

COMPLETED PROJECT REPORT

Project Title: Determination of diphacinone and chlorophacinone residues in California range grass.

Research Agency: National Wildlife Research Center

Principal Investigator: T. Prinus

Budget: \$23,000

Background:

Diphacinone and chlorophacinone are registered anticoagulant rodenticides commonly used to control ground squirrels on rangelands in California. The determination of the amount of toxicant residues in or on crops is a necessary aspect for the registration of a pesticide. A standardized procedure was required to measure the amount of anticoagulant residues on range grasses.

Objectives:

To develop and test laboratory procedures to determine the residues of the anticoagulants diphacinone and chlorophacinone in range grasses.

Summary:

The Study Director contacted the CDFA regarding target application rates and sample matrices for studies. The Study Director initiated the method development studies after receipt of the appropriate control sample matrices from CDFA. The analytical method titled "Determination of Diphacinone and Chlorophacinone Residues in California Range Grass" was completed, after 8 months of effort, on September 11, 1995 and showed the r-squared value for the response linearity for both compounds was $> .999$. Recoveries at 100 ppb, 1 ppm and 10 ppm ranged from 91-104 % with a coefficient of variation from 1-8 %. The methods limits of detection were 46 and 41 ppb for chlorophacinone and diphacinone, respectively. The analytical method was sent to CDFA on September 18, 1995.