

## Cover Crops

Richard and Sharon Thompson devoted a major effort in 1991 to the study of cover crops for weed control. ([See table](#)) Previous trials by the Thompsons and other cooperators have pursued cost reduction, weed control, and managing the cover crop to limit competition with other crops. Dick Thompson put all these lessons together, seeding just 18 pounds of rye per acre in two rows just on the ridge. With this practice cost is limited, the cover is located where it gives the most erosion control and is easiest to eliminate, and the rye is tough on weeds. Actually, this weed control can come both through the rye's competitiveness and through the "allelopathic" effect (perhaps chemical) it has on other plants.

In a cropping system without herbicides, Dick Thompson compared the effect of two factors - cover crop and rotary hoeing - on crop yield and weed numbers. The "cover crop" was either the seeded rye or the natural cover of spring weeds, which, with the late planting, were abundant. Dick was most concerned with the effect of the practices on weeds in the row, but he also counted weeds out of the row. As the table shows, weed numbers were very low overall. In the trial at site 9, the rye cover was more effective in reducing total weeds than was the weed cover, but in the trial at site 1-N the reverse was true. Hoeing reduced the total number of weeds in all three of the factorial trials, but hoeing did not change the number of weeds in the row. In a year with a normal planting season, weed cover would not be so developed at planting time, offering a greater contrast between the rye cover and the volunteer weed cover.

A fourth trial pitted cover crops against two other weed control strategies: herbicide and rotary hoeing. Each of the three treatments in this trial relied on only a single strategy. Weed numbers did not seem to relate to yields in this experiment, but weeds were few overall.