

EVALUATION OF A NO-TILL ORGANIC SOYBEAN SYSTEM IN MICHIGAN. Dale R. Mutch, Extension Specialist and Coordinator, Kellogg Biological Station, Michigan State University, Hickory Corners, MI 49060.

Michigan's largest organic acreage is planted to soybeans. Currently, these soybean farmers use up to 10 tillage treatments to control weeds. The increase in fuel costs has caused farmers to reevaluate current weed control practices to reduce these tillage trips.

Developing a biosuppressant cover crop system for soybeans will reduce tillage trips. Cover crops suppress weeds by competing for light, water and nutrients. The Michigan State University Extension Cover Crop Program has been evaluating a no-till organic soybean system for five years. Cereal rye is planted in the fall and crimped and rolled in the late spring. Soybeans are no-till drilled in 7.5 inch spacing following crimping and rolling of the rye. No additional weed control practices are used throughout the growing season.

We have had mixed results with this practice. In 2004 we had excellent yields and excellent weed control. In 2005 we crimped/rolled the rye too early resulting in lower yields. In 2006 we had very good yields and excellent weed control. In 2007 we had a drought that resulted in poor yields and weedy plots. I believe we need more research on this practice, as the potential benefits definitely make it worth the effort.