MINUTES
VERTEBRATE PEST CONTROL RESEARCH ADVISORY COMMITTEE MEETING
Hopland Research and Extension Center
4070 University Rd.
Hopland, CA 95449
October 23, 2013

Members Present	Members Absent
Dennis Bray, Chairperson	Art Foster
David Kratville	Dale Huss
Mark Novak	Paul Stapp
Karen Sweet	Dan Spangler
Robert Timm	

Visitors	
Duane Schnabel	Jennifer Gordon
Michelle Dennis	Chuck Morse
Roger Baldwin	Katherine Horak
Shannon Chandler	Tom Schmit
Fred Rinder	Dale Donahue
Ryan Meinerz	Steve Schweizer
Edmund Duarte	

Welcome from Mr. Chuck Morse, Mendocino County Agricultural Commissioner and Dr. Robert Timm, UC Hopland Research and Extension Center.

Mr. Dennis Bray - Chairperson brought the meeting to order at 9:00am and followed by introductions of Committee members and guests.

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

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

APPROVAL OF MINUTES

Conference Call on November 1, 2012

Motion: **Robert Timm moved that the Committee approve the minutes from the November 1, 2012 conference call. The motion was seconded by David Kratville and passed unanimously.**

April 24, 2013 Committee Meeting

Motion: **Robert Timm moved that the Committee approve the minutes from the April 24, 2013 meeting. The motion was seconded by Karen Sweet and passed unanimously.**

FINANCIAL REPORTS

Mr. David Kratville provided the Committee with information on the program budget, revenue, expenditures, and projections. The program budget for FY 2013/14 was authorized at the October 10, 2012 meeting at $529,622 and an administrative budget of $203,509. The program has spent approximately $137,472 to date, including encumbrances. Research expenditures including encumbrances for FY 2013/14 are approximately $219,732. The total budget for FY 2014/15 was authorized at $573,450 and the administrative budget at $160,500. With all research projects approved the projected expenditures for FY 2014/15 are currently $94,941. The Fund condition reflects revenue maintained at an average of $435,000 a year and program spending consistent thru FY2016/17 the program reserves would be $992,132. Total revenue for FY 2012/13 was $551,520.28. The first quarter of FY 2013/14 surcharge revenues was at $225,369.41.

Motions: **David Kratville moved that the Committee approve the financial reports as presented. The motion was seconded by Karen Sweet and passed unanimously.**

CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE REGISTRATION ISSUES

Diphacinone Treated Grain .005% label amendments

Mr. Kratville reported on the DPR approved amendment to the Diphacinone Treated Grain .005% label. The amendment will allow for continuous use of bait stations in areas of critical concern and added the target pest and use site of deer mice in orchards. The use restrictions on the previous label stated:

"This product may be used to control deer mice (Peromyscus spp.) after harvest and in dormant season applications only in orchard, groves, and vineyards. Do not graze livestock or plant food or feed crops in spot-treated areas while bait is present."

The amended label states:

"Secure tamper-resistant bait stations near active infestation. Place stations at intervals of 70 to 100 feet. Load 4 to 8 ounces of bait into bait station. Inspect stations at least weekly and replenish bait as needed. Remove and properly dispose of spoiled or fouled bait."

Environmental Protection Agency (EPA) Review of small gas cartridges

No additional information to provide since the April 2013 meeting. Animal and Plant Health Inspection Service (APHIS) Wildlife Services has submitted comments to U.S. EPA. The U.S. EPA has not yet released label changes to Federal Register.

Update on Pending Legislation

AB 711, Rendon. Hunting: nonlead ammunition: PASSED
AB 789, Willams. Trapping PASSED
AB 1213, Bloom. The Bobcat Protection Act of 2013 PASSED
AB 1230, Donnelly. Mammals: use of dogs to pursue bears and bobcats. WITHDRAWN

Chlorophacinone Amendment

Mr. Kratville stated that the Chloriphacinone Treated Grain .005% label is currently in the process of being amended to match the Diphacinone Treated Grain .005% label. The label amendment package has been submitted to DPR for review.

Diphacin Availability

The supplier for Diphacin, the active ingredient in Diphacinone baits, has been having difficulty meeting demand. Several of the mixing counties have been receiving partial or late deliveries. Kings, Fresno and Alameda mixing counties were present at the meeting and Steve Schweizer of Kings County stated that their order came late and not the full order. It was requested that an additional supplier be identified to help meet demand when the current provider cannot.

Proposed changes to oat groat specifications

The supplier for the oat groats used to manufacture CDFA grain baits had notified CDFA and the mixing counties of proposed changes to the Squirrel Oat Groats product specifications. The supplier intended to remove the bulk density parameter from the specifications. Several of the counties expressed concerns that a bulkier lower density grain might pose a problem when repackaging the treated grain. As a result the supplier agreed to maintain the previous specifications for Squirrel Oat Groats.

CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION (DPR), 2ND GENERATION ANTICOAGULANT RESTRICTED USE

Mr. Kratville relayed an update from Ms. Ann Hanger with DPR's intention to designate 2nd Generation Anticoagulants as Restricted Use Pesticides. The public comment period was closed on October 4, 2013. DPR received 26,000 public comments. CDFA also provided comments on the proposal. The final regulations are expected in 2014.

COMMITTEE MEMBERSHIP: CONSIDERATION AND RECOMMENDATION OF NEW MEMBERS

Mr. Bray announced that Committee Member Ed Meyer, the general public representative, submitted a resignation letter to announce he is stepping down from the VPCRAC Committee. Mr. Bray announced that he himself would be retiring as the California Agricultural Commissioners and Sealers Association (CACASA) and therefore no longer able to serve as the CACASA representative to the Committee. Mr. Bray identified Kern County Ag Commissioner, Ruben Arroyo as a possible candidate to take his place on the committee as the CACASA Representative. Mr. Bray further expressed his desire to stay on with the committee by filling the general public

representative position vacated by Mr. Ed Meyer. Mr. Bray recommended that the next meeting take place in Bakersfield, CA at the Ag. Commissioner's office so the committee could meet Commissioner Arroyo.

UNITED STATES DEPARTMENT OF AGRICULTURE, ANIMAL AND PLANT HEALTH INSPECTION SERVICES, WILDLIFE SERVICES, (USDA/APHIS/WS)
FERAL HOG PRESENTATION – SHANNON CHANDLER

Shannon Chandler of USDA/APHIS/WS gave a very thorough presentation on the work Wildlife Services conducts on feral hogs. Mrs. Chandler gave an overview of the exploding populations of feral hogs in California and the rest of the US. She gave a rundown on the types of damage as well as disease transmissions that feral hogs are capable of. Finally she discussed control options utilized by Wildlife Services

REPORT PLAGUE ACTIVITY IN ANGELES NATIONAL FOREST AND CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S (CDPH) SURVEILLANCE AND RESPONSE PROGRAM. – MARK NOVAK

Following a media report of a plague detection in a Angeles National Forest campground Dr. Mark Novak was asked to give the committee an update on CDPH's role in determining the status of plague outbreaks and the proper response. Dr. Novak gave a brief history on plague and it's occurrence in California. He made the distinction between the rather common occurrence of plague detection in a wild rodent and a plague outbreak requiring a significant response from CDPH.

RESEARCH UPDATES

National Wildlife Research Center (NWRC)

Dr. Katherine Horak updated the Committee on the following projects.
"**IN-vitro Inhibition of Chlorophacinone Metabolism in Resistant Meadow Voles using FIFRA 25b Inert Ingredients," Contract # 10-0292.** Dr. Horak gave the Committee the final update for this project. Compounds identified as four and five were used for the final testing for the male and female voles. Each was tested with 6ml, 12ml, and 25ml concentrations. As concentrations increased compound five's ability to inhibit metabolism increased and was more efficacious. Further testing on compound five will be done to test for stability and the ability to mix into bait formulations.

"Increasing Acceptance of Zinc Phosphide Baits," Contract # 10-0291. Dr. Horak gave the Committee the final update for this project. Experiment 1: Induced bait shyness and lecithin avoidance. Slight avoidance of lecithin and voles do not prefer cyclamate sweetness. Experiment 2: Induced bait shyness and zinc phosphide avoidance. Avoid zinc phosphide bait: with LiCl injection and when Control received LiCl injection. Avoid encapsulated zinc phosphide bait after ZP tech LiCl injection. Experiment 3: Induced bait shyness and lecithin avoidance. Two days of conditioned stimulus exposure. Prefer encapsulated zinc phosphide baits over non-encapsulated. Used 0.2% zinc phosphide baits and the lowest dose in literature to cause bait avoidance and no mortality expected. Saw greater mortality in voles fed encapsulated zinc than non-encapsulated. The encapsulated zinc phosphide efficacy trials were preformed. Ten animals per group for a four day diet of plain oats, 24 hour exposure to

encapsulated zinc phosphide covered oats, and seven day observation. The efficacy of the 2% encapsulated ZP was 10:10, 1% was 9:10, and 0.5% was 8:10.

"Dietary Toxicity of Bioincorporated Chlorophacinone to Kestrels." Contract # 11-0430. Dr. Horak gave an update on this project. Based on the EPA new restrictions on second generation anticoagulant rodenticides (SGAR) this projects objectives were to determine the toxicity of biologically-incorporated chlorophacinone in poisoned rat meat fed to kestrels over a seven day feed trial (Biologically and Mechanically amended chlorophacinone diet). The current non-target risk assessments are performed using mechanically amended food.

Rats were fed control diet or Rozol chlorophacinone pellets for three days. They were then euthanized, GI tract removed, and carcasses ground to hamburger consistency. Using combinations of CPN-treated and untreated rats, "biologically-incorporated" CPN diets were formulated at three concentrations (0.15, 0.75, and 1.50 ppm). These CPN diets contain both parent compound and some metabolites. In addition, rodent tissue mechanically-amended with CPN was also prepared at similar dose levels (0.15, 0.75, and 1.50 ppm). The mechanically-amended diets should have fewer metabolites, and the CPN may be bound differently in tissues than in biologically–incorporated diets.

These diets were shipped to the Patuxent Wildlife Research Center where daily rations (two 18 ± 0.1 g meatballs) were prepared for a feeding trial. Following an acclimation period, 40 adult male kestrels (n=5/group) received one of eight different diets for a 7-day period. The diets included Nebraska Bird of Prey food (control), untreated rodent tissue (control), biologically-incorporated CPN (doses of either 0.15, 0.75 or 1.5 ppm), or mechanically-amended diets containing CPN (0.15, 0.75 or 1.5 ppm). During the feeding trial (April 2013), food scraps were collected each day to estimate CPN exposure. Kestrels were observed several times each day, weighed and physically examined on day 0, 3, and 5, and then weighed, examined, bled (0.9 ml jugular venipuncture sample), sacrificed and necropsied on day 7. Following determination of hematocrit, citrated blood was centrifuged, and plasma was frozen in aliquots for clotting time assays (prothrombin time, Russell's viper venom time, thrombin clotting time). Some tissues were fixed in phosphate-buffered formalin (liver, kidney, heart, portions of the intestine, breast muscle) for histopathologic analysis, and the remainder of the liver, kidney and the carcass were frozen at -20°C for residue analysis. None of the CPN-treated birds died during the 7-day trial. One kestrel receiving 1.5 ppm biologically-incorporated CPN exhibited a bruise on the featherless tract (neck region) on day 7 of the trial, and a few other birds succumbed following blood collection presumably due to coagulopathy. A preliminary evaluation of the hematocrit data, suggest that 2 kestrels (1 receiving the 1.5 ppm biologically-incorporated CPN diet and 1 receiving the 1.5 ppm mechanically-amended CPN diet) could be classified as anemic (hematocrit <30).

Dry weight of uneaten food scraps from the feeding trial is being determined, and will be used to estimate food consumption and CPN exposure for each kestrel in the study. Samples for CPN residue analysis have been shipped to the National Wildlife Research Center of USDA. A contract for histopathologic analysis of formalin-fixed tissues was processed by U.S. Geological Survey (USGS). Clotting time assays were conducted in July and August of 2013. Findings show that no significant differences between biologically incorporated and mechanically amended in clotting times and blood parameters. Residue data is currently being analyzed and current risk assessment dosing methods appropriate.

"Estimating job and revenue savings from using a variety of pest control techniques to protect crops from bird and rodent damage in California," #10-0332. Dr. Horak stated that Dr. Stephanie Shwiff couldn't make it to the meeting but she or one of her assistances would give a final report of her project at the April 30, 2014 meeting.

University of California

"Vertebrate pest control – education and certification using the internet and touch screen devices,"#10-0265. Dr. Terry Salmon was not available for an update on this project.

Joint University of California and National Wildlife Research Center (NWRC)

Dr. Roger Baldwin updated the Committee on the following projects:
"Efficacy of Cholecalciferol + Diphacinone for California Vole Control," #12-0408/ 12-0410, this project was extended for money and time from its original project to include a field study. Dr. Baldwin stated that the field study had not started and there was nothing he had to update on for this project at this time.

"Bird-repellant Rodenticide Baits," 12-0439/ 12-0440, Dr. Baldwin stated that he had not gotten in contact with Dr. Scott Werner from NWRC because of the federal furloughs and will be reporting on this project at the April 2014 meeting of the committee.

"Identifying possible alternative baits to replace strychnine for pocket gopher control," #13-0233/13-0234, Dr. Baldwin stated that this project had just been funded and work has not begun for this project as of yet.

NEW RESEARCH AND FUNDING PROPOSALS

Motion: **Robert Timm moved that the Committee recommend funding the research proposal from Dr. Roger Baldwin, UC IPM, entitled, "Maintenance of VPCRAC website," in the amount $29,557. The motion was seconded by David Kratville and passed unanimously.**

Motion: **Karen Sweet moved that the Committee recommend funding the research proposal from Dr. Roger Baldwin, UC IPM, entitled, "Assessing the Efficacy of Carbon Monoxide Producing Machines at Controlling Burrowing Rodents," in the amount of $26,956 on the terms he finds a sponsor to pay for pest control applications charged to private landowners. In addition, the proposal and research report will be rewritten to show that it refers to carbon monoxide generically and not a specific manufacturer or device. The VPCRAC funding will cover collecting and analyzing results of carbon monoxide applications and will not be used for the carbon monoxide applications for profit purposes. The motion was seconded by Mark Novak and passed unanimously.**

Motion: **Karen Sweet moved that the Committee recommend funding the research proposal from Dr. Katherine Horak, USDA/APHIS/WS/NWRC, entitled, "Evaluation of the Hazard of Sequential Exposures to First and Second Generation Anticoagulant Encountered by Non-Target Raptors at the Urban-Agricultural Interface," in the amount $142,945. The motion was seconded by Dennis Bray and passed unanimously.**

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

Next Meeting Schedule
Bakersfield, CA, April 30, 2014

Adjourn
2:37pm

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David Kratville – Secretary Date