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MANHATTAN, KANSAS

DEPARTMENT OF AGRONOMY
in cooperation with
DIVISION OF CEREAL CROPS AND DISEASES
BUREAU OF PLANT INDUSTRY
U. S. Department of Agriculture

# KANSAS CORN TESTS, 1942

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## SUMMARY

The Kansas Corn Testing Program of 1942 included open-pollinated varieties and hybrids produced and distributed by federal, state, and commercial agencies.

The names and addresses of the commercial companies entering hybrids in the tests are given in Table 1. Names of producers of certified seed of hybrid combinations with the state name as a prefix may be obtained from the various Corn Belt agricultural experiment stations. Information on seed of U. S. 13, U. S. 35, Ill. 200, K. I. H. 38, and Kansas-developed hybrids can be obtained by writing to the Department of Agronomy, Kansas State College, Manhattan, Kansas.

Data obtained from the Kansas Corn Performance Tests are summarized in Tables 3 to 21. Entries that stood up as well as the average of the better adapted open-pollinated varieties and produced at least 10 percent more corn are listed on pages 14 and 15.

Results of Experiment Station Tests in northcentral and southcentral Kansas are shown in Tables 22 and 23.

The performance records of several white dent and yellow dent hybrids and popcorn hybrids developed cooperatively by the United States Department of Agriculture and the Kansas Agricultural Experiment Station are shown in Tables 24 to 26. Information in regard to seed stocks for the production of these hybrids may be obtained by writing the Agronomy Department, Kansas State College, Manhattan, Kansas.

Corn variety and hybrid strip tests were conducted on farms in order to obtain information over a wide range of conditions. Results of these trials are summarized by districts in Tables 27 and 28.

The tests most nearly representing the location of the farm should be studied carefully. Results obtained in several districts and over two or more years are more reliable than results obtained in only one district and season.

More satisfactory results will usually be obtained if the corn acreage is planted to several tested hybrids of varying maturity instead of only one. Using different hybrids in each planter box is usually a desirable practice. Since one cannot predict whether early or late planted corn will yield best, date of planting should be spread over several weeks or a month.

# KANSAS CORN TESTS, 1942[1]

R. W. Jugenheimer[2], A. L. Clapp[3], and H. D. Hollembeak[3]

## INTRODUCTION

The 12 Corn Belt States increased their acreage of hybrid corn from 144 thousand acres to 38 million acres during the past 10 years. The United States Department of Agriculture estimates that the extensive use of hybrid corn in these states added 300 million bushels to the 1942 corn crop. This additional yield would produce 3,300,000,000 pounds of pork. Still more efficient production is necessary, however, if corn growers are to meet their 1943 war goals. These goals must be met if we are to feed increased livestock populations and supply our

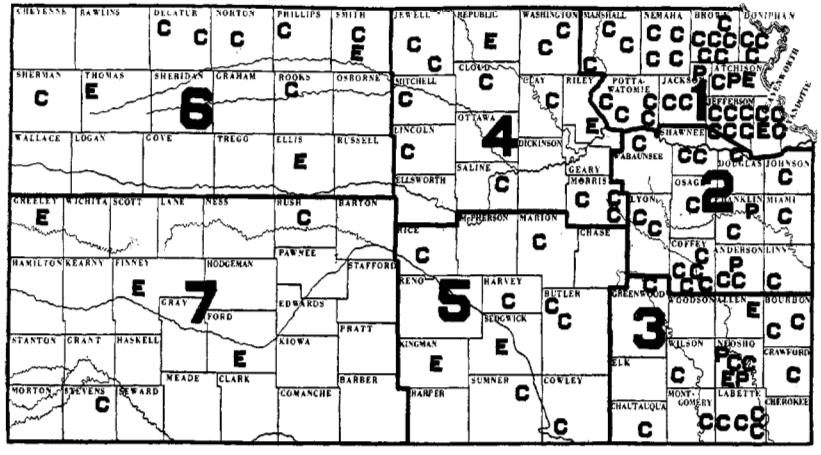


Fig. 1 Kansas Corn Testing program, 1942.
Kansas Corn Districts 1, 2, 3, 4, 5, 6, and 7.
E-Experiment Station Tests, 14 locations.
P-Kansas Corn Performance Tests, 6 locations.
C-Cooperative Corn Strip Tests, 91 locations.

greatly expanded industrial needs. These industries require enormous quantities of corn for the manufacture of alcohol, sugar, starch and many other products vital to the war effort. These goals must be attained in spite of decreased agricultural labor and machinery. The requirements for oil crops, hemp and other emergency war crops may also restrict corn acreage.

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2. Associate agronomist, Division of Cereal Crops and Diseases, Bureau of Plant Industry.

3. Agronomist and assistant agronomist, respectively, Department of Agronomy, Kansas State College.

The most effective method of obtaining maximum corn production is through greater use of desirable hybrids. This bulletin summarizes the results of extensive corn tests in Kansas during the past four years. The state was divided into seven districts on the basis of soil, rainfall and growing season. The Kansas Corn Testing Program outlined in figure 1 included open-pollinated varieties and hybrids produced and distributed by federal, state, and commercial agencies. The entries in the tests are listed in Table 1. Results of Experiment Station Tests of hundreds of Kansas-developed experimental hybrids have not been reported since they are not yet commercially available. With seed of superior hybrids available, a considerably larger proportion of the better corn growing area in Kansas should be planted with hybrid seed corn this next season.

## KANSAS CORN PERFORMANCE TESTS

### PURPOSE

The Kansas Corn Performance Test was added to the Kansas corn improvement program to make possible the comparing of a larger number of corn hybrids than could be included in cooperative strip tests and to permit trials in more localities than is possible on the agricultural experiment stations.

### PLAN AND LOCATION OF TESTS

The eastern half of the state was divided into three districts as shown in figure 1. Two test fields, one on upland and one on bottom land, were located in districts 1, 2, and 3. The 1942 Kansas Corn Performance Tests were made possible by the cooperation of the following men on whose farms the tests were located: Atchison County, C. W. Steinweden, Route 2, Atchison; Jackson County, C. F. M. Stone, Whiting: Franklin County, Chas. O'Connor, Wellsville; Anderson County, Lloyd Jefferson, Garnett; Neosho County, Carl Maloney, Chanute; and Francis Volmer, Parsons.

Commercial entries were included in both tests within a district, and in at least two districts. The entries in the tests are shown in Table 1. From 48 to 66 entries were planted in each field. In order to reduce the influence of soil and other differences, each kind of corn was replicated five times in each test field. Entries were distributed at random within each replication. Each entry was planted in plots two rows wide and ten hills long.

### PROCEDURE

Seed was obtained from commercial sources when possible. Each entry was given a code number by which it was known throughout the season. The code number was replaced by the original designation after the results had been computed. This procedure eliminated either conscious or unconscious discrimination.

TABLE 1. ENTRIES IN THE KANSAS CORN TESTS, 1942.

| Trade name | Color of corn | Entered by | Performance record in Table No. |
|---|---|---|---|
| | | HYBRIDS | |
| Carlson C-20A | Y | Carlson Hybrid Corn Co., Audubon, Iowa | 4, 5, 6, 10, 11, 12 |
| DeKalb 93 | Y | DeKalb Agr. Assoc., DeKalb, Ill. | 21 |
| 94 | Y | | 21 |
| 816 | Y | | 21, 27 |
| 827 | Y | | 22, 28 |
| 847 | Y | | 21 |
| 888 | Y | | 21 |
| 899 | Y | | 21 |
| Funk G-32 | Y | Funk Bros. Seed Co., Bloomington, Ill. | 21 |
| G-46 | Y | | 21, 22 |
| G-53 | Y | | 4, 5, 6, 7, 16, 17, 18 |
| G-80 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18 |
| G-88 | Y | | 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 22, 27, 28 |
| G-94 | Y | | 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 21, 22, 27, 28 |
| G-135 | Y | | 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 |
| G-149 | Y | | 3, 4, 5, 6, 10, 11, 12, 13, 16, 17, 18, 19 |
| G-150 | Y | | 3, 4, 5, 6, 10, 11, 12, 13, 16, 17, 18, 19 |
| G-169 | Y | | 4, 5, 6, 10, 11, 12 |
| G-212 | Y | | 22, 28 |
| G-244 | Y | | 22 |
| Hendriks Cross L | Y | Kans. Agr. Expt. Sta., U. S. D. A. & Kans. Crop Imp. Assn., Manhattan. | 27, 28 |
| Illinois 200 | Y | Kans. Agr. Expt. Sta., U. S. D. A. & Kans. Crop Imp. Assn., Manhattan, Kan. | 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 27, 28 |
| 960 | Y | | 27 |
| Iowa 939 | Y | Kans. Agr. Expt. Sta., U. S. D. A. & Kans. Crop Imp. Assn., Manhattan, Kan. | 21, 22, 23 |
| Iowealth 25A | Y | Michael-Leonard Seed Co., Sioux City, Iowa | 4, 5, 6, 10, 11, 12, 22 |
| 29A | Y | | 21, 22 |
| 30A | Y | | 21 |
| TX 1 | Y | | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19, 27 |
| Jewett 6 | Y | Homer Jewett, Marshall, Mo. | 10, 11, 12, 13, 16, 17, 18, 19, 21 |
| 9 | Y | | 4, 5, 6, 10, 11, 12 |
| 12 | Y | | 3, 4, 5, 6, 7, 10, 11, 12, 16, 17, 18, 19, 22, 27, 28 |
| 20 | Y | | 4, 5, 6, 16, 17, 18 |

TABLE 1. (Continued)

| | | | | |
|---|---|---|---|---|
| Kansas | 3 | W | Kans. Agr. Expt. Sta. & U. S. D. A., Manhattan, Kan. | 4, 5, 6, 7, 8 |
| | 4 | W | | 21 |
| | **6** | **Y** | | 22 |
| | 7 | Y | | 21, 22 |
| | 8 | Y | | 22 |
| | 9 | Y | | 21, 22, 23 |
| | 11 | Y | | 21, 22, 23, 28 |
| | 13 | Y | | 21, 22, 23 |
| | 15 | Y | | 21, 22 |
| | 16 | Y | | 22, 23 |
| | 17 | Y | | 21, 22, 23 |
| | 18 | Y | | 22 |
| | 19 | Y | | 22 |
| | 1104 | Y | | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 27 |
| | 1296 | Y | | 21 |
| | 1340 | Y | | 22, 23 |
| | 1358 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18, 22, 23 |
| | 1412 | Y | | 21, 22, 23 |
| | 1430 | Y | | 21 |
| | 1466 | Y | | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 27, 28 |
| | 1501 | Y | | 21 |
| | 1513 | Y | | 21 |
| | 1514 | Y | | 21 |
| | 1516 | Y | | 22 |
| | 1541 | Y | | 22 |
| | 1549 | Y | | 21, 22, 23 |
| | 1582 | Y | | 22 |
| | 1583 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18, 24, 26 |
| | 1585 | Y | | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19, 23, 24, 26 |
| | 1601 | Y | | 22 |
| | 1611 | Y | | 22 |
| | 1614 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18, 22 |
| | 1623 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18, 22 |
| | 1625 | Y | | 22 |
| | 1628 | Y | | 22 |
| | 1638 | Y | | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19, 22 |
| | 1639 | Y | | 22 |
| | 1641 | Y | | 22 |
| | 1643 | Y | | 22 |
| | 1646 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18 |
| | 1648 | Y | | 22 |
| | 1649 | Y | | 22 |
| | 1661 | Y | | 22 |
| | 1665 | Y | | 22 |
| | 1676 | Y | | 22 |
| | 1677 | Y | | 22 |
| | 1711 | Y | | 22 |
| | 1712 | Y | | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18, 22, 23 |

TABLE 1. (Continued)

| | | | |
|---|---|---|---|
| Kansas 1713 | Y | Kans. Agr. Expt. Sta. & U. S. D. A., Manhattan, Kan. | 22 |
| 1714 | Y | | 22 |
| 1727 | Y | | 22 |
| 2026 | W | | 21 |
| 2046 | W | | 22 |
| 2068 | W | | 22 |
| 2173 | W | | 22 |
| 2187 | W | | 22 |
| 2212 | W | | 22 |
| 2216 | W | | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19, 22 |
| 2232 | W | | 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 22, 23, 24, 26 |
| 2234 | W | | 3, 4, 5, 6, 7, 10, 11, 12, 16, 17, 18, 22, 23, 24, 26 |
| 2241 | W | | 22 |
| 2242 | W | | 22 |
| KK-77 | Y | Kellogg-Kelly Seed Co., St. Joseph, Mo. | 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 22, 27 |
| 88A | Y | | 10, 11, 12, 13, 16, 17, 18, 19, 21 |
| Keystone 38 | Y | Corneli Seed Co., St. Louis, Mo. | 4, 5, 6, 16, 17, 18 |
| K. I. H. 38 | Y | Kan. Indep. Hybrid Corn Prod. Association, Manhat- | 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 22, 27, 28 |
| 440 | Y | tan, Kan. | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18 |
| Mangelsdorf 1001 | Y | Ed F. Mangelsdorf & Bro., Atchison, Kan. | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18 |
| Maygold 39 | Y | Earl May Seed Co., Shenandoah, Iowa | 4, 5, 6, 10, 11, 12 |
| 49 | Y | | 4, 5, 6, 10, 11, 12 |
| 59 | Y | | 4, 5, 6, 10, 11, 12 |
| McCurdy 118M | Y | W. O. McCurdy & Sons, Fremont, Iowa | 4, 5, 6, 7, 8, 10, 11, 12, 13, 22 |
| 123M | Y | | 10, 11, 12, 13, 16, 17, 18, 19 |
| 124M | Y | | 4, 5, 6, 7, 10, 11, 12, 13 |
| Midwest 23 | Y | Stephens Bros., Buckner, Mo. | 4, 5, 6, 10, 11, 12 |
| Missouri 8 | Y | Kan. Agr. Expt. Sta. & U. S. D. A., Manhattan, Kan. | 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 28 |
| 47 | Y | | 21, 22, 27, 28 |
| Missouri King 103 | Y | Missouri Hybrid Corn Co., Fulton, Mo. | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18 |
| Moews-Lowe 514 | Y | B. E. Moews, Granville, Ill. | 21 |
| 830 | Y | | 21 |
| Multicross EMBRO 1 | Y | Ed F. Mangelsdorf & Bro., Atchison, Kan. | 3, 4, 5, 6, 10, 11, 12, 16, 17, 18 |
| Nebraska 238 | Y | Kan. Agr. Expt. Sta. & U. S. D. A., Manhattan, Kan. | 21, 22 |
| Pfister 160 | Y | Cornhusker Hybrid Corn Co., Waterloo, Nebr. | 4, 5, 6, 7, 8, 10, 11, 12, 13, 14 |
| 1234 | Y | | 4, 5, 6, 10, 11, 12 |
| 2834 | Y | | 4, 5, 6, 10, 11, 12 |
| 5892 | Y | | 22 |

TABLE 1. (Concluded)

| | | | |
|---|---|---|---|
| Pioneer 300 | Y | Garst & Thomas Hybrid Corn Co., Coon Rapids, Iowa | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19, 22 |
| 307 | Y | | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28 |
| 324 | Y | | 21, 22 |
| 330 | Y | | 21 |
| 332 | Y | | 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 27 |
| 334 | Y | | 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20 |
| Reid-Midland | Y | Reid National Corn Co., Anamosa, Iowa | 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19 |
| Reid Nat. 129 | Y | | 4, 5, 6, 10, 11, 12, 21 |
| 132-1 | Y | | 22 |
| 134 | Y | | 4, 5, 6, 8, 10, 11, 12, 14, 27 |
| Richbred 1002 | Y | Ed F. Mangelsdorf & Bro., Atchison, Kan. | 27 |
| Steckley 514A | Y | Steckley Hybrid Corn Co., Weeping Water, Nebr. | 4, 5, 6, 10, 11, 12 |
| 523 | Y | | 4, 5, 6, 7, 10, 11, 12, 13 |
| S770 | Y | | 22 |
| 790 | Y | | 4, 5, 6, 10, 11, 12, 27 |
| Stephens Blend | Y | Stephens Bros., Buckner, Mo. | 4, 5, 6, 10, 11, 12 |
| U. S. 13 | Y | Kan. Agr. Expt. Sta., U. S. D. A. & the Kans. Crop Imp. Assn., Manhattan. | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28 |
| 35 | Y | | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28 |
| 44 | Y | | 21 |
| OPEN-POLLINATED VARIETIES | | | |
| Cassel | W | Kan. Agr. Expt. Sta., U. S. D. A. & the Kans. Crop Imp. Assn., Manhattan. | 22, 28 |
| Colby Yellow Cap | Y | | 22, 28 |
| Freed | W | | 21 |
| Hays Golden | Y | | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 27, 28 |
| Kuhn | Y | J. W. Kuhn, Belleville, Kan. | 22 |
| Midland (A) | Y | Kan. Agr. Expt. Sta., U. S. D. A. & Kans. Crop Imp. Assn., Manhattan. | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 24, 26, 27, 28 |
| (C) | Y | | 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 27, 28 |
| (S) | Y | | 28 |
| Pride of Saline | W | | 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28 |
| Reid Yellow Dent | Y | | 4, 5, 6, 7, 8, 9, 26, 27 |

Location of fields, procedure and climatic information are given in Table 2. Hand planters were used to insure a uniform planting rate. Two kernels were planted per hill except in Atchison County where the rate was three kernels. The hills were spaced 40 to 42 inches apart. Proper spacing was assured by cross marking.

Records on yield, lodging, stand, and dropped ears were obtained at harvest. Representative samples of all entries from three or more replications in all of the tests harvested were shelled to determine shelling percentage, and moisture content.

Yield and other data for 1942 are averages of five replications per field, except from the Whiting and Chanute tests where only three replications were harvested. The acre yields of the entries in each test are reported on a comparable basis of shelled grain adjusted to a moisture content of 15.5 percent. The moisture determinations were made on shelled corn with a Tag-Heppenstall moisture meter by the A. A. A. Testing Laboratory, Manhattan, Kansas.

Stand of each entry was reported as percentage of perfect stand. The percentage of erect plants was determinedfrom plant counts for each entry.

## SIGNIFICANCE OF YIELD DIFFERENCES

It is not possible to determine the relative yielding ability with absolute accuracy and small differences do not prove that one hybrid is better than another. Experience has shown that differences in yield may be expected among plots planted from the same seed. These differences may be due to such things as soil or stand variations, but they are reduced to a large extent by repeating or "replicating" the same corn five times in the same test. Even with replication, differences remain which are said to be due to chance. These differences are called "experimental error." Methods are available for utilizing the differences among replicated plots of a strain in calculating such chance errors and for determining the minimum difference between strains that may be considered a real difference. These differences are called "significant differences" and are shown for each district. For example, in Table 5 the highest yielding hybrid produced 90.8 bushels per acre. In this district 10.3 bushels per acre has been calculated as the required size of a significant difference. Subtracting 10.3 bushels from 90.8 bushels leaves 80.5 bushels per acre. Since the 21 highest yielding entries yielded more than 80.5 bushels per acre, they are not considered to be significantly different from the best entry. In other words, any two entries in Table 5 must differ by at least 10.3 bushels before they may be considered as differing in yielding ability.

TABLE 2. LOCATION, PROCEDURE AND CLIMATIC INFORMATION ON KANSAS CORN PERFORMANCE TEST, 1942.

| | District 1 N. E. Kansas | | District 2 C. E. Kansas | | District 3 S. E. Kansas | |
|---|---|---|---|---|---|---|
| | Atchison County | Jackson County | Franklin County | Anderson County | Neosho County | Neosho County |
| Cooperator | C. W. Steinweden Atchison | C. F. M. Stone Whiting | Chas. O'Connor Wellsville | Lloyd Jefferson Garnett | Carl Maloney Chanute | Francis Volmer Parsons |
| No. of entries | 64 | 64 | 66 | 66 | 48 | 48 |
| No. of replications | | | | | | |
| Planted | 5 | 5 | 5 | 5 | 5 | 5 |
| Harvested | 5 | 3 | 5 | 5 | 3 | 5 |
| Size of plot (hills) | 2 x 10 | 2 x 10 | 2 x 10 | 2 x 10 | 2 x 10 | 2 x 10 |
| Hill spacing (inches) | 40 x 41 | 42 x 42 | 40 x 42 | 42 x 42 | 40 x 40 | 40 x 42 |
| Rate of planting (kernels per hill) | 3 | 2 | 2 | 2 | 2 | 2 |
| Date of planting | May 21 | April 23 | May 8 | May 21 | May 12 | May 19 |
| Date of harvest | Oct. 12 to 16 | Oct. 9 to 11 | Oct. 29 | Oct. 27 to 28 | Oct. 20 to 21 | Oct. 22 to 23 |
| Seedbed preparation | List | List | List | Plow | List | Plow |
| Local entry | Funk G-135 | K. I. H. 38 | De Kalb 827 | Hendriks E | Local Yellow | Pride of Saline |
| Rainfall[1] | | | | | | |
| May | 9— 4.60 | 12— 4.16 | 7— 3.47 | 3— 0.54 | 3— 1.83 | 1— 0.11 |
| June | 12— 5.42 | 15— 2.86 | 9— 3.75 | 13— 7.72 | 15—10.77 | 16— 8.78 |
| July | 3— 2.51 | 8— 1.97 | 4— 3.77 | 6— 3.95 | 4— 5.89 | 4— 5.66 |
| Aug. | 7— 8.80 | 7— 7.65 | 6— 5.30 | 6— 5.25 | 6— 3.01 | 8— 3.86 |
| Sept. | 6— 3.63 | 7— 3.47 | 5— 5.17 | 9— 9.04 | 7— 6.52 | 6—11.20 |
| Total 5 months | 37—24.96 | 49—20.11 | 31—21.46 | 37—26.50 | 35—28.02 | 35—29.61 |

[1] First figure represents number of rains and second the total monthly rainfall in inches.

## RESULTS

The data obtained are summarized in Tables 3 to 21. The following entries stood up as well as the average of the better adapted open-pollinated varieties and produced at least 10 percent more grain.

### DISTRICT 1, NORTHEASTERN KANSAS

1942: (Table 4) Kansas 2234, Funk G-149, Kansas 1585, Funk G-80, Funk G-150 and Reid-National 134.

1941-1942, two-year average: (Table 7) Jewett 12, Kansas 1585, K. I. H. 38, Iowealth TX 1, Kansas 2234, U. S. 35, Kansas 1638 and U. S. 13.

1940-1942, three-year average: (Table 8) K. I. H. 38, U. S. 35, Funk G-94, McCurdy 118M, Ill. 200, Pfister 160, U. S. 13, KK-77, Pioneer 332, Pioneer 334 and Pioneer 307.

1939-1942, four-year average: (Table 9) U. S. 35, Funk G-94, U. S. 13, KK-77, Pioneer 307 and Kansas 1104.

### DISTRICT 2, EASTCENTRAL KANSAS

1942: (Table 10) Funk G-149, Kansas 1585, Funk G-150, Reid-National 134, Funk G-135 and Kansas 2234.

1941-1942, two-year average: (Table 13) Funk G-150, Funk G-149, Kansas 1585, Funk G-135 and Funk G-88.

1940-1942, three-year average: (Table 14) Ill. 200, Funk G-135, Funk G-88 and Missouri 8.

1939-1942, four-year average: (Table 15) Ill. 200, Funk G-94, U. S. 35, U. S. 13, Missouri 8, KK-77, Pioneer 307 and Funk G-135.

### DISTRICT 3, SOUTHEASTERN KANSAS

1942: (Table 16) Funk G-88, Kansas 2234, Funk G-149, Ill. 200, Funk G-135, Jewett 20 and Kansas 1585.

1940-1942, three-year average: (Table 20) Funk G-88 and Kansas 2232.

### DISTRICTS 1, 2 AND 3, EASTERN KANSAS

1942: (Table 3) Funk G-149, Kansas 2234, Kansas 1585 and Funk G-150.

1941-1942, two-year average: Kansas 1585.

1940-1942, three-year average: Ill. 200.

1939-1942, four-year average, districts 1 and 2: Funk G-94, U. S. 35, U. S. 13, KK-77 and Pioneer 307.

## INTERPRETATION OF RESULTS

The results given in Tables 3 to 28 should be used to select corn hybrids for planting in 1943. The tests most nearly representing the location of the farm should be studied carefully. Corn producers in northeastern Kansas will be especially interested in Tables 4 to 9, 3 and 27; those in centraleastern Kansas in Tables 10 to 15, 3 and 27; while Tables 16 to 20, 3 and 27 contain data from southeastern Kansas. No performance tests were

planted in districts 4 or 5 because funds were not available. Data obtained from tests conducted by R. F. Sloan at the Belleville and Smith Center Experiment Fields (Table 22) will be of value to northcentral Kansas farmers. Similar data obtained by Clare Porter at the Kingman and Wichita Experiment Fields (Table 23) will assist corn producers in southcentral Kansas. Table 28 gives the results of strip tests located in central and western Kansas.

Two- or three-year averages are usually more reliable than results obtained in only one season. Seasonal conditions vary from year to year and due to this variation there is a difference in response of corn hybrids and varieties. A period of early prolonged drouth and high temperature is likely to favor an early-maturing entry, whereas a later maturing strain often is able to take advantage of a longer growing season when the drouth period does not occur until later. In general, the early to midseason entries were favored in 1939 and 1940, whereas the later maturing strains tended to be most productive in 1938, 1941 and 1942.

In Kansas where the periods of extreme drouth and heat are frequent and variable, the most desirable varieties over a period of years have been those in which the individual plants varied considerably in date of pollination. Experimental evidence has shown that double-cross hybrids pollinate over a shorter period than do the adapted varieties. It appears, therefore, that the most desirable hybrids for use in Kansas might be those with considerable variation in date of pollination. This may be accomplished by mixing two or more adapted hybrids differing in maturity.

Evidence is available to show that more satisfactory results will be obtained if a field is planted to two or more different hybrids of varying maturity instead of only one. Using different hybrids in each planter box is usually a desirable practice. Since one cannot predict whether the early or late planted corn will prove to be the better, it is recommended that planting be spread over several weeks.

TABLE 3. RESULTS, KANSAS CORN PERFORMANCE TEST, **EASTERN KANSAS,** 1942. (INCLUDES HYBRIDS AND VARIETIES ENTERED IN ALL THREE DISTRICTS OF EASTERN KANSAS.)

| Hybrid or variety | Eastern Kansas Average of 6 tests | | | | District 1 N. E. Kansas | | District 2 C. E. Kansas | | District 3 S. E. Kansas | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Yield | | Erect plants | | Yield per acre | | | | | |
| | Per acre | % of O. P.[1] | Total | % of O. P.[1] | Atchison Co. | Jackson Co. | Franklin Co. | Anderson Co. | Neosho Co.[2] | Neosho Co.[3] |
| | Bu. | % | % | % | Bu. | Bu. | Bu. | Bu. | Bu. | Bu. |
| Funk G-149 | 70.4 | 116 | 95 | 107 | 88.6 | 63.1 | 80.9 | 92.3 | 35.3 | 62.3 |
| Kansas 2234 | 69.2 | 114 | 97 | 109 | 90.8 | 63.3 | 78.3 | 79.9 | 40.2 | 63.0 |
| Kansas 1585 | 68.7 | 113 | 96 | 108 | 77.0 | 72.8 | 77.1 | 90.9 | 35.7 | 58.8 |
| Funk G-150 | 67.6 | 111 | 92 | 103 | 82.9 | 64.0 | 79.7 | 87.1 | 30.5 | 61.6 |
| Illinois 200 | 65.3 | 107 | 94 | 106 | 86.0 | 57.4 | 65.9 | 86.6 | 35.4 | 60.4 |
| Funk G-80 | 65.1 | 107 | 96 | 108 | 87.4 | 62.3 | 74.4 | 81.0 | 30.3 | 55.1 |
| Kansas 1583 | 63.8 | 105 | 96 | 108 | 72.3 | 64.5 | 76.0 | 80.1 | 31.7 | 58.3 |
| Kansas 1614 | 63.7 | 105 | 92 | 103 | 81.0 | 60.7 | 70.5 | 78.5 | 32.5 | 59.1 |
| Jewett 12 | 62.4 | 103 | 86 | 97 | 71.8 | 60.8 | 71.2 | 80.2 | 30.5 | 59.7 |
| Pr. of Saline* | 61.4 | 101 | 86 | 97 | 70.9 | 61.4 | 72.3 | 78.1 | 32.5 | 53.3 |
| K. I. H. 38 | 61.0 | 100 | 86 | 97 | 75.7 | 56.9 | 69.6 | 82.1 | 30.6 | 51.3 |
| Reid-Midland | 60.8 | 100 | 90 | 101 | 74.2 | 56.1 | 68.1 | 80.9 | 30.8 | 55.0 |
| Iowealth TX 1 | 60.8 | 100 | 93 | 104 | 78.6 | 58.1 | 65.8 | 76.5 | 33.4 | 52.7 |
| Mo. King 103 | 60.3 | 99 | 95 | 107 | 89.7 | 47.9 | 70.2 | 76.5 | 25.4 | 52.2 |
| Midland (A)* | 60.2 | 99 | 92 | 103 | 72.0 | 64.8 | 68.0 | 72.1 | 29.4 | 55.2 |
| K. I. H. 440 | 60.2 | 99 | 84 | 94 | 80.2 | 48.9 | 67.0 | 79.7 | 27.9 | 57.4 |
| U. S. 35 | 60.2 | 99 | 94 | 106 | 78.5 | 50.0 | 66.2 | 80.4 | 32.6 | 53.3 |
| Kansas 1638 | 59.9 | 98 | 95 | 107 | 86.0 | 53.4 | 67.8 | 77.3 | 26.5 | 48.7 |
| Kansas 2232 | 59.8 | 98 | 94 | 106 | 81.1 | 52.9 | 64.3 | 67.9 | 36.5 | 56.2 |
| Pioneer 332 | 59.7 | 98 | 95 | 107 | 85.1 | 51.8 | 66.1 | 74.0 | 29.1 | 52.2 |
| Kansas 1104 | 59.5 | 98 | 93 | 104 | 77.5 | 59.5 | 64.1 | 74.1 | 31.3 | 50.7 |
| Multicross Em. 1 | 59.5 | 98 | 91 | 102 | 76.9 | 49.2 | 70.6 | 75.6 | 28.0 | 56.7 |
| U. S. 13 | 59.1 | 97 | 93 | 104 | 72.7 | 49.8 | 65.6 | 83.5 | 32.5 | 50.7 |
| Kansas 1712 | 58.6 | 96 | 91 | 102 | 75.1 | 47.8 | 68.4 | 76.8 | 30.1 | 53.3 |
| Kansas 1466 | 57.9 | 95 | 95 | 107 | 73.0 | 54.1 | 64.1 | 75.0 | 29.5 | 51.8 |
| Pioneer 300 | 57.5 | 94 | 97 | 109 | 82.8 | 41.5 | 64.7 | 78.7 | 27.9 | 49.5 |
| Kansas 2216 | 57.0 | 94 | 94 | 106 | 72.8 | 46.9 | 57.8 | 71.4 | 34.4 | 58.7 |
| Kansas 1358 | 56.8 | 93 | 95 | 107 | 71.1 | 50.0 | 65.0 | 71.3 | 30.3 | 53.4 |
| Kansas 1646 | 56.4 | 93 | 97 | 109 | 72.0 | 54.9 | 59.0 | 73.5 | 27.9 | 50.9 |
| Kansas 1623 | 52.6 | 86 | 95 | 107 | 62.2 | 46.9 | 61.0 | 70.2 | 27.2 | 48.2 |
| Pioneer 334 | 52.5 | 86 | 95 | 107 | 77.8 | 39.4 | 57.6 | 73.9 | 21.8 | 44.8 |
| Mangelsdorf 1001 | 52.1 | 86 | 90 | 101 | 60.1 | 43.7 | 59.2 | 65.9 | 31.4 | 52.6 |
| Pioneer 307 | 51.4 | 84 | 94 | 106 | 68.4 | 42.8 | 57.3 | 70.4 | 24.3 | 45.1 |
| Hays Golden | 48.6 | 80 | 88 | 99 | 64.5 | 47.2 | 56.9 | 57.1 | 22.3 | 43.8 |
| Significant difference | | | | | 10.3 | 10.5 | 8.3 | 6.5 | 7.0 | 7.5 |
| Av., 34 entries | 60.0 | | 93 | | 77.0 | 54.2 | 67.4 | 77.0 | 30.5 | 54.0 |
| Av., 2 adapted open pol. var.* | 60.8 | | 89 | | 71.4 | 63.1 | 70.1 | 75.1 | 31.0 | 54.2 |
| Av., 31 hybrids | 60.3 | | 93 | | 77.7 | 53.9 | 67.5 | 77.8 | 30.7 | 54.3 |

[1] Percent of 2 adapted open-pollinated varieties.*
[2] Near Chanute, Kansas.
[3] Near Parsons, Kansas.

TABLE 4. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 1,** ATCHISON AND JACKSON COUNTIES, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Kansas 2234 | 77.0 | 118 | 92 | 119 | 8 | 0 | 81 | 20.1 | 74.7 |
| 2 | Funk G-149 | 75.8 | 116 | 87 | 113 | 7 | 6 | 82 | 15.7 | 81.2 |
| 3 | Kansas 1585 | 74.9 | 114 | 91 | 118 | 7 | 2 | 76 | 18.8 | 81.4 |
| 4 | Funk G-80 | 74.8 | 114 | 90 | 117 | 8 | 2 | 77 | 19.2 | 81.5 |
| 5 | Funk G-150 | 73.4 | 112 | 82 | 106 | 6 | 12 | 79 | 16.9 | 80.8 |
| 6 | Reid Nat. 134 | 72.2 | 110 | 84 | 109 | 7 | 9 | 77 | 19.5 | 81.1 |
| 7 | Illinois 200 | 71.7 | 109 | 86 | 112 | 8 | 6 | 78 | 16.8 | 81.4 |
| 8 | Jewett 20 | 71.0 | 108 | 78 | 101 | 2 | 20 | 75 | 17.6 | 80.3 |
| 9 | Kansas 1614 | 70.8 | 108 | 82 | 106 | 17 | 1 | 73 | 18.7 | 79.1 |
| 10 | Kansas 1638 | 69.7 | 106 | 90 | 117 | 0 | 10 | 74 | 16.2 | 83.4 |
| 11 | Stephens Blend | 69.7 | 106 | 93 | 121 | 3 | 4 | 77 | 16.2 | 82.4 |
| 12 | Missouri King 103 | 68.8 | 105 | 87 | 113 | 10 | 3 | 72 | 16.8 | 80.7 |
| 13 | Kansas 1104 | 68.5 | 104 | 84 | 109 | 13 | 3 | 80 | 16.8 | 81.0 |
| 14 | Kansas 1583 | 68.4 | 104 | 94 | 122 | 2 | 4 | 66 | 16.8 | 79.9 |
| 15* | Midland (A) | 68.4 | 104 | 86 | 112 | 12 | 2 | 78 | 19.2 | 79.8 |
| 16 | Iowealth TX 1 | 68.4 | 104 | 84 | 109 | 8 | 8 | 72 | 19.0 | 81.7 |
| 17 | Pioneer 332 | 68.4 | 104 | 90 | 117 | 3 | 7 | 79 | 15.9 | 83.7 |
| 18 | Midwest 23 | 67.8 | 104 | 94 | 122 | 3 | 3 | 76 | 16.0 | 81.8 |
| 19 | Iowealth 25A | 67.7 | 103 | 84 | 109 | 8 | 8 | 72 | 18.3 | 81.2 |
| 20 | Keystone 38 | 67.2 | 102 | 86 | 112 | 4 | 10 | 79 | 15.0 | 84.8 |
| 21 | Kansas 2232 | 67.0 | 102 | 84 | 109 | 12 | 4 | 77 | 18.2 | 77.1 |
| 22 | K. I. H. 38 | 66.3 | 101 | 76 | 99 | 2 | 22 | 76 | 16.0 | 83.4 |
| 23 | Jewett 12 | 66.3 | 101 | 79 | 102 | 7 | 14 | 70 | 17.3 | 80.6 |
| 24* | Pride of Saline | 66.2 | 101 | 75 | 97 | 20 | 5 | 78 | 19.3 | 76.9 |
| 25 | McCurdy 118M | 66.0 | 101 | 88 | 114 | 5 | 7 | 74 | 14.2 | 83.9 |
| 26 | Maygold 39 | 65.8 | 100 | 87 | 113 | 3 | 10 | 75 | 15.0 | 83.8 |
| 27 | Reid-Midland | 65.2 | 100 | 76 | 99 | 12 | 12 | 72 | 19.2 | 81.2 |
| 28 | KK-77 | 65.1 | 99 | 85 | 110 | 6 | 9 | 70 | 14.2 | 83.2 |
| 29 | Carlson C 20A | 64.7 | 99 | 89 | 116 | 6 | 5 | 71 | 13.3 | 84.2 |
| 30 | K. I. H. 440 | 64.6 | 99 | 72 | 94 | 12 | 16 | 74 | 18.0 | 81.6 |
| 31 | Funk G-94 | 64.5 | 98 | 86 | 112 | 8 | 6 | 72 | 15.8 | 83.3 |
| 32 | U. S. 35 | 64.2 | 98 | 90 | 117 | 5 | 5 | 74 | 14.4 | 84.4 |
| 33 | Pfister 160 | 63.9 | 98 | 86 | 112 | 7 | 7 | 76 | 16.3 | 85.2 |
| 34 | Maygold 49 | 63.8 | 97 | 92 | 119 | 1 | 7 | 72 | 14.6 | 84.2 |
| 35 | Kansas 1466 | 63.6 | 97 | 88 | 114 | 9 | 3 | 74 | 17.3 | 81.0 |
| 36 | Kansas 3 | 63.4 | 97 | 80 | 104 | 15 | 5 | 74 | 19.5 | 74.8 |
| 37 | Kansas 1646 | 63.4 | 97 | 92 | 119 | 6 | 2 | 71 | 17.8 | 81.2 |
| 38 | Multicross EMBRO 1 | 63.0 | 96 | 76 | 99 | 13 | 11 | 76 | 17.2 | 80.5 |
| 39 | Reid Nat. 129 | 62.4 | 95 | 82 | 106 | 10 | 8 | 68 | 15.0 | 81.9 |
| 40 | Pioneer 300 | 62.2 | 95 | 96 | 125 | 1 | 3 | 76 | 15.6 | 82.2 |
| 41 | Funk G-169 | 62.2 | 95 | 89 | 116 | 6 | 5 | 72 | 15.6 | 84.6 |
| 42 | Pfister 2834 | 61.8 | 94 | 91 | 118 | 2 | 7 | 78 | 14.0 | 84.4 |
| 43 | Steckley 514A | 61.8 | 94 | 83 | 108 | 4 | 13 | 74 | 15.5 | 84.0 |
| 44 | Jewett 9 | 61.8 | 94 | 89 | 116 | 6 | 5 | 70 | 15.4 | 83.4 |
| 45* | Reid Yellow Dent | 61.8 | 94 | 69 | 90 | 25 | 6 | 70 | 18.4 | 80.0 |
| 46 | Pfister 1234 | 61.6 | 94 | 84 | 109 | 10 | 6 | 67 | 16.8 | 84.2 |
| 47 | Kansas 1712 | 61.4 | 94 | 82 | 106 | 7 | 11 | 72 | 14.3 | 82.4 |
| 48 | U. S. 13 | 61.2 | 93 | 89 | 116 | 4 | 7 | 68 | 16.0 | 83.0 |
| 49 | Steckley 790 | 61.0 | 93 | 84 | 109 | 7 | 9 | 72 | 15.7 | 81.6 |
| 50 | McCurdy 124M | 60.9 | 93 | 86 | 112 | 7 | 7 | 68 | 13.7 | 83.8 |
| 51 | Kansas 1358 | 60.6 | 93 | 88 | 114 | 9 | 3 | 68 | 19.2 | 82.7 |
| 52 | Kansas 2216 | 59.8 | 91 | 85 | 110 | 10 | 5 | 72 | 21.4 | 73.8 |
| 53 | Pioneer 334 | 58.6 | 89 | 90 | 117 | 4 | 6 | 73 | 14.9 | 83.6 |
| 54 | Steckley 523 | 58.3 | 89 | 78 | 101 | 7 | 15 | 72 | 15.1 | 83.5 |
| 55 | Funk G-53 | 57.4 | 88 | 89 | 116 | 5 | 6 | 70 | 14.5 | 82.7 |
| 56 | Maygold 59 | 56.9 | 87 | 88 | 114 | 7 | 5 | 70 | 15.6 | 82.4 |
| 57 | Hays Golden | 55.8 | 85 | 77 | 100 | 15 | 8 | 74 | 17.1 | 82.4 |
| 58 | Pioneer 307 | 55.6 | 85 | 90 | 117 | 8 | 2 | 72 | 14.9 | 84.8 |
| 59 | Kansas 1623 | 54.5 | 83 | 89 | 116 | 7 | 4 | 66 | 16.8 | 82.8 |
| 60 | Mangelsdorf 1001 | 51.9 | 79 | 76 | 99 | 12 | 12 | 60 | 19.4 | 78.4 |
| Av. of 60 entries | | 64.8 | | 85 | | 8 | 7 | 73 | 16.7 | 81.8 |
| Av. of 3 adapted open-pollinated varieties* | | 65.5 | | 77 | | 19 | 4 | 75 | 19.0 | 78.9 |
| Av. of 56 hybrids | | 65.0 | | 86 | | 7 | 7 | 73 | 16.6 | 81.9 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 5. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 1,** ATCHISON COUNTY, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Kansas 2234 | 90.8 | 127 | 99 | 110 | 1 | 0 | 80 | 21.0 | 74.8 |
| 2 | Missouri King 103 | 89.7 | 125 | 100 | 111 | 0 | 0 | 76 | 18.8 | 80.5 |
| 3 | Funk G-149 | 88.6 | 124 | 100 | 111 | 0 | 0 | 81 | 17.8 | 80.7 |
| 4 | Funk G-80 | 87.4 | 122 | 100 | 111 | 0 | 0 | 72 | 20.5 | 81.2 |
| 5 | Keystone 38 | 87.2 | 122 | 100 | 111 | 0 | 0 | 79 | 17.4 | 83.9 |
| 6 | Kansas 1638 | 86.0 | 120 | 99 | 110 | 0 | 1 | 74 | 18.9 | 82.3 |
| 7 | Illinois 200 | 86.0 | 120 | 100 | 111 | 0 | 0 | 74 | 18.1 | 80.8 |
| 8 | Pioneer 332 | 85.1 | 119 | 98 | 109 | 0 | 2 | 76 | 17.8 | 82.5 |
| 9 | Maygold 39 | 83.7 | 117 | 100 | 111 | 0 | 0 | 72 | 17.4 | 83.1 |
| 10 | Carlson C 20A | 83.6 | 117 | 99 | 110 | 0 | 1 | 74 | 14.3 | 82.9 |
| 11 | McCurdy 124M | 83.2 | 116 | 100 | 111 | 0 | 0 | 71 | 15.3 | 84.4 |
| 12 | Funk G-150 | 82.9 | 116 | 100 | 111 | 0 | 0 | 74 | 18.5 | 79.9 |
| 13 | Pioneer 300 | 82.8 | 115 | 100 | 111 | 0 | 0 | 74 | 17.1 | 82.3 |
| 14 | McCurdy 118M | 82.6 | 115 | 100 | 111 | 0 | 0 | 71 | 15.9 | 83.8 |
| 15 | Iowealth 25A | 81.5 | 114 | 100 | 111 | 0 | 0 | 70 | 20.5 | 80.3 |
| 16 | KK-77 | 81.2 | 113 | 100 | 111 | 0 | 0 | 69 | 15.9 | 81.0 |
| 17 | Kansas 2232 | 81.1 | 113 | 100 | 111 | 0 | 0 | 82 | 20.5 | 75.8 |
| 18 | Kansas 1614 | 81.0 | 113 | 99 | 110 | 1 | 0 | 71 | 20.9 | 78.9 |
| 19 | Local entry (H) | 80.8 | 113 | 98 | 109 | 1 | 1 | 77 | 21.2 | 79.8 |
| 20 | Reid Nat. 134 | 80.7 | 113 | 100 | 111 | 0 | 0 | 72 | 20.9 | 80.1 |
| 21 | Midwest 23 | 80.5 | 112 | 99 | 110 | 1 | 0 | 73 | 17.9 | 81.0 |
| | Differences in yield of less than 10.3 bushels an acre are not significant in this test. | | | | | | | | | |
| 22 | K. I. H. 440 | 80.2 | 112 | 97 | 108 | 2 | 1 | 70 | 20.1 | 81.7 |
| 23 | Funk G-94 | 79.3 | 111 | 99 | 110 | 0 | 1 | 69 | 18.6 | 82.3 |
| 24 | Reid Nat. 129 | 79.3 | 111 | 100 | 111 | 0 | 0 | 68 | 16.7 | 81.8 |
| 25 | Iowealth TX 1 | 78.6 | 110 | 99 | 110 | 0 | 1 | 65 | 20.9 | 81.1 |
| 26 | U. S. 35 | 78.5 | 109 | 100 | 111 | 0 | 0 | 73 | 16.3 | 84.3 |
| 27 | Pioneer 334 | 77.8 | 108 | 99 | 110 | 0 | 1 | 72 | 16.7 | 83.8 |
| 28 | Kansas 1104 | 77.5 | 108 | 99 | 110 | 1 | 0 | 79 | 17.9 | 80.1 |
| 29 | Pfister 2834 | 77.5 | 108 | 99 | 110 | 0 | 1 | 76 | 15.4 | 84.3 |
| 30 | Kansas 1585 | 77.0 | 107 | 100 | 111 | 0 | 0 | 71 | 21.2 | 79.7 |
| 31 | Multicross EMBRO 1 | 76.9 | 107 | 97 | 108 | 2 | 1 | 77 | 18.8 | 80.3 |
| 32 | Stephens Blend | 76.9 | 107 | 99 | 110 | 0 | 1 | 69 | 18.5 | 81.0 |
| 33 | Maygold 59 | 76.9 | 107 | 99 | 110 | 0 | 1 | 74 | 17.9 | 83.2 |
| 34 | Jewett 9 | 76.8 | 107 | 100 | 111 | 0 | 0 | 68 | 17.3 | 82.5 |
| 35 | Pfister 160 | 76.6 | 107 | 100 | 111 | 0 | 0 | 73 | 18.3 | 84.1 |
| 36 | Jewett 20 | 76.3 | 106 | 98 | 109 | 1 | 1 | 73 | 19.6 | 79.4 |
| 37 | Maygold 49 | 76.0 | 106 | 99 | 110 | 0 | 1 | 69 | 16.3 | 83.7 |
| 38 | Steckley 514A | 75.8 | 106 | 98 | 109 | 0 | 2 | 73 | 17.5 | 82.8 |
| 39 | K. I. H. 38 | 75.7 | 106 | 99 | 110 | 1 | 0 | 69 | 19.7 | 82.9 |
| 40 | Steckley 523 | 75.5 | 105 | 97 | 108 | 0 | 3 | 74 | 15.7 | 83.0 |
| 41 | Pfister 1234 | 75.3 | 105 | 97 | 108 | 0 | 3 | 67 | 19.5 | 83.5 |
| 42 | Kansas 1712 | 75.1 | 105 | 100 | 111 | 0 | 0 | 70 | 16.2 | 80.3 |
| 43 | Funk G-169 | 74.7 | 104 | 100 | 111 | 0 | 0 | 69 | 17.7 | 83.1 |
| 44 | Reid-Midland | 74.2 | 104 | 97 | 108 | 1 | 2 | 70 | 20.9 | 78.8 |
| 45 | Kansas 1466 | 73.0 | 102 | 96 | 107 | 2 | 2 | 75 | 18.5 | 79.9 |
| 46 | Kansas 2216 | 72.8 | 102 | 100 | 111 | 0 | 0 | 68 | 21.9 | 74.2 |
| 47 | U. S. 13 | 72.7 | 101 | 97 | 108 | 1 | 2 | 67 | 19.1 | 80.9 |
| 48 | Kansas 1583 | 72.3 | 101 | 100 | 111 | 0 | 0 | 58 | 15.4 | 79.5 |
| 49* | Reid Yellow Dent | 72.2 | 101 | 85 | 94 | 13 | 2 | 66 | 20.4 | 79.1 |
| 50 | Kansas 1646 | 72.0 | 100 | 100 | 111 | 0 | 0 | 68 | 20.6 | 80.0 |
| 51 | Funk G-53 | 72.0 | 100 | 99 | 110 | 0 | 1 | 69 | 16.8 | 83.1 |
| 52* | Midland (A) | 72.0 | 100 | 95 | 106 | 5 | 0 | 73 | 21.1 | 78.4 |
| 53 | Jewett 12 | 71.8 | 100 | 95 | 106 | 1 | 4 | 63 | 19.5 | 79.9 |
| 54 | Kansas 1358 | 71.1 | 99 | 100 | 111 | 0 | 0 | 65 | 21.1 | 81.0 |
| 55* | Pride of Saline | 70.9 | 99 | 90 | 100 | 8 | 2 | 72 | 21.3 | 75.4 |
| 56 | Steckley 790 | 70.6 | 98 | 99 | 110 | 0 | 1 | 68 | 17.9 | 80.1 |
| 57 | Pioneer 307 | 68.4 | 95 | 99 | 110 | 1 | 0 | 66 | 16.7 | 84.9 |
| 58 | Kansas 3 | 67.7 | 94 | 94 | 104 | 6 | 0 | 66 | 20.5 | 73.3 |
| 59 | Hays Golden | 64.5 | 90 | 89 | 99 | 9 | 2 | 72 | 18.9 | 80.6 |
| 60 | Kansas 1623 | 62.2 | 87 | 99 | 110 | 0 | 1 | 61 | 18.1 | 82.3 |
| 61 | Mangelsdorf 1001 | 60.1 | 84 | 97 | 108 | 2 | 1 | 54 | 19.5 | 78.4 |
| Av. of 61 entries | | 77.4 | | 98 | | 1 | 1 | 71 | 18.6 | 81.0 |
| Av. of 3 adapted open-pollinated varieties* | | 71.7 | | 90 | | 9 | 1 | 70 | 20.9 | 77.6 |
| Av. of 57 hybrids | | 77.9 | | 99 | | 0 | 1 | 71 | 18.4 | 81.2 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 6. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 1,** JACKSON COUNTY, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | % of O. P.[1] | Total | % of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Kansas 1585 | 72.8 | 123 | 82 | 130 | 14 | 4 | 81 | 16.4 | 83.1 |
| 2 | Jewett 20 | 65.7 | 110 | 57 | 90 | 3 | 40 | 77 | 15.5 | 81.3 |
| 3* | Midland (A) | 64.8 | 109 | 76 | 121 | 20 | 4 | 84 | 17.4 | 81.2 |
| 4 | Kansas 1583 | 64.5 | 109 | 87 | 138 | 4 | 9 | 73 | 18.3 | 80.3 |
| 5 | Funk G-150 | 64.0 | 108 | 64 | 102 | 12 | 24 | 84 | 15.4 | 81.7 |
| 6 | Reid Nat. 134 | 63.8 | 108 | 69 | 110 | 13 | 18 | 82 | 18.1 | 82.1 |
| 7 | Kansas 2234 | 63.3 | 107 | 86 | 136 | 14 | 0 | 82 | 19.2 | 74.6 |
| 8 | Funk G-149 | 63.1 | 107 | 74 | 117 | 14 | 12 | 82 | 13.6 | 81.6 |
| 9 | Stephens Blend | 62.5 | 106 | 87 | 138 | 7 | 6 | 85 | 13.9 | 83.9 |
| 10 | Funk G-80 | 62.3 | 105 | 80 | 127 | 16 | 4 | 82 | 17.9 | 81.8 |
| | Differences in yield of less than 10.5 bushels an acre are not significant in this test. | | | | | | | | | |
| 11* | Pride of Saline | 61.4 | 104 | 60 | 95 | 32 | 8 | 84 | 17.3 | 78.5 |
| 12 | Jewett 12 | 60.8 | 103 | 63 | 100 | 13 | 24 | 78 | 15.1 | 81.4 |
| 13 | Kansas 1614 | 60.7 | 102 | 65 | 103 | 33 | 2 | 75 | 16.5 | 79.3 |
| 14 | Kansas 1104 | 59.5 | 101 | 68 | 108 | 26 | 6 | 82 | 15.6 | 82.0 |
| 15 | Kansas 3 | 59.2 | 100 | 67 | 106 | 23 | 10 | 81 | 18.5 | 76.2 |
| 16 | Iowealth TX 1 | 58.1 | 98 | 68 | 108 | 17 | 15 | 78 | 17.1 | 82.3 |
| 17 | Illinois 200 | 57.4 | 97 | 72 | 114 | 17 | 11 | 81 | 15.5 | 82.0 |
| 18 | K. I. H. 38 | 56.9 | 96 | 52 | 82 | 3 | 45 | 83 | 12.3 | 84.0 |
| 19 | Reid-Midland | 56.1 | 95 | 54 | 86 | 23 | 23 | 75 | 17.4 | 83.5 |
| 20 | Midwest 23 | 55.2 | 93 | 88 | 140 | 6 | 6 | 80 | 14.2 | 82.5 |
| 21 | Kansas 1646 | 54.9 | 93 | 84 | 133 | 12 | 4 | 74 | 15.1 | 82.3 |
| 22 | Kansas 1466 | 54.1 | 91 | 81 | 128 | 15 | 4 | 74 | 16.1 | 82.2 |
| 23 | Iowealth 25A | 53.9 | 91 | 68 | 108 | 15 | 17 | 73 | 16.1 | 82.0 |
| 24 | Kansas 1638 | 53.4 | 90 | 81 | 128 | 0 | 19 | 75 | 13.4 | 84.4 |
| 25 | Kansas 2232 | 52.9 | 89 | 68 | 108 | 23 | 9 | 72 | 15.9 | 78.4 |
| 26 | Local entry (H) | 52.9 | 89 | 86 | 136 | 4 | 10 | 77 | 12.7 | 84.4 |
| 27 | Pioneer 332 | 51.8 | 88 | 82 | 130 | 6 | 12 | 82 | 14.1 | 84.9 |
| 28 | Maygold 49 | 51.6 | 87 | 85 | 135 | 3 | 12 | 76 | 12.9 | 84.7 |
| 29 | Steckley 790 | 51.5 | 87 | 70 | 111 | 14 | 16 | 76 | 13.5 | 83.2 |
| 30* | Reid Yellow Dent | 51.4 | 87 | 54 | 86 | 36 | 10 | 75 | 16.5 | 80.9 |
| 31 | Pfister 160 | 51.3 | 87 | 73 | 116 | 14 | 13 | 79 | 14.3 | 86.3 |
| 32 | Kansas 1358 | 50.0 | 84 | 76 | 121 | 18 | 6 | 71 | 17.4 | 84.5 |
| 33 | U. S. 35 | 50.0 | 84 | 81 | 128 | 10 | 9 | 75 | 12.4 | 84.6 |
| 34 | U. S. 13 | 49.8 | 84 | 82 | 130 | 7 | 11 | 69 | 12.9 | 85.1 |
| 35 | Funk G-169 | 49.8 | 84 | 79 | 125 | 11 | 10 | 74 | 13.6 | 86.2 |
| 36 | Funk G-94 | 49.7 | 84 | 73 | 116 | 16 | 11 | 74 | 13.0 | 84.3 |
| 37 | McCurdy 118M | 49.3 | 83 | 77 | 122 | 10 | 13 | 77 | 12.6 | 84.0 |
| 38 | Multicross EMBRO 1 | 49.2 | 83 | 54 | 86 | 24 | 22 | 74 | 15.7 | 80.7 |
| 39 | KK-77 | 49.0 | 83 | 70 | 111 | 13 | 17 | 72 | 12.6 | 85.3 |
| 40 | K. I. H. 440 | 48.9 | 83 | 47 | 75 | 23 | 30 | 78 | 15.9 | 81.6 |
| 41 | Steckley 514A | 47.9 | 81 | 68 | 108 | 8 | 24 | 75 | 13.5 | 85.1 |
| 42 | Maygold 39 | 47.9 | 81 | 74 | 117 | 6 | 20 | 78 | 12.7 | 84.4 |
| 43 | Missouri King 103 | 47.9 | 81 | 74 | 117 | 20 | 6 | 68 | 14.9 | 80.9 |
| 44 | Pfister 1234 | 47.9 | 81 | 70 | 111 | 20 | 10 | 68 | 14.1 | 85.0 |
| 45 | Kansas 1712 | 47.8 | 81 | 64 | 102 | 14 | 22 | 75 | 12.4 | 84.0 |
| 46 | Hays Golden | 47.2 | 80 | 65 | 103 | 21 | 14 | 75 | 15.3 | 84.2 |
| 47 | Keystone 38 | 47.1 | 80 | 73 | 116 | 7 | 20 | 79 | 12.7 | 85.8 |
| 48 | Kansas 2216 | 46.9 | 79 | 70 | 111 | 21 | 9 | 75 | 20.8 | 73.5 |
| 49 | Kansas 1623 | 46.9 | 79 | 79 | 125 | 14 | 7 | 70 | 15.6 | 83.3 |
| 50 | Jewett 9 | 46.8 | 79 | 78 | 124 | 13 | 9 | 71 | 13.4 | 84.2 |
| 51 | Pfister 2834 | 46.2 | 78 | 83 | 132 | 5 | 12 | 79 | 12.7 | 84.6 |
| 52 | Carlson C 20A | 45.8 | 77 | 79 | 125 | 11 | 10 | 68 | 12.3 | 85.5 |
| 53 | Reid Nat. 129 | 45.4 | 77 | 64 | 102 | 21 | 15 | 68 | 13.2 | 82.1 |
| 54 | Mangelsdorf 1001 | 43.7 | 74 | 56 | 89 | 22 | 22 | 66 | 19.4 | 78.5 |
| 55 | Pioneer 307 | 42.8 | 72 | 81 | 113 | 15 | 4 | 78 | 13.2 | 84.7 |
| 56 | Funk G-53 | 42.8 | 72 | 79 | 125 | 11 | 10 | 72 | 12.2 | 82.3 |
| 57 | Pioneer 300 | 41.5 | 70 | 91 | 144 | 2 | 7 | 78 | 14.2 | 82.0 |
| 58 | Steckley 523 | 41.1 | 69 | 58 | 92 | 14 | 28 | 71 | 14.5 | 84.0 |
| 59 | Pioneer 334 | 39.4 | 66 | 82 | 130 | 7 | 11 | 74 | 13.2 | 82.3 |
| 60 | McCurdy 124M | 38.6 | 65 | 73 | 116 | 14 | 13 | 66 | 12.1 | 83.3 |
| 61 | Maygold 59 | 37.0 | 62 | 77 | 122 | 14 | 9 | 65 | 13.4 | 81.5 |
| Av. of 61 entries | | 52.4 | | 72 | | 14 | 13 | 76 | 14.9 | 82.5 |
| Av. of 3 adapted open-pollinated varieties* | | 59.2 | | 63 | | 29 | 7 | 81 | 17.1 | 79.9 |
| Av. of 57 hybrids | | 52.1 | | 73 | | 13 | 14 | 76 | 14.8 | 82.7 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 7. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 1,** TWO-YEAR AVERAGE, 1941-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | % of O. P.[1] | Total | % of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | Jewett 12 | 64.8 | 116 | 66 | 100 | 17.4 |
| 2 | Kansas 1585 | 63.4 | 113 | 74 | 112 | 18.2 |
| 3 | K. I. H. 38 | 62.6 | 112 | 72 | 109 | 16.1 |
| 4 | Iowealth TX 1 | 62.5 | 111 | 75 | 114 | 18.4 |
| 5 | Kansas 2234 | 62.3 | 111 | 66 | 100 | 19.6 |
| 6 | U. S. 35 | 62.2 | 111 | 84 | 127 | 15.0 |
| 7 | Kansas 1638 | 61.7 | 110 | 80 | 121 | 16.2 |
| 8 | U. S. 13 | 61.6 | 110 | 71 | 108 | 16.0 |
| 9 | Reid-Midland | 61.4 | 109 | 68 | 103 | 19.4 |
| 10 | Funk G-94 | 61.2 | 109 | 80 | 121 | 16.0 |
| 11 | Kansas 2232 | 61.0 | 109 | 62 | 94 | 18.4 |
| 12 | Pioneer 332 | 60.8 | 108 | 82 | 124 | 16.0 |
| 13 | KK-77 | 59.8 | 107 | 80 | 121 | 15.8 |
| 14* | Midland (A) | 59.4 | 106 | 72 | 109 | 19.3 |
| 15 | McCurdy 124M | 59.2 | 106 | 79 | 120 | 14.7 |
| 16 | Illinois 200 | 59.2 | 106 | 77 | 117 | 17.2 |
| 17 | Steckley 523 | 59.2 | 106 | 72 | 109 | 15.4 |
| 18 | McCurdy 118M | 58.8 | 105 | 82 | 124 | 14.9 |
| 19 | Pfister 160 | 58.6 | 104 | 70 | 106 | 16.3 |
| 20 | Pioneer 334 | 58.4 | 104 | 82 | 124 | 15.0 |
| 21 | Pioneer 300 | 57.8 | 103 | 86 | 130 | 15.6 |
| 22 | Funk G-53 | 57.2 | 102 | 84 | 127 | 15.1 |
| 23 | Kansas 3 | 57.2 | 102 | 63 | 95 | 19.0 |
| 24* | Pride of Saline | 57.2 | 102 | 62 | 94 | 18.6 |
| 25 | Pioneer 307 | 56.8 | 101 | 80 | 121 | 15.6 |
| 26 | Kansas 1104 | 53.8 | 96 | 74 | 112 | 17.0 |
| 27* | Reid Yellow Dent | 51.6 | 92 | 63 | 95 | 18.2 |
| 28 | Kansas 2216 | 51.0 | 91 | 74 | 112 | 20.1 |
| 29 | Mangelsdorf 1001 | 50.5 | 90 | 62 | 94 | 18.5 |
| 30 | Kansas 1466 | 50.2 | 89 | 70 | 106 | 16.9 |
| 31 | Hays Golden | 49.8 | 89 | 63 | 95 | 16.7 |
| Av. of 31 entries | | 58.4 | | 73 | | 17.0 |
| Av. of 3 adapted open-pollinated varieties* | | 56.1 | | 66 | | 18.7 |
| Av. of 27 hybrids | | 59.0 | | 75 | | 16.8 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 8. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 1,** THREE-YEAR AVERAGE, 1940-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | % of O. P.[1] | Total | % of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | K. I. H. 38 | 60.1 | 123 | 76 | 109 | 15.3 |
| 2 | U. S. 35 | 59.4 | 122 | 87 | 124 | 14.7 |
| 3 | Funk G-94 | 59.3 | 122 | 83 | 119 | 15.4 |
| 4 | McCurdy 118M | 58.4 | 120 | 86 | 123 | 14.7 |
| 5 | Illinois 200 | 57.4 | 118 | 79 | 113 | 16.5 |
| 6 | Pfister 160 | 57.0 | 117 | 77 | 110 | 15.6 |
| 7 | U. S. 13 | 57.0 | 117 | 84 | 120 | 15.3 |
| 8 | KK-77 | 56.4 | 116 | 85 | 121 | 15.3 |
| 9 | Pioneer 332 | 56.4 | 116 | 85 | 121 | 15.4 |
| 10 | Reid Nat. 134 | 55.9 | 115 | 69 | 99 | 17.8 |
| 11 | Kansas 2232 | 55.5 | 114 | 69 | 99 | 18.7 |
| 12 | Pioneer 334 | 55.3 | 114 | 84 | 120 | 14.8 |
| 13 | Pioneer 307 | 54.9 | 113 | 83 | 119 | 15.2 |
| 14* | Pride of Saline | 51.9 | 107 | 67 | 96 | 18.0 |
| 15 | Kansas 3 | 50.7 | 104 | 67 | 96 | 18.6 |
| 16 | Kansas 1104 | 49.8 | 102 | 81 | 116 | 16.6 |
| 17* | Midland (A) | 49.5 | 102 | 77 | 110 | 19.1 |
| 18 | Kansas 1466 | 48.2 | 99 | 77 | 110 | 16.3 |
| 19 | Hays Golden | 45.5 | 93 | 68 | 97 | 16.2 |
| 20* | Reid Yellow Dent | 44.7 | 92 | 66 | 94 | 17.5 |
| Av. of 20 entries | | 54.2 | | 78 | | 16.4 |
| Av. of 3 adapted open-pollinated varieties* | | 48.7 | | 70 | | 18.2 |
| Av. of 16 hybrids | | 55.7 | | 80 | | 16.0 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 9. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 1,** FOUR-YEAR AVERAGE, 1939-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | % of O. P.[1] | Total | % of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | U. S. 35 | 65.6 | 127 | 87 | 123 | 13.3 |
| 2 | Funk G-94 | 65.2 | 126 | 84 | 118 | 13.9 |
| 3 | U. S. 13 | 63.2 | 122 | 84 | 118 | 14.0 |
| 4 | KK-77 | 61.0 | 118 | 86 | 121 | 13.8 |
| 5 | Pioneer 307 | 59.4 | 115 | 82 | 115 | 13.8 |
| 6 | Kansas 1104 | 58.2 | 112 | 83 | 117 | 15.2 |
| 7* | Pride of Saline | 55.5 | 107 | 69 | 97 | 16.2 |
| 8 | Kansas 1466 | 53.6 | 103 | 79 | 111 | 14.7 |
| 9* | Midland (A) | 50.8 | 98 | 78 | 110 | 17.3 |
| 10* | Reid Yellow Dent | 49.0 | 95 | 65 | 92 | 15.5 |
| 11 | Hays Golden | 47.4 | 92 | 67 | 94 | 14.5 |
| Av. of 11 entries | | 57.2 | | 79 | | 14.7 |
| Av. of 3 adapted open-pollinated varieties* | | 51.8 | | 71 | | 16.3 |
| Av. of 7 hybrids | | 60.9 | | 84 | | 14.1 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 10. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 2,** FRANKLIN AND ANDERSON COUNTIES, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Funk G-149 | 86.6 | 120 | 98 | 103 | 0 | 2 | 95 | 12.5 | 83.8 |
| 2 | Kansas 1585 | 84.0 | 116 | 98 | 103 | 1 | 1 | 94 | 15.3 | 82.6 |
| 3 | Funk G-150 | 83.4 | 116 | 98 | 103 | 0 | 2 | 92 | 13.6 | 83.0 |
| 4 | Reid Nat. 134 | 79.5 | 110 | 98 | 103 | 0 | 2 | 88 | 14.7 | 84.4 |
| 5 | Funk G-135 | 79.2 | 110 | 98 | 103 | 0 | 2 | 90 | 14.6 | 83.8 |
| 6 | Kansas 2234 | 79.1 | 110 | 100 | 105 | 0 | 0 | 90 | 15.0 | 80.5 |
| 7 | Funk G-88 | 78.9 | 109 | 98 | 103 | 0 | 2 | 88 | 15.8 | 83.8 |
| 8 | Jewett 6 | 78.8 | 109 | 96 | 101 | 0 | 4 | 89 | 14.0 | 82.2 |
| 9 | Kansas 1583 | 78.0 | 108 | 99 | 104 | 0 | 1 | 88 | 14.8 | 83.0 |
| 10 | Funk G-80 | 77.7 | 108 | 99 | 104 | 0 | 1 | 89 | 13.8 | 84.9 |
| 11 | Illinois 200 | 76.2 | 106 | 99 | 104 | 0 | 1 | 90 | 13.6 | 84.2 |
| 12 | K. I. H. 38 | 75.8 | 105 | 98 | 103 | 0 | 2 | 90 | 13.0 | 84.8 |
| 13 | Jewett 12 | 75.7 | 105 | 96 | 101 | 0 | 4 | 88 | 13.4 | 82.4 |
| 14 | Missouri 8 | 75.2 | 104 | 96 | 101 | 0 | 4 | 88 | 14.1 | 83.8 |
| 15* | Pride of Saline | 75.2 | 104 | 97 | 102 | 1 | 2 | 94 | 14.9 | 81.2 |
| 16 | KK-88A | 74.8 | 104 | 98 | 103 | 0 | 2 | 84 | 15.5 | 83.7 |
| 17 | U. S. 13 | 74.6 | 103 | 100 | 105 | 0 | 0 | 90 | 13.4 | 85.1 |
| 18 | Reid-Midland | 74.5 | 103 | 99 | 104 | 0 | 1 | 84 | 16.4 | 82.6 |
| 19 | Kansas 1614 | 74.5 | 103 | 98 | 103 | 0 | 2 | 82 | 16.0 | 81.4 |
| 20 | McCurdy 118M | 74.2 | 103 | 98 | 103 | 0 | 2 | 90 | 13.2 | 85.4 |
| 21 | Midwest 23 | 73.4 | 102 | 98 | 103 | 0 | 2 | 89 | 13.2 | 83.8 |
| 22 | Iowealth 25A | 73.4 | 102 | 99 | 104 | 0 | 1 | 83 | 14.0 | 84.0 |
| 23 | K. I. H. 440 | 73.4 | 102 | 98 | 103 | 0 | 2 | 90 | 13.3 | 84.6 |
| 24 | Missouri King 103 | 73.4 | 102 | 100 | 105 | 0 | 0 | 87 | 13.2 | 83.0 |
| 25 | U. S. 35 | 73.3 | 102 | 98 | 103 | 0 | 2 | 90 | 12.7 | 85.2 |
| 26 | Multicross EMBRO 1 | 73.1 | 101 | 98 | 103 | 0 | 2 | 95 | 13.7 | 83.7 |
| 27 | Maygold 39 | 72.6 | 101 | 98 | 103 | 0 | 2 | 90 | 13.0 | 84.2 |
| 28 | Kansas 1712 | 72.6 | 101 | 99 | 104 | 0 | 1 | 86 | 12.9 | 84.9 |
| 29 | Kansas 1638 | 72.5 | 101 | 98 | 103 | 0 | 2 | 88 | 13.4 | 84.3 |
| 30 | Funk G-94 | 72.1 | 100 | 100 | 105 | 0 | 0 | 87 | 12.9 | 84.5 |
| 31 | Maygold 49 | 71.8 | 100 | 99 | 104 | 0 | 1 | 90 | 12.9 | 84.7 |
| 32 | Carlson C 20A | 71.8 | 100 | 100 | 105 | 0 | 0 | 88 | 12.7 | 85.2 |
| 33 | Pioneer 300 | 71.7 | 99 | 99 | 104 | 0 | 1 | 92 | 13.6 | 83.9 |
| 34 | Steckley 790 | 71.4 | 99 | 100 | 105 | 0 | 0 | 87 | 13.6 | 84.1 |
| 35 | McCurdy 124M | 71.4 | 99 | 100 | 105 | 0 | 0 | 86 | 13.0 | 84.7 |
| 36* | Midland (C) | 71.2 | 99 | 95 | 100 | 3 | 2 | 89 | 15.6 | 82.6 |
| 37 | Iowealth TX 1 | 71.1 | 99 | 98 | 103 | 0 | 2 | 83 | 15.8 | 79.4 |
| 38 | Stephens Blend | 71.1 | 99 | 100 | 105 | 0 | 0 | 87 | 13.8 | 82.6 |
| 39 | McCurdy 123M | 70.8 | 98 | 100 | 105 | 0 | 0 | 88 | 13.5 | 84.8 |
| 40 | Maygold 59 | 70.4 | 98 | 100 | 105 | 0 | 0 | 92 | 12.7 | 84.9 |
| 41 | Reid Nat. 129 | 70.2 | 97 | 100 | 105 | 0 | 0 | 86 | 13.6 | 83.9 |
| 42 | Pioneer 332 | 70.0 | 97 | 98 | 103 | 0 | 2 | 88 | 13.8 | 85.6 |
| 43* | Midland (A) | 70.0 | 97 | 94 | 99 | 4 | 2 | 92 | 15.9 | 82.7 |
| 44 | Kansas 1466 | 69.6 | 96 | 99 | 104 | 0 | 1 | 90 | 14.0 | 84.2 |
| 45 | Steckley 523 | 69.6 | 96 | 96 | 101 | 0 | 4 | 88 | 12.6 | 85.6 |
| 46 | Pfister 2834 | 69.4 | 96 | 99 | 104 | 0 | 1 | 87 | 14.4 | 84.2 |
| 47 | Kansas 1104 | 69.1 | 96 | 100 | 105 | 0 | 0 | 88 | 14.2 | 83.8 |
| 48 | Funk G-169 | 68.9 | 96 | 100 | 105 | 0 | 0 | 86 | 12.8 | 83.2 |
| 49 | KK-77 | 68.4 | 95 | 98 | 103 | 0 | 2 | 83 | 13.4 | 84.8 |
| 50 | Steckley 514A | 68.4 | 95 | 98 | 103 | 0 | 2 | 86 | 13.3 | 84.2 |
| 51 | Kansas 1358 | 68.2 | 95 | 100 | 105 | 0 | 0 | 86 | 14.6 | 84.4 |
| 52 | Pfister 1234 | 67.8 | 94 | 99 | 104 | 0 | 1 | 85 | 13.0 | 85.4 |
| 53 | Pfister 160 | 67.0 | 93 | 100 | 105 | 0 | 0 | 86 | 13.6 | 85.2 |
| 54 | Kansas 1646 | 66.2 | 92 | 100 | 105 | 0 | 0 | 82 | 14.2 | 83.3 |
| 55 | Kansas 2232 | 66.1 | 92 | 99 | 104 | 0 | 1 | 90 | 15.8 | 78.8 |
| 56 | Pioneer 334 | 65.8 | 91 | 99 | 104 | 0 | 1 | 88 | 13.2 | 84.8 |
| 57 | Kansas 1623 | 65.6 | 91 | 99 | 104 | 0 | 1 | 88 | 13.2 | 84.8 |
| 58 | Jewett 9 | 65.6 | 91 | 99 | 104 | 0 | 1 | 84 | 13.4 | 84.4 |
| 59 | Kansas 2216 | 64.6 | 90 | 100 | 105 | 0 | 0 | 85 | 16.8 | 77.2 |
| 60 | Pioneer 307 | 63.8 | 88 | 98 | 103 | 0 | 2 | 86 | 12.8 | 85.6 |
| 61 | Mangelsdorf 1001 | 62.6 | 87 | 97 | 102 | 0 | 3 | 68 | 14.5 | 84.4 |
| 62 | Hays Golden | 57.0 | 79 | 95 | 100 | 3 | 2 | 88 | 13.2 | 82.7 |
| Av. of 62 entries | | 72.1 | | 99 | | 0 | 1 | 88 | 13.9 | 83.7 |
| Av. of 3 adapted open-pollinated varieties* | | 72.1 | | 95 | | 3 | 2 | 92 | 15.5 | 82.2 |
| Av. of 58 hybrids | | 72.4 | | 99 | | 0 | 1 | 88 | 13.8 | 83.8 |

[1] Percent of 3 open-pollinated varieties.*

TABLE 11. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 2,** FRANKLIN COUNTY, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Funk G-149 | 80.9 | 118 | 97 | 104 | 0 | 3 | 92 | 12.8 | 83.3 |
| 2 | Funk G-150 | 79.7 | 116 | 97 | 104 | 0 | 3 | 87 | 14.4 | 82.4 |
| 3 | Kansas 2234 | 78.3 | 114 | 100 | 108 | 0 | 0 | 92 | 15.5 | 79.9 |
| 4 | Funk G-88 | 78.2 | 114 | 95 | 102 | 0 | 5 | 88 | 15.8 | 83.9 |
| 5 | Kansas 1585 | 77.1 | 112 | 98 | 105 | 0 | 2 | 91 | 16.0 | 81.6 |
| 6 | Kansas 1583 | 76.0 | 111 | 98 | 105 | 0 | 2 | 86 | 15.6 | 83.2 |
| 7 | Missouri 8 | 74.7 | 109 | 93 | 100 | 0 | 7 | 83 | 14.4 | 84.1 |
| 8 | Funk G-80 | 74.4 | 108 | 98 | 105 | 0 | 2 | 88 | 13.9 | 85.2 |
| 9 | Jewett 6 | 73.2 | 106 | 95 | 102 | 0 | 5 | 84 | 14.4 | 81.4 |
| | Differences in yield of less than 8.3 bushels an acre are not significant in this test. | | | | | | | | | |
| 10 | Reid Nat. 134 | 72.3 | 105 | 95 | 102 | 1 | 4 | 86 | 15.0 | 83.9 |
| 11* | Pride of Saline | 72.3 | 105 | 95 | 102 | 2 | 3 | 89 | 15.2 | 81.5 |
| 12 | Iowealth 25A | 71.4 | 104 | 98 | 105 | 0 | 2 | 84 | 14.3 | 84.2 |
| 13 | Funk G-135 | 71.2 | 104 | 95 | 102 | 0 | 5 | 86 | 15.3 | 82.4 |
| 14 | Jewett 12 | 71.2 | 104 | 94 | 101 | 0 | 6 | 86 | 13.7 | 82.0 |
| 15 | Multicross EMBRO 1 | 70.6 | 103 | 97 | 104 | 0 | 3 | 88 | 14.3 | 83.5 |
| 16 | Kansas 1614 | 70.5 | 103 | 97 | 104 | 1 | 2 | 76 | 16.0 | 82.0 |
| 17 | KK-88A | 70.4 | 103 | 96 | 103 | 0 | 4 | 79 | 15.7 | 83.1 |
| 18 | Missouri King 103 | 70.2 | 102 | 100 | 108 | 0 | 0 | 87 | 13.4 | 83.3 |
| 19 | K. I. H. 38 | 69.6 | 101 | 96 | 103 | 0 | 4 | 87 | 13.2 | 83.9 |
| 20 | Kansas 1712 | 68.4 | 100 | 98 | 105 | 0 | 2 | 84 | 13.0 | 84.9 |
| 21 | Reid-Midland | 68.1 | 99 | 98 | 105 | 0 | 2 | 82 | 16.9 | 81.1 |
| 22 | McCurdy 118M | 68.0 | 99 | 98 | 105 | 0 | 2 | 86 | 13.7 | 85.3 |
| 23 | Maygold 49 | 68.0 | 99 | 98 | 105 | 0 | 2 | 85 | 13.0 | 84.3 |
| 24* | Midland (A) | 68.0 | 99 | 90 | 97 | 5 | 5 | 88 | 16.5 | 83.0 |
| 25 | Kansas 1638 | 67.8 | 99 | 97 | 104 | 0 | 3 | 84 | 13.4 | 84.4 |
| 26 | K. I. H. 440 | 67.0 | 98 | 96 | 103 | 0 | 4 | 84 | 14.1 | 85.2 |
| 27 | Maygold 59 | 66.9 | 97 | 99 | 106 | 0 | 1 | 88 | 13.0 | 85.2 |
| 28 | Local entry (H) | 66.6 | 97 | 98 | 105 | 0 | 2 | 86 | 13.5 | 86.6 |
| 29 | U. S. 35 | 66.2 | 96 | 97 | 104 | 0 | 3 | 86 | 13.0 | 85.1 |
| 30 | Maygold 39 | 66.2 | 96 | 97 | 104 | 0 | 3 | 86 | 13.7 | 85.0 |
| 31 | Pioneer 332 | 66.1 | 96 | 96 | 103 | 0 | 4 | 82 | 14.5 | 86.7 |
| 32 | Illinois 200 | 65.9 | 96 | 98 | 105 | 0 | 2 | 83 | 14.1 | 83.7 |
| 33 | Funk G-94 | 65.9 | 96 | 100 | 108 | 0 | 0 | 82 | 13.0 | 85.5 |
| 34 | Iowealth TX 1 | 65.8 | 96 | 97 | 104 | 0 | 3 | 82 | 16.3 | 75.4 |
| 35* | Midland (C) | 65.8 | 96 | 94 | 101 | 4 | 2 | 84 | 16.1 | 82.8 |
| 36 | Midwest 23 | 65.7 | 96 | 97 | 104 | 0 | 3 | 83 | 13.6 | 83.8 |
| 37 | U. S. 13 | 65.6 | 95 | 100 | 108 | 0 | 0 | 84 | 13.7 | 84.8 |
| 38 | Kansas 1358 | 65.0 | 94 | 100 | 108 | 0 | 0 | 81 | 14.4 | 85.7 |
| 39 | Steckley 790 | 65.0 | 94 | 99 | 106 | 0 | 1 | 82 | 14.1 | 84.6 |
| 40 | Pfister 1234 | 64.9 | 94 | 99 | 106 | 0 | 1 | 81 | 13.7 | 85.2 |
| 41 | Carlson C 20A | 64.9 | 94 | 100 | 108 | 0 | 0 | 84 | 13.0 | 85.9 |
| 42 | Pioneer 300 | 64.7 | 94 | 98 | 105 | 0 | 2 | 87 | 14.6 | 84.2 |
| 43 | Kansas 2232 | 64.3 | 94 | 98 | 105 | 0 | 2 | 88 | 16.2 | 79.5 |
| 44 | Funk G-169 | 64.1 | 93 | 99 | 106 | 0 | 1 | 86 | 13.0 | 84.0 |
| 45 | Kansas 1104 | 64.1 | 93 | 100 | 108 | 0 | 0 | 81 | 14.8 | 84.7 |
| 46 | Kansas 1466 | 64.1 | 93 | 98 | 105 | 0 | 2 | 86 | 14.4 | 84.6 |
| 47 | Stephens Blend | 64.0 | 93 | 100 | 108 | 0 | 0 | 80 | 14.4 | 82.4 |
| 48 | Jewett 9 | 63.9 | 93 | 98 | 105 | 0 | 2 | 84 | 13.2 | 85.7 |
| 49 | Reid Nat. 129 | 63.5 | 92 | 99 | 106 | 0 | 1 | 81 | 13.9 | 83.8 |
| 50 | McCurdy 124M | 63.3 | 92 | 100 | 108 | 0 | 0 | 82 | 13.0 | 84.3 |
| 51 | Pfister 160 | 62.9 | 92 | 99 | 106 | 0 | 1 | 84 | 14.4 | 86.1 |
| 52 | McCurdy 123M | 62.4 | 91 | 100 | 108 | 0 | 0 | 81 | 14.0 | 84.2 |
| 53 | Steckley 514A | 62.3 | 91 | 97 | 104 | 0 | 3 | 85 | 13.8 | 84.3 |
| 54 | Steckley 523 | 62.2 | 91 | 93 | 100 | 0 | 7 | 80 | 13.2 | 85.7 |
| 55 | Pfister 2834 | 62.1 | 90 | 98 | 105 | 0 | 2 | 82 | 13.7 | 86.0 |
| 56 | KK-77 | 61.1 | 89 | 97 | 104 | 0 | 3 | 78 | 14.1 | 84.9 |
| 57 | Kansas 1623 | 61.0 | 89 | 98 | 105 | 0 | 2 | 83 | 13.8 | 84.9 |
| 58 | Mangelsdorf 1001 | 59.2 | 86 | 94 | 101 | 0 | 6 | 69 | 14.6 | 83.7 |
| 59 | Kansas 1646 | 59.0 | 86 | 100 | 108 | 0 | 0 | 75 | 14.0 | 83.6 |
| 60 | Kansas 2216 | 57.8 | 84 | 99 | 106 | 0 | 1 | 79 | 17.3 | 77.4 |
| 61 | Pioneer 334 | 57.6 | 84 | 98 | 105 | 0 | 2 | 84 | 13.2 | 84.5 |
| 62 | Pioneer 307 | 57.3 | 83 | 97 | 104 | 0 | 3 | 82 | 13.2 | 85.0 |
| 63 | Hays Golden | 56.9 | 83 | 90 | 97 | 6 | 4 | 89 | 13.6 | 82.8 |
| Av. of 63 entries | | 67.0 | | 97 | | 0 | 3 | 84 | 14.3 | 83.7 |
| Av. of 3 adapted open-pollinated varieties* | | 68.7 | | 93 | | 4 | 3 | 87 | 15.9 | 82.4 |
| Av. of 59 hybrids | | 67.1 | | 98 | | 0 | 2 | 84 | 14.2 | 83.8 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 12. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 2,** ANDERSON COUNTY, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Funk G-149 | 92.3 | 122 | 100 | 103 | 0 | 0 | 98 | 12.2 | 84.4 |
| 2 | Kansas 1585 | 90.9 | 120 | 98 | 101 | 2 | 0 | 98 | 14.6 | 83.7 |
| 3 | Funk G-135 | 87.2 | 115 | 100 | 103 | 0 | 0 | 95 | 13.8 | 85.3 |
| 4 | Funk G-150 | 87.1 | 115 | 100 | 103 | 0 | 0 | 96 | 12.8 | 83.6 |
| 5 | Reid Nat. 134 | 86.7 | 115 | 100 | 103 | 0 | 0 | 91 | 14.4 | 85.0 |
| 6 | Illinois 200 | 86.6 | 114 | 100 | 103 | 0 | 0 | 98 | 13.1 | 84.7 |
| | Differences in yield of less than 6.5 bushels an acre are not significant in this test. | | | | | | | | | |
| 7 | Jewett 6 | 84.4 | 112 | 98 | 101 | 0 | 2 | 94 | 13.7 | 83.1 |
| 8 | U. S. 13 | 83.5 | 110 | 100 | 103 | 0 | 0 | 96 | 13.0 | 85.4 |
| 9 | K. I. H. 38 | 82.1 | 108 | 100 | 103 | 0 | 0 | 94 | 12.8 | 85.7 |
| 10 | Midwest 23 | 81.2 | 107 | 100 | 103 | 0 | 0 | 95 | 12.7 | 83.7 |
| 11 | Funk G-80 | 81.0 | 107 | 100 | 103 | 0 | 0 | 90 | 13.8 | 84.7 |
| 12 | Reid-Midland | 80.9 | 107 | 100 | 103 | 0 | 0 | 86 | 15.9 | 84.1 |
| 13 | McCurdy 118M | 80.5 | 106 | 99 | 102 | 0 | 1 | 95 | 12.8 | 85.6 |
| 14 | U. S. 35 | 80.4 | 106 | 99 | 102 | 0 | 1 | 95 | 12.4 | 85.3 |
| 15 | Jewett 12 | 80.2 | 106 | 98 | 101 | 0 | 2 | 90 | 13.2 | 82.9 |
| 16 | Kansas 1583 | 80.1 | 106 | 100 | 103 | 0 | 0 | 90 | 14.1 | 82.9 |
| 17 | Kansas 2234 | 79.9 | 106 | 100 | 103 | 0 | 0 | 89 | 14.5 | 81.1 |
| 18 | K. I. H. 440 | 79.7 | 105 | 100 | 103 | 0 | 0 | 96 | 12.5 | 83.9 |
| 19 | Funk G-88 | 79.6 | 105 | 100 | 103 | 0 | 0 | 88 | 15.7 | 83.8 |
| 20 | McCurdy 124M | 79.4 | 105 | 100 | 103 | 0 | 0 | 90 | 13.1 | 85.1 |
| 21 | KK-88A | 79.3 | 105 | 100 | 103 | 0 | 0 | 88 | 15.3 | 84.3 |
| 22 | McCurdy 123M | 79.2 | 105 | 99 | 102 | 0 | 1 | 96 | 13.0 | 85.3 |
| 23 | Maygold 39 | 78.9 | 104 | 100 | 103 | 0 | 0 | 93 | 12.4 | 83.4 |
| 24 | Carlson C 20A | 78.8 | 104 | 100 | 103 | 0 | 0 | 92 | 12.4 | 84.6 |
| 25 | Pioneer 300 | 78.7 | 104 | 100 | 103 | 0 | 0 | 98 | 12.5 | 83.7 |
| 26 | Kansas 1614 | 78.5 | 104 | 100 | 103 | 0 | 0 | 88 | 15.9 | 80.7 |
| 27 | Funk G-94 | 78.3 | 104 | 100 | 103 | 0 | 0 | 92 | 12.8 | 83.5 |
| 28 | Stephens Blend | 78.2 | 103 | 100 | 103 | 0 | 0 | 94 | 13.1 | 82.9 |
| 29* | Pride of Saline | 78.1 | 103 | 99 | 102 | 0 | 1 | 98 | 14.6 | 80.9 |
| 30 | Steckley 790 | 77.9 | 103 | 100 | 103 | 0 | 0 | 92 | 13.2 | 83.6 |
| 31 | Kansas 1638 | 77.3 | 102 | 100 | 103 | 0 | 0 | 92 | 13.5 | 84.2 |
| 32 | Steckley 523 | 77.1 | 102 | 100 | 103 | 0 | 0 | 96 | 11.9 | 85.5 |
| 33 | Reid Nat. 129 | 77.0 | 102 | 100 | 103 | 0 | 0 | 92 | 13.3 | 84.1 |
| 34 | Kansas 1712 | 76.8 | 102 | 100 | 103 | 0 | 0 | 88 | 12.8 | 84.9 |
| 35 | Pfister 2834 | 76.7 | 101 | 100 | 103 | 0 | 0 | 92 | 12.9 | 86.0 |
| 36* | Midland (C) | 76.6 | 101 | 96 | 99 | 3 | 1 | 94 | 15.1 | 82.5 |
| 37 | Iowealth TX 1 | 76.5 | 101 | 99 | 102 | 0 | 1 | 84 | 15.3 | 83.3 |
| 38 | Missouri King 103 | 76.5 | 101 | 100 | 103 | 0 | 0 | 87 | 13.0 | 82.8 |
| 39 | Missouri 8 | 75.7 | 100 | 100 | 103 | 0 | 0 | 94 | 13.8 | 83.4 |
| 40 | KK-77 | 75.6 | 100 | 100 | 103 | 0 | 0 | 88 | 12.8 | 84.8 |
| 41 | Maygold 49 | 75.6 | 100 | 100 | 103 | 0 | 0 | 94 | 12.8 | 85.1 |
| 42 | Multicross EMBRO 1 | 75.6 | 100 | 100 | 103 | 0 | 0 | 92 | 13.1 | 83.9 |
| 43 | Iowealth 25A | 75.5 | 100 | 100 | 103 | 0 | 0 | 82 | 13.8 | 83.9 |
| 44 | Local entry (H) | 75.1 | 99 | 100 | 103 | 0 | 0 | 89 | 13.8 | 84.9 |
| 45 | Kansas 1466 | 75.0 | 99 | 100 | 103 | 0 | 0 | 95 | 13.5 | 83.9 |
| 46 | Steckley 514A | 74.5 | 98 | 100 | 103 | 0 | 0 | 86 | 12.8 | 84.0 |
| 47 | Kansas 1104 | 74.1 | 98 | 100 | 103 | 0 | 0 | 95 | 13.5 | 82.8 |
| 48 | Pioneer 332 | 74.0 | 98 | 100 | 103 | 0 | 0 | 95 | 13.1 | 84.5 |
| 49 | Pioneer 334 | 73.9 | 98 | 100 | 103 | 0 | 0 | 92 | 13.1 | 85.0 |
| 50 | Maygold 59 | 73.9 | 98 | 100 | 103 | 0 | 0 | 96 | 12.4 | 84.6 |
| 51 | Funk G-169 | 73.8 | 98 | 100 | 103 | 0 | 0 | 86 | 12.7 | 82.3 |
| 52 | Kansas 1646 | 73.5 | 97 | 100 | 103 | 0 | 0 | 88 | 14.5 | 83.0 |
| 53* | Midland (A) | 72.1 | 95 | 98 | 101 | 2 | 0 | 95 | 15.3 | 82.4 |
| 54 | Kansas 2216 | 71.4 | 94 | 100 | 103 | 0 | 0 | 91 | 16.4 | 77.0 |
| 55 | Kansas 1358 | 71.3 | 94 | 100 | 103 | 0 | 0 | 92 | 14.7 | 83.2 |
| 56 | Pfister 160 | 71.1 | 94 | 100 | 103 | 0 | 0 | 88 | 12.9 | 84.3 |
| 57 | Pfister 1234 | 70.7 | 94 | 99 | 102 | 0 | 1 | 89 | 12.3 | 85.6 |
| 58 | Pioneer 307 | 70.4 | 93 | 100 | 103 | 0 | 0 | 89 | 12.5 | 86.1 |
| 59 | Kansas 1623 | 70.2 | 93 | 100 | 103 | 0 | 0 | 94 | 12.6 | 84.7 |
| 60 | Kansas 2232 | 67.9 | 90 | 100 | 103 | 0 | 0 | 92 | 15.5 | 78.0 |
| 61 | Jewett 9 | 67.4 | 89 | 100 | 103 | 0 | 0 | 84 | 13.5 | 83.0 |
| 62 | Mangelsdorf 1001 | 65.9 | 87 | 100 | 103 | 0 | 0 | 67 | 14.4 | 85.2 |
| 63 | Hays Golden | 57.1 | 76 | 100 | 103 | 0 | 0 | 88 | 12.8 | 82.6 |
| | Av. of 63 entries | 77.2 | | 100 | | 0 | 0 | 91 | 13.5 | 83.8 |
| | Av. of 3 adapted open-pollinated varieties* | 75.6 | | 97 | | 2 | 1 | 96 | 15.0 | 81.9 |
| | Av. of 59 hybrids | 77.6 | | 100 | | 0 | 0 | 91 | 13.5 | 83.9 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 13. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 2,** TWO-YEAR AVERAGE, 1941-1942.

| Rank in yield | Hybrid or variety | Average of all tests | | | | Moisture | Upland | | Bottom land | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Yield | | Erect plants | | | Yield per acre | Rank in yield | Yield per acre | Rank in yield |
| | | Per acre | % of O. P.[1] | Total | % of O. P.[1] | | | | | |
| | | Bu. | % | % | % | % | Bu. | | Bu. | |
| 1 | Funk G-150 | 78.2 | 119 | 72 | 101 | 17.2 | 67.8 | 1 | 88.6 | 1 |
| 2 | Funk G-149 | 75.4 | 115 | 82 | 115 | 15.4 | 64.8 | 3 | 86.0 | 3 |
| 3 | Kansas 1585 | 75.0 | 114 | 82 | 115 | 17.2 | 62.0 | 7 | 88.0 | 2 |
| 4 | Funk G-135 | 72.3 | 110 | 81 | 114 | 16.9 | 61.8 | 8 | 82.9 | 4 |
| 5 | Funk G-88 | 72.2 | 110 | 86 | 121 | 18.2 | 65.0 | 2 | 79.4 | 7 |
| 6 | Jewett 6 | 70.6 | 108 | 63 | 89 | 19.1 | 63.3 | 5 | 77.8 | 10 |
| 7 | Reid-Midland | 70.0 | 107 | 78 | 110 | 19.2 | 62.2 | 6 | 80.3 | 6 |
| 8 | Missouri 8 | 70.0 | 107 | 74 | 104 | 17.0 | 63.4 | 4 | 76.8 | 13 |
| 9 | KK-88A | 70.0 | 107 | 79 | 111 | 17.2 | 60.8 | 9 | 79.4 | 8 |
| 10 | Illinois 200 | 69.6 | 106 | 80 | 113 | 15.6 | 56.7 | 18 | 82.6 | 5 |
| 11 | Iowealth TX 1 | 68.4 | 104 | 78 | 110 | 18.5 | 58.2 | 12 | 78.5 | 9 |
| 12 | K. I. H. 38 | 68.2 | 104 | 73 | 103 | 15.6 | 58.2 | 13 | 77.6 | 11 |
| 13 | Kansas 1104 | 67.0 | 102 | 82 | 115 | 16.8 | 59.8 | 10 | 74.4 | 15 |
| 14 | U. S. 13 | 66.3 | 101 | 85 | 120 | 15.5 | 57.2 | 15 | 75.3 | 14 |
| 15* | Pride of Saline | 65.6 | 100 | 67 | 94 | 17.6 | 57.0 | 16 | 74.1 | 17 |
| 16* | Midland (A) | 65.6 | 100 | 76 | 107 | 17.7 | 58.5 | 11 | 72.6 | 23 |
| 17* | Midland (C) | 65.6 | 100 | 70 | 99 | 18.0 | 54.0 | 26 | 77.2 | 12 |
| 18 | Kansas 1466 | 65.6 | 100 | 84 | 118 | 16.5 | 56.8 | 17 | 74.2 | 16 |
| 19 | McCurdy 123M | 64.8 | 99 | 86 | 121 | 15.6 | 56.4 | 21 | 73.2 | 18 |
| 20 | Kansas 1638 | 64.8 | 99 | 84 | 118 | 15.4 | 57.8 | 14 | 71.8 | 25 |
| 21 | Funk G-94 | 64.8 | 99 | 86 | 121 | 15.2 | 56.6 | 19 | 73.0 | 20 |
| 22 | Pioneer 300 | 64.2 | 98 | 80 | 113 | 16.0 | 56.5 | 20 | 72.0 | 24 |
| 23 | McCurdy 124M | 64.1 | 98 | 79 | 111 | 15.5 | 55.4 | 24 | 72.8 | 21 |
| 24 | McCurdy 118M | 63.6 | 97 | 78 | 110 | 15.7 | 54.4 | 25 | 72.8 | 22 |
| 25 | Kansas 2232 | 63.4 | 97 | 80 | 113 | 17.5 | 53.6 | 28 | 73.2 | 19 |
| 26 | U. S. 35 | 62.8 | 96 | 78 | 110 | 16.0 | 55.7 | 22 | 69.9 | 28 |
| 27 | Steckley 523 | 62.3 | 95 | 67 | 94 | 16.2 | 53.3 | 30 | 71.4 | 26 |
| 28 | KK-77 | 61.4 | 94 | 81 | 114 | 15.4 | 53.6 | 29 | 69.1 | 30 |
| 29 | Pioneer 334 | 60.6 | 92 | 74 | 104 | 15.2 | 51.5 | 33 | 69.6 | 29 |
| 30 | Kansas 2216 | 60.4 | 92 | 78 | 110 | 18.7 | 50.1 | 34 | 70.6 | 27 |
| 31 | Pioneer 332 | 60.3 | 92 | 76 | 107 | 16.7 | 55.6 | 23 | 65.0 | 33 |
| 32 | Mangelsdorf 1001 | 60.0 | 91 | 66 | 93 | 18.6 | 54.0 | 27 | 65.8 | 31 |
| 33 | Pioneer 307 | 58.8 | 90 | 78 | 110 | 15.8 | 51.8 | 32 | 65.8 | 32 |
| 34 | Pfister 160 | 57.2 | 87 | 73 | 103 | 15.8 | 52.2 | 31 | 62.2 | 34 |
| 35 | Hays Golden | 48.0 | 73 | 68 | 96 | 17.8 | 45.8 | 35 | 50.2 | 35 |
| Av. of 35 entries | | 65.5 | | 77 | | 16.8 | 57.2 | | 73.9 | |
| Av. of 3 adapted open-pollinated varieties* | | 65.6 | | 71 | | 17.8 | 56.5 | | 74.6 | |
| Av. of 30 hybrids | | 66.0 | | 78 | | 16.6 | 57.6 | | 74.6 | |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 14. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 2,** THREE-YEAR AVERAGE, 1940-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | Illinois 200 | 60.4 | 112 | 83 | 119 | 15.5 |
| 2 | Reid Nat. 134 | 59.7 | 111 | 68 | 97 | 17.6 |
| 3 | Funk G-135 | 59.5 | 110 | 83 | 119 | 16.9 |
| 4 | Funk G-88 | 59.3 | 110 | 87 | 124 | 18.1 |
| 5 | Missouri 8 | 59.2 | 110 | 75 | 107 | 17.2 |
| 6 | K. I. H. 38 | 58.5 | 108 | 75 | 107 | 15.3 |
| 7 | Kansas 1104 | 57.6 | 107 | 83 | 119 | 16.7 |
| 8 | U. S. 13 | 57.3 | 106 | 86 | 123 | 15.4 |
| 9 | Kansas 1466 | 57.1 | 106 | 82 | 117 | 16.3 |
| 10 | Funk G-94 | 55.6 | 103 | 87 | 124 | 15.2 |
| 11 | U. S. 35 | 55.1 | 102 | 80 | 114 | 15.9 |
| 12* | Midland (A) | 54.9 | 102 | 74 | 106 | 17.8 |
| 13 | Kansas 2232 | 54.8 | 102 | 79 | 113 | 17.3 |
| 14 | Pioneer 332 | 54.0 | 100 | 77 | 110 | 16.6 |
| 15 | KK-77 | 53.9 | 100 | 83 | 119 | 15.3 |
| 16* | Midland (C) | 53.9 | 100 | 68 | 97 | 18.0 |
| 17* | Pride of Saline | 53.1 | 98 | 68 | 97 | 17.5 |
| 18 | Pioneer 334 | 52.7 | 98 | 76 | 109 | 15.2 |
| 19 | Pioneer 307 | 51.5 | 95 | 79 | 113 | 15.8 |
| 20 | Pfister 160 | 50.3 | 93 | 72 | 103 | 15.7 |
| 21 | Hays Golden | 42.1 | 78 | 66 | 94 | 17.7 |
| Av. of 21 entries | | 55.3 | | 78 | | 16.5 |
| Av. of 3 adapted open-pollinated varieties* | | 54.0 | | 70 | | 17.8 |
| Av. of 17 hybrids | | 56.3 | | 80 | | 16.2 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 15. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 2,** FOUR-YEAR AVERAGE, 1939-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | Illinois 200 | 46.8 | 121 | 89 | 111 | 13.6 |
| 2 | Funk G-94 | 46.7 | 121 | 89 | 111 | 13.6 |
| 3 | U. S. 35 | 45.7 | 118 | 86 | 107 | 13.0 |
| 4 | U. S. 13 | 45.2 | 117 | 90 | 112 | 13.6 |
| 5 | Missouri 8 | 44.8 | 116 | 83 | 103 | 15.4 |
| 6 | KK-77 | 43.9 | 114 | 88 | 110 | 13.6 |
| 7 | Pioneer 307 | 43.7 | 113 | 91 | 114 | 13.8 |
| 8 | Funk G-135 | 42.4 | 110 | 90 | 112 | 15.7 |
| 9* | Midland (A) | 40.4 | 105 | 82 | 102 | 16.8 |
| 10* | Pride of Saline | 38.8 | 100 | 81 | 101 | 14.8 |
| 11* | Midland (C) | 36.7 | 95 | 78 | 97 | 17.8 |
| 12 | Hays Golden | 35.8 | 93 | 76 | 95 | 14.3 |
| Av. of all 12 entries | | 42.6 | | 85 | | 14.7 |
| Av. of 3 adapted open-pollinated varieties* | | 38.6 | | 80 | | 16.5 |
| Av. of 8 hybrids | | 44.9 | | 88 | | 14.0 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 16. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 3,** NEOSHO COUNTY, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Funk G-88 | 52.1 | 123 | 97 | 104 | 0 | 3 | 86 | 19.8 | 81.2 |
| 2 | Kansas 2234 | 51.6 | 121 | 99 | 106 | 1 | 0 | 85 | 19.1 | 76.6 |
| 3 | Funk G-149 | 48.8 | 115 | 98 | 105 | 0 | 2 | 84 | 15.6 | 81.8 |
| 4 | Illinois 200 | 47.9 | 113 | 96 | 103 | 1 | 3 | 86 | 15.6 | 84.2 |
| 5 | Funk G-135 | 47.6 | 112 | 97 | 104 | 0 | 3 | 82 | 18.3 | 82.0 |
| 6 | Jewett 20 | 47.3 | 111 | 94 | 101 | 3 | 3 | 77 | 16.8 | 79.3 |
| 7 | Kansas 1585 | 47.2 | 111 | 99 | 106 | 1 | 0 | 80 | 19.8 | 80.2 |
| 8 | Kansas 2216 | 46.5 | 109 | 96 | 103 | 1 | 3 | 81 | 18.4 | 77.0 |
| 9 | Kansas 2232 | 46.4 | 109 | 98 | 105 | 0 | 2 | 84 | 17.0 | 77.3 |
| 10 | Funk G-150 | 46.0 | 108 | 96 | 103 | 1 | 3 | 81 | 16.4 | 82.6 |
| 11 | Kansas 1614 | 45.8 | 108 | 96 | 103 | 2 | 2 | 76 | 18.4 | 81.2 |
| 12 | Jewett 6 | 45.6 | 107 | 84 | 90 | 5 | 11 | 81 | 16.4 | 82.2 |
| 13 | Jewett 12 | 45.1 | 106 | 82 | 88 | 4 | 14 | 78 | 16.7 | 82.2 |
| 14 | Kansas 1583 | 45.0 | 106 | 96 | 103 | 1 | 3 | 82 | 19.2 | 81.1 |
| 15 | Keystone 38 | 43.4 | 102 | 94 | 101 | 1 | 5 | 83 | 14.9 | 85.1 |
| 16 | U. S. 35 | 43.0 | 101 | 94 | 101 | 0 | 6 | 80 | 15.4 | 84.0 |
| 17 | Iowealth TX 1 | 43.0 | 101 | 96 | 103 | 1 | 3 | 71 | 19.3 | 80.4 |
| 18* | Pride of Saline | 42.9 | 101 | 88 | 95 | 6 | 6 | 78 | 18.7 | 78.5 |
| 19 | Reid-Midland | 42.9 | 101 | 95 | 102 | 2 | 3 | 78 | 20.6 | 78.3 |
| 20 | Missouri 8 | 42.8 | 101 | 95 | 102 | 3 | 2 | 76 | 17.8 | 81.5 |
| 21 | Funk G-80 | 42.7 | 100 | 98 | 105 | 0 | 2 | 80 | 15.9 | 83.2 |
| 22 | K. I. H. 440 | 42.6 | 100 | 81 | 87 | 1 | 18 | 74 | 14.5 | 83.6 |
| 23* | Midland (C) | 42.4 | 100 | 96 | 103 | 3 | 1 | 81 | 19.0 | 80.7 |
| 24 | Multicross EMBRO 1 | 42.4 | 100 | 98 | 105 | 0 | 2 | 75 | 16.6 | 82.4 |
| 25* | Midland (A) | 42.3 | 100 | 96 | 103 | 2 | 2 | 75 | 19.7 | 81.2 |
| 26 | KK-88A | 42.2 | 99 | 96 | 103 | 1 | 3 | 78 | 18.1 | 81.2 |
| 27 | Mangelsdorf 1001 | 42.0 | 99 | 98 | 105 | 0 | 2 | 72 | 17.2 | 81.6 |
| 28 | Kansas 1358 | 41.8 | 98 | 98 | 105 | 0 | 2 | 74 | 18.6 | 83.4 |
| 29 | Kansas 1712 | 41.7 | 98 | 93 | 100 | 0 | 7 | 81 | 16.0 | 82.9 |
| 30 | McCurdy 123M | 41.7 | 98 | 96 | 103 | 0 | 4 | 86 | 15.8 | 84.2 |
| 31 | U. S. 13 | 41.6 | 98 | 90 | 97 | 0 | 10 | 84 | 15.1 | 84.6 |
| 32 | Kansas 1104 | 41.0 | 96 | 96 | 103 | 2 | 2 | 78 | 16.1 | 83.1 |
| 33 | K. I. H. 38 | 41.0 | 96 | 85 | 91 | 1 | 14 | 78 | 15.2 | 84.8 |
| 34 | Kansas 1466 | 40.6 | 96 | 99 | 106 | 0 | 1 | 76 | 16.5 | 81.0 |
| 35 | Pioneer 332 | 40.6 | 96 | 96 | 103 | 1 | 3 | 78 | 15.3 | 85.5 |
| 36 | Kansas 1646 | 39.4 | 93 | 99 | 106 | 0 | 1 | 73 | 17.4 | 82.8 |
| 37 | Missouri King 103 | 38.8 | 91 | 99 | 106 | 1 | 0 | 77 | 16.2 | 81.8 |
| 38 | Pioneer 300 | 38.7 | 91 | 96 | 103 | 0 | 4 | 79 | 15.0 | 85.0 |
| 39 | Kansas 1623 | 37.7 | 89 | 96 | 103 | 2 | 2 | 77 | 15.4 | 85.6 |
| 40 | Kansas 1638 | 37.6 | 88 | 96 | 103 | 1 | 3 | 78 | 16.2 | 83.3 |
| 41 | Funk G-53 | 37.5 | 88 | 96 | 103 | 0 | 4 | 80 | 14.3 | 83.0 |
| 42 | Pioneer 307 | 34.7 | 82 | 99 | 106 | 0 | 1 | 78 | 15.6 | 85.3 |
| 43 | Pioneer 334 | 33.3 | 78 | 94 | 101 | 1 | 5 | 76 | 14.5 | 82.2 |
| 44 | Hays Golden | 33.0 | 78 | 92 | 99 | 3 | 5 | 74 | 16.6 | 80.6 |
| Av. of 44 entries | | 42.7 | | 95 | | 1 | 4 | 79 | 16.9 | 82.0 |
| Av. of 3 adapted open-pollinated varieties* | | 42.5 | | 93 | | 4 | 3 | 78 | 19.1 | 80.1 |
| Av. of 40 hybrids | | 42.9 | | 95 | | 1 | 4 | 79 | 16.8 | 82.2 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 17. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 3,** NEOSHO COUNTY, PARSONS, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Funk G-88 | 66.6 | 123 | 97 | 105 | 1 | 2 | 86 | 21.1 | 81.6 |
| 2 | Kansas 2234 | 63.0 | 116 | 100 | 109 | 0 | 0 | 80 | 20.4 | 76.0 |
| 3 | Funk G-135 | 62.9 | 116 | 99 | 108 | 1 | 0 | 84 | 19.3 | 80.8 |
| 4 | Funk G-149 | 62.3 | 115 | 99 | 108 | 0 | 1 | 82 | 15.8 | 81.6 |
| 5 | Funk G-150 | 61.6 | 114 | 99 | 108 | 0 | 1 | 82 | 18.3 | 81.2 |
| 6 | Illinois 200 | 60.4 | 111 | 97 | 105 | 2 | 1 | 85 | 16.8 | 83.7 |
| 7 | Jewett 12 | 59.7 | 110 | 93 | 101 | 1 | 6 | 81 | 17.6 | 81.4 |
| 8 | Jewett 6 | 59.5 | 110 | 87 | 95 | 8 | 5 | 77 | 17.4 | 81.8 |
| 9 | Kansas 1614 | 59.1 | 109 | 92 | 100 | 5 | 3 | 73 | 19.3 | 80.9 |
| | Differences in yield of less than 7.5 bushels an acre are not significant in this test. | | | | | | | | | |
| 10 | Kansas 1585 | 58.8 | 109 | 97 | 105 | 2 | 1 | 78 | 21.7 | 80.8 |
| 11 | Jewett 20 | 58.8 | 109 | 96 | 104 | 3 | 1 | 76 | 16.6 | 79.0 |
| 12 | Kansas 2216 | 58.7 | 108 | 96 | 104 | 2 | 2 | 84 | 18.7 | 76.2 |
| 13 | Kansas 1583 | 58.3 | 108 | 95 | 103 | 3 | 2 | 83 | 20.4 | 78.4 |
| 14 | K. I. H. 440 | 57.4 | 106 | 96 | 104 | 1 | 3 | 71 | 15.1 | 84.0 |
| 15 | Local Entry (V) | 57.0 | 105 | 89 | 97 | 10 | 1 | 70 | 22.6 | 74.4 |
| 16 | Multicross EMBRO 1 | 56.7 | 105 | 98 | 107 | 0 | 2 | 79 | 17.8 | 82.9 |
| 17 | Kansas 2232 | 56.2 | 104 | 96 | 104 | 1 | 3 | 78 | 16.9 | 76.8 |
| 18* | Midland (A) | 55.2 | 102 | 95 | 103 | 3 | 2 | 78 | 19.0 | 82.9 |
| 19 | Funk G-80 | 55.1 | 102 | 98 | 106 | 1 | 1 | 78 | 16.0 | 83.7 |
| 20 | Reid-Midland | 55.0 | 102 | 94 | 102 | 3 | 3 | 76 | 20.4 | 79.9 |
| 21* | Midland (C) | 54.2 | 100 | 94 | 102 | 4 | 2 | 82 | 20.4 | 81.0 |
| 22 | McCurdy 123M | 54.0 | 100 | 99 | 108 | 1 | 0 | 82 | 17.0 | 83.0 |
| 23 | Missouri 8 | 53.9 | 99 | 96 | 104 | 1 | 3 | 76 | 18.7 | 79.7 |
| 24 | Kansas 1358 | 53.4 | 98 | 98 | 106 | 0 | 2 | 74 | 18.4 | 82.5 |
| 25 | Kansas 1712 | 53.3 | 98 | 99 | 108 | 0 | 1 | 78 | 17.2 | 81.1 |
| 26 | U. S. 35 | 53.3 | 98 | 98 | 107 | 1 | 1 | 80 | 14.9 | 85.4 |
| 27* | Pride of Saline | 53.3 | 98 | 86 | 94 | 11 | 3 | 75 | 20.6 | 77.2 |
| 28 | Keystone 38 | 53.2 | 98 | 93 | 101 | 2 | 5 | 78 | 15.8 | 85.4 |
| 29 | Iowealth TX 1 | 52.7 | 97 | 95 | 103 | 2 | 3 | 74 | 19.6 | 80.5 |
| 30 | Mangelsdorf 1001 | 52.6 | 97 | 97 | 105 | 1 | 2 | 72 | 19.6 | 81.5 |
| 31 | Pioneer 332 | 52.2 | 96 | 97 | 105 | 0 | 3 | 76 | 16.6 | 84.3 |
| 32 | Missouri King 103 | 52.2 | 96 | 99 | 108 | 0 | 1 | 76 | 17.4 | 80.9 |
| 33 | Kansas 1466 | 51.8 | 96 | 99 | 108 | 0 | 1 | 72 | 17.4 | 80.5 |
| 34 | K. I. H. 38 | 51.3 | 95 | 90 | 98 | 2 | 8 | 72 | 16.3 | 84.4 |
| 35 | KK-88A | 51.2 | 95 | 95 | 103 | 2 | 3 | 75 | 20.2 | 80.1 |
| 36 | Kansas 1646 | 50.9 | 94 | 99 | 108 | 0 | 1 | 74 | 19.8 | 81.4 |
| 37 | U. S. 13 | 50.7 | 94 | 94 | 102 | 1 | 5 | 77 | 15.8 | 83.4 |
| 38 | Kansas 1104 | 50.7 | 94 | 94 | 102 | 4 | 2 | 73 | 17.8 | 81.5 |
| 39 | Pioneer 300 | 49.5 | 91 | 96 | 104 | 0 | 4 | 70 | 16.0 | 87.9 |
| 40 | Kansas 1638 | 48.7 | 90 | 96 | 104 | 3 | 1 | 76 | 18.0 | 82.2 |
| 41 | Funk G-53 | 48.5 | 90 | 99 | 108 | 0 | 1 | 78 | 14.6 | 83.1 |
| 42 | Kansas 1623 | 48.2 | 89 | 96 | 104 | 3 | 1 | 74 | 16.9 | 84.5 |
| 43 | Pioneer 307 | 45.1 | 83 | 99 | 108 | 0 | 1 | 76 | 16.9 | 85.1 |
| 44 | Pioneer 334 | 44.8 | 83 | 97 | 105 | 1 | 2 | 73 | 14.8 | 83.4 |
| 45 | Hays Golden | 43.8 | 81 | 92 | 100 | 6 | 2 | 73 | 17.8 | 80.7 |
| Av. of 45 entries | | 54.6 | | 96 | | 2 | 2 | 77 | 18.0 | 81.5 |
| Av. of 3 adapted open-pollinated varieties* | | 54.2 | | 92 | | 6 | 2 | 78 | 20.0 | 80.4 |
| Av. of 40 hybrids | | 54.8 | | 96 | | 2 | 2 | 77 | 17.7 | 81.8 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 18. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 3,** NEOSHO COUNTY, CHANUTE, 1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Moisture | Shelling |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | Root | Stalk | | | |
| | | Bu. | % | % | % | % | % | % | % | % |
| 1 | Kansas 2234 | 40.2 | 131 | 98 | 104 | 2 | 0 | 90 | 17.8 | 77.1 |
| 2 | Funk G-88 | 37.6 | 122 | 97 | 103 | 0 | 3 | 87 | 18.4 | 80.9 |
| 3 | Kansas 2232 | 36.5 | 119 | 99 | 105 | 0 | 1 | 89 | 17.2 | 77.8 |
| 4 | Jewett 20 | 35.8 | 116 | 92 | 98 | 3 | 5 | 78 | 17.0 | 79.6 |
| 5 | Kansas 1585 | 35.7 | 116 | 100 | 106 | 0 | 0 | 82 | 18.0 | 79.5 |
| 6 | Illinois 200 | 35.4 | 115 | 95 | 101 | 1 | 4 | 87 | 14.4 | 84.6 |
| 7 | Funk G-149 | 35.3 | 115 | 97 | 103 | 1 | 2 | 85 | 15.5 | 81.9 |
| 8 | Kansas 2216 | 34.4 | 112 | 96 | 102 | 0 | 4 | 78 | 18.0 | 77.8 |
| 9 | Keystone 38 | 33.7 | 109 | 94 | 100 | 0 | 6 | 88 | 14.0 | 84.8 |
| 10 | Iowealth TX 1 | 33.4 | 108 | 98 | 104 | 0 | 2 | 68 | 19.0 | 80.4 |
| 11 | KK-88A | 33.3 | 108 | 96 | 102 | 1 | 3 | 80 | 16.0 | 82.3 |
| | Differences in yield of less than 7.0 bushels an acre are not significant in this test. | | | | | | | | | |
| 12 | U. S. 35 | 32.6 | 106 | 90 | 96 | 0 | 10 | 81 | 15.8 | 82.5 |
| 13 | U. S. 13 | 32.5 | 106 | 86 | 91 | 0 | 14 | 90 | 14.4 | 85.9 |
| 14 | Kansas 1614 | 32.5 | 106 | 99 | 105 | 0 | 1 | 78 | 17.4 | 81.6 |
| 15* | Pride of Saline | 32.5 | 106 | 90 | 96 | 1 | 9 | 82 | 16.8 | 79.8 |
| 16 | Funk G-135 | 32.4 | 105 | 94 | 100 | 0 | 6 | 80 | 17.4 | 83.1 |
| 17 | Jewett 6 | 31.8 | 103 | 82 | 87 | 2 | 16 | 85 | 15.4 | 82.6 |
| 18 | Kansas 1583 | 31.7 | 103 | 97 | 103 | 0 | 3 | 81 | 18.0 | 83.8 |
| 19 | Missouri 8 | 31.7 | 103 | 94 | 100 | 5 | 1 | 77 | 16.9 | 83.3 |
| 20 | Mangelsdorf 1001 | 31.4 | 102 | 98 | 104 | 0 | 2 | 72 | 14.8 | 81.8 |
| 21 | Kansas 1104 | 31.3 | 102 | 97 | 103 | 0 | 3 | 83 | 14.4 | 84.7 |
| 22 | Local Entry (V) | 31.2 | 101 | 87 | 93 | 9 | 4 | 78 | 17.6 | 80.2 |
| 23 | Reid-Midland | 30.8 | 100 | 96 | 102 | 1 | 3 | 80 | 20.8 | 76.7 |
| 24 | K. I. H. 38 | 30.6 | 99 | 80 | 85 | 0 | 20 | 83 | 14.0 | 85.1 |
| 25 | Midland (C) | 30.6 | 99 | 97 | 103 | 2 | 1 | 80 | 17.6 | 80.4 |
| 26 | Funk G-150 | 30.5 | 99 | 92 | 98 | 3 | 5 | 80 | 14.6 | 84.0 |
| 27 | Jewett 12 | 30.5 | 99 | 71 | 76 | 7 | 22 | 74 | 15.8 | 83.1 |
| 28 | Funk G-80 | 30.3 | 98 | 98 | 104 | 0 | 2 | 81 | 15.8 | 82.7 |
| 29 | Kansas 1358 | 30.3 | 98 | 98 | 104 | 1 | 1 | 74 | 18.8 | 84.2 |
| 30 | Kansas 1712 | 30.1 | 98 | 87 | 92 | 1 | 12 | 84 | 14.8 | 84.7 |
| 31 | McCurdy 123M | 29.5 | 96 | 93 | 99 | 0 | 7 | 89 | 14.6 | 85.4 |
| 32 | Kansas 1466 | 29.5 | 96 | 98 | 104 | 1 | 1 | 80 | 15.6 | 81.5 |
| 33* | Midland (A) | 29.4 | 95 | 96 | 102 | 2 | 2 | 72 | 20.4 | 79.5 |
| 34 | Pioneer 332 | 29.1 | 94 | 96 | 102 | 2 | 2 | 80 | 14.0 | 86.7 |
| 35 | Multicross EMBRO 1 | 28.0 | 91 | 99 | 105 | 0 | 1 | 71 | 15.4 | 82.0 |
| 36 | K. I. H. 440 | 27.9 | 91 | 66 | 70 | 2 | 32 | 77 | 13.9 | 83.1 |
| 37 | Kansas 1646 | 27.9 | 91 | 99 | 105 | 0 | 1 | 72 | 14.9 | 84.3 |
| 38 | Pioneer 300 | 27.9 | 91 | 95 | 101 | 0 | 5 | 88 | 14.0 | 82.1 |
| 39 | Kansas 1623 | 27.2 | 88 | 95 | 101 | 2 | 3 | 80 | 14.0 | 86.7 |
| 40 | Kansas 1638 | 26.5 | 86 | 96 | 102 | 0 | 4 | 81 | 14.4 | 84.4 |
| 41 | Funk G-53 | 26.5 | 86 | 93 | 99 | 0 | 7 | 83 | 14.0 | 83.0 |
| 42 | Missouri King 103 | 25.4 | 82 | 98 | 104 | 2 | 0 | 78 | 14.9 | 82.8 |
| 43 | Pioneer 307 | 24.3 | 79 | 98 | 104 | 1 | 1 | 79 | 14.4 | 85.5 |
| 44 | Hays Golden | 22.3 | 72 | 92 | 98 | 1 | 7 | 74 | 15.4 | 80.6 |
| 45 | Pioneer 334 | 21.8 | 71 | 91 | 97 | 2 | 7 | 80 | 14.2 | 80.9 |
| Av. of 45 entries | | 30.9 | | 93 | | 1 | 5 | 80 | 16.0 | 82.3 |
| Av. of 3 adapted open-pollinated varieties* | | 30.8 | | 94 | | 2 | 4 | 78 | 18.3 | 79.9 |
| Av. of 40 hybrids | | 31.1 | | 93 | | 1 | 6 | 81 | 15.8 | 82.6 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 19. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 3,** TWO-YEAR AVERAGE, 1941-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | Jewett 6 | 37.8 | 120 | 49 | 68 | 18.3 |
| 2 | Jewett 12 | 35.8 | 113 | 60 | 83 | 18.2 |
| 3 | Kansas 2232 | 34.4 | 109 | 80 | 111 | 17.8 |
| 4 | Funk G-149 | 34.2 | 108 | 84 | 117 | 16.5 |
| 5 | Funk G-150 | 33.9 | 107 | 78 | 108 | 17.6 |
| 6 | Funk G-135 | 33.6 | 106 | 79 | 110 | 18.5 |
| 7 | Kansas 1585 | 33.2 | 105 | 71 | 99 | 19.0 |
| 8 | Illinois 200 | 33.2 | 105 | 78 | 108 | 16.4 |
| 9* | Midland (A) | 33.2 | 105 | 77 | 107 | 19.2 |
| 10 | McCurdy 123M | 33.1 | 105 | 84 | 117 | 16.0 |
| 11 | KK-88A | 32.1 | 102 | 76 | 106 | 18.2 |
| 12* | Midland (C) | 32.0 | 101 | 74 | 103 | 19.2 |
| 13 | Kansas 2216 | 31.8 | 101 | 64 | 89 | 18.9 |
| 14 | Iowealth TX 1 | 31.6 | 100 | 68 | 94 | 18.4 |
| 15 | U. S. 13 | 31.4 | 99 | 86 | 119 | 15.6 |
| 16 | Pioneer 332 | 31.4 | 99 | 88 | 122 | 15.8 |
| 17 | Kansas 1466 | 31.0 | 98 | 86 | 119 | 16.4 |
| 18 | Kansas 1104 | 30.9 | 98 | 70 | 97 | 16.7 |
| 19 | Reid-Midland | 30.9 | 98 | 72 | 100 | 19.6 |
| 20 | Funk G-88 | 30.4 | 96 | 80 | 111 | 19.8 |
| 21 | K. I. H. 38 | 30.2 | 96 | 70 | 97 | 15.8 |
| 22 | U. S. 35 | 30.0 | 95 | 82 | 114 | 16.4 |
| 23* | Pride of Saline | 29.6 | 94 | 64 | 89 | 18.9 |
| 24 | Missouri 8 | 29.2 | 92 | 74 | 103 | 19.2 |
| 25 | Kansas 1638 | 28.8 | 91 | 84 | 117 | 16.2 |
| 26 | Pioneer 300 | 27.9 | 88 | 88 | 122 | 16.8 |
| 27 | Pioneer 307 | 27.3 | 86 | 92 | 128 | 15.9 |
| 28 | Pioneer 334 | 24.8 | 79 | 78 | 108 | 15.5 |
| 29 | Hays Golden | 22.0 | 70 | 64 | 89 | 17.2 |
| Av. of 29 entries | | 31.2 | | 76 | | 17.5 |
| Av. of 3 adapted varieties* | | 31.6 | | 72 | | 19.1 |
| Av. of 25 hybrids | | 31.6 | | 77 | | 17.3 |

[1] Percent of 3 adapted open-pollinated varieties.*

TABLE 20. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 3,** THREE-YEAR AVERAGE, 1940-1942.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Moisture |
|---|---|---|---|---|---|---|
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | |
| | | Bu. | % | % | % | % |
| 1 | Funk G-88 | 37.9 | 115 | 86 | 116 | 17.4 |
| 2 | Kansas 2232 | 37.3 | 113 | 83 | 112 | 16.3 |
| 3 | Illinois 200 | 35.3 | 107 | 83 | 112 | 15.1 |
| 4 | Funk G-135 | 35.2 | 107 | 82 | 111 | 16.6 |
| 5 | U. S. 35 | 35.1 | 107 | 86 | 116 | 15.1 |
| 6 | U. S. 13 | 34.9 | 106 | 89 | 120 | 14.8 |
| 7 | Kansas 1466 | 33.9 | 103 | 89 | 120 | 15.3 |
| 8 | Kansas 1104 | 33.9 | 103 | 78 | 105 | 15.5 |
| 9 | Pioneer 332 | 33.7 | 102 | 91 | 123 | 14.8 |
| 10* | Midland (C) | 33.3 | 101 | 79 | 107 | 17.1 |
| 11* | Pride of Saline | 32.4 | 98 | 69 | 93 | 16.9 |
| 12 | Missouri 8 | 29.9 | 91 | 79 | 107 | 17.1 |
| 13 | Pioneer 307 | 28.4 | 86 | 93 | 126 | 14.9 |
| 14 | Pioneer 334 | 28.2 | 86 | 83 | 112 | 14.5 |
| 15 | Hays Golden | 24.9 | 76 | 72 | 97 | 15.8 |
| Av. of 15 entries | | 33.0 | | 83 | | 15.8 |
| Av. of 2 open-pollinated varieties* | | 32.9 | | 74 | | 17.0 |
| Av. of 12 hybrids | | 33.6 | | 85 | | 15.6 |

[1] Percent of 2 open-pollinated varieties.*

TABLE 21. RESULTS, KANSAS CORN PERFORMANCE TEST, **DISTRICT 5,** MARION AND SUMNER COUNTIES, 1940.

| Rank in yield | Hybrid or variety | Yield | | Erect plants | | Lodged plants | | Stand | Dropped ears | Ears per plant | Ears per cwt. | Shelling | Moisture | Test wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Per acre | % of O. P.1 | Total | % of O. P.1 | Root | Stalk | | | | | | | |
| | | Bu. | % | % | % | % | % | % | % | No. | No. | % | % | Lbs. |
| 1 | Pioneer 332 | 34.8 | 143 | 73 | 143 | 4 | 23 | 92 | 6 | 1.0 | 262 | 83.6 | 15.3 | 56 |
| 2 | Kansas 17 | 33.1 | 136 | 56 | 110 | 20 | 24 | 89 | 1 | 1.2 | 303 | 79.0 | 15.6 | 56 |
| 3 | Kansas 1296 | 32.9 | 135 | 76 | 149 | 4 | 20 | 93 | 8 | 1.0 | 276 | 79.0 | 15.9 | 58 |
| 4 | Kansas 1430 | 32.8 | 135 | 76 | 149 | 12 | 12 | 87 | 6 | 1.0 | 261 | 82.1 | 15.5 | 56 |
| 5 | DeKalb 847 | 32.6 | 134 | 78 | 153 | 4 | 18 | 90 | 7 | 0.9 | 263 | 82.8 | 15.8 | 56 |
| 6 | Iowa 939 | 32.1 | 132 | 60 | 118 | 2 | 38 | 88 | 4 | 1.0 | 290 | 81.0 | 15.5 | 54 |
| 7 | Pioneer 330 | 31.8 | 131 | 79 | 155 | 4 | 17 | 87 | 4 | 1.0 | 282 | 81.6 | 15.6 | 52 |
| 8 | Kansas 1501 | 30.9 | 127 | 72 | 141 | 14 | 14 | 89 | 2 | 1.0 | 270 | 76.6 | 15.7 | 59 |
| 9 | U. S. 35 | 30.5 | 125 | 84 | 165 | 0 | 16 | 92 | 5 | 1.0 | 296 | 79.8 | 16.5 | 54 |
| 10 | Kansas 4 | 30.1 | 124 | 50 | 98 | 40 | 10 | 90 | 1 | 1.0 | 302 | 75.0 | 15.5 | 56 |
| 11 | Kansas 11 | 30.1 | 124 | 66 | 129 | 20 | 14 | 85 | 2 | 0.9 | 250 | 80.8 | 15.1 | 56 |
| 12 | Kansas 1549 | 29.6 | 122 | 77 | 151 | 13 | 10 | 92 | 4 | 0.8 | 284 | 80.2 | 15.0 | 56 |
| 13 | Kansas 9 | 29.6 | 122 | 60 | 118 | 22 | 18 | 82 | 2 | 1.0 | 264 | 79.9 | 15.7 | 56 |
| 14 | DeKalb Exp. 93 | 29.4 | 121 | 81 | 159 | 3 | 16 | 89 | 8 | 1.0 | 310 | 79.2 | 16.6 | 55 |
| 15 | Pioneer 307 | 29.2 | 120 | 81 | 159 | 7 | 12 | 87 | 3 | 1.1 | 348 | 80.8 | 15.2 | 55 |
| 16 | Illinois 200 | 29.0 | 119 | 84 | 165 | 4 | 12 | 90 | 8 | 1.0 | 304 | 76.8 | 16.4 | 55 |
| 17 | Funk G-32 | 28.8 | 118 | 86 | 169 | 3 | 11 | 86 | 6 | 1.1 | 325 | 80.1 | 15.9 | 54 |
| 18 | Missouri 47 | 28.8 | 118 | 52 | 102 | 3 | 45 | 90 | 4 | 1.0 | 316 | 78.0 | 15.4 | 54 |
| 19 | Kansas 1466 | 28.5 | 117 | 74 | 145 | 17 | 9 | 92 | 2 | 1.0 | 300 | 75.7 | 14.9 | 56 |
| 20 | U. S. 13 | 28.5 | 117 | 82 | 161 | 2 | 16 | 88 | 9 | 1.0 | 304 | 79.3 | 16.4 | 54 |
| 21 | DeKalb Exp. 94 | 28.5 | 117 | 84 | 165 | 2 | 14 | 89 | 6 | 1.0 | 296 | 78.2 | 16.6 | 56 |
| 22 | Kansas 1412 | 28.5 | 117 | 78 | 153 | 9 | 13 | 86 | 3 | 0.9 | 282 | 80.0 | 15.8 | 56 |
| 23 | Jewett 6 | 28.4 | 117 | 54 | 106 | 14 | 32 | 91 | 4 | 1.0 | 319 | 76.6 | 15.6 | 54 |
| 24 | Pioneer 324 | 28.2 | 116 | 56 | 110 | 7 | 37 | 84 | 4 | 1.0 | 308 | 80.0 | 16.2 | 53 |
| 25 | Hays Golden* | 28.2 | 116 | 47 | 92 | 35 | 18 | 85 | 2 | 1.0 | 302 | 80.6 | 15.4 | 56 |
| 26 | Missouri 8 | 27.5 | 113 | 60 | 118 | 12 | 28 | 88 | 4 | 1.0 | 305 | 79.6 | 16.0 | 54 |
| 27 | KK-88 | 27.4 | 113 | 89 | 175 | 1 | 10 | 82 | 7 | 1.0 | 291 | 78.6 | 16.3 | 55 |
| 28 | Freed* | 27.4 | 113 | 36 | 71 | 44 | 20 | 92 | 2 | 1.0 | 309 | 76.9 | 15.7 | 55 |
| 29 | Kansas 1514 | 27.2 | 112 | 83 | 163 | 6 | 11 | 93 | 3 | 0.8 | 304 | 79.0 | 16.0 | 58 |
| 30 | Iowealth 29A | 26.8 | 110 | 79 | 155 | 9 | 12 | 83 | 6 | 1.0 | 306 | 79.4 | 16.0 | 56 |

TABLE 21. (Continued)

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | Kansas 7 | 26.7 | 110 | 59 | 116 | 20 | 21 | 87 | 2 | 1.0 | 308 | 78.9 | 15.7 | 55 |
| 32 | Nebraska 238 | 26.6 | 109 | 64 | 125 | 10 | 26 | 81 | 2 | 1.0 | 297 | 78.8 | 15.5 | 52 |
| 33 | Kansas 15 | 26.5 | 109 | 75 | 147 | 9 | 16 | 86 | 4 | 1.0 | 319 | 76.0 | 15.3 | 56 |
| 34 | U. S. 44 | 26.4 | 108 | 71 | 139 | 4 | 25 | 88 | 2 | 1.0 | 316 | 79.4 | 16.5 | 55 |
| 35 | Kansas 13 | 26.2 | 108 | 68 | 133 | 17 | 15 | 87 | 2 | 1.0 | 321 | 77.3 | 16.0 | 56 |
| 36 | Funk G-94 | 26.0 | 107 | 80 | 157 | 1 | 19 | 87 | 9 | 1.0 | 314 | 78.8 | 16.8 | 50 |
| 37 | Moews-Lowe 830 | 25.8 | 106 | 84 | 165 | 2 | 14 | 83 | 8 | 1.0 | 318 | 78.0 | 15.8 | 55 |
| 38 | Midland (A)* | 25.3 | 104 | 60 | 118 | 25 | 15 | 88 | 2 | 0.8 | 296 | 78.6 | 15.7 | 56 |
| 39 | DeKalb 816 | 24.9 | 103 | 90 | 176 | 1 | 9 | 81 | 11 | 0.9 | 296 | 75.7 | 16.8 | 56 |
| 40 | Kansas 1513 | 24.4 | 100 | 74 | 145 | 12 | 14 | 96 | 4 | 1.0 | 372 | 74.2 | 14.8 | 56 |
| 41 | Moews-Lowe 514 | 24.2 | 100 | 77 | 151 | 4 | 19 | 86 | 6 | 1.0 | 343 | 78.9 | 16.6 | 54 |
| 42 | Funk G-46 | 24.2 | 100 | 72 | 141 | 4 | 24 | 90 | 7 | 1.0 | 351 | 75.7 | 15.5 | 56 |
| 43 | DeKalb 899 | 23.7 | 97 | 80 | 157 | 4 | 16 | 86 | 4 | 1.0 | 343 | 74.2 | 15.9 | 56 |
| 44 | National 129 | 23.3 | 96 | 81 | 159 | 3 | 16 | 84 | 7 | 1.0 | 334 | 77.6 | 16.4 | 54 |
| 45 | DeKalb 888 | 23.3 | 96 | 86 | 169 | 3 | 11 | 83 | 6 | 1.0 | 349 | 77.6 | 16.2 | 56 |
| 46 | Kansas 1104 | 22.7 | 93 | 80 | 157 | 9 | 11 | 92 | 2 | 0.9 | 362 | 76.7 | 15.8 | 54 |
| 47 | Iowealth 30A | 22.5 | 92 | 70 | 137 | 7 | 23 | 87 | 6 | 1.0 | 381 | 76.0 | 16.2 | 55 |
| 48 | Local Variety* | 22.1 | 91 | 57 | 112 | 24 | 19 | 93 | 2 | 0.7 | 290 | 76.2 | 16.3 | 54 |
| 49 | Kansas 2026 | 21.6 | 90 | 74 | 145 | 4 | 22 | 94 | 2 | 0.8 | 357 | 71.9 | 15.4 | 54 |
| 50 | Pride of Saline* | 18.7 | 77 | 57 | 112 | 20 | 23 | 88 | 4 | 0.8 | 364 | 71.4 | 16.6 | 53 |
| Av. of 50 entries | | 27.5 | | 72 | | 10 | 18 | 88 | 5 | 1.0 | 309 | 78.2 | 15.9 | 55 |
| Av. of 5 open-pollinated varieties | | 24.3 | | 51 | | 30 | 19 | 89 | 2 | 0.9 | 312 | 76.7 | 15.9 | 55 |
| Av. of 45 hybrids | | 27.9 | | 74 | | 8 | 18 | 88 | 5 | 1.0 | 309 | 78.4 | 15.8 | 55 |

[1] Percent of open-pollinated varieties.

## AGRICULTURAL EXPERIMENT STATION TESTS

The Kansas corn improvement program is conducted cooperatively by the Division of Cereal Crops and Diseases, Bureau of Plant Industry, Agricultural Research Administration, U. S. Department of Agriculture, and the Agronomy Department, Kansas Agricultural Experiment Station. The primary objective is to develop adapted white and yellow dent hybrids and popcorn hybrids that are consistently high yielding, that possess resistance to heat, drought, lodging, insects and diseases and have other desirable characteristics. The work is divided into three phases: (1) The development of desirable Kansas hybrids, (2) the testing of corn hybrids developed outside of Kansas, and (3) fundamental research.

Hybrid seed corn is produced by crossing selected inbred lines. These inbred lines are the "building materials" of the corn breeder. The first requisite of a hybrid corn program, therefore, is to develop inbred lines. These lines are obtained by self-pollinating the corn plant through several generations. Self-pollination is accomplished by applying pollen from a plant to its own silks. Experience has shown that a hybrid corn program requires the production of a large number of inbred lines. To accomplish this, thousands of self-pollinations are made at Manhattan each year.

Inbred lines of corn are of little value in themselves, for they are inferior to open-pollinated varieties in vigor and yield. When two unrelated inbred lines are crossed, however, the vigor is restored. The better hybrid combinations among selected inbred lines give substantial increases in yield over the better varieties.

New inbred lines are first compared in top crosses to determine those possessing promising heredity. The superior-performing lines are next combined and tested in single crosses. Valuable double-cross combinations are then predicted from these single-cross performance data.

New experimental hybrids are tested first in preliminary trials at several locations. Outstanding combinations are then compared in "advanced tests" at experiment fields and branch stations. The most promising hybrids are then entered in the Kansas Corn Performance Test and Cooperative Strip Tests in order to obtain more information on the adaptation of specific hybrids to local conditions.

When a hybrid has been thoroughly tested and its desirability ascertained, the first phase in the commercial production of hybrid corn is the increasing of the inbred lines. The second step is that of crossing the inbred lines into single crosses. These single crosses are then combined into double crosses, This seed is used for the production of commercial corn. After the program has been started, however, all of these various phases may be carried on simultaneously.

Anyone desiring more information on hybrid corn may obtain free copies of Kansas Circular 196, entitled "Hybrid Corn in Kansas" by writing to the Department of Agronomy, Kansas State College, Manhattan, Kansas.

## RESULTS

The results from most of the Experiment Station Tests are not reported in this bulletin as many of the hybrids are experimental. Kansas Corn Performance tests were not planted in Districts 4 or 5 because funds were not available. Data obtained from tests conducted by R. F. Sloan and Clare Porter at the Northcentral and Southcentral Kansas Experiment Fields respectively are therefore of value to farmers in these areas. Table 22 gives the results obtained at Belleville and Smith Center in District 4, and Table 23 those obtained at Kingman and Wichita in District 5. Seed of the Kansas hybrids is not available for planting in 1943.

Over a thousand double cross hybrids have been made since 1938 and these are in various stages of being tested. These hybrids are compared each year in about 9,000 plots planted in over 100 different fields. The location of the tests is shown in figure 1 on page 5.

The performance in 1942 of several white dent and yellow dent hybrids developed at the Kansas Agricultural Experiment Station is given in Table 24. These new hybrids are full season strains, able to take advantage of long growing seasons. Kansas 2234 and Kansas 2232 are white hybrids which will eventually provide a source of white corn for commercial utilization in industrial plants. Kansas 2234 produced 28 percent more corn (14 bushels) than Pride of Saline as an average of 14 tests planted on fields in the five eastern sections of Kansas differing in fertility, topography, heat and rainfall. Kansas 1585 and Kansas 1583 are superior-performing yellow hybrids.

Several of the new Kansas-developed popcorn hybrids are outstanding in performance. As shown in Table 25, Kansas popcorn hybrid 2 averaged 47.6 bushels an acre compared with 26.4 bushels for Supergold, the best open-pollinated variety for Kansas. This is an increase in yield of 80.3 percent.

Table 26 gives the performance over several years of Kansas white hybrids 2234 and 2232, yellow hybrids 1583 and 1585, and popcorn hybrids 2 and 3. As an average of three years, the dent hybrids outyielded the open-pollinated varieties by 32 to 53 percent and had 11 to 29 percent more plants erect at harvest. The popcorn hybrids, over a five-year period, yielded over 60 percent more corn than Supergold and were equal or superior in all other agronomic and popping characteristics.

TABLE 22. RESULTS, EXPERIMENT STATION TEST, **DISTRICT 4,** BELLEVILLE AND SMITH CENTER EXPERIMENT FIELDS, 1942.[2]

| Rank in yield | Hybrid or variety | District Average | | | | | | | | | | Belleville | | | Smith Center | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Yield | | Erect plants | | Height | | Stand | Ears per | | Moisture | Rank in yield | Yield per acre | Erect plants | Rank in yield | Yield per acre | Erect plants |
| | | Per acre | % of O. P.[1] | Total | % of O. P.[1] | Plt. | Ear | | Cwt. | plant | | | | | | | |
| | | Bu. | % | % | % | Ft. | In. | % | No. | No. | % | | Bu. | % | | Bu. | % |
| 1 | Kansas 2234 | 49.9 | 142 | 100 | 125 | 6.6 | 34 | 100 | 148 | 1.0 | 23.4 | 2 | 55.0 | 100 | 4 | 44.9 | 100 |
| 2 | Kansas 1625 | 48.4 | 138 | 98 | 122 | 6.6 | 31 | 98 | 155 | 1.0 | 20.2 | 8 | 51.6 | 97 | 3 | 45.1 | 99 |
| 3 | Kansas 1611 | 48.1 | 137 | 99 | 124 | 6.8 | 32 | 98 | 156 | 1.0 | 22.2 | 3 | 54.3 | 98 | 9 | 41.9 | 100 |
| 4 | Kansas 1639 | 47.4 | 135 | 99 | 124 | 6.8 | 29 | 100 | 160 | 1.0 | 20.6 | 15 | 50.6 | 97 | 5 | 44.3 | 100 |
| 5 | Kansas 1466 | 46.9 | 134 | 100 | 125 | 6.4 | 30 | 98 | 160 | 1.0 | 21.6 | 39 | 45.4 | 100 | 2 | 48.4 | 100 |
| 6 | Kansas 1643 | 46.8 | 133 | 97 | 121 | 7.2 | 35 | 99 | 159 | 1.0 | 21.5 | 10 | 51.1 | 95 | 6 | 42.6 | 99 |
| 7 | Kansas 1614 | 46.6 | 133 | 100 | 125 | 7.0 | 36 | 99 | 149 | 1.0 | 24.1 | 4 | 54.0 | 99 | 26 | 39.1 | 100 |
| 8 | Kansas 1665 | 46.0 | 131 | 94 | 118 | 7.1 | 33 | 98 | 175 | 1.0 | 19.9 | 16 | 50.3 | 88 | 11 | 41.7 | 99 |
| 9 | Kansas 2216 | 45.9 | 131 | 96 | 120 | 6.6 | 31 | 99 | 160 | 1.0 | 25.8 | 17 | 49.8 | 92 | 8 | 42.0 | 99 |
| 10 | Kansas 2232 | 45.2 | 129 | 98 | 122 | 7.0 | 31 | 97 | 153 | 1.0 | 27.0 | 19 | 49.4 | 95 | 14 | 41.0 | 100 |
| 11 | Kansas 1104 | 44.8 | 128 | 98 | 122 | 6.8 | 30 | 98 | 164 | 1.0 | 24.2 | 13 | 50.8 | 96 | 27 | 38.9 | 100 |
| 12 | Kansas 1712 | 44.8 | 128 | 94 | 118 | 7.3 | 33 | 98 | 190 | 1.1 | 19.4 | 53 | 40.9 | 88 | 1 | 48.6 | 99 |
| 13 | Kansas 9 | 44.4 | 126 | 90 | 112 | 6.5 | 30 | 96 | 179 | 1.0 | 18.3 | 14 | 50.8 | 84 | 34 | 37.9 | 95 |
| 14 | Kansas 1623 | 44.0 | 125 | 99 | 124 | 6.3 | 30 | 98 | 173 | 1.0 | 21.6 | 27 | 47.4 | 98 | 16 | 40.6 | 100 |
| 15 | Kansas 1549 | 44.0 | 125 | 97 | 121 | 6.9 | 30 | 98 | 166 | 1.0 | 22.7 | 34 | 46.2 | 94 | 10 | 41.7 | 100 |
| 16 | Kansas 17 | 43.4 | 124 | 75 | 94 | 7.5 | 30 | 98 | 224 | 1.2 | 14.3 | 22 | 48.7 | 56 | 31 | 38.1 | 94 |
| 17 | Kansas 1358 | 43.2 | 123 | 96 | 120 | 6.9 | 33 | 95 | 174 | 1.0 | 19.1 | 35 | 46.1 | 93 | 21 | 40.4 | 100 |
| 18 | Kansas 1641 | 43.0 | 122 | 98 | 122 | 6.6 | 29 | 99 | 172 | 1.0 | 22.0 | 38 | 45.4 | 96 | 17 | 40.6 | 99 |
| 19 | Kansas 7 | 42.8 | 122 | 90 | 112 | 6.6 | 33 | 98 | 174 | 1.0 | 24.6 | 29 | 47.2 | 81 | 29 | 38.3 | 98 |
| 20 | Kansas 13 | 42.2 | 120 | 90 | 112 | 6.2 | 31 | 99 | 182 | 1.0 | 21.8 | 40 | 44.9 | 81 | 24 | 39.4 | 100 |
| 21 | Kansas 1340 | 41.9 | 119 | 96 | 120 | 6.9 | 31 | 98 | 178 | 1.0 | 21.1 | 48 | 42.2 | 92 | 12 | 41.6 | 100 |
| 22 | Illinois 200 | 41.9 | 119 | 94 | 118 | 7.0 | 33 | 99 | 190 | 1.0 | 22.0 | 37 | 45.9 | 87 | 32 | 37.9 | 100 |
| 23 | Kansas 1628 | 41.8 | 119 | 96 | 120 | 6.8 | 31 | 97 | 154 | 1.0 | 28.8 | 36 | 45.9 | 92 | 35 | 37.8 | 100 |
| 24 | Kansas 19 | 41.2 | 117 | 90 | 112 | 6.2 | 32 | 94 | 186 | 1.0 | 20.1 | 58 | 40.2 | 82 | 7 | 42.1 | 99 |
| 25 | Kansas 1412 | 40.8 | 116 | 92 | 115 | 6.7 | 30 | 94 | 180 | 1.0 | 21.5 | 42 | 44.8 | 85 | 38 | 36.7 | 100 |
| 26 | U. S. 13 | 40.8 | 116 | 92 | 115 | 7.2 | 35 | 98 | 192 | 1.0 | 19.2 | 52 | 41.0 | 85 | 18 | 40.6 | 100 |
| 27 | Steckley S770 | 40.8 | 116 | 94 | 118 | 7.0 | 31 | 96 | 184 | 1.0 | 22.0 | 50 | 41.7 | 89 | 22 | 39.9 | 100 |
| 28 | U. S. 35 | 40.3 | 115 | 95 | 119 | 6.8 | 30 | 97 | 204 | 1.0 | 19.4 | 60 | 39.5 | 90 | 13 | 41.1 | 100 |
| 29 | Nat. 132-1 | 40.0 | 114 | 94 | 118 | 7.2 | 34 | 97 | 192 | 1.0 | 24.2 | 41 | 44.9 | 89 | 42 | 35.1 | 100 |
| 30 | Kansas 1727 | 39.6 | 113 | 92 | 115 | 7.2 | 35 | 96 | 192 | 1.0 | 21.4 | 64 | 38.6 | 83 | 19 | 40.5 | 100 |
| 31 | Kansas 1713 | 39.4 | 112 | 90 | 112 | 7.2 | 35 | 97 | 187 | 1.0 | 22.6 | 56 | 40.6 | 80 | 30 | 38.2 | 100 |
| 32 | Kuhn* | 39.3 | 112 | 82 | 102 | 6.5 | 29 | 94 | 190 | 1.0 | 19.1 | 51 | 41.4 | 71 | 37 | 36.9 | 92 |
| 33 | Kansas 11 | 39.2 | 112 | 92 | 115 | 6.5 | 28 | 96 | 188 | 1.0 | 22.0 | 44 | 43.8 | 85 | 43 | 34.5 | 98 |
| 34 | Kansas 1714 | 38.8 | 111 | 92 | 115 | 7.2 | 34 | 96 | 198 | 1.0 | 20.4 | 65 | 38.4 | 85 | 25 | 39.2 | 100 |
| 35 | DeKalb 827 | 38.6 | 110 | 94 | 118 | 6.6 | 28 | 99 | 220 | 1.1 | 18.8 | 71 | 36.5 | 88 | 15 | 40.8 | 100 |
| 36 | Kansas 1638 | 38.5 | 110 | 90 | 112 | 6.9 | 33 | 98 | 186 | 1.0 | 24.2 | 66 | 38.2 | 81 | 28 | 38.8 | 100 |
| 37 | Funk G-94 | 38.4 | 109 | 92 | 115 | 6.9 | 30 | 98 | 204 | 1.0 | 19.2 | 63 | 38.8 | 84 | 33 | 37.9 | 100 |
| 38 | Kansas 1649 | 38.3 | 109 | 92 | 115 | 7.4 | 35 | 93 | 188 | 1.0 | 24.0 | 47 | 42.7 | 87 | 44 | 33.9 | 98 |
| 39 | K. I. H. 38 | 38.3 | 109 | 88 | 110 | 7.2 | 33 | 99 | 206 | 1.0 | 20.4 | 59 | 39.9 | 79 | 39 | 36.7 | 97 |

**TABLE 22.** (Continued)

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | Iowealth 29A | 38.1 | 108 | 89 | 111 | 6.8 | 30 | 96 | 212 | 1.0 | 17.4 | 73 | 35.7 | 78 | 20 | 40.5 | 100 |
| 41 | Missouri 47 | 37.9 | 108 | 81 | 101 | 7.0 | 33 | 96 | 202 | 1.0 | 21.7 | 61 | 39.3 | 67 | 40 | 36.5 | 95 |
| 42 | Cassel* | 36.8 | 105 | 78 | 98 | 5.8 | 25 | 98 | 258 | 1.2 | 16.6 | 57 | 40.5 | 63 | 46 | 33.1 | 93 |
| 43 | Pride of Saline* | 36.6 | 104 | 91 | 114 | 7.2 | 36 | 92 | 182 | 1.0 | 25.0 | 68 | 37.4 | 82 | 41 | 35.9 | 100 |
| 44 | Funk G-212 | 36.4 | 104 | 88 | 110 | 7.0 | 31 | 98 | 230 | 1.1 | 21.7 | 72 | 36.0 | 77 | 36 | 36.9 | 98 |
| 45 | Pioneer 307 | 36.2 | 103 | 86 | 108 | 6.3 | 30 | 95 | 270 | 1.2 | 17.8 | 75 | 32.6 | 74 | 23 | 39.8 | 99 |
| 46 | Hays Golden* | 35.2 | 100 | 84 | 105 | 5.8 | 23 | 96 | 223 | 1.0 | 21.4 | 69 | 36.9 | 74 | 45 | 33.4 | 95 |
| 47 | Iowa 939 | 28.6 | 81 | 70 | 88 | 6.0 | 28 | 97 | 282 | 1.0 | 15.6 | 77 | 28.9 | 45 | 47 | 28.4 | 95 |
| 48 | Pioneer 324 | 28.1 | 80 | 80 | 100 | 6.2 | 26 | 96 | 306 | 1.0 | 14.3 | 79 | 27.9 | 66 | 48 | 28.4 | 95 |
| 49 | Colby Yellow Cap* | 27.7 | 79 | 69 | 86 | 5.9 | 23 | 95 | 278 | 1.1 | 22.0 | 80 | 27.1 | 40 | 49 | 28.3 | 98 |
| 50 | Nebraska 238 | 27.1 | 77 | 80 | 100 | 6.4 | 23 | 96 | 296 | 1.0 | 14.5 | 78 | 28.3 | 62 | 50 | 25.9 | 98 |
| | Kansas 1648 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 1 | 58.3 | 100 | .... | ..... | .... |
| | Kansas 1582 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 5 | 53.9 | 94 | .... | ..... | .... |
| | Kansas 1516 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 6 | 52.8 | 97 | .... | ..... | .... |
| | Kansas 16 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 7 | 52.2 | 88 | .... | ..... | .... |
| | Kansas 2046 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 9 | 51.3 | 90 | .... | ..... | .... |
| | Iowealth 25A | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 11 | 51.1 | 89 | .... | ..... | .... |
| | Kansas 1541 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 12 | 51.0 | 93 | .... | ..... | .... |
| | Kansas 15 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 18 | 49.5 | 94 | .... | ..... | .... |
| | Funk G-88 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 20 | 49.2 | 99 | .... | ..... | .... |
| | Kansas 1601 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 21 | 48.8 | 85 | .... | ..... | .... |
| | Jewett 12 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 23 | 48.5 | 77 | .... | ..... | .... |
| | Kansas 2212 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 24 | 48.4 | 86 | .... | ..... | .... |
| | Kansas 2241 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 25 | 48.4 | 84 | .... | ..... | .... |
| | Kansas 18 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 26 | 47.8 | 93 | .... | ..... | .... |
| | Kansas 1661 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 28 | 47.4 | 90 | .... | ..... | .... |
| | Kansas 1677 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 30 | 47.0 | 93 | .... | ..... | .... |
| | Kansas 6 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 31 | 46.8 | 94 | .... | ..... | .... |
| | Kansas 8 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 32 | 46.6 | 93 | .... | ..... | .... |
| | Kansas 2173 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 33 | 46.3 | 81 | .... | ..... | .... |
| | Kansas 2187 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 43 | 44.0 | 85 | .... | ..... | .... |
| | Kansas 2068 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 45 | 42.8 | 89 | .... | ..... | .... |
| | Kansas 1711 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 46 | 42.7 | 85 | .... | ..... | .... |
| | Kansas 1676 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 49 | 42.0 | 90 | .... | ..... | .... |
| | KK-77 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 54 | 40.9 | 85 | .... | ..... | .... |
| | Funk G-46 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 55 | 40.8 | 87 | .... | ..... | .... |
| | McCurdy 118M | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 62 | 39.2 | 88 | .... | ..... | .... |
| | Kansas 2242 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 67 | 38.0 | 80 | .... | ..... | .... |
| | Pioneer 300 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 70 | 36.5 | 83 | .... | ..... | .... |
| | Pfister 5892 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 74 | 34.5 | 86 | .... | ..... | .... |
| | Funk G-244 | ..... | .... | .... | ..... | ..... | .... | .... | ..... | ..... | ..... | 76 | 29.6 | 75 | .... | ..... | .... |
| Av. of all entries | | 40.7 | | 91 | | 6.7 | 31 | 97 | 194 | 1.0 | 21.1 | | 44.0 | 94 | | 39.1 | 98 |
| Av. of 5 open-pollinated varieties* | | 35.1 | | 80 | | 6.2 | 27 | 95 | 226 | 1.0 | 20.8 | | 36.7 | 66 | | 33.5 | 96 |
| Av. of all hybrids | | 41.3 | | 92 | | 6.8 | 31 | 97 | 190 | 1.0 | 21.1 | | 44.4 | 96 | | 39.1 | 99 |

[1] Percent of open-pollinated varieties.*

[2] Data secured with the assistance of R. F. Sloan, superintendent.

TABLE 23. RESULTS, EXPERIMENT STATION TEST, **DISTRICT 5,** KINGMAN AND WICHITA EXPERIMENT FIELDS, 1941 AND 1942.[2]

| Hybrid or variety | District Average | | | | | | | | | | | Kingman | | | Wichita | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1942 | | | | | | Two-year Av., 1941-1942 | | | | | 1942 | | | 1942 | | |
| | Rank in yield | Yield | | Erect plants | | Borer infested plants | Rank in yield | Yield | | Erect plants | | Rank in yield | Yield per acre | Erect plants | Rank in yield | Yield per acre | Erect plants |
| | | Per acre | of O. P.[1] | Total | of O. P.[1] | | | Per acre | of O. P.[1] | Total | of O. P.[1] | | | | | | |
| | | Bu. | % | % | % | % | | Bu. | % | % | % | | Bu. | % | | Bu. | % |
| Kansas 2234 | 1 | 34.0 | 129 | 86 | 148 | 42 | .... | ..... | ..... | ..... | ..... | 1 | 37.8 | 77 | 6 | 30.3 | 95 |
| Kansas 13 | 2 | 33.9 | 128 | 66 | 114 | 40 | 1 | 29.6 | 122 | 58 | 141 | 2 | 35.6 | 50 | 1 | 32.2 | 83 |
| Kansas 1104 | 3 | 33.4 | 126 | 80 | 138 | 46 | 6 | 27.6 | 114 | 65 | 159 | 4 | 34.9 | 70 | 2 | 31.8 | 90 |
| Kansas 1466 | 4 | 31.3 | 119 | 85 | 147 | 44 | 2 | 29.0 | 119 | 72 | 176 | 7 | 31.9 | 78 | 5 | 30.7 | 92 |
| Kansas 9 | 5 | 31.0 | 117 | 56 | 97 | 38 | 3 | 28.8 | 118 | 43 | 105 | 14 | 30.2 | 37 | 3 | 31.7 | 75 |
| Kansas 1712 | 6 | 30.6 | 116 | 64 | 110 | 36 | .... | ..... | ..... | ..... | ..... | 9 | 31.7 | 42 | 7 | 29.6 | 85 |
| Midland (A)* | 7 | 30.4 | 115 | 62 | 107 | 44 | 10 | 26.6 | 109 | 56 | 137 | 11 | 31.3 | 40 | 8 | 29.4 | 85 |
| Kansas 1358 | 8 | 29.8 | 113 | 66 | 114 | 46 | 4 | 28.0 | 115 | 63 | 154 | 12 | 30.8 | 50 | 9 | 28.8 | 82 |
| Kansas 11 | 9 | 29.6 | 112 | 68 | 117 | 44 | 7 | 27.6 | 114 | 49 | 120 | 8 | 31.7 | 52 | 12 | 27.5 | 83 |
| Kansas 1585 | 10 | 29.4 | 111 | 84 | 145 | 44 | .... | ..... | ..... | .... | ..... | 10 | 31.3 | 73 | 11 | 27.6 | 95 |
| Kansas 1549 | 11 | 29.4 | 111 | 84 | 145 | 44 | 8 | 27.4 | 113 | 67 | 163 | 3 | 35.1 | 72 | 18 | 23.7 | 95 |
| Kansas 1340 | 12 | 29.4 | 111 | 76 | 131 | 44 | 9 | 27.1 | 112 | 63 | 154 | 6 | 32.2 | 67 | 14 | 26.6 | 85 |
| U. S. 13 | 13 | 28.2 | 107 | 68 | 117 | 38 | 11 | 26.5 | 109 | 49 | 120 | 5 | 32.8 | 55 | 19 | 28.6 | 80 |
| Kansas 2232 | 14 | 28.0 | 106 | 77 | 133 | 48 | .... | ..... | ..... | .... | ..... | 15 | 30.1 | 62 | 15 | 25.9 | 92 |
| Kansas 1412 | 15 | 27.7 | 105 | 75 | 129 | 44 | 14 | 25.4 | 104 | 42 | 102 | 16 | 28.7 | 60 | 13 | 26.7 | 90 |
| U. S. 35 | 16 | 27.0 | 102 | 65 | 112 | 40 | 13 | 25.6 | 105 | 58 | 141 | 13 | 30.8 | 55 | 20 | 23.1 | 75 |
| Pride of Saline* | 17 | 25.0 | 95 | 56 | 97 | 42 | 17 | 22.7 | 93 | 33 | 80 | 17 | 28.6 | 37 | 22 | 21.4 | 75 |
| Iowa 939 | 18 | 25.0 | 95 | 47 | 81 | 38 | 12 | 26.0 | 107 | 28 | 68 | 18 | 24.4 | 35 | 16 | 25.7 | 60 |
| Hays Golden* | 19 | 23.8 | 90 | 56 | 97 | 38 | 15 | 23.7 | 98 | 33 | 80 | 19 | 22.5 | 47 | 17 | 25.1 | 65 |
| Kansas 16 | .... | ..... | ..... | .... | ..... | .... | .... | ..... | ..... | .... | ..... | .... | ..... | .... | 4 | 31.3 | 80 |
| Kansas 17 | .... | ..... | ..... | .... | ..... | .... | 5 | 28.0 | 115 | 50 | 122 | .... | ..... | .... | 10 | 28.0 | 90 |
| Illinois 200 | .... | ..... | ..... | .... | ..... | .... | 16 | 23.4 | 96 | 50 | 122 | .... | ..... | .... | 21 | 21.6 | 90 |
| Av. of all entries | | 29.3 | | 70 | | 42 | | 26.6 | | 52 | | | 31.2 | 56 | | 27.4 | 84 |
| Av. of 3 adapted O. P. varieties* | | 26.4 | | 58 | | 41 | | 24.3 | | 41 | | | 27.5 | 41 | | 25.3 | 75 |
| Av. of all hybrids | | 29.9 | | 72 | | 42 | | 27.1 | | 54 | | | 31.9 | 58 | | 27.7 | 85 |

[1] Percent of 3 adapted open-pollinated varieties.*

[2] Data secured with the assistance of Clare Porter, superintendent.

TABLE 24. PERFORMANCE IN EASTERN KANSAS OF SEVERAL WHITE AND YELLOW DENT HYBRIDS DEVELOPED COOPERATIVELY BY THE UNITED STATES DEPARTMENT OF AGRICULTURE AND THE KANSAS AGRICULTURAL EXPERIMENT STATION.

1942

| Location | Entries in test | Kansas hybrids | | | | U. S. 35 | U. S. 13 | Pride of Saline | Midland (A) | Av. of test |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2234 | 2232 | 1585 | 1583 | | | | | |
| **ACRE YIELD, BUSHELS** | | | | | | | | | | |
| DISTRICT ONE, **NORTHEASTERN KANSAS** | | | | | | | | | | |
| Atchison (E) | 153 | 96.2 | 81.4 | 62.3 | 83.2 | 63.2 | 76.6 | 61.8 | 50.4 | 69.8 |
| Atchison (P) | 61 | 90.8 | 81.1 | 77.0 | 72.3 | 78.5 | 72.7 | 70.9 | 72.0 | 77.4 |
| Whiting (P) | 61 | 63.3 | 52.9 | 72.8 | 64.5 | 50.0 | 49.8 | 61.4 | 64.8 | 52.4 |
| McLouth (E) | 18 | 89.4 | 74.9 | 66.1 | ..... | 72.4 | 73.6 | 58.9 | 53.5 | 66.6 |
| Mean | | 84.9 | 72.6 | 69.6 | ..... | 66.0 | 68.2 | 63.2 | 60.2 | 66.5 |
| DISTRICT TWO, **EASTCENTRAL KANSAS** | | | | | | | | | | |
| Wellsville (P) | 63 | 78.3 | 64.3 | 77.1 | 76.0 | 66.2 | 65.6 | 72.3 | 68.0 | 67.0 |
| Garnett (P) | 63 | 79.9 | 67.9 | 90.9 | 80.1 | 80.4 | 83.5 | 78.1 | 72.1 | 77.2 |
| Mean | | 79.1 | 66.1 | 84.0 | 78.0 | 73.3 | 74.6 | 75.2 | 70.0 | 72.1 |
| DISTRICT THREE, **SOUTHEASTERN KANSAS** | | | | | | | | | | |
| Parsons (P) | 45 | 63.0 | 56.2 | 58.8 | 58.3 | 53.3 | 50.7 | 53.3 | 55.2 | 54.6 |
| Parsons (E) | 200 | 63.8 | 56.1 | 46.6 | 64.0 | 44.2 | 47.6 | 47.2 | 37.8 | 49.6 |
| Chanute (P) | 45 | 40.2 | 36.5 | 35.7 | 31.7 | 32.6 | 32.5 | 32.5 | 29.4 | 30.9 |
| Mean | | 55.7 | 49.6 | 47.0 | 51.3 | 43.4 | 43.6 | 44.3 | 40.8 | 45.0 |
| DISTRICT FOUR, **NORTHCENTRAL KANSAS** | | | | | | | | | | |
| Manhattan (E) | 150 | 55.8 | 45.0 | 44.1 | 48.8 | 32.8 | 30.7 | 32.2 | 35.4 | 40.2 |
| Belleville (E) | 80 | 55.0 | 49.4 | ..... | ..... | 39.5 | 41.0 | 37.4 | ..... | 43.9 |
| Smith Center (E) | 51 | 44.9 | 41.0 | ..... | ..... | 41.1 | 40.6 | 35.9 | ..... | 38.6 |
| Mean | | 51.9 | 45.1 | ..... | ..... | 37.8 | 37.4 | 35.2 | ..... | 40.9 |
| DISTRICT FIVE, **SOUTHCENTRAL KANSAS** | | | | | | | | | | |
| Kingman (E) | 19 | 37.8 | 30.1 | 31.3 | ..... | 30.8 | 32.8 | 28.6 | 31.3 | 31.2 |
| Wichita (E) | 22 | 30.3 | 25.9 | 27.6 | ..... | 23.1 | 23.6 | 21.4 | 29.4 | 27.4 |
| Mean | | 34.0 | 28.0 | 29.4 | ..... | 27.0 | 28.2 | 25.0 | 30.4 | 29.3 |
| Av. 14 tests | | 63.4 | 54.4 | ..... | ..... | 50.5 | 51.5 | 49.4 | ..... | 51.9 |

E-Kansas Experiment Station Test.
P-Kansas Corn Performance Test.

TABLE 25. PERFORMANCE IN KANSAS OF SEVERAL POPCORN HYBRIDS DEVELOPED COOPERATIVELY BY THE UNITED STATES DEPARTMENT OF AGRICULTURE AND THE KANSAS AGRICULTURAL EXPERIMENT STATION.

1942

| Location | Kansas popcorn hybrids | | | | Open-pollinated varieties | | | Av. of test |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | Super-gold | South American | Giant Pearl | |
| **ACRE YIELD, BUSHELS** | | | | | | | | |
| **EASTERN KANSAS** | | | | | | | | |
| Atchison | 51.9 | 58.4 | 47.2 | 48.6 | 26.3 | 24.4 | 27.8 | 40.7 |
| McLouth | 58.4 | 47.4 | 47.0 | ..... | 29.0 | 33.0 | 27.4 | 40.4 |
| Mean | 55.2 | 52.9 | 47.1 | ..... | 27.6 | 28.7 | 27.6 | 40.5 |
| **CENTRAL KANSAS** | | | | | | | | |
| Belleville | 26.1 | 24.6 | 24.4 | ..... | 14.4 | 9.5 | 10.8 | 18.3 |
| Manhattan | 29.8 | 28.5 | 25.4 | 24.5 | 16.8 | 10.7 | 10.7 | 20.9 |
| Mean | 28.0 | 26.6 | 24.9 | ..... | 15.6 | 10.1 | 10.8 | 19.6 |
| **WESTERN KANSAS** | | | | | | | | |
| Tribune | ..... | 35.7 | 32.0 | ..... | 17.0 | 20.0 | 14.5 | 23.8 |
| Garden City[1] | ..... | 90.8 | 84.5 | ..... | 55.1 | 59.4 | 45.0 | 67.0 |
| Mean | ..... | 63.2 | 58.2 | ..... | 36.0 | 39.7 | 29.8 | 45.4 |
| Av. of 6 tests | ..... | 47.6 | 43.4 | ..... | 26.4 | 26.2 | 22.7 | 35.1 |
| **ERECT PLANTS, PERCENT** | | | | | | | | |
| **EASTERN KANSAS** | | | | | | | | |
| Atchison | 48 | 56 | 64 | 72 | 68 | 64 | 76 | 64 |
| McLouth | 91 | 92 | 92 | .... | 90 | 95 | 85 | 91 |
| Mean | 70 | 74 | 78 | .... | 79 | 80 | 80 | 78 |
| **CENTRAL KANSAS** | | | | | | | | |
| Belleville | 41 | 39 | 62 | .... | 57 | 30 | 42 | 45 |
| Manhattan | 46 | 19 | 41 | 56 | 19 | 21 | 30 | 33 |
| Mean | 44 | 29 | 52 | .... | 38 | 26 | 36 | 39 |
| **WESTERN KANSAS** | | | | | | | | |
| Garden City[1] | | 92 | 90 | .... | 86 | 75 | 85 | 86 |
| Av. of 5 tests | .... | 60 | 70 | .... | 64 | 57 | 64 | 64 |

[1] Irrigated.

TABLE 26. PERFORMANCE IN EASTERN KANSAS OF SEVERAL WHITE AND YELLOW DENT HYBRIDS AND POPCORN HYBRIDS DEVELOPED COOPERATIVELY BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, AND THE KANSAS AGRICULTURAL EXPERIMENT STATION.

**DENT HYBRIDS**

THREE-YEAR AVERAGE, 1940-1942

| Hybrid or variety | Yield | | Erect plants | | Days to ½ pollen | Height | | Stand |
|---|---|---|---|---|---|---|---|---|
| | Per acre | of O. P.[1] | Total | O. P.[1] | | Plant | Ear | |
| | Bu. | % | % | % | | Ft. | In. | % |
| Kansas White Hybrids | | | | | | | | |
| K 2234 | 59.6 | 153 | 85 | 129 | 82 | 7.6 | 38 | 98 |
| K 2232 | 51.7 | 132 | 78 | 118 | 82 | 7.5 | 38 | 98 |
| Kansas Yellow Hybrids | | | | | | | | |
| K 1583 | 54.7 | 140 | 73 | 111 | 86 | 8.1 | 42 | 97 |
| K 1585 | 53.4 | 137 | 78 | 118 | 84 | 8.3 | 42 | 94 |
| Adapted Open-Pollinated Varieties | | | | | | | | |
| Pride of Saline | 43.6 | | 62 | | 83 | 8.0 | 42 | 87 |
| Midland (A) | 38.9 | | 75 | | 82 | 7.7 | 39 | 94 |
| Reid Yellow Dent | 34.6 | | 60 | | 81 | 8.1 | 40 | 90 |
| Mean | 39.0 | | 66 | | 82 | 7.9 | 40 | 90 |

**POPCORN HYBRIDS**

FIVE-YEAR AVERAGE, 1938-1942

Agronomic Characteristics

| Hybrid or variety | Yield | | Erect plants | | Days to ½ pollen | Height | |
|---|---|---|---|---|---|---|---|
| | Per acre | of O. P.[1] | Total | O. P.[1] | | Plant | Ear |
| | Bu. | % | % | % | | Ft. | In. |
| | 2/ | | 3/ | | 3/ | 3/ | 3/ |
| Kansas Popcorn Hybrids | | | | | | | |
| K 2 | 36.5 | 166 | 71 | 131 | 74 | 6.8 | 34 |
| K 3 | 36.1 | 164 | 80 | 148 | 75 | 6.8 | 34 |
| Adapted Open-Pollinated Variety | | | | | | | |
| Supergold | 22.0 | | 54 | | 74 | 6.1 | 34 |

Popping Qualities

| Hybrid or variety | Popping expansion | Mottling | Loss of hulls | Color | Quality | | Size |
|---|---|---|---|---|---|---|---|
| | | | | | Texture | Flavor | |
| | Volume | % | | | | | |
| | 4/ | 5/ | 5/ | 5/ | 4/ | 4/ | 5/ |
| Kansas Popcorn Hybrids | | | | | | | |
| K 2 | 25.5 | 12.5 | G | W | G | G— | M+ |
| K 3 | 30.0 | 57.5 | G | W | G+ | Ex— | M+ |
| Adapted Open-Pollinated Variety | | | | | | | |
| Supergold | 27.0 | 15.0 | G+ | W | G | G+ | M+ |

[1]/Percent of adapted open-pollinated varieties.
[2]/Five-year average.
[3]/Four-year average.
[4]/Two-year average.
[5]/One-year average.

## COOPERATIVE CORN STRIP TESTS

Strip tests of corn varieties and hybrids were conducted by the Department of Agronomy of Kansas State College in cooperation with county agricultural agents, vocational teachers, and farmers. Seed for these tests was assembled and distributed by the Department of Agronomy through the Seed Distribution project. The tests were planted and harvested by the farmer cooperator and county agent or vocational teacher.

The entries in these tests were planted in four-row plots of sufficient length to obtain reliable areas for harvest. The two inside rows, of sufficient length to make either one thirty-fifth or one seventieth of an acre, were harvested for yield data. Where the corn was well dried at harvest, field weights were used for yield calculations. Where the moisture content varied, moisture samples were retained and reweighed after the moisture content became uniform. The yields were calculated on an ear corn basis, using 70 pounds per bushel. Seed of standard varieties was obtained from growers of certified seed. The hybrids included in the tests were nominated by the commercial producers and experiment stations entering them. The policy is to include only those hybrids in cooperative tests which have previously shown superiority in the performance tests.

### RESULTS IN 1942, TWO- AND THREE-YEAR PERIODS

In the spring of 1942, 92 cooperative corn variety tests were located in 49 counties. The yield and rank of varieties and hybrids from 50 of these tests are reported in Tables 27 and 28. Reports were secured from 14 other tests that could not be included in the averages because yields of some varieties were not reported, or it was thought that the yields were not comparable. Reports were not secured on 28 tests because of failure due to climate, lack of uniformity, and other similar causes.

Two- and three-year average yields are given for those entries that have been included for the full period. Two entries with equal yields are given the same rank and the succeeding rank is omitted. Since the plots in these tests were not replicated, yields from all comparable tests in a district were averaged to increase the reliability of the mean. Response of different entries to climatic variations makes the average yield for two or three years more reliable than yields for one year. Information on lodging, insect and disease resistance, and other similar characteristics can be obtained for the same hybrids from the results in the Corn Performance Tests.

### YIELDS IN EASTERN KANSAS

The average yield and rank of the entries in cooperative strip tests located in the three eastern districts in 1942 and for two- and three-year periods are given in Table 27. Several of

TABLE 27. COOPERATIVE STRIP TESTS, **EASTERN KANSAS**, 1942, AND TWO- AND THREE-YEAR AVERAGE.

| Variety or hybrid | District 1 | | | | | | District 2 | | | | District 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1942 24 tests | | 1941-1942 52 tests | | 1940-1942 75 tests | | 1942 5 tests | | 1941-1942 12 tests | | 1942 9 tests | | 1941-1942 14 tests | |
| | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank |
| | Bu. | | Bu. | | Bu. | | Bu. | | Bu. | | Bu. | | Bu. | |
| Jewett 12 | 68.6 | 1 | ..... | .... | ..... | .... | 58.9 | 3 | ..... | .... | 51.0 | 1 | ..... | .... |
| Reid-National 134 | 67.0 | 2 | 57.8 | 1 | 54.1 | 1 | 53.3 | 12 | ..... | .... | ..... | .... | ..... | .... |
| Illinois 200 | 64.7 | 3 | 57.2 | 3 | ..... | .... | 62.6 | 2 | 43.8 | 1 | 44.8 | 8 | 37.6 | 4 |
| K. I. H. 38 | 64.4 | 4 | 56.9 | 4 | ..... | .... | 56.9 | 5 | 42.3 | 2 | 43.1 | 10 | 35.7 | 9 |
| Kansas 1466 | 64.0 | 5 | 56.1 | 6 | ..... | .... | 52.1 | 15 | 41.6 | 5 | 45.5 | 7 | 37.1 | 7 |
| DeKalb 816 | 64.0 | 5 | 57.3 | 2 | 51.3 | 2 | ..... | .... | ..... | .... | ..... | .... | ..... | .... |
| U. S. 13 | 63.1 | 7 | 56.1 | 6 | 50.9 | 3 | 53.0 | 13 | 41.7 | 4 | 41.2 | 12 | 34.2 | 12 |
| Pride of Saline | 63.0 | 8 | 53.2 | 11 | 48.2 | 6 | 55.9 | 6 | 42.3 | 2 | 48.2 | 3 | 37.6 | 4 |
| Funk G-94 | 62.3 | 9 | 56.5 | 5 | 50.9 | 3 | 51.8 | 17 | 38.8 | 10 | 41.0 | 13 | 35.1 | 10 |
| Kansas 1104 | 61.8 | 10 | 55.6 | 8 | ..... | .... | 52.1 | 15 | 40.9 | 6 | 44.1 | 9 | 37.4 | 7 |
| Missouri 47 | 61.2 | 11 | 54.2 | 9 | 50.0 | 5 | 51.0 | 18 | 38.0 | 11 | ..... | .... | ..... | .... |
| Pioneer 332 | 60.7 | 12 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 40.3 | 14 | 34.7 | 11 |
| Richbred 1002 | 59.2 | 13 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 48.0 | 4 | 38.7 | 3 |
| U. S. 35 | 58.9 | 14 | 53.6 | 10 | 48.2 | 6 | 54.7 | 8 | 40.1 | 7 | 36.6 | 16 | 31.2 | 13 |
| Illinois 960 | 57.7 | 15 | 52.2 | 12 | ..... | .... | 53.4 | 11 | 37.7 | 13 | ..... | .... | ..... | .... |
| KK-77 | 56.4 | 16 | 52.2 | 12 | ..... | .... | 54.4 | 9 | 38.0 | 11 | ..... | .... | ..... | .... |
| Steckley 790 | 55.0 | 17 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... |
| Pioneer 307 | 53.6 | 18 | 49.8 | 14 | 46.2 | 8 | 49.7 | 19 | 37.3 | 14 | 38.5 | 15 | ..... | .... |
| Reid Yellow Dent | 52.6 | 19 | 48.6 | 15 | 42.6 | 9 | ..... | .... | ..... | .... | ..... | .... | ..... | .... |
| Hays Golden | 50.9 | 20 | 44.1 | 16 | 39.3 | 10 | 41.2 | 20 | 33.1 | 15 | 35.3 | 17 | 28.4 | 14 |
| Funk G-88 | ..... | .... | ..... | .... | ..... | .... | 62.9 | 1 | ..... | .... | 48.8 | 2 | 39.9 | 1 |
| Hendriks Cross L | ..... | .... | ..... | .... | ..... | .... | 57.9 | 4 | ..... | .... | 47.2 | 5 | 39.3 | 2 |
| Iowealth TX 1 | ..... | .... | ..... | .... | ..... | .... | 55.9 | 6 | ..... | .... | ..... | .... | ..... | .... |
| Missouri 8 | ..... | .... | ..... | .... | ..... | .... | 54.3 | 10 | 39.6 | 8 | ..... | .... | ..... | .... |
| Midland (A) | ..... | .... | ..... | .... | ..... | .... | 52.4 | 14 | 38.9 | 9 | 42.0 | 11 | ..... | .... |
| Midland (C) | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 45.8 | 6 | 37.5 | 6 |

TABLE 28. COOPERATIVE STRIP TESTS, **CENTRAL** AND **WESTERN KANSAS,** 1942, AND TWO- AND THREE-YEAR AVERAGE.

| Variety or hybrid | District 4 | | | | | | District 5 | | | | District 6 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1942 6 tests | | 1941-1942 10 tests | | 1940-1942 14 tests | | 1942 3 tests | | 1941-1942 7 tests | | 1942 3 tests | | 1941-1942 4 tests | |
| | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank | Yield | Rank |
| | Bu. | | Bu. | | Bu. | | Bu. | | Bu. | | Bu. | | Bu. | |
| Illinois 200 | 50.8 | 1 | 44.9 | 1 | ..... | .... | 53.4 | 9 | 45.9 | 5 | 41.3 | 8 | 44.5 | 3 |
| Pride of Saline | 50.8 | 1 | 43.7 | 3 | 35.9 | 2 | 58.7 | 5 | 47.0 | 3 | 50.8 | 1 | 50.5 | 1 |
| K. I. H. 38 | 50.2 | 3 | ..... | .... | ..... | .... | 50.8 | 11 | 44.7 | 7 | 46.4 | 3 | ..... | .... |
| Midland (A) | 49.7 | 4 | ..... | .... | ..... | .... | 57.5 | 6 | 48.1 | 2 | 40.1 | 9 | ..... | .... |
| DeKalb 827 | 48.4 | 5 | 44.1 | 2 | 37.0 | 1 | ..... | .... | ..... | .... | ..... | .... | ..... | .... |
| U. S. 13 | 47.6 | 6 | 42.5 | 4 | 35.1 | 3 | 48.3 | 13 | 46.2 | 4 | 37.2 | 10 | 40.3 | 5 |
| Missouri 47 | 46.3 | 7 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... |
| Pioneer 307 | 44.9 | 8 | 40.4 | 6 | 34.7 | 4 | 50.7 | 12 | ..... | .... | 43.6 | 6 | ..... | .... |
| U. S. 35 | 44.1 | 9 | 39.7 | 7 | 34.2 | 5 | 47.8 | 14 | 45.0 | 6 | 41.8 | 7 | 42.6 | 4 |
| Funk G-94 | 43.7 | 10 | ..... | .... | ..... | .... | 45.6 | 15 | ..... | .... | 44.5 | 4 | ..... | .... |
| Funk G-212 | 43.1 | 11 | 40.6 | 5 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... |
| Kansas 11 | 41.2 | 12 | 38.5 | 8 | ..... | .... | ..... | .... | ..... | .... | 47.0 | 2 | 47.0 | 2 |
| Cassel | 38.2 | 13 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 44.1 | 5 | ..... | .... |
| Hays Golden | 35.9 | 14 | 32.9 | 9 | 28.3 | 6 | 33.6 | 16 | 35.5 | 8 | 36.6 | 11 | 36.8 | 6 |
| Colby Yellow Cap | 28.8 | 15 | ..... | .... | ..... | .... | ..... | .... | ..... | .... | 33.9 | 12 | ..... | .... |
| Hendriks Cross L | ..... | .... | ..... | .... | ..... | .... | 74.1 | 1 | ..... | .... | ..... | .... | ..... | .... |
| Funk G-88 | ..... | .... | ..... | .... | ..... | .... | 62.7 | 2 | ..... | .... | ..... | .... | ..... | .... |
| Midland (S) | ..... | .... | ..... | .... | ..... | .... | 60.7 | 3 | ..... | .... | ..... | .... | ..... | .... |
| Jewett 12 | ..... | .... | ..... | .... | ..... | .... | 58.8 | 4 | ..... | .... | ..... | .... | ..... | .... |
| Missouri 8 | ..... | .... | ..... | .... | ..... | .... | 56.8 | 7 | ..... | .... | ..... | .... | ..... | .... |
| Kansas 1466 | ..... | .... | ..... | .... | ..... | .... | 55.3 | 8 | 48.7 | 1 | ..... | .... | ..... | .... |
| Midland (C) | ..... | .... | ..... | .... | ..... | .... | 53.2 | 10 | ..... | .... | ..... | .... | ..... | .... |

the later maturing hybrids made high yields in 1942. Some of these are Jewett 12, Reid-National 134, Illinois 200, K. I. H. 38, Kansas 1466, Funk G-88, and Hendriks Cross L. In district 1, the highest yielding hybrid outyielded Pride of Saline approximately the same number of bushels in 1942 and for the two- and the three-year periods. However, only 35% of the entries exceeded the yield of Pride of Saline in 1942 compared to 62% for the two-year period and 50% for the three years. In district 1, northeastern Kansas, the average yield of the hybrids has been consistently higher than the average yield of the adapted open-pollinated varieties. However, this is not the case farther south. In districts 2 and 3, the highest yielding hybrids have outyielded the highest yielding open-pollinated varieties, but the average yield of all hybrids in the test and of the adapted varieties is about the same in 1942 and for the two-year period 1941-1942.

### YIELDS IN CENTRAL AND WESTERN KANSAS

In district 4, northcentral Kansas, the average yield of the hybrid entries has exceeded the average yield of the open-pollinated variety entries 0.5 of a bushel per acre in 1942, 3.2 bushels over the 1941-1942 period, and 3.2 bushels over the three-year period. In district 5, the southcentral section, the corresponding differences in favor of the hybrid entries were 5 bushels per acre in 1942 and 2.6 bushels for the two-year period 1941-1942. In northwestern Kansas, district 6, the average yield of the adapted varieties has exceeded that of the hybrids 1.5 bushels per acre in 1942 and 0.1 of a bushel over the two-year period 1941-1942.