Mississippi Corn Promotion Board
2023 Progress Report

Project
Title: Standardization of MS Corn Hybrid Trials

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Department: Research Support—Variety Testing

Project Summary (Issue/Response)

The 2023 Mississippi Corn for Grain Hybrid trials consisted of a total of fifty-six entries. These hybrids were supplied by twelve participating companies or groups. These hybrids were grown in both irrigated and non-irrigated environments at multiple locations throughout the state. Each participating company was given the opportunity to submit their hybrid in either the irrigated test, non-irrigated test or both. During the 2023 season, the irrigated tests consisted of 53 of the 56 total hybrids. While the non-irrigated locations were made up of 44 hybrids from the total 56 entered in the Mississippi State Corn for Grain Hybrid OVT.

The 2023 growing season started off good and planting was relatively early at most locations. At most locations, conditions at the time of planting were ideal, allowing for all plots to emerge and get up and going quickly. A couple of locations experienced heavy rainfall events following planting that resulted in poor stands and therefore, a replant situation was necessary. One of these replanted locations experienced extreme drought conditions beginning in mid-summer and continuing until harvest. Overall, however, the 2023 growing season was favorable for corn production. Thanks to a very dry fall, harvest was completed without delays due to weather and on average, good yields were observed in 2023.

Project Results/Outcomes

The 2023 Corn for Grain Hybrid Trials were divided into irrigated and a non-irrigated tests. The irrigated corn locations consisted of 53 corn hybrid entries that were evaluated for their yield potential within five different environments throughout the state. The mean yields for these four locations ranged between 234.5 to 262.9 bushels per acre. The mean yield across all five locations for the irrigated trials was 248.8 bushels per acre. The irrigated corn hybrid trials have traditionally all been located in the delta region of the state; however, one of the irrigated locations was positioned in the Black Belt region of the state, near Macon, MS.

The non-irrigated locations consisted of 44 corn hybrid entries that were evaluated for their yield potential within five different environments throughout the state, 5 locations in the Hills and 1 Delta location. The mean yields for the six non-irrigated locations ranged between 138.8 to 214.1 bushels per acre. The mean yield across all four of these non-irrigated locations was 185.4 bushels per acre.

Project Results

2023 Corn hybrid yield summary for dryland locations.						
Aberdeen hills (clay)	Brooksville hills (clay)	Horn Lake hills (loam)	Raymond hills (loam)	Stoneville hills (loam)	Verona hills (clay)	Overall average
bu/A	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*
187.0	214.1	191.3	135.8	187.4	196.6	185.4

2023 Corn hybrid yield summary for irrigated locations.					
Macon hills (clay)	Minter City delta (loam)	Rolling Fork delta (loam)	Stoneville delta (loam)	Stoneville delta (clay)	Overall average
bu/A	*bu/A*	*bu/A*	*bu/A*	*bu/A*	*bu/A*
252.5	252.4	234.5	241.2	262.9	248.7

Harvesting Plots

Project Impacts/Benefits

The overall goal of this project was to evaluate a large number of corn hybrids across multiple environments and cultural practices, both irrigated and non-irrigated, to determine which ones have the greatest yield potential within the state of Mississippi. The benefit of these hybrid trials is to allow the producer to be able to view unbiased yield data of these various corn hybrids, supplied by multiple seed company participants. The results of these yield trials can have a tremendous impact on a producer's decision of which hybrids are best suited for his area of the state and/or particular soil type. Evaluating these trials, grown under both irrigated and non-irrigated conditions, allows one to examine this data and then make management decisions about which hybrids might have the best potential to perform well when soil moisture is limited.

Project Deliverables

The Mississippi Corn Hybrid for Grain publication is available annually in a printed copy or it may be downloaded from the MSU Variety testing website at **mafes.msstate.edu/variety-trials**.