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AGRICULTURAL RESEARCH ADMINISTRATION

BUREAU OF PLANT INDUSTRY,
SOILS, AND AGRICULTURAL ENGINEERING
cooperating with the
STATE AGRICULTURAL EXPERIMENT STATIONS
of the
NORTH CENTRAL REGION

RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART I. NORTH CENTRAL STATES

****
1943
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U. S. REGIONAL SOYBEAN LABORATORY
Urbana, Illinois
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RSLM 109

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PART I. NORTH CENTRAL STATES

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compiled by

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CONTENTS

INTRODUCTION

The Uniform Tests of soybean strains were designed to facilitate the evaluation of new lines developed through the cooperative breeding work. The work of the Laboratory was expanded in the spring of 1943 to include the development of improved varieties of soybeans for industrial utilization for the Southeastern states, and Uniform Tests, Groups V and VI were set up to test the strains adapted to this region. A report on the performance of these nurseries will be issued as Part II of the "Results of the Cooperative Uniform Soybean Tests, 1943."

The four northern groups set up in 1942 have been continued in 1943 with little change in scope but with a number of changes among the entries.

Group I was designed to include varieties for the northernmost parts of the North Central states and contained material of approximately the maturity of Mandarin. Likewise, Group II was designed to include varieties adapted to the northern parts of the soybean belt immediately south of the region for Group I, and contains material of approximately the

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maturity of Richland. Group III was established to include varieties adapted to the central soybean belt area, namely, southern Ohio, central Indiana, central Illinois, southern Iowa, and northern Missouri, and contains material of approximately the maturity of Illini. Group IV contains strains of approximately the maturity of Boone and Gibson, which are adapted to Missouri, southern Indiana, and southern Illinois.

This report includes the detailed results of the Uniform Tests, Groups I to IV, for the 1943 season, and also the two- and four-year summaries of agronomic and chemical information for the different strains grown during the 1940-43 period.

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for the
NORTH CENTRAL REGION

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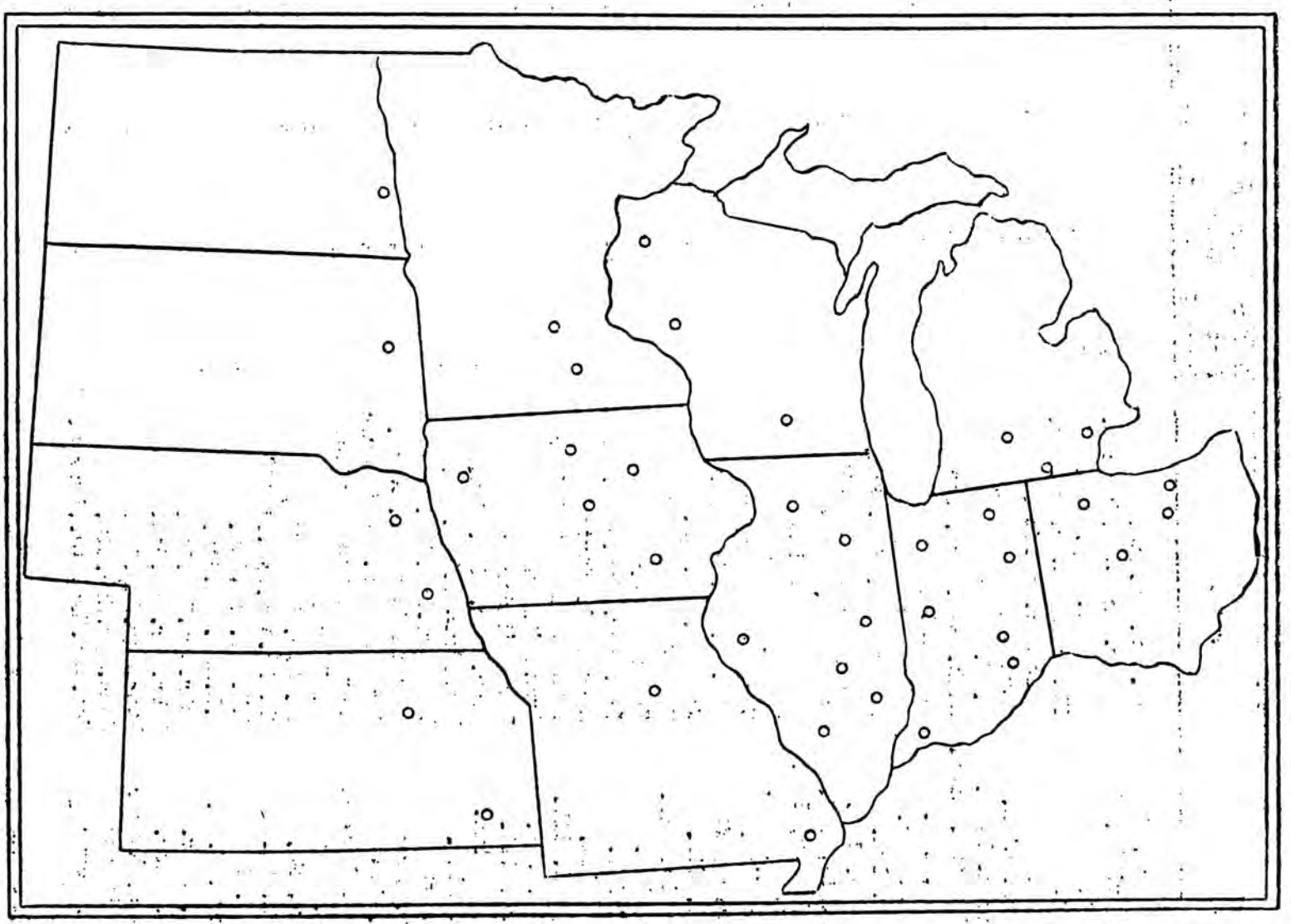
LOCATION OF COOPERATIVE NURSERIES

Location	Cooperator	Uniform Test Group I	Uniform Test Group II	Uniform Test Group III	Uniform Test Group IV
Blacksburg, Va.	Va.Agr.Exp.Sta.			x	x
Strongsville, O.	NE.Br.Ohio Agr.Exp.Sta.	x			
Wooster, Ohio	Ohio Agr. Exp. Sta.	x	x		
Holgate, Ohio	NW.Br.Ohio Agr.Exp.Sta.		x		
Columbus, Ohio	Ohio Agr.Exp.Sta.		x	x	
Dearborn, Mich.	Ford Motor Company	x	x		
Deerfield, Mich.	S. T. Busey		x		
East Lansing, Mich.	Mich. Agr. Exp. Sta.	x	x		
LaGrange, Ind.	Leon Watson	x	x		
Bluffton, Ind.	Gerald Bayless		x		
Wanatah, Ind.	Purdue Agr. Exp. Sta.		x		
Lafayette, Ind.	Purdue Agr. Exp. Sta.		x	x	
Greenfield, Ind.	Raymond E. Roney			x	
North Vernon, Ind.	Charles Robbins			x	x
Evansville, Ind.	Leo J. Hirsch				x
Spooner, Wis.	Wis.Br.Agr.Exp.Sta.	x			
Eau Claire, Wis.	Wis.Br.Agr.Exp.Sta.	x			
Madison, Wis.	Wis.Agr.Exp.Sta.	x	x		
Mt. Morris, Ill.	Earl Kump		x		
Dwight, Ill.	Frank Roeder		x	x	
Urbana, Ill.	Ill. Agr. Exp. Sta.		x	x	x
Clayton, Ill.	Russell S. Davis			x	x
Stonington, Ill.	Frank Garwood and Sons			x	x
Edgewood, Ill.	Frank Wilson			x	x
Freeburg, Ill.	Loren Wilderman			x	x
St. Paul, Minn.	Minn. Agr. Exp. Sta.	x			
Waseca, Minn.	Minn.Br.Agr.Exp.Sta.	x			
Ames, Iowa	Iowa Agr.Exp.Sta.		x	x	
Kanawha, Iowa	Nothern Iowa Exp. Assn.		x		
Hudson, Iowa	Strayer Bros. Seed Farms		x		
Cherokee, Iowa 1/	Cherokee State Hospital		x		
Ottumwa, Iowa	Don Foster			x	
Columbia, Mo.	Mo. Agr. Exp. Sta.			x	x
Sikeston, Mo.	SE. Mo.Agr.Exp.Field				x
Fargo, N. D.	N.D.Agr.Exp.Sta.	x			
Brookings, S. D.	S.D.Agr.Exp.Sta.	x			
Norfolk, Nebr.	Nebr.Agr.Exp.Sta.		x		
Lincoln, Nebr.	Nebr.Agr.Exp.Sta.			x	
Manhattan, Kansas	Kans.Agr.Exp.Sta.			x	x
Thayer, Kansas	Kans.Agr.Exp.Sta.				x
Lubbock, Texas 2/	Tex.Agr.Exp.Sta.,Substa.#8		x	x	x

1/ Test destroyed by hail

2/ Group IV data presented in Southern Nursery Report



Map of the North Central States Showing Location of the Cooperative Uniform Tests, 1943

METHODS

All Uniform Tests have been 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 have varied from eighteen to forty-two inches depending upon the width in common use or the equipment available for handling the crop. Seeding rates have also varied with locations, the most prevalent rates being 150 to 200 viable seeds per row. Rates within this range have given satisfactory stands throughout the region under normal soil and weather conditions at planting time.

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

Chemical composition was determined for each strain in a Uniform Test on composite samples prepared by combining equal weights of seed from each replication at each location included in that particular Group Test. The location composites were prepared by combining equal weights of seed of each of the strains in a Group Test at an individual location. Percentage composition of the seed is expressed on a dry basis. Seed weight for each strain was also determined on the variety composite and was recorded as weight (in grams) per 100 seeds.

Lodging notes were 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 considerable, or 50% to 80% of the plants down
5 All plants down badly

Height was determined as the average length of plants in a plot from the ground to the top extremity at time of maturity.

Maturity was taken as the date when the leaves had dropped, the pods were ripe, and the stems were 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 I, Mandarin; Group II, Richland; Group III, Illini; and Group IV, Gibson.

Seed Quality was 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 were: development of seed; wrinkling; damage; and color for the variety.

Calculating Means. Years have been given equal weight in calculating mean yields, chemical composition and other data for the two- and four-year summaries. In all cases where the lodging and seed quality notes were 1, indicating no difference between strains at a location, these locations were not included in the mean.

Uniform Test, Group I

The Group I Test was composed of eighteen named varieties, two U. S. D. A. plant introductions, and five selections from hybrids. The origin of these varieties and strains is as follows:

Variety or Strain	Source or Originating Agency	Origin
Earlyana	Purdue Agr.Exp.Sta.	Sel. from a natural hybrid
Goldsoy	Ontario Agr. College	Sel. from O.A.C. 211
Habaro	U. S. Dept. of Agr.	P. I. 20405[1]
Kabott	Central Exp.Farm,Ottawa	Sel. from a Manchurian strain
Wis.Man. 3	Wisconsin Agr.Exp.Sta.	Selection from Manchu
Wis.Man.3 Sel.	Wisconsin Agr.Exp.Sta.	Selection from Manchu 3
Wis.Man. 606	Wisconsin Agr.Exp.Sta.	Selection from Manchu
Wis.Man. 839-14	Wisconsin Agr.Exp.Sta.	Selection from Manchu
Manchukota	S.Dakota Agr.Exp.Sta.	(Man.831) Sel. from Manchu
Mandarin	U. S. Dept. of Agr.	P. I. 36653
Dim.Mandarin[2]	Central Exp.Farm, Ottawa	Selection from Mandarin
McR.Mandarin[3]	Agr.Exp. Farm, Winnipeg	Selection from Mandarin
W. Mandarin 507	Wisconsin Agr.Exp.Sta.	Selection from Mandarin
Minsoy	Minnesota Agr.Exp.Sta.	P. I. 27890
O. A. C. 211	Ontario Agr. College	Selection from Habaro
Ontario	N. Y. Agr.Exp.Sta.	Selection from 65344
Pagoda	Central Exp.Farm,Ottawa	Sel. from (Manitoba Br. x Mandarin)
Richland	Purdue Agr.Exp.Sta.	P. I. 70502-2
H1	Illinois Agr.Exp.Sta.	D-1, Parentage unknown
H2	Ohio Agr.Exp.Sta.	(LX339-4) (Dunfield x Illini)
H3	Ohio Agr.Exp.Sta.	(LX349-11) (Scioto x Mandarin)
H4	Ohio Agr.Exp.Sta.	(LX378-12) (Mukden x Mandarin)
H5	Ohio Agr.Exp.Sta.	(LX378-32) (Mukden x Mandarin)
P. I. 68666	U. S. Dept. of Agr.	Foreign Plant Introduction
P. I. 92470	Minnesota Agr.Exp.Sta.	Foreign Plant Introduction

[1] Division of Plant Exploration and Introduction, Bureau of Plant Industry, Soils, and Agricultural Engineering, U.S.D.A.

[2] Dimmock Mandarin

[3] McRostie Mandarin

The uniform test of very early strains begun in 1942 was continued in 1943 with a few changes and additions. Strains C40 and C39 were omitted. They are sister strains of Earlyana and showed no advantage over this variety. P.I.79610 was dropped because of the green color of the cotyledons. Cayuga was dropped because of the black seed coat color and lack of outstanding qualities in the strain. Sioux was dropped because of extremely low yields even where it competed with other strains of similar maturity. The remaining strains were tested in 1943. The Dimmock Mandarin and Wisconsin Mandarin 507 were added to the test to give a more complete comparison of the various strains of Mandarin. Wisconsin Manchu 839-14, an extremely early selection of Manchu from the Spooner station, was also added. H1 to H5, selections from hybrids, were entered by the Ohio station. This made a total of 25 strains.

The test was planted at all locations as a simple lattice with four replications in two sets. A discussion of the accuracy of the designs is given under the section on precision of experimental designs.

The 1943 data for this test are presented in tables 1 to 11 and 13. A two-year summary is presented in tables 12 and 14. It should be noted that Manchu 831 has been named Manchukota and entered in all tables under this designation. Although the test was planted at 12 locations, only nine have been used in calculating most of the means. Due to poor stands and wet weather the East Lansing test was so variable that it had to be omitted from the means. The Fargo test was planted late (June 10) and was severely frosted (September 10). This stopped growth in the later strains and made the yields and chemical compositions quite abnormal. An early frost also occurred at Spooner.

A study of the results of this group for the past two years indicated that it includes strains of too great a spread in maturity. It is also evident that the results of the most northern stations should not be summarized with those as far south as Wooster, LaGrange, etc. In general the earlier strains have done better at Fargo and other northern locations and the later strains at the more southern locations.

Pagoda has been uniformly low in yield in these tests. It has also been consistently very susceptible to leaf spot diseases. Goldsoy also has been rather low in yield and oil content except at Fargo where it has been outstanding in yield and satisfactory in oil content both years of the test. Wisconsin Manchu 839-14 is an exceptionally early strain which did well in 1943 at Fargo, Spooner, Waseca, and St. Paul but rather poorly elsewhere.

Strain P.I.68666 has a very satisfactory record for yield and oil content but is probably too late for this group. Richland is altogether too late for this test. It has been frosted so many times in this test that its mean yield is only mediocre. Earlyana and Manchukota are also relatively late for this test. It seems advisable that this group be separated into two groups in 1944.

Table 1. Summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1943.

Strain	Yield Bu./A.	Lodging	Height Inches	Maturity[1]	Seed Qualtiy	Seed Weight	Percentage of Protein[2]	Percentage of Oil[2]	Iodine Number of Oil
Number of Tests	9	8	9	8	8	9	9	9	9
Wis.Man.606	29.2	2.8	32	+3.8	1.6	17.4	42.0	20.2	134
Wis.Man.3	28.9	3.3	37	+7.0	1.7	16.9	41.5	20.0	134
P.I.68666	28.9	3.8	31	+11.1	1.5	14.3	40.7	20.3	133
Habaro	28.9	2.5	30	+6.6	1.7	19.2	44.2	18.6	132
O.A.C.211	28.8	2.7	31	+6.3	1.8	19.2	44.6	18.5	132
Earlyana	28.3	3.3	38	+9.3	1.8	15.1	43.2	19.7	133
Manchukota[3]	27.7	3.1	34	+9.1	1.6	15.0	42.5	18.8	136
H5	27.6	2.4	37	+2.3	1.4	15.4	43.7	19.5	131
Ontario	27.2	2.6	29	+0.9	1.7	19.4	42.5	20.4	130
W.Man.3 Sel.	27.1	3.0	35	+8.3	1.5	16.8	41.3	20.0	134
Dim.Mand.[4]	26.8	1.9	27	-1.8	1.8	19.4	44.1	19.4	128
H2	26.6	3.2	35	+2.1	1.6	16.0	42.2	20.7	132
H3	26.3	2.7	34	+1.9	1.6	17.5	43.9	19.5	132
H1	26.0	3.1	33	+4.0	1.4	14.9	42.1	19.7	133
H4	25.6	2.3	32	-1.4	1.8	15.9	46.4	18.7	128
McR. Mand.[5]	25.5	2.1	27	-1.6	1.8	19.2	44.6	19.2	128
W.Mand.507[6]	25.3	2.2	31	-2.1	2.2	18.2	45.4	18.3	131
Richland	24.9	2.6	33	+12.8	1.8	15.6	41.0	19.5	131
Goldsoy	24.6	2.6	26	-8.4	2.2	20.4	45.1	18.4	132
Mandarin	24.5	2.4	33	0	2.0	17.5	45.0	18.3	132
W.Man.839-14[7]	23.4	2.5	28	-14.0	2.3	16.2	43.8	19.3	129
P.I.92470	22.1	1.8	28	+4.4	2.4	18.1	45.8	18.2	129
Kabott	20.9	1.8	25	-13.4	1.9	19.5	45.8	17.7	131
Minsoy	18.8	2.9	23	-11.4	1.8	12.1	42.1	18.9	128
Pagoda	16.2	1.0	25	-17.9	1.9	14.9	43.8	18.9	124
Bu.Nec.for Sig. (5% level)	2.6								
(1% level)	3.5								

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

[2] Composition on a dry basis on all samples.

[3] Manchu 831

[4] Dimmock Mandarin

[5] McRostie Mandarin

[6] Wisconsin Mandarin 507

[7] Wisconsin Manchu 839-14

Table 2. Summary of yields in bushels per acre for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 9 Tests	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.[1]	Fargo N. D.[1]	E.Lansing Mich.[1]
Wis. Man. 606	29.2	34.4	37.0	26.8	30.3	32.6	30.3	26.5	23.6	21.6	20.2	11.4	7.0
Wis. Man. 3	28.9	32.8	38.2	27.6	30.5	29.8	28.8	30.7	22.6	19.1	16.6	6.6	7.1
P.I. 68666	28.9	28.0	32.5	26.5	35.5	24.0	28.1	34.7	29.3	21.1	15.6	3.4	7.8
Habaro	28.9	33.6	30.7	31.2	31.6	33.4	28.6	26.4	24.5	19.7	13.5	4.6	10.2
O.A.C. 211	28.8	34.3	32.2	29.8	33.8	30.6	26.8	25.1	25.6	21.1	12.8	4.8	9.4
Earlyana	28.3	33.8	30.2	33.0	29.2	28.1	28.5	28.3	23.7	19.7	12.3	3.8	9.7
Manchukota	27.7	31.6	37.5	28.9	30.2	24.0	25.1	29.2	22.0	21.2	14.3	6.9	9.4
H5	27.6	31.6	31.2	32.0	31.4	33.2	27.2	24.8	16.9	20.0	16.2	10.7	8.4
Ontario	27.2	30.2	28.4	31.5	32.6	30.6	24.9	26.7	21.8	18.3	15.6	16.1	9.0
Wis. Man. 3 Sel.	27.1	28.5	34.5	30.5	27.9	29.8	25.1	28.0	20.1	19.1	16.6	7.5	7.1
Dim. Mandarin	26.8	34.6	25.6	25.1	28.5	33.6	24.7	24.2	23.2	21.7	17.9	20.4	9.5
H2	26.6	28.3	25.9	33.0	29.6	28.7	22.8	26.8	24.4	19.8	14.6	12.7	6.8
H3	26.3	27.2	28.7	31.0	30.9	26.3	23.8	24.7	23.8	20.6	16.4	14.2	10.0
H1	26.0	29.9	23.8	33.0	26.4	25.4	24.9	30.0	19.1	21.5	18.2	5.0	5.6
H4	25.6	31.0	29.9	25.9	27.2	31.7	24.2	20.3	20.9	19.6	15.4	17.8	7.8
McR. Mandarin	25.5	28.2	24.9	24.5	25.2	28.7	28.8	22.8	25.1	20.1	16.2	11.9	8.8
Wis. Mand. 507	25.3	31.2	28.9	26.2	24.3	28.8	23.6	20.1	24.0	20.3	14.3	19.7	8.0
Richland	24.9	29.5	27.2	26.8	27.0	19.8	27.3	26.2	21.4	19.1	10.0	2.8	8.3
Goldsoy	24.6	25.1	24.2	28.6	30.6	26.7	25.4	21.8	21.2	17.4	15.3	24.6	8.1
Mandarin	24.5	27.1	26.3	26.1	23.8	28.9	25.5	20.9	22.2	19.5	14.4	17.6	10.9
Wis. Man. 839-14	23.4	25.9	25.0	29.4	21.0	30.1	20.7	21.8	20.9	15.7	18.0	25.4	7.2
P.I. 92470	22.1	29.5	22.1	20.6	24.4	26.2	23.1	17.3	18.3	17.4	12.6	10.8	6.2
Kabott	20.9	22.6	20.7	24.9	25.4	26.1	18.9	18.9	16.5	14.0	14.0	18.6	6.7
Minsoy	18.8	18.2	20.2	18.4	19.1	19.0	16.1	20.6	22.7	15.3	16.3	19.2	10.2
Pagoda	16.2	22.2	19.4	23.8	17.8	20.0	12.8	12.4	8.8	8.7	12.9	13.0	5.7
Mean	25.6	29.2	28.2	27.8	27.8	27.8	24.7	24.4	21.7	18.8	15.2	12.4	8.2
Coef.of Var.(%)	11.7	12.1	9.9	15.0	11.4	12.7	11.5	7.6	9.3	11.4	17.7	21.7	36.0
Bu.Nec.for Sig.	2.6	5.0	4.0	5.9	4.5	5.3	4.0	2.6	2.9	2.9	3.8	3.8	*

[1]Spooner, Fargo, and East Lansing not included in the mean.
*Not significant at 5% level.

Table 3. Summary of yield rank for the strains in the Uniform Test, Group I, 1943.

Strain	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	Fargo N. D.	E.Lansing Mich.
Wis. Man. 606	2	3	14	9	4	1	9	9	2	1	14	20
Wis. Man. 3	6	1	13	8	9	2	2	12	16	5	19	18
P.I. 68666	18	5	16	1	21	6	1	1	5	11	24	15
Habaro	5	8	6	4	2	4	10	4	12	20	22	2
O.A.C. 211	3	6	9	2	6	9	12	3	5	22	21	7
Earlyana	4	9	1	12	15	5	5	8	12	24	23	5
Manchukota	7	2	11	10	21	12	4	14	4	17	18	7
H5	7	7	4	5	3	8	13	23	10	9	16	11
Ontario	10	13	5	3	6	14	8	15	19	11	9	9
Wis. Man. 3 Sel.	15	4	8	14	9	12	6	20	16	5	17	18
Dim. Mandarin	1	17	20	13	1	16	15	10	1	4	3	6
H2	16	16	1	11	13	21	7	5	11	15	12	21
H3	19	12	7	6	17	18	14	7	7	7	10	4
H1	12	21	1	17	20	14	3	21	3	2	20	25
H4	10	10	19	15	5	17	21	18	14	13	7	15
McR. Mandarin	17	19	22	19	13	2	16	2	9	9	13	10
Wis. Mand. 507	9	11	17	21	12	19	22	6	8	17	4	14
Richland	13	14	14	16	24	7	11	16	16	25	25	12
Goldsoy	21	20	12	7	16	11	17	17	20	14	2	13
Mandarin	20	15	18	22	11	10	19	13	15	16	8	1
Wis. Man. 839-14	21	18	10	23	8	22	17	18	22	3	1	17
P.I. 92470	13	22	24	20	18	20	24	22	20	23	15	23
Kabott	23	23	21	18	19	23	23	24	24	19	6	22
Minsoy	25	24	25	24	25	24	20	11	23	8	5	2
Pagoda	24	25	23	25	23	25	25	25	25	21	11	24

Table 4. Summary of lodging notes on the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 8 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	E.Lansing Mich.
Wis. Man. 606	2.8	4.5	2.0	5	3.0	3	2.0	2.2	1	1	2	1
Wis. Man. 3	3.3	5.0	3.0	5	3.3	3	2.4	2.7	2	1	2	1
P.I. 68666	3.8	4.8	4.0	5	4.7	3	2.9	3.2	3	1	1	1
Habaro	2.5	2.8	2.3	3	2.0	3	2.2	3.0	2	1	1	1
O.A.C. 211	2.7	2.8	1.5	4	2.3	3	2.6	2.2	3	1	2	1
Earlyana	3.3	3.8	2.5	5	3.7	4	2.4	2.8	2	1	2	1
Manchukota	3.1	4.0	3.5	5	2.3	3	1.7	3.5	2	1	2	1
H5	2.4	2.3	1.0	5	3.3	3	1.7	1.7	1	1	1	1
Ontario	2.6	3.8	1.0	5	2.3	2	3.0	1.8	2	1	1	1
Wis. Man. 3 Sel.	3.0	4.5	3.0	5	3.0	3	2.2	2.6	1	1	2	1
Dim. Mandarin	1.9	3.0	1.0	4	1.0	1	1.0	1.3	3	1	1	1
H2	3.2	4.5	1.3	5	3.3	4	2.1	3.0	2	1	3	1
H3	2.7	3.3	1.0	5	3.3	3	2.1	1.8	2	1	1	1
H1	3.1	3.8	1.8	5	4.0	3	2.0	2.2	3	1	1	1
H4	2.3	2.5	1.0	5	1.7	2	2.2	1.1	3	1	1	1
McR. Mandarin	2.1	2.3	1.0	4	1.3	1	1.7	1.8	4	1	1	1
Wis. Mand. 507	2.2	3.8	1.0	4	1.7	2	1.5	1.7	2	1	1	1
Richland	2.6	2.5	1.8	4	2.3	2	1.7	2.7	4	1	1	1
Goldsoy	2.6	3.3	1.0	4	2.0	3	3.1	2.0	2	1	1	1
Mandarin	2.4	2.5	1.0	4	2.0	2	1.7	1.8	4	1	1	1
Wis. Man. 839-14	2.5	3.8	1.0	4	1.0	3	2.2	1.0	4	1	1	1
P.I. 92470	1.8	2.0	1.0	3	1.7	1	1.5	1.5	3	1	1	1
Kabott	1.8	3.3	1.0	2	1.3	2	1.2	1.2	2	1	1	1
Minsoy	2.9	4.3	1.0	4	2.3	4	2.1	3.5	2	1	4	1
Pagoda	1.0	1.0	1.0	1	1.0	1	1.0	1.0	1	1	1	1

[1] Eau Claire, Spooner, and East Lansing not included in the mean.

Table 5. Summary of height data on the strains in the Uniform Test, Group I, 1943

Strain	Mean of 9 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	LaGrange Ind.	Madison Wis.	Brookings S.D.	Eau Claire Wis.	Spooner Wis.	Fargo N.D.	East Lansing Mich.
Wis.Man.606	32	32	33	42	28	35	36	33	22	25	27	37	18
Wis.Man.3	37	37	40	44	33	42	35	40	30	29	30	39	19
P.I.68666	31	34	28	40	29	33	29	29	32	24	30	35	19
Habaro	30	30	31	40	25	38	28	30	24	23	25	29	15
O.A.C.211	31	31	29	43	24	35	28	29	34	23	30	35	18
Earlyana	38	42	41	44	34	43	37	37	30	34	30	39	24
Manchukota	34	36	36	45	29	37	30	34	32	27	33	37	21
H5	37	40	40	45	35	44	36	40	24	28	32	40	28
Ontario	29	31	26	41	25	33	25	27	30	22	24	34	18
W.Man.3 Sel.	35	39	38	45	29	41	37	38	20	30	30	39	17
Dim. Mandarin	27	28	26	39	25	32	25	27	20	20	26	34	18
H2	35	37	34	44	33	37	33	36	30	27	28	40	18
H3	34	36	34	46	27	39	35	37	24	25	28	40	22
H1	33	34	30	46	30	37	33	37	18	30	32	41	18
H4	32	33	28	42	28	36	35	32	30	21	26	38	24
McR. Mandarin	27	27	24	39	22	34	27	27	24	21	26	35	20
W.Mandarin 507	31	33	30	42	29	37	29	34	22	24	28	35	22
Richland	33	35	31	40	28	37	31	36	30	28	26	42	18
Goldsoy	26	26	22	35	24	30	23	29	24	19	18	25	15
Mandarin	33	35	31	46	28	40	33	37	24	23	30	36	23
W.Man.839-14	28	27	22	35	25	31	26	33	30	20	24	25	15
P.I.92470	28	31	25	36	25	31	26	28	30	22	27	32	21
Kabott	25	27	19	31	21	33	22	29	26	17	20	23	13
Minsoy	23	24	17	29	16	27	19	24	32	16	24	24	20
Pagoda	25	24	24	31	23	25	28	30	26	17	20	23	22

[1]Spooner, Fargo, and East Lansing not included in the mean.

Table 6. Summary of maturity data, days earlier (-) or later (+) than Mandarin, for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 8 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	LaGrange Ind.	Madison Wis.	Brookings S.D.	Spooner Wis.
Wis.Man.606	+3.8	+2	+5	+3	-1	+1	+13	+2	+5	--
Wis.Man.3	+7.0	+6	+9	+5	+4	+1	+17	+4	+10	--
P.I.68666	+11.1	+11	+13	+13	+11	+7	+15	+4	+15	--
Habaro	+6.6	+5	+10	+6	+9	+2	+2	+9	+10	--
O.A.C.211	+6.3	+4	+6	+7	+10	+2	+1	+5	+15	--
Earlyana	+9.3	+9	+10	+12	+7	+7	+9	+5	+15	--
Manchukota	+9.1	+9	+12	+15	+6	+6	+9	+6	+10	--
H5	+2.3	-1	+1	+2	+3	+2	+2	-1	+10	--
Ontario	+0.9	+1	+1	+2	+3	0	0	0	0	-2
W.Man.3 Sel.	+8.3	+9	+9	+9	+9	+2	+9	+4	+15	--
Dim.Mandarin	-1.8	-10	0	-1	-1	0	0	-2	0	0
H2	+2.1	+3	+1	+3	+1	+2	+1	+1	+5	--
H3	+1.9	+3	0	+4	+2	+1	+1	-1	+5	--
H1	+4.0	+4	+5	+5	+3	+3	+3	-1	+10	--
H4	-1.4	-5	+4	-5	-1	-4	+1	-1	0	c
McR. Mandarin	-1.6	-10	0	0	-2	0	0	-1	0	0
W. Mandarin 507	-2.1	-10	+1	-4	-2	-1	+1	-2	0	0
Richland	+12.8	+10	+19	+13	+9	+7	+12	+12	+20	--
Goldsoy	-8.4	-5	0	-19	-2	-13	-7	-11	-10	-13
Mandarin	0	0	0	0	0	0	0	0	0	0
W.Man.839-14	-14.0	-13	-18	-21	-10	-13	-16	-21	0	-10
P.I.92470	+4.4	+7	+6	+1	+2	0	+2	+7	+10	--
Kabott	-13.4	-12	-14	-25	-10	-5	-13	-13	-15	-13
Minsoy	-11.4	-13	-14	-16	-8	-5	-11	-14	-10	-6
Pagoda	-17.9	-14	-18	-27	-6	-12	-20	-15	-31	-23
Mandarin matured		9/12	9/18	9/18	9/15	9/23	9/15	9/17	9/20	9/18
Date planted		6/5	5/28	5/14	6/8	5/21	6/3	5/21	5/29	5/27
Days to mature	113	99	114	128	99	126	104	120	115	115

[1] Spooner not included in mean.

Table 7. Summary of seed quality data for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 8 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	Fargo N. D.	E.Lansing Mich.
Wis. Man. 606	1.6	2.5	1	1	2	1	1.5	2	1	2	2	3	1
Wis. Man. 3	1.7	2.8	1	1	2	1	1.5	2	1	2	2	4	1
P.I. 68666	1.5	2.3	1	1	2	1	1.5	1	1	2	2	5	1
Habaro	1.7	2.0	1	1	2	2	1.5	2	1	2	2	5	1
O.A.C. 211	1.8	2.0	1	1	2	2	2.0	2	1	2	2	5	1
Earlyana.	1.8	2.0	1	1	3	2	1.5	2	1	2	2	5	1
Manchukota	1.6	2.3	1	2	2	1	1.5	1	1	2	3	5	1
H5	1.4	2.0	1	1	1	1	1.5	2	1	2	1	4	1
Ontario	1.7	3.3	1	1	2	1	1.5	2	1	2	2	3	1
Wis. Man. 3 Sel.	1.5	2.5	1	1	2	1	1.5	1	1	2	2	4	1
Dim. Mandarin	1.8	2.0	1	2	2	2	1.5	2	1	2	1	2	1
H2	1.6	3.0	1	1	2	1	1.5	2	1	1	3	4	1
H3	1.6	2.5	1	1	2	1	1.5	2	1	2	2	3	1
H1	1.4	2.0	1	1	2	1	1.0	1	1	2	3	5	1
H4	1.8	2.0	1	1	2	1	1.5	3	2	2	2	2	2
McR. Mandarin	1.8	2.0	1	2	2	2	1.5	2	2	1	2	3	1
Wis. Mand. 507	2.2	3.3	1	2	2	2	1.5	3	2	2	2	2	1
Richland	1.8	2.0	1	2	2	2	1.5	2	1	2	2	5	1
Goldsoy	2.2	2.8	1	2	3	2	2.0	3	1	2	2	1	1
Mandarin	2.0	3.3	1	2	2	2	1.5	2	1	2	2	2	1
Wis. Man. 839-14	2.3	4.0	1	2	4	1	2.0	2	1	2	2	1	2
P.I. 92470	2.4	4.0	1	2	2	2	2.0	3	1	3	3	4	1
Kabott	1.9	4.5	1	2	2	1	2.0	2	1	1	2	1	1
Minsoy	1.8	3.5	1	1	3	1	1.5	2	1	1	2	2	1
Pagoda	1.9	2.8	1	2	2	2	1.5	2	1	2	2	3	1

[1]Dearborn, Spooner, Fargo, and East Lansing not included in the mean.

Table 8. Summary of seed weight in grams per 100 seeds for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 9 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	Fargo N. D.	E. Lansing Mich.
Wis. Man. 606	17.4	19	17	18	17	17	14.0	21.0	15	18.2	19.9	9	15
Wis. Man. 3	16.9	18	18	18	18	15	15.3	19.4	15	15.8	19.5	8	15
P.I. 68666	14.3	15	13	15	15	15	13.0	16.6	13	12.9	16.2	5	13
Habaro	19.2	20	19	21	20	17	18.5	24.5	16	16.6	21.1	7	16
O.A.C. 211	19.2	19	18	20	20	18	18.8	24.3	16	18.6	20.3	7	16
Earlyana	15.1	16	17	15	16	13	14.0	18.4	12	14.7	16.9	7	14
Manchukota	15.0	15	17	16	15	14	13.4	16.5	13	14.8	17.2	7	14
H5	15.4	15	15	15	17	15	13.9	16.7	15	15.9	17.6	8	15
Ontario	19.4	20	20	20	20	21	16.9	21.1	17	18.5	21.0	11	17
Wis. Man. 3 Sel.	16.8	19	17	17	18	14	15.6	19.6	14	17.2	20.1	9	15
Dim. Mandarin	19.4	20	20	20	18	22	16.1	20.7	18	20.1	21.9	12	15
H2	16.0	16	15	18	15	16	13.1	18.8	14	15.8	17.7	8	14
H3	17.5	18	17	18	17	17	15.2	20.3	16	19.0	19.4	10	15
H1	14.9	16	14	15	16	15	14.6	16.3	13	14.1	16.5	7	15
H4	15.9	16	17	14	16	18	14.1	14.8	16	16.9	17.1	11	13
McR. Mandarin	19.2	19	20	19	17	20	17.4	21.4	19	20.0	23.5	11	16
Wis. Mand. 507	18.2	18	19	18	17	20	16.5	18.5	17	20.0	19.5	11	15
Richland	15.6	17	17	15	17	13	16.4	18.1	14	13.2	15.9	6	14
Goldsoy	20.4	19	22	20	19	22	19.5	21.5	19	21.9	20.3	15	17
Mandarin	17.5	17	18	18	17	18	15.5	19.2	17	17.9	19.4	11	15
Wis. Man. 839-14	16.2	16	18	16	15	17	14.3	14.4	17	17.9	18.7	12	16
P.I. 92470	18.1	18	18	18	16	20	15.8	21.8	16	19.6	21.2	10	15
Kabott	19.5	20	20	20	18	21	17.1	19.4	18	22.0	22.7	15	17
Minsoy	12.1	13	13	12	11	12	10.3	13.0	12	12.9	14.0	8	14
Pagoda	14.9	15	17	15	14	17	13.2	14.3	13	15.5	18.4	11	15

[1]Spooner, Fargo, and East Lansing not included in the mean.

Table 9. Summary of percentage protein for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 9 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	Fargo N. D.	E.Lansing Mich.
Wis. Man. 606	42.0	45.0	41.2	38.8	39.7	44.2	42.9	42.3	38.7	45.0	44.4	34.0	43.1
Wis. Man. 3	41.5	44.5	41.1	38.9	39.0	43.6	43.0	41.6	38.0	44.1	44.7	35.4	44.0
P.I. 68666	40.7	44.2	40.0	38.9	37.6	43.9	41.8	39.0	37.5	43.2	44.3	37.2	39.9
Habaro	44.2	46.4	43.4	43.1	42.0	46.5	44.8	45.7	39.7	46.0	47.2	36.1	42.2
O.A.C. 211	44.6	47.2	43.9	42.6	42.7	47.9	45.2	46.5	39.5	46.3	46.8	37.5	42.4
Earlyana	43.2	45.9	43.2	40.8	41.8	45.1	43.2	43.2	39.8	45.6	46.3	37.1	42.5
Manchukota	42.5	44.7	42.0	40.3	40.5	43.6	44.0	42.4	39.8	45.1	44.8	36.7	44.5
H5	43.7	45.7	43.2	42.2	40.9	45.7	43.7	43.1	42.2	47.0	46.6	38.1	44.7
Ontario	42.5	44.6	41.9	40.4	40.8	44.7	43.8	41.9	39.9	44.1	45.1	33.8	43.1
Wis. Man. 3 Sel.	41.3	44.8	40.9	38.7	38.1	43.8	40.5	40.8	39.3	44.5	44.1	34.4	44.2
Dim. Mandarin	44.1	45.1	45.1	43.7	40.9	46.7	46.9	43.7	39.9	45.2	48.2	36.7	45.8
H2	42.2	44.7	41.8	41.2	39.4	44.1	44.7	42.3	38.9	42.9	43.7	34.5	43.0
H3	43.9	44.9	43.0	41.0	42.0	45.6	45.0	44.1	42.3	46.8	47.1	36.8	46.5
H1	42.1	43.9	40.4	39.7	39.2	46.3	44.0	40.7	40.4	44.2	43.7	38.9	43.1
H4	46.4	48.6	46.7	44.6	44.1	47.9	48.7	45.0	43.1	48.7	50.5	39.8	47.3
McR. Mandarin	44.6	44.7	44.3	42.9	41.7	48.0	46.8	45.0	41.4	46.4	48.9	34.0	46.7
Wis. Mand. 507	45.4	46.1	46.7	43.2	42.6	48.6	48.1	44.2	41.9	47.3	49.3	36.9	48.6
Richland	41.0	43.0	41.0	39.2	38.2	42.6	41.2	41.1	38.4	44.7	42.4	36.2	41.1
Goldsoy	45.1	46.0	45.0	45.0	41.3	48.9	47.5	45.6	41.0	46.0	47.6	35.0	45.8
Mandarin	45.0	46.1	45.6	42.2	40.6	47.6	46.7	44.5	42.7	49.0	49.3	37.4	47.6
Wis. Man. 839-14	43.8	46.2	44.0	42.9	38.1	47.0	45.8	42.3	41.9	46.3	47.3	33.3	48.9
P.I. 92470	45.8	47.8	45.7	44.4	42.7	48.2	47.9	45.3	42.2	47.9	48.7	36.3	48.0
Kabott	45.8	47.1	45.6	44.2	42.7	49.2	47.0	45.6	44.1	46.9	51.2	37.4	48.2
Minsoy	42.1	42.1	42.0	41.8	38.8	46.1	44.6	41.7	40.1	42.1	46.5	35.7	48.9
Pagoda	43.8	43.6	45.0	42.8	41.3	46.1	42.8	45.1	42.2	45.1	47.7	36.4	47.9
Mean	43.5	45.3	43.3	41.7	40.7	46.1	44.8	43.3	40.6	45.6	46.7	36.2	45.1

[1]Spooner, Fargo, and East Lansing not included in the mean.

Table 10. Summary of percentage oil for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 9 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	Fargo Fargo N. D.	E.Lansing Mich.
Wis. Man. 606	20.2	19.4	20.4	21.5	21.1	19.2	19.6	21.4	20.5	19.1	19.3	18.8	19.2
Wis. Man. 3	20.0	19.5	20.7	20.1	21.5	19.1	19.4	21.2	20.2	18.7	18.6	18.0	19.1
P.I. 68666	20.3	19.0	20.9	21.2	21.6	18.9	20.3	22.5	20.3	18.3	18.5	16.1	19.5
Habaro	18.6	18.4	19.0	19.2	19.6	17.3	19.0	18.9	19.0	16.9	17.1	16.7	18.7
O.A.C. 211	18.5	18.3	18.9	19.2	19.7	17.2	18.4	18.7	19.7	16.8	17.5	16.0	18.7
Earlyana	19.7	19.1	20.1	20.3	20.3	18.3	20.2	20.7	19.8	18.4	18.0	17.1	19.2
Manchukota	18.8	18.8	19.1	19.2	20.1	17.1	18.8	20.0	19.1	17.4	22.1	16.1	17.8
H5	19.5	19.4	19.5	20.2	20.2	18.4	19.5	20.2	19.7	18.3	18.1	17.8	18.0
Ontario	20.4	19.7	20.7	20.9	20.7	19.8	19.9	21.8	20.5	19.7	18.5	19.7	19.1
Wis. Man. 3 Sel.	20.0	19.5	20.4	20.3	20.6	18.7	20.7	21.6	19.8	18.6	18.8	18.2	18.2
Dim. Mandarin	19.4	19.8	19.4	19.2	20.4	18.4	18.1	19.9	20.9	18.9	17.4	20.0	18.0
H2	20.7	20.4	21.3	20.9	21.6	19.8	20.4	21.2	21.0	19.6	19.0	18.5	19.2
H3	19.5	18.8	20.0	20.6	20.1	18.8	19.1	20.2	20.1	18.0	17.3	18.9	17.0
H1	19.7	19.5	20.2	20.5	20.9	18.2	19.8	21.3	19.2	18.1	19.0	16.1	18.6
H4	18.7	17.9	19.0	19.2	19.7	17.9	17.9	19.3	19.7	18.1	16.6	18.6	17.4
McR. Mandarin	19.2	19.5	19.4	19.4	20.3	17.7	18.3	19.4	20.4	18.7	16.9	20.0	17.7
Wis. Mand. 507	18.3	18.5	18.0	19.1	19.3	17.3	16.7	19.2	19.4	16.9	16.4	19.0	16.7
Richland	19.5	19.3	19.2	20.2	21.0	18.9	20.0	20.4	19.4	16.9	18.5	16.8	18.2
Goldsoy	18.4	17.8	18.5	18.3	19.7	16.7	17.9	18.7	20.0	17.9	16.8	20.7	17.4
Mandarin	18.3	18.5	18.4	19.4	19.4	16.9	17.4	19.4	19.2	16.1	16.2	18.8	16.7
Wis. Man. 839-14	19.3	19.1	19.9	19.4	21.2	18.5	18.4	19.7	19.5	18.0	17.2	20.3	16.3
P.I. 92470	18.2	17.9	18.7	18.7	19.4	17.4	17.4	18.8	19.0	16.9	16.5	19.1	16.7
Kabott	17.7	17.2	17.8	18.4	19.0	16.6	17.4	18.0	17.8	17.2	15.9	19.6	16.3
Minsoy	18.9	19.2	19.2	18.2	20.1	17.4	18.0	19.4	19.5	19.1	16.1	18.2	16.2
Pagoda	18.9	19.4	19.0	19.2	19.6	18.4	19.0	18.3	18.8	18.5	17.5	20.0	16.4
Mean	19.2	19.0	19.5	19.7	20.3	18.1	18.9	20.0	19.7	18.0	17.8	18.4	17.9

[1]Spooner, Fargo, and East Lansing not included in the mean.

Table 11. Summary of iodine number of oil for the strains in the Uniform Test, Group I, 1943.

Strain	Mean of 9 Tests[1]	Wooster Ohio	Dearborn Mich.	St. Paul Minn.	Strongsville Ohio	Waseca Minn.	La Grange Ind.	Madison Wis.	Brookings S. D.	Eau Claire Wis.	Spooner Wis.	Fargo N. D.	E. Lansing Mich.
Wis. Man. 606	134	132	135	135	135	134	134	129	135	136	135	143	138
Wis. Man. 3	134	131	134	135	134	134	134	131	136	138	136	144	137
P.I. 68666	133	128	134	135	134	133	129	129	137	139	137	133	138
Habaro	132	126	130	133	132	133	130	129	134	138	134	143	136
O.A.C. 211	132	127	129	133	132	133	131	129	133	137	133	143	136
Earlyana	133	131	132	136	133	135	130	130	135	138	137	144	140
Manchukota	136	133	137	138	136	137	135	133	136	140	138	145	139
H5	131	130	132	132	131	132	130	126	131	134	133	139	135
Ontario	130	130	132	131	132	128	129	126	132	133	133	140	134
Wis. Man. 3 Sel.	134	132	134	135	134	137	133	131	136	138	136	144	139
Dim. Mandarin	128	126	136	126	129	124	128	124	127	132	129	137	131
H2	132	129	133	132	133	131	130	129	134	137	137	141	134
H3	132	131	133	134	134	132	131	128	132	134	133	139	138
H1	133	130	133	136	134	134	131	129	134	138	136	144	137
H4	128	129	128	129	129	128	127	124	128	130	129	135	132
McR. Mandarin	128	128	128	127	131	127	128	126	127	132	131	138	132
Wis. Mand. 507	131	132	130	130	133	131	131	127	131	134	134	139	134
Richland	131	125	131	134	131	134	126	128	134	137	136	142	138
Goldsoy	132	134	132	132	135	132	130	127	132	133	132	140	135
Mandarin	132	132	131	132	134	133	133	128	131	135	134	140	135
Wis. Man. 839-14	129	130	130	131	133	128	127	126	128	128	128	137	130
P.I. 92470	129	127	129	128	131	128	129	126	130	134	131	139	132
Kabott	131	133	131	131	134	129	131	127	131	131	130	139	133
Minsoy	128	128	128	128	132	128	128	122	128	131	131	136	130
Pagoda	124	128	122	127	130	121	123	118	127	123	123	137	127
Mean	131	130	131	132	133	131	130	127	132	134	133	140	135

[1]Spooner, Fargo, and East Lansing not included in the mean.

Table 12. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group I, 1942-43 at Wooster, Strongsville, and LaGrange.

Strain	Yield Bu./A.	Lodging	Height Inches	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Habaro	32.8	1.9	26	+3	2.2	19.6	44.7	18.9	130
P.I.68666	32.6	3.0	28	+7	1.9	14.8	41.4	20.6	131
Wis.Man.606	32.2	2.5	30	+6	2.0	17.0	42.5	20.0	134
Manchukota	31.7	2.2	29	+7	2.2	15.2	43.6	19.0	135
O.A.C. 211	31.7	2.2	25	+3	2.3	19.4	45.3	18.7	131
Earlyana	31.1	2.6	35	+7	2.2	15.8	44.0	19.9	132
W.Man.3 Sel.	30.3	2.4	33	+6	2.2	17.6	41.6	20.3	133
Richland	29.8	1.7	29	+11	2.0	17.4	40.9	20.3	127
McR.Mandarin	29.5	1.5	24	-4	2.3	18.8	45.1	18.9	130
Ontario	26.8	2.2	24	0	2.4	19.3	43.1	20.2	130
Mandarin	26.5	1.9	28	0	2.6	17.1	45.3	18.2	133
Goldsoy	26.0	2.4	23	-4	2.6	18.8	45.3	18.1	134
Kabott	21.4	1.8	21	-9	2.8	19.0	46.3	17.5	133
Minsoy	18.3	2.4	18	-11	2.8	12.2	43.4	18.5	128
Pagoda	16.8	1.2	23	-14	2.5	14.4	43.5	17.1	127

[1]Days earlier (-) or later (+) than Mandarin. Mandarin required 102 days to mature.

Table 13. Analysis of variance for yield of seed for the Uniform Test, Group I, 1943

Source of Variation	Degrees of Freedom	Mean Squares
Locations	8	1,210.48**
Varieties	24	382.88**
Varieties x Locations	192	31.84**
Error	552	9.03

**Highly significant

Table 14. Two-year summary of yields in bushels per acre, and yield rank for strains in the Uniform Test, Group I, 1942-43

Strain	Yield in Bu./A.					Yield Rank			
	Mean of 6 tests[1]	Strongsville, O.	Wooster Ohio	LaGrange Indiana	Fargo N.D.	Strongsville, O.	Wooster Ohio	LaGrange Indiana	Fargo N.D.
Habaro	32.8	38.8	32.4	27.1	17.5	2	4	4	8
P.I.68666	32.6	39.2	31.0	27.7	10.2	1	5	2	14
Wis.Man.606	32.2	36.2	32.9	27.6	17.7	5	2	3	7
Manchukota	31.7	36.5	32.6	25.9	15.3	4	3	5	10
O.A.C. 211	31.7	37.7	33.4	23.9	13.0	3	1	9	12
Earlyana	31.1	34.5	30.9	27.9	11.1	7	7	1	13
W.Man.3 Sel.	30.3	35.6	29.8	25.5	15.8	6	9	6	9
Richland	29.8	33.8	30.5	25.1	7.4	9	8	7	15
McR.Mandarin	29.5	33.1	31.0	24.5	25.9	10	5	8	3
Ontario	26.8	33.9	25.2	21.4	21.5	8	10	11	6
Mandarin	26.5	28.5	27.9	23.2	26.0	12	11	10	2
Goldsoy	26.0	30.9	27.7	19.3	34.5	11	12	12	1
Kabott	21.4	26.2	23.6	14.4	25.2	13	13	13	4
Minsoy	18.3	21.8	19.8	13.2	22.0	14	15	14	5
Pagoda	16.8	18.4	21.9	10.2	14.4	15	14	15	11

[1] Fargo not included in the mean

Uniform Test, Group II

The Group II Test in 1943 consisted of ten named varieties, three U.S.D.A. plant introductions, and three selections of hybrid origin. The source and origin of the sixteen strains are as follows:

Strain	Source or Originating Agency	Origin
Dunfield	Purdue Agr.Expt.Sta.	P.I. 56846
Earlyana	Purdue Agr.Expt.Sta.	Natural hybrid
Illini	Illinois Agr.Expt.Sta.	Selection from A.K.
Lincoln	Illinois Agr.Expt.Sta.	L6-685 Sel. from (Mandarin x Manchu)
Mingo	Ohio Agr.Expt.Sta.	Selection from Manchu
Mukden	Iowa Agr.Expt.Sta.	P.I. 50523-C
Mukden #4	Wisconsin Agr.Expt.Sta.	Selection from Mukden
Richland	Purdue Agr.Expt.Sta.	P.I. 70502-2
Wis. Manchu 3 Sel.	Wisconsin Agr.Expt.Sta.	Selection from Wis. Manchu 3
Wis. Manchu 606	Wisconsin Agr.Expt.Sta.	Selection from Manchu
A41-251	Iowa Agr.Expt.Sta.	Sel. from (Mukden x Dunfield)
A45-251	Iowa Agr.Expt.Sta.	Sel. from (Mukden x Richland)
H8	Ohio Agr.Expt.Sta.	Sel. from (Dunfield x Illini)
P.I. 91109	U. S. Dept. of Agric.	Foreign Plant Introduction
P.I. 92592	U. S. Dept. of Agric.	Foreign Plant Introduction
P.I. 92717	U. S. Dept. of Agric.	Foreign Plant Introduction

[1]Division of Plant Exploration and Introduction, Bureau of Plant Industry, Soils, and Agricultural Engineering, U.S.D.A.

The sixteen strains included in the Uniform Test, Group II were grown at nineteen locations in eight states of the North Central region of the United States. The sixteen strains were grown in rod rows with four replications in a 4 x 4 simple lattice arranged in two sets. Agronomic data taken consisted of yield of seed per acre, lodging, height, maturity, seed quality data, and seed weight. Chemical data obtained consisted of percentage protein, percentage oil, and iodine number of the oil. The summary of the agronomic and chemical data for all strains and locations except Lubbock, Texas, is given in Table 15. A range of nearly eight bushels per acre between strains was obtained when eighteen locations were averaged.

Lincoln, formerly L6-685, has again headed the list in yield of seed per acre. An estimated 11,000 bushels ofLincoln seed will be planted for increase in 1944 by farmers and experiment stations in the soybean belt. The performance of Lincoln in other agronomic and chemical characteristics is very similar to the data obtained in previous years of testing. The areas of adaptation of Lincoln are approximately as follows: the northern limit is a line extending eastward from a point where South Dakota and Nebraska join Iowa; the southern limit is a line extending eastward from a point where Nebraska and Kansas join Missouri. In general Lincoln is adapted to the areas where Illini and Dunfield are grown.

Strain, A45-251, second to Lincoln in yield of seed, seven days earlier, and equally as good in oil content offers considerable promise in its first year of uniform testing. Earlyana, the earliest variety in the test, was named and released to farmers in 1943. Earlyana compares favorably with Richland in yield and in chemical composition. The earlier and taller habits of Earlyana in comparison to Richland permits it to be recommended especially for northern Ohio, Indiana, Illinois, Iowa, and in the southern portion of Michigan and Wisconsin. It should be pointed out, however, that the lodging susceptibility of Earlyana limits its recommendations to the less fertile soils.

While 1942 data were confounded to some extent by the early frost, 1943 data were free from such confounding effects.

The means of the agronomic and chemical data of each of the strains at the individual locations are presented in Tables 16 to 23. Data from Lubbock, Texas, were not included in any of the combined location means since it was felt that the strains in this test were found to be unadapted.

Tables 27 and 28 give the four-year summary of the agronomic and chemical criteria for ten strains which have been grown for this period. Lincoln is first in yield of seed, seed quality, percentage of oil, and iodine number of oil. It ranks third in lodging resistance.

Table 15. Summary of agronomic and chemical data for the strains in the Uniform Test, Group II, 1943.

Strain	Yield in Bu./A.	Lodging	Height Inches	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Number of Tests	18	17	17	16	13	13	18[2]	18[2]	18[2]
Lincoln	33.6	2.4	41	+7	1.4	14.4	40.1	20.4	138
A45-251	32.1	1.7	37	0	1.5	16.8	41.2	20.7	131
P.I. 92717	31.7	2.8	38	+4	1.6	14.3	41.6	19.7	137
Mingo	30.3	3.2	42	+9	1.9	14.9	41.6	19.4	137
Illini	30.0	3.2	46	+8	1.7	15.6	40.3	19.3	137
P.I. 92592	29.6	3.0	34	+5	1.5	16.6	39.1	21.4	135
Mukden	29.5	2.5	41	+4	1.3	14.7	42.9	19.3	132
A41-251	29.2	2.8	46	+4	1.6	15.1	41.3	19.7	132
P.I. 91109	29.0	3.3	34	+2	1.5	14.8	41.8	19.8	130
Mukden #4	29.0	2.4	41	+2	1.3	14.6	43.1	19.4	132
Dunfield	28.7	2.9	40	+8	1.6	14.7	38.8	20.0	133
Richland	28.5	1.8	34	0	1.5	15.9	40.5	20.1	131
Earlyana	28.5	3.1	40	-5	1.7	15.0	43.0	20.2	132
Wis. Man. 606	28.2	2.9	34	-3	1.9	16.3	42.4	20.0	134
H8	28.1	2.8	42	+2	1.7	15.6	41.3	20.6	133
W. Man. 3 Sel.	25.8	3.3	38	-4	1.9	16.9	42.0	20.0	133
Bu.Nec. for Sig. (5% level)	2.0								
(1% level)	2.6								

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

[2]Mean of a composite sample of 13 tests and 5 individual tests. Composition on a dry basis.

Table 16. Summary of yields in bushels per acre for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 18 Tests[1]	Lafayette Ind.	Columbus Ohio	Ames Iowa	Bluffton Ind.	Hudson Iowa	Urbana Ill.	Madison Wis.	Norfolk Nebr.	Wanatah Ind.
Lincoln	33.6	49.4	50.6	44.3	45.2	36.6	39.0	37.1	34.5	33.3
A45-251	32.1	42.9	47.5	44.2	42.0	37.4	35.0	33.3	33.4	32.1
P.I. 92717	31.7	43.1	45.1	41.4	37.5	34.4	37.3	32.4	27.2	30.6
Mingo	30.3	46.4	42.0	42.0	40.8	33.4	33.2	33.6	26.4	33.5
Illini	30.0	41.9	38.1	38.1	35.5	34.2	35.9	33.3	31.0	31.3
P.I. 92592	29.6	38.8	35.6	40.3	31.5	33.3	42.8	34.2	30.3	29.7
Mukden	29.5	42.4	33.0	37.7	41.2	33.8	33.0	32.9	28.9	31.7
A41-251	29.2	37.9	34.2	36.1	41.6	33.8	31.3	30.4	25.7	32.0
P.I. 91109	29.0	37.9	40.1	33.7	28.4	29.0	33.4	33.4	30.1	28.1
Mukden #4	29.0	41.9	33.4	33.6	43.5	33.9	31.9	29.6	27.4	28.1
Dunfield	28.7	38.1	35.6	34.3	37.8	30.6	36.6	31.3	25.7	31.9
Richland	28.5	36.2	35.6	40.3	38.4	33.7	34.1	26.2	30.1	23.3
Earlyana	28.3	34.2	33.2	38.2	38.6	33.4	28.9	28.9	32.9	28.3
Wis. Man 606	28.2	42.2	30.8	36.3	33.2	33.7	30.9	29.3	29.3	29.8
H8	28.1	36.3	36.5	37.9	36.2	32.9	33.3	29.9	30.4	28.1
W.Man.3 Sel.	25.8	35.6	28.4	27.6	29.4	34.6	29.9	28.0	28.6	26.2
Mean	29.5	40.3	38.8	38.4	37.7	33.0	34.1	31.3	30.3	30.1
Coef. of Var.(%)	11.3	7.9	16.4	12.2	15.3	7.3	8.1	6.3	11.1	8.9
Bu. Nec. for Sig. (5% level)	2.0	4.5	9.2	6.7	8.3	3.6	4.0	2.8	4.8	3.8

[1]Lubbock not included in the mean since these strains were found to be unadapted.

Table 17. Analysis of variance for yield of seed for the Uniform Test, Group II, 1943.

Source of Variation	Degrees of Freedom	Mean Squares
Locations	17	3,092.20**
Varieties	15	239.09**
Varieties x Locations	255	36.28**
Error	750	12.01

**Highly significant

Table 16 (continued)

Strain	Dear-born Mich.	Woost-er Ohio	Kana-wha Iowa	Hol-gate Ohio	La-Grange Ind.	Dwight Ill.	Deer-field Mich.	Mt. Morris Ill.	E.Lan-sing Mich.	Lub-bock Texas
Lincoln	35.4	27.4	24.1	24.3	24.8	29.3	26.0	24.7	19.7	17.5
A45-251	28.8	29.8	31.4	28.2	25.1	27.3	25.3	21.6	13.0	17.3
P.I. 92717	28.4	33.4	28.0	28.7	24.6	24.3	27.3	20.8	16.2	14.9
Mingo	30.1	21.4	25.8	24.5	25.1	24.2	26.6	24.2	14.6	15.0
Illini	33.1	21.2	22.7	24.1	24.9	28.1	26.6	24.4	14.3	13.6
P.I. 92592	26.7	26.9	23.6	26.4	25.0	24.9	22.7	23.6	15.0	13.1
Mukden	27.1	27.4	22.3	28.6	25.4	24.2	22.6	20.9	15.6	12.3
A41-251	27.4	29.0	24.8	28.1	26.2	24.4	23.9	19.8	13.2	16.4
P.I. 91109	19.0	27.4	30.2	29.9	28.5	25.8	19.8	18.6	14.2	12.8
Mukden #4	26.8	27.7	24.5	29.2	25.9	23.5	19.9	20.3	14.8	10.1
Dunfield	21.9	21.7	22.2	27.9	26.1	26.6	22.8	22.0	15.1	19.0
Richland	22.0	23.2	26.7	24.8	25.2	23.4	22.8	18.6	12.8	16.1
Earlyana	30.2	27.6	32.3	24.8	24.6	21.0	18.1	19.7	15.3	7.7
Wis. Man. 606	28.6	27.2	29.1	22.6	26.6	22.2	18.4	20.1	13.3	8.6
H8	25.3	26.6	25.5	25.8	27.5	22.9	22.9	18.4	13.4	11.4
W.Man.3 Sel.	26.3	25.5	28.5	21.9	25.4	21.7	18.4	20.7	13.6	7.1
Mean	27.3	26.5	26.3	26.2	25.4	24.6	22.6	21.2	14.5	13.3
Coef. of Var.(%)	13.3	13.4	8.4	11.4	10.7	6.2	12.8	11.7	20.5	10.9
Bu. Nec. for Sig. (5% level)	5.4	5.1	3.1	4.2	3.9	2.2	4.1	3.6	4.3	2.1

Table 18. Summary of rank for yield, arranged in order of mean yields, for the Uniform Test, Group II, 1943.

Strain	Lafayette Ind.	Columbus Ohio	Ames Iowa	Bluffton Ind.	Hudson Iowa	Urbana Ill.	Madison Wis.	Norfolk Nebr.	Wanatah Ind.	Dearborn Mich.
Lincoln	1	1	1	1	4	2	1	3	1	1
A45-251	4	2	2	3	3	6	6	2	3	5
P.I. 92717	3	5	4	10	9	3	8	1	8	7
Mingo	2	6	3	6	13	11	3	14	2	4
Illini	7	8	9	12	10	5	4	5	7	2
P.I. 92592	9	10	5	14	7	1	2	6	10	11
Mukden	5	13	11	5	11	10	7	11	6	9
A41-251	11	14	13	4	2	13	10	15	4	8
P.I. 91109	11	7	7	16	1	8	5	8	13	16
Mukden #4	7	11	14	2	5	12	12	13	13	10
Dunfield	10	3	15	9	16	4	9	15	5	15
Richland	14	3	5	8	12	7	16	8	11	14
Earlyana	16	12	8	7	13	16	14	4	11	3
Wis. Man. 606	6	15	12	13	6	14	13	10	9	6
H8	13	9	10	11	15	9	11	7	13	13
W.Man.3 Sel.	15	16	16	15	8	15	15	12	16	12

Table 13. (continued)

Strain	Wooster Ohio	Kanawha Iowa	Holgate Ohio	La-Grange Ind.	Dwight Ill.	Deerfield Mich.	Mt. Morris Ill.	E.Lansing Mich.	Lubbock Texas
Lincoln	6	12	13	13	1	4	1	1	3
A45-251	2	2	5	9	3	6	6	15	2
P.I. 92717	1	6	3	14	7	1	8	2	7
Mingo	15	8	12	9	9	2	3	7	6
Illini	16	14	14	12	2	2	2	8	8
P.I. 92592	10	13	8	11	6	10	4	5	9
Mukden	6	15	4	6	9	11	7	3	11
A41-251	3	10	6	3	8	5	12	13	4
P.I. 91109	6	3	1	1	5	13	14	9	10
Mukden #4	4	11	2	5	11	12	10	6	13
Dunfield	14	16	7	4	4	8	5	14	1
Richland	13	7	10	8	12	8	14	16	5
Earlyana	5	1	10	14	16	16	13	4	15
Wis. Man. 606	9	4	15	2	14	14	11	12	14
H8	11	9	9	16	13	7	16	11	12
W.Man.3 Sel.	12	5	16	6	15	14	9	10	16

Table 19. Summary of lodging data for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 17 Tests[1]	Lafayette Ind.	Columbus Ohio	Ames Iowa	Bluffton Ind.	Hudson Iowa	Urbana Ill.	Madison Wis.	Norfolk Nebr.	Wanatah Ind.
Lincoln	2.4	1.6	2.8	3.0	3.6	2.8	2.0	2.6	2.2	3.0
A45-251	1.7	1.2	1.3	2.5	2.7	2.0	1.0	1.5	2.0	2.0
P.I. 92717	2.8	1.9	3.0	3.3	4.0	3.0	2.0	2.7	3.5	3.2
Mingo	3.2	2.7	3.5	3.0	4.0	3.0	3.2	3.2	3.0	3.2
Illini	3.2	2.0	4.3	3.5	3.5	3.0	3.8	3.3	4.0	3.4
P.I. 92592	3.0	2.5	4.0	3.3	4.5	3.3	2.0	3.0	2.7	2.6
Mukden	2.5	1.5	3.5	2.8	3.7	2.5	2.5	2.6	3.2	3.0
A41-251	2.8	2.6	2.3	3.5	3.2	3.0	2.5	2.8	3.2	2.9
P.I. 91109	3.3	2.9	3.8	4.0	4.4	3.0	3.0	3.6	4.0	3.0
Mukden #4	2.4	1.6	3.0	3.0	3.1	2.8	2.8	2.1	3.5	2.5
Dunfield	2.9	2.4	2.3	3.0	3.4	3.0	3.0	2.6	3.0	2.7
Richland	1.8	1.2	1.8	1.8	2.4	2.3	1.0	1.3	2.2	1.5
Earlyana	3.1	2.6	3.8	3.0	3.9	3.0	2.5	2.7	3.5	3.4
Wis. Man. 606	2.9	2.5	4.3	3.5	4.5	3.3	2.8	2.2	3.2	3.5
H8	2.8	2.2	3.0	3.3	3.6	2.8	3.0	3.3	4.5	3.2
W.Man.3 Sel.	3.3	2.5	4.8	3.8	4.4	3.0	3.5	2.7	3.7	3.5

[1]East Lansing not included in the mean since no varieties lodged.

Table 19. (continued)

Strain	Dearborn Mich	Wooster Ohio	Kanawha Iowa	Holgate Ohio	La-Grange Ind.	Dwight Ill.	Deerfield Mich.	Mt. Morris Ill.	E. Lansing Mich.
Lincoln	2.3	4.5	3.0	1.5	1.6	2.8	1.0	1.2	1.0
A45-251	1.3	2.3	2.5	1.0	1.6	2.0	1.0	1.0	1.0
P.I. 92717	3.3	4.8	3.0	1.5	2.4	2.8	2.0	1.2	1.0
Mingo	4.0	4.0	3.3	2.5	2.4	5.0	2.0	2.2	1.0
Illini	2.3	4.3	3.5	3.0	2.2	4.2	2.0	2.8	1.0
P.I. 92592	3.3	4.8	3.0	2.5	2.2	3.8	2.0	1.5	1.0
Mukden	1.5	4.0	2.8	2.5	1.7	2.0	1.0	1.5	1.0
A41-251	3.0	4.0	3.0	3.0	2.1	3.0	2.0	1.5	1.0
P.I. 91109	3.8	4.0	3.0	3.0	2.5	4.5	2.0	1.0	1.0
Mukden #4	2.0	3.8	2.8	1.5	1.6	2.5	1.0	1.0	1.0
Dunfield	2.8	3.8	3.0	2.5	2.2	4.0	3.0	1.8	1.0
Richland	1.0	3.8	2.8	1.5	1.6	2.8	1.0	1.0	1.0
Earlyana	3.3	4.0	3.3	3.0	2.2	4.5	3.0	1.0	1.0
Wis. Man. 606	1.3	5.0	3.0	1.5	2.6	3.8	2.0	1.0	1.0
H8	2.5	3.0	3.0	2.0	1.6	3.5	2.0	1.2	1.0
W.Man.3 Sel.	2.0	4.8	3.0	3.0	2.4	4.8	3.0	1.5	1.0

Table 20. Summary of plant height for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 17 Tests[1]	Lafayette Ind.	Columbus Ohio	Ames Iowa	Hudson Iowa	Urbana Ill.	Madison Wis.	Norfolk Nebr.	Wanatah Ind.	Dearborn Mich.
Lincoln	.41	.42	.49	.47	44	38	37	43	42	46
A45-251	.37	.40	45	.42	42	31	35	42	38	38
P.I. 92717	.38	.41	44	45	43	34	36	40	43	42
Mingo	.42	.43	57	45	43	40	39	40	39	48
Illini	.46	.46	60	.56	50	43	42	42	46	49
P.I. 92592	.34	.35	39	41	37	31	34	36	35	37
Mukden	.41	.44	52	49	45	35	40	43	41	45
A41-251	46	.47	60	.56	53	39	42	46	44	52
P.I. 91109	34	.34	40	.39	37	32	32	37	33	33
Mukden #4	41	42	51	.46	44	35	40	38	44	44
Dunfield	.40	.41	47	46	45	40	39	41	40	45
Richland	34	36	37	36	36	32	33	36	34	33
Earlyana	40	40	48	49	44	35	38	44	39	46
Wis. Man. 606	34	41	37	44	41	30	31	34	44	32
H8	42	43	47	50	46	36	40	39	43	49
W.Man.3 Sel.	38	42	48	44	43	31	38	34	42	40

[1]Lubbock not included in the mean.

Table 20. (continued)

Strain	Wooster Ohio	Kanawha Iowa	Holgate Ohio	La-Grange Ind.	Dwight Ill.	Deerfield Mich.	Mt. Morris Ill.	E.Lansing Mich.	Lubbock Texas
Lincoln	41	50	31	38	42	40	38	32	17
A45-251	37	47	30	32	39	35	34	26	17
P.I. 92717	38	46	32	32	41	34	34	22	16
Mingo	40	49	34	36	45	40	36	32	19
Illini	42	55	36	40	56	44	40	30	17
P.I. 92592	35	39	28	30	35	31	31	23	15
Mukden	42	53	30	37	44	38	36	29	15
A41-251	44	57	35	42	52	43	38	29	20
P.I. 91109	36	42	29	29	38	32	26	22	11
Mukden #4	42	53	34	38	44	37	35	26	13
Dunfield	39	49	32	36	42	39	38	25	22
Richland	36	41	30	30	35	34	30	29	14
Earlyana	37	53	31	37	43	36	32	28	12
Wis. Man. 606	30	50	25	34	34	27	26	24	9
H8	42	54	34	38	48	40	36	25	13
W.Man.3 Sel.	36	48	31	34	44	32	30	31	10

Table 21. Summary of maturity data, days earlier (-) or later (+) than Richland, for the strains in the Uniform Test, Group II, 1943

Strain	Mean of 16 Tests[1]	Lafayette Ind.	Columbus Ohio	Ames Iowa	Bluffton Ind.	Hudson Iowa	Urbana Ill.	Madison Wis.	Norfolk Nebr.
Lincoln	+7	+7	+11	+10	+5	+6	+11	+ 4	+3
A45-251	0	0	- 3	+ 2	+1	+1	+ 1	- 5	+1
P.I. 92717	+4	+2	+ 7	+ 8	+4	+4	+ 4	+ 2	+3
Mingo	+9	+8	+14	+ 9	+7	+5	+13	+ 8	+6
Illini	+8	+10	+ 9	+13	+8	+8	+13	+ 6	+3
P.I. 92592	+5	+5	+ 6	+ 7	+4	+4	+ 6	+ 7	+5
Mukden	+4	+2	+ 6	+ 7	+3	+3	+ 9	+ 6	+4
A41-251	+4	+9	+ 2	+ 8	+6	+4	+ 6	+ 7	+3
P.I. 91109	+2	+7	- 1	+ 7	+6	+3	+ 3	+ 1	-2
Mukden #4	+2	0	+ 4	+ 6	+3	+3	+ 5	+ 3	0
Dunfield	+8	+6	+ 9	+11	+6	+7	+11	+ 9	+9
Richland	0	0	0	0	0	0	0	0	0
Earlyana	-5	-5	-10	- 2	-5	-4	- 3	- 9	-7
Wis. Man. 606	-3	+6	-13	+ 5	+5	+1	- 1	-10	-7
H8	+2	+2	- 6	+ 6	+1	+3	+ 5	+16	-1
W. Man. 3 Sel.	-4	-2	-11	+ 1	-2	-2	- 1	- 8	-7
Richland Matured		9/30	9/23	9/20	10/4	9/24	9/17	9/30	9/27
Date of Planting		6/12	6/2	5/19	6/4	5/27	5/31	5/21	5/28
Days to Maturity		110	113	125	122	121	110	133	123

[1]Lubbock not included in the mean.

Table 21. (continued)

Strain	Wana-tah Ind.	Dear-born Mich.	Woost-er Ohio	Kana-wha Iowa	Hol-gate Ohio	La Grange Ind.	Dwight Ill.	Mt. Morris Ill.	Lub-bock Texas
Lincoln	+8	+ 7	+ 9	+5	+7	+6	+ 9	+8	+5
A45-251	+1	0	- 3	+2	0	+1	+ 3	0	+2
P.I. 92717	+5	+ 4	- 2	+3	+5	+3	+ 6	+3	-1
Mingo	+9	+10	+11	+6	+6	+6	+11	+8	+5
Illini	+8	+ 5	+10	+8	+6	+3	+11	+6	+7
P.I. 92592	+4	+ 3	+ 4	+4	+3	+4	+ 3	+5	0
Mukden	+3	+ 3	- 2	+5	+5	+2	+ 4	+2	+2
A41-251	+5	0	+ 1	+5	+5	+4	+ 4	+1	+1
P.I. 91109	+2	+ 3	- 5	+2	+1	+3	+ 2	-3	-5
Mukden #4	+2	- 1	- 2	+3	+5	+3	+ 5	-1	-2
Dunfield	+4	+ 5	+10	+7	+6	+5	+10	+9	+5
Richland	0	0	0	0	0	0	0	0	0
Earlyana	-2	- 7	- 5	-1	-4	-4	- 3	-5	-9
Wis. Man. 606	+6	-10	-12	-1	-6	+1	- 2	-5	-9
H8	+2	+ 1	- 2	+2	0	+2	+ 2	+3	-1
W. Man. 3 Sel.	0	- 7	- 8	-2	-7	-1	- 1	-5	-9
Richland Matured	10/2	10/7	9/25	10/1	9/22	9/28	9/25	9/27	8/18
Date of Planting	5/27	5/28	6/5	5/28	6/12	6/3	6/3	5/27	5/4
Days to Maturity	128	133	113	130	103	118	115	124	107

Table 22. Summary of seed quality data for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 13 Tests[1]	Lafayette Ind.	Columbus Ohio	Ames Iowa	Bluffton Ind.	Hudson Iowa	Urbana Ill.	Madison Wis.	Norfolk Nebr.	Wanatah Ind.
Lincoln	1.4	1.0	2.0	1.0	1.5	1.0	1.0	1.0	3.0	1.5
A45-251	1.5	1.5	2.0	1.0	1.5	1.0	2.0	1.0	2.0	1.5
P.I. 92717	1.6	1.5	2.0	1.5	1.5	1.0	1.0	2.0	3.0	1.5
Mingo	1.9	1.5	3.0	1.8	1.5	1.0	1.0	2.0	4.0	1.5
Illini	1.7	1.5	3.0	1.0	1.5	1.0	1.0	2.0	3.0	1.5
P.I. 92592	1.5	2.0	2.0	1.5	1.5	1.0	1.0	2.0	1.0	1.5
Mukden	1.3	1.5	2.0	1.0	1.0	1.0	1.0	1.0	2.0	1.5
A41-251	1.6	2.0	3.0	1.0	1.5	1.0	3.0	1.0	1.0	1.5
P.I. 91109	1.5	1.5	2.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
Mukden #4	1.3	1.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
Dunfield	1.6	1.0	3.0	1.0	1.5	1.0	1.0	2.0	3.0	1.5
Richland	1.5	1.5	2.0	1.0	1.5	1.0	1.0	2.0	1.0	1.5
Earlyana	1.7	2.0	3.0	1.3	1.5	1.0	2.0	2.0	1.0	1.5
Wis. Man. 606	1.9	1.5	4.0	1.8	1.5	1.0	2.0	2.0	2.0	2.0
H8	1.7	1.5	3.0	1.0	1.5	1.0	1.0	2.0	3.0	2.0
Wis.Man.3 Sel.	1.9	1.5	3.0	1.5	1.5	1.0	1.0	2.0	3.0	2.0

[1]Hudson, Dearborn, Deerfield, Mt. Morris, and East Lansing not included in the mean.

Table 22. (continued)

Strain	Dearborn Mich.	Wooster Ohio	Kanawha Iowa.	Holgate Ohio	LaGrange Ind.	Dwight Ill.	Deerfield Mich.	Mt. Morris Ill.	E.Lansing Mich.
Lincoln	1.0.	2.0	1.0.	1.0	1.0	1.0	1.0	1.0	1.0
A45-251	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
P.I. 92717	1.0.	2.0	2.0.	1.0	1.5	1.0	1.0	1.0	1.0
Mingo	1.0.	2.0	1.8.	1.0	2.0	1.0	1.0	1.0	1.0
Illini	1.0.	3.0	1.0.	1.0	1.0	1.0	1.0	1.0	1.0
P.I. 92592	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
Mukden	1.0.	1.3	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
A41-251	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
P.I. 91109	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
Mukden #4	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
Dunfield	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
Richland	1.0.	2.5	1.0.	2.0	1.5	1.0	1.0	1.0	1.0
Earlyana	1.0.	2.0	1.0.	2.0	1.5	1.0	1.0	1.0	1.0
Wis. Man. 606	1.0.	2.0	1.0.	2.0	1.5	2.0	1.0	1.0	1.0
H8	1.0.	2.0	1.0.	1.0	1.5	1.0	1.0	1.0	1.0
Wis.Man.3 Sel.	1.0.	3.0	1.0.	2.0	1.5	2.0	1.0	1.0	1.0

Table 23. Summary of seed weight in grams per 100 seeds for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 13 Tests[1]	Lafayette Ind.	Columbus Ohio	Bluffton Ind.	Urbana Ill.	Madison Wis.	Norfolk Nebr.	Wanatah Ind.
Lincoln	14.4	15.7	14.5	15.8	13	15.5	13	16.5
A45-251	16.8	18.2	16.9	17.6	15	17.6	17	18.4
P.I. 92717	14.3	15.6	14.3	16.1	13	15.4	14	16.1
Mingo	14.9	16.8	15.4	16.6	14	16.0	14	16.7
Illini	13.6	14.6	13.9	14.5	13	13.7	13	15.3
P.I. 92592	16.6	17.5	15.8	17.9	14	18.7	18	18.6
Mukden	14.7	15.7	15.2	15.5	14	16.4	14	15.6
A41-251	15.1	16.4	14.9	16.1	14	16.8	15	16.3
P.I. 91109	14.8	15.6	15.4	15.4	14	17.2	15	16.7
Mukden #4	14.6	14.5	14.3	15.4	14	16.3	15	15.2
Dunfield	14.7	16.0	15.4	16.6	14	16.1	16	15.6
Richland	15.9	16.3	15.9	16.6	15	16.9	17	16.9
Earlyana	15.0	15.9	13.9	15.5	14	17.1	15	16.6
Wis. Man. 606	16.3	16.5	16.6	15.7	15	19.4	18	16.9
H8	15.6	16.3	15.7	15.5	15	18.0	16	17.4
Wis.Man. 3 Sel.	16.9	17.5	16.4	17.2	15	18.7	18	19.0

[1]Lubbock not included in the mean.

Table 23. (continued)

Strain	Dear-born Mich.	La-Grange Ind.	Dwight Ill.	Deer-field Mich.	Mt. Morris Ill.	E.Lan-sing Mich.	Lub-bock Texas
Lincoln	15	13.1	14	15	13	13	11
A45-251	16	16.2	17	17	16	16	13
P.I. 92717	16	12.6	14	14	12	13	11
Mingo	16	14.1	13	14	13	14	10
Illini	15	11.4	14	14	12	12	11
P.I. 92592	17	15.3	16	16	16	15	12
Mukden	15	13.3	15	14	14	14	10
A41-251	16	14.5	14	15	13	14	11
P.I. 91109	13	14.8	15	14	13	13	11
Mukden #4	15	13.5	14	14	13	15	10
Dunfield	15	14.1	14	15	15	12	11
Richland	17	15.6	14	16	15	15	15
Earlyana	16	14.3	14	14	14	15	11
Wis. Man. 606	18	14.6	15	15	16	15	11
H8	17	14.6	14	15	14	14	12
Wis.Man. 3 Sel.	18	15.7	16	15	17	16	12

Table 24. Summary of percentage protein for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 18 Tests[1]	Composite of 13 Locations[2]	Madison Wis.	Norfolk Nebr.	Dearborn Mich.	Deerfield Mich.	E.Lansing Mich.	Lubbock Texas
Lincoln	40.1	40.4	38.5	37.4	40.2	41.0	40.2	38.8
A45-251	41.2	41.6	39.8	39.8	40.6	41.7	39.3	39.2
P.I. 92717	41.6	41.6	41.2	41.2	42.5	42.6	41.2	41.7
Mingo	41.6	41.8	40.3	39.4	41.1	42.0	42.3	39.2
Illini	40.3	40.4	38.5	37.4	41.3	42.1	40.9	41.3
P.I. 92592	39.1	39.1	38.6	38.0	39.3	41.4	38.1	38.4
Mukden	42.9	43.0	42.2	40.6	42.9	44.5	42.2	42.3
A41-251	41.3	41.3	40.5	39.4	41.1	43.5	41.6	41.3
P.I. 91109	41.8	42.1	41.1	40.4	43.7	42.0	38.0	39.1
Mukden #4	43.1	43.3	41.3	42.0	42.5	43.9	43.3	42.7
Dunfield	38.8	38.6	38.7	39.0	39.9	40.9	38.3	38.1
Richland	40.5	40.6	39.3	40.7	41.1	40.5	39.3	40.0
Earlyana	43.0	43.1	42.4	41.7	43.1	43.9	41.8	41.8
Wis. Man. 606	42.4	42.7	41.3	40.8	42.3	41.8	41.4	41.1
H8	41.3	41.5	41.8	39.1	40.9	42.6	39.0	40.3
W. Man. 3 Sel.	42.0	42.2	41.3	40.3	41.2	42.6	41.1	40.6
Mean	41.3	41.5	40.4	39.8	41.5	42.3	40.5	40.4

[1]Lubbock not included in the mean.
[2]Composite from Lafayette, Columbus, Ames, Bluffton, Hudson, Urbana, Manatah, Wooster, Kanawha, Holgate, La Grange, Dwight, and Mt. Morris.

Table 25. Summary of oil content for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 18 Tests[1]	Composite of 13 Locations[2]	Madison Wis.	Norfolk Nebr.	Dearborn Mich.	Deerfield Mich.	E.Lansing Mich.	Lubbock Texas
Lincoln	20.4	20.5	21.0	22.4	19.8	19.0	19.1	22.4
A45-251	20.7	20.6	21.6	22.2	20.9	19.9	20.7	23.3
P.I. 92717	19.7	19.8	19.9	21.0	19.5	18.3	18.8	20.8
Mingo	19.4	19.4	19.7	21.3	19.1	18.8	18.0	21.0
Illini	19.3	19.4	19.8	21.6	18.2	17.3	17.6	21.7
P.I. 92592	21.4	21.5	21.2	22.5	21.3	19.7	20.3	22.9
Mukden	19.3	19.3	19.7	20.5	19.0	18.4	18.3	21.0
A41-251	19.7	19.9	19.9	20.9	19.4	18.0	18.2	21.5
P.I. 91109	19.8	19.9	20.0	21.7	18.5	18.3	19.9	22.1
Mukden #4	19.4	19.4	20.1	20.6	19.5	18.7	18.3	21.0
Dunfield	20.0	20.3	19.9	21.0	19.2	17.8	18.2	23.4
Richland	20.1	20.2	20.3	21.4	19.5	18.9	19.2	22.1
Earlyana	20.2	20.1	21.2	22.3	19.6	18.7	20.1	20.4
Wis. Man. 606	20.0	19.8	21.3	22.2	19.7	19.1	19.3	21.4
H8	20.6	20.8	20.0	22.6	20.5	18.5	19.6	22.7
Wis.Man.3 Sel.	20.0	19.9	21.1	22.4	20.5	19.1	19.0	21.3
Mean	20.0	20.1	20.4	21.7	19.6	18.7	19.1	21.8

[1]Lubbock not included in the mean.
[2]Composite from Lafayette, Columbus, Ames, Bluffton, Hudson, Urbana, Wanatah, Wooster, Kanawha, Holgate, La Grange, Dwight, and Mt. Morris.

Table 26. Summary of iodine number of oil for the strains in the Uniform Test, Group II, 1943.

Strain	Mean of 18 Tests[1]	Composite of 13 Locations[2]	Madison Wis.	Norfolk Nebr.	Dearborn Mich.	Deerfield Mich.	E.Lansing Mich.	Lubbock Texas
Lincoln	138	137	138	134	139	141	145	128
A45-251	131	130	130	127	133	135	135	120
P.I. 92717	137	136	137	134	138	141	141	129
Mingo	137	136	138	133	138	140	142	128
Illini	137	136	138	133	138	141	143	125
P.I. 92592	135	134	136	130	136	140	142	124
Mukden	132	131	133	130	133	137	139	122
A41-251	132	131	133	129	133	139	140	118
P.I. 91109	130	129	130	128	128	137	137	123
Mukden #4	132	131	133	129	133	136	137	122
Dunfield	133	132	136	129	136	139	142	116
Richland	131	130	133	127	131	137	138	121
Earlyana	132	132	131	129	133	137	137	127
Wis. Man. 606	134	134	131	129	135	136	137	127
H8	133	132	133	130	134	139	140	120
W. Man. 3 Sel.	133	133	132	130	135	137	137	126
Mean	134	133	134	130	135	138	139	124

[1]Lubbock not included in the mean.
[2]Composite from Lafayette, Columbus, Ames, Bluffton, Hudson, Urbana, Wanatah, Wooster, Kanawha, Holgate, La Grange, Dwight, and Mt. Morris.

Table 27. Four-year summary of mean agronomic and chemical data for the strains in the Uniform Test, Group II, 1940-1943.

Strain	Mean Yield Bu./A.	Lodging	Height Inches	Maturity[1]	Seed Quality	Seed Weight	Percent Protein	Percent Oil	Iodine Number of Oil
Number of Tests	49	44	39	43	41	48	53	53	53
Lincoln	34.1	2.3	37	+5.5	1.5	15.1	41.1	21.2	136
P.I. 92717	30.4	2.4	34	+2.3	1.8	14.4	42.8	19.9	135
Mingo	29.9	3.0	37	+5.9	2.1	15.7	43.1	19.9	133
Illini	29.3	2.9	40	+6.4	1.6	14.2	41.4	20.1	134
Dunfield	28.1	2.8	36	+6.1	1.6	16.2	40.5	20.6	129
Mukden	27.0	2.2	37	+2.1	1.7	14.7	44.3	19.5	129
Richland	26.7	1.6	32	0	1.8	16.3	41.4	20.2	127
Earlyana	26.0	2.5	35	-4.1	2.0	14.8	44.1	20.1	131
Wis.Man.606	25.4	2.5	36	-2.6	2.3	16.3	43.3	20.0	133
Wis.Man.3	25.2	2.9	32	0	2.4	16.9	43.2	19.9	132

[1]Days earlier (-) or later (+) than Richland. Richland required 123 days to mature (4-year average of all locations).

Table 28. (continued)

	Stonington Ill.	Mt. Morris Ill.[1]	Kanawha Iowa	Ames Iowa	Hudson Iowa	Holgate Ohio	Wooster Ohio	Dearborn Mich.
Years Tested	1940-41	1942-43	1940-43	1942-43	1942-43	1940-43	1942-43	1941-43
Strain	Yield (bushels per acre)							
Lincoln	28.3	19.0	26.5	48.3	34.5	27.7	29.1	36.7
P.I. 92717	25.1	17.0	27.4	42.8	30.8	27.5	32.1	31.1
Mingo	25.8	18.0	26.1	44.2	28.7	24.6	25.9	30.0
Illini	25.7	17.6	25.6	40.1	31.6	22.6	23.8	35.3
Dunfield	25.7	16.9	24.4	41.1	30.4	22.4	24.9	24.9
Mukden	20.5	16.5	23.8	42.8	29.8	20.7	27.4	29.6
Richland	20.6	15.9	25.9	42.4	30.8	21.3	25.1	22.8
Earlyana	19.4	18.3	28.6	40.0	29.1	21.8	27.5	30.0
Wis. Man. 606	18.1	19.1	25.8	40.1	29.9	22.8	28.3	27.0
Wis. Man. 3	20.7	17.4	26.3	35.5	28.2	21.4	27.1	27.5
Mean	23.0	17.6	26.0	41.7	30.4	23.3	27.1	29.5
			Yield Rank					
Strain								
Lincoln	1	2	3	1	1	1	2	1
P.I. 92717	5	7	2	3	3	2	1	3
Mingo	2	4	5	2	9	3	7	4
Illini	3	5	8	7	2	5	9	2
Dunfield	3	8	9	6	5	6	8	9
Mukden	8	9	10	3	7	10	5	6
Richland	7	10	6	5	3	9	10	10
Earlyana	9	3	1	9	8	7	4	4
Wis. Man. 606	10	1	7	7	6	4	3	3
Wis. Man. 3	6	6	4	10	10	8	6	7

Uniform Test, Group III

The Uniform Group III Test in 1943 was composed of seven named varieties and eighteen selections from hybrids. Considerable revision of strains in this test was made in 1943. The origin of these strains and varieties is as follows:

Strain	Source or Originating Agency	Origin
Chief	Ill. Agr.Expt.Sta.	Sel. from (Illini x Manchu)
Dunfield	Purdue Agr.Expt.Sta.	P.I. 36846[1]
Illini	Illinois Agr.Expt.Sta.	Selection from A.K.
Lincoln	Illinois Agr.Expt.Sta.	L6-685 (Mandarin x Manchu)
Patoka	Purdue Agr.Expt.Sta.	Sel from P.I. 70218-2
Scioto	Ohio Agr.Expt.Sta.	Selection from Manchu
Viking	Illinois Agr.Expt.Sta.	T118 (Illini x Manchu)
A18-231	Iowa Agr.Expt.Sta.	Sel. from (Dunfield x Linman 533)
A31-291	Iowa Agr.Expt.Sta.	Sel. from (Illini x Dunfield)
C56	Purdue Agr.Expt.Sta.	Sel. from CX331 (Illini x Mandell)
C60	Purdue Agr.Expt.Sta.	Sel. from CX331 (Illini x Mandell)
C66	Purdue Agr.Expt.Sta.	Sel. from CX831 (Dunfield x Manchu)
C72	Purdue Agr.Expt.Sta.	Sel. from CX831 (Dunfield x Manchu)
C84	Purdue Agr.Expt.Sta.	Sel. from CX531 (Midwest x Dunfield)
C91	Purdue Agr.Expt.Sta.	Sel. from CX831 (Dunfield x Manchu)
C101	Purdue Agr.Expt.Sta.	Sel. from CX831 (Dunfield x Manchu)
H6	Ohio Agr.Expt.Sta.	LX343-13 Sel. from (Dunfield x Scioto)
H9	Ohio Agr.Expt.Sta.	LX339-10 Sel. from (Dunfield x Illini)
L4-12	Illinois Agr.Expt.Sta.	Selection from a mixed hybrid population
L4-42	Illinois Agr.Expt.Sta.	Selection from a mixed hybrid population
L4-45	Illinois Agr.Expt.Sta.	Selection from a mixed hybrid population
L7-1111	Illinois Agr.Expt.Sta.	Selection from LX 157 (Illini x T48)
L7-1280	Illinois Agr.Expt.Sta.	Unknown
S32-3	Missouri Agr.Expt.Sta.	Sel. from (P.I. 37062 x Illini)
S32-8	Missouri Agr.Expt.Sta.	Sel. from (P.I. 37062 x Illini)

[1]Division of Plant Exploration and Introduction, Bureau of Plant Industry, Soils, and Agricultural Engineering, U.S.D....

The twenty-five strains were replicated four times in a 5 x 5 simple lattice at each location. This test was grown at seventeen locations in nine states. The same type of agronomic and chemical data were obtained as in the Group I and Group II tests.

The mean agronomic and chemical responses for all strains at all locations except Lubbock, Texas, are shown in Table 29. Chief headed the list of strains in yield of seed per acre followed closely by C56 and Lincoln. Lincoln was tested in this group as well as in Group II in order to obtain the best possible estimate of its performance before release. The performance of Lincoln in comparison with Illini and Dunfield in Group III was very similar to their comparative performance in Group II.

Since Illini and Dunfield have been considered the main standard varieties, it is well to note the low position of these two varieties with regard to yield. These two varieties held the same relative positions in the uniform testing in 1942 which indicates progress in selection and breeding work.

Tables 30 to 39 and Table 43 show the summarization of the agronomic and chemical data for each strain at the individual locations.

The two-year summary of the agronomic and chemical data for the strains common to both years at all locations is presented in Table 40. Years were given equal weights in calculation of all means. Table 41 shows the mean yield and rank for the strains in the two-year summary at the individual locations.

The four-year summary of the agronomic and chemical data for those strains grown four years is shown in Table 42.

Table 29. Summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1943.

Strain	Mean Yield Bu/A	Lodging	Height	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	16	15	16	13	11	13	16[2]	16[2]	16[2]
Chief	29.4	2.7	46	+5.0	1.6	11.7	40.0	20.2	133
C56	29.2	2.6	40	+1.5	1.7	12.9	42.0	19.4	135
Lincoln ✓	28.8	1.9	37	-1.3	1.6	12.9	40.2	21.2	134
C72	28.7	2.6	39	+3.5	1.7	14.8	40.5	19.7	131
L7-1111	28.7	2.0	39	+0.1	1.9	11.3	41.1	19.2	133
L7-1280	28.6	2.4	47	+7.0	1.5	13.1	41.3	19.4	136
L4-12	28.2	2.5	37	-0.9	1.7	12.6	40.6	20.6	135
C84 ✓	28.2	2.8	39	+4.1	1.4	13.6	39.8	20.2	134
C101	27.8	2.6	40	+11.1	1.8	14.7	40.0	19.9	136
C66	27.8	1.8	35	-4.8	2.1	13.9	40.3	21.3	128
L4-42	27.6	2.7	41	+3.8	1.4	12.6	43.0	19.6	136
Viking ✓	27.4	2.4	46	+2.5	1.8	12.7	39.6	20.3	133
Patoka	27.3	2.0	37	+8.3	1.4	16.2	42.4	20.0	133
C60	27.3	2.5	37	+0.4	1.9	15.0	42.8	19.3	131
H9	26.9	3.1	40	+4.8	1.6	12.8	40.3	20.6	135
Scioto	26.8	3.0	38	+3.4	1.4	13.4	39.9	20.7	136
S32-3	26.8	2.4	42	+4.2	1.4	11.7	41.5	20.5	135
A31-291	26.8	1.7	37	-3.4	2.1	12.7	40.3	20.9	130
C91	26.7	3.0	44	+8.9	1.4	14.9	40.3	20.3	134
S32-8	26.3	2.4	45	+9.5	1.3	12.4	41.1	20.0	136
L4-45	26.3	2.2	36	-2.3	2.1	12.5	42.9	20.5	132
Dunfield	26.1	2.6	37	-1.7	2.1	13.9	39.0	21.4	129
Illini	26.1	2.8	41	0	1.8	12.6	40.8	20.4	133
A18-231	25.8	2.1	35	-4.6	2.2	14.2	38.9	21.8	131
H6	21.1	2.8	35	-8.9	2.4	13.5	42.8	20.3	130
Mean	27.4								
Bu. Nec. for Sig. (5%level)	1.8								
(1%level)	2.4								

[1]Days earlier (-) or later (+) than Illini. Illini required 114 days to mature.
[2]Composite sample of 13 tests and 3 individual tests. Composition on dry basis.

Table 30. Summary of yields in bushels per acre for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 16 Tests[1]	Columbus Ohio	Lafayette Ind.	Ames Iowa	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Stonington Ill.	Ottumwa Iowa
Chief	29.4	39.8	41.1	37.8	38.1	40.1	30.0	29.0	26.9
C56	29.2	40.6	40.1	36.6	41.2	33.6	28.3	31.4	27.9
Lincoln	28.8	41.2	42.7	39.6	33.5	32.8	23.3	27.8	30.2
C72	28.7	35.5	36.8	36.6	36.3	38.5	31.7	30.6	29.1
L7-1111	28.7	40.4	36.5	41.6	32.2	32.2	36.7	26.9	25.8
L7-1280	28.6	35.3	40.1	38.1	35.6	39.6	29.9	32.1	27.2
L4-12	28.2	36.0	38.5	33.7	35.8	30.7	32.6	29.6	30.8
C84	28.2	42.8	34.8	36.8	34.6	33.9	35.5	27.7	27.3
C101	27.8	31.0	36.8	34.6	38.7	31.4	36.5	25.8	24.7
C66	27.8	40.9	37.9	35.9	33.5	32.1	31.5	30.7	30.3
L4-42	27.6	39.9	40.1	34.8	34.5	31.4	33.1	28.9	28.0
Viking	27.4	38.9	37.1	38.4	32.7	36.6	30.0	27.4	23.0
Patoka	27.3	37.9	34.5	33.2	34.3	35.2	37.3	25.9	26.1
C60	27.3	41.0	35.6	34.3	38.9	31.0	21.6	29.4	27.7
H9	26.9	33.4	33.4	37.1	34.4	31.9	34.5	28.3	29.5
Scioto	26.8	36.4	33.8	33.7	36.1	31.3	36.3	26.4	25.4
S32-3	26.8	37.8	35.0	34.4	29.8	35.9	26.3	26.5	24.5
A31-291	26.8	42.1	33.9	37.7	29.5	31.2	31.1	29.4	26.5
C91	26.7	29.6	35.9	33.8	36.0	34.8	32.2	25.8	25.1
S32-8	26.3	37.6	31.5	31.9	34.6	35.3	29.4	26.8	19.3
L4-45	26.3	29.7	37.1	29.5	33.3	30.9	28.7	30.2	26.0
Dunfield	26.1	34.8	31.7	37.7	28.3	31.1	31.3	30.4	24.6
Illini	26.0	36.4	37.7	34.8	30.5	29.3	22.8	30.4	25.8
A18-231	25.8	37.4	35.9	34.9	28.2	30.2	31.6	27.7	27.7
H6	21.1	26.9	29.2	30.9	21.6	24.3	13.7	22.7	24.6
Mean	27.2	36.9	36.3	35.5	33.7	33.0	30.3	28.2	26.3
Coef.of var. (%)	10.9	13.9	6.7	11.1	8.1	10.9	17.9	6.3	7.9
Bu.Nec.for Sig.(5% level)	1.8	7.2	3.4	5.6	3.9	5.7	7.7	2.3	3.0

[1]Lubbock not included in the mean.

Table 30. (continued)

Strain	Dwight Ill.	Lincoln Nebr.	Greenfield Ind.	Edgewood Ill.	Manhattan Kan.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Lubbock Texas
Chief	28.3	27.0	26.8	22.4	22.4	20.7	19.9	19.6	16.3
C56	27.0	29.8	26.8	25.6	22.1	20.8	16.0	18.3	14.7
Lincoln	30.8	27.8	26.5	23.2	23.6	20.2	19.1	17.5	16.4
C72	27.7	27.7	24.9	24.1	20.3	22.2	19.4	17.8	18.8
L7-1111	30.3	28.9	26.5	24.4	22.2	21.0	15.3	18.2	15.8
L7-1280	24.7	24.6	26.7	25.7	19.0	22.7	19.5	17.4	10.5
L4-12	28.2	25.7	28.1	23.3	22.0	18.6	21.3	15.8	15.4
C84	25.4	25.9	26.2	23.3	20.7	21.4	15.1	19.1	17.9
C101	23.0	27.4	27.6	25.6	17.0	21.8	26.3	15.9	18.4
C66	25.8	25.4	23.6	22.1	22.0	17.8	18.4	16.1	15.2
L4-42	27.0	27.6	26.9	23.7	16.8	22.0	10.3	15.9	12.2
Viking	27.4	26.1	25.7	23.3	19.4	15.5	18.6	18.0	13.4
Patoka	22.4	23.2	25.8	24.3	16.8	21.3	21.2	17.8	20.9
C60	27.4	25.0	25.7	22.4	23.4	18.8	18.6	15.8	11.7
H9	27.6	25.6	24.2	21.4	18.9	18.6	15.7	15.9	15.4
Scioto	25.4	25.2	26.4	22.3	18.8	21.0	13.7	17.1	18.5
S32-3	26.6	25.8	24.6	22.9	21.0	20.3	17.8	19.9	13.1
A31-291	27.0	25.6	25.5	18.6	23.2	15.1	17.2	15.2	15.0
C91	23.8	24.2	24.4	23.8	19.1	23.1	19.9	17.0	19.3
S32-8	24.2	24.4	24.4	24.3	20.7	20.2	17.3	19.2	12.5
L4-45	26.6	26.5	25.7	23.0	21.8	17.5	17.3	16.6	11.0
Dunfield	27.4	26.8	21.8	19.5	14.1	17.3	22.3	17.4	18.3
Illini	30.4	26.4	19.8	21.6	21.6	19.5	15.7	15.7	14.0
A18-231	25.4	25.1	23.5	20.2	23.2	16.0	14.3	12.3	16.4
H6	19.8	21.6	20.7	16.3	21.2	12.5	14.1	12.6	11.8
Mean	26.4	26.0	25.1	22.7	20.5	19.4	17.8	16.8	15.3
Coef.of var. (%)	8.6	5.9	12.5	7.4	11.3	8.1	10.5	11.3	12.4
Bu.Nec.for Sig.(5% Level)	3.2	2.2	4.4	2.3	3.3	2.2	2.6	2.7	2.7

Table 31. Summary of yield rank for the strains in the Uniform Test, Group III, 1943.

Strain	Columbus Ohio	Lafayette Ind.	Ames Iowa	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Stonington Ill.	Ottumwa Iowa	Dwight Ill.
Chief	9	2	5	4	1	15	11	12	4
C56	6	3	10	1	10	19	2	7	11
Lincoln	3	1	2	15	11	22	14	3	1
C72	18	11	10	5	3	11	4	5	6
L7-1111	7	13	1	19	12	2	18	16	3
L7-1280	19	3	4	9	2	17	1	11	20
L4-12	17	6	20	8	22	8	8	1	5
C84	1	18	9	10	9	5	15	10	17
C101	22	11	16	3	15	3	23	20	23
C66	5	7	12	15	13	13	3	2	16
L4-42	8	3	14	12	15	7	12	6	11
Viking	10	9	3	18	4	15	17	24	8
Patoka	11	19	22	12	7	1	22	14	24
C60	4	16	18	2	20	24	9	8	8
H9	21	22	8	14	14	6	13	4	7
Scioto	15	21	20	6	17	3	21	18	17
S32-3	12	17	17	21	5	21	20	23	14
A31-291	2	20	6	22	18	14	9	13	11
C91	24	14	19	7	8	9	24	19	22
S32-8	13	24	23	10	6	18	19	25	21
L4-45	23	9	25	17	21	20	7	15	14
Dunfield	20	23	6	23	19	10	5	21	8
Illini	15	8	14	20	24	23	5	16	2
A18-231	14	14	13	24	23	12	15	8	17
H6	25	25	24	25	25	25	25	21	25

Table 31. (continued)

Strain	Lincoln Nebr.	Greenfield Ind.	Edgewood Ill.	Manhattan Kan.	Columbia Mo.	Clayton Ill.	M.Vernon Ind.	Lubbock Texas
Chief	7	4	16	5	11	5	2	10
C56	1	4	2	7	10	17	5	16
Lincoln	3	7	13	1	13	9	10	8
C72	4	16	7	16	3	8	8	3
L7-1111	2	7	4	6	8	20	6	11
L7-1280	21	6	1	19	2	7	11	25
L4-12	14	1	10	8	17	3	20	12
C84	12	10	10	14	6	21	4	7
C101	6	2	2	22	5	1	17	5
C66	17	21	19	8	19	12	16	14
L4-42	5	3	9	23	4	25	17	21
Viking	11	12	10	17	23	10	7	18
Patoka	24	11	5	23	7	4	8	1
C60	20	12	16	2	16	10	20	23
H9	15	20	21	20	17	18	17	12
Scioto	18	9	18	21	8	24	13	4
S32-3	13	17	15	13	12	13	1	19
A31-291	15	15	24	3	24	16	22	15
C91	23	18	8	18	1	5	14	2
S32-8	22	18	5	14	13	14	3	20
L4-45	9	12	14	10	20	14	15	24
Dunfield	8	23	23	25	21	2	11	6
Illini	10	25	20	11	15	18	23	17
A18-231	19	22	22	3	22	22	25	8
H6	25	24	25	12	25	23	24	22

Table 32. Summary of lodging data for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 15 Tests[1]	Columbus Ohio	Lafayette Ind.	Ames Iowa	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Stonington Ill.	Ottumwa Iowa
Chief	2.7	3.0	1.9	3.3	2.8	2.8	4.3	3.2	2.3
C56	2.6	3.3	2.6	3.5	2.2	2.8	3.0	2.8	2.3
Lincoln	1.9	3.0	1.4	3.0	1.2	2.2	2.5	2.5	1.5
C72	2.6	3.5	2.6	3.3	3.0	3.0	3.8	2.8	2.3
L7-1111	2.0	1.8	2.0	3.0	1.8	2.2	2.0	4.0	1.0
L7-1280	2.4	2.8	1.5	3.0	3.0	2.5	2.5	2.8	2.5
L4-12	2.5	3.8	1.6	3.5	1.8	2.5	3.3	3.0	2.5
C84	2.8	3.8	2.0	3.8	2.8	3.2	2.5	3.0	2.5
C101	2.6	3.0	1.9	3.8	3.0	3.5	3.5	1.5	3.0
C66	1.8	2.0	1.4	2.8	1.0	2.2	2.5	1.5	1.3
L4-42	2.7	3.5	2.0	3.5	2.2	3.0	3.5	3.0	3.0
Viking	2.4	3.3	1.6	3.0	2.8	2.8	3.3	2.8	2.0
Patoka	2.0	2.3	1.7	3.5	2.2	2.2	2.3	2.8	2.8
C60	2.5	2.8	2.1	3.5	2.5	2.2	3.5	2.2	2.3
H9	3.1	4.5	2.5	3.5	3.0	4.0	3.0	3.2	3.3
Scioto	3.0	4.3	3.0	4.0	3.0	3.5	2.5	3.5	2.5
S32-3	2.4	2.3	1.7	3.0	3.0	3.0	3.0	2.2	2.5
A31-291	1.7	2.3	1.4	3.0	1.2	1.8	2.3	2.0	1.0
C91	3.0	4.8	2.5	4.0	3.0	4.0	3.8	3.2	2.8
S32-8	2.4	2.5	1.9	3.0	2.8	2.8	2.3	2.2	2.8
L4-45	2.2	2.8	2.4	3.3	1.8	2.8	3.0	2.8	1.5
Dunfield	2.6	3.0	2.1	3.0	1.8	3.2	2.8	3.0	2.3
Illini	2.8	4.0	1.6	3.3	2.8	3.0	3.5	3.0	2.8
A13-231	2.1	2.5	2.5	3.5	1.5	2.2	3.0	2.2	2.0
H6	2.8	4.3	1.6	3.5	2.2	3.8	4.0	4.8	2.5

[1]North Vernon and Lubbock not included in the mean.

Table 32. (continued)

Strain	Dwight Ill.	Lincoln Nebr.	Greenfield Ind.	Edgewood Ill.	Manhattan Kan.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Lubbock Texas
Chief	4.8	2.5	1.6	2.5	3	1.0	2.0	1	2
C56	4.8	2.0	2.0	1.8	3	1.0	1.5	1	2
Lincoln	3.5	1.0	1.4	1.0	2	1.0	1.0	1	1
C72	4.5	2.0	1.9	2.2	2	1.0	1.5	1	2
L7-1111	3.5	1.0	1.5	1.2	3	1.0	1.2	1	1
L7-1280	4.5	1.8	1.7	1.8	3	1.0	1.5	1	2
L4-12	4.2	1.3	1.9	1.8	3	1.0	2.0	1	3
C84	4.5	2.8	2.0	2.8	3	1.5	1.8	1	2
C101	4.0	3.0	2.0	2.5	2	1.0	1.8	1	2
C66	4.0	1.5	1.2	1.0	2	1.0	1.0	1	1
L4-42	4.8	2.3	2.0	2.2	3	1.0	1.5	1	2
Viking	4.0	1.8	2.1	2.0	2	1.0	2.0	1	2
Patoka	3.8	1.3	1.1	1.0	1	1.0	1.0	1	2
C60	4.5	2.0	1.7	1.8	3	1.0	1.8	1	2
H9	4.8	2.8	2.4	2.5	3	2.0	1.8	1	2
Scioto	4.8	3.3	2.2	3.0	2	1.0	2.0	1	2
S32-3	3.5	2.8	1.7	2.2	3	1.0	1.0	1	1
A31-291	3.5	1.3	1.4	1.0	1	1.0	1.2	1	1
C91	4.8	2.3	2.0	3.2	2	1.5	1.8	1	2
S32-8	4.0	3.0	2.0	2.2	3	1.0	1.5	1	3
L4-45	3.8	1.0	1.7	1.2	3	1.0	1.0	1	2
Dunfield	4.8	2.0	1.5	1.8	4	1.0	2.0	1	2
Illini	5.0	2.5	1.6	2.5	3	1.0	2.0	1	1
A18-231	3.5	1.8	1.1	1.2	3	1.0	1.2	1	1
H6	4.8	1.5	1.2	1.2	4	1.0	1.0	1	2

Table 33. Summary of height data for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 16 Tests[1]	Columbus Ohio	Lafayette Ind.	Ames Iowa	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Stonington Ill.	Ottumwa Iowa
Chief	46	64	53	61	50	50	43	46	43
C56	40	64	43	55	42	42	31	40	36
Lincoln	37	52	42	48	39	38	32	36	37
C72	39	52	43	51	42	40	39	41	37
L7-1111	39	51	42	54	38	43	39	38	37
L7-1280	47	67	53	63	48	55	36	48	44
L4-12	37	52	42	48	39	38	33	37	36
C84	39	48	44	53	40	42	36	43	37
C101	40	54	46	57	38	43	40	42	37
C66	35	43	39	47	38	35	32	34	35
L4-42	41	54	49	56	42	44	39	42	39
Viking	46	69	52	60	48	51	43	45	43
Patoka	37	54	42	54	36	38	36	37	36
C60	37	53	39	51	39	38	32	36	36
H9	40	57	47	54	42	45	32	39	37
Scioto	38	60	43	53	38	42	33	37	33
S32-3	42	55	47	54	44	49	41	40	37
A31-291	37	45	43	48	37	41	37	37	34
C91	44	61	48	58	44	50	39	45	42
S32-8	45	62	52	57	42	48	50	46	40
L4-45	36	48	40	51	38	37	34	36	34
Dunfield	37	48	43	49	36	41	34	38	34
Illini	41	61	46	55	46	43	37	42	39
A18-231	35	47	40	52	35	38	32	34	33
H6	35	55	39	46	36	34	35	34	34

[1]Lubbock not included in the mean.

Table 33. (continued)

Strain	Dwight Ill.	Lincoln Nebr.	Greenfield Ind.	Edgewood Ill.	Manhattan Kan.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Lubbock Texas
Chief	57	47	39	39	44	39	37	28	27
C56	51	39	33	38	37	32	31	23	13
Lincoln	42	38	30	34	41	29	29	25	21
C72	45	40	32	36	38	35	32	23	25
L7-1111	43	41	32	35	44	31	26	23	20
L7-1280	52	47	37	44	45	41	38	28	25
L4-12	43	37	32	35	41	31	32	21	19
C84	45	38	33	36	42	33	32	25	25
C101	46	38	33	37	41	34	37	22	28
C66	41	34	29	35	39	27	28	21	18
L4-42	50	42	34	39	40	36	27	22	17
Viking	50	46	36	46	47	35	38	26	27
Patoka	40	35	29	33	39	29	30	20	21
C60	44	35	31	34	37	30	32	21	20
H9	51	38	33	38	38	32	32	23	21
Scioto	43	36	29	35	40	29	28	22	21
S32-3	51	40	34	40	40	33	36	27	20
A31-291	44	36	33	35	41	27	30	21	22
C91	52	45	37	40	43	37	37	26	27
S32-8	50	45	38	42	43	37	36	27	24
L4-45	43	36	31	34	35	28	29	21	17
Dunfield	44	37	30	35	35	28	31	23	23
Illini	55	40	31	41	38	33	31	25	16
A18-231	42	34	27	33	36	27	28	21	20
H6	44	31	29	32	35	24	28	19	16

Table 34. Summary of maturity data, days earlier (-) or later (+) than Illini, for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 13 Tests[1]	Columbus Ohio	Lafayette Ind.	Ames Iowa	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Ottumwa Iowa
Chief	+ 5.0	--	+ 8	+ 7	+10	+ 8	- 1	+ 5
C56	+ 1.5	+ 1	+ 4	0	+ 7	+ 1	- 4	+ 2
Lincoln	- 1.3	- 1	- 2	- 3	- 1	- 1	- 1	- 2
C72	+ 3.5	+ 4	- 7	+ 6	+ 8	+ 4	0	+ 3
L7-1111	+ 0.1	0	- 1	0	- 1	+ 2	+ 1	- 2
L7-1280	+ 7.0	+ 5	+ 5	+ 7	+11	+ 9	0	+ 6
L4-12	- 0.9	--	- 1	- 1	- 1	0	- 4	0
C84	+ 4.1	--	+ 3	+ 3	+ 8	+ 4	0	+ 6
C101	+11.1	--	+ 8	+15	+14	+12	+ 8	+16
C66	- 4.8	- 9	- 9	- 2	- 1	- 1	- 6	- 1
L4-42	+ 3.8	--	+ 7	0	+10	+ 8	- 1	+ 4
Viking	+ 2.5	--	+ 5	+ 3	+ 8	+ 3	0	+ 3
Patoka	+ 8.3	--	+ 8	+13	+12	+ 8	0	+ 8
C60	+ 0.4	+ 4	+ 1	+ 1	0	0	- 3	+ 4
H9	+ 4.8	--	+ 4	+ 5	+ 8	+ 6	+ 2	+ 5
Scioto	+ 3.4	--	+ 7	+ 6	+ 6	+ 1	- 1	+ 5
S32-3	+ 4.2	--	+ 6	+ 2	+ 7	+ 7	+ 1	+ 4
A31-291	- 3.4	+ 1	- 2	- 2	- 1	- 1	- 3	0
C91	+ 8.9	--	+ 7	+13	+10	+ 9	+ 7	+10
S32-8	+ 9.5	--	+10	+ 8	+12	+10	+ 8	+12
L4-45	- 2.3	- 9	- 1	- 3	- 1	0	0	- 2
Dunfield	- 1.7	0	- 3	- 2	- 1	+ 1	0	- 1
Illini	0	0	0	0	0	0	0	0
A18-231	- 4.6	-10	- 3	- 3	- 1	- 1	- 8	- 2
H6	- 8.9	-18	-12	-15	- 1	- 3	- 9	- 3
Date Planted		6/2	6/12	5/13	6/18	5/31	5/18	6/29
Date Matured		10/3	10/9	10/3	10/2	9/26	9/16	10/11
Days to Mature	114	122	119	139	106	121	122	105

[1]Columbus and Lubbock not included in the mean.

Table 34. (continued)

Strain	Lincoln Nebr.	Greenfield Ind.	Edgewood Ill.	Manhattan Kan.	Columbia Mo.	Clayton Ill.	M.Vernon Ind.	Lubbock Texas
Chief	+ 2	+ 5	+ 3	0	+12	+ 2	+ 4	+21
C56	- 4	+ 3	+ 1	0	+ 6	0	+ 3	+ 1
Lincoln	- 4	0	- 3	- 5	+ 3	+ 2	0	+ 1
C72	- 2	+ 2	+ 2	+ 9	+12	+ 7	+ 2	+ 8
L7-1111	- 3	+ 2	0	- 5	+ 6	0	+ 2	0
L7-1280	+ 4	+ 5	+ 9	+15	+14	+ 2	+ 4	+24
L4-12	- 5	+ 2	- 2	- 5	+ 2	+ 2	+ 1	+ 1
C84	- 3	+ 2	+ 3	+ 9	+ 8	+ 9	+ 1	+11
C101	+ 3	+ 5	+17	+15	+19	+ 9	+ 3	+16
C66	- 7	- 6	- 4	-11	- 2	- 6	- 6	- 2
L4-42	+ 1	+ 3	+ 3	+11	+ 6	- 6	+ 3	0
Viking	- 2	+ 4	+ 3	- 4	+ 6	+ 2	+ 2	+15
Patoka	0	+ 6	+11	+11	+16	+ 9	+ 6	+16
C60	- 5	- 3	0	0	+ 6	+ 2	+ 2	+ 8
H9	0	+ 2	+ 1	+13	+12	+ 2	+ 2	+ 9
Scioto	- 2	+ 4	- 2	+ 9	+ 6	+ 2	+ 3	+ 6
S32-3	+ 2	+ 3	+ 5	+13	+ 6	- 4	+ 2	+25
A31-291	- 8	- 2	- 1	-11	- 2	-10	- 1	+ 4
C91	+ 1	+ 6	+13	+11	+16	+ 9	+ 4	+15
S32-8	+ 5	+ 6	+11	+16	+12	+ 7	+ 7	+26
L4-45	- 4	- 5	- 4	-11	+ 6	- 4	- 1	- 3
Dunfield	- 5	- 1	- 1	- 5	0	- 2	- 2	+ 5
Illini	0	0	0	0	0	0	0	0
A18-231	-10	- 9	- 5	-13	+ 6	-10	- 1	- 4
H6	-15	-10	- 3	-14	- 4	-16	- 9	- 4
Date Planted	5/27	6/5	6/14	6/3	6/1	6/21	6/18	5/4
Date Matured	9/27	9/27	9/26	9/21	9/12	10/1	9/29	8/19
Days to Mature	124	114	105	111	103	102	103	108

Table 35. Summary of seed quality data for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 11 Tests[1]	Columbus Ohio	Lafayette Ind.	Ames Iowa	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Stonington Ill.	Ottumwa Iowa
Chief	1.6	2	1.5	1.0	1	1	2.8	1	1.0
C56	1.7	2	1.5	1.0	1	1	3.8	1	1.0
Lincoln	1.6	3	1.0	1.0	1	1	3.0	1	1.0
C72	1.7	2	1.5	1.0	1	1	1.3	1	1.0
L7-1111	1.9	3	1.0	1.0	1	1	2.3	1	1.0
L7-1280	1.5	2	1.5	1.0	1	1	1.8	1	1.0
L4-12	1.7	2	1.0	1.0	1	1	3.0	1	1.0
C84	1.4	2	1.5	1.0	1	1	1.3	1	1.0
C101	1.8	3	1.5	2.0	1	1	1.8	1	1.8
C66	2.1	2	1.5	1.0	1	1	3.0	1	1.0
L4-42	1.4	2	1.5	1.0	1	1	2.5	1	1.0
Viking	1.8	3	1.5	1.0	1	1	2.0	1	1.3
Patoka	1.4	3	1.5	1.0	1	1	1.0	1	1.0
C60	1.9	2	1.5	1.0	1	1	4.0	1	1.0
H9	1.6	2	1.5	1.0	1	1	2.3	1	1.0
Scioto	1.4	2	1.5	1.0	1	1	1.5	1	1.0
S32-3	1.4	1	1.5	1.0	1	1	2.5	1	1.0
A31-291	2.1	2	1.0	1.0	1	1	4.3	1	1.0
C91	1.4	2	1.0	1.0	1	1	1.5	1	1.3
S32-8	1.3	2	1.0	1.0	1	1	1.8	1	1.0
L4-45	2.1	4	2.0	1.0	1	1	2.0	1	1.0
Dunfield	2.1	3	1.5	1.0	1	1	2.8	1	1.0
Illini	1.8	2	1.5	1.0	1	1	4.0	1	1.0
A18-231	2.2	4	1.0	1.0	1	1	3.0	1	1.0
H6	2.4	3	2.0	1.3	1	1	4.0	1	1.0

[1]Freeburg, Urbana, Stonington, Dwight, Clayton, and Lubbock not included in the mean.

Table 35. (continued)

Strain	Dwight Ill.	Lincoln Nebr.	Greenfield Ind.	Edgewood Ill.	Manhattan Kan.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Lubbock Texas
Chief	1	2	1.0	1	2	2.0	1	1.5	2.0
C56	1	2	1.0	1	3	1.7	1	1.0	3.0
Lincoln	1	1	1.0	1	2	2.0	1	1.5	2.0
C72	1	3	1.0	1	3	2.2	1	1.5	3.0
L7-1111	1	2	1.0	1	4	3.0	1	1.5	3.0
L7-1280	1	2	1.5	1	2	1.5	1	1.0	2.0
L4-12	1	2	1.5	1	3	2.0	1	1.5	2.5
C84	1	2	1.5	1	1	1.7	1	1.0	2.0
C101	1	2	1.0	1	2	2.0	1	1.5	1.5
C66	1	3	1.5	2	4	3.0	1	1.5	2.8
L4-42	1	1	1.0	1	2	1.0	1	1.0	2.0
Viking	1	2	1.0	2	2	2.0	1	1.5	2.5
Patoka	1	1	1.5	1	2	1.0	1	1.5	1.2
C60	1	2	1.5	2	2	2.2	1	1.5	3.0
H9	1	2	1.5	1	2	2.0	1	1.5	2.0
Scioto	1	2	1.0	1	2	1.0	1	1.5	2.2
S32-3	1	1	1.0	1	2	2.0	1	1.5	3.0
A31-291	1	2	1.5	2	4	3.0	1	1.0	2.5
C91	1	1	1.5	1	2	1.2	1	1.5	3.0
S32-8	1	1	1.0	1	2	1.0	1	1.5	2.2
L4-45	1	2	1.5	1	5	2.0	1	1.5	3.2
Dunfield	1	2	1.0	2	4	3.0	1	1.5	2.0
Illini	1	2	1.0	2	2	2.0	1	1.5	2.0
A18-231	1	2	1.5	2	4	2.7	1	1.5	2.5
H6	1	2	1.5	2	5	2.7	1	1.5	2.2

Table 36. Summary of seed weight data in grams per 100 seeds for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 13 Tests[1]	Lafayette Ind.	Freeburg Ill.	Urbana Ill.	Blacksburg Va.	Stonington Ill.	Dwight Ill.	Lincoln Nebr.
Chief	11.7	12.8	13	12	13	12	11	12
C56	12.9	14.6	14	13	14	13	13	12
Lincoln	12.9	14.9	13	13	15	13	14	12
C72	14.8	17.3	15	15	17	15	15	14
L7-1111	11.3	12.5	13	12	15	10	12	10
L7-1280	13.1	13.1	15	14	13	13	12	13
L4-12	12.6	14.4	14	13	14	13	13	12
C84	13.6	15.0	15	15	15	13	13	12
C101	14.7	16.1	15	15	16	15	13	13
C66	13.9	15.0	15	15	16	14	15	12
L4-42	12.6	13.5	13	13	14	13	12	12
Viking	12.7	13.8	14	14	15	12	12	12
Patoka	16.2	17.8	17	17	18	17	16	14
C60	15.0	17.4	16	16	18	15	16	13
H9	12.8	13.3	14	14	15	13	13	12
Swisto	13.4	14.5	14	15	15	13	13	13
S32-3	11.7	12.0	13	12	12	12	12	12
A31-291	12.7	13.8	13	13	15	12	13	12
C91	14.9	15.3	15	15	16	14	13	15
S32-8	12.4	12.5	14	12	14	12	12	13
L4-45	12.5	14.1	13	14	15	12	13	11
Dunfield	13.9	16.4	15	14	15	14	14	14
Illini	12.6	14.1	14	14	14	13	13	12
A18-231	14.2	15.9	15	15	17	14	16	13
H6	13.5	14.1	13	15	17	12	14	13

[1]Lubbock not included in the mean.

Table 36. (continued)

Strain	Green-field Ind.	Edge-wood Ill.	Man-hattan Kan.	Colum-bia Mo.	Clay-ton Ill.	N.Ver-non Ind.	Lub-bock Texas
Chief	11.2	11	10	14.1	10	9.9	10
C56	13.0	13	11	14.8	11	11.4	11
Lincoln	12.9	13	10	13.4	12	11.2	11
C72	13.1	15	13	16.0	14	12.7	11
L7-1111	11.0	11	7	12.9	10	10.5	10
L7-1280	12.3	14	12	15.2	12	12.1	11
L4-12	13.1	12	9	12.9	12	11.3	10
C84	12.6	14	12	15.8	13	11.8	11
C101	13.7	16	13	17.0	15	13.8	12
C66	13.2	13	11	16.2	13	12.0	12
L4-42	11.5	13	11	14.9	11	11.6	10
Viking	12.5	13	10	14.5	11	11.8	10
Patoka	16.2	17	13	16.7	16	15.5	13
C60	14.7	14	12	16.5	13	13.2	11
H9	12.1	12	11	15.0	11	11.5	10
Scioto	12.8	13	12	16.2	11	11.8	11
S32-3	10.1	12	10	14.3	10	10.4	10
A31-291	11.7	12	11	15.8	12	11.2	12
C91	14.7	16	14	16.7	14	15.0	11
S32-8	11.5	13	12	14.3	10	11.2	11
L4-45	12.1	12	9	14.7	11	11.1	10
Dunfield	11.9	13	12	17.0	13	11.4	12
Illini	11.3	13	10	14.8	10	10.4	12
A18-231	13.8	14	11	16.0	12	12.0	12
H6	12.9	13	11	17.2	12	11.9	12

Table 37. Summary of the percentage protein for the strains in the Uniform Test, Group III, 1945.

Strain	Mean of 16 Tests[1]	Composite of 13 Locations[2]	Blacks-burg Va.	Lin-coln Nebr.	Man-hattan Kan.	Lub-bock Texas
Chief	40.0	39.8	39.4	40.9	42.3	39.6
C56	42.0	42.0	40.7	41.0	43.5	40.9
Lincoln	40.2	40.0	40.7	41.2	41.8	40.6
C72	40.5	40.3	40.1	41.5	43.2	39.3
L7-1111	41.1	41.2	40.8	39.8	41.3	39.4
L7-1280	41.3	41.1	41.0	42.1	42.7	39.9
L4-12	40.6	40.3	41.7	41.9	42.6	39.2
C84	39.8	39.3	40.0	41.3	43.8	40.6
C101	40.0	39.9	39.8	39.7	41.3	38.7
C66	40.3	40.0	42.6	41.0	41.3	39.2
L4-42	43.0	43.0	44.1	42.0	42.9	41.6
Viking	39.6	39.4	40.0	40.5	41.3	37.4
Patoka	42.4	42.1	41.5	43.8	43.5	40.0
C60	42.6	42.6	42.8	43.4	44.7	42.8
H9	40.3	40.1	40.8	41.0	41.4	39.1
Scioto	39.9	39.7	39.0	41.7	41.7	39.2
S32-3	41.5	41.3	42.1	41.5	42.9	41.1
A31-291	40.3	40.2	40.1	40.5	42.2	39.0
C91	40.3	40.2	39.6	40.7	42.6	40.1
S32-8	41.1	40.8	41.2	42.1	42.0	40.5
L4-45	42.9	42.9	44.4	41.7	42.7	41.6
Dunfield	39.0	38.7	38.8	39.9	41.8	37.9
Illini	40.8	40.8	40.9	40.1	41.8	40.1
A18-231	38.9	38.8	37.9	39.9	40.6	38.2
H6	42.8	42.8	43.7	42.2	42.4	40.5
Mean	40.9	40.7	40.9	41.3	42.5	39.9

[1]Lubbock not included in the mean.
[2]Composite from Columbus, Lafayette, Ames, Freeburg, Urbana, Stonington, Ottumwa, Dwight, Greenfield, Edgewood, Columbia, Clayton, and N. Vernon.

Table 38. Summary of the percentage oil for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 16 Tests[1]	Composite of 13 Locations[2]	Blacks-burg Va.	Lin-coln Nebr.	Man-hattan Kansas	Lub-bock Texas
Chief	20.2	20.1	21.3	20.6	19.6	22.1
C56	19.4	19.4	20.7	19.7	18.4	20.5
Lincoln	21.2	21.3	22.2	21.0	19.7	21.7
C72	19.7	19.5	21.1	20.3	19.5	22.0
L7-1111	19.2	19.3	20.3	19.5	17.2	20.0
L7-1280	19.4	19.3	20.4	20.2	19.5	21.3
L4-12	20.6	20.7	21.5	20.4	18.8	22.1
C84	20.2	20.2	21.2	20.3	19.2	21.8
C101	19.9	19.9	21.1	20.0	19.3	21.9
C66	21.3	21.3	22.0	20.5	20.6	22.6
L4-42	19.6	19.4	20.1	21.0	20.3	21.2
Viking	20.3	20.3	21.0	20.1	20.0	22.3
Patoka	20.0	20.0	21.0	19.5	18.7	22.3
C60	19.3	19.3	21.8	19.0	17.8	19.2
H9	20.6	20.5	21.2	20.7	20.4	22.3
Scioto	20.7	20.6	22.0	20.7	20.3	22.4
S32-3	20.5	20.5	20.5	20.6	19.9	21.3
A31-291	20.9	20.8	21.2	21.3	20.9	22.5
C91	20.3	20.1	21.8	20.8	20.2	21.4
S32-8	20.0	19.9	20.7	20.8	20.0	22.1
L4-45	20.5	20.6	20.9	20.6	19.4	21.5
Dunfield	21.4	21.4	22.0	22.2	20.7	23.6
Illini	20.4	20.4	21.1	20.9	19.9	22.1
A18-231	21.8	21.8	22.5	21.4	21.1	23.3
H6	20.3	20.2	20.0	21.2	21.0	22.2
Mean	20.3	20.3	21.2	20.5	19.7	21.8

[1]Lubbock not included in the mean.
[2]Composite from Columbus, Lafayette, Ames, Freeburg, Urbana, Stonington, Ottumwa, Dwight, Greenfield, Edgewood, Columbia, Clayton, and N. Vernon.

Table 39. Summary of the iodine number of oil for the strains in the Uniform Test, Group III, 1943.

Strain	Mean of 16 Tests[1]	Composite of 13 Locations[2]	Blacksburg Va.	Lincoln Nebr.	Manhattan Kansas	Lubbock Texas
Chief	133	134	131	129	122	124
C56	135	136	133	132	128	130
Lincoln	134	135	132	132	129	128
C72	131	133	127	124	123	119
L7-1111	133	134	131	130	128	127
L7-1280	136	137	133	131	128	125
L4-12	135	136	132	132	129	127
C84	134	135	130	130	128	124
C101	136	137	131	133	132	124
C66	128	129	123	126	118	121
L4-42	136	137	135	131	127	128
Viking	133	134	130	130	127	127
Patoka	133	134	130	131	131	127
C60	131	132	126	125	122	119
H9	135	136	134	132	131	128
Scioto	136	137	133	132	131	128
S32-3	135	136	133	132	126	124
A31-291	130	132	126	124	115	120
C91	134	135	130	130	129	121
S32-8	136	137	131	131	128	120
L4-45	132	133	130	128	125	126
Dunfield	129	131	126	123	114	114
Illini	133	134	130	129	126	125
A18-231	131	132	130	125	119	126
H6	130	131	127	125	118	126
Mean	133	134	130	129	125	124

[1]Lubbock not included in the mean.
[2]Composite from Columbus, Lafayette, Ames, Freeburg, Urbana, Stonington, Ottumwa, Dwight, Greenfield, Edgewood, Columbia, Clayton, and N. Vernon.

Table 40. Two-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1942-43.

Strain	Mean Yield Bu/A	Lodging	Height	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	29	29	29	22	25	28	31	31	31
Lincoln	32.0	2.2	38	-1.2	1.7	14.0	40.0	21.8	135
C56	30.3	2.8	40	+0.6	2.0	13.4	42.0	20.0	135
L4-12	30.0	2.6	37	-0.8	1.7	13.5	40.7	21.3	136
Chief	29.5	2.9	47	+5.6	1.9	11.9	39.9	20.9	133
L4-42	29.5	2.7	43	+2.3	1.6	12.8	43.0	20.1	137
L7-1111	29.4	2.3	40	+0.6	2.0	11.9	41.1	20.0	135
L7-1280	29.3	2.7	48	+5.5	1.7	13.1	40.8	20.0	136
L4-45	29.1	2.5	37	-2.3	2.0	13.4	42.8	20.8	133
Patoka	28.4	2.3	37	+7.5	1.8	16.5	42.0	20.9	133
C72	28.3	2.9	40	+2.7	1.9	15.1	40.2	20.8	131
C60	28.2	2.6	38	-0.9	1.8	16.2	42.4	20.2	130
C66	28.2	2.0	35	-4.2	2.1	14.4	40.1	21.8	128
Dunfield	27.0	2.8	37	-1.5	2.0	14.1	38.5	21.8	130
Scioto	26.5	3.4	39	+3.5	1.8	13.5	39.8	21.6	136
S32-3	26.1	2.6	43	+2.2	1.5	11.9	41.5	20.8	136
Illini	26.1	3.1	42	0	1.9	12.7	40.6	20.8	134
S32-8	24.7	2.6	46	+7.5	1.9	12.2	41.2	20.8	135

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

Table 41. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group III, 1942-43.

Strain	Mean Yield of 29 Tests	Columbus Ohio	Lafayette Ind.	Greenfield Ind.	N.Vernon Ind.	Urbana Ill.	Freeburg Ill.
	Yield (bushels per acre)						
Lincoln	32.0	44.7	42.0	31.6	23.2	43.8	34.4
C56	30.3	41.5	39.4	30.4	21.4	41.6	36.2
L4-12	30.0	41.3	38.4	31.4	23.5	38.8	30.9
Chief	29.5	38.0	38.9	30.4	26.8	43.3	35.4
L4-42	29.5	39.8	36.4	31.4	22.5	40.2	35.0
L7-1111	29.4	41.4	37.8	30.8	23.6	40.2	28.1
L7-1280	29.3	35.3	39.2	30.2	24.1	44.6	36.0
L4-45	29.1	37.0	38.1	27.9	19.5	41.1	31.8
Patoka	28.4	40.2	35.4	28.1	29.2	41.8	36.0
C72	28.3	33.8	38.9	28.4	23.8	39.0	31.2
C60	28.2	41.0	38.1	30.8	23.4	35.6	33.6
C66	28.2	39.4	37.0	26.5	22.8	37.8	29.8
Dunfield	27.0	31.4	31.9	24.1	20.9	39.7	27.4
Scioto	26.5	31.8	32.5	28.0	21.6	36.9	30.7
S32-3	26.1	33.3	34.4	26.9	21.0	36.4	27.5
Illini	26.1	31.2	36.4	24.0	19.0	33.6	26.5
S32-8	24.7	31.8	33.6	25.5	22.0	37.1	30.1
			Yield Rank				
Lincoln		1	1	1	8	2	6
C56		2	2	6	13	5	1
L4-12		4	6	2	6	11	10
Chief		9	4	6	2	3	4
L4-42		7	11	2	10	7	5
L7-1111		3	9	4	5	7	14
L7-1280		11	3	8	3	1	2
L4-45		10	7	12	16	6	8
Patoka		6	13	10	1	4	2
C72		12	4	9	4	10	9
C60		5	7	4	7	16	7
C66		8	10	14	9	12	13
Dunfield		16	17	16	15	9	16
Scioto		14	16	11	12	14	11
S32-3		13	14	13	14	15	15
Illini		17	11	17	17	17	17
S32-8		14	15	15	11	13	12

Table 41. (continued)

Strain	Stonington Ill.	Clayton Ill.	Dwight Ill.	Columbia Mo.	Ames Iowa	Lincoln Nebr.
	Yield (bushels per acre)					
Lincoln	32.1	26.9	34.7	21.0	40.4	23.6
C56	33.5	21.5	30.0	20.2	35.2	26.4
L4-12	30.6	25.3	32.6	19.9	36.0	23.6
Chief	30.2	24.5	28.2	21.4	32.4	23.0
L4-42	32.2	18.0	28.9	22.8	33.4	25.8
L7-1111	29.6	19.8	34.3	18.2	39.4	24.5
L7-1280	32.0	25.2	27.8	24.1	33.0	22.7
L4-45	33.2	23.4	32.2	18.2	36.0	26.0
Patoka	26.0	23.0	25.0	21.2	28.6	19.5
C72	29.0	21.7	28.0	22.2	32.8	24.1
C60	28.8	22.8	30.1	18.4	36.4	22.1
C66	30.4	19.8	29.1	19.1	38.2	24.2
Dunfield	31.6	26.5	31.4	17.5	37.8	24.9
Scioto	36.2	19.2	25.8	21.1	31.2	22.2
S32-3	29.4	22.5	26.6	20.2	32.1	21.6
Illini	31.2	20.9	30.6	17.0	34.5	24.5
S32-8	25.0	20.3	22.4	20.0	25.8	17.4
	Yield Rank					
Strain						
Lincoln	4	1	1	7	1	4
C56	1	11	8	9	8	1
L4-12	8	3	3	11	6	10
Chief	10	5	11	4	13	11
L4-42	3	17	10	2	10	3
L7-1111	11	14	2	14	2	6
L7-1280	5	4	15	1	11	12
L4-45	2	6	4	14	6	2
Patoka	16	7	16	5	16	16
C72	13	10	12	3	12	9
C60	14	8	7	13	5	14
C66	9	14	9	12	3	8
Dunfield	6	2	5	16	4	5
Scioto	15	16	15	6	15	15
S32-3	12	9	14	9	14	15
Illini	7	12	6	17	9	6
S32-8	17	13	17	8	17	17

Table 42. Four-year summary of agronomic and chemical data for the strains in the Uniform Test, Group III, 1940-43.

Strain	Mean Yield Bu/A	Lodging	Height	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	51	42	37	40	46	50	53	53	53
Chief	26.9	2.6	41	+4.6	1.8	12.5	40.4	20.8	132
Patoka	26.6	1.8	33	+7.0	1.9	17.0	42.9	20.8	131
Scioto	25.5	3.2	34	+2.9	1.9	14.2	41.1	21.3	135
Dunfield	24.1	2.2	33	-1.5	1.9	15.0	39.7	21.5	128
Illini	24.0	2.4	35	0.0	2.0	13.1	41.3	20.6	132

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

Table 43. Analysis of variance for yield of seed for the Uniform Test, Group III, 1943.

Source of Variation	Degrees of Freedom	Mean Squares
Locations	15	4,434.52**
Varieties	24	107.96**
Varieties x Locations	360	27.64**
Error	1008	8.79

**Highly significant.

Uniform Test, Group IV

The Group IV Test in 1943 was composed of five named varieties, three selections from hybrids, and one selection obtained as a rogue. The origin of these varieties and strains is as follows:

Strain	Source or Originating Agency	Origin
Boone	Missouri Agr.Expt.Sta.	Sel. from P.I. 54563-3
Chief	Illinois Agr.Expt.Sta.	Sel. from (Illini x Manchu)
Gibson	Purdue Agr.Expt.Sta.	Sel. from CX531 (Midwest x Dunfield)
Macoupin	Elmer Hulcher	Sel. from commercial lot
Patoka	Purdue Agr.Expt.Sta.	Sel. from P.I. 70218-2
C2	Purdue Agr.Expt.Sta.	Sel. from CX231 (Dunfield x Midwest)
S32-11	Missouri Agr.Expt.Sta.	Sel. from (P.I. 37062 x Illini)
S49-18	Missouri Agr.Expt.Sta.	Sel. from (Virginia x P.I. 54610-3)
S100	Missouri Agr.Expt.Sta.	Rogue from a plot of Illini

Since there were no new entries for Group IV in 1943, the test was relatively small. Only nine strains remained in the test. These were planted as a 3 x 3 simple lattice with four replications. Although the test was planted at a large number of locations, only eleven were included in the means. Thayer, Kansas, was omitted because of very irregular yields. A number of tests in Arkansas, Oklahoma, and Texas and probably one each in Virginia and South Carolina will be summarized in Part II. Blacksburg, Virginia, was included because the results were very much in line with those of the other locations.

There was considerable location x variety interaction in this test. This may be noticed in Tables 45 and 57, and is largely due to S100 which did very well at Freeburg, Evansville, Manhattan, Edgewood, and Columbia; and poorly at Urbana, Stonington, North Vernon, and Sikeston but a study of Table 45 indicates that other varieties are also partly responsible.

S100 is rather late for this test and the indications are that it is somewhat low in oil content. It has a good yield record, however, where it is adapted. In the two-year summary, S100 ranks rather low because it was frosted in most places in 1942. Boone has a good record at Columbia but is definitely low elsewhere.

Table 44. Summary of agronomic and chemical data for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean Yield Bu/A	Lodging	Height	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	11	11	11	8	7	11	11[2]	11[2]	11[2]
C2	26.4	2.0	42	+0.8	1.8	13.3	41.0	19.7	133
S100	26.4	2.0	45	+9.0	1.9	13.1	41.9	18.5	135
Patoka	26.2	1.6	36	-1.3	1.9	16.0	42.1	20.3	131
Chief	26.2	2.3	45	-2.6	2.0	12.0	40.1	20.6	132
S32-11	25.3	2.7	44	+0.3	1.8	11.1	40.9	19.9	136
Gibson	25.1	2.0	38	0	1.6	12.6	40.0	20.1	135
S49-18	23.6	2.5	43	-0.3	1.9	11.8	41.2	19.6	135
Macoupin	22.4	1.9	42	+1.5	1.8	13.9	39.0	20.9	133
Boone	21.0	2.5	40	+3.1	1.9	12.9	40.2	20.1	133
Bu.Nec.for Sig.(5% Level)	2.6								
(1% Level)	3.4								

[1]Days earlier (-) or later (+) than Gibson. Gibson required 121 days to mature.
[2]Composite sample of 8 tests and 3 individual tests. Composition on a dry basis.

Table 45. Summary of yields in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 11 Tests[1]	Urbana Ill.	Freeburg Ill.	Blacksburg Va.	Evansville Ind.	Manhattan Kan.	Edgewood Ill.
C2	26.4	36.6	41.3	35.3	30.5	21.5	24.7
S100	26.4	33.8	44.1	28.9	35.7	28.8	27.1
Patoka	26.2	35.4	37.2	39.3	26.6	22.9	24.3
Chief	26.2	39.0	36.6	32.2	28.3	22.5	21.7
S32-11	25.3	34.6	31.6	25.1	29.4	23.2	23.5
Gibson	25.1	35.3	38.5	31.0	29.1	26.8	20.2
S49-18	23.6	32.9	27.1	27.1	26.3	21.6	23.2
Macoupin	22.4	35.1	31.4	24.6	24.5	17.3	20.6
Boone	21.0	33.1	27.1	18.6	23.4	21.7	19.9
Mean	24.7	35.1	35.0	29.1	28.2	22.9	22.8
Coef.of var. (%)	12.7	13.4	10.7	18.9	8.5	13.1	9.1
Bu.Nec. for Sig.(5% Level)	2.6	Not sig.	5.6	8.2	3.5	4.4	3.1

	Yield Rank					
Strain						
C2	2	2	2	2	8	2
S100	7	1	5	1	1	1
Patoka	3	4	1	6	4	3
Chief	1	5	3	5	5	6
S32-11	6	6	7	3	3	4
Gibson	4	3	4	4	2	8
S49-18	9	8	6	7	7	5
Macoupin	5	7	8	8	9	7
Boone	8	8	9	9	6	9

[1]Thayer not included in the mean.

Table 45. (continued)

Strain	Stonington Ill.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Sikeston Mo.	Thayer Kan.
C2	23.2	22.4	19.0	18.9	17.3	6.9
S100	17.3	20.8	21.0	18.5	14.4	11.5
Patoka	23.4	20.2	22.7	18.8	17.9	8.8
Chief	26.7	19.6	19.9	22.2	19.1	8.1
S32-11	25.5	21.0	25.0	21.5	17.3	10.6
Gibson	24.1	19.5	18.6	18.1	14.8	8.6
S49-18	23.0	18.5	22.7	18.7	18.8	8.0
Macoupin	18.4	19.6	19.5	19.2	15.7	8.0
Boone	17.9	20.5	15.6	18.1	15.1	8.0
Mean	22.2	20.2	20.4	19.3	16.8	8.7
Coef.of var. (%)	9.4	6.0	12.1	8.8	17.9	17.4
Bu. Nec.for Sig.(5% Level)	3.0	1.8	3.7	2.5	Not sig.	2.3

Yield Rank

Strain						
C2	5	1	7	4	5	9
S100	9	3	4	7	9	1
Patoka	4	5	2	5	3	3
Chief	1	6	5	1	1	5
S32-11	2	2	1	2	4	2
Gibson	3	8	8	8	8	4
S49-18	6	9	2	6	2	6
Macoupin	7	6	6	3	6	6
Boone	8	4	9	8	7	6

Table 46. Summary of maturity data, days earlier (-) or later (+) than Gibson, for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 8 Tests[1]	Urbana Ill.	Blacksburg Va.	Evansville Ind.	Manhattan Kan.	Edgewood Ill.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Thayer Kan.
C2	+0.8	+ 1	+ 1	+ 2	0	-1	+2	+ 2	-1	-4
S100	+9.0	+12	+10	+16	+6	+5	+8	+10	+5	+4
Patoka	-1.3	0	- 3	- 3	0	-2	-2	+ 2	-2	-7
Chief	-2.6	0	- 2	- 4	0	-4	-4	- 5	-2	-7
S32-11	+0.3	0	+ 1	- 1	+2	0	-3	0	+3	-1
Gibson	0	0	0	0	0	0	0	0	0	0
S49-18	-0.3	0	- 3	0	+4	0	-4	0	+1	-3
Macoupin	+1.5	+ 5	+ 5	- 3	+2	+1	0	+ 2	0	+1
Boone	+3.1	+ 5	+ 6	0	+6	+3	0	+ 2	+3	-2
Date Planted		5/31	5/18	5/29	6/3	6/14	6/1	6/21	6/18	6/14
Gibson Matured		10/8	9/20	10/1	10/1	10/10	9/29	10/8	10/5	9/27
Days to Mature	121	131	126	125	121	119	121	110	109	106

[1]Freeburg, Stonington, Sikeston, and Thayer not included in the mean.

Table 47. Summary of seed quality data for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 7 Tests[1]	Urbana Ill.	Freeburg Ill.	Blacksburg Va.	Evansville Ind.	Manhattan Kan.	Edgewood Ill.	Stonington Ill.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Sikeston Mo.	Thayer Kan.
C2	1.8	1	1	2.5	2.0	1	1	1	2.0	1	1.0	3.2	4
S100	1.9	1	1	3.0	2.0	1	1	1	1.7	1	1.5	3.0	1
Patoka	1.9	1	1	1.8	2.5	2	1	1	1.5	1	1.5	3.0	2
Chief	2.0	1	1	2.7	2.5	2	1	1	1.7	1	1.5	2.7	4
S32-11	1.8	1	1	2.3	2.0	1	1	2	1.0	1	1.5	2.7	2
Gibson	1.6	1	1	1.8	2.0	1	1	1	1.2	1	1.5	2.7	3
S49-18	1.9	1	1	2.3	2.0	2	1	1	2.0	1	1.0	3.2	4
Macoupin	1.8	1	1	2.8	2.5	1	1	1	1.5	1	1.0	3.0	2
Boone	1.9	1	1	2.5	2.0	1	1	1	2.0	1	1.5	3.0	3

[1]Urbana, Freeburg, Edgewood, Clayton, and Thayer not included in the mean.

Table 48. Summary of lodging data for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 10 Tests[1]	Urbana Ill.	Freeburg Ill.	Blacksburg Va.	Evansville Ind.	Manhattan Kan.	Edgewood Ill.	Stonington Ill.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Sikeston Mo.	Thayer Kan.
C2	2.1	3.2	2.5	2.0	2.4	1	1.8	2.2	1.2	1.5	1	3	1
S100	2.1	3.0	2.8	2.5	2.6	1	2.8	2.8	1.1	1.8	1	1	1
Patoka	1.7	2.2	1.8	1.3	2.1	1	1.2	2.8	1.0	1.2	1	2	2
Chief	2.4	3.5	3.5	2.5	2.2	3	2.2	3.0	1.2	2.0	1	1	1
S32-11	2.8	3.8	4.5	3.8	3.1	2	3.5	2.8	1.6	1.2	1	2	1
Gibson	2.1	3.0	2.0	2.0	2.5	1	2.0	2.8	1.4	1.8	1	2	2
S49-18	2.6	3.2	4.0	3.3	3.2	2	3.8	2.8	1.5	1.2	1	1	2
Macoupin	2.0	2.8	2.2	2.5	2.9	1	2.2	2.5	1.0	2.0	1	1	2
Boone	2.7	3.2	3.5	3.8	3.1	3	3.0	2.8	1.0	1.5	1	2	1

[1]North Vernon and Thayer not included in the mean.

Table 49. Summary of height data for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 11 Tests[1]	Urbana Ill.	Freeburg Ill.	Blacksburg Va.	Evansville Ind.	Manhattan Kan.	Edgewood Ill.	Stonington Ill.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Sikeston Mo.	Thayer Kan.
C2	42	47	46	44	49	46	41	47	34	36	27	42	27
S100	45	52	51	53	50	47	45	49	34	38	30	48	26
Patoka	36	43	37	37	42	40	33	38	28	30	22	48	21
Chief	45	54	54	47	52	47	46	48	38	37	30	36	25
S32-11	44	52	58	44	50	42	41	44	37	39	29	47	28
Gibson	38	44	44	39	44	41	36	44	33	30	25	40	26
S49-18	43	53	54	38	49	43	43	44	35	38	28	44	26
Macoupin	42	46	46	47	45	47	40	46	35	36	28	45	28
Boone	40	48	47	45	48	41	36	43	34	34	29	40	25

[1]Thayer not included in the mean.

Table 50. Summary of seed weight data in grams per 100 seeds for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 11 Tests[1]	Urbana Ill.	Freeburg Ill.	Blacksburg Va.	Evansville Ind.	Manhattan Kan.	Edgewood Ill.	Stonington Ill.	Columbia Mo.	Clayton Ill.	N.Vernon Ind.	Sikeston Mo.	Thayer-Kan.
C2	13.3	13	14	13	12.3	12	14	13	15.6	13	13.1	12.9	11
S100	13.1	12	15	12	11.9	13	14	12	15.9	13	13.8	12.0	12
Patoka	16.0	16	17	19	14.8	14	17	16	17.0	16	15.0	14.6	12
Chief	12.0	12	13	12	10.4	12	12	11	14.3	10	11.7	13.9	11
S32-11	11.1	10	12	11	10.7	10	12	11	13.3	10	10.3	11.4	10
Gibson	12.6	12	13	12	11.7	12	13	13	15.4	12	12.8	12.2	11
S49-18	11.8	12	12	11	10.2	12	13	12	13.9	11	11.2	11.1	11
Macoupin	13.9	13	15	14	13.9	13	16	12	15.8	14	13.3	12.8	12
Boone	12.9	12	14	13	11.4	13	14	12	15.8	12	12.5	12.5	12

[1]Thayer not included in the mean.

Table 51. Summary of the percentage protein for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 11 Tests[1]	Composite of 8 Locations[2]	Blacksburg Va.	Manhattan Kan.	Sikeston Mo.	Thayer Kan.
C2	41.0	40.5	38.0	42.8	46.6	47.9
S100	41.9	41.8	38.4	43.0	45.3	45.4
Patoka	42.1	41.1	42.1	45.4	46.4	45.7
Chief	40.1	39.7	38.4	40.7	44.7	45.1
S32-11	40.9	40.4	39.9	42.2	44.7	45.6
Gibson	40.0	39.7	37.2	41.0	43.9	46.5
S49-18	41.2	40.8	38.8	43.2	45.2	45.3
Macoupin	39.0	38.6	35.5	40.8	43.8	44.5
Boone	40.2	39.2	39.6	43.7	45.2	46.6
Mean	40.7	40.2	38.7	42.5	45.1	45.8

[1]Thayer not included in the mean

[2]Composite from Urbana, Freeburg, Evansville, Edgewood, Stonington, Columbia, Clayton, and North Vernon.

Table 52. Summary of the percentage oil for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 11 Tests[1]	Composite of 8 Locations[2]	Blacksburg Va.	Manhattan Kan.	Sikeston Mo.	Thayer Kan.
C2	19.7	19.8	21.4	19.8	17.6	17.2
S100	18.5	18.4	20.2	18.5	17.1	17.0
Patoka	20.3	20.4	21.3	20.3	18.0	19.1
Chief	20.6	20.7	21.1	20.9	19.5	18.2
S32-11	19.9	20.1	20.0	19.6	18.4	17.4
Gibson	20.1	20.3	21.3	19.3	18.1	16.4
S49-18	19.6	19.7	20.8	19.4	17.8	18.2
Macoupin	20.9	21.1	22.5	20.1	18.8	19.0
Boone	20.1	20.3	21.2	19.8	18.2	17.8
Mean	20.0	20.1	21.1	19.8	18.2	17.8

[1]Thayer not included in the mean.
[2]Composite from Urbana, Freeburg, Evansville, Edgewood, Stonington, Columbia, Clayton, and North Vernon.

Table 53. Summary of the iodine number of oil for the strains in the Uniform Test, Group IV, 1943.

Strain	Mean of 11 Tests[1]	Composite of 8 Locations[2]	Blacksburg Va.	Manhattan Kan.	Sikeston Mo.	Thayer Kan.
C2	133	135	132	130	123	126
S100	135	136	134	134	127	135
Patoka	131	132	130	130	129	132
Chief	132	133	133	126	127	126
S32-11	136	137	136	133	131	134
Gibson	135	136	133	132	128	133
S49-8	135	136	135	132	128	131
Macoupin	133	134	134	132	124	131
Boone	133	135	132	129	124	127
Mean	134	135	133	131	127	131

[1]Thayer not included in the mean.
[2]Composite from Urbana, Freeburg, Evansville, Edgewood, Stonington, Columbia, Clayton, and North Vernon.

Table 54. Two-year summary of mean agronomic and chemical data for the strains in the Uniform Test, Group IV, 1942-1943.

Strain	Mean Yield Bu/A	Lodging	Height	Maturity	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	21	21	20	15	13	22	22	22	22
C2	27.7	2.6	43	-1.3	2.0	13.1	40.9	20.7	132
Patoka	27.7	1.9	36	-2.3	2.0	16.2	42.0	21.1	132
Chief	27.2	2.6	46	-3.5	2.0	12.1	39.8	21.2	132
Gibson	25.6	2.7	39	0.0	1.7	12.8	39.6	20.9	134
S100	24.3	2.5	45	+7.8	2.2	12.0	41.1	19.3	134
S32-11	23.8	2.8	44	-0.4	1.6	10.8	40.2	20.8	136
S49-18	23.8	2.8	43	-0.9	2.0	11.8	40.4	20.5	135
Macoupin	23.3	2.5	43	-1.1	2.1	14.1	39.2	21.7	132
Boone	22.1	2.6	41	+1.5	2.0	12.8	40.1	21.1	132

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

Table 55. Two-year summary of yield in bushels per acre and yield rank for the strains in the Uniform Test, Group IV, 1942-1943.

Strain	Mean of 21 Tests	N.Vernon Ind.	Evansville Ind.	Urbana Ill.	Stonington Ill.	Freeburg Ill.	Clayton Ill.	Sikeston Mo.	Columbia Mo.
C2	27.7	25.3	39.0	42.9	22.6	36.7	22.2	17.3	23.2
Patoka	27.7	26.5	33.9	40.4	24.4	37.0	24.3	17.4	20.3
Chief	27.2	26.7	34.9	37.8	26.8	34.1	23.9	19.1	17.5
Gibson	25.6	22.6	36.6	39.1	21.6	31.5	21.5	18.0	18.8
S100	24.3	21.2	38.6	32.6	23.7	33.3	19.6	19.7	18.2
S32-11	23.8	20.4	31.3	33.0	23.1	26.6	22.7	18.9	19.9
S49-18	23.8	22.4	29.7	32.1	19.6	26.7	23.1	19.1	19.0
Macoupin	23.3	22.4	31.4	31.6	20.4	28.7	22.0	16.8	19.1
Boone	22.1	20.1	27.8	34.7	17.9	24.6	18.6	17.5	21.7

	Yield Rank								
Strain									
C2	1	3	1	1	5	2	5	8	1
Patoka	1	2	5	2	2	1	1	7	3
Chief	3	1	4	4	1	3	2	2	9
Gibson	4	4	3	3	6	5	7	5	7
S100	5	7	2	7	3	4	8	1	8
S32-11	6	8	7	6	4	8	4	4	4
S49-18	6	5	8	8	8	7	3	2	6
Macoupin	8	5	6	9	7	6	6	9	5
Boone	9	9	9	5	9	9	9	6	2

Table 56. Four-year summary of mean agronomic and chemical data for the strains in the Uniform Test, Group IV, 1940-1943.

Strain	Mean Yield Bu/A	Lodging	Height	Maturity[1]	Seed Quality	Seed Weight	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
No. of Tests	41	36	35	32	34	42	42	42	42
Patoka	25.4	1.8	32	-2.6	2.3	16.7	42.9	21.0	130
Gibson	24.9	2.7	37	0.0	2.0	13.2	40.1	20.9	133
Chief	24.8	2.5	44	-2.9	2.0	12.5	40.5	21.1	131
Macoupin	22.1	2.5	41	-0.5	2.3	14.7	40.1	21.6	130
Boone	21.8	2.7	39	+1.6	2.1	13.4	40.7	21.2	131

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

Table 57. Analysis of variance for yield of seed for the Uniform Test, Group IV, 1943.

Source of Variation	Degrees of Freedom	Mean Squares
Locations	10	1398.83**
Varieties	8	171.30**
Varieties x Locations	80	36.56**
Error	232	9.92

**Highly significant.

Precision of Experimental Designs

In looking toward techniques which might permit a better measure of the differences in performance between strains, incomplete block designs known as simple lattices were used. Precision is a relative measure of the information gained or lost when using the incomplete block design in comparison to a randomized complete block design.

The Uniform Tests, Groups I, II, III, and IV were planted to 5 x 5, 4 x 4, 5 x 5, and 3 x 3 simple lattices respectively. There was a gain in precision in 27 tests, a slight gain in 4 tests, and no gain in 15 tests. Where the lattice was used, any gain in precision of less than 1 percent was considered as a slight gain. An average gain in precision of 16.5 percent was found for all the tests where the lattice showed a gain over the randomized complete block whereas the average gain was 11.1 percent for all tests.

Table 58. Gains in precision of the simple lattice as compared to the randomized complete block.

Location	Percentage Gain Uniform Test, Groups: I	II	III	IV
Blacksburg, Virginia			Slight	2
Strongsville, Ohio	Slight			
Wooster, Ohio	4	0		
Holgate, Ohio		0		
Columbus, Ohio		5	0	
Dearborn, Michigan	29	21		
Deerfield, Michigan		0		
East Lansing, Michigan	7	16		
Spooner, Wisconsin	31			
Eau Claire, Wisconsin	0			
Madison, Wisconsin	42	14		
Mt. Morris, Illinois		4		
Dwight, Illinois		15	23	
Urbana, Illinois		10	0	0
Clayton, Illinois			34	29
Stonington, Illinois			Slight	0
Edgewood, Illinois			47	68
Freeburg, Illinois			21	43
St. Paul, Minnesota	1			
Waseca, Minnesota	0			
Ames, Iowa		0	0	
Kanawha, Iowa		0		
Hudson, Iowa		0		
Ottumwa, Iowa			19	
Columbia, Missouri			11	
Fargo, North Dakota	0			
Brookings, South Dakota	7			
Norfolk, Nebraska		Slight		
Manhattan, Kansas			6	0
Thayer, Kansas				1
Lubbock, Texas		2		
Mean percentage gain	11	6	13	18

EFFECT OF LOCATION ON COMPOSITION

Chemical composition of soybean varieties and strains is of importance to producer and processor. The most desirable way of obtaining this information for the uniform nurseries would be to analyze each strain at each location in the area where the nursery is grown. Since this would entail the analysis of many samples it appears more feasible to analyze composites. The strain composites were prepared by including equal weights of seed from each location where that group was grown. These composition data have been presented in the preceding sections and give a satisfactory estimate of the performance of the strains in the area of their adaptation.

Group composites were prepared for each location by taking equal weights of seed from each strain in the test. These composites furnish information on the effect of location on chemical composition of soybean seed. Table 59 gives the chemical analysis of the location composites for the 1942 and 1943 seasons and for the two year mean. As the same strains within each group are grown at each location, the chemical analyses give comparable information between locations. Previous studies have shown varieties x locations interaction to be low for percent protein, percent oil, and iodine number of oil, within the area of adaptation of the strains.

Table 59. Chemical composition of soybean seed grown at each of the Uniform Test locations for 1942-43 (composite sample or mean of all strains grown in each respective Group Test, composition on dry basis).

Location	1942			1943			Two-Year Mean		
	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Group I (mean of 20 strains in 1942 and 25 strains in 1943)									
Wooster, Ohio	45.0	18.8	131	45.3	19.0	130	45.2	18.9	131
Strongsville, Ohio	43.1	19.3	134	40.7	20.3	133	41.9	19.8	134
La Grange, Indiana	46.0	18.4	130	44.8	18.9	130	45.4	18.7	130
Dearborn, Michigan	--	--	--	43.3	19.5	131	--	--	--
East Lansing, Mich.	--	--	--	45.1	17.9	135	--	--	--
Madison, Wisconsin	--	--	--	43.3	20.0	127	--	--	--
Eau Claire, Wis.	--	--	--	45.6	18.0	134	--	--	--
Spooner, Wisconsin	--	--	--	46.7	17.8	133	--	--	--
St. Paul, Minnesota	--	--	--	41.7	19.7	132	--	--	--
Waseca, Minnesota	--	--	--	46.1	18.1	131	--	--	--
Fargo, North Dakota	41.4	19.2	137	36.2	18.4	140	38.8	18.8	139
Brookings, S. Dak.	--	--	--	40.6	19.7	132	--	--	--
Torrington, Wyo.	34.9	20.5	136	--	--	--	--	--	--
Group II (composite of 20 strains in 1942 and 16 strains in 1943)									
Columbus, Ohio	--	--	--	42.1	20.2	130	--	--	--
Wooster, Ohio	43.1	20.5	131	43.5	19.3	131	43.3	19.9	131
Holgate, Ohio	39.6	21.4	135	40.2	20.1	135	39.9	20.8	135
La Grange, Indiana	42.9	19.3	132	42.5	19.7	132	42.7	19.5	132
Bluffton, Indiana	42.0	20.6	133	43.2	19.4	132	42.6	20.0	133
Lafayette, Indiana	40.9	20.9	133	40.9	20.8	132	40.9	20.9	133
Wanatah, Indiana	43.2	20.0	133	45.4	19.0	132	44.3	19.5	133
Urbana, Illinois	38.2	22.1	132	39.3	21.3	130	38.8	21.7	131
Dwight, Illinois	41.7	21.1	133	41.6	20.1	132	41.7	20.6	133
Mt. Morris, Illinois	34.9	22.5	135	36.8	22.0	133	35.9	22.3	134
Hudson, Iowa	41.4	21.1	136	40.5	20.1	134	41.0	20.6	135
Kanawha, Iowa	42.1	21.2	134	40.3	19.1	137	41.2	20.2	136
Ames, Iowa	42.3	20.2	132	41.5	20.3	133	41.9	20.3	133
Cherokee, Iowa	39.5	21.5	136	--	--	--	--	--	--
Paris, Missouri	40.7	21.6	131	--	--	--	--	--	--

St. Joseph, Mo.	38.6	22.6	132	--	--	--	--	--	--
Dearborn, Mich.[1]	43.8	19.7	132	41.5	19.6	135	42.7	19.7	134
East Lansing, Mich.	--	--	--	40.3	19.1	139	--	--	--
Deerfield, Mich.[1]	--	--	--	42.3	18.7	138	--	--	--
Madison, Wisconsin[1]	--	--	--	40.4	20.4	134	--	--	--
Waseca, Minn.[2]	42.1	20.2	136	--	--	--	--	--	--
Norfolk, Nebr.[1]	--	--	--	39.8	21.7	130	--	--	--
Lubbock, Texas[1]	--	--	--	40.4	21.8	124	--	--	--
	Group III (composite of 24 strains in 1942 and 25 strains in 1943)								
Columbus, Ohio	42.3	20.0	136	41.5	19.8	135	41.9	19.9	136
Holgate, Ohio	41.0	19.7	137	--	--	--	--	--	--
N. Vernon, Ind.	45.0	21.8	133	39.6	21.6	133	42.3	21.7	133
Greenfield, Ind.	40.6	21.2	135	39.8	21.8	134	40.2	21.5	135
Lafayette, Ind.	42.1	20.4	136	41.0	20.3	135	41.6	20.4	136
Urbana, Illinois	39.4	21.7	135	38.3	21.4	134	39.1	21.6	135
Dwight, Illinois	42.1	21.5	134	40.8	19.5	137	41.5	20.5	136
Edgewood, Illinois	--	--	--	42.9	20.4	131	--	--	--
Stonington, Ill.	42.4	21.4	133	40.4	20.6	134	41.4	21.0	134
Freeburg, Illinois	41.8	21.4	133	39.8	21.0	135	40.8	21.2	134
Clayton, Illinois	43.6	20.8	135	43.1	19.2	137	43.4	20.0	136
Paris, Missouri	40.1	22.2	134	--	--	--	--	--	--
Columbia, Missouri	43.0	20.8	131	41.5	20.9	127	42.3	20.9	129
Carrollton, Mo.	32.2	24.7	134	--	--	--	--	--	--
St. Joseph, Mo.	36.4	23.0	133	--	--	--	--	--	--
Ames, Iowa	43.4	21.0	135	41.3	19.6	137	42.4	20.3	136
Ottumwa, Iowa	--	--	--	38.8	18.6	140	--	--	--
Blacksburg, Va.[1]	--	--	--	40.9	21.2	130	--	--	--
Lincoln, Nebr.[1,3]	42.4	21.3	132	41.3	20.5	129	41.9	20.9	131
Manhattan, Kan.[1]	--	--	--	42.5	19.7	125	--	--	--
Lubbock, Texas[1]	--	--	--	39.9	21.8	124	--	--	--

Table 59. (continued)

Location	1942			1943			Two-Year Mean		
	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
	Group IV (composite of 24 strains in 1942 and 9 strains in 1943)								
Wheatland, Indiana	38.0	22.2	130	--	--	--	--	--	--
N. Vernon, Indiana	44.3	19.9	131	38.9	21.0	136	41.6	20.5	134
Evansville, Ind.	40.7	21.6	131	40.8	21.2	131	40.8	21.4	131
Urbana, Illinois	39.4	21.5	135	38.5	19.7	137	39.0	20.6	136
Edgewood, Illinois	--	--	--	43.5	19.3	134	--	--	--
Stonington, Ill.	40.9	22.2	131	41.1	18.8	136	41.0	20.5	134
Freeburg, Illinois	40.8	21.4	131	39.6	19.8	137	40.2	20.6	134
Clayton, Illinois	42.3	20.8	136	42.6	18.3	138	42.5	19.6	137
Columbia, Missouri	41.3	21.4	131	39.3	21.1	131	40.3	21.3	131
Elsberry, Missouri	39.2	22.4	129	--	--	--	--	--	--
Carrollton, Mo.	33.3	24.0	132	--	--	--	--	--	--
Sikeston, Missouri[1]	40.1	21.8	127	45.1	18.2	127	42.6	20.0	127
Blacksburg, Va.[1]	--	--	--	38.7	21.1	133	--	--	--
Manhattan, Kansas[1]	--	--	--	42.5	19.8	131	--	--	--
Thayer, Kansas[1]	--	--	--	45.8	17.8	131	--	--	--

[1]Means secured from individual variety analyses in 1943.
[2]Composite of 19 strains in 1942.
[3]Composite of 23 strains in 1942.