WEED MANAGEMENT STRATEGIES TO INCREASE FORAGE PRODUCTIVITY OF PERMANENT GRASS PASTURES. J. D. Green, and David Appelman, Extension Professor and Extension Agent for Agriculture and Natural Resources, Department of Plant and Soil Sciences, University of Kentucky, Lexington, KY 40546.

Weed management strategies that would decrease weed biomass and increase the productivity of a permanent grass pasture were evaluated in a field study in northern Kentucky. Herbicide control options implemented in 2006 along with combinations of cultural practices were evaluated for their effectiveness the following season. The predominant weed species present included tall ironweed (*Vernonia altissima*) and wild blackberry (*Rubus fruticosus*). The experimental layout consisted of a 3-factor split-plot design. Main plots were composed of a herbicide prepackage mixture of triclopyr plus 2,4-D at 0.56 plus 1.12 kg/ha and a prepackage mixture of triclopyr plus fluroxypyr at 0.85 plus 0.28 kg/ha and an untreated check. A combination of sub-plot factors evaluated with and without herbicide options included treatments 1) with and without added soil fertility and 2) with and without additional forages seeded. Treatments receiving added fertility in the spring consisted of 6720 kg/ha agricultural lime and 56 kg/ha of nitrogen based on soil test results. Plots interseeeded with additional forages received a mixture of orchardgrass, red clover, and ladino clover which were seeded in the fall using no-till seeding methods.

Visual control of tall ironweed with triclopyr plus fluroxypyr and tricloppyr plus 2,4-D was similar at 78% and 85%, respectively, one year after treatment. Stem populations were reduced by approximately 67% by both herbicide treatments. Whereas, control of blackberry was significantly greater with triclopyr plus fluroxypyr (96%) compared to triclopyr plus 2,4-D (78%). Furthermore, triclopyr plus fluroxypyr reduced the blackberry stem population by 92% compared to the untreated check; whereas triclopyr plus 2,4-D only reduced blackberry stems levels by 56% one year after treatment.

No statistical interactions in weed biomass or forage yields were observed between herbicide treatments with or without added fertility or with or without fall seeding. Eleven months after herbicide treatments were applied dry matter produced from weed biomass and clover yields were significantly lower for both herbicide treatments compared to the untreated check. Triclopyr plus fluroxypyr produced significantly higher grass forage yields compared to triclopyr plus 2,4-D or the untreated check. When combined across herbicide treatments and fall seeding, forage yield increased by 157% in treatments receiving added fertility. Treatments with or without fall seeding had no impact on forage yield. Weed dry matter yields were not affected by treatments with or without added fertility or with or without fall seeding.

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