PROJECT REPORT:

Project Title: A Literature Review of Existing 'Selective; Bait Stations, Excluding Non Target Mammals.

Research Agency: University of California Cooperative Extension (San Diego)

Principal Investigator: Terrell Salmon

Budget: $8,608.00

Background:

In California, the first generation anticoagulants diphacinone and chlorophacinone are commonly used for the control of California ground squirrels. Past VPCRAC research has demonstrated that the anticoagulants chlorophacinone and diphacinone are extremely effective ground squirrel control materials. The anticoagulants are mixed with a blue dye and applied on steam rolled oat groats (0.01% or 0.005% active ingredient a.i.). The effectiveness of these baits relies on squirrels consuming a series of doses over several days to obtain a lethal dose. A supply of bait over a 6 – 8 day period is therefore needed in most cases. To achieve this, bait having 0.005% a.i. may be continuously supplied in bait stations, or bait having 0.01% a.i. may be applied by hand (spot baiting) or by mechanical bait spreader (broadcast baiting) near active burrow systems.

Previously funded VPCRAC work has established that anticoagulants accumulate in the tissues of squirrels that ingest these baits. Research has shown that most poisoned squirrels contain only small amounts of anticoagulant and that predators and scavengers were not negatively impacted by ground squirrel control operations on rangeland sites. Despite this issues still persist about the potential for secondary poisoning caused by these materials.

There is growing concern over the poisoning of non-target species with field applications of anticoagulant baits, and the registration eligibility of anticoagulants continues to be reviewed by the US Environmental Protection Agency (EPA 2008).

Secondary poisoning potential is a serious concern for all rodent control programs but especially where pets, predators and scavengers are common to the control site. The potential problems are exacerbated when the population of squirrels is high since the number of carcasses which may be found above ground (e.g. exposure) is almost certainly going to be proportional to the number of animals killed in any control operation.

The concept of this project is to conduct a full literature review of existing 'selective' bait stations worldwide. By identifying successfully deployed bait stations through literature this will provide us with research and knowledge to develop selective bait

stations for use in California. The emphasis will be on bait stations that prevent or restrict non target wildlife from accessing rodenticide materials.

Objectives:

1. Identify current best management practice 'selective' bait station methods being used worldwide.

2. Provide a summary and final report detailing the 'selective' bait stations identified with recommendations for use in California.

Progress To Date:

Last Updated:

01/26/2011