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Corn Hybrids For Silage, 1997

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NOTICE TO USER

This Mississippi Agricultural and Forestry Experiment Station Information Bulletin is a summary of research conducted under project number MIS 1414 at locations shown on the map. It is intended for the use of colleagues, cooperators, and sponsors. The interpretation of data presented herein may change after additional experimentation. Information included herein is not to be construed either as a recommendation for use or as an endorsement of a specific variety or product by Mississippi State University or the Mississippi Agricultural and Forestry Experiment Station.

This report contains data generated as part of the Mississippi Agricultural and Forestry Experiment Station research program. Joint sponsorship by the organizations listed in Table 10 is gratefully acknowledged.

Trade names of commercial products used in this report are included only for clarity and understanding. All available names (i.e., trade names, code numbers, chemical names, etc.) of varieties or products used in this research project are listed in Table 10.

Procedure

The 1997 Corn Hybrids Trials for Silage were conducted at three locations on experiment station land -- Mississippi State University, Coastal Plain Branch Experiment Station in Newton, and Brown Loam Branch Experiment Station in Raymond (see map). Two experiments were planted at each location.

One experiment was designed to determine silage yield and various components of forage quality, while the other experiment was designed to determine grain yield of each hybrid. In the silage yield experiment, plots consisted components of forage quality, while the other experiment was designed to determine grain yield of each hybrid. In the silage yield experiment, plots consisted of rows 25 feet long and were spaced 30 inches apart. The grain yield experiment was identical in row spacing to the silage test, however row length was 16.75 feet. Experimental design was a randomized complete block with four replications.

Seed 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 4-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. Lorsban was donated by Dow Elanco and banded at planting for insect control.

Silage was harvested with a 2-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 determined in these trials were crude protein, acid detergent fiber, estimated total digestible nutrients, net energy lactation, net energy gain, and net energy maintenance. Mineral analyses were made for calcium, phosphorus, magnesium, and potassium.

An Almaco SPC-20 plot combine was used to harvest the grain yield experiments. The harvested grain was weighed, the moisture content was determined, and grain yields were converted to bushels per acre at 15 percent moisture.

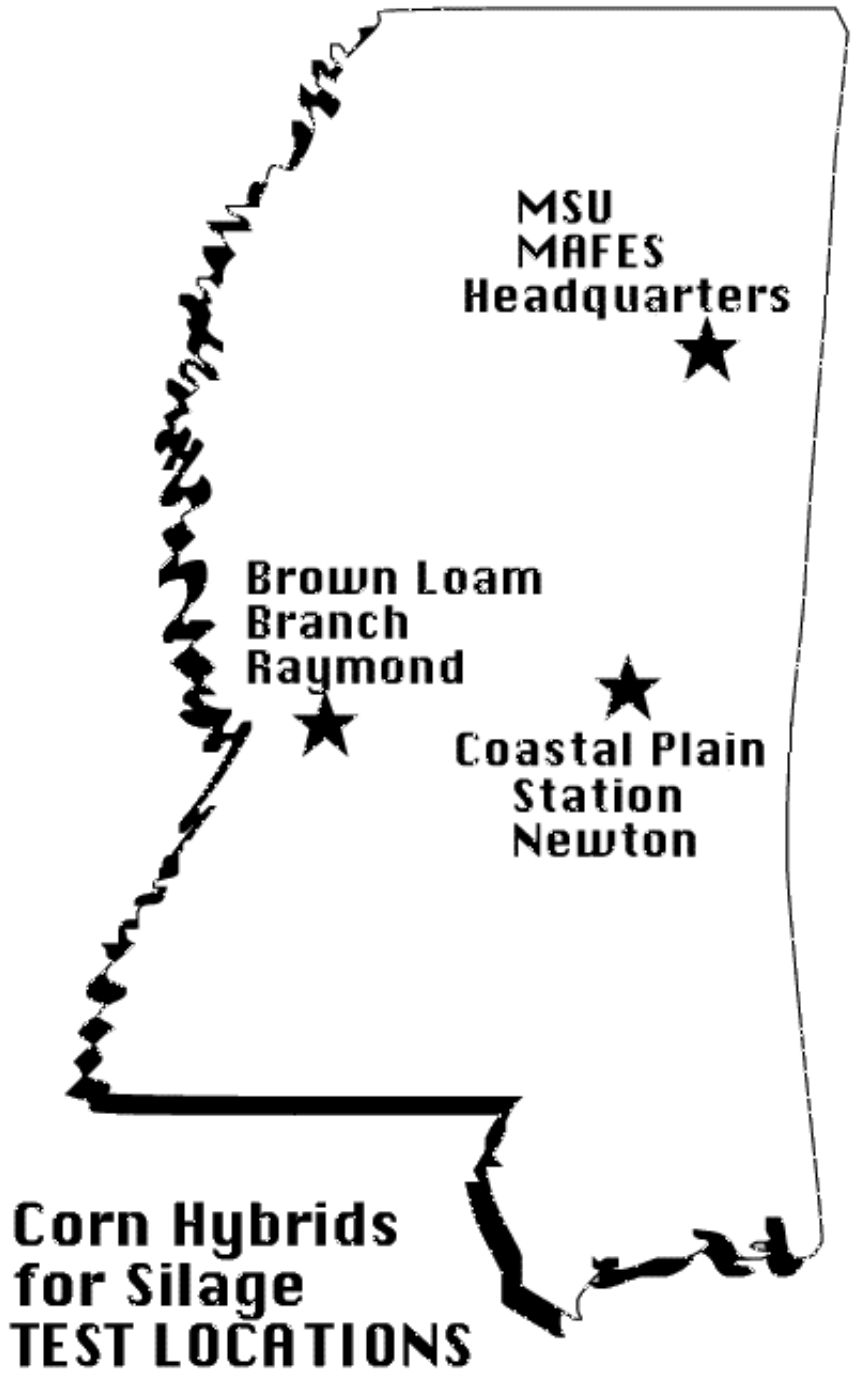

Table 10. Characteristics of hybrids in the Mississippi Corn Silage Trials, 1997.

Company	Hybrid	Planting rate (X 1000)	Days to maturity	Grain texture[1]	MDMV resistance[2]	MCDV resistance[2]
AgraTech Seeds, Inc. 5559 N 500 W McCordsville, IN 46055	1177 ATX999	28 28	135 --	H --	MR --	MR --
AgriPro Seeds, Inc. 6075 Poplar, Suite 435 Memphis, TN 38119	HY 9646 AP 9707 HS 9843 AP 9909 HY 9919V HS 9944 HS 9977	28 28 28 28 28 28 28	-- -- 117 120 120 -- --	-- -- H MH MH -- --	-- -- S S MR -- --	-- -- S S MR -- --

	HY 9899V	28	120	MH	MR	MR
Asgrow Seed Co. P.O. Box 109 Matthews, MO 63867	RX938	28	118	H	--	--
DeKalb Genetics Corp. 3100 Sycamore Rd. DeKalb, IL 60115	DK687 DK743	28 28	118124	MH M	R --	R --
Mycogen Seeds 3600 N. Columbia Plainview, TX 79072	TMF113	24	113	M	S	S
Pioneer Hi-Bred Int'l 6767 Old Madison Pike Suite 110 Huntsville, AL 35806	3085 3223	24 28	124 116	MH M	MR MR	MR MR
Terra International, Inc. 600 Fourth Street P.O. Box 6000 Sioux City, IA 5112-6000	TR1226	28	122	M	S	S

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