



Field Rodenticides: Responsible Use Guidelines, **PRESCRIBE**, and Endangered Species Considerations

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Alameda County Department of
Agriculture

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Coloring in the lines...

Pest Control in Regulatory Context



1. FAC 11408- “**AGRCULTURAL USE**” - Anything not “non-ag”

Production Ag

Pest control for Ag.
Production
e.g. weed control,
pest control on or
around crops

Non-Production Ag (CCR 6622)

Golf Courses, Parks,
Cemetaries, right of
ways, etc

Non-Ag

Home use
Structural
Industrial
Institutional
Veterinarian
Special Districts

2. “Private” / “Property Operator” v. pest control “for hire” ...

Grower/Farmer/Rancher

Water District, Park,
School

Landscaper, Gardener, Pest
Control Co., Restoration Co.

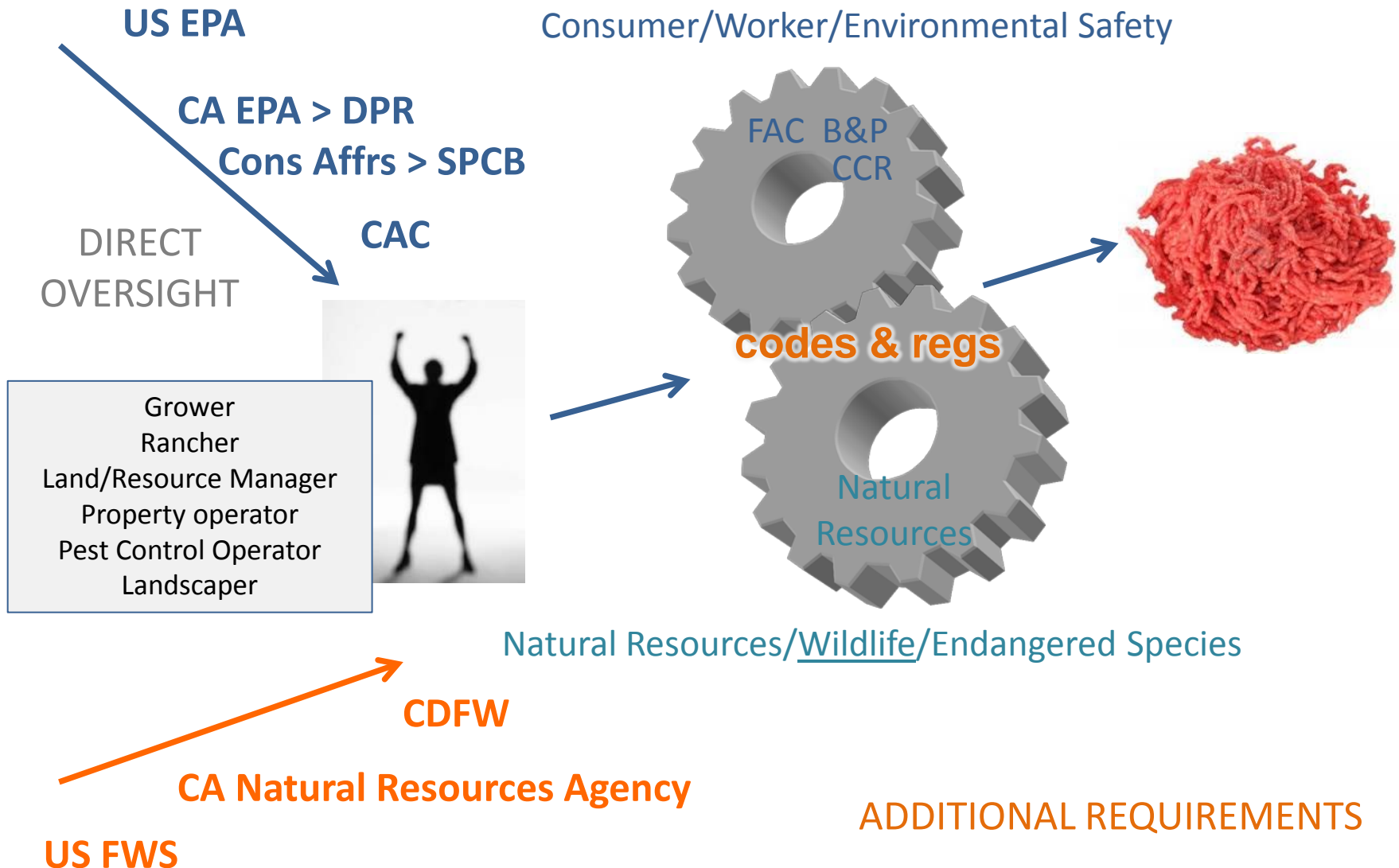


Private

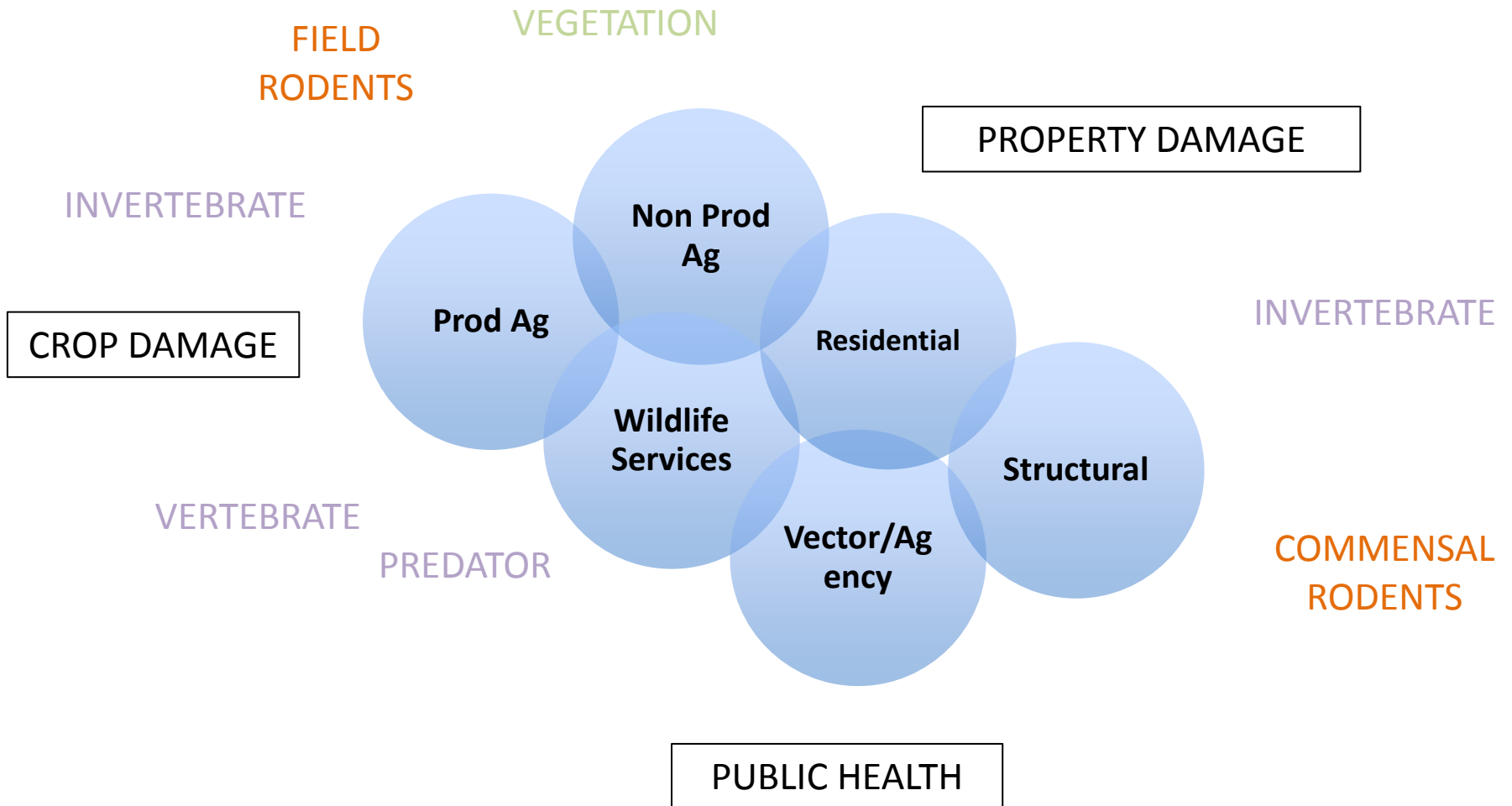
For Hire

***Specific Regulatory requirements will depend on your situation**

Pesticide Regulatory Oversight



The Worlds of Pest Control



RODENTICIDE CONCEPTS

- Pesticide targeted for rodents
- “Commensal” (structural) v. “Field” Rodents
 - Mice & Rats v. Squirrels, Gophers & Voles
- Game v. Non-Game (rodents, except tree squirrels)
- Acute Toxicity v. Multi-Feeding
- 1st Gen & 2nd Gen AR’S v. Non AR’s
- Secondary Toxicity & Non-Target Considerations
- Recent Issues and Public Misconceptions

Rodenticide Types

| Anticoagulants | |
|--|--|
| 1 st Generation | 2 nd Generation |
| Diphacinone, Chlorophacinone, Warfarin | Brodifacoum, Difethialone, Bromadiolone |
| Multi-feeding/Chronic Exposure | Single-feeding/Acutely Toxic |
| Lower $\frac{1}{2}$ life, hours to day | Higher $\frac{1}{2}$ life, days to months |
| Lower secondary Poisoning | Higher secondary poisoning |
| Resistance issues known | No resistance reported |
| Federally Restricted/Retail Formulations | CA Restricted, recently removed from consumer market |

Non-Anticoagulant, Acutely Toxic: bromethalin, cholecalciferol, strychnine, zinc phosphide, aluminum phosphide

AG PRODUCT OVERVIEW

| | 0.01% Diphacinone | 0.005 % Diphacinone | USDA Gas Cartridge | Aluminum Phosphide | Zinc Phosphide | 0.005% Diphacinone Bait Blocks |
|---------------------------|-------------------------|--------------------------------|-----------------------|-------------------------|-------------------------|--------------------------------------|
| Formulation | Treated Grain Bait | Treated Grain Bait | Gas Cartridge | Tablets/Pellets | Treated Grain Bait | Wax Bait Blocks |
| Application | Mechanical Broadcast | Bait Station, Spot Treating | Burrow Fumigant | Burrow Fumigant | Broadcast/Spot Treat | Bait Station/Spot Treat |
| Primary Target species | Ground Squirrels | Ground Squirrels | Ground Squirrels | Gophers | Voles, Rats | Rats/House Mice |
| Application Notes | Multi-feed | Multi-feed | Early Spring | Soil Moisture Needed | Dry Season | w/in 100 ft of structures |
| Signal Word | CAUTION | CAUTION | WARNING | DANGER | CAUTION | CAUTION |
| Pre-Baiting ? | ✓ | ✓ | | | ✓ | |
| ACUTE TOXICITY | | | ✓ | ✓ | ✓ | |
| FED RESTRICTED | ✓ | ✓ | | ✓ | ✓ | |
| CA RESTRICTED | | | | ✓ | ✓ | |

ALWAYS READ LABEL CAREFULLY FOR DETAILS OF USE AND RESTRICTIONS FOR ANY PESTICIDE!

GENERAL USE STATEMENTS

Diphacinone 0.01%

VINEYARDS, ORCHARDS, GROVES, FORESTRY PLANTATIONS, PASTURES, RANGELANDS AND SELECTED NONCROP AREAS

CALIFORNIA GROUND SQUIRRELS

USE RESTRICTIONS: This product may be used to control California Ground Squirrels (*Spermophilus beecheyi*) in broadcast bait applications in vineyards, orchards and groves (non-bearing season only); non-crop borders, and fallow lands; along outsides of fence rows and rights-of-way adjacent to canal banks, ditch banks, highways, levees, railroad lines, and utilities; and in campgrounds, recreational areas, horticultural nurseries, plantations of forest trees, pastures and rangelands.

Do Not graze livestock or plant food or feed crops in spot-treated areas while bait is present. Applications in orchards, groves, and vineyards may only be made after harvest and during the dormant period and may not be made after tree and vine growth resumes in the spring.

BAIT ACCEPTANCE TRIALS: Before applying toxic bait, test for target species' readiness to accept this product by manually scattering untreated crimped oat groats to portions of the infested area. Using flagging or other suitable items, mark areas where oats were scattered and return on the following day to observe where oats are being consumed to assess whether consumption is by ground squirrels or nontarget species. Do not apply toxic bait if it appears that nontarget species are primarily responsible for consuming the oats. Apply toxic bait only if ground squirrels appear to have accepted the oats readily. Untreated crimped oat groats may be obtained from the County Agricultural Commissioner's office.

BROADCAST BAITING: Using a ground-based mechanical spreader or aircraft, apply bait at 10 pounds per swath acre, depending upon the density of ground squirrels. Make a second application 4 days after the first treatment.

0.005% DIPHACINONE: IN/AROUND AGRICULTURAL BUILDINGS, AGRICULTURAL CROPS, RANGELAND, FORESTRY PLANTATIONS AND SELECTED NONCROP AREAS. CALIFORNIA GROUND SQUIRRELS.

USE RESTRICTIONS: THIS PRODUCT MAY BE USED TO CONTROL CALIFORNIA GROUND SQUIRRELS (*SPERMOPHILUS BEECHEYI*) IN BAIT STATION APPLICATIONS IN AND AROUND LIVESTOCK BUILDINGS (E.G., CATTLE BARNS, POULTRY HOUSES); AROUND (BUT NOT WITHIN) LIVESTOCK PENS; IN AND AROUND VINEYARDS, ORCHARDS, AND GROVES; IN RANGELANDS, NONCROP BORDERS, AND FALLOW LANDS; ALONG OUTSIDES OF FENCE ROWS AND RIGHTS-OF-WAY ADJACENT TO CANAL BANKS, DITCH BANKS, HIGHWAYS, LEVEES, RAILROAD LINES, AND UTILITIES; AND IN CAMPGROUNDS, RECREATIONAL AREAS, HORTICULTURAL NURSERIES, AND PLANTATIONS OF FOREST TREES.

This product may also be used in spot-treatment applications in vineyards, orchards, and groves after harvest and during the dormant season, and in rangeland. Do not graze livestock or plant food or feed crops in spot-treated areas while bait is present.

BAIT ACCEPTANCE TRIALS: Before applying toxic bait, test for target species' readiness to accept this product by applying untreated crimped oat groats, to portions or all of the infested area, using the same application method (bait station or spot baiting) that is to be used for toxic baiting.

2% ZnP FIFRA 24[c] Special Local Needs Label (SLN)

For distribution and use only in the state of California

For use on fruit tree orchards (dormant); nonbearing nursery stock; conifer/Christmas tree, poplar/cottonwood, ornamental, and nonbearing fruit tree plantations; grape vineyards; rangeland, pastures and adjacent noncrop areas; non-residential lawns, ornamentals, golf courses and parks for control of voles, ground squirrels, Norway rats and roof rats.

USDA GAS CART in open fields, non-crop areas, rangelands, reforested areas, lawns and golf courses. This product may only be used underground in burrow systems. It may not be used to fumigate buildings or other man-made structures. Do not use in or under buildings or near flammable material, or when either the soil or the vegetation in the area to be treated are in extremely dry conditions. USE THIS PRODUCT ONLY IN BURROW SYSTEMS KNOWN TO BE IN ACTIVE USE BY THE TARGET SPECIES.

CDFA BAIT BLOCK 0.005% DIPHACINONE

This product can only be used to control Norway rats, roof rats, and house mice in and within 100 feet of man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations. Examples of such structures include homes and other permanent or temporary residences, food processing facilities, industrial and commercial buildings, trash receptacles, agricultural and public buildings, transport vehicles (ships, trains, aircraft), docks and port of terminal buildings and related structures around and associated with these sites. Fence and perimeter bait, beyond 100 feet from any structure as defined above, is prohibited. This product must not be applied directly to food or feed crops.

Burrow baiting with CDFA Rodent Bait Blocks is prohibited.

Do not place near or inside ventilation duct openings. Do not contaminate water, food, feedstuffs, food or feed handling equipment, or milk or meat handling equipment or surfaces that come into direct contact with food. When used in USDA inspected facilities, this product must be applied in tamper-resistant bait stations.

Do not sell this product in individual containers holding less than four (4) pounds of bait.

**PERMIT/SALE AND USE CONSIDERATIONS EXTEND BEYOND LABEL PERMITTED SITES
= TARGET, LOCATION, OPERATOR, EXTERNAL FACTORS, CONSIDERED**

SAFE PRACTICES AND MITIGATING PROCEDURES FOR FIELD RODENTICIDES

- Pest Knowledge, Monitoring & Assessment
- Consider alternatives, READ LABELS CAREFULLY
- Application timing, correct product (green veg, stn/broadcast)
- Proper Application, Equipment and Methods, TRAINING
- Pre-Baiting
- Service Container Labeling
- Station monitoring, clean-up procedures planned
- Carcass survey
- Non-Target considerations and awareness
- Good Records and Reporting, Trained Applicators

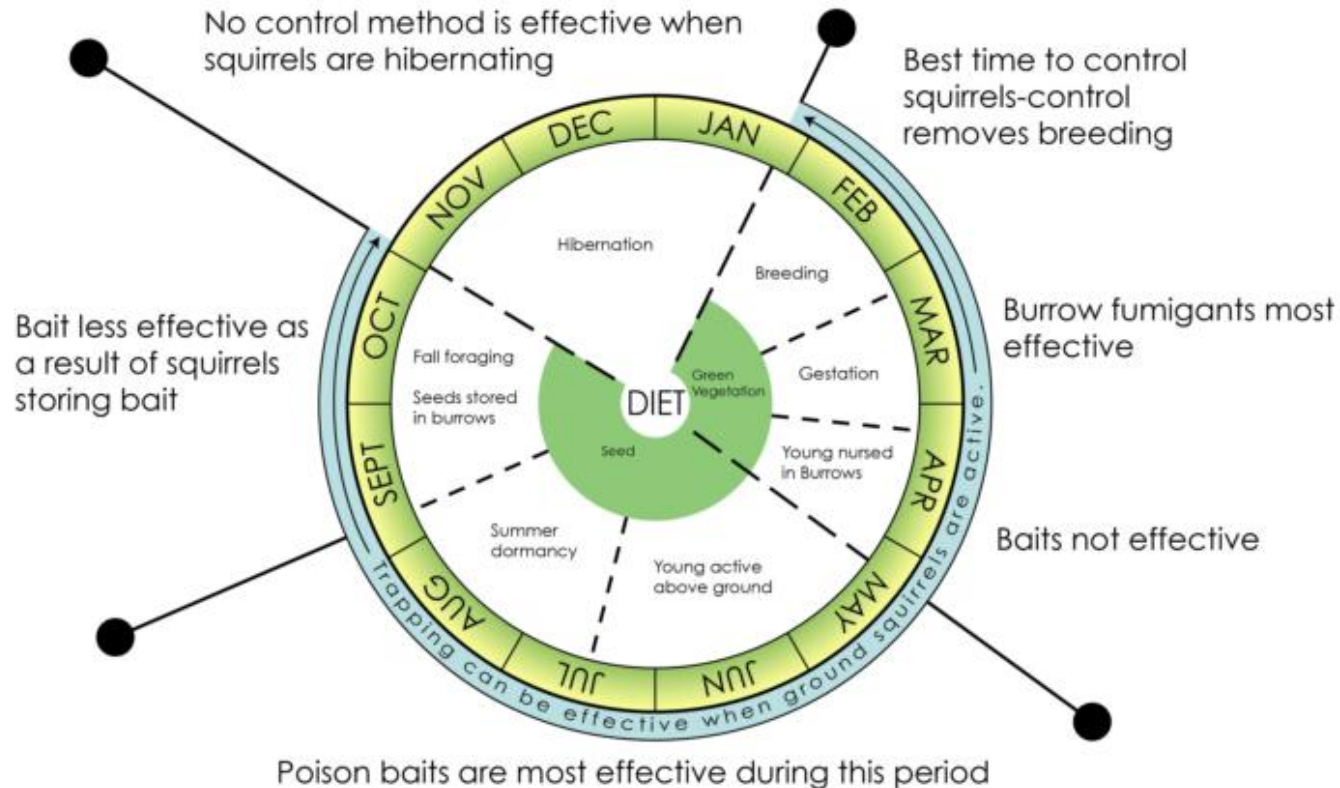
Know your squirrel?





Bay Nature, January 2008

California Ground Squirrel - Calendar of Management



From: University of California Ground Squirrel BMP website: <http://groups.ucanr.org/GS8BMP/index.cfm>

Source: UC Ground Squirrel Best Management Practices
http://ucanr.edu/sites/Ground_Squirrel_BMP/

Squirrel Baiting In Vineyards

- Why bait for ground squirrels in vineyards?



Methods: 0.005% Diphacinone in Bait Stations or limited spot treating

Squirrel Baiting In Vineyards

Do not apply this product in or around homes or other human residences. **Do not** apply this bait at sites or to control pests not indicated on this label. **Do not** apply this product by application methods that are not specified on this label. **Do not** pile bait.



20 to 100 feet apart, Pre-bait, 1 to 5 lbs per visit, monitor activity,
don't bait same spot "forever"

Squirrel Baiting In Vineyards



Squirrel Baiting In Vineyards



Squirrel Baiting In Vineyards



1/3 cup over 40 to 50 square feet

Squirrel Baiting In Vineyards



Hand Baiting/Spot Treating



Squirrel Baiting In Vineyards

▣ Non-target considerations



Squirrel Baiting In Vineyards



Avoid spillage- monitor, station design

Squirrel Baiting In Vineyards



Carcass survey!!



Non-Production Ag Application



DAILY STATION MONITORING
PROGRAM



CARCASS SURVEY!

Service Container Labels



Station Secured



A white PVC pipe with a square end fitting is lying on a surface of dry grass and soil. The pipe is positioned horizontally, with the square fitting on the right side. The background consists of dry, brownish soil and scattered dry grass. A blue text box is overlaid on the right side of the image.

3" Opening?

Off Label Requirements?
= DPR PRESCRIBE

A photograph of a rocky, sandy beach. The ground is covered with small, light-colored pebbles and sand. There are several clumps of brown, seaweed-like material scattered across the surface. A blue rectangular text box is overlaid on the left side of the image.

Non Target Species
Indications?



DAILY STATION MONITORING



Clean Up Procedures



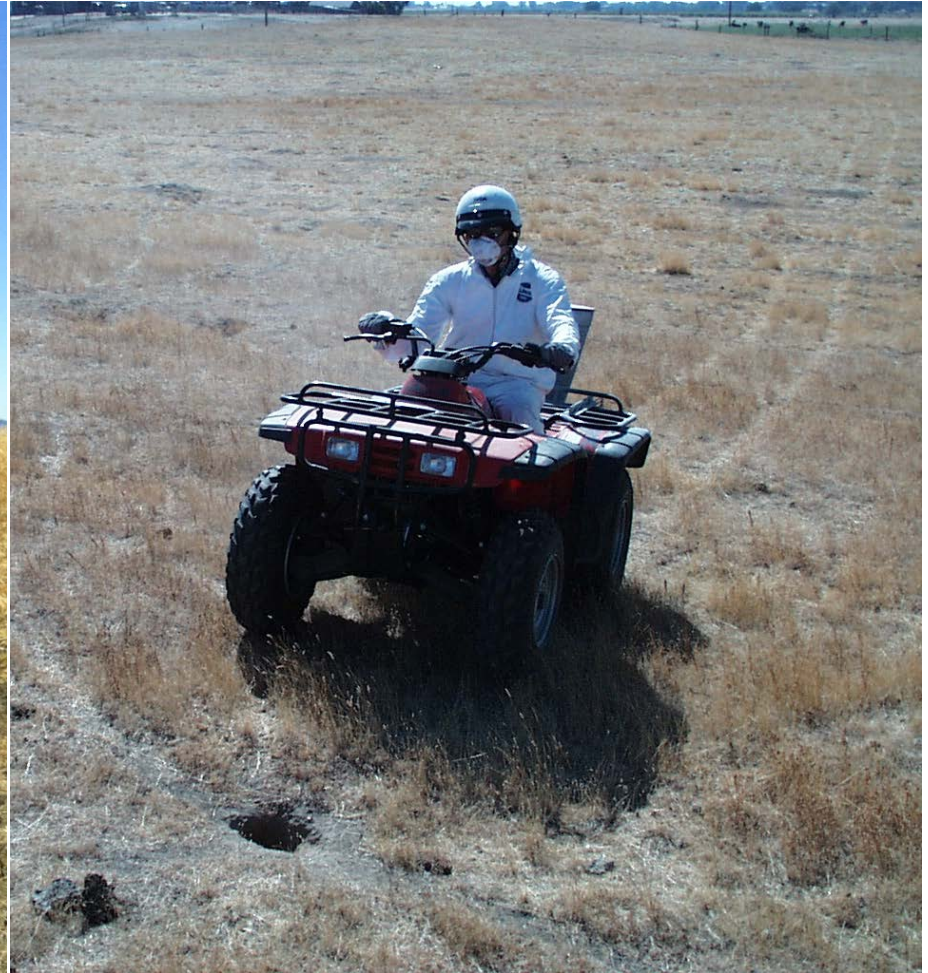


Neatness Counts!





Broadcast Application



0.01% DIPHACINONE = MECHANICAL BROADCAST ONLY



Pre bait, 10 lbs per swath Acre, do not graze in treated areas, 2nd app within 4 days, retreat only areas where bait is taken, carcass survey

RECORDS

EPA REG. # 01-13-011014

SQUIRREL BAITING PROGRAM

DATE 5/18/15

PERMIT NUMBER

RODENTICIDE: DIPHACINONE

APPLICATOR NAME: [REDACTED]

| PLACE OF APPLICATION (AREA) | APPLICATION TIME | | APPLICATION SITE/NUMBER | DISTRIBUTION TYPE | | TOTAL APPLIED (OZ/LBS) | ACTIVITY | | NUMBER OF TAKES |
|-----------------------------|------------------|--------|-------------------------|-------------------|--------------|------------------------|-------------|----|-----------------|
| | START | FINISH | | BROAD CAST | BAIT STATION | | YES | NO | |
| Greenville / Feb 19 | 0630 | | 12.14 | | ✓ | 4 | ✓ | | Ø |
| Greenville / Feb 19 | | | 12.30 | | ✓ | 4 | ✓ | | Ø |
| Greenville / Feb 19 | | | 12.55 | | ✓ | 4 | ✓ | | Ø |
| Greenville / Feb 19 | | | 12.59 | | ✓ | 4 | ✓ | | Ø |
| Mines Rd / ck7 | | | 14.99 | | ✓ | Ø | | ✓ | Ø |
| Mines Rd / ck7 | | | 15.72 | | ✓ | Ø | ✓ | | Ø |
| Mines Rd / ck7 | | 1430 | 16.30 | | ✓ | Ø | | ✓ | Ø |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| TOTAL AMOUNT USED | | | | | | 16 | TOTAL TAKES | | Ø |

Definitions for baiting application:

- (1) "PLACE OF APPLICATION" = name of the area being treated(EX- CAAQ, PRIMARY, CLIFTON COURT FOREBAY ECT.)
- (2) "RODENTICIDE APPLI D" = Brand or trade name of each rodenticide used or symbol representing such name. Including % amount for each.
- (3) "EPA REG. & PERMIT NUMBER" = Number referring to the EPA# of the product utilized & Permit # located found on recommendation.
- (4) "APPLICATION SITE"= refers to the exact area (Broadcasting or bait station you are monitoring at any given time(EX - CAAQ MM32.50/PS)OR BAIT STATION #1
- (5) "APPLICATORS NAME" Refers to the person performing the work, must be written legibly and in ink
- (6) "ACTIVITY yes/no" = The activity of the rodent populous at the site.
- (7) "NUMBER OF TAKES" - How many dead rodents found at site

EPA REG #

01-15-02014

SQUIRREL BAITING PROGRAM

DATE 5/18/15

PERMIT NUMBER

| RODENTICIDE: DIPHACINONE | | | | APPLICATOR NAME: ██████████ | | | | | |
|-----------------------------|------------------|--------|-------------------------|-----------------------------|--------------|------------------------|-------------|----|-----------------|
| PLACE OF APPLICATION (AREA) | APPLICATION TIME | | APPLICATION SITE/NUMBER | DISTRIBUTION TYPE | | TOTAL APPLIED (OZ/LBS) | ACTIVITY | | NUMBER OF TAKES |
| | START | FINISH | | BROAD CAST | BAIT STATION | | YES | NO | |
| Dyer Altamont | 0630 | | 3.86 | | ✓ | 0 | ✓ | | 0 |
| Dyer Altamont | | | 4.31 | | ✓ | 0 | ✓ | | 0 |
| Dyer Altamont | | | 4.44 | | ✓ | 0 | | ✓ | 0 |
| Dyer Altamont | | | 4.59 | | ✓ | 0 | ✓ | | 0 |
| Dyer Altamont | | | 4.74 | | ✓ | 0 | | ✓ | 0 |
| Dyer Altamont | | | 5.00 | | ✓ | 0 | | ✓ | 0 |
| Dyer Altamont | | | 5.09 | | ✓ | 0 | ✓ | | 0 |
| Patterson Pass | | | 8.75 | | ✓ | 0 | | ✓ | 0 |
| Patterson Pass | | | 9.36 | | ✓ | 0 | ✓ | | 0 |
| Patterson Pass | | | 9.48 | | ✓ | 0 | | | 0 |
| Patterson Pass | | | 9.50 | | ✓ | 0 | | | 0 |
| Greenville / Tesla | | | 11.57 | | ✓ | 4 | ✓ | | 0 |
| Greenville / Tesla | | 1430 | 11.73 | | ✓ | 2 | ✓ | | 0 |
| TOTAL AMOUNT USED | | | | | | 6 | TOTAL TAKES | | 0 |

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DAILY SPRAY REPORT

DATE 5/13/15

REPORTING

S. Bay

| LOCATION Alamogordo Cnty | | | EQUIPMENT 142194 | | MIXTURE Diphacinone .005 | | | |
|---|-------|--------------------------------------|---------------------|-------------------|--------------------------|-------------------------|---------------|-----------------|
| FROM | TO | Area Description | TIME | | Gals-Water | Chemicals Kind & Amount | Other Amounts | Crops Adjoining |
| | | | START | END | | | | |
| 3.86 | 5.09 | S. Bay Agua Dulce Over Altamont | 0630 | | | 0 | n/a | n/a |
| 8.75 | 9.50 | S. Bay Agua Dulce Patterson Pass | | | | 0 | n/a | n/a |
| 11.57 | 12.59 | S. Bay Agua Dulce Greenville / Tesla | | | | 22 | n/a | n/a |
| 14.99 | 16.30 | S. Bay Agua Dulce Mines Rd / CK7 | 1430 | | | 0 | n/a | n/a |
| Application Rate Per Acre 4 lbs per station | | | | | | Wind | | |
| Weather Overcast, cool | | | | | | time | Velocity | Direction |
| Crew Members | | | No. Hours 8 | Total Man Hours 8 | 0630 | n/a | n/a | |
| | | | Diphacinone .005 | | | | | |
| | | | EPA # 01-15-017031U | | | | | |
| Signature | | | | | | | | |

938 (Rev. 2/14)

DAILY SPRAY REPORT

DATE

| LOCATION | | | EQUIPMENT | | MIXTURE | | | |
|---------------------------|----|------------------|-----------|-----------------|------------|-------------------------|---------------|-----------------|
| FROM | TO | Area Description | TIME | | Gals-Water | Chemicals Kind & Amount | Other Amounts | Crops Adjoining |
| | | | START | END | | | | |
| | | | | | | Lbs Qts | | |
| | | | | | | Lbs Qts | | |
| | | | | | | Lbs Qts | | |
| | | | | | | Lbs Qts | | |
| Application Rate Per Acre | | | | | | Wind | | |
| Weather | | | | | | time | Velocity | Direction |
| Crew Members | | | No. Hours | Total Man Hours | | | | |
| | | | | | | | | |
| Signature | | | | | | | | |

DWR 938 (Rev. 2/14)

Risk Assessment

$$\text{Hazard} = \text{Toxicity} \times \text{Exposure}$$

EPA Registration Process/Label Science =

Follow label carefully and risks to humans,
environment, and wildlife very low

TAKE HOME MESSAGE 1

ON PESTICIDE LABELS:

- ✦ “THE LABEL IS THE LAW” (mantra)

- ✦ KNOW AND FOLLOW THE LABEL

- ✦ When to read the label?

- ✦ before buying material

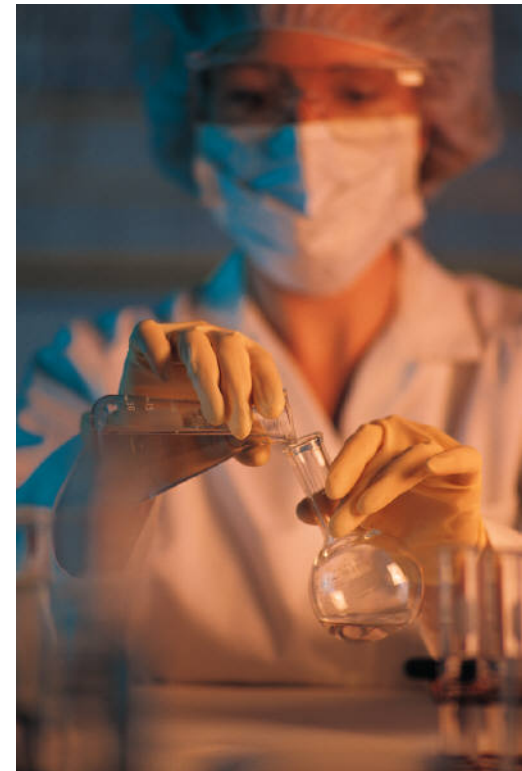
- ✦ before mixing/applying

- ✦ when storing material

- ✦ when disposing of containers

WHY?
What in THE WORLD
is so great about labels?!?!

ANSWER:
“LABEL SCIENCE!”



Pesticides must be registered with EPA

Pesticides must be registered with EPA unless they meet the criteria for a [minimum risk pesticide](#). EPA evaluates pesticides to ensure that when they are used according to label directions they will not harm people, non-target species or the environment.

EPA examines:

- the ingredients of a pesticide;
- where it will be used (e.g., in the home or on food);
- the amount, frequency and timing of its use; and
- how it will be [discarded](#) or [stored](#).

Companies are required to submit to EPA for review information about the health effects of pesticides, including:

- cancer,
- reproductive effects,
- neurological effects, and
- acute and chronic toxic effects.

EPA also funds pesticide research engaging the nation's best scientists and engineers to improve knowledge about how we are exposed to pesticides and their health effects.

Once registered, pesticides are periodically reviewed for safety. If new concerns arise, EPA can change the conditions for using them or cancel their registrations.

It is illegal to use a pesticide product inconsistent with its label directions.

[Contact Us](#) to ask a question, provide feedback, or report a problem.

SO...

know and follow the label!

But what about this?

ENDANGERED SPECIES CONSIDERATIONS

Notice: Killing of an endangered species may result in fine and/or imprisonment under the Endangered Species Act. The use of this product may pose a hazard to a Federally designated endangered/threatened species. For protection of federally listed species, users shall consult the U.S. EPA Endangered Species Bulletin for the county in which the application will occur. A copy of the bulletin may be obtained from the county agricultural commissioner or downloaded from the internet at the following website: <http://www.cdpr.ca.gov/docs/es/esolist.htm>.

RCO
PEST CONTROL PRODUCTS



OMEGA

GOPHER GRAIN BAIT

KEEP OUT OF REACH OF CHILDREN

DANGER

POISON



POISON

EPA REG No. 5042-32 EPA EST No. 67442-OR-002
NET CONTENTS 16 oz.

Manufactured by: RCO International, Inc. • P.O. Box 191, Harrisburg, Oregon 97446
SEE INSIDE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

ACTIVE INGREDIENT:
Strychnine Alkaloid 50%
INERT INGREDIENTS 99.50%
TOTAL..... 100.00%

LIFT
HERE

FIRST AID

IF SWALLOWED: CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. If less than ten (10) minutes have passed since the poison was taken, give 1 or 2 glasses of water and induce vomiting by touching the back of the throat with finger. Repeat until vomit fluid is clear. Have patient lie down in a quiet, darkened room and keep him warm and quiet. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration. Get medical attention.

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes.

Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

NOTE TO PHYSICIAN

Administer 100% OXYGEN by positive pressure to provide as much pulmonary gas exchange as possible, despite seizures. Administer ANTI-CONVULSANT DRUGS intravenously to control convulsions. **NOTICE:** It may be difficult or impossible to stop the seizure activity without stopping respiration. Be prepared to maintain pulmonary ventilation mechanically. Tracheotomy may be necessary if seizures are prolonged.



0 89342 61016 0

PRECAUTIONARY STATEMENT HAZARD to HUMANS and DOMESTIC ANIMALS

DANGER: **Convulsive poison!** Fatal if swallowed or inhaled. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Do not breathe dust. Do not apply this product in a way that will contact any person or pet. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: ***Long-sleeved shirt and long pants, cotton gloves, and shoes plus socks.***

Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should remove clothing immediately if pesticide gets inside. Then, wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds, and other wildlife. Do not allow bait to be exposed on soil surface. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by the cleaning of equipment or disposal of wastes. Do not apply directly to food or feed crops.

ENDANGERED SPECIES CONSIDERATIONS

NOTICE: The killing of a member of an endangered species during strychnine baiting operations may result in a fine under the Endangered Species Act. Before baiting, the user is advised to contact the Regional U.S. Fish and Wildlife Service (Endangered Species Specialist) or the local Fish and Game Office for specific information on endangered species. Strychnine baits should not be used in the geographic ranges of the following species except under programs and procedures approved by the USEPA: California condor, San Joaquin kit fox, Morrow Bay kangaroo rat, gray wolf and grizzly bear.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store only in original container, in a dry place inaccessible to children, pets and domestic animals.

PESTICIDE DISPOSAL: Recover any spilled product. Securely wrap in several layers of newspaper, and discard in trash.

CONTAINER DISPOSAL: Securely wrap original container in several layers of newspaper and discard in trash.

ENDANGERED SPECIES CONSIDERATIONS

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PRESCRIBE

(Pesticide Regulation's Endangered Species Custom Real-time Internet Bulletin Engine)

- How to know what might be required beyond the label with respect to wildlife or endangered species

HOW TO FIND IT?

GOOGLE: DPR PRESCRIBE



Scenario



California Department of Pesticide Regulation

[About DPR](#) | [Join E-Lists](#) | [A-Z Index](#) | [Contact Us](#)

Search

☒ DPR ☐ California

HOME PROGRAMS DATABASES NEWS/PUBLICATIONS QUICK LINKS

PRESCRIBE Online Database Application

[Back to Endangered Species Project](#)

Welcome to Pesticide Regulation's Endangered Species Custom Realtime Internet Bulletin Engine (PREScribe). The PREScribe online database application was developed to help pesticide applicators find out if they have any endangered species in the vicinity of their application site, and the use limitations applicable to the pesticide product(s) they intend to use.

This site provides information consistent with the U.S. Environmental Protection Agency (U.S. EPA)'s Interim Measures Bulletins for Protection of Endangered Species for user-selected sites and pesticides. Habitat data is from the Department of Fish and Game (DFG) Natural Diversity Database, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Pesticide toxicology follows U.S. EPA standards and advice of DFG Pesticide Investigations Unit. Habitat protection measures are from U.S. Fish and Wildlife Service biological opinions and local plans developed through the cooperation of the County Agricultural Commissioners and Sealers Association, the California Department of Fish and Game and the California Department of Food and Agriculture. This program is implemented by the Department of Pesticide Regulation on behalf of U.S. EPA under Section 7(a)(1) of the Endangered Species Act.

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[Zip Code](#)
[Product ?](#)
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CALIFORNIA PESTICIDE INFORMATION PORTAL (CALPIP)

Endangered Species Custom Bulletin

Select Township-Range-Section

Step 2: Choose one or more townships and sections; hold down the Ctrl key for multiple selections.

From available townships under the county(s) you've chosen, select the Township-Range blocks (COMTR), and then the associated Sections (COMTRS)

Available COMTR
Township and Range
under selected county(s)
(36):

01 M01N03W
 01 M01N04W
 01 M01S02W
 01 M01S03E
 01 M01S03W
 01 M01S04E

[Select](#)

Township(s) Selected (2):

01 M03S02E
 01 M03S04E

[Unselect](#)
[Unselect All](#)

Available COMTRS
Sections within selected
Township-Range (48):

01 M03S02E 01
 01 M03S02E 02
 01 M03S02E 03
 01 M03S02E 04
 01 M03S02E 05
 01 M03S02E 06

[Select](#)

Section(s) Selected (2):

01 M03S02E 05
 01 M03S04E 18

[Unselect](#)
[Unselect All](#)

To continue, click Next.

[Next](#)
[Reset](#)
[Start Over](#)

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DATA SOURCE: ?

PRESCRIBE ▾

Endangered Species Bulletin

Location?

[→ County](#)[→ MTRS](#)[→ Zip Code](#)

Product?

[→ Name Search](#)[→ Help](#)**CALIFORNIA PESTICIDE INFORMATION PORTAL (CALPIP)****Endangered Species Custom Bulletin****Species Located**

Step 3. Non-target species in selected section(s) by status:

[→ \[FE\] SAN JOAQUIN KIT FOX](#)[→ \[FT\] CALIFORNIA RED-LEGGED FROG](#)[→ \[FT\] CALIFORNIA TIGER SALAMANDER](#)[→ \[FT\] STEELHEAD - CENTRAL VALLEY DPS](#)[→ \[R\] BURROWING OWL](#)[→ \[R\] CAPER-FRUITED TROPIDOCARPUM](#)

Species Status Key:

[FE] = Federal Endangered

[FT] = Federal Threatened

[FPE] = Federal Proposed Endangered

[FPT] = Federal Proposed Threatened

[R] = Rare, Not Currently Listed

To continue, click Next to select the products that you intend to use.[Next](#)[Start Over](#)

DATA SOURCE: ?

Endangered Species Bulletin

Location?

→ County

→ MTRS

→ Zip Code

Product?

→ Name Search

→ Help



Endangered Species Custom Bulletin

Select Product / Labels

Step 4. Product Search

To identify the products that you intend to use, please enter product name or keyword into the Search Box. When you hit the Search button, you will see a list of search results in the Available Products box below. Click on the product name and click Select to select the product.

Enter full or partial product name to search : (Use '%' for wildcard between strings. Enter a '\' in front to indicate the first word of a label. Put a '\' at the end to indicate the last word of a label.)

Click to Display Available Product Labels by Letter:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Misc

Product [Registration Number]s found by searching 10965-50001 (2) :

RODENT BAIT DIPHACINONE TREATED GRAIN 0.005 [10965-50001-AA]

RODENT BAIT DIPHACINONE TREATED GRAIN (0.005%) [10965-50001-ZA]

Selected Product [Registration Number]s (2):

GAS CARTRIDGE [56228- 2-AA]

RODENT BAIT DIPHACINONE TREATED GRAIN (0.005%) [10965-50001-ZA]

To continue, click Next or Submit to query the use limit on the products you've chosen for the species identified in your locations.

Location?

-> County

-> MTRS

-> Zip Code

Product?

-> Name Search

-> Help



Endangered Species Pesticide Use Limits

Step 5. Use Limit Codes for Selected Products

Pesticide use limitations for the products that you have selected, applicable to the species identified in your locations, if they exist, are listed below. Scroll to the bottom of the page to see a description/instruction of the use limits.

For protection of the following species:

- > [E] SAN JOAQUIN KIT FOX
- > [T] CALIFORNIA RED-LEGGED FROG
- > [T] CALIFORNIA TIGER SALAMANDER
- > [T] STEELHEAD - CENTRAL VALLEY DPS
- > [R] BURROWING OWL
- > [R] CAPER-FRUITED TROPIDOCARPUM

That occur in the following selected sections:

| County | Township Range | | Sections |
|------------|----------------|-----|----------|
| 01 Alameda | 03S | 02E | 05 |
| 01 Alameda | 03S | 04E | 18 |

When using selected products:

Product

GAS CARTRIDGE

RODENT BAIT DIPHACINONE TREATED GRAIN (0.005%)

That contain these active ingredients (chemicals):

- > SODIUM NITRATE
- > DIPHACINONE
- > CARBON

Use Limits

5

1A, 1B, 1C, 1D, 1E
 , 2A, 2B, 2C, 2D, 3
 , 4

That contain these active ingredients (chemicals):

- SODIUM NITRATE
- DIPHACINONE
- CARBON

Observe Use Limits for Selected Products:

Code Use Limitations

- 5 Trained Applicator: Use shall be supervised by a person (wildlife biologist, county agricultural commissioner, university extension advisor, state or federal official or others) who is trained to distinguish dens and burrows of target species from those of non-target species. Use shall occur only in the active burrows of target species. The person responsible for supervision shall be aware of the conditions at the site of application and be available to direct and control the manner in which applications are made (per Section 6406 of Title 3, California Code of Regulations). Contact your county agricultural commissioner for information on training.
- 1A Bait Station Applications: Formulation: The active ingredient shall not exceed 0.005% in the formulated bait.
- 1B Bait Station Design and Use: Bait stations shall be designed with an opening that prevents access to non-target species (not to exceed 3") and controls bait spillage by feeding rodents. See your county agricultural commissioner for recommended designs and suggestions to retrofit existing stations. Bait stations shall be secured (e.g. staked) upright to prevent tipping and access by non-target animals. Bait stations shall not be filled beyond design capacity and in no case shall bait stations be filled with more than 10 lbs of bait.
- 1C Station Monitoring: While treated baits are in use, bait stations shall be inspected for spillage, evidence of disturbance by non-target animals, excess moisture from irrigation systems, etc. Problems shall be corrected before baiting is resumed. Any spilled baits shall be promptly cleaned up (scattering limited quantities of spilled bait in non-crop areas is acceptable if allowed by labeling). Bait stations shall be replenished with treated baits as needed to provide continuous exposure. After treated baits are accepted, as evidenced by consumption of baits, depletion of bait in the bait station shall be inspected at least weekly for depletion of bait and refilled until feeding ceases. Treated baits shall be promptly removed (or bait stations shall be sealed) from all stations after feeding has ceased. If subsequent baiting is needed, a two week period without use of treated baits shall be observed before baiting is resumed. This is to keep the period when treated bait is exposed to a minimum without jeopardizing good pest control.
- 1D Carcass Survey and Disposal: Carcass survey and disposal shall be performed in the treated area beginning on the third day following the initial exposure of toxic baits. Any exposed carcasses shall be disposed of (e.g. completely buried) in a manner inaccessible to wildlife. Carcass surveys shall continue for at least five days after toxic baiting has ceased and thereafter until no more carcasses are found. Carcasses should be handled with care to avoid contact with parasites such as fleas.

for at least five days after toxic baiting has ceased and thereafter until no more carcasses are found. Carcasses should be handled with care to avoid contact with parasites such as fleas.

- 1E Pre-baiting (optional): Pre-baiting with non-toxic (untreated) grains such as oats, oat groats or barley is optional, but may reduce the time period for carcass surveys. Pre-baiting will acclimate the pest species to feed in the bait stations and should be continued until most of the target population is feeding from the stations. The period of toxic bait exposure may be shortened as will the period when pest carcasses may be exposed. The untreated grain need not be the same as the treated grain, but milo or cracked corn should be strictly avoided due to their attractiveness to birds.
- 2A Broadcast (mechanical) and spot (hand) applications. Formulation: The active ingredient shall not exceed 0.01% in the formulated bait.
- 2B Test Baiting/Bait Acceptance: Prior to the main application of toxic baits by spot or broadcast method, a small amount of the bait shall be applied to determine bait acceptance. Test baits shall be broadcast by the same method that will be used for control baiting.
- 2C Use of Treated Baits: Use of treated baits shall begin only when bait acceptance is confirmed by consumption of test baits. Piling of baits shall be avoided. No additional applications shall be made whenever significant quantities of previously applied bait remain. Do not place baits directly into burrows. Do not exceed label application rates. Spot Baiting: Scatter a handful of bait (about 10 handfuls per pound) evenly over 40 to 50 square feet near active burrows or runways. Repeat every other day until feeding ceases. Mechanical Spreader: Apply at the rate of 10 pounds per swath acre through infested area. Follow with a second application in 2 to 3 days.
- 2D Carcass Survey and Disposal: See Limitation Code 1D.
- 3 Pellet Formulation: Use of pelletized formulations for control of ground squirrels is prohibited, except in bait stations as described in Limitation Code 1(A, B, C, E)
- 4 Rabbits: Jackrabbits may be controlled by using self-dispensing bait stations provided that: Bait acceptance is first determined. Carcasses are removed and stations are monitored as described in Limitation Codes 1C and 1D respectively. Baiting ceases when feeding stops. Baits are placed only where jackrabbits are active. Use of pelletized baits is prohibited.

Click on Start Over button to begin a new query, or use the Back button to on your browser to modify your current query criteria.

Reset

Start Over

Is there anything I should know about PRESCRIBE???

Resources for users on the subject of ES:

- County Ag Commissioners
- State Agencies (CDPR, CDFW)
- UC Advisors/Cooperative Extension (*GO AGS!*)
- NRCS/RCD's
- EPA Website



Pesticides: Endangered Species Protection Program

[Recent Additions](#) | [Contact Us](#)Search: ☐ All EPA ☒ This AreaYou are here: [EPA Home](#) » [Pesticides](#) » [Endangered Species Protection Program](#) » [Endangered Species Effects Determination](#) » Endangered Species Litigation

Endangered Species Litigation

Among other things, the Endangered Species Act (ESA) helps ensure that actions taken or permitted by the federal government will not jeopardize the continued existence of a listed species. The ESA requires federal agencies to determine whether their actions might harm a listed species (procedural obligations) and to ensure the action taken or permitted will not jeopardize the continued existence of a listed species (substantive obligations). The ESA also includes provisions that allow the public to bring suit in court against a federal agency when they believe a listed species is not being adequately protected (called citizen suit provisions). Such suits may be focused on a federal agency's procedural or substantive obligations under the ESA.

EPA has been subject to several such citizen suits and as a result has conducted scientific assessments and made effects determinations for pesticide products containing any of 54 pesticide active ingredients to 26 species of listed salmon and steelhead and pesticide products containing any of 18 pesticide active ingredients on certain plant and salmonid species in California. In order to assist the public in understanding certain other measures the courts have put in place, EPA developed an [interactive map](#) that depicts certain court ordered buffer areas, or no use areas, around certain water bodies used by listed salmon and steelhead. Other assessments are underway and other suits are currently pending final decisions by the courts.

Consistent with EPA's desire to conduct the business of the public in an open and transparent manner, the Agency makes available on this site information on each lawsuit, orders issued by the courts, assessments and [effects determinations](#) made consistent with the outcome of litigation, and other relevant information. As future actions are taken by the courts and as EPA completes additional assessments and effects determinations, or takes other actions consistent with the outcome of litigation, that information will be posted to this site as well. [EPA's primary priority-setting approach](#) continues to be its registration and registration review programs.

Information on Litigation Cases

- [EPA Reinstates No-Spray Buffer Zones in California, Oregon and Washington to Protect Salmon as a Result of Final Settlement Agreement for Northwest Center for Alternatives to Pesticides v. EPA](#)
- [San Francisco Bay Area Endangered Species Litigation - Center for Biological Diversity v. EPA](#)
- [Natural Resources Defense Council \(NRDC\) v. EPA - EPA Signs Settlement Agreement Regarding Endangered Species \(2003\)](#)
- [Center for Biological Diversity and the Save Our Springs Alliance \(SOSA\) v. EPA \(Case No: 1:04-Cv-00126-Ckk, 2004\)](#)
- [Washington Toxics Coalition \(WTC\) v. EPA \(Case No: C01-132C\)](#)
- [Effects Determinations Related to Litigation](#)
- [Federal Government Agrees to, and Court Issues Stipulated Injunction Regarding Threatened Species](#)

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GOOGLE: ENDANGERED SPECIES LITIGATION

What to know about the injunctions

- Examples: Salmon supporting waters, red legged frog, SF Bay Area Endangered Species
- No spray buffer zones, on certain active ingredients
- Threat = Federal court case by “citizen action”
- All federal, state, county or other local authorities are “vacated” from imposing the restrictions based on the injunctions.
- Google: ENDANGERED SPECIES LITIGATION



So what happens when people don't color within the lines?

What happens when people don't follow the label or pay any attention to endangered species bulletins?

Yosemite Intercept, 2014

Green Marijuana



Environmental Impacts of Marijuana Cultivation on Public Lands

- Impacts to Vegetation
 - Terracing
 - Thinning
- Impacts to Wildlife
 - Poaching
 - Pesticide Impacts

Direct and Indirect Impacts on Agriculture!

Blame for environmental contamination & wildlife issues, damage from misinformation

Bird Mortality in the Altamont Pass Wind Resource Area, California

K. SHAWN SMALLWOOD^{1,*} and CARL
THELANDER²

Article first published online: 13 DEC 2010

DOI: 10.2193/2007-032

2008 The Wildlife Society

Issue



The Journal of Wildlife
Management

Volume 72, Issue 1, pages
215–223, January 2008

SEARCH

In this issue



Additional Information (Show All)

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Abstract

References

Cited By

Keywords:

Altamont Pass; bird fatalities; mortality estimate; raptor mortality; wind energy; wind turbine

Abstract The 165-km² Altamont Pass Wind Resource Area (APWRA) in west-central California generate between 40 kW and 400 kW of electric power, or 580 MW total. Many birds residing in the area have died as a result of collisions with these wind turbines. We searched for bird carcasses within 50 m of 4,074 wind turbines over a 4.5 years. Using mortality estimates adjusted for searcher detection and scavenger removal, we estimated total bird fatalities to number 67 (80% CI = 25–109) golden eagles (*Aquila chrysaetos*), 1 (80% CI = 0–2) California condors (*Californiaca*), 348 (80% CI = –49 to 749) American kestrels (*Falco sparverius*), 440 (80% CI = –100 to 980) sharp-shinned hawks (*Accipiter cooperii*), 1,127 (80% CI = –23 to 2,277) raptors, and 2,710 (80% CI = –6,100 to 11,520) other birds. Scavenger removal rates might warrant revising mortality estimates for some small-bodied bird species. Given the magnitude of our mortality estimates, regulatory agencies should consider measures to enforce laws intended to protect species killed by APWRA wind turbines, and given the imprecision of sources of error and bias for use in studies of bird collisions wherever wind farms are developed, collision research could be improved by deploying technology to remotely detect collisions and by making wind turbine research more transparent to researchers so that the number of fatalities can be related directly to the actual power output of the wind turbines.

WINDFARMS



New Developments, Old Story



Walnut Creek: Injured golden eagle healing at wildlife hospital

By Katrina Cameron kcameron@bayareanewsgroup.com

POSTED: 04/01/2015 06:24:52 AM PDT | UPDATED: 7 MONTHS AGO

1 COMMENT



April 01, 2015

Sick eagle recovered. In news, signs of trauma, AR's suspected role by Vet...



First big Sierra storm



49ers trade Vernon Davis to Denver Broncos



Tomsula denies Kaepernick vote of confidence

Milpitas killed

eat·drink·play

CLICK HERE TO READ OUR BLOG

Walnut Creek: Injured golden eagle makes full recovery, will return to the sky

By Katrina Cameron | kcameron@bayareanewsgroup.com

0 COMMENTS



Workers at the Lindsay Wildlife Center in Walnut Creek perform a final exam on a Golden Eagle on Thursday, April 30, 2015. (Courtesy of Lindsay Wildlife Center)

WALNUT CREEK -- A severely injured golden eagle rescued

RELATED STORIES



April 30, 2015

Eagle recovers. Released with great fanfare at Las Trampas.

Tracking device installed

SEARCH

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November 2, 2015

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Wind Turbine Ends Golden Eagle's Saga

78

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The eagle is held by Marcia Metzler during examination at Lindsay Wildlife Hospital.



Posted: Thursday, August 6, 2015 12:00 am

By Carol Graham

For 86 days, she soared over the Livermore Valley, her seven-foot wingspan a deep golden brown against blue summer skies.

A satellite telemetry device, #7833, tracked her travels from Mount Diablo to Sunol and the Pleasanton Ridge to the Altamont Pass.

But on July 25, the rehabilitated golden eagle's life came to a heartbreaking, premature end.

She was found on the ground by two power workers at an older wind turbine farm in the Altamont Pass Wind Resource Area. She was alive, but unable to fly. Her wing had been struck and badly damaged by a wind turbine. The workers took her to Lindsay Wildlife Experience in Walnut Creek for treatment.

"They had seen her trying to fly, and flopping on the ground," said Lindsay's Executive Director Norma Bishop. "Our veterinarians described her wing as shredded - bones were broken and missing. Once they realized how badly she was

injured and that any attempt to save her would be futile, only prolonging her suffering, they euthanized her."

where
JULY

Award

NOV.

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| 15 | 16 |
| 22 | 23 |

August 6, 2015

86 days later on July 25th
Eagle flies into turbine and
dies...

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53°

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Wednesday 70° / 52°

Thursday 68° / 57°

Wild pig with blue fat found near Northern California ranch

BY WEAR TV | TUESDAY, SEPTEMBER 15TH 2015



Wild pig has blue fat/WEAR TV



MORGAN HILL, Calif. (KABC) --Ranchers in Northern California shot a wild pig and ended up finding its meat surrounded by Smurf-blue fat.

A user on Imgur posted photos and a short explanation of the bizarre discovery at their in-laws' Morgan Hill ranch. The couple cut open the pig, drained most of the blood and were startled to see fluorescent blue fat peeking out of the incision.

User GlendiiTEK said the ranchers are aware blue pigmentation could be caused by copper poisoning, but there are only old mercury mine shafts near the property. Other wild pigs that were shot by the couple did not have neon blue fat.

Samples of the fat were sent off to UC Davis for testing.

MORE TO EXPLORE

ADVERTISEMENT

WOMEN'S NIGHT OUT in 5 Bay Area Cities!

FREE TICKETS still available

DINNER CLICK HERE

TRENDING

- Entergy to close FitzPatrick nuclear plant in Oswego County
- Aunt: Heidi Allen made deal with police to avoid charges
- Watch: Oswego Halloween House puts on a Show
- At least 7 people shot in Syracuse within 4 days

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Recent Article

Sept 15, 2015

Bad Press, Poor Reporting = Misinformed Public

Negative Perceptions About Rodenticides = Gross unfounded generalizations
Perceptions preclude facts

BUT, ANY NON-TARGET KILL IS A PROBLEM TOO!

Actual Data

CDFW Wildlife Investigations Laboratory

Raptors with Anticoagulant Exposure in Alameda and Contra Costa Counties 2006-2014

| Year | ID | County | Animal | 2nd Generation ARs | | | | 1st Generation ARs | | | | |
|------|------|--------------|---------------------|--------------------|-------|--------|-------|--------------------|-------|------|------|-------|
| | | | | BROD | BROM | DIFETH | DIFEN | DIPH | CHLOR | WARF | COUM | PIVAL |
| 2013 | 2714 | Alameda | Cooper's hawk | trace | trace | | | | | | | |
| 2013 | 2722 | Alameda | Turkey vulture | 0.069 | 0.12 | trace | | | | | | |
| 2014 | 2748 | Alameda | Great horned owl | 0.24 | trace | trace | | | | | | |
| 2013 | 2752 | Alameda | Barn owl | 0.9 | | | | | | | | |
| 2014 | 2753 | Alameda | Barn owl | 0.47 | | | | | | | | |
| 2014 | 2759 | Alameda | Barn owl | 0.72 | | | | | | | | |
| 2014 | 2760 | Alameda | Turkey vulture | 0.45 | | | | | | | | |
| 2014 | 2842 | Alameda | Great horned owl | 0.028 | | | | 0.31 | | | | |
| 2011 | 2629 | Contra Costa | Barn owl | 0.00208 | | | | | 0.169 | | | |
| 2013 | 2697 | Contra Costa | Red tailed hawk | 0.32 | | | | | | | | |
| 2013 | 2706 | Contra Costa | Red shouldered hawk | 0.39 | | | | | | | | |
| 2013 | 2706 | Contra Costa | Barn owl | 0.017 | | | | | | | | |
| 2013 | 2706 | Contra Costa | Red shouldered hawk | 0.52 | | | | | | | | |
| 2013 | 2716 | Contra Costa | Red shouldered hawk | 0.4 | | | | | | | | |
| 2014 | 2775 | Contra Costa | Cooper's hawk | 0.027 | trace | | | | | | | |
| 2014 | 2811 | Contra Costa | Great horned owl | 0.36 | | | | | | | | |

MORE TAKE HOME MESSAGES

- External unrelated events cause big problems
- Perceptions preclude facts
- How to prove the negative???
 - Answer: solid programs with good records!
- Don't get creative with pest control!
 - FAC 12993 unlawful to manufacture pesticide...
 - FAC 12995 unlawful to possess or use unregistered pesticides

TWENTY-SEVENTH VERTEBRATE PEST CONFERENCE

NEWPORT BEACH, CALIFORNIA

MARCH 7 - 10, 2016

PROFESSIONAL INTERESTS OF PARTICIPANTS

The Conference makes significant contributions toward understanding and resolving human-wildlife conflicts and wildlife damage problems, promoting better management methodology, and minimizing adverse environmental and ecological effects. Vertebrate pest management is applied ecology focused on improving agriculture, public and wildlife health, and conservation of natural and human-made resources. The Conference is a forum for sharing knowledge and experiences among researchers, administrators, extension personnel, educators, and practitioners in vertebrate pest management and wildlife damage problems.

Participants vary in professional background, but all have one common interest - wildlife as vertebrate pests. The following are representative of past attendees:

- Animal control officials and personnel
- Private and commercial pesticide applicators
- Consultants in vertebrate pest problems
- Manufacturers and suppliers of vertebrate pest materials
- Health department officials and employees
- Agriculturists interested in predation and disease transmission reduction
- Extension specialists, advisors, and agents
- Foresters
- Wildlife departments (wildlife managers and enforcement agents)
- Pest control advisors (PCAs)
- Federal and state pesticide registration and regulatory agency administrators and staff
- Sanitarians
- Food processing and warehouse managers
- Educators - pest control subjects
- Students
- Researchers - (public agencies and private sector)
- Natural resource managers (conservationists)
- Private wildlife control operators

PROGRAM SCHEDULE

Monday, March 7, 2016

Field Trip - Vertebrate pest management

Tuesday, March 8, 2016

Registration
Keynote Address and Plenary Session
General and Concurrent Sessions

Wednesday, March 9, 2016

General and Concurrent Sessions
Special symposium
• Urban Coyotes: Our Wild & Wily Neighbors

Thursday, March 10, 2016

General and Concurrent Sessions
Special symposium
• Urban and Agricultural Bird Management
Closing Remarks

SHARE WITH A COLLEAGUE

Stella McMillin
California Department of Fish and Wildlife
1701 Nimbus Road, Rancho Cordova, CA 95670
E-mail: stella.mcmillin@wildlife.ca.gov
Telephone: (916) 358-2954

California Continuing Education (CE) credits for Pest Control Professionals (PCA, QAC, etc) are anticipated. CE credit for other programs may also be available.

STUDENT TRAVEL AWARDS

The Conference strongly encourages student participation by offering a discounted Student pre-registration fee of \$75.00 for the entire Conference. Also, a number of student travel scholarships will be available. Students whose abstract for a poster or an oral presentation is accepted and who provide a manuscript for the Proceedings can be eligible to receive a travel award of up to \$500. For more details, contact Kathy Fagerstone at kathy.fagerstone@gmail.com or (303) 880-5066.

Call for Papers

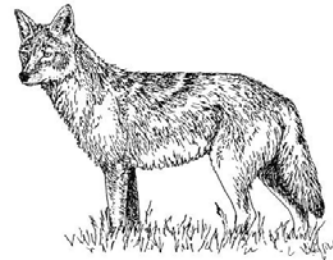
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