



**PERFORMANCE
OF**

CORN

HYBRIDS

IN

ALABAMA

1990



December 1990
Agronomy and Soils Departmental Series No. 150
Alabama Agricultural Experiment Station
Lowell T. Frobish, Director
Auburn University
Auburn University, Alabama

TABLE OF CONTENTS

	Page
INTRODUCTION.....	5
ACKNOWLEDGMENTS.....	8
Table 1. Locations and Cultural Practices for the 1990 Corn Hybrid Tests.....	9
NORTHERN ALABAMA	
Table 2. Two- and Three-Year Yield and Lodging Averages for Northern Alabama, 1988-90.....	10
Table 3. 1990 Yield of Corn Hybrids by Location and Regional Averages of Hybrid Characteristics in Northern Alabama.....	11
CENTRAL ALABAMA	
Table 4. Two- and Three-Year Yield and Lodging Averages for Central Alabama, 1988-90.....	12
Table 5. 1990 Yield of Corn Hybrids by Location and Regional Averages of Hybrid Characteristics in Central Alabama..	13
SOUTHERN ALABAMA	
Table 6. Two- and Three-Year Yield and Lodging Averages for Southern Alabama, 1988-90.....	14
Table 7. 1990 Yield of Corn Hybrids by Location and Regional Averages of Hybrid Characteristics in Southern Alabama.	15
BLACK BELT	
Table 8. Black Belt Corn Hybrid/Virus Test 1988-90.....	16
VIRUS DISEASE REACTIONS OF SOME HYBRIDS IN 1990.....	17
Procedure.....	18
Results.....	18
Table 9. Incidence of Maize Chlorotic Dwarf Virus Disease in Regular Corn Hybrid Tests, 1990.....	19
Table 10. Incidence of Maize Dwarf Mosaic Virus Disease in Regular Corn Hybrid Tests, 1990.....	21

TABLE OF CONTENTS (CONT'D)

IRRIGATED TEST		Page
Table 11.	Irrigated Corn Hybrid Performance and Characteristics, Headland, 1988-90	23
WHITE CORN		
Table 12.	White Corn Hybrid Test, Northern Alabama, 1988-90.....	25
Table 13.	White Corn Hybrid Test, Central Alabama, 1988-90.....	26
Table 14.	White Corn Hybrid Test, Southern Alabama, 1988-90.....	27
EARLY CORN		
Table 15.	Early Corn Hybrid Test, Northern Alabama, 1988-90.....	28
Table 16.	Early Corn Hybrid Test, Central Alabama, 1988-90.....	29
Table 17.	Early Corn Hybrid Test, Southern Alabama, 1987 & 1989-90.....	30
PRELIMINARY TEST		
Table 18.	Characteristics of Corn Hybrids Tested One Year at Crossville in Northern Alabama, 1990.....	31
Table 19.	Characteristics of Corn Hybrids Tested One Year at Tallassee in Central Alabama, 1990.....	32
Table 20.	Characteristics of Corn Hybrids Tested One Year at Fairhope in Southern Alabama, 1990.....	33
Table 21.	Growing Season Rainfall, 1990.....	34
	SOURCES OF 1990 CORN HYBRID TEST SEED.....	35
	ACCEPTABLE HYBRIDS FOR 1991.....	36

Information contained herein is available to all without regard to race, color, sex, or national origin.

PERFORMANCE OF CORN HYBRIDS IN ALABAMA, 1990

D.L. Thurlow and W.C. Johnson¹

INTRODUCTION

Corn hybrids are evaluated annually by the Alabama Agricultural Experiment Station in the Regular Corn Hybrid Test and the Preliminary Corn Hybrid Test on a northern, central, and southern regional basis. The Marion Junction, or Black Belt Substation, corn test is used as the prairie soil regional comparison. Entries in the preliminary tests are both experimental and newly released hybrids. If a hybrid is outstanding in the preliminary test, it is entered in the regular corn test the following year. White and early corn hybrids are tested at one location in each region. One regular and one white corn hybrid test are irrigated at Headland in southern Alabama.

The locations and cultural practices for the tests are shown in table 1. The tests were designed as a randomized complete block with four replications. Row width was 30 to 36 inches depending on location. Two-row plots were used, with row length ranging from 20 to 30 feet depending, again, on location. The target plant population for the tests was 20,000 plants per acre with a seeding rate of 23,000 seeds per acre. The irrigated tests at Headland were seeded at a rate of 30,000 plants per acre and thinned to 25,000.

¹Respectively, Associate Professor and Professor of Agronomy and Soils.

Grain yields were adjusted to 15.5 percent moisture and converted to bushels (56 pounds) per acre. Stalks broken or leaning more than 45 degrees were considered lodged. The mid-silk data measured the number of days from planting until one-half of the plants in the plots were showing silks. Bushel test weights are reported as regional averages from this year's data.

To aid in determining real yield differences, a statistical analysis of variance is performed on the data from each location. The L.S.D. (least significant difference) and C.V. (coefficient of variation) are given for each location's test. The difference in yield of two hybrids must exceed the L.S.D. value for one hybrid to be considered superior to the others in yield in that particular test. The C.V. is a measure of the variability in an experiment. An increase in its value indicates an increase in the unaccounted variability.

The corn hybrid tests are examined for disease incidence each year by R.T. Gudauskas, Professor of Plant Pathology. When virus or other disease symptoms indicate crop damage, disease ratings are compiled and published in this report (page 17). Virus infection data from the tests at Marion Junction, Prattville, Belle Mina, and Winfield are reported this year, tables 9 and 10.

Since the performance of hybrids varies with location and year, long-term averages from several locations are more reliable than 1-year performance. Three-year regional averages are considered a reliable evaluation of the relative performance of hybrids.

The irrigation test at Headland had 13.8 inches of water applied in 11 applications during May, June, and July to supplement the rainfall. Rainfall during June and July was extremely variable in 1990, table 21, which caused corn grain yields to vary by location.

A committee comprised of Department of Agronomy and Soils research and extension personnel involved in corn research reviewed the past 3 years of corn hybrid test data to assemble the list of acceptable hybrids on page 35. The recommended hybrids are not all equal in performance. Some are outstanding in one or more characteristics; while others may not be obviously outstanding, they might possess a satisfactory combination of all characteristics.

ACKNOWLEDGMENTS

Appreciation is 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.

NORTHERN ALABAMA

Tennessee Valley Substation, Belle Mina - W.B. Webster, H.E. Burgess,
B.E. Norris

Sand Mountain Substation, Crossville - J.T. Eason, M.E. Ruf

Upper Coastal Plain Substation, Winfield - W.A. Griffey, R.C. Rawls

CENTRAL ALABAMA

Black Belt Substation, Marion Junction - J.L. Holliman, J.R. Harris

Prattville Experiment Field - D.P. Moore

E.V. Smith Research Center, Shorter - R.R. Duffield

Plant Breeding Unit, Tallassee - S.P. Nightengale

SOUTHERN ALABAMA

Lower Coastal Plain Substation - J.A. Little, P.A. Rose

Brewton Experiment Field - J.R. Akridge

Monroeville Experiment Field - J.R. Akridge

Gulf Coast Substation, Fairhope - E.L. Carden, N.R. McDaniel,
M.D. Pegues

Wiregrass Substation, Headland - H.W. Ivey, L.N. Wells, B.E. Gamble

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

TABLE 1. LOCATIONS AND CULTURAL PRACTICES FOR THE 1990 CORN HYBRID TESTS

Location	Planting date	Nitrogen rate*	Plant population	Date harvested	Herbicides used
<u>Northern Alabama</u>					
Tennessee Valley Substation (Belle Mina)	April 5	136	20,000	September 10	Atrazine + Dual
Sand Mountain Substation (Crossville)					
Regular test	April 18	146	20,000	September 4	Atrazine + Dual
Preliminary test	April 16	156	20,000	September 6-7	Atrazine + Dual
White corn test	April 17	151	20,000	September 7	Atrazine + Dual
Early corn test	April 5	180	20,000	August 28	Atrazine + Dual
Upper Coastal Plain Substation (Winfield)	April 13	150	20,000	September 6-7	Atrazine
<u>Central Alabama</u>					
E.V. Smith Research Center (Shorter)					
Early corn test	March 13	175	20,000	August 6	Atrazine + Lasso
White corn test	March 14	175	20,000	August 6	Atrazine + Lasso
Plant Breeding Unit (Tallassee)	April 19	240	20,000	August 31	Atrazine + Dual
Prattville Experiment Field (Prattville)	March 22	120	20,000	August 30	Atrazine + Dual
Black Belt Substation (Marion Junction)	March 14	150	20,000	August 13	Atrazine
<u>Southern Alabama</u>					
Brewton Experiment Field (Brewton)	March 26	120	20,000	August 28	Atrazine + Dual
Monroeville Experiment Field (Monroeville)	March 26	120	20,000	August 21-24	Atrazine + Dual
Lower Coastal Plain Substation (Camden)	April 12	120	20,000	August 15-16	Dual + Vernam
Wiregrass Substation (Headland)					
Regular test (unirrigated)	April 5	70	20,000	August 21	Atrazine
Regular test (irrigated)	April 5	140	25,000	August 31	Atrazine
White corn test (irrigated)	April 5	140	25,000	September 1	Atrazine
Gulf Coast Substation (Fairhope)					
Regular test	March 27	182	20,000	August 7	Atrazine + Dual
Preliminary test	March 27	182	20,000	August 7	Atrazine + Dual
Early corn test	March 1	162	20,000	August 6	Atrazine + Dual

*Pounds per acre N. Lime, phosphorus, potassium, zinc, and sulfur were applied according to recommendation based on soil test.

TABLE 2. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR NORTHERN ALABAMA, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.		LODGED STALKS, AV.	
	3-YR. *	2-YR. **	3-YR. *	2-YR. **
	1988-90	1989-90	1988-90	1989-90
	BU.	BU.	PCT.	PCT.
PIONEER 3165	112	146	1.5	2.0
ZIMMERMAN Z 27	109	141	2.0	1.8
DEKALB DK 689	108	135	1.7	2.0
AGRATECH GK 900	107	138	1.8	1.5
PIONEER 3320	107	138	1.7	2.0
JACQUES 8400	106	135	3.3	2.8
GARST 8180	105	132	2.7	2.8
SUNBELT 1802	105	133	1.3	1.0
PIONEER 3147	103	130	3.5	3.8
DELTAPINE DP 5750	103	136	0.8	1.3
DELTAPINE G-4666	103	133	1.3	1.5
SUNBELT 1827	102	133	1.5	1.5
DEKALB DK 789	101	133	1.2	1.7
CARGILL 9427	100	131	2.5	2.7
SUNBELT 1876	99	128	2.2	3.3
NC+ 7507	-	143	-	1.7
PIONEER 3140	-	140	-	1.2
ZIMMERMAN Z 38	-	137	-	1.0
JACQUES 8210	-	135	-	1.2
PIONEER 3187	-	134	-	1.2
DELTAPINE RA 1502	-	133	-	1.7
NEW NK S 8645	-	132	-	1.5
TERRA TR 366E	-	132	-	1.2
TERRA TR 1190	-	130	-	1.3
TERRA TR 364E	-	128	-	1.2
FFR 747C	-	126	-	1.3
FFR 955C	-	126	-	2.7
NEW NK MCNAIR 508	-	125	-	3.3
HY PERFORMER HS-64	-	123	-	1.5
HY PERFORMER HS-97	-	123	-	1.8

* BELLE MINA AND CROSSVILLE.

** BELLE MINA, CROSSVILLE, AND WINFIELD.

TABLE 3. 1990 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN NORTHERN ALABAMA

BRAND NAME-HYBRID	BELLE MINA	CROSSVILLE	WINFIELD	1990 REGIONAL AVERAGES					
				YIELD	LODGED	TEST	MID-**	HUSK*	HARVEST
				PER ACRE	STALKS	WEIGHT	SILK	COVER	MOISTURE
	BU.	BU.	BU.	BU.	PCT.	LB./BU.	MO.-DA.	RATING	PCT.
PIONEER 3170	127	143	138	136	1.7	58.4	6-27	3	14.0
NC+ 7507	129	137	125	130	2.3	58.1	6-28	2	14.0
ZIMMERMAN Z 27	132	132	121	128	1.7	58.8	6-28	3	14.1
NEW NK 8 8505	128	133	119	127	1.7	59.4	6-30	2	14.3
FFR 16847	120	125	135	126	1.3	59.9	6-26	2	15.5
PIONEER 3140	131	128	119	126	1.0	57.7	6-26	2	14.2
DELTAPINE DP 5750	131	112	128	124	0.7	59.9	6-27	2	15.0
JACQUES 8510	127	129	115	123	1.3	59.1	6-24	2	15.2
PIONEER 3165	109	138	122	123	1.7	59.7	6-28	2	15.7
AORATECH 825	126	131	112	123	0.7	59.6	6-26	2	14.9
PIONEER 3180	116	122	131	123	1.0	57.2	6-24	2	13.8
ZIMMERMAN Z 38	129	124	114	122	0.7	59.2	6-25	2	14.8
HY PERFORMER HS-88	115	123	129	122	1.7	61.2	6-27	3	15.2
SUNBELT 1802	126	126	114	122	0.7	59.3	6-25	2	15.0
JACQUES 8400	118	122	126	122	1.7	60.9	6-27	2	15.0
JACQUES 8210	136	123	105	121	1.0	58.9	6-24	2	14.4
TERRA TR 366E	113	131	119	121	1.0	59.6	6-25	2	14.5
AORATECH 888	128	116	120	121	0.3	59.3	6-27	2	14.8
DELTAPINE 4820	115	123	123	120	0.7	58.5	6-30	2	17.8
PIONEER 3147	109	125	126	120	3.0	56.5	6-30	2	15.0
DELTAPINE RA 1502	114	123	123	120	1.7	58.7	6-24	2	14.7
ASOROW RX 911	119	113	127	119	1.0	59.1	6-28	2	14.4
CARGILL 9027	123	119	115	119	1.3	59.4	6-26	2	14.7
PIONEER 3187	111	124	120	118	1.0	58.8	6-26	2	14.5
CARGILL 8527	113	123	116	118	1.7	59.6	6-27	2	14.3
SUNBELT 3613	126	113	113	117	3.3	58.8	6-26	2	14.8
AORATECH OK 900	129	108	115	117	1.7	60.7	6-29	2	15.0
PIONEER 3320	125	115	110	117	1.7	59.8	6-27	2	14.2
NEW NK X 8727	118	120	112	116	0.7	60.2	6-28	2	15.6
QARST 8180	119	118	112	116	3.3	59.3	6-27	2	14.2
DEKALB DK 677	107	115	125	115	1.0	60.3	6-26	2	14.4
NEW NK S 8645	112	124	109	115	1.3	59.7	6-26	2	14.2
DELTAPINE Q-4666	115	120	109	115	1.3	59.6	6-27	2	14.4
FFR 907C	111	115	117	114	0.3	59.5	6-27	2	14.8
TERRA TR 364E	120	114	107	114	0.7	59.6	6-28	2	14.4
TERRA TR 1190	111	107	123	113	1.0	58.9	6-27	2	14.1
CARGILL 9427	97	126	115	113	2.7	58.7	6-26	2	15.4
ASOROW RX 947	110	115	113	113	2.0	58.5	6-30	2	15.0
FFR 747C	105	118	114	112	1.0	59.4	6-25	2	14.0
DEKALB DK 789	103	119	110	111	1.0	58.3	6-28	2	16.4
DEKALB DK 689	98	120	112	110	2.0	58.7	6-29	2	14.9
SUNBELT 1827	99	116	112	109	1.3	59.0	6-27	2	15.9
AORATECH 891	92	113	119	108	1.3	60.3	6-28	2	16.6
HY PERFORMER HS-64	103	117	105	108	1.7	60.4	6-28	2	15.0
ZIMMERMAN Z 20	104	117	98	106	0.7	58.9	6-26	2	14.1
HY PERFORMER HS-97	110	106	100	105	1.3	59.7	6-28	2	14.3
FFR 955C	101	108	94	101	2.3	59.3	6-30	2	15.2
SUNBELT 1876	101	76	115	97	2.7	58.7	7-2	2	15.7
NEW NK MCNAIR 508	82	78	93	84	3.7	60.0	7-3	2	17.7
TEST AVERAGE	115.0	119.2	116.1						
L. S. D. (.05)	23.3	15.1	20.5						
C. V. (%)	14.5	9.1	12.6						

* 1= EXCELLENT; 5= VERY POOR.
 ** MID-SILK DATA FROM BELLE MINA AND CROSSVILLE ONLY.

11

TABLE 4. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR CENTRAL ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.		LODGED STALKS, AV.	
	3-YR.	2-YR.	3-YR.	2-YR.
	1988-90	1989-90	1988-90	1989-90
	BU.	BU.	PCT.	PCT.
MCCURDY 7777	87	99	1.0	1.0
PIONEER 3320	79	87	1.2	0.8
GARST 8180	77	89	0.8	1.0
DEKALB DK 689	76	89	1.0	0.8
DELTAPINE DP 5750	76	89	0.8	1.3
ZIMMERMAN Z 27	75	83	1.2	1.0
DELTAPINE G-4666	75	86	0.5	0.8
SUNBELT 1802	73	87	0.8	0.8
SUNBELT 1860	72	85	0.8	0.8
PIONEER 3165	71	81	1.5	1.8
AGRATECH GK 900	71	80	1.0	0.8
PIONEER 3147	71	84	1.8	0.8
DEKALB DK 789	70	81	1.7	1.0
SUNBELT 1882	66	79	0.5	0.5
CARGILL 9427	66	79	1.5	1.8
SUNBELT 1876	65	73	1.2	1.3
SUNBELT 1827	64	80	1.0	1.0
NEW NK MCNAIR 508	62	64	3.0	3.5
JACQUES 9220	-	92	-	1.3
JACQUES 8210	-	89	-	1.5
NEW NK S 8645	-	87	-	0.8
TERRA TR 366E	-	87	-	0.3
TERRA TR 364E	-	87	-	0.5
PIONEER 3187	-	85	-	1.5
NC+ 7507	-	85	-	1.0
TERRA TR 1190	-	85	-	0.8
ZIMMERMAN Z 38	-	82	-	0.5
HY PERFORMER HS-97	-	81	-	0.8
HY PERFORMER HS-64	-	79	-	1.0
PIONEER 3140	-	77	-	1.0

* PRATTVILLE AND CAMDEN.

TABLE 5. 1990 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN CENTRAL ALABAMA

BRAND NAME-HYBRID	PRATTVILLE	CAMDEN	1990 REGIONAL AVERAGES					
			YIELD	LODGED	TEST	MID-**	HUSK*	HARVEST
			PER ACRE	STALKS	WEIGHT	SILK	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	LB./BU.	MO.-DA.	RATING	PCT.
JACQUES 8210	100	77	88	2.0	58.2	6-4	1	11.4
MCCURDY 7777	103	71	87	1.5	58.5	6-8	2	13.4
PIONEER 3170	96	74	85	1.5	58.0	6-6	2	11.4
PIONEER 3187	99	64	81	2.0	58.6	6-6	2	13.3
CARGILL 8527	95	67	81	1.0	59.7	6-6	2	13.8
DELTAPINE 4820	93	68	80	1.5	57.6	6-10	2	16.5
CARGILL 9027	87	74	80	1.5	59.4	6-5	1	12.8
FFR 17411	89	72	80	3.5	56.8	6-6	3	12.7
JACQUES 9220	96	64	80	2.0	58.1	6-6	2	14.7
DEKALB DK 677	97	63	80	0.5	60.0	6-6	2	12.1
NEW NK S 8505	89	69	79	3.0	58.3	6-7	1	12.5
NC+ 7507	102	56	79	1.5	58.0	6-10	2	10.6
ZIMMERMAN Z 27	102	53	77	2.0	57.3	6-10	2	11.3
SUNBELT 1802	93	59	76	1.0	59.1	6-4	2	12.3
PIONEER 3140	88	64	76	1.5	57.0	6-9	2	11.3
AGRATECH 825	89	63	76	1.0	59.1	6-5	2	11.5
PIONEER 3320	88	63	75	1.5	59.5	6-5	2	12.5
TERRA TR 1190	88	62	75	1.0	59.8	6-7	2	13.8
HY PERFORMER HS-88	87	62	74	1.0	61.3	6-5	2	14.3
DEKALB DK 689	92	56	74	1.0	57.6	6-9	1	12.1
PIONEER 3147	102	44	73	1.0	55.5	6-13	2	15.6
PIONEER 3165	96	50	73	3.0	59.4	6-9	2	14.9
SUNBELT 5613	78	67	72	4.5	58.2	6-4	2	11.9
ZIMMERMAN Z 20	83	61	72	1.5	59.3	6-6	2	12.0
DELTAPINE DP 5750	78	64	71	2.0	59.2	6-7	1	12.5
HY PERFORMER HS-64	83	60	71	1.5	58.8	6-6	2	13.1
SUNBELT 1860	86	56	71	1.0	59.2	6-12	2	16.0
DEKALB DK 789	86	55	71	1.5	58.5	6-7	2	15.1
AGRATECH GK 900	92	49	71	1.0	61.8	6-7	3	13.7
TERRA TR 366E	83	58	70	0	59.2	6-5	2	11.3
CARGILL 9427	86	54	70	3.0	57.8	6-6	2	13.3
GARST 8180	84	55	69	2.0	59.4	6-7	2	13.2
ZIMMERMAN Z 38	74	64	69	1.0	58.9	6-5	2	11.5
NEW NK S 8645	73	64	69	1.5	59.3	6-5	1	12.4
HY PERFORMER HS-97	89	48	68	1.0	59.6	6-9	1	13.1
FFR 19418	86	49	67	0.5	59.3	6-7	1	13.0
TERRA TR 364E	83	52	67	0.5	59.3	6-7	1	14.1
DELTAPINE G-4666	76	56	66	1.0	59.6	6-6	1	13.1
SUNBELT 1827	84	45	65	2.0	60.1	6-7	2	13.4
NEW NK X 8727	78	51	65	1.0	60.6	6-7	2	13.1
AGRATECH 888	80	45	63	1.0	59.9	6-7	2	13.4
SUNBELT 1882	72	36	54	1.0	58.9	6-13	2	17.0
SUNBELT 1876	60	46	53	1.5	59.8	6-16	2	15.9
NEW NK MCNAIR 508	67	32	49	4.0	53.5	6-18	2	20.1
TEST AVERAGE	87.0	58.1						
L. S. D. (.05)	13.5	12.9						
C. V. (%)	11.1	15.8						

* 1= EXCELLENT; 5= VERY POOR.
 ** MID-SILK DATA FROM PRATTVILLE ONLY.

TABLE 6. TWO- AND THREE-YEAR YIELD AND LODGING AVERAGES FOR SOUTHERN ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.		LODGED STALKS, AV.	
	3-YR.	2-YR.	3-YR.	2-YR.
	1988-90	1989-90	1988-90	1989-90
	BU.	BU.	PCT.	PCT.
DEKALB DK 689	101	108	2.3	0.4
MCCURDY 7777	98	104	2.9	1.9
GARST 8180	92	100	2.3	1.9
SUNBELT 1860	92	101	1.5	1.1
DEKALB DK 789	90	97	2.2	1.3
SUNBELT 1802	90	98	0.9	0.1
NEW NK MCNAIR 508	90	97	2.8	1.1
PIONEER 3147	89	95	3.3	1.5
ZIMMERMAN Z 27	89	98	1.5	0.5
SUNBELT 1876	89	98	6.0	3.8
SUNBELT 1827	88	102	1.2	0.5
AGRATECH GK 900	86	96	3.5	1.0
PIONEER 3165	86	92	4.8	1.3
CARGILL 9427	86	94	2.5	1.8
SUNBELT 1882	85	91	1.4	0.6
PIONEER 3320	83	91	3.3	1.8
AGRATECH GK 850	82	89	1.8	0.8
MCCURDY 8181	-	110	-	0.6
SUNBELT 7400	-	108	-	1.9
NC+ 7507	-	103	-	0.9
TERRA TR 366E	-	103	-	0.9
JACQUES 9220	-	102	-	2.8
ZIMMERMAN Z 38	-	101	-	0.4
TERRA TR 364E	-	98	-	0.5
JACQUES 8210	-	97	-	0.4
HY PERFORMER HS-97	-	97	-	1.6
TERRA TR 1190	-	95	-	0.9
NEW NK S 8645	-	95	-	0.3
PIONEER 3140	-	92	-	0.4
FFR 747C	-	91	-	0.3
FFR 955C	-	91	-	5.8
HY PERFORMER HS-64	-	86	-	0.8
DELTAPINE G-4543	-	82	-	0.1

* FAIRHOPE, BREWTON, MONROEVILLE, AND HEADLAND.

TABLE 7. 1990 YIELD OF CORN HYBRIDS BY LOCATION AND REGIONAL AVERAGES OF HYBRID CHARACTERISTICS IN SOUTHERN ALABAMA

BRAND NAME-HYBRID	FAIRHOPE	BREWTON	MONROEVILLE	HEADLAND	1990 REGIONAL AVERAGES					
					YIELD	LODGED	TEST	MID-	HUSK*	HARVEST**
					PER ACRE	STALKS	HEIGHT	SILK	COVER	MOISTURE
	BU.	BU.	BU.	BU.	BU.	PCT.	LB./BU.	MO.-DA.	RATING	PCT.
JACQUES 9220	120	142	62	76	100	0.5	56.8	6-9	2	15.6
FFR 16847	143	145	48	64	100	0.5	57.0	6-8	2	15.8
ZIMMERMAN Z 38	129	141	65	59	99	0	57.9	6-7	2	15.0
MCCURDY 7777	120	123	68	80	98	0.5	57.1	6-9	2	15.6
AGRATECH 825	140	131	58	62	98	0	57.7	6-5	2	15.1
MCCURDY 8165	129	142	45	71	97	0.3	58.4	6-7	2	15.8
PIONEER 3165	133	132	40	76	95	0.8	57.2	6-11	2	15.7
CARGILL 9027	145	122	48	65	95	1.3	57.8	6-7	2	15.7
TERRA TR 366E	119	124	66	70	95	0.8	57.4	6-7	2	14.8
MCCURDY 8181	136	126	49	68	95	0.8	57.2	6-11	2	16.3
DEKALB DK 689	154	127	37	61	95	0	57.5	6-11	2	15.4
SUNBELT 1802	145	113	55	65	94	0	56.6	6-5	2	15.4
GARST 8180	127	134	57	58	94	0.5	56.9	6-9	2	15.4
NEW NK 8 8505	126	133	52	62	93	1.8	57.2	6-10	2	15.0
JACQUES 8210	124	123	62	59	92	0	57.3	6-5	2	15.1
FFR 17411	121	135	47	63	91	0.8	56.2	6-8	2	15.6
SUNBELT 1827	143	128	35	59	91	0	58.1	6-10	2	15.4
TERRA TR 364E	130	119	48	68	91	0	57.7	6-9	2	15.0
ABGROW RX 947	154	120	29	62	91	1.8	56.9	6-9	2	15.8
AGRATECH 888	122	115	48	80	91	0.5	57.7	6-7	2	15.1
ABGROW RX 911	134	109	55	65	91	0.3	57.2	6-9	2	15.6
NC+ 7507	139	107	54	62	91	0.3	56.4	6-9	3	15.1
JACQUES 8510	134	109	63	55	90	1.0	57.1	6-5	2	15.5
NEW NK 8 8645	123	126	49	61	90	0.3	57.6	6-7	2	15.4
TERRA TR 1190	127	111	52	68	90	0	57.6	6-7	2	15.2
DEKALB DK 789	130	140	29	58	89	1.0	56.5	6-11	3	16.1
CARGILL 8527	120	119	52	67	89	0.3	57.6	6-7	2	15.0
DELTAPINE 4820	126	114	41	75	89	0.3	55.7	6-12	2	16.2
ZIMMERMAN Z 27	145	108	45	58	89	0.3	56.5	6-9	2	15.1
HY PERFORMER HS-64	125	127	51	52	89	0.3	56.6	6-8	2	15.7
SUNBELT 1860	132	125	25	71	88	0.8	56.7	6-11	2	16.2
HY PERFORMER HS-88	128	106	46	70	88	0	57.8	6-9	2	15.9
FFR 747C	130	102	58	61	88	0	57.4	6-7	2	15.2
HY PERFORMER HS-97	135	108	55	53	88	0.3	57.2	6-10	2	15.3
SUNBELT 7400	127	120	43	60	87	0.5	55.6	6-13	2	16.4
PIONEER 3055	127	105	48	69	87	0.5	56.9	6-9	2	15.9
SUNBELT 1876	143	109	27	69	87	1.0	54.9	6-15	2	17.2
PIONEER 3140	124	120	41	61	86	0.3	56.6	6-8	2	14.8
DEKALB DK 677	124	121	42	58	86	0	57.3	6-8	2	15.3
PIONEER 3147	129	121	32	63	86	0.8	55.6	6-13	2	15.6
CARGILL 9427	136	102	44	62	86	1.0	56.4	6-7	2	15.2
FFR 19418	123	108	50	61	85	0	57.8	6-9	2	15.4
PIONEER 3320	131	100	46	63	85	1.5	57.4	6-7	2	15.4
FFR 955C	132	119	30	56	84	1.3	56.9	6-11	2	15.9
JACQUES 7910	124	100	54	54	83	0	56.6	6-5	2	15.4
NEW NK X 8727	123	94	37	71	81	0	57.8	6-8	2	15.8
ZIMMERMAN Z 20	121	97	41	62	80	0.3	57.2	6-8	2	15.0
DELTAPINE 0-4543	128	84	48	57	79	0	57.7	6-8	2	15.0
SUNBELT 1882	112	111	28	63	78	0.5	56.7	6-12	2	16.2
PIONEER 3180	118	101	37	57	78	0.5	56.3	6-9	3	15.0
AGRATECH GK 900	121	90	40	52	76	0	57.5	6-10	3	15.6
NEW NK MCNAIR 508	130	98	20	55	76	0.8	55.8	6-18	2	17.0
AGRATECH GK 850	104	104	30	55	73	0	56.1	6-15	2	15.7
TEST AVERAGE	129.4	116.7	45.8	63.1						
L. S. D. (.05)	22.3	26.8	17.3	15.5						
C. V. (%)	12.3	16.5	27.0	17.6						

* 1= EXCELLENT; 5= VERY POOR.
 ** HARVEST MOISTURE DATA FROM FAIRHOPE, BREWTON, AND MONROEVILLE

TABLE 8. BLACK BELT CORN HYBRID/VIRUS TEST, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990			
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDSILK	TEST	HUSK**	HARVEST
	1988-90	1989-90		1988-90	1989-90			WEIGHT	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.	MO.-DA.	LB./BU.	RATING	PCT.
DEKALB DK 689	95	107	117	0.7	0.5	1.0	6-8	56.1	3	17.5
DEKALB DK 789	92	116	128	1.0	1.0	1.0	6-8	57.6	4	21.6
JACQUES 9220	91	108	110	2.3	3.0	0	6-8	55.6	3	22.1
MCCURDY 7777	90	103	107	0.7	0.9	0	6-8	55.2	2	21.1
SUNBELT 1860	85	106	122	0.3	0.5	0	6-10	55.8	2	20.6
PIONEER 3147	83	111	117	0.3	0.9	0	6-10	54.1	3	18.8
JACQUES 8400	82	105	106	0.7	0.5	0	6-6	58.4	3	19.6
AGRATECH GK 900	78	97	102	0.7	0.9	0	6-7	59.3	3	19.8
DEKALB DK 649	77	101	104	0	0	0	6-10	56.3	3	16.6
PIONEER 3187	77	100	111	1.0	1.0	1.0	6-7	54.6	3	15.5
SUNBELT 1882	76	102	107	0.3	0.5	1.0	6-11	54.2	2	20.9
PIONEER 3165	-	125	142	-	0	0	6-10	56.6	3	18.8
FFR 955C	-	99	101	-	3.0	1.0	6-11	56.6	3	21.6
AGRATECH 891	-	96	109	-	0.5	1.0	6-7	57.0	2	21.4
HY PERFORMER HS-97	-	91	97	-	0.5	0	6-8	57.3	3	16.4
AGRATECH 888	-	88	101	-	0	0	6-8	58.5	3	16.2
JACQUES 8510	-	-	123	-	-	0	6-4	58.7	2	19.8
PIONEER 3154	-	-	118	-	-	2.0	6-6	56.7	3	16.7
ASGROW RX 947	-	-	117	-	-	0	6-10	56.0	2	20.7
DEKALB EXP964	-	-	117	-	-	0	6-5	54.9	3	15.8
UAP X5003	-	-	116	-	-	1.0	6-8	56.7	2	20.7
CARGILL 8527	-	-	109	-	-	0	6-7	59.1	3	18.5
NEW NK X 758	-	-	105	-	-	0	6-6	55.8	2	16.7
FFR 17411	-	-	104	-	-	1.0	6-6	56.9	3	18.8
AGRATECH 917 W	-	-	100	-	-	0	6-7	55.2	2	21.0
GARST 8180	-	-	96	-	-	0	6-9	58.1	2	19.3
SUNBELT 7400	-	-	96	-	-	1.0	6-12	52.6	3	21.2
NEW NK S 8645	-	-	96	-	-	0	6-7	57.6	3	15.3
TERRA TR 364E	-	-	95	-	-	0	6-8	57.4	3	17.5
FFR 19418	-	-	88	-	-	0	6-7	57.9	3	17.1
AGRATECH GK 927W	-	-	83	-	-	0	6-11	55.7	2	21.8
ASGROW RX 939W	-	-	-	-	-	-	-	56.6	-	-
TEST AVERAGE			107.8							
L. S. D. (.05)			13.2							
C. V. (%)			8.7							

* MARION JUNCTION. SEE TABLE 9 FOR VIRUS DISEASE REACTIONS.
 ** 1= EXCELLENT; 5= VERY POOR.

VIRAL DISEASE REACTIONS OF SOME HYBRIDS IN 1990²

The two most prevalent viral diseases of corn in Alabama are maize chlorotic dwarf (MCD), caused by the maize chlorotic dwarf virus (MCDV), and maize dwarf mosaic (MDM), caused by the maize dwarf mosaic virus (MDMV). Discovery of MDM in the State dates back to the early 1960's, while MCD has been recognized since 1973. Both diseases probably occur throughout Alabama; however, they generally have been more prevalent and damaging in the northern two-thirds of the State.

Symptoms of the two diseases are similar in appearance and sometimes difficult to distinguish. Generally, affected plants are chlorotic or discolored and may be stunted. Leaves of MDM diseased plants show an irregular, light and dark green mosaic or mottle; the initial symptom of MCD is a fine, chlorotic streaking over the smallest veins.

The causal viruses are spread by feeding activities of insects. MCDV is transmitted by certain leafhoppers, and MDMV is carried by some aphids. Both viruses have similar host ranges among a variety of wild and cultivated grasses. Johnsongrass is an important overseason or reservoir host for the viruses, and MCD and MDM incidence and damage usually are high in corn fields that are heavily infested with johnsongrass.

Use of resistant or tolerant corn hybrids and the control of johnsongrass or avoidance of johnsongrass-infested areas are the most practical control for MCD and MDM. Commercial and experimental hybrids are evaluated yearly to identify resistant hybrids or promising sources of resistance to the diseases. Results of evaluations of some commercial hybrids during 1990 are summarized in this report.

²Prepared by Robert T. Gudauskas, Professor of Plant Pathology.

Procedure

Viral disease ratings were made on entries in the corn hybrid test at the Black Belt Substation, Marion Junction, and the Upper Coastal Plain Substation, Winfield. Plants showing symptoms of MCD and/or MDM were counted, and data are reported as percent incidence of the diseases for each hybrid.

Results

Levels of MCD and MDM were unusually low in the tests at all locations, as was the case in the general corn crop throughout the State in 1990. The very low incidence of both diseases among and within hybrids at the Prattville and Marion Junction tests, tables 9 and 10, made any comparison of hybrid susceptibility meaningless. Although lower than usual, incidence of both diseases was more general in the tests at the two northern locations. In the test of 49 hybrids at the Tennessee Valley Substation, incidence of MDC ranged from 0 to 10.5 percent and averaged 1.2 percent; incidence of MDM ranged from 0 to 3.0 percent and averaged 0.3 percent. Nineteen hybrids showed no symptoms of either disease. At the Upper Coastal Plain Substation, incidence of MCD ranged from 0 to 5.8 percent and averaged 0.6 percent among the 49 hybrids in the test; that for MDM ranged from 0 to 11.6 percent and averaged 0.7 percent. Twenty-nine hybrids showed no symptoms of either disease.

Hybrids showing relatively greater resistance or tolerance were apparent at both locations. Under conditions of higher or lower incidence of viral disease, hybrids would be expected to retain their relative ranking. When selecting a hybrid, viral disease reactions should be taken into account for areas where the diseases are known or suspected to occur, along with the considerations of yield and other characteristics given elsewhere in this report.

Table 9. INCIDENCE OF MAIZE CHLOROTIC DWARF VIRUS DISEASE IN REGULAR CORN HYBRID TESTS, 1990

Brand name	Hybrid	Marion Junction	Prattville	Winfield	Belle Mina
		July 11	June 27	July 13	July 27
		<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
AgraTech	825	-	0	0	1.7
AgraTech	888	0	0	0	2.0
AgraTech	891	0	0	1.4	1.8
AgraTech	GK 900	0	0	0	0
AgraTech	GK 917W	4.3	-	-	-
AgraTech	GK 927W	0	-	-	-
Asgrow	RX 911	-	0	0	0
Asgrow	RX 947	0	0	1.6	0
Asgrow	RX 959W	0	-	-	-
Cargill	8527	3.6	0	0	0
Cargill	9027	-	-	0	1.8
Cargill	9427	-	0	0	0
Dekalb	DK 649	0	-	-	-
Dekalb	DK 677	-	0	0	0
Dekalb	DK 689	0	0	3.2	2.8
Dekalb	DK 789	1.8	2.0	0	1.0
Dekalb	EXP 964	0	-	-	-
Deltapine	4820	-	0	0	10.5
Deltapine	DP 5750	-	0	0	0.9
Deltapine	G-4666	-	0	0	0
Deltapine	RA 1502	-	0	0	0
FFR	747C	-	0	1.4	0
FFR	907C	-	0	1.4	0
FFR	955C	0	0	0	0.9
FFR	16847	-	0	0	0
FFR	17411	0	-	-	-
FFR	19418	2.2	-	-	-
Garst	8180	-	0	0	0.9
Hy Performer	HS-64	-	0	3.2	1.8
Hy Performer	HS-88	-	0	0	1.0
Hy Performer	HS-97	0	0	0	4.8
Jacques	8210	-	0	0	0
Jacques	8400	0	0	0	0
Jacques	8510	0	0	0	0
Jacques	9220	0	-	-	-
McCurdy	7777	0	-	-	-
NC+	7507	-	0	0	0
New NK	S 8505	-	0	0	0
New NK	S 8645	2.0	0	0	5.5
New NK	X 758	0	-	-	-
New NK	X 8727	-	0	1.5	0.8
New NK	McNair 508	-	0	0	1.9
Pioneer	3140	-	0	0	1.8
Pioneer	3147	0	0	1.5	0

Continued

Table 9 (Continued). INCIDENCE OF MAIZE CHOLOROTIC DWARF VIRUS DISEASE
IN REGULAR CORN HYBRID TESTS, 1990

Brand name	Hybrid	Marion Junction	Prattville	Winfield	Belle Mina
		July 11	June 27	July 13	July 27
		<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
Pioneer	3154	0	-	-	-
Pioneer	3165	0	0	0	1.9
Pioneer	3170	-	0	0	0
Pioneer	3180	-	0	0	0
Pioneer	3187	0	0	1.5	2.9
Pioneer	3320	-	0	0	2.0
Sunbelt	1802	-	0	0	0
Sunbelt	1827	-	0	1.7	3.1
Sunbelt	1860	0	-	-	-
Sunbelt	1876	-	1.9	1.6	1.0
Sunbelt	1882	0	-	-	-
Sunbelt	5613	-	0	5.8	0.9
Sunbelt	7400	2.4	-	-	-
Terra	TR 364E	0	0	0	0
Terra	TR 366E	-	0	1.7	0
Terra	TR 1190	-	0	0	1.1
UAP	X 5003	0	-	-	-
Zimmerman	Z 20	-	0	0	1.0
Zimmerman	Z 27	-	1.7	0	3.7
Zimmerman	Z 38	-	0	0	1.8

Table 10. INCIDENCE OF MAIZE DWARF MOSAIC VIRUS DISEASE IN
REGULAR CORN HYBRID TESTS, 1990

Brand name	Hybrid	Marion Junction	Prattville	Winfield	Belle Mina
		July 11	June 27	July 13	July 27
		Pct.	Pct.	Pct.	Pct.
AgraTech	825	-	0	1.4	0
AgraTech	888	0	0	0	2.9
AgraTech	891	0	0	1.4	0
AgraTech	GK 900	0	0	0	0
AgraTech	GK 917W	2.2	-	-	-
AgraTech	GK 927W	0	-	-	-
Asgrow	RX 911	-	0	1.6	1.0
Asgrow	RX 947	0	0	0	0
Asgrow	RX 959W	0	-	-	-
Cargill	8527	0	0	0	0
Cargill	9027	-	0	0	0
Cargill	9427	-	0	0	0
Dekalb	DK 649	0	-	-	-
Dekalb	DK 677	-	0	1.6	0
Dekalb	DK 689	0	0	0	0.9
Dekalb	DK 789	0	0	0	1.0
Dekalb	EXP 964	0	-	-	-
Deltapine	4820	-	0	0	0
Deltapine	DP 5750	-	0	1.4	0
Deltapine	G-4666	-	0	0	0
Deltapine	RA 1502	-	0	0	0
FFR	747C	-	0	1.4	0
FFR	907C	-	0	0	0
FFR	955C	0	0	0	0
FFR	16847	-	0	0	0
FFR	17411	0	-	-	-
FFR	19418	2.2	-	-	-
Garst	8180	0	0	0	0
Hy Performer	HS-64	-	0	0	0.9
Hy Performer	HS-88	-	0	1.6	0
Hy Performer	HS-97	4.1	0	0	1.0
Jacques	8210	-	0	0	0
Jacques	8400	0	0	1.5	0
Jacques	8510	0	0	0	0
Jacques	9220	0	-	-	-
McCurdy	7777	0	-	-	-
NC+	7507	-	0	0	3.0
New NK	S 8505	-	0	0	0.9
New NK	S 8645	0	0	0	0
New NK	X 758	0	-	-	-
New NK	X 8727	-	0	0	0.8
New NK	McNair 508	-	0	0	1.0
Pioneer	3140	-	0	0	0
Pioneer	3147	0	0	0	0

Continued

Table 10 (Continued). INCIDENCE OF MAIZE DWARF MOSAIC VIRUS DISEASE
IN REGULAR CORN HYBRID TESTS, 1990

Brand name	Hybrid	Marion Junction	Prattville	Winfield	Belle Mina
		July 11	June 27	July 13	July 27
		<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
Pioneer	3154	0	-	-	-
Pioneer	3165	0	0	0	0
Pioneer	3170	-	0	0	0
Pioneer	3180	-	0	0	0
Pioneer	3187	0	0	0	1.0
Pioneer	3320	-	0	0	0
Sunbelt	1802	-	0	0	0
Sunbelt	1827	-	1.9	6.7	1.0
Sunbelt	1860	0	-	-	-
Sunbelt	1876	-	0	1.6	0
Sunbelt	1882	0	-	-	-
Sunbelt	5613	-	0	11.6	0
Sunbelt	7400	0	-	-	-
Terra	TR 364E	0	0	1.5	0
Terra	TR 366E	-	0	0	0
Terra	TR 1190	-	0	0	0
UAP	X 5003	0	-	-	-
Zimmerman	Z 20	-	0	0	0
Zimmerman	Z 27	-	1.7	0	0.9
Zimmerman	Z 38	-	1.7	0	0

TABLE 11. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA, 1988-90*

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990			
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDSILK	TEST	HUSK**	HARVEST
	1988-90	1989-90	BU.	1988-90	1989-90	PCT.	MO.-DA.	WEIGHT	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.		LB./BU.	RATING	PCT.
DEKALB DK 689	178	175	190	1.3	1.5	1.0	6-12	56.8	2	13.4
GARST 8180	166	162	192	1.7	2.0	3.0	6-12	57.8	3	13.4
AGRATECH GK 900	161	176	194	1.0	0	0	6-12	58.4	3	13.4
SUNBELT 1860	160	161	186	1.0	1.0	0	6-18	57.7	3	13.4
SUNBELT 1827	158	161	183	0.7	0.5	1.0	6-12	58.3	3	13.4
DEKALB DK 789	155	163	190	2.0	2.0	0	6-18	56.3	3	13.4
SUNBELT 1802	155	158	183	1.0	0.5	0	6-18	57.2	4	13.4
MCCURDY 7777	154	159	173	1.7	0	0	6-21	51.0	2	13.4
NEW NK MCNAIR 50B	151	141	167	2.0	2.0	2.0	6-21	58.2	2	13.4
PIONEER 3165	150	144	169	1.7	1.5	2.0	6-18	56.5	2	13.4
ZIMMERMAN Z 27	148	154	172	0.3	0	0	6-12	57.2	4	13.4
PIONEER 3147	146	150	175	3.7	3.5	2.0	6-21	55.2	2	13.4
SUNBELT 1882	144	145	173	0.7	0	0	6-21	57.4	3	13.4
CARGILL 9427	144	147	173	2.3	2.0	1.0	6-21	55.9	3	13.4
SUNBELT 1876	137	133	171	5.7	7.0	2.0	6-21	56.6	2	13.4
PIONEER 3320	137	135	159	1.3	1.5	1.0	6-18	56.9	3	13.4
AGRATECH GK 850	134	145	161	0.7	0	0	6-12	56.5	2	13.4
MCCURDY 8181	-	163	182	-	0	0	6-18	58.6	3	13.4
NC+ 7507	-	162	174	-	1.0	0	6-21	56.5	2	13.4
JACQUES 9220	-	157	205	-	4.5	1.0	6-18	58.4	2	13.4
PIONEER 3140	-	155	178	-	0.5	1.0	6-12	56.1	2	13.4
TERRA TR 1190	-	154	167	-	0	0	6-18	57.4	2	13.4
TERRA TR 364E	-	152	176	-	0	0	6-18	58.1	1	13.4
SUNBELT 7400	-	149	179	-	1.0	0	6-21	56.3	2	13.4
HY PERFORMER HS-97	-	147	168	-	0.5	0	6-18	58.4	2	13.4
TERRA TR 366E	-	145	169	-	0	0	6-12	59.0	3	13.4
JACQUES 8210	-	145	164	-	1.5	2.0	6-18	56.9	2	13.4
FFR 955C	-	143	177	-	5.0	4.0	6-18	57.9	3	13.4
NEW NK 8 8645	-	143	161	-	0	0	6-21	57.8	3	13.4
ZIMMERMAN Z 38	-	142	170	-	1.0	0	6-21	58.5	3	13.4
FFR 747C	-	136	152	-	2.0	0	6-12	58.4	2	13.4
HY PERFORMER HS-64	-	129	149	-	0	0	6-18	57.5	3	13.4
DELTAPINE G-4543	-	125	158	-	0	0	6-12	58.8	2	13.4
ASGROW RX 947	-	-	196	-	-	1.0	6-12	56.8	2	13.4
MCCURDY 8165	-	-	196	-	-	2.0	6-18	59.0	2	13.4
CARGILL 8527	-	-	196	-	-	1.0	6-18	56.8	2	13.4
PIONEER 3055	-	-	191	-	-	0	6-21	57.4	2	13.4
NEW NK X 8727	-	-	191	-	-	0	6-12	58.8	3	13.4

CONTINUED

TABLE 11. IRRIGATED CORN HYBRID PERFORMANCE AND CHARACTERISTICS, HEADLAND, ALABAMA, 1988-90*

CONTINUED

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990			
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDBILK	TEST	HUSK**	HARVEST
	1988-90	1989-90		1988-90	1989-90		MO.-DA.	WEIGHT	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.		LB./BU.	RATING	PCT.
PIONEER 3180	-	-	189	-	-	0	6-18	56.3	2	13.4
NEW NK 8 8505	-	-	186	-	-	0	6-12	57.7	2	13.4
FFR 16847	-	-	186	-	-	0	6-18	57.8	3	13.4
DEKALB DK 677	-	-	179	-	-	1.0	6-12	59.1	3	13.4
AGRATECH 888	-	-	179	-	-	0	6-12	58.8	1	13.4
FFR 19418	-	-	178	-	-	0	6-21	58.9	3	13.4
ASOROW RX 911	-	-	176	-	-	0	6-18	58.9	3	13.4
DELTAPINE 4820	-	-	175	-	-	3.0	6-12	56.9	2	13.4
HY PERFORMER HS-88	-	-	174	-	-	0	6-21	58.4	3	13.4
ZIMMERMAN Z 20	-	-	172	-	-	1.0	6-12	57.4	3	13.4
CARGILL 9027	-	-	170	-	-	2.0	6-18	59.1	1	13.4
AGRATECH 825	-	-	165	-	-	0	6-18	58.5	4	13.4
JACQUES 8510	-	-	162	-	-	0	6-12	58.6	2	13.4
FFR 17411	-	-	162	-	-	2.0	6-12	57.2	3	13.4
JACQUES 7910	-	-	147	-	-	0	6-21	57.3	2	13.4
TEST AVERAGE			175.5							
L. S. D. (.05)			23.5							
C. V. (%)			9.6							

* THE TEST RECEIVED APPROXIMATELY 13.75 INCHES OF IRRIGATION WATER IN 11 APPLICATIONS DURING THE MONTHS OF MAY, JUNE, AND JULY.

** 1= EXCELLENT; 5= VERY POOR.

TABLE 12. WHITE CORN HYBRID TEST, NORTHERN ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990			
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDSILK	TEST	HUSK***	HARVEST
	1988-90	1989-90		1988-90	1989-90		MO./DA.	WEIGHT	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.		LB./BU.	RATING	PCT.
PIONEER 3165 **	120	152	133	0.7	0.5	0	6-30	58.0	2	16.6
ZIMMERMAN Z 54 W	110	138	109	3.3	4.0	3.0	6-30	57.6	2	16.3
ZIMMERMAN Z 16 W	109	133	115	2.7	1.5	1.0	6-29	58.9	2	17.1
PIONEER 3144W	109	138	110	1.7	2.0	2.0	6-30	58.4	2	16.7
ZIMMERMAN Z 14 W	105	131	107	3.7	3.0	3.0	6-30	58.3	2	16.5
ZIMMERMAN Z 17 W	105	129	91	1.7	2.0	2.0	7-1	57.2	2	15.6
AGRATECH 917 W	103	132	97	2.0	2.5	1.0	6-30	58.4	2	16.9
FFR 929W	86	116	92	1.7	2.0	2.0	7-1	58.5	2	17.6
DEKALB DK 689 **	-	142	113	-	0.5	1.0	6-30	56.9	2	15.5
DELTAPINE G-4644W	-	141	116	-	3.0	2.0	7-1	59.3	2	17.0
HY PERFORMER HB 175W	-	135	105	-	2.5	2.0	6-30	58.4	2	16.5
HY PERFORMER HB 180W	-	129	109	-	3.0	2.0	6-29	56.4	2	16.5
ZIMMERMAN Z 27	-	-	124	-	-	1.0	6-30	54.1	2	14.5
ZIMMERMAN Z 63 W	-	-	109	-	-	1.0	6-30	59.3	2	16.5
FFR 19419W	-	-	109	-	-	1.0	6-30	-	2	17.5
ZIMMERMAN Z 61 W	-	-	98	-	-	0	6-30	57.4	2	15.4
ASGROW RX 959W	-	-	97	-	-	4.0	7-1	59.7	2	17.0
AGRATECH GK 927W	-	-	95	-	-	1.0	7-1	58.2	2	17.7
TEST AVERAGE			107.0							
L. S. D. (.05)			15.0							
C. V. (%)			9.9							

* CROSSVILLE.
 ** YELLOW CORN CHECK HYBRID.
 *** 1= EXCELLENT; 5= VERY POOR.

TABLE 13. WHITE CORN HYBRID TEST, CENTRAL ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990		
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDSILK	TEST	HARVEST
	1988-90	1989-90		1988-90	1989-90			WEIGHT	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.	MO./DA.	LB./BU.	PCT.
PIONEER 3165 **	99	118	133	0	0	0	6-7	51.6	20.5
ZIMMERMAN Z 54 W	97	123	121	0.3	0	0	6-6	51.9	20.9
ZIMMERMAN Z 14 W	93	119	128	1.7	1.0	1.0	6-6	53.4	20.8
ZIMMERMAN Z 17 W	92	117	117	1.3	1.0	1.0	6-7	53.5	19.2
ZIMMERMAN Z 16 W	89	109	119	0.7	0	0	6-4	52.8	23.0
FFR 929W	84	109	107	1.7	2.0	4.0	6-8	52.8	21.9
PIONEER 3144W	83	104	99	0	0	0	6-7	52.2	19.6
AGRATECH 917 W	82	106	115	0.3	0	0	6-7	53.0	21.8
HY PERFORMER HS 180W	-	121	125	-	0	0	6-6	51.9	21.9
HY PERFORMER HS 175W	-	119	116	-	0	0	6-7	51.9	21.7
DEKALB DK 689 **	-	115	103	-	0.5	1.0	6-7	50.8	18.2
DELTAPINE 0-4644W	-	90	106	-	0.5	1.0	6-6	54.7	22.9
ZIMMERMAN Z 63 W	-	-	127	-	-	0	6-6	53.7	21.9
FFR 19419W	-	-	113	-	-	1.0	6-6	54.8	23.1
AGRATECH OK 927W	-	-	112	-	-	1.0	6-7	53.5	21.7
ZIMMERMAN Z 27	-	-	103	-	-	0	6-7	50.9	17.8
ZIMMERMAN Z 61 W	-	-	92	-	-	0	6-6	51.8	19.7
ABOROW RX 959W	-	-	90	-	-	1.0	6-10	52.8	25.0
TEST AVERAGE			112.4						
L. S. D. (.05)			24.9						
C. V. (%)			15.6						

* SHORTER.
 ** YELLOW CORN CHECK HYBRID.

TABLE 14. WHITE CORN HYBRID TEST, SOUTHERN ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990			
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDSILK	TEST	HUSK***	HARVEST
	1988-90	1989-90		1988-90	1989-90			WEIGHT	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.	MO./DA.	LB./BU.	RATING	PCT.
ZIMMERMAN Z 14 W	153	155	178	1.3	0	0	6-12	57.7	2	13.4
ZIMMERMAN Z 16 W	152	162	186	1.3	1.5	0	6-18	57.7	3	13.4
PIONEER 3144W	150	162	182	1.0	1.0	0	6-18	57.4	3	13.4
PIONEER 3165 **	147	144	171	1.0	1.5	0	6-12	57.6	2	13.4
ZIMMERMAN Z 54 W	145	149	172	1.3	1.5	3.0	6-12	57.3	3	13.4
ZIMMERMAN Z 17 W	142	146	159	1.3	1.5	1.0	6-18	58.0	2	13.4
AGRATECH 917 W	138	139	155	2.0	1.0	2.0	6-21	58.3	2	13.4
FFR 929W	133	130	155	1.0	0.5	0	6-21	58.1	2	13.4
DEKALB DK 689 **	-	149	162	-	1.0	0	6-18	56.9	3	13.4
DELTAPINE Q-4644W	-	148	168	-	0	0	6-21	60.1	2	13.4
HY PERFORMER HS 180W	-	147	170	-	0	0	6-18	56.8	3	13.4
HY PERFORMER HS 175W	-	139	158	-	1.5	1.0	6-12	56.3	3	13.4
ZIMMERMAN Z 63 W	-	-	185	-	-	1.0	6-18	57.6	2	13.4
ZIMMERMAN Z 61 W	-	-	178	-	-	0	6-18	58.2	2	13.4
ZIMMERMAN Z 27	-	-	167	-	-	0	6-12	57.6	3	13.4
FFR 19419W	-	-	164	-	-	1.0	6-18	60.0	3	13.4
ASOROW RX 959W	-	-	156	-	-	0	6-18	59.6	2	13.4
AGRATECH GK 927W	-	-	143	-	-	0	6-21	58.0	3	13.4
TEST AVERAGE			167.0							
L. S. D. (.05)			16.8							
C. V. (%)			7.1							

* HEADLAND. THE TEST RECEIVED APPROXIMATELY 12.5 INCHES OF IRRIGATION WATER IN 10 APPLICATIONS DURING THE MONTHS OF MAY AND JUNE.

** YELLOW CORN CHECK HYBRID.

*** 1= EXCELLENT; 5= VERY POOR.

TABLE 15. EARLY CORN HYBRID TEST, NORTHERN ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990			
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDSILK	TEST	HUSK**	HARVEST
	1988-90	1989-90		1988-90	1989-90			WEIGHT	COVER	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.	MO./DA.	LB./BU.	RATING	PCT.
ZIMMERMAN Z 27	108	134	118	1.0	1.0	0	6-29	55.2	3	18.6
SUNBELT 1802	106	132	119	0.7	1.0	0	6-27	56.8	2	19.5
DELTAPINE DP 5750	105	127	116	1.3	2.0	1.0	6-29	56.4	2	18.7
AGRATECH 888	104	123	107	0.7	1.0	0	6-28	55.8	2	18.5
DELTAPINE RA 1502	103	128	109	1.0	1.5	1.0	6-26	56.6	2	20.2
DELTAPINE Q-4543	103	131	112	0.3	0.5	0	6-26	56.9	2	18.2
SUNBELT 5613	102	124	98	1.7	2.0	1.0	6-26	56.8	2	18.5
SUNBELT 1827	101	127	101	0.7	1.0	0	6-29	57.9	2	22.2
SUNBELT SB 1839	101	134	99	1.3	2.0	1.0	7-1	55.0	2	20.9
DEKALB DK 649	98	127	100	0	0	0	6-30	55.0	2	18.5
FFR 747C	94	119	105	0.7	1.0	0	6-25	56.9	2	17.7
PIONEER 3165 ***	-	151	119	-	1.0	1.0	7-1	56.8	3	21.5
DEKALB DK 689 ***	-	137	112	-	1.0	0	6-30	56.1	2	19.2
ZIMMERMAN Z 38	-	135	114	-	0.5	0	6-26	56.8	2	19.4
AGRATECH 825	-	135	115	-	0.5	0	6-26	57.3	2	19.5
PIONEER 3295	-	134	104	-	1.0	0	6-29	54.0	3	15.9
DELTAPINE Q-4666	-	130	111	-	1.5	1.0	6-28	56.3	2	18.1
PIONEER 3343	-	123	103	-	0.5	0	6-27	52.8	3	16.5
HY PERFORMER HS-64	-	119	96	-	0.5	0	6-29	57.8	2	19.9
HY PERFORMER HS-97	-	109	101	-	0.5	1.0	6-30	55.9	2	19.3
PIONEER 3245	-	-	117	-	-	1.0	6-29	56.9	3	15.7
NEW NK S 7759	-	-	113	-	-	0	6-26	56.8	2	18.3
FFR 907C	-	-	111	-	-	0	6-27	56.6	2	19.5
ZIMMERMAN Z 20	-	-	110	-	-	1.0	6-29	56.6	3	18.8
NEW NK PX 9540	-	-	110	-	-	0	6-25	56.4	2	17.9
HY PERFORMER HS-569	-	-	109	-	-	0	6-26	58.2	2	18.5
HY PERFORMER HS-59	-	-	107	-	-	0	6-25	56.6	2	18.2
FFR 19418	-	-	107	-	-	1.0	6-29	56.0	2	19.3
HY PERFORMER HS-X9641	-	-	91	-	-	0	6-24	55.6	2	15.2
TEST AVERAGE			108.0							
L. S. D. (.05)			14.6							
C. V. (%)			9.6							

* CROSSVILLE.
 ** 1= EXCELLENT; 5= VERY POOR.
 *** STANDARD MID TO LATE SEASON HYBRIDS.

TABLE 16. EARLY CORN HYBRID TEST, CENTRAL ALABAMA*, 1988-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990		
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDBILK	TEST	HARVEST
	1988-90	1989-90		1988-90	1989-90		MO./DA.	WEIGHT	MOISTURE
	BU.	BU.	BU.	PCT.	PCT.	PCT.		LB./BU.	PCT.
DELTAPINE DP 5750	111	147	130	0.3	0.5	0	6-5	53.2	18.8
ZIMMERMAN Z 27	110	138	106	0	0	0	6-6	50.8	16.8
AGRATECH 888	109	136	118	0.3	0.5	0	6-7	53.2	19.5
SUNBELT 1827	108	143	128	0.7	0.5	0	6-6	52.9	20.7
SUNBELT SB 1839	106	137	117	0	0	0	6-5	52.1	20.7
SUNBELT 1802	104	133	122	1.0	0.5	0	6-3	53.2	21.4
DEKALB DK 649	104	136	117	0.3	0.5	0	6-6	50.4	18.5
FFR 747C	103	133	117	0.7	0.5	0	6-4	53.2	15.4
DELTAPINE RA 1502	103	136	124	1.3	0.5	0	6-4	52.2	19.1
SUNBELT 5613	100	127	115	0.7	0.5	0	6-4	53.2	17.8
DELTAPINE Q-4543	98	120	104	0	0	0	6-3	53.6	15.9
PIONEER 3165 **	-	150	131	-	0.5	0	6-8	53.1	21.4
DELTAPINE Q-4666	-	143	124	-	0.5	0	6-5	53.0	19.7
DEKALB DK 689 **	-	136	116	-	0.5	0	6-6	52.2	18.2
AGRATECH 825	-	129	116	-	0	0	6-5	52.9	17.9
ZIMMERMAN Z 38	-	121	105	-	0.5	0	6-4	52.1	15.6
HY PERFORMER HS-64	-	120	105	-	1.5	1.0	6-5	54.5	16.9
HY PERFORMER HS-97	-	119	110	-	0	0	6-6	53.2	19.5
PIONEER 3295	-	105	73	-	0	0	6-5	51.2	14.3
PIONEER 3343	-	104	86	-	0.5	0	6-4	51.2	13.5
FFR 1941B	-	-	130	-	-	1.0	6-6	53.3	19.2
FFR 907C	-	-	124	-	-	0	6-5	53.1	18.1
PIONEER 3245	-	-	118	-	-	0	6-5	54.0	15.2
HY PERFORMER HS-59	-	-	113	-	-	0	6-4	52.4	14.6
NEW NK PX 9540	-	-	110	-	-	0	6-2	53.5	15.4
HY PERFORMER HS-569	-	-	109	-	-	0	6-3	53.8	19.6
NEW NK S 7759	-	-	105	-	-	0	6-4	51.6	17.4
ZIMMERMAN Z 20	-	-	95	-	-	2.0	6-6	52.4	16.7
HY PERFORMER HS-X9641	-	-	84	-	-	0	6-2	51.5	14.1
TEST AVERAGE			112.1						
L. S. D. (.05)			18.8						
C. V. (%)			11.9						

* SHORTER.
 ** STANDARD MID TO LATE SEASON HYBRIDS.

TABLE 17. EARLY CORN HYBRID TEST, SOUTHERN ALABAMA*, 1987 & 1989-90

BRAND NAME-HYBRID	YIELD PER ACRE, AV.			LODGED STALKS, AV.			1990				
	3-YR.	2-YR.	1990	3-YR.	2-YR.	1990	MIDBILK	TEST	HUSK**	HARVEST	
	1987&'89-90	1989-90	1990	1987&'89-90	1989-90	1990		WEIGHT	COVER	MOISTURE	
	BU.	BU.	BU.	PCT.	PCT.	PCT.	MO./DA.	LB./BU.	RATING	PCT.	
SUNBELT SB 1839	135	147	129	2.3	3.5	0	5	-24	56.8	3	17.0
SUNBELT 1827	123	132	112	1.7	2.5	1.0	5	-26	58.0	4	16.1
ZIMMERMAN Z 27	122	131	114	4.3	6.5	0	5	-24	57.3	3	16.0
DELTAPINE Q-4543	122	129	120	1.3	2.0	0	5	-21	58.9	3	14.8
SUNBELT 1802	120	128	120	2.3	3.5	0	5	-21	57.6	3	16.2
FFR 747C	120	127	125	2.0	3.0	0	5	-20	58.1	3	15.6
SUNBELT 5613	118	121	102	2.0	3.0	0	5	-21	57.6	3	15.4
DELTAPINE DP 5750	-	148	146	-	4.0	0	5	-25	58.9	3	16.6
ZIMMERMAN Z 38	-	143	139	-	1.5	0	5	-22	58.7	3	16.1
DEKALB DK 689 ***	-	142	131	-	8.0	0	5	-27	57.4	3	15.9
PIONEER 3343	-	141	134	-	1.0	0	5	-23	57.2	4	15.8
AGRATECH 888	-	136	116	-	1.0	0	5	-25	58.8	2	15.8
DELTAPINE RA 1502	-	134	123	-	8.5	1.0	5	-21	57.8	3	16.0
PIONEER 3165 ***	-	134	127	-	12.5	4.0	5	-26	57.8	3	17.1
HY PERFORMER HS-64	-	131	126	-	1.5	0	5	-23	58.5	3	16.1
DEKALB DK 649	-	129	127	-	3.0	0	5	-25	57.5	3	15.8
PIONEER 3295	-	128	138	-	8.0	0	5	-24	55.7	4	15.6
DELTAPINE Q-4666	-	127	124	-	4.0	0	5	-25	58.5	2	15.6
AGRATECH 825	-	125	119	-	4.5	0	5	-22	58.4	3	15.3
HY PERFORMER HS-97	-	125	105	-	6.5	1.0	5	-26	58.4	3	15.8
PIONEER 3245	-	-	135	-	-	0	5	-25	58.6	4	15.4
FFR 1941B	-	-	126	-	-	1.0	5	-24	58.0	2	15.9
NEW NK PX 9540	-	-	124	-	-	0	5	-21	57.2	2	15.9
FFR 907C	-	-	118	-	-	0	5	-22	58.4	3	16.3
NEW NK S 7759	-	-	117	-	-	1.0	5	-21	56.7	4	15.6
ZIMMERMAN Z 20	-	-	111	-	-	0	5	-24	58.2	3	16.1
HY PERFORMER HS-X9641	-	-	110	-	-	0	5	-18	55.9	3	15.6
HY PERFORMER HS-59	-	-	110	-	-	0	5	-20	57.4	3	15.1
HY PERFORMER HS-569	-	-	101	-	-	1.0	5	-20	58.5	3	16.0
TEST AVERAGE			121.6								
L. S. D. (.05)			23.3								
C. V. (%)			13.6								

* FAIRHOPE.

** 1= EXCELLENT; 5= VERY POOR.

*** STANDARD MID TO LATE SEASON HYBRIDS.

REPORT OF PRELIMINARY TESTS
TABLE 18. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR AT CROSSVILLE
IN NORTHERN ALABAMA, 1990

BRAND NAME-HYBRID	AV. YIELD	LODGED	HUSK*	MIDSILK	TEST	HARVEST
	PER ACRE	STALKS	COVER		WEIGHT	MOISTURE
	BU.	PCT.	RATING	MO. -DA.	LB. /BU.	PCT.
PIONEER 3165 **	140	0	3	6-29	59.4	17.8
DELTAPINE 6015X	137	0	2	6-29	57.2	14.8
PIONEER 3154	137	1.0	2	6-28	58.1	15.7
PIONEER 3136	137	1.0	2	6-25	57.5	15.4
UAP X5005	136	0	2	6-29	59.1	17.8
UAP X5004	135	0	2	6-28	60.1	17.3
FFR 19467	133	0	2	6-29	59.3	17.8
GARST N7183	133	1.0	2	6-25	58.1	16.1
FFR 19452	132	0	2	6-26	57.6	15.7
CARGILL 8427	131	0	2	6-25	58.6	16.2
UAP X5003	130	0	2	6-28	57.5	17.1
PIONEER X9924	129	1.0	2	6-29	57.8	15.4
FFR 17411	128	1.0	2	6-25	58.0	16.5
JACQUES EXP 0128	127	0	2	6-29	59.9	18.2
GARST 8250	127	0	2	6-26	58.3	16.3
NC+ 8100	127	0	2	6-24	58.9	16.0
AGRATECH EXP 1700	127	0	2	6-27	58.2	15.6
ZIMMERMAN Z 36	125	0	3	6-26	59.3	16.1
PIONEER X9823	125	0	3	6-25	58.1	14.6
DEKALB EXP971	125	0	2	6-24	57.6	16.3
FFR 18066	125	1.0	3	6-26	57.4	14.1
PIONEER 3142	125	2.0	3	6-28	57.5	14.8
JACQUES 7910	124	0	2	6-25	58.2	15.5
DEKALB DK 689 **	123	0	2	6-29	58.1	16.2
FFR 19439	123	0	2	6-26	59.0	16.4
HY PERFORMER HS-9963	122	1.0	3	6-25	56.4	14.6
DEKALB EXP964	122	1.0	2	6-25	54.4	14.5
DELTAPINE 7053X	121	0	2	6-27	60.1	19.2
HY PERFORMER HS-59	121	1.0	2	6-25	57.4	15.0
HY PERFORMER HS-9911	120	1.0	2	6-25	58.1	15.5
NEW NK X 758	118	0	2	6-26	57.6	15.4
SUNBELT EXP 8619	118	2.0	2	6-26	55.5	16.5
DELTAPINE 7051X	116	0	2	6-25	57.8	17.8
HYPERFORMER HS-879	116	1.0	2	6-27	59.6	16.0
HY PERFORMER HS-9773	115	1.0	3	6-26	56.9	13.9
HY PERFORMER HS-60	114	1.0	2	6-25	58.6	16.1
DELTAPINE 6013X	113	0	2	6-28	57.5	16.5
SSI N168	112	4.0	3	6-29	57.4	16.6
TERRA TR 367E	110	0	2	6-26	59.5	16.4
CARGILL 8127	107	1.0	2	6-25	60.3	15.4
DELTAPINE 7055X	106	1.0	2	6-29	59.1	19.5
HYPERFORMER HS-889	105	1.0	2	6-27	58.3	16.0
TEST AVERAGE	123.6					
L. S. D. (.05)	15.2					
C. V. (%)	8.8					

* 1= EXCELLENT; 5= VERY POOR.
** STANDARD HYBRIDS FOR COMPARISON.

REPORT OF PRELIMINARY TESTS
TABLE 19. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR AT TALLASSEE
IN CENTRAL ALABAMA, 1990

BRAND NAME-HYBRID	AV. YIELD	LODGED	HUSK*	MIDSILK	TEST	HARVEST
	PER ACRE	STALKS	COVER		WEIGHT	MOISTURE
	BU.	PCT.	RATING	MO. -DA.	LB. /BU.	PCT.
PIONEER X9823	177	0	2	6-12	59.8	15.1
DELTAPINE 6013X	169	0	4	6-16	57.1	16.9
JACQUES 8510	168	1.0	3	6-11	58.2	17.4
PIONEER 3142	168	2.0	2	6-16	57.5	14.8
PIONEER 3180	165	0	2	6-15	56.6	15.5
DEKALB EXP971	163	0	3	6-11	56.8	15.4
DELTAPINE 6015X	162	0	4	6-16	57.2	15.3
PIONEER 3154	161	4.0	2	6-11	58.0	15.4
GARST 8250	160	0	3	6-12	59.9	15.9
FFR 18066	160	1.0	2	6-15	58.3	16.1
UAP X5003	160	1.0	2	6-16	57.9	17.5
CARGILL 8427	159	0	2	6-12	58.9	15.8
PIONEER 3165 **	159	0	2	6-18	57.2	18.8
AGRATECH EXP 1700	158	0	2	6-17	57.5	14.7
JACQUES EXP 0128	154	0	4	6-15	58.8	18.1
UAP X5005	154	0	3	6-17	58.9	17.4
TERRA TR 367E	153	0	3	6-13	59.9	15.3
GARST N7183	153	0	2	6-11	58.1	15.2
PIONEER X9924	151	0	3	6-17	58.1	16.3
CARGILL 8127	151	0	4	6-11	59.9	15.1
NC+ 8100	150	0	2	6-11	58.6	15.7
ZIMMERMAN Z 36	149	0	3	6-16	58.6	16.4
FFR 18714	149	0	3	6-17	58.4	16.4
HY PERFORMER HS-9773	148	3.0	2	6-15	57.6	14.5
DELTAPINE 7055X	147	0	3	6-16	55.6	19.5
NEW NK X 758	147	0	2	6-14	57.4	14.8
FFR 19467	147	1.0	3	6-16	58.5	15.4
HY PERFORMER HS-60	147	1.0	3	6-11	59.0	14.5
DEKALB DK 689 **	147	1.0	3	6-17	57.3	16.8
UAP X5004	146	0	4	6-16	59.0	17.3
HY PERFORMER HS-9911	145	0	4	6-16	58.9	15.5
JACQUES 7910	144	0	3	6-12	57.8	15.7
DELTAPINE 7053X	141	1.0	3	6-16	58.8	16.6
DEKALB EXP964	138	1.0	3	6-11	55.2	14.9
HY PERFORMER HS-59	137	0	3	6-11	59.1	15.0
PIONEER 3136	136	2.0	3	6-12	57.7	15.5
FFR 19439	133	0	3	6-13	58.3	16.2
HY PERFORMER HS-9963	131	0	2	6-13	57.8	14.6
DELTAPINE 7051X	130	0	4	6-17	57.0	18.8
FFR 907C	129	0	3	6-16	57.8	15.5
HYPERFORMER HS-889	128	4.0	3	6-16	58.9	15.5
SSI N168	124	3.0	2	6-17	57.2	15.1
HYPERFORMER HS-879	121	4.0	2	6-11	59.4	15.4
SUNBELT EXP 8619	121	1.0	3	6-16	56.8	15.3
TEST AVERAGE	148.4					
L. S. D. (.05)	20.6					
C. V. (%)	9.9					

* 1= EXCELLENT; 5= VERY POOR.
** STANDARD HYBRIDS FOR COMPARISON.

REPORT OF PRELIMINARY TESTS
 TABLE 20. CHARACTERISTICS OF CORN HYBRIDS TESTED ONE YEAR AT FAIRHOPE
 IN SOUTHERN ALABAMA, 1990

BRAND NAME-HYBRID	AV. YIELD	LODGED	HUSK*	MIDSILK	TEST	HARVEST
	PER ACRE	STALKS	COVER		WEIGHT	MOISTURE
	BU.	PCT.	RATING	MO.-DA.	LB./BU.	PCT.
PIONEER 3136	150	0	3	6-2	57.3	17.8
HY PERFORMER HS-9773	149	0	3	6-2	57.4	15.4
CARGILL 8127	142	0	3	6-3	59.5	16.5
TERRA TR 367E	141	0	4	6-4	57.8	18.6
PIONEER 3165 **	140	0	3	6-6	57.7	20.3
DELTAPINE 6015X	139	0	3	6-6	57.6	16.6
DEKALB DK 689 **	137	0	2	6-6	58.4	18.6
PIONEER 3142	137	0	4	6-5	56.2	17.4
DEKALB EXP964	135	0	3	6-1	57.3	15.7
GARST N7183	133	0	3	6-2	58.8	18.7
HY PERFORMER HS-9963	131	0	3	6-1	58.1	16.6
HY PERFORMER HS-9911	130	0	3	6-5	59.1	17.1
FFR 18714	130	0	3	6-6	57.7	20.7
HY PERFORMER HS-60	128	0	2	6-2	58.3	18.1
UAP X5005	128	0	2	6-6	54.9	20.8
PIONEER 3170	128	0	3	6-3	58.0	16.5
DELTAPINE 6013X	127	1.0	2	6-6	57.2	16.9
SUNBELT EXP 8619	126	0	3	6-4	57.0	17.4
FFR 19439	126	0	2	6-1	57.6	16.7
PIONEER X9823	126	0	3	6-5	59.6	17.5
SSI N168	122	1.0	3	6-6	56.5	17.4
CARGILL 8427	121	0	3	6-5	59.0	19.1
DELTAPINE 7055X	121	1.0	2	6-5	53.3	19.1
ZIMMERMAN Z 36	120	0	3	6-5	58.8	18.8
FFR 19452	119	0	3	6-3	58.8	16.8
PIONEER 3154	119	0	3	6-4	57.0	17.3
GARST 8250	117	0	3	6-2	58.7	18.9
NEW NK X 758	115	0	3	6-4	57.7	19.4
HY PERFORMER HS-59	114	0	3	6-2	58.3	18.9
PIONEER X9924	114	1.0	3	6-7	57.4	18.5
UAP X5003	114	0	3	6-5	56.6	18.8
UAP X5004	114	0	2	6-6	58.9	20.7
DEKALB EXP971	114	0	3	6-2	56.0	18.2
NC+ 8100	113	0	3	6-1	58.4	19.2
JACQUES EXP 0128	113	0	2	6-6	58.3	21.0
DELTAPINE 7053X	111	0	3	6-6	57.3	17.5
FFR 19467	109	0	2	6-6	58.7	19.3
AGRATECH EXP 1700	106	0	3	6-5	57.5	19.1
DELTAPINE 7051X	104	0	2	6-5	57.1	18.4
HYPERFORMER HS-879	101	0	3	6-4	58.4	17.8
HYPERFORMER HS-889	95	0	3	6-5	58.5	18.7
FFR 907C	92	0	3	6-6	58.6	19.0
TEST AVERAGE	122.5					
L. S. D. (.05)	30.2					
C. V. (%)	17.6					

* 1= EXCELLENT; 5= VERY POOR.
 ** STANDARD HYBRIDS FOR COMPARISON.

Table 21. Growing Season Rainfall

Test location	Year	Monthly rainfall							7 months total
		Mar.	Apr.	May	June	July	Aug.	Sept.	
Belle Mina	1990	8.0	4.5	5.0	3.9	3.8	1.2	1.5	27.9
	1989	5.6	3.2	3.9	13.5	5.1	2.8	3.8	37.9
Crossville	1990	7.4	3.4	4.1	3.5	2.0	2.0	3.9	26.3
	1989	5.8	3.3	3.4	8.3	9.1	1.8	8.9	40.6
Windfield	1990	6.9	3.2	7.2	7.3	3.1	2.1	2.7	25.5
	1989	5.0	3.8	4.5	8.3	7.3	3.3	5.7	37.9
Tallassee	1990	11.7	2.8	4.1	2.0	2.8	1.3	1.3	25.0
	1989	7.3	7.3	5.3	13.7	7.5	1.7	3.3	46.1
Shorter	1990	10.9	2.9	4.6	1.7	2.0	2.4	2.1	26.6
	1989	9.5	7.0	3.5	14.4	9.0	1.9	5.8	51.1
Prattville	1990	10.1	1.6	4.8	1.6	6.1	1.3	0.3	25.8
	1989	7.1	6.0	3.2	10.7	8.1	1.0	2.0	38.1
Marion Junction	1990	9.9	4.5	5.0	1.6	3.5	0.8	0.7	26.0
	1989	7.3	5.5	1.9	9.3	5.7	1.3	1.5	32.5
Camden	1990	8.2	3.0	6.4	1.5	1.5	2.9	2.9	25.6
	1989	5.3	4.2	2.1	10.3	7.4	1.9	3.7	35.9
Monroeville	1990	9.0	4.5	6.3	0.7	5.3	2.3	1.8	29.8
	1989	7.0	8.2	3.6	13.4	7.3	1.7	4.5	45.7
Brewton	1990	12.9	3.8	8.8	1.5	3.5	3.6	1.5	35.6
	1989	8.3	4.6	8.0	11.3	4.8	2.1	4.4	43.5
Fairhope	1990	10.4	2.5	4.9	6.2	5.8	0.9	1.6	32.3
	1989	4.3	2.9	7.0	18.5	8.9	2.2	0.8	44.6
Headland	1990	4.3	2.1	3.5	2.7	3.2	0.8	0.8	17.4
	1989	5.2	3.0	5.6	11.6	7.2	1.9	5.1	39.6

SOURCES OF 1990 CORN HYBRID TEST SEED

<u>Seed Company</u>	<u>Brand</u>	<u>Seed Company</u>	<u>Brand</u>
AgraTech Seed, Inc. Rt. 1, Box 76A McCordsville, IN 46055	AgraTech	McCurdy Seed Co. 522 East Main Street Fremont, IA 52561	McCurdy
Alabama Farmers Cooperative, Inc. P.O. Box 2227 Decatur, AL 35602	FFR	NC + Hybrid Rt. 2, Box 190 Hastings, NE 68901	NC +
Asgrow Seed Co. P.O. Box 109 Matthews, MD 63867	Asgrow	The New Northrup King P.O. Box 249 Grifton, NC 28530	New NK
Cargill Hybrid Seeds Box 5645 Minneapolis, MN 55440	Cargill	Pioneer Hi-Bred Int. 1000 W. Jefferson St. Tipton, IN 46072	Pioneer
Dekalb Plant Genetics 3100 Sycamore Road Dekalb, IL 60115	Dekalb	Seed Source Inc. 106 East 4th Street Leland, MS 38756	SSI
Delta and Pine Land Co. P.O. Box 157 Scott, MS 38772	Deltapine	Sunbelt Hybrids Box 406 Thomasville, GA 31799	Sunbelt
FFR Cooperative 4112 E. State Road 225 W. Lafayette, IN 47906	FFR	Terra International, Inc. P.O. Box 171376 Memphis, TN 38187	Terra
Garst Seed Company Rt. 3 Box 93 Bowling Green, MO 63334	Garst	United Agri Products 2514 82nd Street Lubbock, TX 79423	UAP
Hy Performer Seed Co. 5100 Poplar Ave. Memphis, TN 38103	Hy Performer	Zimmerman Hybrids Inc. 5147 W. Franklin Rd. Evansville, IN 47712	Zimmerman
Jacques Seed Co. Prescott, WI 54021	Jacques		

ACCEPTABLE HYBRIDS FOR 1990

All of the acceptable hybrids are not equal in performance. It is suggested that this report be carefully studied before choosing a hybrid. For relative maturity information, use the days to milksilk data in preceding tables. Unless otherwise noted, all acceptable hybrids have been tested at least 3 years in the tests and are listed in descending order of 3-year average yield.

NORTHERN ALABAMA

Yellow hybrids		White hybrids		Early hybrids+	
Brand name	Hybrid	Brand name	Hybrid	Brand name	Hybrid
Pioneer	3165	Zimmerman	Z 54 W	Deltapine	G-4543
Zimmerman	Z 27	Zimmerman	Z 16 W	Sunbelt	5613
AgraTech	GK 900	Pioneer	3144 W	Sunbelt	1827
Dekalb	DK 698	Zimmerman	Z 14 W	**Zimmerman	Z 38
Pioneer	3320	Zimmerman	Z 17 W	**AgraTech	825
Jacques	8400	**Deltapine	G-4644 W	Deltapine	RA 1502
*Deltapine	G-4666			Sunbelt	1802
*Dekalb	DK 789			AgraTech	888
*Sunbelt	1876			Zimmerman	Z 27
**NC+	7507			Deltapine	DP 5750
**Pioneer	3140			*Sunbelt	1827

*If present trends continue, this hybrid will be removed from the acceptable list next year in the category indicated.

**Recommended based on exceptional 2-year average.

+ Early hybrids listed in order of maturity

ACCEPTABLE HYBRIDS FOR 1990 (continued)
CENTRAL ALABAMA

Yellow hybrids		White hybrids		Early hybrids+		Black Belt	
Brand name	Hybrid	Brand name	Hybrid	Brand name	Hybrid	Brand name	Hybrid
McCurdy	7777	Zimmerman	Z 54 W	Sunbelt	1802	Dekalb	DK 689
Pioneer	3320	Zimmerman	Z 14 W	*Sunbelt	5613	Dekalb	DK 789
Garst	8180	Zimmerman	Z 17 W	Deltapine	DP 5750	Jacques	9220
Dekalb	DK 689	Zimmerman	Z 16 W	**Deltapine	DP G-4666	McCurdy	7777
Deltapine	DP 5750	*Pioneer	3144 W	Sunbelt	SB 1839	Sunbelt	1860
Zimmerman	Z 27	**HyPerformer	HS 180 W	Zimmerman	Z 27	Pioneer	3147
Deltapine	G-4666			Sunbelt	1827	Jacques	8400
Sunbelt	1802			AgraTech	888	*Pioneer	3187
Sunbelt	1860						
*Pioneer	3165						
*Dekalb	DK 789						
*Sunbelt	1882						
*Sunbelt	1876						
**Jacques	9220						

*If present trends continue, this hybrid will be removed from the acceptable list next year in the category indicated.

**Recommended based on exceptional 2-year average.

+Early hybrids listed in order of maturity.

ACCEPTABLE HYBRIDS FOR 1990 (continued)
SOUTHERN ALABAMA

Yellow hybrids		White hybrids		Early hybrids+	
Brand name	Hybrid	Brand name	Hybrid	Brand name	Hybrid
Dekalb	DK 689	Zimmerman	Z 14 W	*FFR	747 C
McCurdy	7777	Zimmerman	Z 16 W	*Sunbelt	1802
Garst	8180	Pioneer	3144 W	**Zimmerman	Z 38
Sunbelt	1860	Zimmerman	Z 54 W	**Pioneer	3343
Dekalb	DK 789			Sunbelt	SB 1839
Sunbelt	1802			Zimmerman	Z 27
New NK	McNair 508			**Deltapine	DP 5750
Pioneer	3147			Sunbelt	1827
Zimmerman	Z 27				
Sunbelt	1876				
Sunbelt	1827				
*AgraTech	GK 900				
*Pioneer	3165				
*Sunbelt	1882				
**McCurdy	8181				
**Sunbelt	7400				

38

*If present trends continue, this hybrid will be removed from the acceptable list next year in the category indicated.

**Recommended based on exceptional 2-year average.

+Early hybrids listed in order of maturity.

