

## **Project Report**

### **Evaluation of Precision Strip Tillage for Alabama Farmers**

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#### **Introduction**

Conservation tillage is the primary system used by north Alabama farmers in producing cotton. Although the conservation tillage system may vary from farm to farm, most farmers have reduced or eliminated deep tillage and many use small grain cover crops to reduce soil compaction. In most cases the farmer will plant back into the old cotton row to avoid tire traffic compaction.

Evaluation of several conservation tillage fields in north Alabama has indicated a compacted soil layer developing at a depth of about three inches below the surface. Most of these compacted soil problems occurred on soils where a cover crop had not been used.

#### **Materials and Methods**

A six row "Remlinger" Precision Strip-Till unit was purchased to evaluate its use to reduce surface soil compaction. In December 2004 the unit was evaluated on approximately 300 acres in Lawrence County. Spring tillage with the Remlinger unit was planned for February and March in 2005. Soil conditions, however, during this period were too wet to effectively run this strip-till unit.

#### **Results and Discussion**

The Remlinger strip tillage unit was found to be very effective in eliminating surface compaction when the chisel shank was run at a 6 inch depth. Some problems with clogging were found early in November when cotton stalks were not brittle and would not flow through the parallel coulters.

The machine's actual tillage area was only eight to ten inches wide. Evaluations at cotton planting indicated the parallel coulters should be set to make a small bed to allow for winter soil settling.

Both farmers were pleased with the use of the Remlinger strip tillage unit. Cotton emerged rapidly and a good tap root developed on the cotton where the strip tillage was used. The machine could be run at eight miles per hour with good results. One suggestion was to add row cleaners to the front coulters to reduce residue going through the machine, and reduce clogging.