

**Results of the
Kentucky Hybrid Corn
Performance Test 1957**

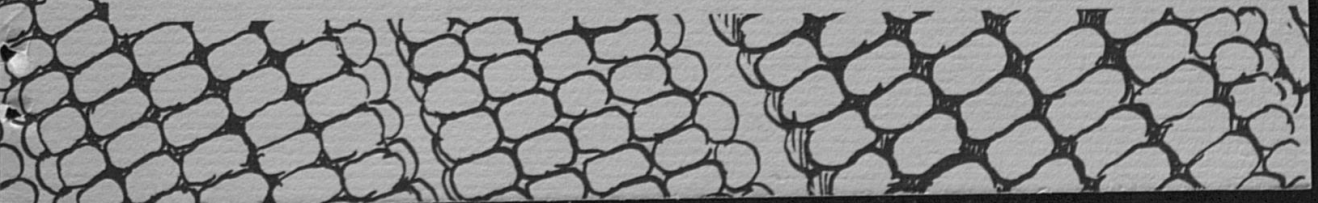
By F.A. LOEFFEL, J.F. SHANE and H.R. RICHARDS



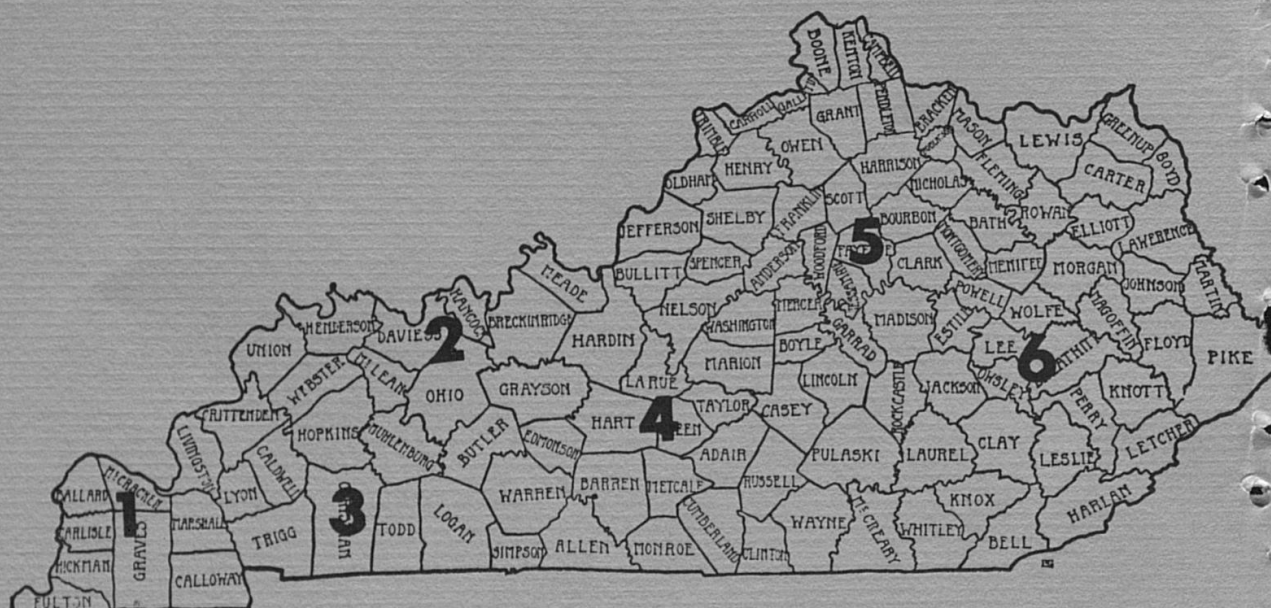
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**UNIVERSITY OF KENTUCKY
AGRICULTURAL EXPERIMENT STATION
LEXINGTON**

JANUARY 1958



LOCATIONS OF
THE 1957 HYBRID CORN PERFORMANCE TEST



<u>Location</u>	<u>Cooperator</u>
1. Wickliffe	James Wilson
2. Owensboro	John H. Gregory Beverly Gregory
3. Hopkinsville	Pennyryle Grain Imp. Ass'n. W. G. Duncan, III
4. Campbellsville	Frank Noe
5. Lexington	Ky. Agr. Exp. Sta.
6. Quicksand	Robinson Agr. Exp. Substation Charles M. Derrickson

RESULTS OF THE KENTUCKY HYBRID CORN
PERFORMANCE TEST IN 1957

F. A. Loeffel, J. F. Shane and
H. R. Richards

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 may be seen by the continuing shift to hybrids by the farmers of Kentucky. In 1957, over 94 percent of the Kentucky corn acreage was planted to hybrids.

Excessive moisture was more of a problem than drouth during the 1957 crop season in Kentucky. Rainfall during the period from April through September totaled 26.56 inches for the state. This is 4.30 inches more than last year and 3.65 inches above average. For the state as a whole, rainfall was below normal in both July and August and especially so in August. The growing season rainfall was 43 percent above average in the west end of the state while the eastern area was slightly below average. The 1957 rainfall distribution was the reverse of the 1956 pattern when the eastern portion received more generous amounts of rain than the western half.

The excessive rainfall during May and June delayed corn planting and necessitated some replanting of corn. Less than half was planted by June 15 in the important corn producing counties of western Kentucky. Much corn was planted in the river bottoms after July 1. In spite of these adverse conditions the average yield of 41.0 bushels for the state is second only to the record yield of 46.0 bushels recorded in 1956.

The average yield for all hybrids at all locations in 1957 was 88.1 bushels. The average yield for all entries in the western area was 96.4 bushels and was 79.7 bushels for eastern Kentucky. Hopkinsville had the highest test average of 112.8 bushels and Lexington the lowest with 62.2 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 inside of the front cover. These testing sites are grouped by geographical location into a western and eastern area for convenience in presenting the data. The western area summary consists of data averaged from Wickliffe, Owensboro and Hopkinsville. Campbellsville, Lexington and Quicksand results are averaged for the eastern Kentucky summary. Fifty-six hybrids which are available to the farmers of Kentucky through commercial trade channels were compared. These hybrids which were developed by state and federal agencies and by privately controlled 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. Fifty-four double crosses, 1 three-way cross 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. Performance data of the hybrids are presented by area for periods of one and two years in tables 4-7. The hybrids are listed in order of moisture content at harvest within groups based on kernel color. The hybrid with the lowest moisture content is listed first.

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. The hybrids which varied from 15.5 percent were adjusted to yield accordingly. Adjustments were made also 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.

The moisture in the grain of individual hybrids was determined at harvest by removing 2 rows of kernels from each of 8 ears selected at random from each of the first three replications. The grain from the 24 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

Since the performance of hybrids vary with environmental conditions which change from season to season and from location to location, one should exercise due caution in drawing conclusions from a single test conducted during any one year. A hybrid may be outstanding at one location but inferior under a different set of conditions. Therefore, one should study carefully the results from several years before making a major change in a choice of a hybrid to plant. However, the results from a single year should not be entirely ignored since such conditions of drouth and excessive moisture normally are not of an annual occurrence. Information from tests grown under these and other abnormal conditions is extremely valuable.

Planting a small acreage of a new hybrid, in comparison with the hybrid or hybrids presently grown a year before a major change is made, is suggested. Yields should be determined and other observational notes recorded during the growing season on the hybrids being compared.

Table 1. Hybrids tested in 1957.

Hybrid	Color	Cross	Source of Hybrids
AES 801	Y	4X	Agricultural Experiment Station (North Central)
AES 805	Y	4X	
Bartlett & O'Bryan W-23 Y-120	W	4X	Bartlett & O'Bryan Owensboro, Kentucky
	Y	4X	
Broadbent 235A 337 402A 406	W	4X	Broadbent Hybrids Cobb, Kentucky
	W	4X	
	Y	4X	
	Y	4X	
DeKalb 3X2 805 852 856 873 893 925 1002	Y	3X	DeKalb Agricultural Ass'n DeKalb, Illinois
	Y	2X	
	Y	4X	
	Y	4X	
	Y	4X	
	Y	4X	
	W	4X	
	Y	4X	
Funk G-91 G-134 G-512W	Y	4X	Columbiana Seed Company Eldred, Illinois
	Y	4X	
	W	4X	
Hagan H-7 H-9	Y	4X	R. M. Hagan Owensboro, Kentucky
	Y	4X	
Ind. 750B 844D	W	4X	Purdue University Agricultural Experiment Station, Lafayette Indiana
	Y	4X	
Ky 102 103 105 106 106A 203 204	Y	4X	University of Kentucky Agricultural Experiment Station Lexington, Kentucky
	Y	4X	
	Y	4X	
	Y	4X	
	Y	4X	
	W	4X	
	W	4X	
Meacham M-5 M-7 M-99Y	W	4X	Meacham's Koreandale Farms Morganfield, Kentucky
	W	4X	
	Y	4X	

Oh L41	Y	4X	Ohio Agricultural Experiment Station, Wooster, Ohio
L51	Y	4X	
P.A.G. 401	Y	4X	Pfister Associated Growers, Inc., Aurora, Ill. and Huntsville, Alabama
444	Y	4X	
485	Y	4X	
631W	W	4X	
633W	W	4X	
Pioneer 300	Y	4X	Pioneer Corn Company Tipton, Indiana
301A	Y	4X	
302	Y	4X	
309A	Y	4X	
312A	Y	4X	
345	W	4X	
505	W	4X	
X-2990	Y	4X	
Stull 100Y	Y	4X	Stull Brothers, Inc., Sebree, Kentucky
101Y	Y	4X	
111Y	Y	4X	
400W	W	4X	
U.S. 13	Y	4X	Experiment Station (U.S.D.A.)
523W	W	4X	
V.P.I. 426	Y	4X	Virginia Agricultural Experiment Station, Blacksburg, Virginia
V.P.I. 646	Y	4X	

Table 2. Pedigrees of Experiment Station and U. S. hybrids tested in 1957.

Hybrids	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 102	(Kys x 38-11)(K4 x L317)
Ky 103	(WF9 x 38-11)(K4 x L317)
Ky 105	(T8 x CI21E)(38-11 x Oh 7B)
Ky 106	(WF9 x 38-11)(CI21E x L317)
Ky 106A	(WF9 x 38-11)(CI21E x Oh41)
Ky 203	(Ky27 x Ky122)(33-16 x Ky 49)
Ky 204	(K64 x 33-16)(K55 x Ky 201)
Oh L41	(WF9 x Hy)(Oh 41 x Oh40B)
Oh L51	(WF9 x Hy)(Oh 43 x Oh45)
U.S. 13	(WF9 x 38-11)(Hy x L317)
U.S. 523W	(K55 x K64)(Ky27 x Ky49)
V.P.I. 426	(WF9 x C103)(Oh 43 x Oh 45)
V.P.I. 646	(WF9 x T8)(38-11 x C103)

Table 3. Agronomic information pertaining to testing locations in 1957.

Location	Soil Type	Previous Crop	Fertilizer Applied	Plants per acre	Date Planted	Date Harvested	Experiment	
							Yield	Moisture
1. Wickliffe	Sandy Loam	Corn	150# 12-12-12 100# Anhydrous	11,750	May 7	Oct. 1	87.4	18.7
2. Owensboro	Sandy Loam	Wheat and Red Clover	225# 5-20-20 200# Am. Nitrate	11,750	May 8	Oct. 3	89.0	17.8
3. Hopkinsville	Silt Loam	Lespedeza	150# 6-4-2-0 100# Anhydrous	11,750	April 29	Oct. 7	114.8	16.4
4. Campbellsville	Clay Loam	Grass and Red Clover	200# 5-20-20 3T. Manure	11,750	May 3	Sept. 26	78.2	19.5
5. Lexington	Silt Loam	Grass	300# 14-14-14 Broadcast	11,750	May 3	Oct. 14	62.2	17.7
6. Quicksand	Sandy Loam	Grass	1500# 5-10-10 Broadcast	14,500	May 17	Oct. 14	98.8	23.9

Table 4. Two year summary of agronomic data recorded on commercially available hybrids compared at three locations in western Kentucky in 1956-57.

Hybrid	Average Yield Bu./Acre			Moisture %	Erect Plants %	Ear Height Ft.
	State	Western	Wickliffe			
Yellow,						
AES 801	78.3	77.6	74.9	78.3	79.5	14.6
P.A.G. 401	86.0	82.5	76.1	79.0	92.5	15.0
Hagan H-7	85.3	82.3	75.2	85.2	86.6	15.5
DeKalb 805	93.3	88.6	85.0	85.9	94.9	15.6
Oh. L41	84.6	79.6	76.4	80.2	82.2	15.6
Stull 100Y	87.0	82.2	80.8	78.3	87.5	15.7
U.S. 13	83.7	81.4	80.3	79.5	84.5	15.8
Pioneer 301A	83.9	82.8	80.7	82.3	85.4	15.8
Stull 101Y	91.9	86.7	85.5	81.9	92.8	15.8
Oh L51	82.9	79.5	76.6	77.2	84.7	16.0
Ind. 844D	80.6	77.4	70.4	77.3	84.5	16.0
Pioneer 300	82.2	77.9	66.6	79.9	87.1	16.0
Ky 106	85.5	87.4	87.6	84.5	90.1	16.0
Ky 103	78.7	76.9	76.7	74.1	79.8	16.3
AES 805	84.7	78.6	76.0	75.9	83.9	16.4
Bartlett & O'Bryan Y-120	87.6	84.3	84.7	81.5	86.9	16.5
P.A.G. 444	86.7	83.4	82.0	77.5	90.6	16.6
Funk G-134	88.9	87.4	86.1	87.1	89.1	16.6
Funk G-91	86.8	82.3	76.6	80.3	89.9	16.7
Broadbent 402A	83.8	77.0	71.0	71.7	88.4	16.7
Ky 102	81.6	78.1	79.7	78.3	76.5	17.2
Ky 106A	85.1	82.0	78.7	82.3	85.0	17.4
DeKalb 1002	86.7	85.7	86.2	80.4	90.5	17.7

KY 105	93.2	92.0	94.6	87.9	93.5	17.7	94.0	4.1
Pioneer 302	85.5	81.0	83.2	76.1	83.6	18.3	95.6	3.7
DeKalb 893	83.3	79.7	78.3	74.2	86.5	18.9	88.8	4.2
Pioneer 309A	87.7	82.2	78.9	81.7	86.1	20.2	98.0	4.0
<u>Yellow Average</u>	85.4	82.1	79.6	79.9	86.8	16.5	92.9	3.7
White								
Stull 400W	88.6	87.7	91.2	79.1	92.9	15.9	92.7	4.1
KY 203	83.3	78.7	82.5	68.8	84.8	16.5	84.5	4.1
Broadbent 235A	81.2	80.1	83.9	74.9	81.5	17.1	90.3	3.9
Ind. 750B	86.5	85.0	89.1	77.7	88.2	17.2	91.6	3.7
Bartlett & O'Bryan W-23	83.2	78.9	77.4	76.5	82.7	17.2	93.8	3.4
Meacham M-5	89.5	86.0	86.1	82.7	89.1	17.2	88.7	3.8
Pioneer 505	84.4	78.6	84.0	67.8	83.9	17.4	92.5	4.4
U.S. 523W	87.4	87.7	92.8	78.4	92.0	17.5	86.8	3.8
P.A.G. 631W	88.6	89.6	90.6	81.3	97.0	17.6	88.4	3.9
KY 204	84.8	81.6	85.3	72.5	87.0	17.6	91.3	3.6
Funk G-512W	90.4	89.6	90.4	85.0	93.4	17.6	89.0	4.3
Broadbent 337	85.2	86.9	89.6	79.6	91.5	17.7	87.2	3.9
DeKalb 925	91.4	89.7	93.9	79.6	95.7	17.8	88.1	3.9
P.A.G. 633W	88.9	88.0	91.3	79.4	93.3	18.4	90.4	4.0
<u>White Average</u>	86.7	84.9	87.7	77.4	89.5	17.3	89.7	3.9
Mean	85.8	83.0	82.4	79.1	87.7	16.8	91.8	3.8

Table 5. One year summary of agronomic data recorded on commercially available hybrids compared at three locations in western Kentucky in 1957.

Hybrids	Average Yield Bu./Acre		Hopkinsville	Moisture %	Erect Plants %	Ear Height ft.
	Western	Wickliffe				
Yellow						
F.A.G. 401	88.7	70.5	88.2	125.0	88.9	3.4
DeKalb 3X2	79.9	80.3	83.0	103.5	92.8	3.1
AES 801	81.0	70.2	90.6	104.5	97.8	3.2
DeKalb 856	84.8	83.1	89.2	112.8	91.4	3.8
Pioneer X2990	91.0	86.5	88.5	108.7	93.4	3.3
DeKalb 873	77.0	61.2	86.6	101.7	89.7	3.6
Hagan H-7	86.9	76.1	94.7	108.3	93.9	3.7
Stull 101Y	91.8	90.3	87.7	123.5	97.0	3.9
U.S. 13	86.3	80.8	89.7	111.2	91.4	3.8
Stull 100Y	92.0	85.1	98.4	111.1	97.3	3.8
Oh 141	84.8	81.1	86.3	102.6	95.0	3.2
Ind. 814D	83.3	69.1	86.4	102.6	92.8	3.2
Broadbent 402A	86.7	83.9	79.0	112.7	94.2	3.8
Pioneer 301A	85.7	81.9	95.9	116.7	91.7	3.1
DeKalb 805	96.9	86.6	98.6	120.4	94.7	3.3
Funk G-91	87.7	73.3	84.8	111.4	95.2	3.7
Ky 106	88.6	93.8	99.8	117.4	96.6	3.9
AES 805	83.6	70.3	88.3	104.1	94.8	3.4
Oh L51	88.1	74.9	86.0	111.2	95.3	3.0
Ky 103	82.0	81.1	86.4	100.9	92.8	3.8
Bartlett & O'Bryan Y-120	87.1	85.3	89.8	106.1	94.4	3.7
Pioneer 300	82.6	78.1	87.2	103.9	92.0	3.7
P.A.G. 1444	91.5	91.7	87.0	109.1	92.0	3.6
Funk G-134	92.0	85.3	94.8	110.5	95.6	3.7
DeKalb 852	88.9	79.9	88.9	112.4	95.3	3.7
P.A.G. 485	91.7	96.2	90.7	131.0	92.0	4.0
Meacham M-99Y	86.5	79.8	78.3	109.6	90.1	3.6
V.P.I. 426	94.3	81.9	95.4	118.6	93.6	3.8

DeKalb 1002	90.0	102.1	90.0	94.8	121.4	17.9	91.7	4.0
Ky 106A	82.8	88.4	73.5	87.3	104.5	18.2	92.5	3.6
Ky 102	79.0	87.7	77.5	86.6	99.1	18.3	89.7	4.2
V.P.I. 646	91.3	98.6	85.5	90.7	119.7	18.3	96.7	3.7
Broadbent 406	90.2	100.2	92.1	86.8	121.6	18.5	95.9	3.8
Hagan H-9	96.6	107.9	107.3	94.9	121.5	18.5	95.3	4.1
Ky 105	93.2	106.0	103.5	91.2	123.4	18.6	96.7	4.0
Pioneer 302	87.7	94.4	89.2	86.2	107.7	18.9	96.4	3.7
Pioneer 312A	94.5	100.2	97.1	97.9	105.6	19.1	96.1	3.8
DeKalb 893	82.1	90.6	84.2	78.0	109.6	19.6	86.2	4.1
Pioneer 309A	90.8	96.9	98.6	83.6	108.6	20.7	97.5	4.0
Stull 111Y	86.5	101.3	103.8	80.5	119.4	24.0	83.4	4.2
<u>Yellow Average</u>	87.7	94.9	84.0	89.0	111.8	17.4	93.5	3.7
<u>White</u>								
Pioneer 345	82.9	88.6	71.5	84.9	109.4	14.7	93.4	3.1
Stull 400W	92.1	103.2	101.2	87.4	121.0	16.4	91.7	4.0
Ind. 750B	94.0	104.3	105.6	94.5	112.8	17.4	87.2	3.7
Ky 203	89.1	98.5	96.9	86.1	112.5	17.5	88.7	4.0
Bartlett & O'Bryan W-23	86.2	92.9	82.7	93.9	102.1	18.2	93.3	3.3
Broadbent 337	88.3	105.2	102.1	90.3	123.3	18.3	91.9	3.8
Ky 204	87.9	96.4	93.0	87.6	108.7	18.4	93.9	3.4
Funk G-512W	90.1	102.8	97.0	92.4	119.1	18.5	87.0	4.1
U.S. 523W	90.3	107.1	113.2	88.5	119.5	18.5	82.8	3.8
Meacham M-5	90.2	98.7	88.0	89.4	118.7	18.6	90.3	3.7
Broadbent 235A	80.1	89.8	90.6	80.3	98.6	18.7	89.8	3.6
Pioneer 505	86.8	94.1	94.4	77.9	109.9	18.9	93.9	4.2
P.A.G. 631W	89.2	103.8	100.2	89.8	121.4	19.1	91.7	3.9
Meacham M-7	93.1	102.7	97.2	94.7	116.2	19.2	87.8	3.8
DeKalb 925	97.1	109.2	103.0	95.2	129.4	19.3	89.2	3.8
P.A.G. 633W	89.2	102.5	97.2	90.8	119.6	19.4	87.8	3.9
<u>White Average</u>	89.2	100.0	95.9	89.0	115.1	18.2	90.0	3.8
Mean	88.1	96.4	87.4	89.0	112.8	17.7	92.5	3.7

Table 6. Two year summary of agronomic data recorded on commercially available hybrids compared at three locations in eastern Kentucky in 1956-57.

Hybrid	Average Yield Bu./Acre					Quicksand	Moisture %	Erect Plants %	Ear Height ft.
	State	Eastern	Campbellsville	Lexington	Quicksand				
Yellow									
P.A.G. 401	86.0	89.5	79.6	68.3	100.2	17.9	93.2	4.0	
Pioneer 301A	83.9	84.9	75.5	68.2	75.7	18.1	90.1	3.5	
Pioneer 300	82.2	86.6	73.8	66.4	86.3	18.2	90.4	4.0	
AES 801	78.3	78.9	74.1	65.1	81.2	18.2	94.5	3.4	
Hagan H-7	85.3	88.2	78.4	65.8	98.2	18.8	92.1	4.2	
Ky 103	78.7	80.4	81.9	56.2	85.3	19.1	83.6	4.0	
Stull 100Y	87.0	91.6	86.1	69.0	102.0	19.2	95.6	4.1	
Ky 106	85.5	83.6	73.8	57.9	88.9	19.2	87.7	4.0	
Oh L41	84.6	89.5	83.7	64.7	90.5	19.2	92.4	3.4	
Oh L51	82.9	86.3	81.0	72.9	102.7	19.3	98.1	3.3	
Stull 101Y	91.9	97.0	79.9	67.9	101.5	19.3	95.5	4.0	
Ky 106A	85.1	88.1	70.2	60.4	101.1	19.5	93.5	3.8	
Ind. 844D	80.6	83.7	78.6	68.7	94.4	19.5	89.7	3.8	
Bartlett & O'Bryan Y-120	87.6	90.7	74.5	64.6	102.1	19.5	93.8	3.9	
U.S. 13	83.7	86.0	80.6	65.2	90.0	19.7	84.9	4.0	
DeKalb 805	93.3	98.0	90.2	77.2	108.4	19.7	97.9	3.7	
Funk G-91	86.8	91.2	86.6	68.5	101.3	19.7	92.7	3.7	
AES 805	84.7	90.8	77.4	71.0	90.3	19.8	94.5	3.6	
Funk G-134	88.9	91.3	87.5	70.8	102.7	20.0	96.1	3.8	
P.A.G. 4444	86.7	90.0	88.4	67.9	105.4	20.1	96.5	3.7	
Ky 102	81.6	85.1	69.5	42.2	98.8	20.4	80.8	4.4	
DeKalb 1002	86.7	87.7	77.8	49.6	106.1	20.5	83.7	4.0	

Ky 105	93.2	94.3	83.6	57.3	100.4	20.7	94.6	4.2
Pioneer 302	85.5	89.9	81.2	67.2	94.7	20.9	94.9	3.9
Broadbent 402A	83.8	90.5	80.1	66.7	97.5	22.1	92.1	4.1
DeKalb 893	83.3	86.9	77.6	46.8	96.2	23.5	83.7	4.3
Pioneer 309A	87.7	93.1	71.9	71.2	110.6	24.3	97.5	4.2
<u>Yellow Average</u>	85.4	88.7	79.4	64.4	96.8	19.9	91.9	3.9
White								
Stull 400W	88.6	89.5	80.5	63.4	98.7	19.7	91.6	4.1
DeKalb 925	91.4	93.0	77.7	59.2	117.9	19.9	88.0	4.1
Meacham M-5	89.5	93.0	82.0	61.6	101.5	19.9	88.7	3.9
Ind. 750B	86.5	88.0	81.8	65.1	104.3	19.9	91.2	4.0
Broadbent 337	85.2	83.4	63.7	49.4	101.1	20.2	86.7	3.9
Pioneer 505	84.4	90.2	75.5	53.0	110.0	20.2	96.1	4.4
Ky 204	84.8	88.0	81.1	60.6	96.6	20.3	92.8	3.6
Bartlett & O'Bryan W-23	83.2	87.4	75.1	63.5	99.7	20.4	92.4	3.6
U.S. 523W	87.4	87.0	72.1	51.6	96.5	20.4	88.6	4.0
Broadbent 235A	81.2	82.3	70.1	50.2	90.9	20.9	92.2	4.0
Funk G-512W	90.4	91.2	77.3	56.2	98.7	20.9	85.1	4.3
Ky 203	83.3	87.9	65.5	59.0	114.2	21.0	85.9	4.1
P.A.G. 633W	88.9	89.7	73.4	54.6	99.8	21.0	92.0	4.0
P.A.G. 631W	88.6	87.5	75.3	48.0	100.4	21.5	88.1	4.0
<u>White Average</u>	86.7	88.4	75.1	56.8	102.2	20.4	90.0	4.0
Mean	85.8	88.6	77.9	61.8	98.6	20.1	91.2	3.9

Table 7. One year summary of agronomic data recorded on commercially available hybrids compared at three locations in eastern Kentucky in 1957.

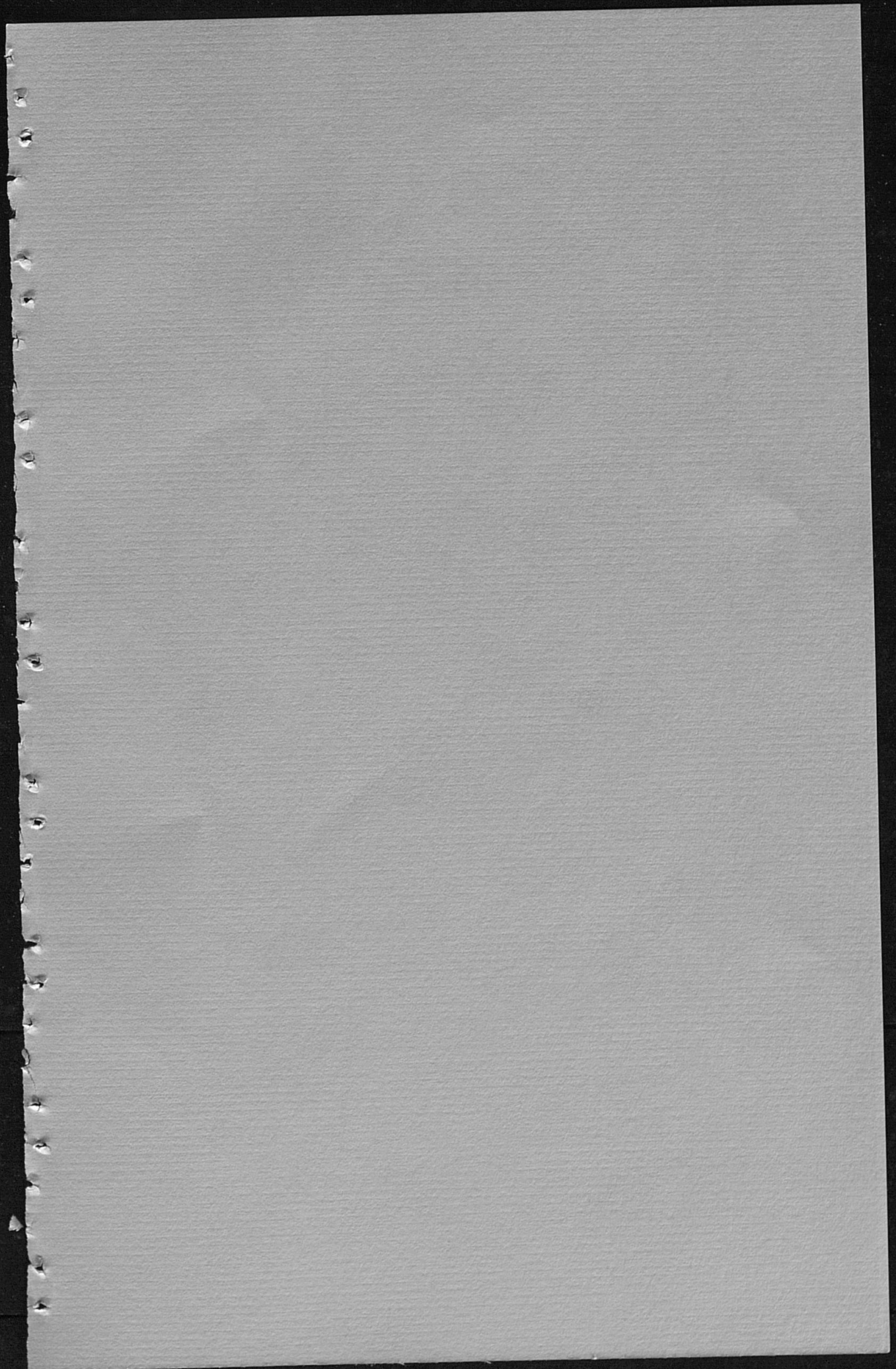
Hybrids	Average Yield Bu./Acre			Quicksand	Moisture %	Erect Plants %	Ear Height ft.
	State	Eastern	Campbellsville				
Yellow							
DeKalb 856	84.8	74.5	74.1	66.5	17.7	85.9	4.2
P.A.G. 401	88.7	82.7	79.6	68.3	18.5	90.9	4.0
Pioneer 301A	85.7	73.1	75.5	68.2	18.6	82.5	3.3
Pioneer X2990	91.0	87.3	84.6	71.6	18.6	92.8	3.8
Hagan H-7	86.9	80.8	78.4	65.8	18.7	86.7	4.2
DeKalb 3X2	79.9	70.9	70.9	59.2	19.2	86.7	3.2
Stull 100Y	92.0	85.7	86.1	69.0	19.3	93.9	4.2
AES 801	81.0	73.5	74.1	65.1	19.4	91.4	3.2
Pioneer 300	82.6	75.5	73.8	66.4	19.4	87.8	4.1
Ind. 844D	83.3	80.6	78.6	68.7	19.4	87.0	3.8
Bartlett & O'Bryan Y-120	87.1	80.4	74.5	64.6	19.4	91.2	3.9
Funk G-134	92.0	87.0	87.5	70.8	19.4	93.1	3.9
DeKalb 873	77.0	70.8	72.9	59.8	19.5	87.0	3.6
Ky 103	82.0	74.5	81.9	56.2	19.6	78.9	4.1
Broadbent 402A	86.7	81.4	80.1	66.7	19.7	93.1	3.8
Oh L41	84.8	79.6	83.7	64.7	19.9	87.0	3.2
Oh L51	88.1	85.5	81.0	72.9	19.9	96.9	3.2
Stull 101Y	91.8	83.1	79.9	67.9	19.9	94.2	4.3
Ky 106A	82.8	77.2	70.2	60.4	19.9	92.5	3.7
Hagan H-9	96.6	85.2	82.5	65.6	19.9	93.1	4.2
Ky 106	88.6	73.5	73.8	57.9	20.0	87.6	4.0
Broadbent 406	90.2	80.1	83.1	60.1	20.1	90.6	4.3
Meacham M-99Y	86.5	83.7	81.8	67.4	20.1	86.7	3.8
U.S. 13	86.3	78.6	80.6	65.2	20.3	80.3	4.0
P.A.G. 444	91.6	87.2	88.4	67.9	20.3	94.4	3.8
AES 805	83.6	79.6	77.4	71.0	20.5	90.5	3.6
P.A.G. 485	91.7	77.3	68.0	57.3	20.6	85.6	4.3
Ky 102	79.0	70.2	69.5	42.2	20.7	80.9	4.5

V.P.I. 646	91.3	84.0	83.0	70.1	99.0	20.7	94.7	4.0
DeKalb 852	88.9	84.0	83.6	67.0	101.3	20.9	86.4	3.8
DeKalb 805	96.9	91.9	90.2	77.2	108.4	20.9	96.7	3.7
V.P.I. 426	94.3	90.0	80.5	71.0	118.4	21.0	89.2	4.0
Funk G-91	87.7	85.5	86.6	68.5	101.3	21.2	90.1	3.7
Pioneer 312A	94.5	88.7	87.7	63.5	114.8	21.3	89.4	4.0
Pioneer 302	87.7	81.0	81.2	67.2	94.7	21.3	92.3	4.0
Ky 105	93.2	80.4	83.6	57.3	100.4	21.3	93.1	4.3
DeKalb 1002	90.0	77.8	77.8	49.6	106.1	21.5	78.1	4.2
Pioneer 309A	90.8	84.6	71.9	71.2	110.6	23.2	95.9	4.3
DeKalb 893	82.1	73.5	77.5	46.8	96.2	23.5	83.9	4.4
Stull 111Y	86.5	71.7	77.3	41.1	96.7	25.8	78.4	4.6
<u>Yellow Average</u>	87.7	80.3	79.3	63.9	97.7	20.3	88.9	3.9

<u>White</u>								
Pioneer 345	82.9	77.2	74.7	65.9	91.0	17.3	92.0	3.2
Stull 400W	92.1	80.9	80.5	63.4	98.7	19.4	88.4	4.2
DeKalb 925	97.1	84.9	77.7	59.2	117.9	19.9	83.1	4.1
Ind. 750B	94.0	83.7	81.8	65.1	104.3	19.9	89.4	4.0
Broadbent 337	88.3	71.4	63.7	49.4	101.1	20.0	83.6	3.8
Meacham M-5	90.2	81.7	82.0	61.6	101.5	20.3	81.4	4.0
Bartlett & O'Bryan W-23	86.2	79.4	75.1	63.5	99.7	20.7	87.8	3.5
Pioneer 505	86.8	79.5	75.5	53.0	110.0	20.8	94.8	4.6
U.S. 523W	90.3	73.4	72.1	51.6	96.5	20.8	84.8	4.2
Ky 204	87.9	79.4	81.1	60.5	96.6	20.9	87.5	3.5
Broadbent 235A	80.1	70.4	70.1	50.2	90.9	21.2	91.2	4.0
Funk G-512W	90.1	77.4	77.3	56.2	98.7	21.2	81.1	4.3
P.A.G. 633W	89.2	75.9	73.4	54.6	99.8	21.2	88.6	4.0
Ky 203	89.1	79.6	65.5	59.0	114.2	21.4	82.0	4.1
Meacham M-7	93.1	83.5	80.8	64.9	104.8	21.7	87.0	4.0
P.A.G. 631W	89.2	74.6	75.3	48.0	100.4	22.4	72.8	4.1
<u>White Average</u>	89.2	78.3	75.4	57.9	101.6	20.6	86.0	4.0
Mean	88.1	79.7	78.2	62.2	98.8	20.4	88.1	3.9

Table 8. Forty-five years of progress in Kentucky corn production.

Year	Harvested acres thousands	Average yield bu./acre	Total production bushels thousands	Hybrid acreage %
1913-1917	3,680	24.8	91,505	0
1918-1922	3,410	23.8	81,140	0
1923-1927	3,100	24.2	74,936	0
1928-1932	2,923	20.6	60,385	0
1933-1937	2,798	22.1	61,728	0.2
1938-1942	2,580	27.0	69,681	10.1
1943-1947	2,324	31.0	72,038	59.6
1948-1952	2,324	36.2	63,100	84.9
1953-1957	1,914	39.5	74,982	92.2



CORN PRODUCTION POINTERS

1. Select good, deep, fertile soil that is least subject to erosion.
2. Test soil to determine fertility program.
3. Select an adapted hybrid that fits into the farm program.
4. Prepare a good seedbed.
5. Plant on time.
6. Get a good stand:
 - a. Match planter plates to grade of corn.
 - b. Adjust number of stalks per acre to fertility level.
 - c. Guard against germination injury from starter fertilizer.
Do not place seed in contact with fertilizer.
7. Control insects.
8. Control weeds. Practice shallow cultivation and only when necessary to control weeds.
9. Side-dress with nitrogen for top yields.
10. Determine your corn yield - - the first 30 bushels produced per acre usually is required to pay expenses of production.
11. Reduce harvest losses.
12. Follow safety practices to avoid personal injury.
13. Protect stored corn from insects and rodents.