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South Dakota Corn Performance Test, 1944

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South Dakota Corn Performance Test, 1944

By KARL F. MANKE and J. E. GRAFIUS[1]

The South Dakota Corn Performance Test is conducted each year to supply impartial information concerning hybrids and open-pollinated varieties to farmers, hybrid seed-corn dealers and producers, and others interested in corn. The plots for this test are located in nine districts of eastern South Dakota. There were 456 entries comprising 156 different hybrids and open-pollinated varieties in 1944. Two to five adapted open-pollinated varieties were planted in each plot as check varieties. Data are presented on yield, moisture percentage of the grain at harvest, 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 judging the advantage or disadvantage of purchasing a given hybrid. Long-time averages are the best indication of the performance of a hybrid and as these tests continue to be conducted their results will become more valuable. 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 Agricultural Experiment Station in cooperation with individual farmers in each of the nine districts.[2]

Check entries. Fourteen open-pollinated varieties were used as check varieties. They were All-Dakota 610, All-Dakota 626, Alta, Brookings 86, Brown County Yellow Dent, Early Murdock, Eureka Yellow Dent, Fulton Yellow Dent (Swope), Fulton Yellow Dent (Vincent), Golden Jewel, Minnesota 13, Reid Yellow Dent, Silver King, and Wimple's Yellow Dent. Two to five of these varieties were included at locations in which they were adapted. (See Tables 3 to 13.)

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 20-inch rainfall line (see map on page 3).

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 (District 5, 6 and 7), and Section D (Districts 8 and 9). It should be pointed out that commercial

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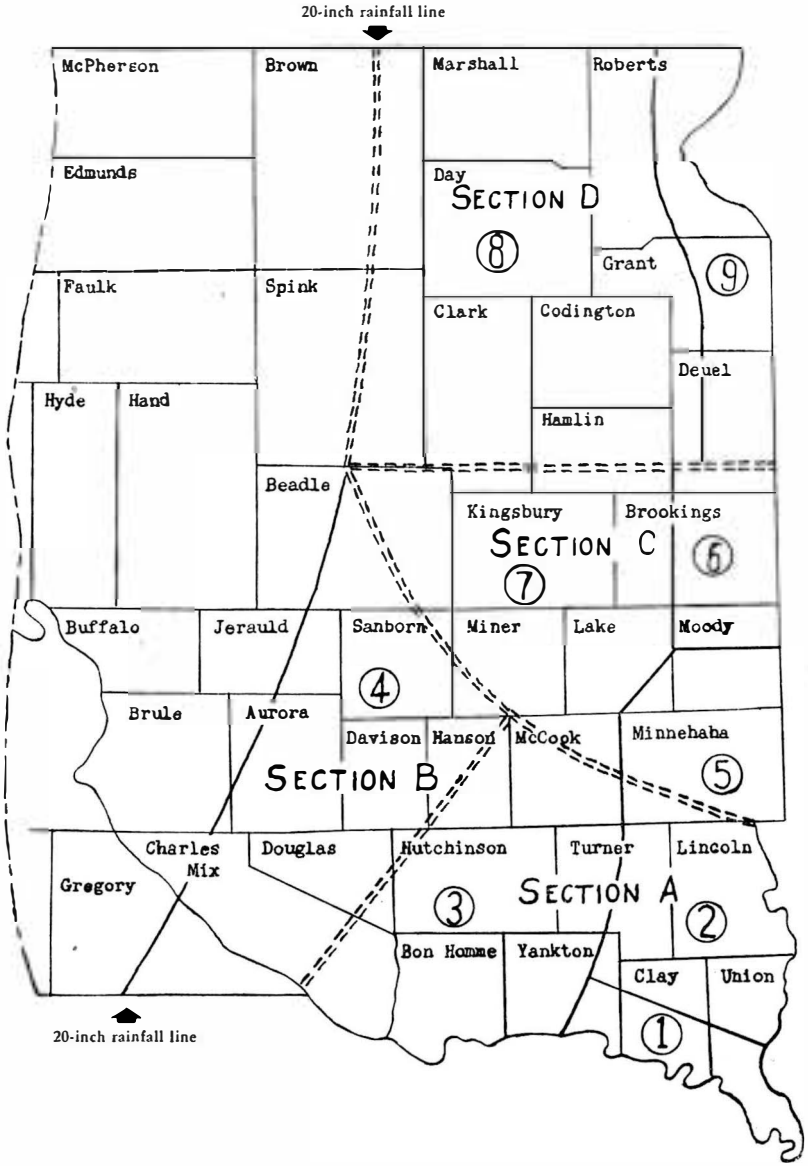
[2] Part of the funds used in conducting these tests was derived from entry fees collected from the seed corn companies submitting hybrids.

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 many of the commercial companies and they have questioned the entry of



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.

hybrids in districts other than the district in which they know the hybrid to be adapted. However, it is felt that sectional entry permits persons unfamiliar with a specific hybrid better to ascertain the limits of its adaptation and for this reason the sectional entry system was adopted and has been retained.

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 cultivated exactly as the rest of the field.

Table 1. Entries for the 1944 Tests and Contributors of Seed

Hybrid Entries		
Funk's G-Hybrids	Funk Bros. Seed Co.	Bloomington, Ill.
Green Acres Hybrids	Green Acres	Hartington, Nebr.
Hoosier-Crost Hybrids	Edw. J. Funk & Son	Kentland, Ind.
Iowealth Hybrids	Michael-Leonard Seed Co.	Sioux City 6, Ia.
Jacques Proven Hybrids	Jacques Seed Co.	Prescott, Wis.
Kingscrost Hybrids	Northrup, King & Co.	Minneapolis, Minn.
Lowe Hybrids	Lowe Seed Co.	Aroma Park, Ill.
Master Hybrids	Farmer Seed & Nurs. Co.	Faribault, Minn.
Minhybrids	Minhybrid Growers Assn.	Montevideo, Minn.
Moews Hybrids	Moews Seed Co.	Granville, Ill.
Pioneer Hi-Breds	Pioneer Hi-Bred Corn Co.	Des Moines 9, Ia.
Reid National Hybrids	Reid National Corn Co.	Anamosa, Ia.
Sokota Hybrids	Sokota Growers Assn.	Brookings, S. Dak.
Standard Hybrids	Standard Seed Co.	Clarinda, Ia.
Turner Hybrids	Turner Hybrid Seed Corn Co.	Grand Junction, Ia.
Open-pollinated Varieties		
All-Dakota 610	So. Dak. Experiment Station	Brookings
All-Dakota 626	So. Dak. Experiment Station	Brookings
Alta	Highmore Experiment Station	Highmore
Brookings 86	So. Dak. Experiment Station	Brookings
Brown County Yellow Dent	Frank McHugh	Aberdeen
Early Murdock	Geo. P. Sexauer & Son	Brookings
Eureka Yellow Dent	Eureka Experiment Station	Eureka
Fulton Yellow Dent	Frank Swope	Orient
Fulton Yellow Dent	A. G. Vincent	Letcher
Golden Jewel	Henry Preheim	Marion
Minnesota 13	Crase Bros.	Brookings
Reid Yellow Dent	Geo. P. Sexauer & Son	Brookings
Silver King	T. Englebretson	Selby
Wimple's Yellow Dent	Geo. P. Sexauer & Son	Brookings

Method of Planting. Each entry was planted in a plot 2 hills wide and 10 hills long and replicated 6 times. Planting was done at the rate of 3 kernels per hill in all fields except those in Districts 1, 2, and 3 where 4 kernels per hill were planted. All planting was done by hand.

Growing Conditions. The plantings were made at later dates than optimum for usual corn planting—between May 17 and June 1. Almost without

exception planting was done under unfavorable conditions of high surface soil moisture and poor stands resulted at many locations. In some locations water stood on the plots for prolonged periods during the growing season and for this reason entire replications had to be abandoned. In spite of late planting and exceptionally high rainfall during the early summer, corn, in general, made fine growth and excellent yields were obtained. The delayed planting and cool summer had its effect on moisture content of the grain at harvest time and moisture content of corn was generally higher than in recent years. In many cases the unusually warm and dry weather during October greatly aided in ripening corn which otherwise would have been extremely immature.

Table 2. General Information: South Dakota Corn Performance Test, 1944

District	County	Post Office	Cooperator	Soil Type	Date Planted	Date Harvested
1	Clay	Wakonda	Eldred Hesla	Kranzburg silt loam	May 30	Nov. 2
2*	Turner	Davis	Rudy Feenstra	Barnes silt loam	May 31	
3	Hutchinson	Parkston	Emanuel Sinkbeil	Barnes silt loam	May 24	Oct. 25
4	Sanborn	Letcher	A. G. Vincent	Barnes sandy loam	May 17	Oct. 23
5	Minnehaha	Brandon	Ray Knutson	Moody silt loam	May 20	Oct. 21
6	Brookings	Brookings	James Biggar	Lamoure silty clay loam	June 1	Nov. 1
7	Kingsbury	Lake Preston	Geo. Larson	Kranzburg silt loam	May 21	Oct. 16
8	Codington	Watertown	M. H. Suttor	Kranzburg silt loam	May 25	Oct. 20
9	Grant	Milbank	Chris Christian	Barnes silt loam	May 26	Oct. 28

* The plot in District 2, Turner County, was not harvested. The farmer inadvertently put the corn included in the plot into the silo.

Measuring Performance

Entries in the 1944 tests were rated on the basis of yield and moisture content. Stands are reported also for all entries in the various districts. Lodging was not severe this season and no attempt was made to differentiate between the entries on this basis.

Yields. Yields of entries were converted to the number of bushels of ear corn per acre with 15 per cent moisture in the grain. As indicated in Table 2 no yields were obtained in District 2.

Moisture Content. Since the growing of hybrid corn has become a general practice among farmers in many sections of the state it has no longer become essential that the crop be completely mature at the time of the first frost. That is, corn now only has to meet the moisture requirements deemed necessary for safe storage rather than for germination. There has been a tendency to grow hybrids which utilize the whole growing season. Frequently the result of this trend has been to grow hybrids which are too late maturing for the average growing season. It thus becomes of primary importance to judge hybrids not only on their ability to withstand lodging and to produce high yields, but on their ability to ripen within the limits of an average season.

The sampling methods used in determining the moisture content of individual hybrids are subject to certain experimental errors. In judging the moisture content of the entries reported herein samples were taken on three of the six replications at east location. Where less than six replications were harvested; moisture samples were taken on at least half of the replications harvested. The moisture content figures were averaged and used as a measure of the maturity of the hybrid. In order to rate the varieties into classes for moisture content they were compared with the average moisture content of the open-pollinated varieties. Moisture Group I consists of hybrids which did not exceed the average moisture content of the open-pollinated varieties by more than the minimum level of significance for moisture. The minimum level of significance is a statistical measure which attempts to define a real difference in moisture content between entries and a difference due to chance variation. Group II hybrids exceeded the open-pollinated varieties in moisture by the minimum level of significance but not by more than twice this figure. When hybrids exceeded the average of the open-pollinated varieties in moisture content by at least twice the minimum level of significance they were classed in 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 reduces 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 1944 data for all entries, both commercial (those offered for sale) and experimental (those not yet released for commercial use) are presented in Tables 3 to 10 inclusive. Average yields and moisture percentages of all entries in Sections A, C, and D are presented in Tables 11, 12 and 13.

The average yields and moisture contents of hybrids and varieties grown for two and three years are presented in Tables 14 to 21 inclusive. In each of these average tables the performance of the various hybrids and varieties for

a given series of years is compared with the performance of an open-pollinated variety during the same period. For example, it will be seen from Table 14 that during three seasons 1941, 1942 and 1944, four hybrids, on the average, out-yielded Wimple's Yellow Dent. These comparisons are presented in terms of per cent of the open-pollinated variety yield.

How to Use This Circular as a Guide in Choosing Hybrids

Farmers have devolped the practice of growing more than one hybrid corn variety to facilitate planting and harvesting and to avoid reliance on a single choice for their entire year's crop. This is a good practice and it should be encouraged. The choice of hybrid is a difficult one and as far as possible farmers ought to rely on actual performance records in making their choices.

In using this circular a farmer should turn first to the map on page 3 and determine the district in which he lives or decide which of the districts most closely resembles his individual situation. For example, a farmer living in the southern part of Moody County is within the limits of District 5 and the plot in which he is most interested is reported in Tables 6, 12, and 17. This is the plot grown in Minnehaha County near Brandon. The results of hybrids grown in District 5 in 1944 are given in Table 6. Here the farmer finds the hybrids separated into three groups according to their relative moisture content at harvest in comparison with the average moisture content of two open-pollinated varieties Golden Jewel and Wimple's Yellow Dent. Also at the bottom of the table is the statement, "A difference between two entries of less than 13.5 bushels in yield and 2.5% in moisture content is not significant." This means that if we subtract from the yield of the highest yielding commercial hybrid (Master F 101: 70.1 bushels per acre) 13.5 bushels we get the value 56.6 bushels; therefore the differences between all the hybrids yielding 56.6 bushels or more are due to chance and are not true differences. Counting down in Moisture Group I the farmer finds 16 hybrids within this 13.5 bushel difference. Now with reference to the moisture contents of these 16 commercial hybrids he finds rather important differences and is able to narrow down his choices to not only those which gave the highest yields but also those which approached a safe moisture for cribbing. The lowest moisture content reported for the 16 highest yielding commercial hybrids is 23.6%. If the farmer then adds to 23.6% to the 2.5% due to chance (as determined by the minimum level of significance), he gets the figure 26.1%. Three commercial hybrids among the 16 have moisture contents below this level. They are Kingscrost KS2 (23.6%), Reid National 110 A (25.5%), and Kingscrost KS6 (25.9%).

Hybrids should be judged by their performance over a period of years wherever such information is available. Table 17 gives two- and three-year averages for yield per acre and moisture content at harvest in District 5, Minnehaha County. Also the hybrids on which two- and three-year averages are available are compared with a standard open-pollinated variety, Golden

Jewel, in terms of the percentage yield of the hybrid in terms of the yield of the open-pollinated variety for a corresponding period. Following through with the three best hybrids on the basis of the 1944 results the farmer living in District 5 will find that in Table 17 these hybrids did not perhaps demonstrate such a high degree of superiority over the longer period of time as they did in 1944. This illustrates the point very well that *all* the data should be examined before a choice is made.

The sectional averages as presented in Tables 11, 12, and 13 are of perhaps greatest interest to seed dealers who become interested in knowing the limits of adaptation of particular hybrids. Table 12, for example, gives the average yields and moisture contents of 33 commercial hybrids grown in 1944 in Minnehaha, Brookings, and Kingsbury Counties. The minimum level of significance values are given at the bottom of the table and are equally applicable in evaluating differences between hybrids for the section as they were for the district.

Table 3—DISTRICT 1 (Clay County): Results of Tests of Corn Hybrids and Varieties on the Farm of Eldred Hesla, Wakonda. (Harvested November 2, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
	bu.	*perct.*	*perct.*
Moisture Group I			
Kingscrost KY	104.7	22.6	84.6
Turner S 56	103.8	24.0	87.1
Reid National 115	103.5	20.0	88.3
Kingscrost K 3	102.1	22.6	85.0
Jacques 1157-J	100.8	22.0	78.3
Funk's G-68 (Exp.)*	99.3	24.2	84.6
Jacques 1205-J	98.1	17.4	79.2
Master F 106	97.4	24.1	92.9
Turner S 52	97.3	24.2	84.2
Iowealth AF 11	96.7	20.0	77.9
Hoosier-Crost F145 (Exp.)*	95.5	21.4	85.0
Green Acres LM 81 C 2 (Exp.)*	95.2	22.4	87.5
Master F 101	95.0	21.0	89.2
Lowe 14	94.6	24.8	81.2
Pioneer Hi-Bred 331	93.2	23.2	83.3
Pioneer Hi-Bred 353 A	92.0	20.1	88.8
Kingscrost KR 2	91.8	22.2	75.0
Standard 615	91.1	25.0	77.1
Green Acres 579 (Exp.)*	90.2	25.0	85.8
Funk's G-39 (Exp.)*	89.2	24.0	85.4
Moews 15	89.1	21.4	92.1
Green Acres 196	88.2	25.6	80.8
Reid National 118 R	87.5	23.2	80.4
Green Acres 396 (Exp.)*	87.4	24.6	90.8
Green Acres LM 94 (Exp.)*	86.5	24.6	86.7
Moews 14	85.9	23.8	73.8
Iowealth 16 H (Exp.)*	85.6	24.8	74.2
Funk's G-51 (Exp.)*	85.3	23.5	81.2
Master S-7 (Exp.)*	84.9	24.8	83.3
Lowe 15	84.7	20.8	80.8
Green Acres 90 (Exp.)*	83.3	24.6	83.3
Wimple's Yellow Dent	81.2	19.0	68.8
Hoosier-Crost F 140 (Exp.)*	77.6	22.7	77.5
Funk's G-550 W	77.5	22.0	82.5
Iowealth 16	76.8	23.7	78.8
Standard 405	74.5	23.2	72.5
Lowe 52	72.3	21.7	75.4
Green Acres 113	70.9	25.6	67.5
Green Acres LM 95 (Exp.)*	68.7	24.2	70.4
Sokota 417	68.1	16.6	88.3

(Continued on page 11)

*Experimental entry

A difference between two entries of less than 22.0 bushels in yield and 4.4% in moisture content is not significant.

Table 3—(Cont'd.) DISTRICT 1 (Clay County): Results of Tests of Corn Hybrids and Varieties on the Farm of Eldred Hesla, Wakonda. (Harvested November 2, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
	bu.	*perct.*	*perct.*
Funk's G-37	66.8	23.4	57.0
Sokota 413AA	62.5	18.0	82.9
Reid Yellow Dent	61.3	23.6	64.6
Sokota 420	59.4	16.8	71.2
Sokota 418	59.4	18.5	76.7
Green Acres 41 (Exp.)*	57.3	24.2	65.6
Moisture Group II			
Iowealth 25 T (Exp.)*	99.8	26.0	93.8
Green Acres 395	98.0	26.3	84.2
Iowealth 25 Y (Exp.)*	94.8	26.4	89.6
Kingscrost KY 2	93.7	26.2	76.9
Green Acres LM (Exp.)*	92.2	28.5	81.7
Turner S 51 A	91.5	26.2	87.9
Iowealth BC 5 (Exp.)*	90.6	26.2	80.0
Green Acres 392 (Exp.)*	89.7	27.0	83.3
Green Acres LM 20 (Exp.)*	89.5	27.6	85.4
Iowealth AQ 9 (Exp.)*	88.5	26.0	87.9
Green Acres LM 421 (Exp.)*	87.6	27.0	82.5
Funk's G-114	86.8	26.6	81.2
Reid National 117 R	86.1	27.5	88.3
Green Acres BRTE (Exp.)*	84.8	27.2	86.7
Lowe 520	83.3	29.8	82.5
Iowealth BC 4	81.6	27.5	83.8
Funk's G-57	80.8	25.8	81.2
Funk's G-66	80.8	28.0	82.5
Iowealth AQ	77.4	28.7	82.5
Turner S 55	76.7	28.0	70.0
Green Acres BR 422 (Exp.)*	75.0	26.4	63.3
Iowealth BC 7 (Exp.)*	73.1	25.8	72.5
Funk's G-29	72.6	26.6	72.1
Green Acres 80 (Exp.)*	66.7	26.5	65.0
Moisture Group III			
Green Acres 64 (Exp.)*	85.8	31.2	84.6

*Experimental entry

A difference between two entries of less than 22.0 bushels in yield and 4.4% in moisture content is not significant.

Table 4—DISTRICT 3 (Hutchinson County): Results of Corn Hybrids and Varieties on the Farm of Emanuel Sinkbeil, Parkston. (Harvested Oct. 25, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
	bu.	*perct.*	*perct.*
Funk's G-114	71.1	28.3	75.0
Funk's G-66	67.0	30.8	72.9
Funk's G-68 (Exp.)*	64.6	25.0	63.3
Standard 405	64.4	26.8	69.6
Pioneer 353 A	60.0	22.7	67.1
Funk's G-29	59.4	33.2	67.9
Lowe 14	58.7	30.0	66.7
Funk's G-37	57.9	34.0	60.8
Funk's G-51 (Exp.)*	55.5	24.5	47.9
Reid National 118 R	55.5	27.5	67.9
Jacques 1157-J	55.3	30.0	61.7
Reid National C White (Exp.)*	55.3	29.0	62.5
Funk's G-39 (Exp.)*	54.0	30.0	51.7
Iowealth AF 11	53.7	22.2	57.1
Master S-7 (Exp.)*	53.7	23.2	64.6
Jacques 1205 J	53.2	27.8	64.6
Moews 14	52.9	29.1	60.4
Funk's G-57	52.9	30.6	60.0
Iowealth AQ	52.7	28.3	57.5
Master F 106	52.2	27.4	64.2
Green Acres 395	51.9	30.5	63.3
Funk's G-550 W	51.4	21.0	55.4
Green Acres 196	51.4	35.0	66.7
Iowealth 16	50.9	27.9	58.8
Reid National 115	49.6	34.4	60.0
Iowealth BC 4	48.8	29.1	46.2
Standard 615	48.3	28.0	56.2
Moews 15	47.8	30.8	64.2
Green Acres 113	47.5	28.2	58.3
Reid National 117R	46.5	23.5	39.2
Sokota 418	46.5	17.8	61.2
Lowe 52	46.2	25.4	52.5
Sokota 417	45.9	15.7	70.0
Sokota 413 AA	45.7	16.4	70.8
Lowe 520	44.6	37.1	57.5
Lowe 15	43.9	32.0	53.3
Turner S 56	43.6	28.5	55.0
Pioneer 331	43.1	31.0	63.3
Kingscrost KY	42.8	30.5	59.6
Kingscrost KY 2	42.8	32.5	52.1
Turner S 51 A	42.6	31.5	54.6
Turner S 55	41.8	38.7	53.8
Master F 101	41.5	24.3	55.8
Turner S 52	41.3	29.1	53.3
Kingscrost K 3	40.5	30.7	35.8
Silver King	39.2	21.6	45.0
Wimple's Yellow Dent	38.9	31.7	52.5
Kingscrost KR 2	38.7	28.3	50.4
Sokota 420	38.7	17.5	66.2

*Experimental entry

A difference between two entries of less than 20.9 bushels in yield is not significant.

Table 5—DISTRICT 4 (Sanborn County): Results of Tests of Corn Hybrids and Varieties on the Farm of A. G. Vincent, Letcher. (Harvested October 23, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
	bu.	*perct.*	*perct.*
Moisture Group I			
Moews 14	81.3	20.8	85.9
Master F101	74.6	20.7	86.2
Iowealth A	68.7	19.3	81.1
Silver King	68.1	20.1	94.1
Pioneer Hi-Bred 359	67.6	16.4	81.9
Funk's G-178	65.3	17.9	90.3
Funk's G-179	63.8	20.5	83.1
Funk's G-550W	61.7	17.2	87.3
Pioneer Hi-Bred 379	60.4	17.4	78.5
Funk's G-35	60.4	17.6	78.0
Iowealth S	58.7	18.2	84.5
Jacques Proven Hybrid 1104-T	58.7	20.8	78.6
Funk's G-1	58.2	17.3	78.7
Funk's G-3 (Exp.)*	58.0	18.0	76.4
Kingscrost KS 6	57.8	19.1	81.1
Iowealth W-12 (Exp.)*	56.0	16.8	81.1
Fulton Yellow Dent (Vincent)	55.3	18.2	77.7
Sokota 418	50.1	16.9	81.1
Kingscrost KA4	48.8	14.3	77.2
Sokota 417	48.3	15.6	76.3
Sokota 413 AA	47.5	14.0	73.4
Sokota 420	47.4	14.8	81.4
Funk's G-177	47.3	19.2	78.8
Moisture Group II			
Reid National 115	73.9	22.6	79.3
Kingscrost KR2	68.0	22.6	76.3
Reid National 110A	61.7	22.6	79.4
Funk's G-31	65.3	21.9	81.9
Funk's G-7	60.4	21.9	79.4
Moisture Group III			
Master F106	73.9	25.1	79.1
Funk's G-29	70.1	24.6	85.9
Moews 15	69.9	24.4	86.2
Jacques Proven Hybrid 1121	59.8	23.9	79.7
Reid National C-White (Exp.)*	58.8	23.6	79.2
Funk's G-12	57.0	23.6	71.8

*Experimental entry

A difference between two entries of less than 10.3 bushels in yield and 2.1% in moisture content is not significant.

Table 6—DISTRICT 5 (Minnehaha County): Results of Tests of Corn Hybrids and Varieties on the Farm of Ray Knutson, Brandon. (Harvested October 21, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
	bu.	*perct.*	*perct.*
Moisture Group I			
Turner J 20 (Exp.)*	70.6	28.6	77.3
Master F 101	70.1	29.9	80.2
Iowealth 11 (Exp.)*	69.0	28.8	81.2
Master S 7 (Exp.)*	67.8	28.5	76.5
Turner T 46 (Exp.)*	66.4	29.9	80.0
Funk's G-12	65.7	29.8	71.0
Kingscrost KS 6	65.6	25.9	82.5
Pioneer 322	65.2	27.7	76.5
Master F 105	64.9	28.0	76.9
Funk's G-1	64.4	26.2	73.1
Funk's G-178 (Exp.)*	63.6	25.5	72.5
Iowealth S 2 (Exp.)*	63.6	26.6	72.1
Reid National 110-G (Exp.)*	63.3	28.5	78.1
Iowealth A	62.7	27.3	72.7
Kingscrost 337 (Exp.)*	62.6	27.4	82.1
Funk's G-7	61.3	27.4	72.3
Iowealth 10 (Exp.)*	61.2	28.6	75.0
Funk's G-179 (Exp.)*	61.1	26.3	76.5
Reid National 110	60.6	26.6	77.9
Pioneer 353 A	60.5	27.4	66.7
Moews 15	59.9	29.5	65.0
Iowealth A 7 (Exp.)*	59.9	27.4	62.1
Reid National 110 A	59.5	29.1	73.5
Reid National 12 (Exp.)*	59.3	27.9	73.5
Funk's G-177 (Exp.)*	58.7	25.5	71.0
Reid National 95	58.0	25.5	81.9
Kingscrost KS2	57.4	23.6	77.7
Reid National 2L (Exp.)*	57.2	28.6	60.2
Master F 82	57.1	27.1	82.1
Minhybrid 405	56.9	26.7	71.2
Reid National 112	56.0	27.7	71.2
Turner T 12	55.9	28.0	66.0
Iowealth S	54.8	26.7	77.7
Reid National 104	54.5	28.1	72.5
Pioneer 359	53.9	23.7	63.8
Golden Jewel	53.9	28.4	69.2
Kingscrost KN 1	51.6	26.9	76.0
Pioneer 379	51.2	24.5	68.3

(Continued on page 15)

*Experimental entry

A difference between two entries of less than 13.5 bushels in yield and 2.5% in moisture content is not significant.

Table 6—(Cont') DISTRICT 5 (Minnehaha County): Results of Tests of Corn Hybrids and Varieties on the Farm of Ray Knutson, Brandon. (Harvested October 21, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
	bu.	*perct.*	*perct.*
Sokota 420	49.3	22.8	71.7
Reid National B White (Exp.)*	49.2	29.4	64.6
Wimple's Yellow Dent	48.8	27.0	55.0
Sokota 418	47.3	24.8	71.0
Kingscrost KA 4	45.4	20.7	67.7
Sokota 417	43.7	23.0	70.4
Sokota 413 AA	41.3	22.5	63.8
Early Murdock	35.3	26.8	54.6
Moisture Group II			
Turner T 26 (Exp.)*	73.7	30.6	77.5
Funk's G-38 (Exp.)*	69.6	30.3	74.6
Lowe 23	64.3	31.0	79.2
Funk's G-31	62.3	30.9	69.0
Lowe 15	61.3	30.0	69.4
Kingscrost KR 2	61.0	30.2	75.0
Reid National C White (Exp.)*	56.4	30.2	56.2
Moisture Group III			
Funk's G-29	70.2	32.7	77.7

*Experimental entry

A difference between two entries of less than 13.5 bushels in yield and 2.5% in moisture content is not significant.

Table 7—DISTRICT 6 (Brookings County): Results of Tests of Corn Hybrids and Varieties on the Farm of James Biggar, Brookings. (Harvested November 1, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
Moisture Group I	*bu.*	*perct.*	*perct.*
Iowealth 11 (Exp.)*	43.1	35.2	63.3
Iowealth A 7 (Exp.)*	41.2	37.8	63.3
Master F 82	35.0	30.0	66.7
Sokota 418	34.4	27.0	72.5
Kingscrost KS 2	32.7	26.6	57.2
Funk's G-179 (Exp.)*	32.4	33.8	56.7
Kingscrost KS 6	32.0	29.0	57.8
Sokota 417	30.9	24.5	61.7
Funk's G-1	30.5	33.9	57.8
Funk's G-178 (Exp.)*	29.9	29.7	51.7
Fulton Yellow Dent	29.8	37.8	68.9
Pioneer 359	29.8	38.1	72.5
Funk's G-177 (Exp.)*	28.9	32.7	55.3
Kingscrost 337 (Exp.)*	28.8	37.9	66.4
Turner T 12 (Exp.)*	28.4	38.5	51.7
Iowealth S	28.3	34.5	59.2
Pioneer 353A	27.7	35.5	58.1
Kingscrost KN 1	27.3	31.4	50.0
Sokota 413 AA	27.1	29.9	63.1
Pioneer 379	25.4	32.7	53.6
All-Dakota 610	23.2	25.0	55.8
Sokota 420	23.2	35.7	55.6
Kingscrost KA 4	23.1	23.7	51.4
Reid National A White (Exp.)*	20.8	32.6	51.7
Brookings 86	11.6	25.1	25.3
Moisture Group II			
Master S 7 (Exp.)*	35.8	39.2	68.1
Master F 101	35.3	44.2	63.3
Iowealth A	33.1	42.2	64.4
Pioneer 322	32.7	44.0	72.2
Funk's G-12	31.6	44.4	56.7
Master F 105	28.0	40.1	52.5
Minhybrid 405	27.7	42.4	60.3
Reid National 110 A	27.6	44.4	54.2
Reid National 112	26.4	44.5	63.1
Reid National 110	26.1	44.8	57.2
Funk's G-7	25.8	44.8	56.1
Reid National 95	25.4	40.2	62.2
Turner T 20 (Exp.)*	22.9	42.6	43.6

(Continued on page 16)

*Experimental entry

A difference between two entries of less than 9.0 bushels in yield and 5.7% in moisture content is not significant.

Table 7—(Con't) DISTRICT 6 (Brookings County): Results of Tests of Corn Hybrids and Varieties on the Farm of James Biggar, Brookings. (Harvested November 1, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
Moisture Group III	*bu.*	*perct.*	*perct.*
Funk's G-38	40.3	45.5	69.2
Iowealth S 2 (Exp.)*	35.2	45.2	71.7
Funk's G-31	34.7	49.5	68.9
Funk's G-29	31.3	49.7	58.1
Lowe 23	31.0	48.1	59.4
Kingscrost KR 2	29.1	47.3	55.3
Moews 15	28.8	45.6	60.0
Iowealth 10 (Exp.)*	25.1	52.8	57.5
Lowe 15	24.3	49.5	51.1
Reid National 104	21.1	47.7	50.3

*Experimental entry

A difference between two entries of less than 9.0 bushels in yield and 5.7% in moisture content is not significant.

Table 8—DISTRICT 7 (Kingsbury County): Results of Tests of Corn Hybrids and Varieties on Farm of Geo. Larson, Lake Preston. (Harvested Oct. 19, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest	Stand
Moisture Group I	*bu.*	*perct.*	*perct.*
Reid National 110	41.2	23.0	57.8
Sokota 413 AA	39.9	18.8	66.1
Reid National 95	39.5	22.2	62.2
Funk's G-179 (Exp.)*	38.4	21.1	46.1
Funk's G-38 (Exp.)*	38.1	23.0	41.9
Pioneer 379	37.6	21.6	53.1
Funk's G-177 (Exp.)*	37.4	23.3	56.4
Kingscrost 337 (Exp.)*	37.2	23.6	46.4
Brookings 86	36.7	17.7	59.0
Kingscrost KS 2	35.6	21.8	52.5
Fulton Yellow Dent (Swope)	34.9	20.6	52.5
Kingscrost KS 6	34.3	23.2	54.4
Sokota 417	34.2	17.4	58.1
Pioneer 359	34.0	21.8	46.7
Funk's G-1	33.1	23.0	44.7
All-Dakota 626	32.6	20.9	53.3
Master F 82	32.4	23.8	51.7
Sokota 418	28.9	22.7	45.3
Funk's G-178 (Exp.)*	26.4	17.5	34.4
Kingscrost KA4	24.8	16.7	63.1
All-Dakota 610	23.2	16.7	38.9
Minnesota 13	22.0	21.0	37.5
Sokota 420	21.6	23.9	38.1
Moisture Group II			
Pioneer 353 A	44.9	25.9	67.2
Early Murdock	44.5	24.6	64.4
Iowealth A	40.1	26.4	56.9
Kingscrost KR 2	39.5	27.2	54.4
Iowealth S	39.0	25.3	55.8
Reid National 104	36.6	27.8	59.7
Reid National 112	33.6	26.1	55.6
Funk's G-12	33.2	28.3	44.4
Minhybrid 405	31.7	24.6	47.2
Reid National B-White (Exp.)*	29.7	27.4	38.6
Master F 105	29.7	24.8	46.1
Kingscrost KN 1	26.2	25.7	38.9
Moisture Group III			
Reid National 110 A	43.5	30.3	61.4
Funk's G-29	42.7	31.2	52.5
Pioneer 322	42.5	29.2	52.5
Moews 15	40.9	31.5	59.4
Master F 101	36.9	27.7	47.2
Funk's G-7	36.0	27.1	64.2
Iowealth 11 (Exp.)*	35.0	28.4	41.7
Lowe 23	34.9	29.7	54.4
Funk's G-31	34.9	30.5	46.7
Lowe 15	23.0	29.5	46.9

*Experimental entry

A difference between two entries of less than 6.1 bushels in yield and 4.0% in moisture content is not significant.

Table 9—DISTRICT 8 (Codington County): Results of Tests of Corn Hybrids and Varieties on the Farm of M. H. Suttor, Watertown. (Harvested October 20, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest[1]	Stand
	bu.	*perct.*	*perct.*
Funk's G-178 (Exp.)*	44.6	33.8	65.6
Iowealth 3 (Exp.)*	42.7	30.0	65.3
Funk's G-31	42.2	47.0	69.4
Sokota 417	42.1	32.0	70.8
Funk's G-179 (Exp.)*	40.5	35.2	56.4
Sokota 420	40.4	27.5	61.9
Sokota 418	40.1	31.6	68.3
Pioneer 353A	40.0	40.3	77.2
Funk's G-12	39.8	38.4	66.4
Master F 82	39.5	36.2	78.3
Pioneer 379	36.5	37.4	65.3
Reid National 95	36.3	31.5	61.4
Kingscrost KS 2	36.3	35.8	63.6
Minhybrid 603	36.1	35.4	71.9
Sokota 414	35.9	29.8	58.6
Funk's G-1	35.7	33.8	55.8
Funk's G-29	35.2	48.1	54.2
Kingscrost KS 6	35.2	35.0	57.2
Master F 101	35.0	54.6	70.8
Alta	34.3	20.9	58.1
Pioneer 322	34.2	47.6	69.2
Reid National 110	33.2	37.8	70.3
Funk's G-177 (Exp.)*	32.7	38.4	56.9
Kingscrost KE 1	32.6	24.2	65.8
Sokota 411	32.6	33.4	58.9
Jacques 1050 J	31.4	37.2	69.4
Funk's G-183 (Exp.)*	30.3	26.6	57.5
Reid National 104	29.8	41.7	57.5
Funk's G-7	29.7	42.4	55.0
Kingscrost KA 4	29.6	31.6	55.0
Kingscrost KE 2	29.2	24.3	58.6
Jacques 1001 J	28.8	41.4	55.6
Funk's G-184 (Exp.)*	28.4	43.4	60.0
Pioneer 359	27.5	45.0	56.7
Sokota 413 AA	27.1	38.6	54.4
Iowealth S	26.6	36.7	49.2

*Experimental entry

[1]A few moisture samples were destroyed due to an accident in the laboratory and insufficient replications for moisture content remained for statistical analysis.

A difference between two entries of less than 9.5 bushels in yield is not significant.

Table 10—DISTRICT 9 (Grant County): Results of Tests of Corn Hybrids and Varieties on the Farm of Chris Christian, Milbank. (Harvested Ocotber 28, 1944)

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Moisture at harvest[1]	Stand
Moisture Group I	*bu.*	*perct.*	*perct.*
Funk's G-179 (Exp.)*	48.0	20.2	76.3
Master S-7 (Exp.)*	45.0	24.6	81.0
Pioneer 353 A	43.0	22.2	81.0
Kingscrost KS 6	42.1	19.4	75.0
Iowealth 3 (Exp.)*	42.1	17.8	73.3
Sokota 418	41.7	19.0	73.7
Funk's G-1	41.0	20.0	67.3
Pioneer 322	40.9	26.0	66.3
Funk's G-184 (Exp.)*	40.7	17.6	69.3
Master F 82	40.0	19.0	77.0
Funk's G-12	39.9	23.6	69.7
Funk's G-178 (Exp.)*	39.1	19.2	60.0
Reid National 104	37.7	22.1	65.3
Sokota 420	37.7	17.4	69.0
Early Murdock	37.6	22.3	70.0
Sokota 414	37.5	16.0	70.7
Jacques 1050 J	37.1	19.0	73.0
Pioneer 379	37.0	18.0	59.0
Iowealth S	37.0	21.0	67.7
Kingscrost KS 6	37.0	21.8	56.7
Pioneer 359	36.9	19.0	65.7
Minhybrid 603	36.8	17.3	66.0
Funk's G-177 (Exp.)*	36.4	19.7	55.0
Reid National 95	35.8	19.4	73.0
Sokota 417	35.8	18.0	70.3
Jacques 1001 J	35.5	19.7	71.0
Kingscrost KE 1	34.4	15.6	69.7
Funk's G-183 (Exp.)*	34.3	19.7	62.7
Reid National 110	33.5	25.4	79.0
Reid National 88 (Exp.)*	32.1	13.2	65.0
Kingscrost KE 2	31.7	13.8	71.3
Reid National 90 (Exp.)*	31.7	18.2	60.7
Sokota 411	31.3	17.7	55.7
Reid National A White (Exp.)*	31.3	20.8	63.3
Sokota 413 AA	30.8	18.1	55.0
Kingscrost KA 4	30.2	15.4	60.3
Funk's G-7	29.7	25.2	56.3
Minnesota 13	23.1	21.2	59.3
Moisture Group II			
Funk's G-29	44.3	28.2	64.7
Master F 101	42.2	26.1	77.3
Funk's G-31	35.8	26.6	70.0

*Experimental entry

A difference between two entries of less than 3.4 bushels in yield and 4.7% in moisture content is not significant.

Table 11—SECTION A: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Entered in Districts 1 and 3 in 1944

Hybrid or variety	Yield per acre			Moisture content of grain at harvest		
	District 1 Clay	District 3 Hutchinson	Section Average	District 1 Clay	District 3 Hutchinson	Section Average
Funk's G-68 (Exp.)*	99.3	64.6	82.0	24.2	25.0	24.6
Funk's G-114	86.8	71.1	79.0	26.6	28.3	27.5
Jacques 1157 J	100.8	55.3	78.1	22.0	30.0	26.0
Lowe 14	94.6	58.7	76.7	24.8	30.0	27.4
Reid National 115	103.5	49.6	76.6	20.0	34.0	27.2
Pioneer 353 A	92.0	60.0	76.0	20.1	22.7	21.4
Jacques 1205 J	98.1	53.2	75.7	17.4	27.8	22.6
Iowealth AF 11	96.7	53.7	75.2	20.0	22.2	21.1
Green Acres 395	98.0	51.9	75.0	26.3	30.5	28.4
Master F 106	97.4	52.5	75.0	24.1	27.4	25.8
Funk's G-66	80.8	67.0	73.9	28.0	30.8	29.4
Kingscrost KY	104.7	42.8	73.8	22.6	30.5	26.6
Turner S 56	103.8	43.6	73.7	24.0	28.5	26.3
Funk's G-37	89.2	54.0	71.6	24.0	30.0	27.0
Reid National 118-R	87.5	55.5	71.5	23.2	27.5	25.4
Kingscrost K-3	102.1	40.5	71.3	22.6	30.7	26.7
Funk's G-51 (Exp.)*	85.3	55.5	70.4	23.5	24.5	24.0
Green Acres 196	88.2	51.4	69.8	25.6	35.0	30.3
Standard 615	91.1	48.3	69.7	25.0	28.0	26.5
Standard 405	74.5	64.4	69.5	23.2	26.8	25.0
Moews 14	85.9	52.9	69.4	23.8	29.1	26.5
Turner S 52	97.3	41.3	69.3	24.2	29.1	26.7
Master S-7 (Exp.)*	84.9	53.7	69.3	24.8	23.2	24.0
Moews 15	89.1	47.8	68.5	21.4	30.8	26.1
Kingscrost KY 2	93.7	42.8	68.3	26.2	32.5	29.4
Master F 101	95.0	41.5	68.3	21.0	24.3	22.7
Pioneer 331	93.2	43.1	68.2	23.2	31.0	27.1
Turner S 51 A	91.5	42.6	67.1	26.2	31.5	28.9
Funk's G-57	80.8	52.9	66.9	25.8	30.6	28.2
Reid National 117-R	86.1	46.5	66.3	27.5	23.5	25.5
Funk's G-29	72.6	59.4	66.0	26.6	33.2	29.9
Kingscrost KR 2	91.8	38.7	65.3	22.2	28.3	25.3
Iowealth BC 4	81.6	48.8	65.2	27.5	29.1	28.3
Iowealth AQ	77.4	52.7	65.1	28.7	28.3	28.5
Funk's G-550 W	77.5	51.4	64.5	22.0	21.0	21.5
Lowe 15	84.7	43.9	64.3	20.8	32.0	26.4
Lowe 520	83.3	44.6	64.0	29.8	37.1	33.5
Iowealth 16	76.8	50.9	63.9	23.7	27.9	25.8
Funk's G-37	66.8	57.9	62.4	23.4	34.0	28.7
Wimple's Yellow Dent	81.2	38.9	60.0	19.0	31.7	25.4
Lowe 52	72.3	46.2	59.3	21.7	25.4	23.6
Turner S 55	76.7	41.8	59.3	28.0	38.7	33.4
Green Acres 113	70.9	47.5	59.2	25.6	28.2	26.9
Sokota 417	68.1	45.9	57.0	16.6	15.7	16.2
Sokota 413 AA	62.5	45.7	54.1	18.0	16.4	17.2
Sokota 418	59.4	46.5	53.0	18.5	17.8	18.2
Sokota 420	59.4	38.7	49.1	16.8	17.5	17.2
Minimum level of significance	**22.0**	**22.5**	**22.2**	**4.4**		

*Experimental entry

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

Table 12—SECTION C: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Entered in Districts 5, 6, and 7 in 1944.

Hybrid or variety	Yield per acre				Moisture content of grain at harvest			
	District 5 Minnehaha	District 6 Brookings	District 7 Kingsbury	Section Average	District 5 Minnehaha	District 6 Brookings	District 7 Kingsbury	Section Average
Funk's G-38 (Exp.)*	69.61	40.28	38.07	49.32	30.3	45.5	23.0	32.93
Iowealth 11 (Exp.)*	69.03	43.11	35.04	49.06	28.8	35.2	28.4	30.80
Funk's G-29	70.18	31.30	42.69	48.06	32.7	49.7	31.2	37.87
Master F-101	70.05	35.30	36.91	47.42	29.9	44.2	27.7	33.93
Pioneer 322	65.22	32.65	42.54	46.80	27.7	44.0	29.2	33.63
Iowealth A	62.68	33.09	40.05	45.27	27.3	42.2	26.4	31.97
Pioneer 353A	60.47	27.69	44.85	44.34	27.4	35.5	25.9	29.60
Kingscrost KS 6	65.56	32.03	34.31	43.97	25.9	29.0	23.2	26.03
Funk's G-179 (Exp.)*	61.09	32.44	38.36	43.96	26.3	33.8	21.1	27.07
Funk's G-31	62.18	34.67	34.91	43.92	30.9	49.5	30.5	36.97
Funk's G-12	65.66	31.64	33.22	43.51	29.8	44.4	28.3	34.17
Reid National 110A	59.46	27.61	43.45	43.51	29.1	44.4	30.3	34.60
Lowe 23	64.29	30.96	34.91	43.39	31.1	48.1	29.7	36.30
Moews 15	59.90	28.81	40.88	43.20	29.5	45.6	31.5	35.53
Kingscrost KR 2	61.02	29.09	39.50	43.20	30.2	47.3	27.2	34.90
Kingscrost 337 (Exp.)*	62.60	28.83	37.22	42.88	27.4	37.9	23.6	29.63
Funk's G-1	64.44	30.47	33.09	42.67	26.2	33.9	23.0	27.70
Reid National 110	60.57	26.13	41.24	42.65	26.6	44.8	23.0	31.47
Kingscrost KS 2	57.41	32.65	35.58	41.88	23.6	26.6	21.8	24.00
Funk's G-177 (Exp.)*	58.65	28.89	37.40	41.65	25.5	32.7	23.3	27.17
Master F-82	57.10	34.98	32.39	41.49	27.1	30.0	23.8	26.97
Funk's G-7	61.33	25.82	35.97	41.04	27.4	44.8	27.1	33.10
Reid National 95	58.00	25.38	39.50	40.96	25.5	40.2	22.2	29.30
Master F-105	64.88	28.00	29.66	40.85	28.0	40.1	24.8	30.97
Iowealth S	54.76	28.29	39.03	40.69	26.7	34.5	25.3	28.83
Funk's G-178 (Exp.)*	63.64	29.85	26.39	39.96	25.5	29.7	17.5	24.23
Pioneer 359	53.90	29.82	33.95	39.22	23.7	38.1	21.8	27.87
Minhybrid 405	56.89	27.67	31.74	38.77	26.7	42.4	24.6	31.23
Reid National 112	55.98	26.42	33.56	38.65	27.7	44.5	26.1	32.77
Pioneer 379	51.23	25.41	37.55	38.06	24.5	32.7	21.6	26.27
Reid National 104	54.53	21.10	36.59	37.41	28.1	47.7	27.8	34.53
Sokota 418	47.26	34.36	28.91	36.84	24.8	27.0	22.7	24.83
Sokota 417	43.73	30.91	34.18	36.27	23.0	24.5	17.4	21.63
Lowe 15	61.25	24.29	23.02	36.19	30.0	49.5	29.5	36.33
Sokota 413 AA	41.34	27.12	39.89	36.12	22.5	29.9	18.8	23.73
Early Murdock	35.32	27.48	44.51	35.77	26.8	36.4	24.6	29.27
Kingscrost KN1	51.59	27.30	26.19	35.03	26.9	31.4	25.7	28.00
Sokota 420	49.34	23.15	21.64	31.38	22.8	35.7	23.9	27.47
Kingscrost KA4	45.44	23.05	24.76	31.08	20.7	23.7	16.7	20.37
Minimum level of significance	**13.5**	**9.0**	**6.1**	12.3	**2.5**	**5.7**	**4.0**	3.3

*Experimental entry

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

Table 13—SECTION D: Average Yield (Bushels) and Moisture Content (Percentage) of Hybrids and Varieties Entered in Districts 8 and 9 in 1944.

Hybrid or variety	Yield per acre			Moisture content of grain at harvest		
	District 8 Codington	District 9 Grant	Section Average	District 8 Codington	District 9 Grant	Section Average
Funk's G-179 (Exp.)*	40.49	47.96	44.22	35.8	20.2	27.70
Iowealth 3 (Exp.)*	42.67	42.10	42.38	30.0	17.8	23.90
Funk's G-178 (Exp.)*	44.64	39.14	41.89	33.8	19.2	26.50
Pioneer 353 A	39.97	42.49	41.23	40.3	22.2	31.25
Sokota 418	40.05	41.68	40.86	31.6	19.0	25.30
Funk's G-12	39.81	39.92	39.86	38.4	23.6	31.00
Funk's G-29	35.22	44.28	39.75	48.1	28.2	38.15
Master F-82	39.50	39.99	39.74	36.2	19.0	27.60
Kingscrost KS 2	36.26	42.10	39.18	35.8	19.4	27.60
Funk's G-31	42.23	35.84	39.04	47.0	26.6	36.80
Sokota 420	40.36	37.66	39.01	27.5	17.4	22.45
Sokota 417	42.12	35.79	38.96	32.0	18.0	25.00
Master F 101	34.96	42.17	38.56	54.6	26.1	40.35
Funk's G-1	35.66	40.98	38.32	33.8	20.0	26.90
Pioneer 322	34.15	40.93	37.54	47.6	26.0	36.80
Pioneer 379	36.49	37.01	36.75	37.4	18.0	27.70
Sokota 414	35.87	37.53	36.70	29.8	16.0	22.90
Minhybrid 603	36.10	36.75	36.42	35.4	17.3	26.35
Reid National 95	36.33	35.84	36.08	31.5	19.4	25.45
Kingscrost KS 6	35.17	36.96	36.06	35.0	21.8	28.40
Funk's G-177 (Exp.)*	32.70	36.41	34.56	38.4	19.7	29.05
Funk's G-184 (Exp.)*	28.37	40.72	34.54	43.4	17.6	30.50
Jacques 1050 J	31.35	37.09	34.22	37.2	19.0	28.10
Reid National 104	29.82	37.71	33.76	41.7	22.1	31.90
Kingscrost KE1	32.62	34.44	33.53	24.2	15.6	19.90
Reid National 110	33.17	33.51	33.34	37.8	25.4	31.60
Funk's G-183 (Exp.)*	30.29	34.26	32.28	26.6	19.7	23.15
Pioneer 359	27.51	36.85	32.18	45.0	19.0	32.00
Jacques 1001 J	28.81	35.45	32.13	41.4	19.7	30.55
Sokota 411	32.60	31.27	31.94	33.4	17.7	25.55
Iowealth S	26.63	36.98	31.80	36.7	21.0	28.85
Kingscrost KE2	29.22	31.74	30.48	24.3	13.8	19.05
Kingscrost KA4	29.59	30.18	29.88	31.6	15.4	23.50
Funk's G-7	29.66	29.69	29.68	42.4	25.2	33.80
Sokota 413 AA	27.12	30.78	28.95	38.6	18.1	28.35
Minimum level of significance	**9.5**	**3.4**	**4.6**		**4.7**	

*Experimental entry

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

Table 14—DISTRICT 1 (Clay County): Yield and Moisture Content of Hybrids and Varieties Grown for Two and Three Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Wimple's Yellow Dent	Moisture at harvest
	bu.	*perct.*	*perct.*
Three-Year Averages 1941-42; 1944			
Kingscrost KY	78.5	121.0	19.9
Iowealth AQ	72.2	111.2	23.5
Funk's G-114	70.5	108.6	23.0
Kingscrost KR 2	70.5	108.6	19.5
Wimple's Yellow Dent	64.9	100.0	17.5
Reid Yellow Dent	56.4	86.9	22.2
Two-Year Average 1941 and 1944			
Turner S 55	71.4	104.4	25.3
Wimple's Yellow Dent	68.4	100.0	17.5
Two-Year Averages 1942 and 1944			
Turner S 56	86.3	124.0	21.6
Jacques 1205 J	83.8	120.4	18.4
Green Acres 392 (Exp.)*	81.9	117.7	24.6
Master F 106	79.8	114.7	21.6
Reid National 118 R	74.2	106.6	22.0
Iowealth 16	73.4	105.5	20.3
Turner S 52	72.1	103.6	21.4
Wimple's Yellow Dent	69.6	100.0	18.3
Green Acres 113	66.2	95.1	22.6
Green Acres 41 (Exp.)*	65.1	93.5	22.8

*Experimental entry

The minimum level of significance for yield for three years is 6.2 bushels and for moisture 2.8 per cent.

Table 15—DISTRICT 3 (Hutchinson County): Yield and Moisture Content of Hybrids and Varieties Grown for Two and Three Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Wimple's Yellow Dent	Moisture at harvest
	bu.	*perct.*	*perct.*
Three-Year Averages 1942-44			
Pioneer 353 A	43.6	158.0	18.8
Turner S 52	42.5	156.3	21.8
Iowealth 16	40.9	150.4	21.6
Turner S 56	40.8	150.0	23.6
Iowealth AQ	39.7	146.0	24.3
Reid National 118 R	36.6	134.6	22.8
Kingscrost KY	36.0	132.4	22.3
Kingscrost KR 2	35.5	130.5	22.3
Silver King	34.6	127.2	19.2
Wimple's Yellow Dent	27.2	100.0	22.4
Two-Year Averages 1942 and 1944			
Funk's G-114	55.7	167.3	25.9
Jacques 1205 J	53.5	160.6	25.8
Green Acres 113	46.4	139.3	25.7
Wimple's Yellow Dent	33.3	100.0	26.8
Two-Year Averages 1943-44			
Funk's G-66	45.3	167.8	25.0
Funk's G-29	43.8	162.2	25.2
Master F106	40.3	149.2	22.3
Funk's G-550 W	39.3	145.6	18.7
Lowe 14	39.3	145.6	26.6
Iowealth AF 11	38.2	141.5	19.0
Reid National 115	37.9	140.4	24.8
Moews 15	36.7	135.9	23.0
Lowe 520	36.1	133.7	28.6
Pioneer 331	36.0	133.3	23.2
Turner S 55	35.5	131.5	29.6
Lowe 15	35.2	130.4	23.9
Reid National 117R	33.2	123.0	20.5
Master F 101	29.0	107.4	20.4
Wimple's Yellow Dent	27.0	100.0	22.6

The minimum level of significance for yield for three years is 5.6 bushels and for moisture for two years is 1.7 per cent.

Table 16—DISTRICT 4 (Sanborn County): Yield and Moisture Content of Hybrids and Varieties Grown for Two and Three Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Fulton Yellow Dent	Moisture at harvest[1]
	bu.	*perct.*	*perct.*
Three-Year Averages 1942-44			
Silver King	28.9	120.4	22.0
Funk's G-35	26.6	110.8	19.8
Funk's G-31	26.1	108.8	25.0
Kingscrost KS 6	24.1	100.4	19.6
Fulton Yellow Dent	24.0	100.0	21.7
Jacques 1104 J	23.3	97.1	22.1
Two-Year Averages 1943-44			
Kingscrost KR 2	16.7	116.0	22.6
Funk's G-179	16.3	113.2	20.5
Master F 101	16.3	113.2	20.7
Master F 106	16.0	111.1	25.1
Funk's G-550W	14.5	100.7	17.5
Funk's G-178 (Exp.)*	14.4	100.0	17.9
Fulton Yellow Dent	14.4	100.0	18.2
Iowealth WI 2 (Exp.)*	14.3	99.3	16.8
Funk's G-1	14.1	97.9	17.3
Funk's G-3	12.8	88.9	18.2
Funk's G-29	12.0	83.3	24.6
Funk's G-12	10.1	70.1	23.6

*Experimental entry

[1]No moisture contents were computed in 1943. During 1943 the yields were so low no moisture samples were taken.

The minimum level of significance for yield for three years is 2.4 bushels and for moisture content for two years is 1.5 per cent.

Table 17—DISTRICT 5 (Minnehaha County): Yields and Moisture Content of Hybrids and Varieties Grown for Two and Three Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Golden Jewel variety	Moisture at harvest
	bu.	*perct.*	*perct.*
Three-year Averages 1942-44			
Funk's G-29	64.9	122.0	28.0
Pioneer 353A	60.7	114.1	23.7
Master F101	59.7	112.2	26.0
Kingscrost KR2	58.3	109.6	26.6
Funk's G-12	58.2	109.4	27.1
Master F105	57.5	108.1	25.3
Reid National 110	56.5	106.2	24.4
Iowealth S	55.9	105.1	25.0
Kingscrost KS6	55.5	104.3	23.5
Golden Jewel	53.2	100.0	25.0
Kingscrost KN1	52.6	99.0	22.8
Wimple's Yellow Dent	47.8	89.8	26.1
Two-Year Averages 1942 and 1944			
Pioneer 322	63.2	106.9	28.1
Iowealth A	59.1	100.0	27.7
Golden Jewel	59.1	100.0	26.4
Reid National 110 A	57.7	97.6	27.4
Wimple's Yellow Dent	51.6	87.3	26.6
Two-Year Averages 1943-44			
Iowealth 11 (Exp.)*	61.7	129.9	25.6
Funk's G-178 (Exp.)*	58.9	123.7	23.7
Iowealth 10 (Exp.)*	58.5	122.9	25.0
Funk's G-179 (Exp.)*	57.0	119.7	24.0
Master F82	56.9	119.5	23.7
Funk's G-1	54.0	113.4	23.7
Reid National 95	53.8	113.0	22.3
Golden Jewel	47.6	100.0	25.3
Sokota 417	45.8	96.2	19.1
Wimple's Yellow Dent	44.5	93.5	26.1
Early Murdock	35.3	74.2	24.8

*Experimental entry

The minimum level of significance for yield for three years is 4.9 bushels and for moisture content is 1.9 per cent.

Table 18—DISTRICT 6 (Brookings County): Yield and Moisture Content of Hybrids and Varieties Grown for Two and Three Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Fulton Yellow Dent	Moisture at harvest
	bu.	*perct.*	*perct.*
Three-Year Averages 1942-44			
Funk's G-12	49.8	112.2	34.9
Master F 82	46.3	104.3	24.6
Kingscrost KS 6	45.6	102.7	25.0
Fulton Yellow Dent	44.4	100.0	25.9
Iowealth S	43.4	97.7	28.7
Master F 105	43.1	97.1	30.1
Pioneer 353 A	42.5	95.7	28.8
Reid National 110	42.5	95.7	31.7
Kingscrost KR 2	41.8	94.1	37.0
Kingscrost KN 1	40.6	91.4	28.5
Brookings 86	33.8	76.1	24.6
Two-Year Averages 1942 and 1944			
Fulton Yellow Dent	41.7	100.0	28.6
Iowealth A	34.8	83.5	38.4
Reid National 110 A	33.3	79.9	43.4
Pioneer 322	33.2	79.6	41.1
Reid National 112	32.2	77.2	39.0
Two-Year Averages 1943 and 1944			
Funk's G-178 (Exp.)*	47.5	119.3	24.1
Funk's G-29	47.0	118.1	36.2
Sokota 417	42.8	107.5	21.0
Funk's G-1	42.6	107.0	25.0
Master F 101	42.1	105.8	32.8
Funk's G-179 (Exp.)*	41.7	104.8	27.0
Reid National 95	40.5	101.8	29.1
Fulton Yellow Dent	39.8	100.0	29.2

*Experimental entry

The minimum level of significance for yield for three years is 4.0 bushels and for moisture is 6.0 per cent.

Table 19—DISTRICT 7 (Kingsbury County): Yield and Moisture Content of Hybrids and Varieties Grown for Two Years.

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Early Murdock	Moisture at harvest
	bu.	*perct.*	*perct.*
Two-Year Averages 1943-44			
Funk's G-29	32.2	111.0	25.8
Funk's G-179 (Exp.)*	30.2	104.1	18.9
Pioneer 353 A	30.1	103.8	20.6
Reid National 110 A	29.1	100.3	24.8
Early Murdock	29.0	100.0	22.2
Iowealth S	28.5	98.3	20.8
Reid National 110	28.5	98.3	18.8
Kingscrost KR 2	27.3	94.1	23.0
Reid National 95	26.8	92.4	18.0
Fulton Yellow Dent	26.0	89.7	17.9
Sokota 413 AA	26.0	89.7	16.2
Master F 101	25.9	89.3	22.4
Funk's G-12	24.8	85.5	22.5
Kingscrost KS 6	24.8	85.5	20.0
Master F 82	24.5	84.5	18.4
Funk's G-178 (Exp.)*	23.7	81.7	16.0
Funk's G-1	23.6	81.4	19.7
Sokota 417	23.5	81.0	14.8
Master F 105	21.8	75.2	22.4
Kingscrost KN 1	19.9	68.6	21.2

*Experimental entry

The minimum level of significance for yield for two years is 2.7 bushels.

Table 20—DISTRICT 8 (Codington County): Yield and Moisture Content of Hybrids and Varieties Grown for Two Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Alta	Moisture at harvest
	bu.	*perct.*	*perct.*
Two-Year Averages 1942 and 1944			
Minhybrid 603	26.3	104.8	35.2
Funk's G-12	25.8	106.4	51.5
Alta	25.1	100.0	22.4
Kingscrost KS 6	16.4	66.3	36.8
Sokota 411	15.5	61.8	31.7
Funk's G-31	15.3	61.0	51.5
Kingscrost KS 2	14.7	58.6	38.2
Reid National 110	13.4	53.4	41.2
Pioneer 353 A	12.9	51.4	44.8
Jacques 1001 J	12.5	49.8	43.2
Pioneer 322	11.4	45.4	50.4
Two-Year Averages 1941 and 1944			
Alta	29.2	100.0	21.3
Funk's G-1	21.2	72.6	28.6

The minimum level of significance for yield for two years is 2.4 bushels.

Table 21—DISTRICT 9 (Grant County): Yield and Moisture Content of Hybrids and Varieties Grown for Two and Three Years

Hybrid or variety	Acre yield of ear corn with 15% moisture in grain	Percent of Early Murdock	Moisture at harvest
	bu.	*perct.*	*perct.*
Three-Year Averages 1941-42; 1944			
Master F 101	51.9	108.4	32.3
Pioneer 353 A	51.1	106.7	29.7
Pioneer 322	49.9	104.2	35.0
Early Murdock	47.9	100.0	27.9
Funk's G-12	44.1	92.1	33.8
Minnesota 13	36.7	76.6	26.2
Two-Year Averages 1941 and 1944			
Early Murdock	49.0	100.0	30.6
Funk's G-1	46.9	95.7	20.3
Reid National 95	41.4	84.5	19.6
Iowealth S	37.0	75.5	22.0
Two-Year Averages 1942 and 1944			
Sokota 418	44.0	105.5	25.2
Kingscrost KS 2	42.1	101.0	28.8
Early Murdock	41.7	100.0	30.6
Minhybrid 603	41.6	99.8	24.7
Kingscrost KS 6	39.6	95.0	31.0
Master F 82	39.0	93.5	29.8
Funk's G-31	38.3	91.8	42.1
Sokota 411	37.6	90.2	22.6
Sokota 417	37.3	89.4	25.0
Jacques 1001 J	36.5	87.5	30.7
Reid National 110	36.3	87.1	32.8

The minimum level of significance for three years for yield is 4.2 bushels and for two years for moisture content is 4.6 per cent.