

WILSON, ROBERT G.\* and GUSTAVO M. SBATELLA, University of Nebraska, 4502 Avenue I, Scottsbluff, NE 69361. **Influence of different brands of glyphosate and spray adjuvants on weed control and sugarbeet performance.**

### **ABSTRACT**

A field study was conducted over the 2009 and 2010 growing seasons to compare nine glyphosate brands and nine water conditioners for weed efficacy and sugarbeet tolerance. The nine brands of glyphosate were applied twice, once at the four and again at the eight true-leaf sugarbeet growth stage, and all glyphosate brands were combined with the water conditioner ammonium sulfate (AMS). The results indicated that brands of glyphosate did not all provide similar weed control when applied at 0.75 lb ae per acre. Helosate Plus provided the lowest weed control of 69 percent while Gly Star Plus provided 98 percent control. Water conditioners were added to spray water according to manufacturers suggestions before Roundup PowerMAX was added. Loadout, Choice Weathermaster, Class Act, and AMS were similar in performance while the addition of Quest, NPAK AMS, Simplot Fraction, and Weather Guard Complete resulted in reduced weed control. Water conditioners should not be chosen on ease of use or cost, but instead on their ability to enhance glyphosate performance. Glyphosates ability to kill weeds may be reduced due to antagonism if too many spray additives are combined in the spray solution. Compared to Roundup PowerMAX plus AMS which provided 96 percent weed control a combination of Nufarm Credit Extreme plus Simplot Fraction plus the adjuvant Wet Cit only controlled 63 percent of the weed population.