

# Mississippi Corn for Silage Variety Trials, 2004

Thomas R. Vaughan  
Manager, Foundation Seed Stocks  
Mississippi State University

Billy B. Johnson  
Senior Research Assistant  
Coastal Plain Experiment Station

Mike McCormick  
Resident Coordinator, Southeast Research Station  
Louisiana State University

Terry R. Smith  
Assistant Professor, Animal & Dairy Science  
Mississippi State University

J. D. Ward  
Associate Professor, Dairy Nutrition, SE Research Station  
Louisiana State University

Clarence Watson  
Associate Director, MAFES  
Mississippi State University

Bernie White  
Manager, Variety Evaluations  
Mississippi State University

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For more information contact Vaughan at (662) 325-2390; e-mail, [rvaughan@pss.msstate.edu](mailto:rvaughan@pss.msstate.edu). Recognition is given to Jessie L. Selvie, Jerry W. Nail, and Jason Horner 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 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 Jeremy Hatfield, a student worker in the Experimental Statistics Unit.

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### PROCEDURES

The 2004 corn hybrids trials for silage were conducted on experiment station land 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 which 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. 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 degrees Fahrenheit until dry. Estimates for forage quality measured in this trial were crude protein, acid detergent fiber, and estimated total digestible nutrients. An Almaco SPC-20 plot combine was used to harvest the grain yield experiments. The harvested grain was weighed, the moisture content determined, and grain yields converted to bushels per acre at 15 percent moisture.



Table 1. Silage yield, grain yield, crude protein, acid detergent fiber content, and total digestible nutrients of twenty four corn hybrids grown at Newton, Mississippi, 2004

Hybrid	Brand	Silage yield <sup>1</sup>	Grain yield	Crude Protein	Acid Detergent Fiber	Total Digestible Nutrients
		<i>tons/A</i>	<i>bu/A</i>	<i>pct</i>	<i>pct</i>	<i>pct</i>
1866Bt	Triumph	30.4	188.8	7.9	18.5	74.0
58P59	UAP Midsouth	28.9	207.8	8.1	17.1	75.0
DKC 67-60	Monsanto	27.3	184.9	8.1	21.6	72.4
900BT	FFR	26.8	165.5	7.7	17.9	74.3
TRX2717RR	Triumph	26.5	178.2	8.0	20.2	72.7
DKC69-72	Monsanto	26.2	144.0	7.9	20.4	72.6
31G66	Pioneer	26.0	190.6	7.9	16.7	75.3
833RR	FFR	26.0	205.3	8.1	18.0	74.4
983RR	Unity	26.0	191.9	8.3	17.9	74.4
DK697	Monsanto	25.3	185.7	7.8	19.8	73.0
57P35	UAP Midsouth	25.2	190.3	8.4	17.4	74.8
31R87	Pioneer	25.2	210.1	7.7	16.6	75.4
2011RR	Triumph	25.1	204.3	8.0	19.3	73.4
849CL	FFR	24.9	201.2	7.9	18.8	73.7
TV2130	Terral	24.9	210.4	7.9	17.7	74.6
33M54	Pioneer	24.6	192.6	8.2	17.5	74.7
TV2140nRR	Terral	24.3	167.0	8.0	17.6	74.6
8288	Garst	24.2	163.4	7.6	18.1	74.3
8204RR	Garst	24.2	190.9	8.2	19.5	73.2
6296	Unity	24.0	198.7	8.2	16.2	75.7
6617	Unity	23.2	211.6	8.4	18.2	74.2
TV2160BT	Terral	23.0	191.1	7.9	21.4	71.8
8230IT	Garst	23.0	177.2	8.0	21.5	71.7
58K22	UAP Midsouth	22.4	189.4	7.8	19.2	73.4
Overall Mean		25.3	189.8	8.0	18.6	73.9
LSD (.10)		4.1	40.9	.4	3.2	2.4
CV (%)		13.7	17.7	4.5	14.7	2.8
R <sup>2</sup> (%)		28.0	27.2	48.6	33.7	33.6

<sup>1</sup>At 35 percent dry matter.

Table 2. Characteristics of hybrids in the Mississippi Corn Silage Trials, 2004

Company	Hybrid	Planting rate (X 1000)	Days to maturity	Grain texture <sup>1</sup>	MDIV resistance <sup>2</sup>	MCDV resistance <sup>2</sup>
FFR Seed	833RR	28	117	H	MS	MS
969 Cloverleaf Drive	849CL	28	118	MS	MR	MR
Southaven, MS 38671	900 BT	28	119	MS	S	S
731-394-4679						
Garst Seed Company	8204RR	28	116	MH	-	-
761 Walnut Knoll Lane	8230IT	28	118	-	-	-
Suite 200	8288	30	117	H	-	-
Cordova, TN 38018						
901-351-7340						
Monsanto	DK697	28	119	M	-	-
3100 Sycamore Rd	DKC67-60	28	117	-	-	-
DeKalb, IL 60115	DKC69-72	28	119	-	-	-
815-758-9323						
Pioneer Hi-Bred Int. Inc.	31G66	28	118	H	MS	MS
7501 Memorial Pkwy SW	31R87	24	120	M	MS	MS
Suite 205	33M54	28	114	H	S	S
Huntsville, AL 35802						
Terral Seed, Inc.	TV2130	28	113	MH	MR	-
P. O. Box 826	TV2140nRR	28	114	H	-	-
Lake Providence, LA 71254	TV2160Bt	28	115	H	MR	-
318-559-2840						
Triumph Seed, Inc.	1866BT	28	118	H(R)	MR	MR
P. O. Box 1050	2011RR	28	120	-	-	-
Ralls, TX 79357	TRX 2717RR	28	121	-	-	-
800-530-4789						
UAP Midsouth	DG58K22	32	118	H	-	-
57 Germantown Court	DG57P35	32	114	H	S	S
Suite 200	DG58P59	32	117	H	-	-
Cordova, TN 38018						
901-752-4223						
Unity Seeds	6296	28	114	M	MR	MR
107 Fallon St.	6617	28	117	-	-	-
Kentland, IN 47951	983RR	28	116	-	-	-
219-474-5810						

<sup>1</sup>M = Medium; H = Hard; MH = Medium-Hard.

<sup>2</sup>MDIV = Maize Dwarf Mosaic Virus; MCDV = Maize Chlorotic Dwarf Virus (corn Stunt); S = Susceptible; R = Resistant; MR = Moderately Resistant.