

PROJECT SUMMARY, January 2007
(Funded Proposal)

Title: Evaluation of a Two-Pass Herbicide System in Three High-Residue Rye Cover Conservation-Tillage Cotton Systems.

Investigators: Andrew Price (Weed Scientist, USDA-ARS), Dale Monks (Cotton Extension Specialist, Auburn University), Mike Patterson (Extension Weed Scientist, Auburn University).

Progress to date: Three field studies were conducted evaluating roundup ready, liberty link, and conventional cotton at E.V. Smith Agricultural Research Center. The studies were a factorial treatment arrangement consisting of three levels: winter cover (rye present or absent), early postemergence alone or sequential (either RoundUp™, Ignite™, or Envoke) alone or followed by a Layby (Caparol™ plus MSMA). Rye was established in the fall of 2004 and 2005 in half the plots as winter cover preceding a cotton crop under a conservation tillage system. In the spring, the winter cover and emerged weeds in fallow plots was terminated with a glyphosate application. Additionally, rye was rolled with mechanical roller-crimper.

Results: In general, a standard three pass system (early postemergence, late postemergence, and layby) provided superior yield protection compared to two-pass systems. Additionally, the RoundUp™ system provided higher weed control and yield compared to the Ignite™ system which provided superior weed control than the conventional seed system.