

2006 Report
C.I. Project # 03-166AL

Fertilization of Cotton on Black Belt Soils

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Because of disappointing yields in 2005 that were due to excessive rains on cotton that was planted no-till into a rye cover crop, in 2006 cotton was planted using a ridge tillage system with no cover crop. Beds were made in November, 2005, and allowed to over-winter. Cotton was planted on 14 April. The experiment was designed as a randomized complete block test of liming, nitrogen-potassium-phosphorus (N-P-K) rates, and supplemental sulfur. Initial fertilizer treatments were applied on 4 May. Due to dry weather and a non-uniform cotton stand, skips were replanted on 15 May. Side-dress N was applied on 14 June. The region was plagued by the worst summer drought and highest temperatures in over 50 years. By mid July, a few bolls were beginning to open. Plots were hand-picked on 30 September. Although 2006 overall yields (380 lb. lint/acre) were slightly higher than those in 2005 (270 lb. lint/acre), the drought-damaged crop failed to produce a decent crop of cotton. Many seeds were immature and hollow. The plots ginned 47.3% lint. We surmise that if the crop had been machine-harvested, very little of the lint would have been recovered because of hard locks and weak bolls due to the physiological effects of the drought. There was no a significant difference in the treatments due to low yields.