

**ARKANSAS CORN AND GRAIN SORGHUM PROMOTION BOARD
PROGRESS REPORT – November 2010**

Title: Improving Technology Transfer for Profitable Corn and Grain Sorghum Production in Arkansas

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Progress to Date:

Twin Row Corn versus Single Row Corn: Two trials were conducted to evaluate single 38 inch row spacing corn compared to twin rows (spaced 7.5 inches apart) on 38 inch wide beds. Trials were located on the Lon Mann Station at Marianna and the Northeast Research and Extension Center at Keiser. A single corn hybrid (Pioneer 33M57) at plant populations of 24K, 30K, 36K, 42K, and 48K are evaluated under single row and twin row planting configuration. A Monosem twin row planter with variable seeding rate technology was used to plant the twin row corn. A standard John Deere Vacuum planter was used to plant the single row plots. Plant populations were taken soon after emergence and where needed plots were thinned to get comparable plant populations between the single row and twin row corn. The center two rows of each four row plot were harvested with a plot combine and yields were adjusted to 15.5% moisture. At Marianna and Keiser, corn yield was not influenced by row configuration. Averaged over row configuration, plant populations of 24, 30, 36, 42, and 48K, yielded 175, 194, 206, 202, and 202 bu/acre respectively at Marianna and 177, 208, 209, 201, and 199 bu/acre respectively at Keiser. The largest challenge with the twin row planter was being able to make the beds wide enough to plant on. If both twin rows can't be properly planted on top of the bed, yields will likely be reduced compared to a single row. A roller bedder that produces a flat bed for planting is much more desirable to plant twin row on than a hipped type bed.

Plant Population: Plant population studies were conducted at Keiser and Rohwer evaluating 6 populations (25K, 30K, 35K, 40K, 45K, and 50K) and three hybrids (Dekalb 64-83, Pioneer 1615, and Pioneer 31D59). Hybrids responded similar to increasing plant population with maximum yield at 35,000 plants/acre at Keiser and 30,000 plants/acre at Rohwer.

County Corn and Grain Sorghum Hybrid Demonstrations: Twenty five county corn hybrid demonstrations and two grain sorghum hybrid demonstrations were conducted across the state. Hybrids have to be entered into the University of Arkansas Corn/Sorghum Hybrid testing program to be entered. These trials provide an additional source of data on corn/grain sorghum hybrid performance for Arkansas producers. The complete County Corn and Grain Sorghum Hybrid Testing Report can be found at the following web address:

http://www.aragriculture.org/crops/corn/hybrid_trials/default.htm