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The background of the cover is a large, black-outlined map of the state of Illinois. The text is centered within this map.

Illinois
HYBRID
CORN
TESTS
1945

Bulletin 517

UNIVERSITY OF ILLINOIS
AGRICULTURAL EXPERIMENT STATION in cooperation with
ILLINOIS STATE NATURAL HISTORY SURVEY . . . February, 1946

Location of
1945 test
fields



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ILLINOIS HYBRID CORN TESTS 1945

By G. H. DUNGAN, J. H. BIGGER, A. L. LANG,
BENJAMIN KOEHLER, and R. W. JUGENHEIMER¹

MORE THAN HALF of the major corn-producing acreage in Illinois in the past eight years has been planted to hybrid seed. The average yield for this period (1938-1945) was 48.5² bushels an acre. The average for the previous eight years (1930-1937), when little hybrid corn was grown, was 32.9 bushels.

In 1945 the corn acreage in 47 Illinois counties was planted entirely to hybrids. In the state as a whole 97.6 percent was planted to hybrids, an all-time high. In spite of many unfavorable growing conditions, the average corn yield for the state was 46.5 bushels to the acre.

PLAN OF THE TESTS

Number of hybrids and their sources. Two hundred seventy hybrids were grown in Illinois on seven regular test fields and on three special test fields. Forty companies and individuals, and the Kansas and Wisconsin Agricultural Experiment Stations, as well as the Illinois Station, furnished the seed for the tests (*see page 254*).

Seventy-two hybrids were tested on each of the fields except at the Dixon Springs Experiment Station, where 60 entries were planted on the bottomland and 14 on the upland field.

A representative of the Illinois Station took most of the seed for planting the test fields directly from the warehouses of the producers entering the corn. A few producers delivered small quantities to the Station. Seed of Illinois and United States hybrids in commercial production was obtained from the Illinois Crop Improvement Association. Seed of Kansas, Wisconsin, and Illinois hybrids not in commercial production was furnished by the respective experiment stations.

Most of the hybrids selected for testing are extensively grown in the state. Some experimental hybrids were included because they had shown promise for commercial production in preliminary tests. A few hybrids were put in the tests mainly to meet the field-performance requirement for certification.

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²Estimates for the acreage of hybrid corn and the average yield for the state were furnished by the ILLINOIS COOPERATIVE CROP REPORTING SERVICE, Illinois State Department of Agriculture cooperating with the U. S. Department of Agriculture.

Table 1.—GENERAL INFORMATION: Illinois Cooperative Hybrid Corn Tests, 1945

Field	County and location in state	Number of entries	Date planted	Date harvested	Average acre-yield		Average moisture in grain	Average erect plants
					Total	Sound		
					<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>
Kings.....	Ogle (N).....	72	May 28	Nov. 20	62.8	62.4	31.3	72.0
Galesburg.....	Knox (WNC).....	72	May 29	Nov. 16	64.5	64.2	22.7	24.1
Sheldon.....	Iroquois (ENC).....	72	May 25	Nov. 8	76.1	75.4	22.8	42.1
Sullivan.....	Moultrie (SC).....	72	May 24	Nov. 13	91.7	90.5	19.7	75.0
Alhambra.....	Madison (S).....	72	July 6	Oct. 12	26.2	....	63.5	37.7
Robbs (Dixon Sp.)..	Pope (Ex.S)							
	Bottomland.....	60	May 26	Nov. 1, 2	47.3	46.6	24.6	65.0
	Upland.....	14	May 26	Nov. 1	52.3	51.6	21.7	88.0

COOPERATORS: ELMER HAYES, *Ogle county*; EARL and WEBSTER GEHRING, *Knox county*; JOHN B. RICE AND SON, *Iroquois county*; R. B. VANDEVEER, Farm Manager, Illinois Masonic Home Farm, *Moultrie county*. The Alhambra field in Madison county is conducted by the Illinois Station. The Pope county field at Robbs is part of the Dixon Springs Experiment Station, of which R. J. WEBB is superintendent.

Soil characteristics of fields. The test fields were medium to high in productivity and each represents a soil type common to the region where it is located. Each field was selected carefully for uniformity in soil type, productivity, and drainage. The field on the bottomland at Dixon Springs Experiment Station at Robbs was the most variable in productivity. The Alhambra field contained a number of "slick spots."

In 1945 the northern field was changed from Mt. Morris to Kings, the east north-central field from Milford to Sheldon. The other tests were conducted on the same farms as in 1944. The approximate locations of the test fields are shown on the map on the inside front cover. General information on soil characteristics and soil management is given in Table 2.

Method of planting. All test plots were planted by hand on land prepared in the regular way for corn. Each plot consisted of 2 rows 10 hills long. Three kernels were dropped in each hill except on the fields at Dixon Springs, where only 2 kernels were planted. Six plots of each entry were planted in controlled random order on each field. Data from all plots were included in the results except as indicated in the tables. The only correction for imperfect stand was an adjustment for missing hills.

WEATHER CONDITIONS

Wet weather delayed corn planting beyond the usual date in all sections of the state. Water on newly planted fields in southern Illinois destroyed stands in general, making replanting of many fields necessary.

Second planting of the Alhambra field was delayed by continued rains until July 6. Corn on the bottomland field at the Dixon Springs Experiment Station was not planted again, altho about half the plots were drowned out by high water in early June.

Table 2.—TESTING FIELDS: Soil Characteristics and Management Practices

Soil type	Lime requirement	Available phosphorus	Available potassium	Previous crops and soil management
Northern: Kings				
<i>tons</i>				
Tama silt loam.....	2	Low	High	Alfalfa sod.
West north-central: Galesburg				
Muscatine silt loam.....	2	Low	Medium +	Clover 1941; corn 1942, 1943; oats-clover seeding in manure 1944. Limed in 1942.
East north-central: Sheldon				
Lisbon silt loam.....	1	High	Medium +	Alfalfa 1942, 1943; corn in 1944. Limed in 1930; ½ ton phosphate 1938; 125 lbs. potash 1944.
South-central: Sullivan				
Flanagan silt loam.....	0	High	Medium	Oats 1940; alfalfa 1941, 1942, 1943; corn 1944.
Southern: Alhambra				
Putnam silt loam.....	None	High	Low	Timothy sod for past four years. Limed and phosphated.
Extreme southern: Robbs (Dixon Springs)				
Upland field: Ava silt loam..	None	Low -	Medium -	Soybeans 1942; small grain 1943; clover 1944. Limed and phosphated.
Bottomland field: Bonnie silt loam.....	2	High	Very low	Corn, rye catch crop 1944. Manured in 1944.

R. S. SMITH, Chief in Soil Physics and Soil Survey, and HERMAN WASCHER, Associate Chief in Soil Survey, have approved the soil-type designations, uniformity, and physical characteristics of the above fields.

Plentiful supply of moisture favored plant growth and grain formation in all sections of the state except the west north-central, where drouth was severe during July and August. Frequent rains during the summer were especially helpful to the corn on the upland field at Dixon Springs.

Temperatures were generally below average thruout the state. As a result, plant development was slow. Because of late planting and the cool season, the crop had an unusually high moisture content at the normal harvest time. The moisture content delayed harvest beyond the usual date.

Local windstorms during early fall caused greater lodging than usual, especially in the west north-central and east north-central sections of the state.

The effect of unfavorable conditions on yield, moisture content, and percentage of erect plants is summarized in Table 1.

INSECT PESTS

Southern corn rootworm. The ability of corn hybrids to withstand conditions causing lodging or to recover from lodging received considerable attention in 1945, especially thruout an area in northern Illinois which suffered windstorm damage in the latter half of the season. Severe lodging occurred on the hybrid corn test fields at Galesburg and Sheldon.

Examination of the root systems of plants in the field at Sheldon showed they had been damaged by the southern corn rootworm, *Diabrotica duodecimpunctata* (F.). The damage was partly responsible for lodging on that field. No evidence of feeding by this insect was found at Galesburg. At Sheldon 5.5 to 83.3 percent of the plants of the different hybrids lodged 30 degrees or more as a result of root damage. Complete records for the field are shown in Table 13 on page 243.

European corn borer. The cool, wet weather of May retarded the development of the European corn borer, *Pyrausta nubilalis* (Hbn.). The same conditions delayed corn planting even more than they retarded the development of the borer. As a result, the corn was so small when the borer eggs were deposited and the larvae hatched that few borers survived. Consequently, early in the season the corn suffered only slight damage. Later, however, conditions were more favorable to the borer in much of the northern half of the state, and second-generation borers developed in such numbers that the final infestation in the fall of 1945 was greater than in the fall of 1944.

The only hybrid-corn test field that suffered from the corn borer was the Sheldon field. Breakage on this field due to borer attack is shown in Table 11, pages 241 and 242. Here 25.0 to 71.6 percent of the plants of the different hybrids were broken below the ear. Almost half the plants (49.8 percent) were broken at a point of borer injury. A three-year summary of corn borer damage in the east north-central field is given in Table 12, page 242.

Relation of rootworm and borer damage to yields. To evaluate rootworm lodging and borer breakage and their relation to yields is difficult. This is especially true in a period when weather conditions are also conducive to lodging. Both lodging and breakage at Sheldon were undoubtedly greater than they would have been had the windstorm not occurred. The consequences of the storm raise two questions: (1) Did the wind cause plants of some hybrids to break instead of lodge and those of others to lodge instead of break? (2) How much had heavy ears or ears high on the stalk to do with lodging and breaking? Evidence in the records supports the opinion that all these things were involved.

The few hybrids which did not lodge, which showed little breakage

from borer damage, and which also yielded better than average may well be considered to have superior ability to produce and to stand up under adverse conditions.

Chinch bugs, northern corn rootworm, and corn earworm. A small area in north-central Illinois suffered some losses from attacks by the chinch bug, *Blissus leucopterus* (Say). The northern corn rootworm, *Diabrotica longicornis* (Say), has been increasing during recent years, but its effect upon the crop was not of great importance in 1945. Corn earworm, *Heliothis armigera* (Hbm.), was not abundant. Other insects attracted little attention.

DISEASE DAMAGE¹

Seedling diseases and seed treatments. Corn planted at the normal time suffered severely from seedling diseases in 1945. The damage was brought about by the unusually cold weather thruout most of May. Seed treatment was a great help to both stands and yields of corn, and it was fortunate that nearly all the seed corn sold to Illinois farmers had been treated.

A seed-treatment test, similar to the test reported for 1944, was conducted with 18 commercial hybrids on the University south farm at Urbana. The seed was planted May 12. The plants did not appear until 14 days later. The average increase in stand from seed treatment was 9.6 percent, the average increase in yield 8.7 bushels. Increases in yield varied from 1.7 to 24.1 bushels (Table 3). Most of these differences were significant since they were above 2.9 bushels.

The poorer the stand without seed treatment, the greater were the increases in yield from seed treatment (correlation coefficient .634). Among the factors known to cause differences in stand are: (1) the ability of the plant to grow at low temperatures, (2) susceptibility to disease, and (3) vitality. These three factors are somewhat interrelated. Inbred lines and their crosses are known to differ in their ability to grow at low temperatures and in their susceptibility to seedling diseases, but differences in vitality are governed more by non-genetic factors than by genetic factors. Therefore, the differences which the hybrids in this test showed in their response to seed treatments are not entirely, tho they may be partly, due to their genetic nature. There is no doubt that the poorer the vitality of corn plants, the greater the need for seed treatment.

Stalk rot diseases. The season was favorable for *Diplodia* stalk rot, but, owing to the greater use of resistant hybrids, losses were for

¹ Estimates on percentage losses from diseases are based to a large extent on survey data obtained by G. H. BOEWE, Illinois State Natural History Survey.

Table 3.—RESPONSE TO SEED TREATMENT: Arasan Applied at Rate of One Ounce per Bushel of Seed, Urbana, 1945

Rank based on yield from treated seed	Entry ^a	Increase in yield from treatment	Total acre-yield			Field stand		Moisture in grain at harvest	Erect plants
			Treated	Un-treated		Treated	Un-treated		
		bu.	bu.	bu.	perct.	perct.	perct.	perct.	
1	Illinois 804	6.9	99.4	92.5	71.5	67.1	22.3	56.7	
2	Illinois 206	2.8	97.7	94.9	70.0	61.7	19.7	80.6	
3	Illinois 2184(W)	3.3	97.1	93.8	77.3	68.3	19.8	59.1	
4	Illinois 784	1.7	96.0	94.3	73.1	69.0	22.9	59.3	
5	Illinois 2019(W)	5.2	94.8	89.6	74.6	67.2	19.5	71.2	
6	Illinois 273	3.8	93.2	89.4	75.6	69.2	18.7	78.7	
7	Illinois 972	12.6	92.0	79.4	73.3	60.1	20.2	71.5	
8	Illinois 200	5.6	91.5	85.9	73.1	65.4	19.1	73.6	
9	Illinois 960	4.5	90.0	85.5	67.3	55.6	20.1	53.9	
10	Illinois 751	8.5	88.6	80.1	74.0	57.3	19.5	83.8	
11	Illinois 201	11.4	88.5	77.1	77.0	59.0	18.9	74.9	
12	U. S. 13	9.1	87.8	78.7	73.3	68.1	19.9	78.8	
13	Illinois 448	24.1	86.8	62.7	70.0	52.5	22.5	66.9	
14	Illinois 101	9.1	85.7	76.6	69.0	61.7	18.7	73.5	
15	Illinois 2059(W)	17.0	85.5	68.5	72.1	58.5	19.1	66.9	
16	Illinois 246	13.9	81.4	67.5	69.4	66.5	20.4	80.3	
17	Illinois 21	7.4	80.5	73.1	73.5	67.1	19.8	82.7	
18	U. S. 35	8.8	80.4	71.6	75.2	61.9	19.2	80.0	
	Average of all entries	8.7	89.8	81.1	72.7	63.1	20.0	71.8	
	Increase or difference needed for significance	2.9	8.6	8.6	.....	.....	.....	.....

^a For pedigrees see Table 4. There were eight replicated plots of each hybrid.

the most part only moderate. The estimated losses in yield were 3.7 percent from *Diplodia*, .8 percent from *Gibberella*, and 1.0 from unidentified causes. There was an unusual number of broken stalks in many fields; stalk rot was responsible for some of the breakage but not for all of it.

Smut. Losses from smut were low, about .8 percent.

Rust. Rust is usually of very minor importance in field corn, but it was more prevalent than usual in 1945. Yields were estimated to have been lowered 1.0 percent by rust.

Ear rots. *Nigrospora*, usually of small importance, was the most prevalent ear rot in 1945. In some parts of the state it was most damaging to the late-planted corn that was caught by frost. It also occurred more than usual in many early fields. *Nigrospora* makes the cobs fragile. Part of the loss from it comes during husking, when the cobs are apt to break. Broken cobs mean corn wasted on the ground.

Gibberella ear rot was also more prevalent than usual. Even so, the estimated damage from *Gibberella* was only .5 percent. In some areas, however, damage may have been bad enough to cause trouble since only a small amount of *Gibberella* corn makes feed unpalatable to hogs. Losses from *Fusarium moniliforme* and *Diplodia zaeae*, which are ordinarily the most damaging, were very low.

A test at Urbana, similar to that reported in 1944, again showed the white hybrids and Illinois 960 and U. S. 35 topping the list of rot-resistant hybrids (Table 4). The fact that these hybrids ranked high

Table 4.—DAMAGE FROM KERNEL ROT: Figures Are Based on Examination of Shelled Corn, Urbana, 1944 and 1945

Rank	Entry ^a	Pedigree of entry	Rot damage		Exposed ear tips
			1944-1945 average	1945	Sept. 10-11, 1945
			<i>perct.</i>	<i>perct.</i>	<i>perct.</i>
1	Illinois 2184(W)	(K6 × K64) (33-16 × CI.61)	.....	1.18	17.6
2	Illinois 2019B(W)	(Ky27 × CI.61) (R30 × 33-16)	.....	1.19	14.8
3	Illinois 960	(R4 × Hy) (701 × L317)	2.44	1.48	20.2
4	Illinois 2059(W)	(Ky27 × CI.61) (33-16 × K6)	2.53	1.68	15.2
5	U. S. 35	(WF9 × 38-11) (R4 × Hy)	3.03	2.34	23.7
6	Illinois 751	(A × 90) (WF9 × Hy)	3.35	1.97	28.2
7	Illinois 200	(WF9 × 38-11) (K4 × L317)	3.66	2.51	33.0
8	Illinois 21	(WF9 × 38-11) (Hy × 187-2)	3.82	2.49	28.7
9	Illinois 972	(WF9 × Hy) (701 × L317)	3.87	2.41	32.7
10	Illinois 273-1	(WF9 × 38-11) (187-2 × O7)	4.15	3.94	45.6
11	Illinois 448	(38-11 × Kys) (K4 × L317)	4.16	2.01	27.9
12	Illinois 804	(5120 × 38-11) (K4 × L317)	4.29	2.38	23.4
13	Illinois 201	(WF9 × 38-11) (187-2 × L317)	4.31	3.55	42.1
14	Illinois 246	(WF9 × Hy) (187-2 × L317)	4.40	3.37	38.3
15	U. S. 13	(Hy × L317) (WF9 × 38-11)	4.69	2.82	35.7
16	Illinois 206	(WF9 × 38-11) (5120 × L317)	4.83	3.15	44.7
17	Illinois 784	(Hy × 5120) (K4 × L317)	4.86	1.99	22.8
18	Illinois 101	(WF9 × M14) (CC7 × 187-2)	4.98	5.84	49.3
	Difference needed for significance		1.76	1.83	....

^a There were eight 40-hill plots of each hybrid each year. All the ears of each plot were shelled and a representative sample taken with a special sampling device.

both in 1944 when *Diplodia* was prevalent and in 1945 when *Nigrospora* was important is of considerable interest. It should not be concluded, however, that all white corn has superior resistance to ear rots, but the fact that some of these white hybrids have superior ear-rot resistance is of importance. No doubt some other white hybrids are just as good or better.

The last column in Table 4 gives the percentage of ears that had exposed ear tips because of poor husk protection. The correlation coefficient between ear-rot damage in 1945 and exposed ear tips, .908, is highly significant. Extensive data obtained during the past four years leave no doubt that ears which are well covered by husks are more likely to escape ear rots.

MEASURING PERFORMANCE

The entries in the 1945 test are listed in the tables in the order of their total yields, except at Alhambra where, because of extremely late planting, they are listed in the order of the moisture content of the grain. Two or more entries having the same total yield are given the same rating, but the one having the higher yield of sound corn is placed first. Those having the same total yield and sound yield are placed in order by percentage of erect plants.

Erect plants. The percentage of erect plants in each plot of each entry on each field was estimated at the time of harvest. The ratings for

erect plants show how the percentage of erect plants for each hybrid compared with the percentage of erect plants on the field as a whole. (Each rating is obtained by dividing the percentage of erect plants for that hybrid by the percentage of erect plants on the field as a whole and multiplying by 100.)

Lodging may have been due to rootworm damage, weak or rotted roots, corn borer damage, stalk rots, or weak stalks. Stalks broken above the ear were not considered lodged.

Yield of grain. To determine shelling percentage, all the ears from one replicate of each entry were shelled. Because of the high moisture content of the ears, the samples on the Kings field did not shell well. Therefore, instead of using the shelled weights for determining shelling percentage, a uniform figure of 78 percent was used for all entries.

From the shelled corn one sample was taken to determine the percentage of moisture at harvest¹ and another to determine the percentage of damaged kernels. The percentage of damaged corn was determined according to the federal grain standards.

The total acre-yield was calculated as shelled corn containing 15.5 percent moisture, the upper limit allowable in No. 2 corn. The yield of sound corn was computed by deducting the amount of damaged corn from the total yield.

The rating of any hybrid for sound yield is the ratio, expressed as percentage, of the yield of sound corn from that hybrid to the average yield of sound corn from all the hybrids on the field.

Height of ear. Notes on comparative height of ear were taken at harvest time.² Each plot of each entry was placed in one of the five following categories: *low*, *mid-low* (midway between low and medium), *medium*, *mid-high* (midway between medium and high), and *high*. Beginning with *low* and continuing progressively to *high*, these terms were assigned numerical values from 1 to 5 to permit the averaging of the plots.

Maturity of late-planted corn. When it became necessary to make the second planting on the Alhambra field as late as July 6, interest in the test shifted from yield of grain to the capacity of the entries to reach maturity. Accordingly, notes on plant development were taken on October 12, which was just a few days ahead of the average date of the first killing frost. A light frost had killed a few blades on some of the plants.

¹ All moisture determinations were made with a Steinlite moisture tester except for a few samples from Dixon Springs and all samples from the Kings and Alhambra fields, which were made with an electric oven.

² Height-of-ear notes were taken at the Alhambra field on October 12, which was in advance of harvest.

Each plot of each entry was placed in one of the following categories based on blade color: *brown* (most mature), $\frac{2}{3}$ *brown*, $\frac{1}{3}$ *brown*, *green*, and *very green* (least mature). Six average ears were taken from one plot of each entry and from these ears grain was taken for a moisture test. After these ears had become air-dry, 100 kernels were taken and weighed. These data are presented for what they may indicate about earliness. While some hybrids are inherently large-kerneled and some are small-kerneled, yet in the early stages of grain development the size of the kernel reflects the progress that has been made toward maturity. The data shown in Table 16 (page 246) may help farmers choose a hybrid corn for late planting.

Significance of yield differences. Too much confidence must not be placed in the particular ranking of a hybrid in the following tables, for chance has played a part in determining its position. Unaccountable variability in the soil and conditions on the field will cause differences in yield that are not inherent in the hybrids themselves.

The part played by chance in the 1945 tests has been calculated for total yield by the mathematical procedure known as "analysis of variance." At the bottom of each table is stated the approximate difference which there must be between any two entries in order for them to show a true inherent difference. Unless two hybrids differ by at least this amount, there is no assurance that one hybrid is inherently higher yielding than the other.

Readers are urged to note the difference necessary for significance, as shown for each test field, and to keep that difference constantly in mind in all comparisons of hybrids on that field.

Table 5.—NORTHERN ILLINOIS: Kings, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Mois- ture in grain at harvest	Erect plants	Rating for—		Compara- tive height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1	Pfister 366A.....	74.2	74.2	.0	27.3	62	86.1	118.9	Medium
2	Nichols N-400.....	71.7	71.4	.4	30.0	74	102.8	114.4	Medium
3	Nichols N-75.....	71.3	71.2	.2	29.1	71	98.6	114.1	Medium
4	Doubet D-1.....	70.7	70.4	.4	28.6	73	101.4	112.8	Medium
5	Pioneer 330.....	68.3	67.8	.7	31.8	87	120.8	108.6	Medium
6	Pioneer 343.....	68.2	67.9	.5	32.3	81	112.5	108.8	Medium
7	Pfister 4897.....	67.9	67.7	.3	28.2	70	97.2	108.4	M-high
8	Sieben S-450.....	67.8	67.7	.2	26.3	64	88.9	108.4	Medium
9	Pioneer 341.....	67.7	67.6	.1	29.7	75	104.2	108.1	Medium
10	Funk G-114.....	67.6	67.4	.3	28.6	81	112.5	108.0	Medium
11	Furr 67A.....	67.5	67.2	.5	29.1	63	87.5	107.6	Medium
12	Blackhawk 98A.....	67.3	67.2	.1	29.9	61	84.7	107.6	Medium
13	DeKalb 615.....	67.2	66.9	.5	28.9	70	97.2	107.2	M-high
14	Nichols 202A.....	66.7	66.5	.3	30.0	68	94.4	106.5	Medium
15	Huebsch 25.....	66.5	66.4	.2	27.1	66	91.7	106.4	Medium
16	Pioneer 340.....	66.4	66.0	.6	32.5	78	108.3	105.7	M-high
17	Lowe 19.....	66.3	66.0	.5	32.6	64	88.9	105.7	M-high
18	Farmcraft 42.....	66.1	66.0	.2	33.9	66	91.7	105.7	Medium
19	Pioneer 353A.....	66.0	65.9	.1	24.2	64	88.9	105.6	M-high
20	Producers' 1015.....	65.8	65.7	.2	27.9	73	101.4	105.2	Medium
21	DeKalb 458.....	65.7	65.6	.1	30.6	64	88.9	105.1	Medium
21	Pfister 299.....	65.7	65.2	.7	31.7	77	107.0	104.4	Medium
23	Illinois 269.....	65.6	65.5	.2	31.4	68	94.4	104.9	M-high
23	Illinois 1240-1.....	65.6	65.4	.3	32.4	67	93.1	104.8	Medium
25	Stiegelmeier S-360.....	65.4	65.1	.5	32.8	55	76.4	104.3	M-high
26	Illinois 1180.....	65.2	65.1	.2	28.4	70	97.2	104.3	Medium
27	Wisconsin 692.....	65.1	65.0	.2	34.9	79	109.7	104.1	M-high
27	Doubet D-25.....	65.1	64.1	1.5	34.0	67	93.1	102.7	Medium
29	Frey 425.....	64.9	64.2	1.0	32.7	74	102.8	102.8	Medium
30	Illinois 751.....	64.8	64.6	.3	32.7	70	97.2	103.5	Medium
31	Crow 514(W).....	64.7	64.6	.2	29.2	59	82.0	103.5	High
32	Illinois 1260.....	64.6	64.5	.1	27.8	77	107.0	103.3	Medium
33	Nichols 5A.....	64.3	64.0	.5	31.5	75	104.2	102.5	Medium
34	Pioneer 322.....	64.2	64.2	.0	29.7	75	104.2	102.8	M-high
34	Ferris F-11.....	64.2	64.1	.2	27.4	68	94.4	102.7	Medium
36	Producers' 1010.....	63.7	63.5	.3	31.5	78	108.3	101.7	M-high
37	Illinois 1091A.....	63.4	63.2	.3	32.2	72	100.0	101.2	Medium
37	National 114-1.....	63.4	62.8	1.0	34.5	82	114.0	100.6	M-high
39	Pfister 50A.....	63.2	62.9	.4	25.8	64	88.9	100.8	Medium
39	Funk G-29.....	63.2	62.6	1.0	34.2	83	115.3	100.3	Medium
39	National 114.....	63.2	62.2	1.6	29.2	69	95.8	99.6	M-high
42	Furr 66A.....	62.8	62.5	.4	31.7	68	94.4	100.1	Medium
43	Blackhawk 72A.....	62.4	62.3	.1	27.3	73	101.4	99.8	Medium
43	Producers' 909.....	62.4	60.6	2.8	37.1	84	116.7	97.1	High
45	DeKalb 404A.....	62.3	62.3	.0	29.2	72	100.0	99.8	Medium
46	Moews 550.....	62.2	61.5	1.1	32.3	80	111.1	98.5	M-high
47	Frey 410.....	62.1	61.8	.4	30.9	68	94.4	99.0	Medium
47	National 118-1.....	62.1	61.5	.9	32.3	74	102.8	98.5	M-high
49	Funk G-116.....	61.8	61.4	.6	35.5	89	123.6	98.4	Medium
49	Sieben S-350.....	61.8	59.4	3.8	41.0	75	104.2	95.2	M-high
51	Morgan M-105.....	61.0	60.6	.6	34.2	77	107.0	97.1	Medium
52	Illinois 101.....	60.9	60.8	.2	30.4	80	111.1	97.4	Medium
53	DeKalb 609.....	60.7	59.4	2.2	32.4	64	88.9	95.2	Medium
54	Stiegelmeier S-379.....	60.4	60.3	.2	33.4	73	101.4	96.6	M-high
55	Moews 14.....	60.3	60.0	.4	29.7	76	105.6	96.1	Medium
56	Crow 360.....	59.8	59.7	.1	32.9	63	87.5	95.6	M-high
57	Lowe 15.....	59.2	59.0	.3	30.7	63	87.5	94.5	Medium
58	DeKalb 422.....	58.6	58.4	.4	33.9	67	93.1	93.6	Medium
59	DeKalb 450.....	58.4	57.3	1.9	36.7	79	109.7	91.8	Medium
60	Ward 115A.....	58.3	58.2	.1	29.9	70	97.2	93.2	Medium
61	Holmes Utility 96.....	58.2	57.8	.7	34.8	71	98.6	92.6	M-high
62	Hoosier Crost F-138.....	57.3	56.8	.8	31.9	65	90.3	91.0	Medium
63	Producers' 1020.....	57.0	56.9	.2	30.6	73	101.4	91.2	Medium
64	Lowe 6(W).....	56.4	56.2	.4	26.4	54	75.0	90.0	M-high
65	Crow 432.....	56.0	55.6	.7	32.7	77	107.0	89.1	Medium
66	Iowwealth 25.....	55.4	55.2	.3	37.5	70	97.2	88.4	High
66 ^s	Iowwealth QAQ.....	53.8	53.7	.2	32.6	74	102.8	86.0	M-high
68	Funk G-51.....	52.4	52.1	.5	36.4	75	104.2	83.5	Medium
69	Hoosier Crost 405.....	51.9	51.7	.3	33.1	74	102.8	82.8	Medium
70	Pfister 281.....	51.8	51.3	1.0	37.6	80	111.1	82.2	M-high
71	Holmes Utility 49.....	50.6	50.0	1.1	33.5	86	119.4	80.1	M-high
72	Ward 115(W).....	46.8	46.4	.9	25.5	62	86.1	74.3	M-high
	Average of all entries.....	62.8	62.4	.6	31.3	72	.....	.....	.....

^s Data are averages of only 5 plots instead of 6.

A difference of less than 4.4 bushels between total yields of any two entries in this table is not significant.

Table 6.—NORTHERN ILLINOIS: Summary, Mt. Morris, 1943, 1944; Kings, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Compara- tive height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1	Nichols 5A.....	84.3	83.8	.5	26.7	90.1	100.3	107.7	Medium
2	Pfister 4897.....	83.7	83.5	.2	24.3	88.2	98.2	107.3	Medium
3	DeKalb 458.....	82.0	81.9	.1	25.9	86.5	96.3	105.3	Medium
4	Funk G-114.....	81.7	81.4	.3	26.8	91.2	101.6	104.6	Medium
4	DeKalb 615.....	81.7	81.3	.5	25.2	87.5	97.4	104.5	Medium
6	Pfister 366.....	81.6	81.4	.3	26.9	86.1	95.9	104.6	M-high
7	Illinois 751.....	81.2	81.0	.2	27.5	89.3	99.4	104.1	Medium
8	Pioneer 341.....	80.9	80.7	.3	25.9	90.5	100.8	103.7	Medium
9	Farmcraft 42.....	80.6	79.9	.8	28.4	87.0	96.9	102.7	Medium
10	Pioneer 330.....	80.3	79.8	.6	26.6	94.3	105.0	102.6	Medium
11	Pioneer 340.....	79.4	79.1	.4	26.7	91.1	101.4	101.7	Medium
11	Producers' 1010.....	79.4	79.1	.4	27.1	90.3	100.6	101.7	Medium
13	Doubet D-1.....	79.1	78.9	.3	26.0	89.2	99.3	101.4	Medium
14	Nichols 202A.....	78.8	78.6	.2	25.5	88.3	98.3	101.0	Medium
15	Illinois 1180.....	78.6	78.4	.2	24.8	88.5	98.6	100.8	Medium
16	Pioneer 322.....	78.2	77.4	.9	24.7	90.4	100.7	99.5	Medium
17	Producers' 909.....	77.7	76.6	1.6	30.5	93.4	104.0	98.5	M-high
18	DeKalb 422.....	77.5	77.3	.3	27.6	86.3	96.1	99.4	Medium
19	Pioneer 353A.....	77.3	77.1	.1	22.8	86.2	96.0	99.1	M-high
20	Hoosier Crost F-138.....	77.2	76.4	1.0	29.6	84.2	93.8	98.2	Medium
21	Illinois 101.....	77.0	76.8	.3	25.9	90.8	101.1	98.7	Medium
21	Funk G-29.....	77.0	76.4	.8	29.9	92.3	102.8	98.2	M-low
23	Crow 360.....	76.8	76.5	.4	28.3	84.7	94.3	98.3	M-high
24	DeKalb 404A.....	76.4	76.2	.2	26.1	87.8	97.8	97.9	Medium
25	DeKalb 450.....	76.1	75.5	.9	29.0	91.5	101.9	97.0	M-low
25	Doubet D-25.....	76.1	74.8	1.8	29.8	88.0	98.0	96.1	Medium
27	Moews 14.....	74.8	74.5	.4	27.5	91.1	101.4	95.8	Medium
28	Producers' 1020.....	74.4	74.3	.2	25.5	89.8	100.0	95.5	M-low
29	Crow 514(W).....	73.6	73.2	.5	24.7	83.8	93.3	94.1	M-high
30	Crow 432.....	73.5	72.7	1.0	27.8	90.0	100.2	93.4	Medium
31	Hoosier Crost 405.....	68.9	68.7	.2	28.2	89.7	99.9	88.3	M-low
	Average of all entries.....	78.3	77.8	.5	26.8	89.8	....	....	.....

A difference of less than 4.1 bushels between total yields of any two entries in this table is not significant.

Table 7.—WEST NORTH-CENTRAL ILLINOIS: Galesburg, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Mois- ture in grain at harvest	Erect plants	Rating for—		Compara- tive height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1	Lowe 520	73.1	72.8	.4	25.3	18	74.7	113.4	High
2	Doubet D-72	70.8	70.7	.2	22.2	23	95.4	110.1	Medium
3	DeKalb 628A	70.3	69.2	1.5	23.4	30	124.5	107.8	Medium
4	Pfister 380	70.1	68.4	2.4	22.6	19	78.8	106.5	Medium
5	Illinois 1237	69.9	69.7	.3	20.5	15	62.2	108.6	Medium
6	Schwenk S-34	69.6	69.4	.3	23.2	28	116.2	108.1	M-high
7	Farmcraft 47	69.3	69.2	.2	20.9	17	70.5	107.8	Medium
8	Pfister 5897	69.0	69.0	0	22.2	24	99.6	107.5	Medium
8	Funk G-37	69.0	69.0	0	20.5	28	116.2	107.5	Medium
10	Morton M-12	68.5	68.1	.6	23.2	29	120.3	106.1	Medium
11	Appl A-13	68.1	68.0	.2	23.1	34	141.1	105.9	Medium
11	Holmes Utility 29	68.1	67.9	.3	21.4	33	136.9	105.8	Medium
13	Holmes Utility 39	68.0	67.5	.7	23.3	22	91.3	105.1	Medium
14	DeKalb 847	67.9	67.6	.4	24.0	25	103.7	105.3	Medium
15	DeKalb 816	67.8	67.5	.4	24.1	30	124.5	105.1	M-high
16	Funk G-169	67.5	67.4	.1	22.0	28	116.2	105.0	Medium
17	Munson M-17	67.4	67.1	.4	22.1	21	87.1	104.5	M-high
18	DeKalb 840	67.3	67.0	.4	23.9	15	62.2	104.4	M-high
19	Frey 644	67.2	67.0	.3	23.1	16	66.4	104.4	M-high
19	Keystone 42	67.2	66.9	.4	22.8	20	83.0	104.2	M-high
21	Pioneer 304	67.0	66.9	.2	23.6	21	87.1	104.2	Medium
22	Funk G-94	66.8	66.7	.2	23.6	26	107.9	103.9	M-high
23	Illinois 273-1	66.7	66.4	.4	20.9	29	120.3	103.4	Medium
23	Pioneer 333	66.7	66.3	.6	20.7	33	136.9	103.3	Medium
25	Crow 633	66.6	66.4	.3	21.3	34	141.1	103.4	Medium
25	Moews 523	66.6	66.4	.3	23.6	17	70.5	103.4	M-high
25	Sieben S-440	66.6	66.2	.6	22.9	23	95.4	103.1	Medium
28	Ferris F-31	66.4	66.3	.1	21.3	28	116.2	103.3	Medium
28	Blackhawk 111	66.4	66.3	.2	20.9	22	91.3	103.3	Medium
30	Doubet D-42	66.2	63.9	3.5	25.2	20	83.0	99.5	M-high
31	Moews 550	65.9	65.8	.2	21.1	28	116.2	102.5	Medium
31	Producers' 1000	65.9	65.7	.3	23.2	13	53.9	102.3	Medium
33	Stewart S-11	65.6	65.3	.4	22.1	34	141.1	101.7	Medium
34	Munson M-19	65.4	64.9	.8	20.8	27	112.0	101.1	Medium
34	Kelly K-374	65.4	64.2	1.8	22.4	18	74.7	100.0	M-high
36	Stiegelmeier S-1313	65.2	64.9	.4	22.4	19	78.8	101.1	M-high
37	Holmes Utility 96	65.1	64.8	.5	23.3	31	128.6	100.9	Medium
38	Producers' 1040	65.0	64.9	.1	19.6	36	149.4	101.1	Medium
39	Illinois 201	64.9	64.4	.8	23.7	12	49.8	100.3	M-high
40	Pioneer 339	64.8	63.8	1.6	21.9	30	124.5	99.4	Medium
41	Stiegelmeier S-102	64.7	64.4	.5	21.7	29	120.3	110.3	Medium
42	DeKalb 800A	64.4	64.0	.6	24.6	27	112.0	99.7	Medium
43	Crow 607	64.1	64.1	0	23.7	18	74.7	99.8	Medium
43	National 125	64.1	64.0	.1	24.2	17	70.5	99.7	Medium
45	Illinois (Appl) 972-2	63.8	63.6	.3	21.8	29	120.3	99.1	Medium
46	Null N-54	63.6	63.4	.3	22.2	19	78.8	98.8	Medium
47	Producers' FCXX	63.6	63.4	.3	23.2	20	83.0	98.8	M-high
48	Illinois 21	63.4	63.4	0	21.1	31	128.6	98.8	Medium
48	DeKalb 817A	63.4	62.9	.8	23.4	24	99.6	98.0	Medium
50	Furr 80	63.0	62.4	1.0	22.8	40	166.0	97.2	Medium
51	Munson M-5	62.9	62.5	.6	23.1	27	112.0	97.4	Medium
52	Hoosier Crost 840	62.8	62.7	.1	23.0	15	62.2	97.7	Medium
53	U. S. 13	62.7	62.4	.4	23.5	33	136.9	97.2	M-high
53	Pfister 1897	62.7	62.3	.6	23.5	31	128.6	97.0	M-high
55	U. S. 44-1	62.5	62.3	.4	22.5	25	103.7	97.0	M-high
56	Illinois 1091A	62.3	62.2	.2	23.1	15	62.2	96.9	Medium
57	Illinois 246	62.3	62.1	.4	24.6	20	83.0	96.7	M-high
58	Stiegelmeier S-6911	62.2	62.1	.2	24.0	23	95.4	96.7	Medium
58	Morgan M-52	62.2	61.9	.5	24.2	17	70.5	96.4	M-high
60	Pioneer 307	61.8	61.1	1.1	23.0	22	91.3	95.2	M-high
61	DeKalb 680	61.5	61.3	.3	23.0	16	66.4	95.5	Medium
61	Morgan M-546	61.5	61.1	.6	22.8	24	99.6	95.2	Medium
63	Frey 645	61.3	61.2	.1	22.5	37	153.5	95.3	Medium
64	Lowe 560	60.5	59.3	2.0	23.4	21	87.1	92.4	Medium
65	Kelly K-42	59.6	59.3	.5	21.6	20	83.0	92.4	Medium
66	U. S. 35	58.5	58.2	.5	22.7	26	107.9	90.7	Medium
67	Ward 120A	58.4	58.3	.2	23.3	17	70.5	90.8	M-high
68	Iowwealth 29A	57.5	57.0	.8	21.4	23	95.4	88.8	Medium
69	Pioneer 334	56.9	56.7	.3	20.8	28	116.2	88.3	Medium
70	Funk G-80	53.9	53.7	.3	32.1	23	95.4	83.6	M-high
71	National 125-1	53.8	53.4	.8	21.2	21	87.1	83.2	Medium
72	Ward 120(W)	46.9	46.4	1.0	25.6	22	91.3	72.3	High
	Average of all entries	64.5	64.2	.5	22.7	24.1	.....	.....	.....

A difference of less than 7.6 bushels between total yields of any two entries in this table is not significant.

Table 8.—WEST NORTH-CENTRAL ILLINOIS: Galesburg
Summary, 1943, 1944, and 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Mois- ture in grain at harvest	Erect plants	Rating for—		Compara- tive height of ear
		Total	Sound				Erect plants	Sound yield	
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	
1	Pfister 5897	94.5	94.2	.3	20.0	72.0	99.4	105.8	Medium
2	DeKalb 800A	93.9	91.5	2.1	21.6	73.8	101.9	102.8	Medium
3	Producers' 1040	93.8	93.1	.7	19.7	75.5	104.3	104.6	Medium
4	Funk G-169	93.7	92.8	.9	20.6	76.6	105.8	104.3	M-high
5	DeKalb 628A	93.4	92.0	1.5	21.3	73.3	101.2	103.4	Medium
6	Crow 633	93.3	90.9	2.5	20.1	74.8	103.3	102.1	Medium
7	DeKalb 816	92.9	91.3	1.6	21.5	75.0	103.6	102.6	M-high
8	Holmes Utility 29	92.8	91.9	.9	20.5	76.3	105.4	103.3	Medium
8	Morgan M-546	92.8	91.3	1.5	21.4	73.8	101.9	102.6	M-high
10	Doubet D-72	92.6	89.3	3.5	20.4	71.9	99.3	100.3	Medium
11	Producers' 1000	92.4	90.7	1.9	21.3	70.0	96.7	101.9	M-high
12	U. S. 13	92.3	91.8	.5	22.1	76.5	105.7	103.1	M-high
13	Doubet D-42	92.0	89.9	2.5	22.0	71.3	98.5	101.0	M-high
13	Farmcraft 47	92.0	88.8	3.2	19.8	67.0	92.5	99.8	Medium
15	Funk G-37	91.7	91.2	.5	19.5	75.4	104.1	102.5	Medium
16	Illinois 246	91.3	89.3	2.0	21.7	70.9	97.9	100.3	M-high
17	National 125	91.0	90.4	.7	21.3	70.3	97.1	101.6	Medium
18	Pfister 380	90.9	89.5	1.7	21.0	71.5	98.8	100.6	Medium
18	DeKalb 817A	90.9	88.4	2.7	21.6	73.9	102.1	99.3	Medium
20	Crow 607	90.6	88.4	2.1	22.0	68.7	94.9	99.3	M-high
21	Lowe 520	90.2	88.5	1.7	22.6	69.8	96.4	99.4	Medium
22	Illinois 21	89.8	88.5	1.3	20.2	75.8	104.7	99.4	Medium
23	Pioneer 339	89.7	87.9	1.9	20.1	75.5	104.3	98.8	Medium
24	DeKalb 680	89.1	87.5	1.8	21.8	67.7	93.5	98.3	Medium
25	Illinois 201	88.9	88.7	.4	21.3	68.7	94.9	99.7	M-high
25	Producers' FCXX	88.9	87.9	1.0	21.5	70.9	97.9	98.8	M-high
25	Pioneer 334	88.9	87.5	1.5	19.7	73.3	101.2	98.3	Medium
28	Moews 523	88.8	87.1	1.8	20.9	69.6	96.1	97.9	M-high
29	Pfister 1897	87.7	86.9	.9	20.6	74.7	103.2	97.6	Medium
30	Moews 550	87.2	86.2	1.0	19.8	72.4	100.0	96.9	Medium
31	Morgan M-52	87.1	86.7	.5	21.3	67.6	93.4	97.4	Medium
32	U. S. 44-1*	86.3	84.4	2.1	20.5	68.9	95.2	94.8	Medium
33	Pioneer 333	85.8	83.9	2.1	20.1	76.4	105.5	94.3	Medium
34	Lowe 560	80.9	79.1	2.2	21.4	71.2	98.3	88.9	Medium
	Average of all entries	90.5	89.0	1.6	20.9	72.4	....	....	.....

* This entry in 1943 was U. S. 44.

A difference of less than 3.9 bushels between total yields of
any two entries in this table is not significant.

Table 9.—EAST NORTH-CENTRAL ILLINOIS: Sheldon, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1 ^s	Morton M-380	83.5	82.2	1.6	23.2	34	80.8	109.0	Medium
2	Frey 692	83.3	82.6	.8	21.6	40	95.0	109.5	M-high
3	Miller 201	83.2	83.0	.2	24.4	13	30.9	110.1	M-high
4 ^s	Holmes Utility 39	82.9	82.6	.4	23.6	32	76.0	109.5	M-high
5 ^s	Stiegelmeier S-360	82.5	81.8	.8	21.3	34	80.8	108.5	Medium
6 ^s	DeKalb 628A	82.4	82.1	.4	22.7	39	92.6	108.9	Medium
7	Pfister 390	82.2	81.1	1.3	21.1	37	87.9	107.6	Medium
8	Holmes Utility 59	81.4	81.2	.3	20.2	57	135.4	107.7	Medium
8 ^s	Pioneer 313B	81.4	81.2	.3	24.8	31	73.6	107.7	Medium
10	Pfister 380	81.1	80.9	.3	21.9	41	97.4	107.3	Medium
10	Funk G-94	81.1	80.4	.9	21.8	45	106.9	106.6	Medium
12 ^s	Keystone 38	80.8	80.6	.3	23.2	43	102.1	106.9	M-high
13 ^s	Funk G-74	80.7	80.1	.7	20.8	52	123.5	106.2	Medium
14 ^s	Pioneer 304	80.4	79.1	1.6	28.1	33	78.4	104.9	Medium
15 ^s	Furr 67	80.1	79.6	.6	22.8	36	85.5	105.6	M-low
15	Frey 644	80.1	78.9	1.5	23.6	39	92.6	104.6	M-high
17 ^s	Illinois 273-1	80.0	79.4	.7	19.5	50	118.8	105.3	Medium
18	DeKalb 816	79.9	79.9	0	23.1	48	114.0	106.0	M-high
19	Doubt D-47	79.5	79.1	.5	20.7	52	123.5	104.9	M-high
19 ^s	Pioneer 300	79.5	78.9	.8	22.7	47	111.6	104.6	M-high
21 ^s	Illinois 201	79.3	79.0	.4	21.0	38	90.3	104.8	M-high
21 ^s	Farmcraft 42	79.3	78.7	.7	22.0	34	80.8	104.4	Medium
23	Seeber 11A	79.0	78.4	.8	23.2	35	83.1	104.0	Medium
24 ^s	Producers' 1050	78.9	78.0	1.1	22.9	35	83.1	103.4	M-high
25	Morton M-33	78.8	78.6	.2	22.9	47	111.6	104.2	Medium
26	Canady C-65	78.7	77.9	1.0	20.3	48	114.0	103.3	Medium
27	Lowe 523	78.5	78.2	.4	23.4	28	66.5	103.7	M-high
28 ^s	Pfister 280	78.4	76.9	1.9	21.6	49	116.4	102.0	Medium
29 ^s	Crow 607	78.1	77.4	.8	23.1	36	85.5	102.7	Medium
29	DeKalb 800A	78.1	77.2	1.2	23.6	46	109.3	102.4	Medium
29	Producers' 1030	78.1	77.0	1.4	23.3	43	102.1	102.1	M-high
32	Funk G-53	77.6	77.0	.8	23.3	52	123.5	102.1	Medium
33	Kelly K-374	77.1	76.9	.2	22.2	43	102.1	102.0	M-high
34	Pioneer 332	77.0	76.9	.1	24.8	38	90.3	102.0	M-high
34	Crow 608	77.0	75.8	1.5	22.9	45	106.9	100.5	M-high
36 ^s	Farmcraft 69	76.9	76.6	.4	23.7	42	99.8	101.6	Medium
36	DeKalb 840	76.9	76.6	.4	23.4	32	76.0	101.6	M-high
37	Lowe 520	76.7	76.7	0	33.2	16	38.0	101.7	High
39 ^s	Illinois 246	76.5	76.4	.1	24.8	34	80.8	101.3	M-high
40	Illinois 21	75.6	74.9	.9	22.2	47	111.6	99.3	Medium
41 ^s	Frey 645	75.5	74.8	.9	21.8	50	118.8	99.2	Medium
41 ^s	Illinois 972-2 (Appl)	75.3	73.9	1.8	22.0	38	90.3	98.0	Medium
42	U. S. 13	75.3	73.4	2.4	25.3	39	92.6	97.3	M-high
42	Producers' 1040	75.3	73.3	2.7	20.8	54	128.3	97.2	Medium
45	National 125-2	75.1	74.7	.5	21.2	40	95.0	99.1	M-high
46	Hoosier Crost 668	74.7	74.3	.6	21.8	42	99.8	98.5	M-high
46	DeKalb 847	74.7	74.0	1.0	22.1	37	87.9	98.1	Medium
48	Keystone 43	74.5	72.7	2.4	22.2	45	106.9	96.4	Medium
49	Pioneer 336	74.3	70.7	4.8	23.1	40	95.0	93.8	Medium
50 ^s	Lowe 560	74.0	73.6	.5	22.3	49	116.4	97.6	Medium
50	National 118	74.0	73.0	1.4	19.5	58	137.8	96.8	Medium
52 ^s	Funk G-37	73.8	73.1	.9	21.1	48	114.0	96.9	Medium
52	Ward 120B	73.8	71.9	2.6	21.5	59	140.1	95.4	Medium
54	Crow 633	73.6	73.2	.5	23.7	48	114.0	97.1	Medium
54 ^s	Sibley 753B	73.6	73.2	.6	20.3	42	99.8	97.1	M-high
56	U. S. 35	73.5	73.4	.1	21.7	61	144.9	97.3	Medium
56 ^s	Pioneer 334	73.5	73.2	.4	22.4	49	116.4	97.1	M-high
58 ^s	Iowaalth 29A	73.4	72.4	1.3	22.6	49	116.4	96.0	M-high
59	Crow 607(W)	73.2	72.9	.4	22.9	28	66.5	96.7	Medium
60	Kelly K-77	72.9	72.5	.5	22.7	44	104.5	96.2	Medium
61	Pfister 4817	72.7	72.5	.3	22.3	33	78.4	96.2	Medium
62	Appl A-201	72.4	71.8	.8	23.9	42	99.8	95.2	Medium
63	Stiegelmeier S-379	72.2	71.6	.8	21.7	46	109.3	95.0	Medium
64 ^s	DeKalb 817A	72.1	71.2	1.2	23.6	38	90.3	94.4	M-high
65	Hoosier Crost FD-6	71.4	71.0	.6	21.0	50	118.8	94.2	Medium
66 ^s	Funk G-169	70.6	69.3	1.9	24.3	39	92.6	91.9	Medium
67	Sibley 700	70.5	69.2	1.8	23.5	43	102.1	91.8	M-high
68 ^s	Hoosier Crost F-170	70.3	69.6	1.0	22.2	57	135.4	92.3	Medium
69	Iowaalth 26N	70.1	69.7	.5	22.1	48	114.0	92.4	Medium
70	Lowe 530	69.7	68.7	1.5	23.3	26	61.8	91.1	M-high
71	Frey 634(W)	63.3	62.8	.8	21.1	36	85.5	83.3	M-high
72	Farmcraft 131(W)	38.5	38.2	.7	29.8	63	149.6	50.7	High
Average of all entries		76.1	75.4	.9	22.8	42.1	.....	.....	.....

* Five plots were included in the average yield instead of six.

A difference of less than 5.0 bushels between total yields of any two entries in this table is not significant.

Table 10.—EAST NORTH-CENTRAL ILLINOIS: Summary, Milford, 1943, 1944 and Sheldon, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1	Holmes Utility 39	87.8	87.3	.6	21.9	74.1	98.5	106.6	M-high
2	DeKalb 840	87.7	86.8	1.1	21.0	72.3	96.1	106.0	Medium
3	Funk G-94	86.7	85.9	.9	21.2	77.0	102.4	104.9	M-high
4	Producers' 1030	86.3	84.9	1.6	21.4	77.2	102.7	103.7	M-high
5	DeKalb 628A	86.0	85.3	.8	21.8	76.1	101.2	104.2	Medium
6	Seeber 11A	85.7	84.9	1.0	21.1	75.3	100.1	103.7	M-high
7	Pfister 380	85.6	85.3	.4	20.9	76.0	101.1	104.2	M-low
7	DeKalb 800A	85.6	84.5	1.4	21.1	77.4	102.9	103.2	Medium
9	DeKalb 816	85.3	84.8	.6	22.0	76.5	101.7	103.5	M-high
10	Illinois 201	84.8	84.2	.8	20.2	73.2	97.3	102.8	M-high
11	Miller 201	84.6	83.5	1.4	21.8	65.5	87.1	102.0	Medium
12	Stiegelmeier 360	83.1	82.6	.6	19.8	70.6	93.9	100.9	Medium
13	Producers' 1040	83.0	81.9	1.4	21.1	81.6	108.5	100.0	Medium
14	Doubet D-47	82.9	82.2	.9	20.8	79.2	105.3	100.4	Medium
15	Crow 607	82.8	82.1	.8	21.5	72.2	96.0	100.2	Medium
16	Pioneer 300	82.7	82.1	.8	22.4	78.8	104.8	100.2	Medium
17	Funk G-169	82.6	81.6	1.2	21.1	72.0	95.7	99.6	M-high
18	Pfister 4817	82.2	81.8	.4	20.6	73.4	97.6	99.9	Medium
19	Pfister 280	82.0	80.6	1.7	20.6	77.9	103.6	98.4	Medium
20	Pioneer 332	81.9	81.0	1.2	23.6	74.3	98.8	98.9	M-high
20	Illinois 21	81.9	80.2	2.0	21.4	77.1	102.5	97.9	Medium
22	Pioneer 313D ^a	81.6	81.1	.6	22.7	71.6	95.2	99.0	Medium
23	Funk G-37	81.5	80.0	1.9	20.1	78.0	103.7	97.7	Medium
24	U. S. 13	80.7	79.0	2.0	22.6	72.9	96.9	96.5	M-high
25	Pioneer 336	80.6	79.1	2.0	20.6	75.0	99.7	96.6	Medium
26	Crow 633	80.3	79.3	1.1	22.1	77.6	103.2	96.8	Medium
26	DeKalb 817A	80.3	79.1	1.5	21.5	74.5	99.1	96.6	Medium
28	DeKalb 847	80.1	78.8	1.7	21.5	73.3	97.5	96.2	Medium
29	U. S. 35	79.9	79.3	.6	21.0	81.9	108.9	96.8	Medium
30	Crow 608	79.6	78.3	1.5	21.4	77.8	103.5	95.6	Medium
31	Sibley 753B-1 ^b	78.7	77.6	1.4	20.1	75.7	100.7	94.7	Medium
32	Lowe 520	78.6	78.1	.6	25.2	68.3	90.8	95.4	Medium
33	Hoosier Crost 668	78.2	77.2	1.2	22.0	76.0	101.1	94.3	Medium
34	Lowe 560	75.8	75.4	.6	20.8	77.3	102.8	92.1	Medium
	Average of all entries	82.6	81.9	1.1	21.5	75.2	.....	.....	.....

^a This entry in the 1945 tests was Pioneer 313B. ^b This entry in the 1943 tests was Sibley 753B.

A difference of less than 3.4 bushels between total yields of any two entries in this table is not significant.

Table 11.—CORN BORER DAMAGE: Sheldon, East North-Central Illinois, 1945

Rank	Entry	Plants broken below ear ^a	Rank	Entry	Plants broken below ear ^a
		perct.			perct.
1	Morton M-33	25.0	15	U. S. 35	41.7
2	Iowwealth 26N	27.2	16	Producers' 1040	42.1
3	Farmcraft 42	29.0	17	National 118	42.3
4	Lowe 520	29.1	18	Crow 607(W)	42.6
4	Lowe 523	29.1	19	Illinois 246	42.7
6	Farmcraft 131(W)	35.5	20	Hoosier Crost FD-6	44.7
7	Holmes Utility 59	36.5	21	Doubet D-47	45.1
8	Pfister 280	36.8	22	Ward 120B	45.4
9	Crow 607	39.9	23	Illinois 273-1	45.6
10	Frey 692	40.0	24	Funk G-53	45.9
11	Frey 644	40.1	25	Lowe 530	46.1
12	Illinois (Appl) 972-2	40.7	26	Pioneer 300	46.5
12	Stiegelmeier S-379	40.7	27	Frey 634(W)	46.7
14	Seeber 11A	41.6	28	Pfister 380	47.0

(Table is concluded on next page)

Table 11.—CORN BORER DAMAGE: Sheldon, concluded

Rank	Entry	Plants broken below ear ^a	Rank	Entry	Plants broken below ear ^a
		<i>perct.</i>			<i>perct.</i>
29	Illinois 21	47.1	51	Kelly K-77	55.2
30	Hoosier Crost F-170	47.4	52	Pioneer 332	55.9
31	Stiegelmeier S-360	47.9	53	Sibley 753B	56.0
32	DeKalb 628A	48.2	54	Keystone 38	56.7
33	Funk G-74	48.4	55	Miller 201	58.4
33	DeKalb 816	48.4	55	Pioneer 334	58.4
35	Holmes Utility 39	49.5	57	Canady C-65	59.6
36	Producers' 1030	49.6	58	Crow 633	60.3
36	Hoosier Crost 668	49.6	59	Pioneer 336	60.9
38	Farmcraft 69	49.8	60	DeKalb 817A	61.2
39	DeKalb 840	50.8	61	Illinois 201	61.5
40	Kelly K-374	51.4	62	Funk G-169	61.6
41	Pfister 4817	51.6	63	Pioneer 313B	61.9
42	Furr 67	52.1	64	Keystone 43	62.3
43	Crow 608	52.2	65	U. S. 13	62.4
44	Appl A-201	53.4	66	Frey 645	62.8
45	DeKalb 847	53.7	66	Sibley 700	62.8
46	DeKalb 800A	54.0	68	Producers' 1050	63.3
47	Lowe 560	54.4	69	Pioneer 304	63.4
48	Morton M-380	54.8	70	Funk G-94	65.1
49	Pfister 390	55.1	71	Funk G-37	65.4
49	Iowearth 29A	55.1	72	National 125-2	71.6
				Average of all entries	49.8

^a Includes only those plants broken below the ear at point of damage by the borer, *Pyrausta nubilalis* (Hbn.).

A difference of less than 15.7 in percentage figures is not significant.

Table 12.—CORN BORER DAMAGE: East North-Central Summary, Milford, 1943, 1944; Sheldon, 1945

Rank	Entry	Plants broken below ear ^a	Rank	Entry	Plants broken below ear ^a
		<i>perct.</i>			<i>perct.</i>
1	Pfister 280	12.8	19	DeKalb 800A	20.5
2	Lowe 520	14.5	20	Producers' 1030	20.7
3	Producers' 1040	14.6	21	Holmes Utility 39	21.0
4	Illinois (Appl) 972 ^b	15.5	21	Sibley 753B ^d	21.0
5	Crow 607	15.6	23	Pioneer 332	21.3
6	Seeber 11A	16.7	24	Lowe 560	21.4
7	Pfister 380	16.8	25	DeKalb 816	22.1
8	U. S. 35	16.9	26	Pioneer 336	22.8
9	Pioneer 300	17.7	27	Illinois 201	23.1
10	Illinois 21	17.8	28	Crow 633	23.2
11	Crow 608	17.9	29	DeKalb 817A	23.3
12	Pfister 4817	18.1	30	U. S. 13	24.2
13	DeKalb 628A	18.3	31	Pioneer 313B ^e	24.4
13	Doubet D-47	18.3	32	Funk G-94	25.5
15	Stiegelmeier S-360 ^c	18.8	33	Miller 201	25.7
16	DeKalb 840	19.2	34	National 125-2 ^f	25.8
17	Hoosier Crost 668	19.5	35	Funk G-169	27.4
18	DeKalb 847	20.3	36	Funk G-37	28.5
				Average of all entries	20.3

^a Includes only those plants broken below the ear at point of damage by the borer, *Pyrausta nubilalis* (Hbn.). ^b This entry was Illinois 972-1 in 1944 and Illinois 972-2 in 1945. ^c This entry was Stiegelmeier 360 in 1943 and 1944. ^d This entry was Sibley 753B-1 in 1944. ^e This entry was Pioneer 313D in 1943 and 1944. ^f This entry was National 125 in 1943 and 1944.

A difference of less than 12.4 in percentage figures is not significant.

Table 13.—SOUTHERN CORN ROOTWORM: Sheldon, East North-Central Illinois, Extent to which stalks resisted lodging caused by the feeding of this insect^a

Rank	Entry	Plants leaning 30 degrees or more	perct.	Resistance rating com- pared with average ^b	Rank	Entry	Plants leaning 30 degrees or more	perct.	Resistance rating com- pared with average ^b
1	Keystone 43	5.5	0	1418	37	Illinois 273-1	11.8	111	111
2	National 125-2	7.4	0	1073	38	Pioneer 332	13.8	108	108
3	Frey 645	6.2	1.2	923	39	Hoosier Crosst F-170	17.4	101	101
4	Funk G-37	6.8	1.2	863	40	Furr 67	17.6	100	100
5	DeKalb 800A	21.8	3.0	286	40	Farmcraft 69	17.6	100	100
6	Ward 120B	16.5	6.7	265	42	Pioneer 336	18.0	98	98
7	Producers' 1040	23.9	4.4	242	42	Morton M-380	22.6	98	98
8	Funk G-53	17.5	7.6	242	44	Hoosier Crosst FD-6	16.7	97	97
9	Canada C-65	19.3	7.2	235	45	Lowwealth 29A	22.2	93	93
10	Funk G-94	21.1	6.9	227	46	Pioneer 304	22.2	93	93
11	Doubet D-47	23.1	8.9	194	47	Kelly K-374	20.8	90	90
12	National 118	26.9	7.5	189	48	Stiegelmeier S-379	25.6	87	87
12	Pioneer 334	23.1	9.4	189	49	Pioneer 300	24.1	86	86
14	Pfister 380	32.5	5.7	180	50	Producers' 1030	25.8	85	85
15	U. S. 35	26.7	9.9	170	51	DeKalb 840	26.8	79	79
16	U. S. 13	24.5	11.6	166	52	Pfister 4817	28.7	78	78
17	Holmes Utility 59	34.1	8.8	153	53	Holmes Utility 39	27.5	77	77
18	Pfister 390	31.7	10.4	151	54	Lowwealth 26N	27.4	76	76
19	Illinois 21	26.9	13.1	149	55	Frey 634(W)	29.4	75	75
20	DeKalb 816	28.3	12.7	148	56	Pioneer 313B	30.9	72	72
21	Funk 700	27.7	13.3	146	57	Frey 692	28.0	71	71
22	Funk G-74	28.3	13.8	142	57	Pfister 280	29.9	71	71
23	DeKalb 817A	31.2	12.9	139	59	Morton M-33	27.4	70	70
24	Appl A-201	26.7	15.5	137	60	DeKalb 628A	32.7	68	68
25	Illinois 201	29.8	14.3	136	61	Illinois 972-2 (Appl)	33.8	67	67
26	Crow 633	29.6	14.8	134	62	Low 530	32.0	66	66
27	Sibley 753B	29.5	15.1	133	63	Crow 607	32.7	63	63
28	Farmcraft 131(W)	26.3	17.3	130	64	Stiegelmeier S-360	38.1	61	61
29	Kelly K-77	31.9	15.3	127	65	Seeber 11A	40.1	57	57
30	Hoosier Crosst 668	35.1	14.3	124	66	Illinois 246	60.5	54	54
31	Keystone 38	37.3	13.6	123	67	Frey 644	39.6	54	54
32	Funk G-169	30.5	17.4	121	68	Farmcraft 42	42.0	53	53
33	DeKalb 847	33.8	16.3	120	69	Crow 607(W)	44.8	48	48
34	Crow 608	32.1	17.6	118	70	Miller 201	47.4	44	44
35	Low 560	37.6	15.6	115	71	Low 523	55.2	42	42
36	Producers' 1050	34.9	17.8	112	72	Low 520	57.7	40	40
						Average of all entries	33.7	20.3	100

^a *Diabrotica undecimpunctata* (F). ^b High rating indicates better standing ability.

In percentage of plants leaning 30 degrees or more, a difference of less than 21.5 between any two entries is not significant.

Table 14.—SOUTH-CENTRAL ILLINOIS: Sullivan, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Mois- ture in grain at harvest	Erect plants	Rating for—		Compara- tive height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1	Doubt D-41.....	102.1	101.5	.6	20.0	58	77.3	112.2	M-high
2	Lowe 523.....	101.2	98.9	2.3	18.6	71	94.7	109.3	Medium
3	Pioneer 332.....	100.4	99.6	.8	20.5	82	109.3	110.1	M-high
4	Producers' 1050.....	99.9	99.7	.2	19.5	65	86.7	110.2	Medium
5	Illinois 784.....	99.2	98.9	.3	22.4	56	74.7	109.3	M-high
6	Funk G-515(W).....	99.0	98.6	.4	20.0	48	64.0	109.0	High
7	Bear OK-40.....	98.6	98.0	.6	18.6	83	110.7	108.3	Medium
7	Bear OK-315(W).....	98.6	98.4	.2	20.0	80	106.7	108.7	Medium
9	Pioneer 505(W).....	98.0	96.5	1.5	19.2	76	101.3	106.6	M-high
10	Pioneer 313B.....	97.4	96.0	1.4	20.1	76	101.3	106.1	Medium
11	Bear OK-150.....	97.2	97.1	.1	19.3	80	106.7	107.3	M-low
12	Illinois 201.....	97.0	96.4	.6	18.9	79	105.3	106.5	Medium
12	Pfister 1897.....	97.0	96.6	.4	19.3	86	114.7	106.7	Medium
12	Miller 1050(W).....	97.0	96.6	.4	19.3	71	94.7	106.7	High
15	Pioneer 300.....	96.6	94.5	2.2	19.7	88	117.3	104.4	Medium
16	Pioneer 304.....	96.5	95.9	.6	21.1	82	109.3	106.0	Medium
17	Illinois 247.....	96.4	90.9	5.7	19.6	71	94.7	100.4	M-high
18	Wealth 28N.....	96.3	95.3	1.0	20.1	55	73.3	105.3	Medium
18	Keystone 38.....	96.3	95.1	1.2	20.0	83	110.7	105.1	Medium
20	Morton M-12.....	95.7	95.1	.6	19.4	81	108.0	105.1	Medium
21	Crow 607.....	95.6	94.7	.9	20.7	63	84.0	104.6	M-high
22	Pfister 164.....	95.2	93.0	2.3	18.9	88	117.3	102.8	Medium
23	Pfister 180.....	95.1	93.8	1.4	19.3	68	90.7	103.6	Medium
23	DeKalb 835.....	95.1	93.0	2.2	19.0	79	105.3	102.8	Medium
25	Producers' 1040.....	94.8	94.4	.4	19.4	89	118.7	104.3	Medium
26	Crow 608.....	94.5	93.6	1.0	19.0	83	110.7	103.4	Medium
27	Whisnand 831.....	94.4	93.8	.6	19.4	78	104.0	103.6	Medium
28	Illinois 246.....	93.8	93.5	.3	19.8	69	92.0	103.3	M-high
29	Pfeifer A-243.....	93.6	89.4	4.5	21.8	44	58.7	98.8	M-high
30	Pfeifer 206.....	93.5	93.3	.2	19.6	81	108.0	103.1	M-high
30	Producers' 777.....	93.5	92.1	1.5	19.2	61	81.3	101.8	M-high
32	DeKalb 816.....	93.3	90.7	2.6	20.0	81	108.0	100.2	M-high
33	National 129-1.....	93.2	92.6	.6	19.2	93	124.0	102.3	Medium
34	Producers' 1000.....	92.9	92.5	.4	19.3	68	90.7	102.2	Medium
35	Funk G-137.....	92.8	92.8	0	22.8	78	104.0	102.5	M-high
35	Stiegelmeier S-102.....	92.8	92.2	.6	18.6	92	122.7	101.9	Medium
35	Illinois 1244.....	92.8	92.6	.2	20.2	60	80.0	102.3	Medium
35	Whisnand 917(W).....	92.8	92.2	.6	19.4	73	97.3	101.9	High
39	Illinois 21.....	92.3	89.3	3.2	19.3	83	110.7	98.7	Medium
40	Appl A-13.....	92.1	91.9	.2	20.0	86	114.7	101.5	Medium
41	Morgan M-546.....	91.5	90.4	1.2	20.2	76	101.3	99.9	Medium
42	Crow 805.....	91.2	90.9	.3	20.2	83	110.7	100.4	Medium
43	Null N-77.....	91.1	86.5	5.1	19.1	63	84.0	95.6	M-high
44	Holmes Utility 39A.....	90.8	90.6	.2	19.7	75	100.0	100.1	Medium
45	Keystone 106(W).....	90.4	90.0	.4	18.8	80	106.7	99.4	M-high
46	Kelly K-99.....	90.3	90.0	.3	19.5	73	97.3	99.4	Medium
47	Kelly K-374.....	90.1	85.8	4.8	18.8	77	102.7	94.8	Medium
47	DeKalb 849.....	90.1	86.9	3.6	19.3	91	121.3	96.0	Medium
49	U. S. 13.....	89.9	88.6	1.5	19.1	79	105.3	97.9	Medium
49	Farmcraft 88.....	89.9	88.3	1.8	19.8	72	96.0	97.6	Medium
51	Farmcraft 81.....	89.6	89.1	.6	19.2	89	118.7	98.5	M-Low
51	Illinois 972A-1.....	89.6	85.2	4.9	18.9	88	117.3	94.1	Medium
53	Hoosier Crost 746.....	88.5	87.8	.8	19.1	84	112.0	97.0	Medium
53	Lowe 855(W).....	88.5	88.3	.2	20.9	65	86.7	97.6	High
55	DeKalb 922(W).....	88.3	88.1	.2	19.7	79	105.3	97.3	Medium
56	Pfister 612(W).....	88.0	87.6	.4	19.6	64	85.3	96.8	M-high
57	DeKalb 888.....	87.2	86.9	.4	20.2	66	88.0	96.0	M-high
58	Pioneer 336.....	86.9	86.6	.4	19.2	91	121.3	95.7	Medium
58	Funk G-80.....	86.9	85.2	2.0	20.5	73	97.3	94.1	Medium
60	Ward 120A.....	86.6	86.3	.3	19.1	83	110.7	95.4	Medium
61	DeKalb 875.....	86.1	84.6	1.7	19.8	74	98.7	93.5	Medium
62	Hoosier Crost 840.....	85.4	79.0	7.5	19.9	78	104.0	87.3	Medium
63	Illinois 200.....	84.8	83.9	1.0	20.7	68	90.7	92.7	Medium
64	Illinois 126.....	84.1	83.9	.2	19.1	76	101.3	92.7	Medium
65	Ward 120(W).....	83.7	83.4	.4	19.7	68	90.7	92.2	M-high
66	Hoosier Crost 707(W).....	83.5	82.9	.7	20.0	52	69.3	91.6	Medium
67	National 125-1.....	81.9	79.0	3.5	19.3	86	114.7	87.3	Medium
68	Funk G-94.....	80.7	80.5	.3	19.7	76	101.3	89.0	M-high
69	National 129.....	80.3	78.0	2.9	19.7	72	96.0	86.2	Medium
70	Illinois 437.....	78.0	77.0	1.3	19.7	83	110.7	85.1	Medium
71	Hoosier Crost 505(W).....	77.7	77.4	.4	18.4	55	73.3	85.5	Medium
72	Lowe 865(W).....	75.3	74.7	.8	18.5	73	97.3	82.5	M-high
	Average of all entries.....	91.7	90.5	1.3	19.7	75	.....	.....	.....

A difference of less than 5.5 bushels between total yields of any two entries in this table is not significant.

Table 15.—SOUTH-CENTRAL ILLINOIS: Sullivan Summary, 1943, 1944, and 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	
1	Funk G-137	97.7	97.4	.3	17.3	82.5	98.7	109.2	M-high
2	Funk G-80	94.9	93.8	1.1	20.4	84.7	101.3	105.2	M-high
3	Whisnand 917(W)	94.5	94.1	.4	19.2	74.7	89.4	105.5	High
4	Miller 1050(W)	94.2	93.9	.3	19.4	79.9	95.6	105.3	M-high
5	Whisnand 831	93.9	93.2	.7	17.5	82.2	98.3	104.5	Medium
6	Illinois 201	93.6	93.1	.6	16.9	85.5	102.3	104.4	Medium
7	Pioneer 332	93.4	92.3	1.2	19.3	85.8	102.6	103.5	Medium
8	DeKalb 835	92.9	91.9	1.0	17.2	88.4	105.7	103.0	M-low
9	Producers' 1040	92.7	92.5	.3	17.9	91.9	109.9	103.7	Medium
10	Pfister 1897	92.5	91.3	1.2	17.7	91.8	109.8	102.4	Medium
11	Producers' 1000	91.9	91.6	.3	17.1	82.4	98.6	102.7	Medium
11	Crow 607	91.9	91.2	.8	19.5	77.4	92.6	102.2	Medium
13	U. S. 13	91.3	90.5	1.0	17.4	86.7	103.7	101.5	Medium
14	Illinois 247	91.2	89.0	2.4	18.7	80.1	95.8	99.8	M-high
15	DeKalb 816	91.0	89.9	1.1	18.7	86.0	102.9	100.8	Medium
15	Pfister 164	91.0	89.8	1.2	17.7	91.0	108.9	100.7	Medium
17	Null N-77	90.9	88.4	2.7	17.9	72.5	86.7	99.1	Medium
18	Illinois 200	90.0	89.0	1.1	19.3	78.6	94.0	99.8	M-high
19	Crow 805	89.6	88.9	.8	17.9	86.5	103.5	99.7	Medium
19	Pioneer 313D*	89.6	88.9	.8	17.7	80.0	95.7	99.7	Medium
21	Crow 608	89.3	88.8	.6	16.9	88.7	106.1	99.6	Medium
22	Farmcraft 81	89.0	88.5	.5	17.0	89.0	106.5	99.2	M-low
23	Pioneer 300	88.4	86.7	3.0	18.7	87.2	104.3	97.2	Medium
23	Illinois 21	88.4	86.4	2.3	18.7	90.9	108.7	96.9	Medium
25	Funk G-94	88.3	87.9	.5	17.8	83.3	99.6	98.5	Medium
26	Farmcraft 88	88.0	86.8	1.4	18.2	80.1	95.8	97.3	Medium
27	DeKalb 888	87.9	86.3	1.8	19.8	72.5	86.7	96.7	M-high
28	Hoosier Crost 840	86.8	84.5	2.7	18.4	85.6	102.4	94.7	Medium
29	Pioneer 336	86.7	86.3	.5	17.4	87.7	104.9	96.7	Medium
30	Hoosier Crost 746	86.0	85.6	.5	17.7	89.3	106.8	96.0	Medium
31	DeKalb 922(W)	83.2	82.9	.4	19.9	82.5	98.7	92.9	M-high
31	Illinois 126	83.2	81.6	1.9	17.7	82.0	98.1	91.5	Medium
33	Hoosier Crost 505(W)	83.1	82.0	1.2	17.6	70.2	84.0	91.9	Medium
Average of all entries		90.2	89.2	1.1	18.2	83.6	.....	.....	.....

* This entry was Pioneer 313B in 1945 tests.

A difference of less than 3.8 bushels between total yields of any two entries in this table is not significant.

Table 16.—SOUTHERN ILLINOIS: Alhambra, 1945

Rank	Entry	Moisture in grain on Oct. 12	Weight of 100 air-dry kernels	Maturity of plants (color of blades)	Erect plants	Compara- tive height of ear	Approximate yield
		<i>perct.</i>	<i>grams</i>		<i>perct.</i>		<i>bu.*</i>
1	Pfister 366	48.4	17.1	$\frac{3}{8}$ brown	18	M-low	38
2	Huebsch 25	49.1	12.9	$\frac{3}{8}$ brown	32	M-low	25
3	Wisconsin 640A	51.5	15.2	$\frac{3}{8}$ brown	22	M-low	41
4	DeKalb 888	52.7	7.6	green	40	M-high	17
5	DeKalb 458	53.0	14.6	$\frac{2}{8}$ brown	20	M-low	29
6	Doubet D-25	53.3	16.8	$\frac{2}{8}$ brown	34	Medium	42
7	Morgan M-105	53.6	11.1	$\frac{2}{8}$ brown	27	M-low	31
8	Illinois 1091A	53.8	18.8	$\frac{1}{8}$ brown	40	Medium	42
9	Funk G-114	54.2	14.4	$\frac{3}{8}$ brown	30	M-low	35
10	Ferris F-11	54.3	18.5	$\frac{2}{8}$ brown	24	M-low	37
11	National 114	54.9	16.5	$\frac{1}{8}$ brown	35	Medium	40
12	Crow 432	55.5	14.5	$\frac{3}{8}$ brown	28	M-low	25
13	Pfister 1897	55.9	17.1	green	42	Medium	39
14	Kelly K-374	56.0	12.8	$\frac{3}{8}$ brown	35	M-low	29
15	Wisconsin 692	56.2	16.4	$\frac{2}{8}$ brown	36	M-low	34
16	Frey 425	57.0	16.1	$\frac{1}{8}$ brown	37	M-low	35
16	Wisconsin 641A	57.0	12.7	$\frac{1}{8}$ brown	35	Medium	25
18	Sieben S-440	57.6	15.1	$\frac{1}{8}$ brown	28	Medium	36
19	Frey 410	58.0	13.7	$\frac{2}{8}$ brown	29	M-low	28
20	Holmes Utility 49	58.6	14.1	green	45	Medium	28
21	Pioneer 330	59.0	13.4	$\frac{1}{8}$ brown	22	Medium	30
21	Nichols 202A	59.0	12.9	$\frac{2}{8}$ brown	33	M-low	29
23	Pioneer 353A	59.4	14.9	$\frac{2}{8}$ brown	32	M-low	25
24	Crow 514(W)	59.5	18.8	$\frac{1}{8}$ brown	23	M-high	34
25	Illinois 206	60.0	15.7	green	48	High	37
25	Furr 66A	60.0	13.3	$\frac{2}{8}$ brown	33	M-low	28
25	DeKalb 404A	60.0	12.1	green	23	M-low	21
28	Crow 805	60.2	15.6	green	55	Medium	33
29	Illinois 269	60.7	13.5	$\frac{1}{8}$ brown	32	Medium	28
30	Pfister 4897	61.0	12.7	$\frac{1}{8}$ brown	37	M-low	29
31	Illinois 126	62.0	13.0	green	40	Medium	33
32	Lowe 15	63.0	9.1	$\frac{3}{8}$ brown	23	M-low	19
32	Blackhawk 98A	63.0	6.7	$\frac{2}{8}$ brown	38	M-low	18
34	Blackhawk 72A	63.2	9.6	$\frac{1}{8}$ brown	32	M-low	23
35	Wisconsin 643	63.4	12.3	$\frac{2}{8}$ brown	35	Medium	27
36	Illinois 101	63.5	12.3	$\frac{2}{8}$ brown	30	M-low	22
37	Illinois 201	63.8	10.8	green	45	M-high	31
38	U. S. 13	64.0	12.6	green	45	M-high	30
38	Crow 607	64.0	10.6	green	48	M-high	25
38	Pioneer 304	64.0	8.9	$\frac{1}{8}$ brown	43	M-low	20
41	Iowearth 25	64.4	11.6	green	48	Medium	25
41	Wisconsin 608	64.4	13.1	$\frac{3}{8}$ brown	18	M-low	26
43	U. S. 44-1	64.7	12.1	green	33	Medium	30
44	Pioneer 332	64.8	13.0	green	52	M-high	29
45	Illinois 200	65.0	13.5	V-green	43	M-high	27
46	DeKalb 615	65.9	11.1	$\frac{1}{8}$ brown	33	M-low	25
46	Illinois 273-1	65.9	10.9	green	45	Medium	24
48	Funk G-29	66.4	10.1	$\frac{2}{8}$ brown	30	M-low	18
49	DeKalb 816	66.5	11.4	green	42	Medium	26
50	Funk G-80	66.7	10.0	green	43	M-high	30
51	Illinois 751	67.5	9.7	$\frac{1}{8}$ brown	35	Medium	22
52	Pfister 164	68.2	9.5	green	53	Medium	20
53	Wisconsin 701A	68.5	12.4	$\frac{1}{8}$ brown	37	Medium	26
53	Morton M-12	68.5	11.0	green	48	Medium	24
53	Farmcraft 42	68.5	8.9	$\frac{1}{8}$ brown	33	Medium	20
56	Hoosier Crost 746	68.6	11.3	green	40	Medium	26
57	Hoosier Crost 840	68.7	9.7	green	45	Medium	25
58	U. S. 35	69.5	11.2	green	50	Medium	24
58	Pioneer 300	69.5	9.7	$\frac{1}{8}$ brown	40	Medium	23
58	Nichols 5A	69.5	9.2	$\frac{1}{8}$ brown	37	Medium	17
61	Whisnand 917(W)	70.0	13.4	V-green	37	High	25
62	Hoosier Crost 1005	71.6	8.9	V-green	67	M-high	20
63	Funk G-125	71.7	5.9	V-green	52	M-high	16
64	Producers' 1010	72.1	10.1	$\frac{1}{8}$ brown	36	Medium	18
65	Pioneer 336	73.3	9.1	green	48	Medium	19
66	Moevs 550	73.5	8.7	green	39	M-high	20
67	Farmcraft 88	73.7	8.4	green	48	M-high	18
68	Kelly K-374	74.3	8.6	green	45	High	19
69	Lowe 855(W)	76.6	7.9	V-green	27	M-high	15
70	Pfeifer A-243	79.5	7.0	V-green	58	M-high	16
71	Farmcraft 133(W)	82.5	7.0	green	35	Medium	13
72	Iowearth T X-1	86.5	2.8	V-green	66	Medium	5
	Average of all entries	63.5	12.0		37.7		26.2

* Yield was estimated from the six-ear sample taken from one plot of each entry on October 12, 1945.

Table 17.—SOUTHERN ILLINOIS: Alhambra Summary, 1943 and 1944

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Compara- tive height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1	Illinois 1243.....	50.7	50.4	.6	16.7	73.9	91.6	129.6	Medium
2	Illinois 200.....	50.2	49.7	1.0	13.9	77.3	95.8	127.8	M-low
3	Kansas K-2275(W).....	49.0	48.9	.3	15.6	69.8	86.5	125.7	Medium
4	Kansas K-2234(W).....	46.3	46.0	.6	17.9	70.4	87.2	118.3	Medium
5	Funk G-80.....	46.1	45.7	1.0	16.8	88.3	109.4	117.5	Medium
6	Kansas K-1583.....	45.1	44.6	1.1	19.9	73.7	91.3	114.7	Medium
7	Illinois 784.....	43.9	43.7	.4	18.1	73.7	91.3	112.3	Medium
8	Whisnand 917(W).....	43.5	43.3	.5	17.3	71.3	88.4	111.3	M-high
9	U. S. 13.....	42.8	42.5	.5	13.2	87.5	108.4	109.3	Medium
10	Illinois 804.....	42.6	42.5	.3	15.4	71.5	88.6	109.3	Medium
10	Illinois 877.....	42.6	42.5	.2	16.8	67.6	83.8	109.3	Medium
12	Funk G-125.....	42.2	42.1	.3	15.0	78.8	97.6	108.2	M-high
13	DeKalb 922(W).....	41.1	40.9	.5	15.0	76.3	94.5	105.1	Medium
14	Miller 1050(W).....	41.0	40.1	2.1	15.9	79.0	97.9	103.1	M-high
15	Crow 607.....	40.8	39.9	2.4	15.0	85.7	106.1	102.6	M-low
16	DeKalb 888.....	40.6	40.4	.5	14.7	84.6	104.8	103.9	Medium
17	Pfister 1823.....	40.4	40.3	.5	13.7	88.8	110.0	103.6	Medium
18	Illinois 2059(W).....	39.6	39.5	.4	16.0	81.7	101.2	101.5	Medium
19	Kansas K-1585.....	39.4	39.2	.5	17.2	75.4	93.4	100.8	Medium
20	Crow 805.....	39.3	39.2	.3	13.2	87.9	108.9	100.8	M-low
21	Illinois 713.....	39.0	38.9	.4	14.8	85.6	106.1	100.0	M-low
22	Ioweaht 29A.....	38.6	38.4	.5	13.5	80.3	99.5	98.7	M-low
23	DeKalb 922(W).....	38.5	38.4	.2	15.7	72.5	89.8	98.7	Medium
24	DeKalb 816.....	37.7	37.6	.3	14.3	92.3	114.4	96.7	M-low
25	Illinois 201.....	36.8	36.6	.4	13.7	92.1	114.1	94.1	M-low
26	Hoosier Crost 840.....	36.5	36.3	.6	14.5	92.0	114.0	93.3	M-low
27	Farmercraft 133(W).....	36.0	35.8	.8	16.5	72.9	90.3	92.0	Medium
28	Low 840.....	35.7	35.5	.5	13.7	87.1	107.9	91.3	Medium
28	DeKalb 919(W).....	35.7	35.5	.7	16.3	85.4	105.8	91.3	M-low
30	Whisnand 901(W).....	35.1	34.5	2.2	16.8	78.0	96.7	88.7	Medium
31	Pioneer 332.....	35.0	34.8	.6	16.0	87.5	108.4	89.5	Medium
32	Farmercraft 88.....	34.4	34.0	1.0	14.2	85.3	105.7	87.4	M-low
33	Illinois 2077(W).....	34.1	34.0	.4	14.4	74.4	92.2	87.4	Medium
34	Pfister 1897.....	33.9	33.8	.2	13.3	87.1	107.9	86.9	M-low
35	Pioneer 336.....	33.2	33.1	.3	13.7	85.4	105.8	85.1	Medium
36	Illinois 126.....	32.4	32.1	1.2	15.2	77.9	96.5	82.5	M-low
37	Hoosier Crost 746.....	32.2	32.1	.3	15.0	82.3	89.6	82.5	Low
38	Pioneer 300.....	32.1	32.0	.2	13.2	90.8	112.5	82.3	Medium
39	Pioneer 313D.....	31.5	31.3	.6	14.8	80.6	99.9	80.5	M-low
40	Pfister 164.....	29.8	29.6	.5	14.7	85.3	105.7	76.1	M-low
	Average of all entries.....	39.1	38.9	.65	15.3	80.7	.....	.....	.....

Table 18.—EXTREME SOUTHERN ILLINOIS: Dixon Springs Bottomland, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		bu.	bu.	perct.	perct.	perct.	perct.	perct.	
1 ³	Illinois 2120(W)	68.0	67.6	.6	24.8	62	95.4	145.1	High
2 ⁴	Whisnand 905(W)	67.3	66.5	1.2	25.3	74	113.8	142.7	M-high
3 ⁵	Illinois 2059(W)	61.5	60.8	.9	26.9	44	67.7	130.5	M-high
4 ³	Funk G-711	59.0	58.4	1.1	34.6	62	95.4	125.3	High
5 ⁵	Illinois 2019(W)	58.7	57.1	2.7	23.2	69	106.1	122.5	M-high
6 ⁴	Pfister 660	57.4	57.2	.4	28.9	79	121.5	122.7	M-high
7 ⁶	Illinois 1233	57.0	56.8	.4	20.9	75	115.4	121.9	Medium
8 ⁵	Illinois 2119(W)	55.7	55.4	.5	24.8	85	130.8	118.9	M-high
9 ⁶	Kansas K-2275(W)	55.5	54.8	1.3	25.5	78	120.0	117.6	M-high
10 ³	Lowe 855(W)	55.1	54.0	2.0	22.5	57	87.7	115.9	M-high
11 ⁶	Iowearth 28N	54.1	53.5	1.1	21.6	55	84.6	114.8	Medium
12 ³	Illinois 1239	53.7	53.0	1.2	22.1	63	96.9	113.7	Medium
13 ⁴	Keystone 106(W)	53.3	52.9	.6	26.9	79	121.5	113.5	M-high
14 ³	Kansas K-2234(W)	52.5	52.3	.4	28.4	73	112.3	112.2	M-high
15 ³	DeKalb 888	52.1	50.9	2.3	22.1	67	103.1	109.2	Medium
16 ⁴	Whisnand 831	51.9	50.7	2.4	20.4	78	120.0	108.8	Medium
17 ⁵	DeKalb 816	51.3	50.7	1.1	20.8	78	120.0	108.8	Medium
18 ²	National 129-2	50.3	50.2	.2	21.8	43	66.2	107.7	M-high
19 ⁶	Illinois 1238	49.7	49.4	.6	23.0	80	123.1	106.0	M-high
20 ⁵	U. S. 13 (Pfeifer)	49.5	49.1	.8	21.6	91	140.0	105.4	Medium
21 ³	Funk G-708	49.1	48.3	1.6	36.7	77	118.4	103.6	High
22 ⁴	Pfister 612(W)	48.7	48.1	1.2	24.1	68	104.6	103.2	M-high
23 ⁴	Miller 1050(W)	48.6	47.3	2.6	26.8	65	100.0	101.5	M-high
24 ⁵	Kelly K-374	48.4	48.2	.4	19.3	73	112.3	103.4	Medium
25 ⁵	Pfister 164	48.2	47.8	.9	18.6	80	123.1	102.6	M-high
25 ³	Illinois 784 (Pfeifer)	48.2	47.2	2.0	27.4	43	66.2	101.3	Medium
27 ⁴	Whisnand 834	48.1	47.7	.8	25.0	55	84.6	102.4	Medium
28 ³	Kelly K-200	47.7	46.7	2.1	25.3	47	72.3	100.2	Medium
29 ⁴	Lowe 865(W)	47.5	45.7	3.8	22.5	70	107.7	98.1	M-high
30 ³	DeKalb 896	47.3	47.2	.2	19.9	67	103.1	101.3	Medium
31 ⁵	DeKalb 875	46.1	45.8	.7	23.2	70	107.7	98.3	Medium
32 ⁴	Illinois 1244	46.0	45.4	1.2	23.2	65	100.0	97.4	Medium
33 ⁵	Kansas K-1585	45.8	45.0	1.7	31.4	87	133.8	96.6	M-high
34 ⁴	Illinois 126	44.8	43.3	3.3	22.1	74	113.8	92.9	Medium
35 ⁴	Morgan M-546	44.7	44.2	1.2	21.8	58	89.2	94.8	Medium
36 ³	Pfister 630(W)	44.5	44.3	.5	23.9	68	104.6	95.1	M-high
37 ²	DeKalb 922(W)	44.3	43.8	1.2	22.7	75	115.4	94.0	Medium
38 ⁵	Illinois 2077(W)	43.9	43.1	1.8	27.2	57	87.7	92.5	Medium
38 ³	Illinois 804	43.9	42.2	3.8	30.2	33	50.8	90.6	M-high
40 ⁴	Whisnand 917(W)	43.3	42.3	2.1	24.3	74	113.8	90.8	M-high
41 ⁴	Ward 120A	43.0	42.8	.4	20.6	79	121.5	91.8	Medium
42 ⁴	Funk G-716	42.9	42.4	1.1	35.0	45	69.2	91.0	M-high
43 ³	Hoosier Crost 707(W)	42.5	41.8	1.6	28.8	60	92.3	89.7	Medium
44 ⁶	Hoosier Crost 840	42.2	41.6	1.4	20.4	80	123.1	89.3	Medium
45 ²	Keystone 40	42.1	41.4	1.3	19.6	40	61.5	88.8	Medium
46 ⁴	Illinois 448 (Pfeifer)	41.7	40.9	1.8	23.4	65	100.0	87.8	M-high
47 ⁵	Lowe 830	40.0	39.5	1.3	22.7	34	52.3	84.8	Medium
48 ⁵	Hoosier Crost 1012	39.7	38.7	2.4	35.6	38	58.4	83.0	M-high
48 ³	Farmcraft 88	39.7	38.9	2.1	21.8	83	127.7	83.5	Medium
50 ³	Producers' Crost 1010	39.5	39.2	.8	29.1	62	95.4	84.1	M-high
51 ³	Producers' 1040	39.3	38.1	3.1	20.8	78	120.0	81.8	Medium
51 ³	Lowe 840	39.3	38.2	2.7	23.4	55	84.6	82.0	Medium
53 ⁵	Farmcraft 133(W)	39.0	38.6	1.0	26.0	67	103.0	82.8	Medium
54 ³	Illinois 713	38.8	38.2	1.6	21.1	60	92.3	82.0	Medium
55 ³	Illinois 200	38.7	38.3	1.0	21.9	53	81.5	82.2	Medium
56 ⁴	Lowe 523	38.5	38.0	1.2	20.9	63	96.9	81.5	Medium
57 ³	U. S. 13	38.3	37.3	2.6	22.1	70	107.7	80.0	Medium
58 ⁴	Kansas K-1583	37.3	36.1	3.2	32.1	61	93.8	77.5	M-high
59 ⁶	National 129	37.2	36.8	1.0	22.1	60	92.3	79.0	Medium
60 ³	Producers' 1050	34.0	32.7	3.7	25.5	37	56.9	70.2	Medium
Average of all entries		47.3	46.6	1.5	24.6	65	....	....	....

2, 3, 4, 5, 6 These figures beside the rank numbers indicate the number of plots averaged to get the data in this table.

A difference of less than 7.1 bushels between total yields of any two entries in this table is not significant.

Table 19.—EXTREME SOUTHERN ILLINOIS: Dixon Springs Bottomland, Summary for 1943, 1944, and 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>		
1	Funk G-711.....	64.1	63.2	1.6	30.8	85.7	98.2	125.6	M-high
2	Illinois 2120(W).....	63.1	62.5	1.0	23.7	85.9	98.4	124.3	M-high
3	Illinois 2119(W).....	59.9	58.8	1.8	23.1	93.9	107.6	116.9	M-high
3	Kansas K-2275(W).....	59.9	58.4	2.5	23.1	88.8	101.7	116.1	M-high
5	Illinois 2059(W).....	58.6	57.3	2.0	22.9	79.1	90.6	113.9	M-high
6	Illinois 2019-B(W).....	55.8	54.9	1.6	22.8	88.5	101.4	109.1	Medium
7	Kansas K-2234(W).....	54.4	53.5	1.6	25.8	90.2	103.3	106.4	M-high
8	Illinois 1239.....	53.9	52.4	2.7	21.5	86.8	99.4	104.2	Medium
9	Illinois 2077(W).....	53.7	53.1	1.2	24.1	83.2	95.3	105.6	Medium
10	Whisnand 917(W).....	53.3	52.4	1.6	23.7	89.7	102.7	104.2	M-high
11	Hoosier Crost 707(W).....	53.2	52.5	1.4	24.7	85.5	97.9	104.4	Medium
12	Farmcraft 133(W).....	52.0	51.4	1.1	24.0	87.3	100.0	102.2	Medium
13	DeKalb 888.....	51.7	50.9	1.5	22.1	88.4	101.3	101.2	Medium
14	Miller 1050(W).....	51.5	50.6	1.6	24.1	86.9	99.5	100.6	M-high
15	Kansas K-1585.....	51.4	50.5	1.6	26.4	95.4	109.3	100.4	M-high
16	Illinois 126.....	51.0	49.8	2.4	20.7	89.4	102.4	99.0	Medium
16	Illinois 1238-B ^a	51.0	49.5	2.9	22.2	91.4	104.7	98.4	Medium
18	Illinois 1233.....	50.2	49.2	2.2	21.3	90.8	104.0	97.8	Medium
19	Kansas K-1583.....	49.8	48.4	2.9	27.4	85.3	97.7	96.2	M-high
20	Illinois 804.....	49.6	37.7	3.9	23.6	76.8	88.0	75.0	Medium
21	Illinois 713.....	48.7	48.1	1.5	21.6	84.7	97.0	95.6	Medium
22	DeKalb 922(W).....	48.5	47.7	1.5	21.4	89.7	102.7	94.8	Medium
23	DeKalb 816.....	47.1	45.9	3.0	19.2	91.3	104.6	91.3	Medium
24	Illinois 784.....	46.9	45.9	2.0	25.2	78.5	89.9	91.3	Medium
25	Hoosier Crost 840.....	45.7	44.1	3.5	20.5	92.5	106.0	87.7	Medium
26	Farmcraft 88.....	45.4	44.2	2.7	21.0	90.4	103.6	87.9	Medium
27	Illinois 200.....	44.8	43.5	2.7	21.5	82.7	94.7	86.5	Medium
28	Lowe 840.....	43.1	42.0	2.4	22.9	83.9	96.1	83.5	M-low
29	U. S. 13.....	42.6	41.7	2.1	20.7	88.3	101.1	82.9	Medium
	Average of all entries.....	51.8	50.3	2.1	23.2	87.3	.....	.....	.....

^a This entry was Illinois 1238 in 1945.

A difference of less than 5.9 bushels between total yields of any two entries in this table is not significant.

Table 20.—EXTREME SOUTHERN ILLINOIS: Dixon Springs Upland, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>		
1	Miller 1050(W).....	63.4	62.7	1.1	19.5	91	103.4	121.5	High
2	Lowe 855(W).....	57.2	57.1	.2	21.8	84	95.4	110.7	M-high
2	Kansas K-1585.....	57.2	56.6	1.1	21.3	91	103.4	109.7	High
4	Kansas K-2275(W).....	56.6	56.1	.9	21.3	86	97.7	108.7	Medium
5	Illinois 804.....	54.6	53.8	1.4	20.4	81	92.0	104.3	Medium
6	Whisnand 917(W).....	54.2	53.8	.8	20.9	96	109.1	104.3	M-high
7	Funk G-711.....	53.8	53.6	.4	28.4	68	77.2	103.9	M-high
8	Kansas K-1583.....	52.8	52.3	1.0	26.2	85	96.6	101.4	M-high
9	Kansas K-2234(W).....	51.1	50.7	.8	20.4	87	98.8	98.3	M-high
10	Illinois 200.....	51.0	49.3	3.3	19.6	93	105.6	95.5	M-high
11	DeKalb 888.....	46.4	45.4	2.1	19.7	92	104.5	88.0	M-high
12	Illinois 1244.....	45.3	43.7	3.6	20.9	93	105.6	84.7	Medium
13	National 129.....	44.9	44.8	.3	20.8	94	106.8	86.8	Medium
14	Illinois 784 (Pfeifer).....	43.9	43.2	1.6	23.2	84	95.4	83.7	M-high
	Average of all entries.....	52.3	51.6	1.3	21.7	88	.....	.....	.....

A difference of less than 11.1 bushels between total yields of any two entries in this table is not significant.

Table 21.—EXTREME SOUTHERN ILLINOIS: Dixon Springs Upland, Summary for 1944 and 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—		Comparative height of ear
		Total	Sound				Erect plants	Sound yield	
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	
1	Kansas K-2275(W).....	43.3	42.5	2.3	20.2	92.2	98.9	116.4	Medium
2	Kansas K-2234(W).....	38.6	38.3	.9	20.0	93.5	100.3	104.9	M-high
3	Kansas K-1585.....	38.5	38.1	1.4	19.3	95.5	102.5	104.4	M-high
4	Whisnand 917(W).....	37.0	36.7	1.3	19.1	98.0	105.2	100.5	M-high
5	Illinois 200.....	36.3	35.0	4.1	18.6	96.5	103.5	95.9	M-high
6	Kansas K-1583.....	34.4	33.7	3.2	22.3	92.5	99.2	92.3	M-high
7	Funk G-711.....	31.4	31.1	2.6	26.0	84.0	90.1	85.2	Medium
	Average of all entries.	37.1	36.5	2.3	20.8	93.2	....	....	.....

A difference of less than 7.2 bushels between total yields of any two entries in this table is not significant.

SOIL ADAPTATION TEST

Nine double-cross hybrids tested at Urbana on soils of different productive levels in 1943 and 1944 were tested again in 1945 in the same way (Table 22).

Soils. The two areas used for the tests are on the Agronomy south farm and differ in productivity as a result of long-continued use of different cropping systems. In the Southwest rotation a high state of productivity has been maintained by a systematic rotation of corn, oats, clover hay, and wheat with a red-clover catch crop. The South-Central area has been depleted of fertility by a rotation of corn, corn, corn, and soybeans. Both fields have received manure and phosphate. The predominating soil type on both fields is Sidell silt loam.

Season. Wet weather delayed planting on both fields until May 23 and 24. Planting was similarly delayed in 1943 and 1944. Growing conditions were favorable thruout the rest of the season, but corn was late in maturing. Even when harvested in early December, the moisture content was higher than in the two previous years.

1945 results. Total yields averaged higher on both fields—the higher and the medium productive—than in either of the past two years. On the more productive soil they averaged 112.9 bushels an acre, which was 5.1 bushels more than the three-year average (Table 23). On the medium-productive soil they averaged 66.3 bushels an acre, or 4.6 bushels higher than the three-year average.

The percentage of damaged kernels was lower on both areas than in 1944 even tho the percentage of moisture was higher at husking time.

More lodging occurred on the highly productive soil. In 1944 more occurred on the medium-productive soil.

On the highly productive soil there was less difference between hybrids than there was in previous years. There was likewise less

Table 22.—SOIL ADAPTATION TEST: Central Illinois, Urbana, 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants	Rating for—	
		Total	Sound				Erect plants	Sound yield
HIGHLY PRODUCTIVE SOIL: Mostly Sidell Silt Loam slightly rolling phase (S400, Southwest rotation)								
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>
1	Illinois 201.....	117.8	117.1	.56	20.5	72	97	104.3
2	Illinois 972-1.....	117.5	116.6	.73	21.0	78	105	103.8
3	Illinois 206.....	115.6	114.8	.69	21.5	75	101	102.2
4	Illinois 784.....	114.1	113.8	.27	24.9	54	73	101.3
4	Illinois 21.....	114.1	113.4	.64	20.8	76	103	101.0
6	Illinois 246.....	112.1	111.1	.90	22.4	68	92	98.9
7	U. S. 13.....	111.3	110.9	.41	21.8	77	104	98.8
8	Illinois 751.....	108.8	108.0	.74	20.5	79	107	96.2
9	Illinois 101.....	105.1	104.8	.30	19.8	89	120	93.3
	Average.....	112.9	112.3	.58	21.5	74	...	.....
A difference of less than 4.0 bushels between total yields of any two of the above entries is not significant.								
MEDIUM PRODUCTIVE SOIL: Mostly Sidell Silt Loam slightly rolling phase (S600, South-Central rotation)								
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>
1	Illinois 201.....	68.9	68.5	.63	20.5	74	93	103.6
2	Illinois 972-1.....	68.8	68.7	.22	20.0	80	100	103.9
3	Illinois 206.....	67.6	67.5	.21	21.4	77	97	102.1
4	Illinois 246.....	67.1	66.7	.67	22.3	79	99	100.9
5	U. S. 13.....	67.0	66.8	.33	21.0	80	100	101.0
5	Illinois 21.....	67.0	66.7	.41	20.8	84	105	100.9
7	Illinois 101.....	65.1	65.0	.23	20.1	92	115	98.3
8	Illinois 751.....	63.0	62.8	.31	19.2	89	112	95.0
9	Illinois 784.....	62.0	61.9	.24	24.2	62	78	93.6
	Average.....	66.3	66.1	.36	21.0	80	...	.....
A difference of less than 4.4 bushels between total yields of any two of the above entries is not significant.								

difference between those on medium-productive soil. With the exception of Illinois 784, there was no significant differences in the ranking of hybrids on the two areas. Illinois 784 ranked higher on the highly productive soil than it did on the medium-productive soil. Its high moisture content, however, and its tendency to lodge severely showed that it is not a well-adapted hybrid for this area. Illinois 101 and 751, being generally too early for the locality of Urbana, ranked low in both tests.

The high yielding ability and the wide adaptability of Illinois 972-1 are demonstrated by the three-year averages given in Table 23. In standing ability, grain, quality, and maturity this hybrid ranks average or above.

Table 23.—SOIL ADAPTATION TESTS: Summary, Central Illinois, Urbana, 1943, 1944, and 1945

Rank	Entry	Acre-yield		Damaged corn in shelled sample	Moisture in grain at harvest	Erect plants 2 yr. ave.	Rating for—	
		Total	Sound ^a				Erect plants	Sound yield
HIGHLY PRODUCTIVE SOIL: Sidell Silt Loam, gently sloping phase, and Flanagan Silt Loam (Southwest rotation)								
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>
1	Illinois 972-1.....	113.3	112.1	.8	18.3	79	103.9	104.7
2	Illinois 201.....	111.3	110.2	1.1	19.2	74	97.4	102.9
3	Illinois 246.....	110.8	110.2	.6	19.9	73	96.0	102.9
4	Illinois 21.....	110.4	109.4	.9	19.2	72	94.7	102.1
5	U. S. 13.....	109.3	108.6	1.3	19.5	77	101.3	101.4
6	Illinois 206.....	109.1	108.3	.7	19.0	76	100.0	101.1
7	Illinois 784.....	107.5	107.1	.6	22.6	59	77.6	100.0
8	Illinois 751.....	100.7	100.1	.5	19.0	86	113.1	93.5
9	Illinois 101.....	98.1	97.7	.4	17.3	88	115.8	91.2
	Average.....	107.8	107.1	.8	19.3	76	.....	.....
A difference of less than 2.1 bushels between total yields of any two of the above entries is not significant.								
MEDIUM PRODUCTIVE SOIL: Sidell Silt Loam, slightly rolling phase (South-Central rotation)								
		<i>bu.</i>	<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>
1	Illinois 972-1.....	64.9	64.5	.8	18.7	69	97.2	105.4
2	Illinois 201.....	64.4	63.4	1.1	18.4	69	97.2	103.6
3	Illinois 21.....	64.3	63.8	.9	19.1	77	108.4	104.2
4	Illinois 206.....	63.2	62.9	.7	19.6	76	107.0	102.8
5	Illinois 246.....	63.0	62.5	.8	19.8	62	87.3	102.1
6	U. S. 13.....	62.4	61.5	1.4	19.6	75	105.6	100.5
7	Illinois 784.....	60.6	60.3	.8	21.8	56	78.9	98.5
8	Illinois 751.....	58.4	58.0	.8	18.1	78	109.9	94.8
9	Illinois 101.....	54.5	53.7	.9	18.1	77	108.4	87.7
	Average.....	61.7	61.2	.9	19.2	71	.....	.....
A difference of less than 3.1 bushels between total yields of any two of the above entries is not significant.								

SUMMARY

Two hundred and seventy corn hybrids were tested on seven fields in Illinois in 1945. Nine of these were again included in a test to determine their response to soils of two different levels of productivity. Eighteen hybrids were tested for their response to seed treatment and their resistance to ear rots. Wet weather made corn planting late on all fields. Good stands were obtained on all the fields, except the bottomland field at Dixon Springs, where about half the plots were drowned out, and at Alhambra, where excessive wetness after planting destroyed all plots of the first planting. These plots were planted a second time on July 6.

The results of these tests were briefly as follows:

1. The Sullivan field in south-central Illinois, as in 1944, had the highest average yield—91.7 bushels an acre. The average acre-yields of the other test fields were: Sheldon, 76.1 bushels; Galesburg, 64.5 bushels; Kings, 62.8 bushels; Dixon Springs, upland, 52.3 bushels; Dixon Springs, bottomland, 47.3 bushels; and Alhambra, 26.2 bushels.

The average yield of corn on all seven fields was 60.1 bushels an acre. This is 29 percent more than the 1945 average yield of the state (46.5 bushels). (The locations of these fields are shown in Table 1, page 228, and on the inside of the front cover.

2. Approximately 30 hybrids have been tested for three years in five sections of the state. The difference between the yield of the highest ranking hybrid and the yield of the lowest, on each field, was as follows: northern Illinois, a difference of 15.4 bushels; west north-central, 13.6 bushels; east north-central, 12.0 bushels; south central, 14.6 bushels; and Dixon Springs, bottomland, 21.5 bushels. These differences indicate possible advantages to be gained by choosing well-adapted hybrids.

3. More white hybrids were included in tests in the southern half of the state than in the northern half. On southern fields they performed relatively better than the whites on the northern and north-central fields.

4. Southern corn rootworm was one cause of the lodging of the corn on the Sheldon field in east north-central Illinois. From 5.5 to 83.3 percent of the plants of the different hybrids lodged 30 degrees or more on this field.

5. The greatest amount of stalk breakage ascribable to damage by the European corn borer occurred on the east north-central field at Sheldon. On this field 25.0 to 71.6 percent of the plants of the different hybrids were broken. Almost half of the plants (49.8 percent) were broken at a point of borer injury.

6. Lodging of corn was especially severe on the west north-central field at Galesburg, the east north-central field at Sheldon, and the southern field at Alhambra. At Galesburg unfavorable weather was believed to be mainly responsible for lodging; at Sheldon, insect damage and unfavorable weather; at Alhambra, extremely late planting.

7. Losses from ear rots caused by *Diplodia* were low in 1945, but damage from *Nigrospora* was higher than usual.

8. Treatment of the seed of 18 hybrids with Arasan increased the yield of grain 8.7 bushels an acre in 1945 compared with 3.2 bushels in 1944. Damage from kernel rot in these same hybrids ranged from 1.18 to 5.84 percent, averaging 2.57 percent.

9. Variations in yields between the nine hybrids tested on soils of two different productivity levels were less than those of previous years. With the exception of Illinois 784, which showed better adaptation to soils high in productivity, there was no significant difference in the rankings of the hybrids on the two fields.

PEDIGREES OF HYBRIDS

Following is a list of Experiment Station and U. S. hybrids whose performance is shown in this bulletin.

Ill. 21.....	(WF9 × 38-11) (Hy × 187-2)	Ill. 1239.....	(K166 × L317) (G × 38-11)
Ill. 101.....	(WF9 × M14) (CC7 × 187-2)	Ill. 1240-1.....	(WF9 × M14) (R2 × Kr-Osf)
Ill. 126.....	(WF9 × 38-11) (Tr × L317)	Ill. 1244.....	(WF9 × 38-11) (K4 × R60)
Ill. 200.....	(WF9 × 38-11) (K4 × L317)	Ill. 1260.....	(WF9 × M14) (R2 × CC35)
Ill. 201.....	(WF9 × 38-11) (187-2 × L317)	Ill. 2019(W).....	(Ky27 × R30) (33-16 × CI.61)
Ill. 206.....	(WF9 × 38-11) (5120 × L317)	Ill. 2059(W).....	(Ky27 × CI.61) (33-16 × K6)
Ill. 246.....	(WF9 × Hy) (187-2 × L317)	Ill. 2077(W).....	(33-16 × CI.61) (Ky27 × CI.43)
Ill. 247.....	(187-2 × 38-11) (Hy × L317)	Ill. 2119(W).....	(Ky27 × CI.61) (33-16 × K64)
Ill. 269.....	(CC10 × CC24) (WF9 × Hy)	Ill. 2120(W).....	(Ky27 × CI.61) (K6 × K64)
Ill. 273-1.....	(WF9 × 38-11) (187-2 × O7)	Kans. 1583.....	(Kys × K201C) (K4 × 38-11)
Ill. 437.....	(WF9 × Hy) (K4 × L317)	Kans. 1585.....	(K155 × K201C) (K4 × 38-11)
Ill. 448.....	(38-11 × Kys) (K4 × L317)	Kans. 2234(W).....	(K41 × K55) (K63 × K64)
Ill. 713.....	(WF9 × 38-11) (G × L317)	Kans. 2275(W).....	(K55 × K64) (Ky27 × 33-16)
Ill. 751.....	(A × 90) (WF9 × Hy)	U. S. 13.....	(Hy × L317) (WF9 × 38-11)
Ill. 784.....	(Hy × 5120) (K4 × L317)	U. S. 35.....	(WF9 × 38-11) (R4 × Hy)
Ill. 804.....	(5120 × 38-11) (K4 × L317)	U. S. 44-1.....	(4-8 × 187-2) (Hy × O7)
Ill. 972A-1.....	(WF9 × O7) (Hy × L317)	Wis. 608.....	(R3 × 8) (24 × 20)
Ill. 972-2.....	(WF9 × Hy) (O7 × R57)	Wis. 640A.....	(WF9 × 32) (A × 90)
Ill. 1091A.....	(WF9 × M14) (Hy × 187-2)	Wis. 641A.....	(WF9 × 32) (187 × 90)
Ill. 1180.....	(WF9 × M14) (CC10 × CC24)	Wis. 643.....	(WF9 × 22) (24 × 20)
Ill. 1233.....	(WF9 × 38-11) (940 × L317)	Wis. 692.....	(WF9 × Hy) (A × 22)
Ill. 1237.....	(WF9 × Hy) (R61 × 187-2)	Wis. 701A.....	(A × Hy) (WF9 × 17)
Ill. 1238.....	(WF9 × 38-11) (940 × G)		

CONTRIBUTORS OF SEED

Appl Hybrids.....	Appl's Hybrid Seed Co.....	St. Joseph
Bear Hybrids.....	Bear Hybrid Corn Co.....	Decatur, Box 628
Blackhawk Hybrids.....	Blackhawk Coop. Hybrid Corn Assn.....	Polo
Canady Hybrid.....	Lloyd A. Canady.....	Watseka
Crow Hybrids.....	Crow's Hybrid Corn Co.....	Milford
DeKalb Hybrids.....	DeKalb Agricultural Assn.....	DeKalb
Doubet Hybrids.....	E. W. Doubet.....	Hanna City
Farmcraft Hybrids.....	Farmcraft Seed Co.....	Oxford, Ind.
Ferris Hybrids.....	Ferris Hybrids.....	Princeton
Frey Hybrids.....	Frey Hybrid Corn Co.....	Gilman
Funk Hybrids.....	Funk Brothers Seed Co.....	Bloomington
Furr Hybrids.....	Furr Hybrids.....	Genoa
Holmes Hybrids.....	Z. M. & C. W. Holmes.....	Edelstein
Hoosier-Crost Hybrids.....	Edw. J. Funk & Sons.....	Kentland, Ind.
Huebsch Hybrid.....	L. A. Huebsch & Son.....	Mundelein
Illinois Hybrids.....	Ill. Agr. Exp. Sta.....	Urbana
	Ill. Crop Improvement Assn. ^a	Urbana
Iowearth Hybrids.....	Michael-Leonard Seed Co.....	Normal
Kansas Hybrids.....	Kansas Agr. Exp. Sta.....	Manhattan, Kan.
Kelly Hybrids.....	Kelly Seed Co.....	San Jose
Keystone Hybrids.....	Corneli Seed Co.....	St. Louis, Mo.
Lowe Hybrids.....	Lowe Seed Co.....	Aroma Park
Miller Hybrids.....	B. A. Miller & Son.....	Forrest
Moews Hybrids.....	Moews Seed Co.....	Granville
Morgan Hybrids.....	Morgan Brothers.....	Galva
Morton Hybrids.....	Roy A. Morton & Sons.....	Bowen
Munson Hybrids.....	Carl Munson.....	Galesburg, R. 3
National Hybrids.....	National Hybrid Corn Co.....	Hudson
Nichols Hybrids.....	Nichols Brothers.....	Hebron

Null Hybrids	Null Seed Farms	Colchester
Pfeifer Hybrids	George L. Pfeifer	Arcola
Pfister Hybrids	Pfister Assoc. Growers	El Paso
Pioneer Hybrids	Pioneer Hi-Bred Corn Co.	Princeton
Producers' Hybrids	Producers' Crop Imp. Assn.	Piper City
Schwenk Hybrid	W. T. Schwenk & Sons	Edwards
Seeber Hybrid	Seeber Brothers	Champaign, R. 3
Sibley Hybrids	Sibley Farms	Sibley
Sieben Hybrids	Sieben Hybrids	Geneseo, R. 1
Stewart Hybrid	Frank S. Stewart	Princeville, R. 1
Stiegelmeier Hybrids	H. L. Stiegelmeier	Normal
U. S. Hybrids	Ill. Crop Improvement Assn. ^a	Urbana
Ward Hybrids	Montgomery Ward & Co.	Chicago
Whisnand Hybrids	Myron Whisnand	Arcola
Wisconsin Hybrids	Wis. Agr. Exp. Sta.	Madison, Wis.

^a Seed supplied by the Association was obtained from samples of the hybrids submitted in 1944 for the laboratory test required for certification.

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