RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART I. NORTH CENTRAL STATES

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1953
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[2]The results of the program of cooperative soybean disease research, conducted by the Section 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.

INTRODUCTION

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

The first variety to be released as a product of the cooperative breeding program was Lincoln, distributed to seed producers in 1944. The latest variety, released in 1953, was Clark, the product of a second cycle of improvement, using Lincoln as one of the parents in the backcross. A total of twelve improved strains have been developed and released since the start of the cooperative work.

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

Uniform Test, Group 0, contains the strains that will bloom and mature under the longer days encountered during summer in the Dakotas, Minnesota, and northern Wisconsin. Group I contains strains generally adapted to South Dakota, the southern parts of Minnesota, Wisconsin, and Michigan, and the northern part of Ohio. Groups II, III, and IV, respectively, include strains adapted to locations farther south in the North Central States and to other areas of similar latitude. In general, each group is arranged to include strains differing in maturity by not over ten to fifteen days. Maturity of the strains is expressed as so many days earlier or later than some well-known check or reference variety in the group.

Temperature and rainfall graphs and a brief statement of weather conditions during the 1953 growing season are included as an aid to interpretation of the agronomic and chemical data. Conditions in the northern part of the North Central Region were normal while very unfavorable conditions prevailed further south. This is well illustrated in the comparative yields of selected strains occurring in the Uniform Tests during the 1952 and 1953 seasons. Group 0 yields were the same in both seasons, while Group I yields were 3.6 bushels per acre lower in 1953, Group II yields were 3.4 bushels less and Groups III and IV yields over 9 bushels less in 1953.

The environment in 1953 was so unfavorable at many locations that bean quality was severely reduced. Poor bean quality affected reliability of the iodine number value as determined by the refractive index method, to the extent that no values are reported. Percentage of acetone insoluble material in the oil, which is a rough but very rapid method of estimating refining loss, was determined on many oil samples and gives some indication of the effect of the adverse season on bean

quality. These should not be considered as a complete measure of refining loss as free fatty acids are not acetone insoluble, but the values reported may be helpful approximations in studying the effect of climate on chemical composition during the 1953 season.

COOPERATING AGENCIES AND PERSONNEL FOR THE NORTH CENTRAL REGION

Section of Forage Crops and Diseases, Beltsville, Maryland

D. F. Beard, Agronomist in Charge
H. W. Johnson, Research Agronomist, Director and Project Leader

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[1]Soybean pathology research under Project 1-4010/4.

COLLABORATORS IN THE NORTH CENTRAL STATES

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

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

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LOCATION OF COOPERATIVE NURSERIES

Location	Cooperator
Ottawa, Ontario	F. Dimmock, Central Exp. Farm
Guelph, Ontario	P. H. Van Schaik, Ontario Agr. College
State College, Pennsylvania	John B. Washko, Pa. Agr. Exp. Sta.
Landisville, Pennsylvania	Substation of Pennsylvania Agr. Exp. Sta.
New Brunswick, New Jersey	E. H. Jurgelski, N. J. Agr. Exp. Sta.
Burlington, New Jersey	W. Lippincott
Newark, Delaware	Henry W. Indyk, Del. Agr. Exp. Sta.
Georgetown, Delaware	Georgetown Substation, Del. Agr. Exp. Sta.
Trappe, Maryland	Willis Farms, Inc.
Beltsville, Maryland	R. C. Leffel, Forage Crops & Diseases, U. S. D. A.
Hoytville, Ohio	Lewis C. Saboe, Northwest Substation
Wooster, Ohio	Lewis C. Saboe, Ohio Agr. Exp. Sta.
Columbus, Ohio	Lewis C. Saboe, Ohio State Univ.
Mt. Healthy, Ohio	W. L. Jones, Hamilton County Exp. Farm
East Lansing, Michigan	H. R. Pettigrove, Mich. Agr. Exp. Sta.
Deerfield, Michigan	Ross Liedel, Farmer Cooperator
Walkerton, Indiana	Elburt F. Place, Farmer Cooperator
Bluffton, Indiana	Gerald & Homer Bayless, Farmer Cooperators
Lafayette, Indiana	O. W. Luetkemeier, Purdue Agr. Exp. Sta.
Greenfield, Indiana	Benjamin Roney & James Marx, Farmer Cooperators
Worthington, Indiana	Frederic Sloan, Farmer Cooperator
Spooner, Wisconsin	Carl Rydberg, Spooner Br., Wis. Agr. Exp. Sta.
Fall City, Wisconsin	J. H. Torrie, 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, Farmer Cooperator
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	J. W. Lambert, S. E. Branch, Minn. Agr. Exp. Sta.
Cresco, Iowa	Howard County Agr. Exp. Assoc.
Kanawha, Iowa	Northern Iowa Agr. Exp. Assoc.
Marcus, Iowa	John Sand, Farmer Cooperator
Independence, Iowa	Carrington-Clyde Exp. Assoc.
Ames, Iowa	Iowa Agr. Exp. Sta.
Ottumwa, Iowa	A. E. Newquist, Farmer Cooperator
Norborne, Missouri	Marvin Moentmann, Farmer Cooperator
Laddonia, Missouri	Carver Brown, Farmer Cooperator
Columbia, Missouri	Missouri Agr. Exp. Sta.
Sikeston, Missouri	Missouri Agr. Exp. Sta.
Casselton, North Dakota	Mark Jendro, N. D. Agr. Exp. Sta.
Fargo, North Dakota	T. E. Stoa, N. D. Agr. Exp. Sta.
Dakota City, Nebraska	Jack Orr, Farmer Cooperator
Lincoln, Nebraska	D. G. Hanway, Nebraska 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, Kans. State College Exp. Field

LOCATION OF COOPERATIVE NURSERIES (CONTINUED)

Location	Kind of Soil	Uniform		Group Tests			Prel. Test
		0	I	II	III	IV	IV
Ottawa, Ontario	Grenville Sandy Loam	x					
Guelph, Ontario	Guelph Sandy Loam	x	x				
State College, Pa.	Hagerstown Silt Loam		x	x			
Landisville, Pa.	Dunmore Silt Loam				x	x	
New Brunswick, N.J.	Sassafras Sandy Loam			x			
Burlington, N. J.	Sassafras Sandy Loam			x			
Newark, Del.	Sassafras Loam			x	x		
Georgetown, Del.	Norfolk Loamy Sand				x	x	
Trappe, Md.	Sandy Loam					x	
Beltsville, Md.	Riverdale Silt Loam				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	x	
Mt. Healthy, Ohio	Fincastle Silt Loam			x	x		
East Lansing, Mich.	Houghton (Muck)	x					
Deerfield, Mich.	Brookston (Mineral)	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	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.	Brenton Silt L. & Harpster Silty C. L.		x	x			
Dwight, Ill.	Elliot Silt Loam			x	x		
Urbana, Ill.	Flanagan and Catlin Silt Loam			x	x	x	
Clayton, Ill.	Herrick Silt Loam				x	x	
Stonington, Ill.	Hartsburg Silty Clay Loam				x	x	
Brownstown, Ill.	Cisne Silt Loam				x	x	
Trenton, Ill.	Bogota Silt Loam						x
Eldorado, Ill.	Drab Clay 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		
Norborne, Mo.	Buckner Loam				x	x	
Laddonia, Mo.	Putnam Silt Loam				x	x	
Columbia, Mo.	Putnam Silt Loam				x	x	x
Sikeston, Mo.	Lintonia Sandy Loam						x
Casselton, N. D.	Bearden Silty Clay Loam	x					
Fargo, N. D.	Fargo Clay	x					
Dakota City, Nebr.	Wabash Silty Clay 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. Percentage composition of the seed is expressed on a dry basis (moisture free). Seed weight for each strain 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
Hardome (O-3-33)	Dominion Exp. Farm, Harrow	Sel. from Mandarin x (Mandarin x A.K.)
Mandarin (Ottawa)	Central Exp. Farm, Ottawa	Sel. from Mandarin
Renville	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.)
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-1460	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau
W9S-2703	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Flambeau
WOS-3138	Wis. A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Flambeau
WOS-3180	Wis. A.E.S. & U.S.R.S.L.	Sel. from Mukden x Flambeau
WOS-3334	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Flambeau
WOS-3386	Wis. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Flambeau

Data for 1953 Group O Uniform Tests were reported from twelve locations and are presented in Tables 1 through 8. The average plot yield of all locations, when only those 1953 entries which were also grown in 1952 are considered, was approximately the same in both years. Of the twelve locations from which data were obtained in 1953, only Ottawa and Guelph, Ontario; Spooner, Wisconsin; and Casselton, North Dakota had lower yields in 1953 than in 1952.

Five new entries, W9S-2703, WOS-3138, WOS-3180, WOS-3334, and WOS-3386, were included in the 1953 Group O tests. Of these five, WOS-3386 and W9S-2703 were the highest yielders. WOS-3386 ranked third in yield as an average of all tests, 1.4 bushels less than W6S-292, the first ranking strain, and was one day earlier in maturity. W9S-2703, with an average yield 1.7 bushels less than W6S-292, was 2.3 days earlier. WOS-3386 did, however, show considerable tendency to lodge.

Renville and O-48-36 have been tested in Group O for only three years (Tables 5 and 6). As an average of all tests, these two entries have ranked fourth and sixth, respectively. During this three-year period, Renville has had the highest oil content of all entries but has averaged 4.4 days later in maturity and 2.8 bushels less than W6S-292, the first ranking strain. Renville has ranked first in yield at Hoytville and Columbus, Ohio, and St. Paul, Minnesota, while the highest yield rank attained by O-48-36 was third at Rosholt, South Dakota.

W6S-292, Capital, Mandarin (Ottawa), W8S-1460, and Flambeau have been tested in Group O for at least four years (Tables 7 and 8). During this period these varieties have ranked in yield in the order listed. W6S-292 was outstanding in this group of five entries since it yielded 2.4 bushels more and was 1.8 days earlier in maturity than Capital, the second ranking variety. W6S-292 ranked first or second

at all locations and had a satisfactory oil content and resistance to lodging although its lodging score was not as good as either Mandarin (Ottawa) or W8S-1460.

Table 1. Summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1953.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	12	7	9	10	8	12	12	12
W6S-292	36.1	+0.3	2.7	33	2.0	15.6	39.9	20.3
Renville	35.0	+3.3	2.1	33	2.3	15.4	39.2	21.1
WOS-3386	34.7	-0.7	3.1	34	1.9	14.4	40.9	20.1
Mandarin (Ottawa)	34.6	0	1.9	31	1.6	18.2	41.6	20.0
W9S-2703	34.4	-2.0	2.2	31	1.9	16.0	40.9	20.6
Capital	33.9	+1.0	3.4	34	1.9	12.4	40.2	20.8
WOS-3180	33.9	-0.7	2.7	32	2.8	16.4	41.7	19.7
L6-8275	33.7	+4.0	2.3	35	2.3	13.4	40.3	20.3
W8S-1460	33.1	-3.6	2.3	30	2.1	16.5	40.5	20.5
WOS-3138	32.8	-1.4	2.4	32	2.1	16.1	41.2	20.3
WOS-3334	31.8	-2.0	3.1	33	1.9	15.5	40.1	20.9
O-48-36	31.7	-2.6	2.1	34	1.8	15.5	39.6	20.3
Hardome	31.7	+0.3	3.1	38	2.4	15.2	40.5	20.3
Flambeau	27.2	-5.1	3.3	30	2.5	16.2	41.5	19.7
Mean	33.2		2.6	33	2.1	15.5	40.6	20.4

[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, 1953.

Strain	Mean of 12 Tests	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Ohio	East Lansing Mich.
W6S-292	36.1	32.9	26.0	27.1	33.0	42.1
Renville	35.0	33.3	23.6	30.4	35.2	42.0
W0S-3386	34.7	29.3	23.3	28.4	33.7	46.7
Mandarin (Ottawa)	34.6	31.6	23.9	31.2	33.3	43.0
W9S-2703	34.4	31.7	24.0	31.9	32.1	47.3
Capital	33.9	32.7	24.4	28.5	33.4	41.5
W0S-3180	33.9	30.2	24.4	27.7	32.8	49.1
L6-8275	33.7	26.7	22.4	31.9	31.5	43.0
W8S-1460	33.1	30.4	23.7	26.2	29.3	50.4
W0S-3138	32.8	29.7	21.4	27.6	26.1	40.4
W0S-3334	31.8	32.1	21.8	28.3	28.5	48.5
0-48-36	31.7	29.7	23.0	30.2	30.2	37.8
Hardome	31.7	34.0	19.8	29.1	25.1	38.4
Flambeau	27.2	33.0	21.2	21.8	19.4	35.5
Mean	33.2	31.2	23.1	28.6	30.3	43.3
Coef. of Var. (%)		9.7	9.0	--	--	--
Bu. Nec. for Sig. (5%)		N.S.	2.9	--	--	--
Row Spacing (In.)		30	24	28	28	28
		Yield Rank				
W6S-292		4	1	12	5	8
Renville		2	7	4	1	9
W0S-3386		13	8	8	2	5
Mandarin (Ottawa)		8	5	3	4	6
W9S-2703		7	4	1	7	4
Capital		5	2	7	3	10
W0S-3180		10	2	10	6	2
L6-8275		14	10	1	8	6
W8S-1460		9	6	13	10	1
W0S-3138		11	12	11	12	11
W0S-3334		6	11	9	11	3
0-48-36		11	9	5	9	13
Hardome		1	14	6	13	12
Flambeau		3	13	14	14	14

Table 2. (Continued)

Strain	Deer-field Mich.	Spooner Wis.	Fall City Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.
W6S-292	39.6	40.1	36.1	36.4	51.1	37.0	31.2
Renville	44.4	35.7	33.4	31.6	49.6	33.1	27.4
W0S-3386	43.5	34.7	37.9	37.1	38.1	34.9	29.2
Mandarin (Ottawa)	40.5	37.8	37.5	33.7	38.9	37.2	26.2
W9S-2703	42.1	35.9	34.2	35.9	36.2	32.1	29.3
Capital	36.2	33.2	33.3	35.0	44.2	35.6	28.4
W0S-3180	38.3	33.4	34.9	34.6	40.3	32.1	28.5
L6-8275	44.0	33.9	30.7	34.6	50.0	29.3	25.8
W8S-1460	36.5	35.2	35.2	31.2	38.7	31.4	29.4
W0S-3138	42.7	36.2	33.3	33.9	39.2	34.8	28.2
W0S-3334	36.2	29.4	32.3	35.3	32.9	27.8	28.1
0-48-36	40.0	34.8	32.3	36.9	29.8	31.2	24.6
Hardome	36.8	33.0	33.3	36.6	40.2	27.5	26.2
Flambeau	25.7	22.2	29.5	29.9	33.2	28.6	26.7
Mean	39.0	34.0	33.9	34.5	40.2	32.3	27.8
Coef. of Var. (%)	9.6	8.2	8.0	10.6	13.5	--	--
Bu. Nec. for Sig. (5%)	5.4	4.0	3.8	5.2	7.7	3.9	3.6
Row Spacing (In.)	22	36	36	24	24	24	24
	Yield Rank						
W6S-292	8	1	3	4	1	2	1
Renville	1	5	7	12	3	6	9
W0S-3386	3	8	1	1	10	4	4
Mandarin (Ottawa)	6	2	2	11	8	1	11
W9S-2703	5	4	6	5	11	7	3
Capital	12	11	8	7	4	3	6
W0S-3180	9	10	5	8	5	7	5
L6-8275	2	9	13	8	2	11	13
W8S-1460	11	6	4	13	9	9	2
W0S-3138	4	3	8	10	7	5	7
W0S-3334	12	13	11	6	13	13	8
0-48-36	7	7	11	2	14	10	14
Hardome	10	12	8	3	6	14	11
Flambeau	14	14	14	14	12	12	10

Table 3. Summary of maturity data, days earlier (-) or later (+) than Mandarin (Ottawa), and lodging data for the strains in the Uniform Test, Group C, 1953.

Strain	Mean of 7 Tests	Ottawa Ontario	Guelph Ontario	Columbus Ohio	East-Lansing Mich.	Deerfield Mich.
W6S-292	+0.3	+2	+2			
Renville	+3.3	+4	+3			
WOS-3386	-0.7	-1	0			
Mandarin (Ottawa)	0	0	0			
W9S-2703	-2.0	+2	+2			
Capital	+1.0	-3	-1			
WOS-3180	-0.7	-1	+1			
L6-8275	+4.0	+5	+2			
W8S-1460	-3.6	-3	-1			
WOS-3138	-1.4	0	-1			
WOS-3334	-2.0	0	0			
0-48-36	-2.6	-8	-3			
Hardome	+0.3	-1	0			
Flambeau	-5.1	-2	-1			
Date planted		5/14	5/20			
Mand. (Ott.) matured		9/26	9/26			
Days to mature	119	135	129			

	Mean of 9 Tests[1]	Lodging				
W6S-292	2.7	1.0	1.0	2.0	2.5	3.0
Renville	2.1	1.0	1.0	1.0	2.0	2.0
WOS-3386	3.1	1.0	1.0	2.3	2.0	3.0
Mandarin (Ottawa)	1.9	1.0	1.0	1.0	2.0	3.0
W9S-2703	2.2	1.0	1.0	1.5	2.5	2.0
Capital	3.4	1.0	1.0	3.0	3.0	5.0
WOS-3180	2.7	1.0	1.0	2.0	2.5	4.0
L6-8275	2.3	1.0	1.0	1.0	2.0	3.0
W8S-1460	2.3	1.0	1.0	1.3	2.0	2.0
WOS-3138	2.4	1.0	1.0	1.8	2.5	2.0
WOS-3334	3.1	1.0	1.0	2.8	2.5	4.0
0-48-36	2.1	1.0	1.0	1.3	2.0	3.0
Hardome	3.1	1.0	1.0	2.5	2.5	4.0
Flambeau	3.3	1.0	1.0	3.2	2.5	4.0
Mean	2.6	1.0	1.0	1.9	2.3	3.1

[1]Ottawa and Guelph, Ontario 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.
W6S-292	-2		+2	- 2	+1	-1
Renville	+1		+4	+ 1	+6	+4
W0S-3386	-7		+1	- 1	+1	+2
Mandarin (Ottawa)	0		0	0	0	0
W9S-2703	-7		-1	- 5	-3	-2
Capital	+2		+1	+ 2	+2	+4
W0S-3180	-4		+1	- 2	+1	-1
L6-8275	+4		+6	+ 2	+6	+3
W8S-1460	-7		-5	- 6	0	-3
W0S-3138	-7		-1	- 2	+1	0
W0S-3334	-9		+1	- 9	+4	-1
0-48-36	0		+1	- 2	-2	-4
Hardome	-1		+1	- 1	+3	+1
Flambeau	-9		-6	-11	-3	-4
Date planted	5/29		5/25	5/15	6/5	6/4
Mand. (Ott.) matured	9/22		9/11	9/18	9/21	9/22
Days to mature	116		109	126	108	110

	Lodging					
W6S-292	3.0	1.8	1.1	5.0	2.5	3.0
Renville	1.8	1.9	1.0	3.9	2.0	2.5
W0S-3386	3.5	2.5	2.0	5.0	3.5	4.5
Mandarin (Ottawa)	1.8	1.4	1.0	4.6	1.5	1.0
W9S-2703	2.5	1.5	1.0	4.6	2.5	2.0
Capital	3.5	3.1	2.2	5.0	3.0	3.0
W0S-3180	2.8	2.0	1.1	5.0	2.5	2.0
L6-8275	3.0	1.6	1.1	4.4	2.5	2.0
W8S-1460	2.5	1.3	2.5	4.9	2.0	2.0
W0S-3138	3.0	2.3	1.1	4.8	2.0	2.5
W0S-3334	4.0	2.0	1.0	5.0	4.0	3.0
0-48-36	2.5	1.4	1.0	4.9	2.0	1.0
Hardome	3.5	2.6	2.5	5.0	2.0	2.5
Flambeau	4.0	2.8	1.1	5.0	4.0	3.0
Mean	3.0	2.0	1.4	4.8	2.6	2.4

Table 4. Summary of height data and percentage oil for the strains in the Uniform Test, Group O, 1953.

Strain	Mean of 10 Tests	Ottawa Ontario	Guelph Ontario	Hoyt-ville Ohio	Colum-bus Ohio	East Lansing Mich.
W6S-292	33	26	38		32	35
Renville	33	27	39		33	33
WOS-3386	34	26	38		33	34
Mandarin (Ottawa)	31	24	34		29	36
W9S-2703	31	26	34		29	31
Capital	34	25	36		34	38
WOS-3180	32	24	36		29	35
L6-8275	35	26	38		34	35
W8S-1460	30	23	33		27	33
WOS-3138	32	23	35		29	37
WOS-3334	33	27	37		32	35
O-48-36	34	27	40		33	34
Hardome	38	30	41		37	36
Flambeau	30	24	34		28	35
Mean	33	26	37		31	35

	Mean of 12 Tests	Percentage of Oil				
W6S-292	20.3	18.6	20.7	20.2	20.8	20.7
Renville	21.1	19.5	20.9	21.4	21.9	21.0
WOS-3386	20.1	19.8	20.1	19.0	20.9	19.6
Mandarin (Ottawa)	20.0	18.2	19.5	19.0	21.4	20.2
W9S-2703	20.6	18.3	21.6	20.5	21.6	19.9
Capital	20.8	18.1	21.7	20.6	21.1	21.1
WOS-3180	19.7	17.5	19.9	19.2	20.9	19.4
L6-8275	20.3	18.2	20.4	19.4	20.1	20.9
W8S-1460	20.5	18.0	19.9	20.0	21.5	20.8
WOS-3138	20.3	17.9	20.7	20.0	22.7	19.9
WOS-3334	20.9	19.3	21.2	20.3	22.4	20.1
O-48-36	20.3	18.6	19.7	20.4	21.5	21.4
Hardome	20.3	18.5	20.9	19.3	21.3	20.5
Flambeau	19.7	17.6	20.6	19.2	21.0	18.2
Mean	20.4	18.4	20.6	19.9	21.4	20.3

Table 4. (Continued)

Strain	Deer-field Mich.	Spooner Wis.	Fall City Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.
W6S-292	33	35	33	29	41		29
Renville	33	35	35	32	36		30
W0S-3386	32	35	35	33	41		30
Mandarin (Ottawa)	31	33	30	28	37		29
W9S-2703	30	35	31	28	35		27
Capital	33	38	34	34	42		28
W0S-3180	30	36	32	31	39		30
L6-8275	36	39	38	34	42		29
W8S-1460	29	33	31	27	39		27
W0S-3138	31	34	32	28	40		29
W0S-3334	32	35	34	32	39		30
0-48-36	35	40	36	30	40		29
Hardome	37	41	40	37	46		31
Flambeau	28	30	30	26	37		27
Mean	32	36	34	31	40		29

	Percentage of Oil						
W6S-292	20.0	19.1	19.9	21.9	22.1	18.2	21.0
Renville	21.6	19.5	21.0	22.4	22.6	20.7	21.0
W0S-3386	20.1	18.7	19.8	21.0	21.3	20.8	20.3
Mandarin (Ottawa)	20.6	19.4	20.3	21.1	21.2	19.8	19.3
W9S-2703	20.4	19.2	20.4	21.7	21.9	19.9	21.8
Capital	21.4	19.6	20.4	22.0	22.1	20.5	21.0
W0S-3180	19.2	18.1	19.2	20.9	21.2	20.2	21.2
L6-8275	20.3	19.2	19.6	22.3	22.1	20.7	20.6
W8S-1460	21.2	19.8	20.9	21.4	21.1	20.5	20.6
W0S-3138	19.8	19.3	19.7	21.4	21.4	19.9	21.4
W0S-3334	20.7	19.1	21.5	22.3	21.8	20.2	21.9
0-48-36	20.4	19.1	20.0	21.6	21.4	20.1	19.5
Hardome	20.0	19.3	19.7	20.7	21.7	20.6	20.6
Flambeau	20.1	18.0	20.3	20.7	21.4	18.9	20.2
Mean	20.4	19.1	20.2	21.5	21.7	20.1	20.7

Table 5. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group 0, 1951-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	34	23	22	32	30	34	38	38
W6S-292	34.0	-0.6	2.3	30	2.0	16.1	40.5	19.8
Mandarin (Ottawa)	32.1	0	1.4	29	1.7	18.9	42.1	19.4
Capital	31.6	+1.3	2.9	32	2.0	13.2	40.9	20.0
Renville	31.2	+3.8	1.7	31	2.3	16.4	40.0	20.4
W8S-1460	30.3	-4.0	1.7	29	2.2	16.5	41.2	19.8
0-48-36	29.2	-1.6	1.7	31	2.1	16.4	40.6	19.6
Flambeau	25.3	-6.0	2.8	28	2.4	16.1	42.0	18.8
Mean	30.5		2.1	30	2.1	16.2	41.0	19.7

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

Table 6. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group 0, 1951-53.

Strain	Mean of 34 Tests	Ottawa Ontario	Guelph Ontario	Hoytville Ohio	Columbus Ohio	East Lansing Mich.	Deerfield Mich.
Years Tested		1951-1953	1951-1953	1952-1953	1951-1953	1951-1953	1951-1953
W6S-292	34.0	38.9	32.3	29.7	25.8	34.2	38.5
Mandarin (Ottawa)	32.1	35.7	28.6	29.4	25.1	34.3	38.9
Capital	31.6	37.2	29.9	28.4	25.1	32.1	34.9
Renville	31.2	35.6	27.9	30.7	27.5	34.8	37.9
W8S-1460	30.3	34.0	28.8	23.5	19.4	35.9	33.7
0-48-36	29.2	34.0	28.1	29.0	21.9	29.7	32.1
Flambeau	25.3	33.6	27.7	20.3	14.9	28.0	23.8
Mean	30.5	35.6	29.0	27.3	22.8	32.7	34.3
		Yield Rank					
W6S-292		1	1	2	2	4	2
Mandarin (Ottawa)		3	4	3	3	3	1
Capital		2	2	5	3	5	4
Renville		4	6	1	1	2	3
W8S-1460		5	3	6	6	1	5
0-48-36		5	5	4	5	6	6
Flambeau		7	7	7	7	7	7

Table 6. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Morris Minn.	St. Paul Minn.	Cassel-ton N.D.	Fargo N.D.	Rosholt S.D.
Years Tested	1951-1953	1951-1953	1951-1953	1952-1953	1952-1953	1951-1953	1951-1952
W6S-292	36.9	28.9	32.5	40.2	38.1	23.5	21.5
Mandarin (Ottawa)	33.1	30.4	30.5	33.6	38.9	30.3	16.6
Capital	30.3	27.6	34.2	40.0	37.5	21.7	15.8
Renville	29.2	25.2	31.3	42.3	37.7	18.1	14.4
W8S-1460	34.5	28.5	29.5	34.9	34.4	27.0	16.1
0-48-36	31.5	27.0	29.4	26.3	35.0	17.3	16.2
Flambeau	26.0	24.1	28.9	27.6	30.7	21.8	10.8
Mean	31.6	27.4	30.9	35.0	36.0	22.8	15.9
	Yield Rank						
W6S-292	1	2	2	2	2	3	1
Mandarin (Ottawa)	3	1	4	5	1	1	2
Capital	5	4	1	3	4	5	5
Renville	6	6	3	1	3	6	6
W8S-1460	2	3	5	4	6	2	4
0-48-36	4	5	6	7	5	7	3
Flambeau	7	7	7	6	7	4	7

Table 7. Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group O, 1950-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	45	32	31	44	42	45	49	49
W6S-292	33.1	-1.0	2.3	31	1.9	16.1	40.7	19.6
Capital	30.7	+0.8	2.7	32	2.1	13.4	41.3	19.8
Mandarin (Ottawa)	30.7	0	1.5	30	1.8	19.0	42.5	19.1
W8S-1460	29.7	-4.5	1.7	29	2.1	16.4	41.3	19.7
Flambeau	25.5	-7.4	2.7	29	2.4	15.9	42.3	18.6
Mean	29.9		2.2	30	2.1	16.2	41.6	19.4

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

Table 8. Four-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group O, 1950-53.

Strain	Mean of 45 Tests	Ottawa Ontario	Guelph Ontario	Columbus Ohio	Deerfield Mich.
Years Tested		1950-1953	1950-1953	1950-1953	1950-1953
W6S-292	33.1	39.6	31.8	26.6	37.7
Capital	30.7	39.1	28.5	25.2	33.9
Mandarin (Ottawa)	30.7	35.9	27.8	25.0	37.8
W8S-1460	29.7	35.8	27.0	20.6	31.3
Flambeau	25.5	34.7	27.0	16.3	24.3
Mean	29.9	37.0	28.4	22.7	33.0
		Yield Rank			
W6S-292		1	1	1	2
Capital		2	2	2	3
Mandarin (Ottawa)		3	3	3	1
W8S-1460		4	4	4	4
Flambeau		5	4	5	5

[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.
Years Tested	1950-1953	1950-1953	1950-1953	1950 1952-53	1950-1953	1950-1952
W6S-292	34.1	28.8	31.0	36.4	24.0	19.5
Capital	26.9	26.9	32.8	36.4	21.4	16.5
Mandarin (Ottawa)	29.4	27.8	28.3	30.7	21.4	15.9
W8S-1460	31.5	27.5	29.1	32.9	26.3	16.4
Flambeau	25.3	23.9	28.6	26.7	21.5	12.4
Mean	29.4	27.0	30.0	32.6	22.9	16.1
	Yield Rank					
W6S-292	1	1	2	1	2	1
Capital	4	4	1	1	4	2
Mandarin (Ottawa)	3	2	5	4	4	4
W8S-1460	2	3	3	3	1	3
Flambeau	5	5	4	5	3	5

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
Mandarin (Ottawa)	Central Exp. Farm, Ottawa	Sel. from Mandarin
Monroe	Ohio A.E.S. & U.S.R.S.L.	Sel. from Mukden x Mandarin
AOK-913	Iowa A.E.S. & U.S.R.S.L.	Sel. from Richland x Mandarin (Ottawa)
AOK-2206	Iowa A.E.S. & U.S.R.S.L.	Sel. from Hawkeye x Mandarin (Ottawa)
AOK-3808	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
L6-8275	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)

Uniform Test, Group I, was grown at fifteen locations in 1953 and data from these tests are summarized in Tables 9 through 14. When only the five Group I entries grown in both 1952 and 1953 are considered, the average plot yield in 1953 was 3.6 bushels per acre less than in 1952. 1953 yields were lower than those of 1952 at ten of the fifteen locations where yield data were obtained. Only Columbus, Ohio; Deerfield, Michigan; Madison, Wisconsin; Shabbona, Illinois; and St. Paul, Minnesota, had a higher average yield in 1953.

Three new strains selected at Kanawha, Iowa, AOK-913, AOK-2206, and AOK-3808, were included in Uniform Test, Group I, for the first time in 1953 (Tables 9 through 12). As an average of fourteen tests of these three strains, AOK-2206 ranked first in yield, followed in order by AOK-3808, and AOK-913, there being a .5 bushel decrease between each adjacent pair. Strain AOK-3808 did, however, rank first in yield at Shabbona, Illinois; Waseca, Minnesota; and Cresco and Kanawha, Iowa. It also had a higher oil content than either of the other two new entries. AOK-913 was approximately two days earlier than either AOK-2206 or AOK-3808 but was somewhat poorer in respect to lodging score. Considering the over-all 1953 averages, these three new entries were lower yielding than L6-8275 and ranged from three to five days later in maturity.

L6-8275, Blackhawk, Earlyana, Monroe, and Mandarin (Ottawa) have been included in Uniform Test, Group I, for at least five years (Tables 13 and 14). During this five-year period, these entries have ranked in yield in the order listed above with L6-8275 exceeding Blackhawk, the second ranking strain, by only .3 bushel. However, L6-8275 has averaged 5.6 days earlier than Blackhawk and has equalled or excelled Blackhawk in lodging resistance and oil content.

Table 9. Summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1953.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	14	10	11	12	12	15	15	15
L6-8275	30.4	+2.9	1.7	35	1.7	13.7	40.8	20.6
AOK-2206	29.2	+8.0	2.0	39	1.7	14.2	40.5	19.7
AOK-3808	28.7	+8.0	1.9	36	1.5	13.9	40.8	20.3
AOK-913	28.2	+5.9	2.3	37	1.8	15.0	40.4	19.8
Blackhawk	27.2	+7.6	2.2	36	1.7	14.2	40.0	20.8
Monroe	25.3	+7.7	2.8	42	1.8	13.6	41.7	19.8
Mandarin (Ottawa)	24.9	0	1.6	30	1.9	17.1	42.3	19.9
Earlyana	24.0	+9.3	3.1	40	2.4	14.4	41.9	19.6
Mean	27.2		2.2	37	1.8	14.5	41.1	20.1

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

Table 10. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1953.

Strain	Mean of 14 Tests[1]	Guelph Ontario	State College Pa.	Hoyt-ville Ohio	Wooster Ohio	Columbus Ohio	Deer-field Mich.	Walker-ton Ind.
L6-8275	30.4	20.1	18.5	32.8	19.0	32.7	33.5	38.9
AOK-2206	29.2	19.6	20.6	33.7	16.4	30.8	36.6	37.8
AOK-3808	28.7	17.0	20.2	28.3	15.7	31.2	31.6	38.7
AOK-913	28.2	19.7	21.4	29.8	16.4	30.1	33.2	36.9
Blackhawk	27.2	20.6	19.6	32.5	15.8	31.9	31.9	29.1
Monroe	25.3	17.0	17.1	26.6	16.5	31.0	30.1	33.9
Mandarin (Ottawa)	24.9	21.1	18.2	26.2	11.1	24.8	31.0	25.2
Earlyana	24.0	17.0	18.8	31.2	12.6	25.8	19.9	34.4
Mean	27.2	19.0	19.3	30.1	15.4	29.8	31.0	34.4
Coef. of Var. (%)		12.9	8.6	--	--	--	12.9	11.1
Bu. Nec. for Sig. (5%)		N.S.	2.5	--	--	--	5.8	6.7
Row Spacing (In.)		24	36	28	28	28	22	38
				Yield Rank				
L6-8275		3	6	2	1	1	2	1
AOK-2206		5	2	1	3	5	1	3
AOK-3808		6	3	6	6	3	5	2
AOK-913		4	1	5	3	6	3	4
Blackhawk		2	4	3	5	2	4	7
Monroe		6	8	7	2	4	7	6
Mandarin (Ottawa)		1	7	8	8	8	6	8
Earlyana		6	5	4	7	7	8	5

[1]Madison, Wisconsin not included in the mean.

Table 10. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Madi-son Wis.	Shab-bona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kana-wha Iowa
L6-8275	32.4	28.5	45.7	28.9	42.9	41.0	23.6	32.9
AOK-2206	29.8	22.2	44.4	27.2	37.8	39.8	23.6	33.3
AOK-3808	26.4	20.9	40.7	31.7	38.1	43.2	24.9	34.5
AOK-913	30.3	26.4	45.0	29.4	27.8	36.9	24.4	32.0
Blackhawk	32.0	23.5	42.7	27.8	31.4	33.1	20.6	30.3
Monroe	24.6	22.2	39.9	25.4	29.7	30.4	22.0	28.0
Mandarin (Ottawa)	37.5	31.4	38.8	23.7	27.7	32.2	13.6	24.8
Earlyana	23.4	18.5	--	28.0	27.1	27.8	22.4	29.4
Mean	29.6	24.2	42.5	27.8	32.8	35.6	21.9	30.7
Coef. of Var. (%)	8.7	6.8	11.1	5.7	19.0	12.4	9.4	6.6
Bu. Nec. for Sig. (5%)	3.8	2.3	N.S.	2.3	9.1	6.6	2.9	3.0
Row Spacing (In.)	36	36	36	40	24	24	42	40
				Yield Rank				
L6-8275	2	2	1	3	1	2	3	3
AOK-2206	5	5	3	6	3	3	3	2
AOK-3808	6	7	5	1	2	1	1	1
AOK-913	4	3	2	2	6	4	2	4
Blackhawk	3	4	4	5	4	5	7	5
Monroe	7	5	6	7	5	7	6	7
Mandarin (Ottawa)	1	1	7	8	7	6	8	8
Earlyana	8	8	--	4	8	8	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, 1953.

Strain	Mean of 10 Tests[1]	Guelph Ontario	State College Pa.	Columbus Ohio	Deerfield Mich.	Walkerton Ind.
L6-8275	+2.9	+ 2	+2	+ 4		+ 3
AOK-2206	+8.0	+12	+3	+10		+ 8
AOK-3808	+8.0	+ 7	+4	+10		+ 9
AOK-913	+5.9	+10	+2	+ 5		+ 7
Blackhawk	+7.6	+12	+3	+ 9		+ 8
Monroe	+7.7	+11	+2	+ 7		+10
Mandarin (Ottawa)	0	0	0	0		0
Earlyana	+9.3	+10	+4	+11		+10
Date planted		5/20	5/29	5/29		6/2
Mand. (Ott.) matured		9/28	9/18	9/2		9/11
Days to mature	113	131	112	96		101
	Mean of 11 Tests[2]	Lodging				
L6-8275	1.7	1.0	1.0	1.0	3.0	1.0
AOK-2206	2.0	1.2	1.0	1.0	4.0	1.0
AOK-3808	1.9	1.0	1.0	1.0	4.0	1.0
AOK-913	2.3	1.4	1.0	1.7	5.0	1.3
Blackhawk	2.2	1.8	1.0	1.5	5.0	1.0
Monroe	2.8	1.4	1.0	1.5	5.0	2.3
Mandarin (Ottawa)	1.6	1.0	1.0	1.0	2.0	1.0
Earlyana	3.1	2.1	1.0	3.0	5.0	2.5
Mean	2.2	1.4	1.0	1.5	4.1	1.4

[1]Madison, Wisconsin not included in the mean.
[2]State College, Pennsylvania and Madison, Wisconsin not included in the mean.

Table 11. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Madison Wis.	Shabbona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa
L6-8275	+ 4	+2	+3		+1	+ 3	+ 4	+ 4
AOK-2206	+ 8	+6	+8		+4	+10	+ 9	+10
AOK-3808	+ 8	+5	+8		+5	+10	+11	+11
AOK-913	+ 8	+4	+5		+3	+ 6	+ 8	+ 6
Blackhawk	+ 8	+8	+7		+4	+ 8	+ 8	+ 8
Monroe	+ 8	+4	+5		+6	+10	+10	+ 9
Mandarin (Ottawa)	0	0	0		0	0	0	0
Earlyana	+12	+9	--		+4	+11	+10	+12
Date planted	5/25	5/21	5/18		5/15	5/27	5/28	5/20
Mand. (Ott.) matured	9/22	9/10	9/5		9/24	9/17	9/12	9/6
Days to mature	120	112	110		132	113	107	109
	Lodging							
L6-8275	2.2	1.3	1.9	1.0	4.6	1.5	1.0	1.0
AOK-2206	3.2	2.4	1.9	1.0	4.5	1.6	1.0	1.0
AOK-3808	2.2	1.8	1.5	1.3	4.8	1.8	1.0	1.2
AOK-913	3.2	2.4	1.4	1.0	4.9	2.1	1.0	1.1
Blackhawk	2.2	2.1	2.4	1.0	4.6	2.4	1.0	1.2
Monroe	3.2	4.5	2.9	1.5	5.0	2.9	1.1	2.3
Mandarin (Ottawa)	1.7	1.0	1.0	1.3	4.8	1.3	1.0	1.0
Earlyana	3.7	3.8	--	2.3	4.9	3.5	1.1	2.6
Mean	2.7	2.4	1.9	1.3	4.8	2.1	1.0	1.4

Table 12. Summary of height data and percentage of oil for the strains in the Uniform Test, Group I, 1953.

Strain	Mean of 12 Tests[1]	Guelph Ontario	State College Pa.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	Deer-field Mich.	Walker-ton Ind.
L6-8275	35	44	23			34	36	35
AOK-2206	39	50	26			38	41	38
AOK-3808	36	44	23			36	40	37
AOK-913	37	47	25			38	38	40
Blackhawk	36	48	24			33	38	34
Monroe	42	51	26			42	44	46
Mandarin (Ottawa)	30	43	21			27	34	33
Earlyana	40	48	28			36	39	40
Mean	37	47	25			36	39	38
	Mean of 15 Tests	Percentage of Oil						
L6-8275	20.6	19.2	21.0	19.1	19.9	21.3	19.2	22.0
AOK-2206	19.7	18.7	19.9	18.8	18.3	20.0	18.9	22.9
AOK-3808	20.3	18.8	20.7	19.9	19.4	19.9	19.8	22.5
AOK-913	19.8	18.4	20.3	18.6	18.4	20.2	19.3	21.5
Blackhawk	20.8	20.3	21.3	19.5	20.0	21.5	19.9	22.4
Monroe	19.8	17.6	20.4	19.6	19.5	20.8	19.2	21.8
Mandarin (Ottawa)	19.9	17.5	20.9	18.9	19.1	20.6	19.6	21.4
Earlyana	19.6	19.8	20.1	19.4	17.8	19.3	18.5	21.1
Mean	20.1	18.8	20.6	19.2	19.1	20.5	19.3	22.0

[1]Madison, Wisconsin not included in the mean.

Table 12. (Continued)

Strain	Spooner Wis.	Fall City Wis.	Madi-son Wis.	Shab-bona Ill.	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kana-wha Iowa
L6-8275	38	37	36	32	41	36	27	35
AOK-2206	42	43	36	34	45	39	28	38
AOK-3808	38	40	39	34	43	37	28	36
AOK-913	40	39	41	35	45	37	26	37
Blackhawk	39	38	36	35	40	36	25	36
Monroe	42	48	31	39	50	42	30	41
Mandarin (Ottawa)	32	31	41	29	39	27	20	29
Earlyana	43	47	--	38	49	42	32	40
Mean	39	40	37	35	44	37	27	37
	Percentage of Oil							
L6-8275	19.0	19.0	20.8	21.7	21.7	20.8	21.6	22.2
AOK-2206	17.9	17.4	19.4	21.3	20.5	20.5	20.7	20.4
AOK-3808	18.4	16.9	20.6	21.9	21.0	20.9	21.5	22.3
AOK-913	17.9	18.0	20.0	22.2	21.0	20.2	20.8	20.6
Blackhawk	19.3	18.3	21.0	22.2	22.5	21.1	21.1	21.6
Monroe	17.5	17.9	20.6	20.4	20.7	20.0	20.2	20.6
Mandarin (Ottawa)	18.5	20.1	20.7	21.4	21.0	19.2	20.1	20.1
Earlyana	18.0	16.7	20.3	20.8	21.8	20.2	19.8	20.8
Mean	18.3	18.0	20.4	21.5	21.3	20.4	20.7	21.1

Table 13. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1949-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	73	53	61	68	62	73	73	73
L6-8275	29.7	+2.7	1.4	33	1.7	14.9	41.3	20.3
Blackhawk	29.4	+8.3	1.9	35	1.6	15.4	40.9	20.4
Earlyana	27.4	+9.9	2.9	38	2.2	15.7	42.6	19.6
Monroe	27.0	+6.4	2.3	39	1.5	14.7	42.3	19.5
Mandarin (Ottawa)	26.6	0	1.3	28	1.9	18.3	42.9	19.4
Mean	28.0		2.0	35	1.8	15.8	42.0	19.8

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

Table 14. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group I, 1949-53.

Strain	Mean of 73 Tests	Guelph Ontario	State College Pa.	Hoytville Ohio[1]	Wooster Ohio	Columbus Ohio	East Lansing Mich.	Deerfield Mich.	Walkerton Ind.
Years Tested		1949-1953	1949-1953	1949-50 1952-53	1951-1953	1949-1953	1951-1952	1950-1953	1949-1953
L6-8275	29.7	26.5	25.1	30.1	28.3	28.1	23.5	28.9	35.3
Blackhawk	29.4	26.4	26.2	32.9	27.7	27.6	25.0	31.7	35.3
Earlyana	27.4	23.3	26.1	32.3	26.0	25.9	24.2	25.2	38.7
Monroe	27.0	23.8	25.0	28.2	26.2	27.1	24.0	29.3	34.7
Mandarin (Ottawa)	26.6	25.7	23.6	27.3	21.1	24.8	20.3	27.8	32.7
Mean	28.0	25.1	25.2	30.2	25.9	26.7	23.4	28.6	35.3
		Yield Rank							
L6-8275		1	3	3	1	1	4	3	2
Blackhawk		2	1	1	2	2	1	1	2
Earlyana		5	2	2	4	4	2	5	1
Monroe		4	4	4	3	3	3	2	4
Mandarin (Ottawa)		3	5	5	5	5	5	4	5

[1]Holgate, Ohio, 1949-50.
[2]Eau Claire, Wisconsin, 1949-50.
[3]Compton, Illinois, 1949-50.

Table 14. (Continued)

Strain	Spooner Wis.	Fall City Wis.[2]	Madison Wis.	Shabbona Ill.[3]	St. Paul Minn.	Waseca Minn.	Cresco Iowa	Kanawha Iowa	Brookings S. D.
Years Tested	1952-1953	1949-1953	1949-1952	1949-1953	1949-50 1952-53	1949-1953	1949-1953	1949-1953	1949-50 1952
L6-8275	35.3	27.5	33.3	30.1	37.5	34.3	24.3	34.2	19.1
Blackhawk	33.5	24.1	36.4	29.5	28.2	33.3	24.2	34.6	20.7
Earlyana	24.9	20.2	32.5	28.7	24.6	29.0	23.9	31.7	19.4
Monroe	28.4	21.6	32.6	27.9	28.0	27.5	23.0	29.1	18.3
Mandarin (Ottawa)	39.7	25.6	29.9	26.2	29.8	30.0	18.6	28.4	19.5
Mean	32.4	23.8	32.9	28.5	29.6	30.8	22.8	31.6	19.4
	Yield Rank								
L6-8275	2	1	2	1	1	1	1	2	4
Blackhawk	3	3	1	2	3	2	2	1	1
Earlyana	5	5	4	3	5	4	3	3	3
Monroe	4	4	3	4	4	5	4	4	5
Mandarin (Ottawa)	1	2	5	5	2	3	5	5	2

UNIFORM TEST, GROUP II

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

Strain	Source or Originating Agency	Origin
Adams	Iowa A.E.S. & U.S.R.S.L.	Sel. from Illini x Dunfield
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Sel. from Mukden x Richland
Harosoy	Harrow Exp. Sta., Harrow, 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 Lincoln x (Linc. x Rich.)
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
C1013	Purdue A.E.S. & U.S.R.S.L.	Sel. from Linc. x (A45-251 x Earlyana)
C1024	Purdue A.E.S. & U.S.R.S.L.	Sel. from Linc. x (A45-251 x Earlyana)
C1056	Purdue A.E.S. & U.S.R.S.L.	Sel. from Linc. x (Lincoln x A45-251)
C1057	Purdue A.E.S. & U.S.R.S.L.	Sel. from Linc. x (Lincoln x A45-251)
W9-1982	Wis. A.E.S. & U.S.R.S.L.	Sel. from A3-108 x Wis. Manchu 3

Group II yield data were obtained from twenty-three locations in 1953. As an average of twenty-two tests, when only those entries grown in both 1952 and 1953 are considered, the 1953 yields averaged 3.4 bushels less than in 1952. The 1953 yields were lower than those of 1952 at thirteen of the twenty locations common to both years. Of the seven locations which were higher in yield in 1953, Deerfield, Michigan; Madison, Wisconsin; Shabbona and Dwight, Illinois; Marcus, Independence, and Ames, Iowa, only Shabbona and Marcus averaged five or more bushels more in 1953 than in 1952.

There were four new entries in the 1953 Group II tests, C1013, C1056, C1057 and W9-1982. In 1952, W9-1982 was tested in Group I but because of its relatively late maturity was transferred to Group II in 1953. As an average of twenty-two tests (Tables 15-18), none of the new entries were outstanding in yield although they were satisfactory in chemical and other agronomic characteristics.

Ten of the 1953 Group II entries were also grown in 1952, and two-year averages for these entries are presented in Tables 19 and 20. As an average of forty-five tests in 1952 and 1953, A0-8618 ranked first in yield, outyielding the second ranking entry, Lincoln, by 1.6 bushels and was one day earlier in maturity. A0-8618 outyielded Harosoy and Hawkeye by 3.2 and 3.9 bushels but was 9 and 5.3 days later in maturity, respectively.

The six named varieties, Lincoln, Adams, Harosoy, Hawkeye, Blackhawk, and Richland, have been tested in Group II for at least three years, and data for 68 tests during this period are presented in Tables 21 and 22. Considering yield, these varieties ranked as listed, with Lincoln outyielding Adams and Harosoy by .8 and .9 bushels per acre, respectively. However, Harosoy has averaged 8.8 days earlier than Lincoln and 5.1 days earlier than Adams. These comparisons are of considerable

interest since Harosoy was increased in 1953 and will be grown in 1954 to a limited extent in several of the North Central States.

Table 15. Summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1953.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	22	13	19	20	16	22	23	23
A0-8618	33.1	+5.1	1.9	40	2.3	15.0	40.0	20.4
Adams	32.1	+1.2	2.2	40	1.6	13.4	39.5	21.4
C873	30.7	+5.0	2.2	42	2.1	15.5	39.8	20.4
Lincoln	30.4	+6.0	2.0	41	1.8	13.0	39.9	20.9
C1056	29.8	+1.4	2.2	39	1.6	14.5	40.4	20.8
Harosoy	29.7	-3.8	2.1	39	1.8	15.7	41.0	20.4
Hawkeye	29.7	0	1.8	38	1.6	15.5	40.9	20.8
C1057	29.6	+5.4	2.2	40	2.0	13.4	40.1	20.6
C931	29.6	+0.8	2.5	39	2.3	13.7	41.5	20.0
C1024	29.1	+1.9	2.9	38	2.1	13.7	39.8	21.4
C1013	28.4	+4.8	2.3	40	2.0	13.9	41.3	20.3
Richland	28.0	+0.5	1.7	34	2.1	15.7	40.0	20.5
Blackhawk	27.3	-8.5	1.6	34	2.2	14.5	40.6	20.9
W9-1982	26.1	-3.5	1.8	39	2.3	16.7	40.4	20.8
Mean	29.5		2.1	39	2.0	14.6	40.4	20.7

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

Table 16. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1953.

Strain	Mean of 22 Tests[1]	State College Pa.	New Brunswick N.J.	Burlington N.J.	Newark Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.
A0-8618	33.1	22.4	23.1	27.5	30.0	32.5	17.4	25.9	26.8	30.0	39.1	45.1
Adams	32.1	23.5	25.7	25.2	31.7	31.6	16.9	23.7	16.8	25.0	38.4	44.8
C873	30.7	21.9	23.2	23.9	29.4	29.0	17.7	26.1	21.9	25.0	35.8	41.9
Lincoln	30.4	23.0	18.1	26.8	32.7	29.2	17.6	23.4	23.8	22.0	37.7	42.5
C1056	29.8	22.7	23.9	20.6	26.1	28.5	14.4	24.7	21.4	25.0	38.5	44.1
Harosoy	29.7	23.2	19.5	25.0	24.3	31.3	11.6	16.0	15.3	29.0	40.3	36.8
Hawkeye	29.7	22.9	27.8	22.8	25.2	28.3	17.3	26.2	19.7	24.0	31.7	40.0
C1057	29.6	22.4	16.8	21.2	30.0	28.0	17.0	26.2	20.1	20.0	37.4	39.5
C931	29.6	22.2	24.7	25.2	27.9	29.1	16.2	19.6	18.2	21.0	34.5	38.9
C1024	29.1	20.8	23.8	19.4	24.2	23.9	15.8	20.8	25.0	26.0	34.9	38.6
C1013	28.4	21.2	19.6	19.9	27.4	28.1	14.5	22.2	24.4	21.0	36.3	39.3
Richland	28.0	21.1	26.9	26.5	27.6	29.4	17.9	23.0	19.3	23.0	35.5	34.6
Blackhawk	27.3	19.6	26.9	23.8	26.2	26.5	16.4	20.5	13.2	26.0	28.2	37.3
W9-1982	26.1	21.2	20.0	16.4	25.5	27.1	11.1	13.7	11.0	27.0	24.2	34.6
Mean	29.5	22.0	22.9	23.2	27.7	28.8	15.8	22.3	19.8	24.6	35.2	39.9
C.V. (%)		8.6	13.5	15.7	13.0	--	--	--	--	20.0	11.4	6.5
Bu. N.F.S. (5%)		2.5	4.4	5.2	5.4	--	--	--	--	7.0	5.7	3.7
Row Sp. (In.)		36	30	20	36	28	28	28	28	22	38	40
						Yield Rank						
A0-8618		6	9	1	3	1	4	4	1	1	2	1
Adams		1	4	4	2	2	7	6	11	6	4	2
C873		9	8	7	5	7	2	3	5	6	8	5
Lincoln		3	13	2	1	5	3	7	4	11	5	4
C1056		5	6	11	10	8	12	5	6	6	3	3
Harosoy		2	12	6	13	3	13	13	12	2	1	12
Hawkeye		4	1	9	12	9	5	1	8	9	12	6
C1057		6	14	10	3	11	6	1	7	14	6	7
C931		8	5	4	6	6	9	12	10	12	11	9
C1024		13	7	13	14	14	10	10	2	4	10	10
C1013		10	11	12	8	10	11	9	3	12	7	8
Richland		12	2	3	7	4	1	8	9	10	9	13
Blackhawk		14	2	8	9	13	8	11	13	4	13	11
W9-1982		10	10	14	11	12	14	14	14	3	14	13

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

Table 16. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Dakota City Nebr.	Lincoln Nebr.	
A0-8618	36.1	46.1	50.5	30.9	32.9	33.1	32.7	48.1	39.9	43.2	32.3	11.9	
Adams	39.5	46.6	46.0	30.9	33.3	30.7	31.9	43.0	38.7	40.3	33.6	14.1	// +
C873	28.4	44.5	49.9	32.2	31.6	32.9	28.4	42.4	34.6	37.5	29.8	12.6	
Lincoln	33.2	46.1	45.5	27.6	29.1	29.7	27.7	44.4	34.1	35.6	28.2	12.2	/ +
C1056	35.0	43.4	41.5	27.5	30.5	25.2	31.9	45.2	34.2	37.4	26.0	11.9	
Harosoy	35.3	42.1	44.8	31.2	31.4	33.0	34.6	45.6	36.0	37.6	27.2	11.8	
Hawkeye	36.3	41.5	42.5	27.7	26.6	24.2	31.9	45.4	34.4	39.7	28.3	11.9	
C1057	28.5	46.8	47.1	30.9	29.4	30.4	28.4	44.0	32.8	35.7	25.5	12.2	
C931	33.0	40.8	41.6	29.4	29.7	30.1	32.2	47.9	35.8	37.2	26.2	9.8	
C1024	28.9	41.4	43.4	30.3	28.7	25.8	32.0	44.9	36.7	37.0	30.7	12.4	
C1013	31.6	38.8	40.6	26.5	27.8	25.7	29.9	46.1	32.6	34.9	26.8	10.4	
Richland	29.0	38.9	35.0	24.3	25.2	26.6	25.0	39.0	32.5	41.0	27.4	10.9	
Blackhawk	34.7	36.1	44.0	24.9	26.3	24.1	32.0	41.0	33.1	33.0	23.5	8.8	
W9-1982	30.7	36.0	45.8	25.6	25.5	25.2	31.6	41.5	36.5	34.4	24.8	11.5	
Mean	32.9	42.1	44.2	28.6	29.1	28.3	30.7	44.2	35.1	37.5	27.9	11.6	
C.V. (%)	6.0	7.3	8.8	6.8	10.7	8.5	5.6	5.3	7.9	9.6	8.7	14.9	
Bu. N.F.S. (5%)	2.8	4.4	5.6	2.8	4.4	3.5	2.5	3.4	4.0	5.1	3.5	2.5	
Row Sp. (In.)	40	40	36	40	40	40	40	40	40	40	40	38	

	Yield Rank											
A0-8618	3	3	1	3	2	1	2	1	1	1	2	6
Adams	1	2	4	3	1	4	6	10	2	3	1	1
C873	14	5	2	1	3	3	11	11	7	6	4	2
Lincoln	7	3	6	9	8	7	13	8	10	11	6	4
C1056	5	6	12	10	5	11	6	6	9	7	11	6
Harosoy	4	7	7	2	4	2	1	4	5	5	8	9
Hawkeye	2	8	10	8	11	13	6	5	8	4	5	6
C1057	13	1	3	3	7	5	11	9	12	10	12	4
C931	8	10	11	7	6	6	3	2	6	8	10	13
C1024	12	9	9	6	9	9	4	7	3	9	3	3
C1013	9	12	13	11	10	10	10	3	13	12	9	12
Richland	11	11	14	14	14	8	14	14	14	2	7	11
Blackhawk	6	13	8	13	12	14	4	13	11	14	14	14
W9-1982	10	14	5	12	13	11	9	12	4	13	13	10

Table 17. Summary of maturity data, days earlier (-) or later (+) than Hawkeye, and lodging data for the strains in the Uniform Test, Group II, 1953.

Strain	Mean of 13 Tests	State College Pa.	New Brunswick N.J.	Burlington N.J.	Newark Del.	Columbus Ohio	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.
A0-8618	+5.1	+ 5			+7			+5	+4	+5
Adams	+1.2	- 2			+4			0	-1	-1
C873	+5.0	+ 2			+9			+5	+4	+4
Lincoln	+6.0	+ 2			+7			+6	+5	+5
C1056	+1.4	- 1			0			+3	-1	0
Harosoy	-3.8	- 6			-8			-2	-3	-4
Hawkeye	0	0			0			0	0	0
C1057	+5.4	+ 4			+7			+7	+2	+5
C931	-0.8	- 1			0			+2	-3	+1
C1024	+1.9	- 1			+5			+3	0	+1
C1013	+4.8	+ 3			+7			+5	+1	+4
Richland	+0.5	- 3			+3			+1	+2	+2
Blackhawk	-8.5	-16			-7			-4	-6	-8
W9-1982	-3.5	- 7			-5			+1	-7	-4
Date planted		5/29			6/12			6/2	5/28	5/30
Hawkeye matured		10/7			9/26			9/23	9/22	9/19
Days to mature	119	131			106			113	117	112

Strain	Mean of 19 Tests[1]	Lodging								
A0-8618	1.9	1.3	1.0	2.0	1.1	1.7	2.0	1.3	2.0	2.8
Adams	2.2	1.0	2.0	4.0	1.6	1.7	3.0	1.3	2.3	2.0
C873	2.2	1.5	1.0	2.0	1.3	2.0	3.0	1.0	2.0	3.0
Lincoln	2.0	1.3	1.0	2.0	1.5	2.0	1.0	1.5	2.3	3.0
C1056	2.2	1.0	1.0	2.0	1.2	1.7	3.0	1.5	1.5	2.8
Harosoy	2.1	1.0	1.0	3.0	3.9	2.3	2.0	1.5	2.5	2.0
Hawkeye	1.8	1.0	1.0	2.0	1.8	2.0	2.0	1.0	1.8	2.3
C1057	2.2	1.3	1.0	3.0	1.3	1.7	2.0	1.5	2.5	3.5
C931	2.5	1.0	1.0	3.0	3.5	2.7	2.0	2.3	3.0	2.5
C1024	2.9	1.5	1.0	3.0	3.6	2.7	4.0	2.8	3.0	3.0
C1013	2.3	1.3	1.0	3.0	1.2	2.0	2.0	1.3	2.5	2.8
Richland	1.7	1.0	1.0	1.0	1.1	2.0	2.0	1.0	1.5	2.8
Blackhawk	1.6	1.0	2.0	3.0	1.0	1.5	2.0	1.0	1.5	1.3
W9-1982	1.8	1.0	1.0	3.0	1.3	2.0	5.0	1.0	1.5	1.3
Mean	2.1	1.2	1.1	2.6	1.8	2.0	2.5	1.4	2.1	2.5

[1]Lincoln, Nebraska not included in the mean.

Table 17. (Continued)

Strain	Green-field Ind.	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Kana-wha Iowa	Mar-cus Iowa	Inde-pen-dence Iowa	Ames Iowa	Da-kota City Nebr.	Lin-coln Nebr.
A0-8618	+5	+ 2			+5	+ 3	+ 5	+6	+7		+ 7
Adams	+2	+ 1			0	+ 1	+ 4	+1	+3		+ 3
C873	+7	+ 3			+7	+ 1	+ 4	+4	+7		+ 8
Lincoln	+7	+ 4			+9	+ 3	+ 6	+6	+8		+10
C1056	+3	+ 3			0	+ 1	+ 4	+3	+1		+ 2
Harosoy	0	- 6			-5	- 6	- 3	-2	-2		- 3
Hawkeye	0	0			0	0	0	0	0		0
C1057	+6	+ 3			+8	+ 2	+ 5	+6	+7		+ 8
C931	+3	+ 2			0	0	+ 2	+2	+3		0
C1024	+5	+ 3			0	0	+ 1	+2	+1		+ 5
C1013	+5	+ 5			+7	+ 1	+ 6	+6	+6		+ 6
Richland	+1	+ 2			-1	0	+ 1	+2	-1		- 2
Blackhawk	-5	-11			-7	-10	-10	-8	-9		- 9
W9-1982	-1	- 6			-1	- 4	- 4	-5	-2		- 1
Date planted	6/3	5/18			5/11	5/20	5/21	5/15	5/12		5/23
Hawkeye matured	9/20	9/25			9/3	9/25	9/26	9/20	9/14		9/8
Days to mature	109	130			115	128	128	128	125		108

	Lodging										
A0-8618	2.0	2.9	2.0	1.3	2.3	1.9	2.2	2.6	1.6	1.5	1.0
Adams	2.3	2.9	1.5	1.8	2.5	2.0	2.6	3.2	1.9	2.2	1.0
C873	2.8	3.4	2.0	2.0	2.5	1.9	2.3	3.4	2.0	1.8	1.0
Lincoln	2.3	2.9	2.0	1.5	2.5	2.0	2.4	3.2	2.2	1.8	1.0
C1056	2.8	3.3	2.0	2.3	3.3	2.2	2.9	3.5	2.4	1.2	1.0
Harosoy	2.3	2.6	1.3	2.0	3.0	2.0	2.6	2.4	2.1	1.0	1.0
Hawkeye	1.5	2.6	1.0	1.3	3.0	1.8	2.1	2.8	1.2	1.2	1.0
C1057	2.5	3.0	2.3	2.0	2.5	2.2	2.3	3.1	2.1	2.0	1.0
C931	2.8	3.9	2.0	2.3	3.3	2.0	2.8	3.4	2.2	1.5	1.0
C1024	3.3	4.0	2.5	2.8	3.8	2.1	3.0	4.3	2.9	2.0	1.0
C1013	2.3	4.0	2.0	2.0	3.0	2.2	2.9	3.9	2.4	2.0	1.0
Richland	1.5	2.6	1.3	1.5	2.3	2.3	2.2	2.5	1.4	1.2	1.0
Blackhawk	1.3	1.6	1.0	1.3	3.0	1.4	1.7	2.4	1.0	1.0	1.0
W9-1982	1.8	1.6	1.0	2.0	2.8	1.6	2.0	2.6	1.4	1.2	1.0
Mean	2.3	3.0	1.7	1.9	2.8	2.0	2.4	3.1	1.9	1.5	1.0

Table 18. Summary of height data and percentage of oil for the strains in the Uniform Test, Group II, 1953.

Strain	Mean of 20 Tests	State College Pa.	New Brunswick N.J.	Burlington N.J.	Newark Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.
A0-8618	40	31	28	34	37			40		45	44	46
Adams	40	32	25	32	41			43		41	46	47
C873	42	33	30	35	40			46		43	46	50
Lincoln	41	32	30	33	41			42		41	47	47
C1056	39	32	27	32	38			39		42	45	45
Harosoy	39	30	28	32	42			43		40	45	46
Hawkeye	38	30	29	33	36			39		40	44	45
C1057	40	34	26	33	40			40		41	44	47
C931	39	31	25	33	37			42		41	42	44
C1024	38	30	25	34	37			40		39	41	46
C1013	40	30	27	35	39			40		42	45	47
Richland	34	29	26	32	34			35		37	38	41
Blackhawk	34	24	27	33	36			37		36	38	45
W9-1982	39	28	25	35	39			40		41	42	47
Mean	39	30	27	33	38			40		41	43	46

	Mean of 23 Tests	Percentage of Oil										
A0-8618	20.4	19.6	18.6	17.8	20.0	19.8	17.4	19.7	19.7	20.2	22.4	20.8
Adams	21.4	21.5	20.6	19.5	20.7	20.8	18.8	20.7	21.4	20.8	23.8	22.2
C873	20.4	20.0	18.7	18.4	19.8	19.8	17.1	19.6	20.4	19.9	22.4	21.1
Lincoln	20.9	21.2	17.8	18.7	20.9	20.6	18.5	19.6	19.6	20.3	23.7	21.7
C1056	20.8	21.7	19.5	18.2	19.8	20.3	16.8	18.9	20.2	19.3	24.3	21.5
Harosoy	20.4	20.0	19.5	18.6	18.1	20.1	18.5	19.2	19.6	19.6	23.3	20.9
Hawkeye	20.8	21.2	21.0	18.1	20.2	20.9	18.4	19.8	20.7	20.0	23.0	21.2
C1057	20.6	20.7	17.8	17.9	21.0	20.2	18.3	20.0	20.4	20.1	22.6	21.7
C931	20.0	20.3	19.5	17.8	19.7	19.8	17.4	18.0	19.4	20.1	22.4	20.0
C1024	21.4	22.2	19.7	18.5	20.7	20.8	18.1	19.4	21.2	19.5	24.2	21.6
C1013	20.3	20.9	17.6	17.6	20.1	20.4	17.4	18.8	19.8	18.1	23.8	20.7
Richland	20.5	20.4	19.8	20.0	19.4	20.0	19.1	19.8	19.9	19.0	21.1	22.1
Blackhawk	20.9	21.3	20.9	18.1	20.4	19.2	19.4	20.8	20.2	19.8	23.9	21.6
W9-1982	20.8	21.3	20.8	18.7	20.0	20.2	18.8	20.0	21.0	19.9	21.9	21.4
Mean	20.7	20.9	19.4	18.4	20.1	20.2	18.1	19.6	20.3	19.8	23.1	21.3

Table 18. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Dakota City Nebr.	Lincoln Nebr.
A0-8618	45	41	42	41	45	40	43	45	42	47	42	24
Adams	45	39	42	41	42	43	44	45	41	44	44	25
C873	43	44	43	42	45	47	44	46	43	50	44	25
Lincoln	44	41	44	41	44	42	44	45	42	46	39	26
C1056	42	40	41	40	44	38	42	44	40	42	38	24
Harosoy	44	44	42	40	42	43	42	43	39	41	37	23
Hawkeye	43	38	40	41	44	40	42	42	37	43	36	24
C1057	41	40	42	40	45	41	43	45	41	47	38	23
C931	43	45	42	39	43	41	44	44	42	46	42	23
C1024	39	39	40	40	40	38	42	42	38	41	38	24
C1013	44	42	43	42	45	41	44	44	42	48	41	24
Richland	38	33	36	35	37	35	35	38	34	37	35	22
Blackhawk	41	35	36	33	36	34	36	38	34	34	34	21
W9-1982	45	40	42	39	44	42	44	43	39	45	40	23
Mean	43	40	41	40	43	40	42	43	40	44	39	24

	Percentage of Oil											
A0-8618	21.5	21.2	20.7	21.3	21.2	21.2	21.4	20.4	20.9	21.2	22.4	20.3
Adams	21.3	22.2	21.2	21.9	22.5	23.3	21.7	20.9	20.9	21.7	22.6	21.9
C873	20.5	20.8	20.4	20.9	21.6	21.2	20.9	20.0	20.8	21.6	22.0	20.3
Lincoln	21.9	21.9	20.8	22.2	21.6	21.7	21.4	21.3	21.1	22.0	22.2	21.0
C1056	21.1	21.6	21.6	22.0	21.8	21.1	22.2	21.9	20.5	21.1	21.9	20.9
Harosoy	21.7	21.0	19.8	21.0	22.3	21.3	21.5	20.3	21.0	21.0	20.8	20.5
Hawkeye	20.3	21.4	21.1	21.4	21.9	21.7	21.6	21.2	20.9	20.7	21.9	20.8
C1057	20.9	21.5	20.9	21.3	21.1	21.4	21.1	20.7	20.7	21.1	21.7	20.7
C931	20.4	20.7	20.5	21.1	20.6	20.4	20.7	20.0	20.5	20.1	21.3	19.8
C1024	21.8	22.2	21.6	22.6	22.7	22.3	22.6	21.3	21.7	21.8	22.9	23.2
C1013	20.9	21.1	21.5	21.2	21.1	20.8	21.5	21.5	20.5	20.1	21.3	20.4
Richland	20.7	20.4	20.0	20.8	21.0	20.5	21.0	20.2	21.5	21.3	21.7	20.8
Blackhawk	21.5	20.8	20.3	21.1	22.1	21.9	21.3	21.0	21.4	22.0	20.7	21.7
W9-1982	21.3	20.9	21.3	21.0	21.6	21.3	21.3	21.1	20.9	21.6	21.8	20.6
Mean	21.1	21.3	20.8	21.4	21.7	21.4	21.4	20.8	21.0	21.2	21.8	20.9

Table 19. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1952-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	45	27	40	42	37	45	46	46
A0-8618	35.1	+5.3	1.9	40	1.9	16.0	40.4	20.9
Lincoln	33.5	+6.3	2.1	40	1.7	14.3	40.3	21.2
Adams	32.9	+1.6	2.1	39	1.6	14.2	39.4	21.6
C873	32.6	+5.3	2.1	41	2.0	16.6	39.9	20.4
Harosoy	31.9	-3.7	1.9	38	1.6	16.6	40.9	20.7
C931	31.8	+2.0	2.4	39	2.1	14.9	41.8	20.2
Hawkeye	31.2	0	1.7	37	1.5	16.9	41.0	21.0
C1024	31.0	+2.2	2.7	37	2.0	14.8	39.9	21.8
Richland	29.0	+0.6	1.7	33	1.9	16.3	40.4	20.7
Blackhawk	28.1	-7.7	1.7	34	2.0	15.3	40.0	21.3
Mean	31.7		2.0	38	1.8	15.6	40.4	21.0

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

Table 20. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1952-53.

Strain	Mean of 45 Tests	State College Pa.	New Brunswick N.J.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.
A0-8618	35.1	29.8	32.6	35.9	29.5	30.3	33.1	23.7	40.7	48.2
Lincoln	33.5	30.8	28.4	33.1	31.3	30.7	31.3	19.3	38.7	48.9
Adams	32.9	27.2	29.1	34.6	29.7	26.9	25.5	20.9	39.7	46.5
C873	32.6	29.1	30.7	33.7	30.6	27.4	28.8	21.5	38.3	46.0
Harosoy	31.9	28.0	27.8	35.3	25.3	22.8	25.0	26.9	41.3	39.5
C931	31.8	26.9	32.1	34.9	29.4	24.7	26.3	19.2	37.1	43.7
Hawkeye	31.2	27.4	30.3	31.5	27.2	25.0	26.2	25.0	36.1	42.1
C1024	31.0	29.2	29.8	31.0	25.1	26.2	29.8	22.4	36.8	43.5
Richland	29.0	25.7	28.0	31.9	26.4	22.5	25.4	20.4	37.1	37.3
Blackhawk	28.1	21.8	29.0	29.2	27.4	20.8	22.8	24.6	33.2	37.4
Mean	31.7	27.6	29.8	33.1	28.2	25.7	27.4	22.4	37.9	43.3

	Yield Rank								
A0-8618	2	1	1	4	2	1	4	2	2
Lincoln	1	8	6	1	1	2	9	4	1
Adams	7	6	4	3	4	7	7	3	3
C873	4	3	5	2	3	4	6	5	4
Harosoy	5	10	2	9	8	9	1	1	8
C931	8	2	3	5	7	5	10	6	5
Hawkeye	6	4	8	7	6	6	2	9	7
C1024	3	5	9	10	5	3	5	8	6
Richland	9	9	7	8	9	8	8	6	10
Blackhawk	10	7	10	6	10	10	3	10	9

Table 20. (Continued)

Strain	Lafayette Ind.	Greenfield Ind.	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Kanawha Iowa	Marcus Iowa	Independence Iowa	Ames Iowa	Lincoln Nebr.
A0-8618	38.0	51.4	48.8	26.7	29.8	35.6	32.8	43.4	37.9	44.9	24.2
Lincoln	37.2	52.4	43.7	24.2	27.4	33.3	28.4	41.2	33.6	39.8	25.9
Adams	37.7	49.2	45.1	25.9	30.6	31.4	31.9	41.7	35.0	42.7	24.3
C873	33.6	48.7	46.2	27.4	28.3	33.5	30.7	38.5	32.9	40.1	25.3
Harosoy	36.2	43.5	43.9	27.8	30.2	32.9	34.3	43.1	34.5	38.0	23.1
C931	35.1	44.9	43.2	25.0	28.3	31.1	33.3	43.2	33.3	40.5	22.4
Hawkeye	35.7	44.3	41.4	22.5	27.5	28.8	34.2	42.3	33.7	41.3	21.6
C1024	32.1	45.6	37.6	25.6	28.0	28.0	30.9	43.5	34.1	37.6	23.5
Richland	31.0	42.1	39.3	19.6	25.9	27.3	27.9	37.8	29.8	39.6	20.8
Blackhawk	32.0	35.7	43.8	21.1	25.6	24.3	31.6	38.8	31.1	32.8	15.0
Mean	34.9	45.8	43.3	24.6	28.0	30.6	31.6	41.4	33.6	39.7	22.6
	Yield Rank										
A0-8618	1	2	1	3	3	1	4	2	1	1	4
Lincoln	3	1	6	7	8	3	9	7	6	6	1
Adams	2	3	3	4	1	5	5	6	2	2	3
C873	7	4	2	2	4	2	8	9	8	5	2
Harosoy	4	8	4	1	2	4	1	4	3	8	6
C931	6	6	7	6	4	6	3	3	7	4	7
Hawkeye	5	7	8	8	7	7	2	5	5	3	8
C1024	8	5	10	5	6	8	7	1	4	9	5
Richland	10	9	9	10	10	9	10	10	10	7	9
Blackhawk	9	10	5	9	9	10	6	8	9	10	10

Table 21. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1951-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	68	45	61	63	54	70	71	71
Lincoln	33.4	+5.5	2.1	39	1.8	14.1	40.5	21.0
Adams	32.6	+1.8	2.0	39	1.6	13.9	39.9	21.1
Harosoy	32.5	-3.3	1.8	38	1.7	16.8	40.4	20.5
Hawkeye	31.6	0	1.6	37	1.5	16.9	41.3	20.8
Blackhawk	29.2	-6.8	1.7	34	1.9	15.2	40.4	21.0
Richland	28.9	+0.6	1.6	33	1.9	16.3	40.5	20.4
Mean	31.4		1.8	37	1.7	15.5	40.5	20.8

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

Table 22. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group II, 1951-53.

Strain	Mean of 68 Tests	State College Pa.	New Brunswick N.J.	Columbus N.J.	Newark Del.	Wooster Ohio	Columbus Ohio	Mt. Healthy Ohio	East Lansing Mich.	Deerfield Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.
Years Tested		1951-1953	1951-1953	1951-1952	1951, 1953	1951-1953	1951-1953	1951-1953	1951-1952	1951-1953	1951-1953	1951-1953	1951-1953
Lincoln	33.4	29.4	30.6	28.8	33.3	30.1	24.8	30.5	25.1	22.3	39.6	45.2	39.3
Adams	32.6	26.8	30.8	26.4	32.0	28.2	24.6	27.4	21.3	21.9	40.5	43.2	37.3
Harosoy	32.5	26.8	30.4	28.6	28.0	25.1	21.3	27.7	20.4	27.1	43.6	39.1	36.8
Hawkeye	31.6	27.2	31.6	26.5	28.0	26.6	22.7	28.6	17.9	24.0	38.5	40.0	36.8
Blackhawk	29.2	22.0	29.7	25.2	27.5	26.0	20.2	25.8	19.7	26.5	35.3	37.0	32.1
Richland	28.9	23.0	29.0	24.6	28.6	25.4	20.5	26.0	22.1	24.7	37.2	35.7	32.5
Mean	31.4	25.9	30.4	26.7	29.6	26.9	22.4	27.7	21.1	24.4	39.1	40.0	35.8
							Yield Rank						
Lincoln		1	3	1	1	1	1	1	1	5	3	1	1
Adams		3	2	4	2	2	2	4	3	6	2	2	2
Harosoy		3	4	2	4	6	4	3	4	1	1	4	3
Hawkeye		2	1	3	4	3	3	2	6	4	4	3	3
Blackhawk		6	5	5	6	4	6	6	5	2	6	5	6
Richland		5	6	6	3	5	5	5	2	3	5	6	5

Table 22. (Continued)

Strain	Green-field Ind.	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Kana-wha Iowa	Mar-cus Iowa	Inde-pen-dence Iowa	Ames Iowa	Center-ville S.D.	Da-kota City Nebr.	Lin-coln Nebr.	
Years Tested	1951-1953	1951-1953	1951-1953	1951-1953	1951-1953	1951-1953	1951-1953	1951-1953	1951-1953	1951-1952	1951, 1953	1951-1953	
Lincoln	50.6	40.4	24.1	30.7	38.0	28.7	37.0	32.3	40.3	21.3	33.8	27.5	4+
Adams	48.4	40.1	24.8	33.6	38.2	30.1	37.3	33.4	40.7	17.0	34.1	25.4	8+
Harosoy	43.9	42.2	28.5	33.7	38.7	32.1	37.5	33.7	38.9	19.1	34.0	25.0	
Hawkeye	44.2	38.0	23.6	31.9	37.4	32.6	37.5	32.5	40.3	16.6	34.6	24.4	
Blackhawk	36.8	40.8	23.6	29.5	30.6	31.9	37.3	31.1	33.7	20.2	31.8	19.1	
Richland	40.4	34.1	21.0	27.6	32.5	26.6	33.1	29.0	37.6	15.3	31.4	23.2	
Mean	44.1	39.3	24.3	31.2	35.9	30.3	36.6	32.0	38.6	18.3	33.3	24.1	
	Yield Rank												
Lincoln	1	3	3	4	3	5	5	4	2	1	4	1	
Adams	2	4	2	2	2	4	3	2	1	4	2	2	
Harosoy	4	1	1	1	1	2	1	1	4	3	3	3	
Hawkeye	3	5	4	3	4	1	1	3	2	5	1	4	
Blackhawk	6	2	4	5	6	3	3	5	6	2	5	6	
Richland	5	6	6	6	5	6	6	6	5	6	6	5	

UNIFORM TEST, GROUP III

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

Strain	Source or Originating Agency	Origin
Chief	Ill. Agr. Exp. Sta.	Sel. from Illini x Manchu
Clark (L9-5138)	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
Dunfield	Purdue Agr. Exp. Sta.	Sel. from P. I. 36846
Illini	Ill. Agr. Exp. Sta.	Sel. from A.K.
Lincoln	Ill. A.E.S. & U.S.R.S.L.	Sel. from Mandarin x Manchu
A0-8618	Iowa A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
C1060	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x A45-251)
L9-4091	Ill. A.E.S. & U.S.R.S.L.	Sel. from (L x (L x R)) x (L x CNS)
L9-5139	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Lincoln x Richland)
U9-2	Nebr. A.E.S. & U.S.R.S.L.	Sel. from Patoka x Man. 13-177

Uniform Test, Group III, yield data were obtained from twenty-three locations in 1953 (Tables 23 through 30). When only the eight Group III entries grown in both 1952 and 1953 tests are considered, the 1953 yield was 9.8 bushels less than in 1952. 1953 yields were less than in 1952 at all locations except Dwight, Illinois, where the plot yields differed by only .1 bushel. Decreases of more than twenty bushels were recorded at Landisville, Pennsylvania, and Lincoln, Nebraska, and of 10 to 20 bushels at Columbus and Mt. Healthy, Ohio; Brownstown, Illinois; Ames and Ottumwa, Iowa; and Columbia, Missouri.

Two entries, C1060 and U9-2, were grown in Group III for the first time in 1953, and data for these entries are summarized in Tables 23 through 26. Of these, U9-2 yielded one bushel more as an average of all twenty-three tests than did C1060 and when all 1953 Group III entries are considered, ranked second, being exceeded only .3 bushel by Clark. Strain U9-2 is 2 days earlier in maturity than Clark.

Eight of the 1953 Group III entries were also included in 1952 tests and data for these two years are summarized in Tables 27 and 28. As indicated by these data, Clark has ranked first in yield and exceeded L9-5139 and A0-8618, the second- and third-ranking strains, by 2.0 and 3.6 bushels, respectively. Clark, however, has averaged 5.1 days later than L9-5139 and 6.1 days later than A0-8618. Except for flower color, L9-5139 and A0-8618 resemble Lincoln in general appearance as well as in agronomic and chemical attributes but have not greatly exceeded Lincoln in yield.

Clark, Lincoln, Chief, Illini, and Dunfield have been included in Group III tests for at least five years and data for these entries from 111 tests are summarized in Tables 29 and 30. For this five-year period, these strains have ranked in yield as listed, and Clark has ranked first at all locations except Dwight, Illinois, where Lincoln outyielded Clark by an average of 1.1 bushels per acre.

Table 23. Summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1953.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	23	17	19	21	21	22	23	23
Clark	27.3	+4.8	1.5	37	1.8	14.5	39.5	21.4
U9-2	27.0	+2.6	1.9	36	2.5	15.5	38.8	21.6
L9-5139	26.7	-0.2	1.8	37	2.0	13.8	39.7	21.4
C1060	26.0	+3.1	2.0	36	1.8	13.7	39.3	21.3
A0-8618	25.2	-0.8	1.8	36	2.6	14.5	40.1	21.0
Lincoln	25.0	0	1.9	37	2.3	12.9	39.3	21.4
L9-4091	24.0	+1.6	2.3	41	2.4	13.8	40.9	20.7
Chief	21.9	+5.2	2.6	46	2.2	11.5	39.8	20.2
Illini	21.8	-0.8	3.2	40	2.3	12.2	40.0	20.7
Dunfield	20.9	-2.2	2.6	36	2.4	14.0	38.9	21.4
Mean	24.6		2.2	38	2.2	13.6	39.6	21.1

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

Table 24. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1953.

Strain	Mean of 23 Tests	Landis-ville Pa.	New-ark Del.	George-town Del.	Belts-ville Md.	Colum-bus Ohio	Mt. Heal-thy Ohio	Lafay-ette Ind.	Green-field Ind.	Worth-ington Ind.	Dwight Ill.	Ur-bana Ill.
Clark	27.3	28.8	36.2	24.2	28.0	29.6	28.2	38.5	49.1	42.9	23.6	25.6
U9-2	27.0	27.8	32.9	19.1	34.7	28.7	24.4	33.8	46.6	35.4	28.3	31.0
L9-5139	26.7	28.5	37.3	18.3	28.1	27.7	26.9	33.8	46.5	39.3	26.2	27.5
C1060	26.0	30.8	41.4	23.0	32.3	24.7	23.8	34.6	45.9	37.3	23.4	24.6
A0-8618	25.2	21.7	32.3	18.2	28.4	24.4	24.5	33.8	47.7	33.0	28.6	28.1
Lincoln	25.0	24.8	34.9	18.7	27.2	23.7	23.9	33.7	46.4	35.0	25.4	27.1
L9-4091	24.0	23.4	33.5	21.1	26.6	25.4	23.7	36.2	46.4	29.7	23.1	22.4
Chief	21.9	23.7	29.1	23.4	28.0	23.9	18.9	31.9	40.2	34.7	22.0	19.2
Illini	21.8	21.4	29.3	19.5	22.7	22.0	15.7	33.0	42.0	25.3	22.0	20.8
Dunfield	20.9	20.1	26.5	16.1	25.5	15.9	17.9	32.2	39.1	28.3	23.6	22.2
Mean	24.6	25.1	33.3	20.2	28.2	24.6	22.8	34.2	45.0	34.1	24.6	24.9
C.V.(%)		10.2	9.0	1.1	7.3	—	--	6.8	5.3	10.5	7.7	13.0
Bu.N.F.S.(5%)		5.2	4.4	3.5	3.0	--	--	3.3	3.5	5.3	2.7	4.7
Row Sp.(In.)		36	36	36	40	28	28	40	40	38	40	40
							Yield Rank					
Clark		2	3	1	5	1	1	1	1	1	5	5
U9-2		4	6	6	1	2	4	4	3	4	2	1
L9-5139		3	2	8	4	3	2	4	4	2	3	3
C1060		1	1	3	2	5	6	3	7	3	7	6
A0-8618		8	7	9	3	6	3	4	2	7	1	2
Lincoln		5	4	7	7	8	5	7	5	5	4	4
L9-4091		7	5	4	8	4	7	2	5	8	8	7
Chief		6	9	2	5	7	8	10	9	6	9	10
Illini		9	8	5	10	9	10	8	8	10	9	9
Dunfield		10	10	10	9	10	9	9	10	9	5	8

Table 24. (Continued)

Strain	Clay-ton Ill.	Ston-ington Ill.	Browns-town Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Nor-borne Mo.	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Man-hattan Kans.	Thay-er Kans.
Clark	28.1	39.4	10.5	31.3	34.6	24.4	22.1	24.4	24.0	9.7	13.4	12.4
U9-2	28.8	30.4	12.3	38.5	34.7	26.5	25.3	24.2	21.4	10.8	11.6	13.6
L9-5139	28.7	43.7	13.5	29.4	34.4	24.4	24.1	24.2	19.4	11.5	10.4	9.7
C1060	30.8	34.7	11.4	26.0	27.1	23.4	25.4	21.5	20.0	9.9	15.8	10.3
A0-8618	25.8	30.8	10.9	28.9	38.4	26.3	22.0	24.9	17.8	10.7	12.1	10.2
Lincoln	25.5	33.8	10.6	25.3	31.6	24.7	26.3	23.1	18.2	11.6	12.8	9.8
L9-4091	31.7	23.4	8.8	31.0	33.6	25.4	21.4	19.5	16.4	9.4	10.6	8.6
Chief	26.2	20.2	9.1	22.5	27.1	19.8	23.9	18.6	19.8	7.2	6.3	7.8
Illini	24.9	31.9	10.0	23.3	32.5	25.0	19.3	19.0	16.3	10.0	7.6	8.4
Dunfield	24.3	23.8	12.7	24.2	25.4	22.2	18.2	22.3	15.3	10.3	7.4	8.2
Mean	27.5	31.2	11.0	28.0	31.9	24.2	22.8	22.2	18.9	10.1	10.8	9.9
C.V.(%)	12.2	--	10.6	18.6	8.9	5.5	11.9	6.3	14.0	16.2	23.4	--
B.N.F.S.(5%)	4.8	--	1.7	7.4	4.1	1.9	3.9	2.0	3.8	2.4	3.7	--
Row Sp.(In.)	40	28	40	40	40	40	40	35	36	38	42	40
	Yield Rank											
Clark	5	2	7	2	3	6	6	2	1	8	2	2
U9-2	3	7	3	1	2	1	3	3	2	3	5	1
L9-5139	4	1	1	4	4	6	4	3	5	2	7	6
C1060	2	3	4	6	8	8	2	7	3	7	1	3
A0-8618	7	6	5	5	1	2	7	1	7	4	4	4
Lincoln	8	4	6	7	7	5	1	5	6	1	3	5
L9-4091	1	9	10	3	5	3	8	8	8	9	6	7
Chief	6	10	9	10	8	10	5	10	4	10	10	10
Illini	9	5	8	9	6	4	9	9	9	6	8	8
Dunfield	10	8	2	8	10	9	10	6	10	5	9	9

Table 25. Summary of maturity data, days earlier (-) or later (+) than Lincoln, and lodging for the strains in the Uniform Test, Group III, 1953.

Strain	Mean of 17 Tests	Landis-ville Pa.	New-ark Del.	George-town Del.	Belts-ville Md.	Colum-bus Ohio	Lafay-ette Ind.	Green-field Ind.	Worth-ington Ind.	Dwight Ill.	Ur-bana Ill.
Clark	+4.8	+5	+4	+6	+6		+ 8	+ 5	0		+5
U9-2	+2.6	+3	0	+6	+5		+ 8	+ 2	-1		+2
L9-5139	-0.2	-5	+4	0	+1		+ 3	0	-3		-1
C1060	+3.1	0	+5	+6	+7		+10	+ 6	-1		+5
A0-8618	-0.8	+3	+1	0	-1		+ 1	0	-1		-2
Lincoln	0	0	0	0	0		0	0	0		0
L9-4091	+1.6	+3	+5	0	+3		+ 4	+ 2	-2		0
Chief	+5.2	+5	+8	+6	+9		+ 8	+10	+4		+2
Illini	-0.8	-5	+3	0	-2		- 1	+ 1	+2		-5
Dunfield	-2.2	-5	+3	-2	0		- 2	+ 1	-3		-8
Date planted		6/5	6/12	5/25	6/10		5/30	6/3	5/22		5/11
Lincoln matured		10/15	10/2	9/12	9/24		9/25	9/28	9/22		9/12
Days to mature	118	132	112	110	106		118	117	123		124

	Mean of 19 Tests[1]	Lodging									
Clark	1.5	1.3	1.6	1.0	1.0	1.0	2.3	2.0	2.3	1.5	2.0
U9-2	1.9	1.5	1.8	1.0	3.0	1.2	2.8	3.0	3.3	1.8	2.0
L9-5139	1.8	1.5	2.1	1.0	2.0	1.2	2.5	3.0	2.5	1.8	2.3
C1060	2.0	1.0	1.6	1.0	3.0	1.7	3.3	3.0	3.0	1.5	2.5
A0-8618	1.8	1.0	2.1	1.0	2.0	1.5	1.8	3.0	3.3	1.8	2.0
Lincoln	1.9	2.0	2.0	1.0	2.0	2.0	1.8	3.0	2.8	1.3	2.5
L9-4091	2.3	2.5	1.9	1.0	3.0	2.0	2.3	3.0	3.0	3.0	3.0
Chief	2.6	2.8	2.3	1.0	5.0	2.0	3.0	3.5	3.0	2.5	2.8
Illini	3.2	3.5	3.8	1.0	5.0	2.7	3.3	4.5	4.5	3.0	3.5
Dunfield	2.6	1.8	3.5	1.0	4.0	2.7	2.8	3.5	3.5	2.5	3.0
Mean	2.2	1.9	2.3	1.0	3.0	1.8	2.6	3.2	3.1	2.1	2.6

[1]Georgetown, Delaware; Lincoln, Nebraska; and Thayer, Kansas not included in the mean.

Table 25. (Continued)

Strain	Clay-ton Ill.	Ston-ington Ill.	Browns-town Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Nor-borne Mo.	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Man-hattan Kans.	Thay-er Kans.
Clark	+3	+ 8			+4	+4		+8	+4	+4	+6	+1
U9-2	+2	+ 6			+2	+2		+4	0	+1	+4	-2
L9-5139	0	+ 2			0	-1		0	-1	-1	0	-2
C1060	+2	+ 4			+4	-4		+6	+3	-1	0	0
A0-8618	-2	+ 1			-3	-2		-2	-3	-2	+1	-3
Lincoln	0	0			0	0		0	0	0	0	0
L9-4091	-2	+ 5			+2	+1		0	-1	-1	+8	+1
Chief	+3	+12			+4	+2		+7	+2	0	+9	-2
Illini	-3	+ 1			+1	0		-2	-1	-5	+9	-6
Dunfield	-4	+ 1			-2	-2		-4	-3	-6	+3	-4
Date planted	5/26	5/26			5/12	5/25		5/23	5/21	5/23	6/2	6/9
Lincoln mat.	9/24	9/22			9/22	9/18		9/10	9/14	9/18	10/5	9/25
Days to mat.	121	119			133	116		110	116	118	125	108
	Lodging											
Clark	1.5	2.0	1.0	2.5	1.4	1.1	1.1	1.1	1.0	1.0	1.2	1.0
U9-2	2.0	2.3	1.0	2.5	1.7	1.3	1.1	1.1	1.0	1.0	1.2	1.0
L9-5139	1.5	2.0	1.0	3.3	1.5	1.2	1.1	1.0	1.1	1.0	1.2	1.0
C1060	2.5	2.0	1.0	3.3	1.8	1.2	1.2	1.1	1.0	1.0	1.5	1.0
A0-8618	2.0	1.5	1.0	3.5	1.4	1.2	1.1	1.1	1.0	1.0	1.4	1.0
Lincoln	2.0	2.0	1.0	3.5	1.7	1.3	1.2	1.1	1.1	1.0	1.4	1.0
L9-4091	2.5	2.3	1.0	3.8	2.5	2.3	1.5	1.5	1.2	1.0	1.3	1.0
Chief	3.0	3.0	2.0	3.5	2.4	2.4	1.5	1.7	1.4	1.0	1.3	1.0
Illini	3.5	3.0	2.0	4.8	3.4	3.0	1.9	1.9	1.9	1.0	1.4	1.0
Dunfield	2.5	3.0	3.0	3.7	2.2	2.0	1.6	1.8	1.3	1.0	1.5	1.0
Mean	2.3	2.3	1.4	3.4	2.0	1.7	1.3	1.3	1.2	1.0	1.3	1.0

Table 26. Summary of height data and percentage of oil for the strains in the Uniform Test, Group III, 1953.

Strain	Mean of 21 Tests	Landis-ville Pa.	New-ark Del.	George-town Del.	Belts-ville Md.	Colum-bus Ohio	Mt. Healthy Ohio	Lafay-ette Ind.	Green-field Ind.	Worth-ington Ind.	Dwight Ill.	Ur-bana Ill.
Clark	37	30	41	23	33	39		45	43	45	42	44
U9-2	36	30	41	19	32	40		43	41	44	41	44
L9-5139	37	32	43	18	31	41		46	43	47	42	44
C1060	36	31	41	19	31	39		44	41	43	42	43
A0-8618	36	31	40	18	30	41		43	41	45	41	43
Lincoln	37	32	41	18	33	39		43	42	46	41	42
L9-4091	41	38	49	20	35	46		48	48	51	42	45
Chief	46	37	53	27	42	51		52	54	56	53	56
Illini	40	38	51	22	34	39		48	47	47	41	40
Dunfield	36	31	42	19	34	38		44	44	45	41	39
Mean	38	33	44	20	34	41		46	44	47	43	44
	Mean of 23 Tests	Percentage of Oil										
Clark	21.4	19.5	20.7	22.3	25.9	20.3	20.8	21.8	20.8	22.1	20.3	20.7
U9-2	21.6	20.8	20.0	23.0	24.1	20.6	20.4	22.4	20.8	21.3	22.1	22.1
L9-5139	21.4	20.4	20.8	22.7	25.3	19.9	19.5	21.0	20.4	21.0	21.6	22.0
C1060	21.3	20.1	21.3	22.8	24.1	19.7	19.9	22.4	20.5	22.0	21.1	20.7
A0-8618	21.0	19.6	19.7	21.9	24.7	19.9	20.1	21.6	20.6	20.7	21.3	20.2
Lincoln	21.4	20.2	21.3	22.5	25.0	19.8	20.2	22.2	20.5	21.0	21.9	19.6
L9-4091	20.7	19.7	20.5	22.6	25.0	19.7	19.5	21.2	19.6	20.4	20.7	21.0
Chief	20.2	18.6	19.6	21.4	23.4	19.1	19.2	19.6	19.0	20.2	19.9	20.1
Illini	20.7	18.9	19.4	22.3	23.8	19.0	18.8	21.1	19.4	20.0	20.8	21.2
Dunfield	21.4	20.8	21.1	23.2	25.1	19.7	20.5	21.6	20.5	21.3	21.4	22.4
Mean	21.1	19.9	20.4	22.5	24.6	19.8	19.9	21.5	20.2	21.0	21.1	21.0

Table 26. (Continued)

Strain	Clay-ton Ill.	Ston-ington Ill.	Browns-town Ill.	Eldor-ado Ill.	Ames Iowa	Ottum-wa Iowa	Nor-borne Mo.	Lad-donia Mo.	Colum-bia Mo.	Lin-coln Nebr.	Man-hattan Kans.	Thayer Kans.
Clark	39	41	30	45	43	40	38	35	31	22	22	
U9-2	36	39	31	45	44	40	36	34	30	22	22	
L9-5139	41	44	32	45	44	40	40	36	32	23	22	
C1060	39	39	32	41	45	40	39	35	30	24	24	
A0-8618	40	44	33	42	43	40	39	35	31	23	23	
Lincoln	42	40	34	45	44	40	40	36	32	24	23	
L9-4091	46	38	36	51	45	44	45	42	35	27	24	
Chief	55	51	39	54	56	52	49	45	41	26	25	
Illini	41	44	37	52	48	45	45	40	31	25	21	
Dunfield	39	39	33	41	43	40	36	36	29	24	22	
Mean	42	42	34	46	46	42	41	37	32	24	23	
	Percentage of Oil											
Clark	23.1	22.3	18.8	20.7	22.8	23.8	22.4	20.0	22.9	19.9	19.8	20.8
U9-2	23.5	21.8	19.9	21.7	22.1	24.1	21.7	21.1	21.4	21.0	19.4	22.3
L9-5139	23.4	22.5	19.8	21.1	21.5	23.5	22.5	21.1	22.1	19.9	19.6	20.3
C1060	22.9	21.8	18.8	21.3	21.6	22.9	21.8	20.1	22.7	19.4	20.2	21.4
A0-8618	23.3	21.5	18.4	20.7	21.5	24.5	21.5	20.5	22.3	19.7	19.2	20.0
Lincoln	23.5	22.5	19.0	20.7	22.2	24.0	22.2	21.0	21.9	20.4	20.0	21.6
L9-4091	22.4	20.0	18.8	19.9	21.0	22.9	22.0	20.3	20.8	19.5	18.7	20.2
Chief	21.1	20.3	18.7	20.1	21.4	22.8	21.5	19.8	21.0	19.1	18.9	19.9
Illini	22.4	21.6	19.6	19.8	21.3	23.2	21.5	20.3	20.9	20.3	20.0	20.2
Dunfield	22.3	21.7	19.3	21.9	21.6	23.8	22.4	19.7	21.0	20.5	19.1	21.3
Mean	22.8	21.6	19.1	20.8	21.7	23.6	22.0	20.4	21.7	20.0	19.5	20.8

Table 27. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1952-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	45	33	38	40	40	44	45	45
Clark	33.6	+5.0	1.7	39	1.6	15.4	39.8	21.6
L9-5139	31.6	-0.1	2.1	40	1.8	14.9	39.9	21.3
A0-8618	30.0	-1.1	2.0	38	2.3	15.5	40.2	21.3
Lincoln	29.7	0	2.1	39	2.1	14.0	39.8	21.6
L9-4091	29.5	+1.9	2.6	43	2.1	15.1	40.9	20.9
Chief	27.9	+5.2	2.8	49	1.9	12.6	40.2	20.7
Illini	25.8	-0.4	3.4	43	2.1	13.4	40.3	20.6
Dunfield	24.1	-2.7	2.7	38	2.4	15.1	39.0	21.7
Mean	29.0		2.4	41	2.0	14.5	40.0	21.2

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

Table 28. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1952-53.

Strain	Mean of 45 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.
Clark	33.6	44.8	46.0	35.2	34.1	35.6	43.1	55.1	44.8	22.6	29.0
L9-5139	31.6	43.6	38.6	30.2	32.8	33.5	38.3	50.8	39.6	26.2	31.1
A0-8618	30.0	34.7	34.6	32.6	28.5	31.6	39.2	48.8	35.7	28.4	32.1
Lincoln	29.7	31.5	37.4	31.8	29.3	30.7	38.7	49.5	33.7	25.6	31.9
L9-4091	29.5	35.7	34.9	33.9	30.7	28.6	40.9	51.7	38.0	26.8	27.1
Chief	27.9	35.5	37.1	31.4	29.8	28.5	38.7	47.5	35.4	21.6	26.5
Illini	25.8	31.6	32.2	26.1	27.0	25.0	36.1	44.5	27.9	23.1	26.6
Dunfield	24.1	26.0	24.9	29.9	21.9	24.9	34.6	40.2	23.1	23.8	23.3
Mean	29.0	35.4	35.7	31.4	29.3	29.8	38.7	48.5	34.8	24.8	28.5

	Yield Rank									
Clark	1	1	1	1	1	1	1	1	7	4
L9-5139	2	2	6	2	2	6	3	2	3	3
A0-8618	5	6	3	6	3	3	5	4	1	1
Lincoln	7	3	4	5	4	4	4	6	4	2
L9-4091	3	5	2	3	5	2	2	3	2	5
Chief	4	4	5	4	6	4	6	5	8	7
Illini	6	7	8	7	7	7	7	7	6	6
Dunfield	8	8	7	8	8	8	8	8	5	8

Table 28. (Continued)

Strain	Clayton Ill.	Stonington Ill.	Brownstown Ill.	Eldorado Ill.	Amea Iowa	Ottumwa Iowa	Laddonia Mo.	Columbia Mo.	Lincoln Nebr.	Manhattan Kans.	Thayer Kans.
Clark	31.5	40.5	18.9	34.9	41.7	34.7	28.1	31.7	26.7	17.0	14.0
L9-5139	31.8	40.3	20.9	31.8	40.7	33.9	27.8	26.4	24.3	13.8	12.8
A0-8618	31.3	34.5	19.4	29.2	42.5	34.1	26.3	24.1	23.2	13.9	12.5
Lincoln	29.4	36.6	18.6	28.2	35.2	32.4	25.3	26.5	25.5	14.9	12.4
L9-4091	33.2	26.0	17.6	31.6	39.9	33.9	23.9	22.9	22.9	11.2	12.2
Chief	29.1	21.7	15.3	26.8	32.9	29.9	23.0	27.3	23.3	11.6	11.4
Illini	24.9	28.2	15.9	21.9	35.0	30.8	23.0	20.0	24.7	11.8	10.9
Dunfield	27.5	23.1	18.4	24.0	31.7	30.7	22.0	17.5	23.0	10.6	9.4
Mean	29.8	31.4	18.1	28.6	37.5	32.6	24.9	24.6	24.2	13.1	12.0
	Yield Rank										
Clark	3	1	3	1	2	1	1	1	1	1	1
L9-5139	2	2	1	2	3	3	2	4	4	4	2
A0-8618	4	4	2	4	1	2	3	5	6	3	3
Lincoln	5	3	4	5	5	5	4	3	2	2	4
L9-4091	1	6	6	3	4	3	5	6	8	7	5
Chief	6	8	8	6	7	8	6	2	5	6	6
Illini	8	5	7	8	6	6	6	7	3	5	7
Dunfield	7	7	5	7	8	7	8	8	7	8	8

Table 29. Five-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1949-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	111	86	97	103	87	109	110	110
Clark	36.3	+6.2	1.9	39	1.7	15.6	40.2	21.5
Lincoln	31.9	0	2.1	39	2.0	14.3	40.1	21.6
Chief	31.3	+7.3	2.8	49	1.9	12.9	40.2	20.4
Illini	28.4	+0.1	3.0	43	2.0	13.6	40.4	20.5
Dunfield	27.0	-1.9	2.8	38	2.2	15.0	39.4	21.6
Mean	31.0		2.5	42	2.0	14.3	40.1	21.1

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

Table 30. Five-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1949-53.

Strain	Mean of 111 Tests	Landisville Pa.	Newark Del.	Georgetown Del.	Beltsville Md.	Columbus Ohio	Mt. Healthy Ohio	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Dwight Ill.	Urbana Ill.
Years Tested		1950-1953[1]	1949-1953	1950-1953	1949-1953	1949-1953	1951-1953	1949-1953	1949-1953	1949-1953	1949-1953	1949-1953
Clark	36.3	41.5	41.7	22.3	33.6	28.6	34.4	40.8	48.5	47.9	29.6	39.5
Lincoln	31.9	32.5	37.1	18.7	30.2	27.0	32.0	36.7	42.2	37.8	30.5	36.5
Chief	31.3	35.4	35.7	20.9	32.9	26.3	29.0	37.9	43.8	40.6	26.8	32.2
Illini	28.4	30.4	33.6	20.1	28.8	23.9	27.5	34.0	38.7	32.7	27.8	29.0
Dunfield	27.0	27.4	27.8	18.9	28.2	23.5	25.2	33.2	35.9	29.3	26.2	28.6
Mean	31.0	33.4	35.2	20.2	30.7	25.9	29.6	36.5	41.8	37.7	28.2	33.2
		Yield Rank										
Clark		1	1	1	1	1	1	1	1	1	2	1
Lincoln		3	2	5	3	2	2	3	3	3	1	2
Chief		2	3	2	2	3	3	2	2	2	4	3
Illini		4	4	3	4	4	4	4	4	4	3	4
Dunfield		5	5	4	5	5	5	5	5	5	5	5

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

Table 30. (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	1949-1953	1949-1953	1949, 1951-53	1949-1952	1949-1953	1949-1953	1949-1953	1949-51, 1953	1949-1953	1949-1953	1949-1953	1949-1953
Clark	36.2	41.3	32.9	42.7	39.7	38.5	38.0	36.9	35.9	31.2	29.0	28.4
Lincoln	32.1	36.5	27.5	36.1	31.9	35.0	36.1	33.6	32.1	25.0	27.4	24.8
Chief	31.3	27.9	27.0	36.9	31.4	30.5	34.0	32.3	31.5	29.2	26.2	26.1
Illini	27.1	28.9	25.1	29.7	26.8	32.4	32.9	28.3	27.2	22.1	24.6	23.1
Dunfield	29.3	26.6	27.7	29.7	25.6	29.9	32.3	24.3	26.2	21.9	24.7	21.5
Mean	31.2	32.2	28.0	35.0	31.1	33.3	34.7	31.1	30.6	25.9	26.4	24.8
	Yield Rank											
Clark	1	1	1	1	1	1	1	1	1	1	1	1
Lincoln	2	2	3	3	2	2	2	2	2	3	2	3
Chief	3	4	4	2	3	4	3	3	3	2	3	2
Illini	5	3	5	4	4	3	4	4	4	4	5	4
Dunfield	4	5	2	4	5	5	5	5	5	5	4	5

UNIFORM TEST, GROUP IV

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

Strain	Source or Originating Agency	Origin
Chief	Ill. Agr. Exp. Sta.	Sel. from Illini x Manchu
Clark (L9-5138)	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
Perry	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x L7-1355
Smith	H. W. Smith, Franklin County	Farmer's Selection
Wabash	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Mansoy
C985	Purdue A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Ogden
C1048	Purdue A.E.S. & U.S.R.S.L.	Sel. from Linc. x (Dunfield x A45-251)
L9-3270	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Rich.)
S1-441	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Ogden)
S9-966	Mo. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Ogden)

Yield data from Uniform Test, Group IV, were obtained from 16 locations in 1953 and are included in Tables 31 through 38. The 1953 average plot yield, when only those eight entries which were also grown in 1952 are considered, was nine bushels less than in 1952. Of the thirteen locations common to both 1952 and 1953 only Eldorado, Illinois, with a five bushel increase, yielded more in 1953 than in 1952.

Two entries, Smith and C1048, were tested in Uniform Test, Group IV, for the first time in 1953. Smith proved to be much later than other Group IV entries and was not harvested at ten of the sixteen locations where yield data were obtained. Strain C1048 did not appear to have outstanding potentialities, ranking sixth as an average of fifteen tests.

Three of the 1953 Group IV entries, S1-441, S9-966, and L9-3270, have been included in these tests for only two years (Tables 35 and 36). The first two strains are similar in appearance to C985 but have not exceeded C985 in yield. S9-966 has, however, averaged 4.1 days earlier in maturity than C985. L9-3270 is a high-oil selection from a backcross of Lincoln x Richland to Lincoln and is again high in oil, but it does not appear to have much value as a future variety because of its relatively low yield and poor seed quality.

Strain C985, Clark, Perry, Chief, and Wabash have been included in Uniform Test, Group IV, for at least three years and these data are summarized in Tables 37 and 38. In respect to yield these entries have ranked as listed above. However, C985 has exceeded Clark by only .7 bushel while averaging 9.2 days later in maturity.

Table 31. Summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1953.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	15	14	13	15	16	16	16	16
C985	25.3	+ 5.4	1.7	37	2.1	15.5	40.0	21.4
Clark	25.1	- 3.4	1.7	36	2.2	14.8	40.2	21.4
S9-966	24.9	+ 1.6	1.5	38	2.2	14.5	39.8	21.5
S1-441	24.8	+ 6.2	1.7	38	2.2	15.6	39.8	21.4
Perry	22.9	+ 2.3	1.8	36	2.6	15.6	41.0	21.0
C1048	22.8	+ 3.0	1.7	40	2.0	12.5	40.4	21.1
L9-3270	22.6	- 2.4	1.5	35	3.4	15.2	40.0	21.9
Chief	22.1	- 4.9	2.5	44	2.5	11.5	40.1	20.3
Wabash	21.8	0	1.9	38	2.2	14.0	40.1	21.0
Smith	13.9	+13.8	3.1	44	3.3	14.6	41.5	18.5
Mean[2]	23.6		1.8	38	2.4	14.4	40.2	21.2

[1]Days earlier (-) or later (+) than Wabash. Wabash required 126 days to mature.
[2]Smith not included in the mean.

Table 32. Summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1953.

Strain	Mean of 15 Tests[1]	Landisville Pa.	Georgetown Del.	Trappe Md.	Columbus Ohio	Worthington Ind.	Urbana Ill.	Clayton Ill.	Stonington Ill.
C985	25.3	32.0	24.7	36.2	18.5	40.8	26.7	30.9	29.1
Clark	25.1	28.8	14.9	32.9	21.7	38.1	33.2	28.2	33.2
S9-966	24.9	29.7	20.2	37.8	23.7	41.3	24.5	31.3	32.2
S1-441	24.8	29.9	25.5	39.4	17.5	36.8	23.1	30.5	28.8
Perry	22.9	32.4	9.9	34.2	21.8	32.6	29.2	27.2	28.3
C1048	22.8	31.4	19.2	32.6	15.3	38.2	21.8	27.5	26.9
L9-3270	22.6	26.5	15.3	30.0	26.5	36.0	30.1	25.8	29.7
Chief	22.1	23.7	20.3	30.7	18.7	32.8	24.6	28.5	33.0
Wabash	21.8	29.2	17.2	32.9	15.9	34.1	22.7	30.8	28.3
Smith	13.9	--	24.8	31.2	--	10.3	--	--	--
Mean[2]	23.6	29.3	18.6	34.1	20.0	36.7	26.2	29.0	29.9
Coef. of Var. (%)		10.2	42.0	8.6	--	11.5	10.9	9.4	15.6
Bu. Nec. for Sig. (5%)		5.2	--	4.0	--	6.2	4.2	N.S.	N.S.
Row Spacing (In.)		36	36	40	28	38	40	40	28

	Yield Rank							
C985	2	3	3	6	2	4	2	5
Clark	7	9	5	4	4	1	6	1
S9-966	5	5	2	2	1	6	1	3
S1-441	4	1	1	7	5	7	4	6
Perry	1	10	4	3	9	3	8	7
C1048	3	6	7	9	3	9	7	9
L9-3270	8	8	10	1	6	2	9	4
Chief	9	4	9	5	8	5	5	2
Wabash	6	7	5	8	7	8	3	7
Smith	--	2	8	--	10	--	--	--

[1]Brownstown, Illinois not included in the mean.
[2]Smith not included in the mean.

Table 32. (Continued)

Strain	Browns-town Ill.	Eldor-ado Ill.	Nor-borne Mo.	Lad-donia Mo.	Colum-bia Mo.	Man-hattan Kans.	Mound Valley Kans.	Thayer Kans.
C985	4.5	45.7	23.3	19.5	25.7	8.7	8.6	8.9
Clark	7.2	46.4	20.6	19.8	25.9	12.2	12.2	8.8
S9-966	7.2	37.9	22.3	16.7	26.0	10.2	11.2	9.1
S1-441	4.6	43.2	26.4	20.1	23.3	10.6	9.6	8.0
Perry	6.2	33.5	21.6	20.0	22.5	10.2	11.8	8.8
C1048	6.5	38.6	22.4	19.7	20.1	10.9	8.8	9.2
L9-3270	7.5	34.4	20.8	15.6	18.9	10.0	10.6	8.1
Chief	8.4	33.4	20.7	18.8	20.3	8.2	10.2	7.3
Wabash	3.1	36.3	20.2	15.3	19.3	8.0	10.1	6.8
Smith	--	--	--	--	--	5.9	6.2	5.2
Mean	6.1	38.8	22.0	18.4	22.4	9.9	10.3	8.3
Coef. of Var. (%)	40.5	17.0	6.8	9.1	11.7	21.2	12.0	--
Bu. Nec. for Sig. (5%)	N.S.	9.7	2.2	2.4	3.9	3.0	1.7	--
Row Spacing (In.)	40	40	40	35	36	40	42	40
	Yield Rank							
C985	8	2	2	5	3	7	9	3
Clark	3	1	8	3	2	1	1	4
S9-966	3	5	4	7	1	4	3	2
S1-441	7	3	1	1	4	3	7	7
Perry	6	8	5	2	5	4	2	4
C1048	5	4	3	4	7	2	8	1
L9-3270	2	7	6	8	9	6	4	6
Chief	1	9	7	6	6	8	5	8
Wabash	9	6	9	9	8	9	6	9
Smith	--	--	--	--	--	10	10	10

Table 33. Summary of maturity data, days earlier (-) or later (+) than Wabash, and lodging data for the strains in the Uniform Test, Group IV, 1953.

Strain	Mean of 14 Tests	Landis-ville Pa.	George-town Del.	Trappe Md.	Colum-bus Ohio	Worth-ington Ind.	Ur-bana Ill.	Clay-ton Ill.	Ston-ington Ill.
C985	+ 5.4	+ 3	0	+ 9		+ 7	+5	+8	+3
Clark	- 3.4	-13	-3	- 3		- 6	-5	-1	0
S9-966	+ 1.6	- 8	0	+ 3		+ 5	+3	+5	0
S1-441	+ 6.2	+ 3	+4	+ 9		+ 5	+5	+9	+3
Perry	+ 2.3	+ 3	0	+ 7		+ 7	+2	+6	+2
C1048	+ 3.0	- 3	0	+ 5		+ 4	+4	+6	+3
L9-3270	- 2.4	- 8	-3	- 1		- 5	-3	+2	-1
Chief	- 4.9	- 8	-3	- 5		- 3	-6	-4	0
Wabash	0	0	0	0		0	0	0	0
Smith	+13.8	--	+4	+21		+22	--	--	--
Date planted		6/5	5/25	5/25		5/22	5/11	5/26	5/26
Wabash matured		10/28	9/19	9/25		9/29	9/23	9/28	10/7
Days to mature	126	145	117	123		130	135	125	134
	Mean of 13 Tests[1]	Lodging							
C985	1.7	1.3	1.0	2.0	1.0	2.0	2.0	2.5	2.0
Clark	1.7	1.3	1.0	2.0	1.5	2.8	2.0	1.8	1.8
S9-966	1.5	1.0	1.0	1.0	1.2	2.0	1.5	2.0	1.3
S1-441	1.7	1.3	1.0	1.0	1.2	2.5	2.0	2.5	2.0
Perry	1.8	1.8	1.0	2.0	1.5	1.8	2.8	2.0	2.0
C1048	1.7	1.0	1.0	2.0	1.5	1.5	2.3	1.8	2.0
L9-3270	1.5	1.0	1.0	1.0	1.0	2.3	2.0	2.0	1.3
Chief	2.5	2.8	1.0	4.0	2.7	2.8	3.0	3.0	2.5
Wabash	1.9	1.8	1.0	3.0	1.0	2.0	2.8	2.5	2.3
Smith	3.1	3.3	1.0	4.0	--	4.0	--	--	--
Mean[2]	1.8	1.5	1.0	2.0	1.4	2.2	2.3	2.2	1.9

[1]Georgetown, Delaware; Brownstown, Illinois; and Thayer, Kansas not included in the mean.

[2]Smith not included in the mean.

Table 33. (Continued)

Strain	Brownstown Ill.	Eldorado Ill.	Norborne Mo.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.	Thayer Kans.
C985		+5	+3	+5	+8	+1	+ 9	+10
Clark		-5	-3	-5	-3	-5	+ 1	+ 3
S9-966		0	0	+2	-2	-2	+ 7	+ 9
S1-441		+5	+4	+5	+8	+3	+ 9	+15
Perry		+2	+1	+2	+5	-3	+ 2	- 4
C1048		+1	+1	+3	+3	-1	+ 8	+ 8
L9-3270		-3	-3	-4	0	-5	+ 3	- 2
Chief		-5	-4	-7	-5	-4	- 1	-14
Wabash		0	0	0	0	0	0	0
Smith		--	--	--	--	+5	+12	+19
Date planted		5/29	5/28	5/23	5/21	6/2	6/13	6/9
Wabash matured		9/24	9/24	9/22	9/22	10/18	10/3	10/4
Days to mature		118	119	122	124	138	112	117
				Lodging				
C985	1.0	2.8	1.2	1.1	1.1	1.3	2.0	1.0
Clark	1.0	2.3	1.2	1.1	1.0	1.3	2.0	1.0
S9-966	1.0	3.5	1.1	1.0	1.0	1.3	2.0	1.0
S1-441	1.0	3.3	1.2	1.0	1.1	1.5	2.0	1.0
Perry	1.0	3.0	1.2	1.1	1.0	1.2	2.0	1.0
C1048	1.0	3.3	1.2	1.1	1.0	1.3	2.0	1.0
L9-3270	1.0	2.7	1.1	1.0	1.0	1.3	2.0	1.0
Chief	1.0	3.5	1.4	1.4	1.4	1.4	3.0	1.0
Wabash	1.0	2.8	1.2	1.2	1.1	1.2	2.0	1.0
Smith	--	--	--	--	--	1.4	3.0	1.0
Mean	1.0	3.0	1.2	1.1	1.1	1.3	2.1	1.0

Table 34. Summary of height data and percentage of oil for the strains in the Uniform Test, Group IV, 1953.

Strain	Mean of 15 Tests	Landisville Pa.	Georgetown Del.	Trappe Md.	Columbus Ohio	Worthington Ind.	Urbana Ill.	Clayton Ill.	Stonington Ill.
C985	37	32	26	42	40	51	48	41	48
Clark	36	30	20	40	43	48	47	38	43
S9-966	38	31	27	46	44	53	49	40	46
S1-441	38	31	29	44	43	55	48	43	47
Perry	36	31	21	41	45	48	47	35	46
C1048	40	36	27	46	45	55	50	39	46
L9-3270	35	30	23	38	41	47	46	37	42
Chief	44	37	30	48	54	57	53	48	54
Wabash	38	36	22	45	44	54	48	42	45
Smith	44	48	34	61	--	64	--	--	--
Mean[1]	38	33	25	43	44	52	48	40	46
	Mean of 16 Tests	Percentage of Oil							
C985	21.4	20.0	22.3	24.0	19.4	22.8	22.3	22.3	22.1
Clark	21.4	19.5	22.8	24.4	19.4	21.6	22.3	23.3	21.5
S9-966	21.5	19.5	22.8	23.7	19.2	21.7	22.0	22.1	22.0
S1-441	21.4	19.7	22.6	24.5	19.9	22.4	21.8	22.5	22.5
Perry	21.0	20.0	22.9	23.6	18.9	21.4	21.5	22.0	21.4
C1048	21.1	19.0	23.0	24.0	19.2	22.0	21.7	21.8	21.8
L9-3270	21.9	20.5	23.7	26.5	19.7	21.5	23.0	23.4	22.3
Chief	20.3	18.6	21.5	24.1	18.2	20.8	21.2	21.4	20.4
Wabash	21.0	18.5	23.2	24.4	18.6	21.2	21.6	22.0	21.1
Smith	18.5	--	20.1	20.6	--	18.6	--	--	--
Mean[1]	21.2	19.5	22.8	24.4	19.2	21.7	21.9	22.3	21.7

[1]Smith not included in the mean.

Table 34. (Continued)

Strain	Browns-town Ill.	Eldor-ado Ill.	Nor-borne Mo.	Lad-donia Mo.	Colum-bia Mo.	Man-hattan Kans.	Mound Valley Kans.	Thayer Kans.
C985	31	48	39	37	34	22	23	
Clark	31	48	38	36	31	20	21	
S9-966	35	50	39	38	34	23	21	
S1-441	31	47	40	38	34	23	22	
Perry	34	45	36	37	31	23	20	
C1048	36	50	42	40	35	24	22	
L9-3270	31	44	37	36	30	22	20	
Chief	42	55	50	47	37	26	24	
Wabash	34	49	43	38	33	22	21	
Smith	--	--	--	--	--	28	26	
Mean	34	48	40	39	33	23	22	
	Percentage of Oil							
C985	18.3	22.4	22.7	20.7	22.8	19.6	20.5	20.5
Clark	18.8	21.4	23.3	20.0	23.6	20.0	20.7	20.2
S9-966	19.2	22.6	23.8	20.4	23.6	19.8	21.0	19.9
S1-441	18.6	22.5	22.3	20.2	21.4	20.1	20.7	20.6
Perry	18.5	20.7	21.9	19.7	22.3	18.9	20.6	20.9
C1048	18.4	21.8	22.5	20.3	22.3	19.2	20.8	20.2
L9-3270	18.5	22.4	23.3	20.7	22.6	19.6	21.6	20.9
Chief	19.0	20.6	22.1	19.2	20.7	18.9	20.0	18.6
Wabash	18.2	22.2	21.9	20.1	22.3	19.4	20.5	20.2
Smith	--	--	--	--	--	16.7	17.6	17.1
Mean	18.6	21.8	22.6	20.1	22.4	19.5	20.7	20.2

Table 35. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1952-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	32	28	26	31	30	33	33	33
C985	30.6	+7.9	2.0	40	2.2	15.7	40.1	21.7
Clark	30.1	-1.6	1.9	38	2.1	15.4	40.4	21.6
S1-441	29.5	+8.6	2.0	40	2.1	15.8	40.0	21.7
S9-966	29.2	+3.8	1.8	41	2.3	14.8	40.0	21.5
Perry	27.8	+4.4	1.9	38	2.4	16.0	40.9	21.4
L9-3270	26.9	-0.7	1.9	37	3.2	15.9	40.5	22.4
Chief	26.1	-2.8	2.9	47	2.3	12.4	40.8	20.4
Wabash	25.6	0	2.2	40	2.1	14.3	40.1	21.4
Mean	28.2		2.1	40	2.3	15.0	40.4	21.5

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

Table 36. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1952-53.

Strain	Mean of 32 Tests	Landisville Pa.	Georgetown Del.	Worthington Ind.	Urbana Ill.	Clayton Ill.	Stonington Ill.
C985	30.6	44.2	27.9	42.8	29.6	33.0	31.2
Clark	30.1	44.8	20.2	39.9	35.0	34.9	38.0
S1-441	29.5	40.8	27.4	40.2	27.7	31.9	28.7
S9-966	29.2	39.7	24.2	43.9	27.9	34.8	32.2
Perry	27.8	38.0	18.8	35.2	32.1	32.8	29.6
L9-3270	26.9	36.3	20.1	34.9	32.8	31.4	32.9
Chief	26.1	35.5	21.7	31.7	27.3	31.5	29.4
Wabash	25.6	35.0	18.4	34.9	27.2	33.7	29.8
Mean	28.2	39.3	22.3	37.9	30.0	33.0	31.5
		Yield Rank					
C985		2	1	2	4	4	4
Clark		1	5	4	1	1	1
S1-441		3	2	3	6	6	8
S9-966		4	3	1	5	2	3
Perry		5	7	5	3	5	6
L9-3270		6	6	6	2	8	2
Chief		7	4	8	7	7	7
Wabash		8	8	6	8	3	5

Table 36. (Continued)

Strain	Browns-town Ill.	Eldor-ado Ill.	Lad-donia Mo.	Colum-bia Mo.	Man-hattan Kans.	Mound Valley Kans.	Thayer Kans.
C985	13.7	41.6	24.3	31.3	13.8	11.3	10.0
Clark	17.2	41.2	26.7	30.0	15.3	13.8	10.9
S1-441	14.6	39.3	24.5	29.8	13.9	12.4	9.9
S9-966	16.0	34.6	22.8	31.3	14.5	12.9	10.7
Perry	14.9	35.0	27.0	31.0	15.3	12.5	10.2
L9-3270	16.6	32.5	25.0	24.5	14.3	12.3	10.1
Chief	15.0	32.3	27.3	25.6	12.9	11.8	9.2
Wabash	12.5	32.5	23.6	25.7	12.7	11.6	9.4
Mean	15.1	36.1	25.2	28.7	14.1	12.3	10.1
	Yield Rank						
C985	7	1	6	1	6	8	5
Clark	1	2	3	4	1	1	1
S1-441	6	3	5	5	5	4	6
S9-966	3	5	8	1	3	2	2
Perry	5	4	2	3	1	3	3
L9-3270	2	6	4	8	4	5	4
Chief	4	8	1	7	7	6	8
Wabash	8	6	7	6	8	7	7

Table 37. Three-year summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1951-53.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	48	39	41	47	42	48	48	48
C985	33.7	+7.3	2.0	41	2.0	16.0	40.1	21.7
Clark	33.0	-1.9	1.9	38	2.0	15.7	40.3	21.7
Perry	30.8	+4.7	2.0	39	2.3	16.3	40.7	21.5
Chief	28.7	-2.0	2.8	48	2.3	12.4	41.0	20.3
Wabash	28.3	0	2.3	41	1.9	14.3	40.0	21.2
Mean	30.9		2.2	41	2.1	14.9	40.4	21.3

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

Table 38. Three-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1951-53.

Strain	Mean of 48 Tests	Landisville Pa.[1]	Georgetown Del.	Beltsville Md.	Worthington Ind.	Evansville Ind.	Urbana Ill.	Clayton Ill.	Stonington Ill.
Years Tested		1951-1953	1951-1953	1951-1952	1951-1953	1951-1952	1951-1953	1951-1953	1951-1953
C985	33.7	45.3	24.8	42.2	46.5	58.6	35.0	35.1	31.5
Clark	33.0	43.8	19.0	34.0	44.8	51.9	40.7	37.1	36.7
Perry	30.8	37.9	17.9	41.1	39.3	46.4	37.1	33.3	30.2
Chief	28.7	36.4	18.4	33.0	36.3	46.7	34.1	32.3	27.7
Wabash	28.3	36.5	17.3	29.7	38.9	46.1	33.8	32.8	28.1
Mean	30.9	40.0	19.5	36.0	41.2	49.9	36.1	34.1	30.8
		Yield Rank							
C986		1	1	1	1	1	3	2	2
Clark		2	2	3	2	2	1	1	1
Perry		3	4	2	3	4	2	3	3
Chief		5	3	4	5	3	4	5	5
Wabash		4	5	5	4	5	5	4	4

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

Table 38. (Continued)

Strain	Brownstown Ill.[2]	Trenton Ill.	Eldorado Ill.	Norborne Mo.	Laddonia Mo.	Columbia Mo.	Manhattan Kans.	Mound Valley Kans.	Thayer Kans.
Years Tested	1951-1953	1951-1952	1951-1953	1951, 1953	1951-1953	1951-1953	1951-1953	1951-1953	1952-1953
C985	23.1	42.6	45.0	30.8	27.8	31.8	22.6	17.9	10.0
Clark	26.1	40.7	43.3	29.0	30.3	29.6	22.5	18.0	10.9
Perry	23.5	39.9	37.8	28.9	30.5	30.6	22.4	16.6	10.2
Chief	20.8	37.3	34.7	26.6	29.2	23.8	21.0	16.2	9.2
Wabash	20.5	36.3	35.5	25.5	26.2	24.6	19.3	15.8	9.4
Mean	22.8	39.4	39.3	28.2	28.8	28.1	21.6	16.9	9.9
	Yield Rank								
C985	3	1	1	1	4	1	1	2	3
Clark	1	2	2	2	2	3	2	1	1
Perry	2	3	3	3	1	2	3	3	2
Chief	4	4	5	4	3	5	4	4	5
Wabash	5	5	4	5	5	4	5	5	4

PRELIMINARY TEST, GROUP IV

Strain C985 (Lincoln x Ogden) is an F_3 plant selection advanced to F_9. Strains C1065 through C1079 are F_6 plant selections from C985 which have been advanced to F_9. Strains C1082 and C1085 are F_6 plant selections from C986 (Lincoln x Ogden) which have been advanced to F_9. C986 was an F_3 plant selection. The unusual yielding ability and high oil content of strains C985 and C986 in Indiana tests in 1949 prompted their entry in Preliminary Test, Group IV, in 1950. C985 and C986 ranked first and third, respectively, in both yield and oil content among 23 entries for the six locations. In 1951 they ranked first and fifth, respectively, in yield among 18 entries at 16 locations in Uniform Test, Group IV. C986 was dropped from the test. C985 ranked first among the 10 entries in 17 tests in Uniform Test, Group IV, in 1952. Segregation for maturity, height, and shattering resistance was rather noticeable in C985. F_6 selections advanced to F_8 from C985 and C986 were tested in Indiana in 1952. These showed marked differences among the sister lines in yield, oil content, maturity, and shattering. The 13 lines retained were entered in Preliminary Test, Group IV, and were grown at four regional locations in 1953. The data are summarized in Tables 39 through 41. All 13 strains are resistant to frogeye leaf spot.

It is interesting to note that 8 of the 10 selections from C985 exceed it in yield; most of them have better seed quality and several are higher in oil content. Some selections are more lodging resistant and some are taller. Selection has been very effective in isolating improved lines from C985.

All the numbered strains are later in maturity than Perry, the latest maturing check variety. Most of the strains exceed Perry in yield, they are taller, and have a more desirable seed quality. Most of the strains are equal to Perry in oil content and one exceeds it by 1.2%.

Unusual drouth and high temperature conditions had a marked effect on yield at each location. This was especially true at Sikeston and Columbia, Missouri, where yields were very low. There was considerable variability in row width at Trenton, Illinois, which affected the reliability of the test. The Worthington, Indiana test was fairly good except for severe drouth and very high temperatures during August and September.

The very marked variety x location interaction necessitates further testing of most of these strains. The rather consistently poor yield performance of C1066, C1070, C1073, C1082, and C1085 indicates that these strains probably should be dropped from the test.

Initial steps have been taken to produce breeders' seed of the strains to be retained.

Table 39. Summary of agronomic and chemical data for the strains in the Preliminary Test, Group IV, 1953.

Strain	Mean Yield Bu./A.	Maturity[1]	Lodging[2]	Height Inches	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil
No. of Tests	4	3	2	4	4	4	4	4
C1074	29.3	+6.0	2.2	45	2.0	15.6	40.3	21.9
C1069	28.9	+8.7	2.4	43	1.8	15.1	40.1	22.2
C1071	28.7	+5.3	2.4	40	1.5	13.8	39.3	22.8
C1068	28.4	+5.7	1.4	40	1.3	14.8	40.6	21.8
C1076	28.3	+6.0	2.2	45	2.0	14.6	41.3	21.8
C1078	27.9	+4.0	2.2	41	1.3	15.1	41.2	21.6
C1079	27.9	+5.3	2.5	43	1.5	14.4	41.2	21.6
C1065	27.9	+7.0	1.5	39	1.5	13.9	40.8	21.7
C985	27.8	+6.7	2.0	42	1.8	14.7	40.4	22.4
C1082	27.4	+4.0	2.5	43	1.5	12.8	41.3	21.5
Perry	26.7	+3.7	1.9	39	2.0	14.2	40.5	21.6
C1085	26.6	+5.7	3.0	41	1.8	13.5	41.5	21.4
C1066	26.3	+4.3	1.9	42	1.8	14.5	39.8	22.7
C1070	26.3	+5.3	2.0	42	1.5	14.3	40.3	22.4
C1073	26.2	+5.7	2.0	42	1.5	14.8	39.9	22.4
Clark	24.2	-4.0	1.9	39	2.0	13.2	38.4	21.7
Wabash	23.3	0	2.0	44	1.3	12.2	39.5	21.8
Mean	27.2		2.1	42	1.7	14.2	40.4	21.9

[1]Days earlier (-) or later (+) than Wabash. Wabash required 124 days to mature.
[2]Columbia and Sikeston, Missouri, where all plants were erect, were not included in the mean.

Table 40. Summary of yield in bushels per acre and yield rank for the strains in the Preliminary Test, Group IV, 1953.

Strain	Yield (Bu./A.)					Yield Rank			
	Mean of 4 Tests	Worth-ington Ind.	Tren-ton Ill.	Colum-bia Mo.	Sikes-ton Mo.	Worth-ington Ind.	Tren-ton Ill.	Colum-bia Mo.	Sikes-ton Mo.
C1074	29.3	41.8	38.6	23.0	13.6	3	2	1	10
C1069	28.9	43.6	37.0	20.8	14.2	1	5	10	7
C1071	28.7	40.2	39.9	21.4	13.3	8	1	8	14
C1068	28.4	41.6	35.7	22.2	14.2	4	8	5	7
C1076	28.3	41.0	36.0	23.0	13.2	6	7	1	15
C1078	27.9	41.4	37.4	19.3	13.5	5	4	14	12
C1079	27.9	38.3	35.5	22.6	15.2	11	9	3	2
C1065	27.9	42.1	34.7	21.3	13.4	2	12	9	13
C985	27.8	40.8	35.1	21.6	13.6	7	11	7	10
C1082	27.4	39.9	33.0	22.3	14.3	9	15	4	5
Perry	26.7	32.6	38.6	19.8	15.7	17	2	13	1
C1085	26.6	39.9	31.1	20.8	14.4	9	16	10	4
C1066	26.3	36.6	36.6	16.9	15.2	13	6	16	2
C1070	26.3	36.3	34.2	21.8	12.9	14	13	6	17
C1073	26.2	36.3	35.4	20.1	13.1	14	10	12	16
Clark	24.2	38.1	33.2	11.5	14.1	12	14	17	9
Wabash	23.3	34.1	27.4	17.2	14.3	16	17	15	5
Mean	27.2	39.1	35.3	20.3	14.0				
Coef. of Var. (%)		11.5	13.8	12.8	--				
Bu. Nec. for Sig. (5%)		6.2	N.S.	2.5	--				
Row Spacing (In.)		38	34-40	36	40				

Table 41. Summary of maturity data, days earlier (-) or later (+) than Wabash, and percentage of oil for the strains in the Preliminary Test, Group IV, 1953.

Strain	Maturity				Percentage of Oil				
	Mean of 3 Tests	Worthington Ind.	Trenton Ill.	Columbia Mo.	Mean of 4 Tests	Worthington Ind.	Trenton Ill.	Columbia Mo.	Sikeston Mo.
C1074	+6.0	+10	+ 4	+4	21.9	22.2	22.7	22.3	20.4
C1069	+8.7	+ 7	+13	+6	22.2	22.8	23.1	22.2	20.6
C1071	+5.3	+ 7	+ 5	+4	22.8	23.5	23.8	23.1	20.6
C1068	+5.7	+ 6	+ 5	+6	21.8	22.5	22.7	22.3	19.7
C1076	+6.0	+ 6	+ 9	+3	21.8	22.6	22.4	22.5	19.7
C1078	+4.0	+ 6	+ 3	+3	21.6	22.2	22.3	22.5	19.2
C1079	+5.3	+ 5	+ 8	+3	21.6	22.2	22.2	22.1	20.0
C1065	+7.0	+ 5	+12	+4	21.7	22.6	22.3	21.9	20.0
C985	+6.7	+ 7	+10	+3	22.4	23.5	23.0	22.7	20.2
C1082	+4.0	+ 5	+ 7	0	21.5	22.5	22.1	21.9	19.4
Perry	+3.7	+ 7	+ 2	+2	21.6	21.9	22.3	22.3	20.0
C1085	+5.7	+ 6	+ 9	+2	21.4	22.2	21.9	22.0	19.3
C1066	+4.3	+ 7	+ 3	+3	22.7	23.2	24.0	22.5	21.1
C1070	+5.3	+ 7	+ 4	+5	22.4	22.7	23.4	22.5	20.8
C1073	+5.7	+ 7	+ 6	+4	22.4	23.1	23.4	22.9	20.1
Clark	-4.0	- 6	- 4	-2	21.7	22.4	22.0	22.3	20.2
Wabash	0	0	0	0	21.8	21.1	22.9	22.5	20.6
Mean					21.9	22.5	22.7	22.4	20.1
Date planted		5/22	5/28	5/30					
Wabash matured		9/29	9/24	9/29					
Days to mature		130	119	122					

Table 42. Chemical composition of soybean seed grown at each of the Uniform Test locations in 1953, the two-year means for 1952-53, and the three-year means for 1951-53.

Location	1953				Two-Year Mean		Three-Year Mean	
	Percentage of Protein	Percentage of Oil	Acetone Insoluble (Percent)	Seed Quality	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
Group 0 (Mean of 14 strains in 1953, 13 in 1952, and 15 in 1951)								
Ottawa, Ontario	43.8	18.4	0.52	2.1	42.6	19.2	40.3	19.5
Guelph, Ontario	37.9	20.6	1.32	2.4	39.0	20.1	40.8	19.3
Hoytville, Ohio	41.6	19.9	0.95	2.1	41.4	20.3	--	--
Columbus, Ohio	40.7	21.4	0.99	2.1	41.1	21.2	41.3	21.0
E. Lan., Mich.(Muck)	39.4	20.3	0.62	2.1	38.9	20.5	--	--
Deerfield, Mich.	41.2	20.4	1.00	2.8	41.1	20.5	42.2	20.0
Spooner, Wis.	41.9	19.1	0.99	1.2	41.2	19.1	42.0	18.4
Fall City, Wis.	42.3	20.2	0.50	1.8	41.9	20.2	42.3	19.4
Morris, Minn.	39.3	21.5	0.50	1.0	39.8	21.2	39.6	20.6
St. Paul, Minn.	38.4	21.7	0.50	1.0	40.1	20.8	--	--
Casselton, N. D.	40.6	20.1	0.53	1.0	42.0	19.5	--	--
Fargo, N. D.	39.7	20.7	0.45	1.0	41.1	19.7	41.2	19.0
Group I (Mean of 8 strains in 1953, 10 in 1952, and 13 in 1951)								
Guelph, Ontario	40.9	18.8	0.72	1.8	41.6	19.0	42.4	18.5
State College, Pa.	40.5	20.6	0.57	1.0	40.1	21.2	40.8	21.0
Hoytville, Ohio	41.0	19.2	0.96	1.6	41.6	19.8	--	--
Wooster, Ohio	44.0	19.1	1.09	2.8	43.4	19.9	43.0	20.0
Columbus, Ohio	41.4	20.5	0.94	2.1	41.3	20.7	41.5	20.8
Deerfield, Mich.	43.0	19.3	0.72	2.3	43.0	19.7	43.3	19.5
Walkerton, Ind.	37.0	22.0	1.00	1.6	39.5	21.3	40.5	20.7
Spooner, Wis.	41.3	18.3	1.07	2.4	40.8	18.7	--	--
Fall City, Wis.	44.2	18.0	0.55	1.5	43.5	19.1	43.8	18.7
Madison, Wis.	41.1	20.4	0.50	1.3	42.2	20.0	42.2	19.7
Shabbona, Ill.	40.4	21.5	1.21	1.3	40.5	21.9	40.5	21.4
St. Paul, Minn.	37.4	21.3	0.49	1.0	39.9	20.3	--	--
Waseca, Minn.	41.1	20.4	0.49	1.1	42.1	20.0	42.4	19.5
Cresco, Iowa	41.2	20.7	0.80	1.0	42.3	20.2	43.0	19.4
Kanawha, Iowa	41.1	21.1	0.90	1.0	41.5	21.0	42.0	20.3
Group II (Mean of 14 strains in 1953, composite of 14 in 1952, and 13 in 1951)								
State College, Pa.	39.9	20.9	0.50	1.9	39.5	21.2	40.2	20.9
New Brunswick, N. J.	42.3	19.4	0.83	2.4	41.6	20.2	42.0	20.1
Burlington, N. J.	44.3	18.4	0.86	2.6	--	--	--	--
Newark, Del.	40.6	20.1	0.41	2.9	--	--	--	--
Hoytville, Ohio	39.5	20.2	0.93	2.0	40.0	20.8	--	--
Wooster, Ohio	44.3	18.1	1.02	2.1	43.2	19.5	42.8	19.6
Columbus, Ohio	42.2	19.6	1.05	1.9	41.7	20.6	42.0	20.5
Mt. Healthy, Ohio	41.8	20.3	0.98	2.1	41.3	20.7	40.2	21.3
Deerfield, Mich.	42.0	19.8	0.68	1.4	42.6	20.1	43.1	19.9

Table 42. (Continued)

Location	1953				Two-Year Mean		Three-Year Mean	
	Percentage of Protein	Percentage of Oil	Acetone Insoluble (Percent)	Seed Quality	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
(Group II Continued)								
Walkerton, Ind.	35.1	23.1	1.08	1.4	38.3	21.7	39.5	21.1
Bluffton, Ind.	38.7	21.3	0.97	1.6	40.2	21.0	40.8	20.8
Lafayette, Ind.	39.5	21.1	1.03	1.6	40.8	21.2	40.9	21.1
Greenfield, Ind.	40.5	21.3	0.99	1.4	41.1	21.4	41.6	21.2
Madison, Wis.	38.8	20.8	0.75	1.4	40.0	20.2	41.1	19.8
Shabbona, Ill.	40.4	21.4	1.22	1.0	39.7	20.9	40.1	20.5
Dwight, Ill.	40.0	21.7	1.20	1.6	40.5	21.4	40.8	21.2
Urbana, Ill.	38.8	21.4	1.56	2.6	38.6	21.5	38.8	21.5
Kanawha, Iowa	39.8	21.4	0.57	1.0	40.2	21.4	41.3	20.5
Marcus, Iowa	40.2	20.8	0.54	1.0	40.3	20.8	40.9	20.4
Independence, Iowa	40.4	21.0	0.60	1.0	39.9	21.5	40.4	20.7
Ames, Iowa	40.3	21.2	0.66	1.0	40.1	21.3	39.8	20.9
Dakota City, Nebr.	38.4	21.8	0.94	1.0	--	--	--	--
Lincoln, Nebr.	41.0	20.9	4.29	2.9	40.5	21.4	40.5	21.4
Group III (Mean of 10 strains in 1953, composite of 15 in 1952, and 16 in 1951)								
Landisville, Pa.[1]	40.8	19.9	0.52	2.3	40.8	20.3	40.6	20.6
Newark, Del.	40.0	20.4	0.42	3.2	40.1	21.0	39.6	21.3
Georgetown, Del.	40.0	22.5	1.11	2.4	--	--	--	--
Beltsville, Md.	32.7	24.6	0.56	2.2	35.0	23.6	35.8	23.6
Columbus, Ohio	40.9	19.8	0.92	1.6	40.5	20.7	41.4	19.9
Mt. Healthy, Ohio	41.8	19.9	1.04	2.2	41.5	20.5	40.4	21.0
Lafayette, Ind.	38.3	21.5	0.52	1.3	38.9	21.4	39.7	21.3
Greenfield, Ind.	39.8	20.2	0.51	1.1	41.0	20.4	41.2	20.5
Worthington, Ind.	40.2	21.0	0.49	2.3	40.8	21.2	40.9	21.3
Dwight, Ill.	39.6	21.1	--	1.1	40.1	21.0	40.4	20.9
Urbana, Ill.	37.6	21.0	1.39	2.1	38.6	21.3	38.6	21.3
Clayton, Ill.	38.2	22.8	--	2.2	39.1	22.3	40.7	21.7
Stonington, Ill.	40.1	21.6	--	2.5	40.1	21.6	39.0	21.9
Brownstown, Ill.[2]	44.0	19.1	1.31	2.6	42.9	20.1	42.0	20.6
Eldorado, Ill.	40.4	20.8	0.91	2.6	40.3	21.4	41.4	21.3
Ames, Iowa	37.5	21.7	0.47	1.0	38.5	21.5	39.4	21.1
Ottumwa, Iowa	34.8	23.6	0.53	1.0	36.8	22.5	38.2	21.9
Norborne, Mo.	37.2	22.0	0.99	2.3	--	--	--	--
Laddonia, Mo.	41.1	20.4	1.26	2.6	40.4	21.0	41.0	20.9
Columbia, Mo.	38.6	21.7	1.02	2.4	40.2	21.5	40.7	21.4
Lincoln, Nebr.	41.5	20.0	1.53	2.4	40.5	20.8	40.0	20.9
Manhattan, Kans.	43.3	19.5	0.45	2.9	41.7	20.9	41.5	21.0
Thayer, Kans.	43.2	20.8	0.75	2.6	42.8	21.0	--	--

Table 42. (Continued)

Location	1953				Two-Year Mean		Three-Year Mean	
	Percentage of Protein	Percentage of Oil	Acetone Insoluble (Percent)	Seed Quality	Percentage of Protein	Percentage of Oil	Percentage of Protein	Percentage of Oil
Group IV (Mean of 9 strains in 1953, composite of 10 in 1952, and 18 in 1951)								
Landisville, Pa.[1]	40.6	19.5	0.70	1.7	40.8	20.3	40.7	20.6
Georgetown, Del.	39.7	22.8	1.23	3.0	40.5	22.4	--	--
Trappe, Md.	34.1	24.4	0.55	1.8	--	--	--	--
Columbus, Ohio	41.8	19.2	1.08	2.0	--	--	--	--
Worthington, Ind.	38.7	21.7	1.02	2.1	39.6	21.9	40.2	21.4
Urbana, Ill.	37.2	21.9	0.99	1.6	38.6	21.8	39.1	21.4
Clayton, Ill.	39.6	22.3	0.86	2.2	40.1	21.9	41.1	21.3
Stonington, Ill.	38.7	21.7	0.70	2.4	39.0	21.9	38.6	22.0
Brownstown, Ill.[2]	44.0	18.6	0.75	3.4	43.2	20.0	42.5	20.5
Eldorado, Ill.	39.3	21.8	0.95	2.6	39.7	22.3	40.9	22.0
Norborne, Mo.	38.4	22.6	1.01	2.2	--	--	--	--
Laddonia, Mo.	41.0	20.1	1.03	1.4	40.4	21.2	40.5	21.2
Columbia, Mo.	38.5	22.4	1.04	1.7	39.4	22.2	40.0	21.8
Manhattan, Kans.	43.2	19.5	0.45	3.4	41.6	21.1	41.5	21.0
Mound Valley, Kans.	43.6	20.7	1.05	3.1	42.1	21.0	41.1	21.6
Thayer, Kans.	44.1	20.2	0.70	3.4	42.6	21.2	--	--

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

SOYBEAN DISEASE INVESTIGATIONS IN 1953[1]

The extremely dry weather prevailing over much of the Midwest in 1953 was a major factor in reducing the prevalence and severity of most soybean diseases, and high temperatures, especially early in the growing season, were likewise instrumental in reducing the incidence and severity of some diseases. Generally speaking, diseases were less important as crop production hazards than at any time in recont years.

Bacterial pustule was the most prevalent disease in Illinois, Indiana, and southern Iowa. In contrast to past years, there was very little pustule in the southern ends of Indiana and Illinois. This was likely a result of the extremely dry weather in this region over most of the summer.

Another usually important leafspot, bacterial blight, was prevalent in northern and central Iowa in June but virtually absent in Indiana and Illinois, where unseasonably high temperatures in June held infection to a minimum. In central Illinois, however, a limited outbreak of blight infection occurred early in July when the disease is usually declining rapidly. This inversion was traceable to a shower and several days of cool weather late in June.

Brown stem rot was prevalent in Illinois but stem browning was less severe than usual because of high temperatures. It was notable this year that very early varieties showed little evidence of the disease in mid-August. In varieties of Lincoln or later maturity, stem browning was obvious but less advanced than usual. Drought damage was becoming apparent late in August, and it is impossible to say whether leaf symptoms developed, since the two are indistinguishable.

Stem canker was prevalent in central Iowa, but less prevalent than usual in Indiana and Illinois. Losses from the disease this year were well below normal. Stem canker appeared several days earlier than usual in Illinois, while in Indiana the initial appearance was somewhat later.

Rhizoctonia root rot appeared in June in both Indiana and Illinois, but was not present to any appreciable extent thereafter.

An outbreak of Phyllosticta leafspot was noted in southcentral Iowa. A few fields were so severely damaged that they were disked and replanted. A leaf scorch presenting symptoms identical to those of Phyllosticta leafspot occurred in central Illinois in June. Whether this is actually the same disease remains a question, since no pycnidia ever developed on the leaves, and only in one case was a Phyllosticta isolated from diseased leaves.

Frogeye, downy mildew, and brown spot were of minor importance throughout the Midwest. Bud blight appeared only in trace amounts.

Soybean mosaic was present in only negligible amounts except in Indiana, where it was more prevalent than in the past. Seed increase fields of Clark variety showed up to 10% mosaic infection.

Disease research in Iowa is concerned mainly with stem canker. Better methods of inoculation are sought as a means of evaluating plants for resistance to the

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[1]Project 1-4010/4, Section of Forage Crops and Diseases.

disease. Different sources of inoculum are under investigation in an attempt to better understand the life cycle of the fungus. The effect of such factors as date and rate of planting, and lodging, on disease development is being studied. Varieties that have shown resistance in previous years are undergoing further tests to verify their disease reaction.

At Urbana, Illinois, 456 Plant Introductions and 38 strains were evaluated for susceptibility to brown stem rot. Seven of these entries showed slight infection and will be retested. Thirty-two plant selections, free of stem browning, were selected from the introductions and strains and will be tested for possible resistance. From past experience, these selections are presumably escapes until additional tests prove otherwise.

Bacterial blight and pustule nurseries were again grown at Urbana, to evaluate 90 Plant Introductions and 36 strains and varieties for resistance to these diseases. Because of the unseasonably hot weather in June, the blight tests were of little value. In the pustule nursery, however, a good epidemic developed after artificial inoculation. Seven P. I.'s appeared to be highly resistant and will be tested further to verify their pustule reaction. The reaction of these P. I.'s and those of several retested strains are listed in the table below.

HIGHLY RESISTANT		MODERATELY RESISTANT	
Identity	Pustule Reaction	Identity	Pustule Reaction
P. I. 88353	1*	Flambeau	2***
88789-1	1*	C739	2***
89002-2	1*	C1024	2**
96333	1*	L6-1152-7	2**
159321	1*	S1-441	2**
171432	1*	S9-966	1-2**
171652-A	1*	W0S-3138	1-2*
L9-4044	0-1***		
L9-4179	1**		
L9-4196	0-1****		
L9-4200	1***		
W9S-2703	1*		
W0S-3334	1*		

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

WEATHER CONDITIONS AND GENERAL GROWTH RESPONSES AT MOST OF THE NURSERY LOCATIONS DURING THE 1953 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 1953 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 past season was not particularly a good one here because of two separate, hot, dry periods which were experienced during the latter part of the summer. Most of the months of July and August were extremely dry and at the same time, unusually hot. This caused the soybean leaves to wilt at that time and finally they dried up completely and dropped off much earlier than usual. The notes on maturity, although shown, were very difficult to obtain. Although the yields were reasonably good, there was considerable variation between replications and no significant differences were obtained from a statistical analysis of the data.

Guelph, Ontario. Seeding of both groups was done on May 20. Seeding conditions were very poor due to excessive rainfall in May and the early part of June. Growing conditions then improved considerably until the end of August when an extremely dry spell hit the Province which lasted for several weeks. The result of this was that although vegetative development was good, seed development lacked, many of the pods at the tops of the plants did not fill out, and resulting yields and quality of seed were low. Group 0, especially, matured at a very rapid rate due to these conditions, resulting in a very narrow maturity index. The first killing frost occurred on October 8 and did considerable damage to many strains in Group I. Downy mildew and bacterial blight occurred to a greater extent this year than in previous years, probably because of the wet season. Harvesting conditions were excellent.

State College and Landisville, Pennsylvania. As indicated by the data, there was a very wet spring. It was impossible to plant soybeans during the month of May. In fact, a lot of spring plowing was not done until early June. It then turned dry and was one of the driest seasons on record at State College. At Landisville the season was also dry but not nearly as bad as at State College. The following rainfall table for the growing season indicates the extent of the drouth:

	State College		Landisville	
	Total Rainfall	Departure from Normal	Total Rainfall	Departure from Normal
May	9.24	+5.19	7.20	--
June	2.05	-2.04	3.54	--
July	2.92	-0.93	3.54	--
August	2.46	-1.01	0.89	-3.57
September	2.10	-0.92	4.98	--
October	1.06	-1.86	2.15	--

New Brunswick and Burlington, New Jersey. Beginning about July 20, temperatures were considerably higher than the average for the period. Some rain was received, but soil moisture remained fairly low. During the first part of August, temperatures were below average and soil moisture only fair. Beginning the last week in August and continuing through the first ten days of September, temperatures were extremely high and soil moisture very low. It might be summarized by more or less hot drouthy conditions for almost two months from the latter part of July through the early part of September. The soybeans made almost normal growth but apparently during flowering and development of the flowering, considerable damage was evident. Certain varieties showed small beans and immature beans as a result of these conditions.

Newark, Delaware. Rainfall for the period May through September was 18.09 inches, which was 2.58 inches below normal. Rainfall was deficient during June, July, and particularly August with May and September above normal. Temperature was slightly above normal. Temperature above 90° was recorded for 10 days in June, 13 in July, and 9 in August.

Georgetown, Delaware. Rainfall for the period May through September was 21.40 inches, which was about normal. However, moisture was deficient during June, July, and September. A total of 9.33 inches was reported for August, but the distribution was such that moisture actually was deficient for certain periods during the month. On August 14 a rainfall of 5.86 was recorded but no damage to beans was noted.

Temperature was slightly above normal. Temperature above 90° was recorded for 10 days in June, 15 in July, and 11 in August.

Beltsville, Maryland. April and May were months of above normal temperatures and rainfall. An exceptionally wet May delayed planting of the nursery until June 5. Approximately one-half of the normal amount of rainfall was received in each of the months of June, July, and August, a period of about normal temperatures. September and October were months of normal rainfall and temperatures. The effect of the mid-season drouth was minimized by the location of the nursery on a soil with an exceptionally good moisture-holding capacity.

Stands were excellent and an excellent growth was obtained. A storm on August 9 resulted in severe early-season lodging. Harvest conditions were ideal. Beans of maturity Groups III and IV were affected but little by drouth, but fields of Group V or later maturity were reduced somewhat by lack of moisture. Seed quality was very good and but few instances of disease were noted.

Hoytville, Wooster, Columbus, and Mt. Healthy, Ohio. The weather in Ohio in 1953 for soybean production was about as variable as it has been any time in the last decade. It is a fact that perhaps the variation in soybean yields in 1953 was perhaps greater than the variation in any other crop. Generally speaking for the state, the weather conditions were not conducive to high yields. In certain localities it was rather dry at planting time and the soybeans were rather slow and erratic in emergence. In other places, the moisture condition was very good at planting time and the soybeans emerged very soon. In general, though, the terrific heat and drouth in August perhaps was the greatest single factor to reduce the soybean yield in Ohio. This was true over a large part of the state. However, in the northwestern part of the state the growing conditions were very favorable and in some regions the yields were perhaps the highest they had ever obtained. In general, however, with the exception of the hot and dry August, the rest of the

season was rather favorable. The harvest season was very dry and favorable for combining. Many of the beans combined were of a very low moisture content. In much of the state the yield was far below the state average of 20.5 bushels. A few very favorable regions in the state brought the yield up to the 20.5-bushel average.

East Lansing and Deerfield, Michigan. The muck plot at East Lansing was on Houghton muck and the plots showed severe manganese deficiency. An application of $MnSo_4$ increased the yield on muck an average of 14 bushels per acre. The East Lansing upland soil (Conover) was deficient in organic matter and with the dry summer the soybeans did rather poorly. Group 0 shattered badly during the fall, Group I shattered some, and Group II a little. There was considerable variation in maturity of a given variety from one replication to another; thus, this factor was not considered. The Deerfield plot was on Brookston soil and beans yielded well in spite of the unfavorable weather. The following temperatures and precipitation data are of interest:

	Total Precipitation	East Lansing Days Precipitation .01 or more	Average Temperature
June	4.09	12	68.1
July	2.39	8	71.2
August	3.22	8	70.3
September	.90	5	60.4
		Adrian (representing Deerfield)	
June	1.79	7	71.2
July	2.55	10	73.2
August	2.06	7	71.9
September	2.20	7	62.9

Walkerton, Indiana. This was a fairly good nursery planted June 2 with all varieties maturing prior to frost. Stands generally were good, but some spottiness was evident among some varieties. Growth was fair and yields were somewhat above average. There was slight pustule and moderate mildew infection. Precipitation was 2.37 below normal for the May-September period. July was the only summer month above normal precipitation. Forty-one days had temperatures above 90° F. during the May-September period. Temperatures ranged from 95 to 104° from August 25 through September 3. There was no rainfall from August 8 to September 4. Precipitation through the growing season to August 8 was well distributed.

Bluffton, Indiana. This nursery was planted May 28 on highly fertile soil. Emergence was excellent and growth abundant. Harvest was prior to frost with ideal harvesting conditions. Yields were somewhat below average for the high fertility level. There was moderate bacterial pustule and slight mildew infection throughout the plot. Stem canker infection was very light. There was some shattering in many of the early maturing varieties. Moisture deficiencies of 1.22, 2.23, and 1.53 inches occurred in May, June, and August, respectively, with a total deficiency of 5.82 inches. There was no precipitation from August 9 to September 4. Temperatures from 93 to 101° occurred on consecutive days from August 25 to September 4. Forty-four days with temperatures of 90° or above occurred during the May-September period.

Lafayette, Indiana. Stands were excellent and growth was about average in this nursery which was planted May 30. Harvest conditions were excellent. Yields were below average. A heavy hail August 9 caused stem, leaf, and petiole injury. Stems were bruised considerably, leaves were torn, and petioles were rather flaccid. There was a good distribution of rainfall through August 9. July had an excess of 4.23 inches. No precipitation occurred from August 9 to September 4. Temperatures were unusually high in late August and early September. There was a moderate infection of bacterial pustule and bacterial blight and a light infection of stem canker throughout the nursery.

Greenfield, Indiana. Stands were excellent and growth was moderately good, with well above average yields. There were very light infections of brownspot, pustule, and some mildew. Some shattering occurred among early-maturing varieties. Harvest conditions were ideal. Precipitation was well distributed in May, June, July, and early August but none occurred from August 9 to September 3. Temperatures were from 92 to 100° on consecutive days from August 25 to September 3. There were 46 days in May through September with temperatures of 90° or higher.

Worthington, Indiana. This was a fair nursery. Stands and growth were good, but yields were below average. Johnson grass was abundant and was hoed out of this nursery. There was considerable lodging and some shattering. This nursery was planted May 22 following a dry period. Precipitation was 2.54 inches below normal in June followed by 1.09 inches above normal in July and an extreme shortage of moisture in August and September. Only 0.77 and 0.63 inches of rainfall occurred in these months, respectively. There was no rainfall from August 9 to September 5. Temperatures were from 94 to 106° on consecutive days for a week the latter part of June. For 10 consecutive days in late July and early August the temperatures were from 93 to 102°. During six of these days the maximum temperatures were 100° or over. For eight consecutive days in late August and early September maximum temperatures were from 100 to 105°. Temperatures of 100 and 101° were reached in individual days in late September. Seed quality was generally poor. There was slight mildew and pustule scattered throughout the nursery. Mosaic was rather severe. There was no frogeye leaf spot as observed frequently in past years.

Evansville, Indiana. All yield trials in this nursery were abandoned because of very poor emergence due to low soil moisture at planting on June 4 and lack of precipitation of any consequence until July 16. Very frequent, but not excessive, precipitation the first 24 days of May prevented seasonable planting. No rain of any consequence occurred from May 24 to July 16. Only 5.43 inches of rainfall were obtained in June through September which was 7.88 inches below normal. Only .56 inch fell in September. Very high temperatures prevailed from late May through September and part of October. There were 76 days from May through September with temperatures of 90° or above. Temperatures near and above 100° were frequent throughout the growing season. A rather severe infection of mosaic was observed in this nursery. No other diseases were observed.

Spooner, Wisconsin. The 1953 season was exceptionally favorable to good growth and production of soybeans. The temperatures were consistently normal or above from planting time until harvest. Rainfall was also consistently sufficient and at several periods excessive until last half of August and September when it was extremely dry. The nursery was irrigated August 31. This was sufficient for properly maturing the early strains, but the ones later than Mandarin (Ottawa) suffered for lack of moisture after September 15. All of the nursery matured rather slowly in spite of the favorable temperatures, but this was perhaps due to the fact

that no fertilizer was applied to the nursery. A light frost occurred September 13, but little damage was done to the late varieties. The next frost, September 22, was listed as the first killing frost. Considerable damage was done by this frost, and the unmatured varieties could not reach their natural state of maturity.

Fall City, Wisconsin. Conditions at Fall City were very similar to Madison. The growth was excellent. The yields for the strains in Group 0 were about 50 percent better than average. The strains in the Group I nursery suffered considerably from dry weather during the latter half of August and September. All strains matured before the first killing frost occurred.

Madison, Wisconsin. The weather during the 1953 growing season at Madison was exceptionally favorable for soybean production. During May, July, and September temperatures were about normal and slightly above normal during June and August. Although May was dry, sufficient moisture was available in the soil for good germination and early growth. June rainfall was normal, while in July the rainfall was 2.23 inches above normal. During the first half of August, rainfall was normal. However, from August 12 until harvest, rainfall was considerably below normal. This resulted in a very heavy growth with considerable lodging. Yields of all varieties, especially the earlier strains, were 50 percent higher than average. The yields of the later strains were reduced some by the dry fall. All varieties were harvested before a killing frost occurred.

Shabbona, Illinois. These tests were planted May 13, 1953 in a moist seedbed that was relatively mellow although numerous corn roots in the surface soil made planting difficult. Stands were good but numerous plants were killed during a hail storm which occurred shortly after emergence. Growth was fairly good and 1953 yields were 2.7 bushels greater than in 1952. Soil tests indicated pH, available phosphorus and potassium were adequate for good growth.

Dwight, Illinois. These tests were planted May 13, 1953 in a somewhat cloddy, dry seedbed. A rain following planting brought the beans up in good, uniform stands. Growth was only fair but yields were 2.8 bushels higher than in 1952. Moisture and growth were excellent through July but subsequent dry, hot weather materially reduced yields. Soil tests indicated that an application of phosphorus to this soil was needed for maximum yields.

Urbana, Illinois. These tests were planted May 11, 1953 in a mellow, moist seedbed. Stands were good and, as at Dwight, growth was excellent through July. Subsequent dry and hot weather materially reduced yields resulting in an average three bushels less in 1953 than in 1952. Soil tests indicated that available phosphorus and potassium were high but that a lime amendment was needed.

Clayton, Illinois. These tests were planted May 26, 1953 in a mellow but relatively dry seedbed. Stands were not too uniform but were adequate and growth was good until late summer due to a prolonged period of hot, dry weather. Yields in 1953 were approximately six bushels less than in 1952. Soil tests indicated pH was nearly optimum and the available phosphorus and potassium levels were high.

Stonington, Illinois. These tests were planted May 26, 1953 in a mellow, moist seedbed. Very hot weather immediately subsequent to planting resulted in poorer stands than normal. A visit to this plot on June 15 disclosed severe chlorosis in two strains, L9-4091 and S9-966, and slight chlorosis in several other strains. Spray tests with iron and manganese salts gave no positive evidence as these being

the causative agents. The plants did become green but growth was only fair and the average plot yield was two bushels less than in 1952. Soil tests indicated that pH and available phosphorus and potassium were adequate but that boron content was very high. Whether the high level of boron is the explanation for the chlorosis observed is not known.

Brownstown, Illinois. These tests were planted May 27, 1953 in a very good seedbed with plenty of moisture. Stands and early growth were good. However, the late summer drouth and hot weather severely reduced yields. The 1953 plot yields averaged fifteen bushels less than 1952. Soil tests indicated a neutral pH and high levels of available phosphorus and potassium.

Trenton, Illinois. These tests were planted May 28, 1953 in a good seedbed. Severe hot, dry weather immediately following planting severely reduced stands and necessitated the abandonment of Uniform Nurseries, Groups III and IV. Stands in the Uniform Preliminary Test, Group IV, were adequate and growth was fair although average yields of Clark, a check variety, were five bushels less than in 1952. Soil tests indicated a nearly neutral pH and high levels of available phosphorus and potassium.

Eldorado, Illinois. These tests were planted May 29, 1953 using furrow openers to get the seed down to moisture. A crust produced by a heavy rain prior to emergence severely reduced the uniformity of growth since part of the plants did not emerge until after a rotary hoe could be used to break the crust. Growth was fairly good and 1953 Group IV yields were approximately five bushels more than in 1952. Soil tests indicated high levels of available phosphorus and potassium but a lime amendment was needed.

Morris, St. Paul, and Waseca, Minnesota. For the second consecutive season, growth conditions for soybeans were almost ideal in Minnesota. If different, 1953 was the more favorable. Uniform nurseries along with other soybean plantings went into the ground on time and emerged with good stands. Moisture conditions were nearly optimum all summer, and good growth temperatures prevailed. Yield levels were higher than average at all locations but particularly so at St. Paul and Morris. Lodging was extremely severe at St. Paul, occurring early in the season. There was very little lodging at Morris and Waseca. The fall was warm and dry, making for ideal harvesting conditions.

Cresco, Iowa. This nursery was located in northeast Iowa on Carrington Plastic Till Phase soil which is tight, cold, wet, slowly drained, and low in fertility. The nursery was planted on May 28 on corn land. During the growing season temperatures averaged near normal, and precipitation for June, July and August was considerably above normal. However, on the contrary, May and September averaged considerably below normal precipitation. The resulting growth and yields, while low, were near average for this nursery and conditions. Frost did not kill prematurely and harvesting was completed under very dry conditions. This nursery was considered reasonably good for making strain comparisons.

Kanawha, Iowa. This nursery is located in northcentral Iowa on level, fertile Webster silty clay loam. Planting was completed on May 20 on land which had grown corn in 1952. Stands were excellent and plots were kept weed-free. During the growing season temperatures averaged slightly higher than normal and precipitation was normal for June, July and August. However, rainfall showed a deficit of 4.5 inches on the average for May and September. These conditions permitted only

reasonably good growth and yields. Heavy infestation of bacterial blight occurred in July. Although a light frost occurred late in September, a killing frost did not occur until after maturity. Harvesting was completed under very dry conditions. This nursery was considered very 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 21 on corn land. Stands were excellent and plots were kept weed-free. Temperatures were near normal and precipitation was normal or above for May, June, July, and August. September was the only month below normal. Therefore, growth was excellent and lodging was rather severe. Frost occurred considerably later than normal. Yields were highest in the state. Harvesting was completed under very dry conditions. This nursery was considered excellent for making strain comparisons.

Independence, Iowa. This location was new in 1951. It is located in northeast central Iowa on Carrington silt loam, medium low in fertility. Planting was completed on May 15. Stands were excellent and plots were kept weed-free. Temperatures throughout the growing season were near normal. A deficit of 1 to 3 inches of precipitation was present every month except July. In spite of this deficit, yields were good and lodging was excessive, primarily because of a severe storm on July 26. Frost occurred much later than normal. Harvesting was completed under very dry conditions. This nursery was considered very good for making strain comparisons.

Ames, Iowa. Ames is centrally located on level, medium-fertile Webster silty clay loam. Planting was made on corn land on May 12. Stands were excellent and nursery was kept weed-free. Normal temperatures throughout the growing season were coupled with a deficit of precipitation in almost every month from May through September which totaled almost nine inches below normal. In spite of the drouth which began in "earnest" about August 3 and lasted until November 21, growth and yields were considered good. Lodging was not as prevalent as had been experienced normally. Maturity was hastened almost two weeks compared to normal. Frost did not occur until after the normal date. Harvesting was completed under very dry conditions. Strain comparisons are believed to be very good to excellent for making strain comparisons.

Ottumwa, Iowa. This nursery was located in southeastern Iowa on flat, fertile Haig silt loam. The nursery was planted May 25. Stands were fair after considerable transplanting was done. Drouth caused the initial irregular stands and emergence. The plots were kept almost weed-free. Temperatures during the growing season averaged normal or above. However, the precipitation deficit was serious. Every month had a deficit from May through September with a total deficit of 12.6 inches. Growth was reasonably good the first three months but in August and September an already serious drouth became worse. Yields were the poorest on record, height was good but there was little or no lodging. Frost occurred much later than normal. Harvesting was completed under very dry conditions. Strain comparisons are believed to be only fair in this nursery primarily because of drouth effects.

Laddonia, Missouri. Soil moisture was ample during May and the plot was planted in a good seedbed following pasture. Calcium and phosphorus were brought up to recommendations, and potassium was satisfactory. Rainfall was above normal in June and growth was very good. However, the July and August total was only slightly more than two inches and there was no effective rainfall in September. As a result,

later varieties suffered greatly from drouth and generally yielded less than early strains. Shattering was serious and L9-4091 lost quite a few seeds. Bacterial pustule was generally present in moderate amounts. Wildfire seemed to be more prevalent on Clark. Group IV was badly hit by stem canker, and Clark and Wabash especially were 100% killed prematurely.

Columbia, Missouri. This location was planted May 21 in a firm, moist seedbed and emergence was good. Three hundred pounds of 0-20-10 was applied before planting and Ca, P, and K had previously been brought up to recommendations. Organic matter is low. The rainfall pattern here was just the opposite of Laddonia. The total May and June rainfall was only 40% of normal with no effective rain in June. The July-August total was 80% of normal and well distributed. Under these conditions the early varieties did not do as well as at Laddonia. In Group III, A0-8618 yielded seven bushels less at Columbia, but the Clark yield was almost the same. Bacterial pustule was present but other diseases were not important.

Norborne, Missouri. This is a moderately heavy black soil, typical of second bottoms along the Missouri River where a high proportion of the land is in soybeans. The beans were planted May 28 with furrow openers in a very firm seedbed. Stands were generally good. May rainfall was heavy, but total rain during June, July, and August was only 4.12 inches, less than half of normal. This was fairly well distributed, however. Growth was good but yields were only about two-thirds normal. Bacterial pustule was moderate and evenly distributed so readings were taken on all four replications. As expected, L9-4091 averaged a 1 reading but C1048 was also uniformly low. A trace of bud blight was present.

Casselton and Fargo, North Dakota. The drouth during the fall of 1952 extended through the winter and into early spring of 1953. The winter was relatively mild with very little snow. Welcome spring rains came April 24. This was followed by other rains, which soon interfered with seeding operations. Rains continued in excessive amounts through June. The southeastern part of the state, where most of the soybeans are grown, suffered most from the excessive water.

Temperatures throughout May and much of June were generally low or moderate, not favorable to soybeans. July and early August were much more favorable. Rainfall through this period was relatively light and temperatures more favorable to the crop. The low rainfall became somewhat serious in late August and September, cutting into the prospective soybean yields. However, it did tend to hasten the maturity of the soybeans before the first light frost on September 21. The soybean crop continued to ripen out after the early frost and was about ready for harvest by the time the killing frost came on October 6. No serious disease situation developed in either the Fargo or the Casselton nurseries, and, on the whole, the year for soybeans was quite favorable.

Dakota City, Nebraska. The test at Dakota City was planted May 26 under reasonably good conditions. Rainfall and temperatures were about normal. Plant growth and yields were good. Although stands were on the thin side, the farmer-cooperator hand-weeded the test so that quite uniform growing conditions existed. The test was harvested September 28, indicating that maturity was well ahead of normal.

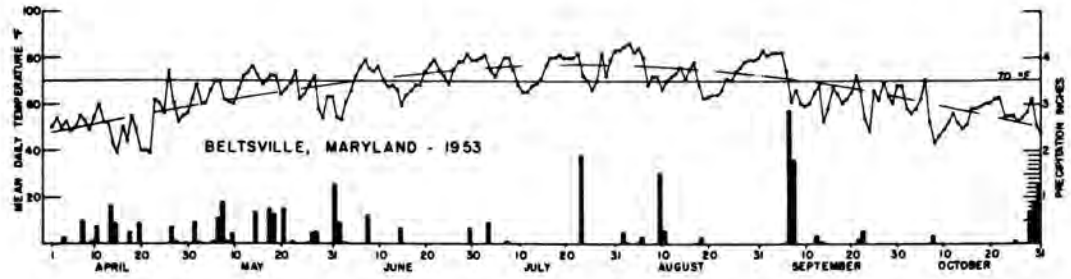
Lincoln, Nebraska. The low average yields of 11.6 and 10.2 bushels per acre in the Group II and III tests, respectively, are primarily due to drouth. Only one rain in each month of May through September could be considered effective. High temperatures with wind about the middle of June and again toward the end of July

accentuated the dry conditions. Early varieties matured during the hot, dry period at the end of August. Later varieties were helped somewhat by rain on September 3 followed by cooler temperatures. More than 10 percent of the plants had been infected by bud blight before July 15 and this increased to more than 50 percent by maturity. Infection by bacterial pustule and bacterial blight was minor. The hot, dry weather caused the soybeans to mature two to three weeks ahead of normal. Early varieties, especially, contained green and shriveled seed. Shattering occurred as soon as pods were dry because of high temperatures and low humidity. Losses due to shattering were kept to a minimum by removal of mature rows at frequent intervals. In spite of small seed size and green, shriveled seeds, the chemical composition appeared to be quite normal. Planting date for the tests was May 23 and harvest was complete by September 25.

Manhattan, Kansas. The season of 1953 was extremely unfavorable for soybean production. Limited rainfall and high temperatures were probably the main causes for the poor set of pods and the lowest yields for several years. The uniform nursery was planted June 2 under very favorable conditions following 3.71 inches of rain on May 27 and 28. A perfect stand of all varieties and vigorous early growth gave prospects of a good test. Precipitation for the month of June was only 1.6 inches. The mean maximum temperature was 93 and ranged as high as 105° with seven days 100° or higher. July was little better, with a precipitation of 1.71 inches and a mean maximum temperature of 91.2° with six days reaching a maximum temperature of 100° to 102°. August and September also were dry and hot. No rain fell from September 6 to October 16 and a maximum temperature of 106° was recorded on September 29, a record breaker. None of the varieties in the uniform nursery matured normally, and the yields and time of maturity were so erratic in the various replicates that the data probably should not be regarded as indicative of the relative value of the varieties.

Mound Valley, Kansas. Soil moisture appeared to be the limiting factor on growth at all stages from germination to maturity. Rainfall for each month beginning at May 1, through September was consistently below normal, and the total for that period was about fifty-five percent of the long time average. All varieties in the nursery were abnormally late in losing their leaves. This condition was general in soybean fields throughout this area.

Thayer, Kansas. Kansas has experienced one of the most dry periods in the history of the state during the past season. It was extremely difficult to secure maturity dates because of the uneven ripening. In general, the replicates agreed very satisfactorily as far as yield is concerned. It is hard to explain the fact that Clark yielded more in Group III than in Group IV or why the maturity was different. The only explanation might be moisture variation.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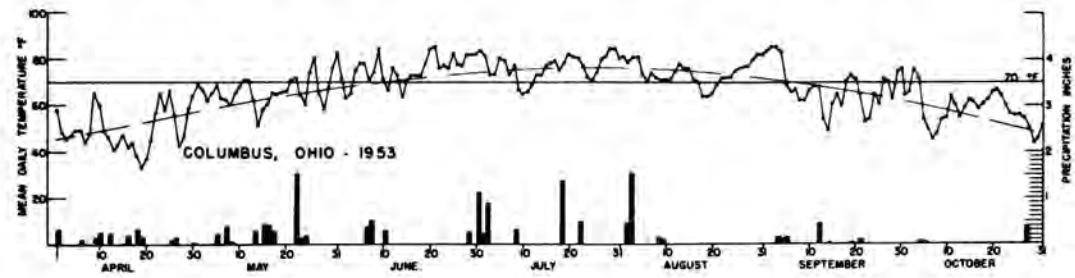
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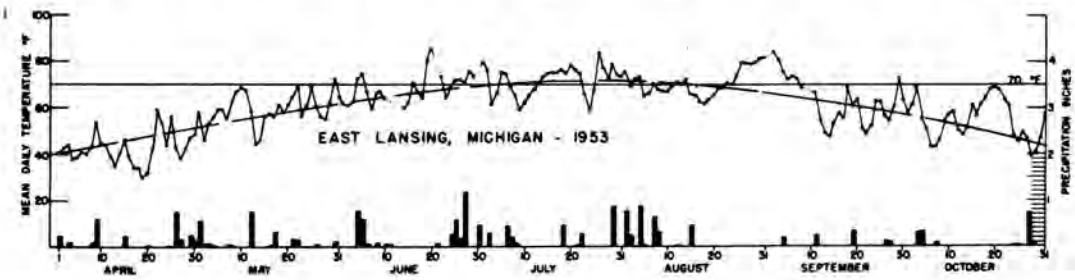
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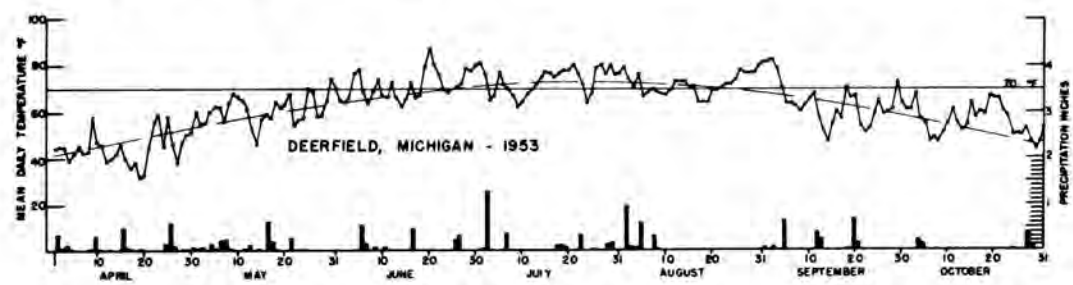
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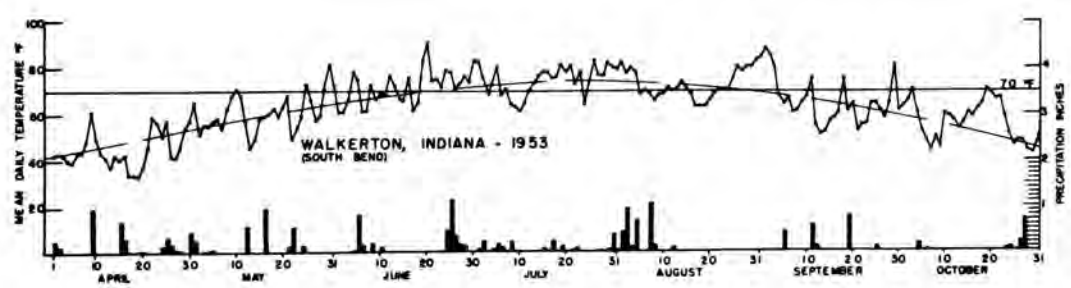
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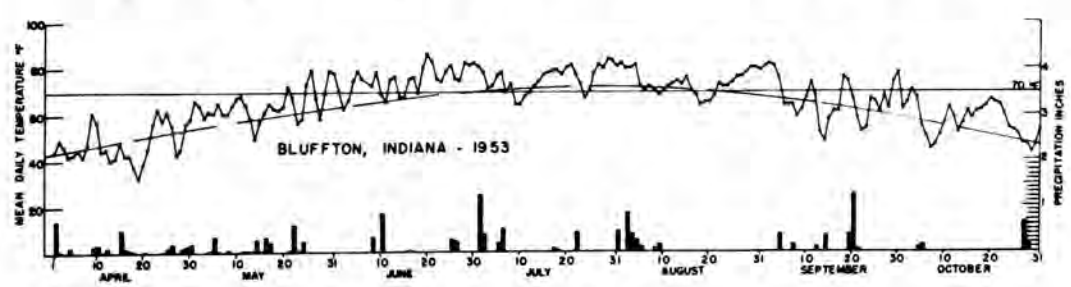
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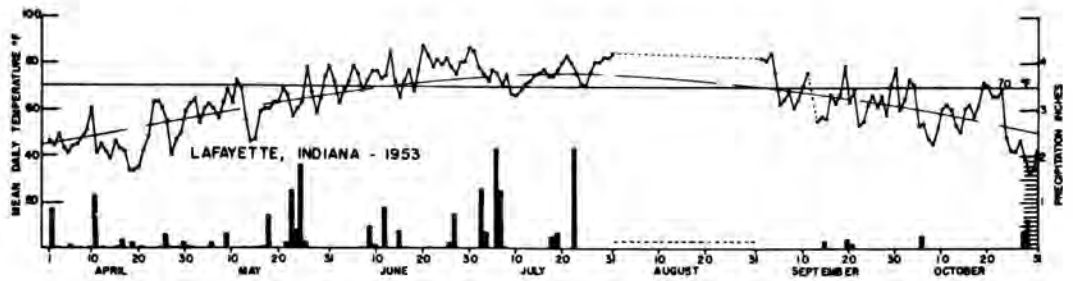
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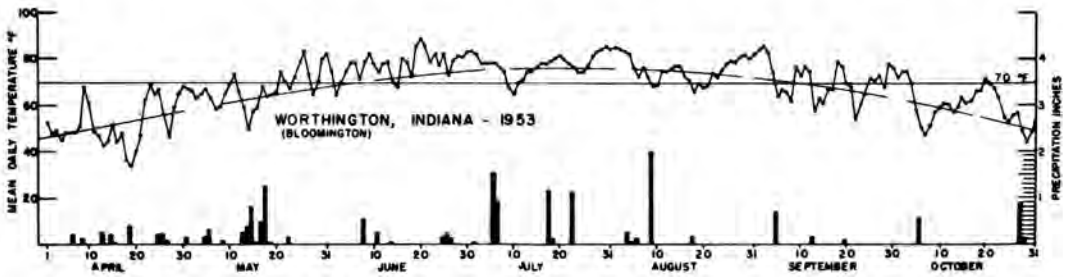
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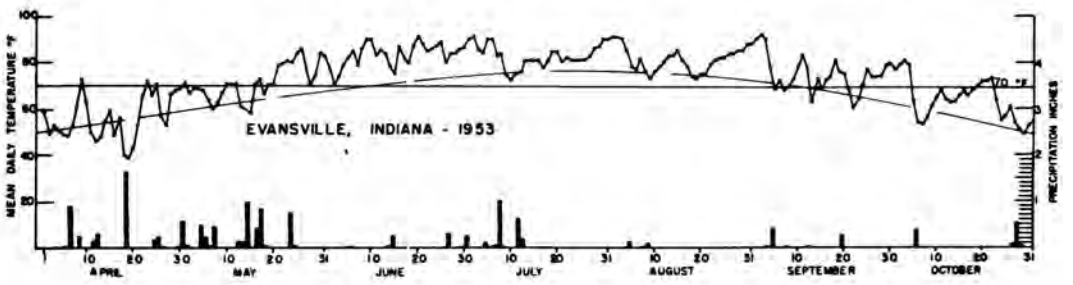
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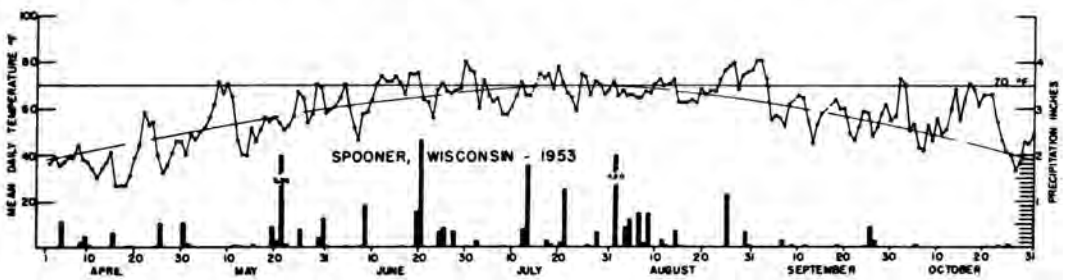
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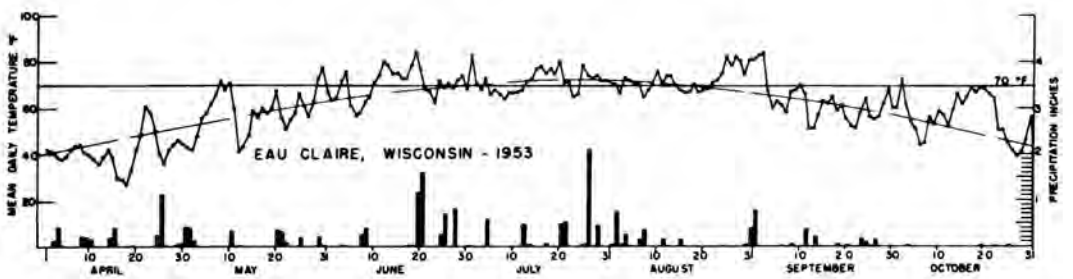
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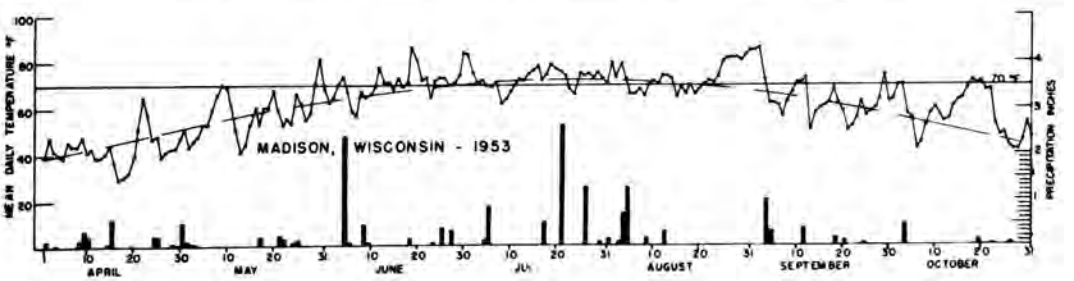
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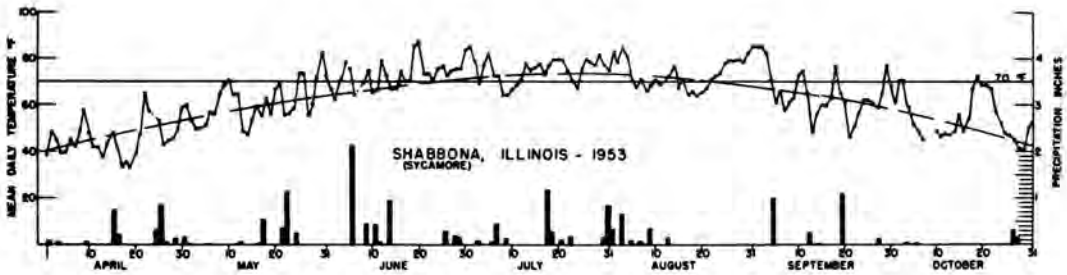
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(SYCAMORE)
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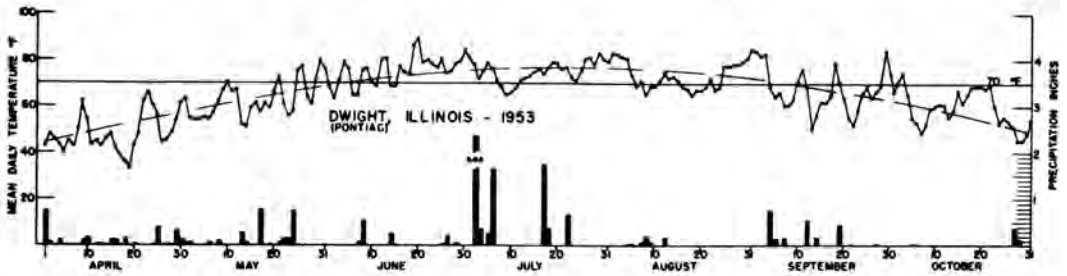
DWIGHT, ILLINOIS - 1953
(PONTIAC)
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PRECIPITATION INCHES
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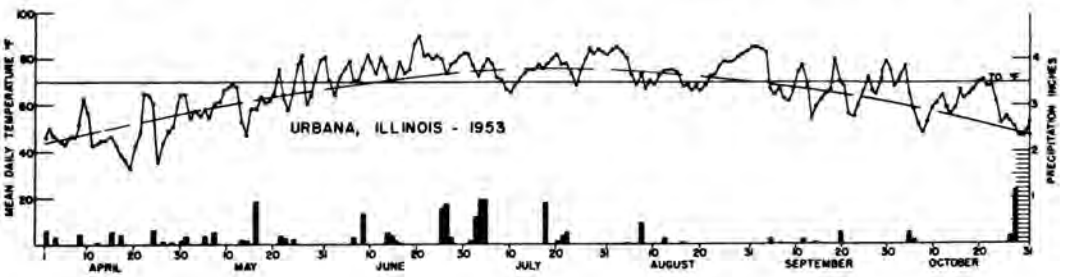
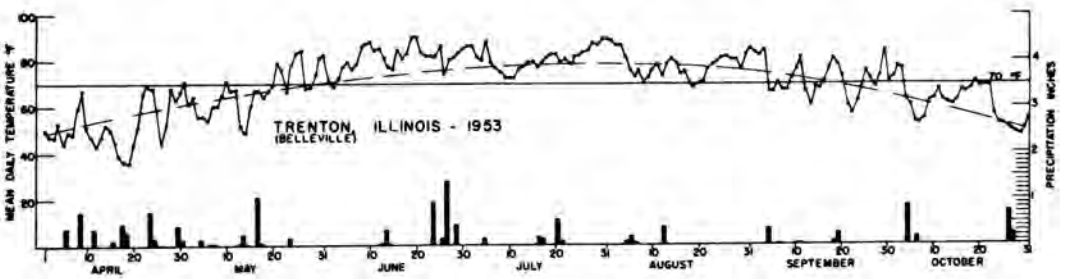
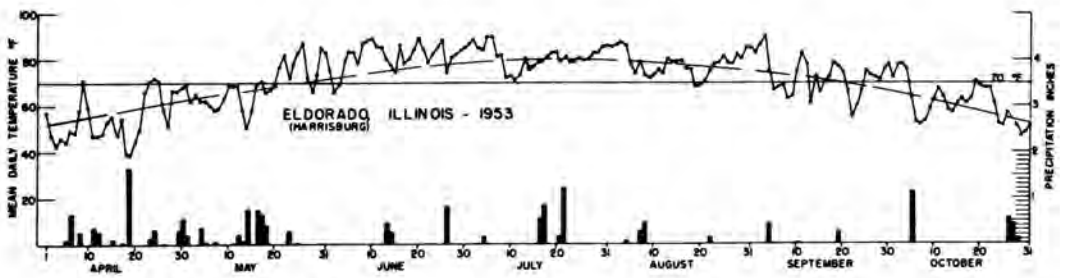
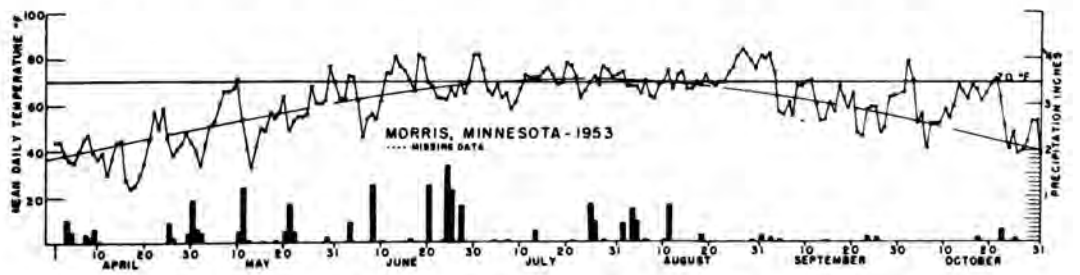
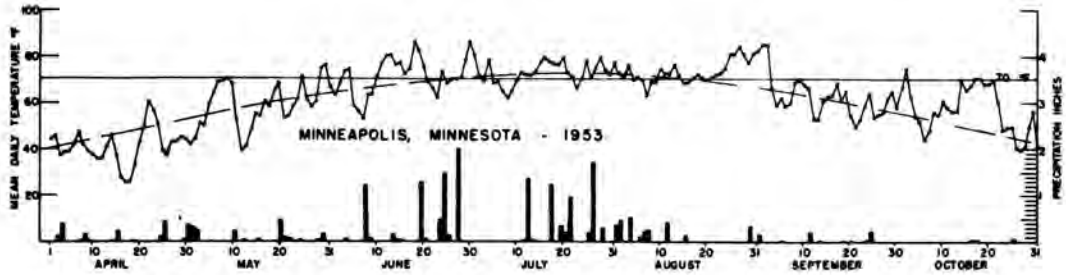
SEPTEMBER
OCTOBER

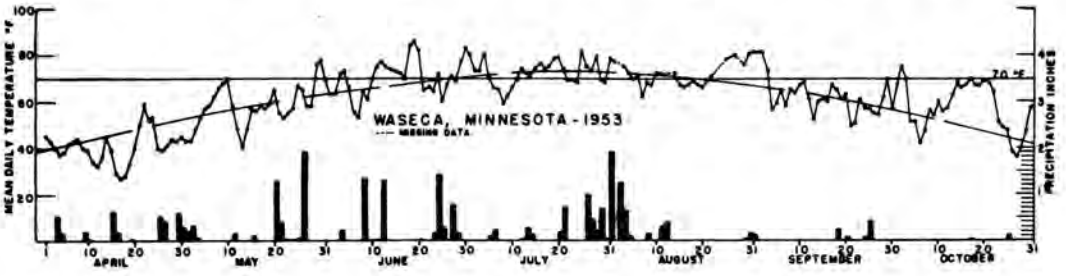

URBANA, ILLINOIS - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

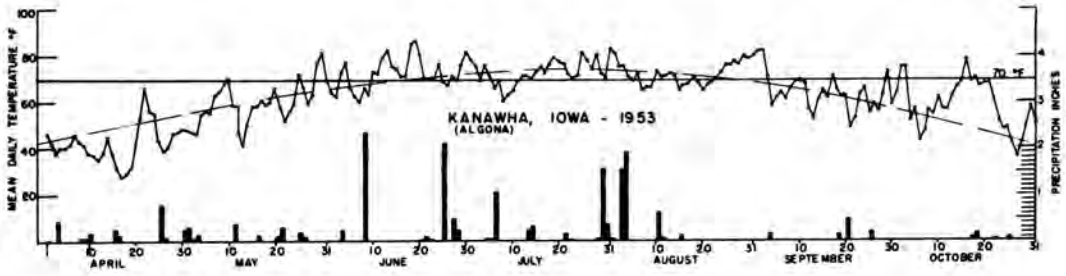

TRENTON, ILLINOIS - 1953
(BELLEVILLE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

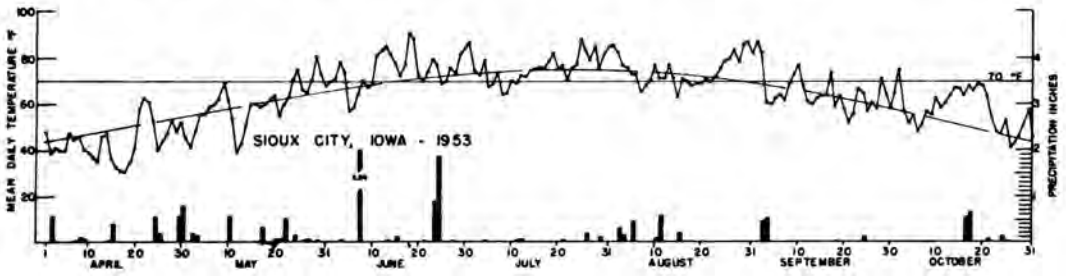

ELDORADO, ILLINOIS - 1953
(HARRISBURG)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

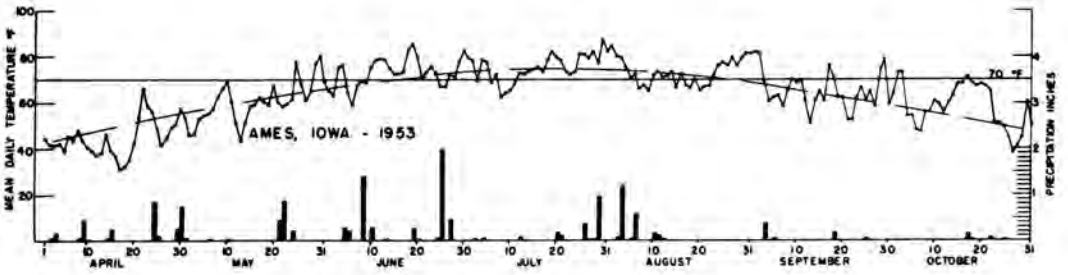

MORRIS, MINNESOTA - 1953
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

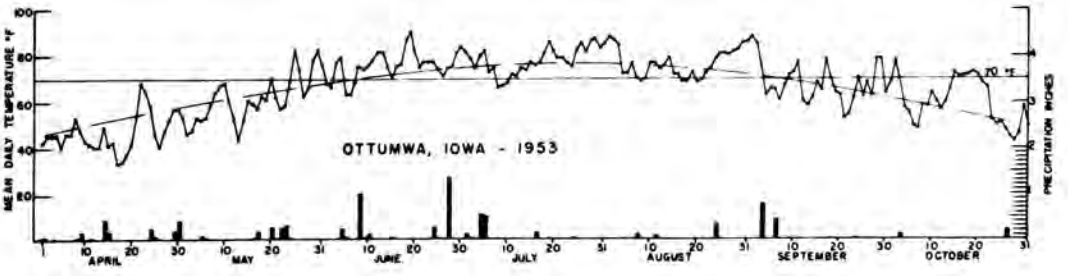

MINNEAPOLIS, MINNESOTA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

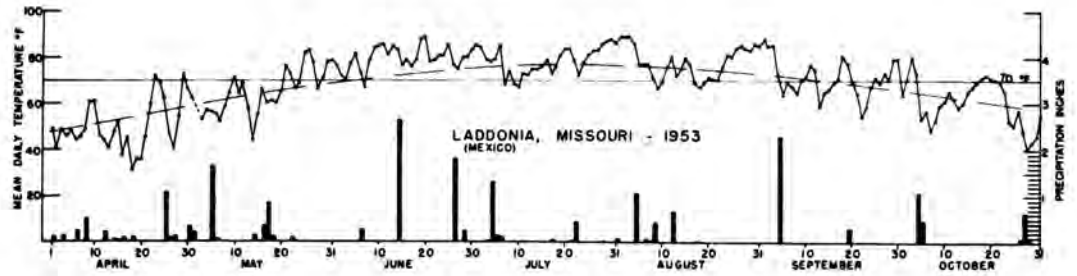

WASECA, MINNESOTA - 1953
---- MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

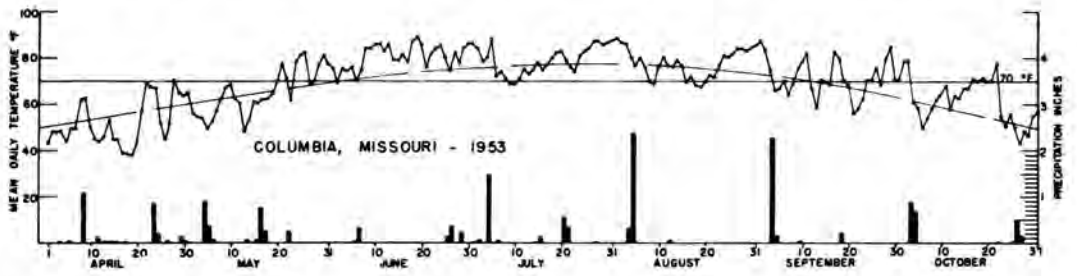

KANAWHA, IOWA - 1953
(ALGONA)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

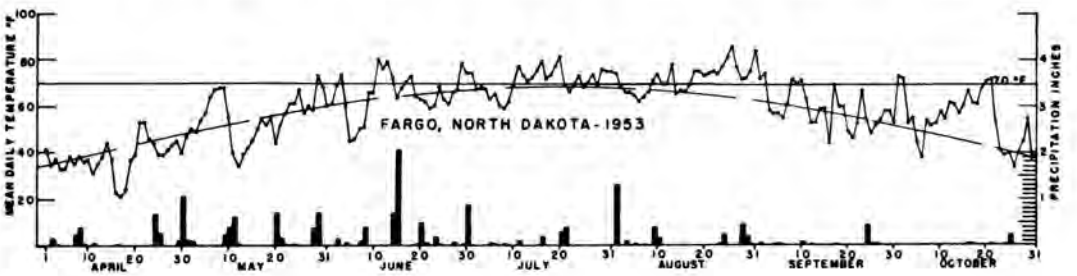

SIOUX CITY, IOWA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

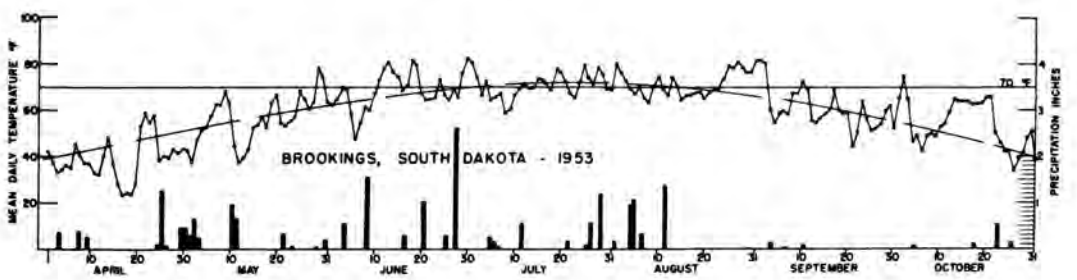

AMES, IOWA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

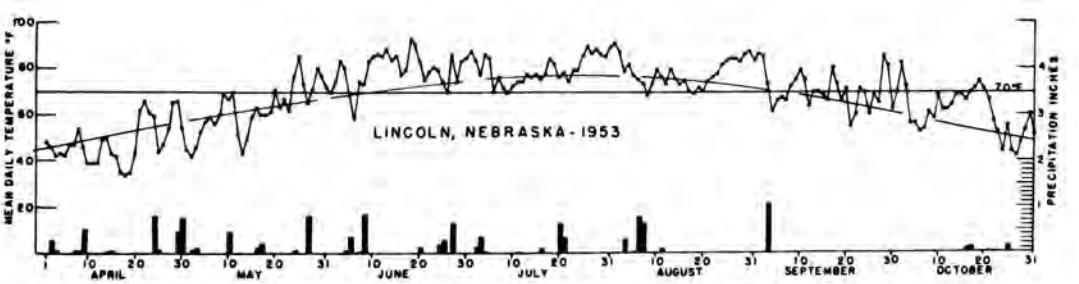

OTTUMWA, IOWA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

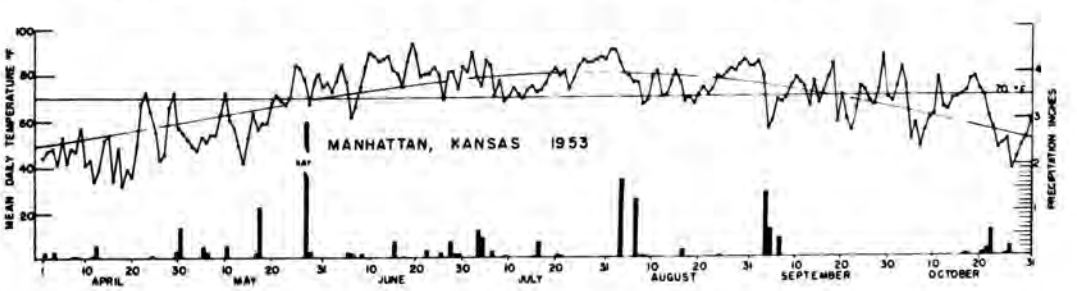

LADDONIA, MISSOURI - 1953
(MEXICO)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


COLUMBIA, MISSOURI - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


FARGO, NORTH DAKOTA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


BROOKINGS, SOUTH DAKOTA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


LINCOLN, NEBRASKA - 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


MANHATTAN, KANSAS 1953
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER