

A Conservation Tillage Profitability Learning Tool: Version 2¹

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Abstract

Many studies have examined the agronomic and economic impact of conservation tillage systems on the primary cash crops in Alabama and Georgia (e.g. corn, cotton, peanuts and soybeans) with mixed results. While some studies purport that conservation tillage systems are agronomically and economically beneficial, others have shown that conservation tillage systems under various circumstances can be detrimental and actually hurt crop yields and lower farm profits. To date, only a limited number of studies have tried to bring much of these results together to examine the impact of conservation tillage systems on corn, cotton, peanuts and soybeans across the Southeast. In an effort to bring the results of past and present agronomic and economic studies together into a decision support tool, the purpose of this project is to construct a conservation tillage profitability learning tool that allows end-users to assess the economic impact of alternative conservation tillage technologies, including cover crops, on different cropping systems in their geographic region of the Southeast. The second version of the learning tool includes a net returns calculator that allows the user to examine the profitability of adopting conservation tillage technologies with or without a cover crop in Alabama and Georgia. Data used to construct the tool came from studies published in agronomic and economic journals, as well as research experiments being conducted in both states. A second decision tool, a cover crop biomass economic decision aide, allows the user to examine the potential of using winter cover crops prior to corn and cotton and provides a detailed economic analysis of the optimal level of biomass to ensure profitability (i.e. that increase in crop yield compensate for the cost of the cover crop). The decision aide has been remodeled to be more user friendly and to run as a stand alone application on Windows based operating systems.

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