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## South Dakota Corn Performance Test, 1943

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*South Dakota*  
**CORN**  
**PERFORMANCE**  
**TEST, 1943**

By J. E. Grafius  
and E. R. Hehn

**SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION**  
**SOUTH DAKOTA STATE COLLEGE . . . BROOKINGS**

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# South Dakota Corn Performance Test, 1943

By J. E. GRAFIUS and E. R. HEHN<sup>1</sup>

The South Dakota Corn Performance Test was designed to supply impartial information concerning hybrids and open-pollinated varieties to the farmers, hybrid-seed-corn dealers and producers, and other persons interested in corn. The plots for this test were in nine areas of eastern South Dakota. There were 362 entries comprising 144 different hybrids and open-pollinated varieties. Two or three adapted open-pollinated varieties were planted in each plot as check varieties. Data are presented on yield, moisture percentage of the grain at harvest, lodging, smut, height, and stand.

It should be emphasized that there are many hybrids which have performed well in South Dakota and that the top hybrid in any district for any one year is not necessarily the best one. Statistical measures are included to be used in weighing the advantage or disadvantage of purchasing a given hybrid. Long-time averages are the best indication of the performance of a hybrid. Used with discretion, these data will provide readers with valuable information on the production, sale, and purchase of hybrid corn.

## Description of Tests

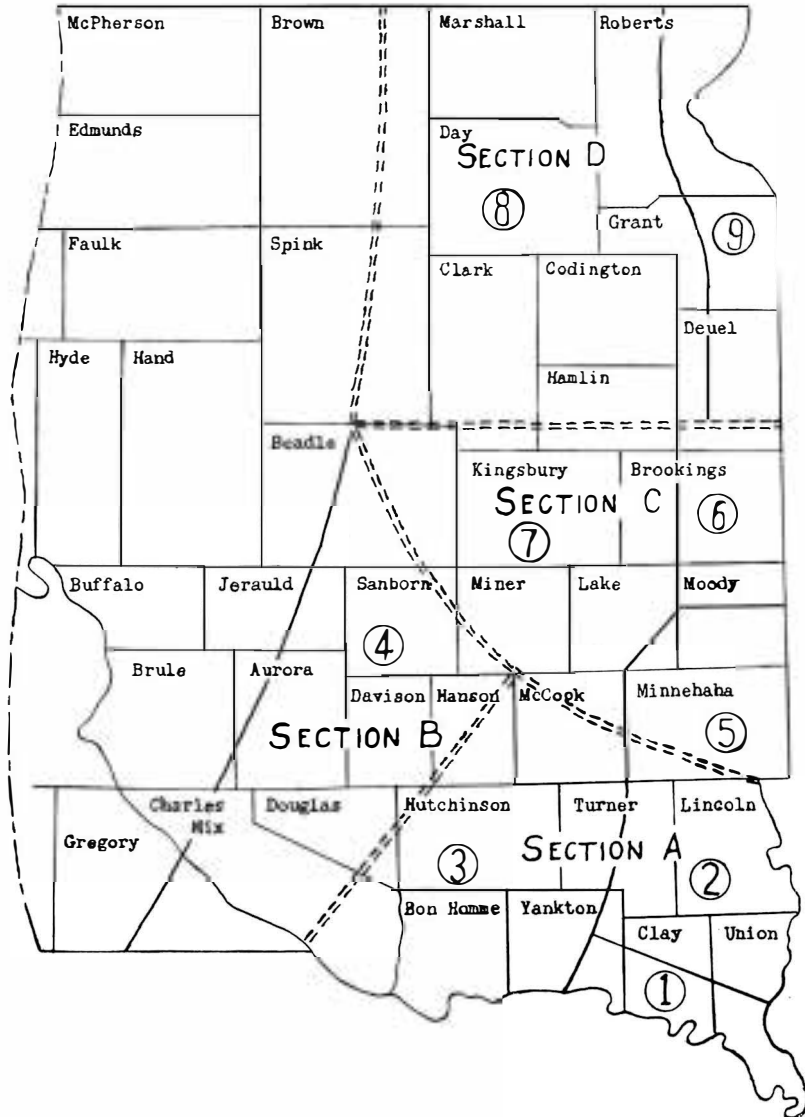
These tests were conducted by the Agronomy Department of the South Dakota Experiment Station in cooperation with the Extension Service, South Dakota Crop Improvement Association, commercial seed companies, and farmers.

**Check entries.** Twelve open-pollinated varieties were used as check varieties. They were Alta, Brookings 86, Brown County Yellow Dent, Early Murdock, Eureka Yellow Dent, Fulton's Yellow Dent (Swope), Fulton's Yellow Dent (Vincent), Golden Jewel, Minn. 13, Reid's Yellow Dent, Silver King, and Wimple's Yellow Dent. Two or three of these varieties were included at locations in which they were adapted. (See Tables 12-17).

**Location of plots.** The plots where the corn was grown for these tests were in nine different agricultural districts in the part of the State east of the approximate 20-inch rainfall line (see map on page 4).

<sup>1</sup>J. E. GRAFIUS, Associate Agronomist; and E. R. HEHN, Assistant Agronomist.

These districts were set up because they have definite variations in length of growing season, rainfall, and soil type. They were grouped into Section A (Districts 1, 2, and 3), Section B (District 4), Section C (Districts 5, 6, and 7), and Section D (Districts 8 and 9).



**Location of plots.** The region of the State east of the approximate 20-inch rainfall line was divided into nine districts. They differ in length of growing season, rainfall, and soil type. These districts were then grouped into four sections.

(Districts 5, 6, and 7), and Section D (Districts 8 and 9). It should be pointed out that commercial hybrids entered in a district must be entered in all districts of a section (see map). This procedure of sectional entry has not met the approval of many of the commercial companies and they have questioned the entry of hybrids in districts other than the district in which they know the hybrid to be adapted. However, it is felt that sectional entry permits the people unfamiliar with a specific hybrid to better ascertain the limits of its adaptation and for this reason the sectional entry system was adopted.

The test plots were located on farms representative of most farms of the district. The plots were planted in the cooperator's field of corn and were treated exactly as the rest of the field.

TABLE 1. ENTRIES FOR THE 1943 TESTS AND CONTRIBUTORS OF SEED

Hybrid Entries		
Carlson Hybrids	Carlson Hybrid Corn Co.	Audubon, Ia.
Funk's Hybrid	Funk Bros. Seed Co.	Bloomington, Ill.
Green Acres Hybrid	Green Acres	Hartington, Nebr.
Gurney's Golden Hybrids	Gurney's Inc.	Yankton
Haapala's Hybrids	Levi Haapala & Sons	Dassel, Minn.
Iowearth Hybrids	Michael-Leonard Seed Co.	Sioux City, Ia.
Jacques Proven Hybrids	Jacques Seed Co.	Prescott, Wis.
Kingscrosst Hybrids	Northrup King and Co.	Minneapolis, Minn.
Lowe Hybrids	Lowe Seed Co.	Aroma Park, Ill.
Master Hybrids	Farmers Seed and Nursery Co.	Faribault, Minn.
Mellow Dent Hybrids	J. E. Johnson	Beresford
Minhybrids	Minhybrid Growers Assn.	Montevideo, Minn.
Moews Hybrids	Moews Seed Co.	Granville, Ill.
Pioneer Hi-Breds	Pioneer Hi-Bred Corn Co.	Des Moines, Ia.
Reid National Hybrids	Reid National Corn Co.	Anamosa, Ia.
Sokota Hybrids	Sokota Growers Assn.	Brookings
Turner Hybrids	Turner Hybrid Seed Corn Co.	Grand Junction, Ia.
Open-Pollinated Varieties		
Alta	Highmore Experiment Substation	Highmore
Brookings 86	South Dakota Experiment Station	Brookings
Brown County Yellow Dent	Frank McHugh	Aberdeen
Early Murdock	G. P. Sexauer & Sons	Brookings
Eureka Yellow Dent	Eureka Substation	Eureka
Fulton's Yellow Dent	Frank Swope	Orient
Fulton's Yellow Dent	A. G. Vincent	Letcher
Golden Jewel	Henry Preheim	Marion
Minn. 13	Cruse Bros.	Brookings
Reid's Yellow Dent	G. P. Sexauer & Sons	Brookings
Silver King	T. Englebretson	Selby
Wimple's Yellow Dent	G. P. Sexauer & Sons	Brookings

TABLE 2. GENERAL INFORMATION: SOUTH DAKOTA CORN PERFORMANCE TEST, 1943

Post office	County	District	Cooperator	Soil type	Date of planting	Date of harvesting
*Elk Point	Clay	1	Donald Rasmussen	Flood Plain	May 16	.....
Davis	Turner	2	Rudy Feenstra	Barnes Silt Loam	May 17	Oct. 14
Parkston	Hutchinson	3	Emanuel Sinkbeil	Barnes Silt Loam	May 14	Oct. 15
Letcher	Sanborn	4	A. G. Vincent	Barnes Loam	May 13	Oct. 16
Brandon	Minnehaha	5	Ray Knutson	Moody Silt Loam	May 8	Oct. 9
Brookings	Brookings	6	James Biggar	Flood Plain	May 17	Oct. 17
De Smet	Kingsbury	7	Kingsbury County Crop Improvement Association	Sioux Sandy Loam	May 18	Oct. 12
*Florence	Codington	8	Engeman Bergh	Barnes Loam	May 19	.....
*Milbank	Grant	9	Chris Christian	Barnes Silt Loam	May 20	.....

\*The plots in Districts 1, 8, and 9 were not harvested. The plot in District 8 was destroyed by hail and the plot in District 9 was destroyed by water. The stand in District 1 was so poor that accurate estimation of results was impossible.

**Method of planting.** Each entry was planted in a plot 2 hills wide and 10 hills long and replicated 6 times in a triple lattice design. Planting was done at the rate of 3 kernels per hill in all fields with the exception of those in Districts 4, 7, and 8, in which 2 kernels per hill were planted. All planting was done by hand.

**Growing conditions.** The hybrid corn for yield tests was planted between May 8 and May 20. Unfavorable weather at planting time resulted in poor stands at many locations, as shown in the tables on pages 15 to 22. In Hutchinson and Sanborn counties, drought caused much damage. In other districts growing conditions were good throughout the summer.

### Measuring Performance

Entries in the 1943 tests were rated on the basis of yield and moisture content. However, resistance to lodging, stalk height, ear height, stand, and smut should also be considered in the choice of a hybrid.

**Yields.** Yields of entries were converted to the number of bushels of ear corn per acre with 15-percent moisture in the grain. In District 4 no moisture samples were taken because of the low yield of grain. As indicated in Table 2, the plots in District 1, 8, and 9 were not harvested because of poor stands and damage due to hail and water.

**Moisture content.** Previous to the advent of hybrid corn, it was of great importance that the farmer should be able to harvest mature

viable seed for his next year's crop. Now, however, when a large number of farmers purchase their seed, viability of the crop harvested on their own farms is usually not so important. The important question is: Can the corn be stored well? In other words, is the moisture content low enough to keep the corn from rotting in the crib?

The U. S. Standards for corn specify certain moisture percentages which were set up to make possible better storage and movement in market channels. As the closest approach to these standards in South Dakota is through the use of the old open-pollinated varieties or adapted hybrids, moisture percentages of the open-pollinated varieties have continued to be used as a yardstick. The entries having a moisture content that did not exceed the sum of (1) the average moisture content of the open-pollinated varieties in a district plus (2) the minimum level of significance, were placed in Moisture Group I. Entries having a moisture content that exceeded this sum were placed in Moisture Group II.

In previous years, where an excessively high moisture-content range among hybrids was obtained, three moisture groups were used in designating moisture content. Hybrids that exceeded the average moisture content of the open-pollinated varieties by at least two times the minimum level of significance, were placed in Moisture Group III.

**Chance variations.** Anyone who has observed corn in the field knows that yield and other data vary greatly from one part of the field to another. These variations are due to differences in such conditions as soil type, position, slope, and stand. The influences of the environment may be partly overcome by replication, which provides an observation of the average performance of the same variety located in a number of different places in the same field. Proper care in the choice of plot locations and in the design of the plot tends to reduce the variations that are not due to the entries themselves but does not entirely remove them.

A certain amount of difference between entries is necessary before they can be said to vary significantly. When they vary only slightly, variations may be due to differences in field conditions and not in the entries themselves. Significant differences were computed for the yield and moisture and are included at the bottom of the table for each district and section. The difference between the two hybrids being compared must exceed the significant difference before it can be said to be a true difference rather than a chance variation. However, it should again be emphasized that one year's results are not so reliable as those obtained over a period of years.



## Results of Tests

The average yields and moisture percentages for all hybrids and open-pollinated varieties entered successively in the same district for 2 or more years are presented in Tables 3 to 11 inclusive (pages 9 to 14). As has been pointed out, these results for several years are of course more reliable than the results for a single year.

The 1943 data for all entries, both commercial (those that can be bought) and experimental (those not yet released for commercial use) are presented in Tables 12 to 17 inclusive. Plots at Districts 1, 8, and 9 were not harvested.

The average yields and moisture percentages of the commercial entries in Sections A and C are presented in Tables 18 and 19. The plots in Section D were not harvested. Data for Section B are in Table 14.

## How to Choose A Hybrid

Careful choice of a hybrid is particularly important in South Dakota because corn is adapted to relatively small areas. It is necessary to choose strains which have good records in the districts where they are to be grown.

When a hybrid is to be selected, all of the data presented should be considered. A good hybrid is one which (1) yields well, (2) has a low moisture content in the grain at harvest, and (3) possesses resistance to root lodging and stalk breaking. However, if the only advantage of hybrid corn over open-pollinated corn was its resistance to lodging, this resistance alone might be sufficient reason for seeding hybrid corn.

The use of the figures for significance presented at the bottom of Tables 3 to 19 inclusive is simple. The minimum level of significance for yield or for moisture means, as the name indicates, the difference in yield or moisture required before two hybrids may be said to differ in these respects. For example, in Table 5 the first six entries may be said to have produced comparable yields, as the yield differences between any two of them does not exceed 8.3 bushels, the minimum level of significance. However, within this same group of six entries the range of moisture percentages does exceed the minimum level of significance (3.4 percent). Moisture content as well as yield should be considered in selecting a hybrid or variety.

The tables giving 2-year averages (Tables 3 to 11 inclusive) should be used as a basis for selecting a hybrid. For Hutchinson county for example, Table 5 should be checked first. Then Table 13 should be examined in order to determine the yield, moisture, stand, root lodging, stalk breaking, ear height, and smut data for the 1943 season. By comparison of the data from the two tables, it should be possible to select a hybrid which will perform well in Hutchinson county.

**RESULTS FOR TWO OR MORE YEARS (Tables 3-11)**

**Table 3. DISTRICT 1: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1939-42)**  
 (Farms where plots were located: 1939, 1941, 1942—Jenson Brothers' Farm, Gayville, Clay county; 1940—Nelson Farm, Gayville, Clay county)

Hybrid or variety	Yield per acre			Moisture content of grain			Moisture group			
	'39-'42	'40-'42	'41-'42	'39-'42	'40-'42	'41-'42	'39	'40	'41	'42
Averages for 4, 3, and 2 years										
Pioneer Hi-Bred 322	56.9	59.9	61.6	16.2	17.7	18.3	I	I	I	I
Reid National 117	56.4	61.9	66.1	17.4	19.3	20.1	I	I	I	I
Iowearth AQ	57.0	62.5	69.6	17.9	19.9	21.0	I	I	II	I
Funk's Hybrid G-114	56.5	58.6	62.4	18.3	19.5	21.3	III	I	I	I
Averages for 3 and 2 years										
Funk's Hybrid G-212		64.4	68.9		19.8	19.7	I	I	I	I
Kingscrot KY		60.0	65.4		18.7	18.6	I	I	I	I
Two-year averages										
Green Acres										
115 (Exp.)*			68.8			19.9			I	I
Pioneer Hi-Bred 334			66.0			19.2			I	I
Henry Field										
Mule 100L			66.1			19.5			I	I
Funk's Hybrid G-67			68.0			20.3			I	I
Master F 106			63.5			19.2			I	I
Kingscrot KR 2			59.9			18.1			I	I
Wimples										
Yellow Dent			56.8			16.8			I	I
Green										
Acres 64 (Exp.)*			73.7			22.1			II	I
Green										
Acres 392 (Exp.)*			73.1			22.0			II	I
Reid's Yellow Dent			54.0			21.5			II	I

\*Experimental hybrids

For the 2-year averages a difference between any two entries of less than 6.8 in yield and 2.8 in moisture content is not significant.

Table 4. DISTRICT 2: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1941-43)

(Farm where plots were located: Rudy Feenstra Farm, Davis, Turner county)

Hybrid or variety	Yield per acre		Moisture content of grain		Moisture group		
	'41-'43	'42-'43	'41-'43	'42-'43	'41	'42	'43
Averages for 3 and 2 years							
Master F 106 .....	56.4	67.7	17.0	18.3	I	I	I
Pioneer Hi-Bred 353 A .....	55.8	69.0	16.4	16.6	I	I	I
Reid National 118 R .....	54.7	66.3	19.2	20.1	I	I	I
Kingscrot KR 2 .....	54.5	65.5	18.0	19.9	I	I	I
Pioneer Hi-Bred 330 .....	48.8	57.9	19.1	19.7	I	I	I
Iowearth 16 .....	47.8	57.7	19.7	21.3	I	II	I
Golden Jewel .....	47.3	55.4	17.4	18.9	I	I	I
Wimple's Yellow Dent .....	44.0	51.4	16.2	17.6	I	I	I
Reids Yellow Dent .....	41.5	53.3	20.5	21.6	I	II	I
Two-year averages							
Johnson's Mellow Dent No. 90* ..	70.7		19.7		I I		
Kingscrot No. 3 .....	69.7		23.6		II I		
Turner S 56 .....	66.6		21.5		II I		
Funk's Hybrid G-12 .....	66.2		18.4		I I		
Funk's Hybrid G-29 .....	66.0		21.8		I I		
Lowe 15 .....	65.3		19.3		I I		
Turner S 52 .....	64.7		20.9		I I		
Moews 15 A .....	64.2		18.8		I I		
Pioneer 334 .....	63.0		23.7		II II		
Kingscrot KY .....	62.0		21.1		I I		
Carlson C-7 .....	61.9		20.3		I I		
Gurney's Golden No. 118R .....	61.9		22.8		I I		
Reid National 120 <sub>2</sub> .....	60.3		23.3		II I		
Lowe 14 .....	59.8		21.4		I I		
Iowearth AQ .....	58.7		21.9		II I		

\*Entered by Dokken in 1942

For the 2-year averages, a difference between any two entries of less than 7.1 in yield and 2.8 in moisture content is not significant.

**Table 5. DISTRICT 3: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1942-43)**  
(Farm where plots were located: Emanuel Sinkbiel Farm, Parkston, Hutchinson county)

Hybrid or variety	Yield		Moisture	
	per acre		content	Moisture
	'42-'43	'42-'43	of grain	group
Two-year averages				
Turner S 52	43.1	18.2	I	I
Turner S 56	39.5	21.2	II	I
Funk's Hybrid G-12	37.4	19.4	I	I
Iowearth 16	36.0	19.7	I	I
Pioneer Hi-Bred 353A	35.4	16.8	I	I
Carlson C-7	34.9	21.4	II	I
Gurney's Golden No. 118R	34.3	21.3	I	I
Kingscrot KR 2	33.9	19.4	I	I
Iowearth AQ	33.2	22.3	II	I
Kingscrot KY	32.7	18.3	I	I
Silver King	32.4	18.1	I	I
Pioneer Hi-Bred 330	32.2	21.4	II	I
Kingscrot No. 3	31.8	21.4	III	I
Lowe 15	30.7	18.5	I	I
Moews 15 A	29.8	19.0	I	I
Pioneer Hi-Bred 334	29.0	20.1	I	I
Lowe 14	27.7	22.7	I	II
Golden Jewel	27.4	18.4	I	I
Reid National 118 R	27.1	20.4	II	I
Johnson's Mellow Dent No. 90*	26.8	19.4	I	I
Wimple's Yellow Dent	21.4	17.7	I	I
Reid National 120 <sub>2</sub>	20.7	24.8	II	II

\*Entered by Dokken in 1942

A difference between any two entries of less than 8.3 yield and 3.4 in moisture content is not significant.

**Table 6. DISTRICT 4: Average Yield (Bushels) of Hybrids and Varieties Grown (1942-43)**  
(Farm where plots were located: A. G. Vincent Farm, Letcher, Sanborn county)

Hybrid or variety	Yield per acre		Moisture group	
			'42	'43
	'42-'43	'42-'43		
Two-year averages				
Silver King	31.4		I	I
Funk's Hybrid G-35 (Exp.)*	28.7		I	I
Funk's Hybrid G-31 (Exp.)*	28.0		II	I
Fulton Yellow Dent (Vincent)	26.0		I	I
Kingscrot KS 6	25.8		I	I
Jacques Proven Hybrid 1104 J	24.8		I	I
Kingscrot KN 1	21.3		I	I

\*Experimental hybrids

A difference between any two entries of less than 3.7 in yield is not significant.

Table 7. DISTRICT 5: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1941-43)  
(Farm where plots were located: Ray Knutson Farm, Brandon, Minnehaha)

Hybrid or variety	Yield per acre		Moisture content of grain		Moisture group		
	'41-'43	'42-'43	'41-'43	'42-'43	'41	'42	'43
Averages for 3 and 2 years							
Pioneer Hi-Bred 353 A .....	53.0	60.8	21.0	21.8	I	I	I
Funk's Hybrid G-12 .....	50.8	54.5	23.9	25.8	I	I	I
Reid National 105 .....	49.0	52.5	21.2	22.5	I	I	I
Golden Jewel .....	48.7	52.8	22.2	23.3	I	I	I
Wimple's Yellow Dent .....	44.5	47.3	23.4	25.7	I	I	I
Two-year averages							
Funk's Hybrid G-29 (Exp.)* .....		62.3		25.7		I	I
Kingscrot KR 2 .....		56.9		24.8		I	I
Iowearth S .....		56.4		24.2		I	I
Reid National 110 <sub>1</sub> .....		54.5		23.4		I	I
Master F 101 (Exp.)* .....		54.5		24.1		I	I
Master F 105 (Exp.)* .....		53.8		23.9		I	I
Kingscrot KN 1 .....		53.1		20.7		I	I
Kingscrot KS 6 .....		50.5		22.3		I	I
Minhybrid 404 .....		48.1		21.6		I	I
Kingscrot KO .....		47.9		22.9		I	I

\*Experimental hybrids

For the 2-year averages, a difference between any two entries of less than 8.6 in yield and 3.4 in moisture content is not significant.

Table 10. DISTRICT 8: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1939-42)

(Farms where plots were located: 1939—Walter Schwanke Farm, Watertown, Codington county; 1940—Ole Olson Farm, Wallace, Codington county; 1941-42—Engeman Bergh Farm, Florence, Codington county)

Hybrid or variety	Yield per acre		Moisture content of grain		Moisture group			
	'39-'42	'41-'42	'39-'42	'41-'42	'39	'40	'41	'42
Averages for 4 and 2 years								
Kingscrot (97 day) D 4 .....	27.3	25.2	24.2	29.2	I	I	I	II
Two-year averages								
Brown County Yellow Dent ..		23.3		27.1		I	I	
Eureka .....		21.8		22.2		I	I	
Alta .....		20.0		23.2		I	I	
Funk's Hybrid G-12 .....		23.6		44.0		I	III	

For the 2-year averages, a difference between any two entries of less than 4.1 in yield and 5.9 in moisture content is not significant.

Table 8. DISTRICT 6: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1941-43)  
(Farm where plots were located: James Biggar Farm, Brookings, Brookings county)

Hybrid or variety	Yield per acre		Moisture content of grain		Moisture group		
	'41-'43	'42-'43	'41-'43	'42-'43	'41	'42	'43
Averages for 3 and 2 years							
lowealth S .....	50.5	51.0	24.0	25.8	I	I	I
Fulton Yellow Dent .....	48.6	51.7	19.4	12.0	I	I	I
Reid National 105 .....	44.5	43.7	24.7	26.4	I	II	I
Early Murdock .....	34.2	32.2	31.9	38.2	I	I	I
Two-year averages							
Kingscrot KS 6 .....		52.4		23.0		I	I
Master F 82 (Exp.)* .....		52.0		21.9		I	I
Master F 105 (Exp.)* .....		50.6		25.1		I	I
Pioneer Hi-Bred 353 A .....		49.9		24.1		I	I
Funk's Hybrid G-12 .....		49.9		30.1		III	I
Reid National 110 <sub>1</sub> .....		49.2		25.2		II	I
Kingscrot KR 2 .....		48.2		31.9		III	I
Kingscrot KN 1 .....		47.2		27.1		II	I
Kingscrot KO .....		46.4		26.6		II	I
Minhybrid No. 404 .....		44.4		21.7		I	I

\*Experimental hybrids

For the 2-year averages, a difference between any two entries of less than 6.4 in yield and 5.6 in moisture content is not significant.

Table 9. DISTRICT 7: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1941-43)  
(Farms where plots were located: 1941—J. W. Jones Farm, Lake Preston, Kingsbury county; 1942 and 1943—Kingsbury County Crop Improvement Association Farm, De Smet)

Hybrid or variety	Yield	Moisture	Moisture group	
	per acre	content of grain	'41	'43
	'41-'43*	'41-'43*		
Two-year averages				
Funk's Hybrid G-1 .....	18.8	19.1	I	I
Minnesota 13 .....	19.5	17.7	I	I
Early Murdock .....	19.9	21.7	I	II
Fulton Yellow Dent .....	21.5	18.0	I	I

\*Total divided by 2; 1942 plot was destroyed.

A difference between any two entries of less than 5.5 in yield and 3.1 in moisture content is not significant.

Table 11. DISTRICT 9: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Grown (1938-42)

(Farms where plots were located: 1938-42—Chris Christian Farm, Milbank, Grant county; 1939—Walter Grothe Farm, Twin Brooks, Grant county)

Hybrid or variety	Yield per acre				Moisture content of grain				Moisture group				
	'38- '42	'39- '42	'40- '42	'41- '42	'38- '42	'39- '42	'40- '41	'41- '42	'38	'39	'40	'41	'42
Averages for 5, 4, 3, and 2 years													
Pioneer													
Hi-Bred 355	57.4	58.5	55.5	48.9	23.4	25.8	27.0	29.5	I	I	I	I	I
Averages for 4, 3, and 2 years													
Kingscrot (97 day) D 4		54.2	52.5	46.1		24.2	25.7	27.7		I	I	I	I
Averages for 3 and 2 years													
Early													
Murdock			52.3	53.0			27.7	30.8		I	I	I	
Minnesota 13			47.5	43.7			25.7	27.7		I	I	I	
Pioneer													
Hi-Bred 322			60.6	54.4			33.6	39.5		I	I	II	
Golden Jewel			41.7	38.7			32.7	36.6		I	I	II	
Two-year averages													
Pioneer													
Hi-Bred 353				55.6				33.5			I	I	
Master F													
102 (Exp.)*				56.8				38.1			I	II	
Master F													
101 (Exp.)*				56.8				35.4			I	II	
Funk's													
Hybrid G-12				51.2				38.9			I	II	

\*Experimental hybrids

For the 2-year averages, a difference between any two entries of less than 6.0 in yield and 8.1 in moisture content is not significant.

## RESULTS FOR 1943 TESTS (TABLES 12-19)

Table 12—DISTRICT 2 (Turner County): Results of Tests of Corn Hybrids and Varieties on the Farm of Rudy Feenstra, Davis. (Harvested October 14, 1943.)

Hybrid or variety	Moisture		Smutted plants	Ear height	Stalk height	Root lodging	Broken stalks	Acre yield of ear corn with 15% moisture in grain
	at harvest	Stand						
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>bu.</i>
MOISTURE GROUP I								
Green Acres 103 (Exp.)*	17.6	90	3.7	41	92	0.0	17.4	73.8
Kingscrot 3	18.6	88	2.5	35	88	0.0	12.7	71.9
Reid National E 118 (Exp.)*	17.0	86	5.2	43	95	0.0	2.6	70.6
Funk's Hybrid G-550 W	13.4	86	5.2	41	91	0.0	28.4	70.1
Reid National 115 <sub>1</sub>	17.8	86	2.5	43	95	0.0	14.9	66.7
Iowalth 16	15.7	86	2.6	38	93	0.0	16.4	66.2
Funk's Hybrid G-29	19.1	82	4.1	35	89	0.0	4.7	65.4
Pioneer Hi-Bred 331	17.1	88	3.8	45	93	0.0	5.7	65.2
Johnson's Mellow Dent No. 90	17.8	84	3.9	37	91	1.9	6.6	65.0
Gurney's Golden Hybrid								
118-R	20.5	84	1.3	40	93	5.9	7.3	64.8
Funk's Hybrid G-115 (Exp.)*	17.5	83	2.6	40	92	0.0	8.7	64.8
Kingscrot KR 2	17.0	87	4.4	35	89	0.0	10.2	64.8
Turner S 56	17.0	78	4.3	40	94	4.9	4.3	64.7
Lowe 15	17.9	86	2.6	35	90	0.0	18.2	64.7
Master F 106	16.9	77	7.6	41	94	1.4	6.5	64.3
Reid National 118 R	18.4	81	5.5	41	93	0.0	7.5	64.2
Lowe 520	20.6	85	4.6	45	99	0.0	9.2	64.1
Carlson C-7	19.1	83	4.0	40	94	0.0	8.7	63.9
Moews 15	17.4	80	5.5	34	88	0.0	8.3	63.9
Gurney's Golden Hybrid								
112 Day	18.4	86	2.6	37	94	1.9	17.5	63.8
Green Acres 9 M 18 (Exp.)*	19.2	76	5.1	41	94	0.0	7.3	63.8
Pioneer Hi-Bred 340	16.3	75	5.1	39	90	2.2	1.5	63.4
Turner S 52	17.1	76	5.1	46	97	0.0	21.2	63.1
Gurney's Golden Hybrid								
118 Day	16.5	83	5.4	41	96	0.0	12.7	62.6
Funk's Hybrid G-66	18.7	92	2.4	43	94	0.0	3.6	62.0
Iowalth AF 11	14.1	78	3.6	40	92	0.0	4.8	61.6
Funk's Hybrid G-12	17.6	75	4.4	37	92	0.7	12.6	61.6
Turner S 55	19.9	86	2.6	44	99	0.0	10.9	61.2
Gurney's Golden Hybrid								
112 R	18.4	82	2.7	43	98	0.0	11.6	61.1
Pioneer Hi-Bred 353 A	14.3	81	4.1	39	92	0.0	19.2	61.0
Iowalth 16 A (Exp.)*	16.8	72	4.6	42	96	0.0	5.4	61.0
Green Acres H 80 (Exp.)*	19.3	82	2.7	41	93	2.0	4.8	60.9
Iowalth 17 A (Exp.)*	19.4	68	9.8	41	95	0.0	7.3	60.4

(Continued on page 16)

A difference between any two entries of less than 3.5 in moisture content and 6.8 in yields is not significant.



Table 12—(Continued) DISTRICT 2 (Turner County): Results of Tests of Corn Hybrids and Varieties on the Farm of Rudy Feenstra, Davis (Harvested October 14, 1943).

Hybrid or variety	Moisture		Smutted plants	Ear height	Stalk height	Root lodging	Broken stalks	Acre yield of ear corn with 15% moisture in grain
	at harvest	Stand						
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>bu.</i>
Green Acres A 51 (Exp.)*	16.5	80	4.8	40	95	0.0	17.2	60.2
Moews 15 A	15.9	80	5.6	37	92	2.1	16.8	60.0
Reid National 117 R	18.0	78	2.1	42	96	0.0	2.8	59.6
Iowearth AQ	17.0	77	5.8	44	96	0.0	13.0	59.4
Green Acres 392 (Exp.)*	19.9	71	3.9	37	91	0.0	10.1	59.0
Haapala's Hybrid 120	19.0	83	4.6	37	91	0.7	2.7	57.9
Master F 101	14.6	73	4.5	36	89	4.5	4.5	57.8
Jacques Proven Hybrid 1209 J	18.6	86	1.3	42	94	0.0	7.1	56.4
Jacques Proven Hybrid 1158 J	16.4	83	6.6	37	91	0.0	0.7	56.0
Funk's Hybrid G-65	20.6	84	1.9	40	93	1.9	12.5	55.8
Green Acres 2814 (Exp.)*	19.4	79	4.9	40	94	0.0	16.9	54.6
Kingscrot KY	20.0	80	4.8	37	92	4.2	8.4	54.4
Reid National 1202	20.3	77	7.1	46	98	3.6	9.4	54.4
Green Acres SM 4 (Exp.)*	18.3	65	6.8	42	95	0.0	23.1	53.6
Iowearth 18 A (Exp.)*	18.4	77	9.4	43	98	0.0	12.3	52.7
Lowe 14	20.0	64	6.9	38	91	0.0	17.2	51.4
Reid's Yellow Dent	17.0	68	8.1	41	94	13.0	35.0	49.3
Golden Jewel	17.4	68	8.9	43	97	13.7	42.7	48.4
Iowearth W 16	14.1	64	6.0	40	91	0.0	5.3	48.4
Pioneer Hi-Bred 330	16.2	70	7.8	39	89	0.0	7.9	47.7
Wimples Yellow Dent	17.6	73	9.2	43	97	11.5	36.9	46.4
Reid National 16 W (White-Exp.)*	13.0	74	7.4	40	91	0.0	35.5	43.3
MOISTURE GROUP II								
Green Acres H 97 (Exp.)*	22.3	84	3.9	43	99	0.0	17.9	65.6
Iowearth W 15 (Exp.)*	21.1	86	3.2	41	96	5.2	19.9	65.0
Lowe 18	21.2	78	4.9	40	93	0.0	1.0	60.0
Green Acres 152	21.7	76	4.4	46	101	6.6	26.5	58.7
Funk's Hybrid G-64 (Exp.)*	22.4	86	2.5	41	92	1.3	3.3	57.2
Green Acres 1351 (Exp.)*	21.0	73	3.8	44	96	2.3	6.9	56.9
Green Acres 31 B (Exp.)*	21.9	83	4.7	46	99	2.0	16.0	55.3
Pioneer Hi-Bred 334	21.3	80	4.2	45	98	4.2	13.9	54.6
Iowearth 14 (Exp.)*	23.1	70	3.9	43	98	0.0	8.7	54.4
Green Acres 38 (Exp.)*	21.6	76	4.4	39	92	0.0	5.8	54.4
Green Acres 117	21.9	83	7.4	43	96	0.0	5.4	50.9
Green Acres 39 (Exp.)*	21.8	77	2.9	39	94	0.0	3.6	47.4

\*Experimental hybrids

A difference between any two entries of less than 3.5 in moisture content and 6.8 in yield is not significant.

**Table 13—DISTRICT 3 (Hutchinson County): Results of Tests of Hybrids and Varieties on the Farm of Emanuel Sinkbeil, Parkston. (Harvested October 15, 1943)**

Hybrid or variety	Moisture at harvest	Stand	Smutted plants	Ear height	Broken stalks	Acre yield of ear corn with 15% moisture in grain
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>bu.</i>
<b>MOISTURE GROUP I</b>						
Turner S 56 .....	17.4	82	6.1	33	15.2	34.4
Kingscrot 3 .....	15.3	88	14.3	31	12.4	32.0
Kingscrot KR 2 .....	17.3	82	15.2	29	7.1	31.2
Turner S 52 .....	14.2	88	5.7	39	13.3	30.9
Pioneer Hi-Bred 334 .....	17.9	84	12.9	36	14.8	30.1
Pioneer Hi-Bred 331 .....	15.3	92	12.7	35	7.3	28.9
Funk's Hybrid G-13 (Exp.)* .....	14.2	92	8.2	26	15.4	28.6
Johnson's Mellow Dent 90 .....	16.3	86	8.7	28	7.8	28.5
Master F 106 .....	17.1	88	7.6	31	20.9	28.4
Funk's Hybrid G-29 .....	17.2	78	8.5	30	9.6	28.2
Funk's Hybrid G-550 W .....	16.4	88	11.4	29	21.9	27.1
Lowe 15 .....	15.7	83	16.0	31	7.0	26.5
Kingscrot KY .....	14.8	75	24.4	27	2.2	26.2
Reid National 115 <sub>1</sub> .....	15.1	88	9.5	33	7.6	26.1
Pioneer Hi-Bred 340 .....	17.8	93	10.7	35	8.0	26.0
Moews 15 .....	15.2	72	10.3	30	8.0	25.5
Iowealth 12 (Exp.)* .....	16.9	84	36.3	28	4.9	24.1
Carlson C-7 .....	19.0	73	18.2	32	6.8	24.1
Reid National 118 R .....	17.4	78	16.1	37	11.8	23.7
Jacques Proven Hybrid 1158 J .....	18.4	73	19.7	31	22.8	23.6
Reid National 10 (Exp.)* .....	14.8	84	7.9	36	5.9	23.5
Funk's Hybrid G-12 .....	17.7	78	10.6	31	7.5	23.5
Funk's Hybrid G-66 .....	19.2	72	15.1	32	6.9	23.5
Gurney's Golden Hybrid 118 R .....	19.4	67	9.9	31	24.9	23.2
Gurney's Golden Hybrid 112 R .....	15.5	76	8.8	34	9.9	23.1
Pioneer Hi-Bred 330 .....	17.5	78	12.8	31	8.5	22.8
Pioneer Hi-Bred 353 A .....	13.5	81	8.3	38	9.3	22.7
Iowealth AF 11 .....	15.8	82	10.0	31	17.2	22.7

(Continued on page 18)

**A difference between any two entries of less than 3.8 in moisture content and 5.9 in yield is not significant.**

Table 13—(Continued) DISTRICT 3 (Hutchinson County): Results of Tests of Hybrids and Varieties on the Farm of Emanuel Sinkbeil, Parkston. (Harvested October 15, 1943)

Hybrid or variety	Moisture at harvest	Stand	Smutted plants	Ear height	Broken stalks	Acre yield of ear corn with 15% moisture in grain
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>perct.</i>	<i>bu.</i>
Moews 15 A .....	15.6	76	11.0	30	11.0	22.7
Iowearth AQ .....	18.9	75	14.4	32	3.3	21.9
Reid National 117 R .....	17.4	80	11.5	34	7.3	19.8
Funk's Hybrid G-65 .....	17.8	74	14.6	29	17.9	19.1
Gurney's Golden Hybrid 112 Day .....	18.2	85	23.5	28	8.8	18.4
Golden Jewel .....	17.2	69	19.5	28	19.7	18.5
Master F 101 .....	16.4	70	11.8	32	13.1	16.5
Iowearth 16 .....	16.3	78	12.8	35	11.7	16.5
Iowearth W 14 (Exp.)* .....	13.4	76	21.7	33	19.5	16.4
Silver King .....	16.7	64	20.8	31	19.5	16.3
Wimples Yellow Dent .....	13.5	53	19.0	29	13.0	15.0
Iowearth W 12 (Exp.)* .....	15.1	63	17.1	34	22.4	12.7
Iowearth W 16 .....	13.9	47	16.0	30	40.9	12.6
MOISTURE GROUP II						
Turner S 55 .....	20.5	82	7.1	35	7.1	29.1
Lowe 520 .....	20.0	86	18.5	36	2.9	27.6
Haapala's Hybrid 120 .....	19.9	67	24.9	30	13.7	20.9
Jacques Proven Hybrid 1209 J .....	21.1	85	9.8	31	2.9	20.8
Lowe 18 .....	22.0	80	11.5	29	2.9	20.7
Green Acres 117 .....	21.0	72	31.0	35	11.5	20.5
Lowe 14 .....	23.2	76	16.3	29	8.7	19.8
Green Acres 152 .....	21.2	84	12.9	36	10.9	19.7
Gurney's Golden Hybrid 118 Day .....	19.6	79	11.6	35	9.5	19.1
Reid National 120 <sub>2</sub> .....	23.5	81	13.4	38	10.3	16.7

\*Experimental hybrids

A difference between any two entries of less than 3.8 in moisture content and 5.9 in yield is not significant.

**Table 14—DISTRICT 4 (Sanborn County): Results of Tests of Corn Hybrids and Varieties on the Farm of A. G. Vincent, Letcher. (Harvested October 16, 1943)**

Hybrid or variety	Stand	Smutted plants	Ear height	Stalk height	Broken stalks	Acre yield of ear corn
	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>bu.</i>
Silver King .....	62	33.3	26	56	37.3	11.7
Kingscrot KR 2 .....	60	20.8	28	57	33.3	10.4
Funk's Hybrid G-179 (Exp.)* .....	71	15.3	24	53	29.4	10.2
Funk's Hybrid G-35 (Exp.)* .....	68	18.3	26	56	35.4	8.9
Fulton Yellow Dent (Vincent) .....	79	18.9	28	52	25.2	8.6
Iowealth W 12 (Exp.)* .....	73	13.7	30	57	17.1	7.6
Master F 106 .....	74	17.9	29	59	33.7	8.0
Funk's Hybrid G-1 .....	77	18.5	26	59	18.5	6.6
Gurney's Golden Hybrid 112 Day .....	70	20.3	28	56	17.9	6.5
Kingscrot KS 6 .....	79	29.4	22	53	26.3	6.5
Master F 101 .....	62	32.4	24	51	27.0	6.5
Funk's Hybrid G-550 W .....	87	14.4	28	57	12.5	6.3
Iowealth 16 .....	72	20.7	27	57	11.5	6.2
Iowealth 10 (Exp.)* .....	85	19.6	28	54	7.9	5.8
Iowealth W 14 (Exp.)* .....	75	14.4	26	55	10.0	5.0
Funk's Hybrid G-178 (Exp.)* .....	70	19.0	25	54	16.7	4.7
Funk's Hybrid G-3 .....	68	12.2	26	53	21.9	4.4
Haapala's Minhybrid No. 405 .....	58	21.5	30	58	37.2	4.1
Jacques Proven Hybrid 1205 J .....	63	21.1	31	62	30.3	4.0
Reid National Improved 110 .....	70	20.3	28	56	16.7	3.8
Funk's Hybrid G-31 (Exp.)* .....	74	26.9	24	57	25.0	3.3
Jacques Proven Hybrid 1104 J .....	66	19.0	32	61	27.9	2.4
Gurney's Golden Hybrid 100 Day .....	60	13.9	29	59	25.0	2.2
Funk's Hybrid G-181 (Exp.)* .....	78	20.2	28	56	30.9	1.8
Kingscrot KN 1 .....	80	21.9	27	56	28.1	1.6
Funk's Hybrid G-12 .....	62	38.7	26	55	34.7	1.1
Funk's Hybrid G-29 .....	81	15.5	26	55	15.5	1.0

\*Experimental hybrids

A difference between any two entries of less than 3.9 in yield is not significant.

Table 15—DISTRICT 5 (Minnehaha County): Results of Tests of Corn Hybrids and Varieties on the Farm of Ray Knutson, Brandon. (Harvested October 9, 1943)

Hybrid or variety	Moisture	Stand	Smutted plants	Ear height	Stalk height	Root lodging	Broken stalks	Acre yield
	at harvest							of ear corn with 15% moisture in grain
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>perct.</i>	<i>perct.</i>	<i>bu.</i>
MOISTURE GROUP I								
Master F 82 .....	20.3	92	1.2	40	88	0.0	0.0	56.6
Funk's Hybrid G-29 .....	25.5	76	0.7	32	80	0.0	0.0	56.6
Jacques Proven Hybrid 1157 J .....	23.4	80	0.7	40	90	0.0	0.0	56.4
Pioneer Hi-Bred 340 .....	25.5	80	1.4	34	85	0.0	0.0	56.4
Reid National Improved 110 .....	20.1	74	1.5	40	88	0.0	0.0	56.1
Iowearth 10 (Exp.)* .....	21.4	85	0.7	36	80	0.0	0.0	55.8
Iowearth No. 11 (Exp.)* .....	22.3	81	1.4	33	78	0.0	0.0	54.4
Funk's Hybrid G-178 (Exp.)* .....	21.9	90	0.6	25	70	0.0	0.0	54.1
Gurney's Golden Hybrid								
100 Day .....	18.1	83	1.4	30	88	2.0	0.0	53.1
Funk's Hybrid G-179 (Exp.)* .....	21.6	82	0.0	28	74	8.8	0.0	52.8
Funk's Hybrid G-115 (Exp.)* .....	23.1	92	0.0	35	88	0.0	0.0	52.8
Iowearth S .....	23.1	75	0.7	42	88	0.0	0.0	52.0
Pioneer Hi-Bred 353 .....	20.2	80	2.8	35	80	2.8	0.0	51.0
Reid National 110 <sub>1</sub> .....	21.0	87	0.0	35	85	0.6	0.0	50.7
Funk's Hybrid G-12 .....	22.8	78	2.8	36	88	0.0	0.0	50.0
Reid National 95 .....	19.1	86	0.0	36	88	7.7	0.0	49.6
Kingscrot KS 6 .....	22.2	77	0.0	30	80	0.0	0.0	48.8
Kingscrot KR 2 .....	22.7	54	0.0	30	82	2.1	0.0	48.3
Sokota 417 .....	15.2	86	1.9	32	72	14.2	0.0	47.9
Reid National 105 .....	19.4	75	0.0	34	86	0.0	0.0	47.2
Pioneer Hi-Bred 353 A .....	21.6	63	1.8	36	80	4.4	0.0	47.0
Pioneer Hi-Bred 358 .....	20.9	68	0.0	33	82	5.7	0.0	45.0
Master F 101 .....	21.5	71	0.0	37	88	0.0	0.0	44.1
Kingscrot KN 1 .....	21.0	60	1.8	34	82	0.0	0.0	43.6
Funk's Hybrid G-1 .....	21.2	68	1.6	27	78	0.0	0.0	43.6
Master F 105 .....	23.0	74	0.8	36	84	0.0	0.0	42.1
Golden Jewel .....	22.2	68	7.3	42	85	20.3	0.0	41.3
Haapala's Hybrid 405 .....	18.0	61	0.9	40	82	0.0	0.0	40.2
Wimple's Yellow Dent .....	25.1	58	1.9	40	82	40.0	0.0	40.2
Iowearth W 14 (Exp.)* .....	15.1	68	0.8	40	88	4.1	0.0	38.9
Kingscrot KO .....	20.0	60	0.9	33	82	0.0	0.0	38.0
Early Murdock .....	22.7	59	1.9	33	72	20.8	0.0	35.3
Minhybrid 404 .....	19.9	61	0.0	38	80	0.0	0.0	33.7
Sokota 413 .....	20.6	63	3.5	33	73	6.1	0.0	31.6
Reid National 16 W								
(White-Exp.)* .....	12.2	47	1.2	36	82	0.0	0.0	31.5
Gurney's Golden Hybrid 90 V .....	16.3	30	1.9	24	70	0.1	1.8	21.3

\*Experimental hybrids

A difference between any two entries of less than 2.4 in moisture content and 7.1 in yield is not significant.

Table 16—DISTRICT 6 (Brookings County): Results of Tests of Corn Hybrids and Varieties on the Farm of James Biggar, Brookings. (Harvested October 17, 1943)

Hybrid or variety	Moisture at harvest		Smutted plants	Ear height	Stalk height	Root lodging	Broken stalks	Acre yield of ear corn with 15% moisture in grain
	perct.	perct.						
MOISTURE GROUP I								
Funk's Hybrid G-178 (Exp.)*	18.5	94	0.6	36	96	0.0	4.1	65.1
Funk's Hybrid G-29	22.8	86	1.3	37	94	0.0	0.0	62.6
Reid National Improved 110	19.7	92	3.6	41	102	0.0	2.4	59.4
Master F 82	17.9	95	1.2	43	98	1.2	3.0	58.4
Kingscrot KR 2	22.4	91	1.2	39	95	0.0	0.0	56.4
Reid National 110 <sub>1</sub>	18.5	96	0.6	44	97	0.0	2.9	56.3
Kingscrot KS 6	21.1	95	3.0	34	92	0.0	2.4	55.9
Funk's Hybrid G-12	21.4	87	1.9	39	98	1.9	0.6	55.7
Reid National 95	17.9	93	3.6	42	96	0.6	3.6	55.6
Sokota 417	17.6	92	4.2	35	91	2.4	10.9	54.7
Funk's Hybrid G-1	16.1	86	3.3	35	92	0.0	3.9	54.6
Gurney's Golden Hybrid								
100 Day	22.0	86	1.9	40	95	0.0	0.6	54.3
Master F 105	20.7	89	0.6	37	96	0.6	0.6	54.1
Pioneer Hi-Bred 353	20.5	87	1.3	42	100	0.0	1.3	53.4
Pioneer Hi-Bred 340	23.7	90	2.5	39	97	0.0	0.6	53.1
Iowearth S	21.9	85	3.3	45	101	0.7	0.0	52.9
Kingscrot KO	21.5	88	1.3	37	92	0.0	0.6	51.9
Pioneer Hi-Bred 353 A	17.9	83	1.4	43	97	4.0	4.0	51.6
Funk's Hybrid G-179 (Exp.)*	20.2	86	4.5	34	93	0.0	1.9	51.0
Pioneer Hi-Bred 91333								
(Exp.)*	20.9	87	3.8	43	97	3.8	3.2	50.2
Fulton Yellow Dent (Swope)	20.5	85	3.9	32	92	3.3	8.5	49.8
Master F 101	21.3	80	0.0	41	96	0.0	0.7	48.9
Early Murdock	20.8	77	5.8	38	93	6.4	10.1	48.7
Pioneer Hi-Bred 358	18.6	81	2.8	39	94	0.0	0.0	48.5
Kingscrot KN 1	19.6	81	4.8	41	97	0.0	6.2	48.2
Haapala's Hybrid 405	18.6	82	2.1	43	96	0.0	1.4	48.2
Reid National 105	20.5	87	3.2	38	96	0.0	0.0	47.8
Minhybrid 404	17.8	80	1.4	41	94	0.0	0.0	47.0
Sokota 413	19.0	85	5.9	33	90	2.6	2.6	46.4
Reid National 7 W								
(White-Exp.)*	17.8	85	2.6	40	93	1.3	5.9	45.0
All Dakota 34	17.5	72	4.6	35	90	3.1	8.5	44.6
Brookings 86	21.8	80	0.0	37	92	4.2	5.6	42.1
Iowearth W 12 (Exp.)*	16.6	81	4.8	43	97	0.7	9.6	40.1
Gurney's Golden Hybrid 90 V	18.5	68	2.5	37	89	0.0	1.7	39.0
All Dakota 46	21.6	56	8.0	37	90	4.0	4.0	36.3
MOISTURE GROUP II								
Jacques Proven Hybrid 1157 J	25.3	92	1.2	43	97	0.6	0.6	56.1

\*Experimental hybrids

A difference between any two entries of less than 3.1 in moisture content and 6.5 in yield is not significant.

Table 17—DISTRICT 7 (Kingsbury County): Results of Tests of Corn Hybrids and Varieties on the Farm of Kingsbury Crop Improvement Association, De Smet. (Harvested October 12, 1943)

Hybrid or variety	Moisture	Stand	Smutted plants	Ear height	Stalk height	Acre yield of ear corn with 15% moisture in grain
	at harvest					
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>in.</i>	<i>in.</i>	<i>bu.</i>
<b>MOISTURE GROUP I</b>						
Funk's Hybrid G-179 (Exp.)*	16.7	84	1.0	31	75	22.0
Funk's Hybrid G-178 (Exp.)*	14.5	91	0.9	32	77	21.6
Iowealth S	16.4	74	0.0	35	79	18.1
Pioneer Hi-Bred 353	15.4	76	0.9	33	74	18.1
Pioneer Hi-Bred 340	18.9	93	0.0	31	71	17.5
Fulton Yellow Dent (Swope)	15.2	73	1.1	26	69	17.1
Master F 82	12.9	84	2.0	37	85	16.8
All Dakota 18	14.4	68	0.0	26	69	16.6
Funk's Hybrid G-12	16.7	71	0.0	34	73	16.4
Minnesota 13	14.8	98	6.9	32	75	16.4
All Dakota 34	14.8	98	1.1	27	71	15.7
Reid National 110 <sub>1</sub>	14.5	98	4.6	33	75	15.7
Pioneer Hi-Bred 353 A	14.9	98	2.7	34	77	15.4
Kingscrot KS 6	16.9	81	1.0	30	78	15.3
Pioneer Hi-Bred 358	13.9	69	0.0	32	77	15.1
Kingscrot KR 2	18.8	75	1.1	31	73	15.0
Master F 101	17.1	58	0.0	33	75	14.8
Reid National Improved 110	19.3	88	2.8	37	83	14.7
Funk's Hybrid G-3 (Exp.)*	17.1	78	0.0	28	77	14.6
Funk's Hybrid G-1	16.4	79	0.0	27	71	14.5
Gurney's Golden Hybrid 100 Day	18.8	74	1.1	35	77	14.3
Kingscrot KO	16.8	65	1.3	28	71	14.3
Reid National 95	13.9	79	1.0	33	78	14.1
Haapala's Hybrid 405	14.9	64	0.0	33	71	14.0
Kingscrot KN 1	16.6	71	2.4	30	73	13.6
Sokota 417	12.1	47	0.0	28	68	12.9
Pioneer Hi-Bred 91333 (Exp.)*	17.1	76	2.2	35	76	12.4
Sokota 413	13.5	73	1.1	27	72	12.1
Gurney's Golden Hybrid 90 V	12.3	60	1.4	29	68	10.4
Reid National 105	15.5	74	0.0	31	77	9.5
Minhybrid 404	14.9	58	0.0	31	67	9.0
Reid National 10 W (White-Exp.)*	13.7	63	0.0	37	73	8.2
<b>MOISTURE GROUP II</b>						
Funk's Hybrid G-29	20.3	83	0.0	33	75	21.6
Jacques Proven Hybrid 1157 J	22.2	83	4.0	34	75	17.7
Master F 105	20.0	71	0.0	32	79	13.9
Early Murdock	19.8	69	3.6	30	70	13.5

\*Experimental hybrids

A difference between any two entries of less than 2.9 in moisture content and 4.5 in yield is not significant.

Table 18. SECTION A: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Entered in Districts 2 and 3 in 1943

Hybrid or variety	Yield per acre			Moisture content of grain at harvest		
	District 2	District 3	Average	District 2	District 3	Average
Kingscrost 3	71.9	32.0	52.0	18.6	15.3	17.0
Turner S 56	64.7	34.4	49.6	17.0	17.4	17.2
Funk's Hybrid G-550 W	70.1	27.1	48.6	13.4	16.4	14.9
Kingscrost KR 2	64.8	31.3	48.0	17.0	17.3	17.2
Pioneer Hi-Bred 331	65.2	28.9	47.1	17.1	15.3	16.2
Turner S 52	63.1	30.9	47.0	17.1	14.2	15.6
Funk's Hybrid G-29	65.4	28.2	46.8	19.1	17.2	18.2
Johnson's Mellow Dent No. 90	65.0	28.5	46.8	17.8	16.3	17.1
Reid National 115 <sub>1</sub>	66.7	26.1	46.4	17.8	15.1	16.5
Master F 106	64.3	28.4	46.4	16.9	17.1	17.0
Lowe 520	64.1	27.6	45.9	20.6	20.0	20.3
Lowe 15	64.7	26.5	45.6	17.9	15.7	16.8
Turner S 55	61.2	29.1	45.2	19.9	20.5	20.2
Pioneer Hi-Bred 340	63.4	26.1	44.8	16.3	17.8	17.1
Moews 15	63.9	25.5	44.7	17.4	15.2	16.3
Carlson C-7	63.9	24.1	44.0	19.1	19.0	19.1
Reid National 118 R	64.2	23.7	44.0	18.4	17.4	17.9
Gurney's Golden Hybrid 118 R	64.8	23.2	44.0	20.5	19.4	20.0
Funk's Hybrid G-66	62.0	23.5	42.8	18.7	19.2	19.0
Funk's Hybrid G-12	61.6	23.5	42.6	17.6	17.7	17.7
Pioneer Hi-Bred 334	54.6	30.1	42.3	21.3	17.9	19.6
Iowealth AF 11	61.6	22.7	42.2	14.1	15.8	15.0
Gurney's Golden Hybrid 112 R	61.1	23.1	42.1	18.4	15.5	17.0
Pioneer Hi-Bred 353 A	61.0	22.7	41.9	14.3	13.5	13.9
Iowealth 16	66.2	16.5	41.4	15.7	16.3	16.0
Moews 15 A	60.0	22.7	41.4	15.9	15.6	15.8
Gurney's Golden Hybrid 112 Day	63.8	18.4	41.1	18.4	18.2	18.3
Gurney's Golden Hybrid 118 Day	62.6	19.1	40.9	16.5	19.6	18.1
Iowealth A Q	59.4	21.9	40.7	17.0	18.9	18.0
Lowe 18	60.0	20.7	40.4	21.2	22.0	21.6
Kingscrost KY	54.4	26.2	40.3	20.0	14.8	17.4
Jacques Proven Hybrid 1158 J	56.0	23.6	39.8	16.4	18.4	17.4
Reid National 117 R	59.6	19.8	39.7	18.0	17.4	17.7
Haapala's Hybrid 120	57.9	20.9	39.4	19.0	19.9	19.5
Green Acres 152	58.7	19.7	39.2	21.7	21.2	21.5
Jacques Proven Hybrid 1209 J	56.4	20.8	38.6	18.6	21.1	19.9
Funk's Hybrid G-65	55.8	19.1	37.5	20.6	17.8	19.2
Master F 101	57.8	16.5	37.2	14.6	16.4	15.5
Green Acres 117	50.9	20.5	35.7	21.9	21.0	21.5
Reid National 120 <sub>2</sub>	54.4	16.7	35.6	20.3	23.5	21.9
Lowe 14	51.4	19.8	35.6	20.0	23.2	21.6
Pioneer Hi-Bred 330	47.7	22.8	35.3	16.2	17.5	16.9
Golden Jewel	48.4	18.5	33.5	17.4	17.2	17.3
Wimples Yellow Dent	46.4	15.0	30.7	17.6	13.5	15.6
Iowealth W 16	48.4	12.6	30.5	14.1	13.9	14.0
Minimum level of significance	6.8	5.9	6.4	3.5	3.8	3.6

A difference between any two entries of less than the figures shown in the bottom line for each column is not significant.



**Table 19. SECTION C: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Entered in All Districts in 1943**

Hybrid or variety	Yield per acre				Moisture content of grain at harvest			
	District 5	District 6	District 7	Sectional average	District 5	District 6	District 7	Sectional average
Funk's Hybrid G-29 .....	56.6	62.6	21.6	46.9	25.5	22.8	20.3	22.9
Master F 82 .....	56.6	58.4	16.8	43.9	20.3	17.9	12.9	17.0
Reid National Improved 110 .....	56.1	59.4	14.7	43.4	20.1	19.7	19.3	19.7
Jacques Proven Hybrid 1157 J .....	56.4	56.1	17.7	43.4	23.4	25.3	22.2	23.6
Pioneer Hi-Bred 340 .....	56.4	53.1	17.5	42.3	25.5	23.7	18.9	22.7
Iowearth S .....	52.0	52.9	18.1	41.0	23.1	21.9	16.4	20.5
Reid National 110 <sub>1</sub> .....	50.7	56.3	15.7	40.9	21.0	18.5	14.5	18.0
Pioneer Hi-Bred 353 .....	51.0	53.4	18.1	40.8	20.2	20.5	15.4	18.7
Funk's Hybrid G-12 .....	50.0	55.7	16.4	40.7	22.8	21.4	16.7	20.3
Gurney's Golden Hybrid 100 Day .....	53.1	54.3	14.3	40.6	18.1	22.0	18.8	19.6
Kingscrot KS 6 .....	48.8	55.9	15.3	40.0	22.2	21.1	16.9	20.1
Kingscrot KR 2 .....	48.3	56.4	15.0	39.9	22.7	22.4	18.8	21.3
Reid National 95 .....	49.6	55.6	14.1	39.8	19.1	17.9	13.9	17.0
Sokota 417 .....	47.9	54.7	12.9	38.5	15.2	17.6	12.1	15.0
Pioneer Hi-Bred 353 A .....	47.0	51.6	15.4	38.0	21.6	17.9	14.9	18.1
Funk's Hybrid G-1 .....	43.6	54.6	14.5	37.4	21.2	16.1	16.4	17.9
Master F 105 .....	42.1	54.1	13.9	36.7	23.0	20.7	20.0	21.2
Pioneer Hi-Bred 358 .....	45.0	48.5	15.1	36.2	20.9	18.6	13.9	17.8
Master F 101 .....	44.1	48.9	14.8	35.9	21.5	21.3	17.1	20.0
Kingscrot KN 1 .....	43.6	48.2	13.6	35.1	21.0	19.6	16.6	19.1
Reid National 105 .....	47.2	47.8	9.5	34.8	19.4	20.5	15.5	18.5
Kingscrot KO .....	38.0	51.9	14.3	34.7	20.0	21.5	16.8	19.4
Haapala's Hybrid 405 .....	40.2	48.2	14.0	34.1	18.0	18.6	14.9	17.2
Early Murdock .....	35.3	48.7	13.5	32.5	22.7	20.8	19.8	21.1
Sokota 413 .....	31.6	46.4	12.1	30.0	20.6	19.0	13.5	17.7
Minhybrid 404 .....	33.7	47.0	9.0	29.9	19.9	17.8	14.9	17.5
Gurney's Golden Hybrid 90 V .....	21.3	39.0	10.4	23.6	16.3	18.5	12.3	15.7
<b>Minimum level significance .....</b>	<b>7.1</b>	<b>6.5</b>	<b>4.5</b>	<b>4.5</b>	<b>2.4</b>	<b>3.1</b>	<b>2.9</b>	<b>2.4</b>

A difference between any two entries of less than the figures shown in the bottom line for each column is not significant.