

RESPONSE OF HERBACEOUS PLANT COMMUNITY AFTER REMOVAL OF WOODY VEGETATION IN A TALLGRASS PRAIRIE RESTORATION

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ABSTRACT: Conservation of native communities, restoration of functional landscapes, ecological research, and environmental education/outreach are critically important activities. Towards these ends the University of Kansas Field Station & Ecological Reserves (KUFS) is engaged in a long-term program at a site in northeastern Kansas. The site is within what was historically the forest-prairie mosaic, but native communities have been greatly altered by human activity the last 150 years. On-the-ground conservation efforts have included increasing the connectivity of native prairies by removing trees and restoring former prairie communities. Prior to the initiation of restoration activities in 2006, 5x5m monitoring plots were established in the areas marked for tree/woody growth removal. These plots were surveyed in 2005 to establish a baseline of species occurrence and community characteristics, and to enable the assessment of restoration trajectories and outcomes. A selection of these permanent plots was re-sampled 2008 and again in 2010 to monitor and assess the progress of the restoration. Much of the restoration work done on the perimeter of a 4-ha native prairie involved the removal of successional trees, which opened up the viewshed, but has the potential to invite weedy species. The dominant species in these areas, *Bromus inermis*, *Andropogon gerardii*, and *Bromus japonicus*, remained dominant and increased in abundance. Another targeted area, the Tomenthera Prairie, was heavily infested with *Juniperus virginiana*. The initial post-restoration survey of vegetation in this area (2008) indicated some recovery of native vegetation, most notably *Dichanthelium acuminatum*, a native cool-season grass.