

ESTABLISHMENT OF FORAGE GRASSES AND LEGUMES IN THE SPRING FOLLOWING A FALL APPLICATION OF AMINOPYRALID. Mark J. Renz, Assistant Professor University of Wisconsin, Madison, WI 53715.

In Wisconsin, herbicides applications to pastures are common during the fall, while fields are replanted or renovated during the spring. Limited information is available as to how fall herbicide applications of aminopyralid can affect establishment of forage grasses and legumes the following spring. Experiments were established at two locations in Arlington and Lancaster Wisconsin to evaluate establishment of a range of legume and grass forages after applications of aminopyralid and other common pasture herbicides. Treatments included aminopyralid (0.054, 0.087 and 0.122 kg ae ha⁻¹), clopyralid (0.420 kg ae ha⁻¹), metsulfuron (0.042 kg ha⁻¹), imazapic (0.210 kg ha⁻¹), 2,4-D + dicamba (0.560 + 1.57 kg ae ha⁻¹) and an untreated control. To assess the tolerance within each species, two varieties of the following species were planted in each plot: Italian ryegrass (Aurelia & Monarque), tall fescue (Fawn & Seine), orchardgrass (Cristosis and Okay), switchgrass (Blackwell & Sunburst), alfalfa (54V46 & WL357Hq), red clover (Cardinal & fsg960), and white clover (Alice & Colt). Plots were treated on October 25th and 20th 2006 and then forage species were planted the following May on the 16th and 18th at Arlington and Lancaster respectively. Frequency of species per plot were counted in 12 locations within each plot and divided by untreated controls 6 to 7 weeks after establishment to allow for the analysis of varieties within the same species with differing establishment rates. Data were analyzed by ANOVA for each species separately.

Significant differences ($p < 0.05$) between sites existed for tall fescue and between varieties for orchardgrass. Data for all other species were combined for both factors. None of the treatments showed any differences in frequency of switchgrass or tall fescue. Orchardgrass frequency in metsulfuron treatments was less than other herbicides, while Italian ryegrass frequency was reduced with both imazapic and metsulfuron. Alfalfa and white clover frequency was less than other treatments with aminopyralid at 0.122 kg ae ha⁻¹ and metsulfuron, but white clover frequency was also reduced with imazapic. Red clover establishment was reduced with the two highest rates of aminopyralid, metsulfuron, and plateau. Results indicate that grass establishment was not reduced the spring following fall aminopyralid applications, but enough herbicide persisted in the soil to reduce the establishment of legume forages. Future experiments are necessary to determine the amount and consistency of injury to specific legume species from aminopyralid under varying environmental conditions.