Healthy, Ohio	W. L. Jones, Hamilton County Exp. Farm
Walkerton, Indiana	Elburt F. Place, Farmer Cooperator
Bluffton, Indiana	Homer Bayless and Son, Farmer Cooperators
Lafayette, Indiana	O. W. Luetkemeier, Purdue Agr. Exp. Sta.
Greenfield, Indiana	Benjamin Roney and James Marx, Farmer Cooperators
Worthington, Indiana	Frederic Sloan, Farmer Cooperators
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	J. H. Torrie, Wis. Agr. Exp. Sta.
Shabbona, Illinois	R. R. Bell, N. Ill. Exp. Field
Dwight, Illinois	Frank Roeder, 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	E. F. Sullivan, Southern Ill. Univ.
Crookston, Minnesota	J. W. Lambert, Minn. Northwest Exp. Sta.
Morris, Minnesota	J. W. Lambert, Minn. West Central 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.
Marcus, Iowa	John Sand, Farmer Cooperator
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.
Brookings, South Dakota	C. J. Franzke, Agr. Exp. Sta.
Laurel, Nebraska	Darrel Henry, Farmer Cooperator
Lincoln, Nebraska	D. G. Hanway, Nebr. Agr. Exp. Sta.
Powhattan, Kansas	C. E. Wassom, Corn Belt Exper. Field
Manhattan, Kansas	E. L. Mader, Kansas State College
Mound Valley, Kansas	Lloyd Jones, Mound Valley Exp. Sta.
Columbus, Kansas	Verlin Peterson, S. E. Kansas Exp. Field

LOCATION OF COOPERATIVE NURSERIES, 1955 (CONTINUED)

Location	Kind of Soil	Uniform Group Tests					Prel. Tests	
		0	I	II	III	IV	II	III
Ottawa, Ont., Can.	Grenville Sandy Loam	x						
Guelph, Ont., Can.	Guelph Loam	x						
Ridgetown, Ont., Can.	Brookston Clay Loam		x					
State College, Pa.	Hagerstown		x	x				
Landisville, Pa.	Dunsmore Silt Loam				x	x		
Englishtown, N. J.	Keyport Fine Sandy Loam			x				
Freehold, N. J.	Colt's Neck Fine Sandy Loam				x			
Newark, Del.	Sassafras Loam			x	x	x		
Beltsville, Md.	Riverdale Silt Loam				x	x		
Hoytville, Ohio	Hoytville Clay		x	x	x		x	
Wooster, Ohio	Wooster Silt Loam		x	x			x	
Columbus, Ohio	Miami-Brookston Silt Loam	x	x	x	x		x	
Mt. Healthy, Ohio	Fincastle Silt Loam			x			x	
Walkerton, Ind.	Maumee Loam		x	x			x	
Bluffton, Ind.	Nappanee Silt Loam			x			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		
Spooner, Wis.	Omega Sandy Loam	x						
Durand, Wis.	Boone Fine Sandy Loam	x	x					
Madison, Wis.	Miami Silt Loam		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	x	x
Girard, Ill.	Harrison Silt Loam				x			
Edgewood, Ill.	Cisne Silt Loam				x	x		x
Eldorado, Ill.	Beaucoup Silty Clay Loam				x	x		
Carbondale, Ill.	Stoy Silt Loam				x	x		
Crookston, Minn.	Fargo Silty Clay Loam	x						
Morris, Minn.	Barnes Silt Loam	x						
St. Paul, Minn.	Waukegan Silt Loam	x	x					
Waseca, Minn.	LeSueur Silty Clay Loam		x	x				
Cresco, Iowa	Carrington Plastic Till Phase		x					
Kanawha, Iowa	Webster Silty Clay Loam		x	x			x	
Marcus, Iowa	Galva Silt Loam			x				
Independence, Iowa	Carrington Silt Loam			x				
Ames, Iowa	Clarion Silt Loam			x	x		x	x
Ottumwa, Iowa	Haig Silt Loam				x			x
Kirksville, Mo.	Putnam Silt Loam			x	x		x	
Laddonia, Mo.	Putnam Silt Loam				x	x		x
Columbia, Mo.	Putnam Silt Loam				x	x		
Jefferson City, Mo.	Wabash Clay					x		
Casselton, N. D.	Bearden Silty Clay Loam	x						
Fargo, N. D.	Fargo Clay	x						
Brookings, S. D.	Barnes Sandy Loam		x					
Laurel, Nebr.	Moody Silt Loam			x				
Lincoln, Nebr.	Wabash Silt Loam			x	x		x	x
Powhattan, Kans.	Grundy Silty Clay Loam				x			
Manhattan, Kans.	Elmo Silt Loam				x	x		
Mound Valley, Kans.	Parsons Silt Loam					x		
Columbus, Kans.	Cherokee Silt Loam				x	x		

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

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 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 was 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 was 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.

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 O

The origin of the strains in the Uniform Test, Group O, is as follows:

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 (W6S-292)	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Seneca
Hardome	Dominion Exp. Farm, Harrow	Sel. from Mandarin x (Mand. 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.)
O-52-710	Central Exp. Farm, Ottawa	Sel. from Blackhawk x Mandarin (Ott.)
O-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
WOS-3138	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau
WOS-3147	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
WOS-3180	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
WOS-3257	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
WOS-3386	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Flambeau

This test was reported from ten locations in 1955, and the data are presented in Tables 1 through 11. Average yields for the eight locations common to both years were 28 bushels per acre in 1954 and 32 in 1955. This increase reflects the higher yields at Guelph, Ontario; Durand, Wisconsin; and at Fargo and Rosholt, North Dakota.

In the four-year mean yield, Grant and Chippewa lead with Grant slightly ahead and three days earlier in maturity. Grant's yield this year, however, was relatively poor, with Chippewa averaging two bushels higher. The remaining varieties in the four-year table in order of average yield are Renville, Capital, Mandarin (Ottawa), Hardome, Comet, Norchief, and Flambeau. Capital, Hardome, and Flambeau have been notably poor in lodging resistance. Flambeau, despite its low average yield, did well in 1955 at the new far northern location at Crookston, where its earliness was an advantage.

Considering the two-year means, WOS-3386 has been outstanding in yield, nearly equalling Grant and Chippewa and being three and five days earlier in maturity, respectively. Strains WOS-3147, WOS-3257, WOS-3180, and WOS-3138 are all of the same maturity as WOS-3386 but yielded from 1.4 to 3.5 bushels less. Strain W9S-2703 was high in yield, considering its early maturity, and also good in oil content and lodging resistance. Strains W9S-2703, WOS-3138, WOS-3180, and WOS-3386 were in this test in 1953 also, and relative yields were about the same.

The origin, development and description of Grant (W6S-292) are given below.

1939 - Cross Lincoln x Seneca made by L. F. Williams, Urbana, Illinois. Cross designated LX818.

1940 - F_1 grown at Urbana, Illinois.

1941 - F_2 grown at Urbana, Illinois.

1943 - F_3 bulk grown by J. H. Torrie, Madison, Wisconsin.

1944 - F_4 bulk grown at Spooner, Wisconsin.

1945 - F_5 plant rows grown at Spooner, Wisconsin.

1946 - F_6 selection made by C. O. Rydberg, Spooner, Wisconsin; designated W6S-292.

1947-48 - Grown in preliminary yield nurseries at Spooner, Wisconsin.

1949 - F_9 grown in Preliminary Test, Group O.

1950-54 - Grown in Uniform Test, Group O.

1953 - F_{13}, 5 bushels of seed raised at Spooner, Wisconsin; 8 by South Dakota; 1 by Minnesota; and 15 by Ontario Agricultural College.

1954 - F_{14}, increase of breeders' seed.

1955 - Grown in both Uniform Tests, Group O and Group I. The name "Grant" was assigned to the strain and seed was released for commercial production.

W6S-292 is the same as Mandarin (Ottawa) in maturity, two inches taller, less resistant to lodging, 1.4 percent higher in oil, and 2.2 bushels better in yield. It has white flowers, light brown pubescence, and yellow seed with a black hilum.

Table 1. Summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1955.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	10	9	8	10	10	10	10	10
Chippewa	34.2	+3.6	1.7	35	1.7	13.4	39.1	20.7
Renville	33.2	+3.9	1.5	32	1.8	15.8	39.1	21.6
WOS-3386	32.3	-1.1	2.2	33	2.0	14.3	39.5	20.3
O-52-793	32.1	+2.4	2.6	36	1.6	16.6	40.0	21.0
Grant	32.1	+1.0	2.3	32	1.6	14.8	38.9	20.6
Capital	31.6	+3.0	3.2	34	1.6	12.2	39.2	20.7
Mandarin (Ottawa)	31.5	0	1.7	30	1.4	17.6	40.4	20.5
O-52-710	31.3	+2.4	1.8	38	1.7	15.8	40.0	20.2
WOS-3147	31.0	-1.7	1.8	31	1.7	15.5	40.7	20.7
Comet	30.9	-1.8	1.8	34	1.6	15.2	39.1	20.6
Hardome	30.9	-1.0	3.1	38	1.8	15.1	39.6	20.5
WOS-3257	30.8	-1.6	2.4	32	2.0	15.7	41.3	20.3
WOS-3180	30.1	-1.3	2.4	33	2.2	16.5	40.5	20.2
WOS-3138	29.5	-2.2	1.7	30	1.8	16.0	39.8	21.3
W9S-2703	29.5	-3.0	1.7	30	1.8	15.6	40.2	21.4
Norchief	28.9	-3.6	2.1	30	2.1	16.2	39.7	21.0
Flambeau	25.5	-7.2	2.7	31	2.0	15.9	40.2	20.4
Mean	30.9		2.2	33	1.8	15.4	39.8	20.7

[1]Days earlier (-) or later (+) than Mandarin (Ottawa). Mandarin (Ottawa) required 111 days to mature.

Table 2. Summary of yield in bushels per acre for the strains in the Uniform Test, Group 0, 1955.

Strain	Mean of 10 Tests	Ottawa Ont.	Guelph Ont.	Columbus Ohio	Spooner Wis.	Durand Wis.	Crookston Minn.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.
Chippewa	34.2	39.0	49.4	49.7	39.8	23.3	23.6	38.5	44.8	13.0	21.3
Renville	33.2	35.2	48.0	46.3	36.3	27.0	29.5	34.8	39.6	14.3	20.5
WOS-3386	32.3	37.2	42.9	39.6	32.4	29.8	29.2	36.2	36.3	17.3	21.6
0-52-793	32.1	35.1	46.1	42.7	34.8	26.7	22.9	40.0	37.4	14.7	20.8
Grant	32.1	37.2	47.1	42.6	32.1	24.2	26.6	36.8	41.2	14.1	18.8
Capital	31.6	38.0	40.0	44.0	31.1	24.9	27.0	34.1	38.1	17.0	21.8
Mandarin (Ott.)	31.5	31.4	44.5	40.6	33.4	27.1	33.3	37.7	28.8	15.8	22.8
0-52-710	31.3	34.0	44.5	44.5	32.5	23.5	23.3	37.3	41.7	12.8	18.9
WOS-3147	31.0	31.3	42.0	38.1	35.6	24.3	27.5	35.1	38.5	16.6	21.0
Comet	30.9	32.0	41.0	40.3	32.8	27.0	30.0	33.3	34.6	17.1	20.9
Hardome	30.9	37.7	38.6	41.6	30.6	26.7	29.7	34.9	33.2	15.9	19.7
WOS-3257	30.8	32.8	44.9	36.5	32.8	26.6	28.2	33.8	30.8	18.0	24.0
WOS-3180	30.1	32.9	39.0	40.1	31.2	28.4	28.2	32.0	25.4	18.8	24.5
WOS-3138	29.5	31.2	43.1	35.3	31.2	27.7	27.4	35.2	24.6	16.5	23.1
W9S-2703	29.5	30.2	39.5	32.0	31.6	25.0	31.0	31.3	31.0	18.6	24.4
Norchief	28.9	31.3	43.2	32.7	29.6	25.6	25.9	32.7	28.0	18.0	22.0
Flambeau	25.5	26.9	34.6	25.4	28.3	25.0	32.2	26.9	17.2	16.0	22.0
Mean	30.9	33.7	42.8	39.5	32.7	26.0	28.0	34.7	33.6	16.1	21.7
C.V. (%)		6.7	11.9	8.9	8.8	--	10.7	9.8	20.8	13.2	9.9
Bu. N.F.S. (5%)		3.2	7.0	5.0	4.0	--	4.2	4.9	10.0	3.5	3.0
Row Sp. (In.)		30	24	28	36	36	24	40	24	42	36

Table 3. Summary of yield rank for the strains in the Uniform Test, Group O, 1955.

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

Table 4. Summary of maturity data, days earlier (-) or later (+) than Mandarin (Ottawa), for the strains in the Uniform Test, Group 0, 1955.

Strain	Mean of 9 Tests	Ottawa Ont.	Guelph Ont.	Spooner Wis.	Durand Wis.	Crookston Minn.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.
Chippewa	+3.6	+ 2	+3	+5	+ 1	+3	+2	+1	+6	+9
Renville	+3.9	+ 7	+6	+4	+ 1	+2	+2	+1	+6	+6
WOS-3386	-1.1	- 1	-1	-1	- 5	-1	+2	-6	+2	+1
O-52-793	+2.4	+ 2	+2	+3	- 1	+4	+4	-2	+6	+4
Grant	+1.0	- 2	+1	+4	- 1	+1	+2	-3	+3	+4
Capital	+3.0	- 2	0	+2	0	+5	+7	0	+8	+7
Mandarin (Ottawa)	0	0	0	0	0	0	0	0	0	0
O-52-710	+2.4	0	+3	+3	- 2	+5	+2	-1	+8	+4
WOS-3147	-1.7	- 2	-2	-2	- 5	+1	0	-5	+1	-1
Comet	-1.8	- 3	-4	0	- 2	-1	0	-4	0	-2
Hardome	-1.0	- 2	-1	+1	- 2	+1	0	-4	0	-2
WOS-3257	-1.6	+ 3	-2	-3	- 5	+2	+2	-8	-1	-2
WOS-3180	-1.3	0	-1	-2	- 4	+1	+2	-6	0	-2
WOS-3138	-2.2	- 5	-2	-2	- 5	0	+1	-4	-2	-1
W9S-2703	-3.0	- 3	-3	-4	- 5	-2	+1	-5	-3	-3
Norchief	-3.6	-10	-2	-5	- 7	-1	0	-4	-1	-2
Flambeau	-7.2	- 9	-8	-7	-11	-8	-2	-9	-6	-5
Date planted	5/28	5/17	5/24	5/24	5/16	5/31	5/25	5/26	6/16	6/14
Mand.(Ott.) matured	9/16	9/20	9/20	9/8	9/13	9/20	9/13	9/19	9/18	9/15
Days to mature	111	126	119	107	120	112	111	116	94	93

Table 5. Summary of lodging data for the strains in the Uniform Test, Group O, 1955.

Strain	Mean of 8 Tests[1]	Ottawa Ont.	Columbus Ohio	Spooner Wis.	Durand Wis.	Crookston Minn.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.
Chippewa	1.7	1.0	1.5	1.0	1.5	2.8	1.5	3.5	1.0	1.0
Renville	1.5	1.0	1.0	1.0	1.4	1.5	1.7	3.2	1.0	1.0
WOS-3386	2.2	1.3	2.0	1.0	2.0	4.0	2.2	4.2	1.0	1.0
O-52-793	2.6	1.5	2.0	2.0	2.5	4.3	3.0	4.2	1.0	1.0
Grant	2.3	1.3	2.0	1.5	2.4	4.0	2.5	4.0	1.0	1.0
Capital	3.2	1.5	3.3	2.5	3.2	3.8	4.7	4.5	1.0	2.0
Mandarin (Ott.)	1.7	1.0	2.0	1.0	1.1	2.0	2.2	3.2	1.0	1.2
O-52-710	1.8	1.0	1.0	1.0	2.0	2.8	2.0	3.5	1.0	1.0
WOS-3147	1.8	1.0	1.3	1.0	1.6	3.5	2.0	3.0	1.0	1.0
Comet	1.8	1.0	2.0	1.0	1.8	2.5	1.7	3.0	1.0	1.2
Hardome	3.1	1.5	2.8	3.0	2.9	4.0	3.7	4.5	1.0	2.0
WOS-3257	2.4	1.3	3.0	1.0	2.4	4.0	3.0	3.2	1.0	1.2
WOS-3180	2.4	1.5	2.8	1.0	2.2	4.0	3.5	3.2	1.0	1.0
WOS-3138	1.7	1.0	1.5	1.0	1.2	3.0	2.0	3.2	1.0	1.0
W9S-2703	1.7	1.0	1.3	1.0	1.4	2.8	1.5	3.7	1.0	1.0
Norchief	2.1	1.0	2.8	1.0	1.6	3.5	2.0	4.0	1.0	1.0
Flambeau	2.7	1.5	3.3	2.0	2.4	3.3	3.0	4.0	1.0	1.8
Mean	2.2	1.2	2.1	1.4	2.0	3.3	2.5	3.7	1.0	1.2

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

Table 6. Summary of height data for the strains in the Uniform Test, Group O, 1955.

Strain	Mean of 10 Tests	Ottawa Ont.	Guelph Ont.	Columbus Ohio	Spooner Wis.	Durand Wis.	Crookston Minn.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.
Chippewa	35	31	36	38	34	32	38	35	42	31	28
Renville	32	29	31	38	31	29	39	32	38	26	27
WOS-3386	33	27	31	38	31	29	39	33	40	32	28
O-52-793	36	32	34	39	33	34	44	36	41	32	30
Grant	32	29	31	37	32	30	38	33	41	27	26
Capital	34	29	32	39	30	29	39	33	47	32	28
Mandarin (Ott.)	30	28	30	35	27	28	36	30	34	27	24
O-52-710	38	33	36	45	36	35	48	37	45	34	33
WOS-3147	31	25	30	37	29	27	39	33	39	29	26
Comet	34	31	32	38	31	32	40	35	41	31	28
Hardome	38	33	37	43	35	35	49	37	47	35	32
WOS-3257	32	28	30	36	29	27	40	33	42	31	27
WOS-3180	33	28	32	36	28	27	43	35	41	31	27
WOS-3138	30	25	28	34	29	27	37	31	36	26	26
W9S-2703	30	26	29	36	28	26	37	32	34	29	27
Norchief	30	26	28	35	27	26	38	31	34	28	25
Flambeau	31	26	28	33	26	27	38	32	40	28	28
Mean	33	29	31	37	30	29	40	33	40	30	28

Table 7. Summary of percentage of oil for the strains in the Uniform Test, Group 0, 1955.

Strain	Mean of 10 Tests	Ottawa Ont.	Guelph Ont.	Columbus Ohio	Spooner Wis.	Durand Wis.	Crookston Minn.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.
Chippewa	20.7	20.7	20.3	19.9	20.4	17.5	20.6	22.5	21.4	22.3	21.3
Renville	21.6	21.9	21.4	20.9	21.1	20.1	21.5	23.4	22.0	21.8	22.2
WOS-3386	20.3	20.1	19.7	20.1	18.6	18.7	20.7	21.7	20.7	21.9	20.4
0-52-793	21.0	21.2	20.7	20.6	19.6	19.2	20.7	22.5	21.5	22.6	21.6
Grant	20.6	20.9	20.3	20.6	19.7	19.1	20.5	22.1	21.4	21.2	20.4
Capital	20.7	21.4	20.9	20.7	19.6	18.2	20.2	21.9	21.1	21.3	21.6
Mandarin (Ott.)	20.5	20.1	20.8	20.7	18.8	18.6	20.8	21.8	20.6	22.2	20.8
0-52-710	20.2	19.5	20.6	20.3	20.0	17.8	19.7	21.8	21.3	20.4	20.6
WOS-3147	20.7	20.2	20.3	20.7	19.2	18.8	21.2	22.5	21.0	22.3	20.7
Comet	20.6	20.4	21.1	20.5	18.8	18.5	21.6	22.0	20.3	21.9	20.5
Hardome	20.5	20.9	20.7	19.8	18.9	18.4	20.9	22.2	20.8	21.9	20.6
WOS-3257	20.3	20.1	20.8	20.1	18.4	18.5	20.3	21.7	20.5	21.8	20.9
WOS-3180	20.2	19.9	20.7	20.1	18.0	18.4	20.2	21.9	20.6	21.5	21.0
WOS-3138	21.3	20.6	21.1	21.5	19.9	19.7	21.4	23.1	21.1	22.5	21.7
W9S-2703	21.4	21.1	20.7	21.5	19.7	21.0	21.8	23.0	21.1	22.5	21.6
Norchief	21.0	21.1	20.9	20.9	19.8	20.1	21.4	22.5	20.8	21.6	20.9
Flambeau	20.4	20.3	20.4	20.0	18.7	19.4	21.4	21.8	19.7	21.9	20.2
Mean	20.7	20.6	20.7	20.5	19.4	18.9	20.9	22.3	20.9	21.9	21.0

Table 8. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1954-55.

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	15	20	20	20	20	20
Chippewa	32.9	+3.2	1.7	34	1.8	14.7	39.4	20.5
Grant	32.1	+0.9	2.2	32	1.7	15.9	39.2	20.4
WOS-3386	32.0	-2.4	2.2	33	1.8	15.3	40.0	19.9
Renville	31.1	+2.8	1.6	32	2.0	16.6	39.2	21.2
Hardome	30.8	-0.9	3.0	36	1.8	16.1	40.2	20.1
WOS-3147	30.6	-2.2	1.8	31	1.7	16.5	41.3	20.1
Capital	30.4	+1.9	3.0	34	1.8	13.3	39.6	20.3
Comet	30.0	-2.1	1.8	33	1.7	16.1	39.4	20.2
Mandarin (Ottawa)	29.9	0	1.7	29	1.5	19.1	40.8	20.0
W9S-2703	29.6	-4.4	1.7	30	1.9	16.2	40.8	20.6
WOS-3257	29.6	-1.9	2.4	31	2.0	16.3	41.8	19.7
WOS-3180	29.2	-1.7	2.3	32	2.1	17.2	41.2	19.7
WOS-3138	28.5	-2.3	1.7	30	1.9	16.9	40.6	20.5
Norchief	28.0	-4.2	2.1	29	2.1	16.8	40.2	20.5
Flambeau	25.4	-8.3	2.8	30	2.2	16.3	41.1	19.5
Mean	30.0		2.1	32	1.9	16.2	40.3	20.2

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

Table 9. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group O, 1954-55.

Strain	Mean of 20 Tests	Ottawa Ont.	Guelph Ont.	Spooner Wis.	Durand Wis.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.
Chippewa	32.9	37.0	40.9	38.4	20.0	39.1	46.3	17.1	25.4
Grant	32.1	34.9	40.9	33.1	18.7	38.4	43.7	20.8	27.4
WOS-3386	32.0	37.0	36.3	33.7	21.5	36.8	41.1	22.7	26.6
Renville	31.1	35.7	37.2	33.6	19.8	34.5	40.4	18.3	27.1
Hardome	30.8	38.0	33.0	32.2	21.0	34.9	35.8	20.3	27.6
WOS-3147	30.6	32.4	37.7	34.6	19.8	34.6	39.4	20.9	25.8
Capital	30.4	33.1	35.0	31.3	20.1	35.7	39.5	20.4	25.2
Comet	30.0	30.8	34.3	34.7	21.8	31.9	35.5	19.5	26.9
Mandarin (Ottawa)	29.9	31.7	35.1	35.3	21.7	34.7	34.4	19.5	24.7
W9S-2703	29.6	32.0	34.4	33.3	18.8	34.3	32.2	21.8	27.8
WOS-3257	29.6	31.8	35.7	32.7	21.0	34.8	34.6	20.7	27.5
WOS-3180	29.2	33.0	33.6	33.8	21.4	32.5	31.8	22.1	25.2
WOS-3138	28.5	29.6	34.5	31.6	21.1	35.0	30.4	20.1	26.0
Norchief	28.0	28.7	34.8	30.6	19.4	33.7	33.2	20.8	26.4
Flambeau	25.4	28.4	28.8	28.8	19.0	30.8	21.5	19.7	26.6
Mean	30.0	32.9	35.5	33.2	20.3	34.8	36.0	20.3	26.4

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

Table 10. - Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1952-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	43	30	31	42	41	42	46	46
Grant	34.2	+0.3	2.3	31	1.8	15.9	39.7	20.3
Chippewa	33.8	+3.2	1.8	34	1.9	14.5	40.2	20.3
Renville	32.8	+3.0	1.7	31	2.1	16.6	39.5	21.1
Capital	32.5	+1.4	3.0	33	1.9	13.1	40.1	20.4
Mandarin (Ottawa)	32.0	0	1.6	29	1.6	18.9	41.3	19.9
Hardome	31.8	-0.7	2.9	36	2.0	16.0	40.6	20.0
Comet	30.6	-2.2	1.8	33	1.8	16.1	39.8	20.2
Norchief	30.0	-3.8	1.9	29	2.1	16.6	40.5	20.4
Flambeau	26.3	-6.8	2.9	30	2.3	16.2	41.5	19.4
Mean	31.6		2.2	32	1.9	16.0	40.4	20.2

[1]Days earlier (-) or later (+) than Mandarin (Ottawa). Mandarin (Ottawa) required 116 days to mature.

Table 11. Four-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group 0, 1952-55.

Strain	Mean of 43 Tests	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Ohio	East Lansing Mich.	Ottawa Lake Mich.[1]
Years Tested		1952-1955	1952-1955	1952-1954	1952-53 1955	1952-1954	1952-1954
Grant	34.2	38.0	36.8	30.8	32.2	38.2	38.5
Chippewa	33.8	37.1	34.7	33.2	35.8	35.6	41.9
Renville	32.8	36.6	32.4	30.6	34.4	38.0	38.3
Capital	32.5	36.0	33.5	30.3	32.2	38.3	35.4
Mandarin (Ottawa)	32.0	34.5	32.3	29.2	31.3	42.7	38.0
Hardome	31.8	39.5	30.4	31.7	28.2	35.9	37.9
Comet	30.6	32.9	31.6	30.3	29.1	35.4	34.2
Norchief	30.0	31.9	32.0	24.4	24.9	40.0	30.4
Flambeau	26.3	32.2	28.5	21.7	18.7	32.0	24.0
Mean	31.6	35.4	32.5	29.1	29.6	37.3	35.4
		Yield Rank					
Grant		2	1	3	3	4	2
Chippewa		3	2	1	1	7	1
Renville		4	4	4	2	5	3
Capital		5	3	5	3	3	6
Mandarin (Ottawa)		6	5	7	5	1	4
Hardome		1	8	2	7	6	5
Comet		7	7	5	6	8	7
Norchief		9	6	8	8	2	8
Flambeau		8	9	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	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952, 1954
Grant	37.5	24.6	35.8	42.0	29.4	27.5	24.2
Chippewa	38.3	24.7	36.6	43.8	25.8	23.5	20.0
Renville	35.9	24.4	33.3	41.3	28.0	25.3	18.7
Capital	33.6	24.8	35.5	39.8	28.9	26.1	20.7
Mandarin (Ottawa)	37.1	27.2	32.8	34.0	29.2	24.0	16.8
Hardome	34.2	25.4	34.6	37.0	25.9	24.4	18.3
Comet	35.9	25.1	31.4	30.9	27.2	22.8	21.6
Norchief	34.2	24.2	31.4	34.1	27.6	28.6	18.5
Flambeau	27.4	21.5	29.5	24.6	25.2	27.0	14.8
Mean	34.9	24.7	33.5	36.4	27.5	25.5	19.5
	Yield Rank						
Grant	2	6	2	2	1	2	1
Chippewa	1	5	1	1	8	9	4
Renville	4	7	5	3	4	5	8
Capital	8	4	2	4	3	4	3
Mandarin (Ottawa)	3	1	8	7	2	7	5
Hardome	6	2	4	5	7	6	6
Comet	4	3	7	8	6	9	2
Norchief	6	8	7	6	5	1	7
Flambeau	9	9	9	9	9	8	9

UNIFORM TEST, GROUP I

The origin of the strains in the Uniform Test, Group I, is as follows:

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 (W6S-292)	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.)

This test was grown at fourteen locations in 1955, and data from these locations are presented in Tables 12 through 19. The average yield for the thirteen locations where this test was grown in both years was 32 bushels in 1954 and 29 in 1955. In the eastern part of the region, yields were approximately the same both years, except at Wooster, Ohio, where yields were unusually low in 1954. In Wisconsin, Minnesota, Iowa, and South Dakota, the 1955 yields were sharply decreased due to drouth.

The only change in strains in the test this year was the addition of Grant from Uniform Test, Group O. Renville has been in the test two years; AOK-2206 and AOK-3808 have been tested three years.

Five varieties have been in this test for seven years. Chippewa led this group in average yield, with Blackhawk, Earlyana, Monroe, and Mandarin (Ottawa) following in that order. Chippewa and Blackhawk were appreciably above the others in oil content.

In the three-year summary, AOK-2206 and AOK-3808 were equal in performance in most respects, but AOK-3808 averaged a little earlier in maturity. These two strains outyielded Blackhawk by 2.5 bushels and were of the same maturity but slightly lower in oil content.

Although Renville yielded well in 1955, it was outyielded by Chippewa. Grant had a rather poor season and yielded less than Mandarin (Ottawa) in this test.

Taole 12. Summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1955.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	14	12	12	14	14	14	14	14
AOK-3808	31.8	+3.9	1.7	34	1.7	14.4	41.1	20.5
AOK-2206	31.8	+5.1	1.8	38	1.9	14.6	40.8	20.4
Chippewa	31.1	0	1.6	33	1.9	14.1	41.3	20.7
Renville	29.8	+1.2	1.7	31	2.4	16.9	40.4	21.9
Blackhawk	28.3	+5.3	2.2	36	1.8	15.3	40.4	21.0
Monroe	27.6	+1.8	2.6	41	1.9	14.1	41.4	20.4
Mandarin (Ottawa)	27.5	-1.8	1.6	28	2.5	17.2	41.9	20.3
Earlyana	27.5	+7.4	3.2	38	2.4	14.6	42.6	20.1
Grant	27.0	-1.0	2.2	30	1.9	14.4	41.0	20.7
Mean	29.2		2.1	34	2.0	15.1	41.2	20.7

[1]Days earlier (-) or later (+) than Chippewa. Chippewa required 111 days to mature.

Table 13. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1955.

Strain	Mean of 14 Tests	Ridge-town Ontario	State Col-lege Pa.	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Walker-ton Ind.
AOK-3808	31.8	31.1	29.7	38.3	36.0	43.4	43.1
AOK-2206	31.8	33.5	33.3	39.3	36.7	43.5	45.2
Chippewa	31.1	25.0	26.7	41.5	35.3	41.9	39.2
Renville	29.8	20.9	24.3	41.2	32.2	40.0	35.4
Blackhawk	28.3	30.6	29.0	29.9	32.5	38.9	34.6
Monroe	27.6	24.1	26.6	36.9	30.2	37.4	37.3
Mandarin (Ottawa)	27.5	18.3	21.4	37.5	28.7	36.6	39.0
Earlyana	27.5	32.3	25.7	36.0	34.5	37.0	37.2
Grant	27.0	20.0	23.4	34.3	29.6	38.2	35.0
Mean	29.2	26.2	26.7	37.2	32.9	39.7	38.4
C. V. (%)		9.3	8.4	--	--	--	4.8
Bu. Nec. for Sig. (5%)		3.6	3.3	--	--	--	2.7
Row Spacing (In.)		24	36	36	28	28	36

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

Table 13. (Continued)

Strain	Durand Wis.	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
AOK-3808	26.9	33.2	36.3	35.0	31.9	15.2	26.1	18.8
AOK-2206	26.1	28.4	35.2	27.9	31.7	14.6	27.1	22.0
Chippewa	24.8	33.5	35.1	36.3	32.8	16.4	25.8	20.5
Renville	29.9	30.7	31.9	36.2	34.0	15.1	24.7	21.3
Blackhawk	24.9	28.5	35.5	24.0	26.6	15.8	24.8	19.9
Monroe	24.6	26.5	35.6	28.3	25.7	13.6	22.1	17.1
Mandarin (Ottawa)	26.3	27.8	32.1	30.1	27.3	16.0	24.4	19.6
Earlyana	18.4	23.4	34.8	24.2	27.1	13.0	23.9	17.2
Grant	20.6	28.3	29.9	34.2	27.3	15.3	21.6	20.6
Mean	24.7	28.9	34.0	30.7	29.4	15.0	24.5	19.7
C. V. (%)	--	--	8.6	20.6	7.9	10.3	6.0	--
Bu. Nec. for Sig. (5%)	--	--	N.S.	9.5	3.4	2.2	2.1	--
Row Spacing (In.)	36	36	40	24	24	42	40	42
	Yield Rank							
AOK-3808	2	2	1	3	3	5	2	7
AOK-2206	4	5	4	7	4	7	1	1
Chippewa	6	1	5	1	2	1	3	4
Renville	1	3	8	2	1	6	5	2
Blackhawk	5	4	3	9	8	3	4	5
Monroe	7	8	2	6	9	8	8	9
Mandarin (Ottawa)	3	7	7	5	5	2	6	6
Earlyana	9	9	6	8	7	9	7	8
Grant	8	6	9	4	5	4	9	3

Table 14. Summary of maturity data, days earlier (-) or later (+) than Chippewa, and lodging data for the strains in the Uniform Test, Group I, 1955.

Strain	Mean of 12 Tests[1]	Ridge-town Ontario	State Col-lege Pa.	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Walker-ton Ind.
AOK-3808	+3.9	+2	- 8	+4		0	0
AOK-2206	+5.1	+3	+ 6	+5		0	+1
Chippewa	0	0	0	0		0	0
Renville	+1.2	+2	+17	+2		+5	+3
Blackhawk	+5.3	+2	+ 7	+7		+3	+4
Monroe	+1.8	+1	+14	+5		0	+1
Mandarin (Ottawa)	-1.8	+1	+17	-1		+3	0
Earlyana	+7.4	+3	+ 8	+8		+2	+3
Grant	-1.0	+2	0	0		+1	0
Date planted	5/24	5/24	5/26	5/26		5/18	6/2
Chippewa matured	9/12	9/16	10/12	9/7		9/10	9/20
Days to mature	111	115	139	104		115	110
	Mean of 12 Tests[2]			Lodging			
AOK-3808	1.7	2.3	1.0	2.0	1.0	1.8	1.3
AOK-2206	1.8	2.8	1.0	2.0	1.0	1.3	1.5
Chippewa	1.6	2.0	1.0	1.8	1.0	1.3	2.3
Renville	1.7	3.0	1.0	1.5	1.0	1.5	1.5
Blackhawk	2.2	2.8	1.0	2.5	1.0	2.0	2.5
Monroe	2.6	2.3	2.0	3.0	1.0	2.3	4.0
Mandarin (Ottawa)	1.6	2.5	1.0	1.5	1.0	1.0	2.0
Earlyana	3.2	4.3	3.0	3.0	1.0	2.8	4.0
Grant	2.2	3.5	1.0	1.8	1.0	2.0	3.5
Mean	2.1	2.8	1.3	2.1	1.0	1.8	2.5

[1]State College, Pennsylvania not included in the mean.
[2]Wooster, Ohio and Brookings, South Dakota not included in the mean.

Table 14. (Continued)

Strain	Durand Wis.	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
AOK-3808	+ 4	+ 3	+3	+ 4	+7	+5	+5	+10
AOK-2206	+ 9	+ 5	+3	+ 9	+6	+4	+6	+10
Chippewa	0	0	0	0	0	0	0	0
Renville	0	+ 1	0	+ 2	-1	-2	+2	0
Blackhawk	+ 5	+ 8	+3	+ 9	+7	+4	+7	+ 4
Monroe	+ 3	+ 1	+2	+ 3	+1	+2	+2	+ 1
Mandarin (Ottawa)	- 2	- 1	-6	- 1	-3	-3	-5	- 4
Earlyana	+13	+10	+6	+12	+9	+6	+9	+ 8
Grant	- 1	- 1	-5	0	-3	-2	-3	0
Date planted	5/16	5/18	6/1	6/3	5/20	5/31	5/18	5/16
Chippewa matured	9/14	9/7	9/15	9/21	9/5	9/12	9/3	9/15
Days to mature	121	112	106	110	108	104	108	122
	Lodging							
AOK-3808	2.1	1.2	1.0	3.7	1.0	1.2	1.3	1.0
AOK-2206	2.5	1.6	1.0	3.7	1.3	1.1	1.5	1.0
Chippewa	1.5	1.1	1.0	4.0	1.0	1.1	1.4	1.0
Renville	1.8	1.8	1.8	3.5	1.0	1.2	1.3	1.0
Blackhawk	2.8	2.8	2.0	4.0	1.2	1.2	1.8	1.0
Monroe	3.0	2.2	2.8	4.0	1.7	1.2	2.4	1.0
Mandarin (Ottawa)	1.1	1.1	1.3	3.7	1.0	1.2	1.4	1.0
Earlyana	4.0	3.6	3.3	4.5	2.3	1.5	2.2	1.0
Grant	1.9	1.9	2.3	4.5	1.0	1.2	1.7	1.0
Mean	2.3	1.9	1.8	4.0	1.3	1.2	1.7	1.0

Table 15. Summary of height data and percentage of oil for the strains in the Uniform Test, Group I, 1955.

Strain	Mean of 14 Tests	Ridge-town Ontario	State Col-lege Pa.	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Walker-ton Ind.
AOK-3808	34	33	24	33	31	40	36
AOK-2206	38	29	29	37	34	47	43
Chippewa	33	32	26	31	31	39	35
Renville	31	27	25	31	30	37	34
Blackhawk	36	34	28	35	32	44	39
Monroe	41	39	31	41	35	50	47
Mandarin (Ottawa)	28	27	22	27	26	34	32
Earlyana	38	30	30	36	38	47	40
Grant	30	28	21	30	31	37	32
Mean	34	31	26	33	32	42	38

	Mean of 14 Tests	Percentage of Oil					
AOK-3808	20.5	22.3	20.6	21.6	20.4	20.9	21.5
AOK-2206	20.4	22.7	19.9	21.3	20.8	20.7	21.4
Chippewa	20.7	22.8	20.1	21.8	21.2	21.3	21.3
Renville	21.9	22.5	21.1	22.9	22.6	22.8	22.1
Blackhawk	21.0	22.5	20.2	21.5	21.6	21.5	20.9
Monroe	20.4	22.1	19.8	21.4	20.7	20.4	21.2
Mandarin (Ottawa)	20.3	21.5	19.8	21.2	20.8	20.9	20.4
Earlyana	20.1	22.4	19.6	21.3	20.6	20.0	20.8
Grant	20.7	22.9	20.6	21.1	20.9	21.8	21.4
Mean	20.7	22.4	20.2	21.6	21.1	21.1	21.2

Table 15. (Continued)

Strain	Durand Wis.	Madi-son Wis.	Shab-bona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kana-wha Iowa	Brook-ings S.D.
AOK-3808	36	33	39	44	35	30	36	22
AOK-2206	42	38	45	45	39	34	41	24
Chippewa	34	33	39	40	34	29	36	23
Renville	34	32	34	37	34	27	34	20
Blackhawk	37	36	43	44	40	34	39	23
Monroe	42	42	51	56	38	38	44	25
Mandarin (Ottawa)	28	28	33	31	29	26	30	17
Earlyana	40	40	46	46	40	35	42	25
Grant	28	29	34	39	31	28	33	18
Mean	36	35	40	42	36	31	37	22
	Percentage of Oil							
AOK-3808	18.9	19.6	20.9	19.1	21.6	19.8	19.2	20.5
AOK-2206	18.9	18.7	20.4	19.0	21.6	19.8	20.2	20.7
Chippewa	17.9	19.8	21.3	20.3	22.1	20.0	19.7	20.8
Renville	20.3	21.6	22.2	21.1	23.3	21.8	20.8	21.4
Blackhawk	19.6	20.5	21.2	19.8	22.6	20.3	20.8	21.0
Monroe	18.5	19.5	21.0	19.3	21.5	20.2	19.2	20.6
Mandarin (Ottawa)	18.3	19.3	20.7	19.8	21.5	19.7	20.0	20.4
Earlyana	18.9	19.1	19.9	18.5	21.4	19.3	19.8	20.3
Grant	18.1	20.0	20.9	20.2	21.9	19.4	19.9	20.6
Mean	18.8	19.8	20.9	19.7	21.9	20.0	20.0	20.7

Table 16. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1953-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	44	34	37	41	40	45	45	45
AOK-2206	32.4	+5.3	1.9	37	1.8	15.6	40.7	20.0
AOK-3808	32.3	+4.6	1.8	35	1.6	15.3	40.9	20.4
Chippewa	31.5	0	1.7	33	1.9	14.8	40.7	20.8
Blackhawk	29.8	+5.0	2.2	35	1.7	15.6	40.1	20.9
Monroe	28.3	+3.1	2.7	40	1.8	14.9	41.5	20.1
Earlyana	27.8	+6.8	3.2	39	2.3	15.6	42.1	20.0
Mandarin (Ottawa)	26.6	-3.3	1.6	28	2.2	18.1	41.8	20.0
Mean	29.8		2.2	35	1.9	15.7	41.1	20.3

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

Table 17. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1953-55.

Strain	Mean of 44 Tests	State College Pa.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Ottawa Lake Mich.[1]	Walkerton Ind.
Years Tested		1953-1955	1953-1955	1953-1955	1953-1955	1953-1954	1953-1955
AOK-2206	32.4	28.2	39.3	24.0	36.8	38.2	41.1
AOK-3808	32.3	27.6	36.0	25.0	35.6	37.1	40.2
Chippewa	31.5	24.6	36.4	24.9	36.9	37.0	37.2
Blackhawk	29.8	26.5	34.0	23.2	36.4	36.7	32.7
Monroe	28.3	23.9	34.6	22.3	33.9	32.7	35.4
Earlyana	27.8	24.2	35.1	23.6	33.2	27.1	34.4
Mandarin (Ottawa)	26.6	22.4	30.9	18.9	28.9	32.0	33.2
Mean	29.8	25.3	35.2	23.1	34.5	34.4	36.3
		Yield Rank					
AOK-2206		1	1	3	2	1	1
AOK-3808		2	3	1	4	2	2
Chippewa		4	2	2	1	3	3
Blackhawk		3	6	5	3	4	7
Monroe		6	5	6	5	5	4
Earlyana		5	4	4	6	7	5
Mandarin (Ottawa)		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	1953-1955	1953-1955	1953-1955	1953-1955	1953-1955	1953-1955	1953-1955	1954-1955
AOK-2206	24.7	39.1	33.1	34.9	37.4	23.9	33.6	26.3
AOK-3808	23.8	40.3	34.6	38.5	40.3	24.2	33.5	26.3
Chippewa	24.0	39.1	33.3	39.4	39.4	23.9	32.1	25.1
Blackhawk	24.6	37.1	32.8	29.5	34.6	21.9	30.7	24.9
Monroe	23.4	34.0	31.0	31.1	32.4	21.5	29.0	21.6
Earlyana	20.9	--	32.1	30.3	29.6	20.4	29.5	22.6
Mandarin (Ottawa)	24.8	32.6	27.2	31.6	31.4	19.3	25.5	23.9
Mean	23.7	--	32.0	33.6	35.0	22.2	30.6	24.4
	Yield Rank							
AOK-2206	2	2	3	3	3	2	1	1
AOK-3808	5	1	1	2	1	1	2	1
Chippewa	4	2	2	1	2	2	3	3
Blackhawk	3	4	4	7	4	4	4	4
Monroe	6	5	6	5	5	5	6	7
Earlyana	7	--	5	6	7	6	5	6
Mandarin (Ottawa)	1	6	7	4	6	7	7	5

Table 18. Seven-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1949-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	103	77	87	97	90	103	103	103
Chippewa	30.3	0	1.5	33	1.8	15.0	41.1	20.4
Blackhawk	29.8	+5.5	1.9	35	1.6	15.6	40.7	20.6
Earlyana	28.0	+7.1	3.0	38	2.2	15.8	42.5	19.8
Monroe	27.8	+3.3	2.4	39	1.6	15.0	42.1	19.7
Mandarin (Ottawa)	26.8	-2.9	1.3	28	2.0	18.4	42.5	19.6
Mean	28.5		2.0	35	1.8	16.0	41.8	20.0

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

Table 19. Seven-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1949-55.

Strain	Mean of 103 Tests	Guelph Ontario	State College Pa.	Hoytville Ohio[1]	Wooster Ohio	Columbus Ohio	East Lansing Mich.	Ottawa Lake Mich.[2]	Walkerton Ind.
Years Tested		1949-1953	1949-1955	1949-50 1952-55	1951-1955	1949-1955	1951-52 1954	1950-1954	1949-1955
Chippewa	30.3	26.5	25.8	32.8	28.1	31.2	22.4	30.8	35.6
Blackhawk	29.8	26.4	27.3	33.5	27.4	30.8	23.0	33.3	35.1
Earlyana	28.0	23.3	26.3	33.8	27.3	29.0	23.0	26.7	37.5
Monroe	27.8	23.8	25.7	31.7	25.8	29.4	22.7	30.3	35.1
Mandarin (Ottawa)	26.8	25.7	24.6	29.3	21.7	26.6	19.4	28.7	33.9
Mean	28.5	25.1	25.9	32.2	26.1	29.4	22.1	30.0	35.4
		Yield Rank							
Chippewa		1	3	3	1	1	4	2	2
Blackhawk		2	1	2	2	2	1	1	3
Earlyana		5	2	1	3	4	1	5	1
Monroe		4	4	4	4	3	3	3	3
Mandarin (Ottawa)		3	5	5	5	5	5	4	5

[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	Durand Wis.[3]	Madison Wis.	Shabbona Ill.[4]	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
Years Tested	1949-1955	1949-52 1954-55	1949-1955	1949-50 1952-55	1949-1955	1949-1955	1949-1955	1949-50 1952, 1954-55
Chippewa	25.8	34.1	31.7	37.6	35.5	24.2	33.5	21.5
Blackhawk	24.4	35.7	31.2	28.3	33.9	23.8	33.5	22.4
Earlyana	20.7	31.4	30.3	27.0	29.4	22.6	31.1	20.6
Monroe	22.3	32.1	29.6	29.3	29.2	22.5	29.2	19.7
Mandarin (Ottawa)	24.4	29.7	27.0	31.0	30.3	19.6	27.7	21.3
Mean	23.5	32.6	30.0	30.6	31.7	22.5	31.0	21.1
	Yield Rank							
Chippewa	1	2	1	1	1	1	1	2
Blackhawk	2	1	2	4	2	2	1	1
Earlyana	5	4	3	5	4	3	3	4
Monroe	4	3	4	3	5	4	4	5
Mandarin (Ottawa)	3	5	5	2	3	5	5	3

UNIFORM TEST, GROUP II

The origin of the strains in the Uniform Test, Group II, is as follows:

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.)
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 (Linc. x A45-251)
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
H15548	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 (Linc. x Rich.)

This test was grown at twenty-three locations in 1955. Data from these locations are presented in Tables 20 through 27. Yields were generally lower this year due to drouth in part of the Midwest, with yields averaging 37 bushels in 1954 and 32 bushels in 1955 for the twenty locations common to both years. In the East, yields were about the same as last year, though a sharp decrease occurred at the New Jersey location. Locations in Ohio and Indiana (with the exception of Greenfield, Indiana) had increased yields in 1955. Locations in Wisconsin, Illinois (except Shabbona), Iowa, and Nebraska showed moderate to very heavy yield reduction.

Among the six varieties in this test, Lincoln and Adams lead in yield on the four-year average. Harosoy, despite its being six days earlier than Adams, was only 0.7 bushel lower in yield. Harosoy appears to have a yield advantage over Hawkeye in northern Indiana, Illinois, and southern Wisconsin. Blackhawk, of Group I maturity, and Richland were appreciably lower in yield.

Strain A0-8618 has been in this test for four years and has outyielded all varieties, exceeding Lincoln by 2.2 bushels. It has ranked first on the four-year average at fourteen of the nineteen locations and has averaged over a day earlier than Lincoln and about two days later than Adams.

Strain L9-5139 has been in Uniform Test, Group III, for several years but in Group II for only two years. It is a day later than A0-8618, but has yielded a bushel less in the area of this test, although the reverse is true in Group III.

No new strains were added to this test in 1955 so all of them have been tested for two years and C1056 for three years. Of these strains, C1128 has yielded highest on the two-year average and is slightly earlier than Adams. It has been very good in lodging resistance and has the highest average oil content in the test. H13501 has yielded almost as well but is later maturing. C1056 yielded well considering its early maturity but was outyielded slightly by the earlier Harosoy.

Strain H15548 and AX29-163-1-2 are both rather late for this test and might perform better if tested farther south with Group III.

Strains H13116, H14521, and H14025 are a few days later than Hawkeye and have been low in yield.

Table 20. Summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1955.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	21	20	19	21	21	23	23	23
A0-8618	34.9	+ 4.0	1.7	40	1.8	15.0	41.3	20.7
L9-5139	33.6	+ 4.6	1.8	41	1.7	13.9	41.0	20.9
Harosoy	33.6	- 3.3	2.3	40	2.2	15.4	41.4	20.6
Adams	33.6	+ 2.6	2.2	41	1.5	13.3	40.0	21.9
C1128	33.5	+ 2.1	1.7	42	1.8	15.5	40.5	21.8
Hawkeye	33.3	0	1.8	40	2.0	16.2	41.4	21.2
H13501	33.0	+ 4.1	1.8	42	1.9	13.8	40.5	21.3
Lincoln	32.3	+ 5.3	2.0	41	1.8	12.9	40.9	21.0
AX29-163-1-2	32.1	+ 4.0	2.4	41	1.7	14.2	39.7	21.9
H15548	32.0	+10.3	2.4	39	1.9	13.2	40.9	20.5
C1056	31.9	+ 2.4	2.1	39	1.5	14.8	40.8	21.3
H13116	31.7	+ 2.7	1.9	40	2.5	15.2	40.9	20.8
Blackhawk	30.2	- 4.7	1.7	36	2.2	14.4	41.1	20.9
H14521	30.1	+ 1.1	1.8	38	2.3	16.8	40.0	21.6
H14025	29.9	+ 1.7	1.6	37	2.1	16.4	42.3	20.5
Richland	28.1	- 0.1	1.8	34	2.3	15.6	41.1	20.5
Mean	32.1		1.9	39	2.0	14.8	40.9	21.1

[1]Days earlier (-) or later (+) than Hawkeye. Hawkeye required 118 days to mature.

Table 21. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1955.

Strain	Mean of 21 Tests[1]	State College Pa.	English-town N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Mt. Heal-thy Ohio	Walk-erton Ind.	Bluff-ton Ind.	Lafay-ette Ind.	Green-field Ind.
A0-8618	34.9	34.9	19.3	46.0	40.6	35.9	52.4	35.0	49.9	53.1	54.1	32.1
L9-5139	33.6	36.1	20.5	51.9	37.1	32.2	46.4	33.1	50.3	48.7	51.0	29.1
Harosoy	33.6	30.1	14.3	46.1	42.4	35.6	45.2	30.8	44.1	50.8	50.1	30.0
Adams	33.6	36.8	20.1	42.1	36.6	35.8	48.4	31.2	48.1	52.9	51.2	28.0
C1128	33.5	35.3	16.3	46.3	37.6	33.7	52.8	27.5	50.9	52.5	49.8	28.7
Hawkeye	33.3	34.6	16.6	47.1	38.9	32.4	52.3	30.0	45.0	51.7	47.2	30.7
H13501	33.0	35.2	21.2	48.4	36.9	34.7	48.3	29.1	41.2	48.2	48.0	29.2
Lincoln	32.3	38.3	18.1	47.1	36.8	33.3	46.1	30.2	48.8	48.9	49.0	26.6
AX29-163-1-2	32.1	35.5	18.6	43.4	33.2	32.7	47.8	28.9	42.2	48.2	48.8	29.9
H15548	32.0	39.6	18.2	51.1	36.8	34.4	41.3	23.7	48.1	41.8	49.3	28.1
C1056	31.9	37.6	15.3	48.2	36.8	32.9	45.0	26.4	47.6	48.4	46.5	26.8
H13116	31.7	33.8	15.4	48.9	36.4	32.2	44.9	30.4	40.7	42.8	44.9	29.9
Blackhawk	30.2	29.0	11.4	36.8	36.4	30.3	40.8	30.4	35.9	48.8	39.6	28.1
H14521	30.1	30.1	18.1	39.4	39.0	33.8	41.0	30.9	40.4	44.3	39.7	24.2
H14025	28.9	25.5	15.8	35.7	34.7	31.6	37.3	33.1	42.4	47.4	38.5	26.3
Richland	28.1	28.4	11.7	36.6	34.2	33.8	34.7	27.6	35.7	37.7	37.3	27.6
Mean	32.1	33.8	16.9	44.7	37.2	33.5	45.3	29.9	44.5	47.9	46.6	28.5
C.V.(%)		5.7	21.3	9.3	--	--	--	10.4	6.8	8.6	7.7	9.2
B.N.F.S.(5%)		2.8	6.5	5.9	--	--	--	4.4	4.3	6.0	5.0	3.7
Row Sp.(In.)		36	30	36	36	28	28	28	36	38	40	38
		Yield Rank										
A0-8618		9	4	10	2	1	2	1	3	1	1	1
L9-5139		5	2	1	6	13	7	2	2	8	3	7
Harosoy		12	14	9	1	3	9	6	9	5	4	3
Adams		4	3	12	11	2	4	4	5	2	2	11
C1128		7	10	8	5	8	1	14	1	3	5	8
Hawkeye		10	9	6	4	12	3	10	8	4	10	2
H13501		8	1	4	7	4	5	11	12	10	9	6
Lincoln		2	7	6	8	9	8	9	4	6	7	14
AX29-163-1-2		6	5	11	16	11	6	12	11	10	8	4
H15548		1	6	2	8	5	12	16	5	15	6	9
C1056		3	13	5	8	10	10	15	7	9	11	13
H13116		11	12	3	12	13	11	7	13	14	12	4
Blackhawk		14	16	14	12	16	14	7	15	7	14	9
H14521		12	7	13	3	6	13	5	14	13	13	16
H14025		16	11	16	14	15	15	2	10	12	15	15
Richland		15	15	15	15	6	16	13	16	16	16	12

[1]Englishtown, New Jersey, and Laurel, Nebraska not included in the mean.

Table 21. (Continued)

Strain	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Kirksville Mo.	Laurel Nebr.	Lincoln Nebr.
A0-8618	25.9	33.5	18.6	31.3	32.4	26.7	32.4	17.1	30.6	21.7	12.4	28.0
L9-5139	25.9	36.9	19.1	29.4	25.5	24.4	31.4	15.6	30.9	22.1	11.4	28.9
Harosoy	26.6	41.0	21.5	26.1	34.8	23.3	32.8	20.8	24.9	19.4	11.7	29.0
Adams	22.7	37.6	19.9	29.1	26.8	27.9	32.8	20.0	28.4	21.5	12.6	27.1
C1128	24.5	36.2	20.5	27.5	27.1	26.2	32.8	18.7	26.1	21.7	13.2	26.7
Hawkeye	21.7	38.6	17.2	25.7	28.9	26.8	33.6	21.5	29.0	20.3	13.1	26.7
H13501	25.8	36.0	20.2	29.5	26.4	26.3	32.2	15.8	30.6	21.7	14.4	29.6
Lincoln	20.2	33.9	20.4	26.0	25.8	25.6	28.4	13.6	29.5	22.7	10.5	26.6
AX29-163-1-2	25.3	34.7	17.1	31.9	23.5	24.3	31.2	17.1	28.5	22.7	8.3	26.6
H15548	24.5	38.6	20.6	29.1	22.1	21.8	26.6	14.4	29.6	22.4	7.4	28.5
C1056	19.9	36.2	21.5	25.3	25.0	26.6	32.7	15.2	25.9	21.3	12.9	24.0
H13116	24.9	32.6	15.5	22.3	29.3	28.9	29.4	19.0	32.2	21.5	11.1	25.3
Blackhawk	26.8	35.1	20.1	25.6	30.2	26.6	29.0	19.3	27.1	14.0	12.2	25.2
H14521	29.2	31.5	18.5	26.1	22.5	26.5	30.8	17.8	24.9	20.0	10.9	22.5
H14025	27.4	32.7	15.6	26.2	22.2	23.3	27.7	18.2	21.8	17.6	10.6	20.9
Richland	21.8	31.3	14.9	23.4	25.6	22.6	30.9	18.8	25.4	18.0	10.2	24.7
Mean	24.6	35.4	18.8	27.2	26.8	25.5	30.9	17.7	27.8	20.5	11.4	26.3
C.V.(%)	--	7.9	13.3	9.5	10.2	9.4	4.6	10.2	15.7	12.8	19.1	12.8
B.N.F.S.(5%)	--	4.0	3.6	3.6	3.9	3.4	2.0	2.6	6.2	3.7	3.1	4.6
Row Sp.(In.)	36	40	40	40	24	40	40	40	40	40	28	38
	Yield Rank											
A0-8618	5	12	10	2	2	4	6	10	3	5	6	5
L9-5139	5	5	9	4	10	11	8	13	2	4	9	3
Harosoy	4	1	1	9	1	13	2	2	14	13	8	2
Adams	12	4	8	5	7	2	2	3	9	8	5	6
C1128	10	6	4	7	6	9	2	7	11	5	2	7
Hawkeye	14	2	12	12	5	3	1	1	7	11	3	7
H13501	7	8	6	3	8	8	7	12	3	5	1	1
Lincoln	15	11	5	11	9	10	14	16	6	1	13	9
AX29-163-1-2	8	10	13	1	13	12	9	10	8	1	15	9
H15548	10	2	3	5	16	16	16	15	5	3	16	4
C1056	16	6	1	14	12	5	5	14	12	10	4	14
H13116	9	14	15	16	4	1	12	5	1	8	10	11
Blackhawk	3	9	7	13	3	5	13	4	10	16	7	12
H14521	1	15	11	9	14	7	11	9	14	12	11	15
H14025	2	13	14	8	15	13	15	8	16	15	12	16
Richland	13	16	16	15	11	15	10	6	13	14	14	13

Table 22. Summary of maturity data, days earlier (-) or later (+) than Hawkeye, and lodging data for the strains in the Uniform Test, Group II, 1955.

Strain	Mean of 20 Tests[1]	State College Pa.	English-town N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Mt. Healthy Ohio	Walk-erton Ind.	Bluff-ton Ind.	Lafay-ette Ind.
A0-8618	+ 4.0	+ 7	+3	+ 6	+ 5	+ 3	+7	+ 4	+ 5	+ 7	+ 2
L9-5139	+ 4.6	+ 6	+3	+ 7	+ 6	+ 3	+6	+ 6	+ 5	+ 5	+ 3
Harosoy	- 3.3	+20	-1	+ 9	0	- 4	-1	- 1	0	- 1	- 3
Adams	+ 2.6	+15	+4	+11	+11	0	+9	+ 3	+ 5	+ 8	+ 3
C1128	+ 2.1	+15	+3	+11	+ 4	+ 3	+4	+ 6	+ 3	+ 3	+ 1
Hawkeye	0	0	0	0	0	0	0	0	0	0	0
H13501	+ 4.1	+ 5	+4	+ 8	+ 4	+ 3	+6	+ 5	+ 3	+ 6	+ 3
Lincoln	+ 5.3	+ 8	+3	+ 9	+ 9	+ 3	+8	+ 4	+ 7	+ 8	+ 3
AX29-163-1-2	+ 4.0	+10	+3	+ 6	+12	+ 3	+4	+ 2	+ 7	+ 7	+ 3
H15548	+10.3	+15	+3	+10	+17	+12	+9	+11	+16	+12	+17
C1056	+ 2.4	+ 3	0	+ 5	+ 6	+ 2	+3	+ 2	+ 5	+ 4	+ 2
H13116	+ 2.7	+14	+2	+10	+ 3	0	+6	+ 3	+ 3	+ 7	+ 3
Blackhawk	- 4.7	+15	-1	+ 8	- 4	- 4	+2	- 4	- 4	- 7	- 7
H14521	+ 1.1	+17	+3	+ 9	+ 4	- 1	+7	+ 1	+ 2	+ 6	- 1
H14025	+ 1.7	+23	+5	+12	+ 3	0	+8	+ 2	+ 3	+ 8	+ 1
Richland	- 0.1	+18	+1	+ 9	- 1	0	+4	0	+ 1	+ 5	0
Date planted	5/22	5/26	5/27	5/26	5/26	5/19	5/18	5/20	6/2	5/26	5/20
Hawkeye matured	9/17	10/4	9/17	9/21	9/17	9/15	9/17	9/10	9/22	9/19	9/18
Days to mature	118	131	113	118	114	119	122	113	112	116	121
	Mean of 19 Tests	Lodging									
A0-8618	1.7	2.0		2.3	1.5	1.0	1.5	1.0	2.0	1.8	1.8
L9-5139	1.8	2.0		2.3	1.3	1.3	2.0	1.0	1.8	2.5	1.8
Harosoy	2.3	1.0		3.5	2.8	1.0	2.0	2.3	3.3	2.8	2.8
Adams	2.2	3.0		3.8	2.3	1.0	1.5	1.0	2.0	1.3	2.3
C1128	1.7	1.0		2.8	2.0	1.0	1.5	1.0	1.5	1.8	1.5
Hawkeye	1.8	1.0		2.5	2.3	1.0	1.3	1.0	1.5	1.8	2.3
H13501	1.8	2.0		2.0	1.8	1.3	1.5	1.0	2.0	2.3	2.3
Lincoln	2.0	2.0		3.3	2.0	1.3	2.0	1.0	2.0	1.5	1.5
AX29-163-1-2	2.4	3.0		3.3	2.3	1.0	2.0	1.5	2.3	2.0	3.3
H15548	2.4	2.0		4.0	2.0	1.0	2.0	1.7	3.8	2.5	2.5
C1056	2.1	2.0		3.5	2.3	1.0	1.5	1.3	1.8	2.0	2.3
H13116	1.9	2.0		2.8	1.5	1.0	2.0	1.5	2.0	2.3	2.3
Blackhawk	1.7	1.0		2.5	1.3	1.0	1.8	1.3	1.5	1.3	2.3
H14521	1.8	2.0		3.0	2.0	1.0	1.5	1.3	1.5	1.5	2.3
H14025	1.6	2.0		1.8	1.8	1.0	1.3	1.0	1.8	2.0	2.0
Richland	1.8	1.0		2.5	1.8	1.0	2.0	1.8	2.0	2.5	2.5
Mean	1.9	1.8		2.9	1.9	1.1	1.7	1.3	2.1	2.0	2.2

[1]State College, Pennsylvania and Newark, Delaware not included in the mean.

Table 22. (Continued)

Strain	Green-field Ind.	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Wa-seca Minn.	Kana-wha Iowa	Mar-cus Iowa	Inde-pen-dence Iowa	Ames Iowa	Kirks-ville Mo.	Lin-coln Nebr.
A0-8618	+3	+ 2	+ 7	+ 6	+5	+4	+2	+ 2	+2	+ 5	+4	+2
L9-5139	+2	+ 3	+ 9	+ 7	+5	+4	+4	+ 4	+3	+ 7	+3	+4
Harosoy	+1	- 4	- 4	-11	-7	-4	-4	- 3	-3	- 5	-5	-6
Adams	+4	0	+ 5	- 3	-2	0	+1	+ 2	0	+ 1	0	0
C1128	+2	+ 1	+ 6	0	+1	0	-1	+ 2	0	+ 2	0	+1
Hawkeye	0	0	0	0	0	0	0	0	0	0	0	0
H13501	+2	+ 1	+ 7	+ 5	+5	+2	+4	+ 4	+4	+ 6	+4	+3
Lincoln	+4	+ 4	+ 8	+ 6	+7	+5	+4	+ 4	+3	+ 6	+5	+5
AX29-163-1-2	+2	+ 4	+ 4	+ 2	+4	+3	+3	+ 5	+2	+ 5	+2	+3
H15548	+8	+13	+10	+10	+9	+6	+7	+13	+7	+10	+9	+6
C1056	+1	+ 2	+ 5	+ 2	0	+2	+1	+ 3	0	+ 3	+3	+1
H13116	+2	0	+ 6	+ 3	+3	0	+2	0	+2	+ 4	+3	+1
Blackhawk	-3	- 5	- 4	-10	-6	-6	-6	- 5	-3	- 6	-5	-6
H14521	+1	- 3	+ 4	- 3	-3	0	0	+ 1	0	+ 3	0	+1
H14025	+2	- 1	+ 7	- 3	0	-2	-1	+ 1	0	+ 2	0	-1
Richland	+1	- 2	+ 1	- 2	-1	-1	-2	- 1	-1	0	-1	-2
Date planted	6/1	5/18	6/1	5/7	5/19	5/20	5/18	5/24	5/12	5/7	6/4	5/30
Hawkeye matured	9/14	9/20	9/24	9/13	9/12	9/19	9/14	9/17	9/14	9/11	9/17	9/28
Days to mature	105	125	115	129	116	122	119	116	125	127	105	121

	Lodging										
A0-8618	1.5	2.2	1.0	1.3	3.8		1.2	1.4	1.2	1.4	1.5
L9-5139	1.8	2.0	1.3	1.3	4.0		1.4	1.4	1.4	1.5	1.8
Harosoy	2.0	3.1	2.3	1.3	5.0		2.2	1.6	1.6	1.3	1.5
Adams	1.8	3.4	2.5	1.8	4.0		2.0	2.0	1.4	1.6	2.2
C1128	1.5	2.8	1.8	1.3	3.3		1.6	1.3	1.3	1.4	1.2
Hawkeye	1.3	3.0	1.8	1.0	4.3		1.7	1.4	1.3	1.4	1.5
H13501	1.8	2.1	1.3	1.5	3.5		1.7	1.6	1.3	1.6	1.2
Lincoln	1.8	2.8	1.5	2.0	3.8		1.9	1.9	1.4	1.7	1.8
AX29-163-1-2	2.0	3.4	2.3	1.8	4.0		2.2	1.9	1.7	1.9	3.0
H15548	2.0	3.0	2.5	2.0	4.0		2.1	2.6	2.2	2.0	2.5
C1056	2.0	3.1	1.8	1.5	4.5		2.0	1.9	1.6	1.6	1.8
H13116	1.3	2.6	1.8	1.5	5.0		1.7	1.4	1.4	1.8	1.0
Blackhawk	1.0	3.2	2.0	1.0	4.3		1.6	1.2	1.4	1.4	1.5
H14521	1.3	2.4	1.3	1.5	3.5		1.4	1.6	1.5	1.5	1.2
H14025	1.3	1.4	1.5	1.0	3.5		1.6	1.4	1.3	1.3	1.0
Richland	1.3	1.6	1.5	1.3	4.5		1.8	1.4	1.6	1.5	1.5
Mean	1.6	2.6	1.8	1.4	4.1		1.8	1.6	1.5	1.6	1.6

Table 23. Summary of height data and percentage of oil for the strains in the Uniform Test, Group II, 1955.

Strain	Mean of 20 Tests	State College Pa.	English-town N.J.	New-ark Del.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Mt. Heal-thy Ohio	Walk-erton Ind.	Bluff-ton Ind.	Lafay-ette Ind.	Green-field Ind.
A0-8618	40	36		31	38	38	48	48	40	46	48	37
L9-5139	41	37		35	41	38	51	46	43	45	48	36
Harosoy	40	30		32	39	37	48	48	43	47	48	37
Adams	41	33		31	41	38	51	47	41	48	49	37
C1128	42	35		35	44	39	51	49	45	50	52	35
Hawkeye	40	33		32	38	36	49	46	42	48	49	34
H13501	42	35		32	43	39	52	50	43	50	50	39
Lincoln	41	37		34	40	38	48	48	41	47	48	36
AX29-163-1-2	41	35		31	40	39	51	50	44	47	47	36
H15548	39	37		36	38	38	47	44	38	43	43	35
C1056	39	36		33	39	38	49	48	40	43	45	34
H13116	40	32		33	42	38	47	45	42	45	47	35
Blackhawk	36	26		30	34	33	43	43	37	44	44	32
H14521	38	31		30	39	37	47	47	39	45	44	34
H14025	37	30		29	34	34	45	45	37	45	43	34
Richland	34	30		28	33	34	42	42	35	41	40	30
Mean	39	33		32	39	37	48	47	41	46	47	35
	Mean of 23 Tests	Percentage of Oil										
A0-8618	20.7	19.9	21.0	21.6	20.5	20.7	20.3	21.2	20.2	20.4	21.7	21.2
L9-5139	20.9	19.8	21.7	22.0	20.9	20.7	20.4	21.3	21.0	19.9	22.3	21.7
Harosoy	20.6	19.6	20.8	20.8	21.7	21.3	21.0	21.5	20.9	20.8	21.8	20.9
Adams	21.9	20.5	21.3	21.8	21.8	21.9	21.7	23.0	21.8	20.8	22.8	22.4
C1128	21.8	20.3	22.0	22.5	22.0	21.5	22.0	20.2	21.9	21.6	23.3	22.7
Hawkeye	21.2	20.7	21.6	22.6	22.3	21.5	21.5	21.2	21.7	21.2	21.9	21.3
H13501	21.3	20.4	21.4	21.3	21.5	21.2	21.1	21.4	22.0	20.5	22.5	22.1
Lincoln	21.0	20.5	21.2	22.0	20.8	21.0	21.3	21.1	21.0	20.3	22.5	21.6
AX29-163-1-2	21.9	21.0	22.3	22.5	22.2	21.4	22.0	22.3	22.0	21.9	22.7	22.9
H15548	20.5	19.8	20.8	21.9	20.4	20.4	20.6	21.2	20.3	19.7	21.5	21.2
C1056	21.3	20.9	22.5	22.7	21.4	20.9	21.5	21.1	22.0	21.3	22.7	21.8
H13116	20.8	20.0	21.4	20.9	20.7	21.0	20.5	21.7	20.6	20.3	21.4	21.6
Blackhawk	20.9	20.2	20.7	21.2	21.7	21.3	20.6	20.4	21.1	20.5	21.4	21.2
H14521	21.6	20.1	22.3	22.1	21.8	22.0	21.7	21.9	21.2	20.8	22.8	21.6
H14025	20.5	19.6	21.2	20.7	20.9	20.6	19.9	20.7	20.6	19.9	21.3	20.7
Richland	20.5	20.4	21.3	20.9	20.9	20.9	21.1	20.7	20.5	20.5	20.8	20.6
Mean	21.1	20.2	21.5	21.7	21.3	21.1	21.1	21.3	21.2	20.7	22.1	21.6

Table 23. (Continued)

Strain	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Kirksville Mo.	Laurel Nebr.	Lincoln Nebr.
A0-8618	41	43	40			42	42	44	40	32	28	39
L9-5139	41	46	41			41	44	45	42	32	30	40
Harosoy	43	44	42			40	41	45	41	30	26	39
Adams	42	48	41			42	42	46	40	30	26	40
C1128	43	48	44			43	45	47	41	32	28	41
Hawkeye	39	46	43			42	42	48	42	29	27	39
H13501	45	46	43			44	46	45	43	33	28	42
Lincoln	41	44	39			43	43	44	42	33	28	40
AX29-163-1-2	42	45	40			42	44	46	44	32	28	40
H15548	38	42	39			39	40	39	40	32	29	36
C1056	39	43	40			40	40	43	38	31	26	38
H13116	41	43	41			42	39	43	41	32	26	38
Blackhawk	36	42	37			40	38	44	36	28	24	37
H14521	39	43	38			39	39	41	37	29	26	34
H14025	38	40	38			38	37	42	36	29	24	34
Richland	36	35	36			35	34	38	35	26	22	34
Mean	40	44	40			41	41	44	40	31	27	38
	Percentage of Oil											
A0-8618	20.5	19.4	19.4	21.1	21.1	20.9	21.7	19.5	21.4	20.4	20.4	21.0
L9-5139	19.6	20.0	19.9	21.5	21.0	21.5	21.4	19.9	21.6	21.0	19.5	21.9
Harosoy	20.6	20.4	20.3	19.5	21.8	20.0	21.4	18.6	20.9	20.3	19.0	20.4
Adams	21.0	21.0	21.9	21.4	22.6	22.3	22.5	21.0	22.9	21.6	22.8	22.2
C1128	21.6	20.4	20.9	22.0	22.2	21.7	22.6	21.0	22.4	22.6	22.1	21.8
Hawkeye	20.7	20.3	20.5	21.0	21.9	21.1	22.2	20.0	21.1	19.0	21.7	20.9
H13501	20.6	20.5	21.0	21.8	21.6	22.1	21.9	20.6	22.0	20.4	21.4	21.7
Lincoln	19.8	20.4	20.2	21.1	20.6	21.6	21.5	19.6	21.9	20.4	20.3	21.3
AX29-163-1-2	21.0	21.7	20.8	22.2	22.1	22.3	22.7	20.2	22.2	20.8	21.2	22.2
H15548	19.9	19.7	20.0	20.7	20.4	20.3	21.2	19.1	20.7	20.6	19.6	21.2
C1056	20.2	21.0	20.0	20.7	21.6	21.6	22.2	19.3	21.4	21.2	21.4	21.6
H13116	20.7	19.6	20.1	20.8	21.6	21.2	21.5	20.4	21.6	20.2	20.3	20.7
Blackhawk	20.6	20.4	21.0	19.3	22.5	20.7	22.3	19.6	21.4	20.8	20.8	21.5
H14521	22.0	20.6	20.7	21.6	22.3	21.4	22.3	20.4	21.9	21.2	21.7	21.6
H14025	20.9	19.2	19.5	20.0	21.4	20.4	20.7	19.9	21.1	20.5	20.4	20.6
Richland	20.5	19.2	19.8	20.0	21.7	19.8	21.4	19.5	19.9	20.0	20.2	20.9
Mean	20.6	20.2	20.4	20.9	21.7	21.2	21.8	19.9	21.5	20.7	20.8	21.3

Table 24. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1954-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	43	36	38	43	39	45	44	44
A0-8618	37.9	+ 4.7	2.0	39	1.9	16.3	41.0	20.7
L9-5139	36.9	+ 5.6	2.2	40	1.8	15.2	40.5	21.0
C1128	36.5	+ 3.5	1.8	41	1.9	16.7	40.1	21.8
H13501	36.1	+ 5.0	2.1	41	2.1	15.0	40.1	21.3
Adams	35.5	+ 4.3	2.3	39	1.7	14.6	39.8	21.7
Harosoy	35.2	- 2.8	2.3	38	2.0	17.1	41.2	20.7
Lincoln	35.1	+ 6.3	2.3	40	1.9	14.3	40.4	21.1
C1056	34.9	+ 2.8	2.4	38	1.7	16.4	40.2	21.5
H15548	34.8	+10.2	2.7	38	2.2	14.2	40.5	20.7
Hawkeye	34.7	0	1.8	37	1.8	17.6	41.1	21.2
AX29-163-1-2	34.3	+ 6.1	2.7	40	2.0	15.6	39.5	21.8
H13116	33.9	+ 3.5	2.1	39	2.4	16.7	40.6	20.8
H14521	33.6	+ 2.0	2.0	37	2.3	18.5	39.9	21.5
Blackhawk	32.0	- 4.5	1.8	34	2.1	15.6	40.8	20.9
Richland	31.0	+ 0.8	1.8	33	2.2	17.0	40.8	20.5
H14025	29.4	+ 3.0	1.8	35	2.4	17.5	42.3	20.3
Mean	34.5		2.1	38	2.0	16.1	40.6	21.1

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

Table 25. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1954-55.

Strain	Mean of 43 Tests	State College Pa.	English-town N.J.[1]	Newark Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.
A0-8618	37.9	34.0	28.8	42.4	41.0	30.2	44.8	42.9	51.3	48.9
L9-5139	36.9	36.3	28.3	47.1	38.1	29.2	42.5	41.6	45.3	47.1
C1128	36.5	35.5	24.9	41.4	38.6	27.3	43.8	44.8	51.2	46.4
H13501	36.1	34.8	30.1	44.4	37.7	29.6	43.2	37.3	48.3	45.5
Adams	35.5	35.4	27.8	39.0	38.8	30.0	41.5	40.4	48.5	46.8
Harosoy	35.2	32.5	24.4	40.0	38.8	28.0	39.8	41.2	52.0	45.5
Lincoln	35.1	36.1	27.4	44.7	36.3	29.7	38.5	39.3	48.0	44.5
C1056	34.9	35.4	27.3	42.6	36.9	28.2	38.3	40.1	46.4	44.1
H15548	34.8	36.7	29.5	47.1	36.3	31.1	39.7	40.6	42.5	45.5
Hawkeye	34.7	32.3	24.6	40.0	39.2	25.9	44.7	39.3	48.1	42.7
AX29-163-1-2	34.3	34.1	26.2	39.3	35.8	27.1	43.8	36.7	44.0	45.1
H13116	33.9	32.6	24.8	44.0	34.6	28.7	39.4	35.4	42.6	41.7
H14521	33.6	31.4	29.7	38.2	37.7	28.7	38.3	36.1	44.7	39.5
Blackhawk	32.0	29.9	21.3	34.7	34.1	25.0	34.8	33.2	46.4	35.7
Richland	31.0	28.2	22.8	35.1	33.3	28.7	35.8	32.3	39.9	35.4
H14025	29.4	24.8	23.7	33.2	33.6	26.4	29.4	34.9	42.1	35.1
Mean	34.5	33.1	26.4	40.8	36.9	28.4	39.9	38.5	46.3	43.1

	Yield Rank								
A0-8618	9	4	7	1	2	1	2	2	1
L9-5139	2	5	1	6	6	6	3	10	2
C1128	4	10	8	5	12	3	1	3	4
H13501	7	1	4	7	5	5	10	5	5
Adams	5	6	12	3	3	7	6	4	3
Harosoy	11	13	9	3	11	8	4	1	5
Lincoln	3	7	3	10	4	11	8	7	9
C1056	5	8	6	9	10	12	7	8	10
H15548	1	3	1	10	1	9	5	14	5
Hawkeye	12	12	9	2	15	2	8	6	11
AX29-163-1-2	8	9	11	12	13	3	11	12	8
H13116	10	11	5	13	7	10	13	13	12
H14521	13	2	13	7	7	12	12	11	13
Blackhawk	14	16	15	14	16	15	15	8	14
Richland	15	15	14	16	7	14	16	16	15
H14025	16	14	16	15	14	16	14	15	16

[1]Middlesex County, New Jersey, 1954.

Table 25. (Continued)

Strain	Green-field Ind.	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Wa-seca Minn.	Kana-wha Iowa	Mar-cus Iowa	Inde-pen-dence Iowa	Ames Iowa	Lin-coln Nebr.
A0-8618	36.6	37.7	34.7	32.8	34.7	36.4	34.5	41.5	27.0	35.7	35.1
L9-5139	37.8	38.7	35.4	32.7	33.4	34.0	32.5	40.4	26.0	36.0	37.3
C1128	34.4	38.2	37.2	34.0	34.0	32.9	33.0	40.7	27.2	30.5	31.6
H13501	36.5	35.4	34.5	34.6	33.4	30.9	33.5	40.6	26.7	34.3	33.9
Adams	32.8	33.5	36.4	33.6	33.0	31.5	32.1	39.6	27.9	32.3	32.2
Harosoy	29.4	35.7	36.0	33.5	31.5	37.7	29.7	39.4	27.7	28.2	33.2
Lincoln	35.0	35.5	33.0	31.3	30.2	31.8	30.3	38.8	25.3	34.4	31.9
C1056	34.9	32.2	34.3	33.7	31.9	31.2	33.3	41.5	25.0	31.2	31.2
H15548	36.4	29.3	34.5	29.8	32.5	26.8	27.4	36.0	26.4	36.5	35.4
Hawkeye	32.6	31.9	36.4	31.8	31.8	33.4	32.3	40.8	27.5	31.0	33.3
AX29-163-1-2	35.5	30.9	34.4	31.1	34.2	26.8	30.6	40.6	26.2	33.5	32.1
H13116	34.3	35.5	33.0	27.1	29.8	33.4	31.5	37.3	25.8	33.8	31.4
H14521	31.3	37.8	31.9	31.1	31.0	30.6	31.4	39.4	25.9	28.8	30.0
Blackhawk	27.8	35.2	34.4	29.1	28.9	33.1	31.4	37.2	26.4	28.9	29.5
Richland	29.4	30.1	30.6	28.4	27.8	29.3	28.1	37.7	23.0	29.7	31.5
H14025	26.6	34.9	28.2	25.0	27.0	27.4	25.6	32.8	23.0	26.1	25.2
Mean	33.2	34.5	34.1	31.2	31.6	31.7	31.1	39.0	26.1	31.9	32.2
	Yield Rank										
A0-8618	2	4	6	6	1	2	1	1	5	3	3
L9-5139	1	1	5	7	4	3	5	7	10	2	1
C1128	8	2	1	2	3	7	4	4	4	11	10
H13501	3	8	7	1	4	11	2	5	6	5	4
Adams	10	11	2	4	6	9	7	8	1	8	7
Harosoy	13	5	4	5	10	1	13	9	2	15	6
Lincoln	6	6	12	9	12	8	12	11	13	4	9
C1056	7	12	11	3	8	10	3	1	14	9	13
H15548	4	16	7	12	7	15	15	15	7	1	2
Hawkeye	11	13	2	8	9	4	6	3	3	10	5
AX29-163-1-2	5	14	9	10	2	15	11	5	9	7	8
H13116	9	6	12	15	13	4	8	13	12	6	12
H14521	12	3	14	10	11	12	9	9	11	14	14
Blackhawk	15	9	9	13	14	6	9	14	7	13	15
Richland	13	15	15	14	15	13	14	12	15	12	11
H14025	16	10	16	16	16	14	16	16	15	16	16

Table 26. Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1952-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	88	63	78	85	76	90	90	90
A0-8618	36.5	+5.0	2.0	40	1.9	16.1	40.7	20.8
Lincoln	34.3	+6.3	2.2	40	1.8	14.3	40.4	21.1
Adams	34.2	+3.0	2.2	39	1.6	14.4	39.6	21.6
Harosoy	33.5	-3.3	2.1	38	1.8	16.9	41.0	20.7
Hawkeye	33.0	0	1.7	37	1.7	17.3	41.0	21.1
Blackhawk	30.0	-6.1	1.8	34	2.0	15.5	40.4	21.1
Richland	30.0	+0.7	1.8	33	2.1	16.7	40.6	20.6
Mean	33.1		2.0	37	1.8	15.9	40.5	21.0

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

Table 27. Four-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1952-55.

Strain	Mean of 88 Tests	State College Pa.	Newark Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.
Years Tested		1952-1955	1953-1955	1952-1955	1952-1955	1952-1955	1952-53 1955	1952-1955	1952-1955	1952-1955
A0-8618	36.5	31.9	38.3	38.5	29.9	37.6	33.7	41.8	49.8	43.5
Lincoln	34.3	33.5	40.7	34.7	30.5	34.6	30.9	39.0	48.5	40.9
Adams	34.2	31.3	36.6	36.7	29.9	34.2	27.4	40.1	47.5	42.3
Harosoy	33.5	30.3	34.8	37.1	26.7	31.3	26.9	41.3	45.8	40.9
Hawkeye	33.0	29.9	35.1	35.4	26.6	34.9	27.5	37.7	45.1	39.2
Blackhawk	30.0	25.9	31.9	31.7	26.2	27.8	25.3	33.2	41.9	33.9
Richland	30.0	27.0	32.6	32.6	27.6	29.2	26.1	34.7	38.6	33.2
Mean	33.1	30.0	35.7	35.2	28.2	32.8	28.3	38.3	45.3	39.1
		Yield Rank								
A0-8618		2	2	1	2	1	1	1	1	1
Lincoln		1	1	5	1	3	2	4	2	3
Adams		3	3	3	2	4	4	3	3	2
Harosoy		4	5	2	5	5	5	2	4	3
Hawkeye		5	4	4	6	2	3	5	5	5
Blackhawk		7	7	7	7	7	7	7	6	6
Richland		6	6	6	4	6	6	6	7	7

Table 27. (Continued)

Strain	Green-field Ind.	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Kana-wha Iowa	Mar-cus Iowa	Inde-pen-dence Iowa	Ames Iowa	Lin-coln Nebr.
Years Tested	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955
A0-8618	44.0	43.3	30.7	31.3	35.2	33.7	42.5	32.5	40.3	29.7
Lincoln	43.7	39.6	28.6	29.4	31.8	29.4	40.0	29.5	37.1	28.9
Adams	41.0	39.3	31.2	32.1	32.2	32.0	40.7	31.5	37.5	28.3
Harosoy	36.5	39.8	31.9	31.9	32.2	32.0	41.3	31.1	33.1	28.2
Hawkeye	38.5	36.7	29.5	29.7	30.3	33.3	41.6	30.6	36.2	27.5
Blackhawk	31.8	39.5	27.8	27.4	26.6	31.5	38.0	28.8	30.9	22.3
Richland	35.8	34.7	25.1	26.2	27.6	28.0	37.8	26.4	34.7	26.2
Mean	38.8	39.0	29.3	29.7	30.8	31.4	40.3	30.1	35.7	27.3
					Yield Rank					
A0-8618	1	1	3	3	1	1	1	1	1	1
Lincoln	2	3	5	5	4	6	5	5	3	2
Adams	3	5	2	1	2	3	4	2	2	3
Harosoy	5	2	1	2	2	3	3	3	6	4
Hawkeye	4	6	4	4	5	2	2	4	4	5
Blackhawk	7	4	6	6	7	5	6	6	7	7
Richland	6	7	7	7	6	7	7	7	5	6

UNIFORM AND PRELIMINARY TESTS, GROUP II

The origin of the strains in the Uniform and Preliminary Tests, Group II, is as follows:

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.)
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 (Linc. x A45-251)
C1105*	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mandarin (Ott.)
C1106*	Purdue A.E.S. & U.S.R.S.L.	Sel. from A4-107-12 x Mandarin (Ott.)
C1117*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mandarin (Ottawa) x Lincoln
C1119*	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
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
H15548	Ohio A.E.S. & U.S.R.S.L.	Sel. from Lincoln x P. I. 68666
H24088*	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*	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x A3-108
W9-2024*	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau

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

Preliminary Test, Group II, in 1955 consisted of ten strains. These were combined with the strains of Uniform Test, Group II, and grown as one test at fourteen locations. Data from these locations are presented in Tables 28 through 32. Yields were good at most locations, but at Dwight, Illinois, and Kirksville, Missouri, the yields were reduced by drouth.

All of the C-strains and W9-2024 were in Preliminary Test, Group I, in 1954. Strains C1117, C1105, C1106, and C1121 led the test in yield both years being exceeded by only a few strains which were several days later in maturity. The yield of C1105 was very good considering its early maturity, but it was low in oil content. Strains C1106 and C1117 were the best of the group in over-all performance.

Strain C1117 was one day later than Harosoy but outyielded it by 1.5 bushels. Strain C1106 was the same maturity as Harosoy and .5 bushel better in average yield. Strain C1119 was very early in maturity and correspondingly lower in yield. It compared favorably with Blackhawk.

Strains H15345 and W9-2024 appeared to be similar to Harosoy in yield and maturity. Strain H24088 is of Lincoln maturity but was lower in yield in this test. Strains H14551 and S2-5437 are of Hawkeye maturity but yielded considerably less.

Table 28. Summary of agronomic and chemical data for the strains in the Uniform and Preliminary Tests, Group II, 1955.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	12	13	12	12	13	13	13	13
A0-8618	34.6	+ 4.2	1.8	41	1.7	15.1	41.4	20.7
C1117*	33.9	- 2.8	1.8	38	1.6	14.0	41.7	21.1
C1128	33.4	+ 1.7	1.7	44	1.6	15.4	40.4	21.9
C1105*	33.2	- 4.5	1.8	40	1.7	15.6	42.2	20.0
Adams	33.2	+ 2.5	2.1	42	1.4	13.2	40.1	21.9
L9-5139	33.0	+ 4.7	1.9	42	1.6	14.1	41.4	20.9
C1106*	32.9	- 3.8	2.0	42	1.8	15.3	42.1	20.8
C1121*	32.8	- 1.1	1.6	37	2.1	14.6	41.9	20.8
H13501	32.8	+ 4.1	1.9	44	1.6	13.9	40.5	21.4
Harosoy	32.4	- 3.9	2.4	41	2.1	15.0	41.3	20.7
Hawkeye	32.3	0	1.9	41	2.0	16.1	41.6	21.1
H15345*	32.3	- 3.1	1.9	38	2.1	13.4	39.6	21.6
Lincoln	32.1	+ 5.8	2.0	42	1.8	13.1	41.1	21.0
W9-2024*	31.9	- 3.5	1.8	42	2.4	16.1	41.1	21.1
AX29-163-1-2	31.7	+ 4.5	2.4	42	1.6	14.3	40.1	21.8
H15548	31.6	+11.3	2.5	39	1.8	13.3	41.3	20.5
C1119*	31.4	- 6.6	2.0	38	2.3	14.6	43.3	20.3
C1056	31.3	+ 2.6	2.1	40	1.3	14.9	41.1	21.3
H24088*	30.7	+ 6.0	1.6	44	1.8	14.1	41.0	20.8
H13116	30.6	+ 2.9	2.1	41	2.4	15.3	41.1	20.8
H14521	30.5	+ 0.9	1.8	39	2.2	16.8	40.1	21.6
Blackhawk	29.8	- 5.2	1.9	37	2.2	14.2	41.4	20.9
H14551*	29.5	- 0.6	1.6	36	2.1	16.9	42.1	21.2
S2-5437*	29.1	- 0.5	1.8	43	1.9	13.2	41.9	20.8
H14025	28.9	+ 1.5	1.6	38	1.9	16.3	42.4	20.5
Richland	27.2	- 0.1	2.0	36	2.3	15.5	41.2	20.4
Mean	31.7		1.9	40	1.9	14.8	41.3	21.0

*Grown in the Preliminary Test, Group II, only.
[1]Days earlier (-) or later (+) than Hawkeye. Hawkeye required 119 days to mature.

Table 29. Summary of yield in bushels per acre for the strains in the Uniform and Preliminary Tests, Group II, 1955.

Strain	Mean of 12 Tests[1]	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Mt. Healthy Ohio	Walk-erton Ind.	Bluff-ton Ind.
A0-8618	34.6	40.6	35.9	52.4	35.0	49.9	53.1
C1117*	33.9	42.3	37.5	48.3	32.1	49.2	54.1
C1128	33.4	37.6	33.7	52.8	27.5	50.9	52.5
C1105*	33.2	40.4	36.8	42.8	28.1	45.3	56.3
Adams	33.2	36.6	35.8	48.4	31.2	48.1	52.9
L9-5139	33.0	37.1	32.2	46.4	33.1	50.3	48.7
C1106*	32.9	39.1	33.1	43.8	28.6	42.4	55.9
C1121*	32.8	40.0	35.6	43.5	32.1	48.3	53.5
H13501	32.8	36.9	34.7	48.3	29.1	41.2	48.2
Harosoy	32.4	42.4	35.6	45.2	30.8	44.1	50.8
Hawkeye	32.3	38.9	32.4	52.3	30.0	45.0	51.7
H15345*	32.3	42.7	35.8	43.1	29.4	44.0	50.3
Lincoln	32.1	36.8	33.3	46.1	30.2	48.8	48.9
W9-2024*	31.9	40.2	33.7	46.6	31.0	44.1	51.8
AX29-163-1-2	31.7	33.2	32.7	47.8	28.9	42.2	48.2
H15548	31.6	36.8	34.4	41.3	23.7	48.1	41.8
C1119*	31.4	37.4	35.0	41.4	29.0	40.6	49.2
C1056	31.3	36.8	32.9	45.0	26.4	47.6	48.4
H24088*	30.7	32.8	31.1	36.5	27.7	46.5	50.0
H13116	30.6	36.4	32.2	44.9	30.4	40.7	42.8
H14521	30.5	39.0	33.8	41.0	30.9	40.4	44.3
Blackhawk	29.8	36.4	30.3	40.8	30.4	35.9	48.8
H14551*	29.5	39.0	31.6	35.6	28.5	40.3	50.9
S2-5437*	29.1	34.8	29.0	43.5	--	37.9	43.2
H14025	28.9	34.7	31.6	37.3	33.1	42.4	47.4
Richland	27.2	34.2	33.8	34.7	27.6	35.7	37.7
Mean	31.7	37.8	33.6	44.2	29.8	44.2	49.3
Coef. of Var. (%)		--	--	--	--	6.8	8.6
Bu. Nec. for Sig. (5%)		--	--	--	--	4.3	6.0
Row Spacing (In.)		36	28	28	28	36	38

*Grown in the Preliminary Test, Group II, only.
[1]Mt. Healthy, Ohio and Lafayette, Indiana not included in the mean.

Table 29. (Continued)

Strain	Lafayette Ind.	Madison Wis.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Ames Iowa	Kirksville Mo.	Lincoln Nebr.
A0-8618	54.1	25.9	18.6	31.3	26.7	30.6	21.7	28.0
C1117*	48.2	28.0	20.6	28.8	25.7	23.0	23.1	25.8
C1128	49.8	24.5	20.5	27.5	26.2	26.1	21.7	26.7
C1105*	46.2	30.8	20.1	27.3	27.8	27.0	18.2	26.1
Adams	51.2	22.7	19.9	29.1	27.9	28.4	21.5	27.1
L9-5139	51.0	25.9	19.1	29.4	24.4	30.9	22.1	28.9
C1106*	48.3	30.4	21.7	28.5	27.6	28.7	20.8	23.2
C1121*	49.9	24.3	20.9	26.5	27.8	27.3	21.9	24.2
H13501	48.0	25.8	20.2	29.5	26.3	30.6	21.7	29.6
Harosoy	50.1	26.6	21.5	26.1	23.3	24.9	19.4	29.0
Hawkeye	47.2	21.7	17.2	25.7	26.8	29.0	20.3	26.7
H15345*	44.5	27.7	19.2	27.8	25.9	27.0	17.7	26.2
Lincoln	49.0	20.2	20.4	26.0	25.6	29.5	22.7	26.6
W9-2024*	43.6	27.6	19.7	27.8	24.6	28.5	16.4	21.8
AX29-163-1-2	48.8	25.3	17.1	31.9	24.3	28.5	22.7	26.6
H15548	49.3	24.5	20.6	29.1	21.8	29.6	22.4	28.5
C1119*	44.0	26.9	21.5	27.3	24.0	25.6	22.3	25.1
C1056	46.5	19.9	21.5	25.3	26.6	25.9	21.3	24.0
H24088*	--	24.9	17.3	33.4	23.3	25.7	22.5	24.2
H13116	44.9	24.9	15.5	22.3	28.9	32.2	21.5	25.3
H14521	39.7	29.2	18.5	26.1	26.5	24.9	20.0	22.5
Blackhawk	39.6	26.8	20.1	25.6	26.6	27.1	14.0	25.2
H14551*	--	25.9	19.4	23.8	22.8	21.5	21.4	21.8
S2-5437*	40.0	23.7	18.1	25.7	23.9	24.5	21.8	23.4
H14025	38.5	27.4	15.6	26.2	23.3	21.8	17.6	20.9
Richland	37.3	21.8	14.9	23.4	22.6	25.4	18.0	24.7
Mean	46.2	25.5	19.2	27.4	25.4	27.1	20.6	25.5
Coef. of Var. (%)	7.7	--	13.3	9.5	8.5	14.4	12.8	12.8
Bu. Nec. for Sig. (5%)	5.0	--	3.6	3.6	3.1	5.4	3.7	4.6
Row Spacing (In.)	40	36	40	40	40	40	40	38

Table 30. Summary of yield rank for the strains in the Uniform and Preliminary Tests, Group II, 1955.

Strain	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Mt. Healthy Ohio	Walk-erton Ind.	Bluff-ton Ind.	Lafay-ette Ind.
A0-8618	4	3	2	1	3	5	1
C1117*	3	1	5	4	4	3	11
C1128	12	13	1	23	1	7	6
C1105*	5	2	18	20	11	1	15
Adams	19	4	4	6	7	6	2
L9-5139	14	20	9	2	2	17	3
C1106*	8	16	14	18	16	2	10
C1121*	7	6	15	4	6	4	5
H13501	15	9	5	15	19	19	12
Harosoy	2	6	11	9	13	11	4
Hawkeye	11	19	3	13	12	9	13
H15345*	1	4	17	14	15	12	17
Lincoln	16	15	10	12	5	15	8
W9-2024*	6	13	8	7	13	8	19
AX29-163-1-2	25	18	7	17	18	19	9
H15548	16	10	20	25	7	25	7
C1119*	13	8	19	16	21	14	18
C1056	16	17	12	24	9	18	14
H24088*	26	24	24	21	10	13	--
H13116	20	20	13	10	20	24	16
H14521	9	11	21	8	22	22	21
Blackhawk	20	25	22	10	25	16	22
H14551*	9	22	25	19	23	10	--
S2-5437*	22	26	15	--	24	23	20
H14025	23	22	23	2	16	21	23
Richland	24	11	26	22	26	26	24

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

Table 30. (Continued)

Strain	Madison Wis.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Ames Iowa	Kirksville Mo.	Lincoln Nebr.
A0-8618	11	18	3	7	3	10	5
C1117*	4	6	8	14	24	1	13
C1128	18	8	12	12	16	10	7
C1105*	1	11	13	3	14	21	12
Adams	22	13	6	2	11	13	6
L9-5139	11	17	5	17	2	7	3
C1106*	2	1	9	5	8	17	22
C1121*	20	5	15	3	12	8	18
H13501	14	10	4	11	3	10	1
Harosoy	10	2	17	21	21	20	2
Hawkeye	24	22	20	6	7	18	7
H15345*	5	16	10	13	14	23	11
Lincoln	25	9	19	15	6	2	9
W9-2024*	6	14	10	16	9	25	24
AX29-163-1-2	15	23	2	18	9	2	9
H15548	18	6	6	26	5	5	4
C1119*	8	2	13	19	19	6	16
C1056	26	2	23	8	17	16	20
H24088*	16	21	1	21	18	4	18
H13116	16	25	26	1	1	13	14
H14521	3	19	17	10	21	19	23
Blackhawk	9	11	22	8	13	26	15
H14551*	11	15	24	24	26	15	24
S2-5437*	21	20	20	20	23	9	21
H14025	7	24	16	21	25	24	26
Richland	23	26	25	25	20	22	17

Table 31. Summary of maturity data, days earlier (-) or later (+) than Hawkeye for the strains in the Uniform and Preliminary Tests, Group II, 1955.

Strain	Mean of 13 Tests[1]	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Mt. Healthy Ohio	Walk-erton Ind.	Bluff-ton Ind.
A0-8618	+ 4.2	+ 5	+ 3	+7	+ 4	+ 5	+ 7
C1117*	- 2.8	0	- 3	0	0	- 1	+ 1
C1128	+ 1.7	+ 4	+ 3	+4	+ 6	+ 3	+ 3
C1105*	- 4.5	- 3	- 3	-1	- 5	- 2	- 2
Adams	+ 2.5	+11	0	+9	+ 3	+ 5	+ 8
L9-5139	+ 4.7	+ 6	+ 3	+6	+ 6	+ 5	+ 5
C1106*	- 3.8	- 3	- 5	+5	- 3	- 1	- 5
C1121*	- 1.1	- 1	- 3	+2	+ 1	- 1	+ 4
H13501	+ 4.1	+ 4	+ 3	+6	+ 5	+ 3	+ 6
Harosoy	- 3.9	0	- 4	-1	- 1	0	- 1
Hawkeye	0	0	0	0	0	0	0
H15345*	- 3.1	0	- 4	+1	- 6	+ 1	+ 1
Lincoln	+ 5.8	+ 9	+ 3	+8	+ 4	+ 7	+ 8
W9-2024*	- 3.5	- 2	- 4	-4	- 3	- 1	- 2
AX29-163-1-2	+ 4.5	+12	+ 3	+4	+ 2	+ 7	+ 7
H15548	+11.3	+17	+12	+9	+11	+16	+12
C1119*	- 6.6	- 3	- 8	-2	- 6	- 4	- 5
C1056	+ 2.6	+ 6	+ 2	+3	+ 2	+ 5	+ 4
H24088*	+ 6.0	+ 8	+ 4	+7	+ 9	+ 8	+ 7
H13116	+ 2.9	+ 3	0	+6	+ 3	+ 3	+ 7
H14521	+ 0.9	+ 4	- 1	+7	+ 1	+ 2	+ 6
Blackhawk	- 5.2	- 4	- 4	+2	- 4	- 4	- 7
H14551*	- 0.6	+ 1	- 3	+4	+ 1	+ 1	+ 8
S2-5437*	- 0.5	0	+ 9	0	--	- 1	0
H14025	+ 1.5	+ 3	0	+8	+ 2	+ 3	+ 8
Richland	- 0.1	- 1	0	+4	0	+ 1	+ 5
Date planted	5/21	5/26	5/19	5/18	5/20	6/2	5/26
Hawkeye matured	9/17	9/17	9/15	9/17	9/10	9/22	9/19
Days to mature	119	114	119	122	113	112	116

*Grown in the Preliminary Test, Group II, only.
[1]Mt. Healthy, Ohio not included in the mean.

Table 31. (Continued)

Strain	Lafay-ette Ind.	Madi-son Wis.	Dwight Ill.	Urbana Ill.	Kana-wha Iowa	Ames Iowa	Kirks-ville Mo.	Lin-coln Nebr.
A0-8618	+ 2	+ 2	+ 6	+5	+2	+ 5	+4	+ 2
C1117*	- 3	- 3	- 7	-3	-3	- 3	-3	- 9
C1128	+ 1	+ 1	0	+1	-1	+ 2	0	+ 1
C1105*	- 7	- 4	-12	-6	-4	- 6	-2	- 6
Adams	+ 3	0	- 3	-2	+1	+ 1	0	0
L9-5139	+ 3	+ 3	+ 7	+5	+4	+ 7	+3	+ 4
C1106*	- 7	- 3	-11	-4	-3	- 5	-4	- 3
C1121*	0	- 3	- 6	-2	-2	- 1	-1	0
H13501	+ 3	+ 1	+ 5	+5	+4	+ 6	+4	+ 3
Harosoy	- 3	- 4	-11	-7	-4	- 5	-5	- 6
Hawkeye	0	0	0	0	0	0	0	0
H15345*	- 2	- 5	- 7	-7	-4	- 3	-2	- 9
Lincoln	+ 3	+ 4	+ 6	+7	+4	+ 6	+5	+ 5
W9-2024*	- 5	- 3	- 8	-4	-4	- 6	-3	0
AX29-163-1-2	+ 3	+ 4	+ 2	+4	+3	+ 5	+2	+ 3
H15548	+17	+13	+10	+9	+7	+10	+9	+ 6
C1119*	- 9	- 6	-12	-8	-6	- 9	-4	-10
C1056	+ 2	+ 2	+ 2	0	+1	+ 3	+3	+ 1
H24088*	+ 4	+ 3	+10	+7	+3	+ 7	+4	+ 6
H13116	+ 3	0	+ 3	+3	+2	+ 4	+3	+ 1
H14521	- 1	- 3	- 3	-3	0	+ 3	0	+ 1
Blackhawk	- 7	- 5	-10	-6	-6	- 6	-5	- 6
H14551*	- 1	- 5	- 6	-6	-2	- 1	+1	+ 2
S2-5437*	- 2	- 4	- 4	-5	-2	0	+3	0
H14025	+ 1	- 1	- 3	0	-1	+ 2	0	- 1
Richland	0	- 2	- 2	-1	-2	0	-1	- 2
Date planted	5/20	5/18	5/7	5/19	5/18	5/7	6/4	5/30
Hawkeye matured	9/18	9/20	9/13	9/12	9/14	9/11	9/17	9/28
Days to mature	121	125	129	116	119	127	105	121

Table 32. Summary of percentage of oil for the strains in the Uniform and Preliminary Tests, Group II, 1955.

Strain	Mean of 13 Tests[1]	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	Walkerton Ind.	Bluffton Ind.
A0-8618	20.7	20.5	20.7	20.3	21.2	20.2	20.4
C1117*	21.1	21.2	21.3	21.4	21.5	21.8	21.3
C1128	21.9	22.0	21.5	22.0	20.2	21.9	21.6
C1105*	20.0	21.0	20.2	19.9	19.2	20.6	19.8
Adams	21.9	21.8	21.9	21.7	23.0	21.8	20.8
L9-5139	20.9	20.9	20.7	20.4	21.3	21.0	19.9
C1106*	20.8	21.9	21.4	20.9	20.8	21.1	21.2
C1121*	20.8	22.2	20.5	20.6	20.7	21.8	20.8
H13501	21.4	21.5	21.2	21.1	21.4	22.0	20.5
Harosoy	20.7	21.7	21.3	21.0	21.5	20.9	20.8
Hawkeye	21.1	22.3	21.5	21.5	21.2	21.7	21.2
H15345*	21.6	22.5	21.4	21.9	21.9	21.1	20.9
Lincoln	21.0	20.8	21.0	21.3	21.1	21.0	20.3
W9-2024*	21.1	21.5	20.9	21.5	21.3	21.6	21.2
AX29-163-1-2	21.8	22.2	21.4	22.0	22.3	22.0	21.9
H15548	20.5	20.4	20.4	20.6	21.2	20.3	19.7
C1119*	20.3	21.1	20.6	20.0	19.2	20.9	20.4
C1056	21.3	21.4	20.9	21.5	21.1	22.0	21.3
H24088*	20.8	20.9	20.6	21.4	20.9	21.0	20.1
H13116	20.8	20.7	21.0	20.5	21.7	20.6	20.3
H14521	21.6	21.8	22.0	21.7	21.9	21.2	20.8
Blackhawk	20.9	21.7	21.3	20.6	20.4	21.1	20.5
H14551*	21.2	21.9	21.2	21.3	21.2	21.2	20.4
S2-5437*	20.8	21.6	19.5	21.2	--	21.6	20.1
H14025	20.5	20.9	20.6	19.9	20.7	20.6	19.9
Richland	20.4	20.9	20.9	21.1	20.7	20.5	20.5
Mean	21.0	21.4	21.0	21.1	21.1	21.2	20.6

*Grown in the Preliminary Test, Group II, only.
[1]Mt. Healthy, Ohio not included in the mean.

Table 32. (Continued)

Strain	Lafayette Ind.	Madison Wis.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Ames Iowa	Kirksville Mo.	Lincoln Nebr.
A0-8618	21.7	20.5	19.4	21.1	20.9	21.4	20.4	21.0
C1117*	22.7	20.2	20.3	20.2	20.9	21.1	21.1	21.2
C1128	23.3	21.6	20.9	22.0	21.7	22.4	22.6	21.8
C1105*	20.6	19.8	19.3	18.7	19.6	21.5	20.0	19.2
Adams	22.8	21.0	21.9	21.4	22.3	22.9	21.6	22.2
L9-5139	22.3	19.6	19.9	21.5	21.5	21.6	21.0	21.9
C1106*	22.3	21.5	20.0	19.2	20.8	18.9	20.8	20.4
C1121*	21.6	19.6	20.5	19.8	21.0	20.6	20.2	20.7
H13501	22.5	20.6	21.0	21.8	22.1	22.0	20.4	21.7
Harosoy	21.8	20.6	20.3	19.5	20.0	20.9	20.3	20.4
Hawkeye	21.9	20.7	20.5	21.0	21.1	21.1	19.0	20.9
H15345*	22.8	21.4	21.1	20.5	21.6	21.4	21.5	22.4
Lincoln	22.5	19.8	20.2	21.1	21.6	21.9	20.4	21.3
W9-2024*	22.1	21.6	20.6	20.4	21.4	21.7	20.6	19.6
AX29-163-1-2	22.7	21.0	20.8	22.2	22.3	22.2	20.8	22.2
H15548	21.5	19.9	20.0	20.7	20.3	20.7	20.6	21.2
C1119*	21.6	19.9	19.5	18.2	19.6	21.0	20.3	20.6
C1056	22.7	20.2	20.0	20.7	21.6	21.4	21.2	21.6
H24088*	21.5	19.7	19.2	20.7	21.5	21.2	21.0	21.5
H13116	21.4	20.7	20.1	20.8	21.2	21.6	20.2	20.7
H14521	22.8	22.0	20.7	21.6	21.4	21.9	21.2	21.6
Blackhawk	21.4	20.6	21.0	19.3	20.7	21.4	20.8	21.5
H14551*	22.3	20.8	21.2	19.7	22.1	21.4	20.8	21.8
S2-5437*	22.3	20.6	20.5	20.2	21.2	20.9	20.6	20.4
H14025	21.3	20.9	19.5	20.0	20.4	21.1	20.5	20.6
Richland	20.8	20.5	19.8	20.0	19.8	19.9	20.0	20.9
Mean	22.0	20.6	20.3	20.5	21.1	21.3	20.7	21.1

UNIFORM TEST, GROUP III

The origin of the strains in the Uniform Test, Group III, is as follows:

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)
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)
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

This test was grown at twenty-four locations in 1955, and the data are presented in Tables 33 through 40. Considering the eighteen locations common to both years, yields averaged 33 bushels in 1954 and 31 in 1955. In the East, yields were about the same both years but were 12 bushels higher at Freehold, New Jersey. In Ohio yields were higher in 1955, but in Indiana, Illinois (except at Eldorado), and Iowa there were moderate to severe yield reductions, with drouth taking a heavy toll at Greenfield, Indiana, Dwight and Urbana, Illinois, and Ames, Iowa. Yields this year were up from a very low 1954 level in Missouri and southeastern Kansas, but were sharply lower at Lincoln, Nebraska, and a failure at Manhattan, Kansas.

Four-year means give Clark a 4.4 bushel yield advantage over Lincoln, and it leads all named varieties at every location but one. Lincoln outyielded Illini and Dunfield by 3.6 and 5.3 bushels, respectively.

The two strains, L9-5139 and A0-8618, have been tested for four years. In the area of this test, L9-5139 has a 1.4 bushel average yield advantage and has held this consistently in all four years. A0-8618 has a higher four-year average yield at five of the twenty locations, which, with the exception of Beltsville, are the more northern locations of Group III. This agrees with results of Uniform Test, Group II. There seems to be a line south of Lafayette, Urbana, and Ames to the north of which A0-8618 is superior in yield and south of which L9-5139 has a clear yield advantage. Strain A0-8618 has outyielded Lincoln by 0.7 bushel in this test while L9-5139 has shown a 2.1 bushel gain over Lincoln.

No new strains were added to this test in 1955 and therefore all strains have been tested at least two years. C1060 and U9-2 were entered in 1953. U9-2 has yielded very well, being exceeded only by Clark, which is 2.6 days later. It is very high in oil content but has been poor in seed quality. The selection from it, U0-41, is about a day earlier. While they yielded the same in 1954, in 1955 U0-41 averaged 1.5 bushels less.

C859 was similar to L9-5139 in average yield but is several days later. C1060, of still later maturity, has been slightly lower in yield.

Table 33. Summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1955.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	22	21	20	23	21	21	21	21
Clark	35.6	+6.1	1.7	38	1.9	15.2	41.0	21.4
U9-2	33.9	+3.3	1.9	37	2.5	16.7	39.9	22.0
L9-5139	33.5	-0.5	2.0	39	2.0	14.5	40.8	21.6
C859	33.2	+4.7	2.1	40	1.8	13.1	39.1	21.8
AO-8618	32.4	-1.7	1.9	38	2.2	15.3	41.4	21.3
UO-41	32.4	+2.0	2.0	36	2.5	16.4	39.9	22.1
C1060	32.1	+5.1	2.1	38	1.8	14.4	40.6	21.3
Lincoln	31.2	0	2.2	39	2.2	13.5	41.2	21.4
Illini	28.4	+1.0	3.3	40	2.1	13.1	41.2	20.7
Dunfield	25.3	-4.0	2.9	36	2.5	14.6	40.1	21.8
Mean	31.8		2.2	38	2.2	14.7	40.5	21.5

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

Table 34. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1955.

Strain	Mean of 22 Tests[1]	Landisville Pa.	Freehold N.J.	Newark Del.	Beltsville Md.	Hoytville Ohio	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.	Urbana Ill.
Clark	35.6	58.4	52.1	49.3	39.0	37.4	44.6	54.9	25.8	36.6	22.6	24.6
U9-2	33.9	49.8	53.5	42.6	32.7	38.4	44.5	50.1	24.5	31.6	22.6	27.7
L9-5139	33.5	45.8	49.9	44.8	31.8	35.8	47.2	51.0	28.6	39.4	21.1	22.8
C859	33.2	47.5	48.2	44.7	38.0	35.9	38.9	50.8	20.7	41.8	24.2	26.7
A0-8618	32.4	41.7	41.3	40.7	31.3	36.2	44.8	54.6	26.4	32.2	22.9	25.5
U0-41	32.4	47.8	46.1	43.6	31.4	35.5	45.4	46.7	23.6	30.9	19.6	27.6
C1060	32.1	50.0	44.1	49.1	35.0	34.0	40.2	51.0	18.7	33.1	21.6	25.8
Lincoln	31.2	49.3	44.3	44.5	32.6	35.4	44.7	47.5	21.3	32.4	20.3	20.8
Illini	28.4	49.0	38.3	35.0	28.8	33.3	39.4	45.8	17.0	31.6	18.9	24.8
Dunfield	25.3	35.1	31.1	29.4	24.3	30.3	26.4	40.3	23.9	20.2	19.5	19.4
Mean	31.8	47.4	44.9	42.4	32.5	35.2	41.6	49.3	23.1	33.0	21.3	24.6
C.V.(%)		9.2	13.2	8.6	3.6	6.3	--	8.5	18.1	10.6	11.9	11.8
B.N.F.S.(5%)		7.5	10.8	5.4	1.7	3.2	--	6.0	6.0	5.1	N.S.	4.3
Row Sp.(In.)		40	28	36	40	36	28	40	38	38	40	40

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

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

Table 34. (Continued)

Strain	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Ames Iowa	Ottumwa Iowa	Kirksville Mo.	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Powhattan Kans.	Manhattan Kans.	Columbus Kans.
Clark	38.3	34.2	43.5	20.4	27.4	37.9	24.3	30.7	33.5	29.2	8.4	5.7	18.8
U9-2	38.7	36.0	38.8	20.9	26.1	34.8	22.1	31.3	31.3	27.7	8.2	4.2	19.0
L9-5139	36.9	33.9	39.8	18.3	27.0	38.8	24.4	29.9	29.0	25.3	8.1	3.9	15.4
C859	37.4	28.0	37.6	18.9	25.0	35.6	23.1	30.5	30.3	26.4	6.5	3.0	20.3
A0-8618	35.6	33.2	38.5	17.8	28.1	40.0	20.8	29.7	29.9	27.9	6.5	2.9	14.3
U0-41	35.9	35.0	37.4	19.2	31.0	34.2	19.7	30.9	29.5	24.4	6.4	4.2	16.9
C1060	36.8	32.3	33.9	16.6	26.1	36.0	21.9	29.1	26.0	26.1	6.2	4.5	18.6
Lincoln	32.5	32.6	31.1	15.6	24.8	36.6	21.6	29.7	29.1	23.5	6.1	2.6	16.2
Illini	27.8	29.9	30.9	18.5	22.9	29.6	19.4	24.5	23.6	23.3	6.4	4.8	11.9
Dunfield	27.3	30.0	27.3	15.7	21.1	29.0	17.1	26.7	27.0	23.1	7.4	4.0	11.4
Mean	34.7	32.5	35.9	18.2	26.0	35.3	21.4	29.3	28.9	25.7	7.0	4.0	16.3
C.V.(%)	7.5	9.4	9.7	18.0	12.0	9.4	10.2	5.6	7.5	--	--	--	--
B.N.F.S.(5%)	3.8	4.1	5.1	N.S.	4.5	4.8	3.2	2.1	3.2	--	--	--	--
Row Sp.(In.)	40	36	40	40	40	40	40	40	36	38	40	40	40
	Yield Rank												
Clark	2	3	1	2	3	3	2	3	1	1	1	1	3
U9-2	1	1	3	1	5	7	4	1	2	3	2	4	2
L9-5139	4	4	2	6	4	2	1	5	7	6	3	7	7
C859	3	10	5	4	7	6	3	4	3	4	5	8	1
A0-8618	7	5	4	7	2	1	7	6	4	2	5	9	8
U0-41	6	2	6	3	1	8	8	2	5	7	7	4	5
C1060	5	7	7	8	5	5	5	8	9	5	9	3	4
Lincoln	8	6	8	10	8	4	6	6	6	8	10	10	6
Illini	9	9	9	5	9	9	9	10	10	9	7	2	9
Dunfield	10	8	10	9	10	10	10	9	8	10	4	6	10

Table 35. Summary of maturity data, days earlier (-) or later (+) than Lincoln, and lodging for the strains in the Uniform Test, Group III, 1955.

Strain	Mean of 21 Tests[1]	Landisville Pa.	Freehold N.J.	Newark Del.	Beltsville Md.	Hoytville Ohio	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.	Urbana Ill.
Clark	+6.1	+6	+ 8	+5	+5	+3	0	+ 6	+3	+6	+5	+7
U9-2	+3.3	+2	0	+2	+2	+2	0	+10	+1	+4	+3	+4
L9-5139	-0.5	-2	- 3	-1	+1	-4	-2	0	-1	0	0	+1
C859	+4.7	+1	0	+1	+4	+3	-2	+10	+5	+6	+5	+7
A0-8618	-1.7	-3	- 9	-4	-2	-3	-1	- 2	+1	0	-3	-1
U0-41	+2.0	+2	- 1	+3	+1	+1	0	+10	+2	+1	+2	0
C1060	+5.1	+1	+ 5	+4	+4	+2	-1	+ 6	+3	+5	+4	+6
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0
Illini	+1.0	+3	- 3	+1	-1	+4	0	+10	+1	+5	-3	+1
Dunfield	-4.0	+1	-16	-9	-7	+1	-4	- 3	0	+2	-7	-3
Date planted	5/24	5/25	6/7	5/26	5/28	5/26	5/18	5/20	6/1	5/18	5/7	5/19
Lincoln matured	9/21	10/8	10/7	9/30	9/29	9/29	9/27	9/23	9/20	9/16	9/22	9/16
Days to mature	120	136	122	127	124	126	132	126	111	121	138	120
	Mean of 20 Tests[2]					Lodging						
Clark	1.7	2.0	3.0	2.0	2.0	1.0	2.0	2.0	1.0	1.8	1.0	3.0
U9-2	1.9	2.0	3.0	2.5	2.2	1.0	2.5	2.5	1.0	2.5	1.8	3.3
L9-5139	2.0	3.0	4.0	2.3	2.8	1.0	1.3	2.0	1.5	2.5	1.5	4.0
C859	2.1	3.0	4.0	2.5	2.2	1.3	2.0	2.8	1.0	3.0	1.8	2.8
A0-8618	1.9	3.0	4.0	2.8	2.5	1.0	1.8	2.0	1.0	2.8	1.0	3.0
U0-41	2.0	2.0	2.0	2.3	3.0	1.0	2.0	2.8	1.0	3.0	1.3	2.8
C1060	2.1	3.0	4.0	2.8	2.2	1.0	2.3	2.0	1.0	3.0	1.0	3.5
Lincoln	2.2	3.0	5.0	3.0	3.0	1.8	1.5	2.0	1.5	3.0	1.0	3.8
Illini	3.3	4.0	5.0	4.3	3.5	2.0	2.0	3.3	3.0	3.8	3.0	4.0
Dunfield	2.9	3.0	5.0	3.8	3.2	1.8	2.5	3.3	2.3	3.8	2.8	5.0
Mean	2.2	2.8	3.9	2.8	2.7	1.3	2.0	2.5	1.4	2.9	1.6	3.5

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

Table 35. (Continued)

Strain	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Ames Iowa	Ottumwa Iowa	Kirksville Mo.	Ladonia Mo.	Columbia Mo.	Lincoln Nebr.	Manhattan Kans.	Columbus Kans.
Clark	+8	+8	+7	+13	+6	+9	+5	+6	+6	+7	+4	0
U9-2	+4	+4	+3	+ 6	+3	+7	+3	+5	+3	+1	+5	0
L9-5139	+1	0	0	+ 3	0	0	-2	0	-1	0	+2	- 5
C859	+7	+6	+6	+ 9	+4	+9	+5	+6	+4	+2	+5	- 5
AO-8618	0	-1	0	- 1	-1	-1	-2	0	-1	-2	+4	- 5
UO-41	+2	+4	+1	+ 3	+1	+5	+1	+1	+1	+1	+3	0
C1060	+7	+6	+6	+11	+4	+9	+5	+7	+5	+8	+3	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0
Illini	0	-2	0	+ 3	0	+4	-2	-1	-1	+2	0	-12
Dunfield	-6	-6	-4	- 3	-2	-5	-2	-3	-2	-6	0	-14
Date planted	5/21	5/26	5/20	5/3	5/11	5/20	6/4	6/10	6/2	5/30	6/1	6/4
Lincoln matured	9/12	9/12	9/6	8/24	9/17	9/19	9/22	9/19	9/17	10/3	10/9	9/30
Days to mature	114	109	109	113	129	122	110	101	107	126	130	118
	Lodging											
Clark	1.5	1.3	2.0	1.0	1.6	2.0	1.0	1.2	1.0	2.0	1.0	1.0
U9-2	2.3	1.3	3.0	1.0	1.4	2.1	1.0	1.0	1.0	1.2	1.0	1.0
L9-5139	2.0	1.3	2.8	1.0	1.6	1.8	1.0	1.1	1.0	1.0	1.0	1.0
C859	2.0	1.8	3.5	1.0	1.5	2.6	1.0	1.2	1.0	1.5	1.0	1.0
AO-8618	1.8	1.0	2.5	1.0	1.5	1.8	1.0	1.1	1.0	1.2	1.0	1.0
UO-41	2.3	1.5	3.8	1.0	1.6	2.4	1.0	1.0	1.0	1.8	1.0	1.0
C1060	1.8	2.3	2.5	1.0	1.6	2.2	1.0	1.1	1.0	2.2	1.0	1.0
Lincoln	2.0	1.8	3.5	1.0	1.6	1.7	1.1	1.1	1.0	1.8	1.0	1.0
Illini	4.0	4.0	4.3	1.0	2.3	3.2	2.1	2.4	2.5	3.5	1.0	1.0
Dunfield	3.0	3.0	3.5	1.0	2.1	3.2	1.5	1.6	1.5	2.0	1.0	1.0
Mean	2.3	1.9	3.1	1.0	1.7	2.3	1.2	1.3	1.2	1.8	1.0	1.0

Table 36. Summary of height data and percentage of oil for the strains in the Uniform Test, Group III, 1955.

Strain	Mean of 23 Tests	Landisville Pa.	Freehold N.J.	Newark Del.	Beltsville Md.	Hoytville Ohio	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.	Urbana Ill.	Girard Ill.
Clark	38	32	33	35	38	36	57	49	35	45	38	48	50
U9-2	37	27	31	30	36	35	52	47	34	42	40	45	49
L9-5139	39	28	34	31	38	38	53	50	36	45	39	48	52
C859	40	29	34	33	40	41	55	51	37	46	43	50	53
A0-8618	38	29	30	32	36	36	51	49	36	44	44	49	50
U0-41	36	27	30	31	36	34	49	45	34	42	35	44	47
C1060	38	32	33	33	38	37	58	49	34	42	39	46	49
Lincoln	39	29	32	34	38	37	57	48	35	44	41	49	51
Illini	40	31	28	38	40	40	60	49	38	46	42	58	49
Dunfield	36	26	23	31	36	38	52	45	36	37	40	48	46
Mean	38	29	31	33	38	37	54	48	36	43	40	49	50

	Mean of 21 Tests	Percentage of Oil										
Clark	21.4	20.4	21.4	20.8	21.4	20.1	22.2	20.8	21.0	21.1	21.9	22.4
U9-2	22.0	20.6	22.3	21.6	21.4	21.3	22.0	21.6	21.0	21.1	22.4	23.7
L9-5139	21.6	20.0	21.7	21.1	20.8	20.5	22.4	21.2	21.5	21.3	21.7	23.2
C859	21.8	21.3	22.5	21.0	20.8	20.8	22.0	20.8	21.4	21.9	21.6	22.3
A0-8618	21.3	20.1	22.1	20.8	20.9	20.7	22.0	20.8	20.8	21.1	21.1	22.1
U0-41	22.1	20.7	22.4	21.7	21.3	21.2	22.0	21.6	21.3	21.0	22.7	23.8
C1060	21.3	21.4	23.1	20.9	20.6	20.8	22.1	20.2	21.4	20.5	21.6	22.8
Lincoln	21.4	20.9	21.9	21.2	20.5	21.2	22.3	21.2	21.2	20.7	21.7	20.1
Illini	20.7	19.9	21.2	20.4	20.4	20.2	21.1	19.9	20.0	20.3	20.8	21.7
Dunfield	21.8	21.0	22.3	22.2	20.7	21.3	21.9	21.6	21.4	21.9	22.2	21.8
Mean	21.5	20.6	22.1	21.2	20.9	20.8	22.0	21.0	21.1	21.1	21.8	22.4

Table 36. (Continued)

Strain	Edge-wood Ill.	Eldor-ado Ill.	Carbon-dale Ill.	Ames Iowa	Ottum-wa Iowa	Kirks-ville Mo.	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Pow-hat-tan Kans.	Man-hat-tan Kans.	Colum-bus Kans.
Clark	43	47	31	37	46	31	36	32	37	20	20	
U9-2	40	45	31	36	46	31	36	32	40	22	22	
L9-5139	41	49	31	39	49	35	38	33	40	21	20	
C859	44	49	33	38	49	34	38	35	41	23	19	
A0-8618	40	46	31	38	48	34	37	32	41	21	22	
U0-41	39	43	29	37	46	30	34	31	38	21	19	
C1060	40	44	31	39	48	31	37	35	37	18	18	
Lincoln	41	47	32	38	49	35	39	34	40	21	21	
Illini	42	47	28	39	51	38	40	37	41	23	23	
Dunfield	39	42	30	37	45	32	35	32	40	22	17	
Mean	41	46	31	38	48	33	37	33	40	21	20	
	Percentage of Oil											
Clark	21.1	22.2	22.9	21.2	21.2	21.4	22.1	22.1	20.8			21.6
U9-2	22.1	22.4	23.4	22.0	22.2	21.3	22.3	23.2	21.6			22.7
L9-5139	21.3	22.1	22.5	21.4	21.8	21.2	22.2	22.3	21.1			22.2
C859	21.4	22.5	23.9	21.9	21.7	21.6	21.7	23.0	21.5			22.8
A0-8618	21.5	21.5	23.0	21.3	21.7	20.7	21.1	22.2	20.7			21.6
U0-41	22.3	21.9	23.0	22.5	22.3	22.2	22.2	23.4	21.7			22.2
C1060	20.7	21.7	22.2	21.0	21.5	20.4	21.5	21.8	20.8			21.2
Lincoln	21.3	21.1	22.9	21.6	22.6	21.1	21.6	21.9	20.3			21.7
Illini	20.3	20.9	21.7	21.1	20.8	20.3	20.9	21.2	20.0			21.5
Dunfield	22.1	22.4	22.7	21.8	22.5	21.2	21.7	22.3	21.1			22.3
Mean	21.4	21.9	22.8	21.6	21.8	21.1	21.7	22.3	21.0			22.0

Table 37. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1954-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	41	35	36	41	37	40	40	40
Clark	37.0	+5.6	1.8	38	1.9	15.9	40.9	21.4
U9-2	34.9	+3.0	2.1	36	2.6	17.7	39.7	22.1
C859	34.5	+4.0	2.3	40	1.9	13.7	39.1	21.8
L9-5139	34.4	-0.3	2.1	38	2.1	15.3	40.8	21.6
U0-41	34.1	+1.8	2.2	35	2.6	17.4	39.8	22.2
C1060	33.3	+4.5	2.3	37	2.0	15.1	40.4	21.4
A0-8618	33.2	-1.7	2.0	37	2.3	16.2	41.4	21.3
Lincoln	32.1	0	2.3	38	2.4	14.2	41.0	21.4
Illini	28.8	+0.4	3.7	39	2.3	13.8	41.1	20.8
Dunfield	27.1	-3.2	3.0	35	2.5	15.2	39.9	22.0
Mean	32.9		2.4	37	2.3	15.5	40.4	21.6

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

Table 38. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1954-55.

Strain	Mean of 41 Tests	Landisville Pa.	Freehold N.J.	Newark Del.	Beltsville Md.	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.
Clark	37.0	54.1	44.8	47.0	40.1	41.4	47.0	34.3	46.4
U9-2	34.9	48.7	44.8	43.3	34.4	40.6	42.4	34.4	40.9
C859	34.5	47.7	41.8	41.0	37.7	36.0	42.8	33.2	47.9
L9-5139	34.4	44.9	40.1	41.5	32.3	41.9	45.5	36.7	45.1
U0-41	34.1	45.8	41.7	41.8	32.6	42.3	41.4	35.1	41.4
C1060	33.3	47.1	38.6	44.9	35.9	36.3	42.5	30.4	42.7
A0-8618	33.2	40.9	37.3	38.3	33.1	39.9	46.9	33.3	38.2
Lincoln	32.1	46.1	38.0	41.5	32.9	37.6	42.5	31.9	38.1
Illini	28.8	43.9	32.9	34.2	27.6	34.2	40.7	27.7	32.3
Dunfield	27.1	33.7	27.2	29.0	28.1	26.7	39.1	30.5	29.5
Mean	32.9	45.3	38.7	40.3	33.5	37.7	43.1	32.8	40.3

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

Table 38. (Continued)

Strain	Dwight Ill.	Urbana Ill.	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Manhattan Kans.	Columbus Kans.
Clark	32.4	31.2	38.9	37.9	41.7	25.4	22.6	38.8	9.1	11.7
U9-2	33.6	32.9	35.2	33.4	37.4	27.7	21.0	34.8	8.0	12.0
C859	34.1	33.0	36.8	33.6	39.1	26.3	20.2	33.8	8.0	13.0
L9-5139	32.0	29.4	35.9	33.0	41.3	24.8	18.7	34.5	8.2	10.2
UO-41	32.4	33.1	33.2	36.7	37.5	26.8	20.8	34.5	9.1	10.8
C1060	28.3	30.8	34.2	34.8	39.9	23.9	18.3	34.4	8.7	11.4
AO-8618	35.3	32.3	33.3	32.9	38.4	25.4	19.8	35.5	7.8	9.5
Lincoln	31.7	27.9	30.1	31.3	36.7	24.7	18.4	29.3	6.9	10.5
Illini	28.4	29.5	29.4	29.6	31.3	21.3	15.9	26.3	10.2	8.7
Dunfield	29.1	27.0	24.8	27.5	30.2	23.0	16.7	27.5	9.5	8.1
Mean	31.7	30.7	33.2	33.1	37.6	24.9	19.2	32.9	8.6	10.6
	Yield Rank									
Clark	4	5	1	1	1	4	1	1	3	3
U9-2	3	3	4	5	8	1	2	3	7	2
C859	2	2	2	4	4	3	4	7	7	1
L9-5139	6	8	3	6	2	6	6	4	6	7
UO-41	4	1	7	2	7	2	3	4	3	5
C1060	10	6	5	3	3	8	8	6	5	4
AO-8618	1	4	6	7	6	4	5	2	9	8
Lincoln	7	9	8	8	5	7	7	8	10	6
Illini	9	7	9	9	9	10	10	10	1	9
Dunfield	8	10	10	10	10	9	9	9	2	10

Table 39. Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1952-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	86	68	74	81	77	84	85	85
Clark	35.3	+5.3	1.8	39	1.8	15.7	40.4	21.5
L9-5139	33.0	-0.2	2.1	39	2.0	15.1	40.4	21.5
A0-8618	31.6	-1.4	2.0	38	2.3	15.9	40.8	21.3
Lincoln	30.9	0	2.2	39	2.3	14.1	40.4	21.5
Illini	27.3	0	3.6	41	2.2	13.6	40.7	20.7
Dunfield	25.6	-3.0	2.9	37	2.5	15.2	39.5	21.9
Mean	30.6		2.4	39	2.2	14.9	40.4	21.4

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

Table 40. Four-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1952-55.

Strain	Mean of 86 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Columbus Ohio	Mt. Healthy Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.
Years Tested		1952-1955	1952-1955	1953-1954	1952-1955	1952-1955	1952-1954	1952-1955	1952-1955	1952-1955
Clark	35.3	49.5	46.5	23.2	37.7	37.8	37.7	45.1	44.7	45.6
L9-5139	33.0	44.3	40.1	18.7	31.3	37.4	35.9	41.9	43.8	42.4
A0-8618	31.6	37.8	36.5	17.8	32.9	34.2	34.0	43.1	41.1	37.0
Lincoln	30.9	38.8	39.5	19.0	32.4	33.5	31.9	40.6	40.7	35.9
Illini	27.3	37.8	33.2	16.9	26.9	30.6	26.3	38.4	36.1	30.1
Dunfield	25.6	29.9	27.0	16.3	29.0	24.3	26.4	36.9	35.4	26.3
Mean	30.6	39.7	37.1	18.7	31.7	33.0	32.0	41.0	40.3	36.2
		Yield Rank								
Clark		1	1	1	1	1	1	1	1	1
L9-5139		2	2	3	4	2	2	3	2	2
A0-8618		4	4	4	2	3	3	2	3	3
Lincoln		3	3	2	3	4	4	4	4	4
Illini		4	5	5	6	5	6	5	5	5
Dunfield		6	6	6	5	6	5	6	6	6

[1]Brownstown, Illinois, 1952 and 1953.
[2]Thayer, Kansas, 1952 and 1953.

Table 40. (Continued)

Strain	Dwight Ill.	Urbana Ill.	Edgewood Ill.[1]	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Manhattan Kans.	Columbus Kans.[2]
Years Tested	1952-1955	1952-1955	1952-53 1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955	1952-1955
Clark	27.5	30.1	24.0	36.9	39.8	38.2	26.8	27.2	32.8	13.1	12.9
L9-5139	29.1	30.3	25.2	33.9	36.9	37.6	26.3	22.6	29.4	11.0	11.5
A0-8618	31.9	32.2	24.0	31.3	37.7	36.3	25.9	22.0	29.4	10.9	11.0
Lincoln	28.7	29.9	23.3	29.2	33.3	35.6	25.0	22.5	27.4	10.9	11.5
Illini	25.8	28.1	20.6	25.7	32.3	31.1	22.2	18.0	25.5	11.0	9.8
Dunfield	26.5	25.2	22.3	24.4	29.6	30.5	22.5	17.1	25.3	10.1	8.8
Mean	28.3	29.3	23.2	30.2	34.9	34.9	24.8	21.6	28.3	11.2	10.9
	Yield Rank										
Clark	4	3	2	1	1	1	1	1	1	1	1
L9-5139	2	2	1	2	3	2	2	2	2	2	2
A0-8618	1	1	2	3	2	3	3	4	2	4	4
Lincoln	3	4	4	4	4	4	4	3	4	4	2
Illini	6	5	6	5	5	5	6	5	5	2	5
Dunfield	5	6	5	6	6	6	5	6	6	6	6

UNIFORM AND PRELIMINARY TESTS, GROUP III

The origin of the strains in the Uniform and Preliminary Tests, Group III, is as follows:

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)
A3-7743*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Mandarin (Ottawa)
A3-7820*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x A4-107-12
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)
C1128*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Wabash x A4-107-12
C1129*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Wabash x A4-107-12
L6-2132-A1*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
L6-2132-A7*	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
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)
P. I. 89152*	Purdue A.E.S. & U.S.R.S.L.	Introduction from Korea
S2-5152*	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-5164*	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-5174*	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
S2-5486*	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x A3-108
S2-5551*	Mo. A.E.S. & U.S.R.S.L.	Sel. from L4-1219 x A4-107-12-1
S2-5558*	Mo. A.E.S. & U.S.R.S.L.	Sel. from L4-1219 x A4-107-12-1
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

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

Preliminary Test, Group III, consisted of fourteen strains in 1956 and was grown at seven locations. The strains were combined with the ten strains of Uniform Test, Group III, and grown as one test. Yields were reduced somewhat below normal by the drouth at most of these locations.

This test included six selections from Lincoln x (Lincoln x Richland) in addition to Clark, A0-8618, and L9-5139. Three of them are selections from L6-2132 (as are L9-5139 and Clark). The seeds planted of S2-5174 were of rather poor quality, and this resulted in almost no stand at Lafayette and Edgewood and may have contributed to its low yield at the other locations. The other five strains, S2-5164, S2-5152, and L6-2132-A1, -A7, and -A14 were among the highest in yield. They ranged in maturity from 1.4 days earlier than Clark to 1.0 day later, and in yield from a

bushel more to a bushel less. Strain L6-2132-A1 exhibited an unusual sterility condition at Edgewood and Laddonia causing it to yield considerably less. Pod set was very low and stems remained green at maturity. The condition was restricted to this strain. Observations at Laddonia pointed toward a possible genetic heterogeneity within the strain in this regard.

Strain A3-7743 performed well, yielding slightly higher than Clark but being 5.4 days earlier. It was lowest in the test in oil content, however, but was correspondingly high in protein.

Strains A3-7820, S2-5486, and S2-5551 all are the same maturity as Clark but averaged 1.3 to 4.4 bushels less in yield. Strain S2-5558 was very late in maturity and yielded less than Lincoln.

Strain C1129 was of the same maturity and yield as L9-5139, but was outyielded by A0-8618, which did very well at these locations. Strain C1128, which has been in Uniform Test, Group II, for two years, is 3.3 days earlier than Lincoln and only slightly lower in yield, but averaged 3.9 bushels less than A0-8618.

P. I. 89152, a strain introduced from Korea in 1930, ranked second in yield at Edgewood and Laddonia, which may indicate possibilities for it in this more southern area. It was relatively lower in yield at the other locations, but except at Urbana it performed as well or better than Lincoln, and is 1.4 days earlier.

Table 41. Summary of agronomic and chemical data for the strains in the Uniform and Preliminary Tests, Group III, 1955.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	7	7	7	7	7	7	7	7
S2-5164*	35.1	+ 8.0	2.0	40	1.5	13.3	39.6	21.8
L6-2132-A14*	34.6	+ 5.6	1.7	42	1.3	13.4	40.9	21.9
L6-2132-A7*	34.4	+ 6.9	1.8	42	1.4	13.7	41.1	21.5
A3-7743*	34.4	+ 1.6	1.9	41	1.7	14.2	42.0	20.3
A0-8618	34.1	- 1.1	1.7	43	1.6	14.3	41.1	21.3
Clark	34.1	+ 7.0	1.9	42	1.4	13.8	40.4	21.5
L6-2132-A1*	34.0	+ 7.6	1.8	43	1.6	15.5	41.6	21.2
U9-2	33.4	+ 4.9	1.8	41	2.1	15.3	39.6	22.1
S2-5152*	33.1	+ 6.9	1.9	41	1.4	13.1	39.9	21.9
U0-41	32.8	+ 3.1	2.0	41	2.0	15.2	39.6	22.2
A3-7820*	32.8	+ 7.1	1.9	42	1.6	14.0	41.3	21.3
L9-5139	32.7	+ 0.1	1.8	44	1.7	13.0	40.6	21.7
C1129*	32.4	+ 0.7	2.0	43	1.7	15.5	41.5	22.2
C1060	32.3	+ 6.6	2.1	42	1.5	13.3	40.4	21.3
C859	31.9	+ 6.3	2.0	44	1.4	11.9	39.3	21.7
P. I. 89152*	31.5	- 1.4	2.2	42	2.6	15.3	40.3	21.5
Lincoln	30.8	0	2.0	43	1.8	12.3	40.9	21.6
S2-5486*	30.6	+ 6.9	2.1	45	1.6	12.7	41.4	20.7
C1128*	30.2	- 3.3	1.8	45	2.3	14.4	40.0	22.4
S2-5558*	29.8	+11.3	2.3	50	1.7	13.2	40.8	21.1
S2-5551*	29.7	+ 7.1	2.1	48	1.9	12.8	40.7	21.5
Illini	28.7	+ 2.0	3.2	46	1.8	12.1	41.0	20.7
Dunfield	27.1	- 4.0	2.9	41	2.2	14.0	39.9	21.9
S2-5174*	--	--	--	--	--	--	--	--
Mean	32.2		2.0	43	1.7	13.8	40.6	21.5

*Grown in the Preliminary Test, Group III, only.
[1]Days earlier (-) or later (+) than Lincoln. Lincoln required 119 days to mature.

Table 42. Summary of yield in bushels per acre for the strains in the Uniform and Preliminary Tests, Group III, 1955.

Strain	Mean of 7 Tests	Lafayette Ind.	Urbana Ill.	Edgewood Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Lincoln Nebr.
S2-5164*	35.1	53.1	30.2	32.2	28.7	36.6	31.6	33.0
L6-2132-A14*	34.6	51.3	29.3	31.6	27.1	39.0	31.0	32.9
L6-2132-A7*	34.4	53.8	28.0	31.3	27.4	38.0	31.4	31.0
A3-7743*	34.4	54.8	29.5	33.6	24.3	37.3	31.1	29.9
A0-8618	34.1	54.6	25.5	33.2	28.1	40.0	29.7	27.9
Clark	34.1	54.9	24.6	34.2	27.4	37.9	30.7	29.2
L6-2132-A1*	34.0	54.0	30.4	28.7	29.3	38.4	29.4	27.6
U9-2	33.4	50.1	27.7	36.0	26.1	34.8	31.3	27.7
S2-5152*	33.1	47.5	29.1	31.9	26.4	35.0	31.5	30.3
U0-41	32.8	46.7	27.6	35.0	31.0	34.2	30.9	24.4
A3-7820*	32.8	47.6	29.4	30.1	27.6	35.1	30.3	29.6
L9-5139	32.7	51.0	22.8	33.9	27.0	38.8	29.9	25.3
C1129*	32.4	53.0	25.0	31.0	25.4	36.0	30.4	25.7
C1060	32.3	51.0	25.8	32.3	26.1	36.0	29.1	26.1
C859	31.9	50.8	26.7	28.0	25.0	35.6	30.5	26.4
P. I. 89152*	31.5	51.0	16.8	35.7	25.9	35.4	31.7	24.1
Lincoln	30.8	47.5	20.8	32.6	24.8	36.6	29.7	23.5
S2-5486*	30.6	52.4	25.4	29.1	21.6	32.4	29.6	23.5
C1128*	30.2	49.2	23.1	21.6	28.1	36.9	30.6	21.7
S2-5558*	29.8	43.8	24.6	27.4	21.9	30.7	32.8	27.2
S2-5551*	29.7	45.7	26.5	30.9	23.4	32.0	28.1	21.6
Illini	28.7	45.8	24.8	29.9	22.9	29.6	24.5	23.3
Dunfield	27.1	40.3	19.4	30.0	21.1	29.0	26.7	23.1
S2-5174*	--	--	25.0	--	24.8	34.4	23.7	25.3
Mean[1]	32.2	50.0	25.8	31.3	25.9	35.4	30.1	26.7
C. V. (%)		8.5	11.8	9.4	11.5	6.4	5.6	--
Bu. Nec. for Sig. (5%)		6.0	4.3	4.1	4.2	3.2	2.1	--
Row Spacing (In.)		40	40	36	40	40	40	38

*Grown in the Preliminary Test, Group III, only.
[1]S2-5174 not included in the mean.

Table 43. Summary of yield rank for the strains in the Uniform and Preliminary Tests, Group III, 1955.

Strain	Lafayette Ind.	Urbana Ill.	Edgewood Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Lincoln Nebr.
S2-5164*	6	2	10	3	9	3	1
L6-2132-A14*	9	5	12	9	2	8	2
L6-2132-A7*	5	7	13	7	5	5	3
A3-7743*	2	3	6	19	7	7	5
A0-8618	3	13	7	4	1	16	8
Clark	1	18	4	7	6	10	7
L6-2132-A1*	4	1	20	2	4	19	10
U9-2	14	8	1	12	17	6	9
S2-5152*	17	6	11	11	16	4	4
U0-41	19	9	3	1	19	9	17
A3-7820*	16	4	16	6	15	14	6
L9-5139	10	21	5	10	3	15	15
C1129*	7	15	14	15	11	13	14
C1060	10	12	9	12	11	20	13
C859	13	10	21	16	13	12	12
P. I. 89152*	10	24	2	14	14	2	18
Lincoln	17	22	8	17	9	16	19
S2-5486*	8	14	19	23	20	18	19
C1128*	15	20	23	4	8	11	23
S2-5558*	22	18	22	22	22	1	11
S2-5551*	21	11	15	20	21	21	24
Illini	20	17	18	21	23	23	21
Dunfield	23	23	17	24	24	22	22
S2-5174*	--	15	--	17	18	24	15

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

Table 44. Summary of maturity data, days earlier (-) or later (+) than Lincoln for the strains in the Uniform and Preliminary Tests, Group III, 1955.

Strain	Mean of 7 Tests	Lafayette Ind.	Urbana Ill.	Edgewood Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Lincoln Nebr.
S2-5164*	+ 8.0	+10	+ 7	+ 7	+6	+ 9	+9	+ 8
L6-2132-A14*	+ 5.6	+ 3	+ 4	+ 7	+5	+ 7	+5	+ 8
L6-2132-A7*	+ 6.9	+ 5	+ 5	+ 8	+6	+ 9	+7	+ 8
A3-7743*	+ 1.6	+ 4	+ 1	0	+2	+ 1	+2	+ 1
AO-8618	- 1.1	- 2	- 1	- 1	-1	- 1	0	- 2
Clark	+ 7.0	+ 6	+ 7	+ 8	+6	+ 9	+6	+ 7
L6-2132-A1*	+ 7.6	+ 6	+ 7	+10	+5	+ 7	+8	+10
U9-2	+ 4.9	+10	+ 4	+ 4	+3	+ 7	+5	+ 1
S2-5152*	+ 6.9	+ 5	+ 6	+ 7	+5	+10	+8	+ 7
UO-41	+ 3.1	+10	0	+ 4	+1	+ 5	+1	+ 1
A3-7820*	+ 7.1	+11	+ 9	+ 4	+5	+ 9	+5	+ 7
L9-5139	+ 0.1	0	+ 1	0	0	0	0	0
C1129*	+ 0.7	- 2	+ 1	- 2	+3	+ 2	+1	+ 2
C1060	+ 6.6	+ 6	+ 6	+ 6	+4	+ 9	+7	+ 8
C859	+ 6.3	+10	+ 7	+ 6	+4	+ 9	+6	+ 2
P. I. 89152*	- 1.4	- 3	- 2	- 2	0	- 1	0	- 2
Lincoln	0	0	0	0	0	0	0	0
S2-5486*	+ 6.9	+12	+ 7	+ 5	+4	+10	+4	+ 6
C1128*	- 3.3	- 3	- 2	- 6	-4	- 5	0	- 3
S2-5558*	+11.3	+15	+13	+10	+8	+13	+9	+11
S2-5551*	+ 7.1	+13	+ 9	+ 3	+4	+ 9	+5	+ 7
Illini	+ 2.0	+10	+ 1	- 2	0	+ 4	-1	+ 2
Dunfield	- 4.0	- 3	- 3	- 6	-2	- 5	-3	- 6
S2-5174*	--	--	- 1	- 1	-1	- 2	-3	- 3
Date planted	5/24	5/20	5/19	5/26	5/11	5/20	6/10	5/30
Lincoln matured	9/20	9/23	9/16	9/12	9/17	9/19	9/19	10/3
Days to mature	119	126	120	109	129	122	101	126

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

Table 45. Summary of percentage of oil for the strains in the Uniform and Preliminary Tests, Group III, 1955.

Strain	Mean of 7 Tests	Lafayette Ind.	Urbana Ill.	Edgewood Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Lincoln Nebr.
S2-5164*	21.8	22.5	21.1	20.8	21.3	22.4	22.9	21.8
L6-2132-A14*	21.9	22.2	22.7	21.3	21.3	21.4	21.9	22.2
L6-2132-A7*	21.5	22.4	21.6	21.2	21.3	21.9	21.7	20.6
A3-7743*	20.3	22.5	19.9	20.0	19.4	19.8	20.7	19.8
A0-8618	21.3	22.0	21.1	21.5	21.3	21.7	21.1	20.7
Clark	21.5	22.2	21.9	21.1	21.2	21.2	22.1	20.8
L6-2132-A1*	21.2	22.1	21.8	21.2	20.4	21.1	21.6	19.9
U9-2	22.1	22.0	22.4	22.1	22.0	22.2	22.3	21.6
S2-5152*	21.9	21.1	22.0	21.8	21.8	22.2	22.6	21.6
U0-41	22.2	22.0	22.7	22.3	22.5	22.3	22.2	21.7
A3-7820*	21.3	21.1	21.7	21.0	21.3	20.6	21.7	21.5
L9-5139	21.7	22.4	21.7	21.3	21.4	21.8	22.2	21.1
C1129*	22.2	23.1	23.2	22.0	21.0	22.5	21.9	21.4
C1060	21.3	22.1	21.6	20.7	21.0	21.5	21.5	20.8
C859	21.7	22.0	21.6	21.4	21.9	21.7	21.7	21.5
P. I. 89152*	21.5	21.9	20.1	21.6	21.8	22.4	21.8	21.1
Lincoln	21.6	22.3	21.7	21.3	21.6	22.6	21.6	20.3
S2-5486*	20.7	20.8	20.7	20.1	20.7	21.4	20.8	20.5
C1128*	22.4	23.0	22.3	22.1	22.3	22.8	22.7	21.3
S2-5558*	21.1	21.6	20.7	20.1	19.9	22.1	21.9	21.4
S2-5551*	21.5	22.0	21.6	21.6	20.6	22.7	22.0	20.0
Illini	20.7	21.1	20.8	20.3	21.1	20.8	20.9	20.0
Dunfield	21.9	21.9	22.2	22.1	21.8	22.5	21.7	21.1
S2-5174*	--	--	21.2	21.9	22.7	22.2	22.0	21.3
Mean[1]	21.5	22.0	21.6	21.3	21.3	21.8	21.8	21.0

*Grown in the Preliminary Test, Group III, only.
[1]S2-5174 not included in the mean.

UNIFORM TEST, GROUP IV

The origin of the strains in the Uniform Test, Group IV, is as follows:

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

Data from Uniform Test, Group IV, were obtained from fifteen locations in 1955. These data are presented in Tables 46 through 53. Considering the eleven locations common to both years, 1954 yields averaged 30 bushels and 1955 yields averaged 29 bushels. There were marked changes at individual locations, however. In the East, yields were up a little. Yields were reduced sharply at Indiana and Illinois locations (except Eldorado, Illinois which remained the same). In Missouri, yields were up from near-failure in 1954. In Kansas, the drouth at Manhattan caused yields to decrease from 20 to 9 bushels while at Columbus, Kansas, the situation was reversed with yields going from 4 to 22 bushels.

Entries in this test were the same as in 1954. Among the named varieties, the five-year means put Clark definitely ahead of the others in yield, followed by Perry, with Wabash and Chief about the same. Clark yielded best at eleven out of the fourteen locations.

Strain C985 has been tested for five years and has a 0.5 bushel average yield advantage over Clark. Out of the fourteen locations in the five-year summary, it has led Clark at ten.

Eight selections from C985 were entered in this test in 1954. The range in yield of the two-year means is only 1.5 bushels with C1068 on top and very slightly ahead of Clark. Late summer drouths in this test area during these years perhaps have influenced these yield results.

Strain C1048 has been tested three years, and its performance has been very similar to Perry in maturity and yield.

Table 46. Summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1955.

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	10	12	14	13	13	13
C1069	31.4	+11.4	2.1	43	2.3	15.2	41.2	22.0
C1076	31.2	+ 9.9	2.0	43	2.2	15.5	42.3	21.2
C985	30.6	+ 9.2	1.8	42	2.3	15.1	41.6	21.8
Clark	30.3	+ 0.5	1.9	39	2.1	14.7	41.2	21.5
C1068	30.3	+ 9.6	1.5	40	2.2	15.6	42.0	21.5
C1065	29.9	+ 8.8	1.3	39	1.9	14.2	41.6	21.6
C1078	29.8	+ 7.6	1.7	42	2.2	15.8	42.2	21.5
C1071	29.5	+ 9.2	1.7	41	2.0	14.6	40.2	22.3
C1074	29.3	+10.3	1.7	45	2.1	16.0	41.7	21.8
C1079	29.1	+ 9.7	1.8	41	2.2	14.7	41.8	21.5
C1048	28.1	+ 5.8	1.7	43	1.9	12.5	41.8	21.1
Perry	27.6	+ 5.7	2.1	39	2.9	15.6	42.6	21.0
Wabash	24.9	0	2.3	41	2.1	13.8	41.3	21.5
Chief	24.7	- 0.6	3.1	48	2.3	11.9	41.3	20.7
Mean	29.0		1.9	42	2.2	14.7	41.6	21.5

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

Table 47. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1955.

Strain	Mean of 13 Tests[1]	Landisville Pa.	Newark Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Edgewood Ill.
C1069	31.4	53.4	54.5	44.2	25.5	36.4	25.0	33.5
C1076	31.2	62.5	52.4	50.1	25.7	38.0	26.6	27.0
C985	30.6	56.9	52.3	46.9	27.0	37.7	25.4	28.1
Clark	30.3	58.4	41.0	39.6	28.1	41.6	22.5	35.6
C1068	30.3	49.6	56.2	50.8	20.6	38.0	28.3	27.8
C1065	29.9	51.9	54.2	47.2	22.0	37.0	26.5	25.4
C1078	29.8	59.2	48.1	46.8	24.0	36.5	26.8	28.8
C1071	29.5	60.3	48.9	48.5	19.8	33.6	24.9	26.7
C1074	29.3	59.9	53.2	47.7	17.2	35.2	24.9	28.4
C1079	29.1	54.8	52.5	42.5	16.4	37.1	21.1	28.2
C1048	28.1	49.9	44.8	43.6	20.1	36.1	21.2	28.4
Perry	27.6	53.0	44.4	43.8	23.7	33.6	22.5	30.6
Wabash	24.9	46.8	33.9	33.8	23.9	29.3	20.3	28.3
Chief	24.7	50.5	37.5	33.1	19.4	28.2	17.7	27.7
Mean	29.0	54.8	48.1	44.2	22.4	35.6	23.8	28.9
Coef. of Var. (%)		17.5	13.1	8.9	28.6	8.8	11.6	9.5
Bu. Nec. for Sig. (5%)		N.S.	9.0	5.6	N.S.	4.5	3.9	3.9
Row Spacing (In.)		40	36	40	38	38	40	36

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

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

Table 47. (Continued)

Strain	Eldorado Ill.	Carbondale Ill.	Laddonia Mo.	Columbia Mo.	Jefferson City Mo.	Manhattan Kans.	Mound Valley Kans.	Columbus Kans.
C1069	35.5	17.6	29.2	33.2	34.4	9.8	14.4	24.2
C1076	38.0	18.1	27.5	32.4	32.2	10.4	13.7	23.5
C985	37.2	17.3	26.7	32.8	30.1	10.5	14.1	22.8
Clark	41.1	20.7	25.7	30.7	31.3	8.5	12.8	23.7
C1068	34.9	16.2	25.6	32.4	28.7	8.1	12.4	22.2
C1065	34.8	18.4	25.2	33.1	27.6	11.8	13.7	23.5
C1078	38.8	19.2	24.9	29.9	29.4	8.6	13.3	20.5
C1071	38.6	18.6	25.6	31.0	30.3	10.9	14.1	22.4
C1074	34.7	16.9	26.9	30.3	30.2	7.9	13.8	21.4
C1079	30.8	17.7	28.1	32.1	32.2	7.9	14.4	24.9
C1048	32.3	17.0	26.8	30.0	29.6	6.5	12.7	22.2
Perry	29.3	19.6	22.8	30.7	26.0	9.1	13.6	18.7
Wabash	31.8	15.6	22.5	27.1	24.8	4.9	14.0	18.5
Chief	29.7	18.0	23.6	25.0	33.6	5.9	12.4	15.6
Mean	34.8	17.9	25.8	30.8	30.0	8.6	13.5	21.7
Coef. of Var. (%)	11.2	9.6	8.2	8.1	23.9	--	12.0	--
Bu. Nec. for Sig. (5%)	5.6	2.5	3.0	3.6	N.S.	--	N.S.	--
Row Spacing (In.)	40	40	40	36	40	40	42	40
	Yield Rank							
C1069	6	9	1	1	1	5	1	2
C1076	4	6	3	4	3	4	7	4
C985	5	10	6	3	8	3	3	6
Clark	1	1	7	8	5	8	11	3
C1068	7	13	8	4	11	9	13	8
C1065	8	5	10	2	12	1	7	4
C1078	2	3	11	12	10	7	10	11
C1071	3	4	8	7	6	2	3	7
C1074	9	12	4	10	7	10	6	10
C1079	12	8	2	6	3	10	1	1
C1048	10	11	5	11	9	12	12	8
Perry	14	2	13	8	13	6	9	12
Wabash	11	14	14	13	14	14	5	13
Chief	13	7	12	14	2	13	13	14

Table 48. Summary of maturity data, days earlier (-) or later (+) than Wabash, and lodging data for the strains in the Uniform Test, Group IV, 1955.

Strain	Mean of 13 Tests[1]	Landisville Pa.	Newark Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Edgewood Ill.
C1069	+11.4	+10	+16	+10	+8	+9	+10	+8
C1076	+ 9.9	+11	+13	+10	+8	+8	+ 7	+8
C985	+ 9.2	+ 9	+12	+10	+8	+8	+ 7	+6
Clark	+ 0.5	- 9	+ 5	0	-1	-2	- 1	0
C1068	+ 9.6	+ 9	+14	+10	+7	+7	+ 5	+6
C1065	+ 8.8	+ 8	+12	+ 9	+7	+6	+ 5	+6
C1078	+ 7.6	+ 9	+12	+ 9	+7	+7	+ 2	+6
C1071	+ 9.2	+ 9	+14	+ 9	+7	+8	+ 5	+6
C1074	+10.3	+11	+14	+10	+8	+9	+ 6	+7
C1079	+ 9.7	+ 9	+10	+ 9	+7	+8	+ 8	+6
C1048	+ 5.8	+ 7	+ 8	+ 5	+6	+6	+ 2	+5
Perry	+ 5.7	+ 9	+12	+ 6	+7	+7	+ 5	+4
Wabash	0	0	0	0	0	0	0	0
Chief	- 0.6	+ 2	+ 5	0	+3	+2	- 3	-1
Date planted	5/28	5/25	5/26	5/28	5/18	5/31	5/19	5/26
Wabash matured	9/24	10/18	10/1	10/5	9/24	9/24	9/26	9/18
Days to mature	119	146	128	130	129	116	130	115
	Mean of 10 Tests[2]	Lodging						
C1069	2.1	3.0	2.3	3.2	2.0	2.0	2.8	1.3
C1076	2.0	3.0	2.3	2.5	2.0	2.0	3.0	1.0
C985	1.8	2.0	2.0	2.2	2.3	1.5	2.8	1.0
Clark	1.9	2.0	1.3	2.8	1.3	1.5	3.8	1.8
C1068	1.5	2.0	1.5	2.0	1.8	1.0	2.0	1.0
C1065	1.3	2.0	1.3	1.2	1.8	1.0	1.5	1.3
C1078	1.7	3.0	1.8	2.2	2.3	1.3	2.5	1.0
C1071	1.7	3.0	1.8	2.0	2.0	1.5	3.0	1.3
C1074	1.7	3.0	1.8	2.0	1.5	1.5	2.5	1.0
C1079	1.8	3.0	1.5	2.8	1.5	1.3	3.0	1.0
C1048	1.7	2.0	1.0	2.2	2.0	1.5	3.0	1.5
Perry	2.1	2.0	1.0	3.0	2.0	2.0	4.3	2.5
Wabash	2.3	3.0	1.3	3.5	1.8	2.3	4.5	3.0
Chief	3.1	4.0	2.3	4.0	2.5	3.3	5.0	3.8
Mean	1.9	2.6	1.7	2.5	1.9	1.7	3.1	1.6

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

Table 48. (Continued)

Strain	Eldorado Ill.	Carbondale Ill.	Laddonia Mo.	Columbia Mo.	Jefferson City Mo.	Manhattan Kans.	Mound Valley Kans.	Columbus Kans.
C1069	+14	+8	+12	+17	+5	+12	+19	+30
C1076	+14	+6	+12	+14	+4	+ 8	+17	+30
C985	+12	+5	+10	+14	+4	+ 8	+16	+30
Clark	+ 4	-6	0	+ 1	-2	+ 1	+ 7	+10
C1068	+13	+4	+11	+14	+6	+11	+17	+30
C1065	+10	+4	+10	+14	+4	+10	+17	+30
C1078	+10	+2	+ 7	+14	+3	+ 5	+15	+30
C1071	+11	+3	+ 9	+14	+4	+12	+17	+30
C1074	+13	+7	+11	+14	+6	+11	+18	+30
C1079	+15	+5	+10	+13	+5	+11	+19	+30
C1048	+ 8	+3	+ 8	+ 9	+1	+ 1	+14	+12
Perry	+ 7	+3	+ 6	+ 7	+2	+ 1	+ 7	+14
Wabash	0	0	0	0	0	0	0	0
Chief	0	-8	- 2	- 1	-1	0	- 2	+ 2
Date planted	5/20	5/3	6/10	6/2	6/17	6/1	6/4	6/4
Wabash matured	9/9	9/11	9/24	9/22	9/30	10/11	9/16	9/20
Days to mature	112	131	106	112	105	132	104	108
				Lodging				
C1069	4.0	1.5	1.0	1.0		1.0		1.0
C1076	3.5	1.5	1.0	1.0		1.0		1.0
C985	2.8	1.5	1.0	1.0		1.0		1.0
Clark	3.0	1.0	1.0	1.0		1.0		1.0
C1068	1.5	1.8	1.0	1.0		1.0		1.0
C1065	1.5	1.3	1.0	1.0		1.0		1.0
C1078	2.0	1.5	1.0	1.0		1.0		1.0
C1071	2.0	1.5	1.0	1.0		1.0		1.0
C1074	2.8	1.5	1.0	1.0		1.0		1.0
C1079	3.8	1.3	1.0	1.0		1.0		1.0
C1048	2.8	1.3	1.0	1.0		1.0		1.0
Perry	3.0	1.0	1.0	1.1		1.0		1.0
Wabash	3.0	1.0	1.3	1.1		1.0		1.0
Chief	3.8	1.8	1.9	2.1		1.0		1.0
Mean	2.8	1.4	1.1	1.1		1.0		1.0

Table 49. Summary of height data and percentage of oil for the strains in the Uniform Test, Group IV, 1955.

Strain	Mean of 12 Tests[1]	Landisville Pa.	Newark Del.	Beltsbille Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Edgewood Ill.
C1069	43	38	42	46	49	46	52	48
C1076	43	42	41	46	49	47	49	49
C985	42	39	40	44	45	48	50	47
Clark	39	32	32	40	45	44	46	45
C1068	40	33	40	43	42	46	47	44
C1065	39	35	37	43	42	46	48	43
C1078	42	38	40	44	45	46	50	49
C1071	41	38	36	42	44	45	49	45
C1074	45	39	42	45	48	51	55	51
C1079	41	38	36	44	45	47	49	49
C1048	43	40	36	45	46	50	51	52
Perry	39	34	28	43	45	44	49	46
Wabash	41	37	31	43	48	48	51	46
Chief	48	42	34	51	51	51	64	53
Mean	42	41	37	44	46	47	51	48

	Mean of 13 Tests	Percentage of Oil					
C1069	22.0	21.8	21.0	20.6	22.5	22.2	21.1
C1076	21.2	21.4	20.7	19.9	21.9	20.8	19.9
C985	21.8	22.1	21.1	20.9	22.4	21.4	20.4
Clark	21.5	22.1	20.2	20.4	22.7	21.2	21.2
C1068	21.5	21.9	20.9	20.3	22.2	21.5	20.5
C1065	21.6	21.8	20.9	20.5	22.5	21.0	20.0
C1078	21.5	21.9	20.6	20.4	22.5	21.0	20.4
C1071	22.3	23.0	21.4	21.2	23.0	22.0	19.9
C1074	21.8	21.5	20.8	20.5	22.4	21.8	20.5
C1079	21.5	22.0	20.8	19.7	22.3	21.3	19.5
C1048	21.1	21.8	20.1	20.1	21.3	20.4	20.3
Perry	21.0	21.6	19.6	19.8	21.5	20.7	20.5
Wabash	21.5	22.0	19.9	20.3	21.6	21.3	20.8
Chief	20.7	20.6	19.1	19.6	21.4	20.7	20.2
Mean	21.5	21.8	20.5	20.3	22.2	21.2	20.4

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

Table 49. (Continued)

Strain	Eldorado Ill.	Carbondale Ill.	Laddonia Mo.	Columbia Mo.	Jefferson City Mo.	Manhattan Kans.	Mound Valley Kans.	Columbus Kans.
C1069	53	44	34	38	44	23		
C1076	51	42	37	36	49	25		
C985	49	40	35	36	45	22		
Clark	49	37	35	32	45	19		
C1068	48	38	34	34	43	19		
C1065	48	38	32	33	42	20		
C1078	49	39	36	36	48	25		
C1071	47	41	35	34	46	23		
C1074	53	42	38	36	50	24		
C1079	49	41	36	35	45	18		
C1048	53	43	38	36	47	22		
Perry	46	36	36	32	45	19		
Wabash	49	39	38	33	48	19		
Chief	57	49	42	40	57	24		
Mean	50	41	36	35	47	22		
	Percentage of Oil							
C1069	22.2	23.1	22.7	22.9	23.2		20.4	22.3
C1076	21.4	22.3	21.9	22.1	22.1		20.0	21.5
C985	22.3	23.2	22.3	22.1	22.3		20.3	22.0
Clark	21.7	22.4	21.8	21.9	22.1		20.2	21.7
C1068	21.8	21.9	22.6	22.3	22.4		19.4	22.3
C1065	21.9	22.5	22.4	22.6	22.1		20.0	22.4
C1078	22.0	22.1	22.1	22.3	23.1		19.6	21.6
C1071	23.1	23.1	23.2	23.3	23.3		20.9	22.5
C1074	22.0	23.1	22.4	22.7	22.5		20.8	21.9
C1079	21.7	22.8	22.2	22.4	22.0		20.0	22.2
C1048	21.5	22.0	21.6	22.3	21.4		20.1	21.9
Perry	21.3	22.9	21.1	21.5	21.2		19.7	22.2
Wabash	21.8	22.4	21.2	21.9	22.3		21.0	22.4
Chief	20.4	21.1	20.9	21.0	21.5		19.7	22.3
Mean	21.8	22.5	22.0	22.2	22.3		20.2	22.1

Table 50. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1954-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	25	21	19	24	25	25	25	25
C1068	32.1	+ 8.1	1.7	39	2.3	15.9	41.5	21.6
C985	31.9	+ 8.5	2.1	41	2.5	15.3	41.3	21.7
Clark	31.9	+ 1.2	1.9	38	2.2	15.2	41.2	21.4
C1076	31.8	+ 9.0	2.3	43	2.4	15.7	41.9	21.1
C1069	31.7	+10.5	2.4	43	2.5	15.6	41.0	21.8
C1065	31.5	+ 7.7	1.7	39	2.2	14.6	41.3	21.5
C1074	30.9	+ 9.0	2.0	44	2.3	16.2	41.3	21.7
C1071	30.9	+ 8.1	2.0	40	2.3	14.8	40.1	22.3
C1078	30.9	+ 7.1	1.9	41	2.3	16.1	42.0	21.3
C1079	30.6	+ 8.0	1.9	40	2.3	14.9	41.4	21.4
Perry	29.2	+ 5.1	2.0	38	2.8	15.6	42.2	21.1
C1048	29.0	+ 5.2	1.9	43	2.1	12.8	41.6	21.0
Wabash	27.2	0	2.4	41	2.2	13.9	40.9	21.6
Chief	26.5	+ 0.3	3.3	47	2.5	12.3	41.5	20.4
Mean	30.4		2.1	41	2.4	14.9	41.4	21.4

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

Table 51. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1954-55.

Strain	Mean of 25 Tests	Landis-ville Pa.	Belts-ville Md.	Worth-ington Ind.	Evans-ville Ind.	Ur-bana Ill.	Eldor-ado Ill.	Carbon-dale Ill.	Lad-donia Mo.	Colum-bia Mo.	Man-hattan Kans.	Colum-bus Kans.
C1068	32.1	50.6	49.0	31.9	45.2	31.6	35.6	24.5	22.5	21.0	14.5	12.9
C985	31.9	55.3	46.1	38.2	40.8	29.1	36.5	23.9	21.6	20.5	16.6	13.5
Clark	31.9	54.1	40.3	38.7	46.7	30.0	37.5	26.1	22.6	19.5	15.2	13.8
C1076	31.8	56.0	46.5	38.0	42.4	28.7	38.2	23.3	23.2	21.2	16.0	13.6
C1069	31.7	51.9	40.2	38.9	41.5	28.1	36.6	24.8	22.1	21.8	16.4	13.6
C1065	31.5	50.8	46.7	33.7	44.3	29.6	34.8	24.5	20.9	20.9	16.1	13.2
C1074	30.9	53.3	49.4	31.6	41.7	28.3	34.1	24.2	22.1	18.7	13.9	13.0
C1071	30.9	52.8	44.5	32.5	42.7	28.4	37.5	25.0	22.0	20.7	17.4	13.2
C1078	30.9	52.9	47.8	34.7	43.3	29.2	37.5	24.9	21.3	19.1	11.9	12.2
C1079	30.6	49.3	47.0	29.2	43.9	26.2	32.2	24.4	22.4	21.3	12.9	14.6
Perry	29.2	49.0	41.1	33.3	41.4	28.6	31.6	24.7	19.3	18.7	14.6	11.8
C1048	29.0	48.3	41.8	33.0	37.4	23.3	32.3	23.3	21.2	18.6	11.5	12.7
Wabash	27.2	46.8	35.1	33.8	36.0	26.0	31.1	20.7	20.9	16.9	11.3	11.4
Chief	26.5	45.9	36.6	28.8	32.1	23.6	28.8	20.5	21.0	16.0	12.7	10.2
Mean	30.4	51.2	43.7	34.0	41.4	27.9	34.6	23.9	21.7	19.6	14.4	12.8

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

Table 52. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1951-55.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	73	60	60	71	67	73	73	73
C985	33.0	+7.8	2.0	41	2.2	15.7	40.6	21.7
Clark	32.5	-0.7	1.9	38	2.1	15.5	40.6	21.6
Perry	30.2	+4.9	2.0	39	2.5	16.0	41.3	21.3
Wabash	27.9	0	2.4	41	2.0	14.1	40.3	21.3
Chief	27.8	-1.1	3.0	47	2.4	12.4	41.2	20.4
Mean	30.3		2.3	41	2.2	14.7	40.8	21.3

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

Table 53. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1951-55.

Strain	Mean of 73 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.
Years Tested		1951-1955	1952, 1955	1951-1954	1951-52 1954-55	1951-1955	1951-52 1954-55	1951-1955
C985	33.0	49.3	51.4	24.0	44.0	43.2	50.6	32.6
Clark	32.5	47.9	40.2	18.6	36.8	42.3	49.3	36.4
Perry	30.2	42.4	41.4	16.7	41.3	36.9	43.7	33.7
Wabash	27.9	40.6	37.2	15.7	32.0	36.9	41.3	30.7
Chief	27.8	40.2	41.5	17.2	34.4	33.3	40.1	29.9
Mean	30.3	44.1	42.3	18.4	37.7	38.5	45.0	32.7
		Yield Rank						
C985		1	1	1	1	1	1	3
Clark		2	4	2	3	2	2	1
Perry		3	3	4	2	3	3	2
Wabash		4	5	5	5	3	4	4
Chief		5	2	3	4	5	5	5

[1]Brownstown, Illinois, 1952-53.
[2]Thayer, Kansas, 1952-53.

Table 53. (Continued)

Strain	Edgewood Ill.[1]	Eldorado Ill.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.	Columbus Kans.[2]
Years Tested	1951-53 1955	1951-1955	1951-1955	1951-1955	1951-1955	1951-53 1955	1952-54 1955
C985	24.4	41.6	25.3	27.3	20.2	17.0	12.1
Clark	28.5	41.0	27.2	25.6	19.5	16.7	12.8
Perry	25.3	35.3	26.0	25.8	19.3	15.9	11.4
Wabash	22.5	33.7	24.1	21.5	16.1	15.4	10.7
Chief	22.5	32.3	25.9	20.7	17.7	15.3	10.0
Mean	24.6	36.8	25.7	24.2	18.6	16.1	11.4
	Yield Rank						
C985	3	1	4	1	1	1	2
Clark	1	2	1	3	2	2	1
Perry	2	3	2	2	3	3	3
Wabash	4	4	5	4	5	4	4
Chief	4	5	3	5	4	5	5

Table 54. Chemical composition of soybean seed grown at each of the Uniform Test locations in 1955 and the five-year mean for 1951-55.

Location	1955		Five-Year Mean	
	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
Group 0 (Mean of 17 strains in 1955, 15 in 1954, 14 in 1953, 13 in 1952, and 15 in 1951)				
Ottawa, Ontario	41.3	20.6	41.0	19.5
Guelph, Ontario	39.2	20.7	40.8	19.4
Columbus, Ohio	42.8	20.5	--	--
Spooner, Wis.	40.6	19.4	41.6	18.6
Durand, Wis.[1]	44.4	18.9	42.2	19.4
Crookston, Minn.	38.0	20.9	--	--
Morris, Minn.	37.4	22.3	40.4	20.8
St. Paul, Minn.	41.6	20.9	--	--
Casselton, N. D.	34.6	21.9	--	--
Fargo, N. D.	38.4	21.0	40.6	19.6
Group I (Mean of 9 strains in 1955, 8 in 1954, 8 in 1953, 10 in 1952, and 13 in 1951)				
Ridgetown, Ontario	35.0	22.4	--	--
State College, Pa.	43.5	20.2	41.3	20.6
Hoytville, Ohio	40.6	21.6	--	--
Wooster, Ohio	41.8	21.1	42.3	20.4
Columbus, Ohio	41.2	21.1	41.1	20.9
Walkerton, Ind.	41.0	21.2	41.1	20.8
Durand, Wis.	41.4	18.8	42.8	19.0
Madison, Wis.	44.1	19.8	42.3	20.0
Shabbona, Ill.	41.0	20.9	40.8	21.1
St. Paul, Minn.	42.0	19.7	--	--
Waseca, Minn.	39.9	21.9	41.5	20.1
Cresco, Iowa	41.5	20.0	42.2	19.6
Kanawha, Iowa	42.5	20.0	41.8	20.4
Brookings, S. D.	41.3	20.7	--	--
Group II (Mean of 16 strains in 1955, 16 in 1954, 14 in 1953; Composite of 14 in 1952, 13 in 1951)				
State College, Pa.	41.8	20.2	40.2	20.7
Englishtown, N. J.[2]	39.9	21.5	40.2	21.0
Newark, Del.	39.5	21.7	--	--
Hoytville, Ohio	40.4	21.3	--	--
Wooster, Ohio	40.9	21.1	41.8	20.1

Table 54. (Continued)

Location	1955		Five-Year Mean	
	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
	(Group II Continued)			
Columbus, Ohio	41.3	21.1	41.5	20.7
Mt. Healthy, Ohio	41.0	21.3	--	--
Walkerton, Ind.	40.4	21.2	40.2	21.0
Bluffton, Ind.	41.2	20.7	41.0	20.8
Lafayette, Ind.	39.9	22.1	40.6	21.5
Greenfield, Ind.	41.0	21.6	41.6	21.4
Madison, Wis.	42.1	20.6	41.1	20.0
Shabbona, Ill.	41.1	20.2	40.5	20.5
Dwight, Ill.	42.0	20.4	41.0	21.0
Urbana, Ill.	40.3	20.9	39.4	21.5
Waseca, Minn.	39.2	21.7	--	--
Kanawha, Iowa	41.4	21.2	41.1	20.6
Marcus, Iowa	39.3	21.8	40.5	20.7
Independence, Iowa	42.6	19.9	41.2	20.4
Ames, Iowa	40.7	21.5	40.0	21.4
Kirksville, Mo.	42.0	20.7	--	--
Laurel, Nebr.	40.8	20.8	--	--
Lincoln, Nebr.	40.9	21.3	40.3	21.5
Group III (Mean of 10 strains in 1955, 10 in 1954, 10 in 1953; Composite of 15 in 1952, 16 in 1951)				
Freehold, N. J.	40.7	20.6	--	--
Newark, Del.	37.6	22.1	39.1	21.5
Beltsville, Md.	42.8	21.2	38.2	22.8
Hoytville, Ohio	40.6	20.9	--	--
Columbus, Ohio	41.4	20.8	41.0	20.2
Lafayette, Ind.	39.5	22.0	39.9	21.5
Greenfield, Ind.	41.3	21.0	41.1	21.0
Worthington, Ind.	42.3	21.1	41.5	21.3
Dwight, Ill.	40.6	21.1	40.4	21.0
Urbana, Ill.	39.8	21.8	39.0	21.5
Girard, Ill.	38.4	22.4	--	--
Edgewood, Ill.	42.3	21.4	--	--
Eldorado, Ill.	40.9	21.9	41.4	21.5
Carbondale, Ill.	39.1	22.8	--	--
Ames, Iowa	40.4	21.6	39.8	21.4

Table 54. (Continued)

Location	1955		Five-Year Mean	
	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
	(Group III Continued)			
Ottumwa, Iowa	38.7	21.8	38.2	22.1
Kirksville, Mo.	41.4	21.1	--	--
Laddonia, Mo.	40.8	21.7	41.0	21.1
Columbia, Mo.	39.9	22.3	--	--
Lincoln, Nebr.	40.4	21.0	39.8	21.2
Columbus, Kans.	42.3	22.0	--	--
Group IV (Mean of 14 strains in 1955, 14 in 1954, 9 in 1953; Composite of 10 in 1952, 18 in 1951)				
Newark, Del.	38.1	21.8	--	--
Beltsville, Md.	42.3	20.5	--	--
Worthington, Ind.	43.0	20.3	41.1	21.3
Evansville, Ind.	41.4	22.2	--	--
Urbana, Ill.	40.4	21.2	39.7	21.3
Edgewood, Ill.	44.2	20.4	--	--
Eldorado, Ill.	41.7	21.8	41.2	22.0
Carbondale, Ill.	39.5	22.5	--	--
Laddonia, Mo.	41.2	22.0	41.0	21.2
Columbia, Mo.	41.4	22.2	--	--
Jefferson City, Mo.	39.4	22.3	--	--
Mound Valley, Kans.	45.9	20.2	--	--
Columbus, Kans.	42.9	22.1	--	--

[1]Fall City, Wisconsin, 1951-1953.
[2]New Brunswick, New Jersey, 1951-1953; Middlesex Co., New Jersey, 1954.

SOYBEAN DISEASE INVESTIGATIONS IN 1955

Soybean diseases in the Midwest were generally more prevalent and severe in 1955 than in the three previous seasons. Serious damage, however, occurred in only limited areas, and over-all damage to the crop was probably small.

Downy mildew was the most prevalent disease in Illinois and Indiana, but occurred in only trace amounts in Iowa. Bacterial blight was common in the northern parts of the three states, with damage confined to the lower half of the plant. Bacterial pustule was found in the central and southern portions of Illinois and Indiana. Brown spot was common in Indiana, especially in the central part. It occurred sparsely in Illinois and was not reported from Iowa.

Brown stem rot appeared later than usual in 1955. Its development during August was slower than usual, largely because of high temperatures; consequently, its effect on yield was not appreciable. Stem canker likewise developed more slowly than usual and caused relatively little damage.

Root rot (Fusarium) was the most prevalent disease in Iowa in 1955. A root rot attributed to Phytophthora sp. was found in limited areas of Ohio, Illinois, and Indiana. It occurred usually in low, poorly drained portions of fields of heavy clay soil. Areas of serious damage were located in northwestern Ohio, east-central Indiana, and north-central Illinois. The disease has caused more losses in northwestern Ohio than in any other location reported thus far. In Indiana and Illinois, serious reduction in stand has been confined to the low portions of affected fields. According to observations in Indiana and Ohio, Harosoy is highly susceptible, while Blackhawk and Monroe appear to be resistant.

Other diseases, common in some years, occurred sparsely in 1955. These include frog-eye, reported only from Indiana; wildfire, found in trace amounts in Illinois; and bud blight, mosaic, and yellow mosaic, all limited to traces.

The accumulated information on disease reaction of all strains that have appeared in the Uniform Tests has been tabulated and appended to this report.

GLOSSARY

BSR = Brown Stem Rot (Cephalosporium gregatum)
STC = Stem Canker (Diaporthe phaseolorum var. caulivora)
BSP = Brown Spot (Septoria glycines)
FE = Frog-eye (Cerospora sojina)
DM = Downy Mildew (Peronospora manshurica)
BBL = Bacterial Blight (Pseudomonas glycinea)
BP = Bacterial Pustule (Xanthomonas phaseoli var. sojense)

Disease reading lists the following:

1-5, disease reaction, followed by capital letter, or letters, to identify the state where test was made.

Letters are the code letters used by agronomists to identify strains in the Uniform Tests (L = Illinois; C = Indiana; A = Iowa; etc.)

Small "n" or "a" after the code letter signifies natural (n) or artifical (a) infection.

Disease readings are listed according to the Soybean Disease Classification Standards for Nursery Ratings, March, 1955, with the

Table 55. Accumulated information on reactions of soybean strains that have appeared in the Uniform Tests, Groups 0 through IV, to seven of the more important diseases.

Strain	Source	Parentage	Brown Stem Rot
		GROUP 0	
Capital	Ottawa	Strain 171 x A.K. (Harrow)	4 Ln
Chippewa	Illinois	Lincoln x (Linc. x Richland)	5 Ln
Comet	Ottawa	Pagoda x Mandarin	2 Ln
Flambeau	Wisconsin	Introduction from Russia	4 Ln
Goldsoy	Ontario	Sel. from O.A.C. 211	4 Ln
Hardome	Harrow	Mandarin x (Mandarin x A.K.)	1 Ln
Mandarin (Ott.)	Ottawa	Sel. from Mandarin	5 Ln
Kabott	Ottawa	Introduction from Manchuria	4 Ln
Montreal Manchu	Montreal	Sel. from Manchu	4 Ln
Norchief	Wisconsin	Hawkeye x Flambeau	5 Ln
Pridesoy	Twin City Seed Co., Minneapolis	Unknown	5 Ln
Pridesoy 57	Twin City Seed Co., Minneapolis	Sel. from Pridesoy	4 Ln
Hokien	Imperial Seed Co., Clear Lake, Ia.	Sel. from Capital	5 Ln
Renville	Minnesota	Lincoln x (Linc. x Richland)	3 Ln
M8	Minnesota	Lincoln x (Linc. x Richland)	5 Ln
M9	Minnesota	Lincoln x (Linc. x Richland)	5 Ln
0-17	Ottawa	Sel. from Pagoda	5 Ln
0-50-11	Ottawa	A.K. x Pagoda	
0-52-710	Ottawa	Blackhawk x Mandarin (Ottawa)	
0-52-793	Ottawa	A45-251 x Flambeau	
0-200	Ottawa	Sel. from Manchu	5 Ln
0-255	Ottawa	Strain 171 x A.K.	5 Ln
W4-2115	Wisconsin	Lincoln x (Linc. x Richland)	5 Ln
W5-2260	Wisconsin	Ontario x Richland	4 Ln
W5S-4167	Wisconsin	Lincoln x Seneca	5 Ln
W6S-199	Wisconsin	Habaro x Goldsoy	4 Ln
W6S-246	Wisconsin	Lincoln x Pagoda	5 Ln
W6S-283	Wisconsin	Lincoln x Kabott	5 Ln
W6S-292	Wisconsin	Lincoln x Seneca	5 Ln
W6S-341	Wisconsin	Cayuga x Kabott	5 Ln

following exceptions: stem canker readings for Indiana (C) were taken as percent of plants infected compared with the total number of infected Hawkeye plants considered as 100%. Frog-eye readings are listed as R (resistant), I (intermediate), and S (susceptible).

Table 55. (Continued)

Strain	Stem Canker	Brown Spot	Frog-eye	Downy Mildew	Bacterial Blight	Bacterial Pustule
			GROUP 0			
Capital	0 Cn	4 Ca	S Ca		3 La	4 La
Chippewa	0 Cn	5 Ca	S Ca	2 Cn	3 La	4 La
Comet	0 Cn	3 Ca	S Ca		3 La	4 La
Flambeau	0 Cn	2-3 Ca	S Ca		2 La	3 La
Goldsoy						
Hardome	14 Cn	2-3 Ca	S Ca	1-2 Cn	2 La	4 La
Mandarin (Ott.)	0 Cn	3 Ca	S Ca	2 Cn	3 La	4 La
Kabott						
Montreal Manchu						
Norchief	26 Cn	4 Ca	S Ca		3 La	3 La
Pridesoy						
Pridesoy 57					2 La	
Hokien			S Ca		3 La	4 La
Renville	0 Cn	3 Ca	S Ca	4-5 Cn	3 La	4 La
M8			S Ca		3 La	
M9			S Ca		3 La	
0-17					4 La	
0-50-11			S Ca		2 La	4 La
0-52-710	22 Cn	3 Ca			2 La	4 La
0-52-793	0 Cn	3 Ca			3 La	4 La
0-200			S Ca		2 La	4 La
0-255					2 La	5 La
W4-2115		3 Ca	S Ca		3 La	
W5-2260					2 La	4 La
W5S-4167						
W6S-199					4 La	
W6S-246						
W6S-283					3 La	4 La
W6S-292		3-4 Ca			4 La	
W6S-341						

Table 55. (Continued)

Strain	Source	Parentage	Brown Stem Rot
		(Group O Continued)	
W6S-339	Wisconsin	Cayuga x Kabott	4 Ln
W7S-727	Wisconsin	Seneca x Mandarin	5 Ln
W7S-955	Wisconsin	Cayuga x Kabott	2 Ln
W8S-1019	Wisconsin	Kabott x Chief	5 Ln
W8S-1200	Wisconsin	Richland x Flambeau	4 Ln
W9S-2703	Wisconsin	Lincoln x Flambeau	3 Ln
WOS-3138	Wisconsin	Hawkeye x Flambeau	3 Ln
WOS-3147	Wisconsin	Mukden x Flambeau	2 Ln
WOS-3180	Wisconsin	Mukden x Flambeau	3 Ln
WOS-3257	Wisconsin	Mukden x Flambeau	2 Ln
WOS-3334	Wisconsin	Lincoln x Flambeau	3 Ln
WOS-3386	Wisconsin	Lincoln x Flambeau	4 Ln
		GROUP I	
Blackhawk	Iowa	Mukden x Richland	5 Ln, 3 An
Chippewa	Illinois	Lincoln x (Linc. x Richland)	5 Ln
Earlyana	Indiana	Sel. from a natural hybrid	5 Ln
Habaro	U. S. Dept. Agr.	Sel. from P. I. 20405	5 Ln
Harly	Ottawa	Mandarin x A.K. (Harrow)	5 Ln
Monroe	Ohio	Mukden x Mandarin	4 Ln
Wis. Manchu 3	Wisconsin	Sel. from Manchu	5 Ln
AOK-913	Iowa	Richland x Mandarin (Ottawa)	4 Ln
AOK-2206	Iowa	Hawkeye x Mandarin (Ottawa)	4 Ln
AOK-3808	Iowa	Lincoln x (Linc. x Richland)	4 Ln
A6K-1011	Iowa	Lincoln x (Linc. x Richland)	5 Ln
A6K-1329	Iowa	Lincoln x (Linc. x Richland)	5 Ln
A6K-1801	Iowa	Lincoln x (Linc. x Richland)	5 Ln
H2804	Ohio	Richland x Scioto	5 Ln
H6403	Ohio	Lincoln x (Linc. x Richland)	4 Ln
L6-8179	Illinois	Lincoln x (Linc. x Richland)	5 Ln
M1	Minnesota	Lincoln x (Linc. x Richland)	5 Ln
M4	Minnesota	Lincoln x (Linc. x Richland)	4 Ln
M10	Minnesota	Lincoln x (Linc. x Richland)	5 Ln
W4-3190	Wisconsin	Lincoln x (Linc. x Richland)	5 Ln
W4-4018	Wisconsin	Lincoln x (Linc. x Richland)	4 Ln
W5-2175	Wisconsin	Mandarin x L6-12	4 Ln
W5-2307	Wisconsin	Lincoln x Richland	5 Ln
W5-3346	Wisconsin	Lincoln x (Linc. x Richland)	5 Ln

Table 55. (Continued)

Strain	Stem Canker	Brown Spot	Frog-eye	Downy Mildew	Bacterial Blight	Bacterial Pustule
		(Group O Continued)				
W6S-339						
W7S-727						
W7S-955						
W8S-1019					3 La	
W8S-1200			S Ca		3 La	
W9S-2703	12 Cn	4 Ca	R Ca		3 La	2 La
WOS-3138	10 Cn	4 Ca	S Ca		1 La	4 La
WOS-3147	0 Cn	3-4 Ca			3 La	4 La
WOS-3180	0 Cn	2-3 Ca	R Ca		2 La	4 La
WOS-3257	0 Cn	3-4 Ca			1 La	4 La
WOS-3334		3 Ca	R Ca			2 La
WOS-3386	10 Cn	3-4 Ca	R Ca		1 La	3 La
		GROUP I				
Blackhawk	44 Cn, 2 An	3-4 Ca	S Ca	5 Cn	4 La, 5 Aa	4 La
Chippewa	0 Cn	5 Ca	S Ca	2 Cn	3 La	4 La
Earlyana	0 Cn	5 Ca, 4 An	S Ca	2 Cn	3 La	5 La
Habaro	12 Cn	5 Ca	S Ca		3 La	4 La
Harly		5 Ca	R Ca		5 La	4 La
Monroe	10 Cn	4 Ca	S Ca	2-3 Cn	4 La	4 La
Wis. Manchu 3						
AOK-913		4 Ca	S Ca			3 La
AOK-2206	33 Cn	3 Ca	S Ca	2-3 Cn	3 La	3 La
AOK-3808	47 Cn	4 Ca	R Ca	2 Cn	2 La	4 La
A6K-1011	33 Cn	2 Ca			3 La	4 La
A6K-1329	36 Cn	5 Ca	S Ca		3 La	
A6K-1801	13 Cn	4 Ca	R Ca		3 La	
H2804						
H6403						
L6-8179	11 Cn	4 Ca	R Ca		2 La	4 La
M1						
M4						
M10	12 Cn	3 Ca	S Ca		3 La	
W4-3190	47 Cn				3 La	4 La
W4-4018						
W5-2175						
W5-2307					3 La	
W5-3346						

Table 55. (Continued)

Strain	Source	Parentage	Brown Stem Rot
		(Group I Continued)	
W5-3633	Wisconsin	Lincoln x (Linc. x Richland)	5 Ln
W5-3638	Wisconsin	Lincoln x Richland	4 Ln
W8S-1025	Wisconsin	Lincoln x Pagoda	5 Ln
W8S-1035	Wisconsin	Lincoln x Pagoda	5 Ln
W9-1982	Wisconsin	A3-108 x Wisconsin Manchu 3	5 Ln
		GROUP II	
Adams (A5-2683)	Iowa	Illini x Dunfield	5 Ln, 5 An
Bavender Special	Iowa	Farmer's Selection	5 Ln
Hawkeye	Iowa	Mukden x Richland	5 Ln, 5 An
Harosoy	Ontario	Mandarin x (Mandarin x A.K.)	5 Ln, 4 An
Korean	Ontario	Introduction from Orient	5 Ln
Mukden	Iowa	P. I. 50523Q	4 Ln
Richland	Indiana	Sel. from P. I. 70502-2	5 Ln, 4 An
A3-176	Iowa	Illini x Dunfield	5 Ln
A4-107-12	Iowa	Mukden x Richland	
A7-6102	Iowa	Lincoln x (Linc. x Richland)	5 Ln
A7-6323	Iowa	Lincoln x (Linc. x Richland)	5 Ln
A7-6402	Iowa	Lincoln x (Linc. x Richland)	5 Ln
A7-6520	Iowa	Lincoln x (Linc. x Richland)	5 Ln
A7-6905	Iowa	Lincoln x (Linc. x Richland)	5 Ln
AO-8618	Iowa	Lincoln x (Linc. x Richland)	5 Ln, 5 An
AX29-163-1-2	Iowa	Adams x Hawkeye	4 Ln, 5 An
C683	Indiana	Mukden x Richland	5 Ln
C739	Indiana	Lincoln x (Linc. x Richland)	5 Ln
C776	Indiana	Lincoln x (Linc. x Richland)	5 Ln
C789	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C790	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C791	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C873	Indiana	Dunfield x Lincoln	5 Ln
C931	Indiana	Lincoln x Earlyana	5 Ln
C1013	Indiana	Lincoln x (A45-251 x Earlyana)	4 Ln
C1024	Indiana	Lincoln x (A45-251 x Earlyana)	5 Ln
C1056	Indiana	Lincoln x (Linc. x A45-251)	4 Ln, 5 An
C1057	Indiana	Lincoln x (Linc. x A45-251)	4 Ln
C1105	Indiana	A4-107-12 x Mandarin (Ottawa)	4 Ln, 5 An
C1106	Indiana	A4-107-12 x Mandarin (Ottawa)	4 Ln, 4 An
C1117	Indiana	Mandarin (Ottawa) x Lincoln	4 Ln, 3 An
C1119	Indiana	Mandarin (Ottawa) x Lincoln	4 Ln, 1 An

Table 55. (Continued)

Strain	Stem Canker	Brown Spot	Frog-eye	Downy Mildew	Bacterial Blight	Bacterial Pustule
		(Group I Continued)				
W5-3633					3 La	3 La
W5-3638						
W8S-1025					3 La	
W8S-1035					3 La	
W9-1982		4 Ca	S Ca			4 La
		GROUP II				
Adams (A5-2683)	11 Cn, 2 An	3 Ca, 4 An	R Ca	3 Cn	4 La, 4 Aa	4 La
Bavender Special						4 La
Hawkeye	100 Cn, 2 An	3 Ca, 4 An	S Ca	4-5 Cn	3 La, 5 Aa	4 La
Harosoy	0 Cn, 2 An	2-3 Ca, 5 An	S Ca	2 Cn	4 La, 5 Aa	4 La
Korean						
Mukden					3 La	5 La
Richland	44 Cn, 2 An	4 Ca, 4 An	S Ca	4 Cn	3 La, 5 Aa	3 La
A3-176						
A4-107-12						4 La
A7-6102	24 Cn	5 Ca	R Ca		5 La	4 La
A7-6323						4 La
A7-6402	36 Cn	4 Ca				
A7-6520	26 Cn	5 Ca	R Ca		3 La	4 La
A7-6905						3 La
A0-8618	59 Cn, 2 An	3-4 Ca, 4 An	R Ca	3 Cn	2 La, 5 Aa	4 La
AX29-163-1-2	123 Cn, 1 An	3-4 Ca, 4 An		3-4 Cn	2 La, 5 Aa	5 La
C683	20 Cn	3 Ca	S Ca	3 Cn	3 La	5 La
C739	8 Cn	4 Ca	R Ca		3 La	4 La
C776	10 Cn	3 Ca	S Ca		3 La	4 La
C789						
C790						
C791						
C873		3 Ca	S Ca			3 La
C931		4 Ca	S Ca			4 La
C1013		4 Ca	R Ca			3 La
C1024		3 Ca	R Ca			3 La
C1056	12 Cn, 2 An	3 Ca, 4 An	R Ca	3 Cn	3 La, 5 Aa	4 La
C1057		2 Ca	S Ca			3 La
C1105	46 Cn, 2 An	3 Ca, 4 An		3-4 Cn	4 La, 5 Aa	
C1106	0 Cn, 2 An	3 Ca, 3 An		4 Cn	4 La, 4 Aa	
C1117	0 Cn, 2 An	4 Ca, 4 An		1-2 Cn	4 La, 3 Aa	
C1119	0 Cn, 2 An	3 Ca, 4 An		2-3 Cn	4 La, 5 Aa	

Table 55. (Continued)

Strain	Source	Parentage	Brown Stem Rot
		(Group II Continued)	
C1121	Indiana	Mandarin (Ottawa) x Lincoln	4 Ln, 3 An
C1128	Indiana	Wabash x A4-107-12	4 Ln, 5 An
H2804	Ohio	Richland x Scioto	4 Ln
H3665	Ohio	Richland x Wisconsin Manchu 3	5 Ln
H6150	Ohio	Lincoln x (Linc. x Richland)	5 Ln
H6217	Ohio	Lincoln x (Linc. x Richland)	5 Ln
H6403	Ohio	Lincoln x (Linc. x Richland)	5 Ln
H13116	Ohio	Lincoln x (Richland x C11)	4 Ln, 5 An
H13501	Ohio	Lincoln x (Richland x C11)	5 Ln, 5 An
H14025	Ohio	Lincoln x Quebec 92	3 Ln, 3 An
H14521	Ohio	Lincoln x Ontario	4 Ln, 5 An
H14551	Ohio	Lincoln x Ontario	4 Ln, 3 An
H15345	Ohio	Lincoln x P. I. 68666	4 Ln, 3 An
H15548	Ohio	Lincoln x P. I. 68666	3 Ln, 5 An
H24088	Ohio	Monroe x Lincoln	4 Ln, 5 An
L4-8066	Illinois	Seneca x L7-1355	5 Ln
L4-8090	Illinois	Seneca x Hudson Manchu	5 Ln
L6-8144	Illinois	Lincoln x Richland	5 Ln
L6-8182	Illinois	Lincoln x (Linc. x Richland)	4 Ln
L6-8474	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-8477	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-8622	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L7-1287	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L8-7289	Illinois	Seneca x Richland	5 Ln
L9-5139	Illinois	Lincoln x (Linc. x Richland)	4 Ln, 5 An
S2-5437	Missouri	Lincoln x A3-108	4 Ln, 3 An
W5-3372	Wisconsin	Lincoln x (Linc. x Richland)	5 Ln
W8-1028	Wisconsin	Lincoln x Manchu 606	5 Ln
W9-1982	Wisconsin	A3-108 x Wisconsin Manchu 3	
W9-2024	Wisconsin	Hawkeye x Flambeau	3 Ln, 5 An
		GROUP III	
Anderson	Farmer's Selection	Rogue in Lincoln	5 Ln
Clark	Illinois	Lincoln x (Linc. x Richland)	5 Ln, 5 An
Cypress #1	Cypress Land Farms Co., St. Louis	Sel. from Korean	5 Ln
Dunfield	Indiana	P. I. 36846	5 Ln, 5 An
Fabulin	Pennsylvania Farm Bureau Coop. Assn.	Sel. from Lincoln	5 Ln
Illini	Illinois	Sel. from A. K.	5 Ln, 5 An

Table 55. (Continued)

Strain	Stem Canker	Brown Spot	Frog-eye	Downy Mildew	Bacterial Blight	Bacterial Pustule
		(Group II Continued)				
C1121	0 Cn, 2 An	3 Ca, 4 An		1-2 Cn	3 La, 5 Aa	5 La
C1128	5 Cn, 2 An	3 Ca, 4 An		1-2 Cn	3 La, 4 Aa	4 La
H2804						4 La
H3665	18 Cn	2 Ca	S Ca		2 La	4 La
H6150	25 Cn	4 Ca	R Ca		4 La	3 La
H6217	14 Cn	3 Ca	S Ca	4 Cn	3 La	
H6403		5 Ca	S Ca		3 La	4 La
H13116	47 Cn, 2 An	4 Ca, 4 An		2-3 Cn	3 La, 5 Aa	5 La
H13501	80 Cn, 2 An	3 Ca, 4 An		5 Cn	3 La, 5 Aa	4 La
H14025	12 Cn, 2 An	3-5 Ca, 4 An		4-5 Cn	3 La, 4 Aa	4 La
H14521	27 Cn, 2 An	4-5 Ca, 4 An		3-4 Cn	3 La, 5 Aa	4 La
H14551	0 Cn, 2 An	3 Ca, 4 An		3 Cn	3 La, 5 Aa	4 La
H15345	22 Cn, 2 An	3 Ca, 4 An		2 Cn	3 La, 5 Aa	4 La
H15548	53 Cn, 2 An	3 Ca, 4 An		1-2 Cn	3 La, 5 Aa	4 La
H24088	26 Cn, 2 An	3 Ca, 4 An		2-3 Cn	4 La, 5 Aa	4 La
L4-8066						
L4-8090						
L6-8144						
L6-8182						3 La
L6-8474						
L6-8477						3 La
L6-8622						
L7-1287					3 La	3 La
L8-7289	37 Cn	3 Ca	S Ca	4 Cn	2 La	4 La
L9-5139	78 Cn, 2 An	5 Ca, 4 An	R Ca	3 Cn	3 La, 5 Aa	4 La
S2-5437	2 An	4 An			3 La, 5 Aa	4 La
W5-3372	55 Cn	3 Ca	R Ca		3 La	3 La
W8-1028	29 Cn	3 Ca		3 Cn	3 La	
W9-1982		4 Ca				
W9-2024	63 Cn, 2 An	4 An		2 Cn	3 La, 5 Aa	4 La
		GROUP III				
Anderson	9 Cn	3 Cn	R Ca		3 La	3 La
Clark	67 Cn, 2 An	3-4 Ca, 4 An	R Ca	4 Cn	3 La, 5 Aa	4 La
Cypress #1	12 Cn	3 Ca	S Ca	3 Cn		
Dunfield	60 Cn, 1 An	3-4 Ca, 4 An	S Ca	3 Cn	3 La, 4 Aa	4 La
Fabulin						3 La
Illini	40 Cn, 2 An	3 Ca, 4 An	R Ca	3 Cn	5 La, 3 Aa	4 La

Table 55. (Continued)

Strain	Source	Parentage	Brown Stem Rot
		(Group III Continued)	
Lincoln	Illinois	Mandarin x Manchu	5 Ln, 5 An
A7-1953	Iowa	Linc. x Linc. x (Linc. x Rich.)	5 Ln
A7-6103	Iowa	Lincoln x (Linc. x Richland)	
A7-6402	Iowa	Lincoln x (Linc. x Richland)	
A7-6629	Iowa	Lincoln x (Linc. x Richland)	
A7-6831	Iowa	Lincoln x (Linc. x Richland)	
C764	Indiana	Lincoln x (Linc. x Richland)	5 Ln
C859	Indiana	Dunfield x Lincoln	4 Ln, 5 An
C977	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C978	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C981	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C983	Indiana	Lincoln x (Rich. x Earlyana)	5 An
C1060	Indiana	Lincoln x (Linc. x A45-251)	5 Ln, 5 An
L6-1152	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-1503	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-2132	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-2132-A1	Illinois	Lincoln x (Linc. x Richland)	5 An
L6-2132-A7	Illinois	Lincoln x (Linc. x Richland)	5 An
L6-2132-A14	Illinois	Lincoln x (Linc. x Richland)	5 An
L8-10946	Illinois	Lincoln x (Linc. x Macoupin)	5 Ln
L9-4197	Illinois	Linc. x (L x R) x (L x CNS)	4 Ln
L9-5139	Illinois	Sel. from L6-2132	5 Ln
S2-5152	Missouri	Lincoln x (Linc. x Richland)	5 An
S2-5164	Missouri	Lincoln x (Linc. x Richland)	5 An
S2-5174	Missouri	Lincoln x (Linc. x Richland)	5 An
S2-5486	Missouri	Lincoln x A3-108	5 An
S2-5551	Missouri	L4-1219 x A4-107-12-1	5 An
S2-5558	Missouri	L4-1219 x A4-107-12-1	5 An
U9-2	Nebraska	Sel. from mixed seed	5 Ln, 5 An
U0-41	Nebraska	Sel. from U9-2	4 Ln, 5 An
		GROUP IV	
Carlin	Farmer's Selection	Rogue in Dunfield	4 Ln
Chief	Illinois	Illini x Manchu	5 Ln
Clark	Illinois	Lincoln x (Linc. x Richland)	5 Ln
Gibson	Indiana	Midwest x Dunfield	4 Ln
Patoka	Indiana	Sel. from P. I. 70218-2	5 Ln
Perry	Indiana	Patoka x L7-1355	5 Ln

Table 55. (Continued)

Strain	Stem Canker	Brown Spot	Frog-eye	Downy Mildew	Bacterial Blight	Bacterial Pustule
		(Group III Continued)				
Lincoln	20 Cn, 2 An	3 Ca, 4 An	R Ca	3-4 Cn	4 La, 5 Aa	4 La
A7-1953		3 Ca	S Ca		3 La	3 La
A7-6103		4 Ca	R Ca	4 Cn		
A7-6402			R Ca	3 Cn	3 La	5 La
A7-6629			S Ca	4 Cn	3 La	5 La
A7-6831						2 La
C764	14 Cn	3 Ca	R Ca		3 La	
C859	25 Cn, 2 An	3 Ca			3 La, 5 Aa	4 La
C977	14 Cn	3 Ca		3 Cn		
C978	13 Cn	5 Ca	S Ca	4 Cn		
C981	15 Cn	4 Ca	R Ca	4 Cn		
C983	10 Cn	3 Ca	S Ca	3 Cn		
C1060	8 Cn, 2 An	3 Ca, 4 An	S Ca	4 Cn	3 La, 5 Aa	4 La
L6-1152	10 Cn	5 Ca	R Ca		3 La	3 La
L6-1503	15 Cn	3 Ca	R Ca		3 La	3 La
L6-2132		4 Ca			2 La	4 La
L6-2132-A1	66Cn, 1 An	4 Ca, 4 An			3 Aa	
L6-2132-A7	0 Cn, 2 An	4 Ca, 4 An			5 Aa	
L6-2132-A14	31 Cn, 2 An	3 Ca, 4 An			5 Aa	
L8-10946						
L9-4197		5 Ca	S Ca	5 Cn	3 La	2 La
L9-5139	78 Cn, 2 An	5 Ca		3 Cn		3 La
S2-5152	0 Cn, 2 An	5 Ca, 4 An			5 Aa	
S2-5164	24 Cn, 2 An	4 Ca, 4 An			4 Aa	
S2-5174	0 Cn, 2 An	3 Ca, 3 An			5 Aa	
S2-5486	0 Cn, 1 An	5 Ca			4 Aa	
S2-5551	37 Cn, 1 An	4 Ca			3 Aa	
S2-5558	20 Cn, 2 An	4 Ca			4 Aa	
U9-2	17 Cn, 2 An	4 Ca, 4 An	R Ca		4 La, 3 Aa	4 La
U0-41	51 Cn, 2 An	3-4 Ca, 4 An			4 La, 3 Aa	4 La
		GROUP IV				
Carlin					1 La	
Chief	44 Cn	4 Ca	I Ca	3 Cn	3 La	3 La
Clark	27 Cn	3 Ca	R Ca	4 Cn	3 La	4 La
Gibson	44 Cn	3 Ca	S Ca	3 Cn		3 La
Patoka	0 Cn	3 Ca	S Ca	5 Cn	2 La	4 La
Perry	45 Cn	4 Ca	I Ca	4 Cn	2 La	4 La

Table 55. (Continued)

Strain	Source	Parentage	Brown Stem Rot
		(Group IV Continued)	
Smith	Farmer's Selection	Unknown	
Wabash	Indiana	Dunfield x Mansoy	5 Ln
C490	Indiana	Patoka x CX531-468-3-3-2	4 Ln
C499	Indiana	C143 x CX531-468-3-3-2-3	4 Ln
C500	Indiana	C143 x CX531-468-3-3-2-3	4 Ln
C501	Indiana	C143 x CX531-468-3-3-2-3	5 Ln
C502	Indiana	C143 x CX531-468-3-3-2-3	4 Ln
C805	Indiana	C143 x Lincoln	5 Ln
C976	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C979	Indiana	Lincoln x (Rich. x Earlyana)	5 Ln
C985	Indiana	Lincoln x Ogden	4 Ln
C986	Indiana	Lincoln x Ogden	5 Ln
C1048	Indiana	Lincoln x (Dunfield x A45-251)	4 Ln
C1065	Indiana	Sel. from C985	4 Ln
C1068	Indiana	Sel. from C985	3 Ln
C1069	Indiana	Sel. from C985	3 Ln
C1071	Indiana	Sel. from C985	4 Ln
C1074	Indiana	Sel. from C985	3 Ln
C1076	Indiana	Sel. from C985	3 Ln
C1078	Indiana	Sel. from C985	3 Ln
C1079	Indiana	Sel. from C985	4 Ln
L3-2010	Illinois	C167 x L7-1355	5 Ln
L3-3427	Illinois	Scioto x Mukden	5 Ln
L6-1656	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-2132	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L6-5679	Illinois	Lincoln x Richland	5 Ln
L8-10755	Illinois	Lincoln x (Lincoln x C171)	5 Ln
L8-10780	Illinois	Lincoln x (Lincoln x C171)	5 Ln
L8-10934	Illinois	Lincoln x (Linc. x Macoupin)	5 Ln
L9-3270	Illinois	Lincoln x (Linc. x Richland)	5 Ln
L9-4091	Illinois	Linc. x (L x R) x (L x CNS)	5 Ln
L9-4196	Illinois	Linc. x (L x R) x (L x CNS)	
L9-5142	Illinois	Sel. from L6-2132	
S1-441	Missouri	Lincoln x (Lincoln x Ogden)	4 Ln
S7-270	Missouri	Chief x (Macoupin x Chief)	5 Ln
S9-966	Missouri	Lincoln x (Lincoln x Ogden)	5 Ln

Table 55. (Continued)

Strain	Stem Canker	Brown Spot	Frog-eye	Downy Mildew	Bacterial Blight	Bacterial Pustule
		(Group IV Continued)				
Smith		3 Ca	S Ca			
Wabash	47 Cn	3 Ca	R Ca	3 Cn	2 La	5 La
C490						3 La
C499						
C500						
C501						3 La
C502						3 La
C805	17 Cn	5 Ca	S Ca	5 Cn		
C976		3 Ca		4 Cn		
C979	61 Cn	3 Ca	S Ca	4 Cn		
C985	34 Cn	4 Ca	R Ca	4 Cn	3 La	4 La
C986	11 Cn	3 Ca	R&S Ca	2 Cn		
C1048	36 Cn	3 Ca	R Ca		2 La	3 La
C1065	57 Cn	3-4 Ca			3 La	4 La
C1068	37 Cn	3-4 Ca			3 La	3 La
C1069	42 Cn	4 Ca			2 La	3 La
C1071	44 Cn	3-4 Ca			3 La	4 La
C1074	89 Cn	4 Ca			3 La	3 La
C1076	39 Cn	4 Ca			3 La	4 La
C1078	39 Cn	5 Ca			3 La	4 La
C1079	63 Cn	5 Ca			3 La	3 La
L3-2010						
L3-3427						
L6-1656	10 Cn	4 Ca	R Ca	4 Cn	4 La	2 La
L6-2132	11 Cn	4 Ca	R Ca	3-4 Cn		
L6-5679	22 Cn	2 Ca	S Ca		4 La	4 La
L8-10755	10 Cn	3 Ca	R Ca	4 Cn		
L8-10780	49 Cn	2 Ca	R Ca	4 Cn		
L8-10934		3 Ca	S Ca			
L9-3270		3 Ca	R Ca			3 La
L9-4091	17 Cn	4 Ca	R Ca		3 La	2 La
L9-4196	0 Cn	3 Ca	S Ca	3 Cn	2 La	1 La
L9-5142	42 Cn	4 Ca	R Ca	3 Cn	2 La	4 La
S1-441		4 Ca	R Ca			3 La
S7-270	47 Cn	3 Ca	S Ca		3 La	
S9-966		3 Ca	R Ca			2 La

The following strains and Introductions have shown good resistance to bacterial blight and bacterial pustule through several seasons. The asterisks after the reaction indicate the number of years the strain has been tested.

Group No.	Strain	Disease Reaction	
		Bact. Blight	Bact. Pustule
II	H3665	2***	
O	Flambeau	2***	
II	L8-7289	2**	
III	L9-4091		2***
IV	L9-4196	2***	1***
III	L9-4197		2**
I	P. I. 68521	1-2****	3****
I	P. I. 68554-1	1-2****	
I	P. I. 153213	1-2***	
III	P. I. 88789-1		2**
IV	P. I. 96333		1***
IV	P. I. 171432		2***

WEATHER CONDITIONS AND GENERAL GROWTH RESPONSES AT MOST OF THE NURSERY LOCATIONS DURING THE 1955 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 1955 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.

Guelph, Ontario, Canada. The growing season at Guelph in 1955 was extremely hot and dry during the latter part of June, July, and the early part of August. July mean temperatures were almost 7° higher than a 40-year average. Soybean yields were extremely low. The Group 0 test was saved by two irrigations in July totaling approximately 3.5 inches. Rainfall in June, July, and August amounted to only 5.67 inches with no effective rain between June 10th and August 5th.

State College and Landisville, Pennsylvania. Pennsylvania experienced the driest May on record. Also, summer temperatures were above normal; hence the 1955 summer was one of the hottest on record. Several periods of moisture stress were experienced during the soybean growing season in addition to the month of May--namely the last two weeks of June and July and the first two weeks of September. Depleted soil moisture was not restored until the hurricane rains in August. Following these rains, ideal growing conditions prevailed from early August through October. Killing frosts did not occur until October 25, making the growing season one of the longest on record. The 1955 growing season was therefore characterized by extremes--dry and hot during the forepart and very favorable in the latter part.

Englishtown and Freehold, New Jersey. The temperatures for the growing period were very much above normal from the middle of June until the end of the first week in August. During that entire time the rainfall was limited to three-fourths of an inch. However, on August 8 a hurricane brought an overabundance of rainfall making the August total somewhat over 10 inches, which was about 8 inches above normal. The soybeans which were planted before June 1 suffered rather badly in the drouth. Yields were low and quality poor. Those planted as late as June 15 were not too far along to benefit from the moisture received at the end of the first week in August. Consequently, they grew well from both a yield and quality standpoint.

Newark, Delaware. A wide variety of weather conditions was experienced during the growing season. Total rainfall for the May to September period was about 3 inches above normal. May, July, and September were months of deficient rainfall with June and August above normal. Severe drouth conditions prevailed during July and the first 10 days of August. During the period from June 26 to August 9, a total of 0.23 inches of precipitation was received. The highest single rainfall for this period was 0.11 inches. A total of 14 inches was received during August. More than half (12.8 inches) of the total rainfall received during the May to September period fell during the period from August 10 to August 22.

The severity of the mid-season drouth was accentuated by abnormally high temperatures. Temperatures of 90 degrees or above were recorded on 21 days during July. During the May to September period, all months except June were above normal.

Severe early-season lodging occurred during mid-August as a result of the heavy rains accompanied by high winds. Varieties in Groups II and III never did fully recover, resulting in a high lodging index. Varieties in Group IV recovered very well and showed very little effects at the time of maturity. The higher than usual index for seed quality in Groups II and III may to some extent be a reflection of the effects of the stormy period. A moldy condition of the seed (attributed to pod and stem blight) occurred to a greater extent this year than in previous years, particularly in the earlier maturity groups.

Beltsville, Maryland. April and May were months of unusual warmth and deficient rainfall. Temperatures during June were quite cool, but rainfall was abundant. Record-breaking heat and near record-dryness were recorded in July, but two hurricanes within a week's time, bringing rainfall of record-breaking proportions, averted a severe drouth during the month of August. Unusual warmth was also recorded during August. Weather during the month of September featured mostly typical temperatures and unseasonable dryness. October was moderately warm and unusually wet for autumn.

Stands, weed control, plant growth, and harvest conditions were very good. Heavy rainfall during August resulted in severe lodging of most strains. Bacterial pustule and wildfire were noticeably absent. Purple stain (Cercospora kikuchii) and poor seed quality were quite prevalent among earlier (Group III) maturing varieties. It has been suggested that the poor seed quality of such seed was caused in part by pod and stem blight, Diaporthe phaseolorum.

Hoytville, Wooster, Columbus, and Mt. Healthy, Ohio. The general growing conditions were very favorable, as indicated by the relatively high yields. This is the second highest acre yield in the history of soybean production in Ohio. There were certain isolated areas in the state that suffered from either too much water or too little water at some time or other during the growing season. However, these areas were relatively small and did not have too much of an effect on the over-all picture. There were yields reported authentically of 45 to 50 bushels in several localities in the state. In the northwestern portion of the state, in the heavy lake bed soils, there were a couple of very heavy showers amounting to several inches over a period of a few hours which seemed to increase the severity of the Phytophthora root rot situation, since it seems to be connected with poor drainage.

Walkerton, Indiana. This was planted very timely, growth was excellent, and harvest conditions were fairly good. A 2.5 inch rain accompanied with considerable wind on August 6 caused excessive early directional lodging. There was a very heavy infection of downy mildew but little evidence of other diseases. Blackhawk had a rating of 5, and Hawkeye 4 for mildew throughout the plot. Very few experimental strains were as heavily infected as Hawkeye. Harosoy and several experimental strains had a very low susceptibility, rating 2 or less, and were considered resistant.

Precipitation averaged 3.01 inches above normal for the growing season with an above normal of 4.13 inches occurring in August and a shortage of 1.24 inches in May. In general, distribution was good. Temperatures averaged 5°F. above normal in July and August with 1, 2, 18, 15, and 5 days with 90°F. or above for May, June, July, August, and September, respectively. Ten days in July and 6 days in August were 95°F. or above, reaching 98 and 101 on consecutive days in late July.

Bluffton, Indiana. This was planted and harvested under rather ideal conditions. Yields were unusually high and averaged 49.3 bushels per acre for the plot. There was very little to moderate infection of bacterial blight and downy mildew. Lincoln and H14025 were most heavily infected with bacterial blight with a rating of 3. H24088 and H15345 were most heavily infected with downy mildew with a rating of 3.

Precipitation was 1.48, 2.05, and 1.27 inches below normal in May, June, and September, respectively, but 3.41 and 1.64 inches above average for July and August, respectively and thus averaged normal for the growing season. Temperatures were slightly above normal with 17, 14, and 8 days 90°F. or above in July, August, and September, respectively. Temperatures were 95°F. or above during only four days of the summer.

Lafayette, Indiana. This was an excellent nursery in general, except that stands were thin or very poor among the Ohio entries in Uniform Preliminary Group II and in C859, L9-5139, and several Missouri entries in Uniform and Preliminary Groups III. Growth was unusually good and yields averaged from about 45 to 50 bushels per acre in most yield trials. There was very little to moderate infection of bacterial pustule, and bacterial blight, a light infection of brown spot and downy mildew, and a moderate infection of stem canker with a small percentage of plants killed. Hawkeye had the highest percentage of plants infected and killed.

Precipitation was about 2.5 inches above average for May and about 2.5 inches below average for August and was about the normal amount for the summer. There were 14, 14, and 7 days with 90°F. or above in July, August, and September, respectively. Temperatures were somewhat above normal through most of the growing season. There were no extensive periods of unusually high temperatures.

Greenfield, Indiana. Planting conditions were excellent, but planting date, June 1, was somewhat late. Stands were good at this location but growth was poor. The average yield and height of Group II was 28.5 bushels per acre and 35 inches, and for Group III it was 23.0 bushels per acre and 36 inches. Hot weather damage was severe. Varieties ripened during a very short period and there was little spread in maturity. There was little or no disease in the plot. There was an abundance of "duds" in most varieties, but seed quality was fairly good.

Precipitation was 1.87 inches above normal for July, but 1.15 inches below normal in August. There were 14, 16, and 9 days with 90°F. or above temperatures in July, August, and September. The late August and mid-September high temperatures were no doubt rather damaging to the crop.

Worthington, Indiana. Cool, wet weather followed planting, emergence was slow, but stands were fair to good. Growth was somewhat below average but rapid, following the cool period. Drouth effects were very noticeable even to the point that many plants died from the lack of moisture, especially in Group IV. There was much yellowing on the lower leaves due to high humidity in July. Mildew was moderate to heavy throughout the plot and caused necrotic lesions. Frog-eye leafspot was present only in a small area of Patoka and Perry seed plots. Seed quality was very poor.

Precipitation was 1.05 inches above average in May, average in June, 3.72 inches above average in July, 3.41 inches below average in August, and normal in September. Only 0.53 inch of precipitation occurred in three showers from July 19 to

September 22, a period of 63 days. It was very hot throughout this period with 19, 17, and 10 days with temperatures 90°F. or above for July, August, and September, respectively.

Evansville, Indiana. This nursery was planted May 31, which was late for this area of the state, and long-season varieties were at some disadvantage. Harvest was somewhat late, October 19-21, but under fairly good conditions. There was moderate bacterial pustule and slight downy mildew infection in the plots. Some manganese deficiency was evident in some areas of the plot even though 25 pounds per acre of manganese sulfate was applied with 125 pounds per acre of 3-9-27 at planting. Many of the lower leaves were yellowed excessively, due probably to very high humidity near the ground level and rapid, spreading growth of the plants.

Precipitation was 3.67 inches below normal for the growing period but distribution was excellent. August was 1.73 inches below normal. Temperatures were high with 1, 3, 26, 19, and 15 days with 90°F. or above during May to September, respectively. The July, August, and September maximum average temperatures were 92.1 and 91.3, and 90.2°F. July was very humid.

Spooner, Wisconsin. The weather in this area was particularly favorable for soybean production. Temerpatures were considerably above normal throughout May and with abundant moisture late in May the beans emerged quickly and uniformly. The temperatures were normal for June, and, although the rainfall was below normal, its distribution was good enough so that no drouth effects showed up in row crops. Conditions were very favorable for soybeans during the month of July when temperatures averaged 4.7 degrees above normal and rainfall totaled 9.02 inches, which was 5.31 inches above normal. Both temperatures and rainfall continued at above normal rates in August, but rainfall was not well enough distributed to prevent some drouth damage about the middle of the month. The first killing frost occurred September 11. There was no rainfall the first two weeks of September, and the soybeans were forced into maturity to some extent.

Durand, Wisconsin. The tests were planted May 16. Emergence and stand were excellent. Conditions were favorable for good growth until early August. Drouth and above normal temperatures reduced yield by 20 per cent, especially for the later varieties. Since the soil is sandy, drouths of short duration can reduce yields if they occur at a critical time in the plant's growth. Frost on September 11 reduced the yields of the later Group I varieties.

Madison, Wisconsin. The tests at Madison were planted May 18. Emergence and stand were excellent. Moisture was below normal in May, August, and September. Temperature was about normal until late June; however, during July and August the average was 5 degrees above normal. Thirty-eight days had temperatures over 90°F. Growth was very good through July. During August and September, because of extreme heat and lack of moisture, yields were reduced 30 to 40 per cent. The reduction in yield was more serious with the later varieties. Seed size, particularly for later varieties and the upper half of the plant, was reduced considerably. A light frost occurred September 11 which killed about one-third of the foliage.

Shabbona, Illinois. Planting was rather late, on June 1, in well-prepared soil of a permeable black prairie type. Emergence and early growth were rapid, and no ill effects from late planting were noted. Despite periods of dry weather in July and August, this location was better favored by rains than elsewhere in the state, and yields were at an all-time high.

Dwight, Illinois. This soil is a moderately permeable black prairie type. Planting was rather early, on May 7, in well-prepared, moist soil. Emergence and early growth were excellent. There was practically no rain here during July and August, and this very severe drouth greatly decreased yields. A late August rainfall raised the yields of some of the very late varieties such as Clark. Practically no lodging took place as a result of the stunted growth. Harvesting was delayed due to wet weather, and a small amount of shattering occurred.

Urbana, Illinois. Planting was made on May 19 in well-prepared soil of a fertile, permeable black prairie type. Soil remained moist with no rain until after emergence, giving a perfect stand which was probably too thick for maximum yields. As in the rest of the state, moisture was more than adequate through June. During the last week of June and first week of July, two very severe local wind and rain storms caused complete lodging of most of the early soybeans. In this lodged condition, stems grew up to six feet in length and pod set was low on such plants. No height notes could be taken in Group II. Following this, dry weather set in and the late varieties were severely reduced in yield.

Girard, Illinois. The soil is a black prairie type with a moderately developed clay subsoil. Planting was on May 21 in well prepared and moist soil. Stands were satisfactory, and plant growth was very luxuriant. July and August drouths were not too severe, and yields were only moderately reduced.

Edgewood, Illinois. This soil is a light-colored prairie soil with a heavy claypan, but it has been brought up to a good fertility level. Planting was on May 26 in well prepared, moist soil. A subsequent rain caused crusting, but stands were, in general, satisfactory. Early growth was good. A 3-inch local rain in early August saved the crop from failure due to the July-August drouth, and yields were only slightly reduced although seed quality was poor. Harvest was delayed by rain, and some strains had begun to shatter.

Eldorado, Illinois. This soil is a very heavy bottomland type which has been brought up to a high level of productivity. Planting was on May 20 in soil moist to the surface, and rains immediately following caused heavy crusting. By use of the rotary hoe, a good stand was obtained, and plant growth was very heavy. The July-August drouth was very severe, and neighboring soybean fields either late-planted or on poorer soil were very severely stunted. Seed quality was poor but yields were rather good despite the lack of moisture.

Carbondale, Illinois. The Group III and Group IV tests were planted on May 3 in a good seedbed on an upland light-colored soil with a well-developed claypan. Cool but wet weather during April until mid-June retarded early vegetative growth; however, good emergence and good stands were obtained. Normal temperatures and average precipitation for the area prevailed from mid-June until late July. Thereafter until early October, a rainfall deficiency of about six inches occurred, and temperatures were above normal. Lower yields than average resulted as a consequence of a pre-season low soil moisture reserve, shallow crop rooting, dry weather from late blossoming until maturity, and soil of only fair drouth resistance. In addition, the soil had received the first basic fertility treatment the previous fall.

Crookston, Minnesota. The Group 0 trial was planted at Crookston in 1955 for the first time. Some of the varieties in this nursery are rather late for Crookston. However, the early half is fairly well adapted, and since soybeans are invading the

Red River Valley on considerable acreage, it seems highly desirable to have a regular testing program in the Valley for the best of the early strains from various breeding programs. The soil at Crookston is Fargo silty clay loam of fairly high fertility and good water-holding capacity. Late May and early June were wet, making it hard to work the heavy soil and to get the planting done. The Uniform Nursery, fortunately, was planted May 31. Most of the remainder of the Crookston soybean plots were not planted until June 14. Good stands resulted and favorable growing conditions prevailed over most of the summer. The beans developed rapidly and well. Killing frost came September 10, at least a week earlier than normal. Some of the later varieties were killed with considerable numbers of leaves attached. In spite of this, the Group 0 nursery averaged 28 bushels per acre and none of the seed quality scores were lower than 2.

Morris, Minnesota. The Group 0 nursery was planted on May 25 in a good seedbed of rather high fertility. Almost perfect stands resulted. Growing conditions were almost ideal throughout the summer. This year the row spacing was 40 inches in contrast to former years when it was 24 inches. In spite of this, the development of the plants was so good that an average of 34 bushels per acre resulted. Frost came on September 11 but most of the varieties were nearly mature and were not perceptibly injured. Seed quality was excellent for nearly every variety.

St. Paul, Minnesota. As usual, the Group 0 and Group I Regional trials were planted in rows spaced 24 inches apart. Late April to mid-May was very dry. On May 18 the field to be planted with soybeans was given about two inches of water with overhead sprinkling equipment. On May 25 most of the soybean plots, including the Group 0 trial, were planted under ideal moisture conditions. A rainy spell intervened at that point, however, and the planting of Group I test was delayed until June 3. Stands throughout all the yield trials were uniform. The field was of unusually high fertility and growing conditions were almost ideal. The soybeans grew so rapidly that severe lodging became inevitable. Yields, on the average, were high but erratic, due primarily to differential lodging from plot to plot. Killing frost did not come till the first week of October, allowing full maturity on nearly all plots, even though lodging prevented normal ripening.

Waseca, Minnesota. Groups I and II were grown at Waseca, which is located almost in the heart of the heavy soybean production area of Minnesota. The soil is LeSueur silty clay loam and has been managed well with good rotations and liberal use of manure. Fertility is high. Corn yields of over 100 bushels per acre have been common in recent years. Both tests were planted on May 18 in rows spaced 24 inches. The topsoil was dry, but moderate rains soon fell and good stands resulted. Rainfall was deficient nearly all summer long, but rather abundant subsoil moisture coupled with the good water-holding capacity of the soil carried the soybeans through in a fairly normal manner. The Group I trial averaged about 30 bushels per acre. The Group II trial averaged several bushels less primarily because killing frost came on September 11, two or three weeks earlier than normal, and killed many of the later varieties far ahead of full maturity.

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 31 on corn land. Stands were fair to good. Weeds were controlled. During the growing season, temperatures were 4.1 degrees above normal, except in June. The precipitation averaged below normal each month except May. The precipitation for May through September was nearly 5.0 inches below normal. Growth, yields, and lodging were less than normal for this location and yields

were lowest in the state. A light frost occurred in mid-September and a killing frost occurred later than normal. Harvesting was completed under good conditions. 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 where corn had been grown previously. Planting was completed on May 18. Stands were generally good to excellent and plots were kept weed-free. During the growing season, temperatures averaged 3.4°F. above normal. Precipitation was seriously deficient (nearly 5 inches below normal) in August and September. Reasonably good growth and fair yields were obtained. Little bacterial blight and pustule 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 good for making strain comparisons.

Marcus, Iowa. This nursery represents the northwest section of Iowa with Galva silt loam soil, medium high in fertility and generally slightly undulating in topography. The nursery was planted May 24 on corn land. Stands were excellent and plots were kept weed-free. Temperatures were 2.4 degrees above normal except for May, and precipitation was seriously deficient in all months except July. Precipitation averaged -9.3 inches below normal for the period May through September. Therefore, growth was curtailed and lodging was not severe. Although a light frost occurred in mid-September, a killing frost occurred considerably later than normal. Yields, although second highest in the state, were considerably below normal. Harvesting was completed under satisfactory conditions. This nursery was considered good 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 12. Stands were excellent and plots were kept weed-free. Temperatures averaged above normal, except in June. Precipitation was below normal for all months except July with an average of 6.2 inches below normal for May through September. Growth, yield, and general response was considered fair for this location. Beans grew tall and lodged little. 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 Webster silty clay loam. Planting was completed on May 7 with subsequent stands poor in some strains. Temperatures were 2.0 degrees above normal except for June. Precipitation was below normal every month except July. Average precipitation for May through September was 5.7 inches below normal. Growth, yield, and general response was fair to poor. Frost occurred after the normal date. Strain comparisons are believed to be fair.

Ottumwa, Iowa. This nursery was in southeastern Iowa on flat, very fertile, Haig silt loam. The nursery was planted May 20, an early date for this nursery. Stands were excellent, and weeds were controlled. Temperatures averaged 1.2 degrees above normal for every month except June. Precipitation was below normal every month except July. Average deficit for May through September was 2.6 inches. In spite of the precipitation deficit, growth and yield 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. This field had been heavily fertilized for corn in previous years, and its productive capacity is high. Rainfall was much below normal each month, and much of the total was not effective. Bud blight was severe in parts of the field but not very serious in the Group Tests. Richland and Blackhawk were very duddy, and all Group II strains had some duds except C1117. Yields of H15345 were reduced some by shattering. Plants were short and yields relatively low.

Laddonia, Missouri. Rainfall was adequate in June and fair in July, the plots receiving a good rain July 23 when Columbia received none. However, this field missed the 2.5-inch to 6-inch rain which fell over much of Missouri August 6 and 7 and received very little rain until August 30. The weather favored early varieties and there was little difference in yield between early and late strains. Variety variance was significant because of a low error variance, but in Group III Dunfield and Illini were responsible for most of the variance. Heavy rains and poor drainage in October prevented harvesting Group IV until November, with consequent lowering of seed quality.

Columbia, Missouri. Rainfall during June was adequate and well spaced but after a 1.8-inch rain on July 6, there was no effective rainfall until August 7. Temperatures were above normal and by August 1 soybeans were definitely under stress. The 2.5 inches of rainfall August 7 carried the beans until the next rain, August 29, but there was no rain then until September 21. Five rainy days in a row then damaged ripe seed, especially on lodged branches. Stands were too heavy on some varieties.

Jefferson City, Missouri. This is a new location for Group IV. The soil is a heavy, black bottom soil. Stands were only fair, and one replication was discarded on this account. These soils are relatively heterogeneous and plot yields are quite variable. This variability was also evident in seed quality--the only location showing appreciable variability in this respect. Seed showed a great deal of mottling. Rainfall was similar to Columbia but was higher in July and September and lower in June and August.

Casselton, North Dakota. Climatic conditions were essentially the same as those for Fargo, except that a more severe drouth was encountered during August and September. Lack of moisture undoubtedly aggravated an alkaline condition, resulting in extremely poor growth and low yields for the strains in one replication. Only Flambeau was fully matured at the time of the first fall frost on September 11. The late planting on June 16, lack of soil moisture, and the 42-inch row spacing are probably some of the reasons why low yields were obtained. Strain comparisons are considered to be only fair.

Fargo, North Dakota. Temperatures averaged very near normal or above during May through September, while precipitation for this same period was below normal except during the month of July. Dry conditions during spring delayed planting until June 14. At the time of the first fall frost (29°), September 11, Mandarin (Ottawa) was not fully matured. Excellent drying conditions existed during September and October. Lack of moisture in August and September and the late planting were probably responsible for the relatively low yields.

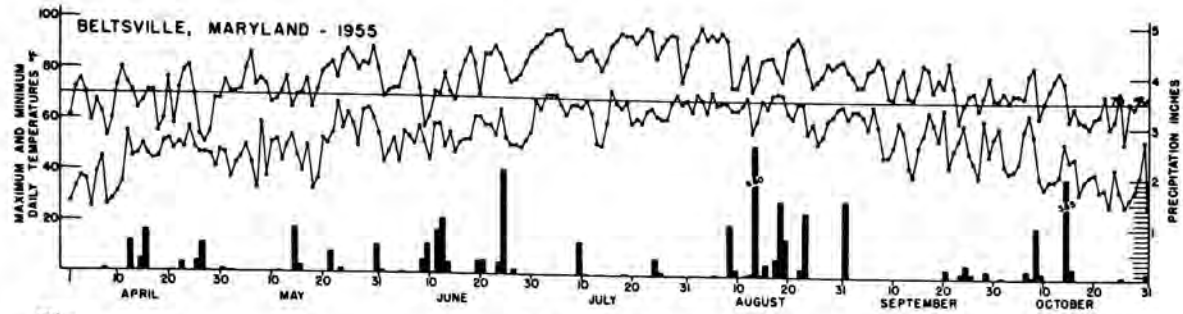
Laurel, Nebraska. The test was planted on June 1, which is about normal for the area. Moisture was adequate and fairly uniform stands were obtained. June was cool and wet. The crop made good development, but weather conditions after the last cultivation resulted in a heavy growth of foxtail. Rainfall during July and

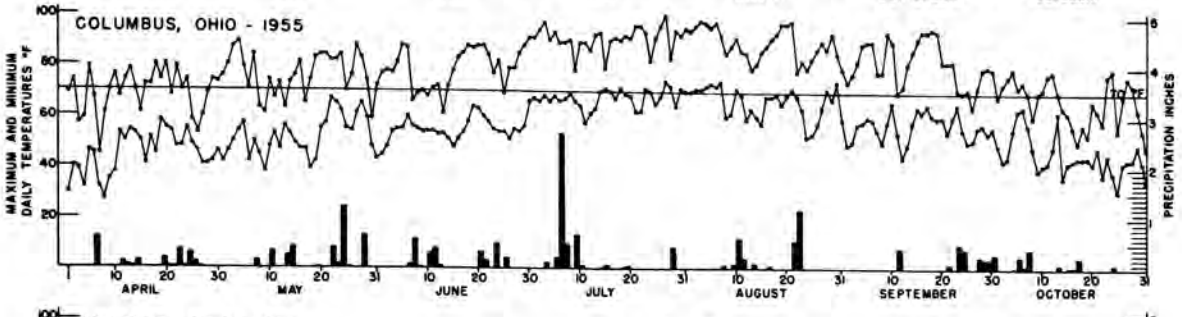
August was 1.18 inches, which represents a deficit of 5.04 inches for the two-month period. This moisture deficit was accompanied by July and August temperatures averaging 6.4 and 8.9 degrees above normal, respectively. Temperatures reached 100 degrees or above on thirteen days during August, which is unusual for this section. The high temperatures and lack of moisture contributed to the low yields and high plot variability obtained. All varieties had ceased development at the time of killing frost on September 11.

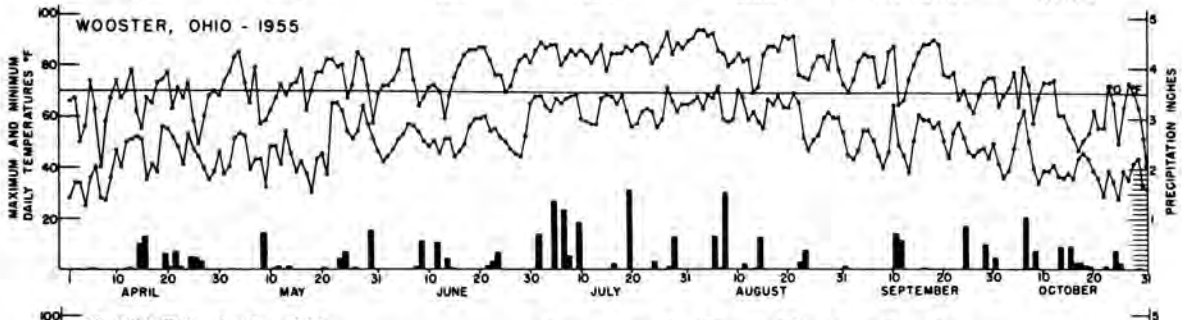
Lincoln, Nebraska. The season at Lincoln was dry and hot. A good seedbed resulted in uniform emergence and stands. Rainfall in June was about normal and early growth was good. Twenty-one days in July had temperatures of 98° or more and rainfall totaled only 2.07 inches. Fifteen days in August had temperatures of 98° or more and the total rainfall was only .84 inches. Only a trace of rain fell in the first seventeen days of September and relatively high temperatures persisted. Four irrigations were applied beginning in July. These resulted in fairly respectable yield levels, although seed size was small. Bud blight was evident early. A high percentage of dudding occurred and interfered with threshing through most of October. Bacterial diseases were unusually light. More mosaic was observed than usual. The green clover worm, grasshoppers, and red spider caused some damage. Green, slug-like larvae (Family Lycaenidae) were responsible for eating off many growing points when plants were 8 to 16 inches tall. At later stages they ate buds and flowering racemes. This larva secretes a honey dew that attracts ants. The adult is a bluish-gray butterfly. The infestation in 1955 was much greater than had ever been observed before.

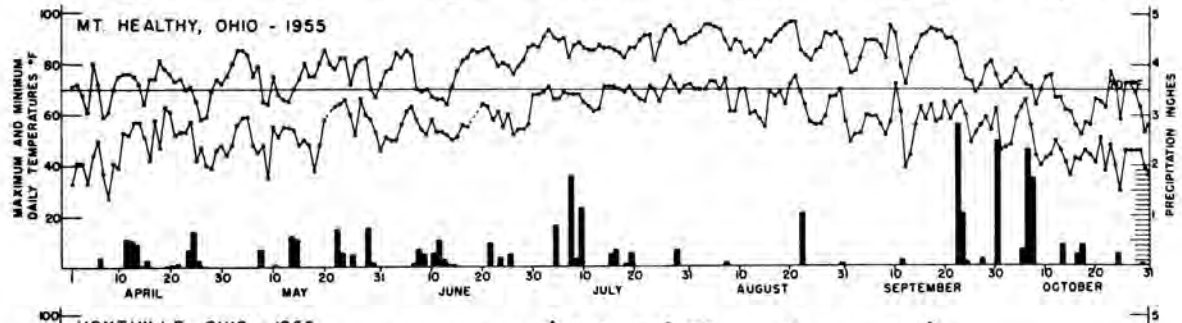
Mound Valley, Kansas. The growing season for soybeans at this location began favorably but drouth stress became apparent on about July 10, and continued almost unabated until September 20. The weather record shows that rainfall was about normal for June, one-tenth normal for July, one-half normal for August, and normal for September, but all occurring within the last ten days of September. Temperatures averaged 3.5 degrees below normal during June, 4 degrees above normal during July, normal during August, and 3 degrees above normal during September. A rainy period which began September 20, and continued through the first week of October slowed ripening of the later maturing strains.

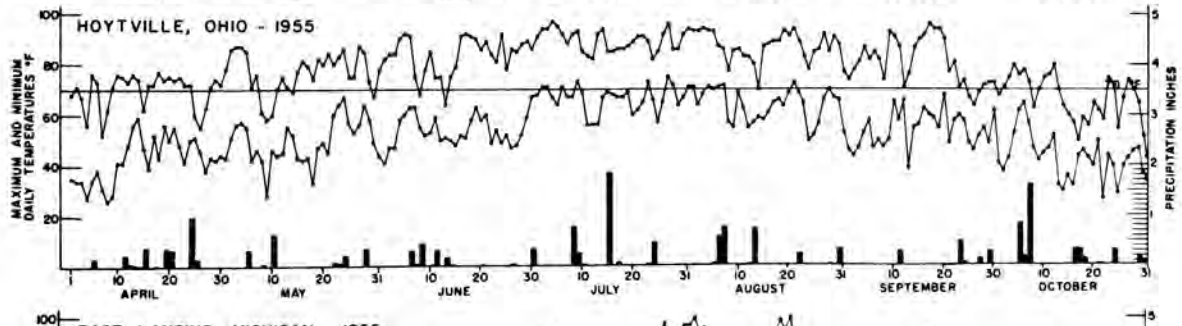
Columbus, Kansas. Moisture conditions were ideal for soybean growth during May and June of 1955. A period of drouth during July and August caused considerable damage to early maturing varieties. Rains in late August and early September promoted the development of late varieties.

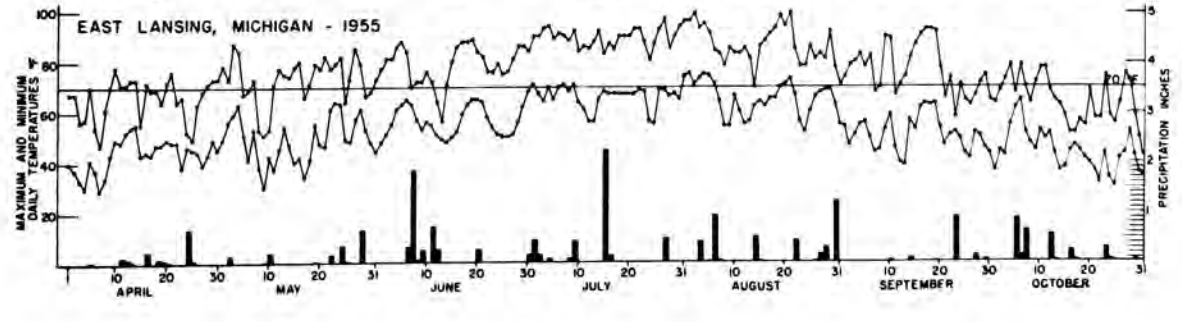

BELTSVILLE, MARYLAND - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

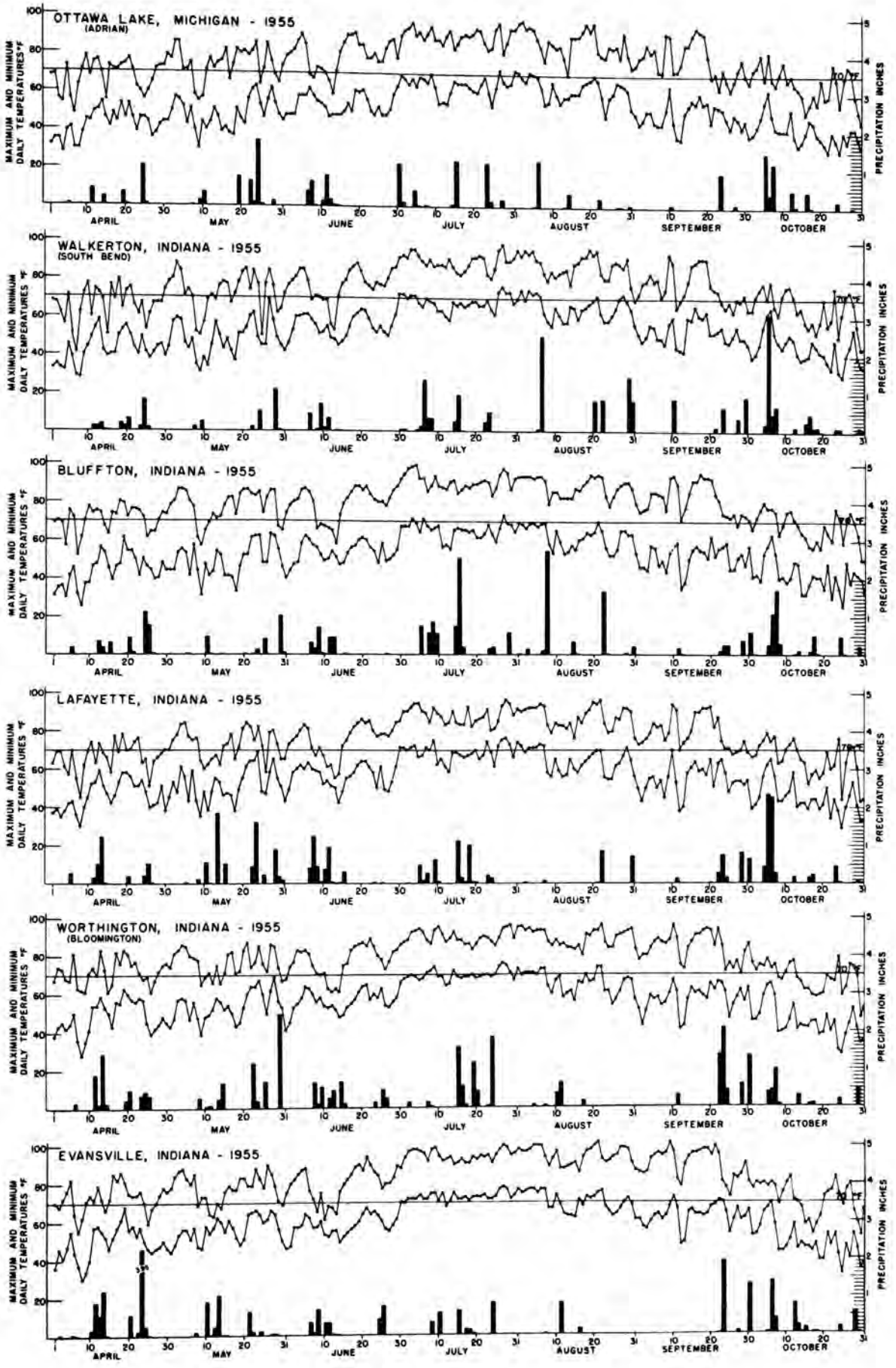

COLUMBUS, OHIO - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

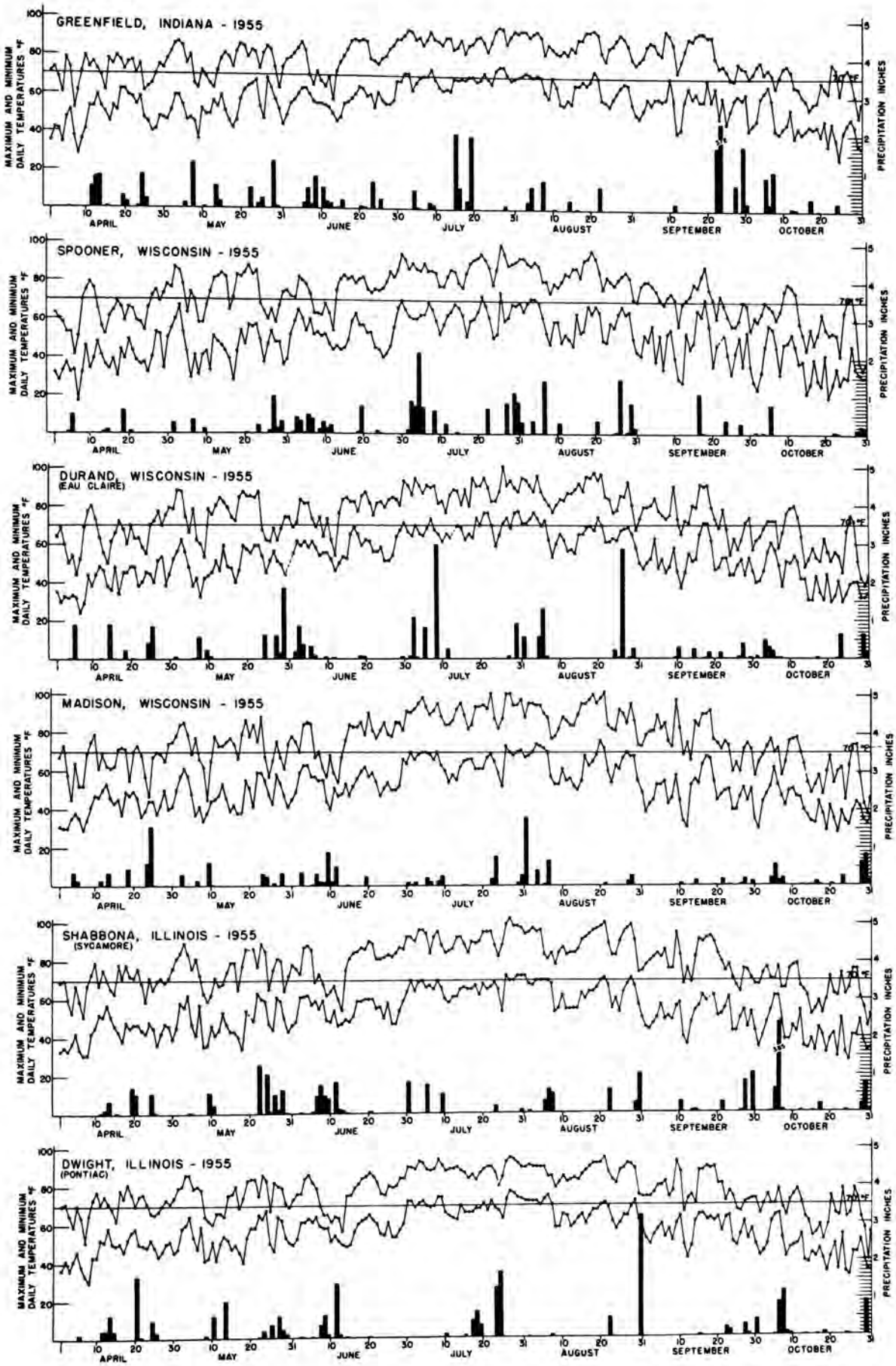

WOOSTER, OHIO - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

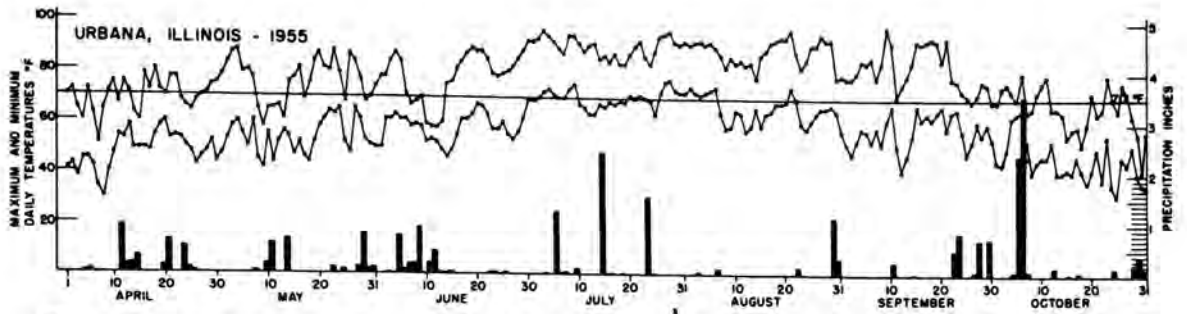

MT. HEALTHY, OHIO - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

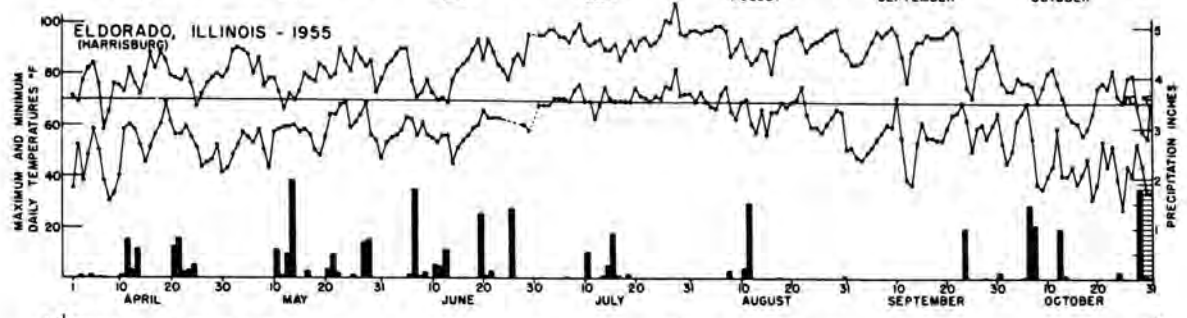

HOYTVILLE, OHIO - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

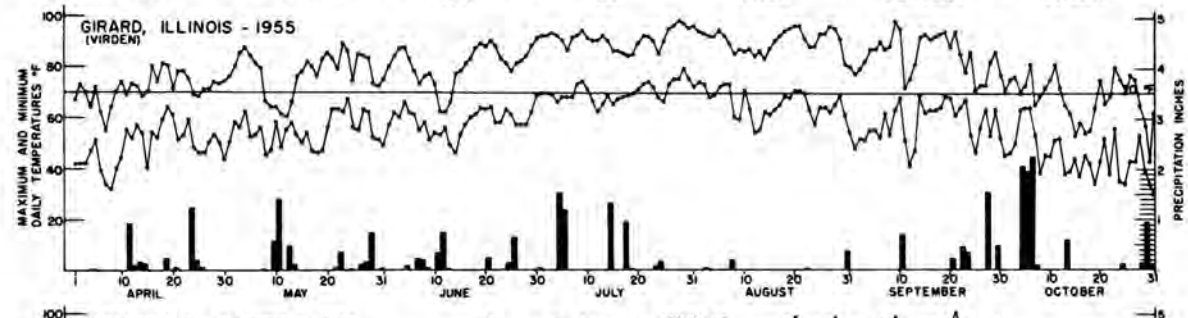

EAST LANSING, MICHIGAN - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

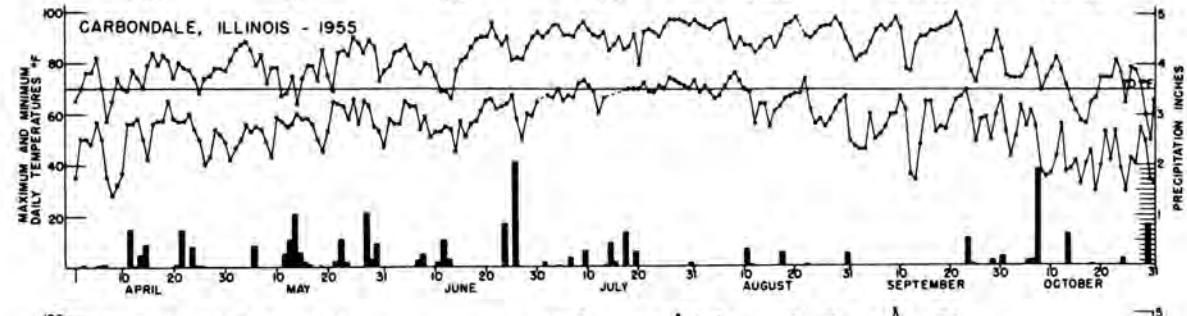

OTTAWA LAKE, MICHIGAN - 1955
(ADRIAN)
WALKERTON, INDIANA - 1955
(SOUTH BEND)
BLUFFTON, INDIANA - 1955
LAFAYETTE, INDIANA - 1955
WORTHINGTON, INDIANA - 1955
(BLOOMINGTON)
EVANSVILLE, INDIANA - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

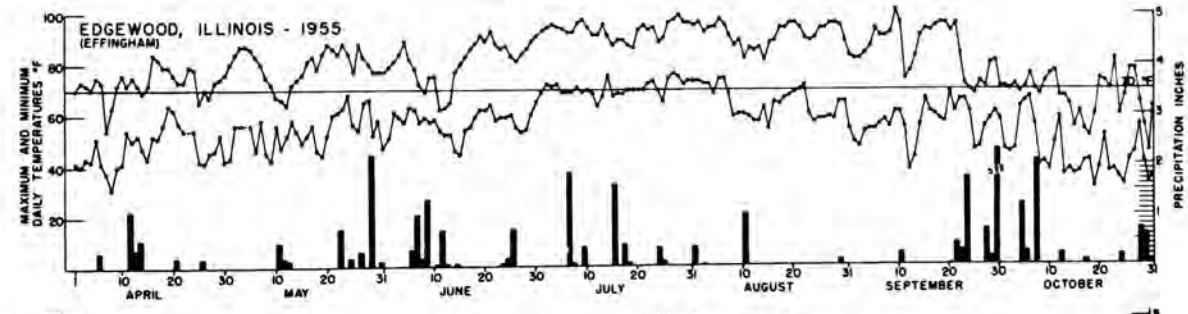

GREENFIELD, INDIANA - 1955
SPOONER, WISCONSIN - 1955
DURAND, WISCONSIN - 1955
(EAU CLAIRE)
MADISON, WISCONSIN - 1955
SHABBONA, ILLINOIS - 1955
(SYCAMORE)
DWIGHT, ILLINOIS - 1955
(PONTIAC)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


URBANA, ILLINOIS - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


ELDORADO, ILLINOIS - 1955
(HARRISBURG)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


GIRARD, ILLINOIS - 1955
(VIRDEN)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


CARBONDALE, ILLINOIS - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


EDGEWOOD, ILLINOIS - 1955
(EFFINGHAM)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
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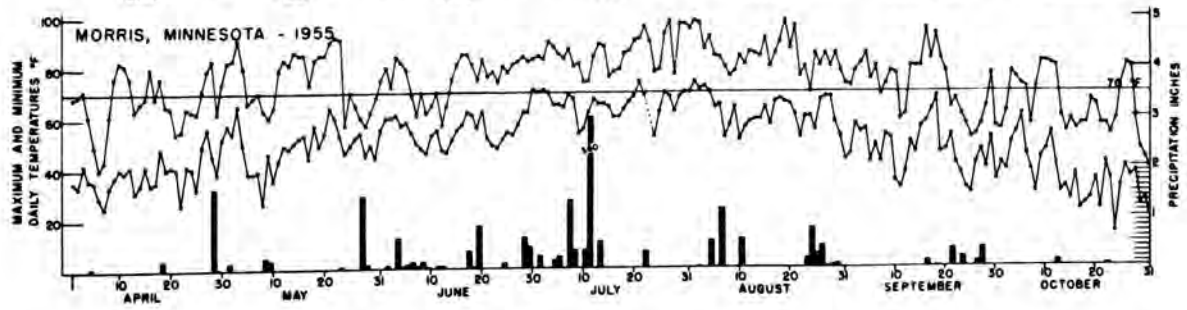
AUGUST
SEPTEMBER
OCTOBER


MORRIS, MINNESOTA - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
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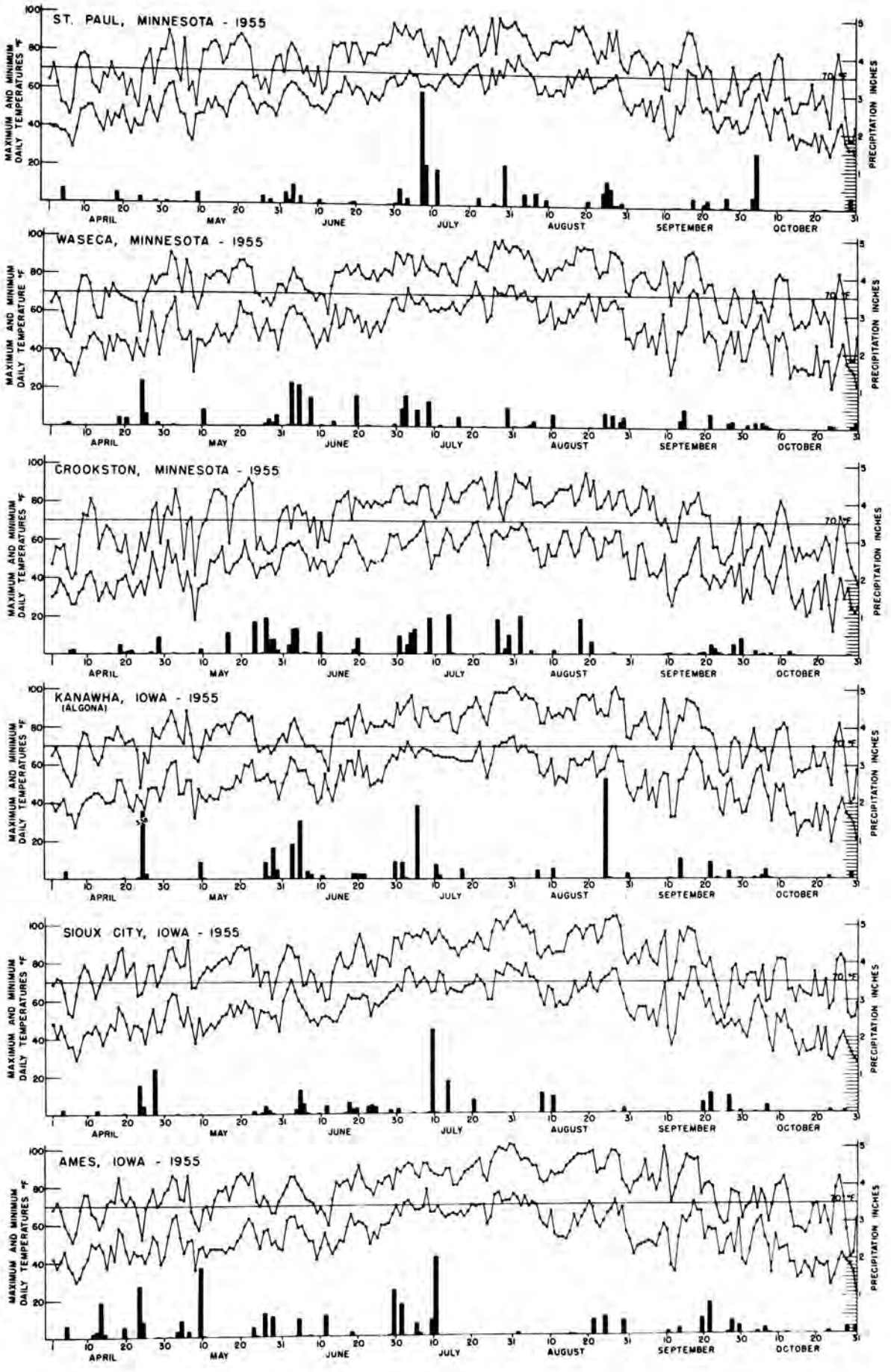
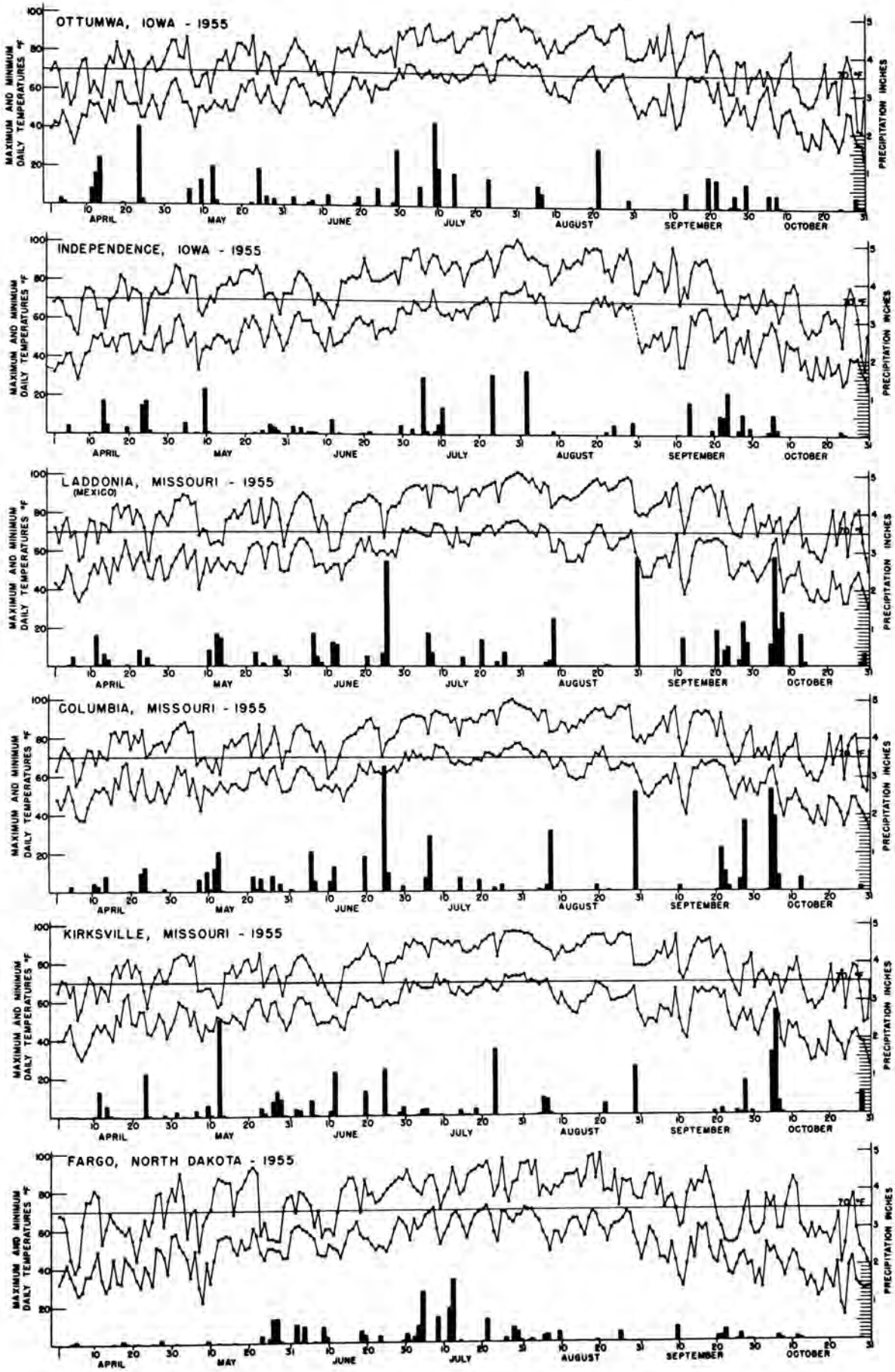
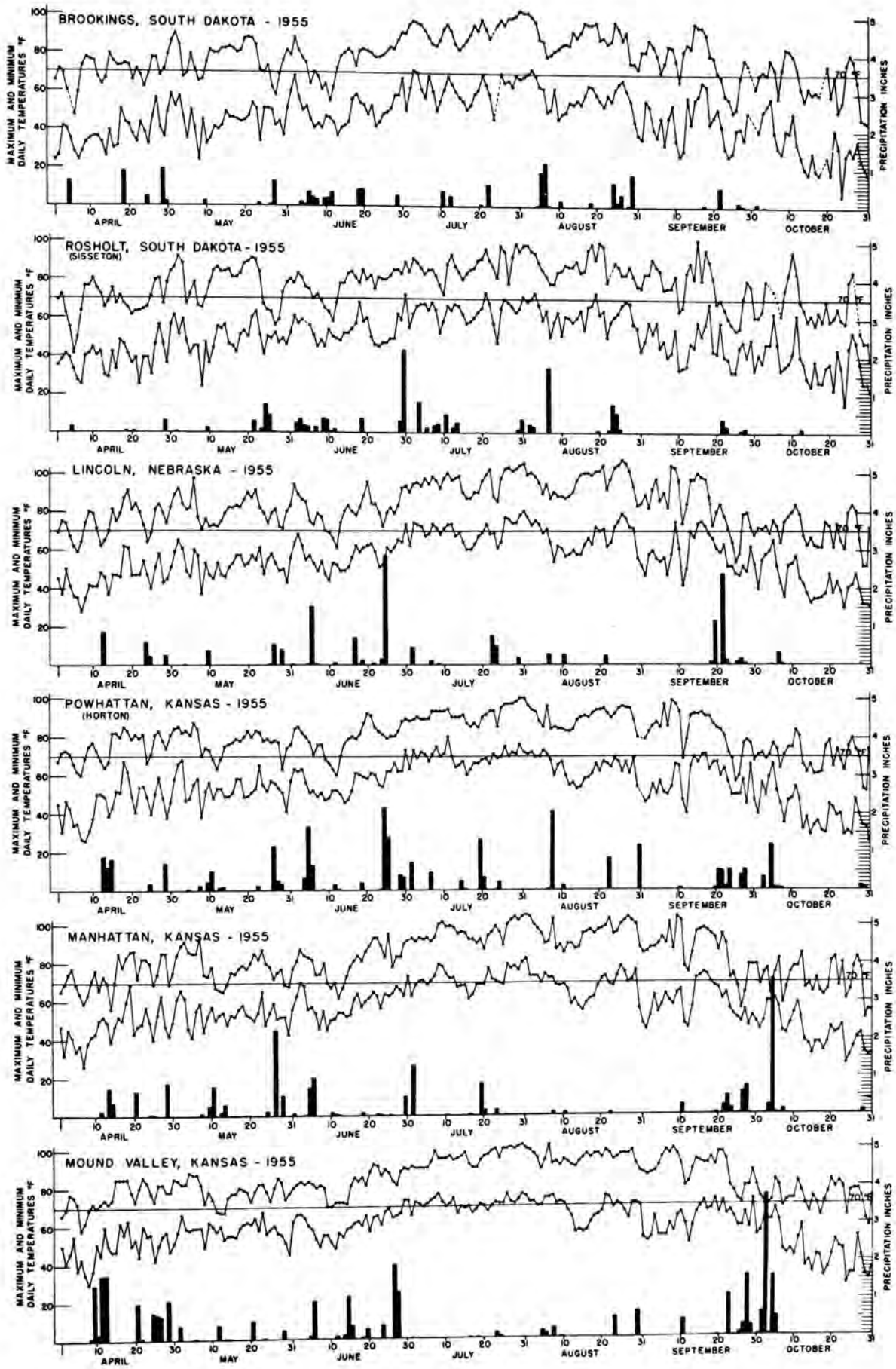
JULY
AUGUST
SEPTEMBER
OCTOBER


ST. PAUL, MINNESOTA - 1955
WASECA, MINNESOTA - 1955
CROOKSTON, MINNESOTA - 1955
KANAWHA, IOWA - 1955
(ALGONA)
SIOUX CITY, IOWA - 1955
AMES, IOWA - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


OTTUMWA, IOWA - 1955
INDEPENDENCE, IOWA - 1955
LADDONIA, MISSOURI - 1955
(MEXICO)
COLUMBIA, MISSOURI - 1955
KIRKSVILLE, MISSOURI - 1955
FARGO, NORTH DAKOTA - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


BROOKINGS, SOUTH DAKOTA - 1955
ROSHOLT, SOUTH DAKOTA - 1955
(SISSETON)
LINCOLN, NEBRASKA - 1955
POWHATTAN, KANSAS - 1955
(HORTON)
MANHATTAN, KANSAS - 1955
MOUND VALLEY, KANSAS - 1955
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER