

TOLERANCE OF VARIOUS MARKET CLASSES OF DRY BEANS TO CLOMAZONE. Nader Soltani, Christy Shropshire, and Peter H. Sikkema, Research Associate, Research Technician, and Associate Professor, University of Guelph Ridgetown Campus, Ridgetown, ON, Canada. N0P 2C0.

Tolerance of eight cultivars of dry beans representing eight market classes (black, brown, cranberry, kidney, otebo, pinto, white and yellow eye beans) to the pre-emergence application of clomazone at the dose of 1116 and 2232g a.i. ha⁻¹ was studied at Exeter and Ridgetown, Ontario, Canada in 2004 and 2005. Clomazone applied pre-emergence caused 5, 4, and 1% visual injury at 1116 g ha⁻¹ and 11, 10, and 4% visual injury at 2232 g ha⁻¹ in dry beans at 7, 14, and 28 days after emergence (DAE), respectively. Visual injury increased with dose and decreased over time. Visual injury was minimal by 28 DAE (less than 5%) and had no adverse effect on plant height, shoot dry weight and yield of any market class of dry beans evaluated. Seed moisture content measured at harvest ranged from 17 to 24% for various market classes of dry beans and was not affected by the application of clomazone. White bean exhibited the least visual injury followed by brown, kidney, yellow eye, otebo, pinto, and then black and cranberry beans. Based on these results, clomazone applied pre-emergence at 1116 g ha⁻¹ has an adequate margin of crop safety for use in black, brown, cranberry, kidney, otebo, pinto, white, and yellow eye beans.