

WILSON, ROBERT G.*, University of Nebraska, 4502 Avenue I, Scottsbluff, NE 69361. **Influence of ALS-resistant kochia control in corn on kochia control the following year in sugarbeet.**

ABSTRACT

A field study was initiated near Scottsbluff, Nebraska to evaluate the efficacy of herbicides for controlling ALS-resistant kochia in sugarbeet following various degrees of kochia control in corn the previous year. Glyphosate-resistant corn was treated postemergence with four different weed control treatments in 2005. Kochia control of 50, 71, 85, and 99% was obtained from the four weed control treatments utilized in corn. The four levels of kochia control became main plots in 2006 when glyphosate-resistant sugarbeet were planted. Each of the main plots was divided into six subplots that were treated with a different sugarbeet weed control program. Kochia density in sugarbeet averaged 6, 3, 2, and 1 plant/m² in main plots where in the previous year kochia control had been 51, 71, 85, and 99%, respectively. A conventional treatment of phenmedipham plus desmedipham plus triflurosulfuron plus clopyralid at 0.18 plus 0.18 plus 0.018 plus 0.10 kg/ha applied four times (Full-rate) provided acceptable kochia control in some main plots. When the Full-rate was applied to main plots where 50 and 99% kochia control had been obtained in 2005, kochia control in sugarbeet was 12 and 81%, respectively and demonstrates the benefit of investing in kochia control in the previous corn crop.