

THE EFFECT OF POSTEMERGENCE THIFENSULFURON-METHYL ON COMMERCIAL PROCESSING TOMATO CULTIVARS IN A TWO YEAR STUDY. Stephen C. Weller, Greg R. Kruger, William G. Johnson, Timothy A. Koch, and Doug Doohan, Professor, Department of Horticulture and Landscape Architecture, Graduate Research Assistant, Associate Professor, Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN 47907, Research Assistant, Associate Professor, The Ohio State University, Ohio Agricultural Research and Development Center, Wooster, OH 44691.

Experiments in Ohio and Indiana in 2007 and 2008 evaluated the safety of postemergence applications of thifensulfuron-methyl on several commercially grown processing tomato cultivars. In Ohio, cultivars evaluated were: TR12, 818, 611, 9704, 401, 7983, 46TJ, and 331 in 2007 and cultivars 818, 611, 9704, 331, 3402, and TSH4 in 2008. In Indiana, cultivars 818, 611, 9704, 401, 7983, and 331 were evaluated in 2007 and 2008. Treatments of 0, 8, or 16 g/ha of thifensulfuron-methyl + 0.25% v/v of a non-ionic surfactant were applied to tomatoes approximately four weeks after transplanting. Evaluations on visual injury based on a scale of 0 to 100 (where 0 = no injury and 100 was completely dead plants) and yield were collected. Results were generally similar at both locations, but injury was more prevalent on some cultivars tested in Ohio. Cultivars exhibited some initial chlorosis after application, but injury was mild and most cultivars quickly recovered. The exception was cultivar TR12 which was susceptible and did not recover as quickly as other cultivars and it had a significant yield loss. Over all cultivars, except TR-12, thifensulfuron-methyl did not reduce yields and appears to be a good candidate for postemergence broadleaf weed control for most commercial processing tomato cultivars.