EFFECT OF HERBICIDE APPLICATION TIMING ON SPINY AMARANTH CONTROL IN PASTURES. Meghan Edwards, J.D. Green and W.W. Witt, Research Assistant, Extension Professor, Professor, Department of Plant and Soil Sciences, University of Kentucky, Lexington, KY 40546.

Spiny amaranth is a problematic weed of heavily grazed pastures in Kentucky and surrounding states. The objectives were to evaluate spiny amaranth control when herbicides are applied before and after emergence. Spiny amaranth seed collected in 2008 were seeded in rows in the fall (November) and spring (March) in fields located in Lexington and Princeton, KY. Treatments consisted of five application dates and five herbicides plus an untreated control arranged in a split-split plot design with seeding date as the main plots. Treatment application dates arranged as sub plots were in November, March, April, May and June. Pendimethalin at 1.6 kg ai/ha, aminopyralid at 120 g ae/ha, aminocyclopyrachlor at 70 g ae/ha, dicamba at 0.56 kg ae/ha and 2,4-D at 1.1 kg ae/ha arranged as sub-sub plots were the five herbicides evaluated in this study. The following parameters were measured: fresh weight, plant height and percent visual control. Combined across locations pendimethalin applied in November, March and April before spiny amaranth emergence gave the best control and significantly reduced fresh weight biomass compared to other treatments. Aminopyralid applied in May after spiny amaranth emergence provided 70 percent visual control and significantly reduced plant height. Other herbicide treatments applied in May reduced spiny amaranth growth, but were less effective than aminopyralid. June applications of 2,4-D reduced plant height and provided 80 control. Fresh weight biomass and height was also reduced with dicamba, aminopyralid and aminocyclopyrachlor applied in June compared to pendimethalin and the untreated control.

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