**USU Extension Grant - Final Report**

Project Leader: Mark Nelson

Project Title: Comparison of Methods to Control Piute Ground Squirrels in Irrigated Crop Ground.

Project Beginning Date and End Date: June 1, 2016 – December 31, 2018

Total Requested: $10,000.

Project Summary: This project will compare different methods of controlling the Townsend Ground Squirrel in alfalfa fields. We are going to compare several new methods of control.

Project Results:

* 1. Increased collaboration between on- and off-campus faculty.

This grant gave me a great opportunity to collaborate with other agents and specialists on and off campus. I was able to submit abstracts with Dr. Nicky Frey and present at several conferences.

* 1. Outcomes, outputs, and impacts

This funding was used to conduct a number of different trials to find what kind of baits and other control methods are most effective in controlling the ground squirrels. In our research we found that the few products currently labeled to control squirrels here in Utah are not appetizing to squirrels. We found that the Rozol Vole Pelleted Bait has a strong bait acceptance but was not currently licensed for controlling the Townsend Ground Squirrel here in Utah. By conducting these trials and working with the LiphaTech Company we were able to receive a Section 24(c) Special Local Need Label from the State of Utah. This label is in effect for 5 years and will allow farmers to have a helpful tool in their arsenal against this resilient pest. Many farmers used in this product this past year and reported that they were able to get better control of the ground squirrels.

We found that the Rozol bait is effective until the alfalfa greens up in the spring. We also conducted trials to find control methods that would work after the alfalfa green up. We found one of the most effective methods of control after green up is to use Fumitoxin Tablets to fumigate the squirrels in their holes.

* 1. Efforts/plans to produce, publish, and disseminate scholarly materials.

I have presented the results of our trials for the past three years at our Beaver County Crop Schools. I was also able to have Dennis Hincamp, USU Extension come to our crop school and video my presentation and also video some of our trials. He put the video up on YouTube and to date there have been 5545 views. I am also currently working with Dr. Frey to publish a ground squirrel control factsheet.

* 1. Efforts/plans to secure extramural funds

I am working with private companies to receive funding to continue research trials on controlling the squirrels. Last year I was able to collect $6500. from private companies.

 Presenting results of the research.

 I have presented the results of my research at the Utah Association of County Agricultural Agents Summer Meeting. Dr. Frey and I have also made a poster that we presented at the International Vertebrae Pest Conference held in February 2018, Rohnert Park, CA