

CHEMICAL CONTROL OF SALT CEDAR IN SOUTHWEST KANSAS. 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 tree found throughout the western U.S. along rivers, streams, and wetlands. In Kansas, over 20,000 ha of saltcedar exists primarily along the Arkansas and Cimarron rivers. The objective of this research was to compare the efficacy of herbicides applied either as cut-stump or foliar treatments for saltcedar control. The study site was located on the Cimarron National Grassland located in southwest Kansas and managed by the United States Forest Service. Saltcedar was cut during July 2008 using a 71-cm rotary saw attached on the front end of a tractor. Cut-stump and foliar treatments were applied on July 31, 2008 and evaluated October 3, 2008 and July 27, 2009. Cut-stump treatments were replicated 10 times and were applied using a 3.8 L garden sprayer. Treatments included glyphosate (50% v/v), imazapyr (10% v/v), glyphosate + imazapyr (5 + 5% v/v), triclopyr (10 and 25% v/v in diesel), and triclopyr + fluroxypyr (18.75 + 6.25% v/v in diesel). Foliar treatments included high-volume applications of imazapyr as 0.5 and 1% solutions in water and imazapyr + glyphosate at a 0.5 + 1% rate. These treatments were applied to 15 to 20 trees using a backpack sprayer. All cut-stump treatments provided 100% control of saltcedar 2 months after treatment (MAT). All treatments except glyphosate at 50% v/v and triclopyr at 10% v/v in diesel provided 100% control 1 year after treatment (YAT). Foliar applications of imazapyr at 0.5 to 1% v/v solutions provided 35 to 48% defoliation of saltcedar 2 MAT. The combination of imazapyr + glyphosate at 0.5 + 1% v/v in water provided 68% defoliation 2 MAT. By 1 YAT the three foliar treatments provided 56 to 73% mortality of saltcedar. Saltcedar is a difficult tree to kill, but cut-stump and foliar treatments exist that can provide significant control. Follow-up control may be necessary to increase mortality of saltcedar initially treated with foliar-applied herbicides.