

# Effects of Precipitation, Grazing and Initial Planting Practice on CRP Plant Diversity Across Kansas

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The Conservation Reserve Program (CRP) is a federally funded program that has converted marginal cropland to native plant communities over the past 30 years with the goal of preventing erosion, improving water quality, and reducing loss of wildlife habitat and biodiversity. Nationwide, 23.5 million acres are currently enrolled in CRP, yet few studies have examined plant communities on CRP lands at a large scale. As part of a larger three-year study, we collected vegetation data from 108 CRP sites across the precipitation gradient in Kansas to determine the effects of planting practices (CP2 and CP25) and periodic grazing on plant communities. In 2017, plant species richness increased linearly with the precipitation gradient from an average of 5 species per m<sup>2</sup> in the west to 10 species per m<sup>2</sup> in eastern Kansas. Across sites, 88 plant species were identified in the western region, 125 in the central, and 143 in the eastern region. Collectively, 237 species were found across the 108 sites, representing over 11% of all plant species that occur in Kansas. Neither grazing nor planting practice had a detectable effect on plant species richness or evenness in the first year of the study.