COMPLETED PROJECT REPORT

Project Title: California Ground Squirrel laboratory feeding study.

Research Agency: National Wildlife Research Center

Principal Investigator: McCann

Budget: $13,740.00

Summary:

April 1998: A 3-day, no-choice feeding trial was initiated to determine the minimum Cholecalciferol concentration in a bait that would produce the maximum California ground squirrel mortality. The test ended June 14 with the euthanizing of the surviving animals. The results of the test are as follows:

For the following concentrations: 0.00% (control), 0.015%, 0.022%, 0.033%, 0.05%, and 0.075% the mean total consumption for 3 days was: 63.85g, 56.17g, 48.35g, 38.31g, 38.64g, and 29.90g, respectively. The 3 day mean mg/kg ingested by the treated groups of squirrels was: 13.17, 16.50, 20.77, 30.14, and 33.53, respectively. No deaths occurred until day 5 when one animal died at the 0.05% concentration and one at the 0.075% concentration. Other test results were:

0.00%	0 died	0% dead by day 12
0.015%	3 died	30% dead by day 12
0.022%	8 died	80% dead by day 12
0.033%	5 died	50% dead by day 9
0.05%	8 died	80% dead by day 11
0.075%	9 died	90% dead by day 12

June 2000 Final Report Abstract

This study evaluated Cholecalciferol as a rodenticide to control California ground squirrels. Sixty ground squirrels were placed on a 3-day, no-choice, laboratory feeding study. Six groups of 10 animals were fed different concentrations of Cholecalciferol treated oat groat baits: 0.00% (control), 0.015%, 0.022%, 0.033%, 0.05%, and 0.075%, Mortality for each group was 0%, 30%, 90%, 50%, 80%, and 90%, respectively. Total 3-day food consumption of the different concentrations ranged from 131.7 g (0.015%) to 638.5 g (0.00%). The carcasses were examined for calcium deposition on the heart and kidneys; there was some deposition, but the deposition could not effectively be differentiated between treatment groups or by amount of Cholecalciferol ingested. The groups with 90% (0.022% concentration), 80% (0.05%), and 90% (0.075%) mortalities meet the 70% minimum standard established by the EPA for verifying efficacy of rodenticides.

Last Updated:

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