

A COMPARISON OF FULL-, SPLIT- AND MICRO-RATE HERBICIDE TREATMENTS FOR WEED MANAGEMENT IN RED BEET. Darren E. Robinson, Associate Professor, Department of Plant Agriculture, University of Guelph, Ridgetown Campus, Ridgetown, ON, N0P 2C0.

Trials were established in 2008 and 2009 at different locations each year to determine red beet tolerance and weed control of pyrazon plus triflusal applied as full, split or micro-rates, with or without a preemergence application of s-metolachlor (1200 g ai/ha). In 2009, visual injury was observed in the split-rate and micro-rate treatments, and corresponded to reductions in yield of No.1 and 2 beets where s-metolachlor had been applied PRE, and where split-rates of pyrazon plus triflusal were applied. These results were in contrast to those observed in 2008, where no injury or yield reductions were observed ($p < 0.001$). The primary difference between the trials was higher soil OM (9.2 vs. 3.2%) and lower sand content (49 vs 78%) in 2008 than in 2009. All treatments that included pyrazon plus triflusal applied as split- or micro-rate applications provided greater than 90% control of common lamb's-quarters and redroot pigweed. In years or fields where multiple flushes of weeds occur, the best weed control is obtained with the use of micro-rates.