Mississippi Corn Promotion Board
2013 Progress Report

Project Title: Standardization of Mississippi Corn Hybrid Trials

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Department: Research Support

Project Summary (Issue/Response)

The Corn for Grain Hybrid trials consisted of a total of 105 entries in 2013. These hybrids were supplied by seventeen participating companies or groups. These hybrids were grown in both irrigated and non-irrigated environments at multiple locations throughout the state. Each participating company is given the opportunity to submit their hybrid in either the irrigated test, non-irrigated test or both. During the 2013 season, the irrigated tests consisted of 100 of the 105 total hybrids. While the non-irrigated locations were made up of 88 hybrids from the total 105 entered in the Mississippi State OVT.

The most significant change in the OVT hybrid trials during the past season was a location change. A request was made during the annual Technical Advisory Committee meeting to relocate the test traditionally grown at Newton, to an area of Noxubee County in order to evaluate yield potential of these hybrids when grown under irrigation in the Black Belt area of the state. The new test site was located on a producer near Macon, MS. This location was grown under center-pivot irrigation and produced good yields.

The 2013 growing season conditions at the time of planting were ideal, but heavy rainfall and unseasonably cooler temperatures delayed germination of all of the earlier planted plots. The remainder of the growing season was very favorable for corn production, due to the milder temperatures and timely rainfall throughout the season. Harvest was completed without any delays due to weather or equipment and good yields were observed in 2013, even at some of the non-irrigated locations that were planted later than the target date, due to the heavy spring rains.

Project Results/Outcomes

The 2013 Corn for Grain Hybrid Trials were divided into irrigated and a non-irrigated tests. The irrigated corn locations consisted of 100 corn hybrid entries that were evaluated for their yield potential within five different environments throughout the state. The mean yields for these five locations ranged between 176.4 to 234.8 bushels per acre. The mean yield across all five locations for the irrigated trials was 208.9 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 in 2013 was positioned in the Black Belt region of the state, near Macon, MS.

The non-irrigated locations consisted of 88 corn hybrid entries that were evaluated for their yield potential within four different environments throughout the Hill section of the state. The mean yields for these four locations ranged between 124.6 to 190.2 bushels per acre. The mean yield across all four of these non-irrigated locations was 150.1 bushels per acre.

Project Impacts/Benefits

The overall goal of this project was to evaluate multiple corn hybrids across multiple environments, 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 for 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 or particular soil type. By having tests grown under both irrigated and non-irrigated conditions, this data can help one to make management decisions about which hybrids might have the best potential to perform well when soil moisture is limited.

Project Deliverables

The Corn Hybrid for Grain publication is available annually in a printed copy or it may be downloaded from the MSU Variety testing website at www.msucares.com.

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