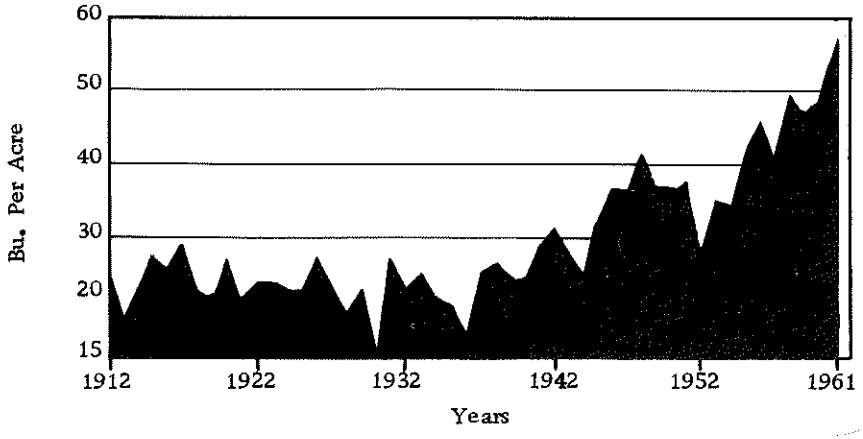
KENTUCKY CORN PRODUCTION EFFICIENCY
50 YEARS OF PROGRESS



During the past 50 years, much progress has been made in Kentucky to improve the efficiency of producing corn. In 1912, the average yield was 27 bushels per acre. This past year the state average was 55 bushels per acre, more than double that produced 50 years ago.

Little progress was made in improving production efficiency until 1942. Since 1942, the progress made can be divided into two periods. Yields ranged from 30 to 40 bushels from 1942 and 1955. The second period of increased efficiency from 1955 to 1961, yields have ranged from 40 to 55 bushels.

Although progress has been made, are Kentucky corn growers keeping pace with other states? The answer is no. How can this lag in efficient corn production be corrected?

Visit your county agent and check with him on these good production pointers:

1. Early plantings (April 20-May 15).
2. Increasing the number of stalks per acre (12,000-18,000).
3. Fertilization for top yields (soil test).
4. Control weeds (consider chemicals used at planting time).
5. Select a good hybrid that meets your needs.

11M-1-62

Results of the Kentucky Hybrid Corn Performance Test - 1961

By W.K. MARTIN and F.A. LOEFFEL

PROGRESS REPORT 108

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UNIVERSITY OF KENTUCKY

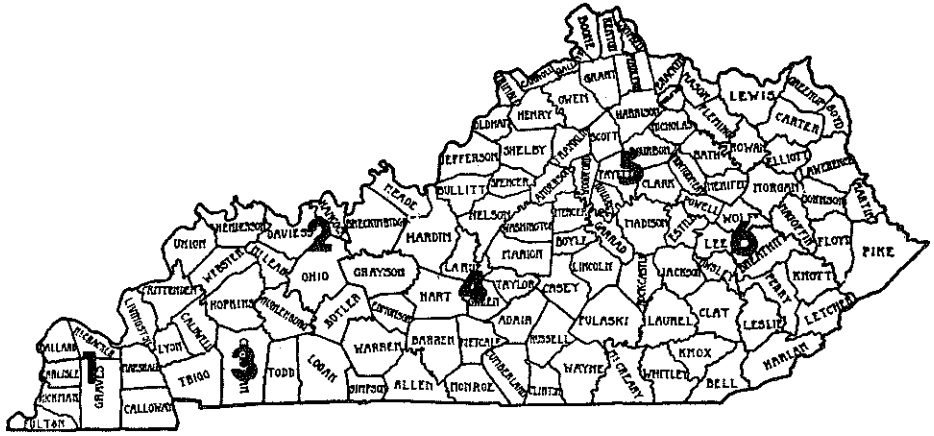
AGRICULTURAL EXPERIMENT STATION

LEXINGTON

JANUARY 1962

TESTING LOCATIONS OF

THE KENTUCKY HYBRID CORN PERFORMANCE TEST



Area		Location	Cooperator
Western	1.	Wickliffe	James Wilson
	2.	Owensboro	Beverly Gregory
	3.	Hopkinsville	Murray Wall
Eastern	4.	Campbellsville	James Noe
	5.	Lexington	Ky. Agr. Exp. Sta.
	6.	Quicksand	Robinson Agr. Exp. Substation Charles M. Derrickson

Acknowledgment is made to the University of Kentucky Computing Center, for assistance in summarizing the results reported in this progress report.

RESULTS OF THE KENTUCKY HYBRID CORN PERFORMANCE TEST IN 1961

W. K. Martin and F. A. Loeffel

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 97 percent of the Kentucky corn acreage was planted to hybrids in 1961.

Corn planting was delayed in 1961 because of heavy rainfall and below normal temperatures during April and early May. In spite of this, Kentucky farmers have produced a record breaking corn crop averaging 52 bushels per acre for the entire state. The last year's state average yield was 49 bushels per acre which was the record production until this year. Favorable moisture conditions along with heavier than usual fertilizer applications boosted yields to a new record despite a late planting season. Total production was 57.2 million bushels down almost 16 million bushels from last year. This year's crop was produced on approximately 1.1 million acres as compared to 1.5 million acres in 1960. A 28 percent cut in acreage due to the Goverment Feed Grain Program resulted in the smallest Kentucky corn crop since 1952.

Cool temperature and frequent rainfall dominated Kentucky's weather during the last part of April and

early May. Corn planting was started during this period on a very small scale in the southern counties. By May 9, only 3 percent of the corn crop had been planted, mostly in southern border counties and the bluegrass area. Approximately 30 percent of the 1960 crop was planted by this date. Two years ago over half of the acreage was planted and much was already up and growing by this time. Only 5 percent of the corn acreage was planted by the 16th of May compared to 40 percent in 1960 and 70 percent in 1959. This was the smallest amount planted at mid-May in many years. By June 6, two-thirds of the corn was planted, but progress was still two weeks behind schedule.

Despite the late start in spring, growing conditions in July and August were very favorable, except for a few low areas damaged by too much rain Approximately 30 percent of the corn crop was harvested by the middle of October.

The cool weather conditions in May were favorable for corn borer feeding, resulting in some damage to the stalks and ears.

Prior to 1960, disease ratings for Northern and Southern corn leaf blights were taken on each of the experiments when natural infection created a measurable differential. This procedure was not entirely satisfactory since meaningful ratings on disease were possible only on a few of the experiments in which the disease was severe.

In 1960 and 1961 ratings for these diseases were taken only at Lexington in a special planting which had been artifically inoculated with the disease spores. Severe disease epidemics have been present each year to assure effective evaluation of the hybrids being tested.

The average yield for all hybrids grown at 5 locations in 1961 was 115.0 bushels. The highest test average was 134.9 bushels grown at Quicksand. The lowest test average was 91.2 bushels for the Owensboro test.

EXPERIMENTAL METHODS

The performance test was conducted at five locations which represent corn-producing areas typical of the state. These locations together with the name of the cooperator are listed on the inside of the front 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. Similarly the yields from Lexington and Quicksand were averaged for the eastern Kentucky area.

Sixty 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 crosses, 3X; and a single cross as 2X. Seed of a single cross hybrid sells at a premium due to increased costs of producing seed. Fifty-four double crosses, two three-way crosses and four single crosses, 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. The reaction of the hybrids to Northern and Southern leaf blight are summarized in Table 7. The hybrids in Table 7 are listed in alphabetical order.

Field Design.

Each hybrid was planted in 4 plots at each of the 5 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. All tests were planted at the rate of 6 kernels per hill and the resulting plants thinned to 4 per hill.

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.

Four moisture samples were taken for each hybrid by taking two samples 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.

Disease.

Visual ratings of hybrid reaction to Northern and Southern corn leaf blight disease were taken on an artifically inoculated planting of the hybrids at Lexington. Each hybrid was planted in a 1 x 5 hill plot replicated three times. A five class rating scale is used: excellent, very good, good, fair and poor.

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 cannot be predicted at the time of planting, a farmer should plant a hybrid which has a good performance in an "average" season. The best estimate of hybrid performance for an "average" season is obtained by combining the results obtained from a large number of experiments grown in different years at a number of locations.

The information presented in Table 4 is the average of 17 individual experiments grown in 1959, 1960, and 1961. In Table 5 are summarized the results obtained from 11 experiments grown in 1960 and 1961. Table 6 contains information obtained from 6 experiments grown in 1961 at different locations in the state. For this reason, the information contained in Table 4 is the best estimate available for comparing the performance of corn hybrids for average growing conditions in Kentucky.

MAKE YOUR CHOICE BASED ON YOUR OWN NEEDS

Improvements in corn hybrids are constantly being made. An efficient corn producer will want to keep informed on these improvements and to determine if they will produce on his farm. For this reason, it is suggested that new hybrids be grown frequently on a trial basis in comparison with the hybrid or hybrids presently grown. A farmer often changes his entire corn acreage to a different hybrid. He then compares his old hybrid grown the previous year with the new hybrid grown the current year. Since the two hybrids were grown under different weather conditions, this comparison is not valid and often leads to incorrect decisions.

Hybrids being compared should be grown in the same field using identical management practices. A good way to do this is to plant one-half bushel or one bushel of seed of the new hybrid in the center of a field being sure to mark it at planting time. It is important to observe the hybrids frequently during the growing season. At harvest, yield should be determined and other observational notes recorded. Consult your county agent for procedure. If this suggestion is followed, a corn grower will be able to select hybrids which more nearly fits his production practices and personal preferences.

Strip tests can also be used by individual farmers to determine the value of other factors contributing to production efficiency, such as planting rates and fertilizer. It is important for a farmer to have an unfertilized check strip, and a strip receiving twice the quantity of fertilizer that the remainder of the field received. This enables him to determine if his investment in fertilizer was profitable and whether he used too little or too much fertilizer. The number of corn plants per acre in Kentucky is generally too low for top production. It would be well worth the time and effort to change the setting on the drill and compare yields at different rates of planting. It should be kept in mind, however, that plant population and fertility level must be kept in balance for efficient production. Consideration should also be given to the use of chemical weed killers, soil insecticides and some method of minimum tillage for preparation of land.

DO YOUR PART TO CONTRIBUTE TOWARD
A 60 BUSHEL AVERAGE CORN YIELD IN
KENTUCKY IN 1962

Table 1. Hybrids tested in 1961.

Hybrid	Color	Cross	Source of Hybrids
AES 805	Y	4X	Agricultural Experiment
809	Y		Station (North Central)
Broadbent 402B	Y	4X	Broadbent Hybrids
			Cobb, Kentucky
Crib Filler 66	Y	2X	Mitchell Farms
116	Y	4X	Windfall, Indiana
123	Y	4X	
131	Y	4X	
138	Y	4X	
Dekalb 633	Y	4X	Dekalb Agricultural
803	Y	3X	Ass'n., Dekalb,
805	Y	2X	Illinois
837	Y	4X	
869	Y	4X	
886	Y	4X	
925	W	4X	
Dixie 110Y	Y	4X	Dixie Stock Farms
			Sonora, Kentucky
Hagan H-2	W	4X	R. M. Hagan, Route 4,
H-9	Y	4X	Owensboro, Kentucky
Hilligoss 84	Y	4X	Shamrock Seed Farms
			McCordsville, Indiana
Ken-Bred E-20Y	Y	4X	Ken-Bred Producers;
E-20YA	Y	4X	Patmor, Jackson, Thompson
M-20W	W	4X	Marion, Danville, Hillsboro,
			Kentucky
Ky 105	Y	4X	University of Kentucky
106A	Y	4X	Agricultural Experiment
204	W	4X	Station, Lexington
205W	W	4X	
5901TW	W	4X	
5902TW	W	4X	
5921W	W	4X	

Table 1. Continued.

Hybrid	Color	Cross	Source of Hybrids
Meacham M-5	W	4X	Meacham's Koreandale
M-33Y	Y	4X	Farms, Morganfield,
			Kentucky
P.A.G. 434	Y	4X	Pfister Associated Growers,
436	Y	3X	Inc., Aurora, Illinois and
633W	W	4X	Huntsville, Alabama.
SX 19	Y	2X	
Pioneer 309A	Y	4X	Pioneer Corn Company, Inc.
309B	Y	4X	Tipton, Indiana
312A	Y	4X	
321	Y	4X	
323	Y	4X	
Princeton 8-A	Y	4X	Princeton Farms
840-A	Y	4X	Princeton, Indiana
890-A	Y	4X	
990	W	4X	
990-A	W	4X	
Southern States			
Catawba	Y	4X	Southern States Coop., Inc.
Cherokee	Y	4X	Division of Seed and Farm
Matoaka	Y	4X	Supply, Richmond 20,
Munsee	Y	4X	Virginia
Pocahontas	Y	4X	
Stull 100Y	Y	4X	Stull Brothers, Inc.
100YA	Y	4X	Sebree, Kentucky
101Y	Y	4X	
101YA	Y	4X	
101YAA	Y	4X	
107Y	Y	2X	
400WC	W	4X	
500W	W	4X	
US 13	Y	4X	Experiment Station
523W	W	4X	(U.S.D.A.)

Table 2. Pedigrees of Experiment Station and U. S. hybrids tested in 1961.

Hybrid	Pedigree
AES 805	(WF9 x 38-11)(C103 x Oh 45)
AES 809	(WF9 x P8)(Oh 43 x C103)
Ky 105	(T8 x CI21E)(38-11 x Oh 7B)
Ky 106A	(WF9 x 38-11)(CI21E x Oh 41)
Ky 204	(K64 x 33-16)(K55 x Ky 201)
Ky 205W	(Ky 211 x 33-16)(Ky 209 x H21)
Ky 5901TW	(Ky 211 tms x 33-16)(K55 x CI64)
Ky 5902TW	(Ky 211 tms x 33-16)(K55 x K64)
Ky 5921W	(CI64 x 33-16)(CI66 x Ky 201)
US 13	(WF9 x 38-11)(Hy x L317)
US 523W	(K55 x K64)(Ky 27 x Ky 49)

Table 3. Agronomic information pertaining to testing locations in 1961.

Location	Fertilizer applied	Plants per acre	Date planted	Date harvested	Experiment average Yield	Moisture
1. Wickliffe	600# 12-6-6 liquid fertilizer	14,860	June 12	Oct. 14	93.3	32.1
2. Owensboro	200# 0-20-20 200# Am. Nitrate	14,990	May 16	Oct. 6	91.2	22.4
3. Hopkinsville	300# 6-18-12 100# Anhydrous	15,150	May 24	Oct. 13	121.7	17.7
5. Lexington	500# 12-12-12	14,680	May 19	Oct. 26	134.0	19.8
6. Quicksand	66# Nitrogen 90# Phosphorus 90# Potash 33# Nitrogen (Side Dress)	19,010	May 22	Oct. 28	134.9	22.6

Table 4. Three-year summary of hybrids grown in 1959, 1960, and 1961.

Hybrid	Average Yield Bu./Acre			Maturity		
	State	Western Wickliffe Owensboro Hopkinsville	Eastern Campbellsville* Lexington Quicksand	Harvest Ear Moisture %	Erect Plants %	Ear Height ft.
YELLOW						
Dekalb 805	112.4	109.7	115.4	18.3	88.7	3.3
Dekalb 869	100.0	96.9	103.6	18.8	87.9	3.5
AES 805	102.9	99.5	106.6	18.9	84.6	3.4
Ky 106A	95.9	91.6	100.8	19.0	77.5	3.5
Stull 100Y	113.5	108.9	118.7	19.0	86.1	3.8
Dekalb 837	102.7	97.1	109.1	19.1	84.4	3.3
Stull 101Y	113.2	104.8	122.6	19.1	86.8	3.5
Hagan H-9	116.7	110.1	124.0	19.2	87.8	4.0
AES 809	103.1	97.4	109.4	19.3	88.8	3.0
Stull 100YA	115.2	109.9	121.1	19.3	88.5	4.0
US 13	100.6	96.1	105.6	19.3	77.4	3.6
P.A.G. 434	108.3	103.4	113.8	19.4	88.2	3.6
Stull 101YA	111.6	105.3	118.7	19.4	82.7	4.0
Ky 105	115.9	109.6	123.1	20.0	86.7	4.2
Broadbent 402B	115.1	108.9	122.0	20.2	88.7	4.1
Pioneer 312A	108.0	100.6	116.3	20.6	89.4	3.5
Pioneer 309A	110.2	100.3	121.3	22.5	91.3	4.1
Pioneer 309B	110.9	99.7	123.4	23.7	91.1	4.0
Yellow Average	108.7	102.8	115.3	19.7	86.5	3.7
WHITE						
Ky 205W	105.2	100.2	110.7	18.1	83.2	3.7
Stull 400WC	112.1	106.1	118.8	19.3	80.2	4.1
Meacham M-5	108.0	104.5	112.0	19.9	80.8	3.8
US 523W	108.0	103.3	113.4	20.5	83.7	3.9
Ky 204	105.8	100.1	112.2	20.6	88.4	3.6
Ky 5921W	111.0	104.9	117.8	20.8	85.9	3.7
P.A.G. 633W	108.5	101.9	115.8	20.9	86.1	4.0
Dekalb 925	110.1	106.2	114.5	21.0	86.8	3.9
Stull 500W	109.7	104.9	115.2	21.0	77.3	3.9
White Average	108.7	103.6	114.5	20.2	83.6	3.8
GRAND AVERAGE	108.7	103.0	115.0	19.9	85.3	3.8

* 1959 and 1960 only.

Make Your Choice Based On Your Own Needs. See Page 8

Table 5. Two-year summary of hybrids grown in 1960 and 1961.

Hybrid	Average Yield Bu./Acre			Maturity		
	State	Western Wickliffe Owensboro Hopkinsville	Eastern Campbellsville* Lexington Quicksand	Harvest Ear Moisture %	Erect Plants %	Ear Height ft.
YELLOW						
Crib Filler 116	112.7	103.7	123.5	19.0	89.5	3.3
Dekalb 805	117.8	110.3	126.8	19.6	89.7	3.1
Ken-Bred E20Y	106.4	100.6	113.3	19.8	87.4	3.0
AES 805	103.0	97.2	101.1	20.0	83.6	3.2
Stull 100Y	117.8	109.4	127.9	20.1	84.4	3.8
Dekalb 633	109.6	103.9	116.4	20.2	90.1	3.1
Dekalb 837	107.0	98.2	117.5	20.2	84.0	3.1
Crib Filler 123	112.7	101.5	126.1	20.5	91.5	3.3
Dekalb 869	105.7	97.7	115.3	20.5	89.2	3.4
Ky 106A	102.0	94.2	111.4	20.5	76.9	3.4
Meacham M-33Y	123.4	112.3	136.9	20.5	87.8	3.9
Stull 100YA	118.1	110.6	127.2	20.7	89.0	3.9
AES 809	106.3	96.6	117.9	20.8	88.3	2.9
Hagan H-9	121.7	112.9	132.3	20.8	86.6	4.0
P.A.G. 434	110.3	103.3	118.7	20.8	88.4	3.4
Crib Filler 131	111.5	99.7	125.7	20.9	86.7	3.7
US 13	102.2	95.9	109.9	20.9	80.8	3.5
Stull 101Y	119.4	109.0	131.9	21.0	86.9	3.3
Dekalb 803	111.6	103.9	120.9	21.1	89.1	3.4
Stull 101YA	113.3	105.2	123.1	21.1	83.1	3.9
Broadbent 402B	118.2	108.3	130.1	21.5	89.1	4.0
Ky 105	120.8	111.0	132.7	21.5	87.5	4.2
Stull 101YAA	116.1	102.9	131.9	21.9	89.0	3.6
Crib Filler 138	112.7	102.3	125.2	22.0	84.5	3.8
Pioneer 312A	112.9	101.9	126.0	22.0	89.8	3.3
Pioneer 309A	112.9	100.2	128.2	24.0	91.9	4.0
Pioneer 309B	112.0	97.7	129.3	25.2	92.0	4.0
Yellow Average	112.7	103.4	123.6	21.1	87.4	3.6
WHITE						
Ky 205W	107.1	98.3	117.6	19.5	87.9	3.5
Stull 400WC	112.9	102.9	125.0	20.6	80.2	4.0
Ky 5901TW	110.1	101.7	120.3	20.7	85.3	3.5
Ky 5902TW	108.7	103.6	114.8	20.8	85.6	3.6
Meacham M-5	111.0	104.9	118.3	21.3	81.1	3.7
Hagan H-2	108.4	98.4	120.5	22.0	90.4	3.6
Ky 204	106.9	99.2	116.2	22.1	90.0	3.4
Ky 5921W	111.6	102.9	122.2	22.2	85.8	3.5
US 523W	111.8	103.6	121.7	22.2	85.1	3.9
Stull 500W	111.7	105.0	119.7	22.3	83.6	3.9
Dekalb 925	112.6	104.8	122.0	22.6	82.3	3.8
P.A.G. 633W	110.2	100.9	121.4	22.6	86.8	4.0
White Average	110.3	102.2	120.0	21.6	85.3	3.7
GRAND AVERAGE	112.0	103.0	122.8	21.3	86.9	3.6

* 1960 only.

Table 6. Annual summary of hybrids grown in 1961.

Hybrid	Average Yield Bu./Acre State	Western Wickliffe Owensboro Hopkinsville	Eastern Lexington Quicksand	Maturity Harvest Ear Moisture %	Erect Plants %	Ear Height ft.
YELLOW						
S.S. Pocahontas	107.7	99.7	119.7	18.3	87.0	3.0
Crib Filler 116	120.7	108.5	139.0	20.2	91.4	3.3
Dekalb 805	118.5	109.3	132.2	20.4	94.4	3.1
Ken-Bred E-20Y	110.9	103.4	122.1	21.0	94.5	3.0
Stull 107Y	105.0	97.4	116.5	21.0	90.9	3.0
Crib Filler 66	107.8	101.6	117.1	21.1	88.2	3.2
P.A.G. SX 19	129.2	119.1	144.4	21.1	86.7	3.4
Pioneer 321	114.4	105.2	128.4	21.2	90.7	3.0
Dekalb 837	111.8	98.8	131.3	21.3	82.4	3.1
Dekalb 633	114.9	104.8	130.1	21.4	92.7	3.0
Princeton 840A	111.6	102.3	125.6	21.6	89.2	2.9
Ken-Bred E-20YA	115.6	101.7	136.4	21.8	89.5	3.9
AES 805	106.9	96.2	122.8	21.9	82.8	3.2
Dekalb 869	105.9	97.5	118.6	21.9	91.6	3.1
Stull 100Y	119.8	110.3	134.2	21.9	88.2	3.5
S.S. Matoaka	116.7	102.4	138.2	22.1	91.8	3.1
Hagan H-9	126.7	112.4	148.2	22.2	85.6	3.7
Crib Filler 123	113.1	99.4	133.7	22.2	93.8	3.3
Crib Filler 131	117.8	104.3	138.0	22.4	89.1	3.6
Dixie 110Y	121.8	109.7	139.9	22.4	86.4	3.8
Princeton 890-A	111.9	102.2	126.5	22.4	93.8	2.9
S.S. Cherokee	114.3	99.5	136.6	22.4	88.5	3.4
Dekalb 803	107.1	98.3	120.3	22.5	88.7	3.2
Ky 106A	102.2	93.8	114.7	22.5	80.4	3.3
AES 809	111.2	98.0	131.2	22.6	90.6	2.8
P.A.G. 434	116.2	103.4	135.5	22.6	90.7	3.2
S.S. Munsee	112.0	100.7	129.0	22.6	88.5	3.0
Princeton 8-A	103.7	96.0	115.3	22.7	93.6	3.0
U.S. 13	109.5	97.8	127.0	22.9	81.6	3.5
Meacham M-33Y	125.9	109.9	150.0	23.0	87.9	3.8
Stull 101YA	121.6	104.7	147.0	23.1	80.7	4.0
Hilligoss 84	109.1	94.7	130.6	23.2	85.7	3.4
P.A.G. 436	108.4	97.6	124.7	23.3	90.9	3.2
Ky 105	127.2	108.4	155.5	23.5	89.1	4.2
Stull 100YA	120.1	105.4	142.1	23.5	87.6	3.7
Pioneer 323	112.2	97.1	134.9	23.6	95.9	3.1
Stull 101Y	122.4	108.2	143.7	23.6	87.9	3.3
Broadbent 402B	121.4	106.9	143.1	23.7	90.7	4.0
Stull 101YAA	119.9	104.1	143.7	23.7	89.7	3.5
S.S. Catawba	118.7	103.1	142.1	23.9	88.4	3.1
Crib Filler 138	116.2	102.7	136.4	24.0	86.7	3.6
Dekalb 886	109.0	97.7	125.9	24.4	94.1	3.3
Pioneer 312A	115.0	102.2	134.3	24.7	93.2	3.1
Pioneer 309A	117.2	100.2	142.7	26.7	94.5	3.9
Pioneer 309B	110.8	89.3	143.2	29.2	92.7	3.8
Yellow Average	114.6	103.6	133.2	22.6	89.3	3.3

Table 6. Continued.

Hybrid	Average Yield Bu./Acre			Maturity		
	State	Western Wickliffe Owensboro Hopkinsville	Eastern Lexington Quicksand	Harvest Ear Moisture	Erect Plants	Ear Height
				%	%	ft.
WHITE						
Ky 205W	109.9	96.0	130.8	20.7	90.3	3.3
Ky 5901TW	115.5	101.0	137.4	21.8	90.4	3.2
Ky 5902TW	115.6	103.7	133.5	22.5	87.8	3.5
Stull 400WC	116.1	101.5	138.0	22.7	83.6	3.8
Meacham M-5	118.8	104.8	139.8	23.2	86.0	3.5
Princeton 990	119.2	106.3	138.5	23.2	83.3	3.8
Ken-Bred M-20W	110.1	96.5	130.6	23.3	90.0	3.3
Hagan H-2	112.7	100.0	131.8	24.0	95.4	3.4
US 523W	113.9	100.0	134.8	24.0	91.2	3.6
Stull 500W	115.8	103.4	134.4	24.1	84.7	3.7
Ky 5921W	109.3	96.3	128.8	24.3	85.9	3.4
Ky 204	114.3	99.3	136.8	24.8	92.1	3.1
P.A.G. 633W	111.8	95.2	136.7	25.0	89.0	3.8
Princeton 990-A	116.1	98.0	143.2	25.6	93.3	3.6
Dekalb 925	119.1	102.4	144.1	25.9	84.0	3.7
White Average	114.5	100.3	135.9	23.7	89.1	3.5
GRAND AVERAGE	114.6	101.8	133.4	22.9	89.2	3.4

Table 7. Reaction of hybrids to leaf blight diseases [1/]

Hybrids	Leaf Blight Resistance-1961		Leaf Blight Resistance 1960-61	
	Southern	Northern	Southern	Northern
WHITE				
Dekalb 925	Fair	Fair	Poor	Fair
Hagan H-2	Fair	Good	Good	Very Good
Ken-Bred M-20W	Good	Fair		
Ky 204	Fair	Fair	Poor	Fair
Ky 205W	Good	Poor	Poor	Fair
Ky 5901TW	Poor	Very Good	Poor	Good
Ky 5902TW	Good	Fair	Poor	Fair
Ky 5921W	Good	Very Good	Fair	Very Good
Meacham M-5	Very Good	Good	Good	Good
P.A.G. 633W	Poor	Good	Poor	Good
Princeton 990	Very Good	Very Good		
Princeton 990-A	Very Good	Very Good		
Stull 400WC	Very Good	Good	Very Good	Good
Stull 500W	Very Good	Very Good	Good	Very Good
US 523W	Good	Poor	Good	Fair

Continued on next page

Table 7. Continued.

Hybrids	Leaf Blight Resistance-1961 Southern	Leaf Blight Resistance-1961 Northern	Leaf Blight Resistance 1960-61 Southern	Leaf Blight Resistance 1960-61 Northern
YELLOW				
AES 805	Good	Very Good	Good	Very Good
AES 809	Very Good	Very Good	Good	Excellent
Broadbent 402B	Good	Poor	Good	Poor
Crib Filler 66	Good	Excellent		
Crib Filler 116	Good	Good	Fair	Good
Crib Filler 123	Good	Very Good	Very Good	Excellent
Crib Filler 131	Good	Excellent	Good	Excellent
Crib Filler 138	Good	Good	Good	Good
Dekalb 633	Fair	Very Good	Fair	Very Good
Dekalb 803	Very Good	Very Good	Good	Excellent
Dekalb 805	Very Good	Excellent	Good	Excellent
Dekalb 837	Good	Very Good	Fair	Very Good
Dekalb 869	Poor	Very Good	Poor	Very Good
Dekalb 886	Very Good	Excellent		
Dixie 110Y	Good	Good		
Hagan H-9	Good	Fair	Fair	Fair
Hilligoss 84	Good	Very Good		
Ken-Bred E-20Y	Good	Good	Fair	Very Good
Ken-Bred E-20YA	Good	Excellent		
Ky 105	Good	Poor	Good	Poor
Ky 106A	Poor	Good	Poor	Good
Meacham M-33Y	Good	Fair	Fair	Fair
P.A.G. 434	Poor	Good	Poor	Good
P.A.G. 436	Very Good	Excellent		
P.A.G. SX 19	Very Good	Very Good		
Pioneer 309A	Very Good	Very Good	Very Good	Very Good
Pioneer 309B	Very Good	Very Good	Good	Excellent
Pioneer 312A	Very Good	Very Good	Very Good	Excellent
Pioneer 321	Poor	Good		
Pioneer 323	Good	Very Good		
Princeton 8-A	Good	Very Good		
Princeton 840-A	Very Good	Good		
Princeton 890-A	Very Good	Excellent		
S.S. Catawba	Very Good	Poor		
S.S. Cherokee	Good	Poor		
S.S. Matoaka	Very Good	Good		
S.S. Munsee	Very Good	Fair		
S.S. Pocahontas	Good	Fair		
Stull 100Y	Good	Very Good	Poor	Very Good
Stull 100YA	Very Good	Good	Good	Good
Stull 101Y	Excellent	Very Good	Very Good	Very Good
Stull 101YA	Very Good	Excellent	Good	Excellent
Stull 101YAA	Good	Very Good	Good	Very Good
Stull 107Y	Very Good	Excellent		
US 13	Poor	Good	Poor	Good

1/ Resistance rating scale, excellent, very good, good, fair, and poor.