THE EFFECTS OF VARYING SEEDING RATES OF *BOUTELOUA CURTIPENDULA* AND MOWING ON NATIVE PLANT ESTABLISHMENT IN A NEW PRAIRIE RECONSTRUCTION.

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Abstract: A major problem in prairie reconstruction is weed competition. Research has shown that mowing in the first year can increase establishment and survival of prairie plants. The use of nurse crops (companion crops) has been suggested as an alternative to mowing for weed suppression. The goal of this study was to examine various seeding rates of *B. curtipendula*, as a nurse crop in mowed and unmowed plots to determine if it suppresses weeds without reducing the establishment of seeded natives. We hypothesized that increasing the seeding rate of *B curtipendula* will reduce weed growth and promote an increase in native seedling numbers. In addition we hypothesized that number of the native seedlings in mowed plots with no *B. curtipendula* seed will be similar to unmowed plots seeded with *B. curtipendula*. Seeds of 25 different species of grasses and forbs were broadcast on June 18th at Neal Smith Wildlife Refuge at a seeding rate of 22 seeds/m^2. *B. curtipendula* was also broadcast at seeding rates of 0, 22, 43, 173, and 345 seeds/m^2. The site was mowed mid-August of the first growing season and approximately every three weeks of the second growing season. Sampling was done in early September 2005 and in June and mid August 2006. Native seedling counts, biomass clippings, basal cover, and photosynthetic light were measured. Results show no significant difference ($p>0.05$) between seeding rates in total native species composition or weed biomass.