

2008 FINAL SUMMARY

INFLUENCE OF TILLAGE AND HERBICIDES ON WEED CONTROL IN COTTON

(Title no. 10)

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Tillage systems including: 1)-moldboard plowing followed by (fb) disking with Prowl @2 pts/A, fb field cultivation., 2)-disking twice with Prowl fb field cultivation, 3)-notill with Prowl preemergence after planting, and 4)-notill without Prowl were evaluated for weed control and cotton yield over a three year period beginning in 2006. All plots in 2007 and 2008 were planted notill to evaluate the residual effect of moldboard plowing.

Weed control and seed cotton yields in 2006 were higher overall for the plots that received moldboard plowing, regardless of the preemergence or postemergence herbicides applied after tillage operations. Notill either with or without Prowl resulted in lower overall weed control and cotton yield. This tillage influence carried over somewhat in 2007 with the same trend as 2006. Continuing the trial in 2008 shows that the yield increase attributed to primary tillage over notill in 2006 and 2007 did not carry over into the third year. However, the advantage of Prowl herbicide was evident, resulting in an average of 37 percent lower seed cotton yield for the three year average when Prowl was not used. Although preemergence herbicides provided better overall early-season control for all systems, the use of glyphosate postemergence was required for optimum weed control and cotton yield.