

MANAGEMENT OF GLYPHOSATE-RESISTANT GIANT RAGWEED IN SOYBEAN. Chad B. Brabham, Bill Johnson, and Mark Loux, Graduate Research Assistant and Associate Professor, Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN 47907, Professor, Department of Horticulture and Crop Science, The Ohio State University, Columbus, OH 43210.

Tank mixing glyphosate and fomesafen can be an effective means of controlling glyphosate-resistant giant ragweed. The objective of this research was to determine the effectiveness of various adjuvants on giant ragweed control with glyphosate plus fomesafen. The experimental design was a randomized complete block with a factorial arrangement of treatments which included glyphosate rates of 0 or 0.75 lbs ae/A, fomesafen rates 0, 0.176, or 0.353 lbs of ai/A, and three different adjuvants. The chemical formulation of glyphosate used was the Roundup PowerMAX™ product. Adjuvant treatments were either no adjuvant, non-ionic surfactant (NIS) at 0.5% v/v, a crop oil concentrate/ NIS (COC/NIS) blend at 0.5% v/v, or dimethenamid at 0.47 lbs of ai/A. Giant ragweed density was 15 plants per square yard and 6 to 44 inches in height where the treatments were applied. The trial was visually rated at 14, 28, 42, and 84 days after treatment (DAT) and soybean yield was recorded. Fomesafen applied alone at 0.176 lbs/A or 0.353 lbs/A provided 50 and 68% control, respectively. Glyphosate alone controlled giant ragweed 90%. The addition of fomesafen or adjuvants did not improve giant ragweed control over glyphosate alone. In a glufosinate-resistant soybean study, sequential POST treatments of glufosinate provided better control than single treatments. The addition of fomesafen to glufosinate improved giant ragweed control over single applications of glufosinate.