

TOLERANCE OF DRY BEANS TO KIH-485. Peter H. Sikkema*, Nader Soltani, and Christy Shropshire. Assistant Professor, Research Associate, and Research Technician, Ridgetown College, University of Guelph. Ridgetown, ON N0P 2C0.

There is little information on the sensitivity of dry beans to KIH-485. Tolerance of eight market classes of dry beans (black, brown, cranberry, kidney, otebo, pinto, white, and yellow eye beans) to the preemergence (PRE) application of KIH-485 at 209 and 418 g/ha was studied at two locations, Exeter (2004 and 2005) and Ridgetown (2004) in Ontario. The eight market classes differed in their response to KIH-485. Generally, the small seeded market classes (black, otebo, pinto and white) were more sensitive to KIH-485 than the large seed market classes (brown, cranberry, kidney and yellow eye). The PRE application of KIH-485 at Ridgetown resulted in 67, 40, 33, 39, 59, 55, 65 and 44% visual crop injury 14 days after emergence (DAE) in black, brown, cranberry, kidney, otebo, pinto, white and yellow eye beans, respectively. Dry bean height 28 DAE at Ridgetown was 32, 22 and 17 cm and at Exeter (2004) was 24, 24 and 22 cm with the application of KIH-485 at 0, 209 and 418 g/ha, respectively. At Exeter in 2005, there was only a decrease in the height of brown and white beans. Bean dry weight 42 DAE at Ridgetown was 117, 90 and 63 g and at Exeter (2005) was 166, 156 and 142 g with the application of KIH-485 at 0, 209 and 418 g/ha, respectively. The maturity of black, otebo and pinto beans was delayed with the application of KIH-485 at Ridgetown. Dry bean yield at Ridgetown was 3.21, 2.84 and 2.33 T/ha and at Exeter (2004) was 3.00, 2.85 and 2.67 T/ha with the application of KIH-485 at 0, 209 and 418 g/ha, respectively. Based on these preliminary studies, the application of KIH-485 causes unacceptable visual crop injury and yield loss in dry beans.