Introduction

Dr. Deling and others have documented changes in plant communities in the mixed grass prairie caused by the herbivory of the Black-tailed prairie dog. Cynomys ludovicianus. Canopy height, litter cover, and nitrogen mineralization rates in disturbed prairie dog towns and the control area. Commercial rabbit co-habitations, a rabbit and an herbivore, are known to reduce canopy height and nitrate and ammonium. rabbit co-habitations reduce the grasses, thus reducing canopy height and nitrogen mineralization rates. rabbit co-habitations have been observed in the active prairie dog towns and need to be examined as a possible confounding factor. It is not known if rabbit herbivory occurs on the abandoned or control sites. The nitrogen data shows increased nitrogen on prairie dog colonies, but not on the abandoned or control sites. The results are labeled preliminary as no statistical analyses have been performed yet.

Research Methods

Prior to field work, students are trained at the schoolyard research plot at Rocky Mountain High School. Students in the field are accompanied by a teacher, graduate student, or volunteer. Students estimate % cover of grasses, forbs, litter, and bare ground using a Daubenmire frame. Canopy height above the frame is measured.

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Between 20 and 30 random points are measured at each site type: uncolonized grassland (control), active prairie dog colony by the bike path (disturbed), and abandoned prairie dog colony by the bike path (disturbed). Students record data in September (Fall) and May (Spring).

Starting in Fall 2004, total nitrogen samples have been taken on the disturbed prairie dog town and the control area. Commercial rabbit co-habitations are inserted and left for one week, then removed, washed, and returned to the company for analysis of nitrate and ammonium.

Discussion

The results are labeled preliminary as no statistical analyses have been performed yet. The preliminary data show some trends consistent with the data from the mixed grass prairie and SGS-LTER. Canopy height is reduced and grasses decrease relative to forbs, but these results may not be statistically significant or hold up over time. As the project continues, data will accumulate and become more amenable to analysis. Rabbit co-habitations have been observed on the active prairie dog towns and need to be examined as a possible confounding factor. It is not known if rabbit herbivory occurs on the abandoned or control sites. The nitrogen data shows increased nitrogen on prairie dog colonies, presumably from animal nitrogenous waste or increases in nitrogen cycling rates.

Preliminary Results

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