

CUT-STUMP TREATMENT OF SALT CEDAR ON THE CIMARRON NATIONAL GRASSLAND.
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Saltcedar (*Tamarix ramosissima* Ledeb.) is an invasive shrub or tree found along stream banks and waterways throughout the western United States. In Kansas, saltcedar infests more than 20,000 ha and is particularly a problem along the Cimarron and Arkansas watersheds. Initial research conducted in 2004 indicated that cut-stump treatments containing triclopyr or imazapyr provided greater than 80% control at 6 months after treatment (MAT). The only treatment providing 100% mortality 15 MAT was a ready to use formulation of triclopyr applied at 90 g L⁻¹. Research was continued in 2005 and 2006 on the Cimarron National Grassland located near Elkhart, KS to assess the effectiveness of herbicides applied to cut-stumps of saltcedar. In 2005, a stand of multi-stemmed saltcedar were cut near ground level during the dormant season using a 71-cm rotary saw attached on the front end of a tractor. On May 6, 2005, 100 cut-stumps were selected for herbicide treatment. Tree cutting and herbicide application occurred on April 26 in 2006. Ten or eleven treatments were applied each year in a randomized block design with 10 replications. Herbicides were applied using hand-held garden sprayers. Treatments applied in 2005 were rated for percent control 3 and 5 MAT, and for mortality 17 MAT. Treatments applied in 2006 were rated for percent control 4 and 6 MAT with a preliminary mortality rating taken 6 MAT. Treatments in 2005 and 2006 included an untreated check, triclopyr at 48 and 120 g L⁻¹ diesel, glyphosate at 90 g L⁻¹ water, imazapyr at 23 g L⁻¹ water, triclopyr + 2,4-D at 5 + 10 g L⁻¹ diesel, a ready to use formulation of triclopyr at 90 g L⁻¹, glyphosate + 2,4-D at 36 + 46 g L⁻¹ water, glyphosate + imazapyr at 36 + 24 g L⁻¹ water, and imazapyr at 23 g L⁻¹ diesel. In 2006, an additional treatment of glyphosate at 180 g L⁻¹ water was applied. All untreated trees resprouted, with resprouts up to 1.8 m tall. In 2005, all herbicides provided greater than 80% control 3 MAT except glyphosate at 90 g L⁻¹ water. Additional resprouting occurred between 3 and 5 MAT. All treatments containing triclopyr or imazapyr provided greater than 80% control 5 MAT, except triclopyr + 2,4-D at 5 + 10 g L⁻¹ diesel. The only treatments applied in 2005 providing 100% mortality 17 MAT were triclopyr at 120 g L⁻¹ diesel and imazapyr at 23 g L⁻¹ diesel. In 2006, all herbicide treatments except glyphosate at 90 g L⁻¹ water provided at least 80% control of saltcedar 4 and 6 MAT. Apparent mortality at the end of the growing season was also 80 to 100% for these same treatments.