

CONTROLLING GLYPHOSATE RESISTANT VOLUNTEER CORN. Robert N. Klein, Jeffrey A. Golus, Amanda S. Cox, Professor, Technician, Technician, University of Nebraska, West Central Research and Extension Center, North Platte, NE 69101

A popular rotation in the High Plains is the winter wheat, ecofallow corn, pre-winter wheat fallow rotation. Much of the ecofallow corn is now glyphosate resistant and much of the pre-winter wheat fallow is now no-till. Several applications of glyphosate are being made during the pre-winter wheat fallow period and producers want a herbicide that could be added to the glyphosate to control the volunteer glyphosate resistant corn.

A field study was conducted at North Platte, Nebraska with glyphosate resistant corn planted on May 8, 2007 in 6, 76 cm rows. Early applications were applied on June 15 with corn in the 2-3 leaf stage and late applications were applied on June 23 with corn in the 5-6 leaf stage.

Treatments included clethodim (Select Max), glyphosate potassium salt (Roundup WeatherMax), paraquat dichloride (Gramoxone Inteon), glufosinate-ammonium (Liberty), and metribuzin (Sencor DF), used at various rates. Additives also included in the treatments included non-ionic surfactant (NIS) at 0.25% v/v and/or 2.8 kg/ha ammonium sulfate (AMS).

Ratings were taken on June 24 and July 14. All but one of the treatments applied June 15 with the glyphosate resistant corn in the 2-3 leaf stage gave 100% control by the second rating date of July 14. The other treatment was 99.3%. Only one treatment that was applied on the second application date of June 23 with the corn being in the 5-6 leaf stage gave over 75% control. This treatment included 0.067 kg/ha of clethodim with NIS and AMS, and gave 99.7% control.

From the research, it can be concluded that the glyphosate resistant corn must be controlled early. In some situations two treatments may be needed because of the varied germination period by volunteer glyphosate resistant corn.