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Evaluations  
of  
Corn  
Hybrids  
in  
Alabama,  
2000

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*Information contained herein is available to all persons regardless of race, color, sex, or national origin.*

# Evaluations of Corn Hybrids in Alabama, 2000

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## INTRODUCTION

Selected corn hybrids are evaluated annually by the Alabama Agricultural Experiment Station as a service to producers and industry. These tests are conducted throughout the state in an attempt to determine effects of different climatic factors and soil types on yield. There are several types of tests in the program. The Preliminary Hybrid Tests are conducted at one location in each of the northern, central, and southern regions of Alabama. These tests include experimental and newly released hybrids. If a hybrid is outstanding in the preliminary test, it is entered in the Regular Corn Hybrid Test the following year.

The Regular Corn Hybrid Test is conducted at two locations in the northern region, two locations in the central region, and four locations in the southern region. Early yellow corn hybrids are tested at one location in each region. In addition, a regular corn hybrid test is irrigated at both Belle Mina and Headland and a preliminary test is irrigated at Tallassee. Locations and cultural practices for all tests are given in Table 1.

## PROCEDURE

All tests are laid out in a randomized complete block design with four replicate plots for each variety at each location. Rows are 30 to 36 inches apart, depending on location. Two-row plots are used, and both rows are harvested. Plots are 20 to 30 feet long, depending on location. The target plant population for the tests is 20,000 plants per acre with a seeding rate of 23,000 seeds per acre. The irrigated tests at Belle Mina, Tallassee, and Headland are seeded at a rate to achieve 30,000 plants per acre, but are thinned to 25,000 plants per acre.

Grain yields are adjusted to 15.5 percent moisture and converted to bushels (56 pounds) per acre. Stalks broken or leaning more than 45 degrees are considered lodged. The mid-silk data show the number of days from planting until approximately half the plants in the plots are showing silks. The Regular Corn Hybrid tests also are examined for disease incidence at selected locations each year. When virus or other disease symptoms indicate crop damage, disease ratings are compiled and published in this report. In 1998, the virus test at Marion Junction was not harvested due to extremely dry growing conditions.

## INTERPRETATION OF DATA

In replicated experiments such as those reported here, yields from each of the four replicate plots of a particular variety at a given location will be slightly different because of inherent differences in productivity among those plots. These differences in yield among replicate plots are known as random variation. Given this situation it is clearly necessary to have a method to determine whether differences among hybrids are “true” or “real” differences, or whether they are due to random variation. To do this, a statistical analysis was conducted to determine a “least significant difference” (LSD) by comparing the differences among varieties with random variation. If the difference in yield between two hybrids is larger than the LSD, then the difference is probably real, but if the difference is less than the LSD, it may not be real. If the difference between two hybrids is less than, but close to the LSD, then there is still a chance that it is real, but if it is considerably smaller than the LSD, then it is probably not real and mainly due to random variation.

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<sup>1</sup>*Glass is an Agricultural Program Associate and Mask is a Professor in the Auburn University Department of Agronomy and Soils.*

With this in mind **it is very important to study differences in hybrid yields in relation to the LSD**, which is provided at the bottom of the table for each of the current year yield columns at each location. Clearly, LSDs vary from one location to another. This is because random variation varies among locations and from year to year. The coefficient of variation (CV) is a reflection of random variation, and is reported below the LSD values in the tables. If the CV is low, a precise or reliable test is indicated. Ideally, the CV should be below 10 percent, but CVs of 10 to 20 percent are acceptable. Values for the CV above 20 percent indicate a rather unreliable test, which may have been caused by factors such as disease variation among replicates, etc.

In comparing yield potential of two hybrids it is important to consider a wide range of results. **Do not focus on results from only one year at one location.** Two- and three-year average yields are provided by location and region. These are more useful guides than yields from only one year. However, other factors may deserve consideration. For example, differences between the highest and the lowest yield of a hybrid across several locations may be an indication of the stability of its yield under variable conditions, or what is the “risk level” of the variety.

Differences in yield of hybrids among locations will be a result of the combined effects of differences among locations in soil, weather (mainly rainfall), planting date, weed control, and other factors. To assist in estimating which factors most likely had the greatest effect on yield differences among locations, planting dates and cultural practices (Table 1), rainfall records (Table 18), and soil types (Table 19) are provided. This information also serves as a guide for assessing conditions to which results may be extrapolated.

**TABLE 1. LOCATIONS AND CULTURAL PRACTICES FOR THE 2000 CORN HYBRID TESTS**

Location	Planting date	Nitrogen rate <sup>1</sup>	Plant population	Date harvested	Herbicides used
<b>NORTHERN ALABAMA</b>					
<b>Tennessee Valley Research and Extension Center (Belle Mina)</b>					
Regular test (nonirrigated)	March 15	150	20,000	August 14	Atrazine/Dual
Regular test (irrigated)	March 14	175	25,000	August 18	Atrazine/Dual
<b>Sand Mountain Research and Extension Center (Crossville)</b>					
Early corn test	April 10	150	20,000	August 29	Atrazine/Dual
Regular test	April 18	150	20,000	August 29	Atrazine/Dual
Preliminary test	April 18	150	20,000	August 29	Atrazine/Dual
<b>CENTRAL ALABAMA</b>					
<b>E.V. Smith Research Center (Shorter)</b>					
Early corn test	March 8	150	20,000	July 24	Atrazine/Dual
<b>Plant Breeding Unit (Tallassee)</b>					
Preliminary test	March 24	150	20,000	August 16	Atrazine
Preliminary test (irrigated)	March 24	150	25,000	August 14	Atrazine
<b>Prattville Research Field (Prattville)</b>	March 15	120	20,000	August 16	Atrazine
<b>Black Belt Research and Extension Center (Marion Junction)</b>					
	March 9	153	20,000	August 8	Atrazine
<b>SOUTHERN ALABAMA</b>					
<b>Brewton Research Field (Brewton)</b>	March 15	140	20,000	August 14	Atrazine/Dual
<b>Monroeville Research Field (Monroeville)</b>	March 10	140	20,000	August 15	Atrazine/Dual
<b>Wiregrass Research and Extension Center (Headland)</b>					
Regular test (unirrigated)	March 24	160	20,000	Not harvested	Atrazine
Regular test (irrigated)	March 24	220	25,000	August 18	Atrazine
<b>Gulf Coast Research and Extension Center (Fairhope)</b>					
Early corn test	February 28	150	20,000	August 2	Atrazine/Dual
Regular test	March 13	110	20,000	August 3	Atrazine/Dual
Preliminary test	March 13	150	20,000	August 2	Atrazine/Dual

<sup>1</sup>Pounds per acre N. Lime, phosphorus, potassium, zinc, and sulfur were applied according to soil test recommendations.

**TABLE 2. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR CORN  
FOR NORTHERN ALABAMA,<sup>1</sup> 1998-00**

Brand name-hybrid	Yield per acre, av.		Lodged stalks, av.	
	3-yr. (1998-00) <i>bu.</i>	2-yr. (1999-00) <i>bu.</i>	3-yr. (1998-00) <i>pct.</i>	2-yr. (1999-00) <i>pct.</i>
Dekalb DK 687	119	134	1.3	1.3
Pioneer 3223	117	139	2.8	4.0
Funk's DG 5516	115	130	2.0	2.3
AgriPro AP 9707	114	130	3.0	3.3
Pioneer 32K61	113	135	2.3	2.5
Pioneer 3163 <sup>2</sup>	113	129	2.7	3.5
Pioneer 3167 <sup>2</sup>	112	135	2.8	3.5
Pioneer 33G26	106	126	2.0	1.8
Garst 8222IT	106	122	1.7	1.5
Funk's 5510A	105	123	2.7	3.0
SS 859 CL	—	138	—	2.8
Pioneer 33J56	—	132	—	3.0
SS 849 CL	—	131	—	2.8
Garst 8220	—	130	—	2.0
Pioneer 33K81	—	127	—	2.3

<sup>1</sup> Belle Mina and Crossville. <sup>2</sup> Standard hybrids for comparison.

**TABLE 3. 2000 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN NORTHERN ALABAMA**

Brand name-hybrid	Belle Mina <i>bu.</i>	Cross- ville <i>bu.</i>	2000 Regional Averages					
			Yield per ac. <i>bu.</i>	Lodged stalks %	Test weight <i>lb./bu.</i>	Mid- silk <i>mo.-da.</i>	Husk cover rating <sup>1</sup>	Harvest moisture <i>pct.</i>
Pioneer 3223	97	111	104	7.0	56.1	6-22	2	13.1
SS 900 BT	88	119	103	3.0	53.9	6-24	2	13.8
SS 859 CL	88	112	100	5.0	54.0	6-24	2	13.4
Pioneer 31R88	83	118	100	5.0	55.3	6-24	3	13.5
Pioneer 33J56	82	111	96	3.5	57.3	6-24	3	13.3
Pioneer 32K62	74	114	94	1.0	56.7	6-24	3	11.5
Pioneer 3167 <sup>2</sup>	82	105	93	6.0	55.9	6-24	2	13.2
Pioneer 33G26	81	104	93	2.5	57.2	6-23	3	13.1
TR 1157	76	108	92	2.5	54.3	6-23	2	12.7
Pioneer 33K81	75	107	91	3.5	56.7	6-24	2	13.3
Garst 8251IT	77	105	91	6.5	53.1	6-24	2	13.0
Funk's 5510A	83	99	91	5.0	53.3	6-23	3	13.8
Funk's G-4581	81	101	91	2.5	55.1	6-23	2	12.9
TR702E	79	103	91	4.5	55.3	6-24	2	13.8
Funk's DG 5516	82	100	91	4.0	54.4	6-23	2	12.9
TR 1129 RR	73	108	90	5.5	55.6	6-22	2	12.7
Pioneer 31G98	80	97	89	2.0	56.5	6-23	2	13.3
Garst 8222IT	82	91	86	2.0	56.4	6-23	2	13.5
AgriPro AP 9707	78	95	86	4.5	54.6	6-24	3	11.6
Pioneer 32K61	75	97	86	4.0	56.4	6-24	3	13.0
Garst 8220	75	94	84	3.0	52.2	6-23	3	13.2
TR 1089 RR	70	98	84	8.0	54.6	6-21	3	12.8
CG 818	72	94	83	1.5	54.4	6-22	2	13.9
Dekalb DK 687	75	90	82	2.0	53.9	6-24	2	13.7
SS 849 CL	76	88	82	4.5	53.4	6-23	3	13.1
TR 1166 BT	79	85	82	3.5	56.1	6-22	3	13.4
TR 1106	63	100	81	3.0	54.6	6-24	3	12.7
Pioneer 3163 <sup>2</sup>	74	87	80	5.0	54.5	6-24	3	12.5
Dekalb DK 697	71	74	73	4.5	54.7	6-24	3	13.8
<b>Test Average</b>	<b>78.2</b>	<b>100.3</b>						
<b>LSD (.05)</b>	<b>9.3</b>	<b>24.1</b>						
<b>CV (%)</b>	<b>8.4</b>	<b>17.1</b>						

<sup>1</sup>1= Excellent; 5= Very poor. <sup>2</sup>Standard hybrids for comparison.

**TABLE 4. EARLY CORN HYBRID TEST AT CROSSVILLE IN NORTHERN ALABAMA, 1998-00**

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2000—			
	3-yr.	2-yr.	2000	3-yr.	2-yr.	2000	Mid-silk	Test weight	Husk cover	Harvest moisture
	1998-00 <i>bu.</i>	1999-00 <i>bu.</i>	2000 <i>bu.</i>	1998-00 <i>pct.</i>	1999-00 <i>pct.</i>	2000 <i>pct.</i>	<i>mo.-da.</i>	<i>lb./bu.</i>	rating <sup>1</sup>	<i>pct.</i>
Pioneer 32K61	140	159	130	1.3	1.5	3.0	6-28	58.9	3	11.1
Pioneer 3245 <sup>2</sup>	127	144	118	3.0	3.5	6.0	6-26	58.9	3	10.6
Pioneer 33G26	124	138	109	2.0	2.5	5.0	6-26	59.3	3	10.8
Pioneer 34B23	—	156	128	—	3.0	5.0	6-25	59.2	3	11.2
Pioneer 33J56	—	155	108	—	9.0	16.0	6-25	59.0	3	10.7
Pioneer 33K81	—	145	106	—	2.0	3.0	6-24	59.1	3	11.8
SS 710	—	—	123	—	—	6.0	6-26	55.2	3	10.0
Dekalb DK 668	—	—	113	—	—	5.0	6-28	56.1	3	12.2
SS 747	—	—	109	—	—	10.0	6-30	55.8	3	11.5
SS 670 BT	—	—	104	—	—	17.0	6-27	54.3	3	12.3
SS 729 CL	—	—	97	—	—	16.0	6-25	56.2	4	10.8
Dekalb DK 650	—	—	96	—	—	3.0	6-29	57.2	3	10.4
SS EXP 80000	—	—	95	—	—	12.0	6-26	55.6	3	11.0
<b>Test Average</b>				<b>110.4</b>						
<b>LSD (.05)</b>				<b>21.2</b>						
<b>CV (%)</b>				<b>13.4</b>						

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup>Standard mid to late season hybrids.

**TABLE 5. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT CROSSVILLE IN NORTHERN ALABAMA, 2000**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating <sup>1</sup>	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Novartis N83-N5	128	6.0	3	6-29	54.9	10.8
Asgrow RX 764	106	1.0	3	6-29	54.0	12.1
Dekalb DKC65-25	105	4.0	3	6-30	56.7	11.0
Novartis N79-L3	104	6.0	3	6-29	54.4	12.2
Pioneer 3163 <sup>2</sup>	103	4.0	3	7-1	54.2	11.7
Pioneer 3167 <sup>2</sup>	103	3.0	3	7-1	55.2	11.2
Novartis N91-R9	102	2.0	3	7-3	54.9	11.5
Dyna-Gro X15548	100	1.0	3	7-2	55.5	11.7
<b>Test Average</b>	<b>106.1</b>					
<b>LSD (.05)</b>	<b>19.7</b>					
<b>CV (%)</b>	<b>12.6</b>					

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard hybrids for comparison.



**TABLE 6. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, BELLE MINA, ALABAMA,<sup>1</sup> 2000**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating <sup>2</sup>	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
AgriPro AP 9707	213	8.0	2	6-13	57.0	15.6
Garst 8222IT	211	6.0	1	6-12	57.0	16.9
TR702E	200	3.0	2	6-13	55.2	17.1
SS 900 BT	200	7.0	2	6-12	54.5	16.5
Pioneer 3223	197	11.0	2	6-13	58.2	16.0
SS 859 CL	195	6.0	2	6-13	52.7	16.2
Garst 8220	191	5.0	2	6-13	54.8	16.5
Pioneer 3163 <sup>3</sup>	188	14.0	3	6-13	56.4	15.5
Funk's G-4581	188	12.0	2	6-12	58.0	16.8
Funk's DG 5516	188	5.0	1	6-12	56.0	16.1
Garst 8251IT	185	4.0	2	6-12	56.8	16.0
Dekalb DK 697	184	11.0	2	6-13	56.8	16.4
Pioneer 33G26	183	3.0	3	6-12	59.2	15.5
TR 1157	183	4.0	2	6-12	55.1	15.6
TR 1089 RR	182	1.0	2	6-8	54.5	15.6
Funk's 5510A	182	5.0	2	6-12	53.6	16.8
Pioneer 31R88	182	6.0	2	6-12	58.8	16.4
SS 849 CL	181	8.0	2	6-12	54.1	15.9
Pioneer 31G98	180	15.0	2	6-13	57.3	15.5
Pioneer 3167 <sup>3</sup>	180	1.0	1	6-13	52.9	17.8
Pioneer 32K61	177	1.0	2	6-12	56.9	16.2
TR 1166 BT	177	4.0	2	6-10	56.8	16.1
Dekalb DK 687	177	8.0	1	6-13	53.8	16.6
Pioneer 3245 <sup>3</sup>	176	17.0	2	6-12	57.6	15.3
TR 1106	174	9.0	2	6-11	53.7	16.5
CG 818	163	17.0	2	6-12	55.3	16.1
TR 1129 RR	152	14.0	2	6-9	57.9	15.0
<b><i>Test Average</i></b>	<b><i>184.7</i></b>					
<b><i>LSD (.05)</i></b>	<b><i>19.1</i></b>					
<b><i>CV (%)</i></b>	<b><i>7.4</i></b>					

<sup>1</sup> The test received approximately 10.5 inches of irrigation water. <sup>2</sup> 1= Excellent; 5= Very poor. <sup>3</sup> Standard hybrids for comparison.

**TABLE 7. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN AT PRATTVILLE IN CENTRAL ALABAMA, 1998-00**

Brand name-hybrid	Yield per acre, av.		Lodged stalks, av.	
	3-yr. (1998-00) <i>bu.</i>	2-yr. (1999-00) <i>bu.</i>	3-yr. (1998-00) <i>pct.</i>	2-yr. (1999-00) <i>pct.</i>
Pioneer 3167 <sup>1</sup>	80	102	3.7	1.5
Pioneer 3163 <sup>1</sup>	75	97	4.0	2.0
Pioneer 3223	73	89	5.0	1.5
Pioneer 32K61	62	78	6.0	2.0
Dekalb DK 687	—	83	—	2.0

<sup>1</sup> Standard hybrids for comparison.

**TABLE 8. 2000 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS AT PRATTVILLE IN CENTRAL ALABAMA**

Brand name-hybrid	Prattville <sup>1</sup> <i>bu.</i>	Yield per a. <i>bu.</i>	Lodged stalks <i>pct.</i>	2000 Regional Averages			
				Test weight <i>lb./bu.</i>	Mid-silk <i>mo.-da.</i>	Husk cover rating <sup>1</sup>	Harvest moisture <i>pct.</i>
Pioneer 31G98	57	57	3.0	57.1	6-14	2	12.0
Pioneer 3163 <sup>2</sup>	53	53	2.0	55.8	6-14	2	11.6
Funk's DG 5516	46	46	0	55.6	6-13	2	11.5
CG 818	46	46	0	53.0	6-13	2	10.5
Pioneer 3167 <sup>2</sup>	45	45	1.0	55.1	6-15	2	13.1
Pioneer 31R88	44	44	1.0	53.0	6-13	2	11.7
Garst 8251IT	43	43	1.0	54.9	6-14	2	11.8
Dekalb DK 697	43	43	0	54.5	6-13	3	10.9
TR 1157	43	43	1.0	53.4	6-13	2	11.3
TR702E	42	42	1.0	55.3	6-14	2	11.1
Pioneer 32K61	42	42	2.0	55.2	6-12	2	13.5
Pioneer 3223	40	40	2.0	55.0	6-13	1	12.5
Garst 8222IT	40	40	0	56.5	6-14	3	12.2
TR 1166 BT	39	39	0	57.8	6-14	3	12.2
TR 1129 RR	39	39	0	55.9	6-13	2	11.2
TR 1089 RR	36	36	0	53.1	6-13	1	11.6
Funk's 5510A	36	36	1.0	52.8	6-13	2	10.0
Dekalb DK 687	34	34	2.0	56.0	6-14	1	12.4
TR 1106	29	29	3.0	52.8	6-14	2	11.0
<b>Test Average</b>	<b>41.8</b>						
<b>LSD (.05)</b>	<b>10.0</b>						
<b>CV (%)</b>	<b>17.0</b>						

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard hybrids for comparison.

**TABLE 9. EARLY CORN HYBRID TEST AT SHORTER IN CENTRAL ALABAMA, 1998-00**

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2000—		
	3-yr.	2-yr.	2000	3-yr.	2-yr.	2000	Mid-	Test	Harvest
	1998-00 <i>bu.</i>	1999-00 <i>bu.</i>	<i>bu.</i>	1998-00 <i>pct.</i>	1999-00 <i>pct.</i>	<i>pct.</i>	-silk <i>mo.-da.</i>	weight <i>lb./bu.</i>	moisture <i>pct.</i>
Pioneer 3394	94	112	59	4.7	7.0	14.0	—	57.1	15.3
Pioneer 32K61	87	104	35	4.0	5.5	11.0	—	59.1	15.3
Pioneer 3245 <sup>1</sup>	86	105	33	1.7	2.0	3.0	—	53.0	15.3
SS 729 CL	—	—	46	—	—	26.0	—	54.7	15.3
SS 747	—	—	45	—	—	8.0	—	54.3	15.3
Dekalb DK 668	—	—	44	—	—	12.0	—	54.3	15.3
Pioneer 34B23	—	—	44	—	—	6.0	—	55.0	15.3
SS 710	—	—	40	—	—	20.0	—	53.8	15.3
Dekalb DK 650	—	—	39	—	—	4.0	—	54.8	15.3
SS 670 BT	—	—	35	—	—	33.0	—	50.9	15.3
<b>Test Average</b>			<b>41.9</b>						
<b>LSD (.05)</b>			<b>11.9</b>						
<b>CV (%)</b>			<b>19.5</b>						

<sup>1</sup>Standard mid to late season hybrids.

**TABLE 10. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT TALLASSEE IN CENTRAL ALABAMA, 2000**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating <sup>1</sup>	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Dyna-Gro X15548	13	54.0	3	6-20	52.9	17.6
Pioneer 3167 <sup>2</sup>	12	53.0	3	6-19	50.3	18.6
Novartis N83-N5	8	52.0	3	6-19	50.4	13.8
Asgrow RX 764	8	29.0	4	6-16	52.2	13.1
Novartis N79-L3	8	33.0	3	6-17	55.6	14.7
Dekalb DKC65-25	7	33.0	4	6-18	51.7	12.2
Novartis N91-R9	7	53.0	3	6-19	50.9	18.5
Pioneer 3163 <sup>2</sup>	5	26.0	3	6-19	52.3	14.7
<b>Test Average</b>	<b>8.4</b>					
<b>LSD (.05)</b>	<b>3.8</b>					
<b>CV (%)</b>	<b>30.7</b>					

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard hybrids for comparison.

**TABLE 11. CHARACTERISTICS OF IRRIGATED CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT TALLASSEE IN CENTRAL ALABAMA,<sup>1</sup> 2000**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating <sup>2</sup>	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Dyna-Gro X15548	135	40.0	2	6-15	52.3	20.0
Pioneer 3167 <sup>3</sup>	116	40.0	2	6-15	51.2	21.8
Novartis N83-	110	61.0	3	6-15	51.8	21.3
Novartis N79-L3	95	56.0	3	6-13	58.0	16.4
Asgrow RX 764	94	34.0	3	6-10	54.6	16.1
Dekalb DKC65-25	86	60.0	3	6-12	53.9	16.9
Pioneer 3163 <sup>3</sup>	85	65.0	3	6-15	52.8	18.2
Novartis N91-R9	75	69.0	3	6-15	54.1	18.8
<b>Test Average</b>	<b>99.3</b>					
<b>LSD (.05)</b>	<b>16.6</b>					
<b>CV (%)</b>	<b>11.4</b>					

<sup>1</sup> The test received approximately 9.1 inches of irrigation water. <sup>2</sup> 1= Excellent; 5= Very poor. <sup>3</sup> Standard hybrids for comparison.

**TABLE 12. 2000 YIELD OF CORN HYBRIDS PERFORMANCE AND CHARACTERISTICS AT MARION JUNCTION IN CENTRAL ALABAMA, 2000**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating <sup>1</sup>	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
TR 1166 BT	104	0	—	—	57.9	11.4
Garst 8220	102	0	—	—	56.0	13.2
Dekalb DK 687	94	0	—	—	57.6	12.0
SS 900 BT	94	1.0	—	—	55.5	13.4
Pioneer 33J56	92	0	—	—	59.3	11.8
TR 1129 RR	92	0	—	—	57.0	11.3
Dyna-Gro X15548	89	0	—	—	60.1	13.5
SS 859 CL	88	1.0	—	—	54.5	13.0
SS 849 CL	87	0	—	—	54.5	11.2
TR 1157	87	0	—	—	56.4	11.4
AgriPro HS9843	86	0	—	—	58.1	11.4
Garst 8251IT	86	0	—	—	57.0	12.5
Funk's 5510A	85	0	—	—	55.9	12.2
Pioneer 3163 <sup>2</sup>	82	1.0	—	—	56.8	11.9
TR 1089 RR	80	0	—	—	55.2	11.8
Pioneer 3167 <sup>2</sup>	78	1.0	—	—	57.5	13.9
CG 818	77	0	—	—	56.1	12.0
TR702E	74	1.0	—	—	57.2	11.7
AgriPro AP9939	71	0	—	—	56.9	12.4
TR 1106	62	0	—	—	55.1	12.0
<b>Test Average</b>	<b>85.4</b>					
<b>LSD (.05)</b>	<b>20.3</b>					
<b>CV (%)</b>	<b>16.8</b>					

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard hybrids for comparison.

**TABLE 13. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR CORN  
FOR SOUTHERN ALABAMA,<sup>1</sup> 1998-00**

Brand name-hybrid	Yield per acre, av.		Lodged stalks, av.	
	3-yr. (1998-00) <i>bu.</i>	2-yr. (1999-00) <i>bu.</i>	3-yr. (1998-00) <i>pct.</i>	2-yr. (1999-00) <i>pct.</i>
AgriPro AP 9909	105	120	1.8	2.5
Pioneer 3223	105	121	0.2	0.3
Funk's DG 5516	104	119	1.7	2.5
Funk's 5510A	104	122	0.8	1.2
Dekalb DK 687	103	118	1.2	1.8
AgriPro AP 9707	102	117	1.0	1.3
Pioneer 3163 <sup>2</sup>	100	114	1.6	1.8
AgriPro HS9843	98	112	1.2	1.7
Pioneer 3167 <sup>2</sup>	96	109	6.3	9.5
Pioneer 32K61	93	103	0.0	0
SS 849 CL	—	119	—	1.0
SS 859 CL	—	118	—	9.0
Funk's G-4581	—	115	—	1.8
AgriPro AP9939	—	114	—	1.5

<sup>1</sup> Fairhope, Brewton, and Monroeville. <sup>2</sup> Standard hybrids for comparison.

**TABLE 14. 2000 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN SOUTHERN ALABAMA**

Brand name-hybrid	Fair- hope <i>bu.</i>	Brew- ton <i>bu.</i>	Monroe- ville <i>bu.</i>	2000 Regional Averages					
				Yield per a. <i>bu.</i>	Lodged stalks <i>pct.</i>	Test weight <i>lb./bu.</i>	Mid- silk <i>mo.-da.</i>	Husk cover rating <sup>1</sup>	Harvest moisture <i>pct.</i>
Funk's G4581	102	104	28	78	3.3	58.8	5-29	3	21.9
AgriPro AP 9909	114	84	34	77	4.3	58.3	5-29	3	24.4
Funk's DG 5516	108	100	23	77	5.0	57.9	5-28	2	22.4
SS 900 BT	114	94	24	77	13.7	55.2	6-2	2	23.1
Funk's 5510A	117	87	22	75	2.0	55.9	5-27	2	25.1
SS 849 CL	105	92	29	75	1.7	55.2	5-29	3	23.2
Pioneer 31R88	99	103	22	75	2.0	56.3	5-31	3	23.1
Dekalb DK 697	98	109	14	73	7.7	58.1	6-1	3	23.4
CG 818	110	83	25	73	0.7	56.8	5-28	3	23.5
AgriPro HS9843	104	83	28	72	3.3	57.8	5-29	2	22.2
SS 859 CL	111	83	20	71	17.3	54.7	6-2	2	23.4
Garst 8251IT	112	76	23	70	8.0	57.0	5-28	2	22.7
Pioneer 31G98	91	92	28	70	2.3	59.2	5-31	3	22.1
TR702E	96	84	29	70	1.3	57.0	5-31	2	24.0
Pioneer 3223	79	105	22	68	0.7	43.8	5-31	2	21.7
TR 1166 BT	78	104	22	68	0.3	59.5	5-26	2	22.4
AgriPro AP9939	95	81	27	68	2.3	56.9	5-31	2	24.5
Dekalb DK 687	91	88	21	67	3.7	56.6	6-1	2	23.9
AgriPro AP 9707	102	82	14	66	2.7	56.4	5-30	3	21.6
Garst 8222IT	101	79	17	65	0	58.5	5-28	2	23.1
TR 1129 RR	95	75	24	64	0.3	58.8	5-26	2	21.2
TR 1157	92	79	21	64	4.7	55.9	5-28	2	22.1
Pioneer 3163 <sup>2</sup>	85	69	23	59	3.0	56.6	5-31	3	21.6
Pioneer 3167 <sup>2</sup>	86	71	18	58	18.0	54.9	6-5	2	25.7
Pioneer 32K61	90	62	16	56	0	59.1	5-29	3	22.2
TR 1089 RR	94	53	14	54	0	55.6	5-25	2	19.0
TR 1106	71	61	16	49	0.3	56.3	5-31	3	21.5
<b><i>Test Average</i></b>	<b>97.6</b>	<b>84.4</b>	<b>22.2</b>						
<b><i>LSD (.05)</i></b>	<b>17.9</b>	<b>21.9</b>	<b>5.7</b>						
<b><i>CV (%)</i></b>	<b>13.0</b>	<b>18.4</b>	<b>18.1</b>						

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard hybrids for comparison.

**TABLE 15. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA,<sup>1</sup> 1998-00**

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2000—			
	3-yr.	2-yr.	2000	3-yr.	2-yr.	2000	Mid-	Test	Husk	Harvest
	1998-00	1999-00	2000	1998-00	1999-00	2000	-silk	weight	cover	moisture
	<i>bu.</i>	<i>bu.</i>	<i>bu.</i>	<i>pct.</i>	<i>pct.</i>	<i>pct.</i>	<i>mo.-da.</i>	<i>lb./bu.</i>	rating <sup>2</sup>	<i>pct.</i>
Funk's DG 5516	166	164	157	1.7	1.5	3.0	5-31	—	2	14.8
AgriPro AP 9707	156	156	132	2.3	0.5	1.0	6-4	—	1	14.8
Pioneer 3167 <sup>3</sup>	156	160	157	7.3	1.0	2.0	6-5	—	2	14.8
Pioneer 3223	153	154	135	2.3	0	0	6-4	—	2	14.8
AgriPro AP 9909	152	147	134	3.0	2.0	4.0	6-5	—	2	14.8
AgriPro HS9843	149	151	144	2.7	1.0	2.0	6-3	—	2	14.8
Dekalb DK 687	147	154	150	6.3	1.5	3.0	6-3	—	2	14.8
Pioneer 32K61	145	148	145	0.7	1.0	2.0	6-3	—	1	14.8
Pioneer 3163 <sup>3</sup>	142	138	121	3.0	1.5	3.0	6-2	—	2	14.8
Funk's 5510A	132	141	137	5.7	1.0	2.0	5-30	—	2	14.8
AgriPro AP9939	—	160	148	—	1.5	3.0	6-5	—	2	14.8
SS 859 CL	—	157	153	—	1.5	3.0	6-5	—	2	14.8
Funk's G-4581	—	154	154	—	0.5	1.0	6-3	—	1	14.8
SS 849 CL	—	141	129	—	2.0	4.0	6-1	—	2	14.8
Pioneer 31R88	—	—	162	—	—	4.0	5-31	—	2	14.8
TR702E	—	—	159	—	—	0	6-6	—	2	14.8
Pioneer 31G98	—	—	158	—	—	0	6-4	—	2	14.8
Garst 8251IT	—	—	155	—	—	1.0	6-5	—	1	14.8
Pioneer 3146	—	—	147	—	—	5.0	6-4	—	2	14.8
Garst 8222IT	—	—	147	—	—	1.0	6-1	—	2	14.8
SS 900 BT	—	—	142	—	—	3.0	6-5	—	2	14.8
TR 1157	—	—	140	—	—	2.0	6-3	—	2	14.8
TR 1166 BT	—	—	138	—	—	2.0	5-30	—	2	14.8
Dekalb DK 697	—	—	135	—	—	1.0	6-4	—	2	14.8
CG 818	—	—	127	—	—	4.0	5-31	—	2	14.8
TR 1129 RR	—	—	120	—	—	2.0	5-28	—	2	14.8
TR 1089 RR	—	—	115	—	—	7.0	5-26	—	2	14.8
Pioneer 3245 <sup>3</sup>	—	—	108	—	—	3.0	6-2	—	2	14.8
TR 1106	—	—	101	—	—	2.0	6-4	—	2	14.8
<b>Test Average</b>	<b>139.6</b>									
<b>LSD (.05)</b>	<b>22.5</b>									
<b>CV (%)</b>	<b>11.4</b>									

<sup>1</sup> The test received approximately 14.0 inches of irrigation water. <sup>2</sup> 1= Excellent; 5= Very poor. <sup>3</sup>Standard mid to late season hybrids.

**TABLE 16. EARLY CORN HYBRID TEST AT FAIRHOPE IN SOUTHERN ALABAMA, 1998-00**

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2000—			
	3-yr.	2-yr.	2000	3-yr.	2-yr.	2000	Mid-	Test	Husk	Harvest
	1998-00 <i>bu.</i>	1999-00 <i>bu.</i>	2000 <i>bu.</i>	1998-00 <i>pct.</i>	1999-00 <i>pct.</i>	2000 <i>pct.</i>	-silk <i>mo.-da.</i>	weight <i>lb./bu.</i>	cover rating <sup>1</sup>	moisture <i>pct.</i>
Pioneer 32K61	127	125	89	0.3	0.5	1.0	5-18	60.5	3	17.9
Pioneer 3245 <sup>2</sup>	119	121	77	0.7	1.0	1.0	5-18	58.8	3	18.2
Pioneer 3394	—	122	83	—	0.5	1.0	5-15	56.5	3	16.0
SS 710	—	—	108	—	—	0	5-17	56.1	3	15.2
SS 729 CL	—	—	97	—	—	3.0	5-15	56.6	3	15.2
Dekalb DK 650	—	—	91	—	—	0	5-23	58.6	4	17.8
SS 747	—	—	89	—	—	2.0	5-17	57.1	3	16.0
Pioneer 34B23	—	—	88	—	—	5.0	5-16	57.7	3	18.2
Dekalb DK 668	—	—	86	—	—	3.0	5-17	56.9	2	16.5
SS 670 BT	—	—	84	—	—	8.0	5-17	53.8	3	13.5
<b>Test Average</b>	<b>89.3</b>									
<b>LSD (.05)</b>	<b>10.8</b>									
<b>CV (%)</b>	<b>8.4</b>									

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard mid to late season hybrids.

**TABLE 17. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT FAIRHOPE IN SOUTHERN ALABAMA, 2000**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating <sup>1</sup>	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Novartis N83-N5	119	1.0	3	5-23	58.7	18.3
Novartis N79-L3	101	0	4	5-24	61.9	19.8
Dekalb DKC65-25	97	2.0	3	5-27	58.4	17.4
Asgrow RX 764	92	0	3	5-23	58.4	15.7
Pioneer 3163 <sup>2</sup>	91	3.0	3	5-30	57.9	17.0
Pioneer 3167 <sup>2</sup>	82	1.0	3	5-30	54.6	22.3
Dyna-Gro X15548	79	0	3	5-29	59.0	18.7
Novartis N91-R9	66	2.0	3	5-30	58.2	23.8
<b>Test Average</b>	<b>90.8</b>					
<b>LSD (.05)</b>	<b>13.3</b>					
<b>CV (%)</b>	<b>10.0</b>					

<sup>1</sup> 1= Excellent; 5= Very poor. <sup>2</sup> Standard hybrids for comparison.



**TABLE 18. GROWING SEASON RAINFALL, 1998-00**

Test location	Year	Monthly rainfall (inches)							7-month total
		Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>Belle Mina</b> .....	2000	5.5	8.6	0.7	4.1	0.7	2.7	1.7	24.0
	1999	5.1	3.8	4.7	6.5	3.6	0.2	0.6	24.5
	1998	4.3	4.3	2.4	1.8	5.3	1.8	0.9	20.8
<b>Crossville</b> .....	2000	5.1	7.1	1.7	4.9	0.9	1.7	4.0	25.4
	1999	3.8	3.5	4.4	10.5	6.1	1.6	1.7	31.6
	1998	5.8	8.9	1.6	3.6	3.5	2.5	0.5	26.4
<b>Tallassee</b> .....	2000	5.5	3.6	1.7	1.6	3.1	3.5	4.9	23.9
	1999	5.9	1.4	3.6	12.2	3.1	1.9	4.0	32.1
	1998	6.3	7.5	1.7	3.9	6.1	1.4	8.8	35.7
<b>Shorter</b> .....	2000	4.7	2.2	1.8	1.6	1.0	2.4	3.9	17.6
	1999	4.7	1.9	3.3	9.2	3.5	2.4	2.1	27.1
	1998	6.5	5.2	4.4	2.6	2.6	2.2	9.9	33.4
<b>Prattville</b> .....	2000	4.7	2.8	0.6	2.6	2.4	1.1	7.3	21.5
	1999	4.9	1.7	3.2	9.6	10.7	2.6	1.8	34.5
	1998	5.3	2.4	2.5	2.7	4.1	3.4	8.6	29.0
<b>Marion Junction</b> .....	2000	4.2	4.3	0.8	2.7	0.8	2.2	4.1	19.1
	1999	6.3	0.8	1.3	12.1	5.2	1.3	3.3	30.3
	1998	3.7	4.3	1.2	2.9	6.3	2.2	9.1	29.7
<b>Monroeville</b> .....	2000	3.5	2.5	0.4	6.5	3.2	2.3	3.1	21.5
	1999	8.2	2.6	4.5	7.7	3.7	2.4	2.1	31.2
	1998	5.7	3.6	2.2	1.4	7.2	9.8	17.7	47.6
<b>Brewton</b> .....	2000	3.9	1.6	4.1	8.6	3.4	4.4	5.5	31.5
	1999	8.1	1.6	5.5	9.2	12.1	7.9	2.8	47.2
	1998	13.0	6.2	0.8	1.7	8.4	5.1	25.9	61.1
<b>Fairhope</b> .....	2000	4.1	1.1	0.7	4.2	3.2	3.0	9.5	25.8
	1999	5.8	0.1	3.2	8.3	9.7	6.0	2.3	35.4
	1998	6.1	4.5	0.8	2.2	6.2	5.9	24.1	49.8
<b>Headland</b> .....	2000	3.3	0.5	0.1	1.8	1.3	2.6	6.1	15.7
	1999	3.3	1.2	6.0	5.9	4.1	1.1	1.5	23.1
	1998	9.2	2.7	0.5	2.4	9.6	3.9	4.7	33.0

**TABLE 19. SOIL TYPES FOR CORN TRIALS, 2000**

Test location	Soil type
<b>North</b>	
Belle Mina .....	Decatur silt loam
Crossville .....	Wynntown fine sandy loam
<b>Central</b>	
Tallassee .....	Cahaba loamy sand
Shorter .....	Norfolk sandy loam
Prattville .....	Lucedale fine sandy loam
Marion Junction .....	Vaiden clay
<b>South</b>	
Monroeville .....	Lucedale loam
Brewton .....	Benndale fine sandy loam
Headland .....	Dothan sandy loam
Fairhope .....	Malbis fine sandy loam

**SOURCES OF 2000 CORN HYBRID TEST SEED**

Seed company	Brand	Seed company	Brand
AgriPro Seeds 761 Walnut Knoll Lane Memphis, TN 38018	AgriPro, Garst	Pioneer Hi-Bred Int, Inc. 6767 Old Madison Pike Huntsville, AL 35806	Pioneer
Croplan Genetics 6555 Quince Rd. Memphis, TN 38119	CG, TR	Southern States Coop P.O. Box 26230 Richmond, VA 23260	SS
Novartis Seed, Inc Route 1 Box 360 Ayden, NC 28513	N79-L3 N83-N5 N91-R9	United Agri Products P.O. Box 534 Athens, AL 35611	Funk's
Monsanto Company 3100 Sycamore Road DeKalb, IL 60115	Asgrow, Dekalb		