



Proceedings of the 74th Annual Meeting of the North Central Weed Science Society

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The program and abstracts of posters and papers presented at the annual meeting of the North Central Weed Science Society are included in this proceedings document. Titles are listed in the program by subject matter with the abstract number listed in parenthesis. Abstracts are listed in numerical order followed by the author and keyword listing.

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Soybean Yields as Influenced by Ultra-Micro Rates of Dicamba: Hormesis or Not? Stevan Z. Knezevic*, Jon Scott, Darko Jovanovic, Ivan B. Cuvaca; University of Nebraska-Lincoln, Lincoln, NE (26)

ABSTRACT

There are speculations that a drift of sub-lethal or ultra-low doses of dicamba herbicides to soybean can increase the yield through the phenomenon called hormesis. Thus, there is a need to evaluate the impact of ultra micro-rates of dicamba on yields of sensitive soybean. Field study was conducted in 2018 and 2019 at Concord, NE. The study was arranged as a split-plot design with ten dicamba micro-rates, 3 application times and 4 replications. Dicamba rates included 0; 1/10; 1/100; 1/1000; 1/5000; 1/10000; 1/20000; 1/30000; 1/40000 and 1/50000 of the 560 g ae ha⁻¹ (label rate) of XtendiMax. The 3 application times were V2 (2nd trifoliolate), R1 (beginning of flowering) and R2 (full flowering) stages of soybean development. Application of 1/5000 to 1/10 of dicamba label rate caused 20 to 80% visual injury with the greatest injury at R1. A 1/10 of the dicamba label rate could cause 23 to 78% soybean yield loss depending on the growth stage of exposure; with the greatest yield loss (78%) at the R1 stage. In general, our preliminary study suggested that there was no evidence that sub-lethal doses of dicamba could increase the yield of soybean irrespective of the growth stage of dicamba exposure, suggesting that there is no hormesis occurring.