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ABSTRACT

Impact of Non-target Herbicide Exposures on Potato. Vikram Bisht¹ and Haider Abbas². ¹*Manitoba Agriculture, Carman, 65, 3rd Avenue NE, Carman, MB, R0G 0J0.* ²*MB Agriculture, NE Corner of Highway No. 1 & 5, Carberry, MB. R0K 0H0.*

Potatoes are vulnerable to non-target herbicide exposure from applications on cereal, oilseed and other crops grown close by. The exposure of potato crops to herbicides could be due to drift, improper tank cleaning, misapplication or residual actives in soil. The potato foliage injury symptoms are often typical and diagnostic of that herbicide group; injuries become more severe with increasing concentration of herbicide. A demonstration trial was conducted in 2022 at Carberry off-site research plots to exhibit symptoms caused by some common herbicides used in Manitoba. Eight herbicide treatments (Buctril-M, Engenia, Glyphosate-early, Glyphosate-late, Infinity, Liberty, Odyssey and Rustler) at 5, 10 and 20% of the labelled rates for target crops were sprayed on potato foliage 5-weeks after emergence. Glyphosate-late was sprayed late in season to simulate exposure from glyphosate on cereals meant for weed control. All herbicide treatments, except glyphosate-late exhibited visual symptoms of injury. The typical symptoms were similar to those seen in 2011 and 2012 demonstrations. Most herbicides caused noticeable reduction in yield compared to control (water) treatment. Glyphosate-early affected current season yields but not the glyphosate-late. Daughter tubers have been kept in cold storage to demonstrate impact on seed performance next year.