

TANK-MIXING STROBILURIN FUNGICIDES WITH METRIBUZIN, THIFENSULFURON AND RIMSULFURON IN TOMATO. Darren E. Robinson, Rob Nurse, Nader Soltani and Peter H. Sikkema, Assistant Professor, Department of Plant Agriculture, University of Guelph, Ridgetown, ON, N0P 2C0, Research Scientist, Agriculture and Agri-Food Canada, Harrow, ON, Research Associate and Assistant Professor, Department of Plant Agriculture, University of Guelph, Ridgetown, ON.

Trials were conducted at two locations in southwestern Ontario from 2004 to 2006 to compare the effect of tank-mixing strobilurin fungicides with tomato herbicides 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, 300, 600 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 azoxystrobin (75 g a.i. ha⁻¹) or pyraclostrobin (110 g a.i. ha⁻¹). Untreated weed-free and weedy checks were included for comparison. Adding azoxystrobin or pyraclostrobin to rimsulfuron or metribuzin (150 and 300 g a.i. ha⁻¹) did not cause significant visual injury, however there was some injury (5%) when 600 g a.i. ha⁻¹ Sencor was tank mixed with either fungicide. Adding azoxystrobin to thifensulfuron did not cause significant visual injury, while adding pyraclostrobin to thifensulfuron did result in commercially significant visual injury. Despite this, adding pyraclostrobin to thifensulfuron did not delay maturity or reduce yield. The addition of azoxystrobin or pyraclostrobin to metribuzin, thifensulfuron or rimsulfuron did not reduce weed control compared to the herbicides applied alone.