

**MINUTES**  
**VERTEBRATE PEST CONTROL RESEARCH ADVISORY COMMITTEE MEETING**  
**Sponsored by: Sacramento County Department of Agriculture**  
**California Department of Food and Agriculture Headquarters**  
**1220 N St, Auditorium**  
**Sacramento, CA 95814**  
**April 25, 2012**

Members Present

Dan Spangler, Chairperson  
Art Foster  
Karen Sweet  
Mark Novak  
Dennis Bray  
Edward Meyer  
Paul Stapp  
Robert Timm  
Victoria Hornbaker

Members Absent

Dale Huss

Visitors

Jennifer Gordon  
David Kratville  
Roger Baldwin  
Al Hom  
Christian Bagocius  
Fred Rinder

Duane Schnabel  
Peter Newman  
Edmund Duarte  
Colleen Murphy  
Denise Alder

Via Webinar

Katherine Horak  
Steve Schweizer  
Jason Dean  
Eric Wylde  
Michelle Thom  
John Johnson  
Kevin Backus

Stephanie Shwiff  
Thomas Schmit  
Alan Muchlinski  
Michael Leoni  
Robert Roach  
Donald Mayeda

Scott Werner  
Erick Wolf  
Mohammed Bari  
Charlene Carveth  
Ann Hanger  
Mark Martinez

INTRODUCTIONS

Welcome from Robert Leavitt, Ph.D., Director of Plant Health and Pest Prevention Services (PHPPS) of California Department of Food and Agriculture (CDFA).

Chairman Dan Spangler called the meeting to order at 8:00 a.m. followed by the introductions of Committee members and guests.

BAGLEY-KEENE OPEN MEETING ACT AND VERTEBRATE PEST CONTROL RESEARCH ADVISORY COMMITTEE COMPLIANCE

Mr. Dan Spangler and the Committee acknowledged the Bagley-Keene Open Meeting Act and Vertebrate Pest Control Research Advisory Committee (VPCRAC) compliance.

## APPROVAL OF MINUTES

**Motion:** Dennis Bray moved that the Committee approve the minutes from the October 5, 2011 meeting. The motion was seconded by Art Foster and passed unanimously.

## FINANCIAL REPORT UPDATE

Ms. Victoria Hornbaker provided the Committee with information on the program budget, revenue, expenditures, and projections. The program budget for FY 2011/12 was authorized at \$600,000 and the program has spent approximately \$483,096 to date, including encumbrances. Research expenditures including encumbrances for FY 2011/12 are approximately \$321,632. The administrative budget for FY 2011/12 was set at \$232,000 and the program has spent approximately \$189,870. Ms. Hornbaker discussed the program fund condition and explained to the Committee that if spending and revenues remain at the same level the program will be insolvent by FY 2013/2014. Mr. Mark Novak requested that financial reports be sent out with meeting announcements. The Committee questioned why the program is paying so much for Information Technology (IT) services. Mr. Duane Schnabel explained that the cost allocation for IT services is assessed based on the number of program personnel using IT services.

**Motion:** Edward Meyer moved that the Committee approve the Financial Reports as presented. The motion was seconded by Dennis Bray and passed unanimously.

The Committee requested a report showing the affects of raising the bait assessment on bait sales. The report should include information collected from participating counties and be presented at the October meeting. In addition, the Committee would like to have county representatives present at the October meeting to facilitate a discussion about the impacts of raising the assessment.

**Motion:** Dennis Bray moved that the CDFA staff provide a report to the Committee, at the next meeting, on the impacts of raising the bait assessment rate on the counties in the bait program. Based on this information the Committee will determine whether the bait assessment rate should be increased. The motion was seconded by Dan Spangler and passed unanimously.

**Motion:** Karen Sweet moved that the CDFA staff provide a report to the Committee, at the next meeting, on regulations governing the VPCRAC; the report will also contain a discussion on the rules and regulations involved in amending existing legislation to adjust research priorities and to expand options for bait sales. The motion was seconded by Dennis Bray and passed unanimously.

## COMMITTEE MEMBERSHIP: CONSIDERATION AND RECOMMENDATION OF NEW MEMBERS

Committee Member Ellen Des Jardins-Hirth has officially retired from the Committee as of the October 5, 2011 meeting. Committee members donated money to get a plaque for Ellen's retirement in honor of her years of service to the Committee.

The vacancy has been posted on the VPCRAC website and the CDFA website. So far there hasn't been any interest in the vacancy.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RISK MITIGATION DECISION FOR TEN RODENTICIDES

### **Status of Agricultural Uses**

CDFA staff continues to present training classes immediately followed by private applicator exams administered by the County Agricultural Commissioner's staff. These training and exam events target historic users within the county in order to maintain their ability to use the newly designated "Restricted Use" baits. These exams being administered immediately after a training class has led to higher pass rates. The Department of Pesticide Regulation (DPR) temporary vertebrate private applicator exam will expire in mid June 2012.

### **Impacts to CDFA Program**

The Program continues to conduct outreach activities to facilitate getting bait to the counties that are in need. San Diego has withdrawn from the mixing program as a result Southern California counties must now purchase bait elsewhere and pay increased shipping costs. Los Angeles is currently buying bait from Kings County.

## CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION'S REEVALUATION OF SECOND GENERATION ANTICOAGULANT BAITS, STATUS AND PROPOSED ACTION

Ms. Denise Alder from California Department of Pesticide Regulation's reported on the reevaluation of second generation anticoagulant baits.

## CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE REGISTRATION ISSUES

Mr. David Kratville presented updates on several registration issues. The zinc phosphide label was revised to correct several issues and submitted to DPR for review. Additionally, DPR and EPA are deciding if the requirement for an expiration date applies to stand alone Special Local Need registrations. The Program currently has a sub-registration for diphacinone bait blocks with HACCO/Neogen. Neogen offered to prepackaged the bait blocks in bait stations under the CDFA label. A minimum purchase amount of 720 pouches at \$7.80 per pouch = \$5,616 + shipping \$760 would be required. Representatives from some of the participating counties believed that the cost per package seemed close to what they would pay for bulk bait blocks. The minimum

required purchase is a concern for counties who don't normally purchase large quantities of bait blocks.

#### SPECIALTY CROP BLOCK GRANT UPDATES

Mr. Scott Werner of National Wildlife Research Center updated the Committee on the project "**Bird Depredation to Almond, Lettuce, Melons and Ginseng.**" A survey was given to growers of the targeted crops to determine the type and severity of bird damage they encounter. Data was collected from the survey including; the current cost of bird control, methods used, crop loss levels, cost for treatment, and potential yield loss and property damage if current control methods were unavailable or not used. Survey responses established that California growers are experiencing crop damage from a variety of bird species. Efficacy tests of a 50 percent 9,10-anthraquinone (active ingredient) bird repellent produced by Arkion Life Sciences were conducted on four crop and bird combinations; almonds and American crows, lettuce seedlings and horned larks, ginseng and wild turkeys, and melons and grackles. Cage trails were conducted to determine a concentration-response of the anthraquinone based avian repellent on four crop and bird combinations. The higher concentration trails elicited better repellency in all four crop and bird combinations.

Dr. Roger Baldwin from UC Kearny Ag Center updated the Committee on the project "**Development of an Integrated Pest Management Program for Vole Control in Artichokes**". This study was initiated due to the extensive damage being caused by voles in artichokes. The initial phase of the study was to develop a reliable indexing method to estimate vole populations; trapping combined with wax block chew indicators proved to be the most accurate and reliable method. Efficacy of several cultural practices like weed control and discing was studied, as well as assessing efficacy of vole exclusion devices. The efficacy of conventional rodenticides including chlorophacinone treated bracts, zinc phosphide treated bracts, chlorophacinone pellets, and cholecalciferol pellets was assessed during different seasons. Testing each bait seasonally was done to determine if seasonality influences bait acceptance. The final objective will be to develop an integrated pest management program for controlling voles in artichokes that can be used by growers.

#### QUALITY ASSURANCE/ QUALITY CONTROL PROGRAM

Rodenticide bait samples were collected from two mixing counties for QA/QC analysis. Both .005 and .01 percent baits were sampled from each county. Samples were submitted to two labs to check the consistency of the QA/QC results. Individual samples were split and sent to the CDFA Center for Analytical Chemistry and additionally to the National Wildlife Research Center's Analytical Chemistry Project lab. Results from both labs were similar and in agreement with sample concentrations. Results were reported back to the individual counties and adjustments will be made if needed to insure a quality product is being produced.

#### RESEARCH UPDATES

##### National Wildlife Research Center

Dr. Katherine Horak provided an update to the Committee on the following projects:

**“Pharmacokinetic Studies with Kestrels and Owls for Validating the CDFA/USDA Rodenticide PBPK Model”** Dr. Horak reported that the kestrel and screech owl trials have been completed. Residue analysis is ongoing. The next phase of this study will be to test the validity of the kestrel models with the different exposure scenarios.

**“Using Liver Microsomes to Screen Anticoagulant/Inhibitor Formulations for Meadow Vole Control”** Dr. Horak reported that the animal welfare paperwork was accepted by the NWRC, which will allow the establishment of a wild trapped colony of voles. The use of a breeding colony will reduce stress mortality on animals caught in California and transported to the Colorado laboratory facility. A three choice feeding trial will be conducted, using a control laboratory feed, lab feed with chlorophacinone and lab feed with chlorophacinone and pomegranate juice extract. Liver microsomes will be analyzed for all three groups.

**“IN-vitro Inhibition of Chlorophacinone metabolism in resistant meadow voles using FIFRA 25b inert ingredients”** Dr. Horak reported that trials have started for this project. Microsomes were isolated from wild caught resistant voles. In-vitro inhibition of chlorophacinone metabolism was analyzed using several FIFRA 25b compounds. It was found that one of the compounds (Compound 5) showed the most metabolism inhibition. Compound 5 will be tested for stability and the ability to mix into rodenticide bait.

**“Increasing Acceptance of zinc phosphide baits”** Dr. Horak reported that a breeding colony of wild trapped Colorado voles was established at the NWRC for this study. The voles were conditioned to have an aversion response to different compounds. Microencapsulation of zinc phosphide was completed and a two choice feeding test was conducted. The study used 0.2 percent zinc phosphide bait at the lowest literature dose to cause bait avoidance, with no mortality being expected for these trials. The voles preferred encapsulated zinc phosphide bait over non-encapsulated regardless of aversion response conditioning. Greater mortality was seen in voles that were fed encapsulated zinc rather than non-encapsulated bait. It is possible that the encapsulation prevents contact of the zinc phosphide with the moisture until the bait reaches the animals gut. The cooperative agreement was extended to perform additional toxicity tests.

Dr. Stephanie Shwiff provided an update to the Committee on the following project.

**“Estimating Job and Revenue Savings from using a Variety of Pest Control Techniques to Protect Crops from Bird and Rodent Damage in California”** Dr. Shwiff reported on the findings of the survey conducted to collect data on the value of crop savings from pest control. Objectives were to first estimate the amount of crop savings related to pest control measures in specific counties for selected crops. Second was to quantify the number of jobs and the amount of revenue saved in each modeled county resulting from the pest control measure induced crop savings. A computer based state-of-the-art regional economic model (REMI), was used to forecast how a change in one industry or region affects economic performance in other industries or regions. The REMI model predicted to the year 2050 that there would be a positive impact of preventing bird damage of over \$30 billion, equating to roughly \$769 million per year and 12,000 jobs annually. The same REMI model predicted a positive impact of preventing rodent damage of over \$43 billion, which equates to roughly \$1.10 billion and 22,000 jobs annually. The final steps for this project will be to create factsheets, brochures, reports, public releases and publications based on the economic model.

University of California

Mr. Peter Newman updated the Committee on the following projects:

**“Development and Evaluation of the VPCRAC Website for Vertebrate Pest Research Information”** Mr. Newman reported that the development stages of the VPCRAC website have been completed. Maintenance and updating will be required in the future to keep the website up and running properly.

**“Amended Scope – Vertebrate Pest Control Certification, Education and Outreach”** Mr. Newman reported that four additional vertebrate pests were added to kiosk system: pocket gophers, meadow voles, rabbits, and rats. Kiosks are located in six California County Agricultural Commissioner offices: Alameda (Livermore), Monterey, Fresno, Kings, San Diego, and Inyo Counties. In the future it is planned to create modules for additional pests such as deer mice and moles.

**“Vertebrate Pest Control – Education and Certification using the Internet and Touch Screen Devices”** Mr. Newman stated that the University of California Extension Vertebrate Pest Control Education website is ready to launch and will be linked to the VPCRAC website. YouTube, Facebook and Twitter are several of the social media sites that are being used to share vertebrate pest control information. Several of the videos developed in conjunction with the VPCRAC ground squirrel kiosk have been added to YouTube. Videos on pest control techniques for rabbits, rats, and meadow voles created for the kiosk will be added to the website.

Dr. Roger Baldwin updated the Committee on the following projects:

**“Identifying the level of use of aluminum phosphide for controlling burrowing pests in California”** Dr. Baldwin’s project focused on the importance of aluminum phosphide for use in vertebrate pest control in California. This project was still in progress and would be updated during the next meeting.

**“Reregistration of CDFA Baits for Control of Norway and Roof Rats in Agricultural Fields”** Dr. Baldwin stated that this project would be reported on during the next meeting.

RESEARCH PROPOSAL DISCUSSION AND DECISION SESSION

**Motion:** Dennis Bray moved that the Committee fund the research proposal from Dr. Stephanie Shwiff, National Wildlife Research Center entitled, “Examining the cost effectiveness of CDFA-VPCRAC bait use at livestock facilities.” in the amount of \$84,400. The motion was seconded by Karen Sweet. The motion was defeated with a majority vote of eight Nays and one Yea vote.

**Motion:** Paul Stapp moved that the Committee fund the research proposal from Dr. Alan Muchlinski, California State University, Los Angeles, “Introduced species of tree squirrels: impact on agriculture and native species of tree squirrels in California.” in the amount of \$90,147. The motion was seconded by Victoria Hornbaker. The

**motion was defeated with a majority vote of seven Nays and two Yea votes.**

**Motion:** Mark Novak moved that the Committee fund the research proposal from Valerie Mellano, UC Cooperative Extension, entitled, "Techniques and Methods for Controlling California Ground Squirrels in Almond and Other Specialty Crops in San Joaquin Antelope Squirrel Territory," in the amount of \$45,909 only under the contingency that the Specialty Crop Block Grant for the same project is approved and funded. The motion was seconded by Edward Meyer and passed with a majority vote of eight Yeas and one Nay vote.

**Motion:** Victoria Hornbaker moved that the Committee fund the research proposal from Valerie Mellano, UC Cooperative Extension, entitled, "Food Safety and Rodent Control in Leafy Green Crops Supplement - Spanish Version," in the amount of \$11,939, pending peer review of the English version of the text. The motion was seconded by Art Foster and passed unanimously.

**Motion:** Karen Sweet moved the Committee amended the three year research project from Peter Newman, Individual Consultant, entitled, "Development and Evaluation of the VPCRAC Website," in the amount of \$33,809 to a one year contract in the amount of \$11,187, with the option to extend the project for an additional year, pending a cost analysis. The motion was seconded by Art Foster and passed with a majority vote of six Yeas and three Nay vote. The Committee voted to fund the amended research proposal for a one year contract in the amount of \$11,187; it was passed unanimously.

Closed Executive Session of the VPCRAC Pursuant to Government Code Section 1126  
(If deemed necessary)

Discussion continued regarding the future direction of the Committee and what should be discussed during the October meeting. It was decided that the meeting for October would be a 1 ½ day meeting where the first day would be a full day of discussion on program direction, maintaining the research component and bait sales. The following half day would include updates on current projects and new proposals.

NEXT MEETING

October 10-11, 2012 in Merced, CA

  
Victoria L. Hornbaker – Secretary

9/24/12  
Date