

INFLUENCE OF SELECTED HERBICIDE TREATMENTS ON IRONWEED CONTROL, FORAGE YIELD, AND FORAGE QUALITY IN TALL FESCUE PASTURES. Kevin W. Bradley* and Robert L. Kallenbach, Assistant and Associate Professor, Division of Plant Sciences, University of Missouri, Columbia, MO 65211.

Field experiments were conducted to evaluate the effect of various herbicides and herbicide combinations on tall ironweed (*Vernonia altissima* Nutt.) control, total forage yield, and forage quality in tall fescue pastures. In separate experiments, 2, 4-D, 2, 4-D plus dicamba, 2, 4-D plus picloram, clopyralid plus 2, 4-D, and metsulfuron plus 2, 4-D plus dicamba were applied at various rates to tall ironweed that was 20 cm in height on May 19 in 2004 and on May 27 in 2005. In 2004, greater than 80% visual control of tall ironweed was observed with all treatments except metsulfuron plus 2, 4-D plus dicamba 2 months after treatment. However, all herbicide treatments except clopyralid plus 2, 4-D at 0.1 plus 0.56 kg/ha provided similar and moderate reductions in tall ironweed stem numbers one year after treatment (YAT). These treatments provided from 40 to 73% fewer tall ironweed stems compared to the untreated control 1 YAT. Total forage (fescue plus tall ironweed) was harvested from the middle 1.25 by 6 meters of each plot approximately 2 MAT in both trials and analyzed for acid detergent fiber (ADF), neutral detergent fiber (NDF), and protein content in response to each treatment. In both years, all herbicide treatments reduced total forage yield compared to the untreated control. This occurred as a result of the reduction in tall ironweed content in herbicide-treated compared to untreated plots. Few differences in ADF, NDF, or protein content were observed between herbicide-treated and untreated forage samples, and none of the observed differences suggested improved forage quality in treated compared to untreated plots. For example, ADF content of forage from herbicide-treated plots ranged from 33 to 34.4% while that of untreated plots was 33%. These results suggest that tall ironweed infestations may not necessarily reduce forage quantity or quality of tall fescue pastures, but may occur in these environments due to the poor palatability of this weed compared to other desirable species.