



LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

630.7

I16b

nos. 638-654

cop. 2

AGRICULTURE

NON CIRCULATING

CHECK FOR UNBOUND
CIRCULATING COPY

Performance of EXPERIMENTAL CORN HYBRIDS IN ILLINOIS 1959



LOCATION OF
TEST FIELDS

By R. W. Jugenheimer,
K. E. Williams, and R. L. Harrison

CONTENTS

	Page
MATERIAL TESTED	4
MEASURING PERFORMANCE	6
RESULTS OF THE TESTS	8
NORTHERN ILLINOIS: DeKalb	
Double Crosses (Table 2)	10
Three-Way Crosses and Standards (Table 3)	13
NORTH-CENTRAL ILLINOIS: Peoria	
Double Crosses (Table 4)	16
Three-Way Crosses and Standards (Table 5)	19
CENTRAL ILLINOIS: Urbana	
Double Crosses (Table 6)	20
Three-Way Crosses and Standards (Table 7)	25
Three-Way Crosses and Standards (Table 8)	26
Hybrids Involving Related Inbreds (Table 9)	29
SOUTH-CENTRAL ILLINOIS: Brownstown	
Double Crosses (Table 10)	31
Three-Way Crosses and Standards (Table 11)	34
Three-Way Crosses and Standards (Table 12)	35
STATE-WIDE PERFORMANCE OF ILLINOIS THREE-WAY CROSSES AND STANDARDS (Table 13)	38
PERFORMANCE OF HIGH-OIL HYBRIDS (Table 14)	41
DOUBLE-CROSS HYBRID NUMBERS, PEDIGREES, AND INDEX TO TABLES (Table 15)	42

Acknowledgment is due W. T. Schwenk and Sons, Edwards, Illinois, for providing land for one of the tests. Trials in DeKalb, Champaign, and Fayette Counties were located on University of Illinois farms managed by R. E. Bell, C. H. Farnham, and P. E. Johnson. Thanks are due W. C. Jacob and Robert Seif for processing the data, and to H. M. Hayes, Earl Wernsman, S. S. Bal, P. S. Bhatnagar, N. S. Dass, P. S. Hoshiarpuri, and V. B. Malik for aid in field and laboratory. E. B. Earley supervised the oil and protein determinations.

PERFORMANCE OF EXPERIMENTAL CORN HYBRIDS IN ILLINOIS, 1959

By R. W. JUGENHEIMER, K. E. WILLIAMS, and R. L. HARRISON¹

THE DEVELOPMENT AND EVALUATION of better-performing inbred lines and hybrids remain an important objective of the Illinois Agricultural Experiment Station. This report summarizes the results of performance trials of experimental corn hybrids conducted in 1959. More than 750 different hybrids were compared in nearly 3,500 plots. Most of the hybrids were developed by the senior author. Data from preliminary tests involving specialized phases of the Illinois corn-research program are not included in this bulletin.

The University of Illinois does not produce hybrid seed corn in commercial quantities. Hybrids that include new inbred lines may be produced under the "delayed-release" program adopted by the states in the corn belt. Multiplication of a new line is handled by the Station, and the production of single crosses in quantity is handled by the Illinois Seed Producers Association, Champaign, Illinois. If a new Illinois experimental hybrid gives satisfactory performance, the parental lines eventually are released for use by seedsmen.

In order to make the results of corn research more quickly available to the public, the University of Illinois has adopted a slight modification of the "delayed-release" policy as it pertains to Illinois-developed inbred lines. Inbred lines of corn developed by the University of Illinois may be released to the public when they have demonstrated superior combining ability for yield, standability, disease resistance, insect resistance, chemical composition, male sterility, or other characters. Such Illinois lines may form a part of a new hybrid or be used in other ways by corn breeders. Inbred lines of corn developed by others will not be released without their approval.

Hand-pollinated seed of released Illinois inbred lines usually is available for a fee in packets containing 25 to 100 kernels. New releases are announced annually about April 1. Inquiries may be addressed to the Agronomy Department, University of Illinois, Urbana, Illinois.

Since most of the hybrids whose performance is recorded here are not yet in commercial use, the information about them is of most value to producers of hybrid seed. The 1959 performance of hybrids available to farmers in commercial quantities is reported in Bulletin 651 of this Station.

¹R. W. JUGENHEIMER, Assistant Dean and Assistant Director; K. E. WILLIAMS, Crops Testing Technician; R. L. HARRISON, Research Assistant.

MATERIAL TESTED

Double crosses for consideration of seedsmen. Nearly 400 different double-cross hybrids were grown at four locations. The seed was produced by controlled hand-pollination. The double-cross hybrids whose performance is shown in this report and the tables in which each appears are shown in Table 15. This table also contains the pedigrees of the hybrids tested. *In the pedigrees, the order of the single crosses and of the lines in the single crosses has no significance; it does not indicate which should be used as seed or pollen parent.*

Illinois yellow hybrids are numbered consecutively below 2000 and above 3000. White hybrids are numbered in the 2000 series; these white hybrids are usually followed by the letter W. Hybrids that have performed well after regional testing in several corn-belt states have been designated AES (Agricultural Experiment Station) hybrids. Hybrids in the 600 series are similar to Illinois 1277 in maturity; those in the 700 series correspond in maturity to Illinois 21; those in the 800 series correspond to Illinois 1570; and those in the 900 series to Illinois 1851.

The letter A or B following an Illinois hybrid number indicates that the combination of inbred lines making up the hybrid has been rearranged or permuted. For example, if the original pedigree of an Illinois hybrid was $(1 \times 2) (3 \times 4)$, the letter A following the number means that the hybrid was put together $(1 \times 3) (2 \times 4)$, the letter B, $(1 \times 4) (2 \times 3)$. A difference in reciprocals is not recognized in this method. When a short dash (-) followed by a number occurs as part of an Illinois hybrid number, it means that a tested related line has been substituted for one of the inbred lines included in the original hybrid.

Hybrids for prediction studies. Twelve sets of three-way crosses differing in maturity were tested in 1959. The three-way crosses in Tables 5, 7, and 11 are a part of the "uniform" tests conducted cooperatively by corn-belt states and the U. S. Department of Agriculture. Seed of the unreleased inbred lines involved in these crosses was contributed by the state or by the federal corn breeder who developed them. Three-way crosses whose performance is reported in Tables 3, 8, 12, and 13 were developed by the Illinois Station and tested only in Illinois.

Performance of single-cross, three-way-cross, and top-cross hybrids is of interest to corn breeders, producers of hybrid seed corn, and farmers. Characteristics of single crosses such as yield, standability,

and size, shape, and quality of seed definitely affect the practical production of hybrid seed corn. Some farmers are interested in growing single-cross and three-way-cross hybrids commercially because of their attractive appearance and extreme uniformity. Use of single-cross and three-way-cross data for the prediction of desirable double-cross combinations creates additional interest in the performance of single crosses and three-way crosses.

Prediction studies are an extremely valuable part of a research program. Methods are available to predict the performance of the better hybrid combinations without making and testing large numbers of undesirable crosses. For example, 1,225 single crosses and 690,900 double crosses are possible with 50 inbred lines. However, by using single-cross performance data, the corn breeder can predict which of the many possible double-cross combinations are likely to be most desirable. The following six single crosses can be made with four inbred lines: $A \times B$, $A \times C$, $A \times D$, $B \times C$, $B \times D$, and $C \times D$. The average performance of the four non-parental single crosses gives the predicted performance of a specific double-cross hybrid. For instance, the average yields of the four single crosses $A \times C$, $A \times D$, $B \times C$, and $B \times D$ give the predicted yield of double cross ($A \times B$) ($C \times D$). The procedure in predicting acre yields and percentage of erect plants from single-cross data is shown on page 6 of Illinois Agricultural Experiment Station Bulletin 597.

Similar predictions can be made for other characteristics. Predicted hybrid combinations, however, should always be thoroughly tested under field conditions before being put into commercial production.

Three-way crosses also provide useful predictions of the performance of double-cross hybrids. A large number of inbred lines can be compared, and the method is especially valuable where a desirable seed-parent single cross is available for use as a tester. Three-way crosses provide information on specific hybrids and may often eliminate the time and expense required for testing inbred lines in top crosses and single crosses. The procedure in predicting acre yields and percentage of erect plants from three-way-cross data is also shown on page 6 of Bulletin 597.

Top crosses are simple to produce and often are useful in early stages of a breeding program. For example, a single cross from the corn belt of the United States might contribute genes for high yield and standability, and an open-pollinated variety from Europe might contribute adaptation to local European conditions. Such top crosses might

thus combine the desirable traits of the American single cross and the European open-pollinated variety. Most top crosses, however, are temporary expedients, which usually are eventually replaced by double crosses. Top crosses are useful also for evaluating the performance of inbred lines. They also provide a means of selecting promising open-pollinated varieties for use as source material for the development of inbred lines.

MEASURING PERFORMANCE

Trials were made at four locations: in DeKalb county in northern Illinois, in Peoria county in north-central Illinois, in Champaign county in central Illinois, and in Fayette county in south-central Illinois. These locations are representative of the soil, rainfall, and length of growing season in their respective areas.

Table 1.—GENERAL INFORMATION: Tests of Illinois Experimental Corn Hybrids, 1959

County ^a	Section of state	Table number	Plants per hill	Date of—	
				Planting	Harvesting
DeKalb.....	Northern	2-3	5	May 14	Oct. 13
Peoria.....	North-Central	4-5	5	May 18	Oct. 19
Champaign.....	Central	6	5	May 7	Oct. 15
Champaign.....	Central	7	5	May 28	Nov. 3
Champaign.....	Central	8	5	May 28	Oct. 28
Champaign.....	Central	9	5	May 28	Oct. 23
Fayette.....	South-Central	10-12	4	June 3	Nov. 10

^a The fields are located near the following cities and towns: in DeKalb county near DeKalb, in Peoria county near Peoria, in Champaign county near Urbana, and in Fayette county near Brownstown.

Hybrids were compared for grain yield, maturity, shelling percentage, standability, ear height, dropped ears, and resistance to smut. Only hybrids of similar maturity were tested on the same field. A familiar hybrid whose maturity was considered the standard for the group is named in each table heading. Percentages of oil and protein in the grain were determined on special hybrids.

General information concerning the tests is given in Table 1.

Field plot design. The data in Tables 3, 5, 7, 8, 10, 11, 12, 13, and 14 were obtained in randomized blocks. Rectangular lattice designs were used for the data reported in Tables 2, 4, 6, and 9.

Method of planting. All plots in these tests were planted, thinned, and harvested by hand in well-fertilized fields prepared in the usual way for corn. Individual plots were 2×5 or 1×10 hills in area. Six kernels were planted in hills spaced 40 inches apart. Hills were thinned to 5 plants at DeKalb, Peoria, and Urbana, and to 4 plants at Brownstown.

Acre grain yields. Acre yields are reported as shelled grain containing 15.5 percent moisture, the maximum allowable for No. 2 corn. Data from all plots are included in the report on yield. The only correction for imperfect stands was the following adjustment for missing hills:

$$\text{Ear weight in field} \times \left[1 + \left(\frac{\text{missing hills}}{\text{hills present}} \times .7 \right) \right] = \text{adjusted ear weight}$$

This adjustment adds 0.7 percent of the average hill yield for each missing hill, and assumes that 0.3 percent is made up by the increased yield of surrounding hills.

Shelling percentage and moisture in grain. All ears from one replication of each entry were shelled immediately after harvest. The percentage of moisture in the shelled grain was determined with a Steinlite moisture meter.

Stand. Counts of the number of missing hills and number of missing plants were made in late summer in each plot. The data are reported as percentage of a perfect stand. Yields were corrected for missing hills.

Ear height. Representative plants in each plot were measured to determine the distance in inches from the soil to the ear-bearing node.

Erect plants and dropped ears. Percentage of erect plants and of dropped ears in each plot of each entry was determined by actual counts at the time of harvest. Stalks broken above the ear were not considered lodged. Stalks leaning less than 45 degrees were considered as erect.

Leaf blight. Readings were recorded on all plots at DeKalb. A grade of 1 denotes the greatest amount of resistance, while a grade of 5 signifies extreme susceptibility to leaf blights.

Smutted plants. The number of smutted plants was recorded on all plots in late summer in fields having considerable smut infection. These data are reported in the tables as percent of smutted plants.

Oil and protein content. Percentage of oil and of protein was determined by standard procedures on representative grain samples.

RESULTS OF THE TESTS

Data obtained from the tests are summarized in Tables 2 to 14. Long-time averages are more reliable indexes of the performance of hybrids than a single year's result. The parts of the tables summarizing the results of two or three years therefore deserve the most weight when the results are studied.

Relative performance cannot be determined with absolute accuracy by any method of testing. Small differences between entries are seldom of any significance. In fact, small differences are to be expected among plots planted even with the same lot of seed. Variations in growing conditions such as soil fertility are reduced but not completely eliminated by replicating the same entry several times in the same test. Unavoidable variation may be determined by a mathematical procedure known as analysis of variance. From this procedure figures may be obtained that represent the range which differences between two entries must exceed before those entries can be considered significantly different. The method used to determine this range is called the "Multiple Range Test."¹ This method considers the number of entries that fall within the range as well as the variability of the test. Data shown in **boldface** were not statistically different from the best performance for that characteristic.

Double crosses. The performance of nearly 400 new double-cross hybrids is shown in Tables 2, 4, 5, 6, 7, 9, 10, and 11. Many of these hybrids were superior to popular combinations now being grown.

Three-way crosses. Data on three-way crosses are reported in Tables 3, 5, 7, 8, 11, 12, 13, and 14. These data permit predicting the performance of hundreds of promising double crosses. Some of the three-way-cross hybrids may be grown commercially because of their excellent performance, extreme uniformity, and attractive appearance.

High-oil and high-protein hybrids. Three new corn hybrids, Ill. 6021 ((R75 × R76) (R84 × K4)), Ill. 6052 ((R78 × 38-11) (R84 × K4)), and Ill. 6001 (R78 × (K4 × 38-11)), have been developed in the Agronomy Department of the University of Illinois. Foundation single-cross seed of these three hybrids is available to seedsmen interested in producing seed in 1960. Such seed may be obtained from the Illinois Seed Producers Association, 107 N. 5th Street, Champaign, Illinois. Seed of Ill. hybrids 6001, 6021, and 6052 for farm use is available for the 1960 growing season from the following producers:

¹"Multiple Range and Multiple F Tests," by D. B. Duncan in *Biometrics* 11 (1), 1-43. 1955.

Illinois Seed Producers Association, 107 N. 5th Street, Champaign, Illinois; Mountjoy Seed Company, Atlanta, Illinois; George Pfeifer, Arcola, Illinois; Producers Seed Company, Piper City, Illinois; MFA, Marshall, Missouri; and Ruff Seed Company, Amanda, Ohio.

These new hybrids yield about 30 percent more oil and 10 percent more protein than present commercial hybrids. In addition, they are similar to standard hybrids in grain yield, standability, and other agronomic traits. Nationwide use of adapted high-oil hybrids would produce almost as much oil as is now received from butterfat, soybeans, cotton, and flax. These new high-oil hybrids should benefit both the starch industry and the livestock feeders.

Results of tests with high-oil and high-protein hybrids are given in Table 14.

Single crosses and hybrids involving related inbred lines. Some farmers are interested in hybrids with greater uniformity and performance than are available in double-cross hybrids. Single-cross hybrids are more attractive and uniform in appearance than other types of hybrids. The relatively high cost of producing seed of single crosses usually limits their use to situations where extreme uniformity is important.

Sister-line crosses are combinations between sister strains of the same inbred line. Some sister-line crosses have considerably greater yield, vigor, and standability than the original inbred line, and may be practical for the commercial use of single-cross hybrids. Data on a group of inbred lines and sister-line crosses were reported in Table 11 of Illinois Bulletin 636. Related versions of the same inbred are grouped together in Table 11A of Bulletin 636. Some growers are interested in producing Hy \times Oh7 because of its high yield and ability to yield well under high plant populations. Hy2 yielded 35 bushels an acre, whereas a related sister-line cross R158 \times CI.42A yielded 125 bushels per acre. This latter hybrid might be used as a seed parent. In addition, it is resistant to leaf blight and is higher in protein content. Oh7 yielded 51 bushels an acre, whereas Oh7 \times Oh7A, a sister-line cross, yielded 85 bushels an acre. This cross might be used as the pollen parent for the commercial production of a modified version of Hy \times Oh7. Many of the other sister-line crosses appear to be promising and could be used as seed parents of single crosses.

The performance of hybrids involving related inbred lines is given in Table 9 of this bulletin. Some of these hybrids produced higher grain yields, had greater uniformity of plant and ear, and appear to be more practical to produce than the original single-cross hybrids.

Table 2. — DOUBLE CROSSES OF ILLINOIS 1277 MATURITY

Tested in Northern Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Rank in yield	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Ear height	Dropped ears	Smut	Leaf blight
A — Three-year averages, 1957-1959										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>score</i>
1	Ill. 3152	128	28	78	88	99	43	...	...	...
2	Ill. 1952	126	25	78	85	98	44	...	...	...
3	Ill. 3009	126	24	79	90	98	48	...	...	...
4	Ill. 1936	124	27	77	84	99	45	...	...	...
5	Ill. 1961	123	24	78	87	99	47	...	...	...
6	Ill. 1862	123	29	78	92	100	40	...	...	...
7	Ill. 1559B	120	26	77	83	97	44	...	...	...
8	Ill. 1959	120	26	78	91	98	45	...	...	...
9	Ill. 3043	120	30	79	92	97	47	...	...	...
10	Ill. 1955	120	24	77	90	97	44	...	...	...
11	Ill. 1962	120	24	78	87	97	47	...	...	...
12	Ill. 1969A	120	29	78	88	97	48	...	...	...
13	Ill. 3046	119	27	77	90	97	49	...	...	...
14	AES 601	119	26	77	82	98	44	...	...	...
15	Ill. 1960	119	26	79	84	99	45	...	...	...
16	Ill. 1957	118	26	78	83	99	45	...	...	...
17	Ill. 1958	118	24	78	82	96	47	...	...	...
18	AES 702	118	28	75	83	98	48	...	...	...
19	AES 514	115	23	78	94	99	44	...	...	...
20	Ill. 1864	115	27	77	81	99	41	...	...	...
21	Ill. 2247W	114	28	76	80	97	49	...	...	...
22	Ill. 1091A	113	27	77	66	98	48	...	...	...
23	Ill. 1555A	111	23	76	79	96	46	...	...	...
24	AES 510	111	24	77	78	96	44	...	...	...
25	AES 610	111	25	79	93	98	39	...	...	...
26	Ill. 1277	110	27	77	68	99	45	...	...	...
27	Ill. 1560A	110	29	78	80	96	44	...	...	...
28	Ohio K24	107	26	78	76	94	42	...	...	...
29	Ohio M15	100	24	78	71	91	47	...	...	...
30	Ill. 101	100	26	77	65	93	44	...	...	...
31	Ill. 21	92	28	77	73	85	51	...	...	...
	Average	116	26	78	83	97	45	...	...	...
B — Two-year averages, 1958-1959										
1	Ill. 3173	134	28	82	89	100	48	...	...	...
2	Ill. 3176B	130	31	77	84	98	47	...	...	...
3	Ill. 3152A	128	26	78	83	100	44	...	...	...
4	Ill. 3167B	128	30	78	85	98	49	...	...	...
5	Ill. 3152	128	28	78	83	100	44	...	...	...
6	Ill. 3169B	127	30	78	84	98	44	...	...	...
7	Ill. 1936	126	27	78	78	100	46	...	...	...
8	Ill. 1952	126	26	79	79	98	45	...	...	...
9	Ill. 3174	125	26	78	84	100	47	...	...	...
10	Ill. 1862	124	30	80	88	100	42	...	...	...
11	Ill. 1961	123	24	79	82	100	46	...	...	...
12	Ill. 3287	123	30	78	94	98	44	...	...	...
13	Ill. 1559B	122	26	78	74	98	44	...	...	...
14	Ill. 3009	122	25	79	85	98	50	...	...	...
15	Ill. 2247W	122	28	76	70	99	50	...	...	...
16	Ill. 1959	122	26	79	88	98	46	...	...	...
17	Ill. 1962	121	24	78	82	98	47	...	...	...
18	Ill. 1955	119	24	77	86	100	44	...	...	...
19	AES 601	118	26	77	75	99	45	...	...	...
20	Ill. 1958	118	25	78	74	99	47	...	...	...
21	Ill. 1960	118	26	79	77	100	45	...	...	...
22	Ill. 1969A	117	30	78	84	98	50	...	...	...

(Table is continued on next page)

Table 2.—Continued

Rank in yield	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Ear height	Dropped ears	Smut	Leaf blight
B—Two-year averages, 1958-1959—concluded										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>score</i>
23	Ill. 1957.....	116	27	78	74	100	44	...	...	...
24	Ill. 3043.....	116	32	78	88	98	48	...	...	...
25	Ill. 3046.....	116	29	78	86	99	49	...	...	...
26	AES 610.....	114	26	79	90	99	40	...	...	...
27	AES 514.....	113	25	78	92	100	46	...	...	...
28	AES 702.....	113	29	76	75	100	49	...	...	...
29	Ill. 1091A.....	110	27	76	52	99	50	...	...	...
30	Ill. 1864.....	110	29	77	72	100	42	...	...	...
31	AES 510.....	109	25	76	68	98	45	...	...	...
32	Ill. 1555A.....	108	24	75	70	98	46	...	...	...
33	Ohio K24.....	108	26	79	66	94	44	...	...	...
34	Ill. 1560A.....	108	30	78	70	97	43	...	...	...
35	Ohio M15.....	108	24	80	60	98	47	...	...	...
36	Ill. 101.....	104	27	78	54	100	44	...	...	...
37	Ill. 1277.....	104	26	77	55	100	46	...	...	...
38	Ill. 21.....	100	28	77	63	98	52	...	...	...
39	Ill. 6052.....	100	35	76	62	98	56	...	...	...
40	Ill. 6021.....	95	32	76	63	100	57	...	...	...
	Average.....	117	27	78	77	99	46	...	...	...
C—1959 results (3 replications)										
1	Ill. 3301.....	132	24	80	95	100	40	0	8	1.4
2	Ill. 3173.....	130	24	82	91	99	44	1	3	2.6
3	Ill. 3176B.....	128	28	77	94	98	42	3	8	2.5
4	Ill. 3303.....	128	25	79	89	100	43	2	2	1.5
5	Ill. 3270.....	125	25	77	92	99	40	1	4	2.3
6	Ill. 3152B1.....	124	26	77	93	99	40	1	8	2.0
7	Ill. 3379.....	124	24	79	90	98	42	1	4	2.7
8	Ill. 1952.....	123	22	78	89	98	42	1	10	2.2
9	Ill. 3152A.....	123	24	78	93	100	41	1	7	2.3
10	Ill. 1962.....	122	22	79	80	99	44	0	3	3.3
11	Ill. 3009.....	122	22	79	84	99	44	3	7	3.1
12	Ill. 3167B.....	122	27	78	94	99	44	3	3	2.2
13	Ill. 3300.....	122	25	78	82	99	43	1	5	1.9
14	Ill. 3383.....	122	25	79	87	100	44	0	5	2.6
15	Ill. 1959.....	121	22	78	89	100	44	1	7	3.1
16	Ill. 3268.....	121	27	80	96	97	42	1	9	2.1
17	Ill. 3311.....	121	27	78	90	100	43	0	1	2.4
18	Ill. 3382.....	121	26	79	96	99	45	3	5	2.8
19	Ill. 3266.....	120	26	79	86	96	41	6	3	2.6
20	Ill. 3271.....	120	26	81	90	99	40	4	9	3.1
21	Ill. 3381.....	120	25	79	91	100	44	2	3	2.8
22	Iowa 4967.....	120	26	78	84	100	45	7	6	1.5
23	Ill. 3174.....	119	25	78	83	100	47	1	3	2.8
24	Ill. 3267.....	118	26	77	89	96	44	8	2	2.8
25	Ill. 3274.....	118	26	77	97	99	44	4	2	3.0
26	Ill. 3310.....	118	27	78	91	99	41	4	1	2.0
27	Ill. 1955.....	117	21	79	80	100	43	1	11	3.6
28	Ill. 1960.....	117	23	78	88	99	42	0	9	1.6
29	Ill. 1961.....	117	23	79	83	99	43	2	2	3.0
30	Ill. 3169B.....	117	27	77	91	97	41	3	9	2.9
31	Ill. 3275.....	117	26	82	91	99	44	1	3	2.0
32	Ill. 3287.....	117	26	77	93	96	40	1	4	1.3
33	Ill. 3302.....	117	24	78	92	99	45	3	8	2.4
34	Ill. 3302A1.....	117	24	78	92	100	42	0	8	1.4
35	Ill. 3305.....	117	24	78	77	99	40	3	11	2.2
36	Ill. 1559B.....	116	23	80	95	97	40	1	7	2.3
37	Ill. 1862.....	116	26	79	96	100	37	1	12	2.2
38	Ill. 1936.....	116	22	78	84	100	43	3	6	3.0
39	Ill. 3043.....	115	27	78	91	99	45	4	4	3.0
40	Ill. 3152.....	115	24	77	92	99	41	1	11	2.7

(Table is concluded on next page)

Table 2. — Concluded

Rank in yield or code	Entry	Acre yield	Moisture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut	Leaf blight
C — 1959 results (3 replications) — concluded										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>
41	Ill. 3313.....	115	23	80	96	98	43	4	6	1.8
42	Ill. 3380.....	115	25	79	92	100	46	5	2	2.6
43	Ill. 2247W.....	114	24	77	80	100	47	8	6	2.7
44	Ill. 3152A1.....	114	23	79	93	100	40	2	6	1.9
45	Ill. 3309-1.....	114	25	77	90	100	44	5	4	2.6
46	Ill. 3046.....	113	25	77	90	99	44	2	2	1.7
47	Ill. 1957.....	112	23	79	84	100	44	3	3	3.1
48	Ill. 3179.....	112	26	80	52	99	49	3	5	3.7
49	Ill. 3272.....	112	27	80	97	100	43	2	8	2.8
50	Ill. 3309.....	112	26	76	88	99	46	3	2	2.5
51	Ill. 3312.....	112	27	80	94	99	43	1	1	2.3
52	Ill. 3312-1.....	112	25	73	86	99	43	3	3	1.9
53	Ill. 1958.....	111	22	80	82	99	43	0	4	1.9
54	Ill. 1969A.....	111	26	78	93	99	45	4	4	2.2
55	Ill. 3152-1.....	111	24	78	91	99	38	2	6	2.4
56	Ill. 3269.....	111	26	77	93	99	41	1	3	2.1
57	Ill. 3307.....	109	26	76	85	99	47	1	2	2.2
58	AES 610.....	108	22	79	93	99	40	2	3	2.5
59	Ill. 3300A.....	108	25	77	87	99	41	1	6	1.7
60	AES 514.....	107	23	78	95	100	45	2	3	2.2
61	Ill. 3273.....	107	28	78	96	96	40	6	5	2.7
62	Ill. 3308.....	107	25	78	85	100	48	3	4	2.0
63	Ill. 6109.....	107	25	76	78	100	50	7	9	3.3
64	Ill. 3152B.....	106	23	75	87	99	42	1	7	2.4
65	Ill. 3304.....	106	27	76	91	98	42	0	14	2.5
66	Ill. 1560A.....	105	26	78	90	97	40	2	9	2.6
67	Ill. 3265.....	104	28	78	93	99	42	3	4	2.5
68	Iowa 5052.....	104	24	74	92	97	41	7	3	2.4
69	Ohio K24.....	103	25	79	68	97	43	5	4	3.0
70	AES 510.....	102	22	77	85	99	42	7	14	2.7
71	Ill. 3306.....	100	26	76	86	100	46	5	2	1.5
72	AES 601.....	99	23	77	88	99	40	2	7	3.7
73	Ill. 1091A.....	99	24	76	72	99	46	3	7	3.9
74	Ill. 1555A.....	96	21	76	76	97	43	2	10	3.1
75	Ill. 6115.....	96	23	75	79	100	45	8	3	2.3
76	Ohio M15.....	96	22	78	57	97	44	2	5	3.3
77	Ill. 1864.....	95	26	77	86	100	38	2	7	2.9
78	Ill. 6021.....	93	25	77	74	99	52	5	6	3.0
79	AES 702.....	92	25	74	94	100	44	8	6	2.4
80	Ill. 6052.....	92	30	77	67	100	49	3	13	3.5
81	Ill. 101.....	89	24	77	85	100	40	2	13	3.0
82	Ill. 21.....	86	25	76	77	99	48	2	8	4.6
83	Ill. 1277.....	84	23	77	79	99	41	2	5	4.0
	Average.....	112	25	78	87	99	43	3	6	2.5
D — Single and sister-line crosses										
84	Hy2×WF9.....	86	26	74	83	100	44	3	6	4.0
85	(R158×CI.42)(WF9× R75).....	79	25	76	75	99	51	6	4	3.4
86	Hy2×Oh7.....	124	26	80	81	99	53	3	3	3.1
87	(R158×CI.42A)(Oh7× Oh7A).....	96	29	77	83	100	54	3	5	3.1
88	Hy2×187-2.....	90	26	78	63	99	50	9	2	4.0
89	(R158×CI.42A)(R84× W187R).....	60	26	75	67	99	51	9	6	5.0
90	R158×CI.42A.....	87	28	75	80	99	54	11	3	2.9
	Average.....	89	26	76	76	99	51	6	4	3.6

Table 3.—THREE-WAY CROSSES AND STANDARDS

Tested in Northern Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut	Leaf blight
							Plant	Ear			
A—Inbred lines crossed with (WF9 × Oh43)											
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>score</i>
1	R71.....	114	28	82	97	98	84	38	3	3	4.0
2	R74.....	99	26	80	92	97	88	36	0	3	2.0
3	R74A.....	91	27	75	98	99	87	36	1	8	1.5
4	R76.....	111	26	79	69	95	94	48	10	2	2.0
5	R78.....	116	27	82	89	94	88	41	3	3	2.0
6	R84.....	95	25	80	82	88	88	46	7	11	3.0
7	R101.....	105	25	79	93	97	91	40	0	9	4.0
8	R104.....	100	26	83	81	98	86	40	1	1	4.0
9	R109B.....	109	26	82	97	93	88	42	0	1	3.0
10	R112.....	115	25	83	96	96	94	40	5	10	2.5
11	R113.....	113	24	79	82	100	84	40	1	3	2.5
12	R114.....	108	24	79	91	95	98	41	1	3	2.0
13	R132.....	114	27	80	67	99	92	44	1	0	3.0
14	R134.....	136	27	79	93	92	96	46	4	3	2.0
15	R135.....	96	25	83	76	88	92	45	4	2	2.0
16	R151.....	134	27	82	83	99	92	42	5	2	3.0
17	R154.....	134	24	80	86	92	96	42	2	2	2.5
18	R158.....	107	24	81	92	100	98	42	6	1	2.5
19	R159.....	107	28	80	88	97	86	40	2	1	2.5
20	R166.....	92	26	82	87	92	80	35	1	2	3.0
21	R168.....	123	23	82	92	99	86	41	0	2	2.0
22	R172.....	125	25	81	94	99	90	42	0	0	1.5
23	R180.....	93	27	79	87	96	86	40	4	4	3.5
24	R181.....	120	20	80	73	96	88	38	2	0	3.5
25	R182.....	109	25	81	96	92	96	41	4	4	3.0
26	R183.....	82	26	78	76	98	94	44	1	3	1.5
27	R192.....	101	26	79	90	99	96	44	2	15	3.0
28	R193.....	115	26	80	93	98	92	40	4	5	2.5
29	R194.....	100	28	79	77	99	88	42	3	2	2.0
30	R195.....	104	24	79	89	99	94	46	2	3	4.5
31	R196.....	104	25	80	96	100	92	44	3	0	3.5
32	R197.....	117	29	80	85	98	93	47	6	0	2.5
33	R198.....	108	27	81	86	98	94	47	4	11	2.0
	Average...	109	26	80	87	96	91	42	3	4	2.7
B—Single crosses											
34	WF9×Oh43....	108	27	81	94	98	87	39	6	3	2.5
35	WF9×B37....	95	28	75	98	100	92	42	5	9	3.5
36	B41×Oh7A....	71	32	74	56	94	94	51	1	1	4.0
	Average...	91	29	77	83	97	91	44	4	4	3.3
C—Inbred lines crossed with (WF9 × B37)											
1	R71.....	103	29	75	99	89	94	48	4	2	4.0
2	R74.....	95	29	76	100	69	93	45	3	7	2.5
3	R74A.....	64	30	68	97	100	98	45	2	3	1.0
4	R76.....	93	27	75	90	96	96	52	6	12	3.0
5	R78.....	101	28	78	84	95	94	41	3	9	2.0
6	R84.....	73	25	75	89	96	96	50	3	12	4.5
7	R101.....	85	25	75	89	98	92	46	0	7	3.5
8	R104.....	99	26	80	79	99	92	48	5	1	4.0
9	R109B.....	103	27	77	99	97	94	46	2	4	2.5
10	R112.....	109	26	80	98	100	90	48	6	6	2.5
11	R113.....	106	24	76	93	100	91	50	2	1	3.0
12	R114.....	107	28	76	99	99	98	48	1	2	2.5
13	R132.....	101	25	77	56	95	94	46	2	3	4.0
14	R134.....	108	28	74	94	95	96	46	10	8	2.0
15	R135.....	92	25	77	83	79	96	52	6	6	1.5

(Table is continued on next page)

Table 3. — Continued

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut	Leaf blight
							Plant	Ear			
C — Inbred lines crossed with (WF9 × B37) — continued											
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>score</i>
16	R151.....	130	29	79	91	99	98	53	6	0	2.5
17	R154.....	122	26	79	78	97	96	52	1	0	2.5
18	R158.....	91	25	77	90	89	98	48	5	3	4.5
19	R159.....	97	27	76	94	100	93	50	1	6	1.0
20	R166.....	98	26	80	90	97	92	46	2	10	3.0
21	R168.....	125	25	78	99	98	90	45	0	8	2.5
22	R172.....	107	26	76	95	100	92	49	1	1	1.5
23	R180.....	92	27	77	97	94	90	46	5	3	3.5
24	R181.....	123	23	76	89	100	94	45	2	2	2.5
25	R182.....	82	24	76	97	68	98	48	3	7	2.5
26	R183.....	56	29	75	98	98	96	51	0	1	1.5
27	R192.....	104	27	76	87	96	98	50	0	12	2.0
28	R193.....	96	28	76	91	100	94	47	4	3	2.5
29	R194.....	109	30	77	96	96	93	52	3	7	2.0
30	R195.....	103	24	76	91	98	92	50	3	8	3.5
31	R196.....	118	26	76	94	99	97	50	2	7	2.5
32	R197.....	125	31	77	78	98	95	52	2	5	2.5
33	R198.....	96	31	77	82	100	98	52	9	11	2.0
	Average...	100	27	76	90	95	94	48	3	5	2.6
D — Single crosses											
34	WF9×Oh43....	100	28	76	97	98	92	42	5	3	2.0
35	WF9×B37.....	85	28	74	99	96	90	48	4	15	2.5
36	B41×Oh7A....	24	35	66	42	97	91	50	0	0	4.0
	Average...	70	30	72	79	97	91	47	3	6	2.8
E — Inbred lines crossed with (B41 × Oh7A)											
1	R71.....	80	31	78	89	98	90	48	2	4	3.5
2	R74.....	119	28	77	92	99	92	49	1	2	2.0
3	R74A.....	25	30	75	96	100	92	50	4	12	1.5
4	R76.....	105	30	74	76	100	98	52	2	9	2.5
5	R78.....	63	31	77	59	100	92	50	0	8	2.5
6	R84.....	41	29	76	82	98	90	54	6	10	3.0
7	R101.....	79	26	77	80	99	91	50	3	3	4.0
8	R104.....	89	27	78	71	100	90	54	3	0	3.5
9	R109B.....	105	30	79	93	100	92	52	2	7	2.5
10	R112.....	91	28	78	95	99	92	45	3	10	1.0
11	R113.....	78	25	77	94	99	87	49	1	1	2.5
12	R114.....	98	27	75	90	98	97	52	2	4	2.5
13	R132.....	83	27	76	57	97	94	52	5	2	4.5
14	R134.....	97	30	80	85	100	93	49	13	3	1.5
15	R135.....	51	29	78	92	100	92	50	7	7	3.0
16	R151.....	122	28	79	75	100	97	52	8	2	2.0
17	R154.....	107	27	79	80	100	96	54	6	2	2.5
18	R158.....	92	27	78	93	94	96	51	3	0	3.5
19	R159.....	71	33	75	95	100	94	48	1	6	1.0
20	R166.....	68	29	76	60	100	84	46	1	3	2.5
21	R168.....	108	26	83	97	100	88	46	1	4	1.5
22	R172.....	95	26	78	86	99	94	54	1	5	1.0
23	R180.....	73	28	76	70	100	86	44	3	3	3.5
24	R181.....	117	23	76	73	100	92	48	1	3	3.5
25	R182.....	94	27	79	94	98	94	48	3	0	1.5
26	R183.....	70	28	77	95	96	92	54	4	2	1.5
27	R192.....	70	29	75	85	97	92	50	0	9	3.0
28	R193.....	87	27	75	86	100	91	46	6	1	2.5
29	R194.....	47	34	78	92	100	90	50	4	5	2.5
30	R195.....	76	27	75	98	99	91	52	3	3	3.0
31	R196.....	78	28	75	84	98	92	54	3	2	2.5
32	R197.....	106	30	77	84	100	92	52	2	0	2.5
33	R198.....	84	31	77	60	99	94	56	1	3	2.0
	Average...	84	28	77	84	99	92	50	3	4	2.5

(Table is concluded on next page)

Table 3. — Concluded

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut	Leaf blight
							Plant	Ear			
F — Single crosses											
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>score</i>
34	WF9×Oh43...	104	28	81	95	99	89	42	5	1	1.0
35	WF9×B37....	72	27	74	94	100	92	47	1	10	2.0
36	B41×Oh7A....	41	34	72	42	99	90	50	1	2	2.5
	Average...	72	30	76	77	99	90	46	2	4	1.8
G — Mean of inbred lines crossed with three testers											
1	R71.....	99	29	78	95	95	89	45	3	3	3.8
2	R74.....	104	28	78	95	88	91	43	1	4	2.2
3	R74A.....	60	29	73	97	99	92	44	2	8	1.3
4	R76.....	103	28	76	78	97	96	51	6	8	2.5
5	R78.....	93	29	79	77	96	91	44	2	7	2.2
6	R84.....	70	26	77	84	94	91	50	5	11	3.5
7	R101.....	90	25	77	87	98	91	45	1	6	3.8
8	R104.....	96	26	80	77	99	89	47	3	1	3.8
9	R109B.....	105	28	79	96	97	91	47	1	4	2.7
10	R112.....	105	26	80	96	98	92	44	5	9	2.0
11	R113.....	99	24	77	90	99	87	46	1	2	2.7
12	R114.....	104	26	77	93	97	98	47	1	3	2.2
13	R132.....	99	26	78	60	97	93	47	3	2	3.8
14	R134.....	114	28	78	91	96	95	47	9	5	1.8
15	R135.....	80	26	79	84	89	93	49	6	5	2.2
16	R151.....	129	28	80	83	99	96	49	6	1	2.5
17	R154.....	121	26	79	81	96	96	49	3	1	2.5
18	R158.....	97	25	79	92	94	97	47	5	1	3.5
19	R159.....	92	29	77	92	99	91	46	1	4	1.5
20	R166.....	86	27	79	79	96	85	42	1	5	2.8
21	R168.....	119	25	81	96	99	88	44	0	5	2.0
22	R172.....	109	26	78	92	99	92	48	1	2	1.3
23	R180.....	86	27	77	85	97	87	43	4	3	3.5
24	R181.....	120	22	77	78	99	91	44	2	2	3.2
25	R182.....	95	25	79	96	86	96	46	3	4	2.3
26	R183.....	69	28	77	90	97	94	50	2	2	1.5
27	R192.....	92	27	77	87	97	95	48	1	12	2.7
28	R193.....	99	27	77	90	99	92	44	5	3	2.5
29	R194.....	85	31	78	88	98	90	48	3	5	2.2
30	R195.....	94	25	77	93	98	92	49	3	5	3.7
31	R196.....	100	26	77	91	99	94	49	3	3	2.8
32	R197.....	116	30	78	82	99	93	50	3	2	2.5
33	R198.....	96	30	78	76	99	95	52	5	8	2.0
	Average...	98	27	78	87	97	92	47	3	4	2.6
H — Mean of three single-cross testers											
34	WF9×Oh43...	104	28	79	95	98	89	41	5	2	1.8
35	WF9×B37....	84	28	74	97	99	91	46	3	11	2.7
36	B41×Oh7A....	45	34	71	47	97	92	50	1	1	3.5
	Average...	78	30	75	80	98	91	46	3	5	2.7

Table 4.—DOUBLE CROSSES OF ILLINOIS 21 MATURITY

Tested in North-Central Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Three-year averages, 1957-1959									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	Ill. 3042	125	23	80	92	94	46	1	..
2	Ill. 3026	123	22	80	89	96	41	1	..
3	Ill. 3022	122	20	81	89	92	44	1	..
4	Ill. 3029	120	21	80	91	93	42	0	..
5	Ill. 3010	119	21	80	86	97	47	2	..
6	AES 805	119	21	80	81	96	48	2	..
7	Ill. 3023A	119	19	82	88	97	40	0	..
8	Ill. 3021	118	22	81	93	97	43	2	..
9	AES 703	118	20	80	93	93	43	0	..
10	Ill. 3160	117	20	82	96	96	44	0	..
11	Ill. 1968	116	19	83	86	94	46	0	..
12	Ill. 3032	116	20	81	87	95	42	1	..
13	Ill. 1332	115	19	81	80	95	48	1	..
14	Ill. 3039	115	21	79	91	97	43	1	..
15	Ill. 1971	114	20	83	83	96	46	1	..
16	Ill. 3017	114	21	80	93	95	44	1	..
17	Ill. 1969	113	20	82	93	96	47	1	..
18	Ill. 3020	112	20	80	91	99	40	1	..
19	Ill. 3043	111	20	82	93	96	45	2	..
20	Ill. 1921	110	23	79	89	93	48	1	..
21	Ill. 1966	110	20	79	82	93	46	1	..
22	AES 705	109	21	80	91	98	44	1	..
23	Ill. 3030	109	21	79	95	96	43	1	..
24	Ill. 21	108	21	81	76	93	48	2	..
25	Ill. 1928	108	23	79	87	92	52	1	..
26	Ill. 1831	107	22	81	86	94	42	1	..
27	AES 704	106	21	79	97	91	42	1	..
28	Ill. 1570	106	21	79	74	96	48	3	..
29	AES 702	105	21	79	80	92	45	1	..
30	Iowa 4297	98	21	80	78	96	45	2	..
	Average	113	21	80	88	95	45	1	..
B — Two-year averages, 1958-1959									
1	Ill. 3042	124	22	82	92	97	47	1	..
2	Ill. 3022	124	20	82	92	95	46	1	..
3	Ill. 3029	122	21	82	92	96	44	0	..
4	Ill. 3026	121	21	81	92	96	44	2	..
5	Ill. 3015B	120	20	82	94	95	46	4	..
6	Ill. 3021	119	20	82	93	99	44	2	..
7	Ill. 1968	118	18	84	90	97	46	0	..
8	AES 805	118	20	80	82	98	50	3	..
9	Ill. 3010	117	20	81	88	98	48	3	..
10	Ill. 3160	117	20	83	98	96	46	0	..
11	Ill. 3291	116	20	84	92	98	46	1	..
12	Ill. 3294	116	21	82	86	99	52	4	..
13	AES 703	116	20	80	94	94	46	0	..
14	Ill. 3023B	116	21	82	90	98	44	1	..
15	Ill. 3023A	116	19	83	88	98	42	0	..
16	Ill. 1969	114	20	83	92	98	48	2	..
17	Ill. 3039	114	20	79	92	99	44	2	..
18	Ill. 3017	113	20	80	94	96	46	1	..
19	Ill. 3032	113	20	82	86	95	44	1	..
20	Ill. 1332	112	18	82	82	94	51	2	..
21	Iowa 4991	112	21	82	97	97	44	0	..
22	AES 705	111	20	80	92	98	46	2	..

(Table is continued on next page)

Table 4. — Continued

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
B — Two-year averages, 1958-1959 — concluded									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
23	Ill. 1921	111	22	80	88	98	50	2	..
24	Ill. 1971	111	19	83	89	95	48	1	..
25	Ill. 3043	110	20	82	93	97	46	2	..
26	Ill. 1966	109	20	79	84	96	49	2	..
27	Ill. 3020	109	20	80	92	98	40	2	..
28	Iowa 4989	109	20	80	96	96	48	0	..
29	AES 704	108	20	79	98	96	44	2	..
30	Ill. 2249W	108	20	81	82	97	52	12	..
31	Ill. 3030	108	20	80	95	96	44	1	..
32	Ill. 1831	107	22	82	88	96	44	2	..
33	AES 702	106	20	80	85	96	48	2	..
34	Ill. 6052	106	22	80	74	99	58	3	..
35	Ill. 21	104	20	81	74	95	50	2	..
36	Ill. 1570	104	20	80	78	98	49	5	..
37	Ill. 1928	104	22	80	88	94	54	1	..
38	Ill. 6021	104	20	82	81	96	58	6	..
39	Iowa 4297	98	20	80	80	94	47	3	..
	Average	112	20	81	89	97	47	2	..
C — 1959 results (3 replications)									
1	Ill. 3182A	118	24	83	69	97	46	3	1
2	Ill. 3022	116	22	80	96	93	42	1	6
3	Ill. 3042	115	24	82	96	95	43	0	4
4	Ill. 3347	112	24	81	90	96	46	1	1
5	Ill. 1968	109	20	84	92	94	42	1	5
6	Ill. 3026	108	23	80	90	96	40	1	6
7	Ill. 3321	108	21	81	90	96	44	1	8
8	Ill. 3348	108	25	79	89	97	45	1	0
9	Ill. 3029	107	22	81	98	92	43	1	2
10	Ill. 3318	107	20	81	94	97	45	0	6
11	U.S. 13	107	22	80	87	97	52	5	5
12	Ill. 3021	106	22	81	95	98	41	3	12
13	Ill. 3326A	106	19	82	94	98	44	0	11
14	Ill. 1969	105	21	81	93	96	46	1	1
15	Ill. 3317	105	22	82	96	99	44	1	4
16	Ill. 3345	105	24	82	90	97	47	3	1
17	Ill. 3182B	104	24	81	84	98	46	0	3
18	Ill. 3314	104	22	83	86	97	48	1	3
19	Ill. 3318A	104	20	78	94	94	46	3	4
20	Ill. 3326	104	22	80	91	95	43	0	5
21	Ill. 3319	103	21	81	94	95	47	0	0
22	Ill. 3323A	103	20	79	95	97	42	0	1
23	AES 703	102	22	80	94	94	42	1	4
24	Ill. 3015B	102	22	80	94	91	42	1	6
25	Ill. 3160	102	21	82	96	95	44	0	4
26	Iowa 4962	102	22	78	91	96	40	1	3
27	Ill. 3023A	101	21	82	90	97	39	0	1
28	Ill. 3315	101	22	80	95	88	48	2	2
29	Ill. 3291	100	23	83	97	96	44	0	12
30	Ill. 3184A	99	25	82	76	96	50	1	8
31	Ill. 3322	99	21	81	92	96	43	0	4
32	AES 702	98	22	79	93	94	45	2	1
33	Ill. 1971	98	21	81	93	90	45	2	6
34	Ill. 3010	98	22	80	89	95	43	4	6
35	Ill. 3294	98	23	80	91	98	50	5	8
36	Ill. 6109	98	21	77	92	94	46	1	4
37	Ill. 3032	97	22	80	86	91	42	1	6
38	Ill. 3039	96	22	77	94	99	40	2	5
39	Ill. 3045A	96	20	79	91	95	43	0	4
40	Ill. 3017	95	21	79	97	92	44	1	5

(Table is concluded on next page)

Table 4. — Concluded

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
C — 1959 results (3 replications) — concluded									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
41	Ill. 3043.....	95	24	80	91	96	43	1	1
42	Ill. 3323.....	95	21	79	94	99	44	0	4
43	Ill. 6115.....	95	22	80	82	93	46	1	4
44	Ill. 3023B.....	94	24	81	92	97	40	2	7
45	Ill. 3183A.....	94	26	79	87	95	47	3	2
46	Ill. 3315A.....	94	22	79	94	95	45	1	1
47	Ill. 3325A.....	94	20	80	90	97	42	0	6
48	Iowa 4991.....	94	24	81	98	94	40	0	5
49	Ill. 2249W.....	93	22	78	89	96	49	12	14
50	Ill. 3020.....	93	22	79	96	97	38	1	8
51	AES 705.....	92	22	79	98	95	43	1	3
52	Ill. 1332.....	92	20	79	86	89	48	0	6
53	Ill. 3011A.....	92	21	78	98	97	41	1	7
54	Ill. 3049.....	92	24	78	93	93	44	1	1
55	Ill. 1921.....	91	24	79	86	95	46	3	4
56	Ill. 3316.....	91	21	79	90	95	44	1	1
57	Ill. 1966.....	89	22	75	87	95	47	2	6
58	Ill. 3320.....	89	20	81	96	91	44	1	4
59	AES 805.....	88	23	79	94	95	47	4	15
60	Ill. 21.....	88	21	78	88	94	47	2	10
61	Ill. 3030.....	87	22	77	97	94	40	0	3
62	Ill. 6021.....	87	21	80	89	93	54	4	10
63	Iowa 4989.....	86	24	79	95	95	45	0	6
64	AES 704.....	85	22	76	98	93	41	1	3
65	Ill. 1570.....	85	23	80	89	95	45	4	4
66	Ill. 1928.....	84	25	79	91	90	48	2	9
67	Ill. 3325.....	83	20	79	93	98	42	1	10
68	Ill. 1831.....	81	25	80	91	93	38	2	12
69	Ill. 6052.....	81	26	78	76	98	53	3	13
70	Ill. 1996.....	79	24	77	92	91	46	2	1
71	Iowa 4297.....	75	23	79	87	91	45	2	14
72	Ill. 3044A.....	72	21	78	94	95	40	1	4
	Average.....	97	22	80	91	95	44	2	5

Table 5. — THREE-WAY CROSSES AND STANDARDS
OF ILLINOIS 21 MATURITY

Tested in North-Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Inbred lines crossed with (WF9 × B14)									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R104.....	84	22	83	94	95	39	1	0
2	R135.....	74	26	85	91	91	43	4	14
3	R138.....	101	23	82	90	94	43	0	6
4	R195.....	80	18	82	96	87	40	2	7
5	H62.....	94	26	81	93	89	39	2	0
6	Ia57:1302.....	94	22	82	75	93	43	0	1
7	Ia57:1766.....	69	25	82	96	89	44	1	12
8	Oh26F.....	89	18	84	95	96	41	4	3
	Average.....	86	23	83	91	92	42	2	5
B — Inbred lines crossed with (B37 × Oh43)									
9	R104.....	73	21	86	93	91	38	1	3
10	R135.....	87	21	84	75	87	45	3	10
11	R138.....	104	22	81	90	95	43	2	6
12	R195.....	79	21	82	96	89	41	0	7
13	H62.....	94	25	82	91	94	39	0	2
14	Ia57:1302.....	102	22	80	79	95	44	0	5
15	Oh26F.....	94	21	83	94	93	39	1	3
	Average.....	90	22	83	88	92	41	0	5
C — Standard checks									
19	Ill. 3016.....	103	20	80	94	93	37	0	3
17	B37×Oh43.....	100	25	79	99	96	36	0	4
16	WF9×B14.....	90	18	80	99	91	43	1	2
18	AES 705.....	88	20	79	97	92	39	0	4
20	Ill. 3049.....	85	23	81	88	98	46	0	1
21	Ia. 4297.....	85	20	85	92	92	40	1	10
	Average.....	92	21	81	95	94	40	0	4
	Average of 21 entries.....	89	22	82	91	92	41	2	5

Table 6. — DOUBLE CROSSES OF ILLINOIS 1570 MATURITY
Tested in Central Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Three-year averages, 1957-1959									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	A 102	109	22	81	78	98	42	1	12
2	Ill. 1976	109	21	80	85	96	45	0	9
3	AES 810	107	19	81	91	96	42	1	12
4	Ill. 3117	106	19	85	98	98	41	1	14
5	Ill. 3093	105	19	81	89	98	42	2	8
6	Ill. 1918	104	20	83	88	98	44	5	8
7	Ill. 3080	103	20	80	83	98	43	1	6
8	Ill. 1984	102	21	79	86	98	42	1	9
9	Ill. 3055	102	19	82	90	98	43	0	10
10	Ill. 3049	102	20	82	97	98	41	0	5
11	Ill. 1332-3	102	21	82	88	97	43	1	13
12	Ill. 1916	102	19	83	86	98	45	2	16
13	Ill. 1926	101	19	80	94	96	43	2	7
14	AES 809	100	21	82	91	95	38	1	13
15	Ill. 1856	100	25	80	86	98	47	1	13
16	Ill. 1922	100	21	81	93	98	41	0	8
17	Ill. 1983	99	19	82	93	98	43	2	7
18	Ill. 1989	99	19	80	92	96	39	1	7
19	Ill. 3107	99	20	82	88	99	42	2	13
20	Ill. 3121	99	19	83	88	97	40	1	5
21	Ill. 1981	98	20	81	90	97	45	2	16
22	Ill. 1987	98	20	77	87	98	43	2	8
23	Ill. 3115	98	17	82	88	98	43	2	18
24	Ill. 3119	98	21	82	84	99	42	1	7
25	Ill. 1332-4	98	19	82	89	97	42	1	8
26	Ill. 1996	98	20	77	92	97	43	1	10
27	Ill. 1813	98	21	81	96	95	43	2	9
28	Ill. 1880	98	19	83	89	98	42	2	7
29	Ill. 1921	98	20	80	94	98	41	1	12
30	Ill. 3124	98	21	80	95	99	42	1	7
31	Ill. 3092	97	20	81	91	97	43	2	10
32	Ill. 3074	97	21	83	92	99	42	0	9
33	AES 702	97	20	80	88	99	40	2	12
34	Ill. 1944	97	21	79	90	94	47	0	11
35	Ill. 1994	97	21	78	91	97	41	1	11
36	Ill. 1332	97	20	82	93	97	42	2	16
37	Ill. 3075	97	20	83	89	99	43	1	7
38	U.S. 13	97	19	80	81	95	46	4	10
39	Ill. 1928	97	21	81	90	96	45	1	17
40	Ill. 1919	96	19	80	85	98	42	3	16
41	Ill. 3104	96	19	80	88	98	40	2	13
42	Ill. 21	96	19	82	89	98	42	2	10
43	Ill. 1978	95	21	77	83	98	45	2	10
44	Ill. 1893	95	20	80	89	94	46	2	17
45	Ill. 1992	95	22	78	92	95	43	0	11
46	Ill. 3151	95	19	80	92	97	43	1	16
47	Ill. 1570	95	20	80	81	97	43	2	10
48	Ill. 1851	94	22	77	88	95	47	1	15
49	AES 805	93	20	79	92	97	42	1	23
50	Ill. 1890	93	19	81	89	94	42	0	18
	Average	99	20	81	89	97	43	1	11

(Table is continued on next page)

Table 6.—Continued

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
B—Two-year averages, 1958-1959									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	Ill. 3183	109	20	82	89	96	38	2	10
2	Ill. 3186	108	19	84	86	98	42	2	12
3	Ill. 1976	107	20	82	90	98	42	0	12
4	A 102	105	19	83	77	98	41	1	17
5	Ill. 3080	104	18	82	84	98	41	2	8
6	Ill. 3117	104	17	86	89	98	40	2	19
7	AES 810	102	18	82	94	95	40	2	17
8	Ill. 1918	101	20	84	91	98	42	7	12
9	Ill. 3093	100	18	82	88	98	40	2	12
10	Ill. 1926	100	18	82	96	97	40	2	10
11	Ill. 1984	100	18	80	91	98	40	2	14
12	Ill. 3055	100	18	82	93	98	43	0	16
13	Ill. 3074	100	20	85	93	99	40	0	13
14	Ill. 1916	99	17	85	88	98	44	4	20
15	Ill. 1989	99	18	82	93	98	38	1	10
16	Iowa 5115	98	19	80	92	98	40	0	6
17	AES 809	98	20	84	90	97	34	1	19
18	Ill. 1987	98	19	78	89	100	42	3	12
19	Ill. 1922	97	20	84	94	98	38	0	11
20	Ill. 3151	96	18	83	95	98	42	2	24
21	Ill. 3049	96	20	83	98	100	38	0	8
22	Ill. 3119	96	18	84	84	98	42	2	10
23	Ill. 3121	96	18	84	84	96	38	1	6
24	Ill. 1856	96	21	81	92	98	44	2	19
25	Ill. 3075	95	18	84	88	98	40	1	10
26	U.S. 13	95	19	82	84	97	44	6	14
27	AES 705	94	18	84	94	98	36	1	16
28	Ill. 1992	94	20	81	92	95	40	0	16
29	Ill. 1996	94	18	78	94	97	40	1	14
30	Ill. 1983	94	18	82	95	98	41	2	10
31	Ill. 1570	94	18	82	92	96	42	3	14
32	Ill. 1994	94	19	80	90	98	40	2	16
33	Ill. 1332-3	93	20	84	90	96	40	2	19
34	Ill. 1332-4	93	18	84	94	95	40	2	12
35	Ill. 1813	93	20	82	96	94	42	2	14
36	Ill. 21	93	18	82	94	98	43	4	15
37	Ill. 3107	93	19	84	91	100	41	3	19
38	Ill. 1944	92	20	82	88	92	46	0	15
39	Ill. 1919	92	18	81	90	97	40	5	24
40	Ill. 3115	92	16	84	93	98	42	2	25
41	Ill. 3124	91	20	82	96	100	40	2	10
42	Ill. 1880	90	18	84	93	98	41	2	10
43	Ill. 1981	90	18	83	92	97	43	2	22
44	Ill. 1332	90	18	84	97	99	42	2	24
45	Ill. 1893	90	18	82	92	96	43	4	25
46	Ill. 1921	90	19	80	98	98	39	2	18
47	AES 702	89	18	82	91	99	37	2	18
48	Ill. 3104	88	18	80	93	98	38	3	19
49	Ill. 1928	87	20	82	92	96	41	2	24
50	Ill. 3092	87	18	82	91	96	40	3	14
51	Ill. 1851	86	20	78	86	94	46	1	22
52	Ill. 1978	86	20	79	86	98	45	2	15
53	Ill. 6021	86	19	80	86	98	49	5	24
54	Ill. 6052	83	19	84	78	92	48	3	22
55	AES 805	83	19	80	93	98	40	1	34
56	Ill. 1890	83	19	80	92	92	41	0	26
	Average	95	19	82	91	97	41	2	16

(Table is continued on next page)

Table 6.—Continued

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
C—1959 results (3 replications)									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	Ill. 3343	106	20	83	92	100	37	1	6
2	Ill. 3346	106	21	85	86	99	39	1	9
3	Ill. 3347	104	18	84	92	95	33	1	9
4	Ill. 3350	103	22	80	87	99	37	1	6
5	Ill. 3332A	100	19	85	84	98	35	0	8
6	Ill. 3244	99	19	84	84	98	34	1	16
7	Ill. 3349	99	20	79	81	97	38	1	11
8	A104	99	19	80	74	96	36	1	11
9	Ill. 3334	98	19	85	79	98	35	1	6
10	Ill. 3353	98	21	82	89	95	34	1	6
11	Ill. 3357	98	21	82	91	97	30	0	8
12	Ill. 3329	96	18	83	90	100	34	1	5
13	Ill. 3377	96	18	84	92	99	36	3	19
14	Ill. 1976	95	19	81	92	98	36	0	21
15	A110	95	20	84	74	92	36	1	5
16	Ill. 3354	93	23	78	76	99	37	2	8
17	Ill. 1918	92	20	83	92	95	35	12	21
18	Ill. 3248	92	19	82	79	99	33	3	12
19	Ill. 3344	92	24	83	94	97	37	1	7
20	Ill. 3359	92	20	80	84	97	33	2	12
21	Ill. 3378	92	19	86	84	99	36	2	17
22	Ill. 3277	91	19	81	84	97	35	0	14
23	Ill. 3348	90	21	84	92	99	36	0	6
24	Ill. 3328	89	19	83	85	98	34	1	7
25	Ill. 3330	89	19	84	89	98	36	1	8
26	Ill. 3351	89	20	85	88	100	39	1	6
27	Ill. 3372	89	20	83	87	99	36	3	18
28	Ill. 3080	88	18	82	78	99	36	1	15
29	Ill. 3183	88	21	79	84	94	32	1	15
30	Ill. 3186	88	19	84	84	96	36	3	21
31	AES 810	87	18	80	92	99	33	3	27
32	Ill. 3332	87	19	82	73	95	34	2	5
33	Ill. 3374	87	18	80	96	94	35	4	16
34	Ill. 1926	86	19	80	95	97	34	3	17
35	Ill. 3117	86	17	85	89	99	34	2	28
36	Ill. 3240A	85	22	82	93	97	35	3	32
37	Ill. 3247	85	19	82	73	97	37	1	14
38	Ill. 3259B	85	18	81	78	98	31	0	15
39	Ill. 3333	85	19	84	80	95	34	3	9
40	A102	85	19	82	75	99	33	1	22
41	Ill. 3183A	84	21	81	89	96	36	3	20
42	Ill. 3281	84	18	82	89	98	37	2	24
43	Ill. 3184A	83	20	83	77	99	36	5	26
44	Ill. 3362	83	21	83	88	97	35	1	15
45	Ill. 3373	83	18	82	91	99	32	5	19
46	Ill. 3055	82	18	81	96	99	39	0	26
47	Ill. 3238	82	20	83	91	99	34	1	25
48	Ill. 3074	81	20	84	89	98	34	1	17
49	Ill. 3237A	81	18	84	84	98	34	1	16
50	Ill. 3242	81	20	82	88	95	34	0	15
51	Ill. 3093	80	17	83	86	97	34	2	25
52	Ill. 3222	80	18	83	90	99	34	2	10
53	Ill. 3236	80	23	85	82	93	36	0	19
54	Ill. 3345	80	22	80	90	98	37	2	6
55	Ill. 3355	80	20	81	95	96	31	1	10
56	A109	80	19	81	87	96	36	3	25
57	Ill. 3237	79	19	81	86	100	30	2	11
58	Ill. 3249	79	20	83	82	97	33	5	16
59	Ill. 3367	79	20	81	91	99	33	0	13
60	U.S. 13	79	19	81	88	99	39	8	27
61	Ill. 1989	78	18	82	92	98	33	0	18
62	Ill. 3182A	78	22	83	81	99	34	1	19
63	Ill. 3342	78	17	84	82	99	34	2	14
64	Ill. 3358	78	19	83	87	88	32	1	13
65	Ill. 3360	78	20	81	86	99	34	1	16

(Table is continued on next page)

Table 6.—Continued

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
C — 1959 results (3 replications) — continued									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
66	Ill. 3384	78	20	83	93	94	33	1	22
67	Ill. 3121	77	18	84	72	98	32	2	10
68	Ill. 3239	77	19	83	85	99	34	0	17
69	Ill. 3356	77	20	80	82	95	33	2	10
70	Ill. 3259A	76	20	83	82	99	34	1	13
71	Ill. 3331	76	19	84	89	95	36	5	20
72	Iowa 5018	76	19	80	91	98	32	3	21
73	AES 809	75	20	82	89	97	31	1	34
74	Ill. 1916	75	18	84	89	97	37	6	33
75	Ill. 1987	75	18	74	89	99	36	2	21
76	Ill. 3102	75	18	80	95	92	34	1	32
77	Ill. 3254	75	19	80	93	97	30	0	9
78	Ill. 3280	75	19	79	95	96	34	1	28
79	Ill. 3368	75	18	83	95	99	37	3	18
80	Ill. 1570	74	18	81	95	99	37	5	23
81	Ill. 1922	74	20	84	92	99	35	1	18
82	Ill. 1984	74	18	80	91	97	35	1	26
83	Ill. 3124	74	20	82	94	100	36	3	18
84	Ill. 3256	74	19	84	90	97	34	1	19
85	Ill. 3259	74	20	82	86	98	30	1	12
86	Ill. 3119	73	18	83	74	97	35	3	12
87	Ill. 3232	73	17	81	94	98	34	3	20
88	Ill. 3361	73	19	81	87	95	35	2	14
89	Ill. 1856	72	22	79	94	97	34	2	28
90	Ill. 3253	72	22	83	81	99	30	1	8
91	Ill. 3371	72	18	81	96	95	39	1	26
92	Ill. 3375	72	20	85	90	100	39	2	26
93	U.S. 523W	72	24	78	77	98	38	2	23
94	Ill. 1944	71	19	82	81	89	40	1	15
95	Ill. 1994	71	19	79	90	98	33	2	29
96	Ill. 1996	71	18	72	93	99	34	1	28
97	Ill. 3220	71	20	82	95	98	35	1	25
98	Ill. 3276	71	21	74	94	98	36	1	15
99	Ill. 3279	71	21	82	98	99	34	5	36
100	Ill. 3370	71	19	79	97	96	34	6	26
101	Iowa 5115	71	19	77	93	97	34	1	11
102	Ill. 21	70	18	82	98	96	37	4	25
103	Ill. 1880	70	18	84	95	97	35	2	16
104	Ill. 1983	70	17	80	98	97	35	3	19
105	Ill. 3049	70	20	83	98	99	35	1	12
106	Ill. 3182B	70	20	81	89	95	34	2	18
107	Ill. 3221	70	20	84	89	97	36	0	36
108	Ill. 1332-4	69	17	84	94	95	33	2	16
109	Ill. 3278	69	19	79	89	97	36	4	24
110	Iowa 5040	69	19	80	92	99	35	1	19
111	Ill. 3011A	68	17	80	94	99	32	1	34
112	Ill. 3075	68	19	82	84	98	34	0	14
113	Ill. 3225	68	21	83	96	97	35	2	28
114	Ill. 3246	68	22	68	76	96	37	2	20
115	Ill. 1851	67	20	77	96	99	37	1	40
116	Ill. 1992	67	19	80	95	96	34	1	31
117	Ill. 3092	67	17	83	93	98	35	2	24
118	Ill. 3151	67	18	81	97	98	35	1	41
119	Ill. 3227	67	18	80	95	98	36	3	22
120	Ill. 3364	67	22	81	91	95	37	0	17
121	AES 702	66	17	82	86	99	33	3	35
122	Ill. 1332-3	66	19	85	92	99	35	3	34
123	Ill. 3255	66	19	81	88	99	33	1	11
124	Ill. 3257	66	19	82	91	97	32	0	19
125	AES 705	65	18	82	96	97	31	0	26
126	Ill. 3260	65	18	79	81	97	33	1	32
127	Ill. 3369	65	18	80	94	98	34	2	29
128	Ill. 1813	64	20	81	95	99	37	3	28
129	Ill. 1893	64	19	80	93	97	35	3	44
130	Ill. 3235	64	17	80	98	97	36	8	32

(Table is concluded on next page)

Table 6. — Concluded

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
C — 1959 results (3 replications) — concluded									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
131	Ill. 3241.....	64	21	82	83	98	39	3	27
132	Ill. 3284.....	64	19	83	95	94	35	2	26
133	Ill. 3376.....	64	19	80	95	99	36	2	22
134	Ill. 3365.....	63	18	81	95	97	35	3	26
135	Ill. 1928.....	62	22	80	94	95	35	1	44
136	Ill. 1981.....	62	19	82	98	97	36	3	40
137	Ill. 3115.....	62	17	81	93	97	34	3	44
138	Ill. 3230.....	62	19	82	96	100	32	3	38
139	Ill. 3240.....	62	21	82	91	98	34	1	37
140	Ill. 3260A.....	62	18	81	79	100	33	0	35
141	Ill. 6021.....	62	20	77	91	98	42	5	47
142	Ill. 3218.....	61	19	82	98	98	32	3	22
143	Ill. 3258.....	61	18	82	89	91	30	0	20
144	Ill. 3264.....	61	17	81	83	96	34	1	24
145	Ill. 1919.....	60	19	77	93	99	33	5	36
146	Ill. 3226.....	60	18	81	98	97	35	1	32
147	Ill. 3283.....	60	18	79	92	99	34	0	35
148	Ill. 6109.....	60	18	80	90	96	33	2	40
149	Ill. 6115.....	60	18	79	96	98	36	3	38
150	Ill. 1332.....	59	18	81	100	100	35	4	44
151	Ill. 3107.....	59	19	82	97	99	34	4	29
152	Ill. 3223.....	59	21	82	99	97	33	0	24
153	Ill. 3224.....	59	19	81	100	97	36	4	37
154	Ill. 3285.....	59	18	79	92	98	34	1	44
155	Ill. 3233.....	58	18	80	99	98	33	10	33
156	Ill. 3234.....	58	19	80	95	97	38	7	29
157	Ill. 3282.....	58	19	76	96	95	33	1	43
158	Ill. 6052.....	57	20	84	82	93	37	3	42
159	Ill. 3229.....	56	19	81	100	99	32	2	30
160	Ill. 1890.....	55	19	78	92	93	36	0	46
161	Ill. 1921.....	54	20	78	98	98	32	4	29
162	Ill. 1978.....	54	20	75	98	97	35	4	30
163	Ill. 3219.....	54	19	82	98	99	33	1	33
164	Ill. 3228.....	53	18	83	97	97	31	3	39
165	Ill. 6062.....	51	18	79	94	97	35	4	49
166	Ill. 3217.....	50	19	81	99	100	35	2	23
167	AES 805.....	49	18	76	97	99	33	2	58
168	Ill. 3104.....	49	18	75	99	98	33	4	35
169	Ill. 3363.....	49	19	79	99	98	33	1	35
170	Ill. 3366.....	45	18	72	98	95	35	4	35
171	Iowa 5122.....	40	18	78	100	99	32	3	47
172	Ill. 3231.....	38	18	79	93	96	30	4	46
	Average.....	74	19	81	90	97	35	2	23

Table 7.—THREE-WAY CROSSES AND STANDARDS OF ILLINOIS 1570 MATURITY

Tested in Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Ear height	Dropped ears	Smut
A—Inbred lines crossed with (Hy × WF9)									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R74A	58	21	74	97	94	34	1	6
2	R76	83	19	81	93	96	37	9	15
3	R78	65	21	80	74	93	28	3	8
4	R84	58	19	79	93	98	36	1	5
5	R196	40	20	78	88	98	36	1	2
6	H51	85	21	78	91	98	36	2	5
7	38-11	76	21	80	95	100	52	7	19
8	L317	76	21	82	57	94	40	4	5
9	Ia47:1313	57	19	77	92	98	36	1	4
10	Ia57:1357	83	22	79	93	99	36	2	0
11	K807	64	19	78	98	95	33	0	2
12	K808	73	21	78	83	99	36	0	2
13	Mo4582	111	22	80	89	97	40	22	2
14	Mo61004	84	23	75	87	93	34	0	3
15	Mo61018	61	24	73	96	96	35	1	3
16	CI.38B	79	20	75	97	99	38	2	7
	Average	72	21	78	89	97	36	4	6
B—Inbred lines crossed with (B14 × CI.31A)									
17	Hy	103	22	83	80	93	41	0	1
18	R74A	53	22	77	100	94	32	0	4
19	R76	83	20	80	71	96	42	4	6
20	R78	83	20	80	74	96	34	3	2
21	R84	84	19	78	68	95	38	0	6
22	R196	95	22	81	89	98	36	0	0
23	WF9	79	20	81	92	96	32	0	8
24	H49	72	22	79	88	100	36	1	1
25	H51	74	20	78	79	97	32	0	2
26	H52	70	21	74	98	98	42	2	4
27	H55	94	22	82	64	99	40	0	4
28	H56	111	24	82	79	99	40	0	0
29	38-11	93	19	79	95	100	40	4	6
30	B41	54	21	77	95	97	36	0	2
31	L317	68	21	78	58	97	40	0	3
32	Ia57:1313	84	21	80	79	98	38	0	0
33	Ia57:1357	74	24	78	92	95	33	0	2
34	K807	72	20	75	97	99	36	0	2
35	K808	61	24	77	88	97	34	0	9
36	Mo4582	95	20	79	72	96	40	2	0
37	Mo9120	108	21	83	93	99	34	0	1
38	Mo9170	79	22	80	95	98	36	0	2
39	Mo53683	87	21	79	84	99	36	2	3
40	Mo61004	90	24	75	85	95	36	0	1
41	Mo61018	59	24	76	97	94	30	0	0
42	Mo61259	92	24	76	94	96	40	0	2
43	CI.29A	84	22	78	94	99	36	3	3
44	CI.38B	81	21	79	95	98	33	0	3
45	CI.42A	102	25	81	56	98	39	0	5
	Average	82	22	79	85	97	37	1	3
C—Standard checks									
47	B14×CI.31A	108	22	82	88	90	36	0	3
48	Ill. 1332	77	19	81	94	99	38	0	18
49	U.S. 13	72	20	78	80	97	44	1	12
46	Hy×WF9	63	23	79	99	99	30	1	10
	Average	80	21	80	90	96	37	1	11
Average of 49 entries									
		79	21	79	86	97	36	2	5

Table 8. — THREE-WAY CROSSES AND STANDARDS
Tested in Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
A — Inbred lines crossed with (WF9 × Oh43)										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R71.....	91	20	80	90	100	67	31	1	4
2	R74.....	65	22	77	92	99	66	29	0	1
3	R74A.....	46	21	72	96	92	69	29	1	7
4	R76.....	86	22	78	79	89	77	38	4	7
5	R78.....	77	23	81	68	95	70	33	4	5
6	R84.....	67	21	80	89	98	68	33	2	5
7	R101.....	81	21	79	81	99	70	32	1	9
8	R104.....	81	21	82	88	100	70	34	0	11
9	R109B.....	79	23	79	94	88	69	31	1	1
10	R112.....	88	20	82	76	95	67	27	2	7
11	R113.....	68	21	74	84	97	67	31	0	5
12	R114.....	56	19	80	95	95	74	32	0	11
13	R132.....	80	21	79	67	100	69	33	1	5
14	R134.....	88	21	78	92	94	79	36	1	2
15	R135.....	76	21	83	74	96	67	31	9	14
16	R151.....	101	22	82	90	99	74	32	1	5
17	R154.....	95	21	82	62	98	71	31	0	5
18	R158.....	77	19	83	92	100	75	33	5	2
19	R159.....	56	22	76	98	98	62	26	0	2
20	R166.....	78	22	81	54	97	59	28	0	4
21	R168.....	89	19	84	85	99	68	28	3	5
22	R172.....	94	21	82	89	100	72	36	0	4
23	R180.....	69	22	76	80	97	66	27	5	6
24	R181.....	96	19	78	78	98	72	32	1	3
25	R182.....	62	20	79	94	97	70	33	3	2
26	R183.....	45	21	77	96	100	76	33	0	8
27	R192.....	86	23	79	85	99	71	28	0	4
28	R193.....	77	20	79	74	98	71	29	0	3
29	R194.....	78	23	79	77	99	70	33	0	3
30	R195.....	68	19	78	92	98	71	32	0	6
31	R196.....	75	21	79	92	98	72	35	4	4
32	R197.....	96	23	80	85	93	73	35	1	2
33	R198.....	95	24	80	79	97	74	32	1	16
	Average.....	78	21	79	84	97	70	32	2	6
B — Single crosses										
34	WF9×Oh43.....	97	19	81	92	97	72	29	0	3
35	WF9×B37.....	76	23	75	90	100	74	35	0	9
36	B41×Oh7A.....	53	27	70	70	98	72	38	1	2
	Average.....	75	23	75	84	98	73	34	0	5
C — Inbred lines crossed with (WF9 × B37)										
1	R71.....	95	24	78	90	95	72	26	2	5
2	R74.....	88	24	76	94	98	72	27	0	4
3	R74A.....	34	23	68	90	97	73	28	0	9
4	R76.....	70	22	78	92	93	77	32	1	22
5	R78.....	69	23	78	73	100	69	27	0	11
6	R84.....	42	22	72	93	100	71	33	0	17
7	R101.....	89	23	80	95	97	68	28	0	9
8	R104.....	74	22	81	75	97	72	30	1	5
9	R109B.....	58	24	75	90	92	72	30	0	10
10	R112.....	76	22	79	86	93	70	27	1	14
11	R113.....	61	21	72	93	98	66	29	0	14
12	R114.....	61	21	74	89	98	76	32	0	6
13	R132.....	91	22	79	58	98	67	29	2	9
14	R134.....	81	23	76	99	93	76	33	1	4
15	R135.....	63	23	79	79	89	73	34	1	28

(Table is continued on next page)

Table 8.—Continued

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
C—Inbred lines crossed with (WF9 × B37)—concluded										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
16	R151.....	97	23	79	87	98	78	34	0	5
17	R154.....	91	22	81	75	96	76	30	2	8
18	R158.....	64	20	75	97	97	81	33	3	8
19	R159.....	51	23	72	97	97	71	27	0	12
20	R166.....	87	23	80	86	97	63	28	0	2
21	R168.....	80	21	81	98	96	67	25	0	12
22	R172.....	76	23	77	98	99	70	31	0	7
23	R180.....	69	21	78	93	99	65	26	5	15
24	R181.....	93	20	77	97	97	73	30	1	4
25	R182.....	53	20	74	96	99	73	26	0	4
26	R183.....	40	24	74	98	95	74	35	0	7
27	R192.....	82	23	76	95	99	73	30	1	12
28	R193.....	63	21	75	82	97	71	25	1	6
29	R194.....	76	26	77	92	99	69	32	1	4
30	R195.....	68	20	75	91	94	72	32	0	5
31	R196.....	69	23	76	84	99	76	33	0	7
32	R197.....	87	24	77	78	94	76	34	3	2
33	R198.....	66	24	75	87	93	77	35	1	22
	Average.....	72	22	76	89	96	72	30	1	10
D—Single crosses										
34	WF9×Oh43.....	98	20	80	91	95	70	24	1	0
35	WF9×B37.....	60	22	72	95	94	71	30	0	13
36	B41×Oh7A.....	53	26	70	61	100	72	38	1	10
	Average.....	70	23	74	82	96	71	31	1	8
E—Inbred lines crossed with (B41 × Oh7A)										
1	R71.....	104	26	80	90	99	74	38	2	1
2	R74.....	90	25	78	88	100	72	34	0	5
3	R74A.....	15	26	68	89	100	63	30	0	12
4	R76.....	75	25	76	90	100	79	46	0	17
5	R78.....	67	25	81	60	98	71	36	0	18
6	R84.....	42	22	75	95	98	70	38	1	10
7	R101.....	52	24	80	97	100	70	32	1	15
8	R104.....	86	22	83	86	89	68	31	0	12
9	R109B.....	49	27	74	92	97	74	39	0	6
10	R112.....	66	23	80	88	99	70	32	1	14
11	R113.....	41	25	73	97	100	59	37	0	17
12	R114.....	54	22	76	86	96	76	36	0	12
13	R132.....	62	24	78	61	97	71	36	0	7
14	R134.....	71	26	77	91	98	74	37	1	6
15	R135.....	30	23	81	89	99	69	38	2	14
16	R151.....	92	25	80	90	98	78	37	0	13
17	R154.....	93	23	82	46	100	74	37	0	2
18	R158.....	54	23	79	98	98	81	40	6	4
19	R159.....	40	25	73	97	100	70	36	0	4
20	R166.....	79	24	81	48	99	70	35	0	6
21	R168.....	79	21	83	96	84	71	37	0	18
22	R172.....	73	23	80	91	95	73	37	1	9
23	R180.....	66	24	77	88	98	65	32	2	3
24	R181.....	86	22	78	71	97	75	37	0	7
25	R182.....	59	23	77	99	99	71	35	1	3
26	R183.....	36	25	78	94	97	73	37	0	5
27	R192.....	69	26	75	72	100	75	39	0	10
28	R193.....	67	23	77	86	99	74	33	2	5
29	R194.....	49	26	75	89	98	72	37	2	5
30	R195.....	58	22	77	91	98	72	41	0	11
31	R196.....	70	24	74	88	97	74	37	0	4
32	R197.....	61	26	77	89	91	71	37	3	4
33	R198.....	56	25	78	87	99	79	48	1	21
	Average.....	64	24	78	85	97	72	37	1	9

(Table is concluded on next page)

Table 8. — Concluded

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
F — Single crosses										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
34	WF9×Oh43.....	72	22	77	77	94	70	31	0	9
35	WF9×B37.....	75	21	78	81	96	70	32	0	5
36	B41×Oh7A.....	46	27	72	84	100	71	38	0	6
	Average.....	64	23	76	81	97	70	34	0	6
G — Mean of inbred lines crossed with three testers										
1	R71.....	97	23	79	90	98	71	32	2	3
2	R74.....	81	24	77	91	99	70	30	0	3
3	R74A.....	31	24	69	95	96	68	29	0	9
4	R76.....	77	23	77	84	94	78	39	2	15
5	R78.....	71	23	80	67	98	70	32	1	11
6	R84.....	51	22	75	92	99	70	35	1	11
7	R101.....	74	22	80	91	99	69	31	1	11
8	R104.....	80	22	82	83	95	70	32	0	9
9	R109B.....	62	25	76	92	92	72	34	0	6
10	R112.....	77	22	80	83	96	69	29	1	12
11	R113.....	57	22	73	91	98	64	32	0	12
12	R114.....	57	21	76	90	96	75	33	0	10
13	R132.....	78	22	79	62	98	69	33	1	7
14	R134.....	80	23	77	94	95	77	36	1	4
15	R135.....	57	23	81	80	95	70	34	4	19
16	R151.....	97	23	80	89	98	77	35	0	8
17	R154.....	93	22	82	61	98	74	33	1	5
18	R158.....	65	21	79	96	98	79	36	5	5
19	R159.....	49	23	74	97	98	68	30	0	6
20	R166.....	81	23	81	63	98	64	31	0	4
21	R168.....	83	20	83	93	93	69	30	1	11
22	R172.....	81	22	80	93	98	72	35	0	7
23	R180.....	68	22	77	87	98	66	29	4	8
24	R181.....	92	20	78	82	97	74	33	1	5
25	R182.....	58	21	77	96	98	72	31	1	3
26	R183.....	40	23	76	96	97	74	35	0	7
27	R192.....	79	24	77	84	99	73	32	0	9
28	R193.....	69	22	77	81	98	72	29	1	5
29	R194.....	68	25	77	86	99	71	34	1	4
30	R195.....	65	20	76	91	97	72	35	0	7
31	R196.....	72	22	76	88	98	74	35	1	5
32	R197.....	81	24	78	84	93	73	36	2	3
33	R198.....	72	24	78	84	96	77	38	1	20
	Average.....	71	23	78	86	97	72	33	1	8
H — Mean of three single-cross testers										
34	WF9×Oh43.....	89	20	79	87	95	71	28	0	4
35	WF9×B37.....	70	22	75	89	97	72	32	0	9
36	B41×Oh7A.....	51	27	71	72	99	72	38	1	6
	Average.....	70	23	75	83	97	72	33	0	6

Table 9. — HYBRIDS INVOLVING RELATED INBREDS
OF ILLINOIS 1570 MATURITY

Tested in Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Hybrids involving related inbreds									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	Hy2×WF9	60	19	77	94	98	29	0	6
2	(Hy2×R138)(WF9×R75)	73	20	81	97	96	36	4	21
3	(Hy2×R158)(WF9×R75)	73	20	80	94	93	39	2	16
4	Hy2×38-11	85	20	80	98	98	42	8	5
5	(Hy2×R138)(38-11×R76)	80	19	81	81	100	46	3	17
6	(Hy2×R158)(38-11×R76)	91	19	81	89	94	45	10	10
7	(Hy2×R138)(38-11×CI.38B)	84	19	80	93	97	41	5	9
8	(Hy2×R158)(38-11×CI.38B)	67	20	80	93	97	37	2	11
9	Hy2×Oh7	116	20	84	76	93	39	0	0
10	(Hy2×R138)(Oh7×Oh7A)	112	22	83	67	99	40	1	6
11	(Hy2×R158)(Oh7×Oh7A)	106	22	80	86	89	41	0	1
12	(Hy2×R138)(Oh7×Oh7B)	124	20	85	84	99	40	0	6
13	(Hy2×R158)(Oh7×Oh7B)	104	21	84	89	89	39	1	2
14	Hy2×Oh41	84	21	81	96	94	37	2	1
15	(Hy2×R138)(Oh41×R118)	63	21	78	85	98	42	0	4
16	(Hy2×R158)(Oh41×R118)	61	20	73	91	97	41	1	6
17	(Hy2×R138)(Oh41×CI.317B)	85	22	78	73	97	45	1	3
18	(Hy2×R158)(Oh41×CI.317B)	86	24	79	68	98	43	1	1
19	Hy2×187-2	60	19	82	96	96	36	1	12
20	(Hy2×R138)(187-2×W187R)	52	21	78	87	98	39	1	7
21	(Hy2×R158)(187-2×W187R)	55	20	79	90	99	38	4	3
22	(Hy2×R138)(187-2×R84)	56	20	83	85	96	41	2	5
23	(Hy2×R158)(187-2×R84)	49	19	78	93	96	38	3	7
24	WF9×38-11	83	18	81	94	100	37	3	7
25	(WF9×R75)(38-11×R76)	74	19	78	98	94	38	3	25
26	(WF9×R75)(38-11×CI.38B)	91	18	81	100	94	35	3	25
27	WF9×Oh7	99	20	83	97	96	31	0	5
28	(WF9×R75)(Oh7×Oh7A)	104	21	81	85	93	34	1	12
29	(WF9×R75)(Oh7×Oh7B)	95	18	79	98	95	30	0	7
30	WF9×Oh41	97	19	79	52	99	34	1	4
31	(WF9×R75)(Oh41×R118)	83	20	79	76	93	37	2	5
32	(WF9×R75)(Oh41×CI.317B)	89	23	77	64	97	40	1	5
33	WF9×187-2	68	20	83	100	93	35	1	13
34	(WF9×R75)(187-2×W187R)	72	18	81	85	100	34	1	14
35	(WF9×R75)(187-2×R84)	71	18	82	94	92	37	1	14
36	38-11×Oh7	109	21	80	86	97	39	0	15
37	(38-11×R76)(Oh7×Oh7A)	109	21	82	74	100	44	1	15
38	(38-11×CI.38B)(Oh7×Oh7A)	110	22	79	72	97	42	0	14
39	(38-11×R76)(Oh7×Oh7B)	108	22	82	74	96	43	0	15
40	(38-11×CI.38B)(Oh7×Oh7B)	102	20	83	89	100	41	0	24
41	38-11×Oh41	78	24	80	84	96	35	2	1
42	(38-11×R76)(Oh41×R118)	71	21	78	84	91	44	0	15
43	(38-11×CI.38B)(Oh41×R118)	72	21	76	87	97	42	0	6
44	(38-11×R76)(Oh41×CI.317B)	81	22	74	60	94	44	0	5
45	(38-11×CI.38B)(Oh41× CI.317B)	75	22	74	78	95	44	0	5
46	38-11×187-2	73	19	82	90	99	33	1	9
47	(38-11×R76)(187-2×W187R)	76	19	84	77	100	39	4	8
48	(38-11×CI.38B)(187-2×W187R)	76	20	85	87	99	35	3	14
49	(38-11×R76)(187-2×R84)	63	19	76	87	95	43	2	18
50	(38-11×CI.38B)(187-2×R84)	60	20	79	97	99	39	5	23
51	Oh7×Oh41	101	22	79	81	94	36	0	3
52	(Oh7×Oh7A)(Oh41×R118)	95	23	77	64	93	42	0	4
53	(Oh7×Oh7B)(Oh41×R118)	100	22	80	75	100	40	0	2
54	(Oh7×Oh7A)(Oh41×CI.317B)	113	25	79	45	99	45	1	2
55	(Oh7×Oh7B)(Oh41×CI.317B)	93	24	79	63	95	42	0	5

(Table is concluded on next page)

Table 9. — Concluded

Code	Entry	Acre yield	Moisture in grain	Shell-ing	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Hybrids involving related inbreds — concluded									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
56	(Oh7×187-2).....	108	20	84	71	99	36	0	6
57	(Oh7×Oh7A)(187-2×W187R)...	94	22	82	59	96	37	0	4
58	(Oh7×Oh7B)(187-2×W187R)...	97	19	82	56	94	37	0	4
59	(Oh7×Oh7A)(187-2×R84).....	103	21	82	60	99	39	0	7
60	(Oh7×Oh7B)(187-2×R84).....	98	22	82	74	97	36	0	7
61	Oh41×187-2.....	82	22	80	61	80	40	0	4
62	(Oh41×R118)(187-2×W187R)...	64	22	81	67	96	40	1	6
63	(Oh41×CI.317B)(187-2× W187R).....	65	26	80	45	95	41	0	2
64	(Oh41×R118)(187-2×R84).....	55	21	77	76	99	40	1	12
65	(Oh41×CI.317B)(187-2×R84)...	57	24	76	64	88	44	2	19
	Average.....	84	21	80	81	96	39	1	9
B — Sister-line crosses									
66	R138×R158.....	72	21	79	85	93	38	4	4
67	R158×CI.42A.....	74	22	82	75	97	39	8	7
	Average.....	73	22	80	80	95	38	6	6
C — Double crosses									
68	Ill. 1332.....	90	19	82	94	99	37	1	7
69	Ill. 1570.....	79	23	79	90	96	37	2	7
70	Ill. 3049.....	71	22	81	92	96	35	1	3
71	Ill. 6021.....	55	21	78	86	94	40	1	19
72	Ill. 6052.....	52	22	78	81	96	40	2	11
	Average.....	69	21	80	89	96	38	1	9
	Average of 72 entries.....	82	21	80	81	96	39	2	9

Table 10. — DOUBLE CROSSES OF ILLINOIS 1851 MATURITY
Tested in South-Central Illinois, 1957-1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Three-year averages, 1957-1959									
		<i>bu.</i>	<i>percl.</i>	<i>percl.</i>	<i>percl.</i>	<i>percl.</i>	<i>in.</i>	<i>percl.</i>	<i>percl.</i>
1	Ill. 1851.....	105	26	77	85	99	49	...	4
2	Ill. 1660.....	103	28	77	82	98	45	...	1
3	Ill. 3133.....	99	26	80	86	99	45	...	4
4	Ill. 1539A.....	98	29	77	90	98	49	...	3
5	Ill. 1928.....	97	27	78	94	99	46	...	6
6	U.S. 523W.....	97	29	76	69	99	44	...	2
7	Ill. 1852.....	96	28	73	81	96	45	...	2
8	Ill. 3129.....	96	26	78	86	99	45	...	4
9	Ill. 3140.....	96	28	76	80	99	49	...	3
10	Ill. 3147.....	95	26	78	79	99	47	...	4
11	Ill. 1856.....	94	28	74	96	99	44	...	4
12	Ill. 3126.....	94	25	79	90	97	45	...	2
13	Ill. 3145.....	94	27	77	90	96	45	...	8
14	Ill. 3135.....	94	27	76	94	98	46	...	1
15	Ill. 1850.....	94	28	74	89	97	46	...	3
16	Ill. 1849.....	94	28	72	96	99	45	...	1
17	Ill. 1893.....	94	25	75	92	99	47	...	4
18	Ill. 1913.....	93	22	82	89	99	44	...	2
19	Ill. 3149.....	93	25	79	94	96	43	...	3
20	Ill. 1909.....	92	24	80	90	95	44	...	7
21	Ill. 1918.....	91	26	79	86	97	44	...	2
22	Ill. 1948.....	91	27	79	79	98	45	...	1
23	Ill. 3131.....	91	27	78	81	97	47	...	4
24	Ill. 1332.....	90	25	79	91	98	44	...	6
25	AES 805.....	89	24	77	93	98	44	...	7
26	Ill. 3136.....	89	25	78	94	99	43	...	1
27	Ill. 1570.....	88	25	77	89	98	43	...	1
28	Ill. 1935.....	88	23	78	88	99	43	...	7
29	Ill. 200.....	88	26	78	74	97	46	...	5
30	U.S. 13.....	87	26	78	76	97	46	...	2
31	Ill. 1889.....	81	25	76	91	98	43	...	12
	Average.....	93	26	77	87	98	45	...	4
B — Two-year averages, 1958-1959									
1	Ill. 3190.....	125	20	82	94	98	46	...	4
2	Ill. 3198A.....	122	20	84	84	99	46	...	4
3	Kan. 4003.....	122	20	86	78	99	46	...	4
4	Ky. 105.....	120	20	82	88	97	45	...	6
5	Ill. 1660.....	119	21	83	93	98	44	...	1
6	Ky. 5712W.....	117	21	81	97	100	42	...	3
7	Ill. 3193.....	116	19	84	90	98	44	...	3
8	Ill. 3192A.....	116	20	82	84	96	46	...	2
9	Ill. 1851.....	114	20	82	90	99	46	...	6
10	Ill. 3204A.....	114	20	80	96	99	46	...	4
11	Ill. 3214.....	114	20	82	85	100	44	...	6
12	Ill. 1856.....	113	20	82	95	99	44	...	6
13	Ill. 3197B.....	112	20	80	94	98	43	...	4
14	Ill. 3210.....	112	21	80	96	97	46	...	8
15	Ill. 1852.....	112	19	80	88	98	43	...	3
16	U.S. 523W.....	112	21	81	80	99	43	...	4
17	Ill. 1849.....	112	20	80	99	100	43	...	2
18	Ill. 3192.....	112	20	82	86	94	45	...	0
19	Ill. 1539A.....	111	20	80	96	99	46	...	4
20	Ill. 3135.....	111	18	82	93	99	46	...	1

(Table is continued on next page)

Table 10. — Continued

Rank in yield	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Ear height	Dropped ears	Smut
B — Two-year averages, 1958-1959 — continued									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
21	Ill. 3140.....	111	20	82	97	100	45	...	5
22	Ill. 3133.....	110	20	84	90	99	44	...	6
23	Ill. 3206.....	110	21	80	96	98	43	...	4
24	Ill. 1850.....	108	20	78	96	96	45	...	4
25	Ill. 3131.....	108	18	82	82	99	46	...	6
26	Ill. 3145.....	108	20	82	91	98	45	...	10
27	Ill. 1928.....	107	20	82	96	99	44	...	10
28	Ill. 3129.....	105	19	82	90	99	42	...	6
29	Ill. 3147.....	104	18	81	84	99	46	...	6
30	U.S. 13.....	104	18	83	83	99	44	...	4
31	Ill. 3149.....	102	18	82	93	97	41	...	4
32	Ill. 1909.....	102	18	84	84	97	42	...	10
33	Ill. 3126.....	102	20	82	90	97	43	...	3
34	Ill. 1893.....	102	18	78	94	98	44	...	6
35	Ill. 1332.....	100	17	82	90	98	42	...	8
36	Ill. 1913.....	100	18	86	88	99	42	...	3
37	Ill. 1918.....	100	20	83	83	98	44	...	3
38	Ill. 1948.....	98	22	82	81	100	42	...	2
39	Ill. 1570.....	96	18	82	87	98	42	...	2
40	Ill. 3136.....	94	18	80	92	99	41	...	2
41	Ill. 200.....	94	18	80	75	96	44	...	8
42	AES 805.....	92	18	81	93	99	42	...	10
43	Ky. 5708.....	92	20	77	86	99	42	...	4
44	Ill. 1935.....	88	17	80	89	98	40	...	11
45	Ill. 1889.....	84	19	79	92	98	42	...	18
	Average.....	107	19	82	90	98	44	...	5
C — 1959 results (2 replications)									
1	AES 904W.....	141	24	79	84	100	42	0	8
2	Ky. 105.....	126	21	81	95	98	40	0	2
3	Tenn. 7110W.....	123	23	78	91	100	38	2	2
4	Kan. 4003.....	122	22	83	70	100	40	1	4
5	Ill. 3190.....	121	23	79	92	98	42	0	6
6	Ill. 3198A.....	118	22	81	76	100	42	0	1
7	Ky. 5712W.....	118	24	80	98	100	40	1	0
8	Mo. 881.....	118	24	78	87	99	40	0	4
9	Tenn. 7015.....	118	24	80	81	100	43	1	6
10	U.S. 642.....	117	25	79	72	100	42	0	5
11	Ill. 3154.....	115	24	78	82	100	39	0	2
12	Tenn. 5005.....	114	22	79	80	100	40	0	2
13	Tenn. 7018.....	114	22	83	77	95	42	0	7
14	Ill. 1660.....	113	23	81	92	99	40	1	1
15	Ill. 3157.....	112	20	81	54	100	42	2	4
16	Ill. 3214.....	112	23	79	76	100	42	0	2
17	Ill. 3251.....	112	23	80	85	100	42	4	0
18	U.S. 523W.....	112	24	78	69	100	40	4	4
19	U.S. 658.....	112	22	79	82	98	42	3	8
20	Ill. 1851.....	111	22	79	86	100	40	2	8
21	Ill. 3133.....	111	22	82	86	99	40	4	2
22	Ill. 3197B.....	111	22	78	92	100	40	0	2
23	Ill. 3362.....	111	22	81	91	100	40	0	10
24	Ill. 3140.....	110	22	80	95	100	40	1	2
25	Ill. 3192.....	110	23	79	79	100	42	2	0
26	Ill. 3193.....	110	22	81	85	100	40	4	2
27	Ill. 3135.....	109	20	81	88	100	40	2	2
28	Ill. 3204A.....	108	23	78	95	100	41	2	1
29	Ill. 3252.....	108	23	77	99	95	39	0	3
30	Ill. 3360.....	107	21	81	85	100	38	1	5
31	Kan. 2446W.....	107	22	76	85	100	40	1	2
32	Ill. 1539A.....	105	23	77	92	99	40	2	3
33	Ill. 1852.....	105	21	77	81	99	39	0	5
34	Ill. 1856.....	104	23	78	95	100	38	1	10
35	Ill. 3145.....	104	22	80	86	99	42	1	16

(Table is concluded on next page)

Table 10. — Concluded

Rank in yield	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Ear height	Dropped ears	Smut
C — 1959 results (2 replications) — concluded									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
36	Ill. 3192A.....	104	21	79	74	96	43	1	3
37	Ill. 1849.....	103	22	76	99	100	40	4	2
38	Ill. 3206.....	103	24	78	96	99	38	1	4
39	Ill. 3337B.....	103	20	82	86	95	40	1	5
40	Mo. 916.....	103	24	76	97	85	40	0	6
41	Tenn. 501W.....	103	23	76	80	95	38	1	4
42	Tenn. 8106W.....	103	23	78	84	100	38	1	11
43	Ill. 1332.....	102	19	80	92	100	39	0	12
44	Ill. 1928.....	101	23	79	99	99	40	1	18
45	Ill. 3131.....	101	20	81	72	100	40	0	6
46	Ill. 3210.....	101	24	77	97	94	42	1	4
47	Ill. 3335.....	101	21	78	79	95	40	4	3
48	Ill. 3355.....	101	22	81	92	100	36	4	0
49	Ill. 6021.....	101	21	80	89	99	40	3	8
50	U.S. 13.....	101	21	80	79	100	40	2	5
51	Ark. 5614.....	100	22	80	70	100	43	4	4
52	Ill. 6115.....	100	20	85	76	100	40	4	2
53	Ill. 1850.....	99	22	74	97	94	40	1	5
54	Ill. 3337A.....	99	19	80	85	100	39	0	4
55	Ill. 3129.....	97	22	79	88	100	38	1	1
56	Ill. 3149.....	97	20	80	94	100	37	1	4
57	Ill. 3341A.....	97	19	80	88	100	40	1	6
58	Ill. 1909.....	96	20	81	81	96	41	5	17
59	Ill. 1948.....	96	25	80	70	100	38	0	1
60	Ill. 3147.....	96	20	79	73	99	40	4	11
61	Ill. 3250.....	96	24	79	71	100	40	0	1
62	Ill. 3341.....	96	20	81	72	99	39	0	11
63	Kan. 2561W.....	96	22	77	99	100	34	4	8
64	Ill. 3337.....	95	19	79	75	100	37	1	0
65	VPI 653.....	95	22	80	90	98	37	3	5
66	Ill. 1570.....	94	20	79	82	99	38	1	2
67	Ill. 3126.....	94	22	78	87	94	39	0	5
68	N.C. 5113.....	94	25	83	86	90	40	5	9
69	Ill. 1918.....	93	23	81	72	100	38	2	5
70	Ill. 1964.....	93	20	79	72	100	40	4	9
71	Ill. 3339A.....	92	20	80	91	99	38	3	4
72	Ill. 6052.....	92	22	80	72	99	40	4	10
73	VPI 648.....	92	23	76	99	100	38	0	14
74	Ill. 1893.....	90	20	74	94	99	38	4	5
75	Ill. 1913.....	89	20	82	78	100	36	5	4
76	Ill. 1996.....	87	20	80	86	100	40	0	0
77	Ill. 3338A.....	87	20	82	91	99	38	1	1
78	Ill. 200.....	86	20	79	71	100	40	0	10
79	Ill. 3336.....	86	20	79	67	96	40	0	0
80	Ill. 3339.....	86	20	79	91	100	38	0	6
81	Ill. 3049.....	85	22	81	86	100	34	1	1
82	Ill. 3136.....	85	21	78	92	100	36	0	2
83	Ill. 3339B.....	84	20	79	91	99	38	0	5
84	AES 805.....	81	20	79	92	100	39	5	15
85	Ill. 3340.....	80	21	74	90	98	40	3	8
86	Ill. 1935.....	79	19	76	91	100	37	1	14
87	Ill. 6001.....	78	24	79	69	100	35	0	6
88	Ill. 3338.....	78	21	78	87	96	38	1	5
89	Ill. 6109.....	76	20	77	79	100	36	1	8
90	Ky. 5708.....	70	23	73	82	100	36	0	2
91	Ill. 1889.....	57	22	74	95	99	36	0	23
	Average.....	101	22	79	85	99	39	1	5

Table 11. — THREE-WAY CROSSES AND STANDARDS
OF ILLINOIS 1851 MATURITY

Tested in South-Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic. Absence of boldface figures in some columns is due to lack of statistical information.)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Ear height	Dropped ears	Smut
A — Inbred lines crossed with (B41 × Oh7A)									
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R132.....	93	20	82	42	99	32	0	3
2	R134.....	113	22	79	66	100	36	5	0
3	R197.....	104	22	82	62	100	35	5	2
4	R198.....	101	24	83	34	99	36	13	4
5	K7-25.....	99	23	78	81	100	34	1	0
6	K7-47.....	110	23	81	75	100	36	0	10
7	K7-50.....	104	22	85	90	100	33	2	4
8	Mo5.....	92	21	78	59	100	29	0	8
9	Mo6.....	112	21	79	83	99	36	1	5
10	Mo7.....	99	24	78	37	98	38	0	8
11	Mo0225.....	117	24	78	95	100	36	4	5
12	Mo2788A.....	91	21	76	42	95	32	0	2
13	Mo9294.....	106	24	80	71	100	36	1	4
14	Mo11077.....	115	22	86	40	98	38	3	3
15	Mo61072.....	107	23	80	98	100	36	0	2
16	Ok2011.....	110	22	82	60	100	34	16	4
17	Ok2012.....	106	23	81	39	99	36	4	3
18	Ok2013.....	85	23	80	94	95	34	1	5
19	Ok4001.....	98	23	80	71	99	36	0	2
20	Ok4002.....	105	21	80	89	100	37	1	5
21	Ok4003.....	103	22	81	51	100	32	0	1
22	Ok7001.....	115	21	80	61	100	36	1	5
23	Ok7002.....	92	19	81	42	100	38	5	4
24	Va12C.....	102	21	74	96	99	35	1	4
25	Va23.....	89	23	80	93	94	31	0	3
26	Va27.....	117	21	79	54	100	36	2	0
27	Va29.....	118	29	81	61	100	36	4	0
28	Va35C.....	114	21	79	88	100	36	2	1
29	CI.31A.....	109	22	80	81	100	34	1	4
	Average.....	104	22	80	67	99	35	3	3
B — Standard checks									
31	Ill. 1851.....	112	20	80	73	99	38	0	4
30	B41 × Oh7A.....	103	21	81	78	91	34	6	1
33	U.S. 13.....	96	19	83	68	98	36	5	3
32	Ill. 1913.....	91	19	87	74	100	33	0	1
36	R158 × CI.42A.....	86	20	86	92	94	33	1	1
35	R138 × R158.....	78	20	83	83	92	35	0	0
34	Hy2 × R158.....	65	20	81	95	100	34	1	2
	Average.....	90	20	83	80	96	35	2	2
Average of 36 entries.....		102	22	81	70	98	35	2	3

Table 12.—THREE-WAY CROSSES AND STANDARDS

Tested in South-Central Illinois, 1959

(Data in boldface were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
A—Inbred lines crossed with (WF9 × Oh43)										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R71.....	89	19	82	96	100	60	25	3	4
2	R74.....	79	20	81	91	98	65	26	1	0
3	R74A.....	77	20	75	60	100	68	28	1	5
4	R76.....	97	20	81	94	98	70	31	3	17
5	R78.....	88	20	80	91	98	62	28	4	7
6	R84.....	96	20	79	89	100	64	30	4	3
7	R101.....	83	19	81	95	100	63	29	1	6
8	R104.....	87	19	84	90	100	57	29	4	4
9	R109B.....	90	21	81	100	100	65	29	1	6
10	R112.....	96	19	82	92	98	67	27	0	6
11	R113.....	55	20	76	97	98	60	27	0	1
12	R114.....	82	19	80	99	100	70	31	3	11
13	R132.....	108	20	82	85	100	62	29	1	0
14	R134.....	100	20	80	95	99	70	35	1	3
15	R135.....	74	20	83	90	91	63	30	1	9
16	R151.....	106	21	83	94	100	65	30	1	1
17	R154.....	95	19	83	85	100	62	27	1	1
18	R158.....	75	19	81	97	98	68	29	10	5
19	R159.....	89	20	81	95	100	66	27	1	8
20	R166.....	84	20	85	34	99	59	24	0	0
21	R168.....	89	18	85	99	100	65	27	3	3
22	R172.....	95	20	83	99	98	65	31	3	3
23	R180.....	89	19	83	89	100	65	29	1	4
24	R181.....	100	18	79	90	100	66	29	1	1
25	R182.....	77	18	82	100	100	68	30	4	1
26	R183.....	80	22	80	99	100	70	30	1	3
27	R192.....	93	20	79	99	100	64	29	0	18
28	R193.....	98	20	81	95	96	69	31	0	1
29	R194.....	99	21	82	94	100	65	32	0	3
30	R195.....	91	18	80	98	100	66	28	0	9
31	R196.....	96	20	81	99	98	69	34	1	1
32	R197.....	102	21	83	94	100	66	33	8	3
33	R198.....	105	21	83	90	99	69	32	8	13
	Average.....	90	20	81	92	99	65	29	2	5
B—Single crosses										
34	WF9×Oh43.....	100	19	84	99	98	65	26	0	5
35	WF9×B37.....	83	19	78	100	100	66	31	5	24
36	B41×Oh7A.....	116	22	80	84	100	71	34	2	2
	Average.....	100	20	81	94	99	67	30	2	10
C—Inbred lines crossed with (WF9 × B37)										
1	R71.....	97	22	79	96	100	74	37	1	1
2	R74.....	100	19	81	99	100	66	29	5	3
3	R74A.....	57	20	70	98	100	69	33	3	11
4	R76.....	81	20	78	100	100	71	33	3	15
5	R78.....	89	20	81	94	93	66	31	0	6
6	R84.....	89	19	81	89	100	63	31	0	6
7	R101.....	84	19	82	91	100	63	28	1	9
8	R104.....	90	19	84	59	98	71	34	1	3
9	R109B.....	94	20	81	93	95	66	29	1	3
10	R112.....	93	19	82	96	100	66	31	0	8
11	R113.....	67	20	77	100	100	66	32	0	4
12	R114.....	87	19	78	100	100	79	39	0	5
13	R132.....	97	18	82	60	100	65	31	0	3
14	R134.....	104	20	78	97	96	76	37	5	0
15	R135.....	70	19	80	98	100	68	34	4	14

(Table is continued on next page)

Table 12. — Continued

Code	Entry	Acre yield	Moisture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
C — Inbred lines crossed with (WF9 × B37) — concluded										
		<i>bu.</i>	<i>percl.</i>	<i>percl.</i>	<i>percl.</i>	<i>percl.</i>	<i>in.</i>	<i>in.</i>	<i>percl.</i>	<i>percl.</i>
16	R151.....	105	21	83	94	96	75	34	3	8
17	R154.....	101	20	83	96	100	66	29	1	4
18	R158.....	71	19	80	98	100	72	33	4	5
19	R159.....	87	19	78	99	100	67	31	0	10
20	R166.....	89	18	86	78	100	64	28	0	1
21	R168.....	84	19	80	98	100	67	33	1	5
22	R172.....	101	19	82	99	100	65	32	1	4
23	R180.....	76	19	82	93	93	68	33	3	7
24	R181.....	94	18	79	93	100	69	28	0	9
25	R182.....	72	18	81	100	96	64	29	0	3
26	R183.....	86	20	80	100	99	74	35	0	3
27	R192.....	97	21	80	96	100	73	32	0	15
28	R193.....	90	19	82	96	100	72	33	1	3
29	R194.....	101	20	81	93	100	70	30	0	3
30	R195.....	76	18	79	96	100	67	35	1	4
31	R196.....	79	19	79	100	95	69	36	1	7
32	R197.....	103	20	82	90	96	73	36	1	3
33	R198.....	104	20	82	94	99	73	35	4	19
	Average.....	88	19	80	93	99	69	32	1	6
D — Single crosses										
34	WF9×Oh43.....	106	19	85	95	100	65	30	1	1
35	WF9×B37.....	88	19	79	100	100	71	32	2	15
36	B41×Oh7A.....	102	22	81	91	95	72	34	3	1
	Average.....	99	20	82	96	98	69	32	2	6
E — Inbred lines crossed with (B41 × Oh7A)										
1	R71.....	106	22	82	91	98	65	33	0	3
2	R74.....	98	21	81	100	98	63	26	0	3
3	R74A.....	74	20	74	99	100	67	32	1	9
4	R76.....	107	20	81	96	100	77	39	4	21
5	R78.....	82	22	80	90	99	62	32	1	1
6	R84.....	83	20	80	94	100	68	34	0	8
7	R101.....	75	20	83	82	99	65	33	0	5
8	R104.....	99	19	85	64	100	68	37	0	1
9	R109B.....	89	21	81	99	100	67	33	1	1
10	R112.....	90	20	81	94	100	61	28	1	4
11	R113.....	59	21	77	99	99	63	31	0	0
12	R114.....	72	19	77	96	99	74	35	1	10
13	R132.....	93	20	83	43	100	70	33	0	1
14	R134.....	114	21	78	94	99	78	38	1	0
15	R135.....	80	20	81	87	99	74	38	0	15
16	R151.....	112	21	85	92	96	71	39	3	4
17	R154.....	88	20	84	71	100	67	33	0	0
18	R158.....	79	19	82	96	98	73	32	1	0
19	R159.....	90	22	80	99	100	70	34	0	15
20	R166.....	89	20	86	35	99	61	30	1	1
21	R168.....	90	19	84	94	100	64	33	1	6
22	R172.....	103	19	83	98	98	65	32	1	1
23	R180.....	89	21	81	91	99	72	34	3	4
24	R181.....	104	18	82	58	99	76	36	1	1
25	R182.....	85	20	81	98	100	70	31	1	0
26	R183.....	95	22	80	98	100	77	39	0	5
27	R192.....	101	23	82	82	99	74	36	1	12
28	R193.....	98	20	83	89	100	66	31	0	1
29	R194.....	94	21	81	91	100	69	35	0	3
30	R195.....	97	19	83	90	100	65	32	0	3
31	R196.....	107	21	81	98	100	66	32	3	1
32	R197.....	103	21	81	80	99	66	34	8	4
33	R198.....	102	22	83	70	100	69	34	5	10
	Average.....	92	20	81	87	99	69	34	1	5

(Table is concluded on next page)

Table 12. — Concluded

Code	Entry	Acre yield	Moisture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
F — Single crosses										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
34	WF9×Oh43.....	95	19	86	95	94	63	26	0	1
35	WF9×B37.....	74	19	80	99	100	65	30	2	12
36	B41×Oh7A.....	108	22	80	80	100	74	37	0	1
	Average.....	92	20	82	91	98	67	31	1	5
G — Mean of inbred lines crossed with three testers										
1	R71.....	97	21	81	95	99	66	32	1	3
2	R74.....	93	20	81	97	98	65	27	2	2
3	R74A.....	69	20	73	98	100	68	31	2	8
4	R76.....	95	20	80	97	99	73	34	3	18
5	R78.....	86	21	80	92	96	63	30	2	5
6	R84.....	89	20	80	90	100	65	31	1	5
7	R101.....	80	19	82	90	100	64	30	1	7
8	R104.....	92	19	84	71	99	65	33	2	3
9	R109B.....	91	21	81	97	98	66	30	1	3
10	R112.....	93	19	82	94	99	65	29	0	6
11	R113.....	60	20	76	99	99	63	30	0	2
12	R114.....	80	19	78	98	100	74	35	1	9
13	R132.....	99	19	82	63	100	65	31	0	1
14	R134.....	106	21	79	95	98	75	36	3	1
15	R135.....	75	20	81	92	97	68	34	2	13
16	R151.....	107	21	84	93	98	70	34	2	4
17	R154.....	94	20	84	84	100	65	30	1	2
18	R158.....	75	19	81	97	98	71	31	5	3
19	R159.....	89	20	80	98	100	68	30	0	11
20	R166.....	87	19	86	49	99	61	27	0	1
21	R168.....	88	19	83	97	100	65	31	2	5
22	R172.....	100	20	83	98	98	65	32	2	3
23	R180.....	85	20	82	91	97	68	32	2	5
24	R181.....	99	18	80	80	100	70	31	1	4
25	R182.....	78	19	81	99	99	67	30	2	1
26	R183.....	87	21	80	99	100	74	35	0	3
27	R192.....	97	21	80	92	100	70	32	0	15
28	R193.....	95	20	82	93	99	69	32	0	2
29	R194.....	98	21	82	93	100	68	32	0	3
30	R195.....	88	19	80	95	100	66	32	0	5
31	R196.....	94	20	80	99	98	68	34	2	3
32	R197.....	102	21	82	88	98	68	34	5	3
33	R198.....	104	21	83	85	99	70	34	5	14
	Average.....	90	20	81	91	99	68	32	2	5
H — Mean of three single-cross testers										
34	WF9×Oh43.....	100	19	85	96	97	64	27	0	2
35	WF9×B37.....	82	19	79	99	100	67	31	3	17
36	B41×Oh7A.....	109	22	80	85	98	72	35	2	1
	Average.....	97	20	81	93	98	68	31	2	7

Table 13. — STATE-WIDE PERFORMANCE OF ILLINOIS
THREE-WAY CROSSES AND STANDARDS

Tested in Illinois, 1959

(Data in boldface were not statistically different
from the best performance for that characteristic)

Code	Entry	Acre yield	Moisture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
A — Inbred lines crossed with (WF9 × Oh43)										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R71.....	98	22	82	94	99	71	31	2	4
2	R74.....	81	23	79	92	98	73	31	0	1
3	R74A.....	71	23	74	97	97	75	31	1	7
4	R76.....	98	23	79	81	94	80	39	6	9
5	R78.....	94	23	81	83	96	73	34	4	5
6	R84.....	86	22	79	87	95	73	37	4	6
7	R101.....	90	22	80	90	99	75	34	1	8
8	R154.....	90	22	83	86	99	71	34	2	5
9	R109B.....	92	23	81	97	94	74	34	1	3
10	R112.....	100	21	82	88	96	76	32	2	8
11	R113.....	79	21	76	88	98	71	33	0	3
12	R114.....	82	21	79	95	97	81	35	1	9
13	R132.....	101	23	80	73	100	74	35	1	2
14	R134.....	108	23	79	94	95	82	39	2	3
15	R135.....	82	22	83	80	92	74	35	5	9
16	R151.....	114	23	83	89	99	77	35	2	3
17	R154.....	108	22	82	78	97	76	34	1	3
18	R158.....	86	21	81	94	99	80	35	7	3
19	R159.....	84	23	79	94	98	72	31	1	4
20	R166.....	85	23	83	59	96	66	29	0	2
21	R168.....	100	20	84	92	99	73	32	2	3
22	R172.....	105	22	82	94	99	76	36	1	2
23	R180.....	84	23	79	85	98	72	32	4	5
24	R181.....	105	19	79	80	98	76	33	1	1
25	R182.....	83	21	81	96	96	78	35	4	3
26	R183.....	69	23	78	90	99	80	36	1	5
27	R192.....	93	23	79	91	99	77	34	1	12
28	R193.....	97	22	80	87	97	78	33	1	3
29	R194.....	92	24	80	82	99	75	36	1	3
30	R195.....	88	21	79	93	99	77	35	1	6
31	R196.....	92	22	80	96	99	78	38	3	2
32	R197.....	105	25	81	88	97	77	38	5	2
33	R198.....	103	24	82	85	98	79	37	4	13
	Average.....	92	22	80	88	97	75	34	2	5
	Tester WF9×Oh43.....	98	22	81	93	97	75	32	2	3
B — Inbred lines crossed with (WF9 × B37)										
1	R71.....	98	25	77	95	95	80	37	3	3
2	R74.....	94	24	78	98	89	77	34	3	5
3	R74A.....	52	24	69	95	99	80	35	2	8
4	R76.....	81	23	77	94	96	82	39	3	16
5	R78.....	87	24	79	84	96	77	33	1	9
6	R84.....	68	22	76	90	99	77	38	1	12
7	R101.....	86	22	79	92	98	74	34	0	8
8	R104.....	87	22	82	71	98	78	38	2	3
9	R109B.....	85	24	78	94	95	78	35	1	6
10	R112.....	93	22	80	93	98	76	35	2	9
11	R113.....	78	22	75	95	99	74	37	1	6
12	R114.....	85	23	76	96	99	85	40	0	4
13	R132.....	97	22	79	58	98	75	36	1	5
14	R134.....	97	24	76	97	95	83	39	6	4
15	R135.....	75	23	79	87	89	79	40	4	16

(Table is continued on next page)

Table 13.—Continued

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
B—Inbred lines crossed with (WF9 × B37)—concluded										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
16	R151	111	24	80	90	98	84	40	3	4
17	R154	105	22	81	83	98	80	37	1	4
18	R158	75	21	77	95	95	84	38	4	6
19	R159	78	23	76	97	99	77	36	0	9
20	R166	91	23	82	85	98	73	34	1	5
21	R168	97	21	80	98	98	75	34	0	8
22	R172	95	23	78	97	100	76	37	1	4
23	R180	79	22	79	94	95	74	35	4	8
24	R181	103	21	78	93	99	79	34	1	5
25	R182	69	21	77	98	88	79	35	1	5
26	R183	61	24	76	99	97	81	40	0	4
27	R192	94	24	77	93	98	82	37	0	13
28	R193	83	23	78	90	99	79	35	2	4
29	R194	95	25	79	93	98	78	38	1	5
30	R195	82	21	77	93	97	77	39	1	6
31	R196	88	23	77	93	98	81	40	1	7
32	R197	105	25	79	82	96	81	41	2	3
33	R198	89	25	78	88	97	83	41	5	18
	Average	87	23	78	91	97	79	37	2	7
	Tester WF9 × B37	79	23	76	95	99	77	36	2	12
C—Inbred lines crossed with (B41 × Oh7A)										
1	R71	97	26	80	90	98	77	40	1	3
2	R74	102	25	79	93	99	76	36	0	3
3	R74A	38	26	72	98	100	74	37	2	11
4	R76	96	25	77	84	100	85	46	2	16
5	R78	70	26	79	70	99	75	39	0	9
6	R84	55	24	77	90	99	76	42	2	9
7	R101	69	23	80	86	99	76	39	1	8
8	R104	91	23	82	74	96	76	41	1	4
9	R109B	81	26	78	95	99	78	42	1	5
10	R112	82	24	80	92	99	74	35	2	9
11	R113	59	24	76	97	99	70	39	0	6
12	R114	75	23	76	91	98	82	41	1	9
13	R132	79	24	79	53	98	79	41	2	4
14	R134	94	26	78	90	99	82	42	5	3
15	R135	54	24	80	89	99	79	42	3	12
16	R151	109	25	81	86	98	82	43	4	6
17	R154	96	23	81	66	100	79	41	2	1
18	R158	75	23	80	96	97	84	41	4	1
19	R159	67	27	76	97	100	78	39	0	8
20	R166	79	24	81	48	99	72	37	1	3
21	R168	93	22	83	96	95	75	39	1	10
22	R172	91	23	81	92	97	78	41	1	5
23	R180	76	24	78	83	99	75	37	3	3
24	R181	102	21	79	67	99	81	40	1	4
25	R182	79	23	79	97	99	78	38	2	1
26	R183	67	25	79	95	98	81	44	1	4
27	R192	80	26	77	80	99	81	42	0	11
28	R193	84	24	78	87	100	77	37	3	2
29	R194	63	27	78	91	99	77	41	2	4
30	R195	77	23	78	93	99	76	42	1	6
31	R196	85	24	77	90	98	78	41	2	2
32	R197	90	26	78	84	97	76	41	4	3
33	R198	81	26	80	72	99	81	46	2	11
	Average	80	24	79	85	99	78	40	2	6
	Tester B41 × Oh7A	68	28	74	68	98	79	41	1	3

(Table is concluded on next page)

Table 13.—Concluded

Code	Entry	Acre yield	Mois- ture in grain	Shell- ing	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
D — Mean of inbred lines crossed with three testers and grown at three locations										
		<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>
1	R71.....	98	25	80	93	97	76	36	2	3
2	R74.....	93	24	79	94	95	75	34	1	3
3	R74A.....	54	24	72	96	99	76	35	1	8
4	R76.....	92	24	78	86	97	82	41	4	13
5	R78.....	83	24	80	79	97	75	35	2	8
6	R84.....	70	23	78	89	98	75	39	3	9
7	R101.....	81	22	80	89	99	75	35	1	8
8	R104.....	89	22	82	77	98	75	38	2	4
9	R109B.....	86	24	79	95	96	76	37	1	4
10	R112.....	92	23	81	91	98	75	34	2	9
11	R113.....	72	22	76	93	99	72	36	0	5
12	R114.....	81	22	77	94	98	83	38	1	7
13	R132.....	92	23	80	61	98	76	37	1	3
14	R134.....	100	24	78	93	96	82	40	4	3
15	R135.....	70	23	81	85	93	77	39	4	12
16	R151.....	111	24	81	88	98	81	39	3	5
17	R154.....	103	22	82	76	98	78	37	2	3
18	R158.....	79	22	79	95	97	83	38	5	3
19	R159.....	76	24	77	96	99	76	36	1	7
20	R166.....	85	23	82	64	98	70	34	1	3
21	R168.....	97	21	82	95	97	74	35	1	7
22	R172.....	97	23	80	94	99	76	38	1	4
23	R180.....	79	23	79	88	97	74	35	3	5
24	R181.....	104	20	79	80	99	79	36	1	3
25	R182.....	77	22	79	97	94	78	36	2	3
26	R183.....	66	24	78	95	98	81	40	1	4
27	R192.....	89	24	78	88	99	80	38	0	12
28	R193.....	88	23	79	88	99	78	35	2	3
29	R194.....	84	25	79	89	99	76	38	1	4
30	R195.....	82	21	78	93	98	77	39	1	6
31	R196.....	89	23	78	93	98	79	39	2	4
32	R197.....	100	25	79	85	97	78	40	4	3
33	R198.....	91	25	80	82	98	81	41	4	14
	Average.....	86	23	79	88	98	77	37	2	6
	Average of 3 testers.....	82	24	77	85	98	77	36	2	6

Entry	Acre yield	Oil		Protein		Moisture in grain		Shelling	Erect plants	Stand	Ear height	Smut
		perct.	lb. per acre	perct.	lb. per acre	perct.	perct.					
A — Northern Illinois, DeKalb, 1958												
Ill. 6052 ^b	124	5.44	378	10.44	725	40	83	66	99	59	..	..
U.S. 13.....	122	4.49	307	9.44	645	34	76	69	100	57	..	..
Ill. 6021 ^b	102	5.41	309	9.00	514	39	75	48	98	62	..	..
Average.....	116	5.11	331	9.63	628	38	78	61	99	59	..	..
B — North-Central Illinois, Peoria, 1958-1959												
Ill. 6052 ^b	106	6.73	399	10.10	600	22	80	74	90 ^a	58	8	8
Ill. 6021 ^b	104	5.72	333	9.50	553	20	82	81	96	58	8	8
Average.....	105	6.22	366	9.80	576	21	81	78	98	58	8	8
C — Central Illinois, Urbana, 1954-1959												
U.S. 13.....	110	4.72	291	10.30	634	20	..	86	..	..	..	..
Ill. 6052 ^b	103	6.37	367	11.32	653	22	..	81	..	..	..	..
Ill. 6021 ^b	102	6.31	360	11.11	635	20	..	84	..	..	..	..
Average.....	105	5.80	339	10.91	641	21	..	84	..	..	..	..
D — Central Illinois, Urbana, 1958-1959												
R182(38-11 × K4).....	97	5.13	279	10.20	554	..	..	95	97	..	..	..
R158(38-11 × K4).....	97	5.05	274	11.02	599	..	..	91	98	..	..	..
U.S. 13.....	96	4.80	237	9.80	527	..	..	92	98	..	..	..
Ill. 6021 ^b	92	5.92	305	10.49	540	..	..	86	98	..	..	..
R199(38-11 × K4).....	88	5.64	278	9.76	481	..	..	88	96	..	..	..
Ill. 6115.....	88	5.25	259	11.11	548	..	..	90	98	..	..	..
R207(38-11 × K4).....	88	4.49	221	10.17	501	..	..	94	98	..	..	..
Ill. 6052 ^b	86	6.36	306	10.67	514	..	..	78	95	..	..	..
Ill. 6109.....	86	5.22	251	11.02	531	..	..	87	96	..	..	..
R213(38-11 × K4).....	84	5.50	259	10.06	473	..	..	92	97	..	..	..
Ill. 6062.....	82	6.04	277	11.09	509	..	..	84	97	..	..	..
Ill. 6001 ^b	78	6.88	300	10.39	454	..	..	88	98	..	..	..
R183(38-11 × K4).....	78	5.38	235	10.97	479	..	..	88	98	..	..	..
R85(38-11 × K4).....	76	4.98	212	11.75	500	..	..	88	93	..	..	..
R120(38-11 × K4).....	75	4.87	205	12.58	528	..	..	96	96	..	..	..
Average.....	86	5.41	260	10.74	516	..	..	89	97	..	..	..
E — South-Central Illinois, Brownstown, 1958-1959												
Ill. 6021 ^b	105	6.28	369	10.30	606	18	83	88	98	46	5	5
U.S. 13.....	104	4.58	267	10.08	587	18	84	89	96	43	3	3
Ill. 6052 ^b	102	5.82	332	10.75	614	18	83	84	96	46	7	7
Average.....	104	5.56	323	10.38	602	18	83	87	97	45	5	5

^a Data not analyzed statistically. ^b Available for commercial production.

Table 15.—DOUBLE-CROSS HYBRID NUMBERS,
PEDIGREES, AND INDEX TO TABLES

(The order of the single crosses does not indicate
which should be used as seed or pollen parent.)

Hybrid	Pedigree	Table No.
AES 510	(WF9 x W22) (H19 x B9)	2ABC
AES 514	(B14 x A239) (A295 x W64A)	2ABC
AES 601	(M14 x B14) (WF9 x W22)	2ABC
AES 610 (Ill. 1580)	(M14 x A73) (Oh43 x Oh51A)	2ABC
AES 702 (Ill. 1790)	(C103 x M14) (Hy2 x WF9)	2ABC, 4ABC, 6ABC
AES 703 (Ill. 3019A)	(WF9 x Oh43) (B14 x B38)	4ABC
AES 704 (Ill. 3016A)	(WF9 x Oh43) (B14 x B37)	4ABC
AES 705 (Ill. 3011)	(C103 x Oh43) (WF9 x B14)	4ABC, 5C, 6BC
AES 805 (Ill. 1770)	(C103 x Oh45) (WF9 x 38-11)	4ABC, 6ABC, 10ABC
AES 809	(C103 x Oh43) (P8 x WF9)	6ABC
AES 810	(WF9 x H50) (Oh7B x Oh45)	6ABC
AES 904W	(K64 x Mo22) (T111 x T115)	10C
III. 21	(Hy2 x 187-2) (WF9 x 38-11)	2ABC, 4ABC, 6ABC
III. 101	(M14 x WF9) (187-2 x W26)	2ABC
III. 200	(WF9 x 38-11) (L317 x K4)	10ABC
III. 1091A	(Hy2 x 187-2) (M14 x WF9)	2ABC
III. 1277	(M14 x WF9) (I.205 x 187-2)	2ABC
III. 1332	(Hy2 x Oh7) (WF9 x 38-11)	4ABC, 6ABC, 7C, 9C, 10ABC
III. 1332-3	(WF9 x 38-11) (Oh7 x Cl.42A)	6ABC
III. 1332-4	(HyR x Oh7) (WF9TMS x 38-11)	6ABC
III. 1539A	(38-11 x Cl.7) (K201 x Cl.21E)	10ABC
III. 1555A	(WF9 x Oh51A) (I.224 x Oh28)	2ABC
III. 1559B	(M14 x Oh28) (WF9 x Oh51A)	2ABC
III. 1560A	(WF9 x Oh51A) (I.205 x Oh28)	2ABC
III. 1570	(Hy2 x Oh41) (WF9 x 38-11)	4ABC, 6ABC, 9C, 10ABC
III. 1660	(K4 x K201) (Oh7 x Cl.21E)	10ABC
III. 1813	(C103 x Oh45) (Hy2 x WF9)	6ABC
III. 1831	(WF9 x W146) (K237 x Oh45)	4ABC
III. 1849	(C103 x 38-11) (K201 x Cl.21E)	10ABC
III. 1850	(C103 x Cl.21E) (38-11 x K201)	10ABC
III. 1851	(C103 x 38-11) (Oh7 x Cl.21E)	6ABC, 10ABC, 11B
III. 1852	(C103 x Cl.21E) (38-11 x Oh7)	10ABC
III. 1856	(38-11 x Oh7) (K201 x Cl.21E)	6ABC, 10ABC
III. 1862 (Iowa 4779)	(M14 x WF9) (Oh43 x Oh51A)	2ABC
III. 1864	(M14 x WF9) (Oh43 x W22)	2ABC
III. 1880	(R103 x R104) (WF9 x 38-11)	6ABC
III. 1889	(C103 x Oh45) (38-11 x Oh29)	10ABC
III. 1890	(C103 x Oh45) (R75 x 38-11)	6ABC
III. 1893	(C103 x 38-11) (Oh7B x Oh29)	6ABC, 10ABC
III. 1909	(R130 x R151) (WF9 x 38-11)	10ABC
III. 1913	(R151 x R154) (WF9 x 38-11)	10ABC, 11B
III. 1916	(R130 x R154) (WF9 x 38-11)	6ABC
III. 1918	(R151 x R153) (WF9 x 38-11)	6ABC, 10ABC
III. 1919	(R130 x R156) (WF9 x 38-11)	6ABC
III. 1921	(R71 x R105) (WF9 x 38-11)	4ABC, 6ABC
III. 1922	(Hy2 x WF9) (R71 x R105)	6ABC
III. 1926	(R71A x R74) (R75 x 38-11)	6ABC
III. 1928	(R75 x 38-11) (R98 x R105)	4ABC, 6ABC, 10ABC
III. 1935	(C103 x R101) (R75 x 38-11)	10ABC
III. 1936	(Hy2 x WF9) (M14 x B14)	2ABC

(Table is continued on next page)

Table 15.—Continued

Hybrid	Pedigree	Table No.
III. 1944	(R71 x R98) (R130 x R153)	6ABC
III. 1948	(R105 x R151) (R153 x R154)	10ABC
III. 1952	(M14 x B14) (A545 x W64A)	2ABC
III. 1955	(M14 x A297) (B14 x W64A)	2ABC
III. 1957	(M14 x A545) (B14 x W64A)	2ABC
III. 1958	(M14 x Oh26A) (B14 x A545)	2ABC
III. 1959 (Ind. 6225)	(M14 x W64A) (B14 x A297)	2ABC
III. 1960	(M14 x W64A) (B14 x A545)	2ABC
III. 1961	(B14 x A545) (A239 x W64A)	2ABC
III. 1962	(B14 x A545) (A297 x W64A)	2ABC
III. 1964	(R138 x R143) (R144 x WF9)	10C
III. 1966	(R163 x R165) (WF9 x B14)	4ABC
III. 1968	(R163 x R169) (WF9 x B14)	4ABC
III. 1969	(R165 x R168) (WF9 x B14)	4ABC
III. 1969A	(R165 x WF9) (R168 x B14)	2ABC
III. 1971	(R168 x R169) (WF9 x B14)	4ABC
III. 1976	(38-11 x Oh41) (Oh7 x Cl.21E)	6ABC
III. 1978	(C103 x 38-11) (WF9 x Oh7A)	6ABC
III. 1981	(WF9 x 38-11) (Oh7 x Cl.21E)	6ABC
III. 1983	(Hy2 x B14) (WF9 x 38-11)	6ABC
III. 1984	(Hy2 x WF9) (Oh29 x Oh41)	6ABC
III. 1987	(C103 x B10) (Hy2 x WF9)	6ABC
III. 1989	(Hy2 x WF9) (M14 x Oh29)	6ABC
III. 1992	(C103 x B14) (WF9 x Oh7A)	6ABC
III. 1994	(C103 x WF9) (Oh29 x Oh41)	6ABC
III. 1996	(C103 x B14) (Hy2 x Oh7)	4C, 6ABC, 10C
III. 3009	(B14 x B21) (A297 x W64A)	2ABC
III. 3010	(C103 x N24) (WF9 x B14)	4ABC
III. 3011A	(C103 x B14) (WF9 x Oh43)	4C, 6C
III. 3015B	(WF9 x N24) (B14 x B37)	4BC
III. 3016	(WF9 x B14) (B37 x Oh43)	5C
III. 3017	(WF9 x B14) (B37 x Oh45)	4ABC
III. 3020	(WF9 x B14) (N6 x Oh43)	4ABC
III. 3021	(WF9 x B14) (N6 x Oh45)	4ABC
III. 3022	(WF9 x B14) (N22A x Oh43)	4ABC
III. 3023A	(WF9 x B14) (N24 x Oh43)	4ABC
III. 3023B	(WF9 x N24) (B14 x Oh43)	4BC
III. 3026	(WF9 x B14) (N610 x Oh45)	4ABC
III. 3029	(WF9 x B14) (Oh43 x Oh45)	4ABC
III. 3030	(WF9 x B14) (Oh43 x Oh422)	4ABC
III. 3032	(WF9 x B38) (Oh28 x Oh43)	4ABC
III. 3039	(B37 x B38) (Oh28 x Oh43)	4ABC
III. 3042	(WF9 x B14) (B40 x Oh45)	4ABC
III. 3043	(R71 x R109B) (WF9 x B14)	2ABC, 4ABC
III. 3044A	(R109B x B14) (R113 x WF9)	4C
III. 3045A	(R109B x WF9) (R168 x B14)	4C
III. 3046	(R113 x R168) (WF9 x B14)	2ABC
III. 3049	(Hy2 x WF9) (R71 x R109B)	4C, 5C, 6ABC, 9C, 10C
III. 3055	(R109B x R168) (WF9 x 38-11)	6ABC
III. 3074	(R71 x R168) (R105 x R163)	6ABC
III. 3075	(Hy2 x WF9) (R95 x R101)	6ABC
III. 3080	(Hy2 x WF9) (R101 x Oh451)	6ABC
III. 3092	(Hy2 x WF9) (B38 x K720)	6ABC
III. 3093	(Hy2 x WF9) (B38 x N25)	6ABC
III. 3102	(R101 x Oh41) (WF9 x 38-11)	6C

(Table is continued on next page)

Table 15.—Continued

Hybrid	Pedigree	Table No.
III. 3104	(R109B x N25) (WF9 x 38-11)	6ABC
III. 3107	(R154 x B38) (WF9 x 38-11)	6ABC
III. 3115	(R127 x N35) (WF9 x 38-11)	6ABC
III. 3117	(R127 x R154) (WF9 x 38-11)	6ABC
III. 3119	(Hy2 x WF9) (R154 x B38)	6ABC
III. 3121	(Hy2 x WF9) (R127 x R154)	6ABC
III. 3124	(Hy2 x WF9) (R71 x R168)	6ABC
III. 3126	(R101 x Mo3) (38-11 x K201)	10ABC
III. 3129	(R101 x Mo8) (38-11 x K201)	10ABC
III. 3131	(R129 x Mo3) (38-11 x K201)	10ABC
III. 3133	(R127 x Mo3) (38-11 x K201)	10ABC
III. 3135	(R71A x Mo3) (38-11 x K201)	10ABC
III. 3136	(R74 x R101) (38-11 x K201)	10ABC
III. 3140	(38-11 x K201) (Ky126 x Cl.21E)	10ABC
III. 3145	(R129 x Mo9150) (38-11 x K201)	10ABC
III. 3147	(R118 x R129) (38-11 x K201)	10ABC
III. 3149	(R74 x R129) (38-11 x K201)	10ABC
III. 3151	(WF9 x 38-11) (B14 x Oh41)	6ABC
III. 3152	(M14 x WF9) (B14 x Oh43)	2ABC
III. 3152A	(M14 x B14) (WF9 x Oh43)	2C
III. 3152B	(M14 x Oh43) (WF9 x B14)	2C
III. 3152A1	(M14 x B14) (Oh43 x W64A)	2C
III. 3152B1	(M14 x Oh43) (B14 x W64A)	2C
III. 3152-1	(M14 x W64A) (B14 x Oh43)	2C
III. 3154	(R132 x R134) (K201C x Cl.21E)	10C
III. 3157	(R132 x R135) (R134 x R136)	10C
III. 3160	(WF9 x Oh7) (B14 x Oh43)	4ABC
III. 3167B	(WF9 x B37) (A545 x Oh43)	2BC
III. 3169B	(WF9 x Oh43) (B37 x Oh28)	2BC
III. 3173	(B14 x Oh43) (A545 x N24)	2BC
III. 3174	(B37 x Oh28) (A297 x Oh43)	2BC
III. 3176B	(B37 x Oh43) (A545 x Oh28)	2BC
III. 3179	(R101 x R105) (R151 x Cl.42A)	2C
III. 3182A	(R105 x WF9) (R151 x R154)	4C, 6C
III. 3182B	(R105 x R154) (R151 x WF9)	4C, 6C
III. 3183	(R105 x R153) (R154 x WF9)	6BC
III. 3183A	(R105 x R154) (R153 x WF9)	4C, 6C
III. 3184A	(R105 x WF9) (R154 x Cl.42A)	4C, 6C
III. 3186	(R151 x Cl.42A) (R154 x WF9)	6BC
III. 3190	(Cl03 x K201) (Ky126 x Oh7B)	10BC
III. 3192	(Cl03 x Oh7B) (Ky126 x N82481)	10BC
III. 3192A	(Cl03 x Ky126) (N82481 x Oh7B)	10BC
III. 3193	(38-11 x K712) (K201 x Oh7B)	10BC
III. 3197B	(K201 x Cl.21E) (K712 x Oh7B)	10BC
III. 3198A	(K201 x Ky126) (N82481 x Oh7B)	10BC
III. 3204A	(Cl03 x K712) (K201 x Ky126)	10BC
III. 3206	(Cl03 x K712) (K201 x Cl.21E)	10BC
III. 3210	(Cl03 x K712) (Ky126 x Cl.21E)	10BC
III. 3214	(K201 x Ky126) (K712 x Oh7B)	10BC
III. 3217	(Hy2 x WF9) (R109B x H60)	6C
III. 3218	(Hy2 x WF9) (H51 x H60)	6C
III. 3219	(Hy2 x WF9) (H51 x 187-2-13657-6)	6C
III. 3220	(Hy2 x WF9) (H54 x H60)	6C
III. 3221	(Hy2 x WF9) (H54 x 187-2-13657-6)	6C
III. 3222	(Hy2 x WF9) (H60 x K758)	6C

(Table is continued on next page)

Table 15. — Continued

Hybrid	Pedigree	Table No.
III. 3223	(Hy2 x WF9) (H60 x Cl.30)	6C
III. 3224	(Hy2 x WF9) (H60 x Cl.38B)	6C
III. 3225	(Hy2 x WF9) (H60 x 187-2-13657-6)	6C
III. 3226	(Hy2 x H60) (WF9 x 38-11)	6C
III. 3227	(Hy2 x K757) (WF9 x 38-11)	6C
III. 3228	(R71 x H60) (WF9 x 38-11)	6C
III. 3229	(R109B x H60) (WF9 x 38-11)	6C
III. 3230	(WF9 x 38-11) (H53 x H60)	6C
III. 3231	(WF9 x 38-11) (H53 x K757)	6C
III. 3232	(WF9 x 38-11) (H60 x K757)	6C
III. 3233	(WF9 x 38-11) (H60 x Cl.30)	6C
III. 3234	(WF9 x 38-11) (H60 x Cl.42A)	6C
III. 3235	(WF9 x 38-11) (K757 x Cl.30)	6C
III. 3236	(R101 x WF9) (R105 x Cl.42A)	6C
III. 3237	(R101 x WF9) (R151 x R154)	6C
III. 3237A	(R101 x R154) (R151 x WF9)	6C
III. 3238	(R101 x WF9) (R151 x Cl.42A)	6C
III. 3239	(R101 x WF9) (R154 x Cl.42A)	6C
III. 3240	(R105 x WF9) (R151 x Cl.42A)	6C
III. 3240A	(R105 x Cl.42A) (R151 x WF9)	6C
III. 3241	(R105 x R154) (R130 x WF9)	6C
III. 3242	(R101 x R105) (R151 x WF9)	6C
III. 3244	(R105 x R153) (R151 x WF9)	6C
III. 3246	(R105 x R130) (R153 x WF9)	6C
III. 3247	(R130 x R154) (R153 x WF9)	6C
III. 3248	(R151 x R154) (R153 x WF9)	6C
III. 3249	(R153 x WF9) (R154 x Cl.42A)	6C
III. 3250	(K712 x N82481) (Ky126 x Oh41)	10C
III. 3251	(38-11 x K201) (K711 x Ky126)	10C
III. 3252	(38-11 x K201) (K711 x Cl.21E)	10C
III. 3253	(R71 x R74) (R109B x R168)	6C
III. 3254	(R71 x R112) (R74 x R109B)	6C
III. 3255	(R71 x R112) (R109B x R168)	6C
III. 3256	(R74 x R96B) (R112 x R168)	6C
III. 3257	(R74 x R109B) (R110 x R112)	6C
III. 3258	(R74 x R109B) (R112 x R114)	6C
III. 3259	(R74 x R109B) (R112 x R168)	6C
III. 3259A	(R74 x R112) (R109B x R168)	6C
III. 3259B	(R74 x R168) (R109B x R112)	6C
III. 3260	(R74 x R112) (R109B x R115)	6C
III. 3260A	(R74 x R115) (R109B x R112)	6C
III. 3264	(R109B x R168) (R112 x R114)	6C
III. 3265	(R71 x R109B) (WF9 x Oh43)	2C
III. 3266	(R74 x R109B) (WF9 x Oh43)	2C
III. 3267	(R74 x R110) (WF9 x Oh43)	2C
III. 3268	(R74 x R112) (WF9 x Oh43)	2C
III. 3269	(R74 x R114) (WF9 x Oh43)	2C
III. 3270	(R74 x R168) (WF9 x Oh43)	2C
III. 3271	(R96B x R112) (WF9 x Oh43)	2C
III. 3272	(R109B x R112) (WF9 x Oh43)	2C
III. 3273	(R109B x R114) (WF9 x Oh43)	2C
III. 3274	(R112 x R168) (WF9 x Oh43)	2C
III. 3275	(R114 x R168) (WF9 x Oh43)	2C
III. 3276	(R71 x R109B) (38-11 x K4)	6C
III. 3277	(R74 x R109B) (38-11 x K4)	6C

(Table is continued on next page)

Table 15. — Continued

Hybrid	Pedigree	Table No.
III. 3278	(R74 x R110) (38-11 x K4)	6C
III. 3279	(R74 x R112) (38-11 x K4)	6C
III. 3280	(R74 x R114) (38-11 x K4)	6C
III. 3281	(R74 x R168) (38-11 x K4)	6C
III. 3282	(R96B x R112) (38-11 x K4)	6C
III. 3283	(R109B x R112) (38-11 x K4)	6C
III. 3284	(R109B x R114) (38-11 x K4)	6C
III. 3285	(R112 x R168) (38-11 x K4)	6C
III. 3287	(C103 x Oh43) (WF9 x Oh51A)	2BC
III. 3291	(P8 x WF9) (B14 x Oh43)	4BC
III. 3294	(C103 x Hy2) (P8 x WF9)	4BC
III. 3300	(M14 x Oh43) (R113 x B14)	2C
III. 3300A	(M14 x R113) (B14 x Oh43)	2C
III. 3301	(M14 x Oh43) (R168 x B14)	2C
III. 3302	(M14 x B14) (R172 x WF9)	2C
III. 3302A1	(M14 x W64A) (R172 x B14)	2C
III. 3303	(M14 x Oh43) (R172 x B14)	2C
III. 3304	(M14 x B37) (WF9 x Oh43)	2C
III. 3305	(M14 x A295) (WF9 x Oh43)	2C
III. 3306	(M14 x Oh43) (L12 x B14)	2C
III. 3307	(R113 x B14) (R172 x WF9)	2C
III. 3308	(R113 x Oh43) (L12 x B14)	2C
III. 3309	(R113 x B14) (WF9 x Oh43)	2C
III. 3309-1	(R113 x B14) (Oh43 x W64A)	2C
III. 3310	(R165 x B14) (WF9 x Oh43)	2C
III. 3311	(R168 x B14) (WF9 x Oh43)	2C
III. 3312	(R172 x B14) (WF9 x Oh43)	2C
III. 3312-1	(R172 x B14) (Oh43 x W64A)	2C
III. 3313	(L12 x B14) (Oh43 x W64A)	2C
III. 3314	(Hy2 x R109B) (R168 x B14)	4C
III. 3315	(Hy2 x R109B) (WF9 x B14)	4C
III. 3315A	(Hy2 x WF9) (R109B x B14)	4C
III. 3316	(Hy2 x WF9) (R113 x B14)	4C
III. 3317	(Hy2 x WF9) (R165 x B14)	4C
III. 3318	(Hy2 x WF9) (R168 x B14)	4C
III. 3318A	(Hy2 x R168) (WF9 x B14)	4C
III. 3319	(Hy2 x WF9) (R172 x B14)	4C
III. 3320	(R109B x R113) (R168 x B14)	4C
III. 3321	(R109B x R165) (R168 x B14)	4C
III. 3322	(R109B x Oh28) (R168 x B14)	4C
III. 3323	(R109B x R172) (WF9 x B14)	4C
III. 3323A	(R109B x WF9) (R172 x B14)	4C
III. 3325	(R109B x WF9) (B14 x Oh28)	4C
III. 3325A	(R109B x Oh28) (WF9 x B14)	4C
III. 3326	(R168 x B14) (WF9 x Oh28)	4C
III. 3326A	(R168 x Oh28) (WF9 x B14)	4C
III. 3328	(Hy2 x R129) (R71 x R74)	6C
III. 3329	(Hy2 x WF9) (R71 x R74)	6C
III. 3330	(Hy2 x 38-11) (R71 x R74)	6C
III. 3331	(Hy2 x R129) (R71 x WF9)	6C
III. 3332	(Hy2 x R74) (R127 x WF9)	6C
III. 3332A	(Hy2 x WF9) (R74 x R127)	6C
III. 3333	(Hy2 x R129) (R74 x WF9)	6C
III. 3334	(Hy2 x R154) (R74 x WF9)	6C
III. 3335	(C103 x R113) (Hy2 x 38-11)	10C

(Table is continued on next page)

Table 15. — Continued

Hybrid	Pedigree	Table No.
III. 3336	(C103 x R153) (Hy2 x R154)	10C
III. 3337	(C103 x Hy2) (R154 x 38-11)	10C
III. 3337A	(C103 x R154) (Hy2 x 38-11)	10C
III. 3337B	(C103 x 38-11) (Hy2 x R154)	10C
III. 3338	(C103 x R154) (Hy2 x R168)	10C
III. 3338A	(C103 x R168) (Hy2 x R154)	10C
III. 3339	(C103 x Hy2) (R168 x 38-11)	10C
III. 3339A	(C103 x R168) (Hy2 x 38-11)	10C
III. 3339B	(C103 x 38-11) (Hy2 x R168)	10C
III. 3340	(C103 x R159) (Hy2 x 38-11)	10C
III. 3341	(C103 x R154) (R168 x 38-11)	10C
III. 3341A	(C103 x R168) (R154 x 38-11)	10C
III. 3342	(Hy2 x R168) (R154 x 38-11)	6C
III. 3343	(R71 x R74) (H49 x H55)	6C
III. 3344	(R71 x R105) (H49 x H55)	6C
III. 3345	(R71 x R109B) (H49 x H55)	4C, 6C
III. 3346	(R71 x R168) (H49 x H55)	6C
III. 3347	(R74 x R101) (H49 x H55)	4C, 6C
III. 3348	(R74 x R109B) (H49 x H55)	4C, 6C
III. 3349	(R74 x R168) (H49 x H55)	6C
III. 3350	(R101 x Oh41) (H49 x H55)	6C
III. 3351	(R109B x R168) (H49 x H55)	6C
III. 3353	(R71 x R74) (H49 x H51)	6C
III. 3354	(R71 x R105) (H49 x H51)	6C
III. 3355	(R71 x R109B) (H49 x H51)	6C, 10C
III. 3356	(R71 x R168) (H49 x H51)	6C
III. 3357	(R74 x R101) (H49 x H51)	6C
III. 3358	(R74 x R109B) (H49 x H51)	6C
III. 3359	(R74 x R168) (H49 x H51)	6C
III. 3360	(R101 x Oh41) (H49 x H51)	6C, 10C
III. 3361	(R109B x R168) (H49 x H51)	6C
III. 3362	(Oh7 x Cl.42A) (H49 x H51)	6C, 10C
III. 3363	(C103 x B14) (R109B x WF9)	6C
III. 3364	(R74 x R101) (K201 x Cl.21E)	6C
III. 3365	(Hy2 x R71) (WF9 x 38-11)	6C
III. 3366	(Hy2 x R109B) (WF9 x 38-11)	6C
III. 3367	(R74 x WF9) (Oh7 x Cl.21E)	6C
III. 3368	(Hy2 x R71) (WF9 x B14)	6C
III. 3369	(C103 x B14) (R71 x WF9)	6C
III. 3370	(C103 x B14) (R74 x WF9)	6C
III. 3371	(C103 x B14) (R172 x WF9)	6C
III. 3372	(C103 x Cl.7) (R74 x WF9)	6C
III. 3373	(C103 x WF9) (R101 x Oh41)	6C
III. 3374	(R101 x Oh41) (WF9 x B14)	6C
III. 3375	(C103 x WF9) (Hy2 x Cl.42A)	6C
III. 3376	(Hy2 x Cl.42A) (WF9 x B14)	6C
III. 3377	(Hy2 x Cl.42A) (WF9 x N6)	6C
III. 3378	(Hy2 x Cl.42A) (WF9 x W64A)	6C
III. 3379	(WF9 x W64A) (Oh43 x Oh45R)	2C
III. 3380	(Hy2 x WF9) (R172 x Oh43)	2C
III. 3381	(R71 x WF9) (B14 x Oh43)	2C
III. 3382	(R109B x WF9) (B14 x Oh43)	2C
III. 3383	(M14 x WF9) (R172 x Oh43)	2C
III. 3384	(Hy2 x Oh7) (WF9 x Oh41)	6C
III. 2247W	(R144 x R145) (R146 x R148)	2ABC

(Table is concluded on next page)

Table 15. — Concluded

Hybrid	Pedigree	Table No.
Ill. 2249W	(R147 x R148) (H21 x 33-16)	4BC
Ill. 6001	(R78) (38-11 x K4)	14D
Ill. 6021	(R75 x R76) (R84 x K4)	2BC, 4BC, 6BC, 9C, 10C, 14ABCDE
Ill. 6052	(R78 x 38-11) (R84 x K4)	2BC, 4BC, 6BC, 9C, 10C, 14ABCDE
Ill. 6062	(R76 x K4) (R78 x R84)	6BC, 14D
Ill. 6109	(R78 x R85) (R92 x R117)	2C, 4C, 6C, 10C, 14D
Ill. 6115	(R83A x R91) (R92 x R118)	2C, 4C, 6C, 10C, 14D
A 102	(Hy2 x Oh7) (128-4A x SS101)	6ABC
A 104	(Hy2 x Oh7) (R101 x 220A)	6C
A 109	(Hy2 x Oh7) (88-4A x 128-4A)	6C
A 110	(Hy2 x Oh7) (88-4A)	6C
Ark. 5614	(C103 x AK-d20) (AK-8 x Cl.7)	10C
Iowa 4297 (Ill. 1290)	(M14 x 187-2) (WF9 x I.205)	4ABC, 5C
Iowa 4962	(M14 x WF9) (B37 x B42)	4C
Iowa 4967	(M14 x WF9) (B42 x Oh51A)	2C
Iowa 4989	(WF9 x B14) (B37 x B42)	4BC
Iowa 4991	(WF9 x B14) (B42 x Oh43)	4BC
Iowa 5018	(WF9 x B7) (B14 x Cl.31A)	6C
Iowa 5040	(Hy2 x WF9) (B14 x B48)	6C
Iowa 5052	(M14 x WF9) (Oh51A x W182D)	2C
Iowa 5115	(WF9 x B14) (B45 x Cl.31A)	6BC
Iowa 5122	(WF9 x 38-11) (B14 x B38)	6C
Kan. 2246W	(H30 x K41) (33-16 x K55)	10C
Kan. 2561W	(H28 x H30) (K55 x Mo1W)	10C
Kan. 4003	(K201R x K711) (K712 x Oh7B)	10BC
Ky. 105	(38-11 x Oh7B) (T8 x Cl.21E)	10BC
Ky. 5708	(C103 x Cl.21E) (Cl.29C x Cl.38B)	10BC
Ky. 5712W	(33-16 x Cl.64) (K55 x Ky201)	10BC
Mo. 881	(Mo7 x Cl.21E) (Oh7B x Oh29)	10C
Mo. 916	(Mo6 x Cl.21E) (Oh7B x Oh29)	10C
Mo. 996	(Mo0225 x Mo9689) (T204 x Cl.21)	10C
N.C. 5113	(K41 x NC42) (K55 x NC88W)	10C
Ohio M15	(A x W23) (Oh26 x Oh51)	2ABC
Ohio K24	(WF9 x Oh51A) (Oh33 x Oh40B)	2ABC
Tenn. 501W	(K41 x K44) (T111 x T115)	10C
Tenn. 5005	(T218 x T220) (T474 x T490)	10C
Tenn. 7015	(A441-5 x Ky36-11) (T474 x T490)	10C
Tenn. 7018	(ITE701 x Ky36-11) (T474 x T490)	10C
Tenn. 7110W	(T315 x T337) (E184 x K64)	10C
Tenn. 8106W	(T315 x T331) (A14 x T115)	10C
U.S. 13	(Hy2 x L317) (WF9 x 38-11)	4C, 6ABC, 7C, 10ABC, 11B, 14ACDE
U.S. 523W	(K55 x K64) (Ky27 x Ky49)	6C, 10ABC
U.S. 642	(Cl.20 x Cl.317B) (Cl.42A x Cl.90A)	10C
U.S. 658	(Cl.7 x Cl.90A) (Cl.20 x Cl.38B)	10C
VPI 648	(C103 x Hy3) (WF9 x T8)	10C
VPI 653	(WF9 x T8) (K155 x Oh43)	10C

UNIVERSITY OF ILLINOIS-URBANA

Q. 630.71L6B
BULLETIN, URBANA
638-654 1959-60

C002



3 0112 019529434