

SENSITIVITY OF WINTER WHEAT TO FALL APPLIED POSTEMERGENCE HERBICIDES. Nader Soltani\*, Christy Shropshire, Peter H. Sikkema. Research Associate, Research Technician, and Assistant Professor. Ridgetown College, University of Guelph, Ridgetown, ON, Canada, N0P 2C0.

The adoption of production practices such as no-till and the use of non-residual herbicides such as glyphosate in the preceding crop have resulted in an increase of winter annual, biennial and perennial weeds in winter wheat in Ontario. Few fall applied postemergence (POST) herbicide options are available to control these weeds. Five field trials were conducted in Ontario to evaluate the crop safety of fall POST applications of dicamba, 2,4-D amine, MCPA amine, dichlorprop/ 2,4-D ester, bromoxynil/MCPA ester and thifensulfuron-methyl/tribenuron-methyl in winter wheat. Dicamba, MCPA amine, bromoxynil/MCPA ester and thifensulfuron-methyl/tribenuron-methyl did not cause any visual injury and there was no decrease in winter wheat height or yield. The application of 2,4-D amine and dichlorprop/2,4-D ester caused minor visual injury 24 to 31 weeks after treatment. Winter wheat height was reduced as much as 8% with dichlorprop/2,4-D ester. Yield was reduced up to 9 and 14% with 2,4-D amine and dichlorprop/2,4-D ester, respectively. Based on these findings, POST applications of 2,4-D amine and dichlorprop/2,4-D ester in the fall result in unacceptable injury in winter wheat. However, fall applications of dicamba, MCPA amine, bromoxynil/MCPA ester and thifensulfuron-methyl/tribenuron-methyl possess an adequate margin of crop safety for winter wheat weed management in Ontario.