

ANALYSIS OF SOYBEAN RESPONSE TO SIMULATED DRIFT RATES OF PGR HERBICIDES USING A FOLIAR RESIDUE TEST. Shane M. Andersen, Leon J. Wrage, Sharon A. Clay, Duane P. Matthees, Graduate Research Assistant and Professors, Department of Plant Science, South Dakota State University, Brookings, SD 57007.

Field studies were conducted to determine the effects of plant growth regulator (PGR) herbicides on soybean. Soybeans were treated at the V3-V4 growth stage with several rates of dicamba (diglycolamine salt) and 2, 4-D amine. Plants were harvested at 0, 6, 12, 24, and 48 days after treatment (DAT). Samples were analyzed for herbicide residue using an aqueous base foliage extraction method.

Applications of PGR herbicides to soybean caused easily identifiable symptoms. Increasing rates of each herbicide coincided with increased yield reduction. Chemical residue values diminished quickly after initial application. Residue values also had a strong negative correlation with yield.