DOSE RESPONSE CURVES OF KIH-485 FOR WEED CONTROL IN CORN. Stevan Z. Knezevic, Jon E. Scott* and Peter Porpiglia, Associate Professor and Research Technologist, Haskell Ag. Lab., University of Nebraska, Concord, NE, 68728-2828, and Researcher, Kumia America, White Plains, New York.

KIH-485 is a new herbicide under development. Field studies were conducted in 2006 and 2007 at Brunswick and Concord to describe and compare dose response curves for KIH-485 at three soil types (eg. 1%OM, 2%, and 3% OM) for control of green foxtail, field sandbur, large crabgrass, velvetleaf and tall waterhemp. Dose response curves were fit, and ED90 values (effective dose that provides 90% weed control) were determined utilizing the **R** and *drc* software package. Corn showed excellent tolerance to KIH-485, as there was no crop injury at any of the rates tested at medium and heavy soils. There was crop injury at sandy soil (<1%OM) at 2X and 3X rates due to cold-wet spring in 2007 only. Generally, an increase in OM resulted in higher ED90 values for all weed species. Based on the 2006 data, the ED90 (90% control) for green foxtail was 115 g ai/ha for soils with 1% OM, while 300 g ai/ha was calculated for soils with 3% OM. Similar response was observed for other weed species. The proposed label rate for KIH might be between 200-250 g ai /ha, which would provide excellent control of most weed species for at least first four weeks of the growing season on soils up to 3% OM. Based on the 2006 data, at 28 DAT field sandbur was controlled with 228 g ai/ha on soils with 1% OM, green foxtail with 115g and 121g ai/ha on soils with 1% and 2% OM, as well as velvetleaf and tall waterhemp on soils with 3% OM with 189 g ai/ha and 240 g ai/ha. Most soils in Nebraska contain no more than 3% OM, thus the KIH has a good potential for PRE use in corn as it provided excellent early season control of our major weed species (sknezevic2@unl.edu).

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