

GLYPHOSATE INFLUENCE ON SUGARBEET PRODUCTION AND CONTROL OF ABUTILON THEOPHRASTI, CHENOPODIUM ALBUM, AND AMARANTHUS SPECIES USING WEED GROWTH STAGE AND GROWING DEGREE DAYS. Mark W. Bredehoeft*, Mark W. Bloomquist, Chris C. Dunsmore, and Cody W. Bakker, Southern Minn. Beet Sugar Coop., 83550 County Rd 21, Renville, MN 56284.

Weed control in sugarbeets has been a challenge since the inception of sugarbeet production. Conventional sugarbeet weed control has seen many modifications to optimize the efficacy of these products. Weed control with conventional products has been managed by growth stage of sugarbeet and weeds and more recently by growing degree days. In 2008 a significant part of the sugarbeet growing regions in the United States seeded some percentage of their sugarbeet production acres to a biotech variety with the Glyphosate tolerant trait. Sugarbeet growers need to be given information to best manage Glyphosate for weed control in sugarbeet. A study was established in 2008 in Southern Minnesota to evaluate application of Glyphosate for control of Abutilon theophrasti, Chenopodium album and Amaranthus species using weed growth stage or growing degree days. A base of 34 degrees Fahrenheit was used to calculate GDD. One treatment with Glyphosate gave 54, 69 and 83 percent control of Abutilon theophrasti, Amaranthus species and Chenopodium album. All other Glyphosate treatments gave weed control with of 90% or greater. Sugarbeet production was best with Glyphosate applied at 200 and 400 GDD and one application prior to row closure. The application at 200 GDD tended to be the most important when an application one week prior to row closure was conducted. Glyphosate application at 1, 2, 4, and 6 inch weeds was best for weed control and sugarbeet production with Glyphosate applied at 32 oz. per acre compared to 22 oz. per acre.