

FARM-LEVEL PROFITABILITY OF WEED AND INSECT MANAGEMENT STRATEGIES IN TRANSGENIC AND NONTRANSGENIC CORN. Kathrin Schirmacher, Scott M. Swinton, James J. Kells, and Christina D. DiFonzo, Graduate Student, Department of Crop and Soil Sciences, Professor, Department of Agricultural Economics, Professor, Department of Crop and Soil Sciences, and Associate Professor, Department of Entomology, Michigan State University, East Lansing, MI 48824-1325.

Stacking of traits has led to corn hybrids that contain resistance for both herbicides and insects. Stacked trait corn hybrids are currently being aggressively marketed to corn producers. Transgenic traits offer corn growers new options for weed and insect management. These options are often more environmentally friendly and carry less risk to users than conventional strategies. Adoption of this new technology will occur only if there is a clear economic advantage over current practices. This 3-year study examines the management of weeds and corn rootworm via stacked transgenic corn hybrids compared to conventional insect and weeds management strategies. Profitability of this technology is a function of the efficacy and consistency of pest management and resulting crop yield preservation. The economic value of these traits has not been determined under Michigan conditions. The profitability of resistance traits in corn hybrids for Michigan corn producers varies according to the levels of pest infestations. This research identifies the level of pest infestations in which the cost of these stacked transgenic traits are justified in relation to conventional practices.