
Agronomy and Soils Departmental Series No. 239
Alabama Agricultural Experiment Station
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Auburn University
Auburn, Alabama
December 2001

**Evaluations
of
Corn
Hybrids
in Alabama,
2001**

Printed in cooperation with the Alabama Cooperative Extension System
(Alabama A&M University and Auburn University).

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

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Acknowledgments

Appreciation is expressed to Mien-Huei Tzeng, Research Data Analysis, for the computation, summarization, and analysis of the data in this report.

Appreciation is also expressed to the following supervisory personnel of the outlying units whose quality work makes this a reliable source of information for farmers in their areas. Chet Norris and Ellis Burgess, Tennessee Valley Research and Extension Center; Tony Dawkins, Sand Mountain Research and Extension Center; Jimmy Holliman, Black Belt Research and Extension Center; Don Moore, Prattville Research Field; James Bannon, Bobby Durbin, and Steve Nightengale, E.V. Smith Research Center; Randy Akridge, Brewton and Monroeville Research Fields; Ronnie McDaniel and Malcomb Pegues, Gulf Coast Research and Extension Center; Larry Wells and Brian Gamble, Wiregrass Research and Extension Center.

Evaluations of Corn Hybrids in Alabama, 2001

K. M. Glass and P. L. Mask¹

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.

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.

¹*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 2001 CORN HYBRID TESTS

Location	Planting date	Nitrogen rate ¹	Plant population	Date harvested	Herbicides used
NORTHERN ALABAMA					
Tennessee Valley Research and Extension Center (Belle Mina)					
Regular test (nonirrigated)	March 27	150	20,000	September 13	Atrazine/Dual
Regular test (irrigated)	March 27	175	25,000	September 14	Atrazine/Dual
Sand Mountain Research and Extension Center (Crossville)					
Early corn test	April 11	125	20,000	September 10	Atrazine/Dual
Regular test	April 18	125	20,000	September 10	Atrazine/Dual
Preliminary test	April 18	125	20,000	September 10	Atrazine/Dual
CENTRAL ALABAMA					
E.V. Smith Research Center (Shorter)					
Early corn test (nonirrigated)	April 11	150	20,000	August 17	Atrazine/Dual
Plant Breeding Unit (Tallassee)					
Preliminary test	April 2	140	20,000	August 28	Atrazine
Preliminary test (irrigated)	April 2	140	25,000	September 4	Atrazine
Prattville Research Field (Prattville)					
	May 3	110	20,000	October 4	Atrazine
Black Belt Research and Extension Center (Marion Junction)					
	April 19	150	20,000	September 11	Atrazine
SOUTHERN ALABAMA					
Brewton Research Field (Brewton)					
	March 26	140	20,000	August 22	Atrazine
Wiregrass Research and Extension Center (Headland)					
Regular test (nonirrigated)	April 11	195	20,000	August 24	Atrazine
Regular test (irrigated)	April 11	265	25,000	August 27	Atrazine
Gulf Coast Research and Extension Center (Fairhope)					
Early corn test	March 6	150	20,000	August 4	Atrazine/Dual
Regular test	March 23	150	20,000	August 4	Atrazine/Dual
Preliminary test	March 23	150	20,000	August 4	Atrazine/Dual

¹Pounds 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 YELLOW CORN
IN NORTHERN ALABAMA,¹ 1999-01**

Brand name-hybrid	Yield per acre, av.		Lodged stalks, av.	
	3-yr. (1999-01) <i>bu.</i>	2-yr. (2000-01) <i>bu.</i>	3-yr. (1999-01) <i>pct.</i>	2-yr. (2000-01) <i>pct.</i>
Dekalb DK 687	154	138	1.0	1.3
SS 859 CL	151	139	2.2	3.0
Garst/AgriPro 9707	148	136	2.3	2.5
Pioneer 3167 ²	147	131	2.7	3.5
Pioneer 3163 ²	143	126	2.5	2.8
Garst/AgriPro 8222IT	139	129	1.2	1.3
Funk's DG 5516	139	124	1.7	2.3
Pioneer 32K61	138	116	1.8	2.3
SS 900 BT	—	148	—	1.5
Pioneer 31R88	—	146	—	2.8
Pioneer 31G98	—	137	—	1.3
Dekalb DK 697	—	134	—	2.5
Garst/AgriPro 8251IT	—	123	—	4.0
CG818	—	121	—	1.3

¹ Belle Mina and Crossville. ² Standard hybrids for comparison.

TABLE 3. 2001 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>	2001 Regional Averages					
			Yield per ac. <i>bu.</i>	Lodged stalks <i>pct.</i>	Test weight <i>lb./bu.</i>	Mid- silk <i>mo.-da.</i>	Husk cover rating ¹	Harvest moisture <i>pct.</i>
Dekalb DK 697	195	196	196	0.5	59.4	6-22	3	17.9
Dekalb DK 687	182	207	194	0.5	57.2	6-22	2	19.0
SS 900 BT	182	203	192	0.0	55.3	6-20	2	18.5
Pioneer 31R88	193	190	192	0.5	59.0	6-21	3	19.3
SS 882CL	169	209	189	0.0	58.2	6-21	2	18.2
Pioneer 32H58	183	192	187	1.0	59.5	6-20	2	18.1
Pioneer 31G98	193	178	186	0.5	57.5	6-21	3	17.9
Garst/AgriPro 9707	187	184	185	0.5	57.0	6-22	2	17.9
Dekalb DKC 68-70	181	190	185	0.0	57.6	6-22	2	18.4
Pioneer 32K64	176	183	179	0.5	59.3	6-21	3	17.6
Dyna-Gro 5518 RR	178	178	178	1.0	56.7	6-22	2	17.9
Dyna-Gro 5515	177	178	178	1.0	57.1	6-22	2	17.9
SS 859 CL	168	187	177	1.0	55.2	6-21	2	18.2
Pioneer 32R25	173	174	173	2.0	58.5	6-22	2	18.0
TV 2140RR	182	165	173	0.5	56.8	6-22	2	17.3
Garst/AgriPro 8222IT	166	179	172	0.5	58.4	6-20	2	19.0
Pioneer 3163 ²	175	169	172	0.5	57.4	6-22	3	17.7
Croplan Genetics 1167RR	171	170	170	0.5	57.9	6-21	2	17.9
Pioneer 3167 ²	162	177	169	1.0	58.7	6-23	2	20.7
Croplan Genetics 743	170	165	168	1.5	55.3	6-17	3	17.6
CG818	156	165	160	1.0	56.6	6-20	2	19.0
Funk's DG 5516	166	147	156	0.5	57.4	6-21	2	17.8
TV 2160BT	171	139	155	0.0	58.5	6-22	2	17.9
Garst/AgriPro 8251IT	158	151	154	1.5	57.2	6-21	2	17.7
Croplan Genetics 7879	162	137	150	1.0	58.6	6-20	3	19.1
Pioneer 32K61	156	135	145	0.5	60.3	6-21	3	17.9
<i>Test Average</i>	<i>174.2</i>	<i>174.8</i>						
<i>L.S.D. (.05)</i>	<i>16.6</i>	<i>39.6</i>						
<i>C.V. (%)</i>	<i>6.8</i>	<i>16.1</i>						

¹1= Excellent; 5= Very poor. ²Standard hybrids for comparison.

TABLE 4. EARLY CORN HYBRID TEST AT CROSSVILLE IN NORTHERN ALABAMA, 1999-01

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2001 regional av.—			
	3-yr.	2-yr.	2001	3-yr.	2-yr.	2001	Mid-silk	Test weight	Husk cover	Harvest moisture
	1999-01 <i>bu.</i>	2000-01 <i>bu.</i>	<i>bu.</i>	1999-01 <i>pct.</i>	2000-01 <i>pct.</i>	<i>pct.</i>	<i>mo.-da.</i>	<i>lb./bu.</i>	rating ¹	<i>pct.</i>
Pioneer 32K61	158	144	158	1.0	1.5	0.0	6-29	60.5	3	16.7
Pioneer 3245 ²	154	146	175	2.7	3.5	1.0	6-28	60.3	3	16.4
Pioneer 33G26	148	139	170	1.7	2.5	0.0	6-26	59.5	4	15.9
Croplan Genetics 721	—	—	183	—	—	0.0	6-27	57.5	3	16.1
Dekalb DKC61-24	—	—	182	—	—	0.0	6-27	58.3	3	15.9
Pioneer 34B28	—	—	171	—	—	0.0	6-27	59.6	3	15.0
Pioneer 32K64	—	—	169	—	—	0.0	6-29	59.6	4	16.2
Pioneer 32H58	—	—	163	—	—	0.0	6-27	58.3	3	17.5
Dekalb DKC65-25	—	—	161	—	—	0.0	6-29	59.4	3	17.1
Pioneer 34B24	—	—	151	—	—	0.0	6-28	59.8	3	16.1
Pioneer 33G30	—	—	138	—	—	0.0	6-26	59.1	4	16.1
Test Average			165.3							
L.S.D. (.05)			36.6							
C.V. (%)			15.3							

¹ 1= Excellent; 5= Very poor. ²Standard mid to late season hybrids.

TABLE 5. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT CROSSVILLE IN NORTHERN ALABAMA, 2001

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating ¹	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Croplan Genetics 733BT	196	0	3	6-29	57.4	16.4
Garst/AgriPro 8215	187	0	3	6-29	57.6	17.2
Garst/AgriPro 8288	181	0	3	6-28	57.8	16.6
Dyna-Gro X15548	180	0	3	6-29	58.6	17.2
Croplan Genetics 827	166	0	3	6-27	56.9	17.4
Pioneer 3167 ²	165	0	3	6-30	58.1	16.5
Pioneer 3163 ²	159	0	3	6-27	57.1	17.2
Croplan Genetics 683	158	0	3	6-25	58.2	15.7
Garst 8366 IT	147	0	3	6-28	55.3	17.3
Croplan Genetics 767RR	146	0	3	6-28	56.8	15.6
Test Average	168.5					
L.S.D. (.05)	49.2					
C.V. (%)	20.1					

¹ 1= Excellent; 5= Very poor. ² Standard hybrids for comparison.

TABLE 6. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, BELLE MINA, ALABAMA,¹ 1999-2001

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			———2001 averages———			
	3-yr.	2-yr.	2001	3-yr.	2-yr.	2001	Mid-	Test	Husk	Harvest
	1999-01	2000-01	2001	1999-01	2000-01	2001	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 ²	<i>pct.</i>
Garst/AgriPro 8222IT	218	217	222	2.7	3.5	1.0	6-11	59.3	2	20.7
Garst/AgriPro 9707	217	218	223	3.3	4.5	1.0	6-12	59.2	1	20.6
SS 859 CL	213	203	210	2.7	3.5	1.0	6-12	56.9	2	20.0
Pioneer 3163 ³	203	191	194	5.7	8.0	2.0	6-13	59.1	3	20.1
Dekalb DK 687	200	193	209	3.0	4.5	1.0	6-13	59.3	1	20.4
Funk's DG 5516	196	194	200	2.3	3.0	1.0	6-12	58.9	1	19.6
Pioneer 3167 ³	193	187	195	0.3	0.5	0.0	6-15	59.6	1	23.0
Pioneer 32K61	184	173	168	0.3	0.5	0.0	6-11	61.1	2	20.0
Pioneer 31G98	—	207	233	—	8.0	1.0	6-13	59.2	2	19.3
SS 900 BT	—	204	208	—	3.5	0.0	6-12	57.0	1	20.3
Dekalb DK 697	—	199	215	—	6.0	1.0	6-14	60.4	2	21.7
Pioneer 31R88	—	199	216	—	4.0	2.0	6-12	59.4	3	22.1
Garst/AgriPro 8251IT	—	196	206	—	2.5	1.0	6-12	58.3	1	19.9
CG 818	—	183	203	—	9.0	1.0	6-12	57.5	2	21.2
TV 2140RR	—	—	232	—	—	1.0	6-12	56.6	1	17.4
Dekalb DKC 68-70	—	—	224	—	—	0.0	6-13	58.1	1	20.2
Dyna-Gro 5515	—	—	216	—	—	1.0	6-12	57.8	2	20.6
Pioneer 32H58	—	—	215	—	—	1.0	6-12	60.4	2	20.5
Pioneer 32R25	—	—	213	—	—	2.0	6-12	58.8	2	22.0
SS 882CL	—	—	212	—	—	1.0	6-12	59.7	2	20.3
Croplan Genetics 743	—	—	211	—	—	2.0	6-11	56.1	3	18.9
Dyna-Gro 5518 RR	—	—	209	—	—	1.0	6-13	56.7	1	19.5
Croplan Genetics 1167RR	—	—	208	—	—	1.0	6-12	58.8	1	19.7
TV 2160BT	—	—	208	—	—	1.0	6-12	59.0	2	18.7
Croplan Genetics 7879	—	—	205	—	—	0.0	6-12	59.3	2	19.5
Pioneer 32K64	—	—	189	—	—	1.0	6-12	59.8	2	19.5
Test Average			209.3							
L.S.D. (.05)			13.5							
C.V. (%)			4.6							

¹ The test received approximately 2.8 inches of irrigation water. ² 1= Excellent; 5= Very poor. ³ Standard hybrids for comparison.

TABLE 7. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN AT PRATTVILLE IN CENTRAL ALABAMA, 1999-01

Brand name-hybrid	Yield per acre, av.—		Lodged stalks, av.—	
	3-yr. (1999-01) <i>bu.</i>	2-yr. (2000-01) <i>bu.</i>	3-yr. (1999-01) <i>pct.</i>	2-yr. (2000-01) <i>pct.</i>
Pioneer 3167 ¹	107	81	2.3	2.5
Pioneer 3163 ¹	107	90	6.0	8.0
Dekalb DK 687	93	72	3.0	3.5
Pioneer 32K61	92	81	1.7	1.5
Pioneer 31G98	—	89	—	4.5
Funk's DG 5516	—	82	—	1.5
Dekalb DK 697	—	80	—	2.5
Pioneer 31R88	—	65	—	3.0
CG818	—	59	—	2.5

¹ Standard hybrids for comparison.**TABLE 8. 2001 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS AT PRATTVILLE IN CENTRAL ALABAMA**

Brand name-hybrid	2001 Regional Averages					
	Prattville ¹ <i>bu.</i>	Lodged stalks <i>bu.</i>	Test weight <i>lb./bu.</i>	Mid-silk <i>mo.-da.</i>	Husk cover rating ¹	Harvest moisture <i>pct.</i>
Pioneer 3163 ²	127	14.0	59.6	7-25	3	15.4
TV 2160BT	123	6.0	58.5	7-26	3	14.8
Pioneer 31G98	122	6.0	58.3	7-25	2	14.2
Pioneer 32K61	120	1.0	60.2	7-24	3	14.5
Dekalb DK 697	118	5.0	60.6	7-25	2	15.2
Funk's DG 5516	118	3.0	57.7	7-26	2	14.0
Dekalb DKC 68-70	118	5.0	59.4	7-26	1	16.6
Pioneer 3167 ²	118	4.0	54.5	7-26	2	18.6
TV 2140RR	116	13.0	56.0	7-25	3	13.1
Croplan Genetics 7879	114	5.0	57.3	7-26	3	14.6
Dekalb DK 687	111	5.0	58.9	7-26	2	15.9
Pioneer 32H58	111	4.0	59.7	7-24	2	15.0
Dyna-Gro X15548	107	4.0	60.8	7-25	2	16.7
Pioneer 32R25	107	13.0	58.6	7-26	2	14.9
Dyna-Gro 5515	106	5.0	56.4	7-25	3	13.0
Croplan Genetics 1167RR	99	4.0	58.0	7-26	2	13.6
Pioneer 31R88	86	5.0	58.9	7-25	3	14.5
CG818	72	5.0	55.0	7-24	3	13.1
Dyna-Gro 5516 RR	67	2.0	57.9	7-25	2	13.0
Croplan Genetics 743	57	9.0	51.7	7-24	4	10.2
Test Average	105.8					
L.S.D. (.05)	21.3					
C.V. (%)	14.2					

¹ 1= Excellent; 5= Very poor. ² Standard hybrids for comparison.

TABLE 9. EARLY CORN HYBRID TEST AT SHORTER IN CENTRAL ALABAMA, 1999-01

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2001—		
	3-yr.	2-yr.	2001	3-yr.	2-yr.	2001	Mid-	Test	Harvest
	1999-01 <i>bu.</i>	2000-01 <i>bu.</i>	<i>bu.</i>	1999-01 <i>pct.</i>	2000-01 <i>pct.</i>	<i>pct.</i>	-silk <i>mo.-da.</i>	weight <i>lb./bu.</i>	moisture <i>pct.</i>
Pioneer 3245 ¹	118	88	143	1.3	1.5	0.0	6-13	—	30.1
Pioneer 3394	117	94	128	4.7	7.0	0.0	6-11	—	28.1
Pioneer 32K61	113	83	131	3.7	5.5	0.0	6-14	—	28.9
Pioneer 32H58	—	—	142	—	—	0.0	6-13	—	30.4
Dekalb DKC65-25	—	—	136	—	—	0.0	6-13	—	30.5
Croplan Genetics 721	—	—	134	—	—	0.0	6-12	—	30.1
Pioneer 34B28	—	—	130	—	—	2.0	6-12	—	28.9
Dekalb DKC61-24	—	—	129	—	—	0.0	6-13	—	28.9
Test Average			134.0						
L.S.D. (.05)			12.7						
C.V. (%)			6.5						

¹Standard mid to late season hybrids.**TABLE 10. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT TALLASSEE IN CENTRAL ALABAMA, 2001**

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating ¹	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Pioneer 3163 ²	171	0.0	4	6-17	58.3	18.1
Garst/AgriPro 8288	159	1.0	2	6-16	58.1	20.5
Croplan Genetics 827	150	0.0	2	6-20	57.1	21.4
Dyna-Gro X15548	147	0.0	2	6-20	60.8	20.0
Kaystar X 1181	145	1.0	3	6-17	58.5	17.8
Pioneer 3167 ²	142	0.0	2	6-20	60.7	21.2
Croplan Genetics 683	138	1.0	3	6-13	57.9	15.8
Croplan Genetics 767RR	136	0.0	2	6-17	58.1	18.3
Croplan Genetics 733BT	128	1.0	4	6-13	56.2	17.6
Test Average	146.1					
L.S.D. (.05)	13.7					
C.V. (%)	6.4					

¹ 1= Excellent; 5= Very poor. ² Standard hybrids for comparison.

TABLE 11. CHARACTERISTICS OF IRRIGATED CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT TALLASSEE IN CENTRAL ALABAMA,¹ 2001

Brand name–hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating ²	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Pioneer 3163 ³	194	1.0	4	6-20	57.9	22.0
Garst/AgriPro 8288	182	0.0	3	6-17	58.3	23.2
Croplan Genetics 827	176	2.0	2	6-21	57.7	23.3
Kaystar X 1181	165	0.0	3	6-19	58.1	21.2
Dyna-Gro X15548	150	0.0	2	6-21	61.3	20.8
Pioneer 3167 ³	150	1.0	2	6-21	60.8	22.6
Croplan Genetics 767RR	148	0.0	3	6-20	57.1	22.0
Croplan Genetics 683	147	0.0	3	6-17	59.1	18.9
Croplan Genetics 733BT	143	0.0	4	6-15	57.5	21.2
Test Average	161.6					
L.S.D. (.05)	13.1					
C.V. (%)	5.5					

¹ The test received approximately 4.0 inches of irrigation water. ² 1= Excellent; 5= Very poor. ³ Standard hybrids for comparison.

TABLE 12. CORN HYBRID PERFORMANCE AND CHARACTERISTICS AT MARION JUNCTION IN CENTRAL ALABAMA, 2001

Brand name–hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating ¹	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Croplan Genetics 827	143	5.0	1	–	59.5	15.9
Pioneer 3163 ²	136	1.0	1	–	56.9	15.6
Dekalb DK 697	134	1.0	1	–	60.2	15.0
Dekalb DKC 68-70	129	1.0	1	–	59.5	13.6
Pioneer 32R25	129	9.0	1	–	55.7	15.7
Pioneer 31R88	126	4.0	1	–	58.8	14.4
Pioneer 3167 ²	125	4.0	1	–	56.7	17.4
Funk's DG 5516	124	3.0	1	–	58.6	14.9
Pioneer 31G98	124	5.0	2	–	56.3	15.4
Dyna-Gro 5516 RR	121	12.0	1	–	57.4	11.8
Dyna-Gro 5515	117	5.0	1	–	58.1	15.6
TV 2140RR	117	8.0	1	–	56.3	14.0
Croplan Genetics 7879	116	5.0	1	–	58.5	16.2
TV 2160BT	112	5.0	1	–	58.9	14.3
Pioneer 32H58	110	2.0	1	–	61.4	16.2
Garst/AgriPro 8215	108	13.0	1	–	57.4	15.7
Dyna-Gro X15548	103	1.0	1	–	61.6	16.1
CG818	102	4.0	1	–	60.0	15.3
Croplan Genetics 1167RR	97	3.0	1	–	59.0	13.2
Dekalb DK 687	97	3.0	1	–	59.1	15.2
Croplan Genetics 743	93	2.0	1	–	57.1	14.4
Croplan Genetics 744BT	89	0	1	–	60.2	13.4
Pioneer 32K61	79	2.0	1	–	63.1	15.7
Test Average	114.4					
L.S.D. (.05)	33.6					
C.V. (%)	20.8					

¹ 1= Excellent; 5= Very poor. ² Standard hybrids for comparison.

**TABLE 13. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN
IN SOUTHERN ALABAMA,¹ 1999-01**

Brand name-hybrid	Yield per acre, av.		Lodged stalks, av.	
	3-yr. (1999-01) <i>bu.</i>	2-yr. (2000-01) <i>bu.</i>	3-yr. (1999-01) <i>pct.</i>	2-yr. (2000-01) <i>pct.</i>
Garst/AgriPro 9707	133	122	1.3	2.0
Funk's DG 5516	132	124	2.7	4.0
Dekalb DK 687	131	116	2.0	3.0
SS 859 CL	131	120	9.0	13.0
AgriPro HS 9843	127	121	1.7	2.5
Pioneer 3163 ²	124	109	2.5	3.3
Pioneer 3167 ²	123	106	9.7	14.0
Pioneer 32K61	113	99	0.0	0.0
Dekalb DK 697	—	126	—	6.0
SS 900 BT	—	123	—	10.5
Pioneer 31R88	—	123	—	1.5
Pioneer 31G98	—	119	—	1.8
Garst/AgriPro 8251IT	—	117	—	6.0
CG818	—	111	—	1.0
Garst/AgriPro 8222IT	—	108	—	0.3

¹ Fairhope and Brewton. ² Standard hybrids for comparison.

TABLE 14. 2001 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>	Head- land <i>bu.</i>	2001 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 ¹	Harvest moisture <i>pct.</i>
Pioneer 32R25	172	135	81	129	0	56.7	6-9	3	17.0
AgriPro HS 9843	166	130	76	124	0	55.6	6-11	2	14.6
Dekalb DKC 68-70	178	127	67	124	0.3	56.2	6-11	2	17.6
Dekalb DK 697	166	133	73	124	0.3	57.7	6-8	3	17.7
Funk's DG 5516	164	125	76	121	0.7	55.4	6-7	2	16.1
TV 2160BT	165	124	74	121	0.3	57.3	6-9	3	17.9
Dyna-Gro 5515	172	143	47	121	1.7	55.9	6-10	2	16.2
Pioneer 31G98	167	127	63	119	0.3	57.4	6-10	3	17.4
SS 882CL	165	131	61	119	0.3	57.1	6-9	3	18.2
Dekalb DK 687	162	123	68	117	0.7	55.4	6-10	2	17.3
Croplan Genetics 7879	178	119	55	117	0.3	57.0	6-7	3	17.9
Garst/AgriPro 9707	173	132	46	117	0.3	55.6	6-9	3	16.4
Dyna-Gro 5518 RR	161	128	62	117	1.0	54.5	6-10	2	16.9
Pioneer 31R88	155	134	58	116	0.7	57.1	6-9	3	17.7
SS 900 BT	161	124	60	115	0.3	55.3	6-7	2	18.4
Dyna-Gro 5516 RR	146	124	70	113	0.7	56.3	6-9	2	16.5
SS 859 CL	156	131	50	112	2.0	53.8	6-9	3	17.9
TV 2140RR	142	135	59	112	0.3	54.6	6-9	2	17.5
Croplan Genetics 1167RR	151	122	57	110	0.3	56.2	6-10	2	16.5
Garst/AgriPro 8251IT	157	123	48	109	0.3	55.3	6-9	2	15.1
Pioneer 3167 ²	148	121	58	109	2.3	55.2	6-9	3	21.0
Pioneer 32H58	139	125	54	106	2.0	58.5	6-7	3	18.4
Pioneer 32K61	152	94	68	105	0.3	59.4	6-7	3	16.8
Pioneer 3163 ²	157	127	28	104	2.7	56.1	6-8	3	19.2
Croplan Genetics 743	124	128	56	103	0.3	53.0	6-5	3	16.4
Garst/AgriPro 8222IT	150	104	49	101	0.7	57.4	6-8	2	17.5
CG818	152	98	41	97	0.7	55.1	6-9	3	18.6
<i>Test Avarage</i>	<i>158.3</i>	<i>124.5</i>	<i>59.3</i>						
<i>L.S.D. (.05)</i>	<i>13.1</i>	<i>17.1</i>	<i>21.9</i>						
<i>C.V. (%)</i>	<i>5.9</i>	<i>9.8</i>	<i>26.2</i>						

¹ 1= Excellent; 5= Very poor. ² Standard hybrids for comparison.

TABLE 15. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA,¹ 1999-01

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2001—			
	3-yr. 1999-01 <i>bu.</i>	2-yr. 2000-01 <i>bu.</i>	2001 <i>bu.</i>	3-yr. 1999-01 <i>pct.</i>	2-yr. 2000-01 <i>pct.</i>	2001 <i>pct.</i>	Mid- -silk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Husk cover rating ²	Harvest moisture <i>pct.</i>
Garst/AgriPro 9707	177	175	219	0.7	1.0	1.0	6-12	57.1	2	12.7
Pioneer 3167 ³	176	183	208	1.3	2.0	2.0	6-12	57.3	2	12.7
Funk's DG 5516	173	174	192	1.0	1.5	0	6-13	56.8	2	12.7
Dekalb DK 687	168	174	198	1.0	1.5	0	6-14	56.6	1	12.7
SS 859 CL	167	169	186	1.0	1.5	0	6-14	56.0	2	12.7
AgriPro HS 9843	166	170	195	1.0	1.5	1.0	6-14	58.2	2	12.7
Pioneer 32K61	166	173	201	1.0	1.5	1.0	6-10	58.1	1	12.7
Pioneer 3163 ³	162	166	210	1.0	1.5	0	6-12	56.1	2	12.7
Pioneer 31G98	—	191	224	—	0.5	1.0	6-10	57.1	2	12.7
Pioneer 31R88	—	185	207	—	2.0	0	6-15	58.1	2	12.7
Dekalb DK 697	—	176	217	—	1.5	2.0	6-10	58.4	2	12.7
SS 900 BT	—	172	202	—	2.0	1.0	6-14	56.7	2	12.7
Garst/AgriPro 8222IT	—	164	182	—	0.5	0	6-12	58.7	2	12.7
Garst/AgriPro 8251IT	—	164	173	—	0.5	0	6-12	58.1	1	12.7
CG 818	—	155	183	—	2.0	0	6-10	56.0	2	12.7
Pioneer 32R25	—	—	217	—	—	0	6-12	57.0	2	12.7
Dekalb DKC 68-70	—	—	204	—	—	1.0	6-14	57.1	2	12.7
Dyna-Gro 5518 RR	—	—	203	—	—	1.0	6-12	56.2	3	12.7
Pioneer 32H58	—	—	201	—	—	1.0	6-10	58.9	2	12.7
Dyna-Gro 5516 RR	—	—	195	—	—	0	6-10	57.2	2	12.7
Dyna-Gro 5515	—	—	194	—	—	2.0	6-16	57.2	1	12.7
SS 882CL	—	—	191	—	—	0	6-14	58.3	3	12.7
TV 2160BT	—	—	188	—	—	0	6-14	59.1	2	12.7
Croplan Genetics 1167RR	—	—	181	—	—	0	6-10	57.5	1	12.7
Croplan Genetics 7879	—	—	166	—	—	1.0	6-14	58.0	1	12.7
Croplan Genetics 743	—	—	156	—	—	1.0	6-7	59.6	3	12.7
TV 2140RR	—	—	150	—	—	0	6-14	55.1	2	12.7
Test Average			194.0							
L.S.D. (.05)			21.2							
C.V. (%)			7.8							

¹ The test received approximately 7.0 inches of irrigation water. ² 1= Excellent; 5= Very poor. ³ Standard mid to late season hybrids.

TABLE 16. EARLY CORN HYBRID TEST AT FAIRHOPE IN SOUTHERN ALABAMA, 1999-01

Brand name-hybrid	—Yield per acre/av.—			—Lodged stalks, av.—			—2001—			
	3-yr.	2-yr.	2001	3-yr.	2-yr.	2001	Mid-	Test	Husk	Harvest
	1999-01 <i>bu.</i>	2000-01 <i>bu.</i>	<i>bu.</i>	1999-01 <i>pct.</i>	2000-01 <i>pct.</i>	<i>pct.</i>	-silk <i>mo.-da.</i>	weight <i>lb./bu.</i>	cover rating ¹	moisture <i>pct.</i>
Pioneer 3245 ²	130	112	148	0.7	0.5	0	5-29	59.7	3	21.1
Pioneer 32K61	126	108	126	0.3	0.5	0	5-30	59.9	2	19.8
Pioneer 3394	125	107	130	0.3	0.5	0	5-27	58.4	3	17.3
Dekalb DKC65-25	—	—	143	—	—	0	5-29	57.6	3	19.5
Croplan Genetics 721	—	—	127	—	—	0	5-30	56.1	3	19.5
Pioneer 32H58	—	—	120	—	—	0	5-28	58.8	3	21.5
Dekalb DKC61-24	—	—	118	—	—	0	5-28	57.7	3	18.7
Pioneer 34B28	—	—	104	—	—	0	5-29	57.6	3	19.9
Test Average	126.9									
L.S.D. (.05)	17.1									
C.V. (%)	9.2									

¹ 1= Excellent; 5= Very poor. ² Standard mid to late season hybrids.

TABLE 17. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT FAIRHOPE IN SOUTHERN ALABAMA, 2001

Brand name-hybrid	Av. yield per acre <i>bu.</i>	Lodged stalks <i>pct.</i>	Husk cover rating ¹	Midsilk <i>mo.-da.</i>	Test weight <i>lb./bu.</i>	Harvest moisture <i>pct.</i>
Pioneer 3163 ²	150	0	2	6-1	58.2	23.4
Pioneer 3167 ²	147	0	3	6-1	57.5	28.7
Croplan Genetics 767RR	140	0	3	6-2	55.8	19.6
Croplan Genetics 827	140	0	3	6-2	56.0	24.1
Croplan Genetics 683	136	0	3	5-30	58.0	18.4
Kaystar X 1181	134	2.0	3	6-1	58.0	20.7
Croplan Genetics 733BT	133	0	4	5-28	55.0	18.7
Garst/AgriPro 8288	122	0	2	5-30	56.3	24.6
Dyna-Gro X15548	120	0	2	6-2	59.0	22.3
Test Average	135.7					
L.S.D. (.05)	17.9					
C.V. (%)	9.0					

¹ 1= Excellent; 5= Very poor. ² Standard hybrids for comparison.

TABLE 18. GROWING SEASON RAINFALL, 1999-01

Test location	Year	Monthly rainfall (inches)							7-month total
		Mar.	Apr.	May	June	July	Aug.	Sept.	
Belle Mina	2001	5.8	3.9	6.4	8.8	4.3	3.2	5.6	38.0
	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
Crossville	2001	8.4	2.7	5.2	1.0	4.7	4.5	3.7	30.2
	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
Tallassee	2001	16.1	5.2	5.5	5.8	4.2	4.7	1.0	42.5
	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
Shorter	2001	13.8	6.0	3.6	7.1	3.1	2.4	1.6	37.6
	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
Prattville	2001	13.1	3.8	2.9	5.1	4.0	9.6	2.4	40.9
	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
Marion Junction	2001	11.5	5.4	2.5	5.3	4.1	6.6	3.7	39.1
	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
Brewton	2001	16.0	3.0	1.5	9.5	4.8	7.8	3.4	46.0
	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
Fairhope	2001	8.7	0.3	0.6	13.8	15.7	0.1	4.7	43.9
	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
Headland	2001	12.6	2.5	2.1	11.6	3.3	3.9	3.7	39.7
	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

TABLE 19. SOIL TYPES FOR CORN TRIALS, 2001

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

SOURCES OF 2001 CORN HYBRID TEST SEED

Seed company	Brand	Seed company	Brand
Croplan Genetics P.O. Box 146 Blytheville, AR 72316	Croplan Genetics	Pioneer Hi-Bred Int., Inc. 6767 Old Madison Pike Huntsville, AL 35806	Pioneer
Garst/AgriPro Seeds 761 Walnut Knoll Lane Memphis, TN 38018	Garst, AgriPro	Southern States Coop 6606 West Broad St. Richmond, VA 23230	SS
Monsanto Company 3100 Sycamore Road DeKalb, IL 60115	Dekalb DK	Terral Seed P.O. Box 826 Lake Providence, LA 71254	TV
Panner Seed Inc. P.O. Box 947 Huron, SD 57350	Kaystar	UAP Southeast 25324 HSV-Brownsferry Rd Madison, AL 35756	Dyna-Gro