SALTCEDAR CONTROL IN THE CIMARRON RIVER BASIN. Walter H. Fick and Wayne A. Geyer, Associate Professor, Department of Agronomy, and Professor Department of Horticulture, Forestry, and Recreation Resources, Kansas State University, Manhattan, KS 66506.

Saltcedar (*Tamarix ramosissima* Ledeb.) is an invasive woody plant found throughout most of the western U.S. in riparian areas. In Kansas, over 20,000 ha of saltcedar exists primarily along the Arkansas and Cimarron rivers. Once established saltcedar decreases forage production, reduces species richness, and affects water quality and quantity. The objective of this research was to compare the efficacy of several herbicides applied as cut-stump treatments for saltcedar control. The study sites were located in southwest Kansas in Morton and Stevens counties on land managed by the United States Forest Service. Saltcedar was cut during or at the end of the dormant period using a 71-cm rotary saw attached on the front end of a tractor. Herbicides were applied using a hand sprayer with 10 trees per treatment. Herbicides were applied prior to resprouting in 2004 (April 13), at resprouting in 2005 (May 6), and the day of cutting in 2006 (April 26). Mortality was determined at the end of the second growing season following treatment. Means were separated using chi square analysis ($P<0.10$). Treatments varied from year to year, but an untreated check, imazapyr at 23 g L^{-1} in water, triclopyr at 48 g L^{-1} in diesel, triclopyr + 2,4-D at 5 + 10 g L^{-1} diesel, and a ready to use formulation of triclopyr at 90 g L^{-1} were applied in all 3 years. All non-treated cut-stumps resprouted within 2 to 4 months. Glyphosate applied at less than 180 g L^{-1} water was ineffective. The addition of imazapyr to glyphosate at 12 + 18 g L^{-1} water and 24 + 36 g L^{-1} water provided 90 to 100% control. Imazapyr was equally effective (>90% control) when applied with water or diesel at 23 g L^{-1}. Triclopyr applied at 48 or 120 g L^{-1} diesel or in a ready-to-use formulation at 90 g L^{-1} provided 80 to 100% control. Triclopyr + 2,4-D at 5 + 10 g L^{-1} diesel provided variable control of saltcedar, but was more effective if applied prior to stump sprouting. Saltcedar can be effectively controlled using imazapyr or triclopyr applied as cut-stump treatments. Glyphosate at 180 g L^{-1} water also shows promise.

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