

COMPLETED PROJECT REPORT

Project Title: Efficacy of Cholecalciferol on Valley Pocket Gophers

Research Agency: National Wildlife Research Center

Principal Investigator: G. McCann

Budget: \$244,254.00

Summary:

The California Vertebrate Pest Advisory Council (CVPAC), through a cooperative agreement with the California Department of Food and Agriculture (CDFA) funded a laboratory study at the NWRC to determine if cholecalciferol was effective and could potentially be used to control valley pocket gophers in California. Cholecalciferol is registered in California for commensal rodent control at the 0.075% concentration. One hundred valley pocket gophers were captured in California and shipped to the Colorado for a 3-day, no-choice feeding trial and laboratory efficacy study with a control (0.00%) and 4 concentrations of cholecalciferol treated oat groats: 0.050%, 0.075%, 0.112%, and 0.169%. Mortality was 100% in the 0.05% treatment group by day 8, 100% in the 0.075% by day 7, 100% in the 0.112% group by day 10, and 95% in the 0.169% group by day 7. One control animal died on day 3 of unknown causes and the 1 gopher that survived in the 0.169% group consumed only 0.03 g of bait in 3 days. Total mean bait consumption was 17.98 g for the control animals and ranged from 2.50 g to 4.32 g for the 4 treated groups (higher concentrations resulted in lower consumption). The average mg/kg received by the animals in the treated groups was 13.60 mg/kg for the 0.050% bait, 19.61 mg/kg for the 0.075%, 21.39 mg/kg for the 0.112%, and 27.95 mg/kg for the 0.169% bait. These laboratory studies indicate that cholecalciferol has potential as a field rodenticide for controlling valley pocket gophers in California when used at concentrations of 0.050% or greater.