

SUGARBEET STAND IN RESPONSE TO ENCAPSULATED ACETOCHLOR APPLIED PREEMERGENCE

Andrew R. Kniss

University of Wyoming, Plant Sciences Dept. 3354, 1000 E. University Ave.,
Laramie, WY 82071

A relatively new encapsulated formulation of acetochlor (Warrant, Monsanto Company) is currently registered for use in corn, soybean, and cotton. Previous research has shown this new product to also have some tolerance when applied PRE or POST in sugarbeet. In 2010, sugarbeet stand reduction was observed in research plots in Wyoming where sugarbeet was replanted (due to freezing temperatures) into acetochlor-treated soil. A field study was conducted at the Sustainable Agriculture Research and Extension Center near Lingle, Wyoming in 2011 and repeated in 2012 to evaluate safety of encapsulated acetochlor to replanted sugarbeet. Sugarbeet ('Beta 66RR60') were planted in 30-inch rows at a rate of 70,000 seeds/A at 6 dates each year. Herbicide treatments were applied preemergence on the first planting date, and all subsequent planting was done into soil treated at the initial planting date. Herbicide was applied with a CO₂-pressurized knapsack sprayer delivering 16.8 gallons of total volume per acre at 30 psi with TeeJet 11002DG nozzles. Plots were 10 feet wide by 30 feet long and arranged in a randomized complete block design with 4 replications. Sugarbeet populations were counted regularly throughout the season. Sugarbeet stand was influenced by acetochlor rate and sugarbeet planting date.