

FIELD PANSY (*VIOLA RAFINESQUII* GREENE) CONTROL IN NO-TILL FIELDS WITH FALL- AND SPRING-APPLIED HERBICIDES. Jason N. Miller, David L. Regehr and Dallas E. Peterson, Graduate Research Assistant, Professor and Professor, Department of Agronomy, Kansas State University, Manhattan, KS 66506.

Field pansy has become a problematic weed in no-till fields in northeast Kansas and adjacent regions. It is usually a winter annual, but can germinate in either the fall or spring. It is the only *Malanium* violet native to North America. Previous work has shown poor or erratic weed control from many spring burndown treatments. Field studies were conducted over the past three years to evaluate herbicide application timing, and herbicides with different modes of action, for effective field pansy control. Experiments were conducted on natural populations of field pansy growing in northeast Kansas no-till fields in an annual corn/soybean rotation. Ahead of corn, in 2002-03, most treatments provided excellent field pansy control. Only paraquat applied in the fall, and glyphosate applied in the spring, provided <89% control. In 2004, all treatments were spring applied. In general, control was less than 2003, with control ranging from 60% to 100%. In 2005, treatments were applied either early or late spring. All treatments provided >90% control regardless of application timing, except atrazine at 1120 g/ha for both timings, and atrazine plus flumetsulam applied late spring. Ahead of soybeans, in 2002-03, all fall-applied treatments provided >90% control, except thifensulfuron, sulfentrazone, and thifensulfuron plus sulfentrazone. The only treatments to provide >90% control in the spring of 2003, were cloransulam and cloransulam plus flumioxazin. In the 2003-04 fall applied treatments, only sulfentrazone plus chlorimuron, thifensulfuron, and thifensulfuron plus sulfentrazone provided >90% control. In the spring of 2004, only glyphosate plus thifensulfuron, glyphosate plus sulfentrazone plus chlorimuron, and glyphosate plus thifensulfuron plus sulfentrazone provided >90% control. In both soybean experiments, the spring-applied treatments generally provided lower control compared to the fall-applied. This research demonstrated that ahead of no-till corn, atrazine with appropriate tank mix partners, can control a broad spectrum of winter and spring germinating weed species, including field pansy, from both fall or spring application timings. For no-till soybean producers, the most effective strategy for field pansy control consists of fall-applied burndown treatments that have soil-residual activity.