

RESPONSE OF DRY BEAN TO PREEMERGENCE AND POSTEMERGENCE APPLICATIONS OF CLORANSULAM-METHYL. Nader Soltani, Christy Shropshire and Peter H. Sikkema. Department of Plant Agriculture, University of Guelph Ridgetown Campus, Ridgetown, ON N0P 2C0.

Tolerance of various market classes of dry bean to cloransulam-methyl is not known. Three field studies were conducted in Ontario during 2007 and 2008 to determine tolerance of black, cranberry, kidney and white bean to the pre-emergence (PRE) and post-emergence (POST) application of cloransulam-methyl applied at 17.5, 35, and 70 g ai ha⁻¹. Cloransulam-methyl applied at 17.5, 35, and 70 g ha⁻¹ caused between 4 and 23% injury in black, cranberry, kidney, and white bean. Cloransulam-methyl applied at 17.5, 35, and 70 g ha⁻¹ reduced shoot dry weight between 16 and 28% compared to the non-treated control. Cloransulam-methyl applied PRE reduced black bean height 27% and cranberry bean height 25% at 70 g ha⁻¹ and reduced white bean height 19% at 35 g ha⁻¹ and 37 % at 70 g ha⁻¹. Cloransulam-methyl applied PRE reduced the yield of black bean 29% at 35 g ha⁻¹ and 43% at 70 g ha⁻¹, cranberry bean 43% at 70 g ha⁻¹ and white bean 36% at 35 g ha⁻¹ and 54% at 70 g ha⁻¹. Based on these results, there is not an adequate margin of crop safety for the PRE and POST application of cloransulam-methyl in black, cranberry, kidney and white bean at the rates evaluated.