

REGIONAL SUMMARY OF OPTIMUM GAT SOYBEAN RESEARCH. Angela J. Kazmierczak, Richard K. Zollinger, Chris M. Boerboom, Michael Moechnig, and Tom Hoverstad; North Dakota State University, Fargo, ND 58108; University of Wisconsin, Madison, WI 53706, South Dakota State University, Brookings, SD 57007, University of Minnesota, Waseca, MN 56093.

Optimum GAT (glyphosate acetolactate tolerance) technology allows glyphosate and various ALS herbicides to be applied for weed control while maintaining safety to transformed crops. Experiments were established at four locations across the upper Midwest to determine soybean crop safety and efficacy of the herbicide programs designated for the technology: Arlington, WI; Waseca, MN; Brookings, SD; and Prosper, ND. Treatments were applied to Optimum GAT soybean and included either PRE followed by POST or POST applications of the following: clorimuron, thifensulfuron, flumioxazin, glyphosate, tribenuron, rimsulfuron, cloransulam, and sulfentrazone. Herbicide rates were determined within the labeled rates. Across all locations, there was a wide spectrum of weeds evaluated, but specific species varied by location. Crop safety was evaluated at most locations and injury to soybean was not observed. Overall, treatments provided greater than 90% control of all weeds at the last evaluation timing with the exception of common ragweed at Prosper where treatments that received only a POST application gave 86 to 88% control.