RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART I. NORTH CENTRAL STATES

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1952
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Compiled by:

J. L. Cartter, R. D. Osler
Ruth E. Lawrence and Carolyn J. Younger[1]

From Data Supplied by:

M. W. Adams, South Dakota
J. C. Anderson, New Jersey
F. B. Collins, Delaware
F. I. Collins, Illinois
F. Dimmock, Ontario
D. G. Hanway, Nebraska
D. N. Huntley, Ontario
L. C. Jones, Kansas
O. A. Krober, Illinois
J. W. Lambert, Minnesota
R. C. Leffel, Maryland
R. D. Osler, Illinois
V. H. Peterson, Kansas
H. R. Pettigrove, Michigan
A. H. Probst, Indiana
C. O. Rydberg, Wisconsin
L. C. Sabee, Ohio
T. E. Stoa, North Dakota
J. H. Torrie, Wisconsin
J. B. Washko, Pennsylvania
C. R. Weber, Iowa
M. G. Weiss, Maryland
L. F. Williams, Missouri
J. W. Zahnley, Kansas

TABLE OF CONTENTS

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[1]Senior Agronomist, Agronomist, Statistical Clerk, and Clerk-Stenographer, respectively.

[2]The results of the program of cooperative soybean disease research, conducted by the Division of Forage Crops and Diseases, is included in this report, since the two programs are closely integrated. The disease report was prepared by D. W. Chamberlain, Pathologist.

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 For this reason, citation to particular statements in the Report should not be published unless permission has been granted previously by the Laboratory or the state station concerned.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.

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. Perry is the latest of the improved, high yielding, high oil content soybean strains to be produced through the cooperative breeding program of the Laboratory. It was released for commercial production last year and over a seven-year period has continued to outyield Wabash by about 3 bushels in its area of adaptation, though it is nearly 4 days later in maturity. Seed of Perry is a little higher in oil content than Wabash and nearly 1 percent higher in protein. Soybean producers in all of the major soybean growing areas of the North Central States now have improved strains available for their use from what might be called the first cycle of improvement by hybridization. New strains are constantly being developed through the cooperative work and in 1952 there were 6 strains in Group IV that exceeded Perry in yield, one of which was 6 days earlier in maturity. This new strain is being considered for release during 1953.

Nine uniform test groups have been established to measure the yield and range of adaptation of the better strains that are being developed through the breeding program, the first five of which include strains of proper maturity for the North Central States. The other four groups contain strains adapted to the southern part of the United States, and a summary of performance of these will be found in Part II of this report, which is published 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 1952 growing season are included as an aid to interpretation of the agronomic and chemical data. Soil type for most nursery locations has been included this year as a further help to the plant breeder when studying strain by location interactions.

COOPERATING AGENCIES AND PERSONNEL FOR THE NORTH CENTRAL REGION

Division of Forage Crops and Diseases, Beltsville, Maryland

D. F. Beard, Agronomist in Charge
M. G. Weiss, Principal Agronomist, Director and Project Leader

Laboratory Headquarters, Urbana, Illinois

J. L. Cartter, Senior Agronomist, Director
Carolyn J. Younger, Clerk-Stenographer
Lottie M. Rehberg, Clerk-Stenographer

Breeding and Genetics Project

R. D. Osler, Agronomist
H. H. Eaton, Agricultural Aid
Elizabeth M. Berreis, Biological Science Aid
Ruth E. Lawrence, Statistical Clerk
Marjorie M. Johnson, Clerk
Marie J. Demlow, Clerk

Plant Physiology Project

R. W. Howell, Plant Physiologist
C. E. Burt, Agricultural Aid (1/2 time)
R. H. Johnson, Refrigeration Mechanic

Chemical Analysis

F. I. Collins, Chemist
O. A. Krober, Chemist
Elizabeth W. Heywood, Physical Science Aid
Sharon S. Wilkins, Laboratory Helper

Plant Pathology[1]

D. W. Chamberlain, Pathologist
C. E. Burt, Agricultural Aid (1/2 time)

Lafayette, Indiana

A. H. Probst, Agronomist

Ames, Iowa

C. R. Weber, Agronomist

Columbia, Missouri

L. F. Williams, Agronomist

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[1]Soybean pathology research under Project 12-4010.

Collaborators in the North Central States

Illinois Agricultural Experiment Station
Agronomy Department: C. M. Woodworth

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

Kansas Agricultural Experiment Station
Agronomy Department: J. W. Zahnley

Michigan Agricultural Experiment Station
Farm Crops Department: H. R. Pettigrove

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

Missouri Agricultural Experiment Station
Field Crops Department: W. C. Etheridge

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

North Dakota Agricultural Experiment Station
Agronomy Department: T. E. Stoa

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: M. W. Adams

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

LOCATION OF COOPERATIVE NURSERIES

Location	Cooperator
Ottawa, Ontario	F. Dimmock, Central Exp. Farm
Guelph, Ontario	D. N. Huntley, Ontario Agr. College
State College, Pennsylvania	John B. Washko, Pa. Agr. Exp. Sta.
Landisville, Pennsylvania	Tobacco Substation
New Brunswick, New Jersey	John C. Anderson, N. J. Agr. Exp. Sta.
Columbus, New Jersey	John C. Anderson, N. J. Agr. Exp. Sta.
Newark, Delaware	F. B. Collins, Del. Agr. Exp. Sta.
Georgetown, Delaware	F. B. Collins, Georgetown Substa., Del. Agr. Exp. Sta.
Beltsville, Maryland	R. C. Leffel, Forage Crops & Diseases, U. S. D. A.
Hoytville, Ohio	Northwest Substation
Wooster, Ohio	Ohio Agr. Exp. Sta.
Columbus, Ohio	Lewis C. Saboe, Ohio State Univ.
Mt. Healthy, Ohio	W. L. Jones, Hamilton Co. Exp. Farm
East Lansing, Mich.(Muck)	H. R. Pettigrove, Mich. Agr. Exp. Sta.
East Lansing, Mich.(Mineral)	H. R. Pettigrove, Mich. Agr. Exp. Sta.
Deerfield, Michigan	Ross Liedel, Farmer Cooperator
Walkerton, Indiana	Elburt Place, Farmer Cooperator
Bluffton, Indiana	Gerald and Homer Bayless, 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 Cooperator
Evansville, Indiana	Bernard Wagner, Farmer Cooperator
Spooner, Wisconsin	Carl Rydberg, Spooner Br., Wis. Agr. Exp. Sta.
Fall City, Wisconsin	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.
Clayton, Illinois	Russell Davis, Farmer Cooperator
Stonington, Illinois	Frank Garwood & Sons, Farmer Cooperators
Brownstown, Illinois	P. E. Johnson, Soil Experiment Field
Trenton, Illinois	Fred Bergman, Farmer Cooperator
Eldorado, Illinois	Cyril Wagner, Farmer Cooperator
Morris, Minnesota	J. W. Lambert, Branch, Minn. Agr. Exp. Sta.
St. Paul, Minnesota	J. W. Lambert, Minn. Agr. Exp. Sta.
Waseca, Minnesota	S. E. Branch, Minn. Agr. Exp. Sta.
Cresco, Iowa	Howard Co. Agr. Exp. Assoc.
Kanawha, Iowa	N. 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
Laddonia, Missouri	Carver Brown, Farmer Cooperator
Columbia, Missouri	Mo. Agr. Exp. Sta.
Casselton, North Dakota	Agronomy Seed Farm
Fargo, North Dakota	T. E. Stoa, N. D. Agr. Exp. Sta.
Rosholt, South Dakota	Irvin Voss, Farmer Cooperator
Brookings, South Dakota	M. W. Adams, Agr. Exp. Sta.
Centerville, South Dakota	Harold Engstrom, Farmer Cooperator
Lincoln, Nebraska	Donald G. Hanway, Nebr. Agr. Exp. Sta,
Manhattan, Kansas	J. W. Zahnley, Kansas State College
Mound Valley, Kansas	Lloyd C. Jones, Mound Valley Br. Exp. Sta.
Thayer, Kansas	Verlin H. Peterson, Columbus-Thayer Exp. Fields

LOCATION OF COOPERATIVE NURSERIES (CONTINUED)

Location	Kind of Soil	Uniform Group Tests				
		0	I	II	III	IV
Ottawa, Ontario	Grenville Sandy Loam	x				
Guelph, Ontario	Guelph Sandy Loam	x	x			
State College, Pa.	Hagerstown Silt Loam		x	x		
Landisville, Pa.	Silt Loam				x	x
New Brunswick, N. J.	Sassafras Loam			x		
Columbus, N. J.	Sassafras Sandy Loam			x		
Newark, Del.	Sassafras Silt Loam				x	x
Georgetown, Del.	Norfolk Loamy Sand					x
Beltsville, Md.	Riverdale Silt Loam				x	x
Hoytville, Ohio	Brookston Clay	x	x	x		
Wooster, Ohio	Wooster Silt Loam		x	x		
Columbus, Ohio	Miami-Brookston Silty Clay Loam	x	x	x	x	
Mt. Healthy, Ohio	Fincastle Silt Loam		x	x	x	
East Lansing, Mich.	Houghton (Muck)	x				
East Lansing, Mich.	Conover (Mineral)	x	x	x		
Deerfield, Mich.	Brookston	x	x	x		
Walkerton, Ind.	Maumee Loam		x	x		
Bluffton, Ind.	Nappanee Silt Loam			x		
Lafayette, Ind.	Floyd-Raub Complex			x	x	
Greenfield, Ind.	Brookston-Crosby Complex			x	x	
Worthington, Ind.	Genesee Loam				x	x
Evansville, Ind.	Montgomery Silty Clay Loam					x
Spooner, Wis.	Omega Sandy Loam	x	x			
Fall City, Wis.	Boone Fine Sandy Loam	x	x			
Madison, Wis.	Miami Silt Loam		x	x		
Shabbona, Ill.	Flanagan Silt Loam		x	x		
Dwight, Ill.	Black Silt Loam			x	x	
Urbana, Ill.	Muscatine Silt Loam			x	x	x
Clayton, Ill.	Brown Silt Loam				x	x
Stonington, Ill.	Black Clay Loam				x	x
Brownstown, Ill.	Cisne Silt Loam				x	x
Trenton, Ill.	Harrison Silt Loam				x	x
Eldorado, Ill.	Yellow Gray Silt Loam				x	x
Morris, Minn.	Barnes Silt Loam	x				
St. Paul, Minn.	Waukegan Silt Loam	x	x			
Waseca, Minn.	LeSueur Silty Clay Loam		x			
Cresco, Iowa	Carrington Plastic Till Phase		x			
Kanawha, Iowa	Webster Silt Loam		x	x		
Marcus, Iowa	Galva Silt Loam			x		
Independence, Iowa	Carrington Silt Loam			x		
Ames, Iowa	Webster Silty Clay Loam			x	x	
Ottumwa, Iowa	Haig Silt Loam				x	
Laddonia, Mo.	Putnam Silt Loam				x	x
Columbia, Mo.	Putnam Silt Loam				x	x
Casselton, N. D.	Bearden Silty Clay Loam	x				
Fargo, N. D.	Fargo Clay	x				
Rosholt, S. D.	Barnes Silt Loam	x				
Brookings, S. D.	Barnes Silt Loam		x			
Centerville, S. D.	Barnes Silt Loam			x		
Lincoln, Nebr.	Sharpsburg Silty Clay Loam			x	x	
Manhattan, Kans.	Geary Silt Loam				x	x
Mound Valley, Kans.	Parsons Silt Loam					x
Thayer, Kans.	Parsons 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 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 18-20 feet of row is planted and only 16 or 16 1/2 feet harvested. Seed has been planted on the basis of 200 viable seeds per row.

Yields are taken on individual replications after the seed has been dried to a uniform moisture content basis.

Chemical composition is determined for each strain at each location in Groups 0 and I. Chemical composition is determined for the locations in Groups II, III, and IV on composite samples prepared by combining equal weights of seed from each location. The location composites are prepared by combining equal weights of seed of each of the strains in a Group Test at an individual location. Percentage composition of the seed is expressed on a dry basis (moisture free). Seed weight for each strain is determined on the variety composite or by individual locations, and is recorded as weight (in grams) per 100 seeds.

Lodging notes are recorded on a scale of 1 to 5 according to the following criteria:

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 All plants down badly

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

Maturity is taken as the date when the pods are ripe, the leaves have dropped, and the stems are fairly dry. Maturity in all summaries is expressed as days earlier (-) or later (+) than a standard or reference variety. Reference varieties used for the different Uniform Tests are as follows: Group 0, Mandarin (Ottawa); Group I, Mandarin (Ottawa); Group II, Hawkeye; Group III, Lincoln; and Group IV, Wabash.

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

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

The factors considered in estimating seed quality are: Development of seed; wrinkling; damage; and color for the variety.

Calculating Means. In most cases where the lodging and seed quality notes are 1, indicating no difference between strains at a location, these locations are not included in the mean.

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	Fl	Florida
K	Kansas	Ga	Georgia
E	Michigan	La	Louisiana
M	Minnesota	D	Mississippi
S	Missouri	N	North Carolina
U	Nebraska	Ok	Oklahoma
F	North Dakota	SC	South Carolina
H	Ohio	UT	Tennessee
B	South Dakota	TS	Texas
W	Wisconsin	V	Virginia
O	Ontario, Canada		

It is suggested that states cooperating in these Uniform Tests use a letter or letters to identify 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)
Flambeau	Wis. Agr. Exp. Sta.	Sel. from Intr. from Russia
Hokien	Imperial Seed Co., Clear Lake, Iowa	Sel. from Capital
Mandarin (Ottawa)	Central Exp. Farm, Ottawa	Sel. from Mandarin
Renville (M2)	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
L6-8275	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
M8	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
M9	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
O-3-33	Dominion Exp. Farm, Harrow	Sel. from Mandarin x (Mandarin x A.K.)
O-48-36	Central Exp. Farm, Ottawa	Sel. from Pagoda x Mandarin
W6S-292	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Seneca
W8S-1200	Wis. A.E.S. & U.S.R.S.L.	Sel. from Richland x Flambeau
W8S-1460	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau

Data for the Group O Uniform tests were reported from fourteen locations in 1952 and are presented in Tables 1 through 8. The average yield of all tests of all Group O entries grown in both 1951 and 1952 was 7.1 bushels higher in 1952 than in 1951. Of the nine locations common to 1951 and 1952 Group O tests, only one, Columbus, Ohio, had a lower average yield in 1952 than in 1951, and this difference was only 2.1 bushels. As an average of fourteen tests, the 1952 oil percentage of all Group O entries was 1.3 higher than it was in 1951.

Only two new entries were included in the 1952 Group O tests, L6-8275 and O-3-33. L6-8275 was tested in past years as well as in 1952 in Uniform Group I tests and was included in Group O in 1952 to obtain data from more northern locations than possible in Group I. O-3-33 was a new entry from the Dominion Experimental Farm at Harrow, Ontario. L6-8275 ranked second in yield as an average of eleven Group O tests (Note Table 1) and had very good resistance to lodging. L6-8275 averaged 1.1 bushels less than W6S-292, the first ranking strain, was 3.4 days later in maturity, but had a better lodging score than W6S-292. L6-8275 ranked first or second in yield at Hoytville and Columbus, Ohio; East Lansing (mineral soil) and Deerfield, Michigan; Spooner and Fall City, Wisconsin; and Morris, Minnesota. The other new 1952 Group O entry, O-3-33, ranked sixth in yield as an average of 11 tests and averaged somewhat lower in percentage of oil than any of the five entries ranking above it in yield.

Two 1952 Group O entries, Renville (M2) and O-48-36, have been tested in this group for only 1951 and 1952. Note Tables 5 and 6. As an average of 1951-52 tests, Renville has ranked sixth. Renville has very good lodging resistance and is outstanding in percentage of oil but has averaged 5 days later in maturity and 3.6 bushels less than W6S-292--the strain ranking first in yield for 1951-52. Renville

has ranked first or second in yield for 1951-52 tests at Columbus, Ohio; East Lansing, Michigan (mineral soil); and Morris, Minnesota.

Nine 1952 Group 0 entries have been tested for at least three years in Uniform tests, and these data are summarized in Tables 7 and 8. During this three-year period, W6S-292 has been outstanding in yield ranking first at Ottawa and Guelph, Ontario; Cortland (1950-51 only) and Columbus, Ohio; Deerfield, Michigan; Spooner and Fall City, Wisconsin; and Rosholt, South Dakota. W6S-292 has averaged 1.4 days earlier in maturity than Mandarin (Ottawa) and has been exceeded by only M8 and M9 in oil content. It is interesting to note that W6S-292 has ranked first in yield as an average of all Group 0 tests in each of the three years it has been tested, 1950-52.

Table 1. Summary of agronomic and chemical data for the strains in the Uniform Test, Group 0, 1952.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	11	8	7	12	13	10	14	14	14
W6S-292	36.6	-1.1	2.0	29	2.0	16.5	40.3	20.1	134.2
L6-8275	35.5	+2.3	1.3	32	1.9	15.2	41.6	20.0	135.7
Capital	35.5	+0.9	2.6	32	2.1	13.4	40.9	20.3	134.6
Hokien	34.2	+1.8	2.5	31	2.2	13.5	40.7	20.3	135.2
Kenville	34.1	+3.0	1.2	30	2.1	17.6	40.3	20.8	133.8
0-3-33	33.9	-0.8	2.4	32	2.2	16.5	41.6	19.6	131.4
M8	33.8	+1.3	1.5	29	2.0	17.6	40.4	20.3	134.3
Mandarin (Ottawa)	33.8	0	1.2	28	1.7	19.3	42.1	19.6	130.3
M9	31.9	+0.8	1.9	29	2.2	17.6	41.6	20.6	134.3
W8S-1460	31.2	-3.3	1.2	28	2.2	16.4	41.2	20.0	131.3
0-48-36	30.7	-2.0	1.5	30	2.1	16.7	40.8	19.9	131.2
W8S-1200	29.8	-2.9	1.5	28	2.5	16.3	41.2	19.7	131.2
Flambeau	27.1	-5.5	2.8	27	2.3	16.1	42.3	18.9	133.0
Mean	32.9		1.8	30	2.1	16.4	41.2	20.0	133.1

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

Table 2. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group 0, 1952.

Strain	Mean of 11 Tests[1]	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Onio	East Lansing Mich. Muck	East Lansing Mich. Mineral	Deer-field Mich.
W6S-292	36.6	49.1	39.5	32.2	21.0	49.3	14.3	39.9
L6-8275	35.5	47.6	34.7	32.6	26.2	42.3	20.7	38.7
Capital	35.5	45.0	39.5	28.2	19.2	45.8	17.3	35.9
Hokien	34.2	48.8	38.4	24.7	20.4	44.9	15.1	36.1
Renville	34.1	41.7	31.7	30.9	21.7	46.6	18.7	32.7
0-3-33	33.9	48.1	35.8	28.8	17.9	39.0	14.6	37.5
M8	33.8	46.0	35.0	28.1	19.8	51.1	14.1	35.8
Mandarin (Ottawa)	33.8	42.8	35.1	27.6	19.8	47.9	13.0	36.9
M9	31.9	42.9	32.0	27.9	17.5	46.8	15.1	31.7
W8S-1460	31.2	40.0	35.0	20.8	12.6	42.0	18.3	29.1
0-48-36	30.7	40.5	35.0	27.8	16.7	37.7	15.5	28.6
W8S-1200	29.8	38.4	35.2	22.2	12.3	45.9	19.7	28.7
Flambeau	27.1	38.9	35.3	18.8	11.1	37.2	9.5	26.6
Mean	32.9	43.8	35.6	27.0	18.2	44.3	15.8	33.7
Coef. of Var. (%)		8.3	6.8	--	--	12.5	18.2	16.2
Bu. Nec. for Sig. (5%)		5.2	1.1	--	--	8.1	4.2	7.9
Row Spacing (In.)		30	24	30	28	28	28	22
		Yield Rank						
W6S-292		1	1	2	3	2	10	1
L6-8275		4	11	1	1	9	1	2
Capital		6	1	5	7	7	5	6
Hokien		2	3	10	4	8	7	5
Renville		9	13	3	2	5	3	8
0-3-33		3	4	4	8	11	9	3
M8		5	8	6	5	1	11	7
Mandarin (Ottawa)		8	7	9	5	3	12	4
M9		7	12	7	9	4	7	9
W8S-1460		11	8	12	11	10	4	10
0-48-36		10	8	8	10	12	6	12
W8S-1200		13	6	11	12	6	2/	11
Flambeau		12	5	13	13	13	13	13

[1] Columbus, Ohio; East Lansing, Michigan (mineral); and Fargo, North Dakota not included in the mean.

Table 2. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.	Rosholt S.D.
W6S-292	43.8	24.9	30.1	29.2	39.1	24.1	25.8
L6-8275	42.4	28.2	33.5	32.8	39.8	17.4	17.8
Capital	38.7	25.4	36.9	35.8	39.3	25.4	19.9
Hokien	41.2	24.2	31.5	27.5	41.1	22.4	17.7
Renville	40.7	24.5	32.7	34.9	42.3	19.7	16.3
0-3-33	39.3	26.0	32.2	36.2	35.3	15.9	14.4
M8	36.4	20.9	29.8	36.9	35.8	17.3	15.5
Mandarin (Ottawa)	40.1	27.9	28.0	28.2	40.6	20.4	16.6
M9	38.0	23.8	26.0	30.5	39.0	12.9	11.8
W8S-1460	40.4	22.8	27.0	31.1	37.4	32.3	17.6
0-48-36	39.5	24.2	24.9	22.7	38.8	12.6	18.3
W8S-1200	31.0	21.2	27.1	26.5	37.0	27.4	14.1
Flambeau	29.8	18.3	27.4	22.0	32.8	28.1	11.5
Mean	38.6	24.0	29.8	30.3	38.3	21.2	16.7
Coef. of Var. (%)	7.2	9.5	--	--	--	--	--
Bu. Nec. for Sig. (5%)	3.9	3.3	4.3	6.2	5.0	5.8	--
Row Spacing (In.)	36	36	24	24	24	24	36

	Yield Rank						
W6S-292	1	5	6	8	6	5	1
L6-8275	2	1	2	5	4	9	4
Capital	9	4	1	3	5	4	2
Hokien	3	7	5	10	2	6	5
Renville	4	6	3	4	1	8	8
0-3-33	8	3	4	2	12	11	10
M8	11	12	7	1	11	10	9
Mandarin (Ottawa)	6	2	8	9	3	7	7
M9	10	9	12	7	7	12	12
W8S-1460	5	10	11	6	9	1	6
0-48-36	7	7	13	12	8	13	3
W8S-1200	12	11	10	11	10	3	11
Flambeau	13	13	9	13	13	2	13

Table 3. Summary of maturity data, days earlier (-) or later (+) than Mandarin (Ottawa), and lodging data for the strains in the Uniform Test, Group O, 1952.

Strain	Mean of 8 Tests[1]	Ottawa Ontario	Guelph Ontario	Columbus Ohio	East Lansing Mich. Muck	East Lansing Mich. Mineral	Deerfield Mich.
W6S-292	-1.1	+ 2	0				
L6-8275	+2.3	+ 4	+ 1				
Capital	+0.9	+ 3	- 3				
Hokien	+1.8	+ 2	- 1				
Kenville	+3.0	+ 4	+ 1				
O-3-33	-0.8	+ 1	- 2				
M8	+1.3	+ 4	+ 1				
Mandarin (Ottawa)	0	0	0				
M9	+0.8	+ 3	+ 1				
W8S-1460	-3.3	- 1	-12				
O-48-36	-2.0	+ 1	- 1				
W8S-1200	-2.9	- 1	-12				
Flambeau	-5.5	+ 1	-11				
Date planted		5/20	5/17				
Mand. (Ott.) matured		9/24	9/20				
Days to mature	119	127	126				
	Mean of 7 Tests[2]	Lodging					
W6S-292	2.0	2.0	1.3	1.8	4.0	1.0	1.0
L6-8275	1.3	1.0	1.0	1.0	4.0	1.0	1.0
Capital	2.6	2.5	2.0	2.2	4.0	1.0	1.0
Hokien	2.5	2.5	1.6	2.2	4.0	1.0	1.0
Kenville	1.2	1.0	1.0	1.0	4.0	1.0	1.0
O-3-33	2.4	2.0	1.5	2.8	4.0	1.0	1.0
M8	1.5	2.0	1.0	1.2	4.0	1.0	1.0
Mandarin (Ottawa)	1.2	1.0	1.0	1.0	4.0	1.0	1.0
M9	1.9	2.0	1.3	2.0	4.0	1.0	1.0
W8S-1460	1.2	1.0	1.0	1.2	4.0	1.0	1.0
O-48-36	1.5	1.0	1.0	2.5	4.0	1.0	1.0
W8S-1200	1.5	1.0	1.0	1.2	4.0	1.0	1.0
Flambeau	2.8	3.5	2.1	2.0	4.0	1.0	1.0
Mean	1.8	1.7	1.3	1.7	4.0	1.0	1.0

[1]Fargo, North Dakota not included in the mean.
[2]East Lansing (muck and mineral) and Deerfield, Michigan not included in the mean.

Table 3. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.	Rosholt S.D.
W6S-292	- 2	- 2	- 5	- 5	+ 3	0	0
L6-8275	+ 3	+ 2	+ 2	- 2	+ 4	+ 5	+ 4
Capital	+ 4	- 2	+ 1	+ 2	+ 2	+ 3	0
Hokien	+ 4	- 1	+ 1	+ 5	+ 2	+ 2	+ 2
Renville	+ 2	+ 2	+ 3	+ 1	+ 7	+ 6	+ 4
0-3-33	- 2	- 3	0	- 3	+ 1	+ 4	+ 2
M8	+ 1	0	0	- 1	+ 3	+ 4	+ 2
Mandarin (Ottawa)	0	0	0	0	0	0	0
M9	- 1	0	0	- 2	+ 4	+ 2	+ 1
W8S-1460	- 6	- 2	- 1	- 1	- 1	- 3	- 2
0-48-36	- 3	- 3	- 4	- 4	0	+ 1	- 2
W8S-1200	- 5	- 1	0	- 1	- 1	- 5	- 2
Flambeau	- 8	-10	- 4	- 5	- 3	- 7	- 4
Date planted	5/24	5/22	5/28	5/21	6/3	5/29	5/16
Mand. (Ott.) matured	9/27	9/13	9/10	9/18	9/30	10/2	9/7
Days to mature	126	114	105	120	119	126	114

	Lodging			
W6S-292	1.9	1.9	2.0	2.8
L6-8275	1.6	1.4	1.0	1.8
Capital	2.9	2.5	3.0	2.9
Hokien	2.7	2.3	3.0	3.0
Renville	1.7	1.4	1.0	1.6
0-3-33	3.7	2.3	1.0	3.4
M8	2.1	1.3	1.0	1.6
Mandarin (Ottawa)	1.5	1.6	1.0	1.0
M9	2.0	1.8	2.0	2.5
W8S-1460	1.2	1.0	1.0	2.3
0-48-36	2.2	1.0	1.0	1.9
W8S-1200	2.1	1.1	2.0	2.4
Flambeau	3.7	2.0	2.0	4.0
Mean	2.3	1.7	1.6	2.4

Table 4. Summary of height data and percentage of oil for the strains in the Uniform Test, Group 0, 1952.

Strain	Mean of 12 Tests[1]	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Ohio	East Lansing Mich. Muck	East Lansing Mich. Mineral	Deer-field Mich.
W6S-292	29	33	31	28	25		18	34
L6-8275	32	39	35	29	28		23	37
Capital	32	40	33	28	28		20	38
Hokien	31	38	33	28	27		20	39
Renville	30	35	33	26	25		20	32
0-3-33	32	40	39	28	30		21	39
M8	29	37	31	26	26		20	31
Mandarin (Ottawa)	28	32	29	24	24		18	29
M9	29	35	32	26	26		21	32
W8S-1460	28	32	28	22	24		20	28
0-48-36	30	38	34	26	25		22	35
W8S-1200	28	33	30	22	24		24	28
Flambeau	27	33	28	20	25		15	28
Mean	30	36	32	26	26		20	33

	Mean of 14 Tests	Percentage of Oil						
W6S-292	20.1	19.5	19.1	20.2	20.9	21.4	20.4	20.3
L6-8275	20.0	19.8	19.4	20.2	21.0	21.3	21.0	20.0
Capital	20.3	20.0	19.5	21.1	21.4	21.3	21.5	21.2
Hokien	20.3	20.4	19.5	21.2	21.2	21.3	22.3	21.4
Renville	20.8	20.8	20.2	21.7	22.3	20.9	21.3	21.2
0-3-33	19.6	19.5	19.1	20.5	21.0	19.3	20.1	20.6
M8	20.3	20.4	19.7	21.2	21.5	21.1	20.7	21.0
Mandarin (Ottawa)	19.6	19.5	19.5	20.8	20.1	19.5	20.5	20.5
M9	20.6	20.5	19.8	21.5	21.5	20.6	20.0	21.6
W8S-1460	20.0	20.1	19.8	20.6	20.0	20.5	20.6	21.2
0-48-36	19.9	19.6	18.8	20.7	20.5	20.6	20.2	20.1
W8S-1200	19.7	20.2	20.9	20.0	20.3	20.2	18.7	20.1
Flambeau	18.9	18.9	19.3	19.6	19.4	19.5	18.8	18.8
Mean	20.0	19.9	19.6	20.7	20.9	20.6	20.5	20.6

[1]East Lansing, Michigan (mineral) not included in the mean.

Table 4. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Morris Minn.	St. Paul Minn.	Casselton N.D.	Fargo N.D.	Rosholt S.D.
W6S-292	34	27	25	35	31	24	26
L6-8275	37	29	29	39	32	26	24
Capital	36	28	27	38	31	25	28
Hokien	35	27	27	39	31	25	25
Renville	34	26	26	36	30	25	27
0-3-33	35	31	25	35	32	24	28
M8	33	25	25	35	32	24	24
Mandarin (Ottawa)	31	26	24	33	30	24	24
M9	32	26	24	35	31	22	24
W8S-1460	33	25	25	37	28	25	25
0-48-36	33	29	26	32	30	23	26
W8S-1200	29	26	28	40	29	23	27
Flambeau	29	26	25	30	28	23	25
Mean	33	27	26	36	30	24	26

	Percentage of Oil						
W6S-292	19.6	21.1	20.8	20.2	18.8	18.5	20.7
L6-8275	18.8	20.0	20.9	19.9	19.0	18.5	19.7
Capital	20.1	20.3	20.7	20.2	19.1	18.5	19.1
Hokien	19.2	19.6	21.2	20.2	19.1	18.2	20.0
Renville	19.2	21.1	21.8	20.9	19.6	19.5	21.1
0-3-33	18.5	18.9	20.2	19.4	19.1	18.1	19.8
M8	18.7	20.5	21.1	20.5	19.1	18.6	20.6
Mandarin (Ottawa)	18.1	19.5	20.5	18.9	19.0	18.4	19.8
M9	19.4	21.4	21.3	20.6	20.0	19.0	20.6
W8S-1460	19.1	19.5	20.5	19.7	18.7	19.1	20.3
0-48-36	19.3	20.7	20.9	19.7	18.8	18.4	20.0
W8S-1200	18.6	19.8	20.5	19.7	18.5	18.8	19.5
Flambeau	18.3	18.9	19.9	18.7	17.4	18.3	18.5
Mean	19.0	20.1	20.8	19.9	18.9	18.6	20.0

Table 5. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1951-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	22	16	13	22	22	22	26	26	26
W6S-292	32.9	-1.0	2.1	29	2.0	16.4	40.8	19.5	135.9
Mandarin (Ottawa)	30.9	0	1.2	28	1.7	19.3	42.3	19.1	133.4
Hokien	30.6	+2.3	2.4	31	2.2	13.8	40.8	19.6	136.9
Capital	30.4	+1.5	2.7	31	2.1	13.6	41.2	19.6	136.5
M8	29.5	+1.9	1.6	29	2.2	17.0	40.6	19.7	136.3
Renville	29.3	+4.0	1.5	30	2.3	16.9	40.4	20.1	135.6
W8S-1460	28.9	-4.2	1.4	28	2.2	16.5	41.6	19.5	133.5
M9	28.7	+1.9	1.8	29	2.2	17.3	41.6	20.0	135.7
O-48-36	27.9	-1.1	1.5	30	2.3	16.8	41.1	19.3	133.2
W8S-1200	27.4	-5.1	1.4	28	2.4	16.2	41.0	19.4	133.6
Flambeau	24.4	-6.5	2.5	27	2.3	16.1	42.3	18.4	135.4
Mean	29.2		1.8	29	2.2	16.4	41.2	19.5	135.1

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

Table 6. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group 0, 1951-52.

Strain	Mean of 22 Tests	Ottawa Ontario	Guelph Ontario	Columbus Ohio	East Lansing Mich. Muck	East Lansing Mich. Mineral
W6S-292	32.9	41.9	35.5	22.2	30.3	22.4
Mandarin (Ottawa)	30.9	37.8	30.9	21.0	29.9	19.4
Hokien	30.6	41.5	33.3	21.5	29.5	20.9
Capital	30.4	39.4	32.7	21.0	27.4	22.5
M8	29.5	39.5	31.2	21.7	31.9	21.4
Renville	29.3	36.8	30.1	23.7	31.2	22.9
W8S-1460	28.9	35.8	31.4	14.5	28.7	21.7
M9	28.7	38.6	29.9	18.6	30.1	21.1
0-48-36	27.9	36.1	30.6	17.8	25.7	19.3
W8S-1200	27.4	33.6	32.0	15.0	35.4	20.4
Flambeau	24.4	33.9	31.0	12.6	24.2	16.1
Mean	29.2	37.7	31.7	19.1	29.5	20.7

	Yield Rank				
W6S-292	1	1	2	4	3
Mandarin (Ottawa)	6	8	5	6	9
Hokien	2	2	4	7	7
Capital	4	3	5	9	2
M8	3	6	3	2	5
Renville	7	10	1	3	1
W8S-1460	9	5	10	8	4
M9	5	11	7	5	6
0-48-36	8	9	8	10	10
W8S-1200	11	4	9	1	8
Flambeau	10	7	11	11	11

Table 6. (Continued)

Strain	Deer-field Mich.	Spooner Wis.	Fall City Wis.	Morris Minn.	Fargo N.D.	Hosholt S.D.
W6S-292	38.0	35.3	25.3	30.6	19.6	21.5
Mandarin (Ottawa)	38.1	30.7	26.8	28.9	17.4	16.6
Hokien	33.8	30.4	23.8	30.7	17.7	15.8
Capital	34.3	28.8	24.7	33.8	18.4	15.8
M8	32.5	26.4	20.8	29.0	14.5	14.3
Renville	34.6	26.0	21.1	31.2	13.4	14.4
W8S-1460	32.3	34.1	25.2	28.6	25.8	16.1
M9	32.2	29.2	23.7	28.2	11.0	12.8
0-48-36	28.1	29.9	24.4	25.6	13.7	16.2
W8S-1200	30.3	27.6	22.2	27.5	24.5	14.7
Flambeau	22.8	27.9	21.4	28.4	19.3	10.8
Mean	32.5	29.7	23.6	29.3	17.6	15.4
	Yield Rank					
W6S-292	2	1	2	4	3	1
Mandarin (Ottawa)	1	3	1	6	7	2
Hokien	5	4	6	3	6	5
Capital	4	7	4	1	5	5
M8	6	10	11	5	8	9
Renville	3	11	10	2	10	8
W8S-1460	7	2	3	7	1	4
M9	8	6	7	9	11	10
0-48-36	10	5	5	11	9	3
W8S-1200	9	9	8	10	2	7
Flambeau	11	8	9	8	4	11

Table 7. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1950-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	33	25	22	34	34	33	37	37	37
W6S-292	32.1	-1.4	2.1	30	1.9	16.2	41.0	19.4	135,8
Hokien	29.7	+1.5	2.3	32	2.3	14.0	41.2	19.4	136,2
Capital	29.6	+0.7	2.5	31	2.2	13.7	41.6	19.4	135,9
Mandarin (Ottawa)	29.4	0	1.3	29	1.8	19.3	42.8	18.8	132.7
M9	29.0	+1.5	1.8	30	2.1	16.9	41.7	19.9	135.6
M8	28.9	+1.7	1.6	30	2.1	16.7	40.6	19.6	136.0
W8S-1460	28.5	-4.8	1.5	28	2.1	16.3	41.5	19.4	132.7
W8S-1200	27.0	-7.4	1.4	28	2.4	16.0	40.8	19.3	133.1
Flambeau	24.9	-8.2	2.5	28	2.3	15.8	42.5	18.2	134.9
Mean	28.8		1.9	30	2.1	16.1	41.5	19.3	134.8

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

Table 8. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group 0, 1950-52.

Strain	Mean of 33 Tests	Ottawa Ontario	Guelph Ontario	Cort-land Ohio	Colum-bus Ohio	Deer-field Mich.
Years Tested		1950-1952	1950-1952	1950-1951	1950-1952	1950-1952
W6S-292	32.1	41.8	33.7	23.2	24.4	37.1
Hokien	29.7	41.2	30.0	19.5	22.6	32.3
Capital	29.6	41.2	29.8	20.8	22.5	33.1
Mandarin (Ottawa)	29.4	37.3	29.1	20.3	22.2	36.9
M9	29.0	40.8	28.3	20.6	21.4	32.0
M8	28.9	41.8	29.9	19.1	22.7	31.5
W8S-1460	28.5	37.6	28.1	18.1	17.7	31.8
W8S-1200	27.0	32.9	29.1	17.1	17.8	29.6
Flambeau	24.9	35.3	28.9	15.6	15.2	23.8
Mean	28.8	38.9	29.7	19.4	20.7	32.0
		Yield Rank				
W6S-292		1	1	1	1	1
Hokien		3	2	5	3	4
Capital		3	4	2	4	3
Mandarin (Ottawa)		7	5	4	5	2
M9		5	8	3	6	5
M8		1	3	6	2	7
W8S-1460		6	9	7	8	6
W8S-1200		9	5	8	7	8
Flambeau		8	7	9	9	9

[1]Eau Claire, Wisconsin, 1950.

Table 8. (Continued)

Strain	Spooner Wis.	Fall City Wis.[1]	Morris Minn.	St. Paul Minn.	Fargo N.D.	Rosholt S.D.	Moses Lake Wash.
Years Tested	1950-1952	1950-1952	1950-1952	1950, 1952	1950-1952	1950-1952	1950-1951
W6S-292	32.1	26.4	29.2	29.1	21.6	19.5	38.5
Hokien	25.8	24.1	29.6	28.6	18.3	16.0	40.9
Capital	24.8	24.7	32.0	32.5	19.0	16.5	29.2
Mandarin (Ottawa)	26.6	24.5	26.5	26.6	19.8	15.9	38.3
M9	26.6	26.3	27.1	30.9	12.6	13.3	34.6
M8	24.8	22.1	27.7	32.5	16.4	15.4	33.3
W8S-1460	30.3	24.9	28.4	30.0	25.3	16.4	38.4
W8S-1200	25.9	22.4	27.2	26.9	24.5	14.2	40.6
Flambeau	26.3	22.0	28.2	23.5	19.8	12.4	30.2
Mean	27.0	24.2	28.4	29.0	19.7	15.5	36.0
				Yield Rank			
W6S-292	1	1	3	5	3	1	3
Hokien	7	6	2	6	7	4	1
Capital	8	4	1	1	6	2	9
Mandarin (Ottawa)	3	5	9	8	4	5	5
M9	3	2	8	3	9	8	6
M8	8	8	6	1	8	6	7
W8S-1460	2	3	4	4	1	3	4
W8S-1200	6	7	7	7	2	7	2
Flambeau	5	9	5	9	4	9	8

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
Earlyana	Purdue Agr. Exp. Sta.	Sel. from a natural hybrid
Habaro	U. S. Dept. of Agr.	Sel. from P. I. 20405
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 (M2)	Minn. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
A6K-1011	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
L6-8179	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
L6-8275	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
W9-1982	Wis. A.E.S. & U.S.R.S.L.	Sel. from A3-108 x Wis. Manchu 3

Uniform Test, Group I, was grown at eighteen locations in 1952 and data for these tests are summarized in Tables 9 through 16. As an average of all tests, including the nine Group I entries grown in both 1951 and 1952, 1952 yields averaged 3.8 bushels per acre higher than did 1951 yields. Of the fourteen locations common to the 1951 and 1952 Group I tests, four had lower yields in 1952 than in 1951--East Lansing, Michigan, 1.6 bushels lower; Deerfield, Michigan, 3.2 bushels; Walkerton, Indiana, .8 bushel; and Shabbona, Illinois, 6.8 bushels. Average percentage of oil in 1952 was 1.1 higher than in 1951.

W9-1982 was the only new entry in the 1952 Group I tests. As an average of all tests, this entry ranked second in yield and 1.5 bushels less than A6K-1011. W9-1982 averaged about three days later in maturity and .6 higher in percentage of oil than A6K-1011. W9-1982 ranked first in yield at Guelph, Ontario; Columbus and Mt. Healthy, Ohio; East Lansing, Michigan; Madison, Wisconsin; and Cresco, Iowa.

Nine of the 1952 Uniform Test, Group I, entries were also tested in 1951. Summaries of data for these two years are presented in Tables 13 and 14. A6K-1011, the only strain in the Group I tests for just 1951 and 1952, has ranked first in yield as an average of thirty-one tests. This entry has ranked first in yield for an average of 1951 and 1952 tests at Guelph, Ontario; State College, Pennsylvania; Columbus and Mt. Healthy, Ohio; East Lansing, Michigan; Walkerton, Indiana; Madison, Wisconsin; Shabbona, Illinois; and Waseca, Minnesota. A6K-1011 has been similar to Blackhawk in maturity and resistance to lodging but has averaged about .3 of a percent less in oil content than has Blackhawk.

Eight of the 1952 Group I entries have been tested for at least three years and data summaries for this period are presented in Tables 15 and 16. As an average of forty-five tests, L6-8179 has ranked first in yield for this period, outyielding Blackhawk by an average of .9 bushels per acre. L6-8179 has had a slightly better lodging score and .2 percent higher oil content than Blackhawk. As indicated in Table 16, L6-8179 has outyielded Blackhawk at all Group I locations except Deerfield, Michigan; Kanawha, Iowa; and Brookings, South Dakota.

Table 9. Summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1952.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	18	12	15	17	16	17	18	18	18
A6K-1011	34.3	+ 8.2	1.7	33	1.8	16.4	41.8	20.4	134.8
W9-1982	32.8	+11.3	2.0	38	1.8	19.1	40.8	21.0	130.6
L6-8179	32.4	+ 8.3	1.6	33	1.9	16.2	41.2	20.7	132.2
L6-8275	31.8	+ 3.4	1.4	31	1.8	15.5	41.4	20.6	135.3
Blackhawk	31.7	+ 7.5	1.7	34	1.7	16.0	40.9	20.7	130.4
Renville	30.5	+ 4.0	1.4	29	2.1	18.5	40.7	21.1	133.7
Earlyana	29.2	+11.3	3.0	38	2.4	16.5	42.4	20.2	133.4
Mandarin (Ottawa)	28.9	0	1.3	27	1.5	18.0	42.7	19.9	130.5
Monroe	28.3	+ 6.0	2.3	38	1.4	15.7	42.3	19.8	133.1
Habaro	27.8	+ 7.3	2.0	28	1.9	19.8	43.3	19.2	132.9
Mean	30.8		1.8	33	1.8	17.2	41.8	20.4	132.7

[1]Days earlier (-) or later (+) than Mandarin (Ottawa). Mandarin (Ottawa) required 110 days to mature.

Table 10. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1952.

Strain	Mean of 18 Tests	Guelph Ontario	State College Pa.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deerfield Mich.
A6K-1011	34.3	34.1	30.3	36.6	39.7	24.6	35.3	25.4	31.3
W9-1982	32.8	34.4	28.5	34.7	40.2	25.6	35.8	25.8	25.9
L6-8179	32.4	33.8	28.1	34.8	38.4	23.5	33.1	24.7	31.8
L6-8275	31.8	32.8	27.5	28.5	41.3	22.5	34.3	22.2	30.1
Blackhawk	31.7	32.5	23.9	33.1	39.0	21.8	32.1	24.6	35.9
Renville	30.5	31.1	24.8	30.5	37.7	18.9	32.3	22.8	28.8
Earlyana	29.2	28.7	26.6	32.5	38.1	24.4	33.4	22.9	25.5
Mandarin (Ottawa)	28.9	31.1	24.1	26.5	28.5	18.6	29.2	17.8	21.8
Monroe	28.3	28.7	25.2	30.5	33.2	19.6	29.3	24.3	27.5
Habaro	27.8	28.0	25.9	32.4	34.6	16.5	31.1	20.7	18.4
Mean	30.8	31.5	26.5	32.0	37.1	21.6	32.6	23.1	27.7
Coef. of Var. (%)		8.7	12.5	--	--	--	--	15.5	15.5
Bu. Nec. for Sig. (5%)		4.0	5.4	--	--	--	--	5.3	6.2
Row Spacing (In.)		24	36	30	21	28	28	28	22
					Yield Rank				
A6K-1011		2	1	1	3	2	2	2	3
W9-1982		1	2	3	2	1	1	1	7
L6-8179		3	3	2	5	4	5	3	2
L6-8275		4	4	9	1	5	3	8	4
Blackhawk		5	10	4	4	6	7	4	1
Renville		6	8	7	7	8	6	7	5
Earlyana		8	5	5	6	3	4	6	8
Mandarin (Ottawa)		6	9	10	10	9	10	10	9
Monroe		8	7	7	9	7	9	5	6
Habaro		10	6	6	8	10	8	9	10

Table 10. (Continued)

Strain	Walker-ton Ind.	Spoon-er Wis.	Fall City Wis.	Madi-son Wis.	Shab-bona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kana-wha Iowa	Brook-ings S.D.
A6K-1011	40.4	38.3	30.4	43.3	25.6	32.6	47.3	36.5	35.4	29.7
W9-1982	36.5	32.2	28.4	45.2	24.0	23.7	45.4	40.2	36.2	27.1
L6-8179	37.1	34.6	29.2	41.8	24.3	26.8	43.0	35.0	34.8	29.2
L6-8275	35.7	38.2	27.1	39.1	24.0	38.5	37.6	35.1	33.6	24.9
Blackhawk	37.0	34.9	28.3	43.5	19.8	22.3	42.4	33.8	37.1	28.2
Renville	33.9	40.5	24.1	38.9	21.4	38.0	42.0	30.0	29.7	23.3
Earlyana	35.5	26.3	26.9	35.1	18.8	12.5	37.8	38.4	33.3	29.1
Mandarin (Ottawa)	36.9	41.8	26.3	40.6	19.3	29.9	38.0	31.5	31.8	25.8
Monroe	34.9	32.2	23.6	35.8	21.0	21.6	30.5	35.5	31.1	24.7
Habaro	30.2	34.5	25.1	38.8	17.5	14.9	35.2	36.4	34.4	26.4
Mean	35.8	35.4	27.0	40.2	21.6	26.1	39.9	35.2	33.7	26.8
C.V. (%)	8.9	9.4	9.7	7.7	6.5	--	--	7.2	6.0	8.0
Bu. N.F.S. (5%)	4.6	4.7	3.8	4.4	2.0	7.5	6.9	3.7	2.9	3.1
Row Sp. (In.)	38	36	36	36	40	24	24	42	40	40
					Yield Rank					
A6K-1011	1	3	1	3	1	3	1	3	3	1
W9-1982	5	8	3	1	3	6	2	1	2	5
L6-8179	2	6	2	4	2	5	3	7	4	2
L6-8275	6	4	5	6	3	1	8	6	6	8
Blackhawk	3	5	4	2	7	7	4	8	1	4
Renville	9	2	9	7	5	2	5	10	10	10
Earlyana	7	9	6	10	9	10	7	2	7	3
Mandarin (Ottawa)	4	1	7	5	8	4	6	9	8	7
Monroe	8	8	10	9	6	8	10	5	9	9
Habaro	10	7	8	8	10	9	9	4	5	6

Table 11. Summary of maturity data, days earlier (-) or later (+) than Mandarin (Ottawa), and lodging data for the strains in the Uniform Test, Group I, 1952.

Strain	Mean of 12 Tests[1]	Guelph Ontario	State College Pa.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deerfield Mich.
A6K-1011	+ 8.2	+ 5	+ 7	+ 5			+ 7		
W9-1982	+11.3	--	+11	+ 9			+11		
L6-8179	+ 8.3	--	+ 9	+ 5			+ 6		
L6-8275	+ 3.4	+ 1	+ 9	0			+ 6		
Blackhawk	+ 7.5	+ 7	+ 7	+ 2			+ 5		
Renville	+ 4.0	+ 1	+12	0			+ 5		
Earlyana	+11.3	--	+ 7	+ 6			+11		
Mandarin (Ottawa)	0	0	0	0			0		
Monroe	+ 6.0	+ 6	+ 7	+ 2			+ 4		
Habaro	+ 7.3	+ 4	+ 7	0			+ 6		
Date planted		5/17	6/3	6/3			6/5		
Mand. (Ott.) matured		9/21	9/27	9/9			9/2		
Days to mature	110	127	116	98			89		

	Mean of 15 Tests[2]	Lodging							
A6K-1011	1.7	1.0	1.0	1.3	1.0	1.0	1.2	1.0	1.0
W9-1982	2.0	1.8	1.0	1.5	1.0	1.0	2.2	1.0	1.0
L6-8179	1.6	1.3	1.0	1.5	1.0	1.0	1.2	1.0	1.0
L6-8275	1.4	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0
Blackhawk	1.7	1.3	1.0	1.0	1.5	1.0	1.8	1.0	1.0
Renville	1.4	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0
Earlyana	3.0	3.2	2.3	4.0	1.5	2.3	3.2	1.0	1.0
Mandarin (Ottawa)	1.3	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0
Monroe	2.3	1.6	1.3	2.0	1.0	1.0	2.5	1.0	1.0
Habaro	2.0	1.3	1.3	2.0	1.0	1.0	1.8	1.0	1.0
Mean	1.8	1.5	1.2	1.6	1.1	1.1	1.8	1.0	1.0

[1]Guelph, Ontario not included in the mean.
[2]East Lansing and Deerfield, Michigan not included in the mean.

Table 11. (Continued)

Strain	Walker-ton Ind.	Spooner Wis.	Fall City Wis.	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
A6K-1011	+ 9	+ 8	+ 9	+11		+ 4	+10	+ 6	+14	+ 8
W9-1982	+10	+ 9	+10	+14		+13	+16	+ 8	+16	+ 9
L6-8179	+ 9	+ 8	+ 9	+12		+10	+ 9	+ 5	+13	+ 5
L6-8275	+ 7	+ 1	+ 2	+ 5		- 1	+ 4	0	+ 6	+ 2
Blackhawk	+ 7	+ 8	+ 7	+ 9		+11	+11	+ 8	+10	+ 5
Renville	+ 9	+ 1	+ 3	+ 4		0	+ 5	+ 1	+ 4	+ 4
Earlyana	+11	+14	+13	+11		+15	+18	+ 9	+14	+ 6
Mandarin (Ottawa)	0	0	0	0		0	0	0	0	0
Monroe	+ 8	+ 5	+ 5	+ 6		+ 8	+ 7	+ 5	+10	+ 5
Habaro	+ 8	+13	+ 5	+ 8		+10	+12	+ 4	+ 9	+ 6
Date planted	6/5	5/24	5/22	5/28		5/21	5/21	5/21	5/26	5/23
Mand. (Ott.) matured	9/10	9/28	9/13	9/10		9/18	9/11	9/21	9/9	9/8
Days to mature	97	127	114	105		120	113	123	106	108
					Lodging					
A6K-1011	1.0	3.0	2.0	2.9	1.5		4.0	1.7	1.7	1.5
W9-1982	1.5	2.7	2.5	3.3	1.3		4.0	2.2	1.8	2.0
L6-8179	1.0	2.5	1.8	2.8	1.0		3.0	1.6	1.6	2.0
L6-8275	1.0	1.5	1.4	2.1	1.0		3.0	1.5	1.6	1.0
Blackhawk	1.0	3.0	2.0	2.5	1.0		3.0	1.8	1.2	2.0
Renville	1.0	2.2	1.0	2.2	1.0		2.0	1.4	1.5	2.0
Earlyana	2.8	4.2	3.1	4.0	2.0		5.0	2.8	2.3	3.0
Mandarin (Ottawa)	1.0	1.2	1.5	1.8	1.0		2.0	1.3	1.3	1.5
Monroe	2.8	3.0	2.5	3.5	1.8		4.0	3.0	2.1	2.0
Habaro	1.8	3.7	2.5	3.0	1.0		3.0	2.4	1.5	2.0
Mean	1.5	2.7	2.0	2.8	1.3		3.0	2.0	1.7	1.9

Table 12. Summary of height data and percentage of oil for the strains in the Uniform Test, Group I, 1952.

Strain	Mean of 17 Tests	Guelph Ontario	State College Pa.	Hoyt-ville Ohio	Wooster Ohio	Colum-bus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deer-field Mich.
A6K-1011	33	36	23	32	26		31	24	37
W9-1982	38	41	26	36	31		36	28	44
L6-8179	33	35	21	29	28		32	24	35
L6-8275	31	34	22	28	24		30	26	32
Blackhawk	34	36	24	30	27		33	23	40
Renville	29	33	22	28	25		30	24	35
Earlyana	38	39	25	32	30		34	26	45
Mandarin (Ottawa)	27	30	21	24	22		25	22	31
Monroe	38	41	25	34	32		38	28	46
Habaro	28	33	20	28	20		24	19	31
Mean	33	36	23	30	27		31	24	38
	Mean of 18 Tests	Percentage of Oil							
A6K-1011	20.4	18.8	22.3	19.9	21.0	21.1	20.8	21.3	20.2
W9-1982	21.0	19.9	22.4	21.0	21.7	21.6	21.3	22.1	20.1
L6-8179	20.7	19.8	21.8	19.3	20.3	21.8	21.0	21.6	20.7
L6-8275	20.6	19.3	21.6	20.6	21.5	21.3	21.2	21.7	20.4
Blackhawk	20.7	19.9	21.9	21.0	21.0	18.8	21.5	21.7	20.1
Renville	21.1	20.2	22.0	21.6	21.6	22.3	22.2	22.1	20.9
Earlyana	20.2	18.6	21.6	20.3	20.8	19.2	20.6	21.2	19.6
Mandarin (Ottawa)	19.9	19.2	21.5	19.8	19.3	21.0	20.5	20.6	19.4
Monroe	19.8	18.8	21.4	19.3	20.3	20.9	19.7	20.6	20.0
Habaro	19.2	17.8	21.0	19.7	19.4	19.9	19.6	20.5	18.7
Mean	20.4	19.2	21.8	20.3	20.7	20.8	20.8	21.3	20.0

Table 12. (Continued)

Strain	Walker-ton Ind.	Spooner Wis.	Fall City Wis.	Madi-son Wis.	Shab-bona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kana-wha Iowa	Brook-ings S.D.
A6K-1011	39	39	31	37	31	39	37	38	32	29
W9-1982	43	41	35	42	36	46	43	45	36	33
L6-8179	39	38	31	36	30	40	37	39	32	28
L6-8275	36	39	29	35	29	40	36	35	30	29
Blackhawk	41	39	35	37	31	40	40	38	31	32
Renville	33	35	26	31	27	35	33	32	26	26
Earlyana	46	41	37	38	37	50	45	46	36	36
Mandarin (Ottawa)	33	33	26	27	24	35	30	30	24	25
Monroe	48	38	35	41	34	49	41	47	36	34
Habaro	33	35	28	32	24	36	35	32	25	24
Mean	39	38	31	36	30	41	38	38	31	30
	Percentage of Oil									
A6K-1011	20.4	19.1	20.7	19.5	22.6	18.9	19.3	19.7	20.9	20.8
W9-1982	21.0	19.6	20.9	20.5	22.7	19.6	20.3	20.4	21.2	21.1
L6-8179	20.6	19.2	20.9	20.3	22.1	20.1	20.3	20.4	21.1	21.1
L6-8275	21.0	19.3	20.7	18.3	22.4	19.9	19.7	20.2	21.0	21.4
Blackhawk	21.3	19.6	20.1	20.3	22.2	19.9	20.1	20.0	21.4	21.8
Renville	20.4	19.1	20.4	20.5	24.3	20.3	20.0	20.0	21.6	21.0
Earlyana	20.4	19.8	20.1	19.7	23.0	19.1	19.8	19.4	20.1	21.0
Mandarin (Ottawa)	20.3	18.2	19.4	18.9	21.8	18.9	19.5	19.0	20.7	19.8
Monroe	20.0	18.7	19.9	19.3	21.6	18.1	18.9	19.2	20.0	20.5
Habaro	19.7	18.2	19.2	18.3	19.1	17.7	18.3	18.4	19.5	19.8
Mean	20.5	19.1	20.2	19.6	22.2	19.3	19.6	19.7	20.8	20.8

Table 13. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1951-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	31	22	24	28	26	30	31	31	31
A6K-1011	31.0	+ 8.2	1.8	33	1.8	15.9	42.1	19.9	136.2
L6-8179	30.3	+ 8.2	1.5	33	1.9	16.2	41.5	20.3	134.0
Blackhawk	29.7	+ 8.3	1.8	34	1.8	15.9	41.4	20.2	131.9
L6-8275	29.5	+ 3.4	1.4	31	1.8	15.4	41.9	20.1	136.3
Earlyana	27.8	+10.0	2.8	37	2.4	16.4	42.9	19.7	134.9
Renville	27.7	+ 4.0	1.3	29	2.2	18.0	41.1	20.5	134.6
Monroe	27.4	+ 6.1	2.3	38	1.7	15.6	43.0	19.3	134.5
Mandarin (Ottawa)	27.2	0	1.3	27	1.7	18.7	43.3	19.3	132.0
Habaro	27.1	+ 7.8	2.0	28	1.9	19.9	43.8	18.6	134.3
Mean	28.6		1.8	32	1.9	16.9	42.3	19.8	134.3

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

Table 14. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1951-52.

Strain	Mean of 31 Tests	Guelph Ontario	State College Pa.	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.
A6K-1011	31.0	29.9	27.7	33.3	21.2	33.4	26.1
L6-8179	30.3	29.9	26.4	32.3	20.8	32.4	25.1
Blackhawk	29.7	27.7	23.2	33.6	19.5	30.3	25.0
L6-8275	29.5	29.5	25.8	33.0	20.3	33.1	23.5
Earlyana	27.8	26.0	24.7	32.7	21.2	29.8	24.2
Renville	27.7	27.6	22.4	31.3	19.0	31.3	23.1
Monroe	27.4	24.9	23.8	31.0	19.1	29.7	24.0
Mandarin (Ottawa)	27.2	27.0	22.5	26.1	16.8	29.7	20.3
Habaro	27.1	24.2	23.4	30.2	16.5	28.4	23.7
Mean	28.6	27.4	24.4	31.5	19.4	30.9	23.9

	Yield Rank					
A6K-1011	1	1	2	1	1	1
L6-8179	1	2	5	3	3	2
Blackhawk	4	7	1	5	5	3
L6-8275	3	3	3	4	2	7
Earlyana	7	4	4	1	6	4
Renville	5	9	6	7	4	8
Monroe	8	5	7	6	7	5
Mandarin (Ottawa)	6	8	9	8	7	9
Habaro	9	6	8	9	9	6

Table 14. (Continued)

Strain	Deer-field Mich.	Walker-ton Ind.	Fall City Wis.	Madi-son Wis.	Shab-bona Ill.	Waseca Minn.	Cresco Iowa	Kana-wha Iowa
A6K-1011	28.6	40.1	22.4	38.7	27.6	40.4	28.9	34.5
L6-8179	30.5	39.8	25.0	37.6	26.0	38.1	28.4	33.1
Blackhawk	34.0	36.6	25.9	38.3	24.3	36.9	26.5	35.5
L6-8275	27.5	34.1	27.4	34.3	26.4	36.4	27.0	32.5
Earlyana	28.7	38.1	21.8	32.9	23.2	32.5	29.0	31.0
Renville	31.4	31.0	21.7	32.9	24.3	35.6	21.8	27.0
Monroe	30.8	35.2	20.3	33.0	25.0	29.8	27.4	29.0
Mandarin (Ottawa)	27.7	36.0	24.7	32.4	24.2	34.2	23.0	29.7
Habaro	24.9	35.0	21.3	31.9	24.2	33.3	27.7	33.5
Mean	29.3	36.2	23.4	34.7	25.0	35.2	26.6	31.8
	Yield Rank							
A6K-1011	6	1	5	1	1	1	2	2
L6-8179	4	2	3	3	3	2	3	4
Blackhawk	1	4	2	2	5	3	7	1
L6-8275	8	8	1	4	2	4	6	5
Earlyana	5	3	6	6	9	8	1	6
Renville	2	9	7	6	5	5	9	9
Monroe	3	6	9	5	4	9	5	8
Mandarin (Ottawa)	7	5	4	8	7	6	8	7
Habaro	9	7	8	9	7	7	4	3

Table 15. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1950-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	45	31	37	42	39	44	44	44	44
L6-8179	30.3	+ 8.2	1.5	33	1.8	15.9	41.2	20.2	134.0
Blackhawk	29.4	+ 8.6	1.8	35	1.6	15.9	41.1	20.0	131.6
L6-8275	29.0	+ 2.9	1.4	32	1.7	15.4	41.6	20.0	136.0
Earlyana	27.5	+10.0	2.8	37	2.2	16.5	42.9	19.5	134.7
Renville	27.5	+ 3.0	1.3	29	2.2	17.5	40.8	20.5	134.4
Monroe	27.2	+ 6.3	2.2	38	1.5	15.4	42.8	19.1	134.2
Habaro	26.9	+ 8.5	2.1	29	1.8	19.9	43.9	18.3	134.0
Mandarin (Ottawa)	26.6	0	1.2	28	1.8	18.9	43.2	19.1	131.5
Mean	28.1		1.8	33	1.8	16.9	42.2	19.6	133.8

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

Table 16. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1950-52.

Strain	Mean of 45 Tests	Guelph Ontario	State College Pa.	Hoyt-ville Ohio[1]	Colum-bus Ohio	Deer-field Mich.	Walker-ton Ind.
Years Tested		1950-1952	1950-1952	1950, 1952	1950-1952	1950-1952	1950-1952
L6-8179	30.3	26.5	28.0	33.0	23.9	30.5	38.2
Blackhawk	29.4	25.0	26.3	32.6	22.1	31.6	34.2
L6-8275	29.0	26.6	26.4	29.3	23.0	27.3	32.6
Earlyana	27.5	22.4	26.4	31.4	22.6	27.0	37.8
Renville	27.5	26.6	23.0	29.8	22.0	29.5	28.8
Monroe	27.2	22.8	26.2	29.4	22.3	29.0	35.4
Habaro	26.9	23.2	25.6	32.2	19.6	24.5	36.3
Mandarin (Ottawa)	26.6	25.5	24.1	27.8	19.9	26.7	33.2
Mean	28.1	24.8	25.8	30.7	21.9	28.3	34.6
		Yield Rank					
L6-8179		3	1	1	1	2	1
Blackhawk		5	4	2	5	1	5
L6-8275		1	2	7	2	5	7
Earlyana		8	2	4	3	6	2
Renville		1	8	5	6	3	8
Monroe		7	5	6	4	4	4
Habaro		6	6	3	8	8	3
Mandarin (Ottawa)		4	7	8	7	7	6

[1]Holgate, Ohio, 1950.
[2]Eau Claire, Wisconsin, 1950.
[3]Compton, Illinois, 1950.

Table 16. (Continued)

Strain	Fall City Wis.[2]	Madison Wis.	Shabbona Ill.[3]	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S.D.
Years Tested	1950-1952	1950-1952	1950-1952	1950, 1952	1950-1952	1950-1952	1950-1952	1950, 1952
L6-8179	25.3	37.3	32.1	25.7	35.7	28.3	33.4	24.6
Blackhawk	24.6	36.4	30.7	22.5	35.6	26.5	35.4	25.0
L6-8275	27.0	32.5	30.7	29.9	34.9	26.0	33.7	22.7
Earlyana	21.0	31.6	29.9	15.6	31.6	27.0	31.8	23.9
Renville	23.2	31.6	28.0	30.7	34.1	22.4	28.6	22.7
Monroe	20.9	32.4	29.2	21.8	28.5	25.6	29.4	22.2
Habaro	18.3	30.3	29.2	14.9	31.6	27.3	33.4	22.5
Mandarin (Ottawa)	24.2	29.8	27.3	25.6	32.1	21.7	29.1	24.2
Mean	23.1	32.7	29.6	23.3	33.0	25.6	31.9	23.5
	Yield Rank							
L6-8179	2	1	1	3	1	1	3	2
Blackhawk	3	2	2	5	2	4	1	1
L6-8275	1	3	2	2	3	5	2	5
Earlyana	6	5	4	7	6	3	5	4
Renville	5	5	7	1	4	7	8	5
Monroe	7	4	5	6	8	6	6	8
Habaro	8	7	5	8	6	2	3	7
Mandarin (Ottawa)	4	8	8	4	5	8	7	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
Earlyana	Purdue Agr. Exp. Sta.	Sel. from a natural hybrid
Harosoy	Harrow Exp. Sta., Harrow, Ontario	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 A7-6402
A6K-549	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
A7-6402	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
C683	Purdue A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
C873	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Lincoln
C931	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Earlyana
C1024	Purdue A.E.S. & U.S.R.S.L.	Sel. from Linc. x (A45-251 x Earlyana)

Group II was grown at twenty-three locations in 1952. As an average of all tests, when only those entries grown in both 1951 and 1952 are considered, the 1952 yields were slightly higher than 1951. The 1952 yields were considerably higher than yields for the previous year at State College, Pennsylvania; Columbus, New Jersey; Wooster and Columbus, Ohio; Bluffton and Greenfield, Indiana; Madison, Wisconsin; and Marcus, Iowa. 1952 yields were lower than 1951 yields at Deerfield, Michigan; and Shabbona, Dwight, and Urbana, Illinois. Average percentage of oil was almost one percent higher in 1952 than in 1951.

There were five new entries in the 1952 Group II tests, A0-8618, A7-6402, C873, C931 and C1024. As an average of all tests, note Table 17, A7-6402, and A0-8618 ranked first and second in yield, respectively. A0-8618 is a selection from A7-6402 and averaged about a day earlier in maturity than A7-6402. These two strains have very good resistance to lodging and a satisfactory oil content, but A7-6402 averaged 6.6 days later than Hawkeye in maturity while A0-8618 averaged 5.5 days later. The highest yielding 1951 Group II entry, Harosoy, ranked fifth in yield in 1952, 3.2 bushels less than A7-6402, the first ranking strain. It is of considerable interest that Harosoy is the only 1952 Group II entry earlier in maturity than Hawkeye that outyielded it. Harosoy averaged 10.1 days earlier in maturity than A7-6402 and 3.5 days earlier than Hawkeye.

Nine of the 1952 Group II entries were also grown in 1951, and two-year averages for these entries are presented in Tables 21 and 22. As an average of all 1951 and 1952 tests, Lincoln and Harosoy ranked first and second in yield, Harosoy averaging 33.9 bushels per acre compared to 34.9 for Lincoln. Harosoy has averaged eight days earlier than Lincoln and three days earlier than Hawkeye.

The six named varieties, Lincoln, Adams, Hawkeye, Blackhawk, Earlyana, and Richland have been tested in Group II for at least five years, and data for 108 tests during this period are presented in Tables 23 and 24. In respect to yield, these varieties ranked as listed above with Lincoln outyielding Adams and Hawkeye by an average of .9 and 1.6 bushels per acre, respectively. During this period, Hawkeye has averaged 6.0 days earlier than Lincoln and 2.9 days earlier than Adams and has had a better lodging score than either Lincoln or Adams.

Table 17. Summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1952.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	23	14	21	22	21	23	23	23	23
A7-6402	37.3	+6.6	1.9	38	1.5	19.4	40.0	21.0	132.1
A0-8618	37.0	+5.5	1.9	39	1.5	17.0	40.7	21.3	132.1
Lincoln	36.6	+6.6	2.1	39	1.6	15.5	40.7	21.5	136.6
C873	34.4	+5.5	2.0	40	1.8	17.7	39.9	20.4	134.3
Harosoy	34.1	-3.5	1.7	37	1.4	17.5	40.8	20.9	132.1
C931	34.0	+3.2	2.2	38	1.9	16.1	42.0	20.4	134.3
Adams	33.7	+2.0	1.9	37	1.5	15.0	39.2	21.7	133.7
C1024	32.8	+2.4	2.4	36	1.8	15.9	40.0	22.1	132.3
Hawkeye	32.6	0	1.5	36	1.4	18.3	41.0	21.2	129.4
A6K-549	31.5	-2.4	1.8	35	2.1	17.7	41.3	21.3	134.5
C683	31.1	-1.9	1.6	39	1.8	15.8	40.3	21.1	128.3
Richland	30.0	+0.7	1.6	32	1.6	16.9	40.7	20.8	129.4
Blackhawk	28.9	-6.9	1.7	33	1.7	16.0	39.4	21.7	130.3
Earlyana	28.2	-3.9	2.7	36	1.9	15.7	40.2	21.1	133.2
Mean	33.0		1.9	37	1.7	16.8	40.4	21.2	132.3

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

Table 18. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1952.

Strain	Mean of 23 Tests	State College Pa.	New Brunswick N.J.	Columbus N.J	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.
A7-6402	37.3	38.3	38.8	41.0	39.8	41.7	33.6	41.3	27.8	18.3	43.2	56.4
A0-8618	37.0	37.2	42.0	37.2	39.3	41.6	34.6	39.4	23.8	17.3	42.2	51.3
Lincoln	36.6	38.6	38.6	33.7	37.0	45.0	37.9	38.7	26.5	16.6	39.6	55.3
C873	34.4	36.2	38.2	28.5	38.4	43.5	28.6	35.6	22.6	18.0	40.7	50.1
Harosoy	34.1	32.7	36.0	34.6	39.3	39.0	29.5	34.6	20.2	24.8	42.3	42.1
C931	34.0	31.5	39.4	30.1	40.7	42.5	29.7	34.3	22.6	17.4	39.6	48.5
Adams	33.7	30.8	32.4	29.7	37.5	42.4	30.0	34.2	18.5	16.7	40.9	48.2
C1024	32.8	37.6	35.8	26.9	38.1	34.4	31.6	34.5	23.0	18.7	38.6	48.3
Hawkeye	32.6	31.8	32.7	30.4	34.6	37.0	23.8	32.6	17.6	26.0	40.4	44.1
A6K-549	31.5	29.4	29.7	33.1	34.5	42.1	28.0	34.5	22.0	19.1	37.9	37.9
C683	31.1	28.9	30.5	30.9	32.8	35.6	26.4	31.9	18.1	25.4	42.3	38.7
Richland	30.0	30.2	29.0	28.0	34.3	34.9	21.9	31.4	20.0	17.7	38.6	40.0
Blackhawk	28.9	23.9	31.1	29.0	31.8	38.4	21.0	32.4	17.2	23.2	38.2	37.4
Earlyana	28.2	26.6	29.9	23.5	31.5	31.5	24.4	28.2	18.1	21.2	37.4	38.4
Mean	33.0	32.4	34.6	31.2	36.4	39.3	28.6	34.5	21.3	20.0	40.1	45.5
C.V. (%)		12.5	7.4	16.6	--	--	--	--	15.2	21.3	8.5	4.1
Bu. N.F.S. (5%)		5.4	4.8	7.5	--	--	--	--	4.7	6.2	N.S.	2.7
Row Sp. (In.)		36	24	24	30	21	28	28	28	22	38	38

	Yield Rank										
A7-6402	2	3	1	2	6	3	1	1	8	1	1
A0-8618	4	1	2	3	7	2	2	3	12	4	3
Lincoln	1	4	4	8	1	1	3	2	14	8	2
C873	5	5	11	5	2	8	4	5	9	6	4
Harosoy	6	6	3	3	8	7	5	8	3	2	9
C931	8	2	8	1	3	6	8	5	11	8	5
Adams	9	9	9	7	4	5	9	10	13	5	7
C1024	3	7	13	6	13	4	6	4	7	10	6
Hawkeye	7	8	7	9	10	12	10	13	1	7	8
A6K-549	11	13	5	10	5	9	6	7	6	13	13
C683	12	11	6	12	11	10	12	11	2	2	11
Richland	10	14	12	11	12	13	13	9	10	10	10
Blackhawk	14	10	10	13	9	14	11	14	4	12	14
Earlyana	13	12	14	14	14	11	14	11	5	14	12

Table 18. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Centerville S.D.	Lincoln Nebr.
A7-6402	40.8	56.5	44.1	19.2	27.0	34.2	30.5	38.6	34.8	49.9	22.5	38.8
A0-8618	39.9	56.6	47.1	22.5	26.6	38.1	32.8	38.7	35.9	46.5	24.2	36.5
Lincoln	41.1	58.6	41.8	20.7	25.6	36.9	29.1	38.0	33.0	43.9	25.3	39.5
C873	38.7	52.8	42.5	22.5	25.0	34.0	32.9	34.6	31.1	42.6	16.8	37.9
Harosoy	37.1	44.8	42.9	24.4	29.0	32.8	34.0	40.5	32.9	38.3	17.4	34.3
C931	37.1	48.9	44.7	20.6	26.8	32.0	34.4	38.5	30.7	43.7	13.4	35.0
Adams	35.9	51.8	44.1	20.9	27.9	32.1	31.8	40.4	31.3	45.1	17.2	34.4
C1024	35.3	49.7	31.8	20.8	27.2	30.1	29.7	42.0	31.5	38.1	16.2	34.5
Hawkeye	35.0	47.1	40.2	17.2	28.4	33.3	36.5	39.1	33.0	42.8	15.7	31.2
A6K-549	34.0	41.1	44.1	21.2	25.5	30.0	29.7	35.6	28.5	37.7	17.2	31.2
C683	29.6	44.7	45.9	19.3	28.0	27.9	31.3	36.2	28.9	38.4	15.8	27.7
Richland	32.9	45.3	43.6	14.8	22.6	27.9	30.8	36.5	27.1	38.2	14.1	30.7
Blackhawk	29.2	35.3	43.6	17.3	24.8	24.4	31.2	36.6	29.0	32.5	15.6	21.1
Earlyana	31.2	42.7	31.4	17.6	23.8	27.1	27.6	36.1	27.1	35.6	13.4	24.6
Mean	35.6	48.3	42.0	19.9	26.3	31.5	31.6	38.0	31.1	41.0	17.5	32.7
C.V. (%)	4.2	5.3	5.2	9.4	7.4	9.9	7.1	5.8	7.7	5.6	11.0	12.0
Bu. N.F.S. (5%)	2.1	3.6	4.1	2.7	2.7	4.3	3.2	3.1	3.4	3.3	2.8	5.6
Row Sp. (In.)	40	36	36	40	40	40	40	40	40	40	42	38
	Yield Rank											
A7-6402	2	3	4	10	6	3	10	6	2	1	3	2
A0-8618	3	2	1	2	8	1	5	5	1	2	2	4
Lincoln	1	1	11	7	9	2	13	8	3	4	1	1
C873	4	4	10	2	11	4	4	14	8	7	7	3
Harosoy	5	10	9	1	1	6	3	2	5	9	4	8
C931	5	7	3	8	7	8	2	7	9	5	13	5
Adams	7	5	4	5	4	7	6	3	7	3	5	7
C1024	8	6	13	6	5	9	11	1	6	11	8	6
Hawkeye	9	8	12	13	2	5	1	4	3	6	10	9
A6K-549	10	13	4	4	10	10	11	13	12	12	5	9
C683	13	11	2	9	3	11	7	11	11	8	9	12
Richland	11	9	7	14	14	11	9	10	13	10	12	11
Blackhawk	14	14	7	12	12	14	8	9	10	14	11	14
Earlyana	12	12	14	11	13	13	14	12	13	13	13	13

Table 19. Summary of maturity data, days earlier (-) or later (+) than Hawkeye, for the strains in the Uniform Test, Group II, 1952.

Strain	Mean of 14 Tests[1]	State College Pa.	New Brunswick N.J.	Columbus N.J.	Hoytville Ohio	Mt. Healthy Ohio	Walkerton Ind.	Bluffton Ind.
A7-6402	+6.6	+ 9	+ 6	+ 4	+ 7	+ 9	+ 6	+ 4
A0-8618	+5.5	+ 4	+ 7	+ 4	+10	+ 7	+ 4	+ 2
Lincoln	+6.6	+ 4	+ 7	+ 4	+10	+ 9	+ 5	+ 4
C873	+5.5	+ 6	+ 7	+ 5	+ 9	+ 9	+ 5	+ 3
Harosoy	-3.5	0	- 5	+ 1	- 4	- 2	- 1	- 2
C931	+3.2	+ 9	+ 2	+ 2	+ 5	+ 7	+ 4	+ 3
Adams	+2.0	+ 2	- 5	+ 1	+ 4	+ 5	+ 3	+ 3
C1024	+2.4	+ 6	0	0	+ 4	+ 3	+ 5	0
Hawkeye	0	0	0	0	0	0	0	0
A6K-549	-2.4	+ 4	- 6	- 2	- 6	- 3	- 2	+ 1
C683	-1.9	+ 6	- 8	- 2	- 5	- 1	+ 1	+ 1
Richland	+0.7	+ 4	- 5	+ 2	0	+ 2	+ 2	+ 2
Blackhawk	-6.9	0	- 8	- 2	-10	- 3	- 5	-10
Earlyana	-3.9	0	- 6	- 2	- 6	- 3	- 3	- 7
Date planted		6/3	6/17	6/13	6/3	6/5	6/5	5/14
Hawkeye matured		10/4	10/1	9/22	9/21	9/14	9/24	9/28
Days to mature	119	123	106	101	110	101	111	137

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

Table 19. (Continued)

Strain	Lafayette Ind.	Madison Wis.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Centerville S.D.
A7-6402	+10	+ 5	+ 6	+ 7	+ 7	+ 8	+11	+ 3
A0-8618	+ 7	+ 4	+ 5	+ 6	+ 4	+ 7	+ 8	+ 2
Lincoln	+ 9	+ 4	+ 7	+ 6	+ 6	+ 7	+10	+ 5
C873	+ 8	+ 2	+ 7	+ 3	+ 4	+ 6	+ 7	+ 2
Harosoy	- 4	- 4	- 6	- 3	- 2	- 3	- 5	- 9
C931	+ 7	0	+ 3	+ 2	+ 3	+ 1	+ 4	+ 2
Adams	+ 6	- 4	- 2	+ 2	+ 3	+ 3	+ 7	+ 2
C1024	+ 5	0	+ 3	+ 1	+ 3	+ 1	+ 5	+ 3
Hawkeye	0	0	0	0	0	0	0	0
A6K-549	0	- 7	- 3	- 1	- 3	- 2	- 3	+ 3
C683	- 3	- 1	- 5	- 1	- 1	0	- 1	0
Richland	+ 4	0	- 1	+ 1	0	0	0	+ 3
Blackhawk	- 6	- 9	-10	- 9	- 7	- 5	- 6	- 7
Earlyana	- 2	- 8	-10	- 4	- 3	- 3	0	+ 2
Date planted	6/2	5/21	5/8	5/26	5/20	5/16	5/8	5/28
Hawkeye matured	9/22	9/28	9/6	9/30	9/24	9/21	9/16	9/28
Days to mature	112	130	121	127	127	128	131	123

Table 20. Summary of lodging and height data for the strains in the Uniform Test, Group II, 1952.

Strain	Mean of 21 Tests[1]	State College Pa.	New Brunswick N.J.	Columbus N.J.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.
A7-6402	1.9	1.5	3.5	3.0	1.5	2.0	1.0	2.5	1.0	1.0	1.0	2.0
A0-8618	1.9	1.3	3.5	3.0	1.8	2.2	1.0	2.5	1.0	1.0	1.5	1.5
Lincoln	2.1	2.0	3.8	3.2	1.8	2.5	1.5	1.5	1.0	1.0	1.3	2.3
C873	2.0	2.3	3.5	3.5	2.0	2.2	1.0	2.5	1.0	1.0	2.0	2.0
Harosoy	1.7	1.0	3.8	2.8	1.8	1.5	1.0	2.0	1.0	1.0	1.0	1.0
C931	2.2	2.0	4.0	2.8	2.2	2.2	1.3	3.0	1.0	1.0	1.3	1.8
Adams	1.9	1.0	4.0	3.5	1.2	1.8	1.3	2.0	1.0	1.0	1.0	2.3
C1024	2.4	2.0	3.8	2.5	2.8	2.2	1.8	3.0	1.0	1.0	3.0	3.0
Hawkeye	1.5	1.0	2.8	2.8	1.5	1.5	1.0	1.5	1.0	1.0	1.0	1.0
A6K-549	1.8	1.5	3.5	2.5	2.0	1.5	1.3	2.0	1.0	1.0	1.0	1.3
C683	1.6	1.3	4.0	2.2	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.5
Richland	1.6	1.3	3.2	2.8	1.0	1.5	1.0	2.0	1.0	1.0	1.0	1.3
Blackhawk	1.7	1.0	4.2	4.0	1.2	1.8	1.0	2.0	1.0	1.0	1.0	1.0
Earlyana	2.7	2.3	4.8	4.2	3.8	2.2	1.8	3.0	1.0	1.0	2.5	3.0
Mean	1.9	1.5	3.7	3.1	1.8	1.9	1.2	2.3	1.0	1.0	1.4	1.8
	Mean of 22 Tests					Height						
A7-6402	38	33	39	35	36	35		38	34	39	46	39
A0-8618	39	32	42	38	38	32		40	33	37	44	41
Lincoln	39	33	37	34	38	34		39	33	38	45	43
C873	40	37	39	39	38	35		40	32	45	49	44
Harosoy	37	29	39	35	35	30		36	28	34	47	38
C931	38	31	39	35	36	33		40	30	42	45	39
Adams	37	26	34	32	36	32		34	31	38	48	40
C1024	36	29	37	35	36	30		33	30	39	44	38
Hawkeye	36	28	35	32	34	30		34	25	40	46	39
A6K-549	35	30	34	33	32	29		34	33	38	41	36
C683	39	36	38	35	36	33		38	27	44	49	41
Richland	32	29	32	28	34	28		28	27	38	40	33
Blackhawk	33	24	34	30	30	29		34	21	38	42	37
Earlyana	36	25	36	30	32	30		36	31	42	45	40
Mean	37	30	37	34	35	31		36	30	39	45	39

[1]East Lansing and Deerfield, Michigan not included in the mean.

Table 20. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Snabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Centerville S.D.	Lincoln Nebr.
A7-6402	2.0	2.0	3.8	1.3	3.5	1.3	2.3	1.8	1.8	1.8		1.3
A0-8618	2.0	2.0	3.5	1.0	3.8	1.3	2.4	1.6	1.9	1.8		1.0
Lincoln	2.0	2.0	3.5	1.0	3.3	2.0	2.7	2.0	2.0	2.5		1.5
C873	2.0	2.3	3.5	1.3	2.8	1.5	2.2	1.6	1.6	1.6		1.5
Harosoy	1.0	2.0	3.3	1.0	3.0	1.0	1.5	1.7	1.5	2.0		1.0
C931	2.0	2.5	3.8	1.5	3.3	1.8	2.2	2.0	1.8	2.0		1.8
Adams	2.0	2.0	3.5	1.0	3.8	1.3	2.2	1.9	1.6	2.0		1.5
C1024	2.0	3.0	4.0	1.8	3.5	2.0	2.5	2.5	2.1	2.2		1.5
Hawkeye	1.0	1.3	2.8	1.0	2.8	1.0	1.5	1.4	1.5	1.4		1.0
A6K-549	2.0	2.0	3.9	1.3	2.8	1.0	1.8	1.5	1.5	1.4		1.5
C683	1.0	1.5	3.5	1.0	2.8	1.3	1.7	1.5	1.4	1.7		1.0
Richland	1.0	1.5	2.5	1.0	3.0	1.3	1.8	1.5	1.6	1.4		1.0
Blackhawk	1.0	1.8	3.0	1.0	4.0	1.0	1.3	1.6	1.4	1.5		1.0
Earlyana	2.3	3.0	3.8	1.8	4.5	1.5	2.4	2.6	2.1	3.1		2.0
Mean	1.7	2.1	3.5	1.2	3.4	1.4	2.0	1.8	1.7	1.9		1.3
	Height											
A7-6402	38	35	43	37	39	40	36	42	42	45	32	40
A0-8618	40	39	44	37	39	42	36	43	42	45	33	40
Lincoln	41	38	43	37	41	41	37	43	41	46	32	42
C873	41	39	42	37	41	44	37	45	44	47	31	43
Harosoy	37	38	42	36	38	44	35	41	41	43	32	40
C931	39	37	42	36	40	41	38	42	39	43	31	40
Adams	38	38	38	35	38	43	38	43	40	45	32	39
C1024	36	35	40	35	36	38	34	39	38	42	30	36
Hawkeye	38	35	39	34	38	44	35	43	42	43	29	34
A6K-549	35	30	37	32	35	39	33	37	37	40	30	36
C683	37	36	46	36	39	44	36	41	44	46	30	39
Richland	33	30	36	29	31	38	31	36	35	37	28	29
Blackhawk	33	31	36	29	34	39	31	36	38	39	30	30
Earlyana	38	38	41	34	37	43	34	41	40	41	28	39
Mean	37	36	40	35	38	41	35	41	40	43	31	38

Table 21. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1951-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	46	32	42	43	38	48	48	48	48
Lincoln	34.9	+5.2	2.1	38	1.8	14.7	40.8	21.0	137.8
Harosoy	33.9	-3.0	1.7	38	1.6	17.4	40.1	20.6	132.7
Adams	32.9	+2.1	1.9	38	1.6	14.2	40.1	21.0	134.6
Hawkeye	32.6	0	1.5	37	1.5	17.6	41.5	20.8	130.5
A6K-549	32.4	-2.8	1.8	35	2.1	17.2	41.8	20.9	135.0
C683	31.8	-0.7	1.7	40	1.7	15.3	40.6	20.7	129.5
Blackhawk	30.2	-6.0	1.7	34	1.7	15.6	40.3	21.1	130.2
Earlyana	30.0	-5.1	2.7	37	2.0	15.6	41.7	20.5	133.8
Richland	29.3	+0.7	1.6	33	1.8	16.6	40.7	20.3	130.5
Mean	32.0		1.9	37	1.8	16.0	40.8	20.8	132.7

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

Table 22. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1951-52.

Strain	Mean of 46 Tests	State College Pa.	New Brunswick N.J.	Columbus N.J.	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.
Lincoln	34.9	32.6	36.8	28.8	36.4	25.5	33.9	25.1	22.5	40.5	46.6
Harosoy	33.9	28.6	35.8	28.6	31.8	24.0	33.9	20.4	26.1	45.2	40.3
Adams	32.9	28.4	33.4	26.4	33.8	25.0	32.7	21.3	20.4	41.6	42.4
Hawkeye	32.6	29.3	33.5	26.5	31.2	21.0	33.0	17.9	24.0	41.9	40.0
A6K-549	32.4	26.4	31.5	29.0	33.2	22.1	32.8	19.9	23.7	41.4	37.2
C683	31.8	26.1	31.7	25.5	31.2	21.5	31.3	20.2	30.1	46.0	38.4
Blackhawk	30.2	23.2	31.1	25.2	30.8	20.0	32.1	19.7	26.8	38.9	36.8
Earlyana	30.0	23.9	31.0	22.7	28.7	21.1	28.6	19.8	26.8	40.0	38.9
Richland	29.3	23.9	30.0	24.6	29.1	19.2	29.3	22.1	25.5	38.1	36.3
Mean	32.0	26.9	32.8	26.4	31.8	22.2	32.0	20.7	25.1	41.5	39.7

	Yield Rank									
Lincoln	1	1	2	1	1	1	1	8	6	1
Harosoy	3	2	3	4	3	1	4	4	2	3
Adams	4	4	5	2	2	5	3	9	4	2
Hawkeye	2	3	4	5	7	3	9	6	3	4
A6K-549	5	6	1	3	4	4	6	7	5	7
C683	6	5	6	5	5	7	5	1	1	6
Blackhawk	9	7	7	7	8	6	8	2	8	8
Earlyana	7	8	9	9	6	9	7	2	7	5
Richland	7	9	8	8	9	8	2	5	9	9

Table 22. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Centerville S.D.	Lincoln Nebr.
Lincoln	42.4	52.8	37.9	22.3	31.5	42.6	29.2	33.3	31.4	42.7	21.3	35.2
Harosoy	37.6	44.8	40.9	27.1	34.8	41.6	30.8	33.5	32.5	39.5	19.1	31.6
Adams	36.2	49.3	37.1	21.8	33.8	41.9	29.2	34.4	30.7	40.9	17.0	31.0
Hawkeye	37.1	45.5	35.8	21.6	34.5	39.0	33.0	33.6	31.6	40.6	16.6	30.7
A6K-549	35.2	41.1	39.8	25.5	32.1	37.9	32.1	35.3	30.7	38.9	20.9	30.5
C683	33.9	44.3	39.2	24.6	33.7	37.6	29.6	32.9	29.5	37.2	17.9	27.4
Blackhawk	30.8	37.1	39.2	23.0	31.1	33.8	31.9	35.5	30.1	34.1	20.2	24.3
Earlyana	33.9	44.2	32.5	22.6	30.0	34.1	29.1	33.9	27.3	35.5	19.1	24.4
Richland	34.2	41.1	33.7	19.3	28.8	35.4	27.4	30.1	27.2	35.9	15.3	29.4
Mean	35.7	44.5	37.3	23.1	32.3	38.2	30.3	33.6	30.1	38.4	18.6	29.4
	Yield Rank											
Lincoln	1	1	5	6	6	1	6	7	3	1	1	1
Harosoy	2	4	1	1	1	3	4	6	1	4	4	2
Adams	4	2	6	7	3	2	6	3	4	2	7	3
Hawkeye	3	3	7	8	2	4	1	5	2	3	8	4
A6K-549	5	7	2	2	5	5	2	2	4	5	2	5
C683	7	5	3	3	4	6	5	8	7	6	6	7
Blackhawk	9	9	3	4	7	9	3	1	6	9	3	9
Earlyana	7	6	9	5	8	8	8	4	8	8	4	8
Richland	6	7	8	9	9	7	9	9	9	7	9	6

Table 23. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1948-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	108	83	99	102	87	110	110	110	110
Lincoln	34.4	+6.0	2.2	39	1.6	14.5	40.5	21.0	135.8
Adams	33.5	+2.9	2.1	39	1.5	14.5	40.2	21.1	132.7
Hawkeye	32.8	0	1.6	38	1.5	17.7	41.0	21.0	128.8
Blackhawk	29.9	-5.9	1.6	35	1.8	15.6	40.8	21.0	127.7
Earlyana	29.3	-5.3	2.7	38	2.1	15.6	42.0	20.5	131.9
Richland	29.2	+0.5	1.6	34	1.8	16.5	40.5	20.4	129.2
Mean	31.5		2.0	37	1.7	15.7	40.8	20.8	131.0

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

Table 24. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1948-52.

Strain	Mean of 108 Tests	State College Pa.	New Brunswick N.J.	Newark Del.	Hoytville Ohio[1]	Columbus Ohio	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.	Greenfield Ind.
Years Tested		1948-1952	1950-1952	1949-1951	1948-50 1952	1948-1952	1950-1952	1948-49 1951-52	1948-1952	1948-1952	1948-1952
Lincoln	34.4	33.7	35.0	36.2	37.0	31.7	22.4	41.0	41.5	44.0	44.5
Adams	33.5	31.8	32.5	39.7	35.1	31.0	21.5	41.1	41.0	38.9	41.3
Hawkeye	32.8	32.0	31.9	37.8	31.4	28.4	25.0	41.5	39.9	38.1	39.7
Blackhawk	29.9	29.0	28.2	32.5	29.4	26.6	26.3	36.8	35.2	31.4	32.5
Earlyana	29.3	28.1	28.5	32.8	29.6	25.0	25.1	37.6	34.7	33.8	35.2
Richland	29.2	26.7	27.3	33.9	30.9	25.1	25.0	36.7	34.1	35.7	34.0
Mean	31.5	30.2	30.6	35.5	32.2	28.0	24.2	39.1	37.7	37.0	37.9
		Yield Rank									
Lincoln		1	1	3	1	1	5	3	1	1	1
Adams		3	2	1	2	2	6	2	2	2	2
Hawkeye		2	3	2	3	3	3	1	3	3	3
Blackhawk		4	5	6	6	4	1	5	4	6	6
Earlyana		5	4	5	5	6	2	4	5	5	4
Richland		6	6	4	4	5	3	6	6	4	5

[1]Holgate, Ohio, 1948-50.
[2]Compton, Illinois, 1948-50.
[3]Hudson, Iowa, 1948-50.

Table 24. (Continued)

Strain	Worthington Ind.	Madison Wis.	Snabbona Ill.[2]	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa[3]	Ames Iowa	Centerville S.D.	Lincoln Nebr.
Years Tested	1948-1951	1948-1952	1948-1952	1949-1952	1948-1952	1948-1952	1948-1952	1948-1952	1948-1952	1948-1952	1948-1952
Lincoln	35.9	36.9	30.1	31.1	39.5	30.6	37.7	27.0	39.2	20.7	32.2
Adams	33.0	34.8	30.7	30.6	42.7	31.2	38.2	27.1	38.1	19.4	29.5
Hawkeye	34.1	35.0	28.9	30.6	37.4	33.7	37.6	28.1	37.5	19.3	28.7
Blackhawk	28.8	34.0	29.2	26.4	33.7	33.0	36.5	26.8	31.9	20.0	24.6
Earlyana	29.6	30.6	27.7	26.6	33.3	30.0	35.0	25.1	33.9	17.8	23.9
Richland	31.1	30.1	27.7	25.2	34.0	29.3	33.2	24.4	32.9	17.1	27.7
Mean	32.1	33.6	29.1	28.4	36.8	31.3	36.4	26.4	35.6	19.1	27.8
	Yield Rank										
Lincoln	1	1	2	1	2	4	2	3	1	1	1
Adams	3	3	1	2	1	3	1	2	2	3	2
Hawkeye	2	2	4	2	3	1	3	1	3	4	3
Blackhawk	6	4	3	5	5	2	4	4	6	2	5
Earlyana	5	5	5	4	6	5	5	5	4	5	6
Richland	4	6	5	6	4	6	6	6	5	6	4

UNIFORM TEST, GROUP III

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

Strain	Source or Originating Agency	Origin
Adams	Iowa A.E.S. & U.S.R.S.L.	Sel. from Illini x Dunfield
Chief	Ill. Agr. Exp. Sta.	Sel. from Illini x Manchu
Cypress #1	Cypress Land Farms Co., St. Louis, Missouri	Sel. from Korean
Dunfield	Purdue Agr. Exp. Sta.	Sel. from P. I. 36846
Fabulin	Pa. Farm Bureau Coop. Assn.	Sel. from Lincoln
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 A7-6402
A7-6103	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
A7-6402	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
C983	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Richland x Earlyana)
L6-2132	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
L9-4091	Ill. A.E.S. & U.S.R.S.L.	Sel. from (L x (L x R)) x (L x CNS)
L9-5138	Ill. A.E.S. & U.S.R.S.L.	Sel. from L6-2132
L9-5139	Ill. A.E.S. & U.S.R.S.L.	Sel. from L6-2132

Uniform Test, Group III, was grown at twenty-two locations in 1952, and data for these tests are summarized in Tables 25 through 32. When only the ten Group III entries grown in both 1951 and 1952 tests are considered, the 1952 average yield was only .1 bushel less than in 1951. However, rather large differences between 1951 and 1952 yields were noted at several locations, and only two locations (Clayton and Stonington, Illinois) had yields in 1951 and 1952 which were within five bushels of each other. Oil content was .4 percent higher in 1952 than it was in 1951.

Five entries, L9-5138, L9-5139, L9-4091, A0-8618, and Fabulin, were grown in Group III for the first time in 1952, and data for these entries are summarized in Tables 25-28. Strain L9-5138, a selection from L6-2132, planned for release in the summer of 1953, ranked first in yield as an average of all tests, outyielding the second highest strain, L6-2132, by an average of 1.6 bushels per acre. L9-5138 averaged 5.2 days later in maturity than Lincoln and ranked first or second in yield at all locations except Beltsville, Maryland; Dwight, Urbana, Clayton, Stonington, and Brownstown, Illinois; and Thayer, Kansas. Of the remaining four new 1952 entries, L9-5139 ranked highest in yield and was sixth as an average of all entries. Among strains of Lincoln maturity, L9-5139 averaged .4 bushel less in yield and .6 percent less in oil content than A7-6402 as an average of twenty-two tests, outyielding Lincoln by two bushels.

Four of the 1952 Group III entries, A7-6402, C983, A7-6103, and Cypress #1, have been tested for only two years in Uniform Tests, and data for these tests are summarized in Tables 29 and 30. As an average of forty-five tests during this two-year period, A7-6402 and C983 have ranked second--1.9 bushels less than L6-2132,

the first ranking entry. A7-6402 has averaged only slightly later than Lincoln and 5.8 days earlier than L6-2132. C983 has averaged 3.7 days later than Lincoln.

Six of the 1952 Group III entries have been tested for at least four years, and summaries of data from eighty-eight tests during this period are presented in Tables 31 and 32. As an average of these tests, L6-2132 has ranked first in yield, 4.9 bushels more than Chief, the second ranking entry. L6-2132 has ranked first as an average of these four years of tests at nineteen of the twenty-two locations--Georgetown, Delaware; Columbus, Ohio; and Dwight, Illinois, excepted.

Table 25. Summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1952.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	22	16	19	19	19	22	22	22	22
L9-5138	39.8	+5.2	1.9	41	1.4	16.2	40.1	21.8	134.3
L6-2132	38.2	+5.3	2.1	41	1.6	16.3	40.6	21.8	134.0
C983	37.2	+2.2	2.2	42	1.5	16.3	39.8	21.2	135.1
A7-6402	36.8	+0.1	1.9	40	2.0	18.8	40.4	21.7	128.6
A7-6103	36.6	+1.3	2.1	41	1.8	16.2	39.8	22.3	132.9
L9-5139	36.4	+0.1	2.3	42	1.5	15.9	40.1	21.1	132.9
L9-4091	35.0	+2.1	2.8	45	1.7	16.3	40.8	21.1	131.2
A0-8618	34.8	-1.3	2.1	40	1.9	16.4	40.3	21.6	130.9
Lincoln	34.3	0	2.3	41	1.8	15.0	40.2	21.7	135.1
Chief	33.8	+5.1	3.0	51	1.6	13.7	40.6	21.1	132.6
Cypress #1	32.8	+4.2	3.6	36	1.8	18.2	41.5	20.6	130.6
Fabulin	31.6	+8.8	3.1	41	2.0	16.5	39.9	21.2	136.3
Adams	31.2	-3.5	2.3	39	1.8	15.0	40.5	22.2	131.7
Illini	29.8	+0.1	3.5	45	1.9	14.5	40.6	20.5	131.5
Dunfield	27.2	-3.1	2.7	40	2.3	16.1	39.0	21.9	126.9
Mean	34.4		2.5	42	1.8	16.1	40.3	21.5	132.3

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

Table 26. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1952.

Strain	Mean of 22 Tests	Landis-ville Pa.	New-ark Del.	Belts-ville Md.	Colum-bus Ohio	Mt. Healthy Ohio	Lafay-ette Ind.	Green-field Ind.	Worth-ington Ind.	Dwight Ill.	Ur-bana Ill.
L9-5138	39.8	60.7	55.7	42.3	38.5	42.9	47.7	61.1	46.6	21.5	32.4
L6-2132	38.2	56.6	46.2	35.5	36.9	40.6	46.6	56.5	42.7	24.0	34.0
C983	37.2	47.8	44.4	47.0	37.6	39.7	47.7	55.6	43.3	23.4	32.9
A7-6402	36.8	55.3	43.1	41.8	37.1	38.2	46.6	54.3	43.2	26.5	36.3
A7-6103	36.6	49.4	40.6	46.7	36.7	38.8	46.3	54.2	46.5	26.9	33.2
L9-5139	36.4	58.6	39.8	32.2	37.9	40.0	42.7	55.0	39.8	26.1	34.6
L9-4091	35.0	48.0	36.3	41.2	36.0	33.5	45.6	56.9	46.2	30.4	31.7
A0-8618	34.8	47.6	36.8	36.7	32.5	38.6	44.5	49.9	38.3	28.1	36.0
Lincoln	34.3	38.2	39.8	36.4	34.8	37.4	43.6	52.6	32.3	25.7	36.6
Chief	33.8	47.3	45.0	34.8	35.7	38.1	45.4	54.7	36.0	21.2	33.7
Cypress #1	32.8	43.3	45.5	37.7	35.5	35.8	44.1	46.3	32.2	19.8	31.6
Fabulin	31.6	45.9	44.4	35.0	35.8	36.7	37.2	39.6	30.5	18.6	29.0
Adams	31.2	41.2	34.8	28.0	32.8	33.4	41.4	50.0	27.2	27.2	29.7
Illini	29.8	41.7	35.0	29.5	32.0	34.2	39.1	47.0	30.5	24.2	32.4
Dunfield	27.2	31.8	23.3	34.2	27.9	31.8	36.9	41.2	17.8	23.9	24.3
Mean	34.4	47.6	40.7	37.3	35.2	37.3	43.7	51.7	36.9	24.5	32.6
C.V.(%)		15.7	7.6	9.5	--	--	6.3	7.9	13.7	9.5	13.9
Bu. N.F.S.(5%)		10.1	--	4.9	--	--	4.0	5.3	8.5	3.3	N.S.
Row Sp.(In.)		40	36	36	28	28	40	36	38	40	40

	Yield Rank									
L9-5138	1	1	3	1	1	1	1	1	12	9
L6-2132	3	2	9	5	2	3	3	6	9	5
C983	7	5	1	3	4	1	4	4	11	8
A7-6402	4	7	4	4	7	3	7	5	5	2
A7-6103	5	8	2	6	5	5	8	2	4	7
L9-5139	2	9	13	2	3	11	5	7	6	4
L9-4091	6	12	5	7	13	6	2	3	1	11
A0-8618	8	11	7	13	6	8	11	8	2	3
Lincoln	14	9	8	11	9	10	9	10	7	1
Chief	9	4	11	9	8	7	6	9	13	6
Cypress #1	11	3	6	10	11	9	13	11	14	12
Fabulin	10	5	10	8	10	14	15	12	15	14
Adams	13	14	15	12	14	12	10	14	3	13
Illini	12	13	14	14	12	13	12	12	8	9
Dunfield	15	15	12	15	15	15	14	15	10	15

Table 26. (Continued)

Strain	Clay-ton Ill.	Ston-ington Ill.	Browns-town Ill.	Tren-ton Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Man-hattan Kans.	Thayer Kans.
L9-5138	34.9	41.5	27.2	39.3	38.5	48.7	45.0	31.7	39.4	43.6	20.6	15.6
L6-2132	35.9	44.1	28.5	40.6	36.8	48.8	42.7	33.1	39.3	38.9	18.4	14.0
C983	37.0	44.2	28.0	37.1	33.8	46.0	42.0	28.4	35.0	36.5	18.0	13.3
A7-6402	35.8	38.3	29.8	31.6	33.8	46.4	45.7	30.0	31.4	31.9	18.1	15.2
A7-6103	36.0	42.1	26.5	32.9	33.4	44.1	44.2	31.1	31.0	35.6	17.2	12.5
L9-5139	34.8	36.9	28.2	34.6	34.1	47.0	43.4	31.3	33.4	37.0	17.2	15.8
L9-4091	34.6	28.5	26.3	32.4	32.2	46.2	42.4	28.3	29.3	36.4	11.8	15.8
A0-8618	36.8	38.1	27.8	32.3	29.5	46.6	41.9	27.7	30.3	35.6	15.6	14.8
Lincoln	33.2	39.4	26.6	33.5	31.4	43.9	42.3	31.4	31.6	34.4	16.2	13.6
Chief	32.0	23.1	21.5	31.8	31.0	38.7	40.0	27.4	34.7	39.4	16.9	14.9
Cypress #1	34.6	32.1	25.2	32.1	30.5	39.0	40.2	30.3	28.2	27.0	16.7	13.4
Fabulin	26.2	26.1	22.1	34.7	31.7	41.3	32.9	30.0	35.6	30.0	19.3	13.6
Adams	32.1	32.4	26.5	29.0	25.4	42.5	39.5	24.1	23.1	37.5	16.0	12.0
Illini	24.9	24.4	21.8	24.6	20.4	37.4	36.5	27.0	23.6	39.3	15.9	13.4
Dunfield	30.6	22.3	24.1	25.1	23.7	38.0	39.1	21.7	19.7	35.6	13.8	10.6
Mean	33.3	34.2	26.0	32.8	31.1	43.6	41.2	28.9	31.0	35.9	16.8	13.9
C.V.(%)	9.4	13.8	8.2	9.0	7.4	6.5	7.8	10.8	9.0	10.9	9.5	--
B.N.F.S.(5%)	4.4	6.8	3.0	4.2	3.3	4.0	4.6	2.1	3.0	5.6	2.3	--
Row Sp.(In.)	40	28	40	40	40	40	38	35	36	38	42	40
	Yield Rank											
L9-5138	6	4	6	2	1	2	2	2	1	1	1	3
L6-2132	4	2	2	1	2	1	5	1	2	4	3	7
C983	1	1	4	3	4	7	8	9	4	7	5	12
A7-6402	5	6	1	12	4	5	1	7	8	13	4	4
A7-6103	3	3	8	7	6	8	3	5	9	9	6	13
L9-5139	7	8	3	5	3	3	4	4	6	6	6	1
L9-4091	8	11	10	8	7	6	6	10	11	8	15	1
A0-8618	2	7	5	9	12	4	9	11	10	9	13	6
Lincoln	10	5	7	6	9	9	7	3	7	12	10	8
Chief	12	14	15	11	10	13	11	12	5	2	8	5
Cypress #1	8	10	11	10	11	12	10	6	12	15	9	10
Fabulin	14	12	13	4	8	11	15	7	3	14	2	8
Adams	11	9	8	13	13	10	12	14	14	5	11	14
Illini	15	13	14	15	15	15	14	13	13	3	12	10
Dunfield	13	15	12	14	14	14	13	15	15	9	14	15

Table 27. Summary of maturity data, days earlier (-) or later (+) than Lincoln, for the strains in the Uniform Test, Group III, 1952.

Strain	Mean of 16 Tests	Landis-ville Pa.	New-ark Del.	Belts-ville Md.	Lafay-ette Ind.	Worth-ington Ind.	Ur-bana Ill.	Ston-ington Ill.	Browns-town Ill.
L9-5138	+5.2	+12	+ 5	+ 6	+ 5	+ 7	+ 3	+ 9	+ 6
L6-2132	+5.3	+12	+ 7	+ 7	+ 4	+ 6	+ 3	+ 9	+ 6
C983	+2.2	- 1	+ 2	+ 4	+ 1	+ 3	+ 2	+ 4	+ 6
A7-6402	+0.1	0	+ 1	0	0	+ 2	0	+ 1	0
A7-6103	+1.3	- 1	+ 1	+ 2	0	+ 1	+ 2	+ 3	+ 4
L9-5139	+0.1	0	0	+ 2	+ 1	+ 2	+ 1	0	0
L9-4091	+2.1	+12	+ 4	+ 2	+ 2	+ 6	0	+ 2	+ 4
A0-8618	-1.3	+ 2	0	- 1	- 3	+ 1	- 3	0	- 1
Lincoln	0	0	0	0	0	0	0	0	0
Chief	+5.1	+12	+ 5	+ 7	+ 5	+ 8	- 1	+ 9	+ 3
Cypress #1	+4.2	+12	+ 7	+ 8	+ 4	+ 8	+ 2	+ 5	+ 4
Fabulin	+8.8	+20	+ 7	+ 8	+ 8	+ 7	+ 6	+12	+12
Adams	-3.5	0	- 3	- 4	- 4	0	- 8	- 2	- 8
Illini	+0.1	0	+ 5	- 1	0	0	- 1	- 1	+ 1
Dunfield	-3.1	+ 4	+ 2	- 4	- 3	- 3	- 7	- 1	- 7
Date planted		5/19	6/6	5/23	6/2	5/14	5/8	5/24	5/21
Lincoln matured		10/8	9/29	9/19	10/3	9/20	9/14	9/13	9/9
Days to mature	121	142	115	119	123	129	129	112	111

Table 27. (Continued)

Strain	Trenton Ill.	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Thayer Kans.
L9-5138	+ 5	+ 6	+ 4	+ 4	+ 2	+ 3	+ 6	0
L6-2132	+ 5	+ 5	+ 4	+ 5	+ 2	+ 3	+ 6	0
C983	+ 1	+ 3	+ 3	+ 3	+ 2	- 3	+ 2	+ 3
A7-6402	0	- 1	+ 2	0	+ 2	0	- 1	- 5
A7-6103	+ 1	+ 2	0	+ 1	+ 2	+ 1	+ 1	0
L9-5139	0	+ 1	0	0	0	- 1	0	- 5
L9-4091	+ 1	+ 1	+ 2	+ 1	+ 1	+ 1	- 1	- 5
A0-8618	- 1	- 4	0	- 1	0	- 1	- 4	- 5
Lincoln	0	0	0	0	0	0	0	0
Chief	+ 8	+ 3	+10	+ 5	+ 2	+ 5	+ 3	- 2
Cypress #1	+ 3	+ 2	+ 8	+ 3	0	+ 2	+ 4	- 5
Fabulin	+10	+10	+ 9	+ 7	+ 7	+ 7	+ 8	+ 2
Adams	0	- 6	- 3	- 4	- 5	- 2	- 1	- 6
Illini	0	+ 2	+ 4	+ 1	- 2	- 1	- 1	- 5
Dunfield	- 1	- 7	- 4	- 4	- 4	- 2	- 3	- 6
Date planted	5/26	5/16	5/8	5/27	5/23	6/3	5/28	5/20
Lincoln matured	9/13	9/8	9/28	9/27	9/17	9/22	9/21	9/16
Days to mature	110	115	143	123	117	111	116	119

Table 28. Summary of lodging and height data for the strains in the Uniform Test, Group III, 1952.

Strain	Mean of 19 Tests[1]	Landis-ville Pa.	New-ark Del.	Belts-ville Md.	Lafay-ette Ind.	Green-field Ind.	Worth-ington Ind.	Dwight Ill.	Ur-bana Ill.	Clay-ton Ill.	Ston-ington Ill.
L9-5138	1.9	3.3	3.0	1.3	2.0	2.0	2.7	3.5	1.5	1.5	2.5
L6-2132	2.1	3.5	3.0	1.0	2.0	2.3	3.0	3.5	2.0	2.3	2.5
C983	2.2	2.0	3.0	1.9	2.0	1.8	3.7	3.5	2.3	1.8	2.3
A7-6402	1.9	2.5	2.0	1.0	1.8	1.8	3.0	3.5	2.0	2.3	2.3
A7-6103	2.1	3.3	3.0	1.3	2.0	2.0	3.7	3.0	2.0	2.5	2.5
L9-5139	2.3	2.8	4.0	1.1	2.0	2.0	3.3	3.3	1.8	2.0	3.0
L9-4091	2.8	3.3	4.0	2.0	2.0	1.5	3.7	4.0	2.5	2.3	3.0
A0-8618	2.1	2.8	4.0	1.0	1.8	1.8	4.0	3.3	2.0	2.5	2.5
Lincoln	2.3	2.8	3.0	1.1	1.8	1.8	3.7	3.3	2.0	1.8	2.8
Chief	3.0	3.0	3.0	2.9	3.0	3.0	4.0	3.8	2.8	3.0	4.0
Cypress #1	3.6	4.3	4.0	3.0	3.8	4.0	5.0	5.0	3.5	3.8	3.5
Fabulin	3.1	4.0	3.0	2.1	3.8	4.3	4.0	4.3	3.0	3.0	3.5
Adams	2.3	3.3	4.0	1.0	2.0	2.0	3.3	3.7	1.8	2.0	3.0
Illini	3.5	4.7	4.0	2.0	2.3	3.0	4.3	4.8	3.0	3.0	4.3
Dunfield	2.7	3.3	4.0	1.5	2.0	3.0	4.3	3.5	2.5	2.8	3.5
Mean	2.5	3.3	3.4	1.6	2.3	2.4	3.7	3.7	2.3	2.4	3.0
	Mean of 19 Tests	Height									
L9-5138	41	49	43	44	39	42	48	39	39	42	45
L6-2132	41	50	42	43	41	37	48	37	40	44	44
C983	42	51	44	45	38	38	53	37	43	46	46
A7-6402	40	47	41	39	40	36	47	38	40	43	43
A7-6103	41	52	42	45	37	40	51	39	41	43	42
L9-5139	42	53	42	43	42	41	51	39	42	47	44
L9-4091	45	70	49	48	42	43	53	41	44	47	45
A0-8618	40	51	41	42	39	39	46	39	40	43	41
Lincoln	41	53	43	42	39	39	48	36	40	42	41
Chief	51	62	59	55	44	54	56	46	50	55	55
Cypress #1	36	50	41	38	36	35	45	31	35	38	38
Fabulin	41	50	40	44	39	43	48	38	42	42	40
Adams	39	48	40	37	40	32	48	38	42	41	41
Illini	45	77	49	37	36	42	52	41	46	46	43
Dunfield	40	64	40	37	44	36	44	37	40	41	39
Mean	42	55	44	43	40	40	49	38	42	44	43

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

Table 28. (Continued)

Strain	Browns-town Ill.	Trenton Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Man-hattan Kans.	Thayer Kans.
L9-5138	1.3	2.0	1.8	1.5	2.0	1.1	1.8	1.0	1.1	1.0
L6-2132	1.5	2.5	1.8	1.7	2.2	1.1	1.8	1.3	1.1	1.0
C983	1.8	2.3	3.0	2.2	1.9	1.0	2.1	2.0	1.1	1.0
A7-6402	1.3	1.5	1.3	1.7	2.2	1.0	2.1	1.0	1.0	1.0
A7-6103	1.0	2.0	2.0	1.4	1.9	1.1	2.1	1.3	1.0	1.0
L9-5139	2.0	3.0	3.0	1.7	2.0	1.1	2.5	1.5	1.0	1.0
L9-4091	3.0	3.3	4.0	2.7	2.6	1.4	3.3	3.8	1.2	1.0
A0-8618	1.5	1.8	2.3	1.6	1.9	1.1	1.8	1.0	1.0	1.0
Lincoln	2.3	2.5	2.8	1.9	2.2	1.1	2.8	2.0	1.1	1.0
Chief	3.3	3.3	4.0	2.6	2.8	1.7	3.3	3.0	1.1	1.0
Cypress #1	3.5	4.0	3.8	3.1	4.3	1.4	3.8	3.0	1.8	1.0
Fabulin	3.3	3.5	3.5	1.6	4.1	1.2	3.1	1.8	1.7	1.0
Adams	2.8	2.5	2.8	1.5	2.2	1.0	2.8	1.3	1.0	1.0
Illini	4.0	4.5	5.0	2.9	3.4	1.9	4.5	3.8	1.5	1.0
Dunfield	2.8	2.5	2.5	2.3	2.7	1.4	4.1	2.0	1.2	1.0
Mean	2.4	2.7	2.9	2.0	2.6	1.2	2.8	2.0	1.2	1.0

	Height								
L9-5138	41	40	38	48	49	31	35	43	29
L6-2132	40	40	38	49	48	29	36	41	28
C983	43	41	37	49	51	32	35	39	28
A7-6402	40	38	35	47	46	32	32	42	28
A7-6103	41	39	39	48	47	32	34	40	27
L9-5139	42	42	38	49	49	33	34	40	27
L9-4091	45	46	38	49	51	37	38	42	30
A0-8618	41	38	38	48	47	30	33	42	26
Lincoln	41	39	37	47	48	32	35	42	28
Chief	48	48	46	60	67	39	45	53	36
Cypress #1	34	31	32	43	42	29	28	31	24
Fabulin	41	39	38	51	49	34	37	41	30
Adams	42	37	34	48	46	31	32	40	25
Illini	42	42	39	50	53	38	38	48	29
Dunfield	38	36	34	48	45	32	32	41	25
Mean	41	40	37	49	49	33	35	42	28

Table 29. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1951-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	45	32	40	41	38	44	44	44	44
L6-2132	38.4	+6.5	2.1	41	1.8	16.0	40.4	21.6	135.3
A7-6402	36.5	+0.7	2.0	40	2.0	17.3	40.0	21.4	130.2
C983	36.5	+3.7	2.2	42	1.6	15.9	40.0	21.2	136.1
A7-6103	36.1	+1.9	2.0	41	1.8	16.0	39.7	21.9	133.7
Lincoln	34.0	0	2.2	40	1.8	14.6	40.4	21.6	135.6
Chief	34.0	+7.2	2.9	51	1.9	13.5	40.5	20.7	134.0
Adams	32.5	-2.2	2.3	39	1.8	14.7	40.3	22.0	132.3
Cypress #1	31.3	+6.1	3.6	36	1.8	18.5	42.0	20.2	132.2
Illini	30.5	+1.3	3.1	44	1.9	13.9	40.4	20.5	133.0
Dunfield	28.7	-1.5	2.8	39	2.2	15.7	39.6	21.8	128.3
Mean	33.9		2.5	41	1.9	15.6	40.3	21.3	133.1

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

Table 30. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1951-52.

Strain	Mean of 45 Tests	Landisville Pa.[1]	Newark Del.	Beltsville Md.	Columbus Ohio	Mt. Healthy Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.	Urbana Ill.
L6-2132	38.4	49.7	40.3	33.1	24.0	37.5	44.6	53.5	47.4	29.5	43.0
A7-6402	36.5	46.2	38.4	36.7	25.1	37.2	43.1	51.3	46.8	32.5	42.1
C983	36.5	43.2	39.6	38.4	24.7	37.9	44.6	52.4	47.5	29.7	41.7
A7-6103	36.1	42.3	36.5	38.3	24.4	37.3	43.4	49.8	49.7	30.4	42.7
Lincoln	34.0	36.3	36.2	31.7	23.8	36.0	39.9	47.3	38.4	31.2	41.7
Chief	34.0	42.7	37.0	32.8	22.9	34.0	41.7	51.1	42.7	26.5	41.0
Adams	32.5	36.3	33.1	27.5	24.2	32.5	38.9	46.6	36.0	34.2	38.7
Cypress #1	31.3	40.6	37.0	33.4	23.6	30.7	41.5	44.3	36.8	25.7	34.3
Illini	30.5	35.6	32.7	28.6	22.7	33.4	37.1	45.3	35.2	29.1	36.5
Dunfield	28.7	30.7	25.2	30.2	21.0	28.9	34.8	42.6	29.3	28.4	33.6
Mean	33.9	40.4	35.6	33.1	23.6	34.5	41.0	48.4	41.0	29.7	39.5

	Yield Rank									
L6-2132	1	1	5	5	2	1	1	3	6	1
A7-6402	2	3	3	1	4	4	3	4	2	3
C983	3	2	1	2	1	1	2	2	5	4
A7-6103	5	6	2	3	3	3	5	1	4	2
Lincoln	7	7	7	6	5	7	6	6	3	4
Chief	4	4	6	8	6	5	4	5	9	6
Adams	7	8	10	4	8	8	7	8	1	7
Cypress #1	6	4	4	7	9	6	9	7	10	9
Illini	9	9	9	9	7	9	8	9	7	8
Dunfield	10	10	8	10	10	10	10	10	8	10

[1]Palmyra, Pennsylvania, 1951.
[2]Edgewood, Illinois, 1951.

Table 30. (Continued)

Strain	Clayton Ill.	Stonington Ill.	Brownstown Ill.[2]	Trenton Ill.	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Manhattan Kans.
L6-2132	37.6	41.0	37.8	44.3	44.5	45.8	40.8	38.6	33.6	36.5	27.3
A7-6402	37.2	38.0	35.6	36.5	37.4	43.0	42.9	31.4	29.2	32.8	24.8
C983	36.7	38.7	34.2	40.8	38.4	42.5	39.9	31.2	30.6	34.8	23.1
A7-6103	35.8	38.9	32.7	38.1	36.7	41.3	42.6	33.5	29.9	33.9	25.0
Lincoln	32.9	37.6	30.6	37.4	35.3	41.1	39.8	33.5	28.7	34.5	22.9
Chief	31.3	25.9	31.0	38.8	36.1	35.3	37.8	34.0	28.8	34.4	27.5
Adams	31.9	33.8	31.2	36.4	31.4	37.9	38.7	27.7	24.5	33.4	26.1
Cypress #1	29.3	31.7	28.4	34.5	26.0	35.0	36.2	25.7	26.1	27.3	26.5
Illini	25.2	26.4	26.9	30.9	28.5	35.6	36.2	28.5	22.8	33.6	24.7
Dunfield	31.2	25.7	30.6	29.6	27.2	34.2	36.2	25.2	21.0	32.3	21.7
Mean	32.9	33.8	31.9	36.7	34.2	39.2	39.1	30.9	27.5	33.4	25.0
	Yield Rank										
L6-2132	1	1	1	1	1	1	3	1	1	1	2
A7-6402	2	4	2	6	3	2	1	5	4	8	6
C983	3	3	3	2	2	3	4	6	2	2	8
A7-6103	4	2	4	4	4	4	2	3	3	5	5
Lincoln	5	5	7	5	6	5	5	3	6	3	9
Chief	7	9	6	3	5	8	7	2	5	4	1
Adams	6	6	5	7	7	6	6	8	8	7	4
Cypress #1	9	7	9	8	10	9	8	9	7	10	3
Illini	10	8	10	9	8	7	8	7	9	6	7
Dunfield	8	10	7	10	9	10	8	10	10	9	10

Table 31. Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1949-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	88	69	78	82	66	87	87	87	87
L6-2132	38.6	+6.6	2.0	40	1.7	15.9	40.4	21.5	134.7
Chief	33.7	+7.8	2.8	50	1.8	13.3	40.3	20.5	133.7
Lincoln	33.6	0	2.1	40	1.9	14.6	40.3	21.6	134.8
Adams	32.0	-3.0	2.2	38	1.9	14.6	40.4	21.9	131.2
Illini	30.0	+0.9	3.0	44	1.9	13.9	40.5	20.4	132.5
Dunfield	28.5	-1.8	2.8	39	2.2	15.3	39.5	21.6	128.1
Mean	32.7		2.5	42	1.9	14.6	40.2	21.3	132.5

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

Table 32. Four-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1949-52.

Strain	Mean of 88 Tests	Landisville Pa.[1]	Newark Del.	Georgetown Del.	Beltsville Md.	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.	Urbana Ill.
Years Tested		1950-1952	1949-1952	1950-1951	1949-1952	1949-1952	1949-1952	1949-1952	1949-1952	1949-1952	1949-1952
L6-2132	38.6	45.7	43.1	21.6	35.0	28.4	41.4	48.3	49.1	31.1	43.0
Chief	33.7	39.3	37.3	20.1	34.1	26.9	39.4	44.7	42.1	28.0	35.4
Lincoln	33.6	35.1	37.7	18.7	30.9	27.8	37.4	41.2	38.5	31.8	38.9
Adams	32.0	34.7	35.6	23.2	29.1	30.0	36.5	38.6	34.8	32.2	37.1
Illini	30.0	33.4	34.7	20.3	30.3	24.4	34.2	37.9	34.6	29.3	31.1
Dunfield	28.5	29.9	28.1	19.7	28.9	25.4	33.5	35.1	29.6	26.9	30.2
Mean	32.7	36.4	36.1	20.6	31.4	27.2	37.1	41.0	38.1	29.9	36.0
		Yield Rank									
L6-2132		1	1	2	1	2	1	1	1	3	1
Chief		2	3	4	2	4	2	2	2	5	4
Lincoln		3	2	6	3	3	3	3	3	2	2
Adams		4	4	1	5	1	4	4	4	1	3
Illini		5	5	3	4	6	5	5	5	4	5
Dunfield		6	6	5	6	5	6	6	6	6	6

[1]Columbia, Pennsylvania, 1950, and Palmyra, Pennsylvania, 1951.
[2]Edgewood, Illinois, 1949 and 1951.
[3]Freeburg, Illinois, 1949-50.

Table 32. (Continued)

Strain	Clayton Ill.	Stonington Ill.	Brownstown Ill.[2]	Trenton Ill.[3]	Eldorado Ill.	Ames Iowa	Ottumwa Iowa	Norborne Mo.	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Manhattan Kans.
Years Tested	1949-1952	1949-1952	1949, 1951-52	1949-1952	1949-1952	1949-1952	1949-1952	1949-1951	1949-1952	1949-1952	1949-1952	1949-1952
L6-2132	38.2	41.8	40.4	42.7	41.8	39.5	41.4	41.9	38.8	33.0	33.8	32.1
Chief	32.6	29.8	33.0	36.9	33.6	31.4	37.5	35.1	34.7	31.6	31.0	31.0
Lincoln	33.7	37.2	33.1	36.1	33.5	35.9	38.9	36.0	34.4	26.7	31.3	27.8
Adams	32.0	32.1	33.4	33.1	29.2	34.0	38.7	32.5	29.0	24.6	30.1	28.3
Illini	27.6	28.2	30.1	29.7	27.7	32.4	34.9	31.3	29.2	23.5	28.3	27.0
Dunfield	30.5	27.3	32.7	29.7	26.0	31.0	34.8	26.3	27.2	23.5	28.3	25.0
Mean	32.4	32.7	33.8	34.7	32.0	34.0	37.7	33.9	32.2	27.2	30.5	28.5
	Yield Rank											
L6-2132	1	1	1	1	1	1	1	1	1	1	1	1
Chief	3	4	4	2	2	5	4	3	2	2	3	2
Lincoln	2	2	3	3	3	2	2	2	3	3	2	4
Adams	4	3	2	4	4	3	3	4	5	4	4	3
Illini	6	5	6	5	5	4	5	5	4	5	5	5
Dunfield	5	6	5	5	6	6	6	6	6	5	5	6

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
Wabash	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Mansoy
Perry	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x L7-1355
C985	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ogden
L6-2132	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
L8-10780	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x C171)
L9-3270	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
L9-5138	Ill. A.E.S. & U.S.R.S.L.	Sel. from L6-2132
S1-441	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Ogden)
S9-966	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Ogden)

Uniform Test, Group IV, was grown at seventeen locations in 1952, and data for these tests are summarized in Tables 33 through 40. Average plot yield, when only those seven 1952 Group IV entries which were also grown in 1951 are considered, was 4.6 bushels less in 1952 than in 1951. 1952 average seed quality was poorer than in 1951, while average oil percent of all entries in the seventeen Group IV tests was .5 percent higher in 1952. The 1952 average plot yields ranged from six to twelve bushels more than 1951 yields at Georgetown, Delaware; Beltsville, Maryland; Evansville, Indiana; and Columbia, Missouri, and from six to sixteen bushels less at Worthington, Indiana; Urbana, Trenton, and Eldorado, Illinois; and Manhattan and Mound Valley, Kansas.

Three strains, S1-441, S9-966, and L9-3270, were entered in Uniform Test, Group IV, for the first time in 1952. As an average of all tests, these entries do not seem to show too much promise, ranking third, fifth, and eighth in yield, respectively, though L9-3270 was outstanding in oil content, averaging .9 percent higher than the next highest strain.

Four 1952 entries, C985, L9-5138, L8-10780, and L6-2132, have been tested in Group IV for two years. During this period, all four of these unnamed strains have outyielded the named varieties in the test. As an average of 33 tests in 1951-52, C985 has ranked first in yield. However, L9-5138, the second highest-yielding entry, has averaged only .9 bushels less in yield and has averaged 9.3 days earlier in maturity than C985. L9-5138 is of particular interest since it will be named and released in 1953 in several North Central states.

Perry, Wabash, and Chief have been tested in Uniform Test, Group IV, for at least seven years, and summaries of 110 tests during this period are presented in Tables 39 and 40. As an average of all tests, Perry, though 4 days later than Wabash, has ranked first in yield, 2.9 bushels more than Wabash and 3.3 bushels more than Chief. Perry has ranked first at 14 out of the 16 locations for which data are summarized in Table 40.

Strain L9-5138 was increased in Illinois, Indiana, Iowa, and Missouri in 1952. The production was as follows:

State	Approximate Production (Bushels)
Illinois	700
Indiana	~~800~~ 265
Iowa	250
Missouri	900
Total	~~2,650~~ 2,115

The strain will be named and released during the summer of 1953. The following is a description and history of L9-5138 prepared by Dr. L. F. Williams.

L9-5138 is a BC_1S_7 line from the backcross, Lincoln x (Lincoln x Richland). It is about two days earlier than Chief and is about the same height as Lincoln. It has about the same oil content as Lincoln, Wabash, and Perry. L9-5138 has purple flowers, brown pubescence, and a black hilum.

1941 - Cross between Lincoln (L6-685) and Richland made by M. G. Weiss at Ames, Iowa.

1942 - Greenhouse. Backcross of F_1 (Lincoln x Richland) to Lincoln made by L. F. Williams at Urbana, Illinois.

1942 - BC_1. 700 plants grown at Urbana, Illinois.

1943 - BC_1S_1. 700 plant rows grown at Urbana, Illinois, and plant selections made from them.

1944 - BC_1S_2. 2000 plant rows grown at Urbana, Illinois. Best rows harvested.

1945 - BC_1S_3. Yield test at Urbana, Illinois. Plant selections made from best strains.

1946 - BC_1S_4. Plant row yield test: 2 replications at Urbana, Illinois, and 2 at Stonington, Illinois.

1947 - BC_1S_5. Yield tests at Urbana and Stonington, Illinois.

1948 - BC_1S_6. Strain L6-2132 entered in Uniform Preliminary Test, Group III, averaged 7.7 bushels more than highest-yielding named variety. Ten random plant selections made to test uniformity of strain.

1949 - BC_1S_7. L6-2132 entered in Uniform Test, Group III, yielded 3.8 bushels more than highest-yielding named variety. Ten plant rows grown at Urbana, Illinois.

1950 - BC_1S_8. L6-2132 grown in Uniform Test, Group III, yielded 5.2 bushels more than highest-yielding named variety. Replicated yield test of ten selections grown at Urbana, Illinois. L9-5138 was highest in yield.

1951 - BC_1S_9. L6-2132 grown in Uniform Test, Group III, yielded 4.4 bushels more than highest-yielding named variety. L6-2132 and selections L9-5138 and L9-5142 entered in Uniform Test, Group IV. L9-5138 averaged .5 bushels more than L6-2132 and 2.1 bushels more than any named variety.

1952 - BC_1S_{10}. L9-5138 grown in Uniform Test, Group III, yielded 5.5 bushels more than the highest-yielding named variety and 1.6 bushels more than L6-2132. L9-5138 grown in Uniform Test, Group IV, yielded 2.3 bushels more than the highest-yielding named variety and 1.2 bushels more than L6-2132.

Table 33. Summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1952.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	17	14	13	16	14	17	17	17	17
C985	35.8	+10.3	2.2	43	2.2	15.8	40.2	21.9	136.3
L9-5138	35.0	+ 0.3	2.1	39	2.0	16.0	40.6	21.7	134.3
S1-441	34.2	+10.9	2.2	42	1.9	16.0	40.2	22.0	136.0
L6-2132	33.8	- 0.1	2.2	38	2.0	15.5	40.4	21.8	133.7
S9-966	33.4	+ 5.9	2.0	43	2.3	15.0	40.1	21.5	135.1
L8-10780	33.3	+ 6.7	2.0	44	2.3	17.2	39.6	22.0	134.0
Perry	32.7	+ 6.5	2.0	39	2.2	16.3	40.8	21.8	131.5
L9-3270	31.1	+ 1.0	2.3	39	3.0	16.5	41.0	22.9	133.2
Chief	30.0	- 0.6	3.2	50	2.1	13.2	41.4	20.4	132.3
Wabash	29.3	0	2.5	41	1.9	14.5	40.0	21.7	129.6
Mean	32.9		2.3	42	2.2	15.6	40.4	21.8	133.6

[1]Days earlier (-) or later (+) than Wabash. Wabash required 127 days to mature.

Table 34. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1952.

Strain	Mean of 17 Tests	Landis-ville Pa.	New-ark Del.	George-town Del.	Belts-ville Md.	Worth-ington Ind.	Evans-ville Ind.	Ur-bana Ill.	Clay-ton Ill.
C985	35.8	56.3	50.5	31.0	49.0	44.7	64.7	32.4	35.1
L9-5138	35.0	60.7	39.3	25.5	39.8	41.6	50.6	36.8	41.5
S1-441	34.2	51.7	49.6	29.3	42.5	43.6	62.8	32.2	33.2
L6-2132	33.8	56.6	39.0	26.4	35.5	39.1	49.1	35.7	38.0
S9-966	33.4	49.6	40.3	28.2	42.6	46.5	56.9	31.3	38.2
L8-10780	33.3	45.3	48.3	29.2	43.3	38.6	51.3	32.0	37.8
Perry	32.7	43.6	38.3	27.7	43.9	37.8	47.0	35.0	38.3
L9-3270	31.1	46.1	38.2	24.9	34.7	33.8	46.0	35.5	37.0
Chief	30.0	47.3	45.5	23.0	34.0	30.5	45.9	30.0	34.5
Wabash	29.3	40.8	40.4	19.6	30.4	35.7	43.0	31.6	36.5
Mean	32.9	49.8	42.9	26.5	39.6	39.2	51.7	33.3	37.0
Coef. of Var. (%)		15.7	8.9	19.5	10.3	14.6	9.0	7.3	8.7
Bu. Nec. for Sig. (5%)		10.1	2.8	8.0	5.6	8.3	6.7	3.5	4.6
Row Spacing (In.)		40	36	36	36	38	38	40	40

	Yield Rank							
C985	3	1	1	1	2	1	5	8
L9-5138	1	7	7	6	4	5	1	1
S1-441	4	2	2	5	3	2	6	10
L6-2132	2	8	6	7	5	6	2	4
S9-966	5	6	4	4	1	3	9	3
L8-10780	8	3	3	3	6	4	7	5
Perry	9	9	5	2	7	7	4	2
L9-3270	7	10	8	8	9	8	3	6
Chief	6	4	9	9	10	9	10	9
Wabash	10	5	10	10	8	10	8	7

Table 34. (Continued)

Strain	Stonington Ill.	Brownstown Ill.	Trenton Ill.	Eldorado Ill.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.	Thayer Kans.
C985	33.2	22.8	41.3	37.5	29.0	36.9	18.8	13.9	11.0
L9-5138	42.8	27.2	38.5	36.0	33.5	34.0	18.4	15.4	13.0
S1-441	28.5	24.5	39.9	35.3	28.9	36.3	17.1	15.1	11.7
L6-2132	39.7	27.4	35.1	37.5	33.4	34.4	18.5	16.3	13.3
S9-966	32.2	24.7	35.3	31.3	28.8	36.6	18.7	14.6	12.2
L8-10780	34.5	22.7	37.4	34.6	33.5	35.3	16.4	14.0	11.8
Perry	30.8	23.6	35.3	36.4	34.0	39.4	20.3	13.1	11.5
L9-3270	36.1	25.6	30.8	30.5	34.3	30.1	18.5	13.9	12.1
Chief	25.8	21.6	31.7	31.2	35.7	30.8	17.6	13.4	11.1
Wabash	31.2	21.8	32.4	28.7	31.8	32.0	17.4	13.0	11.9
Mean	33.5	24.2	35.8	33.9	32.3	34.6	18.2	14.3	12.0
Coef. of Var. (%)	12.5	7.1	6.4	8.3	6.4	8.9	6.5	11.1	--
Bu. Nec. for Sig. (5%)	5.9	2.5	3.3	4.0	2.2	3.1	1.7	2.3	--
Row Spacing (In.)	28	40	40	40	35	36	42	42	40
	Yield Rank								
C985	5	7	1	1	8	2	2	6	10
L9-5138	1	2	3	4	4	7	6	2	2
S1-441	9	5	2	5	9	4	9	3	7
L6-2132	2	1	7	1	6	6	4	1	1
S9-966	6	4	5	7	10	3	3	4	3
L8-10780	4	8	4	6	4	5	10	5	6
Perry	8	6	5	3	3	1	1	9	8
L9-3270	3	3	10	9	2	10	4	6	4
Chief	10	10	9	8	1	9	7	8	9
Wabash	7	9	8	10	7	8	8	10	5

Table 35. Summary of maturity data, days earlier (-) or later (+) than Wabash, for the strains in the Uniform Test, Group IV, 1952.

Strain	Mean of 14 Tests[1]	Landis-ville Pa.	New-ark Del.	George-town Del.	Belts-ville Md.	Worth-ington Ind.	Evans-ville Ind.	Urbana Ill.
C985	+10.3	0	+ 9	--	+10	+17	+13	+11
L9-5138	+ 0.3	- 8	0	+ 4	- 1	+ 2	+ 1	0
S1-441	+10.9	+ 7	+ 8	--	+10	+18	+13	+10
L6-2132	- 0.1	- 8	0	+ 4	- 1	0	+ 1	- 2
S9-966	+ 5.9	+ 7	+ 3	+11	+ 2	+ 7	+ 8	+ 7
L8-10780	+ 6.7	+ 7	+ 6	+11	+ 4	+ 9	+ 7	+ 6
Perry	+ 6.5	0	+ 8	+11	+ 4	+14	+11	+ 7
L9-3270	+ 1.0	- 8	+ 1	+ 4	- 1	+ 5	+ 3	- 2
Chief	- 0.6	- 8	0	+ 4	- 1	+ 2	+ 3	- 4
Wabash	0	0	0	0	0	0	0	0
Date planted		5/19	6/6	5/29	5/24	5/14	5/5	5/8
Wabash matured		10/28	10/6	9/18	9/28	9/26	9/15	9/20
Days to mature	127	162	122	112	127	135	133	135

[1]Georgetown, Delaware not included in the mean.

Table 35. (Continued)

Strain	Stonington Ill.	Brownstown Ill.	Eldorado Ill.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.	Thayer Kans.
C985	+ 6	+12	+13	+ 7	+11	+14	+12	+ 9
L9-5138	- 2	- 5	+ 2	0	- 2	+ 5	+ 8	+ 4
S1-441	+ 8	+10	+15	+ 6	+11	+14	+12	+10
L6-2132	- 2	- 5	+ 1	0	- 2	+ 4	+ 8	+ 4
S9-966	+ 5	+ 3	+ 9	+ 2	+ 4	+10	+ 9	+ 7
L8-10780	+ 1	+ 5	+10	+ 5	+ 4	+11	+12	+ 7
Perry	+ 4	+ 6	+ 8	+ 3	+ 5	+ 8	+ 8	+ 5
L9-3270	- 1	- 6	0	+ 1	- 1	+ 7	+12	+ 4
Chief	- 1	- 8	- 1	+ 1	0	+ 4	- 1	+ 6
Wabash	0	0	0	0	0	0	0	0
Date planted	5/24	5/21	5/16	5/23	6/3	5/28	5/12	5/20
Wabash matured	9/29	9/20	9/12	9/20	9/26	9/22	9/15	9/12
Days to mature	128	122	119	120	115	117	126	115

Table 36. Summary of lodging and height data for the strains in the Uniform Test, Group IV, 1952.

Strain	Mean of 13 Tests[1]	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Clayton Ill.
C985	2.2	3.5	3.0	1.0	1.4	2.5	2.0	2.0	3.3
L9-5138	2.1	3.3	4.0	1.0	1.4	2.3	2.3	1.5	1.8
S1-441	2.2	3.5	2.0	1.0	1.3	2.5	2.0	2.3	3.3
L6-2132	2.2	3.5	3.0	1.0	1.4	2.5	2.3	1.8	2.5
S9-966	2.0	3.5	2.0	1.0	1.1	2.5	2.5	2.0	2.0
L8-10780	2.0	3.5	2.0	1.0	1.3	2.0	2.3	2.0	2.3
Perry	2.0	3.5	3.0	1.0	1.6	2.5	2.0	2.0	2.5
L9-3270	2.3	4.3	4.0	1.0	1.3	2.8	2.8	2.3	2.3
Chief	3.2	3.0	4.0	1.0	3.5	3.5	3.0	3.0	3.0
Wabash	2.5	4.5	3.0	1.0	2.3	2.3	2.0	2.3	3.0
Mean	2.3	3.6	3.0	1.0	1.7	2.5	2.3	2.1	2.6
	Mean of 16 Tests				Height				
C985	43	52	45	34	49	54	50	46	46
L9-5138	39	49	42	24	47	52	45	43	44
S1-441	42	55	46	33	50	46	50	42	47
L6-2132	38	50	41	25	45	48	44	41	42
S9-966	43	58	47	29	51	56	49	47	48
L8-10780	44	57	45	36	47	54	48	45	50
Perry	39	53	48	28	46	48	41	44	45
L9-3270	39	49	41	28	43	50	43	44	43
Chief	50	62	61	34	57	60	53	58	54
Wabash	41	57	44	28	46	53	45	44	47
Mean	42	54	46	30	48	52	47	45	47

[1]Georgetown, Delaware not included in the mean.

Table 36. (Continued)

Strain	Stonington Ill.	Brownstown Ill.	Trenton Ill.	Eldorado Ill.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.
C985	2.8	1.5	2.3	1.5		1.4	1.0	
L9-5138	3.0	1.3	1.8	2.0		1.9	1.0	
S1-441	2.8	1.8	2.5	2.5		1.6	1.0	
L6-2132	2.8	1.5	2.3	2.5		1.6	1.0	
S9-966	2.5	1.5	2.0	2.0		1.4	1.0	
L8-10780	2.3	1.8	2.0	2.3		1.5	1.0	
Perry	2.8	1.5	1.8	1.0		1.3	1.0	
L9-3270	2.8	1.8	1.3	2.0		1.8	1.0	
Chief	3.3	3.3	3.0	4.0		3.2	2.3	
Wabash	2.8	2.0	2.5	3.0		1.6	1.0	
Mean	2.8	1.8	2.2	2.3		1.7	1.1	
	Height							
C985	47	41	43	43	34	40	32	28
L9-5138	44	40	39	37	30	33	28	28
S1-441	48	41	41	42	34	41	31	29
L6-2132	43	39	38	37	30	32	27	28
S9-966	49	41	43	41	34	39	32	29
L8-10780	48	45	44	40	39	41	33	33
Perry	44	40	39	34	31	34	28	24
L9-3270	42	39	37	37	31	33	29	28
Chief	53	52	50	48	42	40	37	34
Wabash	45	40	41	39	35	37	31	28
Mean	46	42	42	40	34	37	31	29

Table 37. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1951-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	33	25	28	32	26	32	32	32	32
C985	37.9	+8.2	2.2	43	2.0	16.2	40.2	21.9	137.5
L9-5138	37.0	-1.1	2.0	39	1.9	16.1	40.4	21.8	135.3
L8-10780	36.5	+5.4	2.1	44	2.1	17.5	40.0	22.0	134.6
L6-2132	36.2	-1.3	2.2	39	2.0	15.7	40.6	21.7	135.2
Perry	34.8	+5.9	2.1	40	2.1	16.6	40.6	21.7	132.1
Chief	32.0	-0.6	3.0	50	2.2	12.9	41.4	20.3	133.5
Wabash	31.6	0	2.5	42	1.8	14.4	40.0	21.3	130.6
Mean	35.1		2.3	42	2.0	15.6	40.5	21.5	134.1

[1]Days earlier (-) or later (+) than Wabash. Wabash required 130 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 IV, 1951-52.

Strain	Mean of 33 Tests	Landisville Pa.[1]	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Clayton Ill.
C985	37.9	52.0	24.9	42.2	49.3	58.6	39.2	37.2
L9-5138	37.0	51.3	21.0	34.0	48.2	51.9	44.5	41.6
L8-10780	36.5	43.6	22.4	41.0	45.5	49.2	41.1	39.3
L6-2132	36.2	49.7	21.6	33.9	44.6	50.2	42.2	37.8
Perry	34.8	40.6	21.9	41.1	42.6	46.4	41.0	36.4
Chief	32.0	42.7	17.4	33.0	38.1	46.7	38.8	34.2
Wabash	31.6	40.1	17.4	29.7	41.3	46.1	39.4	33.8
Mean	35.1	45.7	20.9	36.4	44.2	49.9	40.9	37.2
				Yield Rank				
C985		1	1	1	1	1	6	4
L9-5138		2	5	4	2	2	1	1
L8-10780		4	2	3	3	4	3	2
L6-2132		3	4	5	4	3	2	3
Perry		6	3	2	5	6	4	5
Chief		5	6	6	7	5	7	6
Wabash		7	6	7	6	7	5	7

[1]Palmyra, Pennsylvania, 1951.
[2]Edgewood, Illinois, 1951.

Table 38. (Continued)

Strain	Stonington Ill.	Brownstown Ill.[2]	Trenton Ill.	Eldorado Ill.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.
C985	32.7	32.4	42.6	44.7	32.0	34.8	29.6	22.5
L9-5138	38.5	35.6	40.7	41.8	35.6	31.4	27.6	20.9
L8-10780	34.7	31.9	42.9	43.5	36.5	33.5	25.5	20.9
L6-2132	37.7	34.3	39.6	42.3	37.3	29.3	27.5	23.1
Perry	31.2	32.2	39.9	39.9	35.7	34.6	28.5	19.0
Chief	25.1	27.0	37.3	35.3	34.4	25.6	27.4	19.2
Wabash	28.0	29.2	36.3	35.1	31.7	27.3	24.9	18.7
Mean	32.6	31.8	39.9	40.4	34.7	30.9	27.3	20.6
	Yield Rank							
C985	4	3	2	1	6	1	1	2
L9-5138	1	1	3	4	4	4	3	3
L8-10780	3	5	1	2	2	3	6	3
L6-2132	2	2	5	3	1	5	4	1
Perry	5	4	4	5	3	2	2	6
Chief	7	7	6	6	5	7	5	5
Wabash	6	6	7	7	7	6	7	7

Table 39. Seven-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1946-52.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	110	91	96	105	85	106	106	106	106
Perry	34.1	+3.8	1.9	39	1.9	17.0	41.1	21.5	130.0
Wabash	31.2	0	2.2	42	1.6	14.5	40.3	21.4	129.3
Chief	30.8	-1.5	2.7	48	2.0	12.9	41.1	20.5	132.3
Mean	32.0		2.3	43	1.8	14.8	40.8	21.1	130.5

[1]Days earlier (-) or later (+) than Wabash. Wabash required 129 days to mature.

Table 40. Seven-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1946-52.

Strain	Mean of 110 Tests	Landisville Pa.[1]	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Clayton Ill.	Stonington Ill.
Years Tested		1948 1950-52	1946-48 1950-52	1946-1952	1946-1952	1946-1952	1946-1952	1946-1952	1946-1952
Perry	34.1	36.6	24.3	36.1	42.8	44.9	38.8	34.8	33.8
Wabash	31.2	37.0	21.9	30.3	41.5	42.7	34.9	29.9	30.7
Chief	30.8	38.1	21.3	33.1	39.7	42.1	31.9	29.1	29.5
Mean	32.0	37.2	22.5	33.2	41.3	43.2	35.2	31.3	31.3
		Yield Rank							
Perry		3	1	1	1	1	1	1	1
Wabash		2	2	3	2	2	2	2	2
Chief		1	3	2	3	3	3	3	3

[1]Columbia, Pennsylvania, 1948 and 1950; Palmyra, 1951.
[2]Edgewood, Illinois, 1946-49 and 1951.
[3]Freeburg, Illinois, 1946-50.

Table 40. (Continued)

Strain	Browns-town Ill.[2]	Trenton Ill.[3]	Eldor-ado Ill.	Nor-borne Mo.	Lad-donia Mo.	Colum-bia Mo.	Man-hattan Kans.	Thayer Kans.
Years Tested	1946-49 1951-52	1946-1952	1947-1952	1948-1951	1949-1952	1946-1952	1946-1952	1947,1949, 1952
Perry	36.0	35.8	35.0	39.2	37.6	31.8	27.8	12.9
Wabash	33.2	32.1	30.2	36.6	34.7	27.1	24.9	13.5
Chief	31.9	31.7	30.5	37.8	35.9	27.6	25.1	13.6
Mean	33.7	33.2	31.9	37.9	36.1	28.8	25.9	13.3
	Yield Rank							
Perry	1	1	1	1	1	1	1	3
Wabash	2	2	3	3	3	3	3	2
Chief	3	3	2	2	2	2	2	1

Table 41. Chemical composition of soybean seed grown at each of the Uniform Test locations in 1952, the two-year means for 1951-52, and the three-year means for 1950-52 (composite sample or mean of all strains grown in each respective Group Test).

Strain	1952			Two-Year Mean			Three-Year Mean		
	Percent-age of Protein	Percent-age of Oil	Iodine Number of Oil	Percent-age of Protein	Percent-age of Oil	Iodine Number of Oil	Percent-age of Protein	Percent-age of Oil	Iodine Number of Oil
Group 0 (Mean of 13 strains in 1952, 15 in 1951, and 18 in 1950)									
Ottawa, Ontario	41.4	19.9	136.4	38.6	20.1	137.5	39.5	19.7	137.8
Guelph, Ontario	40.1	19.6	132.2	42.2	18.7	134.6	41.8	18.4	136.1
Hoytville, Ohio	41.2	20.7	133.3	--	--	--	--	--	--
Columbus, Ohio	41.4	20.9	131.0	41.6	20.8	131.4	42.3	20.4	129.9
E. Lan., Mich. (Muck)	38.3	20.6	134.4	--	--	--	--	--	--
E. Lan., Mich. (Min.)	40.0	20.5	132.0	40.7	19.7	134.4	--	--	--
Deerfield, Mich.	40.9	20.6	130.6	42.7	19.8	132.3	--	--	--
Spooner, Wis.	40.4	19.0	134.4	42.0	18.1	136.0	42.9	17.7	136.4
Fall City, Wis.[1]	41.4	20.1	133.0	42.3	19.0	134.0	42.5	18.9	134.1
Morris, Minn.	40.2	20.8	135.5	39.7	20.1	137.7	40.7	19.3	136.2
St. Paul, Minn.	41.7	19.9	131.0	--	--	--	--	--	--
Casselton, N. D.	43.4	18.9	133.6	--	--	--	--	--	--
Fargo, N. D.	42.5	18.6	136.0	42.0	18.2	140.2	42.6	18.2	138.2
Roaholt, S. D.	43.3	20.0	130.2	42.7	19.2	134.4	42.4	18.9	135.1
Group I (Mean of 10 strains in 1952, 13 in 1951, and 18 in 1950)									
Guelph, Ontario	42.2	19.2	131.3	43.1	18.4	134.4	43.0	18.1	137.0
State College, Pa.	39.7	21.8	130.9	40.9	21.2	130.4	41.0	20.9	131.3
Hoytville, Ohio	42.1	20.3	132.6	--	--	--	--	--	--
Wooster, Onio	42.7	20.7	132.2	42.5	20.5	133.0	--	--	--
Columbus, Ohio	41.1	20.8	131.3	41.6	20.9	132.2	42.2	20.7	130.8
Mt. Healthy, Ohio	42.0	20.8	131.7	40.6	21.4	131.5	--	--	--
East Lansing, Mich.	38.9	21.3	133.6	39.9	20.2	135.9	--	--	--
Deerfield, Mich.	42.9	20.0	130.5	43.4	19.6	132.7	--	--	--
Walkerton, Ind.	41.9	20.5	130.9	42.2	20.1	132.7	41.9	20.2	133.1
Spooner, Wis.	40.3	19.1	136.0	--	--	--	--	--	--
Fall City, Wis.[1]	42.7	20.2	135.6	43.6	19.0	137.7	43.4	18.8	137.5
Madison, Wis.	43.3	19.6	135.8	42.8	19.3	136.1	42.8	19.3	135.3
Shabbona, Ill.[2]	40.6	22.2	132.5	40.6	21.3	134.1	40.7	21.2	133.2
St. Paul, Minn.	42.4	19.3	133.9	--	--	--	--	--	--
Waseca, Minn.	43.1	19.6	134.7	43.1	19.0	136.6	43.3	18.7	136.2
Cresco, Iowa	43.4	19.7	131.8	43.9	18.7	135.2	43.5	18.4	136.8
Kanawha, Iowa	41.9	20.8	132.4	42.5	19.9	134.5	42.3	19.7	133.9
Brookings, S. D.	40.2	20.8	130.7	--	--	--	--	--	--

Table 41. (Continued)

Strain	1952			Two-Year Mean			Three-Year Mean		
	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Group II (Composite of 14 strains in 1952, 13 in 1951, and 20 in 1950)									
State College, Pa.	39.0	21.4	133.7	40.3	20.9	132.3	40.0	20.7	133.6
New Brunswick, N.J.	40.9	21.0	136.3	41.8	20.4	135.0	41.2	20.6	134.4
Columbus, N. J.	41.4	20.9	136.0	40.9	21.1	134.1	--	--	--
Hoytville, Ohio	40.5	21.4	131.2	--	--	--	--	--	--
Wooster, Ohio	42.1	20.8	130.9	42.1	20.4	131.9	--	--	--
Columbus, Ohio	41.1	21.5	129.4	41.9	20.9	129.8	41.8	20.7	129.9
Mt. Healthy, Ohio	40.7	21.0	131.2	39.4	21.8	130.7	--	--	--
East Lansing, Mich.	38.6	22.0	133.4	39.8	20.3	136.8	--	--	--
Deerfield, Mich.	43.1	20.4	131.5	43.6	19.9	133.0	42.6	19.8	134.1
Walkerton, Ind.	41.5	20.3	129.4	41.7	20.1	131.9	--	--	--
Bluffton, Ind.	41.6	20.7	130.0	41.9	20.6	129.5	41.8	20.4	129.6
Lafayette, Ind.	42.1	21.2	131.2	41.6	21.1	131.8	41.4	21.0	131.8
Greenfield, Ind.	41.7	21.5	131.7	42.1	21.1	130.8	43.0	20.3	131.7
Madison, Wis.	41.1	19.6	132.9	42.3	19.3	134.5	41.7	19.1	135.4
Shabbona, Ill.[2]	38.9	20.4	132.6	40.0	20.1	134.6	40.0	20.1	134.2
Dwight, Ill.	40.9	21.1	130.6	41.2	20.9	132.2	41.0	21.0	131.7
Urbana, Ill.	38.4	21.5	132.9	38.8	21.5	133.6	39.1	21.4	133.1
Kanawha, Iowa	40.5	21.3	132.9	42.0	20.1	134.5	41.3	19.9	135.0
Marcus, Iowa	40.3	20.7	132.3	41.2	20.2	134.5	41.2	19.7	134.7
Independence, Iowa[3]	39.3	22.0	130.6	40.4	20.6	133.3	40.7	20.3	132.9
Ames, Iowa	39.9	21.4	131.5	39.6	20.8	133.6	39.8	20.6	132.8
Centerville, S. D.	38.6	22.5	130.3	39.3	21.1	134.3	39.3	20.8	133.3
Lincoln, Nebr.	40.0	21.9	128.6	40.2	21.6	132.2	39.7	21.2	132.1
Group III (Composite of 15 strains in 1952, 16 in 1951, and 10 in 1950)									
Landisville, Pa.[4]	40.7	20.6	135.7	40.5	20.9	135.8	41.0	20.9	135.2
Newark, Del.	40.1	21.5	134.7	39.4	21.7	134.0	40.0	21.6	133.9
Beltsville, Md.	37.3	22.6	136.9	37.3	23.1	135.1	38.8	22.6	134.8
Columbus, Ohio	40.1	21.6	134.3	41.7	20.0	134.6	41.7	20.1	134.2
Mt. Healthy, Ohio	41.2	21.0	135.1	39.7	21.5	133.9	--	--	--
Lafayette, Ind.	39.5	21.2	134.5	40.4	21.2	134.5	40.6	20.9	135.0
Greenfield, Ind.	42.1	20.5	135.1	41.9	20.7	134.1	42.0	20.0	134.8
Worthington, Ind.	41.4	21.3	131.7	41.3	21.4	132.8	41.4	21.3	132.4
Dwight, Ill.	40.6	20.8	134.0	40.8	20.8	134.8	40.9	20.6	134.4

Table 41. (Continued)

Strain	1952			Two-Year Mean			Three-Year Mean		
	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
				(Group III Continued)					
Urbana, Ill.	39.6	21.5	134.0	39.1	21.4	135.2	39.3	21.2	134.8
Clayton, Ill.	39.9	21.7	132.9	41.9	21.1	134.0	41.6	20.9	133.9
Stonington, Ill.	40.0	21.6	132.9	38.4	22.1	133.7	38.9	21.7	133.3
Brownstown, Ill.[5]	41.7	21.1	132.3	41.0	21.3	132.9	--	--	--
Trenton, Ill.[6]	39.6	21.5	132.6	40.6	21.3	132.8	41.8	20.9	132.1
Eldorado, Ill.	40.2	22.0	132.9	41.9	21.6	131.5	41.5	21.5	131.4
Ames, Iowa	39.4	21.3	134.5	40.4	20.8	136.3	40.3	20.8	135.3
Ottumwa, Iowa	38.8	21.4	134.7	39.9	21.1	135.4	39.6	21.0	134.7
Laddonia, Mo.	39.7	21.5	130.9	40.9	21.2	133.0	39.6	21.5	133.1
Columbia, Mo.	41.7	21.2	133.4	41.8	21.2	134.0	40.7	21.3	134.0
Lincoln, Nebr.	39.5	21.5	130.9	39.2	21.4	134.5	38.6	21.2	134.0
Manhattan, Kans.	40.1	22.3	131.7	40.6	21.8	133.7	40.7	21.4	132.5
Thayer, Kans.	42.4	21.1	127.2	--	--	--	--	--	--
	Group IV (Composite of 10 strains in 1952, 18 in 1951, and 10 in 1950)								
Landisville, Pa.[4]	40.9	21.0	137.2	40.7	21.1	136.9	41.7	20.6	136.4
Newark, Del.	40.9	21.5	136.3	--	--	--	--	--	--
Georgetown, Del.	41.3	21.9	134.5	--	--	--	--	--	--
Beltsville, Md.	37.5	22.5	135.7	38.5	22.2	135.2	39.6	21.6	135.2
Worthington, Ind.	40.4	22.0	132.6	40.9	21.3	134.4	41.3	21.0	133.3
Evansville, Ind.	41.4	21.8	134.3	41.1	22.1	133.6	41.6	21.5	132.8
Urbana, Ill.	40.0	21.7	134.7	40.1	21.2	135.8	39.3	21.1	135.2
Clayton, Ill.	40.6	21.5	132.9	41.8	20.8	134.8	41.4	20.6	134.1
Stonington, Ill.	39.2	22.0	132.9	38.5	22.2	133.8	39.1	21.4	133.4
Brownstown, Ill.[5]	42.4	21.4	133.7	41.8	21.4	134.2	--	--	--
Trenton, Ill.[6]	41.2	22.0	132.9	41.4	21.6	134.6	42.2	20.9	133.8
Eldorado, Ill.	40.1	22.7	135.1	41.7	22.1	133.8	--	--	--
Laddonia, Mo.	39.7	22.3	131.5	40.2	21.8	133.8	39.3	21.7	133.5
Columbia, Mo.	40.2	22.0	134.3	40.8	21.5	135.0	40.0	21.5	134.4
Manhattan, Kans.	40.0	22.6	131.2	40.7	21.8	134.3	40.6	21.3	132.5
Mound Valley, Kans.	40.6	21.2	124.6	39.9	22.0	128.1	--	--	--
Thayer, Kans.	41.0	22.2	130.9	--	--	--	--	--	--

[1]Eau Claire, Wisconsin, 1950.
[2]Compton, Illinois, 1950.
[3]Hudson, Iowa, 1950.
[4]Palmyra, Pennsylvania, 1950-51.
[5]Edgewood, Illinois, 1950-51.
[6]Freeburg, Illinois, 1950.

SOYBEAN DISEASE INVESTIGATIONS IN 1952[1]

Soybean diseases in Illinois, as in the Midwest generally, were not severe in 1952. Although yields were reduced somewhat compared with those of previous seasons, it is probable that unfavorable weather conditions contributed more to this reduction than did diseases. Moreover, the combination of heat and drought was even less favorable for diseases in general than for the production of the soybean crop.

Of the diseases usually occurring on soybeans in the Midwest, bacterial pustule (Xanthomonas phaseoli var. sojensis) was the most prevalent in Illinois, Indiana, and Missouri. In central and southern Illinois, many areas showed the most severe development of pustule seen in seven years. Severe infection likewise occurred in central and southern Indiana. This disease was less prevalent in Iowa, and of no consequence in Wisconsin and Minnesota.

Bacterial blight (Pseudomonas glycinea) infection was very light in Illinois, Indiana, and Missouri. In Iowa, Minnesota, and Wisconsin infection was general but not seriously damaging.

Wildfire (Pseudomonas tabaci) was of little consequence over the Midwest, appearing only in widely scattered centers of infection in central and southern Illinois and western Indiana.

Brown spot (Septoria glycines) was the most prevalent of the fungus leafspots in 1952 in Illinois, Indiana, Iowa, and Minnesota. In general, defoliation was not serious except for a few fields in central and southern Illinois where infection caused the loss of three to four trifoliate leaves.

Frogeye (Cercospora sojina) appeared only in limited areas of the Midwest in 1952, mainly in Illinois and Indiana. Even in these states it was a minor disease. The decline of frogeye leafspot in Indiana has been attributed to the increasing use of the resistant Lincoln and Wabash to replace the susceptible varieties formerly grown. The substitution of Wabash for older varieties in southern Illinois may be a factor in limiting the disease in this state.

Stem canker (Diaporthe sp.) was prevalent in Illinois, Indiana, Iowa, and Minnesota. Damage from this disease appeared to be less severe than in previous seasons. As usual, maximum infection was lower in Illinois (2-3%) than in Iowa (7%) or Indiana (10-15%).

Brown stem rot (Cephalosporium gregatum) was less severe than usual in 1952, probably because of high temperatures. It was prevalent in Illinois, Indiana, and Iowa, and was found in two locations in southern Minnesota. There was no general development of leaf symptoms, although there were some fields in Indiana and Illinois showing this phase of the disease. Lodging was noted in some fields, but it was not severe enough to cause appreciable losses.

Rhizoctonia root rot (Rhizoctonia solani) was not generally distributed in the Midwest in 1952. In Illinois, however, it was found in about 25% of the fields inspected in the central and northern soybean-producing areas. A few fields showed 3-5% infection, while the majority of infected fields evidenced only trace amounts.

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[1]Project 12-4010, Division of Forage Crops and Diseases.

Downy mildew (Peronospora manshurica) was somewhat more prevalent than usual in Iowa, and less than usual in Illinois and Indiana. Infection was generally light, except for central and northwestern Indiana where moderate severity was attained in some cases. The disease occurred in trace amounts in Wisconsin, and light infection was found in two fields in Minnesota.

The virus diseases, bud blight (tobacco ring-spot virus), mosaic (Soja virus 1), and yellow mosaic (Phaseolus virus 2) were of no economic importance in the Midwest in 1952.

Field tests for disease resistance were continued at Illinois in 1952. Those involving bacterial blight yielded no information, since the unseasonably warm weather inhibited the development of infection. In the brown stem rot trial, 378 plant introductions were tested on heavily infested soil. Four of these, P. I.'s 189969, 189908, 194634, and 194642, showed very low disease reactions and will be retested next season, along with 77 disease-free selections (possibly escapes) made from various introductions.

Uniform Test strains were evaluated for bacterial pustule resistance at Urbana, Illinois. Heavy infection resulted from artificial inoculation combined with a natural epiphytotic, giving ideal conditions for disease readings. Thirty-seven strains were included in the nursery. The following table lists the strains showing moderate or better resistance.

HIGHLY RESISTANT		MODERATELY RESISTANT	
Identity	Pustule Reaction	Identity	Pustule Reaction
L9-4196	0-1 ***	Flambeau	2 **
L9-4179	1 *	C739	2 **
L9-4091	1 ***	L6-1152-7-2	2 *
L9-4044	0-1 **	L9-5138	2 **
L9-4200	1 **	C1024	2 *
		S1-441	2 *
		S9-966	1-2 *
		0-3-33	2 *

*Rating established on one year's results.
**Rating based on two years' results.
***Rating based on three years' results.

WEATHER CONDITIONS AND GENERAL GROWTH RESPONSES AT MOST OF THE NURSERY LOCATIONS DURING THE 1952 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 1952 seasons are presented in graphs at the end of this section of the report. The daily mean temperatures and rainfall are taken from "Climatological Data" published by the Weather Bureau. The arc is the normal mean monthly temperature for the location.

Ottawa, Ontario. The 1952 season was one of the most favorable experienced for a number of years, particularly with respect to the unusually high yields. The maturity differences from last year may have been due to residual effects of heavy fertilization on this plot during the previous year. Abundant moisture and favorable temperatures prevailed throughout the season.

Guelph, Ontario. The season was normal in most respects. Rainfall was well distributed throughout most of the year, with the exception of the period from early August to mid-September, which was very dry. Good stands were obtained in most plots. Several early stands, however, appeared to be somewhat low in germination.

New Brunswick and Columbus, New Jersey. The temperature was from 2 to 3 degrees above normal during the months of June and July, and during both months the distribution of rainfall was poor and about an inch less than normal at both locations. In August the temperature was practically normal and the rainfall, 2 to 3 inches above normal, well distributed throughout the month. Quite good yields were obtained because of the distribution of rainfall in August when the soybeans were filling out. Apparently the very high temperatures the first two months had very little effect on growth. The season average was not far from normal for both locations.

Beltsville, Maryland. Uniform tests were planted on the 23rd and 24th of May and excellent stands were obtained. June and July, exceptionally warm months, were deficient in rainfall, but early August rains averted a drought. Excellent weed control was obtained. Harvest conditions were ideal, with little rainfall, much bright weather, and with but little shattering of beans. Stands and yields at this location were very satisfactory.

Hoytville, Wooster, Columbus, and Mt. Healthy, Ohio. The weather conditions for soybean production were very similar over most of Ohio in 1952. It was exceedingly dry at planting time, and the emergence was very erratic. In some cases, the beans had to be replanted. However, the stands were not too good and did not emerge very evenly. Some time after planting, the rainfall was rather adequate for growth. However, the drouth during July and August greatly reduced the soybean yield over most of the state. The harvest period was very dry and provided exceedingly good combining weather.

East Lansing and Deerfield, Michigan. The mean yields between our muck and mineral soils near East Lansing were as follows:

1951	Mineral	25.5	Muck	14.3
1952	Mineral	15.8	Muck	44.3

The factors of moisture and temperature were quite largely responsible for the yield reversal in 1951 and 1952. In 1951 the beans on the muck were injured by frost, causing the seeds to be very immature and of extremely poor quality. The plants lodged very badly, and plant growth was only fair, due to a cool summer. In 1952 the beans on the mineral soil suffered from drouth which reduced the vigor and growth of the plants materially. The beans on the muck did not show dry weather injury, and the beans were not injured by fall frost.

Walkerton, Indiana. This was an excellent nursery planted June 5. Growth was good, and maturity and harvest conditions were ideal. Yields were very good considering that the soil tested very low in both phosphorus and potash with pH about 6.0. The nursery was fertilized with 135#/A. of 0-15-15 + 40# $MnSO_4$. There was a very heavy downy mildew infection. Blackhawk was the most severely infected. Other diseases were negligible. Maximum temperatures were 5.2° above normal in June but were near normal during the other months of the growing season. June, July, and August had 30 days with temperatures of 90° or above. Seven days in September were also 90° or above, which is very unusual so far north in the state. The highest temperature of the season was 100° on June 29. Precipitation was 1.75 inches above normal in June and 2.64 inches below normal in September. July and August were normal. Distribution of precipitation was excellent through August 21. Following a 0.22 inch rain on August 21 there was only a 0.44 inch rain on September 1 and very little precipitation until October 14. The continued drouth in September probably accounts for the rather narrow range in yield between early and late maturing varieties in Group II.

Bluffton, Indiana. This was an excellent nursery. It was planted and harvested under ideal conditions. There were no damaging effects due to disease, although some pustule, mildew, and fusarium were observed. Yields were the highest ever attained at this location. Growth was not too abundant, and there was not much lodging. Precipitation was somewhat below normal in June, only about one-half of normal in July, normal in August, and two inches above normal in September. Rainfall distribution was good throughout the growing season. The latter part of May was cool, the latter part of June and most of July were very hot, and August and September maximum temperatures were below normal. A total of 33 days in June, July, and August had temperatures of 90° or above. The highest temperature was 98° on June 29.

Lafayette, Indiana. This nursery had excellent stands, and the strains matured and were harvested under ideal conditions. It was planted June 2. Growth was short, generally, and yields were low for the rated productivity of the soil. The land was spring-plowed and was worked too wet. It remained "rubbery" throughout much of the season. There was a fairly heavy infection of bacterial pustule, and moderate infections of brown spot and downy mildew. Other diseases were negligible. Maximum temperatures were 5.1° above normal in June and near average in the other summer months. There were 34 days in June, July, and August with temperatures of 90° or above. The highest summer temperature was 100° June 30. Precipitation was 1.68 inches below average in July and average or above in the remainder of the growing season, with 2.70 and 2.82 inches above average in May and June, respectively.

Greenfield, Indiana. This was an excellent nursery, planted under ideal conditions on June 2. Growth appeared to be below average, but yields were the best ever attained at this location. Diseases were nearly negligible with a small amount of pustule and brown spot. Maturity and harvest conditions were ideal. Temperatures

were unusually high during much of the summer with 39 days in June, July, and August 90° or above. Temperatures were at or near 100° on three successive days in late July. The maximum temperatures averaged 6.1° above normal for June. Precipitation was 2.09 and 2.85 inches above normal in June and September, respectively, but 1.07 and 0.94 inches below normal in July and August, respectively. The rainfall was well distributed throughout the growing season.

Worthington, Indiana. This was a poor nursery. Planting conditions were ideal on May 14. Stands were poor generally; two tests were discarded. Poor stands resulted, probably due to fertilizer injury. About 90# of N and 100# of 60% K_2O per acre were plowed under and 250#/A. of 3-12-12 were applied in the row. There was an excessive growth of Johnson grass which required much hand weeding. The plots were kept fairly clean. Lodging was early and excessive. Seed quality was poor, and yields were low. Bacterial pustule and downy mildew were moderate in infection, and frogeye leaf spot was present, but not serious. Other diseases were negligible. Maximum temperatures were 5.9° above normal in June and about normal the remainder of the growing season. There were 49 days in June, July, and August with temperatures of 90° or above. Nine days in September were 90° or above. On 10 days of the growing season temperatures were 98° or above with the highest at 103° on July 29. Precipitation was 1.86 and 0.33 inches below normal in August and September, respectively. It was 0.70 and 0.89 inches above normal in June and July, respectively. The rainfall distribution was excellent throughout the growing season.

Evansville, Indiana. This was an excellent nursery. It was planted very early, May 5, during very hot weather and under excellent conditions. Growth was good but not excessive. Pustule was very abundant. No other diseases were serious, and frogeye leaf spot was absent. Maturity and harvest conditions were ideal and early. Yields were the highest ever attained at this location even though temperatures were unusually high, with 57 days in June, July, and August 90° or above, and 9 of these days 100° or above with 105° on July 27. June maximum temperatures were 9.2° above normal. Coupled with high temperatures were very marked deficiencies in precipitation, with all months, May through October, being below average with a shortage of 5.94 inches in these months. The distribution of the limited precipitation was good throughout the growing season.

Spooner, Wisconsin. The weather during the 1952 growing season was particularly favorable to soybean production in this area. The temperatures and rainfall were generally above normal and the season was unusually long with low rainfall in September.

Fall City, Wisconsin. The weather was very favorable for soybeans. The temperature and rainfall were above normal during most of the growing season. The first killing frost occurred on September 28. At this time almost all of the varieties were fully mature except a few of the later ones in Group I. Lodging was moderate and diseases minor.

Madison, Wisconsin. The 1952 season was exceptionally favorable for soybeans. Moisture conditions were very good at the beginning of the growing season and with the exception of a dry period in April, were excellent throughout the summer. Above normal precipitation occurred in May, June, July, and August. September and October were very dry; only 0.68 inches of rain fell during this period. During the growing season, temperatures were above normal except during August and October. The first killing frost occurred on October 3. At this time all varieties were

matured except the later ones in Group II. Lodging was severe and maturity slightly later than normal. Diseases were a minor factor.

Shabbona, Illinois. These tests were planted May 6, 1952 in a mellow, moderately moist seedbed. The monthly precipitation was at least equal to the long-time average for May through August, while the two months of September and October were considerably below average. Stands were excellent but growth was poor, and the average plot yield for Group I was 6.8 bushels less than in 1951. Soil tests indicated (1) a lime amendment was needed at a rate of two tons per acre, (2) the phosphorus level was low, and (3) the potassium level was high.

Dwight, Illinois. These tests were planted June 7, 1952 in a moist seedbed that was too firm in certain areas. Stands within the Uniform Nursery tests were good and growth was good. Wet soil conditions in May prevented the cooperator from getting in the field and thus caused the delay in planting date until June 7. Precipitation for the period May through September was slightly above the long-time average, with June considerably above average. A number of the later Group III entries were killed prematurely by frost. Soils tests indicated an adequate supply of lime and of available phosphorus and potassium. The Group II entries averaged 3.5 bushels less than this same maturity group has averaged at Dwight during the years 1949-1951.

Urbana, Illinois. These tests were planted May 6, 1952 in a moist, mellow seedbed. Stands were excellent and growth was moderately good. Monthly precipitation was above average in May and June but considerably below average in July, August, and September. Soil tests indicated (1) a lime amendment was needed at a rate of two tons per acre, and (2) available phosphorus and potassium was high. A few late entries in the Group IV test were killed prematurely by frost. Considerable bacterial pustule was noted but other diseases were not as prevalent as in previous years. Average plot yield of the entries in Group III was 4.8 bushels less than the average for this same test grown in 1949-1951.

Clayton, Illinois. These tests were planted June 3, 1952 in a good seedbed having adequate moisture below the top inch of soil. Stands were excellent and growth was good. Several Group IV entries were killed prematurely by frost. Bacterial pustule was the only disease of consequence noted in the plots. Soil tests indicated (1) a lime amendment of two tons per acre was needed, and (2) levels of available phosphorus and potassium were high. Monthly precipitation during June, August, and September was slightly below the long-time average, with July precipitation considerably above normal. The 1952 average plot yields for the Group III entries was slightly above the 1949-1951 average for this same test.

Stonington, Illinois. These tests were planted May 24, 1952 in a moist but slightly cloddy seedbed. Stands were excellent and growth was fairly good. Soil tests indicated there were adequate supplies of lime, available phosphorus, and available potassium. The 1952 average plot yields of Group III entries were slightly above the 1949-1951 average for this same test.

Brownstown, Illinois. These tests were planted May 21, 1952 in a moist, mellow seedbed. Stands were excellent but growth was only fair. Precipitation was considerably below the long-time average for the months of May, June, and August, and was only slightly above average in July and September. Soil tests indicated there were adequate supplies of lime, available phosphorus, and available potassium.

Trenton, Illinois. These tests were planted May 26, 1952 in a good seedbed having adequate moisture. Stands were excellent and growth was fair. Precipitation was considerably below average during the growing season except for the month of July. Soil tests indicated there were adequate supplies of lime, available phosphorus, and available potassium. The 1952 average plot yields for the Group III entries was 3.2 bushels less than the 1949-1951 average for this same test.

Eldorado, Illinois. These tests were planted May 16, 1952 in a mellow seedbed having adequate moisture. Stands were excellent but growth was only fair, possibly due to inadequate moisture supplies. Precipitation was considerably below the long-time average for all months from May through September. Soil tests indicated a lime amendment was needed at a rate of three tons per acre, but supplies of available phosphorus and potassium were high. The 1952 average plot yields for the Group III entries was 5 bushels less than the 1947-1951 average for this same test.

Morris, St. Paul, and Waseca, Minnesota. Weather was almost ideal for soybean growth in Minnesota in 1952. Planting was timely, and weed control was satisfactory insofar as the experimental plots were concerned. Moisture was adequate but not excessive all through the growing season, and temperatures were moderate. The late summer and fall drouth came late enough to be of little or no handicap to the crop. In fact, it facilitated harvesting of the largest soybean crop in the history of the state. The average acre-yield was also at an all time high. Yield and seed quality were unusually high in all of the experimental yield trials.

Cresco, Iowa. This nursery is located in northeast Iowa on Carrington Plastic Till Phase. This soil is always tight, cold, wet, slowly drained, and rather low in fertility. Planting was completed May 21. Stands were light due to seed corn maggot which caused some dying and "bullheads". However, after transplanting from alleyways into the row a good stand resulted. A warmer than normal June and July, together with near normal rain, gave the best growth and the highest yields ever obtained at this nursery. Frost occurred several times but light damage resulted. Killing frost was October 3. Phosphate, potash, and manure were applied before planting. This permitted a good growth. Harvesting was completed under very dry conditions. Strain comparisons are very good for this test.

Kanawha, Iowa. This nursery was located in north-central Iowa on level, fertile, Webster silty clay loam. Planting was completed on May 26. During the growing season temperatures averaged 1.0° F. above normal, and rainfall totaled 3.76 inches less than normal. Stands were excellent. Two light hail storms occurred on June 13 and 23 which defoliated 10 to 15 percent of the plants and broke 5 to 10 percent of the stems. No serious damage resulted.

Several light frosts occurred in September with the killing freeze October 3. The warm temperatures and sufficient moisture hastened maturity approximately one week. Harvesting was completed on very dry conditions. This nursery was fair to 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 20 on corn land. Stands were excellent, and plots were kept weed-free. Growth was excellent. On August 22, light hail injury occurred which gave the appearance of lodging with some broken stems. No serious loss resulted from this hail. Temperatures during the growing season averaged slightly above normal and precipitation was normal. These conditions

hastened maturity a week to 10 days. Frost occurred several times, but a killing freeze did not occur until October 3. Yields were excellent. Harvesting was completed under very dry conditions. This test was considered very good for making strain comparisons.

Independence, Iowa. Independence, a new location in 1951, is located in northeast central Iowa on Carrington silt loam, medium low in fertility. Planting was completed May 16. The seed corn maggot caused some seedling injuries, but stands were excellent after transplanting. A reasonably good growth occurred with higher than normal temperatures and about a 6-inch deficit of moisture during the growing season, maturity was hastened approximately 7 to 10 days. Light frost injury in September did not injure yields. Threshing was completed under very dry conditions. This test should be good for making strain comparisons.

Ames, Iowa. Ames is centrally located on level, medium fertile, Webster silty clay loam. Planting was completed on May 8. Stands were excellent. A warmer than normal growing season, particularly June, coupled with a slight excess of moisture, hastened maturity about 10 days. Growth was good and no serious frost damage occurred. Harvesting was completed under very dry conditions. Strain comparisons are believed to be excellent at this location.

Ottumwa, Iowa. This nursery was located in southeastern Iowa on fertile Haig silt loam. The nursery was planted May 27. Stands were excellent, and little transplanting was necessary. Excellent growth occurred due to near normal temperatures and rainfall during the growing season. Only a slight deficit of rain occurred during the season. No serious frost injury occurred and harvesting was completed under dry conditions. Lodging was rather excessive due to considerable growth and a severe windstorm in August. Strain comparisons in this nursery should be excellent.

Laddonia, Missouri. This test was planted May 24 in a rather dry seedbed. Stands were very satisfactory but the drouth continued all season. This was the driest growing season in the memory of local farmers. This is a Putnam soil but the fertility and organic matter have been built up to a high level, and probably due to this fact, yields were quite good. Growth was short and very little lodging occurred. Bacterial pustule was generally present, and both brown stem rot and stem canker were prevalent late in the season but probably did not do a great deal of damage.

Columbia, Missouri. The field on which the Uniform tests were planted had shown severe potash and magnesium deficiency and very poor yields in 1950. Eight tons of manure, 800 pounds of sul-po-mag, 160 pounds of KCl, and 400 pounds of 4-12-4 were plowed down before planting in 1952. The season was drier than usual but several rains occurred at critical periods. Growth for most varieties was good and yields were the highest in the history of the field. Dunfield, Illini, and Adams, however, lodged severely and showed extreme duddiness, perhaps due to some imbalance in nutrients since they looked much better on other fields not so heavily fertilized. Bacterial pustule was widespread and very severe, even resistant varieties showing some lesions.

Casselton, North Dakota. The second nursery previously carried at Park River was transferred to the Agronomy Seed Farm at Casselton in 1952. Casselton is only about 20 miles west of Fargo. The soil, however, is a lighter and more favorable soil for soybeans than the heavy soil at Fargo. That location will better represent the

area of our state where soybeans are grown than Fargo actually does. This nursery was planted June 3 and emerged promptly with uniform and full stands. As at Fargo, the early severe drougth and the moderate midsummer temperature did slow the development of the crop. It was very noticeable too, that the lighter and more favorable soil condition for this nursery allowed for a more rapid plant development and earlier maturity than at Fargo. Mandarin (Ottawa) reached satisfactory maturity before the early frost, as did several of the other lines. Disease was relatively light. Stands were heavy and yields very good, despite heavy lodging. Rainfall and temperature conditions were much the same as at Fargo.

Fargo, North Dakota. Drought which began in early May, extended into late June. As a result there was some slow and uneven emergence in nursery plantings made May 29. Late June rains relieved the situation and the crop made fairly satisfactory progress from then on. Temperatures, however, through much of July and August were only moderate, resulting in later podding than usual and a slower development of the crop. Fall frosts, however, held off and a week of fairly favorable ripening temperatures for soybeans early in September allowed for satisfactory maturity in the earlier lines. Mandarin (Ottawa) was approaching maturity, though not fully ripe, when frost occurred on October 2, about 9 days later than normal for this area. There was no serious disease situation present.

Rosholt, South Dakota. A warm April with less than .5 inch of rain left a dry seedbed for planting this test. Emergence was very spotty, consequently many rows could not be harvested. No analysis was possible since 24 plots out of 52 were lost due to poor stand, dry weather, and gophers. The entire development of the nursery was so unsatisfactory that much reliance should not be placed upon the results obtained. Maturity notes were particularly difficult since all strains had dried up early in September, nearly three weeks before frost. Seed quality is low, due chiefly to drouth. It is surprising that the mean yield is so high. It might be a result of having harvested only those rows which appeared to have made a fairly normal development. A field of Blackhawk beside the nursery made 12.5 bu./acre. Blackhawk in the nursery averaged 21 bu./acre. There appears, from the scanty data obtained, to be no relation between yield and earliness. In general, subsoil moisture was good and that brought the crop through.

Brookings, South Dakota. The 1952 season was, in general, favorable to the production of soybeans.

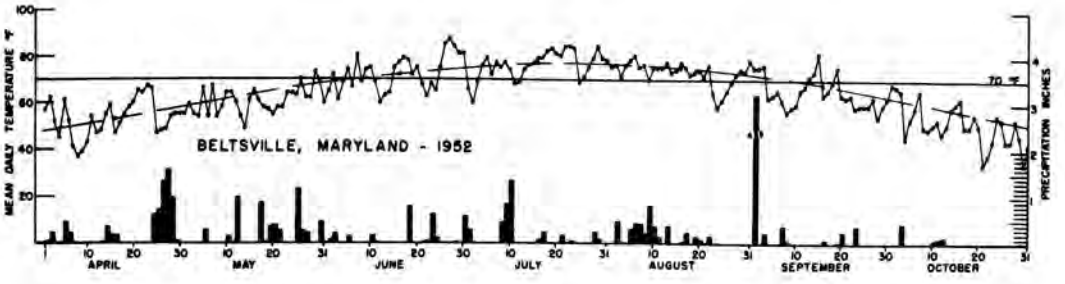
Centerville, South Dakota. Two circumstances may serve to explain the low mean yields of this nursery in a year when beans should have been outstandingly good. In the first place the soil fertility level was low. Secondly, it was too wet to get beyond one cultivation; consequently the weed problem was rather serious. The three top-ranking entries appeared really outstanding, however. The long dry frost-free fall was ideal for the long-season types, though it does not provide any alibi for the relatively poorer performance of Blackhawk, Hawkeye, and Richland in comparison with the early Harosoy.

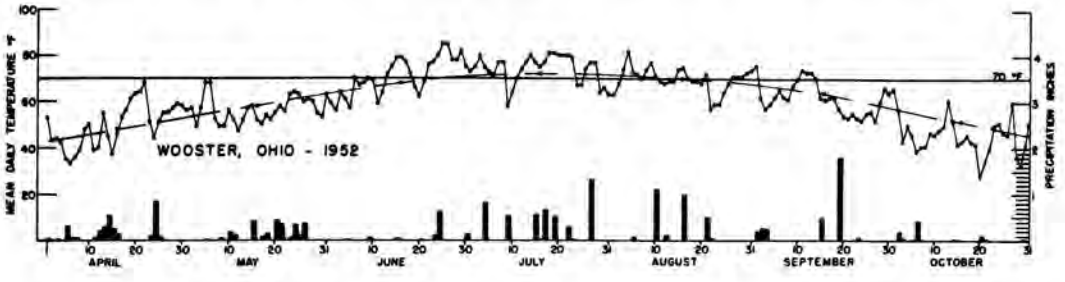
Lincoln, Nebraska. The Group II and III nurseries were planted May 28 on relatively fertile Sharpsburg silty clay loam. No rain of consequence was received following planting until June 18. Temperatures were above normal and humidity low during this period. Variable stands resulted. Many beans did not germinate until after June 18. From June 18 to September 1 conditions for growth were nearly optimum. No rain was received from September 1 until after harvest. The killing frost on October 6 was

about normal as to date. The extremely dry scil at maturity and its effect on root deterioration, along with considerable late bud blight infection and the variable emergence in the spring, led to maturity readings that were undependable. Bacterial blight was rather severe at mid-July. Only a small amount of bacterial pustule occurred. A neighboring field showed wildfire in early September.

Manhattan, Kansas. The soybean crop in 1952 was produced almost wholly without effective precipitation. During the six-months period, May 1 to November 1, only 8.62 inches fell, and came in thirty-five light showers, only two of which exceeded 0.5 inch and none over 0.7. June with 0.25 inch and July with 0.95 were the driest two consecutive summer months on record. This is in sharp contrast with the 1951 season in which 23.87 inches of rain fell during June and July. Above normal temperatures also accompanied the drought. From June 8 to 30 there was only one day that the maximum temperature fell below 90 and on eight days it was 100 degrees or above. In July the maximum daily temperature ranged from 91 to 107 degrees on 22 days, with ten days of 100 to 107 degrees. In spite of the heat and drouth, 28 bushels per acre of Perry soybeans were harvested from a field of 7 acres on the Agronomy Farm. Soil and moisture conditions were favorable on May 28 when the variety tests were planted, resulting in excellent stands of all varieties. During pod-setting the crop suffered severely from drouth and heat. Later when the crop was approaching maturity the hot dry weather hastened ripening. A hard freeze on October 6, with minimum temperature of 21 degrees, resulted in some frost-damaged seed in a few of the later varieties.

Mound Valley, Kansas. The year 1952 was the driest in the history of weather records in this area. Nearly normal rainfall during August probably accounts for the fact that soybeans yielded surprising well compared to the performance of other summer growing crops. Extremely dry weather and low humidity during the fall made shattering a serious problem.


BELTSVILLE, MARYLAND - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


WOOSTER, OHIO - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
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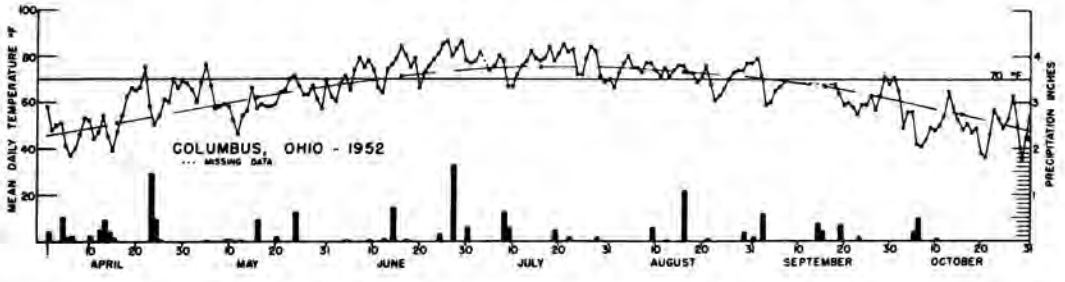
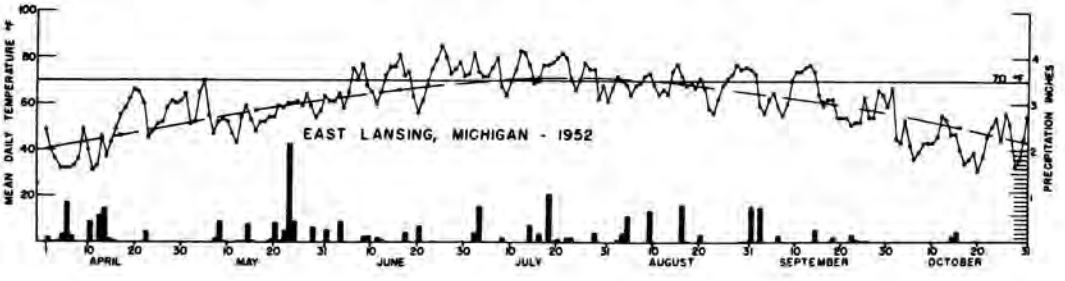
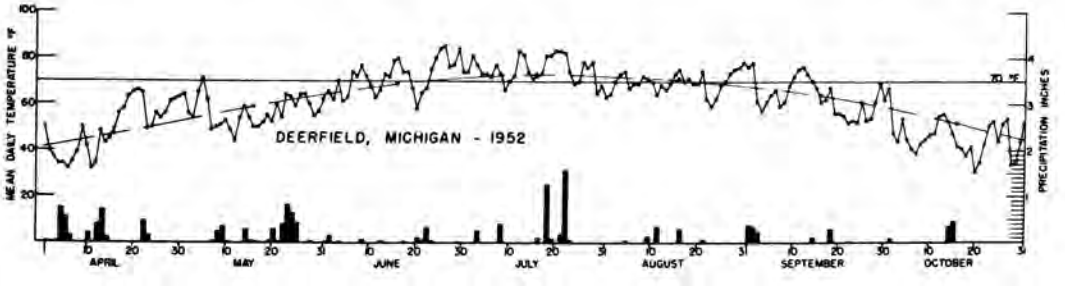
AUGUST
SEPTEMBER
OCTOBER


COLUMBUS, OHIO - 1952
... MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


EAST LANSING, MICHIGAN - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


DEERFIELD, MICHIGAN - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
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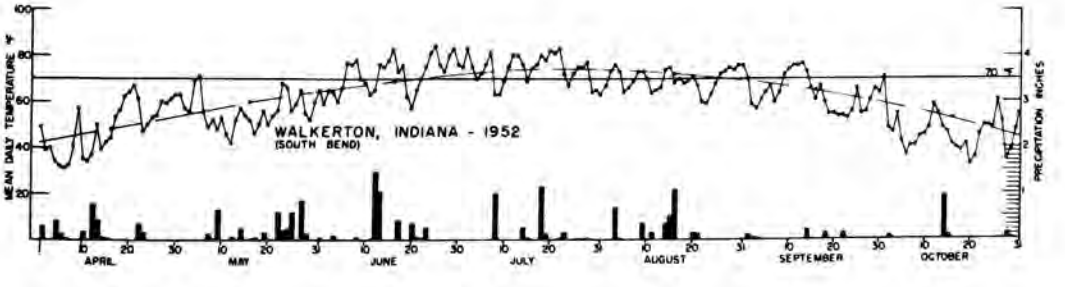
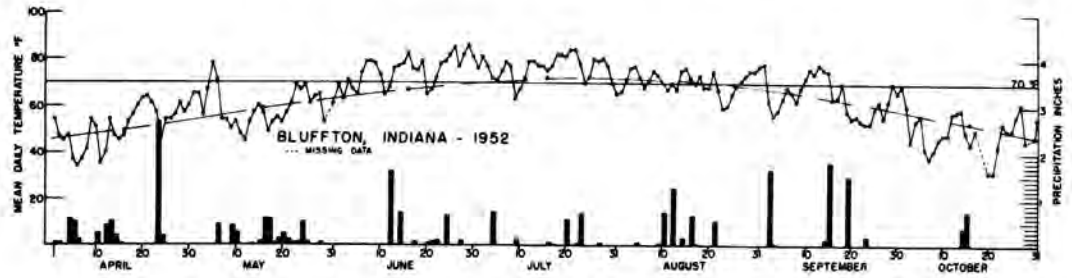
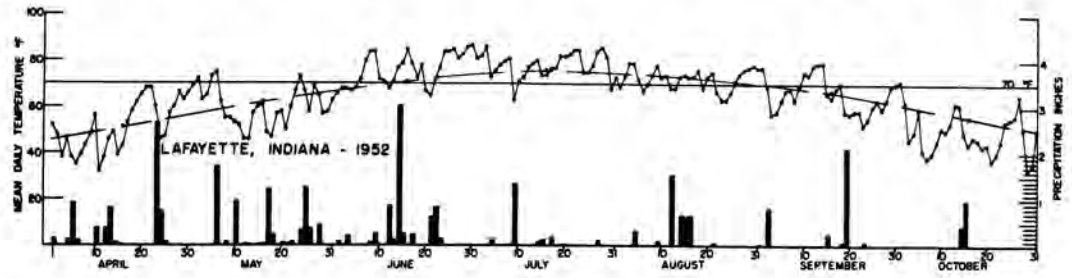
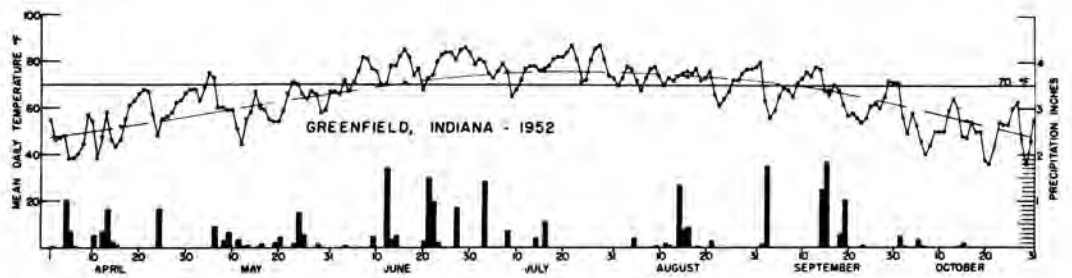
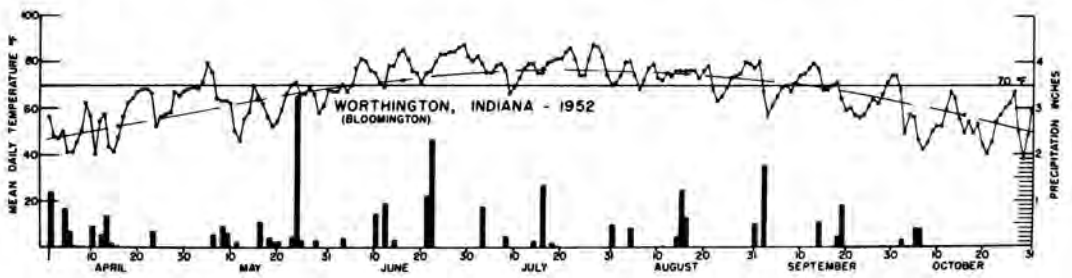
AUGUST
SEPTEMBER
OCTOBER

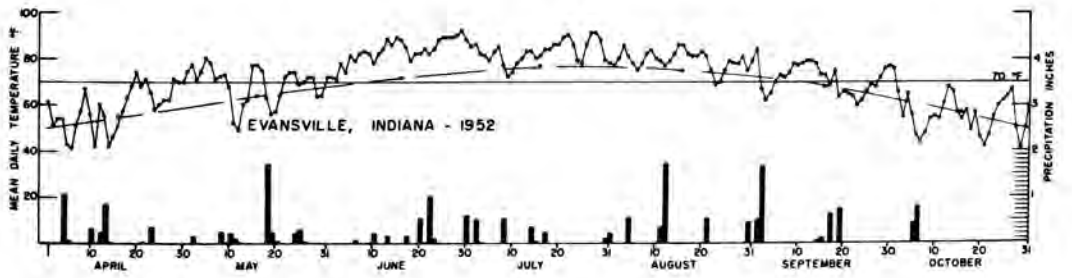

WALKERTON, INDIANA - 1952
(SOUTH BEND)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

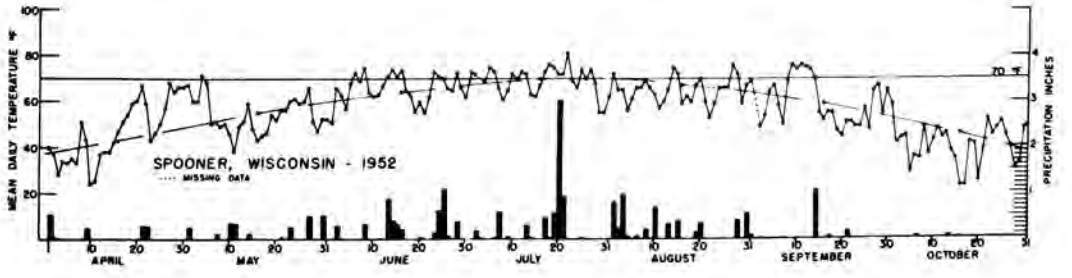

BLUFFTON, INDIANA - 1952
--- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

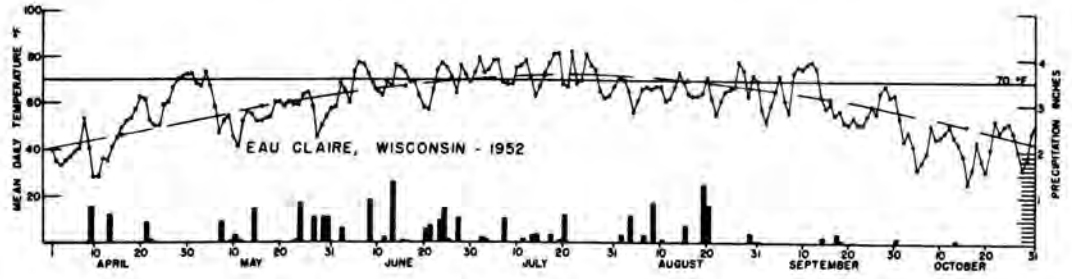

LAFAYETTE, INDIANA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

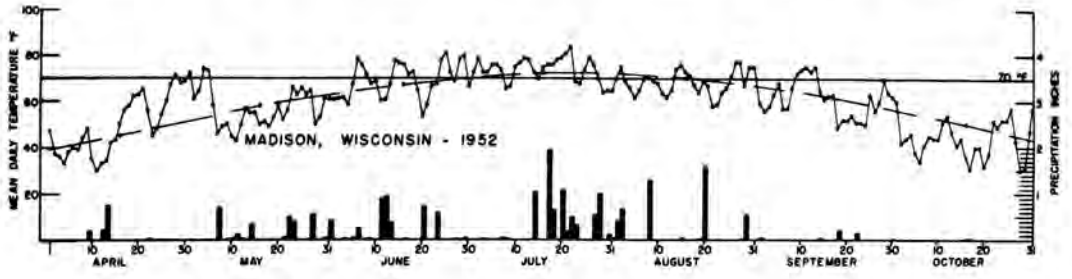

GREENFIELD, INDIANA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

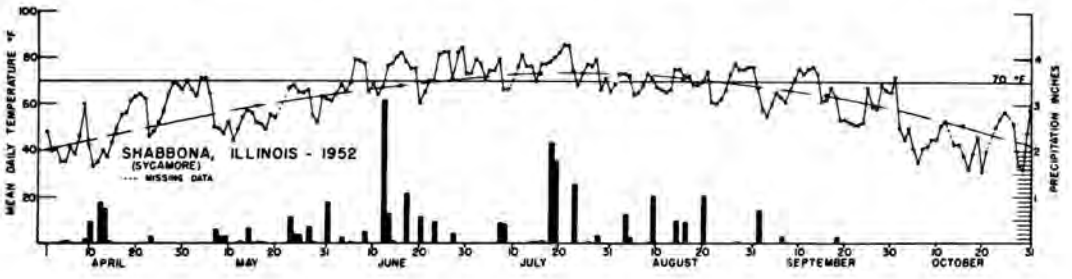

WORTHINGTON, INDIANA - 1952
(BLOOMINGTON)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

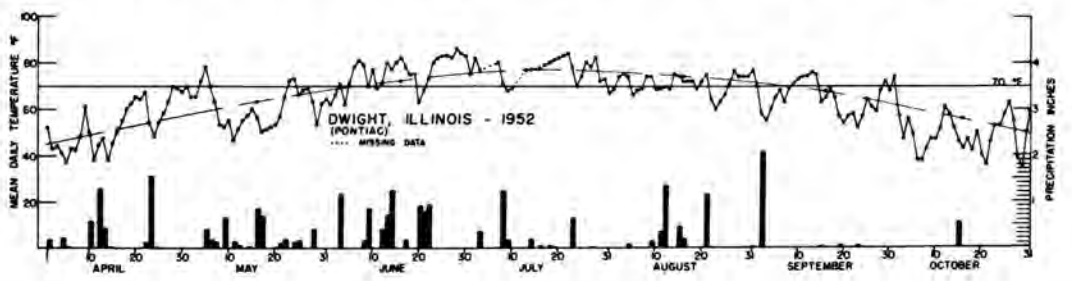

EVANSVILLE, INDIANA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

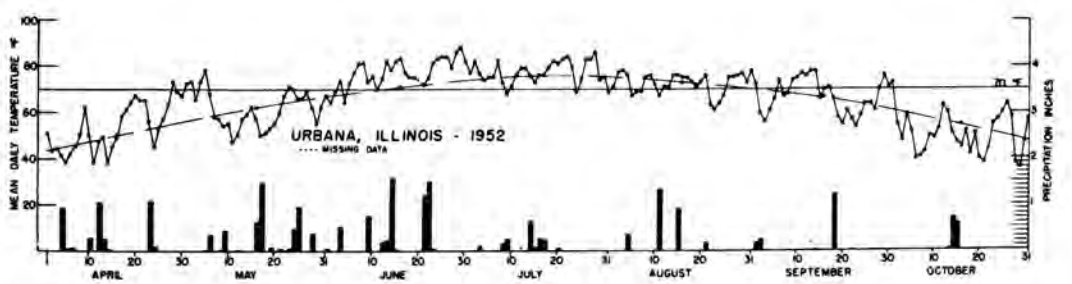

SPOONER, WISCONSIN - 1952
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

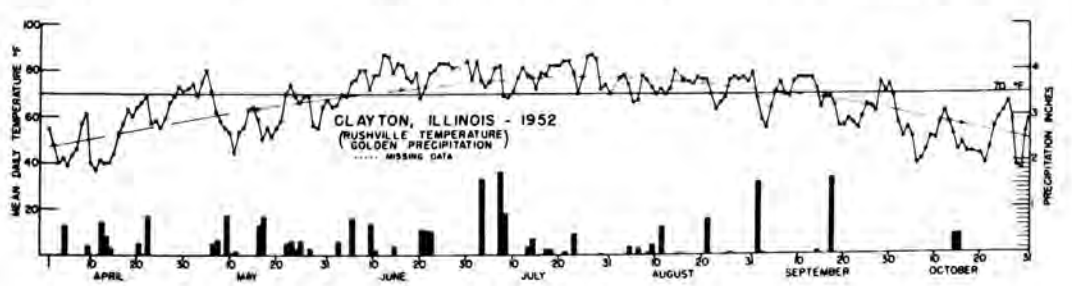

EAU CLAIRE, WISCONSIN - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

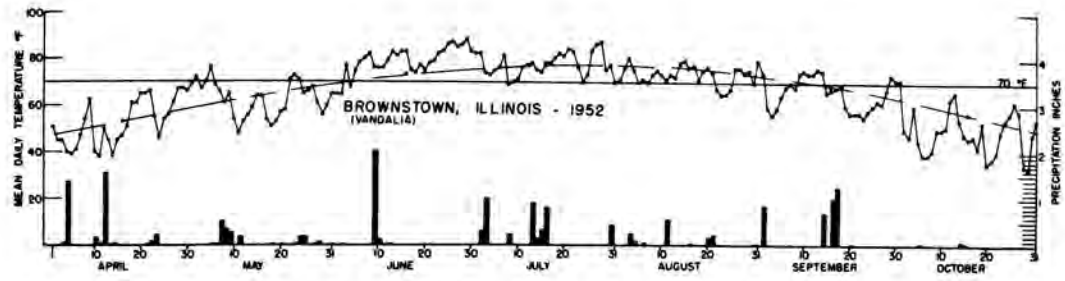

MADISON, WISCONSIN - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

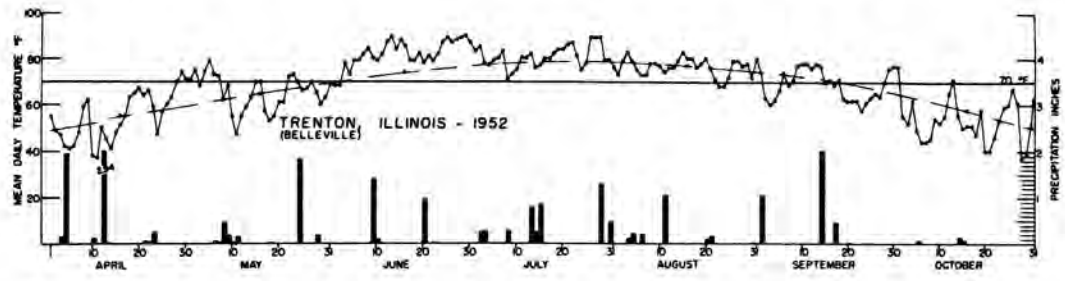

SHABBONA, ILLINOIS - 1952
(SYCAMORE)
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

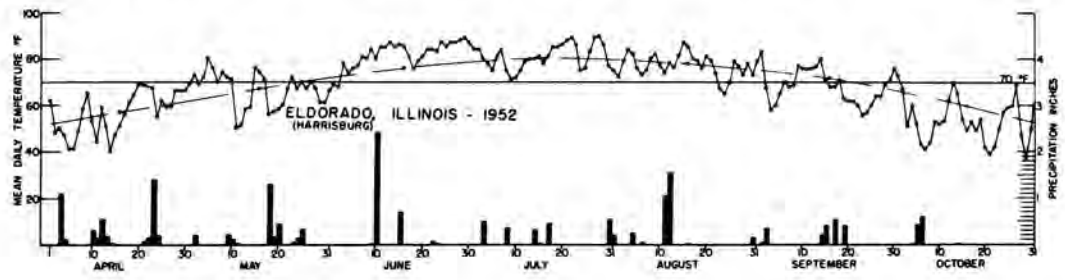

DWIGHT, ILLINOIS - 1952
(PONTIAC)
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

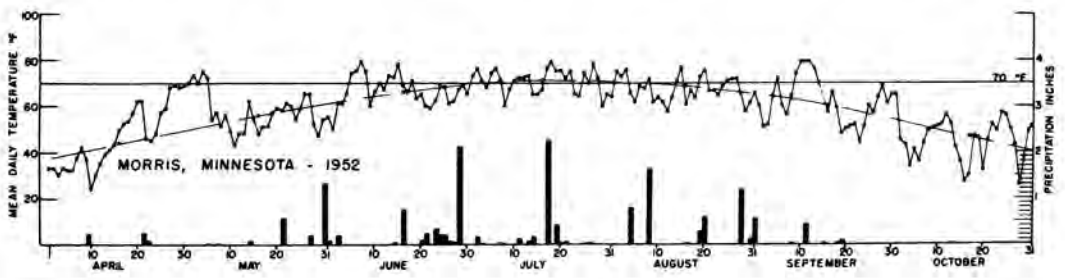

URBANA, ILLINOIS - 1952
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

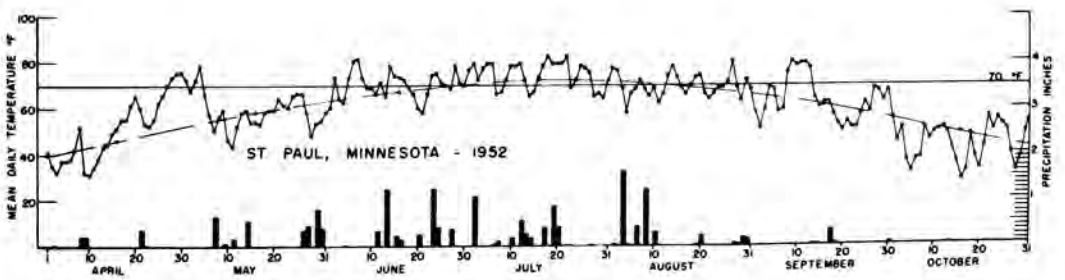

CLAYTON, ILLINOIS - 1952
(RUSHVILLE TEMPERATURE)
(GOLDEN PRECIPITATION)
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

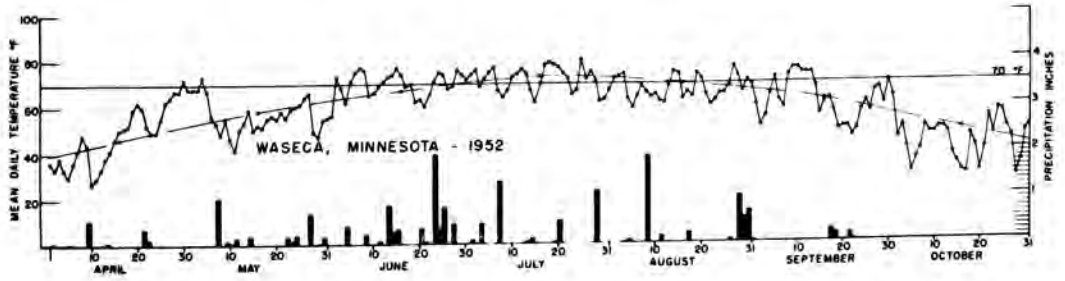

BROWNSTOWN, ILLINOIS - 1952
(VANDALIA)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

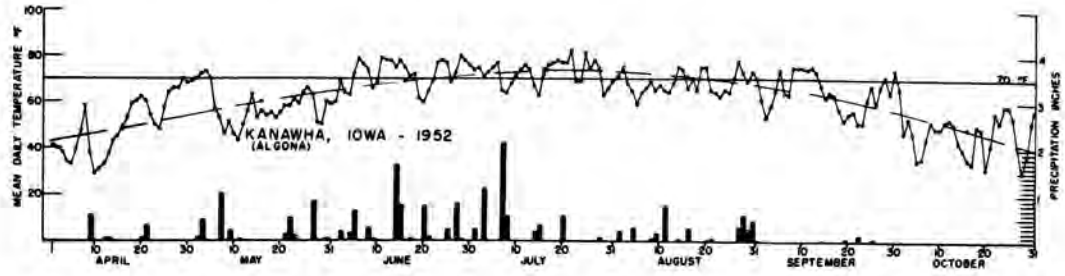

TRENTON, ILLINOIS - 1952
(BELLEVILLE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

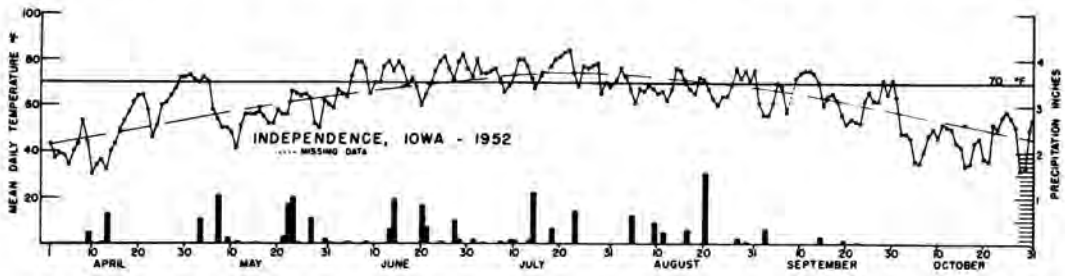

ELDORADO, ILLINOIS - 1952
(HARRISBURG)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

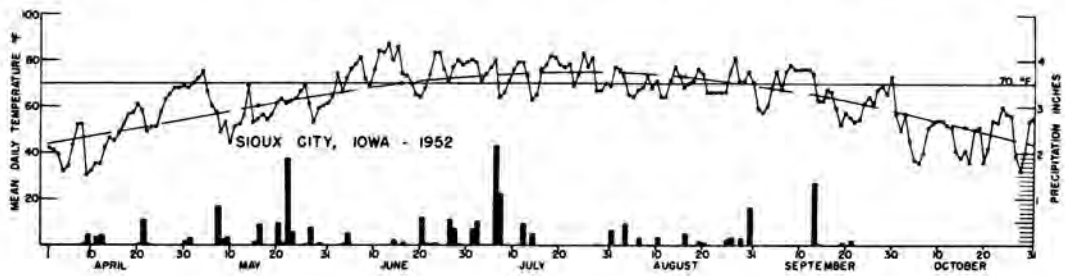

MORRIS, MINNESOTA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

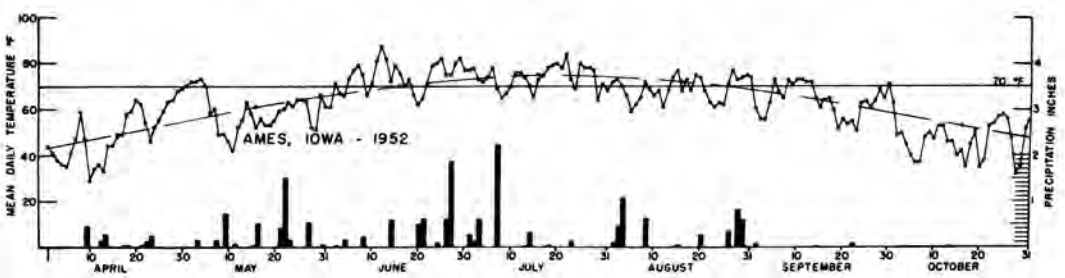

ST PAUL, MINNESOTA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

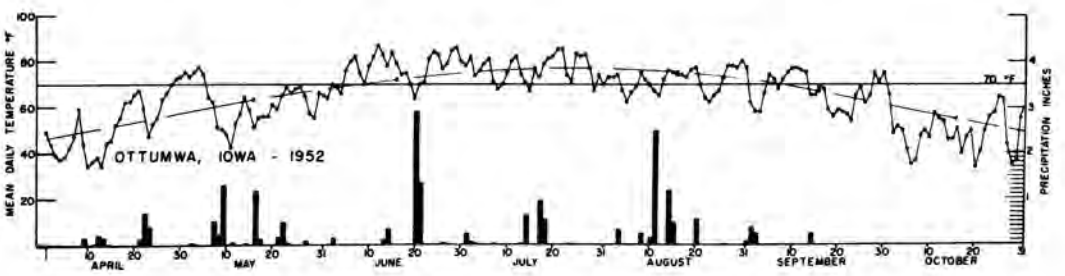

WASECA, MINNESOTA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

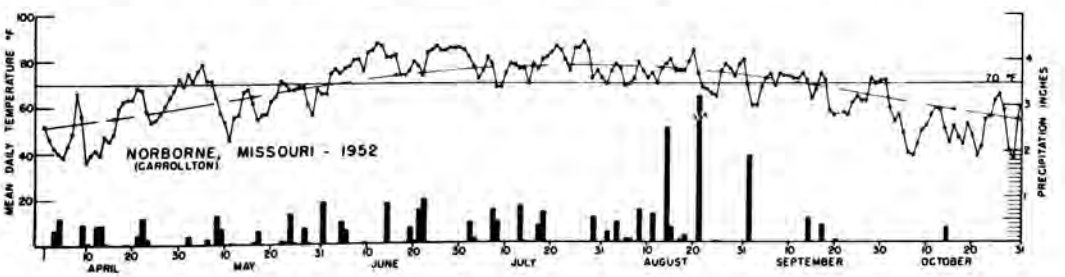

MEAN DAILY TEMPERATURE °F
KANAWHA, IOWA - 1952
(ALGONA)
70 °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

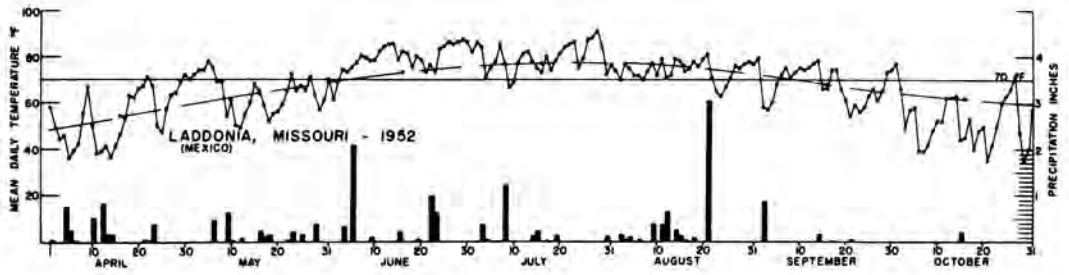

MEAN DAILY TEMPERATURE °F
INDEPENDENCE, IOWA - 1952
---- MISSING DATA
70 °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

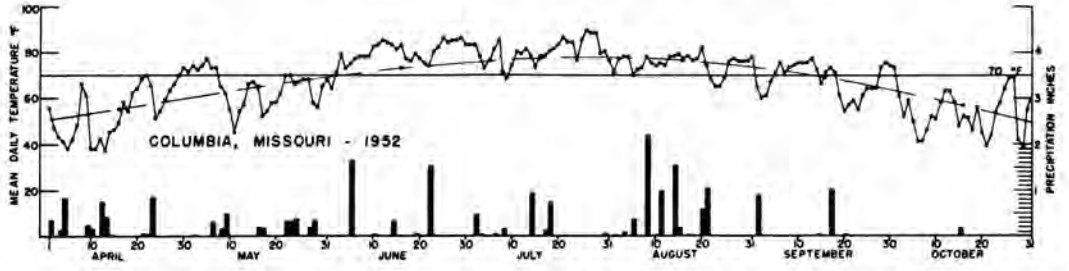

MEAN DAILY TEMPERATURE °F
SIOUX CITY, IOWA - 1952
70 °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

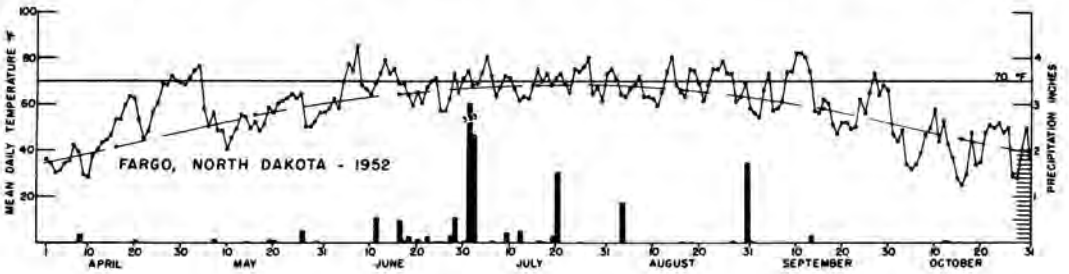

MEAN DAILY TEMPERATURE °F
AMES, IOWA - 1952
70 °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

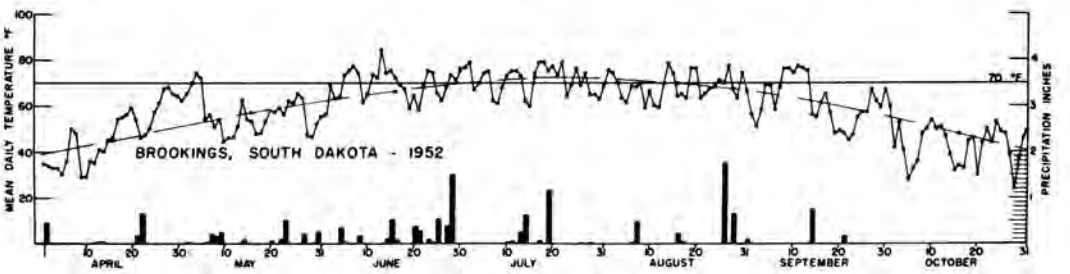

MEAN DAILY TEMPERATURE °F
OTTUMWA, IOWA - 1952
70 °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

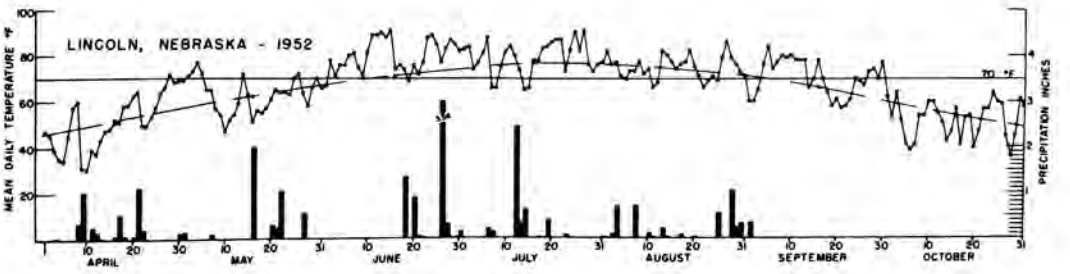

MEAN DAILY TEMPERATURE °F
NORBORNE, MISSOURI - 1952
(CARROLLTON)
70 °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

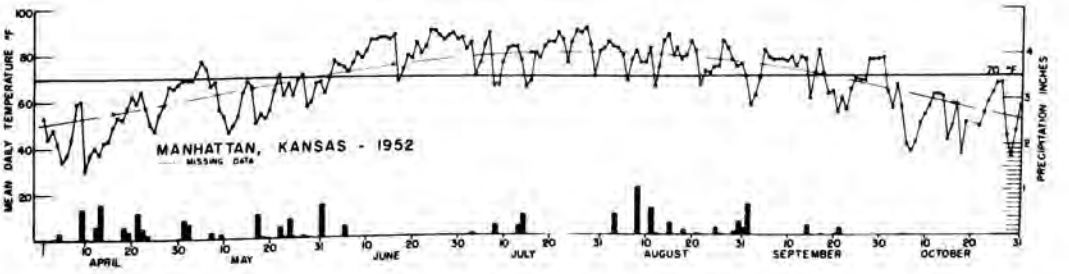

LADDONIA, MISSOURI - 1952
(MEXICO)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


COLUMBIA, MISSOURI - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


FARGO, NORTH DAKOTA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


BROOKINGS, SOUTH DAKOTA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


LINCOLN, NEBRASKA - 1952
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


MANHATTAN, KANSAS - 1952
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER