

INTERACTIONS BETWEEN SAFLUFENACIL AND GLYPHOSATE ON SELECTED BROADLEAF WEEDS. Stevan Z. Knezevic, Avishek Datta, Jon Scott\*, and Leo D. Charvat. Associate Professor, Postdoctoral Research Associate, Research Technologist, Haskell Agricultural Laboratory, University of Nebraska, Concord, NE 68728; Biology Area Manager, BASF Corporation, Lincoln, NE 68523.

Saflufenacil (Kixor<sup>TM</sup>) is a new herbicide under development by BASF for preplant burndown and preemergence broadleaf weed control in field crops, including corn, soybean, sorghum, and wheat. Field experiments were conducted in 2007 and 2008 to describe dose-response curves of saflufenacil applied alone or tank-mixed with methylated seed oil (MSO) or glyphosate to control several broadleaf weeds in Nebraska. Dose-response curves based on log-logistic model were used to determine the ED<sub>90</sub> values (effective dose that provides 90% weed control efficacy) for kochia, wild buckwheat, horseweed, henbit, field pennycress, prickly lettuce, shepherd's-purse, field bindweed, and dandelion. In general, weed control efficacy was influenced by herbicide dose and type of tank-mix. For most of the species tested, weed control efficacy increased when small amount of saflufenacil was added to the label dose of glyphosate. For example, 90% control of horseweed at 28 days after treatment was obtained with 217, 78, and 35 g ai/ha for saflufenacil applied alone or tank-mixed with MSO or glyphosate, respectively. The ED<sub>90</sub> values determined for different broadleaf weed species are within the proposed label dose for saflufenacil (e.g., 125 g ai/ha). Addition of glyphosate improved activity; however, it may not be needed unless grass and perennial weeds are target species.

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