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Mississippi Corn for Silage Hybrid Trials, 2006

Thomas R. Vaughan, Brad Burgess, Billy B. Johnson, Mike McCormick, Terry R. Smith, Jerry Simmons, and Bernie White

PROCEDURES

The 2006 corn hybrid trials for silage were conducted at the Coastal Plain Branch Experiment Station at Newton. Two experiments were planted. One experiment was designed to evaluate silage yield and various components of forage quality, while the other experiment was designed to evaluate grain yield of each hybrid. In the silage yield experiment, plots consisted of two 25-foot-long rows that were spaced 30 inches apart. The grain yield experiment was identical in row spacing to the silage tests, but row length was 16.75 feet. Experimental design was a randomized complete block with four replications. Seeds of all entries were supplied by participating companies and packaged for planting at rates of 24,000 or 28,000 seeds per acre as specified by the respective seed company. A four-row planter equipped with 31 cell cone units was used for planting. Established stands were not thinned. Nitrogen, phosphorus, potassium, and lime were applied according to soil test recommendations.

Weeds were controlled by cultivation and/or herbicides currently registered for use on corn with strict adherence to all label instructions. All hybrids were treated with Poncho 250 or Cruiser for insect control. Silage was harvested with a two-row silage harvester, and the biomass from the entire plot was blown into an automatic weigh wagon. Chopped samples were collected from each plot for dry matter and forage quality determinations. Samples were placed in a forced draft oven at 140°F until dry. Estimates for forage quality measured in this trial were crude protein, acid detergent fiber, and estimated total digestible nutrients. The grain yield was not published because statistical analysis indicated that data was too variable to provide useful varietal information.

Thomas Vaughan is manager of Foundation Seed Stocks at Mississippi State University (MSU); Brad Burgess is a research associate II at MSU; Billy Johnson is a senior research assistant at the MAFES Coastal Plain Experiment Station; Mike McCormick is resident coordinator of the Southeast Research Station of the Louisiana State University Agricultural Center; Terry Smith is an assistant professor in the MSU Department of Animal and Dairy Science; Jerry Simmons is a research associate with the Louisiana State University Agricultural Center; and Bernie White is manager of MSU Variety Evaluations. For more information, contact Vaughan at (662) 325-2390; e-mail, rvaughan@pss.msstate.edu. Recognition is given to Jessie L. Selvie and Jerry W. Nail, research technicians for the Variety Testing Program, for their assistance in packaging, planting, harvesting, and recording plot data. Additional acknowledgment is also extended to Terry R. Smith, professor of Animal and Dairy Science for his assistance in preparing forage samples for quality and statistical analysis. Special thanks are given to Dr. Mike McCormick and associates of LSU Agricultural Center, Southeast Research Station in Franklinton, Louisiana, for their contribution to this project in evaluation of all forage quality samples. Statistical analyses and computing assistance were provided by Clayton Nash, a student worker in the Experimental Statistics Unit. This publication was prepared by Jimmie Cooper, administrative secretary for MAFES Research Support Units. It was published by the Office of Agricultural Communications, a unit of the Mississippi State University Division of Agriculture, Forestry, and Veterinary Medicine.

Experiment Station
Vance H. Watson, Director
Mississippi Agricultural & Forestry Experiment Station
Robert H. Foglesong, President • Mississippi State University • Vance H. Watson, Vice President

MAFES Coastal Plain Branch, Newton

Ideal conditions existed at planting time, resulting in excellent emergence and early plant growth. Crop growth remained good until the crop ran out of moisture during the latter part of May. The last significant rainfall that the crop received was 2.04 inches on May 11. Following the rain, the crop became severely drought-stressed, and yield was significantly reduced. Harvest was made in a timely manner.

Soil type . . . . . **Prentiss fine sandy loam**
Soil pH **5.8**
Soil fertility . . . . . **P=H+; K=L**
Fertilizer added . . . . . **13-13-13 @ 500 lb/A Preplant on 3/23/06**
0-0-60 @ 100 lb/A on 3/23/06
34-0-0 @ 400 lb/A Broadcast on 4/17/06
Herbicide application . . . . . **Atrazine + Lasso @ 2 qt/A Broadcast on 3/27/06**
Planting date . . . . . **March 27**
Harvest date . . . . . **August 9**

Table 1. Silage yield, crude protein, acid detergent fiber content, and total digestible nutrients of 24 corn hybrids grown at Newton, Mississippi, 2006.

Hybrid	Brand	Silage yield[1]	Crude protein	Acid detergent fiber	Total digestible nutrients
		tons/A	*pct*	*pct*	*pct*
TV26B82	Terral	12.9	11.3	31.0	73.2
TV23R31	Terral	12.6	11.5	34.2	70.6
2993RRB	Golden Acres	12.0	11.9	32.8	71.5
842RR	FFR	11.7	11.0	34.9	70.2
2988RRB	Golden Acres	11.6	10.8	32.7	71.7
DG57K58	Dyna-Gro	11.2	10.6	35.2	70.2
2841RRB	Golden Acres	11.1	11.2	33.9	70.7
31R87	Pioneer	11.1	11.4	33.4	70.9
TV2160BT	Terral	11.1	11.2	34.9	70.1
31P41	Pioneer	11.1	11.5	36.1	69.0
DG58K02	Dyna-Gro	11.0	11.1	34.4	70.4
886RR	FFR	11.0	11.1	35.6	69.6
8247YG1	Garst	10.9	10.9	33.5	70.6
8295YG1/RR	Garst	10.7	10.8	34.2	70.7
DKC66-23	DEKALB	10.7	10.5	34.1	70.8
851RRBt	Croplan Genetics	10.5	11.6	32.8	71.6
DKC67-23	DEKALB	10.5	10.9	33.0	71.7
33V15	Pioneer	10.3	11.1	33.8	71.0
895Bt	Croplan Genetics	10.1	11.0	35.0	69.8
DG58P59	Dyna-Gro	9.7	11.1	32.9	71.5
DKC69-71	DEKALB	9.6	11.6	35.4	69.6
V58YR2	Vigoro	9.5	11.7	32.2	71.9
V59YR52	Vigoro	9.1	11.6	35.1	69.9
822RRBt	Croplan Genetics	8.7	11.5	34.9	69.9
Overall Mean		10.8	11.2	34.0	70.7
LSD (.10)		1.8	0.8	2.8	2.1
CV (%)		14.4	3.4	4.0	1.5
R^2 (%)		38.9	63.0	60.0	61.0

[1]At 35 percent dry matter.

Rainfall Summary

	Inches
April	2.33
May	6.83
June	2.34
July	3.26
August	1.36
Total	16.12

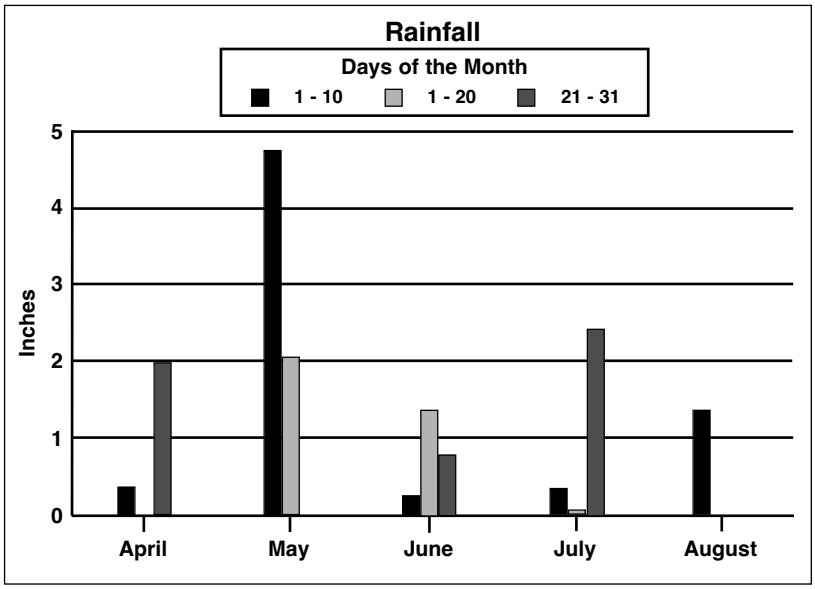

Table 2. Characteristics of hybrids in the Mississippi corn for silage hybrid trials, 2006.

Company	Hybrid	Planting rate (X 1000)	Days to maturity	Grain texture[1]	MDIV resistance[2]	MCDV resistance[2]
Croplan Genetics P.O. Box 42 Cary, MS 39054 662-873-7351	822RR/Bt 851RR/Bt 895Bt	28 28 28	119 118 120	- M -	- S -	- S -
FFR Seed 969 Cloverleaf Drive Southaven, MS 38671 901-652-0903	842RR 886RR	28 28	117 119	- M-H	- MS	- MS
Garst Seed Company 2369 330th Street P.O. Box 500 Slater, IA 50244 318-396-7037	8247YG1 8295YG1/RR	28 28	117 117	H H	MR MR	MR MR
Golden Acres Genetics P.O. Box 579 Buchanan Dam, TX 78609 512-793-5205	2841RRB 2988RRB 2993RRB	28 28 28	117 118 119	- H H	- MR R	- MR R
Monsanto 800 N. Lindbergh Blvd. St. Louis, MO 63167 815-754-4809	DKC66-23 DKC67-23 DKC69-71	28 28 28	116 117 119	- - -	- - -	- - -
Pioneer Hi-Bred Int., Inc. 7501 Memorial Pkwy SW Suite 205 Huntsville, AL 35802 256-650-4223	31P41 31R87 33V15	28 28 28	118 120 114	M M -	- MS -	- MS -
Royster-Clark, Inc. 717 Robinson Rd., SE Washington, C. H., OH 43160 740-869-2181	V58YR2 V59YR52	28 28	117 119	M M	- -	- -
Terral Seed, Inc. P.O. Box 826 Lake Providence, LA 71254 318-559-2840	TV2160Bt TV23R31 TV26B82	28 28 28	115 113 115	- H M	- R MR	- - -
UAP Distribution, Inc. 7251 West 4th St. Greeley, CO 80634 601-856-3314	DG57K58 DK58K02 DG58P59	28 28 28	115 116 116	H - H	- - -	- - -

[1]M = Medium; H = Hard; MH = Medium-Hard.
[2]MDIV = Maize Dwarf Mosaic Virus; MCDV = Maize Chlorotic Dwarf Virus (corn Stunt); S = Susceptible; R = Resistant; MR = Moderately Resistant.

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