

GUZA, COREY J.*, JAMES F. STEWART, and LEE A. HUBBELL, Michigan Sugar Company, 2600 S. Euclid Ave., Bay City, MI 48706. *Beta vulgaris* response to amide herbicides.

ABSTRACT

A study was conducted over two years examining the effect of amide herbicides on sugarbeet injury and weed control. S-metolachlor and dimethenamide-P were applied to sugarbeets preemergence and at the two-leaf stage of sugarbeet growth. S-metolachlor was applied at rates of 0.72 kg ai/ha, 1.0 kg ai/ha and 1.4 kg ai/ha. Dimethenamide-P was applied at rates of 0.42 kg ai/ha, 0.63 kg ai/ha and 0.84 kg ai/ha. Regardless of herbicide rate, dimethenamide-P applied preemergence resulted in sugarbeet injury each year. S-metolachlor applied preemergence at rates of 1.4 kg ai/ha and 1.0 kg ai/ha also caused sugarbeet injury each year. In one of two years, s-metolachlor applied preemergence at 0.72 kg ai/ha resulted in sugarbeet injury. Sugarbeets were not injured when herbicides were applied at the two-leaf stage of growth. In one of two years, *Amaranthus retroflexus* control was similar between treatments when s-metolachlor and dimethenamide-P were applied preemergence regardless of herbicide rate. Emerged weeds were not controlled when s-metolachlor and dimethenamide-P were applied at the two-leaf stage timing.