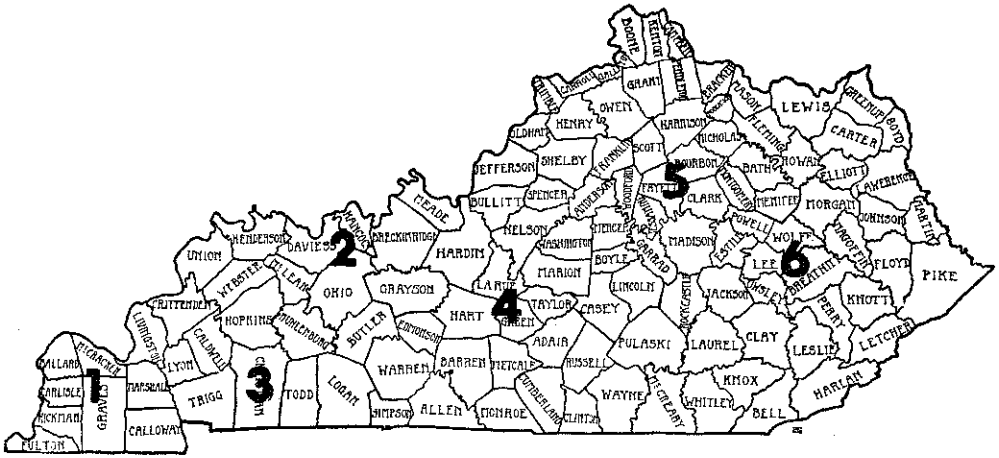
TESTING LOCATIONS OF

THE KENTUCKY HYBRID CORN PERFORMANCE TEST




| Area | | Location | Cooperator |
|---|---|---|---|
| Western | 1. | Wickliffe | James Wilson |
| | 2. | Owensboro | Beverly Gregory |
| | 3. | Hopkinsville | Pennyrile Grain Imp. Ass'n.<br>W. G. Duncan, III |
| Eastern | 4. | Campbellsville | Frank Noe |
| | 5. | Lexington | Ky. Agr. Exp. Sta. |
| | 6. | Quicksand | Robinson Agr. Exp. Substation<br>Charles M. Derrickson |

10M-1-59

# Results of the Kentucky Hybrid Corn Performance Test - 1958

By F.A. LOEFFEL and J.F. SHANE

PROGRESS REPORT 74

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**UNIVERSITY OF KENTUCKY**

**AGRICULTURAL EXPERIMENT STATION**

**LEXINGTON**

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## WHICH HYBRID SHOULD I PLANT?

A. Choose between white and yellow corn.

1. Yield of white and yellow hybrids is equal.
2. Feeding value is equal when ration contains protein supplement.
3. Midseason white hybrids may not pick as clean as earlier maturing yellow hybrids.
4. White corn usually sells at a premium price.
5. White hybrids may not stand as well as yellow hybrids of equal maturity.

B. Decide on maturity of hybrid.

1. A full-season hybrid will yield more than an early hybrid.
2. If corn is to be followed by fall sown small grains, plant an early or midseason hybrid.

C. Choose hybrid on basis of <u>balanced</u> performance.

1. Performance information from 3 years of testing is superior to information from 1 year.
2. Performance information from testing at 6 locations per year is superior to information from 3 locations per year.
3. <u>Small</u> differences among hybrids may not be important.
4. Look at maturity, erect plants and ear height information as well as yield before making a selection.
5. A good standing midseason hybrid which yields less than a full-season hybrid may be the best choice.

D. Minimize importance of price in buying seed corn.

1. Cost of seed is very,very small in comparison to total cost of producing an acre of corn.

E. Buy enough seed to plant a minimum of 12,000 to 14,000 plants per acre.

# RESULTS OF THE KENTUCKY HYBRID CORN PERFORMANCE TEST IN 1958

F. A. Loeffel and J. F. Shane

The objective of the Kentucky Hybrid Corn Performance Test is to provide an unbiased estimate of the relative performance of corn hybrids being sold in Kentucky. This information may then be used by farmers, seedsmen and research and extension personnel in determining which hybrid most nearly possesses the characteristics which are desired or required for a specific situation. The need for the University of Kentucky Agricultural Experiment Station to obtain this information is indicated by the continuing shift to hybrids by the farmers of Kentucky. Over 95 percent of the Kentucky corn acreage was planted to hybrids in 1958.

A cool wet spring delayed land preparation for corn in all parts of the state. Only 2 percent of the acreage was planted before May 13 compared to 36 percent in 1957. Seventy-five percent of the corn in the state was planted by June 3 although only 50 percent was planted in the western fourth of the state. Early plantings were especially weedy due to frequent showers which hampered cultivation. For one month following July 4, field work was generally at a standstill as abundant and unusually frequent rain fell over the entire state. July was the second wettest July ever recorded since records were started in 1889. Severe flooding in July damaged corn,especially in the Ohio and Mississippi river bottoms. The average rainfall in Kentucky for the growing season (April through September) totaled 28.72 inches, 5.81 inches above normal and 2.16 inches above 1957. All areas of the state registered above-normal amounts of rainfall in 1958.

The experiment grown at Wickliffe was not harvested this year due to the July flood. Although the growing season was delayed, the abundant moisture permitted a statewide record yield of 49.0 bushels per acre to be established. The average yield for all hybrids grown at five locations in 1958 was 109.3 bushels. The average yield in western Kentucky was 109.2 bushels and 109.4 bushels in eastern Kentucky. Lexington had the highest test average of 121.0 bushels and Campbellsville the lowest with 86.7 bushels.

## EXPERIMENTAL METHODS

The performance test was conducted at six locations which represent corn-producing areas typical of the state. These locations together with the name of the cooperator are listed on the back cover. These testing sites were grouped by geographical location into a western and eastern area for convenience in presenting the results. Yields from Wickliffe, Owensboro, and Hopkinsville were averaged for the western area summary. Similarly the yields from Campbellsville, Lexington, and Quicksand were averaged for the eastern Kentucky summary. The experiment grown at Wickliffe was not harvested in 1958 due to a July flood.

Forty-nine hybrids which are available to the farmers of Kentucky through commercial trade channels were compared. These hybrids, developed by state and federal research agencies and by private seed companies,are listed in Table 1. Information concerning the seed source of the hybrid, the kernel color and the type of cross are presented. The type of hybrid is designated as follows: double cross, 4X; three-way cross, 3X and a single cross as 2X. Seed of a single cross hybrid sells at a premium due to increased costs of producing seed. Forty-six double crosses, 2 three-way crosses and 1 single cross were evaluated this year.



The pedigrees of hybrids developed by state and federal agencies are listed in Table 2. Agronomic information pertaining to the testing locations is presented in Table 3. Results of the Kentucky Hybrid Corn Performance Test are summarized for periods of 3 years, 2 years and 1 year and are presented in Tables 4-6 respectively. The hybrids are grouped in the tables on the basis of kernel color. Within groups the hybrids are listed in order of increasing moisture content.

Field Design.

Each hybrid was planted in 4 plots at each of the six locations with individual plots being 2 hills wide and 5 hills long. These plots were located in different parts of the testing field to minimize cultural and soil differences.

Yield.

The corn from each plot was harvested and weighed individually. The yield of the hybrids was determined and is reported on the basis of bushels of shelled corn per acre with a moisture content of 15.5 percent. Adjustments were made for missing hills but not for other variation in stand. Therefore, the yields at each location reported in this progress report constitute an average yield of the 4 plots after all adjustments were made.

Moisture.

The moisture content at harvest is the best measure of relative maturity of hybrids which is available. A hybrid may be considered to be earlier than a second hybrid if its moisture content at harvest is consistently lower. Maturity thus determined is not absolute but is relative to the hybrids being compared. Two moisture samples were taken for each hybrid by taking a sample from replication 1 and 2, and from replication 3 and 4.

The moisture content in the grain was determined at harvest by removing 2 rows of kernels from

each of 10 ears selected at random from each of two replications. The grain from the 20 ears was thoroughly mixed and the moisture content of a 100 gram sample was determined with a Steinlite moisture meter.

Erect Plants.

The percent erect plants is considered to be an estimate of the resistance of a hybrid to the total insect and disease complex affecting standing ability. This value is obtained by counting plants with stalks broken between the ear bearing node and ground level and those which lean from the base at an angle of more than 30 degrees from the vertical. This sum is subtracted from the plants present and the difference divided by the total plants present to give the percent erect plants.

Ear Height.

Ear height, distance from the base of the plant to the point of attachment of the upper ear, was measured visually using a scale with one foot intervals. Visual ratings were taken on four plots of each hybrid at each location.

Stand.

All tests were planted at the rate of 5 kernels per hill and the resulting plants thinned to 3 per hill. The percent stand was computed on the basis of the total plants present divided by the number of plants which would have been present if all had survived.

## INTERPRETATION

The performance of hybrids vary with weather conditions which change from season to season and from testing location to testing location in the same season. Since the weather conditions can not



be predicted at the time of planting a farmer should plant a hybrid which has a good performance in an "average" season. The results obtained from a large number of experiments grown in different years at different locations are the best estimate of hybrid performance for an average season. The information presented in Table 4 is the average of 17 experiments grown in 1956, 1957, and 1958. The information presented in Table 5 is the average of 11 experiments grown in 1957 and 1958. Table 6 contains information obtained from 5 experiments grown in 1958. Therefore, the information contained in Table 4 is the best estimate available for comparing the performance of corn hybrids for average growing conditions in Kentucky.

It is suggested that new hybrids be grown frequently on a trial basis in comparison with the hybrid or hybrids presently grown. Hybrids being compared should be grown in the same field using similar management practices. Yield should be determined at harvest and other observational notes recorded during the growing season on the hybrids. If this suggestion is followed, a valid decision may be made which will increase the profit of growing corn.

P L A N T and C O M P A R E

The final answer is the performance of corn hybrids on your farm

Table 1. Hybrids tested in 1958.

| Hybrid | Color | Cross | Source of Hybrids |
|---|---|---|---|
| AES 801 | Y | 4X | Agricultural Experiment |
| 805 | Y | 4X | Station (North Central) |
| Bartlett & | | | |
| O'Bryan W-23 | W | 4X | Bartlett & O'Bryan |
| Y-120 | Y | 4X | Owensboro, Kentucky |
| Broadbent 337 | W | 4X | Broadbent Hybrids |
| 402A | Y | 4X | Cobb, Kentucky |
| 402B | Y | 4X | |
| DeKalb 803 | Y | 3X | DeKalb Agricultural |
| 803A | Y | 4X | Ass'n. DeKalb, |
| 805 | Y | 2X | Illinois |
| 810 | Y | 4X | |
| 852 | Y | 4X | |
| 925 | W | 4X | |
| 1002 | Y | 4X | |
| 1028 | Y | 4X | |
| Funk G-91 | Y | 4X | Columbiana Seed |
| G-134 | Y | 4X | Company, Eldred, |
| G-144 | Y | 4X | Illinois |
| G-512W | W | 4X | |
| G-711 | Y | 4X | |
| Hagan H-7 | Y | 4X | R. M. Hagan |
| H-9 | Y | 4X | Owensboro, Kentucky |
| Ind 750B | W | 4X | Purdue University |
| 844D | Y | 4X | Agricultural Experiment Station, Lafayette Indiana |
| Ky 103 | Y | 4X | University of Kentucky |
| 105 | Y | 4X | Agricultural Experiment |
| 106A | Y | 4X | Station, Lexington, Kentucky |



Table 1. Continued.

| Hybrid | Color | Cross | Source of Hybrids |
|---|---|---|---|
| Ky 203 | W | 4X | |
| 204 | W | 4X | |
| Meacham M-5W | W | 4X | Meacham's Koreandale |
| M-7W | W | 4X | Farms, Morganfield Kentucky |
| Oh L51 | Y | 4X | Ohio Agricultural Experiment Station Wooster, Ohio |
| P.A.G. 401 | Y | 4X | Pfister Associated |
| 444 | Y | 4X | Growers, Inc., Aurora, |
| 485 | Y | 4X | Illinois and Huntsville, |
| 631W | W | 4X | Alabama |
| 633W | W | 4X | |
| Pioneer 309A | Y | 4X | Pioneer Corn Company |
| 312A | Y | 4X | Tipton, Indiana |
| 319 | Y | 4X | |
| 332-2A | Y | 3X | |
| Stull 85Y | Y | 4X | Stull Brothers, Inc. |
| 100Y | Y | 4X | Sebree, Kentucky |
| 100YA | Y | 4X | |
| 101Y | Y | 4X | |
| 400W | W | 4X | |
| US 13 | Y | 4X | Experiment Station |
| 523W | W | 4X | (U.S.D.A.) |
| V.P.I. 646 | Y | 4X | Virginia Agricultural Experiment Station Blacksburg, Virginia |

Table 2. Pedigrees of Experiment Station and U.S. hybrids tested in 1958.

| Hybrid | Pedigree |
|---|---|
| AES 801 | (WF9 x B7)(B10 x B14) |
| AES 805 | (WF9 x 38-11)(C103 x Oh45) |
| Ind 750B | (K41 x K44)(33-16 x H21) |
| Ind 844D | (WF9 x 38-11)(Tr x Hy) |
| Ky 103 | (WF9 x 38-11)(K4 x L317) |
| Ky 105 | (T8 x CI21E)(38-11 x Oh 7B) |
| Ky 106A | (WF9 x 38-11)(CI21E x Oh 41) |
| Ky 203 | ( Ky 27 x Ky 122)(33-16 x Ky 49) |
| Ky 204 | (K64 x 33-16)(K55 x Ky 201) |
| Oh L51 | (WF9 x Hy)(Oh 43 x Oh 45) |
| U.S. 13 | (WF9 x 38-11)(Hy x L317) |
| U.S. 523W | (K55 x K64)(Ky 27 x Ky 49) |
| V.P.I. 646 | (WF9 x T8)(38-11 x C103) |



Table 3. Agronomic information pertaining to testing locations in 1958.

| Location | Fertilizer Applied | Plants per Acre | Date Planted | Date Harvested | Experiment Average Yield | Moisture |
|---|---|---|---|---|---|---|
| 1. Wickliffe | Test not harvested because of flood. | | | | | |
| 2. Owensboro | 200# 3-12-12<br>80# Anhydrous | 11,750 | May 14 | Oct. 2 | 107.8 | 21.8 |
| 3. Hopkinsville | 200# 6-42-0<br>138# Anhydrous | 11,750 | May 15 | Oct. 8 | 111.2 | 20.2 |
| 4. Campbellsville | 200# 10-10-10<br>12T Manure | 11,750 | May 16 | Sept. 29 | 86.7 | 23.3 |
| 5. Lexington | 500# 15-15-15 | 11,750 | May 9 | Oct. 4 | 121.0 | 26.3 |
| 6. Quicksand | 300# 0-30-30<br>400# Am. Nitrate | 14,500 | May 25 | Oct. 16 | 120.2 | 26.6 |

Table 4. Three-year summary of hybrids grown in 1956, 1957 and 1958.

| Hybrid | Average Yield Bu./Acre | | | Maturity | | |
|---|---|---|---|---|---|---|
| | State | Western<br>Wickliffe<br>Owensboro<br>Hopkinsville | Eastern<br>Campbellsville<br>Lexington<br>Quicksand | Harvest Ear Moisture<br>% | Erect Plants<br>% | Ear Height<br>Ft. |
| YELLOW | | | | | | |
| PAG 401 | 88.7 | 84.9 | 92.0 | 17.5 | 92.5 | 3.7 |
| AES 801 | 83.1 | 80.9 | 85.0 | 17.7 | 96.1 | 3.4 |
| Hagan H7 | 90.5 | 86.9 | 93.7 | 18.5 | 92.9 | 3.8 |
| Ind. 844D | 85.0 | 81.9 | 87.8 | 18.9 | 90.5 | 3.5 |
| US #13 | 89.0 | 86.8 | 91.0 | 18.9 | 88.3 | 4.0 |
| Stull 100Y | 95.5 | 89.9 | 100.4 | 19.0 | 96.5 | 3.9 |
| Ky 103 | 86.1 | 84.1 | 88.0 | 19.0 | 88.7 | 4.0 |
| Stull 101Y | 97.9 | 92.8 | 102.5 | 19.0 | 96.3 | 4.0 |
| DeKalb 805 | 99.6 | 94.9 | 103.8 | 19.0 | 97.2 | 3.5 |
| Funk G91 | 92.8 | 86.7 | 98.2 | 19.2 | 94.0 | 3.7 |
| Funk G134 | 94.2 | 93.9 | 94.5 | 19.3 | 95.7 | 3.8 |
| Bartlett & O'Bryan Y-120 | 92.4 | 88.9 | 95.6 | 19.4 | 93.5 | 3.7 |
| Oh L51 | 91.7 | 86.7 | 96.1 | 19.5 | 96.5 | 3.2 |
| AES 805 | 92.5 | 86.4 | 98.0 | 19.7 | 94.9 | 3.6 |
| Ky 106A | 88.5 | 84.7 | 91.9 | 19.7 | 92.1 | 3.8 |
| PAG 444 | 93.6 | 89.8 | 97.0 | 20.2 | 96.3 | 3.7 |
| DeKalb 1002 | 94.5 | 93.8 | 95.2 | 20.4 | 85.2 | 4.1 |
| Broadbent 402A | 88.7 | 83.1 | 93.8 | 20.5 | 92.8 | 4.1 |
| Ky 105 | 101.0 | 99.2 | 102.6 | 20.9 | 95.3 | 4.3 |
| Pioneer 309A | 95.1 | 90.1 | 99.5 | 23.7 | 98.1 | 4.1 |
| Yellow Average | 92.0 | 88.3 | 95.3 | 19.5 | 93.6 | 3.8 |
| WHITE | | | | | | |
| Stull 400W | 96.2 | 95.6 | 96.8 | 19.4 | 93.1 | 4.1 |
| Ind. 750B | 94.4 | 92.0 | 96.5 | 20.2 | 93.1 | 3.8 |
| Ky 203 | 92.9 | 89.7 | 95.7 | 20.2 | 87.0 | 4.4 |
| Meacham M-5W | 96.2 | 93.1 | 99.0 | 20.4 | 91.3 | 3.8 |
| DeKalb 925 | 99.0 | 97.7 | 100.1 | 20.6 | 90.8 | 4.0 |
| Ky 204 | 92.7 | 89.0 | 96.0 | 20.6 | 94.2 | 3.6 |
| US 523W | 96.7 | 95.9 | 97.5 | 20.6 | 89.6 | 3.9 |
| Bartlett & O'Bryan W-23 | 89.8 | 86.4 | 92.9 | 20.8 | 94.6 | 3.6 |
| Broadbent 337 | 94.6 | 96.0 | 93.5 | 20.9 | 89.8 | 4.0 |
| Funk G512W | 98.0 | 97.2 | 98.7 | 20.9 | 89.0 | 4.3 |
| PAG 633W | 96.6 | 95.8 | 97.3 | 21.2 | 92.7 | 4.0 |
| PAG 631W | 88.4 | 88.4 | 88.4 | 21.3 | 90.1 | 3.9 |
| White Average | 94.6 | 93.1 | 96.0 | 20.6 | 91.3 | 4.0 |
| Over-all average | 93.0 | 90.1 | 95.6 | 20.1 | 92.5 | 3.9 |

Table 5. Two-year summary of hybrids grown in 1957 and 1958.

| Hybrid | Average Yield Bu./Acre | | | Maturity | | |
|---|---|---|---|---|---|---|
| | State | Western<br>Wickliffe<br>Owensboro<br>Hopkinsville | Eastern<br>Campbellsville<br>Lexington<br>Quicksand | Harvest<br>Ear Moisture<br>% | Erect<br>Plants<br>% | Ear<br>Height<br>Ft. |
| YELLOW | | | | | | |
| PAG 401 | 91.6 | 93.7 | 89.9 | 18.3 | 91.0 | 3.7 |
| Pioneer 319 | 100.0 | 99.4 | 100.5 | 18.7 | 94.7 | 3.7 |
| AES 801 | 87.2 | 89.4 | 85.4 | 19.1 | 95.6 | 3.4 |
| Hagan H7 | 94.2 | 96.1 | 92.7 | 19.4 | 91.5 | 3.7 |
| Ind. 844D | 89.0 | 89.8 | 88.4 | 19.7 | 90.5 | 3.5 |
| US #13 | 93.3 | 97.5 | 89.9 | 19.8 | 88.5 | 4.0 |
| Stull 101Y | 101.2 | 104.7 | 98.4 | 20.1 | 96.5 | 4.0 |
| Ky 103 | 92.1 | 96.0 | 88.9 | 20.2 | 88.4 | 4.1 |
| Stull 100Y | 102.9 | 104.2 | 101.8 | 20.2 | 96.1 | 4.0 |
| Funk G91 | 96.7 | 94.0 | 98.9 | 20.3 | 93.9 | 3.7 |
| Bartlett & O'Bryan Y-120 | 94.9 | 97.2 | 92.9 | 20.4 | 93.3 | 3.7 |
| Broadbent 402A | 93.0 | 95.7 | 90.9 | 20.4 | 92.8 | 3.8 |
| DeKalb 805 | 105.1 | 106.7 | 103.8 | 20.4 | 97.1 | 3.4 |
| Funk G134 | 98.8 | 103.4 | 95.0 | 20.4 | 95.1 | 3.8 |
| DeKalb 852 | 95.4 | 97.7 | 93.5 | 20.5 | 90.5 | 3.9 |
| Ky 106A | 89.2 | 90.2 | 88.4 | 20.8 | 91.5 | 3.7 |
| AES 805 | 96.2 | 96.5 | 96.0 | 20.9 | 93.3 | 3.6 |
| Hagan H9 | 107.5 | 110.8 | 104.8 | 20.9 | 95.2 | 4.2 |
| VPI 646 | 102.1 | 102.9 | 101.5 | 20.9 | 94.6 | 3.8 |
| Oh L51 | 99.3 | 97.7 | 100.7 | 21.1 | 97.2 | 3.1 |
| PAG 444 | 100.1 | 101.2 | 99.2 | 21.5 | 95.2 | 3.7 |
| DeKalb 1002 | 100.6 | 108.4 | 94.1 | 21.6 | 86.7 | 4.2 |
| PAG 485 | 100.8 | 109.5 | 93.6 | 21.9 | 92.0 | 4.3 |
| Pioneer 312A | 101.4 | 104.6 | 98.7 | 21.9 | 95.0 | 3.8 |
| Ky 105 | 105.4 | 112.0 | 99.9 | 22.3 | 96.1 | 4.4 |
| Pioneer 309A | 100.9 | 103.6 | 98.6 | 24.4 | 97.6 | 4.1 |
| Yellow Average | 97.7 | 100.1 | 95.6 | 20.6 | 93.5 | 3.8 |
| WHITE | | | | | | |
| Stull 400W | 102.3 | 109.7 | 96.2 | 20.3 | 92.5 | 4.1 |
| Ind. 750B | 102.8 | 107.8 | 98.6 | 21.2 | 92.2 | 3.9 |
| Ky 203 | 101.2 | 108.2 | 95.5 | 21.4 | 88.3 | 4.6 |
| Ky 204 | 98.8 | 102.4 | 95.8 | 21.9 | 93.7 | 3.7 |
| Meacham M-5W | 100.3 | 105.0 | 96.4 | 21.9 | 91.0 | 3.8 |
| US 523W | 103.4 | 112.5 | 95.9 | 21.9 | 88.7 | 4.1 |
| DeKalb 925 | 106.3 | 114.2 | 99.8 | 22.0 | 91.2 | 4.0 |
| Broadbent 337 | 101.6 | 112.4 | 92.5 | 22.1 | 91.8 | 4.0 |
| Funk G512W | 102.0 | 109.7 | 95.6 | 22.1 | 88.5 | 4.3 |
| Bartlett & O'Bryan W-23 | 95.2 | 99.3 | 91.8 | 22.3 | 94.2 | 3.6 |
| PAG 633W | 101.0 | 109.2 | 94.3 | 22.4 | 92.0 | 3.9 |
| Meacham M7W | 101.9 | 106.5 | 98.0 | 22.7 | 92.1 | 3.8 |
| PAG 631W | 88.7 | 96.2 | 82.5 | 22.9 | 90.7 | 4.0 |
| White Average | 100.4 | 107.2 | 94.8 | 21.9 | 91.3 | 4.0 |
| Over-all Average | 98.6 | 102.5 | 95.4 | 21.1 | 92.4 | 3.9 |

Table 6. One-year summary of hybrids grown in 1958.

| Hybrid | Average Yield Bu./Acre | | | Maturity | | |
|---|---|---|---|---|---|---|
| | State | Western<br>Owensboro<br>Hopkinsville | Eastern<br>Campbellsville<br>Lexington<br>Quicksand | Harvest Ear Moisture<br>% | Erect Plants<br>% | Ear Height<br>Ft. |
| YELLOW | | | | | | |
| PAG 401 | 95.2 | 92.3 | 97.1 | 20.2 | 93.7 | 3.6 |
| Pioneer 319 | 110.9 | 106.7 | 113.6 | 20.5 | 97.3 | 3.7 |
| AES 801 | 94.7 | 90.8 | 97.3 | 21.0 | 97.2 | 3.6 |
| US #13 | 101.8 | 103.0 | 101.1 | 21.6 | 92.4 | 4.1 |
| Ind. 844D | 95.9 | 95.5 | 96.2 | 21.7 | 91.8 | 3.5 |
| Funk G91 | 107.5 | 100.2 | 112.4 | 21.8 | 95.8 | 3.7 |
| Hagan H7 | 103.0 | 100.7 | 104.6 | 21.8 | 93.4 | 3.5 |
| DeKalb 852 | 103.2 | 103.7 | 102.9 | 22.0 | 90.6 | 4.0 |
| DeKalb 805 | 115.0 | 113.9 | 115.7 | 22.2 | 99.2 | 3.3 |
| Stull 85Y | 102.3 | 99.0 | 104.5 | 22.3 | 97.5 | 3.2 |
| Ky 103 | 104.2 | 105.7 | 103.2 | 22.3 | 93.2 | 4.2 |
| Stull 101Y | 112.5 | 111.0 | 113.6 | 22.4 | 97.9 | 3.9 |
| VPI 646 | 115.1 | 109.2 | 119.0 | 22.6 | 93.7 | 3.6 |
| Stull 100YA | 103.5 | 102.4 | 104.3 | 22.6 | 96.6 | 3.4 |
| Funk G134 | 107.1 | 113.3 | 103.0 | 22.7 | 96.9 | 3.9 |
| DeKalb 803 | 107.7 | 103.0 | 110.9 | 22.7 | 96.4 | 3.5 |
| Bartlett & O'Bryan Y120 | 104.2 | 102.4 | 105.4 | 22.8 | 95.0 | 3.5 |
| Stull 100Y | 116.0 | 113.2 | 117.9 | 22.9 | 96.9 | 4.0 |
| Ky 106A | 96.9 | 93.0 | 99.5 | 22.9 | 91.8 | 3.6 |
| Hagan H9 | 120.7 | 115.3 | 124.3 | 23.0 | 96.9 | 4.2 |
| Broadbent 402A | 100.7 | 101.4 | 100.3 | 23.1 | 92.2 | 3.6 |
| Pioneer 332-2A | 112.5 | 111.7 | 113.0 | 23.2 | 97.6 | 4.2 |
| DeKalb 810 | 107.2 | 107.7 | 106.9 | 23.3 | 97.9 | 3.4 |
| DeKalb 803A | 100.1 | 98.5 | 101.1 | 23.3 | 95.9 | 3.4 |
| AES 805 | 111.3 | 109.9 | 112.3 | 23.4 | 94.5 | 3.7 |
| DeKalb 1002 | 113.3 | 117.9 | 110.3 | 23.8 | 90.9 | 4.3 |
| Pioneer 312A | 109.8 | 111.3 | 108.8 | 24.0 | 97.9 | 3.7 |
| Funk G144 | 105.7 | 104.9 | 106.2 | 24.1 | 97.7 | 3.4 |
| Oh L51 | 112.7 | 108.2 | 115.7 | 24.2 | 98.7 | 3.1 |
| PAG 444 | 110.2 | 109.0 | 111.1 | 24.6 | 98.1 | 3.6 |
| Ky 105 | 119.9 | 121.0 | 119.3 | 25.0 | 98.3 | 4.6 |
| Broadbent 402B | 122.3 | 120.3 | 123.7 | 25.2 | 98.1 | 4.4 |
| PAG 485 | 111.7 | 114.8 | 109.7 | 25.4 | 97.1 | 4.5 |
| DeKalb 1028 | 117.5 | 122.5 | 114.2 | 27.3 | 90.1 | 4.6 |
| Pioneer 309A | 113.0 | 113.7 | 112.5 | 27.4 | 99.0 | 4.1 |
| Funk G711 | 111.5 | 113.3 | 110.3 | 28.7 | 88.9 | 4.4 |
| Yellow Average | 108.2 | 107.2 | 108.9 | 23.3 | 95.5 | 3.8 |
| WHITE | | | | | | |
| Stull 400W | 114.7 | 119.4 | 111.6 | 23.2 | 96.6 | 4.2 |
| Ky 203 | 115.9 | 122.8 | 111.3 | 23.8 | 94.4 | 4.3 |
| Ind. 750B | 113.3 | 113.1 | 113.5 | 24.3 | 97.1 | 3.9 |
| Ky 204 | 111.8 | 111.4 | 112.1 | 24.6 | 98.4 | 3.8 |
| US 523W | 119.3 | 120.6 | 118.4 | 24.7 | 96.1 | 4.1 |
| DeKalb 925 | 117.4 | 121.7 | 114.5 | 24.8 | 97.7 | 4.0 |
| Meacham M-5 | 112.4 | 114.5 | 111.0 | 24.8 | 98.1 | 3.8 |
| PAG 633W | 115.2 | 119.1 | 112.6 | 24.9 | 97.3 | 3.8 |
| Funk G512W | 116.3 | 120.1 | 113.8 | 24.9 | 94.4 | 4.4 |
| Meacham M-7 | 112.4 | 112.3 | 112.5 | 25.3 | 98.3 | 3.7 |
| PAG 631W | 88.2 | 84.8 | 90.4 | 25.4 | 96.2 | 3.9 |
| Bartlett & O'Bryan W23 | 106.0 | 109.0 | 104.0 | 25.6 | 99.1 | 3.8 |
| Broadbent 337 | 117.5 | 123.3 | 113.6 | 25.7 | 98.2 | 4.2 |
| White Average | 112.3 | 114.8 | 110.7 | 24.8 | 97.0 | 4.1 |
| Over-all Average | 109.3 | 109.2 | 109.4 | 23.7 | 95.9 | 3.9 |

## 1958--RECORD CORN YEAR IN KENTUCKY

The average production of corn in Kentucky reached a new high in 1958. The average yield per acre was 49.0 bushels, 3 bushels higher than the previous record of 46.0 bushels established in 1956.

The first 40 bushel statewide average was made in Kentucky in 1948 when 41 bushels per acre were produced. The significance of this record becomes apparent when it is realized that an average yield of 30 bushels was not obtained in Kentucky until as recently as 1942. Only 3 times since that year have corn yields failed to reach an average of 30 bushels. The improved efficiency of corn production in Kentucky is indicated by the production figures for 1955 through 1958 of 41.0, 46.0, 41.0, and 49.0 bushels per acre.

Several factors are responsible for the greatly improved per acre yields in Kentucky. One factor is that high producing hybrids are being grown on more than 95 percent of the corn acreage in 1958. In 1942, only 22.7 percent of the state's corn acreage was in hybrids. Six years later it was 82.0 percent when the first 40-bushel corn crop was grown. The hybrids available for planting in 1958 were markedly superior to those which were available in 1942.

Other factors are the increased use of fertilizer, timeliness of field operations made possible by mechanization and the removal of land unsuited for corn from production.

Although progress has been made in improving the efficiency of corn production in Kentucky, much remains to be done. In the future, emphasis must be placed on the following factors which contribute to more efficient production:

1. Increase the number of plants per acre.
2. Insure adequate fertility.
3. Discourage corn planting in June and July.
4. Encourage the acceptance of newly developed superior hybrids.

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