

EFFECT OF HERBICIDE-FUNGICIDE TANK-MIX COMBINATIONS ON WEED CONTROL AND TOMATO TOLERANCE. Darren E. Robinson and Allan S. Hamill, Assistant Professor, Department of Plant Agriculture, University of Guelph, Ridgetown, ON, N0P 2C0 and Research Scientist, Agriculture and Agri-Food Canada, Harrow, ON.

Trials were conducted at two locations in southwestern Ontario from 2002-2004 to compare the effect of herbicide-fungicide tank mixtures on weed control, tomato visual injury, and tomato yield. In each trial, one half of each plot was kept weed-free by handweeding to test for visual injury and tomato tolerance to herbicides alone. The other half of each plot was not hand-weeded to determine the level of weed control of each treatment, and the effect of competition on tomato yield. Treatments included rimsulfuron (15 and 30 g a.i. ha⁻¹), thifensulfuron (6 and 12 g a.i. ha⁻¹), metribuzin (150 and 300 g a.i. ha⁻¹), rimsulfuron+metribuzin (15+150 and 30+300 g a.i. ha⁻¹), or thifensulfuron+metribuzin (6+150 and 12+300 g a.i. ha⁻¹) alone or with either chlorothalonil (1600 g a.i. ha⁻¹) or chlorothalonil+copper (1600+2200 g a.i. ha⁻¹). Untreated weed-free and weedy checks were included for comparison. In one of the study years, visual injury was observed at 7 days after treatment (DAT) in the rimsulfuron+metribuzin and thifensulfuron+metribuzin treatments, but by 28 DAT the plants had outgrown the injury. The addition of chlorothalonil or chlorothalonil+copper did not increase visual injury, and did not reduce tomato yield in the weed-free portion of the trial. The addition of chlorothalonil did not reduce weed control in any of the treatments. However, the addition of chlorothalonil+copper reduced control of velvetleaf (*Abutilon theophrasti* Medic.) control in the thifensulfuron and rimsulfuron+metribuzin treatments, and common lamb's-quarters (*Chenopodium album* L.) control in the thifensulfuron treatment. These reductions in weed control corresponded to a yield reduction in the thifensulfuron and rimsulfuron+metribuzin treatments when chlorothalonil+copper were added to the herbicide treatments.