

*Evaluations of
Corn Hybrids
in Alabama,
2004*

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EVALUATION OF CORN HYBRIDS IN ALABAMA

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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 the State. 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, one location in the central region and three 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 Belle Mina and Headland. Locations and cultural practices for all tests are given in Table 1.

EXPERIMENTAL PROCEDURES

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 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 lbs) 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.

STATISTICAL ANALYSIS

All test were conducted in randomized complete block designs and analyzed accordingly. It is important to keep in mind that genotype x environment interaction is common in multi-year and multi-location mean. This interaction usually is an indication that the relative rankings of varieties change from one environment to the next. Thus, one cannot draw widespread conclusions if the interaction is significant.

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.

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, LSD's vary from one location to another. This is because random variation varies among locations and from year to year. The coefficient of variation (CV)

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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 CV's 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 2004 CORN HYBRID TRIALS

Location	Planting date	Nitrogen Rate [†] lbs/ac	Plant pop. seeds/ac	Date harvested	Herbicides used
NORTHERN ALABAMA					
Tennessee Valley Res. and Ext. Ctr. (Belle Mina)					
Regular test (non-irrigated)	March 24	175	20,000	August 31	Atrazine/Dual
Regular test (irrigated)	March 24	210	25,000	September 1	Atrazine/Dual
Sand Mountain Res. and Ext. Ctr. (Crossville)					
Regular test	April 6	135	20,000	September 10	Atrazine/Dual
Early test	March 26	135	20,000	September 10	Atrazine/Dual
Preliminary test	April 6	135	20,000	September 10	Atrazine/Dual
CENTRAL ALABAMA					
E.V. Smith Research Center (Shorter)					
No-Till Early corn test	March 17	150	20,000	August 9	Atrazine/Dual
Early test	March 17	150	20,000	August 9	Atrazine/Dual
Plant Breeding Unit (Tallasse)					
Preliminary test	March 30	140	20,000	August 19	Atrazine/Dual
Prattville Experiment Field (Prattville)					
Regular test	April 1	120	20,000	August 28	Atrazine
SOUTHERN ALABAMA					
Brewton Experiment Field (Brewton)					
Regular test (non-irrigated)	April 28	120	20,000	September 10	Atrazine/Dual
Wiregrass Res. and Ext. Ctr. (Headland)					
Regular test (non-irrigated)	March 23	170	20,000	August 23	Atrazine
Regular test (irrigated)	March 19	230	25,000	August 24	Atrazine
Gulf Coast Res. and Ext. Ctr. (Fairhope)					
Regular test	March 22	148	20,000	August 9	Atrazine/Dual
Early test	March 18	148	20,000	August 4	Atrazine/Dual
Preliminary test	March 22	148	20,000	August 4	Atrazine/Dual

[†] 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, 2002-2004

Brand name - hybrid	Grain yield		% stalks lodging	
	3-yr	2-yr	3-yr	2-yr
	----- bu/acre -----		----- % -----	
Pioneer 31G98	182	211	1.3	1.6
Garst 8222IT	177	198	2.4	3.2
Dyna-Gro 58K22	175	188	3.5	5.2
Pioneer 31R88	173	190	1.5	1.6
Garst 8288	172	186	1.5	1.9
Terral TV2160Bt	166	181	4.6	6.4
Pioneer 34B24	164	181	1.7	2.1
AT 733RR	163	178	1.3	1.7
Terral TV2140nRR	162	175	2.6	3.3
Dyna-Gro 5515	154	173	3.2	4.3
Dekalb DKC 64-11		213		0.7
Dekalb DKC 69-71		211		0.8
Garst 8350 YG1		202		0.7
Garst 8200 YG1		201		2.8
Pioneer 31G66		197		2.6
Garst 8230IT		197		2.7
Dyna-Gro 5518		193		3.8
Dekalb DKC 61-42		189		1.8
Pioneer 34B23		186		2.6
Pioneer 33V15		180		3.1
Test Average	169	192		
LSD _{0.05}	27.0	21.2		
CV (%)	5.7	4.0		

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TABLE 3. 2004 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN NORTHERN ALABAMA

Brand name - hybrid	Belle Mina	Cross- ville	2004 regional averages					
			Yield	Lodging	Test- weight	Mid- silk	Husk cover	Harvest moisture
			----- bu/acre -----	-- % --	lb/bu	mo-day		-- % --
Dekalb DKC 69-71	196	197	197	1.3	60	6-14	3	15.7
Dyna-Gro Cx 04319	199	190	195	1.4	60	6-14	2	17.4
Dekalb DKC 64-11	186	203	194	1.3	59	6-12	3	15.0
Pioneer 31G98	202	185	194	2.9	59	6-14	3	15.3
Croplan Genetics 895BT	191	192	192	1.6	59	6-14	1	17.3
Garst 8200 YG1	201	178	190	4.6	60	6-14	2	17.0
Croplan Genetics DS 830	184	192	188	4.5	60	6-14	2	16.1
Garst 8350 YG1	183	193	188	1.4	60	6-10	3	16.0
Dekalb DKC 61-42	173	202	188	2.9	58	6-8	3	14.3
Pioneer 31G66	203	169	186	4.1	59	6-13	2	16.0
Garst 8222IT	176	193	184	5.3	60	6-14	2	16.9
Dyna-Gro Cx 03317	190	175	183	2.6	60	6-14	3	16.7
Croplan Genetics 1167RR	182	180	181	3.1	59	6-14	2	14.9
Dekalb DKC 67-60	175	186	180	3.1	60	6-14	1	16.6
Dekalb DKC 60-19	181	179	180	1.1	58	6-7	3	15.3
Pioneer 31R88	181	176	178	3.0	59	6-14	3	16.8
Garst 8230IT	171	185	178	4.9	57	6-14	3	17.1
AgraTech 755RRBt	201	152	177	0.8	58	6-11	2	15.6
Pioneer 34B23	183	167	175	4.9	60	6-10	3	14.7
AgraTech 855RR	183	163	173	1.0	59	6-14	3	16.7
Garst 8288	180	162	171	3.4	59	6-11	3	16.5
AgraTech 727RR	173	168	170	2.1	60	6-14	2	14.6
Pioneer 34B24	178	160	169	3.6	60	6-13	3	16.0
Dyna-Gro 5518	181	157	169	7.3	58	6-14	2	14.7
Dekalb DKC 63-52	187	148	167	2.3	58	6-7	3	15.4
Croplan Genetics 799BT	182	151	167	2.5	60	6-10	2	15.9
AT 733RR	182	150	166	3.0	59	6-12	2	15.3
Dyna-Gro 58K22	188	140	164	9.8	57	6-14	2	15.2
Croplan Genetics DS 822RR	173	153	163	6.4	58	6-14	3	16.9
Terral TV2140nRR	183	140	161	6.3	58	6-14	2	15.3
Pioneer 33V15	171	151	161	5.8	60	6-10	3	15.1
Dyna-Gro 5515	167	147	157	8.6	59	6-14	2	15.7
Croplan Genetics 872RR	179	129	154	6.8	59	6-14	2	16.1
Terral TV2160Bt	186	117	151	12.3	60	6-14	3	16.1
Test Average	184	169	176					
LSD <small>0.05</small>	17.3	46.8	25.0					
CV (%)	3.3	9.9	5.0					

**TABLE 4. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS,
BELLE MINA, ALABAMA, 2002-2004**

Brand name - hybrid	Grain yield			Lodging			Test- weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Dyna-Gro 58K22	229	231	218	4.1	5.1	10.0	58	6-14	1.3	17.4
Pioneer 31G98	225	231	206	1.8	2.1	4.0	60	6-14	2.0	18.4
Terral TV2140nRR	221	218	193	8.6	11.6	22.5	59	6-14	1.3	17.9
Pioneer 31R88	220	231	222	1.8	2.1	3.8	61	6-14	2.0	19.2
Garst 8288	218	219	201	2.7	3.5	6.5	58	6-12	1.0	19.9
Terral TV2160Bt	216	215	208	1.7	2.3	4.3	61	6-14	2.0	18.6
AT 733RR	214	204	199	2.3	2.9	5.3	59	6-13	1.8	18.7
Dyna-Gro 5515	208	202	183	9.4	13.1	26.0	59	6-14	2.0	18.4
Garst 8222IT	207	216	200	7.8	11.1	20.0	60	6-14	1.0	21.1
Pioneer 34B24	203	206	205	0.3	0.3	0.3	61	6-14	2.8	18.8
Pioneer 31G66		246	243		1.9	3.3	60	6-13	1.3	19.3
Garst 8200 YG1		233	217		4.5	7.8	60	6-13	1.0	20.9
Dekalb DKC 69-71		230	221		2.6	4.3	60	6-14	2.3	19.8
Dekalb DKC 61-42		228	213		7.5	14.8	58	6-10	3.0	17.1
Pioneer 33V15		223	221		2.3	4.0	62	6-12	2.5	18.8
Garst 8230IT		223	205		2.1	3.8	58	6-14	1.8	20.1
Dyna-Gro 5518		220	207		6.9	13.8	57	6-14	1.3	17.6
Garst 8350 YG1		217	211		6.0	8.0	61	6-12	1.8	18.7
Dekalb DKC 64-11		214	210		1.9	3.8	60	6-12	2.0	17.9
Pioneer 34B23		211	200		2.6	4.8	61	6-11	3.0	18.2
Dyna-Gro Cx 04319			225			2.3	59	6-14	1.8	20.0
Dekalb DKC 63-52			224			7.3	58	6-7	2.5	18.7
Croplan Genetics DS 822RR			221			7.3	57	6-14	2.0	19.4
Croplan Genetics DS 830			220			14.3	60	6-13	1.5	18.6
Croplan Genetics 895BT			220			6.5	61	6-12	1.0	21.1
Dyna-Gro Cx 03317			219			5.3	62	6-14	1.5	19.8
Croplan Genetics 799BT			212			9.0	62	6-10	1.0	20.6
Dekalb DKC 60-19			212			3.3	59	6-7	2.0	18.5
AgraTech 755RRBt			208			13.8	58	6-12	2.0	18.3
Croplan Genetics 1167RR			204			11.8	60	6-14	1.3	18.2
AgraTech 855RR			199			2.8	61	6-14	2.3	18.6
AgraTech 727RR			191			13.5	60	6-14	1.5	17.2
Croplan Genetics 872RR			187			19.8	61	6-14	1.0	20.7
Dekalb DKC 67-60			187			7.5	62	6-14	1.5	20.3
Test Average	216	221	209							
LSD <i>0.05</i>	16.3	18.3	24.2							
CV (%)	2.7	2.9	4.1							

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TABLE 5. EARLYCORN HYBRID PERFORMANCE AND CHARACTERISTICS, CROSSVILLE, ALABAMA, 2002-2004

Brand name - hybrid	Grain yield			Lodging			Test-weight <i>lb/bu</i>	Mid-silk <i>mo-day</i>	Husk cover	Harvest moisture <i>-- % --</i>
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	<i>bu/acre</i>			<i>%</i>						
Pioneer 34B24		178	131		0.5	0.8			3.3	16.5
Pioneer 33M54			198			0.3			2.8	16.9
Pioneer 33N56			184			0.5			3.3	15.9
Pioneer 32K61			182			0.3			3.8	16.7
Pioneer 33V15			176			1.0			3.3	16.6
Pioneer 34B23			169			1.3			3.0	16.6
Croplan Genetics 721CRW/RR			166			7.0			3.0	17.1
Dyna-Gro 57K25			155			3.5			2.5	18.5
Croplan Genetics 705RR			134			1.5			2.0	16.9
Test Average			166							
LSD <i>0.05</i>			33.5							
CV (%)			6.9							

TABLE 6. PRELIMINARYCORN HYBRID PERFORMANCE AND CHARACTERISTICS, CROSSVILLE, ALABAMA, 2002-2004

Brand name - hybrid	Grain yield			Lodging			Test-weight <i>lb/bu</i>	Mid-silk <i>mo-day</i>	Husk cover	Harvest moisture <i>-- % --</i>
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	<i>bu/acre</i>			<i>%</i>						
SS E 83462			214			0.0			1.5	15.0
Garst 8292 YG1			195			3.5			1.8	14.9
Terral TVX26BR401 (RR/YGCB)			177			4.8			2.0	14.5
Terral TVX25R401 (RR)			168			3.5			3.0	16.0
Terral TVX23R31 (RR)			154			6.0			3.0	15.0
CG 841RR			144			2.0			3.0	15.8
Terral TVX27B401 (YGCB)			139			12.8			1.5	14.6
Terral TVX26B401 (YGCB)			115			5.5			1.5	15.3
Test Average			163							
LSD <i>0.05</i>			19.5							
CV (%)			4.1							

TABLE 7. ONE, TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN AT PRATTVILLE IN CENTRAL ALABAMA, 2002-2004

Brand name - hybrid	Grain yield			Lodging			Test-weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Pioneer 31G98	168	196	180	0.2	0.0	0.0	56	6-19	1.5	13.7
Terral TV2140nRR	166	188	173	0.4	0.1	0.0	55	6-19	2.3	12.0
Dyna-Gro 58K22	164	186	180	0.1	0.0	0.0	54	6-18	1.3	13.9
Dyna-Gro 5515	156	173	163	0.2	0.1	0.0	56	6-20	2.0	12.6
Terral TV2160Bt	153	177	160	1.0	0.1	0.0	56	6-18	2.3	14.5
Dyna-Gro 5518		191	180		0.1	0.0	56	6-19	1.5	12.4
Garst 8200 YG1		189	182		0.0	0.0	59	6-18	1.5	12.5
Terral TV26BR10n		188	181		0.3	0.5	56	6-18	1.8	12.2
Pioneer 31G66		178	166		0.1	0.0	54	6-19	1.5	12.9
Garst 8230IT		175	165		0.0	0.0	54	6-19	1.8	13.4
Pioneer 33V15		167	149		0.0	0.0	58	6-18	2.5	13.6
Dekalb DKC 67-60			193			0.3	59	6-18	1.0	12.9
Dekalb DKC 69-72			188			0.0	57	6-18	2.8	12.5
Croplan Genetics DS 830			184			0.0	56	6-17	2.3	11.8
Dyna-Gro Cx 03317			178			0.3	57	6-18	2.0	11.8
Dekalb DKC 69-71			172			0.0	57	6-18	2.5	13.7
Pioneer 31G97			171			0.0	55	6-19	1.8	13.4
Dekalb DKC 66-80			161			0.0	57	6-18	1.3	11.4
Croplan Genetics 1167RR			154			0.0	57	6-18	1.3	13.6
Pioneer 31R87			143			0.0	55	6-18	2.5	12.6
Dyna-Gro Cx 04319			140			0.0	54	6-18	2.3	15.0
Test Average	161	182	170							
LSD <i>0.05</i>	11.7	16.2	24.9							
CV (%)	2.5	3.1	5.2							

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TABLE 8. PRELIMINARY CORN HYBRID PERFORMANCE AND CHARACTERISTICS, TALLASSEE, ALABAMA, 2002-2004

Brand name - hybrid	Grain yield			Lodging			Test-weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
SS E 83462			177			0.3		6-11	2.3	14.8
Terral TVX25R401 (RR)			177			0.3		6-12	3.0	20.0
Terral TVX27B401 (YGCB)			175			0.5		6-13	2.0	17.0
Vigoro V 58Y41			170			0.5		6-11	2.3	19.1
Garst 8292 YG1			163			0.5		6-10	2.0	18.4
Vigoro V 58YR2			162			0.3		6-13	2.5	18.6
Terral TVX26B401 (YGCB)			161			1.3		6-13	2.0	18.0
Terral TVX26BR401 (RR/YGCB)			160			0.5		6-11	2.5	18.8
Vigoro V 56Y51			156			1.0		6-12	2.5	16.4
Vigoro EX 284001			148			1.0		6-13	2.5	15.8
Terral TVX23R31 (RR)			147			0.3		6-13	2.0	17.9
CG 841RR			145			0.0		6-12	2.5	16.0
Test Average			162							
LSD_{0.05}			15.6							
CV (%)			3.4							

TABLE 9. ONE, TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR THE EARLY NO-TILL CORN TEST AT SHORTER IN CENTRAL ALABAMA, 2002-2004.

Brand name - hybrid	Grain yield			Lodging			Test-weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Terral TV2140nRR	163	181	182	1.7	2.1	3.8	57	6-7		20.1
Terral TV2160Bt	159	175	170	0.5	0.5	0.8	59	6-5		21.4
Terral TV26BR10n	154	172	163	0.7	1.0	2.0	58	6-5		19.8
Dyna-Gro 5518		186	182		2.1	4.0	56	6-7		20.6
Pioneer 31G98		184	175		3.4	6.8	59	6-8		20.8
Garst 8230IT		181	174		3.1	6.0	57	6-4		21.9
Pioneer 31G66		179	172		1.3	2.0	58	6-5		20.5
Dyna-Gro 58K22		179	177		1.5	2.5	57	6-6		20.8
Dyna-Gro 5515		170	169		0.9	1.8	57	6-7		20.5
Pioneer 33V15		166	159		1.4	2.5	60	6-6		19.4
Dekalb DKC 69-72			199			2.3	58	6-8		22.5
Dekalb DKC 67-60			188			1.0	59	6-8		20.5
Croplan Genetics DS 830			188			1.3	58	6-5		21.0
Garst 8200 YG1			187			0.3	59	6-5		22.5
Dyna-Gro Cx 04319			178			0.3	59	6-6		22.0
Dekalb DKC 69-71			177			0.0	59	6-8		23.0
Pioneer 31R87			173			0.8	60	6-9		21.5
Pioneer 31G97			169			8.0	58	6-7		20.8
Dekalb DKC 66-80			163			0.5	58	6-5		19.5
Dyna-Gro Cx 03317			159			0.3	59	6-6		21.6
Croplan Genetics 1167RR			158			0.5	58	6-6		19.9
Test Average	159	177	174							
LSD _{0.05}	8.0	13.5	22.8							
CV (%)	1.6	2.7	4.7							

TABLE 10. ONE, TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR THE EARLY CORN TEST AT SHORTER IN CENTRAL ALABAMA, 2002-2004.

Brand name - hybrid	Grain yield			Lodging			Test-weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Pioneer 33V15			165			0.3		6-4		18.3
Pioneer 33M54			165			0.8		6-4		19.7
Pioneer 33N56			149			1.0		6-5		18.7
Croplan Genetics 721CRW/RR			149			1.3		6-4		18.0
Croplan Genetics 705RR			148			4.8		6-1		17.1
Dyna-Gro 57K25			147			1.5		6-1		18.4
Test Average			154							
LSD _{0.05}			24.5							
CV (%)			5.3							

TABLE 11. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN IN SOUTHERN ALABAMA, 2002-2004

Brand name - hybrid	Grain yield		% stalks lodging	
	3-yr	2-yr	3-yr	2-yr
	----- bu/acre -----		----- % -----	
Dyna-Gro 58K22	134	150	3.3	2.1
Pioneer 31G98	129	149	2.5	1.7
Terral TV2160Bt	129	141	2.1	1.9
Dyna-Gro 5515	129	138	1.4	1.0
Garst 8200 YG1		159		1.6
Dekalb DKC 69-71		155		1.1
Pioneer 31G66		154		1.3
Dekalb DKC 67-60		148		1.1
Dyna-Gro 5518		147		2.1
AgraTech 855RR		143		0.2
Pioneer 33V15		141		2.1
Terral TV26BR10n		140		1.3
Dekalb DKC 66-80		138		1.8
Test Average	130	146		
LSD <i>0.05</i>	23.8	13.8		
CV (%)	5.7	3.3		

TABLE 12. 2004 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN SOUTHERN ALABAMA

Brand name - hybrid	2004 regional averages								
	Fair- hope	Brew- ton	Head- land	Yield	Lodg- ing	Test- weight	Mid-silk	Husk cover ¹	Harvest moist.
	----- bu/acre -----				-- % --	lb/bu	mo-day		-- % --
Garst 8200 YG1	165	136	181	161	0.3	56	6-13	2	17.4
Croplan Genetics DS 830	162	118	188	156	0.1	56	6-13	3	17.7
Dyna-Gro Cx 03317	153	138	170	154	0.1	56	6-13	2	18.1
Croplan Genetics 895BT	159	121	182	154	0.0	57	6-10	2	17.2
Dekalb DKC 69-72	154	123	183	154	0.1	56	6-10	3	17.8
Dyna-Gro Cx 04319	159	135	164	153	0.1	55	6-10	3	18.3
AgraTech 999Bt	152	115	188	151	0.3	54	6-15	2	18.8
Dekalb DK 697	159	111	182	151	0.2	57	6-10	3	17.8
Pioneer 31G98	153	122	175	150	0.0	55	6-13	3	17.3
Dekalb DKC 69-71	152	116	183	150	0.4	57	6-12	3	17.9
Pioneer 31G66	156	116	178	150	0.2	56	6-10	2	17.4
Dyna-Gro 58K22	144	116	184	148	0.1	55	6-12	3	16.7
AgraTech 955RR	142	120	178	147	0.0	56	6-13	3	17.9
Dyna-Gro 5518	142	115	179	145	0.5	53	6-11	2	16.2
Dekalb DKC 67-60	147	102	185	144	0.2	58	6-13	2	18.0
Croplan Genetics 799BT	156	110	166	144	0.1	54	6-12	2	16.6
Pioneer 33V15	153	100	171	141	0.3	56	6-11	2	17.5
Croplan Genetics 872RR	149	102	170	140	0.3	56	6-11	2	17.7
Croplan Genetics 1167RR	139	105	174	139	0.8	55	6-11	2	16.6
Terral TV26BR10n	124	122	158	134	0.3	55	6-13	3	16.7
Terral TV2160Bt	141	101	160	134	0.4	56	6-13	3	16.7
Dekalb DKC 66-80	132	94	174	134	0.8	55	6-11	2	16.3
Dyna-Gro 5515	134	103	161	133	0.6	55	6-13	3	16.4
Croplan Genetics DS 822RF	151	98	148	132	0.0	53	6-12	3	17.3
AgraTech 855RR	142	109	144	132	0.1	56	6-12	3	18.0
Test Average	149	114	173	145					
LSD _{0.05}	24.1	12.7	22.1	11.6					
CV (%)	5.7	4.0	4.5	2.9					

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2004

TABLE 13. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA, 2002-2004

Brand name - hybrid	Grain yield			Lodging			Test-weight <i>lb/bu</i>	Mid-silk <i>mo-day</i>	Husk cover	Harvest moisture <i>-- % --</i>
	3-yr	2-yr	2004 [†]	3-yr	2-yr	2004				
	----- <i>bu/acre</i> -----			----- <i>%</i> -----						
Pioneer 31G98	158	162	130	0.8	1.3	0.0	50	5-29	3.3	11.8
Dyna-Gro 5515	146	138	107	1.0	1.3	0.0	50	6-2	3.5	11.8
Dyna-Gro 58K22	140	129	70	2.1	1.5	0.0	50	5-29	2.8	11.8
Terral TV2160Bt	131	120	90	6.2	6.8	0.0	51	6-5	3.5	11.8
Dekalb DKC 69-71		172	143		2.0	0.0	52	6-2	3.8	11.8
Pioneer 31G66		172	158		1.8	0.0	50	6-2	2.8	11.8
Dyna-Gro 5518		169	142		0.8	0.0	51	6-5	3.5	11.8
Garst 8200 YG1		168	135		1.3	0.0	51	6-2	2.5	11.8
Dekalb DKC 67-60		168	156		2.3	0.0	52	6-3	2.3	11.8
AgraTech 855RR		154	120		3.0	0.0	51	5-30	2.8	11.8
Pioneer 33V15		154	143		0.5	0.0	51	6-2	3.0	11.8
Terral TV26BR10n		140	95		1.5	0.0	50	5-29	3.3	11.8
Dekalb DKC 66-80		139	99		0.8	0.0	51	6-2	3.3	11.8
Dekalb DKC 69-72			174			0.0	51	6-5	3.0	11.8
Croplan Genetics DS 830			161			0.0	52	6-2	2.3	11.8
Dekalb DK 697			153			0.0	52	6-5	3.0	11.8
AgraTech 999Bt			150			0.0	51	6-5	2.3	11.8
AgraTech 955RR			146			0.0	51	6-2	3.3	11.8
Croplan Genetics 799BT			132			0.0	51	5-30	2.8	11.8
Dyna-Gro Cx 03317			132			0.0	50	5-29	3.3	11.8
Croplan Genetics 895BT			122			0.0	51	5-22	2.5	11.8
Dyna-Gro Cx 04319			122			0.0	51	5-29	3.0	11.8
Croplan Genetics 872RR			122			0.0	52	5-29	3.8	11.8
Croplan Genetics 1167RR			114			0.0	51	6-2	2.8	11.8
Croplan Genetics DS 822RR			98			0.0	50	6-5	2.8	11.8
Test Average	144	153	129							
LSD <i>0.05</i>	24.8	28.5	46.7							
CV (%)	5.8	6.5	12.9							

† The 2004 Irrigated test received 5.4 inches of water in 7 applications but was severely damaged by a heavy stinkbug infestation.

**TABLE 14. EARLY CORN HYBRID PERFORMANCE AND CHARACTERISTICS,
FAIRHOPE, ALABAMA, 2002-2004**

Brand name - hybrid	Grain yield			Lodging			Test-weight <i>lb/bu</i>	Mid-silk <i>mo-day</i>	Husk cover	Harvest moisture <i>-- % --</i>
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- <i>bu/acre</i> -----			----- <i>%</i> -----						
Pioneer 33M54			172		-	1.3		5-30	3.0	22.6
Pioneer 33V15			159			2.3		5-29	3.0	20.8
Croplan Genetics 721CRW/RR			151			3.3		5-30	3.3	20.4
Dyna-Gro 57K25			151			1.0		5-30	3.3	20.7
Croplan Genetics 705RR			147			1.3		5-26	2.5	19.6
Pioneer 33N56			141			0.0		5-29	3.5	19.4
Test Average			154							
LSD <i>0.05</i>			12.4							
CV (%)			2.7							

**TABLE 15. PRELIMINARY CORN HYBRID PERFORMANCE AND CHARACTERISTICS,
FAIRHOPE, ALABAMA, 2002-2004**

Brand name - hybrid	Grain yield			Lodging			Test-weight <i>lb/bu</i>	Mid-silk <i>mo-day</i>	Husk cover	Harvest moisture <i>-- % --</i>
	3-yr	2-yr	2004	3-yr	2-yr	2004				
	----- <i>bu/acre</i> -----			----- <i>%</i> -----						
Terral TVX27B401 (YGCB)			165		-	1.3	55	6-4	2.0	23.5
SS E 83462			160			0.3	55	6-3	2.5	19.6
Pioneer 33V15			160			0.3	58	6-3	3.3	22.8
Garst 8292 YG1			158			0.0	56	6-2	2.8	25.1
Terral TVX26B401 (YGCB)			157			0.3	58	6-5	2.0	25.1
Vigoro V 58YR2			155			0.3	54	6-4	2.5	26.2
Terral TVX25R401 (RR)			153			0.3	54	6-3	2.8	27.8
Terral TVX26BR401 (RR/YGCB)			152			0.8	54	6-4	3.0	27.0
Terral TVX23R31 (RR)			148			0.0	57	6-4	3.3	24.1
Vigoro V 58Y41			144			0.5	55	6-3	3.0	26.4
Vigoro V 56Y51			142			0.5	57	6-4	3.0	23.0
Vigoro EX 284001			140			0.3	56	6-4	3.3	22.5
CG 841RR			121			0.5	57	6-5	3.3	26.8
Test Average			150							
LSD <i>0.05</i>			24.1							
CV (%)			5.6							

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2004

TABLE 16. GROWING SEASON RAINFALL, 2002-2004.

Location	Year	----- Monthly rainfall in inches -----							7-month total
		Mar.	Apr.	May	June	July	Aug.	Sept.	
Belle Mina									
	2004	5.5	4.3	3.2	5.1	7.8	3.0	3.5	32.5
	2003	2.2	4.3	9.8	5.0	4.6	3.0	8.6	37.5
	2002	5.5	1.5	10.3	0.9	4.5	1.7	5.3	29.7
Crossville									
	2004	4.2	2.9	5.5	7.3	4.6	4.0	8.5	37.0
	2003	4.4	5.1	12.6	4.0	4.8	5.9	3.9	40.7
	2002	7.8	3.0	4.8	1.9	4.5	2.0	8.9	32.9
Shorter									
	2004	0.8	3.1	4.0	7.4	2.4	4.9	6.4	29.0
	2003	6.7	9.1	6.0	6.6	7.8	6.9	4.5	47.6
	2002	6.5	3.6	2.5	5.6	2.3	1.9	4.6	27.0
Prattville									
	2004	1.4	3.5	5.2	8.8	1.9	5.7	6.0	32.5
	2003	5.2	8.8	4.8	7.4	6.8	8.0	2.2	43.2
	2002	5.8	1.4	2.6	1.9	4.2	2.2	6.2	24.3
Brewton									
	2004	1.0	6.6	4.3	14.6	4.9	5.3	8.6	45.3
	2003	6.3	7.4	9.4	8.1	11.5	13.2	5.9	61.8
	2002	5.3	2.2	1.8	12.4	12.4	5.7	11.5	51.3
Fairhope									
	2004	0.7	2.3	2.0	10.8	4.7	8.3	12.6	41.4
	2003	5.2	3.1	5.8	9.5	18.4	5.2	3.7	50.9
	2002	4.2	3.1	2.3	3.4	10.8	5.8	14.8	44.4
Headland									
	2004	0.5	4.4	3.4	9.8	4.4	2.1	7.1	31.7
	2003	6.0	9.2	3.4	8.8	7.5	6.1	4.7	45.7
	2002	5.2	3.4	2.9	3.9	4.1	3.1	2.9	25.5

TABLE 17. SOIL TYPES FOR CORN TRIALS, 2004

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
South	
Brewton	Benndale fine sandy loam
Headland	Dothan sandy loam
Fairhope	Malbis fine sandy loam

SOURCES OF 2004 CORN HYBRID TRIAL SEED

Seed Company	Brand	Seed Company	Brand
AgraTech Seeds P.O. Box 88823 Dunwoody, GA 30356	AgraTech	Pioneer Hi-Bred Int., Inc. 7501 Memorial Parkway SW Huntsville, AL 35806	Pioneer
Garst Seed Company 761 Walnut Knoll Lane Memphis, TN 38018	Garst,	Royster-Clark, Inc. 717 Robinson Rd. SE Washington C.H, OH 43160	Vigoro
Land O'Lakes P.O. Box 614 Midland City, AL 36350	Croplan Genetics	Terral Seed P.O. Box 826 Lake Providence, LA 71254	TV
Monsanto Company 3100 Sycamore Road DeKalb, IL 60115	Dekalb DK	UAP Southeast 25324 HSV-Brownsferry Rd Madison, AL 35756	Dyna-Gro
Southern States P.O. Box 26230 Richmond, VA 23260	SS		