

*Evaluations of
Corn Hybrids
in Alabama,
2002*

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TABLE OF CONTENTS

Introduction	2
Table 1. Locations and Cultural Practices for the 2002 Corn Hybrid Tests	3
NORTHERN ALABAMA	
Table 2. Two- and Three-year Yield and Lodging Averages for Corn in Northern Alabama, 2000-2002	4
Table 3. 2002 Yield of Corn Hybrids by Location and Regional Averages of Hybrid Characteristics in Northern Alabama	5
Table 4. Early Corn Hybrid Test at Crossville in Northern Alabama, 2000-2002	6
Table 5. Characteristics of Corn Hybrids Tested One Year in Preliminary Test at Crossville in Northern Alabama, 2002	6
Table 6. Irrigated Corn Hybrid Performance and Characteristics, Belle Mina, Alabama, 2002	7
CENTRAL ALABAMA	
Table 7. Two- and Three-year Yield and Lodging Averages for Corn at Prattville in Central Alabama, 2000-2002	8
Table 8. 2002 Yield of Corn Hybrids and Regional Averages of Hybrid Characteristics at Prattville in Central Alabama	8
Table 9. Early Corn Hybrid Test at Shorter in Central Alabama, 2000-2002	9
Table 10. No-Till Early Corn Hybrid Test at Shorter in Central Alabama, 2000-2002	9
Table 11. Characteristics of Corn Hybrids Tested One Year in Preliminary Test at Tallassee in Central Alabama, 2002	10
Table 12. Characteristics of Corn Hybrids Tested One Year in Irrigated Preliminary Test at Tallassee in Central Alabama, 2002	10
SOUTH ALABAMA	
Table 13. Two- and Three-year Yield and Lodging Averages for Corn in Southern Alabama, 2000-2002	11
Table 14. Yield of Corn Hybrids by Location and Regional Averages of Hybrid Characteristics in Southern Alabama, 2002	12
Table 15. Irrigated Corn Hybrid Performance and Characteristics, Headland, Alabama, 2000-2002	13
Table 16. Early Corn Hybrid Test at Fairhope in Southern Alabama, 2000-2002	14
Table 17. Characteristics of Corn Hybrids Tested One Year in Preliminary Test at Fairhope in Southern Alabama, 2002	14
RAINFALL, SOIL TYPES AND SEED SOURCES	
Table 18. Growing Season Rainfall, 2000-2002	15
Table 19. Soil Types for Corn Trials, 2002	16
Sources of 2002 Corn Hybrid Test Seed	16

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, 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 Belle Mina and Headland and a preliminary test is irrigated at Tallassee. 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. Beginning with the 2002 crop, we analyzed the trial data using a nearest neighbor analysis (NNA) adjustment of the data. This proven statistical technique uses covariance analysis to eliminate field trends utilizing the average residual of neighboring plots, hence nearest neighbor analysis. This results in improved precision of entry mean performance estimates.

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

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

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 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 2002 CORN HYBRID TRIALS

Location	Planting date	Nitrogen Rate [†] lbs/ac	Plant popul. seeds/ac	Date harvested	Herbicides used
NORTHERN ALABAMA					
Tennessee Valley Res. and Ext. Ctr. (Belle Mina)					
Regular test (non-irrigated)	March 28	175	20,000	August 27	Atrazine/Dual
Regular test (irrigated)	March 28	210	25,000	August 29	Atrazine/Dual
Sand Mountain Res. and Ext. Ctr. (Crossville)					
Early corn test	April 8	130	20,000	September 9	Atrazine/Dual
Regular test	April 18	130	20,000	September 9	Atrazine/Dual
Preliminary test	April 19	130	20,000	September 10	Atrazine/Dual
CENTRAL ALABAMA					
E.V. Smith Research Center (Shorter)					
Early corn test	March 29	150	20,000	August 7	Atrazine/Dual
No-Till Early corn test	March 29	150	20,000	August 7	Atrazine/Dual
Plant Breeding Unit (Tallassee)					
Preliminary test (non-irrigated)	March 19	160	20,000	August 7	Atrazine/Dual
Preliminary test (irrigated)	March 19	160	25,000	August 8	Atrazine/Dual
Prattville Experiment Field (Prattville)					
	March 19	120	20,000	August 22	Atrazine/Dual
Black Belt Res. and Ext. Ctr. (Marion Junction)					
	March 29	150	20,000	Test not harvested	
SOUTHERN ALABAMA					
Brewton Experiment Field (Brewton)					
	March 19	140	20,000	August 13	Atrazine/Dual
Wiregrass Res. and Ext. Ctr. (Headland)					
Regular test (non-irrigated)	March 25	180	20,000	August 19	Atrazine
Regular test (irrigated)	March 25	250	25,000	August 20	Atrazine
Gulf Coast Res. and Ext. Ctr. (Fairhope)					
Early corn test	March 1	110	20,000	August 2	Atrazine/Dual
Regular test	March 22	110	20,000	August 2	Atrazine/Dual
Preliminary test	March 20	110	20,000	August 2	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, 2000-2002

Brand name - hybrid	Grain yield		% stalks lodging	
	3-yr	2-yr	3-yr	2-yr
	----- bu/acre -----		----- % -----	
SS 900 BT	146	168	2.1	0.3
Dekalb DK 697	134	165	3.7	0.5
Pioneer 31R88	143	165	3.6	1.0
Pioneer 31G98	133	155	1.6	0.7
SS 859 CL	136	154	3.9	1.3
Garst/AgriPro 8222IT	131	154	1.7	0.7
Pioneer 32K61	123	141	3.3	1.1
Pioneer 32K64	-	157	-	0.5
Terral TV2140RR	-	157	-	0.8
Croplan Genetics 1167RR	-	156	-	0.6
Dyna-Gro 5518 RR	-	156	-	1.1
Dekalb DKC 68-70	-	155	-	0.2
Dyna-Gro 5515	-	147	-	1.3
Terral TV2160Bt	-	145	-	0.5
LSD <i>0.05</i>	12.0	16.5	0.4	0.5

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

TABLE 3. 2002 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN NORTHERN ALABAMA

Brand name - hybrid	Belle Mina	Cross- ville	2002 regional averages					
			Yield	Lodging	Test- weight	Mid-silk	Husk cover	Harvest moisture
	----- bu/acre	----- bu/acre	----- -- % --	----- -- % --	----- lb/bu	----- mo-day	----- -- % --	----- -- % --
Dyna-Gro X15617	88	206	147	0.2	57	6-23	2	13.9
SS 900 BT	97	194	145	0.7	57	6-22	2	14.5
Garst/AgriPro 8288	91	197	144	0.6	56	6-19	2	15.0
Croplan Genetics 1167RR	78	209	143	0.5	58	6-22	2	14.4
Croplan Genetics 721	84	201	142	1.9	57	6-19	2	14.6
Pioneer 32K61	79	205	142	1.5	60	6-21	3	14.5
Pioneer 32W86	96	184	140	0.7	57	6-21	2	14.4
AgraTech 755RR	83	196	139	2.1	59	6-19	2	13.9
Pioneer 32D99	80	195	138	1.4	57	6-22	2	15.1
Dyna-Gro 5518 RR	86	189	137	0.7	57	6-23	2	14.7
Terral TV2140RR	77	198	137	0.8	57	6-24	2	14.2
Dekalb DKC69-70 (YG)	71	204	137	0.5	56	6-23	2	14.5
Terral TV2155Bt	88	186	137	1.1	56	6-21	2	14.4
Terral TV2160Bt	84	189	137	0.9	57	6-21	2	14.1
Pioneer 31R88	97	176	136	1.3	57	6-22	3	14.1
Pioneer 34B28	84	186	135	1.4	59	6-19	2	14.4
SS 781CL	91	179	135	0.8	58	6-23	2	14.5
Croplan Genetics 818BT	91	179	135	0.2	56	6-20	2	14.6
Pioneer 31N27	67	203	135	3.1	59	6-21	2	14.0
Dyna-Gro 5516 RR	71	199	135	0.5	57	6-21	2	14.6
AgraTech 733RR	80	189	135	0.4	57	6-21	2	14.8
Dyna-Gro X15616	71	196	134	0.9	57	6-21	2	14.4
Pioneer 33G26	87	180	134	0.9	59	6-19	3	13.7
Pioneer 32K64	70	197	133	0.2	58	6-20	2	14.1
Terral TV2140Xn1RR	88	178	133	1.2	56	6-22	2	14.3
SS 859 CL	82	183	132	1.0	56	6-22	2	14.6
Garst/AgriPro 8222IT	76	188	132	0.7	57	6-21	2	14.4
Croplan Genetics 733BT	77	186	132	1.0	58	6-18	2	14.2
Croplan Genetics 702	66	196	131	0.7	57	6-23	2	14.7
Terral TV2140Xn2RR	84	176	130	1.3	57	6-22	2	13.2
Dekalb DK 697	78	182	130	0.3	57	6-24	2	14.5
Terral TV23R15n	86	170	128	0.0	57	6-22	2	14.5
SS 842RR	89	167	128	2.1	57	6-22	3	14.8
Dekalb DKC 68-70	83	173	128	0.3	55	6-22	2	14.8
Pioneer 33G30	92	162	127	0.2	59	6-20	3	14.2
Pioneer 31G98	84	166	125	0.7	59	6-22	2	13.5
Pioneer 34B24	87	155	121	0.9	59	6-20	2	14.2
AgraTech 721BtRR	73	169	121	0.4	57	6-20	2	13.3
Dyna-Gro 5515	70	170	120	1.1	58	6-22	2	14.4
Test Average	82	186						
LSD_{0.05}	9.2	18.4						
CV (%)	6.9	6.1						

TABLE 4. EARLY CORN HYBRID TEST AT CROSSVILLE IN NORTHERN ALABAMA, 2000-2002

Brand name - hybrid	Grain yield			% stalks lodging			2002			
	3-yr	2-yr	2002	3-yr	2-yr	2002	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Pioneer 33G26	163	190	216	4.1	1.3	2.6	60	6-22	4	13.1
Pioneer 32K61	169	188	219	2.3	0.7	1.5	61	6-22	3	13.1
Pioneer 33G30	-	186	230	-	0.2	0.4	61	6-22	3	13.1
Pioneer 34B28	-	186	201	-	0.6	1.1	60	6-23	4	13.0
Pioneer 34B24	-	178	202	-	0.2	0.4	60	6-23	3	13.1
Terral TV23R15n	-	-	206	-	-	0.4	59	6-22	3	13.4
Terral TV2140RR	-	-	217	-	-	4.9	58	6-24	3	12.7
Terral TV2140Xn1RR	-	-	220	-	-	0.3	59	6-23	3	13.0
Terral TV2155Bt	-	-	221	-	-	0.4	60	6-22	3	13.3
Terral TVX24R002	-	-	226	-	-	0.7	61	6-22	2	13.6
Terral TV2140Xn2RR	-	-	227	-	-	0.4	58	6-22	3	13.2
Terral TV26BR10n	-	-	229	-	-	0.0	60	6-23	3	13.1
Terral TV2160Bt	-	-	234	-	-	0.0	60	6-23	2	13.6
Test Average	166	185	219							
LSD <i>0.05</i>	19.8	22.5	8.7							
CV (%)	7.4	7.5	2.4							

TABLE 5. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT CROSSVILLE IN NORTHERN ALABAMA, 2002

Brand name - hybrid	Yield	Lodging	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
Dekalb DK687RR	221	2.8	60	7-1	4	12.6
Asgrow RX897RR	192	0.6	60	7-3	3	11.8
Garst 8118RR	180	1.1	59	7-1	4	12.1
Pioneer 31R88	175	2.7	60	6-30	4	12.1
Garst 8230IT	167	1.0	59	6-30	3	11.8
Croplan Genetics DS 822RR	165	5.0	59	6-30	4	11.7
Terral TV26BR10n	163	3.9	60	6-30	4	11.6
Croplan Genetics 747	160	3.2	61	6-29	3	11.5
Terral TVX24R002	158	3.1	61	6-30	3	12.5
Garst 8255RR	157	1.4	59	7-1	3	12.5
Croplan Genetics 827	156	1.2	59	7-2	3	11.4
Croplan Genetics 671CL/BT	137	3.4	59	6-29	3	11.9
Garst 8285RR	135	1.7	59	6-30	4	12.3
Garst 8366 IT	77	1.7	59	6-30	4	11.7
Test Average	150					
LSD <i>0.05</i>	22.7					
CV (%)	5.4					

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

TABLE 6. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, BELLE MINA, ALABAMA, 2000-2002

Brand name - hybrid	Grain yield			% stalks lodging			2002			
	3-yr	2-yr	2002	3-yr	2-yr	2002	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Pioneer 31G98	208	222	214	7.2	1.2	1.2	52	6-21	2	17.1
Dekalb DK 697	205	215	221	5.2	1.2	1.2	52	6-21	1	17.4
SS 900 BT	209	213	218	3.2	0.6	1.2	51	6-21	1	16.5
SS 859 CL	206	211	205	3.0	0.6	0.0	51	6-21	2	16.8
Pioneer 31R88	199	207	196	3.5	1.8	1.2	52	6-20	3	17.3
Garst/AgriPro 8222IT	208	206	189	3.2	1.2	1.2	54	6-20	1	16.8
Pioneer 32K61	179	180	197	0.6	0.3	0.6	58	6-20	2	16.6
Terral TV2140RR	-	235	238	-	1.5	1.8	53	6-19	2	16.2
Dyna-Gro 5518 RR	-	233	260	-	1.6	2.0	54	6-19	1	15.9
Dyna-Gro 5515	-	218	219	-	1.6	2.0	54	6-19	2	17.7
Dekalb DKC 68-70	-	216	210	-	0.2	0.3	50	6-22	1	17.5
Croplan Genetics 1167RR	-	215	222	-	0.7	0.3	54	6-19	1	17.0
Terral TV2160Bt	-	214	221	-	0.9	0.6	52	6-20	2	17.6
Pioneer 32K64	-	187	187	-	0.8	0.3	59	6-19	2	16.0
SS 842RR	-	-	257	-	-	1.4	51	6-19	2	17.0
AgraTech 733RR	-	-	236	-	-	1.2	54	6-17	1	16.6
Terral TV2140Xn2RR	-	-	232	-	-	2.4	52	6-19	2	17.3
Terral TV23R15n	-	-	231	-	-	0.0	54	6-18	2	17.0
Pioneer 32D99	-	-	229	-	-	0.6	51	6-21	2	17.9
AgraTech 721BtRR	-	-	228	-	-	0.0	55	6-17	1	16.6
Dyna-Gro X15617	-	-	226	-	-	2.0	53	6-21	2	16.8
Croplan Genetics 818BT	-	-	226	-	-	0.0	52	6-19	1	17.7
Terral TV2140Xn1RR	-	-	225	-	-	0.9	53	6-20	1	16.2
Dyna-Gro 5516 RR	-	-	223	-	-	0.0	54	6-18	1	16.4
Terral TV2155Bt	-	-	222	-	-	0.3	53	6-20	2	17.0
Dekalb DKC69-70 (YG)	-	-	219	-	-	0.0	50	6-22	2	18.0
Pioneer 32W86	-	-	217	-	-	0.3	55	6-20	2	16.5
Garst/AgriPro 8288	-	-	217	-	-	1.0	52	6-18	2	17.4
AgraTech 755RR	-	-	215	-	-	0.6	57	6-17	2	16.5
Dyna-Gro X15616	-	-	215	-	-	0.3	55	6-20	1	16.4
SS 781CL	-	-	213	-	-	1.8	55	6-19	2	16.1
Croplan Genetics 702	-	-	212	-	-	0.0	50	6-21	1	17.0
Croplan Genetics 721	-	-	202	-	-	1.2	54	6-18	2	16.7
Pioneer 34B24	-	-	196	-	-	0.3	55	6-20	2	16.9
Pioneer 33G30	-	-	192	-	-	0.3	59	6-18	2	16.2
Pioneer 31N27	-	-	190	-	-	0.7	54	6-21	2	17.2
Pioneer 33G26	-	-	177	-	-	1.5	58	6-18	2	16.6
Pioneer 34B28	-	-	168	-	-	2.8	56	6-19	2	17.1
Croplan Genetics 733BT	-	-	160	-	-	0.7	54	6-17	2	16.5
Test Average			213							
LSD_{0.05}			11.5							
CV (%)			3.3							

TABLE 7. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN AT PRATTVILLE IN CENTRAL ALABAMA, 2000-2002

Brand name - hybrid	Grain yield			% stalks lodging			2002			
	3-yr	2-yr	2002	3-yr	2-yr	2002	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Pioneer 31G98	96	116	113	5.2	5.1	0.5	59	6-11	1	14.3
Terral TV2140RR	.	118	120	.	11.7	1.4	56	6-10	1	14.0
Terral TV2160Bt	.	114	102	.	6.2	2.9	58	6-12	2	14.7
Dyna-Gro 5515	.	113	126	.	4.3	0.5	56	6-11	1	13.7
Croplan Genetics 1167RR	.	113	128	.	4.3	0.9	58	6-10	1	14.3
Pioneer 32R25	.	109	113	.	13.8	1.0	59	6-13	2	14.6
Dyna-Gro 5516 RR	.	96	131	.	2.8	0.4	58	6-10	1	14.0
Dyna-Gro 5518 RR	.	.	132	.	.	0.4	56	6-10	1	14.2
Terral TV23R15n	.	.	124	.	.	0.0	57	6-11	1	14.1
Terral TV2140Xn1RR	.	.	123	.	.	0.5	55	6-11	1	13.9
Dyna-Gro X15616	.	.	123	.	.	0.5	58	6-12	2	14.3
Croplan Genetics 702	.	.	122	.	.	1.3	57	6-12	2	14.8
Terral TV2140Xn2RR	.	.	119	.	.	0.9	56	6-10	1	13.8
Dyna-Gro X15617	.	.	113	.	.	0.4	57	6-11	2	14.4
Terral TV2155Bt	.	.	98	.	.	1.7	58	6-12	2	14.4
Croplan Genetics 733BT	.	.	95	.	.	2.2	57	6-10	2	13.7
Croplan Genetics 818BT	.	.	93	.	.	2.3	57	6-10	2	14.6
Croplan Genetics 721	.	.	86	.	.	1.5	56	6-11	3	14.4
Pioneer 32D99	.	.	86	.	.	3.5	57	6-13	2	16.2
Test Average	96	111	113							
LSD _{0.05}		13.5	10.9							
CV (%)		7.2	5.9							

TABLE 8. 2002 YIELD OF CORN HYBRIDS AND AVERAGES OF HYBRID CHARACTERISTICS AT PRATTVILLE IN CENTRAL ALABAMA

Brand name - hybrid	Yield bu/acre	Lodging -- % --	Test-weight lb/bu	Mid-silk mo-day	Husk cover ¹	Harvest moisture -- % --							
							Dyna-Gro 5518 RR	132	0.4	56	6-10	1	14.2
							Dyna-Gro 5516 RR	131	0.4	58	6-10	1	14.0
Croplan Genetics 1167RR	128	0.9	58	6-10	1	14.3							
Dyna-Gro 5515	126	0.5	56	6-11	1	13.7							
Terral TV23R15n	124	0.0	57	6-11	1	14.1							
Terral TV2140Xn1RR	123	0.5	55	6-11	1	13.9							
Dyna-Gro X15616	123	0.5	58	6-12	2	14.3							
Croplan Genetics 702	122	1.3	57	6-12	2	14.8							
Terral TV2140RR	120	1.4	56	6-10	1	14.0							
Terral TV2140Xn2RR	119	0.9	56	6-10	1	13.8							
Pioneer 31G98	113	0.5	59	6-11	1	14.3							
Pioneer 32R25	113	1.0	59	6-13	2	14.6							
Dyna-Gro X15617	113	0.4	57	6-11	2	14.4							
Terral TV2160Bt	102	2.9	58	6-12	2	14.7							
Terral TV2155Bt	98	1.7	58	6-12	2	14.4							
Croplan Genetics 733BT	95	2.2	57	6-10	2	13.7							
Croplan Genetics 818BT	93	2.3	57	6-10	2	14.6							
Croplan Genetics 721	86	1.5	56	6-11	3	14.4							
Pioneer 32D99	86	3.5	57	6-13	2	16.2							
Test Average	113												
LSD _{0.05}	10.9												
CV (%)	5.9												

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

TABLE 9. EARLY CORN HYBRID TEST AT SHORTER IN CENTRAL ALABAMA, 2000-2002

Brand name - hybrid	Grain yield			% stalks lodging			2002			
	3-yr	2-yr	2002	3-yr	2-yr	2002	Test- weight	Mid- silk	Husk cover ¹	Harvest moisture
	-----	bu/acre	-----	-----	%	-----	lb/bu	mo-day		-- % --
Pioneer 3394	111	136	143	-	-	0.0	63	6-2	-	10.7
Terral TV2140Xn2RR	-	-	141	-	-	0.0	59	6-4	-	10.6
Terral TV2140RR	-	-	134	-	-	0.0	60	6-5	-	10.6
Terral TV2140Xn1RR	-	-	130	-	-	0.0	59	6-5	-	10.2
Terral TV2160Bt	-	-	125	-	-	0.0	61	6-3	-	10.5
Terral TV23R15n	-	-	123	-	-	0.0	61	6-3	-	11.0
Terral TVX24R002	-	-	123	-	-	0.0	62	6-3	-	11.3
Terral TV2155Bt	-	-	121	-	-	0.0	61	6-3	-	10.7
Terral TV26BR10n	-	-	119	-	-	0.0	60	6-3	-	11.0
Test Average			129							
LSD _{0.05}			7.5							
CV (%)			2.9							

TABLE 10. NO-TILL EARLY CORN HYBRID TEST AT SHORTER IN CENTRAL ALABAMA, 2002

Brand name - hybrid	Yield	Lodging	Test- weight	Mid-silk	Husk cover ¹	Harvest moisture
Pioneer 3394	135	0.0	63	6-02	-	10.5
Terral TV2140Xn2RR	131	0.9	59	6-05	-	9.8
Terral TV2140RR	127	0.5	59	6-05	-	9.8
Terral TV2160Bt	126	0.5	62	6-04	-	10.3
Terral TV2140Xn1RR	123	1.3	59	6-05	-	10.0
Terral TV23R15n	122	0.0	60	6-04	-	10.6
Terral TV2155Bt	120	0.0	62	6-04	-	10.5
Terral TV26BR10n	115	0.0	60	6-04	-	10.2
Terral TVX24R002	109	0.0	62	6-04	-	10.9
Test Average	123					
LSD _{0.05}	9.6					
CV (%)	3.7					

TABLE 11. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT TALLASSEE IN CENTRAL ALABAMA, 2002

Brand name - hybrid	Yield	Lodging	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
	<i>bu/acre</i>	-- % --	<i>lb/bu</i>	<i>mo-day</i>		-- % --
Garst 8230IT	187	1.3	-	6-1	2	-
Dekalb DK687RR	186	0.4	-	6-3	1	-
Pioneer 32R25	185	0.0	-	6-3	3	-
Croplan Genetics DS 822RR	177	0.4	-	6-1	2	-
Garst 8118RR	168	0.4	-	6-4	2	-
Terral TVX24R002	166	0.0	-	6-2	2	-
Croplan Genetics 827	161	0.4	-	6-5	3	-
Asgrow RX897RR	155	0.0	-	6-3	1	-
Terral TV26BR10n	141	0.8	-	6-3	3	-
Croplan Genetics 747	135	0.0	-	5-31	4	-
Croplan Genetics 671CL/BT	123	0.0	-	5-30	4	-
Test Average	162					
LSD <i>0.05</i>	9.0					
CV (%)	3.4					

TABLE 12. CHARACTERISTICS OF IRRIGATED CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT TALLASSEE IN CENTRAL ALABAMA, 2002

Brand name - hybrid	Yield	Lodging	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
	<i>bu/acre</i>	-- % --	<i>lb/bu</i>	<i>mo-day</i>		-- % --
Pioneer 32R25	241	0.0	63	6-6	3	10
Croplan Genetics DS 822RR	219	0.0	62	6-4	3	9
Garst 8230IT	215	0.0	61	6-5	2	10
Garst 8118RR	205	0.4	61	6-6	2	10
Croplan Genetics 827	200	0.0	60	6-7	2	9
Dekalb DK687RR	197	0.0	64	6-5	1	10
Terral TV26BR10n	197	0.4	62	6-4	2	10
Croplan Genetics 747	190	0.0	61	6-3	3	10
Asgrow RX897RR	181	0.0	63	6-5	1	9
Terral TVX24R002	180	0.4	65	6-4	2	10
Croplan Genetics 671CL/BT	142	0.0	62	6-2	2	10
Test Average	197					
LSD <i>0.05</i>	17.5					
CV (%)	5.5					

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

TABLE 13. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR YELLOW CORN IN SOUTHERN ALABAMA, 2000-2002

Brand name - hybrid	Grain yield		% stalks lodging	
	3-yr	2-yr	3-yr	2-yr
	----- <i>bu/acre</i> -----		----- % -----	
Dekalb DK 697	124	112	7.2	1.8
Pioneer 31G98	114	102	3.1	2.0
Garst/AgriPro 8222IT	110	96	0.6	1.3
Pioneer 32R25	-	112	-	0.9
Dekalb DKC 68-70	-	111	-	2.0
Dyna-Gro 5515	-	111	-	2.3
Terral TV2160Bt	-	109	-	1.3
Dyna-Gro 5518 RR	-	107	-	3.1
Terral TV2140RR	-	106	-	1.9
Dyna-Gro 5516 RR	-	105	-	1.0
Croplan Genetics 1167RR	-	103	-	0.7
LSD <i>0.05</i>	7.5	7.9	1.0	1.4

TABLE 14. 2002 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN SOUTHERN ALABAMA.

Brand name - hybrid	Fair- hope	Brew- ton	Head- land	2002 regional averages					
				Yield	Lodg- ing	Test- weight	Mid-silk	Husk cover ¹	Harvest moist.
				----- bu/acre -----	-- % --	lb/bu	mo-day		-- % --
Dekalb DKC69-70 (YG)	120	125	70	105	3.4	57	6-4	2	14.3
Dyna-Gro 5515	131	120	64	105	2.0	54	6-3	3	14.5
Terral TV2155Bt	139	111	62	104	3.0	57	6-3	3	14.3
Terral TV2140RR	128	108	75	103	3.2	53	6-4	3	14.5
Dekalb DKC 68-70	134	113	63	103	3.5	57	6-4	2	14.7
Croplan Genetics 1167RR	121	113	74	103	0.9	55	6-4	2	14.5
Dyna-Gro 5518 RR	124	106	75	102	4.7	53	6-2	3	14.3
Dekalb DK 697	125	112	68	101	3.0	57	6-3	3	14.3
Dyna-Gro 5516 RR	123	112	66	100	0.9	56	6-3	2	14.4
Garst/AgriPro 8288	129	110	62	100	0.8	55	6-2	2	14.7
Pioneer 32R25	121	115	64	100	1.8	56	6-4	3	15.0
Terral TV2160Bt	128	107	63	99	2.2	56	6-3	3	14.3
Terral TV2140Xn1RR	138	106	53	99	4.0	54	6-3	3	14.1
Croplan Genetics 818BT	128	93	70	97	4.1	55	6-1	3	14.3
Terral TV23R15n	120	114	56	97	1.6	56	6-3	2	14.3
Croplan Genetics 721	123	92	73	96	1.5	54	5-31	3	14.3
AgraTech 755RR	121	95	72	96	1.2	58	6-1	3	14.5
Terral TV2140Xn2RR	123	110	53	95	3.7	54	6-3	3	14.1
AgraTech 733RR	110	103	73	95	2.5	55	6-2	3	14.0
Dyna-Gro X15617	126	99	60	95	5.4	54	6-2	3	14.0
Garst/AgriPro 8222IT	129	97	58	95	1.4	57	6-2	3	14.3
Dyna-Gro X15616	117	108	59	95	2.3	56	6-4	3	14.3
Garst 8285	117	98	64	93	1.2	56	6-4	2	14.4
Pioneer 32D99	127	100	51	93	5.1	55	6-4	3	14.4
AgraTech 721BtRR	120	102	55	92	1.6	55	6-3	3	14.2
Croplan Genetics 702	125	101	48	91	2.2	56	6-4	3	14.4
Pioneer 31G98	112	100	58	90	3.5	57	6-4	2	14.3
Croplan Genetics 733BT	112	89	69	90	1.4	55	5-30	3	14.2
Test Average	124	106	64						
LSD _{0.05}	8.1	5.4	10.0						
CV (%)	4.0	3.1	9.6						

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

TABLE 15. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA, 2000-2002

Brand name - hybrid	Yield	Lodging	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
Dekalb DKC 68-70	186	0.0	-	6-3	1	-
Dekalb DK 697	186	0.6	-	5-26	2	-
Dekalb DKC69-70 (YG)	185	1.1	-	6-2	3	-
Garst/AgriPro 8288	172	1.8	-	5-25	2	-
Croplan Genetics 818BT	169	0.0	-	5-30	2	-
Dyna-Gro 5518 RR	168	6.5	-	5-29	2	-
Croplan Genetics 702	165	0.6	-	6-2	2	-
Croplan Genetics 1167RR	162	1.4	-	5-31	2	-
Dyna-Gro 5515	161	0.6	-	6-1	2	-
Garst/AgriPro 8222IT	160	0.0	-	5-29	2	-
Dyna-Gro X15617	160	3.2	-	5-29	2	-
Dyna-Gro X15616	159	2.0	-	6-2	3	-
Terral TV2140Xn2RR	159	0.0	-	5-29	2	-
Terral TV2140RR	157	3.2	-	6-3	2	-
Pioneer 32D99	155	0.0	-	6-2	2	-
Garst 8285	153	1.4	-	5-29	2	-
Terral TV23R15n	153	0.0	-	5-31	2	-
Pioneer 31G98	153	0.0	-	6-3	2	-
Terral TV2155Bt	150	1.4	-	7-15	3	-
Terral TV2160Bt	149	5.2	-	5-25	4	-
AgraTech 733RR	149	4.5	-	5-25	4	-
AgraTech 755RR	148	2.4	-	5-26	2	-
Pioneer 32R25	147	0.0	-	5-29	3	-
Croplan Genetics 721	147	2.7	-	5-26	3	-
Terral TV2140Xn1RR	144	3.6	-	6-3	2	-
Dyna-Gro 5516 RR	142	0.7	-	6-4	1	-
AgraTech 721BtRR	134	7.6	-	5-27	3.5	-
Croplan Genetics 733BT	122	1.6	-	5-26	2.5	-
Test Average	157					
LSD <i>0.05</i>	10.1					
CV (%)	3.9					

TABLE 16. EARLY CORN HYBRID TEST AT FAIRHOPE IN SOUTHERN ALABAMA, 2000-2002

Brand name - hybrid	Grain yield			% stalks lodging			2002			
	3-yr	2-yr	2002	3-yr	2-yr	2002	Test-weight	Mid-silk	Husk cover ¹	Harvest moisture
	----- bu/acre -----			----- % -----			lb/bu	mo-day		-- % --
Pioneer 3394	104	114	100	1.1	0.6	1.1	56	5-21	4	13.4
Terral TV2140Xn1RR	-	-	125	-	-	1.1	55	5-24	3	13.2
Terral TV26BR10n	-	-	125	-	-	0.6	57	5-24	3	13.4
Terral TV2160Bt	-	-	123	-	-	2.7	57	5-22	3	13.5
Terral TV2155Bt	-	-	123	-	-	2.7	58	5-22	3	13.5
Terral TVX24R002	-	-	123	-	-	0.6	59	5-23	3	13.8
Terral TV2140Xn2RR	-	-	122	-	-	2.2	55	5-25	3	13.2
Terral TV2140RR	-	-	121	-	-	3.3	55	5-25	3	13.0
Terral TV23R15n	-	-	119	-	-	0.6	56	5-23	2	13.4
Test Average			120							
LSD _{0.05}			7.9							
CV (%)			3.9							

TABLE 17. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR IN PRELIMINARY TEST AT FAIRHOPE IN SOUTHERN ALABAMA, 2002

Brand name - hybrid	Yield bu/acre	Lodging -- % --	Test-weight lb/bu	Mid-silk mo-day	Husk cover ¹	Harvest moisture -- % --
Terral TVX24R002	127	0.6	60	6-1	3	13.8
Pioneer 32R25	123	1.1	58	6-1	4	13.5
Croplan Genetics DS 822RR	122	1.6	56	6-9	3	13.1
Garst 8285RR	118	1.7	57	6-1	2	13.3
Croplan Genetics 747	117	0.0	57	5-30	3	13.4
Garst 8230IT	116	2.9	54	6-1	3	13.2
Terral TV26BR10n	116	1.7	57	5-31	3	13.4
Garst 8118RR	114	2.3	56	6-2	3	13.2
Garst 8255RR	113	2.8	57	6-1	3	13.2
Asgrow RX897RR	107	1.2	57	6-1	3	13.2
Croplan Genetics 827	102	0.6	55	6-3	3	12.9
Croplan Genetics 671CL/BT	102	1.1	57	5-28	3	13.1
Test Average	116					
LSD _{0.05}	11.1					
CV (%)	5.9					

EVALUATIONS OF CORN HYBRIDS IN ALABAMA 2002

TABLE 18. GROWING SEASON RAINFALL, 2000-2002.

Test location	Year	----- Monthly rainfall (inches) -----							7-month total
		Mar.	Apr.	May	June	July	Aug.	Sept.	
Belle Mina	2002.....	5.5.....	1.5.....	10.3.....	0.9.....	4.5.....	1.7.....	5.3.....	29.7
	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
Crossville	2002.....	7.8.....	3.0.....	4.8.....	1.9.....	4.5.....	2.0.....	8.9.....	32.9
	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
Tallassee	2002.....	7.5.....	3.7.....	3.6.....	4.8.....	2.9.....	1.8.....	4.3.....	28.6
	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
Shorter	2002.....	6.5.....	3.6.....	2.5.....	5.6.....	2.3.....	1.9.....	4.6.....	27.0
	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
Prattville	2002.....	5.8.....	1.4.....	2.6.....	1.9.....	4.2.....	2.2.....	6.2.....	24.3
	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
Marion Junction	2002.....	5.3.....	1.0.....	4.6.....	3.6.....	6.5.....	4.3.....	9.1.....	34.4
	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
Brewton	2002.....	5.3.....	2.2.....	1.8.....	12.4.....	12.4.....	5.7.....	11.5.....	51.3
	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
Fairhope	2002.....	4.2.....	3.1.....	2.3.....	3.4.....	10.8.....	5.8.....	14.8.....	44.4
	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
Headland	2002.....	5.2.....	3.4.....	2.9.....	3.9.....	4.1.....	3.1.....	2.9.....	25.5
	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

TABLE 19. SOIL TYPES FOR CORN TRIALS, 2002

Test location	Soil type
North	
Belle Mina	Decatur silt loam
Crossville	Wynnville 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 2002 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. 6767 Old Madison Pike Huntsville, AL 35806	Pioneer
Croplan Genetics P.O. Box 146 Blytheville, AR 72316	Croplan Genetics	Southern States Coop P.O. Box 26230 Richmond, VA 23260	SS
Garst Seed Company 761Walnut Knoll Lane Memphis, TN 38018	Garst,	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