

IMPACT OF STAGE OF GROWTH AND WEATHER ON SERICEA LESPEDEZA CONTROL USING HERBICIDES. Walter H. Fick, Associate Professor, Department of Agronomy, Kansas State University, Manhattan, KS 66506.

Sericea lespedeza has been a state wide noxious weed in Kansas since July 1, 2000. Previous screening studies have indicated that triclopyr and metsulfuron are the most effective herbicides for sericea lespedeza control. Studies conducted at a site near Maple Hill, KS from 1998-2002 were evaluated to determine the impact of stage of growth and environmental conditions at the time of herbicide application on sericea lespedeza control. Herbicides included in this study were triclopyr, metsulfuron, and fluroxypyr. These herbicides were applied in 20 gpa spray volumes using a CO₂-powered four-nozzle boom sprayer equipped with 8004 flat fan nozzles. Stage of growth at the time of herbicide application ranged from late vegetative to seed production. Individual plots were 6.7 by 25 feet with treatments replicated four times. Treatments were evaluated for percent control about 1 year after treatment. Control with 0.5 lb/acre triclopyr ranged from 41-99% with an average of 68%. Metsulfuron at 0.24-0.3 oz/acre averaged 63% control with a range from 4-99%. Fluroxypyr at 0.19-0.25 lb/acre provided 60% control with a range from 14-84%. Control was generally equal among treatments applied during the late vegetative stage except in 2002. A combination of 0.38 lb/acre triclopyr + 0.13 lb/acre fluroxypyr provided 90% control of sericea lespedeza treated on July 3, 2002. Triclopyr (0.5 lb/acre) and metsulfuron (0.3 oz/acre) provided only 65 and 20% control, respectively. Rainfall during June and July, 2002 was 45% of normal. Limited rainfall during July in 1999 and 2000 also reduced control using triclopyr, metsulfuron, and fluroxypyr. Metsulfuron (0.24 oz/acre) provided 92% control when applied on September 18, 1998 during full bloom. Triclopyr (0.5 lb/acre) and fluroxypyr (0.19 lb/acre) provided only 60 and 72% control, respectively. Sericea lespedeza produced few flowers during 2000 due to extremely dry weather (29% of normal for July-September). Spraying under these conditions resulted in less than 25% control with any of the herbicides. Stage of growth and growing conditions at the time of herbicide application can greatly influence the effectiveness of most herbicides used for sericea lespedeza control.