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Mississippi Corn for Silage Hybrid Trials, 2007

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PROCEDURES

The 2007 corn hybrid trials for silage were conducted at the Coastal Plain Branch Experiment Station in 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 28-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 14 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 belted 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. Characteristics 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.

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MAFES Coastal Plain Branch, Newton

Adequate soil moisture was present at planting. High seed germination resulted in good stand established and early season vigor. However, by mid-May the test began to suffer drought conditions that persisted until mid-June, when some rainfall was received. July did bring significantly greater rainfall. However, due to the late developmental phase of growth, the benefit was minimal. The test was harvested in a timely manner.

Soil type . . . . . **Prentiss fine sandy loam**
Soil pH **6.1**
Soil fertility . . . . . **P=H; K=M**
Fertilizer added . . . . . **Preplant — 0-0-60 @ 200 lb/A on March 12**
Topdress — 34-0-0 @ 588 lb/A on April 3

Herbicide application . . . . . **Preplant — Atrazine @ 2 qt/A + Dual II Magnum @ 1.5 pt/A on March 19**
Postplant — Callisto @ 3 oz/A + Atrazine @ 10 oz/A on May 3

Planting date . . . . . **March 19**
Harvest date . . . . . **July 18**

Table 1. Silage yield, crude protein, acid detergent fiber content, and total digestible nutrients of 11 corn hybrids grown at Newton, Mississippi, 2007.

Hybrid	Brand	Silage yield[1]	Crude protein	Acid detergent fiber	Total digestible nutrients
		tons/A	*pct*	*pct*	*pct*
DG58K40	Dyna-Gro	13.6	9.3	29.2	67.5
DKC69-71 (YGCB/RR2)	DEKALB	13.1	9.1	32.1	65.4
2993RRB	Golden Acres	12.8	8.1	31.5	65.8
DKC67-87 (YGCB/RR2)	DEKALB	12.6	9.4	31.6	65.8
28Z49	Golden Acres	12.2	9.5	31.3	66.0
2989RRB	Golden Acres	11.8	8.6	32.9	64.9
DKC67-23 (YGCB/RR2)	DEKALB	11.5	9.5	31.8	65.6
8950RB	Croplan Genetics	11.0	8.9	29.2	67.4
DG57K58	Dyna-Gro	11.0	9.5	28.8	67.7
DG58K02	Dyna-Gro	10.7	9.0	31.5	65.8
746RR2BT	FFR	10.7	11.0	29.5	67.2
Overall Mean		11.9	9.3	30.9	66.3
LSD (.10)		1.9	0.5	1.3	0.9
CV (%)		10.8	4.1	2.8	0.9
R^2 (%)		51.3	82.9	78.6	78.3

[1]At 35 percent dry matter.

Rainfall Summary

	Inches
April	3.14
May	2.16
June	2.48
July	4.86
August	2.84
Total	15.48

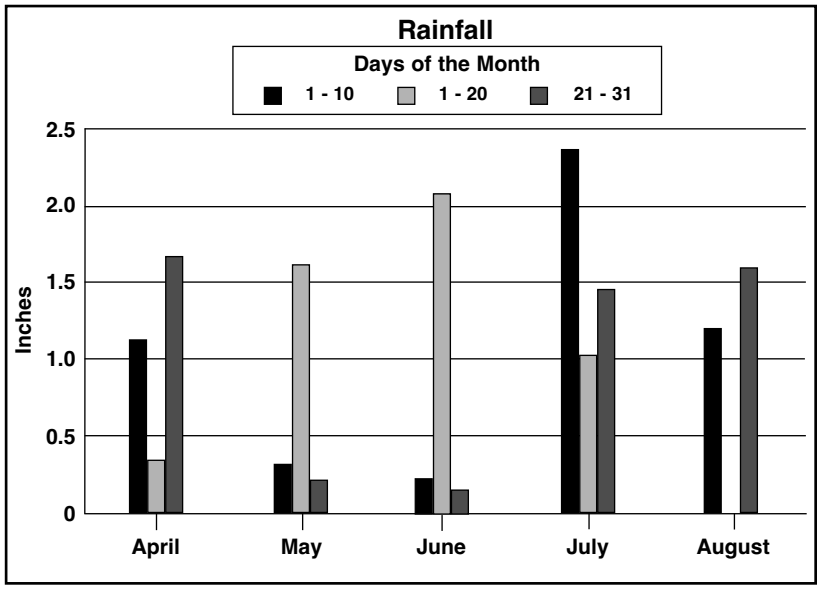

Table 2. Characteristics of hybrids in the Mississippi corn for silage hybrid trials, 2007.

Company	Hybrid	Planting rate (X 1000)	Days to maturity	Grain texture[1]	MDIV resistance[2]	MCDV resistance[2]
FR Seed 969 Cloverleaf Drive Southaven, MS 38671 901-652-0903	746RR2BT	28	114	M	—	—
Golden Acres Genetics P.O. Box 579 Buchanan Dam, TX 78609 512-793-5205	28Z49 2989RRB 2993RRB	28 28 28	118 118 119	H H H	MR MR R	MR MR R
Land O' Lakes/Croplan Genetics P.O. Box 64281 St. Paul, MN 55164 662-873-7351	8950RB	28	121	—	—	—
Monsanto 800 N. Lindbergh Blvd. St. Louis, MO 63167 800-768-6387	DKC67-23 (YGCB/RR2) DKC67-87 (YGCB/RR2) DKC69-71 (YGCB/RR2)	28 28 28	117 117 119	— — —	— — —	— — —
UAP Distribution, Inc. 7251 West 4th St. Greeley, CO 80634 601-856-3314	DG57K58 DK58K02 DG58K40	28 28 28	115 119 117	H 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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