

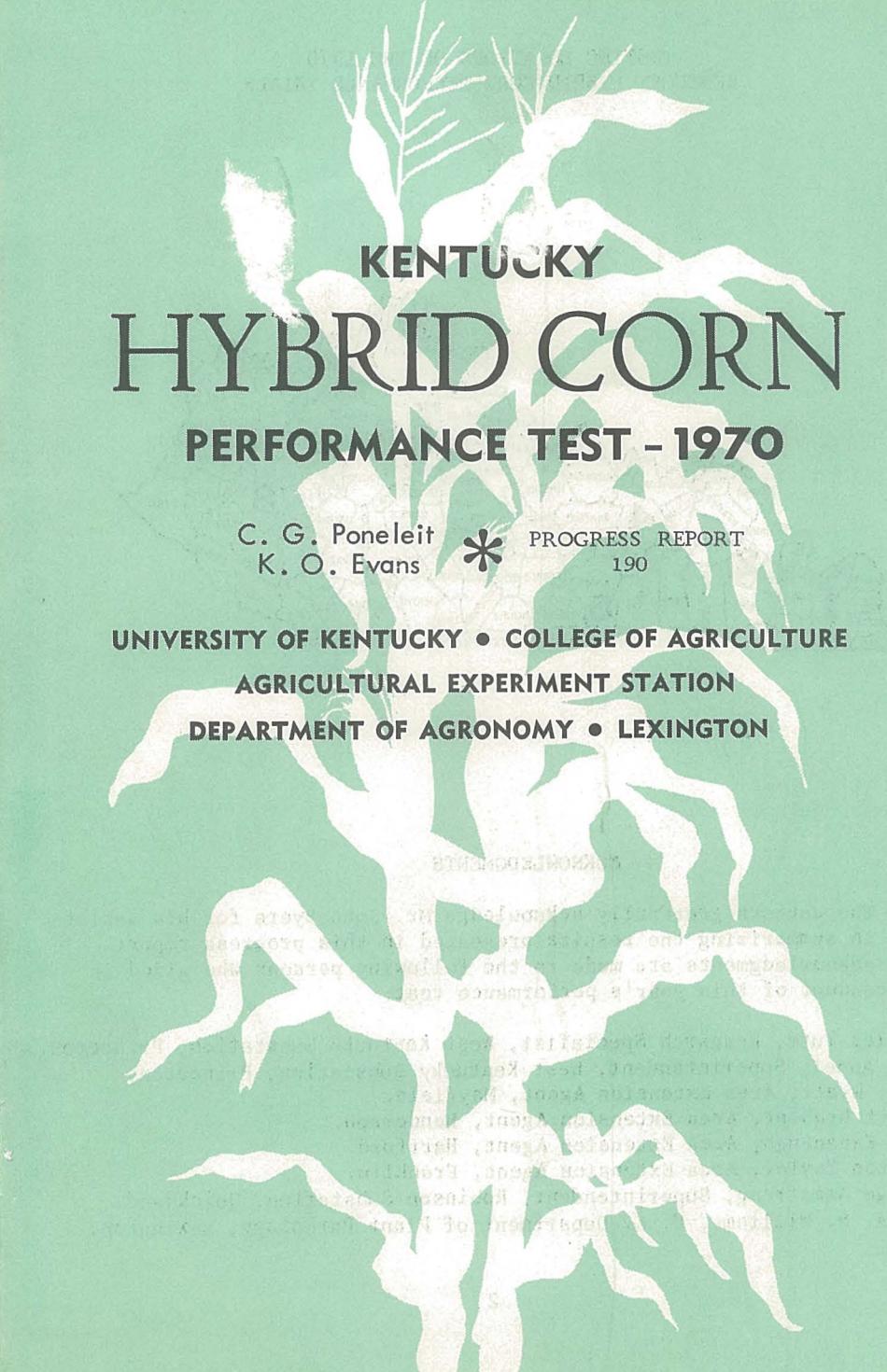
Table 21. (continued)

| Hybrid | Southern Corn Leaf Blight* | Corn Leaf Blight* | Grain Quality** |
|-----------------------|----------------------------|-------------------|-----------------|
| | 8-11-70 | 9-2-70 | |
| White | | | |
| W. O. King & Son K-60 | 5.3 | 7.3 | 1.8 |
| Schenk S-96W | 5.4 | 7.2 | 1.5 |
| K.A.E.S. Ky 5921W | 5.5 | 7.2 | 2.0 |
| T-E M-20W | 6.4 | 6.9 | 2.1 |
| Stull's 550W | 6.0 | 7.0 | 1.9 |
| S.S. 935W | 5.5 | 7.8 | 2.0 |
| Princeton 990B | 5.7 | 6.7 | 1.9 |
| Meacham's M-7B | 5.2 | 6.4 | 1.9 |
| Princeton 920A | 4.9 | 6.7 | 1.7 |
| Dekalb XL390W | 6.0 | 7.7 | 2.4 |
| P.A.G. SX-90W | 2.4 | 3.2 | 1.0 |
| Pioneer 511A | 2.0 | 3.0 | 1.0 |
| Funk's G4895W | 4.0 | 5.0 | 1.3 |
| White Average | 4.9 | 6.3 | 1.7 |
| Grand Average | 5.0 | 6.9 | 1.5 |

* Ratings for Southern Corn Leaf Blight (SCLB) on a 0-9 scale. 0 = no leaf lesion, 9 = dead or very severely damaged. The early ratings (8-11-70) were taken at Franklin and Hartford, Ky. and the late ratings (9-2-70) at Hartford and Henderson, Ky. by Dr. A. S. Williams, Department of Plant Pathology.

** 1 = Few diseased, shriveled kernels and no broken cobs in grain at harvest.
 2 = Moderate amounts of above factors.
 3 = Excessive amounts of above factors.
 Ratings in table represent the average over all non-virus locations.

15M--1-71

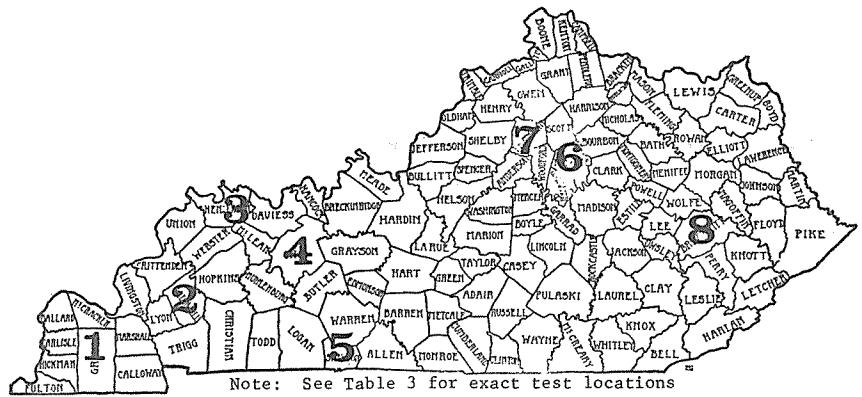


KENTUCKY HYBRID CORN PERFORMANCE TEST - 1970

C. G. Poneleit * PROGRESS REPORT
 K. O. Evans 190

UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE
 AGRICULTURAL EXPERIMENT STATION
 DEPARTMENT OF AGRONOMY • LEXINGTON

TESTING LOCATIONS OF THE 1970
KENTUCKY HYBRID CORN PERFORMANCE TRIALS



ACKNOWLEDGMENTS

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Dr. A. S. Williams, U. K. Department of Plant Pathology, Lexington.

Table 21. 1970 Southern Corn Leaf Blight and Grain Quality Ratings.

| Hybrid | Southern Corn Leaf Blight* | | Grain Quality** |
|-------------------|----------------------------|--------|-----------------|
| | 8-11-70 | 9-2-70 | |
| <u>Yellow</u> | | | |
| Dekalb XL45 | 6.0 | 8.9 | 1.8 |
| S.S. 720 | 6.0 | 9.0 | 2.1 |
| Trojan TXS-112 | 6.0 | 9.0 | 1.5 |
| P.A.G. SX-53 | 5.5 | 6.4 | 1.5 |
| Funk's G-4333 | 4.9 | 7.0 | 1.5 |
| S.S. 865 | 6.5 | 8.7 | 2.1 |
| P.A.G. SX-93 | 7.0 | 9.0 | 2.1 |
| Indep. S&W SS-400 | 5.9 | 8.5 | 1.8 |
| Deka1b XL44 | 4.8 | 6.9 | 1.2 |
| N.-K. PX-616 | 4.7 | 9.0 | 1.3 |
| T-E Cashmaker | 6.0 | 8.7 | 1.9 |
| Meacham's MX-30Y | 4.3 | 8.7 | 1.5 |
| Pioneer 3571 | 4.5 | 5.5 | 1.0 |
| S.S. 707 | 5.5 | 8.4 | 1.8 |
| S.S. 750 | 5.7 | 8.0 | 1.5 |
| N.-K. KT-680 | 5.0 | 7.5 | 1.6 |
| Indep. S&W SD-600 | 5.5 | 8.5 | 1.6 |
| Stew. Card. SX-47 | 5.7 | 8.2 | 1.5 |
| Princeton SX-823 | 5.9 | 8.9 | 1.4 |
| Trojan TXS-116 | 6.9 | 9.0 | 2.2 |
| Princeton SX-803 | 5.7 | 8.9 | 2.0 |
| K.A.E.S. Ky 105 | 6.4 | 7.8 | 2.2 |
| Pioneer 3516 | 3.5 | 5.9 | 1.0 |
| Migro M-44SX | 6.7 | 8.9 | 1.7 |
| Migro M-750 | 4.9 | 6.9 | 1.7 |
| S.S. 840 | 5.0 | 7.0 | 1.4 |
| Stull's 747YSP | 5.9 | 7.4 | 1.8 |
| T-E 6916 | 4.5 | 8.2 | 1.5 |
| Trojan TKS-122 | 4.2 | 7.5 | 1.4 |
| Meacham's MX-40Y | 4.7 | 7.9 | 1.5 |
| Schenk SS-88A | 5.7 | 7.5 | 1.7 |
| Pioneer 3369A | 2.9 | 4.0 | 1.0 |
| Trojan TKS-121 | 4.0 | 7.9 | 1.5 |
| N.-K. PX-678 | 1.5 | 2.8 | 1.0 |
| T-E E-20-Y-A | 4.7 | 7.4 | 1.7 |
| P.A.G. SX-17 | 5.5 | 5.8 | 1.3 |
| McNair X210V | 5.5 | 7.7 | 1.6 |
| Dekalb XL81 | 3.9 | 5.4 | 1.0 |
| Dekalb XL66 | 3.3 | 5.4 | 1.0 |
| Stull's 807A+SX | 4.5 | 7.0 | 1.4 |
| Funk's G4550 | 4.7 | 5.8 | 1.2 |
| Pioneer 3308 | 3.3 | 3.9 | 1.0 |
| Stull's 808SX | 4.7 | 7.7 | 1.3 |
| Stull's 720ASX | 4.2 | 7.5 | 1.3 |
| Funk's G4697 | 3.5 | 5.7 | 1.1 |
| Pioneer 3196 | 2.5 | 3.7 | 1.1 |
| P.A.G. SX-39 | 2.0 | 3.5 | 1.0 |
| Dekalb XL85 | 3.3 | 4.9 | 1.0 |
| Funk's G5757 | 4.5 | 5.2 | 1.2 |
| P.A.G. SX-68 | 4.7 | 5.0 | 1.2 |
| Funk's G4761 | 5.4 | 5.4 | 1.5 |
| Yellow Average | 4.9 | 7.0 | 1.5 |

Table 20. Maize Dwarf Mosaic Virus Test, Normal Population, Frankfort, Kentucky. 1969.

| Hybrid | Yield Bu/A | Avg % Moist. | % Stalk Lodged | Avg % Stand | M.D.M. Rating | | |
|------------------------|---------------|-----------------|-------------------|----------------|---------------|------|------|
| | | | | | 1969 | 1968 | 1967 |
| <u>Yellow</u> | | | | | | | |
| Funk's 23413 | 95.1 | 19.8 | 18.7 | 65.6 | 2.0 | | |
| Pioneer 3188 | 47.2 | 16.2 | 8.8 | 75.0 | 3.0 | | |
| Dekalb 1006 | 75.7 | 22.9 | 15.7 | 66.7 | 3.3 | | |
| G. Ac. VR-20Y | 85.3 | 17.6 | 6.1 | 78.1 | 3.7 | 5.2 | 3.0 |
| Ky 105 | 39.6 | 17.6 | 38.8 | 67.7 | 3.7 | 4.2 | 1.2 |
| Princeton 875M | 47.4 | 17.7 | 10.9 | 68.7 | 4.0 | | |
| Trojan C. F. Exp. 2709 | 56.3 | 18.6 | 6.3 | 78.1 | 4.0 | | |
| Excel E-944 | 56.6 | 20.2 | 7.8 | 65.6 | 4.0 | | |
| P.A.G. SX-17 | 45.1 | 16.2 | 12.1 | 53.1 | 4.3 | | |
| Stull's 307Y | 64.4 | 17.4 | 7.1 | 71.9 | 4.3 | | |
| Funk's G4761 | 80.4 | 19.4 | 5.9 | 70.8 | 4.3 | 3.0 | |
| Stull's Exp. 1808 | 47.6 | 16.1 | 13.4 | 78.1 | 4.7 | | |
| P.A.G. 439 | 48.2 | 19.1 | 9.5 | 67.7 | 4.7 | | |
| Schenk's SS-75A | 38.0 | 16.9 | 7.0 | 60.4 | 5.0 | 6.2 | |
| Pioneer 3191 | 40.9 | 17.9 | 12.8 | 65.6 | 5.3 | | |
| Funk's G5757 | 46.3 | 19.1 | 21.7 | 54.2 | 5.3 | 4.2 | |
| S.S. 866 | 47.3 | 20.9 | 9.7 | 75.0 | 5.3 | 4.0 | 1.7 |
| Stull's 807A SX | 24.8 | 17.1 | 23.7 | 59.4 | 5.7 | | |
| Pioneer 3369A | 36.3 | 16.7 | 23.5 | 74.0 | 6.0 | 5.2 | |
| S.S. 865 | 37.8 | 17.4 | 18.4 | 72.9 | 6.0 | | |
| Schenk's SS-88A | 48.9 | 18.5 | 11.9 | 69.8 | 6.0 | | |
| Stull's 720SX | 29.0 | 16.2 | 24.2 | 64.6 | 6.3 | 5.3 | |
| Excel E-8244 | 18.9 | 17.8 | 51.3 | 65.6 | 6.3 | | |
| S.S. 720 | 26.0 | 16.3 | 40.4 | 63.5 | 7.0 | 6.5 | |
| Excel E-71X | 24.2 | 16.6 | 38.4 | 53.1 | 7.0 | | |
| Trojan C. F. 116 | 23.1 | 19.1 | 17.3 | 67.7 | 7.0 | | |
| S.S. 750 | 30.6 | 16.2 | 36.1 | 63.5 | 7.3 | | |
| Yellow Average | 46.7 | 18.0 | 18.4 | 67.3 | 5.0 | 4.7 | 2.0 |
| <u>White</u> | | | | | | | |
| G. Ac. VR-20W | 80.4 | 22.5 | 5.8 | 66.7 | 3.0 | | |
| Pioneer 511A | 65.5 | 20.5 | 11.7 | 65.6 | 4.0 | 3.8 | |
| Schenk's S-96W | 51.3 | 19.1 | 3.2 | 74.0 | 4.3 | 4.8 | 2.5 |
| Meacham's MX-75W | 67.3 | 19.6 | 8.1 | 72.9 | 4.7 | 4.7 | 3.6 |
| Dekalb 999W | 69.2 | 20.0 | 9.0 | 79.2 | 4.7 | 4.3 | |
| Ky 5921W | 65.1 | 18.7 | 12.7 | 67.7 | 5.0 | 4.3 | 3.0 |
| S.S. 935W | 51.2 | 20.4 | 6.2 | 67.7 | 5.3 | 4.5 | 3.4 |
| Stull's 500W | 50.9 | 18.0 | 19.9 | 78.1 | 6.7 | 4.3 | |
| Stull's 400W | 40.6 | 20.3 | 20.3 | 66.7 | 7.0 | | |
| White Average | 60.2 | 19.9 | 10.8 | 70.9 | 5.0 | 4.4 | 3.3 |
| Grand Average | 53.4 | 19.0 | 14.6 | 69.1 | 5.0 | 4.6 | 2.6 |

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KENTUCKY HYBRID CORN

PERFORMANCE TEST IN 1970

C. G. Poneleit and K. O. Evans

INTRODUCTION

The objective of the Kentucky Corn Performance Test is to provide unbiased performance estimates of hybrid seed corn sold in Kentucky. This information, hopefully, will aid farmers as they select hybrids for use in the following season.

In addition to the crop hazards expected during a normal crop season, the 1970 Kentucky corn crop was attacked by a devastating new race of Southern Corn Leaf Blight (*Helminthosporium maydis*). Summarized under the next major heading are some of the points that each corn grower should consider before purchasing seed corn for 1971.

SOUTHERN CORN LEAF BLIGHT

Occurrence and Symptoms

The new race of *Helminthosporium maydis* was first diagnosed in Kentucky during June 1970. It is extremely pathogenic on plants containing the Texas male-sterile cytoplasm. The disease is first noticed as light green flecks on the leaves; each of which eventually forms brownish lesion that can enlarge to $\frac{1}{2}$ inch long. Under ideal conditions the lesions will cover the entire leaf surface, causing death of susceptible plants.

Since the disease is likely to be a problem in 1971 also and since the best method of control is the use of resistant hybrids (those that do not have Texas male-sterile cytoplasms), the following suggestions should be used when buying seed for 1971.

Recommendations for 1971 Seed Corn Purchases

The University of Kentucky Agricultural Experiment Station recommends that seed corn for 1971 be purchased in the following order of priority:

1. A hybrid with 100% normal cytoplasm (N) that has performed well in past years' tests.
2. A hybrid with a blend of normal and Texas male-sterile cytoplasms (B) that has performed well in past years' tests.
3. F₂ or second generation seed of a proven normal cytoplasm hybrid.

These recommendations are based on the observations that susceptibility to Southern Leaf Blight of corn is associated with the

Table 19. Maize Dwarf Mosaic Virus Test, Normal Population, Frankfort, Ky. 1970.

| Hybrid | Yield Bu/A | Avg % Moist. | % Stalk Lodged | Average % Stand | M.D.M. 7-8-70 | M.D.M. 8-19-70 |
|-----------------|---------------|-----------------|-------------------|--------------------|------------------|-------------------|
| <u>Yellow</u> | | | | | | |
| Pioneer 3147 | 75.5 | 23.7 | 20.4 | 92.7 | 3.0 | 1.3 |
| Pioneer X8445 | 110.7 | 23.6 | 13.3 | 94.8 | 3.7 | 1.7 |
| Stull 907Y SP | 70.2 | 24.1 | 27.8 | 85.4 | 4.3 | 2.3 |
| Trojan TX 6753 | 17.1 | 19.0 | 33.7 | 84.4 | 4.2 | 2.7 |
| Trojan TXS 6772 | 29.3 | 22.3 | 18.9 | 82.3 | 4.0 | 2.7 |
| P.A.G. SX-17 | 40.8 | 22.1 | 47.1 | 82.3 | 5.2 | 3.3 |
| Funk 23413 | 40.3 | 22.3 | 11.9 | 87.5 | 3.8 | 3.7 |
| Trojan TX6593 | 13.6 | 21.1 | 50.6 | 82.3 | 4.2 | 4.0 |
| Funk G4761 | 32.1 | 21.2 | 23.6 | 90.6 | 3.7 | 4.0 |
| Dekalb 1006 | 14.8 | 21.8 | 52.4 | 67.7 | 6.8 | 4.7 |
| Pioneer 3188 | 20.7 | 18.8 | 41.6 | 90.6 | 6.2 | 5.0 |
| Stull 307Y | 15.7 | 19.1 | 52.3 | 93.7 | 6.0 | 5.0 |
| Ky 105 | 15.6 | 19.4 | 28.8 | 83.3 | 5.7 | 5.0 |
| Trojan TX 6833 | 9.6 | 21.8 | 20.2 | 82.3 | 7.7 | 5.3 |
| Trojan TXS 7602 | 18.0 | 22.1 | 32.8 | 88.5 | 5.8 | 5.7 |
| S.S. 866 | 20.5 | 18.1 | 40.1 | 90.6 | 5.3 | 5.7 |
| Trojan TXS 6642 | 18.7 | 19.6 | 33.7 | 92.7 | 5.3 | 5.7 |
| T.-E. VR-20-Y | 18.1 | 19.2 | 38.1 | 85.4 | 5.3 | 6.0 |
| Schenk SS-88A | 5.1 | 17.8 | 47.4 | 79.2 | 6.7 | 6.3 |
| Princeton 875M | 12.4 | 20.1 | 39.2 | 84.4 | 4.8 | 6.7 |
| McNair X210V | 9.4 | 21.3 | 36.0 | 78.1 | 6.8 | 7.0 |
| Yellow Average | 29.0 | 20.9 | 33.8 | 85.7 | 5.2 | 4.5 |
| <u>White</u> | | | | | | |
| P.A.G. SX-90W | 115.0 | 23.1 | 10.1 | 86.5 | 4.3 | 1.3 |
| P.A.G. 644W | 116.8 | 24.6 | 14.8 | 87.5 | 5.2 | 2.0 |
| Funk 24963W | 40.2 | 22.0 | 21.5 | 92.7 | 2.3 | 3.0 |
| T.-E. VR-20-W | 41.5 | 17.3 | 28.0 | 88.5 | 3.2 | 3.3 |
| Pioneer 511A | 51.7 | 23.3 | 33.5 | 91.7 | 6.8 | 3.7 |
| Princeton 940 | 30.9 | 17.3 | 24.8 | 96.9 | 2.8 | 4.7 |
| Schenk S-96W | 21.9 | 19.5 | 32.0 | 84.4 | 5.5 | 5.0 |
| Stull 550W | 26.3 | 18.4 | 27.1 | 92.7 | 5.5 | 5.3 |
| Princeton 960 | 29.6 | 18.2 | 19.8 | 84.4 | 6.7 | 5.3 |
| Meacham MX-75W | 11.1 | 18.3 | 16.7 | 81.2 | 6.0 | 5.7 |
| Dekalb Exp. 901 | 18.5 | 21.3 | 44.9 | 81.2 | 6.3 | 5.7 |
| Stull 700W SP | 7.5 | 18.5 | 48.2 | 80.2 | 5.8 | 6.0 |
| W.O. King K-70 | 24.1 | 18.4 | 22.7 | 91.7 | 5.8 | 6.0 |
| Ky 5921W | 14.3 | 20.9 | 47.5 | 82.3 | 7.5 | 6.3 |
| Zimmerman 94W | 24.3 | 21.1 | 28.7 | 80.2 | 6.5 | 6.3 |
| White Average | 38.2 | 20.1 | 28.0 | 86.8 | 5.4 | 4.6 |
| Grand Average | 32.8 | 20.6 | 31.4 | 86.1 | 5.2 | 4.5 |

Location of Tests

The 1970 performance test locations were identical to the 1969 test locations. Each location sampled a different soil and climatic area of the state. The map on page 2 shows the location and Table 3 shows pertinent agronomic information for each test. The Lexington and Princeton locations had a normal and high population test as well as a screening test, which was initiated in 1970 to help identify promising additions to the larger performance test. The other test sites had only the normal population performance tests.

The Frankfort test site was specifically chosen for the presence of maize dwarf mosaic virus. The hybrid corn companies were asked to nominate only those hybrids that were known to have virus resistance.

Cultural Practices

The seedbed was prepared by conventional tillage methods at all locations. Fertilizer was applied as indicated by soil tests. The test areas were treated with herbicide and supplemented by post emergence cultivation when necessary. Table 3 shows the specific treatments for each location.

Experimental Design

Uncontrollable variability of soil types, fertility and other factors was sampled by using three replications of an 8 x 8 balanced lattice. A separate randomization was used for each location. Information presented in Tables 4 through 20 is adjusted for block and replication differences when shown applicable by statistical analyses.

Planting

All plots were planted with a conventional four-row corn planter modified for small plot work. The planter boxes were replaced by special planting heads to permit clean-out after planting each plot row. Each hybrid plot consisted of three side-by-side rows. The two outer rows bordered the middle row from competitive effects of neighboring hybrids and were not used for collection of data. The row width at all locations was 38 inches. Population was varied by altering combinations of row length and number of kernels per row.

Harvesting

All plots were harvested with a conventional tractor-mounted, one-row picker-sheller. The middle row of the 3-row plot was picked, shelled, and the grain collected in a metal container. The grain weight and moisture content of each plot were then measured and recorded on the harvesting equipment with a portable scale and moisture meter. Later, acre yields were calculated and adjusted to

Table 17. Annual Summary, Screening Test, Normal Population, Lexington, Ky.

| Hybrid | Yield Bu/A | Avg % Moist. | % Root Lodged | % Stalk Lodged | Average % Stand |
|---------------------|---------------|-----------------|------------------|-------------------|--------------------|
| <u>Yellow</u> | | | | | |
| Northrup-King PX50 | 68.6 | 15.8 | 0.0 | 11.9 | 87.5 |
| T-E Harvestmaster | 76.5 | 16.2 | 0.0 | 19.4 | 80.2 |
| Trojan M-112 | 89.4 | 16.2 | 0.0 | 22.6 | 90.6 |
| Schenk SS-66 | 102.6 | 16.8 | 0.0 | 43.2 | 91.7 |
| T-E Bonusmaker-S | 93.8 | 17.9 | 0.0 | 46.5 | 92.7 |
| Migro M-720 | 75.0 | 18.0 | 0.0 | 54.7 | 96.9 |
| Pioneer X8537 | 128.9 | 18.2 | 0.0 | 34.2 | 100.1 |
| Princeton SX-850 | 122.5 | 18.4 | 0.0 | 21.5 | 86.5 |
| Princeton SX-836 | 102.5 | 18.4 | 0.0 | 45.5 | 91.7 |
| Pioneer 3306 | 86.9 | 18.5 | 0.0 | 59.7 | 87.5 |
| Trojan TXS-119 | 98.8 | 19.1 | 0.0 | 31.6 | 91.7 |
| Northrup-King PX610 | 74.5 | 19.1 | 0.0 | 44.6 | 87.5 |
| Funk's 23413 | 121.3 | 19.3 | 0.0 | 25.9 | 92.7 |
| A.C.C.O. UC4600 | 80.0 | 19.5 | 0.0 | 52.6 | 85.4 |
| A.C.C.O. UC6000 | 81.8 | 19.9 | 0.0 | 44.3 | 95.8 |
| Indep. S&W SS-800 | 75.7 | 20.3 | 0.0 | 49.5 | 92.7 |
| T-E Mintmaker | 105.1 | 21.5 | 0.0 | 55.6 | 89.6 |
| K.A.E.S. Ky 105 | 72.3 | 21.6 | 0.0 | 75.5 | 92.7 |
| Pioneer 334 | 120.7 | 21.7 | 0.0 | 15.9 | 90.6 |
| P.A.G. SX-98 | 99.2 | 21.7 | 0.0 | 39.8 | 96.9 |
| Princeton SX-804 | 75.5 | 22.1 | 0.0 | 57.4 | 100.2 |
| Schenk SS-X8 | 90.0 | 22.5 | 0.0 | 55.9 | 96.9 |
| Migro M-40SX | 83.0 | 22.6 | 0.0 | 67.2 | 83.3 |
| Stull's 807SX | 91.8 | 22.7 | 0.0 | 63.8 | 84.4 |
| Princeton SX-650 | 94.9 | 22.7 | 0.0 | 28.2 | 86.5 |
| McNair Exp. 7090 | 68.0 | 23.5 | 0.0 | 80.3 | 94.8 |
| P.A.G. 492 | 91.3 | 25.0 | 0.0 | 28.2 | 85.4 |
| Princeton 1006 | 76.5 | 25.7 | 0.0 | 68.9 | 90.6 |
| Trojan TXS-120 | 104.0 | 27.8 | 0.0 | 18.6 | 82.3 |
| Yellow Average | 91.4 | 20.4 | 0.0 | 43.6 | 90.8 |

Table 17. (continued)

| Hybrid | Yield Bu/A | Avg % Moist. | % Root Lodged | % Stalk Lodged | Average % Stand |
|------------------|---------------|-----------------|------------------|-------------------|--------------------|
| <u>White</u> | | | | | |
| Princeton 960 | 87.3 | 18.5 | 0.0 | 59.8 | 93.7 |
| W.O. King K-70 | 80.0 | 19.9 | 0.0 | 59.6 | 92.7 |
| Princeton 940 | 74.5 | 19.9 | 0.0 | 49.7 | 91.7 |
| Meacham's MX-50W | 55.5 | 21.3 | 0.0 | 74.9 | 91.7 |
| Migro M-77SX | 58.9 | 21.7 | 0.0 | 73.4 | 95.8 |
| K.A.E.S. Ky5921W | 91.1 | 21.9 | 0.0 | 59.1 | 96.9 |
| Schenk SS-98W | 68.3 | 22.2 | 0.0 | 62.7 | 84.4 |
| P.A.G. 644W | 124.3 | 22.5 | 0.0 | 54.1 | 93.7 |
| Stull's 700WSP | 69.3 | 23.4 | 0.0 | 73.2 | 86.5 |
| Meacham's MX-75W | 71.4 | 24.0 | 0.0 | 53.1 | 95.8 |
| Zimmerman 94W | 75.7 | 24.0 | 0.0 | 57.1 | 80.2 |
| Funk's G508W | 103.6 | 25.1 | 0.0 | 38.7 | 88.5 |
| Schenk SS-101W | 103.2 | 26.3 | 0.0 | 31.4 | 88.5 |
| White Average | 81.8 | 22.4 | 0.0 | 57.5 | 90.8 |
| Grand Average | 88.4 | 21.0 | 0.0 | 47.9 | 90.8 |

In addition to the 1970 annual summaries for each location, we have included the 1969 summary over all non-virus locations and the 1969 MDM virus test summary. This is done because most of the hybrids tested in 1970 had the susceptible Texas male-sterile cytoplasm and the 1970 data will not be an accurate assessment of their true yield potential if they can be produced and sold as the more resistant normal cytoplasm versions for 1971. Therefore, the 1969 averages will be helpful when deciding among several hybrids that were susceptible in 1970 (T cytoplasm) but may be resistant for 1971 (N or B cytoplasm).

The plots in 1969 and 1970 were planted at 20,000 and 26,700 kernels per acre for the normal and high populations respectively and were not thinned. The percent stand indicated in each annual table, when multiplied by the number of kernels planted per acre, will be the actual plant population of that hybrid. A percent stand less than 100 would indicate some loss of plants owing to incomplete germination, seedling diseases or other factors. However, a stand reduction of 15% is not uncommon.

Comparisons between yields or other characters of any two or more hybrids should be made only with data from one table at a time. The testing procedures employed do not allow comparisons such as a hybrid grown at one location and population with another hybrid grown at a different location and population.

Table 1. Pedigrees of Experiment Station Hybrids Tested in 1970.

| Hybrid | Color | Cross | Pedigree |
|----------|--------|---|----------|
| Ky 105 | Yellow | 4X (T8 x GI21E) (38-11 x Oh 7B) | |
| Ky 5921W | White | 4X (CI64 x 33-16) (Ky 201 x CI66) | |

Table 15. Annual Summary, High Population, Lexington and Princeton, Ky.

| Hybrid | Yield Bu/A | Avg % Moist. | % Root Lodged | % Stalk Lodged | Average % Stand |
|-------------------|---------------|-----------------|------------------|-------------------|--------------------|
| Yellow | | | | | |
| P.A.G. SX-53 | 93.0 | 15.6 | 6.5 | 12.9 | 89.8 |
| N.-K. PX-616 | 53.9 | 15.6 | 1.1 | 25.4 | 91.1 |
| Trojan TXS-112 | 66.9 | 15.9 | 13.2 | 12.1 | 81.2 |
| S.S. 707 | 71.9 | 16.0 | 7.5 | 20.6 | 92.4 |
| Dekalb XL45 | 67.2 | 16.1 | 1.3 | 11.9 | 82.0 |
| T-E Cashmaker | 65.9 | 16.2 | 2.4 | 26.3 | 86.7 |
| S.S. 720 | 50.1 | 16.3 | 4.4 | 24.9 | 90.6 |
| S.S. 865 | 48.0 | 16.4 | 3.9 | 25.9 | 83.1 |
| Pioneer 3571 | 72.4 | 16.4 | 2.2 | 3.3 | 89.3 |
| Migro M-750 | 51.5 | 16.5 | 3.9 | 25.9 | 91.1 |
| N.-K. KT-680 | 41.9 | 16.6 | 0.9 | 13.4 | 91.4 |
| Stew. Card. SX-47 | 54.2 | 16.7 | 5.8 | 18.4 | 89.1 |
| S.S. 750 | 52.0 | 16.8 | 0.3 | 24.4 | 90.4 |
| K.A.E.S. Ky 105 | 35.4 | 16.9 | 3.7 | 31.6 | 84.6 |
| Indep. S&W SS-400 | 55.6 | 16.9 | 2.3 | 13.2 | 88.0 |
| S.S. 840 | 43.0 | 17.0 | 2.6 | 23.0 | 89.6 |
| N.-K. PX-678 | 59.0 | 17.0 | 0.9 | 9.5 | 92.2 |
| Funk's G4333 | 73.4 | 17.1 | 3.3 | 17.7 | 90.1 |
| Migro M-448X | 70.2 | 17.2 | 1.1 | 10.6 | 91.4 |
| Dekalb XL44 | 80.1 | 17.2 | 4.2 | 4.8 | 91.4 |
| Princeton SX-803 | 40.5 | 17.2 | 0.0 | 45.3 | 85.7 |
| Meacham's MX-30Y | 47.9 | 17.3 | 6.0 | 21.2 | 86.5 |
| P.A.G. SX-93 | 59.3 | 17.4 | 0.0 | 14.4 | 94.0 |
| Indep. S&W SD-600 | 45.4 | 17.5 | 0.7 | 17.9 | 87.8 |
| Princeton SX-823 | 61.4 | 17.6 | 0.0 | 12.9 | 93.2 |
| Pioneer 3308 | 67.7 | 17.7 | 0.8 | 22.3 | 95.3 |
| Schenk SS-88A | 37.9 | 17.8 | 0.0 | 40.9 | 91.9 |
| Trojan TXS-116 | 51.2 | 17.9 | 1.6 | 15.7 | 87.0 |
| Pioneer 3369A | 80.8 | 18.0 | 0.0 | 20.8 | 90.9 |
| T-E 20-Y-A | 45.5 | 18.1 | 2.1 | 24.2 | 88.3 |
| Meacham's MX-40Y | 67.3 | 18.1 | 0.3 | 18.3 | 90.9 |
| P.A.G. SX-17 | 54.8 | 18.3 | 1.9 | 39.3 | 88.3 |
| Pioneer 3516 | 61.7 | 18.3 | 0.6 | 27.1 | 86.5 |
| Stull's 747YSP | 36.3 | 18.4 | 3.9 | 33.1 | 89.6 |
| Dekalb XL66 | 90.6 | 18.5 | 2.8 | 11.5 | 90.6 |
| T-E 6916 | 66.8 | 18.5 | 0.5 | 7.7 | 92.2 |

Table 15. (continued)

| Hybrid | Yield Bu/A | Avg % Moist. | % Root Lodged | % Stalk Lodged | Average % Stand |
|------------------------------|---------------|-----------------|------------------|-------------------|--------------------|
| Pioneer 3196 | 77.2 | 18.6 | 0.0 | 21.5 | 95.1 |
| Trojan TXS-122 | 50.7 | 18.8 | 0.0 | 22.6 | 90.4 |
| P.A.G. SX-39 | 64.4 | 18.8 | 0.0 | 15.3 | 84.1 |
| Funk's G4697 | 61.4 | 19.0 | 2.8 | 25.1 | 87.2 |
| Funk's G5757 | 56.8 | 19.2 | 1.6 | 12.3 | 83.6 |
| Trojan TXS-121 | 43.8 | 19.2 | 1.3 | 20.6 | 89.1 |
| Stull's 808SX | 45.0 | 19.3 | 0.9 | 26.6 | 88.5 |
| Dekalb XL81 | 72.7 | 19.4 | 0.0 | 10.8 | 93.2 |
| Funk's G4761 | 64.5 | 19.6 | 0.7 | 9.8 | 90.9 |
| Stull's 807A ⁺ SX | 48.4 | 19.7 | 0.7 | 28.2 | 92.4 |
| McNair X210V | 51.6 | 19.8 | 1.6 | 27.4 | 83.3 |
| Funk's G4550 | 62.4 | 20.1 | 0.0 | 15.7 | 87.2 |
| Stull's 720ASX | 43.1 | 20.5 | 0.3 | 29.6 | 89.3 |
| Dekalb XL85 | 79.5 | 20.9 | 0.0 | 15.8 | 88.8 |
| P.A.G. SX-68 | 47.3 | 22.9 | 0.0 | 38.4 | 89.3 |
| Yellow Average | 58.6 | 17.9 | 2.0 | 20.6 | 89.2 |
| White | | | | | |
| Stull's 550W | 41.9 | 17.4 | 6.0 | 26.5 | 90.6 |
| King & Son K-60 | 44.7 | 17.5 | 0.3 | 36.9 | 89.3 |
| Schenk S-96W | 38.4 | 17.5 | 0.3 | 22.6 | 90.4 |
| K.A.E.S. Ky 5921W | 37.7 | 17.6 | 1.8 | 28.1 | 89.6 |
| T-E M-20W | 39.3 | 18.0 | 3.3 | 23.9 | 86.5 |
| Princeton 990B | 41.7 | 18.2 | 0.3 | 31.8 | 86.7 |
| Meacham's M-7W | 29.9 | 18.5 | 1.2 | 14.2 | 90.4 |
| S.S. 935W | 43.2 | 18.7 | 1.8 | 33.8 | 89.6 |
| Princeton 920A | 36.2 | 18.9 | 0.8 | 21.4 | 90.6 |
| Dekalb XL390W | 34.1 | 19.6 | 0.6 | 33.5 | 86.5 |
| P.A.G. SX-90W | 63.9 | 19.9 | 0.0 | 35.6 | 91.9 |
| Pioneer 511A | 58.8 | 20.3 | 1.8 | 25.5 | 89.3 |
| Funk's G4895W | 33.4 | 24.4 | 1.7 | 8.8 | 89.6 |
| White Average | 41.8 | 19.0 | 1.5 | 26.4 | 89.3 |
| Grand Average | 50.2 | 18.2 | 1.9 | 21.8 | 89.2 |

