

*Evaluations of
Corn Hybrids
in Alabama,
2006*

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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 25,000 plants per acre with a seeding rate of 28,000 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

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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 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 10) and soil types (Table 11) 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 2006 CORN HYBRID TRIALS

	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 28	175	25,000	August 16	Atrazine/Dual
Regular test (irrigated)	March 29	200	30,000	August 23	Atrazine/Dual
Sand Mountain Res. and Ext. Ctr. (Crossville)					
Regular test	April 6	145	25,000	September 1,5	Atrazine/Dual
Early test	No trial	-	-	-	-
Preliminary test	No trial	-	-	-	-
CENTRAL ALABAMA					
E.V. Smith Research Center (Shorter)					
No-Till Early corn test	March 27	150	30,000	August 9	Atrazine/Dual
Early test	No trial	-	-	-	-
Plant Breeding Unit (Tallassee)					
Preliminary test	No trial	-	-	-	-
Prattville Experiment Field (Prattville)					
Regular test	March 29	120	25,000	August 15	Atrazine/Dual
SOUTHERN ALABAMA					
Brewton Experiment Field (Brewton)					
Regular test	March 20	120	25,000	August 22	Atrazine/Dual
Wiregrass Res. and Ext. Ctr. (Headland)					
Regular test (non-irrigated)	March 21	160	25,000	Not harvested	Atrazine
Regular test (irrigated)	March 20	220	30,000	August 29, 30	Atrazine
Gulf Coast Res. and Ext. Ctr. (Fairhope)					
Regular test	March 14	130	25,000	August 8	Atrazine/Dual
Early test	No trial	-	-	-	-
Preliminary test	No trial	-	-	-	-

† 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, 2004-2006

Brand name - hybrid	Grain yield		% stalks lodging	
	3-yr	2-yr	3-yr	2-yr
	----- bu/acre -----		----- % -----	
Croplan Genetics 895BT	144	121	3.8	4.9
Dyna-Gro Cx 04319	143	117	6.5	9.1
AgraTech 755RRBt	140	122	3.5	4.9
Dekalb DKC 69-71	140	112	1.9	2.2
Vigoro V 58YR2	.	125	.	4.0
Dekalb DKC 63-81 (RR2/YGCB)	.	124	.	7.2
Terral TV25BR23 (RR/YGCB)	.	124	.	6.6
Dyna Gro 58P59	.	124	.	4.8
Pioneer 31G68 (YGCB)	.	123	.	3.1
Dekalb DKC 61-45 (RR2/YGCB)	.	123	.	1.7
Croplan Genetics 731HX/LL	.	122	.	5.0
Croplan Genetics 851RR2/BT	.	122	.	7.0
Terral TV25R31 (RR)	.	118	.	7.3
Dyna Gro 58K40	.	115	.	11.7
Dekalb DKC 61-72 (RR2)	.	112	.	12
Garst 8450IT	.	107	.	7
Pioneer 33M54	.	103	.	11
Test Average	142	118		
LSD_{0.10}	5	5		
CV (%)	10	9		

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TABLE 3. 2006 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN NORTHERN ALABAMA

Brand name - hybrid	Belle Mina	Cross- ville	2006 regional averages					
			Yield	Lodging	Test- weight	Mid- silk	Husk cover	Harvest moisture
			----- <i>bu/acre</i> -----	-- % --	<i>lb/bu</i>	<i>mo-day</i>		-- % --
Dekalb DKC 62-31 (YGCB)	34	127	81	1.5	54.2	6-16	1.3	11.0
Garst 8380 IT	35	125	80	3.8	53.8	6-17	1.8	13.2
DynaGro CX 05415	33	127	80	4.8	55.1	6-17	1.0	11.9
Dekalb DKC 63-81 (RR2/YGCB)	44	114	79	6.4	57.2	6-17	1.5	12.0
AgraTech X 41751CRW	32	126	79	2.0	54.7	6-17	1.8	11.9
Terral TV25R31 (RR)	32	124	78	2.0	55.4	6-18	1.3	13.3
Dekalb DKC 64-27 (RR2)	40	113	76	1.6	57.1	6-16	1.5	12.6
Garst 8295 YG1/RR	22	128	75	0.5	54.4	6-19	1.0	16.8
Southern States SS 96012	33	117	75	2.0	56.6	6-15	2.0	12.0
Terral TV25BR23 (RR/YGCB)	24	126	75	1.0	54.8	6-19	1.3	13.5
DynaGro CX 06319	24	126	75	1.1	55.4	6-20	1.0	15.8
Dekalb DKC 64-81 (YGCB)	19	129	74	1.3	56.2	6-17	1.8	12.2
Dekalb DKC 61-22 (RR2)	25	121	73	3.9	56.0	6-16	1.3	11.7
DynaGro 58P45	33	113	73	2.6	56.7	6-20	1.0	14.1
Garst 8248 RR	28	118	73	4.3	54.8	6-21	1.0	14.8
Dekalb DKC 66-23 (RR2/YGCB)	19	125	72	1.4	55.8	6-17	1.3	12.3
Pioneer 31G68 (YGCB)	24	120	72	1.3	53.7	6-8	1.3	11.7
Southern States SS 804	27	116	72	1.0	55.6	6-20	1.0	13.0
Dekalb DKC 61-45 (RR2/YGCB)	27	116	72	0.3	55.3	6-17	1.8	12.3
AgraTech 755RRBt	20	124	72	2.3	53.7	6-21	1.0	12.7
Vigoro V 58YR2	19	122	71	1.0	54.1	6-19	1.3	13.7
Terral TV26BR61	30	111	70	1.1	56.0	6-18	1.0	14.1
Terral TVX25BR601	28	113	70	3.1	56.3	6-20	1.3	15.7
Garst 8247 YG1	19	122	70	0.8	54.8	6-20	1.3	15.6
Dyna-Gro Cx 04319	26	114	70	3.0	53.2	6-20	1.3	13.4
Croplan Genetics 731HX/LL	16	124	70	1.0	54.6	6-20	1.5	12.0
Croplan Genetics 751 RR2/Bt	26	114	70	1.4	53.6	6-19	1.5	13.9

continued

TABLE 3. CONTINUED

Brand name - hybrid	Belle Mina	Cross- ville	2006 regional averages					
			Yield	Lodging	Test- weight	Mid- silk	Husk cover	Harvest moisture
	----- bu/acre	----- bu/acre		-- % --	lb/bu	mo-day		-- % --
Garst 8246	23	115	69	5.0	54.5	6-20	1.8	13.2
Dekalb DKC 61-72 (RR2)	25	114	69	6.8	55.0	6-16	1.3	11.2
Garst 8353 CB/LL	28	110	69	0.5	55.1	6-18	1.3	11.9
Terral TVX25BR602	27	110	68	1.6	57.4	6-17	1.0	11.8
Terral TV26BR41 (RR/YGCB)	20	115	68	1.8	53.6	6-18	1.0	13.2
Pioneer 31N28	10	125	67	3.3	57.8	6-21	1.0	12.8
Dyna Gro 58P59	21	113	67	0.6	53.2	6-21	1.3	13.9
Dyna Gro 58K40	30	104	67	6.4	55.5	6-19	1.3	13.3
Croplan Genetics 895BT	21	112	67	0.4	54.3	6-20	1.0	16.3
Croplan Genetics 851RR2/BT	25	109	67	1.9	53.3	6-10	1.5	14.6
Pioneer 33Y45	24	109	67	1.4	57.5	6-20	1.3	13.4
Garst 8450IT	21	111	66	1.1	54.0	6-16	1.0	12.7
Southern States SS 96013	18	113	65	0.8	55.5	6-21	1.8	13.9
Pioneer 31D58	14	114	64	5.3	58.3	6-20	1.5	11.7
Dekalb DKC 69-72	14	114	64	3.6	55.2	6-22	1.0	12.1
DynaGro 57P12	24	104	64	2.0	54.3	6-19	1.3	13.8
Pioneer 33V15	18	109	63	4.6	58.1	6-18	1.3	12.1
Croplan Genetics 780 RR2/Bt	21	105	63	3.1	56.8	6-21	1.0	13.4
Southern States SS 842RR2/YGCB	18	106	62	1.3	54.2	6-22	1.5	13.3
Pioneer 33M54	16	103	59	4.0	57.5	6-20	1.3	11.9
Pioneer 31P41	19	100	59	5.1	57.0	6-20	1.0	13.5
Croplan Genetics 799 RR2	12	101	57	2.5	54.9	6-22	1.0	14.2
Dekalb DKC 69-71	14	98	56	0.3	56.6	6-22	1.0	13.7
Test Average	24	115	70					
LSD_{0.10}	9	13	7					
CV (%)	40	12	17					

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TABLE 4. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, BELLE MINA, ALABAMA, 2004-2006

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	2006	3-yr	2-yr	2006				
	<i>bu/acre</i>			<i>%</i>						
AgraTech 755RRBt	197	191	186	15.0	15.6	1.5	57	6-11	2.3	16.6
Croplan Genetics 895BT	193	179	170	13.6	17.1	2.8	59	6-9	2.0	19.0
Dekalb DKC 69-71	185	166	148	11.9	15.8	0.3	58	6-16	2.5	17.8
Dyna-Gro Cx 04319	184	163	151	14.7	20.9	3.3	56	6-12	3.0	15.4
Dyna Gro 58P59	.	196	175	.	10.6	1.3	56	6-13	2.5	15.4
Croplan Genetics 851RR2/BT	.	195	179	.	21.9	1.3	56	6-13	2.5	16.1
Vigoro V 58YR2	.	195	182	.	15.4	2.0	57	6-11	2.3	16.7
Dekalb DKC 61-45 (RR2/YGCB)	.	192	180	.	3.4	0.5	59	6-11	3.3	14.1
Pioneer 31G68 (YGCB)	.	189	174	.	13.4	3.5	57	6-11	2.0	15.4
Croplan Genetics 731HX/LL	.	185	176	.	14.9	1.8	57	6-12	2.3	16.1
Terral TV25BR23 (RR/YGCB)	.	182	165	.	20.0	0.8	58	6-10	2.0	15.1
Dekalb DKC 63-81 (RR2/YGCB)	.	181	165	.	12.1	3.0	61	6-8	2.5	14.7
Dyna Gro 58K40	.	180	170	.	17.1	3.8	60	6-14	2.0	17.1
Terral TV25R31 (RR)	.	174	172	.	13.4	5.0	58	6-9	2.5	16.2
Garst 8450IT	.	172	172	.	14.0	2.8	57	6-10	2.0	14.8
Pioneer 33M54	.	170	175	.	14.6	3.3	61	6-11	2.0	15.6
Dekalb DKC 61-72 (RR2)	.	157	162	.	19.9	4.5	58	6-8	3.3	13.1
Garst 8247 YG1	.	.	203	.	.	4.3	59	6-9	2.0	17.2
Dekalb DKC 64-81 (YGCB)	.	.	194	.	.	0.8	60	6-8	2.3	16.6
Garst 8248 RR	.	.	192	.	.	7.0	59	6-9	2.0	16.3
Terral TV26BR41 (RR/YGCB)	.	.	189	.	.	4.3	57	6-10	2.3	16.1
Croplan Genetics 751 RR2/Bt	.	.	188	.	.	1.3	58	6-12	2.0	16.6
Terral TV26BR61	.	.	185	.	.	0.5	59	6-11	2.8	16.5
Garst 8246	.	.	184	.	.	6.8	59	6-10	2.3	16.5
DynaGro 57P12	.	.	184	.	.	3.3	58	6-11	2.3	16.7
DynaGro CX 06319	.	.	183	.	.	0.8	58	6-9	2.0	17.5
Dekalb DKC 64-27 (RR2)	.	.	178	.	.	4.0	60	6-6	2.3	14.9

continued

TABLE 4. CONTINUED

Brand name - hybrid	Grain yield			Lodging			Test-weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2006	3-yr	2-yr	2006				
	----- bu/acre -----			----- % -----						
Garst 8380 IT	.	.	178	.	.	3.5	57	6-10	2.3	15.3
Croplan Genetics 780 RR2/Bt	.	.	178	.	.	3.3	60	6-12	2.0	15.2
DynaGro 58P45	.	.	176	.	.	1.0	60	6-13	2.0	17.1
Southern States SS 842RR2/YGCB	.	.	175	.	.	2.0	56	6-13	2.8	16.0
Garst 8295 YG1/RR	.	.	173	.	.	1.8	59	6-8	2.0	17.7
Garst 8353 CB/LL	.	.	172	.	.	0.8	58	6-8	2.0	15.0
Southern States SS 96012	.	.	171	.	.	1.3	60	6-5	3.8	13.8
Southern States SS 96013	.	.	171	.	.	0.0	60	6-13	2.8	16.2
Terral TVX25BR602	.	.	171	.	.	0.0	61	6-11	2.0	14.9
Pioneer 33V15	.	.	170	.	.	4.8	61	6-9	2.0	15.5
Pioneer 31D58	.	.	170	.	.	5.8	61	6-11	2.0	16.1
Croplan Genetics 799 RR2	.	.	170	.	.	2.8	59	6-11	2.3	16.2
Pioneer 33Y45	.	.	170	.	.	2.8	61	6-11	3.0	16.0
Dekalb DKC 62-31 (YGCB)	.	.	170	.	.	2.5	59	6-9	2.8	15.4
Pioneer 31N28	.	.	168	.	.	4.8	62	6-11	2.0	16.4
Terral TVX25BR601	.	.	164	.	.	0.5	60	6-11	2.0	17.4
DynaGro CX 05415	.	.	163	.	.	6.0	58	6-11	2.5	14.2
Southern States SS 804	.	.	163	.	.	4.0	58	6-12	2.0	14.8
Pioneer 31P41	.	.	162	.	.	6.3	60	6-9	2.0	15.6
AgraTech X 41751CRW	.	.	161	.	.	4.3	57	6-9	2.0	13.5
Dekalb DKC 66-23 (RR2/YGCB)	.	.	161	.	.	2.5	59	6-7	2.3	14.4
Dekalb DKC 61-22 (RR2)	.	.	160	.	.	8.0	59	6-9	3.0	13.7
Dekalb DKC 69-72	.	.	144	.	.	6.5	60	6-15	2.8	15.5
Test Average	190	181	173							
LSD_{0.10}	7	9	23							
CV (%)	7	8	15							

† The 2006 irrigated test received 8.3 inches of water.

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TABLE 5. ONE, TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN AT PRATTVILLE IN CENTRAL ALABAMA, 2004-2006

Brand name - hybrid	Grain yield			Lodging			Test-weight lb/bu	Husk Mid- silk cover mo-day	Harvest moisture -- % --	
	3-yr	2-yr	2006	3-yr	2-yr	2006				
	----- bu/acre -----			----- % -----						
Dekalb DKC 69-72	121	88	29	0.7	1.0	0.3	54	6-12	1.0	8.7
Dekalb DKC 67-60	121	85	26	0.3	0.4	0.3	56	6-13	1.0	9.5
Dekalb DKC 69-71	112	81	30	1.4	2.1	0.8	54	6-12	1.0	9.1
Terral TV25R31 (RR)	.	98	45	.	0.0	0.0	54	6-10	1.3	8.9
Terral TV26BR41 (RR/YGCB)	.	96	40	.	0.1	0.3	52	6-11	1.0	8.9
Dyna Gro 58K40	.	94	32	.	0.9	1.8	56	6-12	1.0	8.9
Terral TV25BR23 (RR/YGCB)	.	92	37	.	0.0	0.0	53	6-12	1.0	9.4
Southern States SS 804	.	92	37	.	0.5	0.5	54	6-11	1.0	9.2
Pioneer 33M54	.	80	33	.	1.4	0.5	56	6-11	1.0	8.8
Southern States SS 842RR2/YGCB	.	77	27	.	1.0	1.0	49	6-11	1.3	9.5
Garst 8247 YG1	.	.	47	.	.	1.3	53	6-11	1.3	9.3
Dekalb DKC 64-81 (YGCB)	.	.	44	.	.	2.0	55	6-11	1.3	8.7
Garst 8248 RR	.	.	44	.	.	5.0	52	6-10	1.0	8.9
DynaGro CX 05415	.	.	44	.	.	2.8	54	6-12	1.3	8.9
Dekalb DKC 66-23 (RR2/YGCB)	.	.	43	.	.	0.8	52	6-8	1.0	8.8
Garst 8380 IT	.	.	42	.	.	1.3	52	6-10	1.3	9.3
Croplan Genetics 751 RR2/Bt	.	.	41	.	.	2.3	52	6-11	1.5	8.9
Croplan Genetics 895BT	.	.	41	.	.	1.3	53	6-11	1.3	9.1
Garst 8246	.	.	41	.	.	0.8	50	6-12	1.0	9.2

continued

TABLE 5. CONTINUED

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	2006	3-yr	2-yr	2006				
	----- <i>bu/acre</i> -----			----- <i>%</i> -----						
Pioneer 33V15	.	.	39	.	.	5.5	56	6-9	1.3	9.4
Pioneer 31G68 (YGCB)	.	.	39	.	.	2.0	51	6-12	1.3	9.0
Croplan Genetics 799 RR2	.	.	39	.	.	0.5	53	6-11	1.0	8.8
Dekalb DKC 66-23 (RR2/YGCB)	.	.	38	.	.	0.8	54	6-9	1.5	9.4
DynaGro CX 06319	.	.	37	.	.	0.8	56	6-10	1.0	8.5
Garst 8295 YG1/RR	.	.	37	.	.	0.5	53	6-10	1.3	9.2
Croplan Genetics 731HX/LL	.	.	37	.	.	2.0	51	6-13	1.3	9.0
Pioneer 31R87	.	.	37	.	.	3.5	54	6-11	1.3	8.8
Terral TV26BR61	.	.	37	.	.	1.0	55	6-10	1.0	9.1
Garst 8353 CB/LL	.	.	37	.	.	0.0	52	6-10	1.0	9.1
Pioneer 31P41	.	.	36	.	.	0.0	56	6-10	1.0	8.7
Croplan Genetics 780 RR2/Bt	.	.	34	.	.	0.0	54	6-11	1.5	8.6
Terral TVX25BR602	.	.	33	.	.	1.8	56	6-11	1.0	9.4
Pioneer 31N26 (RR2)	.	.	33	.	.	0.5	56	6-11	1.3	9.3
Dekalb DKC 66-23 (RR2/YGCB)	.	.	32	.	.	0.3	56	6-12	1.0	9.2
Southern States SS 96013	.	.	31	.	.	0.0	52	6-11	1.5	9.3
Southern States SS 96012	.	.	29	.	.	1.0	52	6-9	1.3	9.7
Croplan Genetics 851RR2/BT	.	.	29	.	.	0.5	50	6-13	1.3	9.2
DynaGro 58P45	.	.	28	.	.	3.8	54	6-13	1.5	8.5
Pioneer 31D58	.	.	27	.	.	1.0	57	6-10	1.3	9.0
Dyna-Gro Cx 04319	.	.	26	.	.	1.3	52	6-13	1.5	8.9
Terral TVX25BR601	.	.	25	.	.	1.5	55	6-11	1.0	9.2
Test Average	118	88	36							
LSD_{0.10}	6	7	8							
CV (%)	9	11	25							

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2006

TABLE 6. ONE, TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR THE NO-TILL EARLY CORN TEST AT SHORTER IN CENTRAL ALABAMA, 2004-2006.

Brand name - hybrid	Grain yield			Lodging			Test-weight lb/bu	Mid-silk mo-day	Husk cover %	Harvest moisture %
	3-yr	2-yr	2006	3-yr	2-yr	2006				
	----- bu/acre -----			----- % -----						
Dekalb DKC 69-72	122	83	22	0.8	0.0	0.0	55	6-10	.	14.1
Dekalb DKC 69-71	113	81	15	-0.0	-0.0	0.0	55	6-10	.	15.1
Dekalb DKC 67-60	113	75	21	0.3	-0.0	0.0	60	6-7	.	14.5
Terral TV25R31 (RR)	.	81	26	.	0.3	0.0	55	6-5	.	13.6
Terral TV25BR23 (RR/YGCB)	.	77	21	.	0.1	0.0	55	6-4	.	13.3
Terral TV26BR41 (RR/YGCB)	.	76	22	.	0.9	0.0	54	6-4	.	12.3
Dyna Gro 58K40	.	72	23	.	-0.0	0.0	56	6-8	.	12.6
Pioneer 33M54	.	66	21	.	-0.0	0.0	56	6-6	.	12.9
Southern States SS 96012	.	.	36	.	.	0.0	55	6-1	.	12.0
Pioneer 31G68 (YGCB)	.	.	35	.	.	0.0	52	6-4	.	12.2
DynaGro CX 06319	.	.	33	.	.	0.0	55	6-4	.	13.7
Dekalb DKC 66-23 (RR2/YGCB)	.	.	33	.	.	0.0	55	6-1	.	12.7
Pioneer 31R87	.	.	32	.	.	0.0	54	6-5	.	12.7
Dekalb DKC 66-23 (RR2/YGCB)	.	.	30	.	.	0.0	54	6-3	.	13.0
Garst 8353 CB/LL	.	.	29	.	.	0.0	55	6-3	.	12.3
Pioneer 33V15	.	.	28	.	.	0.0	57	6-3	.	13.0
DynaGro CX 05415	.	.	28	.	.	0.0	55	6-6	.	12.6
Garst 8246	.	.	27	.	.	0.0	55	6-4	.	13.1
Croplan Genetics 751 RR2/Bt	.	.	27	.	.	0.0	54	6-5	.	12.9
Croplan Genetics 895BT	.	.	26	.	.	0.0	55	6-4	.	13.6
Garst 8248 RR	.	.	26	.	.	0.0	54	6-5	.	13.5
Garst 8247 YG1	.	.	26	.	.	0.0	55	6-3	.	13.1
Garst 8380 IT	.	.	25	.	.	0.0	54	6-4	.	12.6
DynaGro 58P45	.	.	25	.	.	0.0	56	6-9	.	12.3
Southern States SS 96013	.	.	25	.	.	0.0	54	6-7	.	13.1

continued

TABLE 6. CONTINUED

Brand name - hybrid	Grain yield			Lodging			Test-weight	Mid-silk	Husk cover	Harvest moisture
	3-yr	2-yr	2006	3-yr	2-yr	2006				
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Garst 8295 YG1/RR	.	.	24	.	.	0.0	54	6-4	.	13.8
Dekalb DKC 64-81 (YGCB)	.	.	24	.	.	0.0	56	6-2	.	12.7
Terral TVX25BR602	.	.	24	.	.	0.0	56	6-6	.	12.8
Terral TVX25BR601	.	.	23	.	.	0.0	56	6-7	.	13.0
Croplan Genetics 731HX/LL	.	.	22	.	.	0.0	55	6-6	.	12.5
Terral TV26BR61	.	.	22	.	.	0.0	55	6-5	.	12.7
Croplan Genetics 799 RR2	.	.	22	.	.	0.0	54	6-4	.	13.3
Croplan Genetics 780 RR2/Bt	.	.	20	.	.	0.0	56	6-7	.	13.0
Croplan Genetics 851RR2/BT	.	.	20	.	.	0.0	54	6-8	.	12.4
Southern States SS 804	.	.	18	.	.	0.0	56	6-5	.	13.3
Pioneer 31D58	.	.	17	.	.	0.0	56	6-6	.	13.4
Southern States SS 842RR2/YGCB	.	.	16	.	.	0.0	53	6-7	.	13.0
Dekalb DKC 66-23 (RR2/YGCB)	.	.	13	.	.	0.0	55	6-9	.	13.4
Dyna-Gro Cx 04319	.	.	12	.	.	0.0	54	6-10	.	12.6
Pioneer 31P41	.	.	11	.	.	0.0	55	6-8	.	13.3
Pioneer 31N26 (RR2)	.	.	11	.	.	0.0	55	6-7	.	12.6
Test Average	116	77	23							
LSD_{0.10}	10	7	8							
CV (%)	16	13	37							

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2006

TABLE 7. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN IN SOUTHERN ALABAMA, 2004-2006[†]

Brand name - hybrid	Grain yield		% stalks lodging	
	3-yr	2-yr	3-yr	2-yr
	----- bu/acre -----		----- % -----	
Croplan Genetics 895BT	101	82	5.5	8.3
Dyna-Gro Cx 04319	100	77	4.7	7.0
Dekalb DKC 69-72	98	77	3.7	5.5
Dekalb DKC 69-71	96	78	4.3	6.1
Dekalb DKC 67-60	89	71	4.3	6.4
Dyna Gro 58K40	.	92	.	2.8
Vigoro V 62R66	.	88	.	6.2
Pioneer 33M54	.	86	.	2.4
Croplan Genetics 851RR2/BT	.	85	.	9.1
Vigoro V 58YR2	.	83	.	8.1
Pioneer 31N26 (RR2)	.	83	.	2.8
Croplan Genetics 731HX/LL	.	82	.	7.8
Test Average	97	82		
LSD_{0.10}	6	8		
CV (%)	17	21		

[†] Two- and three-year averages based on Brewton and Headland data only.

TABLE 8. 2006 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN SOUTHERN ALABAMA

Brand name - hybrid	Fair- hope	Brew- ton	Head- land	2006 regional averages					
				Yield	Lodg- ing	Test- weight	Mid- silk	Husk cover ¹	Harvest moist.
				----- bu/acre -----	-- % --	lb/bu	mo-day	-- % --	
Vigoro V 58YR2	120	64		92	3.1	53	5-29	2	14.5
DynaGro CX 06319	113	69		91	1.9	57	5-28	3	14.9
Dyna Gro 58K40	114	66		90	3.3	53	5-30	2	15.5
Vigoro V 62R66	113	67		90	5.4	51	5-30	2	15.4
DynaGro CX 05415	113	65		89	1.5	56	5-29	3	14.4
Pioneer 31P41	122	55		89	0.4	57	5-30	2	15.3
Croplan Genetics 751 RR2/Bt	116	62		89	4.1	54	5-30	2	14.4
Southern States SS 804	103	74		88	1.3	52	5-28	2	14.9
Dekalb DKC 66-23 (RR2/YGCB)	112	62		87	2.4	56	5-28	3	14.7
Croplan Genetics 799 RR2	106	67		87	1.8	52	5-29	2	15.6
DynaGro 58P45	108	65		86	1.1	53	5-30	3	15.5
Pioneer 33M54	104	67		85	1.5	56	5-30	3	15.5
Croplan Genetics 731HX/LL	111	56		84	2.5	55	5-30	3	14.5
Croplan Genetics 895BT	106	58		82	7.1	53	5-28	2	15.4
Dekalb DKC 64-81 (YGCB)	103	60		82	2.0	53	5-28	3	15.0
Pioneer 31D58	108	55		81	0.0	56	5-29	2	15.7
Croplan Genetics 780 RR2/Bt	98	62		80	1.8	55	5-30	2	15.2
Pioneer 31N26 (RR2)	104	54		79	1.5	53	5-29	3	15.7
Croplan Genetics 851RR2/BT	101	55		78	5.8	52	5-31	2	14.6
Dekalb DKC 66-23 (RR2/YGCB)	93	63		78	2.3	53	5-29	3	14.7
Dekalb DKC 69-72	101	51		76	1.5	53	5-31	3	15.4
Dyna-Gro Cx 04319	95	57		76	6.5	56	5-31	3	14.5
Southern States SS 842RR2/YGCB	97	55		76	6.3	54	5-31	3	14.6
Dekalb DKC 69-71	108	37		72	1.8	57	6-1	3	15.7
Southern States SS 96013	98	46		72	2.5	52	5-31	3	15.0
Southern States SS 96012	93	50		72	1.0	53	5-28	3	14.8
Dekalb DKC 66-23 (RR2/YGCB)	103	39		71	3.4	52	5-31	3	15.8
Dekalb DKC 67-60	91	45		68	1.5	54	5-31	2	16.7
Test Average	106	58		82					
LSD_{0.10}	13	8		6					
CV (%)	14	16		12					

‡ Headland location not harvested due to severe drought.

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2006

TABLE 9. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA, 2004-2006

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	2006	3-yr	2-yr	2006				
	----- <i>bu/acre</i>			----- <i>%</i>						
Dekalb DKC 69-72	170	170	186	6.5	9.8	9.0	59	5-25	2.5	14.8
Dekalb DKC 69-71	165	177	199	6.1	9.1	7.8	60	5-30	2.5	15.2
Dekalb DKC 67-60	158	159	178	6.2	9.3	6.8	59	5-29	1.8	14.6
Croplan Genetics 895BT	153	169	188	6.3	9.5	8.0	58	5-29	2.5	13.9
Dyna-Gro Cx 04319	146	160	182	6.6	9.9	5.0	56	5-29	3.5	13.3
Vigoro V 62R66	.	184	188	.	9.4	4.5	60	5-29	1.8	13.5
Pioneer 31N26 (RR2)	.	177	192	.	9.8	8.5	61	5-26	2.8	15.3
Dyna Gro 58K40	.	172	192	.	6.8	2.0	60	5-31	2.8	14.7
Pioneer 33M54	.	167	189	.	8.3	6.0	60	5-29	3.3	15.5
Croplan Genetics 851RR2/BT	.	166	187	.	10.8	12.8	55	5-31	3.3	12.7
Vigoro V 58YR2	.	163	199	.	7.0	5.0	58	5-29	2.5	13.2
Croplan Genetics 731HX/LL	.	143	184	.	12.3	15.0	56	5-30	3.5	12.7
Pioneer 31D58	.	.	203	.	.	6.8	59	5-29	2.0	14.0
Croplan Genetics 799 RR2	.	.	198	.	.	9.8	57	5-29	2.8	13.3
Dekalb DKC 66-23 (RR2/YGCB)	.	.	193	.	.	13.8	56	5-25	3.0	13.6
Pioneer 31P41	.	.	190	.	.	0.8	57	5-29	2.5	14.1
DynaGro CX 05415	.	.	190	.	.	4.5	56	5-30	3.8	13.5
Croplan Genetics 751 RR2/Bt	.	.	190	.	.	7.5	56	5-30	3.0	13.4
DynaGro 58P45	.	.	187	.	.	14.0	59	5-31	3.0	15.2
Southern States SS 842RR2/YGCB	.	.	187	.	.	38.3	56	5-31	3.3	14.6
Southern States SS 804	.	.	186	.	.	5.0	58	5-31	1.8	13.4
Southern States SS 96013	.	.	186	.	.	13.5	59	5-26	3.3	14.3
Dekalb DKC 64-81 (YGCB)	.	.	183	.	.	2.8	57	5-29	3.3	14.3
DynaGro CX 06319	.	.	181	.	.	19.8	56	5-25	2.5	14.0
Croplan Genetics 780 RR2/Bt	.	.	173	.	.	16.0	58	5-31	2.8	13.2
Dekalb DKC 66-23 (RR2/YGCB)	.	.	169	.	.	11.8	58	5-31	2.8	16.0
Dekalb DKC 66-23 (RR2/YGCB)	.	.	169	.	.	14.3	57	5-26	3.8	13.6
Southern States SS 96012	.	.	156	.	.	5.3	55	5-25	4.0	12.9
Test Average	159	167	186							
LSD_{0.10}	10	11	19							
CV (%)	12	10	11							

† The 2006 irrigated test received 7.65 inches of water in 10 applications. A heavy stinkbug infestation was reported in both 2004 and 2005

TABLE 10. GROWING SEASON RAINFALL, 2004-2006.

Location	Year	----- Monthly rainfall in inches -----						7-month	
		Mar.	Apr.	May	June	July	Aug.	Sept.	total
Belle Mina									
	2006	2.0	4.9	4.2	1.8	2.4	2.5	3.1	20.9
	2005	3.6	5.4	1.4	3.7	6.6	3.5	3.4	27.6
	2004	5.5	4.3	3.2	5.1	7.8	3.0	3.5	32.5
Crossville									
	2006	2.8	6.6	3.6	2.9	1.2	1.9	5.5	24.5
	2005	7.0	4.6	2.4	5.0	7.2	3.2	2.0	31.4
	2004	4.2	2.9	5.5	7.3	4.6	4.0	8.5	37.0
Shorter									
	2006	3.7	1.9	3.6	1.2	2.3	4.9	3.1	20.7
	2005	11.1	7.8	2.2	3.1	10.1	3.2	2.0	39.5
	2004	0.8	3.1	4.0	7.4	2.4	4.9	6.4	29.0
Prattville									
	2006	5.3	2.2	3.1	0.8	3.4	2.5	3.2	20.5
	2005	8.5	6.8	3.4	4.0	9.2	4.3	3.2	39.4
	2004	1.4	3.5	5.2	8.8	1.9	5.7	6.0	32.5
Brewton									
	2006	2.8	2.8	7.0	2.7	3.6	8.9	4.0	31.8
	2005	6.4	14.2	3.3	8.0	9.8	7.4	10.1	59.2
	2004	1.0	6.6	4.3	14.6	4.9	5.3	8.6	45.3
Fairhope									
	2006	0.4	6.1	3.2	1.3	5.4	4.2	5.3	25.9
	2005	4.3	20.5	7.1	10.4	11.4	11.4	4.7	69.8
	2004	0.7	2.3	2.0	10.8	4.7	8.3	12.6	41.4
Headland									
	2006	0.7	1.2	4.1	2.6	2.7	3.5	4.6	19.4
	2005	5.5	9.2	3.1	11.1	5.3	8.8	2.2	45.2
	2004	0.5	4.4	3.4	9.8	4.4	2.1	7.1	31.7

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2006

TABLE 11. SOIL TYPES FOR CORN TRIALS, 2006.

Test location	Soil type
North	
Belle Mina.....	Decatur silt loam
Crossville.....	Wynnvilleville fine sandy loam
Central	
Shorter.....	Norfolk sandy loam
Prattville.....	Lucedale fine sandy loam
South	
Brewton.....	Benndale fine sandy loam
Headland.....	Dothan sandy loam
Fairhope.....	Malbis fine sandy loam

SOURCE OF 2006 CORN HYBRID TRIAL SEED

Seed Company	Brand	Seed Company	Brand
Grabow Seed Services, Inc. P.O. Box 88823 Atlanta, GA 30356	AgraTech	Pioneer Hi-Bred Int., Inc. 7501 Memorial Parkway SW Huntsville, AL 35802	Pioneer
Garst Seed Company P.O. Box 651 Ellaville, GA 31806	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	Terral Seed, Inc. P.O. Box 826 Lake Providence, LA 71254	TV
Monsanto Company 800 N. Lindbergh Blvd. St. Louis, MO 63167	Dekalb DKC	UAP Southeast 25324 HSV-Brownsferry Rd Madison, AL 35756	Dyna-Gro
Southern States 6606 West Broad St. Richmond, VA 23260	SS		