2015-2016 Extension Grant – Final Report

Project Leader: Eric Thacker

Project Title: Home on the Range: Maintaining Livestock Production and Robust Wildlife Populations.

Project Duration: June 1, 2015 – May 30, 2016.

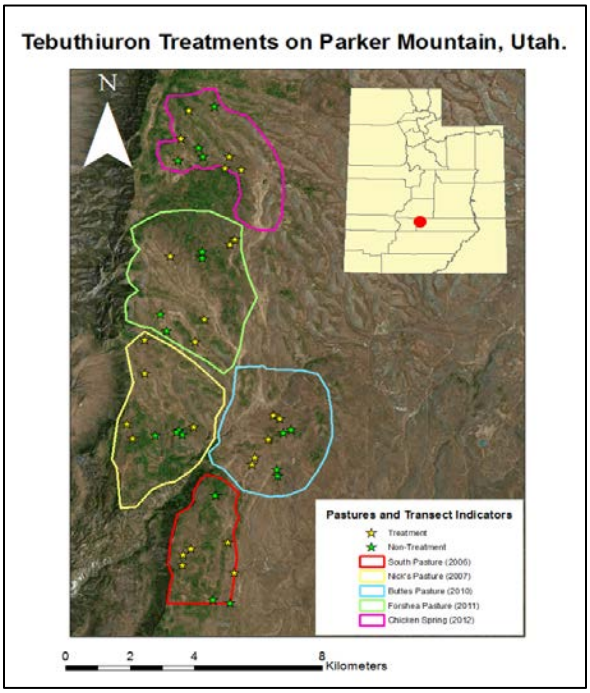
Total Requested Amount: $10,000.

Project Objectives:

Objectives

The overall objective of this project were to provide data that will ensure sustainability of local agriculture while enhancing conservation of valuable wildlife. USU extension has a unique opportunity to work within existing networks (Parker Mountain Adaptive Resource Management Group) to provide timely relevant scientific information to help improve management of agricultural and natural resources. We collected baseline utilization and vegetative data. This preliminary data will be used to pursue larger grants to adequately explore the potential solutions that will avoid conflict between livestock and pronghorn. For the purpose of this project we will

1. Estimate utilization of forbs and grasses as baseline data using grazing cages.
2. Estimate forage availability across upper portions of Parker Mountain where there is the greatest likelihood of conflict between cattle and pronghorn.
3. Use preliminary data to pursue multiyear grant from Utah Division of Wildlife Resources complete research project on pronghorn and livestock interaction.



Project Results: Data was collected across 5 pastures in pronghorn summer habitat. Formal assessments of pronghorn forage utilization were not conducted because there was no discernable (measurable) utilization from pronghorn in the high elevation pastures prior to livestock entering the pastures. Final utilization assessments conducted at the end of the season conducted by SITLA range managers concluded that utilization levels were within seasonal targets, suggesting that there is adequate forage for pronghorn and livestock. Results from our forage assessment suggest that chemical sagebrush treatments increase forage for cattle (grass). It is possible that these treatments could be conducted by the division of Wildlife

(UDWR) resources as a way to mitigate increasing pronghorn populations. As pronghorn populations increase the UDWR can implement sagebrush control treatments in mountain sagebrush communities to eliminate concerns over reduced forage availability. These results suggest that habitat treatments could be done to help alleviate concerns over competition between pronghorn and livestock. Additionally the sagebrush treatments will improve pronghorn habitat by increasing forbs which are critical for lactating pronghorn does. We submitted a funding proposal ($320,000) to UDWR but was unsuccessful in obtaining funding this fiscal year even though our project was the #2 ranked big game research project. Big Game Coordinator Justin Shannon is hopeful that we will be able to obtain funding for the pronghorn project next fiscal year as research funds are anticipated to increase. The most important outcome of this project is that it has opened communication about the potential conflict of pronghorn and livestock. We have solicited and received support from the Wayne County Commissioners and have discussed the potential impacts of our research at Parker Mountain Adaptive Management resource group meetings. We have also recently submitted a funding proposal to Western SARE and we are awaiting the results of the review process.

Table 1. Paired t-test results for vegetation responses in tebuthiuron treatment and untreated areas across five pastures on Parker Mountain, Utah. n=10.

Response	t-statistic	p-value	Mean of Differences
Live Mountain Sagebrush Cover (%)	6.12	0.0036	18.57
Forb Biomass	-3.19	0.0334	0.007
Grass Biomass	-2.86	0.0461	0.019

Signatures:

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