Weed Trials

The challenges in weed management in 1992 came from the weather. Postemergence herbicides were ineffective in the dry spring and early summer conditions, while there were plenty of good days for using the rotary hoe. But cultivating helped dry the soil, and the rains came just when it was too late to cultivate anyway, allowing weeds to grow profusely. There were no easy routes to success. What might have worked in previous years could be a real dud in 1992. If there was a key, it was in knowing your system, adjusting it a little, and staying in control.

There were three trials in corn and four in soybeans that evaluated ridge tillage with and without herbicides (<u>Table 6</u>). In five of these seven trials, the system using mechanical controls instead of chemical/mechanical was the more profitable one. In one of these, **Tom and Alesia Lacina's** banded soybeans yielded significantly better but were less profitable because of two postemergence spray passes across the field. In **Paul Mugge's** trial in soybeans, mechanical control was less profitable not because of a yield difference but due to the cost of two extra rotary hoeings and a cultivation.

Richard and Sharon Thompson, Boone, compared the effectiveness of three rotary hoe passes (double-hoeing the first time, single the second) with no rotary hoeing (<u>Table 6</u>). In neither corn nor soybeans did they see a significant difference in yield or in numbers of broadleafed weeds, which were uniformly low.

The Thompsons also compared four no-herbicide systems for their ability to control weeds: 1) the standard BuffaloTM planter (depth gauge wheel and coulter over the row); 2) a Buffalo planter modified so these items were off the row; 3) rye drilled on the ridge the previous fall; and 4) an empty drill that disturbed the ridge in the fall but planted no seed. A patch of sunflowers dominated the count of total broadleaf weeds, but the fall rye treatment had significantly fewer smartweeds than the other treatments (<u>Table 3</u>). The highest smartweed count was with the modified planter.