COMPLETED PROJECT REPORT

Project Title: Best Management Practices California Ground Squirrel Program.

Research Agency: University of California - Davis

Principal Investigator: Salmon

Budget: $258,552.00

Background:

October - December 2002

This is the final year of this project and current work continues to develop the educational materials for the overall BMP ground squirrel program. Slides taken during this project, as well as the extensive wildlife damage collection (10,000+ slides) are being digitized as appropriate and will be incorporated into the BMP project. Work on the complete ground squirrel control guide is progressing.

January - March 2003

The last 3 months have been spent working mostly on a Best Management Practices Manual that will be useful to growers, farm advisors, and others concerned with ground squirrel control. We have conducted an extensive literature review on many aspects of ground squirrel control and compiled the information into the manual. We have incorporated the recommendations made from recent BMP reports and other research funded by VPCRAC. The goal of this manual is to provide recommendations for the practical application of control techniques in farmland, grazing, parkland, and urban settings.

The next stage will be to take the information we have gathered and develop materials that are practical and useful to those interested in controlling ground squirrels. We will be meeting with farm advisors and agricultural commissioner staff to determine what the needs of the growers are, and then we will develop materials to distribute to them. These may come in the form of an information website and/or pamphlets and flyers that can be made available at county agricultural commissioner offices.

A 2nd project that we are working on is a calibration study for handheld rotary spreaders. It has been determined that broadcast application of anticoagulant bait is a safe and effective method of baiting. However, calibration is an important part in the efficacy and safety of this material, not to mention cost efficiency. The current label recommendation for 0.01% active ingredient

anticoagulant is to apply at a rate of 10 lb/ac. Without proper calibration, it is difficult to determine if one is applying this material at an accurate rate. We assume that the time it takes to calibrate may discourage some people. We want to encourage the use of handheld spreaders as an alternative to spot baiting. We are testing different methods of calibration and plan to work out a method that will be easy to replicate without being time consuming. Essentially we would like the applicator to be able to look at what has been spread on the ground in front of him/her and determine if it is reasonably close to the proper application rate. The biggest problem with this method is that some rotary spreaders have an uneven distribution. We are going to look at this distribution for various spreaders to see if we can make a practical recommendation as to how many kernels/ft2 one can expect to find across the swath of the spreader.

Summary:

April - October 2003

The final report has been completed and submitted to CDFA. The report includes sections on simulation models, long term (field) demonstrations, bait quality assurance, and innovative learning strategies (comprehensive web site). The abstract provided with the report is as follows:

The California ground squirrel (Spermophilus beecheyi) is likely the most serious wildlife pest in California. A number of ground squirrel control techniques are available to growers and, if used properly, can be quite effective. However, the selection and success of any particular technique very much depends on understanding ground squirrel biology and behavior. Successful control also depends on making the correct selection and proper application of rodenticides and other tools. Squirrel problems persist because poor control decisions are made or because growers do not know the options available to deal with the specific situation. The goal of this project is to develop, assess, and evaluate strategies to implement the best management practices (BMP) for the control of California ground squirrels. This was done through ground squirrel population simulation modeling, long-term demonstration of important control strategies, and developing a comprehensive and interactive web site on California ground squirrel BMP.

Last Updated:

02/23/09