SALTCEDAR CONTROL USING FOLIAR AND BASAL BARK TREATMENTS. Walter H. Fick and Wayne A. Geyer, Associate Professor, Department of Agronomy, Professor, Department of Horticulture, Forestry, and Recreation Resources, Kansas State University, Manhattan, KS 66506.

Saltcedar [*Tamarix ramosissima*] is an invasive woody species in riparian zones and along streambanks in the southwestern and southeastern U.S. and throughout the Great Plains. Saltcedar respouts following top removal by fire or mechanical cutting. Herbicides are commonly used to control saltcedar. The objectives of this research were to 1) determine the efficacy of foliar and basal-applied herbicides for saltcedar control, and 2) determine associated vegetative cover changes. The study was conducted on the Cimarron National Grasslands, near Elkhart, Kansas. Herbicides were applied on August 16, 2006 and on an adjacent site on August 30, 2007. Foliar treatments consisted of 0.56 and 1.12 kg ha^{-1} imazapyr, and imazapyr + glyphosate at 0.56 + 1.12 kg ha^{-1}. All three foliar treatments contained 1% methylated seed oil (v/v). Triclopyr was applied as a basal bark treatment at 48 g L^{-1} of diesel. All treatments were applied using a hand sprayer. Treatments were applied to 6.1 by 6.1 m plots in a completely randomized design with four replications. Saltcedar plants were 1 to 3-m tall at the time of herbicide application. Saltcedar mortality was determined about 1 year after treatment (YAT). Vegetative foliar cover was estimated using Daubenmire's Canopy Coverage method at the time of herbicide application and about 1 YAT. All herbicides provided greater than 85% mortality of saltcedar 1 YAT. Vegetative cover changes varied with treatment. Bare ground increased following treatment in 2007 because of much dryer than normal precipitation in late 2007 through most of the 2008 growing season. Perennial grasses such as alkali sacaton, inland saltgrass, and western wheatgrass were generally decreased following application of treatments containing imazapyr and glyphosate. A reduction in perennial grasses was often associated with an increase in annual forbs such as Russian thistle and kochia.

2008 North Central Weed Science Society Proc. 63:74.