

Stale seedbed management for Roundup Ready corn. B. J. Williams and A. B. Burns.
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Studies were conducted between 1994 and 1995 to determine if stale seedbed management practices for conventional corn apply to Roundup Ready corn. The experimental designs were RCBs arranged as factorials with 3 replications. Factor A was stale seedbed management approach. Management approaches included removal of weeds 2 weeks before planting, mechanical removal of weeds by dragging at planting, and to plant as is and remove weeds after corn emerged. Glyphosate at 1 lb ai/A plus 0.75 lb ai/A 2,4-D was applied 2 weeks prior to planting to remove weeds in plots receiving the preplant treatment. Factor B was postemergence weed management options and included 1 lb ai/A glyphosate plus 0.75 lb ai/A 2,4-D or glyphosate plus 0.5, 1 or 1.5 lb ai/A atrazine applied at V2. A layby treatment of 1 lb ai/A glyphosate plus 1.0 lb ai/A atrazine was applied at V6. Despite excellent weed control from all treatments, corn yields were dramatically affected by stale seedbed management programs. In 1994, the best corn yields were observed in plots where weeds were removed before planting. Dragging beds prior to planting was better than doing nothing, but still resulted in an average yield reduction of 20%. On average, planting as is and removing weeds at V2 resulted in a 30% yield reduction. In 1995, corn yields were similar for removing weeds before planting and the dragging. Planting as is and removing weeds at V2 resulted in an average yield reduction of 65% in 1995. In both years, 2,4-D applications at V2 reduced corn yields from 15 to 55% compared to atrazine treatments. These results indicate that removing weeds at or before planting is necessary to achieve maximum corn yields, even when weeds can be effectively removed after corn emergence.

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