

56228-6

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

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March 3, 2008

USDA APHIS
4700 River road, Unit 152
Riverdale, MD 20737

Attention: Stephanie Stephens

Subject Zinc Phosphide Concentrate
EPA Reg. No. 56228-6
You resubmission of February 25, 2007
New Use on Artichokes

Purpose This submission revises the label for this product, under sec 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), to add the use of artichokes to the label for this product.

Review We have reviewed this request and found it acceptable, provided you make the labeling changes, indicated below, that you have agreed to.


Labeling The labeling submitted with the above letter, under section 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) is acceptable, provided you submit one (1) copy of final printed labeling to us, with the following changes, before you ship your product.

1. Revise your artichoke use direction according to Enclosure 1.

Questions

If you have questions about this letter, please contact me at 703-305-5407 (phone); 703-305-6596 (fax); or peacock.dan@epa.gov (E-Mail).

Sincerely,



Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Attachment

1. Revised Artichoke Use Directions
2. Stamped Label
3. Type Size Requirements

**File
Location**

Dan Peacock, Flash Drive, 2gb, P:\Documents\Word, WP, Excel, etc\Zinc Phosphide\56228-6\New Artichoke Use\56228-6, artichoke use, bait conc, app rate issues rev label, 2-25-2008.doc

Enclosure 1. Revised Artichoke Use Directions, 12455-6

USE RESTRICTIONS:

Baits made from this product may be used to control California voles (*Microtus californicus*) in artichokes. Do not broadcast on growing crop. The bait application rate must not exceed 40 pounds of treated 0.54% zinc phosphide bait (0.2 pounds of active ingredient) per acre. Do not exceed one application to the same field in one 12-month period. Use baits made from artichoke bracts. Prepare baits as indicated under MIXING DIRECTIONS below.

PREBAITING: Prebaiting in artichokes is not required.

MIXING DIRECTIONS (Artichokes only): Artichoke bracts should be used whole. To prepare toxic bait, mix bait with vegetable oil at a rate of 1 ounce of oil per 10 pounds of artichoke bracts. Add 7 1/2 level tablespoons (1.4 ounces) of ZINC PHOSPHIDE CONCENTRATE to mixture and blend thoroughly by manual stirring or by use of a mechanical tumbling type mixer. Continue mixing until bait, oil, and concentrate are evenly mixed.

APPLICATION DIRECTIONS:

Hand Baiting: Scatter about 0.5 ounces (2-3 bracts) of bait per every other artichoke plant on bare ground in vole-infested areas. Apply bait near vole burrow openings or runways. **Do not overbait.** Be careful to apply bait so that it does not directly contact any parts of the artichoke plant

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

Fatal if swallowed, inhaled or absorbed through the skin. Causes eye and skin irritation. Do not get in eyes, on skin or on clothing. Do not breathe dust. Keep away from humans, domestic animals and pets. Avoid contamination of feed or foodstuffs, Avoid contact with acids. Wash all utensils, spoons, or measuring devices thoroughly after using.

Personal Protective Equipment (PPE):
All mixers/loaders must wear:
-long sleeve shirt and long pants;
-shoes plus socks;
-chemical-resistant gloves;
-a dust/mist filtering respirator (MSHA/NIOSH) approval number prefix TC-21C or a NIOSH-approved respirator with an R, P, or HE filter; and
-protective eyewear.
Anyone who applies bait by ground broadcast equipment must wear:
-dust mask.
All applicators and any person who retrieves carcasses and unused bait must wear:
-gloves.

USER SAFETY REQUIREMENTS:

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are provided for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet.

USER SAFETY RECOMMENDATIONS:

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. 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.

RESTRICTED USE PESTICIDE

DUE TO ACUTE ORAL, DERMAL AND INHALATION HAZARDS TO HUMANS AND HAZARDS TO NONTARGET SPECIES

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

ZINC PHOSPHIDE CONCENTRATE

For rodent and lagomorph control

For use in and around buildings, in rangelands, pastures, vineyards, orchards, groves, tree farms, bushberries, caneberries, strawberries, sugar beets, sugarcane, alfalfa, barley, dry beans, potatoes, wheat, macadamia nut orchards, ornamentals, lawns, turf, other non-crop areas, and artichokes for the listed species of rodents and lagomorphs.

ACTIVE INGREDIENT:

Zinc Phosphide: 63.2%

OTHER INGREDIENTS: 36.8%

TOTAL..... 100.00%

KEEP OUT OF REACH OF CHILDREN

ACCEPTED DANGER-PELIGRO
with **COMMENTS**
in EPA Letter Dated

MAR 3 2008

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 56228-6



FIRST AID

Have label with you when obtaining treatment advice. Any person who applies zinc phosphide products and experiences signs or symptoms such as nausea, abdominal pain, tightness in the chest, or weakness, should be seen by a physician immediately.

If swallowed	-Immediately call a poison control center, doctor, or 1-800-858-7378 or transport the person to the nearest hospital. -DO NOT DRINK WATER -Do not administer anything by mouth or make the person vomit unless advised to do so by a doctor.
If on skin or clothing	-Take off contaminated clothing. -Rinse skin immediately with plenty of water for 15-20 minutes. -Call a poison control center, doctor or 1-800-858-7378 for treatment advice.
If inhaled	-Move person to fresh air. -If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. -Call a poison control center, doctor or 1-800-858-7378 for further treatment advice.
If in eyes	-Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. -Call a poison control center, doctor or 1-800-858-7378 for treatment advice.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage. See additional PRECAUTIONARY STATEMENTS on Left Panel.

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ENVIRONMENTAL HAZARDS

This product is toxic to wildlife and fish. Birds and other wildlife feeding on toxic bait may be killed. Use with care when applying in areas frequented by wildlife or adjacent to any body of water. Do not apply where runoff is likely to occur. Do not apply this product 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 cleaning of equipment or disposal of wastes. Do not apply this product in areas inhabited by livestock, or where a hazard exists to rare or endangered species. Dogs and other predatory and scavenging mammals might be poisoned if they feed upon animals that have eaten this bait.

ENDANGERED SPECIES CONSIDERATIONS

NOTICE: This product may have effects on Federally listed threatened or endangered species or their critical habitat in some counties. It is a violation of Federal law to kill, harm, or harass listed animal species without authorization. The killing of a member of an endangered species may result in a fine and/or imprisonment under the Endangered Species Act. To limit the potential for such impacts when using this product, consult and follow the instructions provided on this label and in the EPA Endangered Species Bulletin for the County or Parish in which you are applying this product. To determine whether your County or Parish has a Bulletin, consult www.epa.gov/espp before each season's use of this product.

UNITED STATES DEPARTMENT OF AGRICULTURE

Animal and Plant Health
Inspection Service
Riverdale, MD 20737-1237

EPA Reg. No. 56228-6
EPA Est. No. 56228-ID-1

Net Contents: _____

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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its label.

READ THIS LABEL: Read entire label and follow all use directions, use precautions, and use restrictions which pertain to the bait application to be made.

GENERAL USE RESTRICTIONS (For All Uses):

Do not apply this product by any method or use not specified on this label. Do not apply bait on roads, over water, or, except where specifically indicated in these directions, where plants are grown for food or feed.

Wear all required personal protective equipment (PPE) when mixing, handling, and applying bait. See **PRECAUTIONARY STATEMENTS**.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only persons associated with the applications may be present in the area when the bait is being applied and such persons must wear required PPE. Keep all other persons out of the treated area during application.

MIXING DIRECTIONS

GENERAL REQUIREMENTS: Wear required PPE when mixing/holding bait, applying bait and retrieving unused bait and carcasses. Due to compaction of the concentrate, shake cans before opening them. Bait materials resembling human foods must be altered in form by cubing, crushing, balling or pelletizing so that they are not readily recognizable as human food. Prepare bait so that it is of a type, size and form that is likely to be accepted well by target species and not especially attractive to nontarget species.

GRAIN BAITS (wheat, oats, barley, rye, milo or millet):

Mix 1.1 pounds of heated lecithin into 2.3 pounds of heated mineral oil. Slowly blend 3.25 pounds of **ZINC PHOSPHIDE CONCENTRATE** into this mixture until it is evenly blended. Pour new mixture over 93.4 pounds of whole, rolled, or hulled grain and mix thoroughly.

DIRECTIONS FOR USE, (continued)

SUNFLOWER SEED BAITS:

Mix 1.1 pounds of heated lecithin into 2.3 pounds of heated mineral oil. Slowly blend in 3.25 pounds of **ZINC PHOSPHIDE CONCENTRATE** into this mixture until it is evenly blended. Pour new mixture over 93.4 pounds of sunflower seeds and mix thoroughly.

MEAT BAITS (ground meat, canned dog or cat food, and/or dry meat-based pet food):

Slowly blend 1 ounce of **ZINC PHOSPHIDE CONCENTRATE** into 2 pounds of meat.

FRUIT OR VEGETABLE BAITS (carrots, sweet potatoes, alfalfa, beet tops, cabbage, potatoes, apples, pears, or artichokes):

Artichoke bracts should be used whole. Cut root vegetables and fruits into 1/2-inch cubes, except when bait is to be used for muskrats, nutria, jackrabbits or marmots. For muskrat, nutria, or jackrabbit control, cut carrots or sweet potatoes into 2-inch lengths. For marmots, cut carrot baits into 1- to 2-inch lengths or use baby carrots of the same length. Cut leafy vegetables into 3- to 6-inch lengths. Drain fluids or juices from bait materials. Place 10 pounds of cut-up bait material in a 5-gallon container.

To prepare prebait: Mix bait material with vegetable oil at a rate of 1 ounce of oil per 10 pounds of bait material. Tumble or stir mixture until oil is evenly mixed with bait.

To prepare toxic bait: Mix bait with vegetable oil at a rate of 1 ounce of oil per 10 pounds of bait material. Add 7 1/2 level tablespoons (1.4 ounces) of **ZINC PHOSPHIDE CONCENTRATE** to mixture and blend thoroughly by manual stirring or by use of a mechanical tumbling type mixer. Continue mixing until bait, oil, and concentrate are evenly mixed.

DIRECTIONS FOR USE, (continued)

IN AND AROUND BUILDINGS

(to control Norway Rats, Roof Rats, House Mice, White-Footed Mice, Meadow Voles, Prairie Voles, Mountain Voles, California Voles, Pine Voles)

IMPORTANT: Do not expose children, pets, or other nontarget animals to rodenticides. To help prevent accidents:

1. Store product or bait in a location out of reach of children and pets.
2. Apply bait used in and around buildings in locations out of reach of children, pets, domestic animals, and nontarget wildlife, or in tamper-resistant bait stations. These stations must be resistant to destruction by dogs and by children under six years of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from stations when they are lifted, units must be secured or otherwise immobilized. Even stronger bait stations are needed in areas open to hooved livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism. Note that dogs, cats, and other animals may actively search for bait, especially when meat-based baits are used.
3. Dispose of product container and unused, spoiled, and unconsumed bait as specified on this label.

DIRECTIONS FOR USE, (continued)

USE RESTRICTIONS: Baits mixed from this product may be used to control Norway rats (*Rattus norvegicus*), roof rats (*R. rattus*), house mice (*Mus musculus*), white-footed mice (*Peromyscus leucopus*), meadow voles (*Microtus pennsylvanicus*), prairie voles (*M. ochrogaster*), mountain voles (*M. montanus*), California voles (*M. californicus*), and pine voles (*M. pinetorum*) in and around industrial, commercial, agricultural and public buildings.

Do not place baits in areas where there is a possibility of contaminating food or surfaces that come into direct contact with food. Do not use in edible product areas of food or feed processing plants, restaurants, or other areas where food or feed is commercially prepared and processed. Do not contaminate food or feed or equipment used to handle food or feed. Do not place product or bait near or inside ventilation duct openings. Do not broadcast bait.

SELECTION OF TREATMENT AREAS: Determine areas where rats or mice will most likely find and consume bait. Generally, these areas are along walls, by gnawed openings, in or beside burrows, or in locations where rodents or signs of rodents have been seen. Protect bait from rain or snow. Remove as much alternative food as possible.

APPLICATION DIRECTIONS:

For Rats: Apply 1 to 2 teaspoons (4 to 8 grams) of bait per bait placement. Grain-based, meat-based, or fruit- or vegetable-based baits may be used.

For Mice and Voles: Apply 1 teaspoon (4 grams) of bait per bait placement. Space placements at 8- to 12-foot intervals in infested area. Grain-based or fruit- or vegetable-based baits may be used for mice and voles. Meat-based baits may also be used for house mice but not for white-footed mice or voles.

For Rats, Mice and Voles: Collect and properly dispose of uneaten bait after completion of the baiting program. Collect and properly dispose of dead rodents as they are found.

DIRECTIONS FOR USE, (continued)

CROP BORDERS, CANAL AND DITCH BANKS, ORNAMENTALS, NON-RESIDENTIAL LAWNS/TURF/GOLF COURSES, OTHER NON-CROP AREAS, RANGELAND/PASTURES, DORMANT ORCHARDS/VINEYARDS (to control Ground Squirrels)

USE RESTRICTIONS: Baits made from this product may be used to control whitetail antelope ground squirrels (*Ammospermophilus leucurus*), *Piute ground squirrels (*Spermophilus mollis*), *Merriam's ground squirrels (*S. canus*), California ground squirrels (*S. beecheyi*), Columbian ground squirrels (*S. columbianus*), Franklin's ground squirrels (*S. franklinii*), Townsend's ground squirrel (*S. townsendii*), golden-mantled ground squirrels (*S. lateralis*), Richardson's ground squirrels (*S. richardsonii*), round-tailed ground squirrels (*S. tereticaudus*), thirteen-lined ground squirrels (*S. tridecemlineatus*), rock squirrels (*S. variiegatus*), Uinta ground squirrels (*S. armatus*), Belding's ground squirrels (*S. beldingi*), Wyoming ground squirrels (*S. elegans*), and Washington ground squirrels (*S. washingtoni*) on crop borders, canal and ditch banks, ornamentals, other noncrop areas (cemeteries, airport grasses, highway medians, horticultural nurseries), nonresidential lawns, turf, golf courses, rangelands, pastures and dormant orchards and vineyards.

***Do not use baits made from this product in Idaho to control Piute ground squirrels or Merriam's ground squirrels except in situations where damage is related to the protection of personal health and/or safety, property or agriculture (see Idaho State Code (IDAPA 13.01.06.000, et seq., Rules of the Idaho Fish and Game Commission, IDAPA 13.01.06, "Rules Governing Classification and Protection of Wildlife, <http://adm.idaho.gov/adminrules/rules/idapa13/0106.pdf>)).**

Do not apply bait on roads, near residential areas, or over water. Do not apply bait by air. Do not treat the same area with zinc phosphide at intervals of less than 30 days.

DIRECTIONS FOR USE, (continued)

Use baits made from grain, fruit or vegetables. Grain baits are not recommended for Belding's ground squirrels. Prepare baits as indicated under **MIXING DIRECTIONS**.

Special Use Restrictions for Orchards: Baits may be applied only after harvest or during the dormant season. Do not apply bait after tree growth begins in the spring of the year. Do not broadcast bait over non-orchard crops. Do not graze animals on treated areas.

Special Use Restrictions for Vineyards: Baits may be applied only during the non-bearing season. Do not apply bait over growing crop. Do not graze animals on treated areas. **Ground broadcast applications** may not exceed 6 pounds of 2% zinc phosphide bait (0.12 pounds of active ingredient) per acre.

Special Use Restrictions for Rangeland Grasses: Baits may be applied only to rangelands with less than 50% ground cover. **Ground broadcast applications** may not exceed 6 pounds of 2% zinc phosphide bait (0.12 pounds of active ingredient) per acre at a maximum of one application per year. **Hand-baiting applications** may not exceed one teaspoon (4 grams) of bait per treated burrow or runway at a maximum rate of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock. Do not graze animals in treated areas. Do not apply zinc phosphide baits where plants are grown for food or feed.

Special Use Restrictions for Pasture Grasses: Baits may only be applied in **hand baiting applications** which may not exceed one teaspoon (4 grams) of bait per treated mound or burrow at a maximum of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock.

DIRECTIONS FOR USE, (continued)

PREBAITING: Prebaiting with untreated grain or other carrier of the type to be used in toxic bait is strongly recommended as a means of enhancing acceptance of toxic bait. Apply prebait 2 to 4 days before toxic bait is to be used. Prebait should be exposed in the same manner as is to be used for applying toxic bait. If toxic bait is to be applied manually, scatter one teaspoon of untreated bait on the ground near each burrow or runway. If toxic bait is to be ground broadcast, broadcast prebait at a rate of 6 pounds per acre.

The item selected as the prebait and bait base should be something that the target population is accepting at the time of the year that they are to be controlled. Before prebait is applied, it may be helpful to scatter several different grains in a few places within the infested areas to determine: (1) whether the ground squirrels are ready to accept grains; (2) which grain they seem to prefer; and (3) whether there is significant consumption of grain by nontarget species.

APPLICATION DIRECTIONS:

Spot Baiting: After all or most of the prebait has been consumed, scatter one tablespoon of 2% zinc phosphide bait around each active burrow or runway. Allow bait to fall through grass to the ground but do not apply to bare ground. Do not place bait in heaps or piles.

Ground Broadcast Baiting: Broadcast toxic bait only after all or most of the prebait has been consumed. Apply bait using hand-powered or ground-driven broadcasting equipment in swaths 10 to 15 feet wide in infested areas. Apply toxic bait at rates of 6 pounds of 2% zinc phosphide bait (0.12 pounds of active ingredient) per acre or less, depending upon the rate of acceptance of prebait and ground squirrel density.

All Applications: Collect and bury spilled or unused bait and observed animal carcasses within 3 days after bait application.

DIRECTIONS FOR USE, (continued)

ORCHARDS, GROVES, NURSERIES, VINEYARDS, ORNAMENTAL PLANTINGS AND NONBEARING FRUIT TREES (to control Voles and White-Footed Mice)

USE RESTRICTIONS: Baits made from this product may be used to control meadow voles (*Microtus pennsylvanicus*), prairie voles (*M. ochrogaster*), California voles (*M. californicus*), mountain voles (*M. montanus*), pine voles (*M. pinetorum*), and white-footed mice (*Peromyscus leucopus*) in orchards, groves, horticultural nurseries, vineyards, ornamental plantings, and plantings of nonbearing fruit trees. Do not apply bait to bare ground.

Use baits made from wheat, oats, barley, rye, millet, sunflower seeds, or fruit. Prepare baits as indicated under **MIXING DIRECTIONS**.

Special Use Restrictions for Orchards and Groves:

Baits may be applied only after harvest or during the dormant season. Do not apply bait after tree growth begins in the spring of the year. Do not broadcast bait over non-orchard crops. Do not graze animals on treated areas.

Special Use Restriction for Vineyards: Baits may be applied only during the non-bearing season. Do not apply bait over the growing crop. Do not apply bait by air. Do not graze animals on treated areas. **Ground broadcast applications** must not exceed 10 pounds of 2% zinc phosphide bait (0.20 pounds of active ingredient) per acre.

DIRECTIONS FOR USE, (continued)

APPLICATION DIRECTIONS:

Hand Baiting:

Fruit Baits: Place 1 or 2 cubes of bait at intervals of 2 feet or more in active trails under the cover of grass or artificial cover (e.g., boards or mats) near the bases of each infested tree.

Grain or Sunflower Seed Baits: Near the base of each infested tree, place one teaspoon (4 grams) of 2% zinc phosphide bait at 2 to 4 locations, either on surface or at the mouths of holes leading directly to underground burrow systems. Cover bait artificially (e.g., by using mats or boards) or by pulling overhanging grass back into place.

Trail-Builder Baiting (grain or sunflower seed baits only): Follow manufacturer's instructions for the type of equipment used. Set equipment to drop one teaspoon (4 grams) at 4- to 5-foot intervals in the artificial trail made by the machine just inside the dripline of both sides of the trees. Apply 2 to 3 pounds of 2% zinc phosphide bait per acre.

Ground Broadcast Baiting (grain or sunflower seed baits only): Under infested trees, broadcast bait evenly by cyclone seeder or by gloved hand. Concentrate baiting in areas with the greatest amount of vegetative cover. Apply 6 to 10 pounds of 2% zinc phosphide bait (0.12 to 0.2 pounds of active ingredient) per acre.

Aerial Application (grain baits only): Do not aerially apply bait to grape vineyards or to any actively growing crops. Broadcast 6 to 10 pounds of 2% zinc phosphide bait (0.12 to 0.2 pounds of active ingredient) per acre at other sites listed in this subsection of the **DIRECTIONS FOR USE**. Apply bait immediately after harvest and before leaf fall, when the grass is not yet matted.

DIRECTIONS FOR USE, (continued)

NON-CROP AREAS (RIGHTS-OF-WAYS, PARKS, HIGHWAY MEDIANS, NONRESIDENTIAL LAWNS, TURF, GOLF COURSES, AIRPORT GRASSES (to control Voles and White-Footed Mice)

USE RESTRICTIONS: Baits made from this product may be used to control meadow voles (*Microtus pennsylvanicus*), prairie voles (*M. ochrogaster*), California voles (*M. californicus*), mountain voles (*M. montanus*), pine voles (*M. pinetorum*), and white-footed mice (*Peromyscus leucopus*) in non-crop areas (rights-of-ways, nonresidential lawns, parks, turf, golf courses, airport grasses and highway medians). Do not apply bait to bare ground. Do not apply by air.

Use baits made from wheat, oats, barley, rye or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

PREBAITING: Prebaiting with untreated grain of the type to be used in the toxic bait may lead to more consistent acceptance of toxic bait. Prebait should be applied, at rates appropriate for toxic baiting, beginning 2 or 3 days before toxic baits are to be used.

APPLICATION DIRECTIONS:

Hand Baiting: Place one teaspoon (4 grams) of bait in surface runways or at the mouths of holes leading to underground burrow systems. Apply bait at rates of 3 to 5 pounds (0.06 to 0.1 pounds of active ingredient) per acre.

Trail-Builder Baiting (grain or sunflower seed baits only): Follow manufacturer's instructions for the type of equipment used. Set equipment to drop one teaspoon (4 grams) at 4- to 5-foot intervals in the artificial trail made by the machine. Apply 2 to 3 pounds of 2% zinc phosphide (0.04 to 0.06 pounds of active ingredient) per acre.

Ground Broadcast Baiting (grain or sunflower seed baits only): Broadcast bait evenly by cyclone seeder or by gloved hand. Apply 6 to 10 pounds of 2% zinc phosphide bait (0.12 to 0.2 pounds of active ingredient) per acre.

DIRECTIONS FOR USE, (continued)

PASTURES, RANGELANDS, AND REFORESTATION AREAS (to control Voles and White-Footed Mice)

USE RESTRICTIONS: Baits made from this product may be used to control meadow voles (*Microtus pennsylvanicus*), prairie voles (*M. ochrogaster*), California voles (*M. californicus*), mountain voles (*M. montanus*), pine voles (*M. pinetorum*), and white-footed mice (*Peromyscus leucopus*) in pastures, rangelands, and reforestation areas. Make fall treatments prior to seed fall or seedling efforts. Make spring treatments if needed to protect emergent seedlings. Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

Special Use Restrictions for Rangeland Grasses: Baits may be applied only to rangelands with less than 50% ground cover. Regardless of treatment method (ground-broadcast applications, aerial applications, and hand baiting), the rate of treatment may not exceed 6 pounds of 2% zinc phosphide bait (0.12 pounds of active ingredient) per acre at a maximum of one application per year. **Hand baiting applications** may not exceed one teaspoon (4 grams) of 2% zinc phosphide bait per treated runway or burrow at a maximum rate of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock. Do not graze animals in treated areas. Do not apply zinc phosphide baits where plants are grown for food or feed.

Special Use Restrictions for Pasture Grasses: Baits applied by **hand baiting** may not exceed one teaspoon of 2% zinc phosphide bait (0.08 grams of active ingredient) per treated runway or burrow at a maximum of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock.

Special Use Restrictions for Reforestation Areas: **Ground or aerial broadcast applications** may not exceed 9 pounds of 2% zinc phosphide bait (0.18 pounds of active ingredient) per acre. Do not apply bait in areas where plants are being grown for food or feed or in areas inhabited by livestock.

APPLICATION DIRECTIONS:

Hand Baiting: Place one teaspoon (4 grams) of bait in surface runways or at the mouths of holes leading to underground burrow systems. Apply 3 to 5 pounds of 2% zinc phosphide bait (0.06 to 0.1 pounds of active ingredient) per acre.

DIRECTIONS FOR USE, (continued)

Trail-Builder Baiting (grain or sunflower seed baits only): Follow manufacturer's instructions for the type of equipment used. Set equipment to drop one teaspoon (4 grams) at 4- to 5-foot intervals in the artificial trail made by the machine. Apply 2 to 3 pounds of 2% zinc phosphide bait (0.04 to 0.06 pounds of active ingredient) per acre. Do not use trail builders to treat pasture grasses.

Ground Broadcast Baiting (grain or sunflower seed baits only): Broadcast bait evenly by cyclone seeder or by gloved hand. Apply 3 to 6 pounds of 2% zinc phosphide bait (0.06 to 0.12 pounds of active ingredient) per acre on rangeland grasses or 5.5 to 9 pounds of 2% zinc phosphide bait (0.11 to 0.18 pounds of active ingredient) per acre on reforestation areas. Do not use ground broadcast baiting to treat pasture grasses.

Aerial Application (grain baits only): Do not aerially apply bait to pasture grasses. Evenly broadcast 3 to 6 pounds of 2% zinc phosphide bait (0.06 to 0.12 pounds of active ingredient) per acre on rangeland grasses or 5.5 to 9 pounds of 2% zinc phosphide bait (0.11 to 0.18 pounds of active ingredient) per acre on reforestation areas.

BUSHBERRIES, CANEBERRIES AND STRAWBERRIES (to control Voles and White-Footed Mice)

USE RESTRICTIONS: Baits made from this product may be used to control meadow voles (*Microtus pennsylvanicus*), prairie voles (*M. ochrogaster*), California voles (*M. californicus*), mountain voles (*M. montanus*), pine voles (*M. pinetorum*), and white-footed mice (*Peromyscus leucopus*) in bushberries [blueberries (highbush and lowbush), currant, elderberry, gooseberry and huckleberry]; caneberries [blackberry, raspberry (black and red), loganberry, and cultivars or hybrids of these caneberries]; and in strawberries. Only apply this product in the dormant season; after final harvest and not later than the beginning of leaf emergency in the spring. Do not apply when ground is snow covered. Do not apply by air. Minimum preharvest interval is 70 days.

DIRECTIONS FOR USE, (continued)

Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

APPLICATION DIRECTIONS:

Broadcast Baiting: This product may be broadcast by cyclone seeder, or by hand. When applying by hand (wear rubber gloves during hand broadcast operations), throw tablespoon amounts into heavy cover along bushed, rock outcrops, and fence lines. Make up to 2 applications at a minimum interval of 21 days, at the rate of 6 to 10 pounds per acre per application.

SUGAR BEETS (*California only*) (to control California and Mountain Voles)

USE RESTRICTIONS: Baits made from this product may be used to control California voles (*Microtus californicus*) and mountain voles (*M. montanus*) in sugar beets. Do not allow grazing of sugar beet tops. Do not make more than two applications of zinc phosphide bait to the same field in any one crop cycle. Do not apply bait within 30 days of harvest.

Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

PREBAITING: Prebaiting with untreated grain of the type to be used for toxic baiting may lead to more consistent acceptance of the toxic bait. Prebait should be applied, at rates identical to toxic baiting, beginning 2 to 3 days before toxic baits are to be used.

APPLICATION DIRECTIONS:

BAITING: Apply bait by mechanical spreader or aircraft at rates of 4 to 6 pounds of 2% zinc phosphide bait (0.08 to 0.12 pounds of active ingredient) per acre, depending upon the density of the infestation. If the field was prebaited, delay baiting until prebait has been accepted by target species. Do not apply by air when wind velocity exceeds 10 mph. Do not apply in piles or permit piles to be formed by equipment.

DIRECTIONS FOR USE, (continued)

ALFALFA, BARLEY, DRY BEANS, POTATOES, SUGAR BEETS, AND WHEAT (to control Voles and White-footed Mice)

USE RESTRICTIONS: Baits made from this product may be used to control meadow voles (*Microtus pennsylvanicus*), prairie voles (*M. ochrogaster*), California voles (*M. californicus*), mountain voles (*M. montanus*), pine voles (*M. pinetorum*), and white-footed mice (*Peromyscus leucopus*) on alfalfa, barley, dry beans, potatoes, sugar beets, and wheat.

Use baits made from wheat. Prepare baits as indicated under **MIXING DIRECTIONS**.

PREBAITING: Prebaiting with untreated grain of the type to be used for toxic baiting may lead to more consistent acceptance of the toxic bait. Prebait should be applied, at rates identical to toxic baiting, beginning 2 to 3 days before toxic baits are to be used.

APPLICATION DIRECTIONS:

ALFALFA:

Use Restrictions: All applications must occur shortly after a cutting of the hay, and/or prior to new growth attaining a length of 2 inches. Alfalfa forage from treated areas must not be harvested until it reaches maturity. Do not apply this product to alfalfa within 30 days of harvest. This use is restricted to California, Idaho, Oregon and the state of Washington.

Broadcast Baiting: This product may be broadcast by air or ground-driven dispensing devices. Apply zinc phosphide bait at a rate up to 10 lbs (0.2 lbs of active ingredient) per acre. A second application may be made after 10 days. A maximum of 20 lbs of 2% zinc phosphide bait (0.4 lbs active ingredient) may be applied per year. Do not apply by air when wind velocity exceeds 10 mph. Do not apply in piles or permit piles to be formed by equipment.

BARLEY:

Use Restrictions: Do not apply bait post-harvest or pre-plant. Do not apply this product to barley within 50 days of harvest. This use is restricted to Idaho, Oregon and the state of Washington.

Broadcast Baiting: This product may be broadcast by air or ground-driven dispensing devices. Apply zinc phosphide bait at a rate up to 6 lbs (0.12 lbs active ingredient) per acre. Two applications may be made at a minimum interval of 25 days. A maximum of 12 lbs (0.24 lbs active ingredient) per acre may be applied per year. All applications must be made prior to the boot stage.

DIRECTIONS FOR USE, (continued)

POTATOES:

Use Restrictions: Do not apply bait post-harvest or pre-plant. Do not apply this product to potatoes within 30 days of harvest. This use is restricted to Idaho, Oregon and the state of Washington.

Broadcast Baiting: This product may be broadcast by air or ground-driven dispensing devices. Apply zinc phosphide bait at a rate up to 10 lbs (0.2 lbs active ingredient) per acre, or two applications at a rate of up to 5 lbs (0.1 lbs active ingredient) each per acre. The maximum rate per year is 10 lbs (0.2 lbs active ingredient).

SUGAR BEETS:

Use Restrictions: Do not apply bait post-harvest or pre-plant. Do not apply this product to sugar beets within 30 days of harvest. This use is restricted to Idaho, Oregon and the state of Washington.

Broadcast Baiting: This product may be broadcast by air or ground-driven dispensing devices. Apply zinc phosphide bait at a rate up to 10 lbs (0.2 lbs of active ingredient) per acre at planting. A second application may be made at this rate. The maximum application rate per year is 20 lbs of 2% zinc phosphide bait (0.4 lbs of active ingredient).

WHEAT:

Use Restrictions: Do not apply bait post-harvest or pre-plant. Do not apply this product to wheat within 50 days of harvest. This use is restricted to Idaho, Oregon and the state of Washington.

Broadcast Baiting: This product may be broadcast by air or ground-driven dispensing devices. Apply zinc phosphide bait at a rate up to 6 lbs (0.12 lbs of active ingredient) per acre. A second application may be made within 25 days. The maximum application rate per year is 12 lbs of 2% zinc phosphide bait (0.24 lbs of active ingredient).

DRY BEANS:

Use Restrictions: Do not apply by air. Do not apply this product to dry beans within 30 days of harvest. This use is restricted to Idaho, Oregon and the state of Washington.

Broadcast Baiting: This product may be broadcast by hand or ground-driven dispensing devices at a rate of 6 lbs (0.12 lbs active ingredient) per acre. No more than one application per growing season is permitted.

DIRECTIONS FOR USE, (continued)

RANGELAND, PASTURES, CANAL AND WATERWAY RIGHTS-OF-WAY, DORMANT ORCHARDS, TREE FARMS, AND RURAL AGRICULTURAL BUILDINGS

(to control Woodrats)

USE RESTRICTIONS: Baits made from this product may be used to control eastern woodrats (*Neotoma floridana*), southern plains woodrats (*N. micropus*), whitethroat woodrats (*N. albigula*), desert woodrats (*N. lepida*), Mexican woodrats (*N. mexicana*), dusky-footed woodrats (*N. fuscipes*), and bushytail woodrats (*N. cinerea*), in rangelands, pastures, noncrop rights-of-ways adjacent to canals or waterways, dormant orchards, tree farms, and rural agricultural buildings. Do not apply bait by air.

Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

Special Use Restrictions for Rangeland Grasses: Baits may be applied only to rangelands with less than 50% ground cover. **Hand baiting applications** may not exceed one teaspoon (4 grams) of 2% zinc phosphide bait per treated runway or burrow at a maximum rate of one application per year. The rate of treatment may not exceed 6 pounds of 2% zinc phosphide bait (0.12 pounds of active ingredient) per treated acre at a maximum of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock. Do not graze animals in treated areas. Do not apply zinc phosphide baits where plants are grown for food or feed.

Special Use Restrictions for Pasture Grasses: Baits may be applied in **hand baiting applications** which may not exceed one teaspoon (4 grams) of 2% zinc phosphide bait (0.08 grams of active ingredient) per treated runway or burrow at a maximum of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock.

DIRECTIONS FOR USE, (continued)

APPLICATION DIRECTIONS:

Outdoor Applications: When baiting outside at the sites noted above, scatter 1 teaspoon (4 grams) of 2% zinc phosphide bait over 1 square foot of ground in runway near or leading to the entrance of the den.

Applications in Rural Agricultural Buildings: Place 1 ounce of bait in a shallow open container near each point of woodrat activity only if you are able to bait in areas not accessible to children, pets, domestic animals, and nontarget wildlife, and where contamination of food or feed will not occur. In all other locations, bait must be placed in tamper-resistant bait stations secured, if necessary, to prevent bait from being spilled out of the unit. Check bait stations frequently for continued presence of bait and to remove any sticks or other foreign objects brought into stations by woodrats.

Replenish bait as long as there is continued evidence that woodrats are taking it. Remove and properly dispose of all bait when woodrats cease to accept it.

RANGELAND AND PASTURES

(to control Prairie Dogs)

USE RESTRICTIONS: Baits made from this product may be used to control black-tailed prairie dogs (*Cynomys ludovicianus*), white-tailed prairie dogs (*C. leucurus*), and Gunnison prairie dogs (*C. gunnisoni*) on rangelands and pastures in the western United States where nontarget species, especially the black footed ferret, will not be at risk (see ENDANGERED SPECIES CONSIDERATIONS on this label and the ENDANGERED SPECIES ATTACHMENT included with this product's labelling). Do not use baits made from this product to control the endangered Utah prairie dog (*C. parvidens*, see ENDANGERED SPECIES CONSIDERATIONS on this label and the ENDANGERED SPECIES ATTACHMENT). Baits made from this product may only be used to control prairie dogs in North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, New Mexico, Arizona, Colorado, Utah, Wyoming and Montana.

Baits used to control prairie dogs must be applied by hand. Do not apply treated bait by air or by ground broadcast equipment. Baits may only be applied from midsummer through midwinter (July to February of the following year). Do not apply zinc phosphide bait more than once during this period.

Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

DIRECTIONS FOR USE, (continued)

Special Use Restrictions for Rangeland Grasses:

Baits may be applied only to rangelands with less than 50% ground cover. **Hand baiting applications** may not exceed one teaspoon (4 grams) of 2% zinc phosphide bait per treated runway or burrow at a maximum rate of one application per year. The rate of treatment may not exceed 6 pounds of 2% zinc phosphide bait (0.12 pounds of active ingredient) per treated acre at a maximum of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock. Do not graze animals in treated areas. Do not apply zinc phosphide baits where plants are grown for food or feed.

Special Use Restrictions for Pasture Grasses: Baits may be applied in **hand baiting applications** which may not exceed one teaspoon (4 grams) of 2% zinc phosphide bait (0.08 grams of active ingredient) per treated mound or adjacent feeding area at a maximum of one application per year. Do not use zinc phosphide baits in areas inhabited by livestock.

PREBAITING: Prebaiting with untreated grain of the type to be used in the toxic bait is required. Apply prebait 1 or 2 days before toxic baits are used. Scatter one teaspoon (4 grams) of prebait on ground near each active mound.

The item selected as the prebait and bait should be something that the target population is accepting at the time of year that they are to be controlled. Before prebait is applied, it may be helpful to scatter several different grains in a few places within the infested area to determine: (1) whether the prairie dogs are accepting grains; (2) which grain they seem to prefer; and (3) whether there is significant consumption of grain by nontarget species.

OBSERVATION: Before and during prebaiting, observe the infested area regularly and systematically to assess presence and potential for exposure of nontarget animals to toxic bait. If nontarget animals that might be harmed by the bait are observed in the infested area, do not apply toxic bait.

BAITING: After all or most of the prebait has been taken by prairie dogs, scatter one teaspoon (4 grams) of 2% zinc phosphide bait (0.08 grams of active ingredient) in 6-inch (diameter) bait area at the edge of each active mound or in adjacent feeding areas. Bury spilled or unused bait and observed animal carcasses within 3 days after bait application.

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DIRECTIONS FOR USE, (continued)

NON-CROP AREAS

(to control Woodchucks, Yellow-bellied Marmots, and Black-Tailed Jackrabbits)

USE RESTRICTIONS: Baits prepared from this product may be used to control woodchucks (*Marmota monax*), yellow-bellied marmots (*M. flaviventris*), and black-tailed jackrabbits (*Lepus californicus*) in noncrop areas. Do not apply baits made from this product in food- or feed-crop areas. Do not apply baits by air.

Use baits made from fruit or vegetables. Prepare baits as indicated under MIXING DIRECTIONS.

APPLICATION DIRECTIONS:

PREBAITING: Prebaiting with 1- to 2-inch pieces of fruits or vegetables is recommended to enhance acceptance of toxic bait by target species and to assess the potential for risks associated with bait taken by nontarget species. Treat fruit or vegetables pieces with corn oil before applying them. Apply prebait in the morning, following the procedures described under **BAITING** for the species to be controlled.

BAITING: Apply toxic bait in the morning in locations where prebait was accepted.

For Woodchucks and Yellow-Bellied Marmots: Place 4 or 5 pieces of toxic bait under rock overhangs, in protected crevices, or at the sides of burrows dug in areas that are not rocky.

For Black-Tailed Jackrabbits: Prepare a furrow in noncrop area adjacent to field being damaged or adjacent to other areas from which it is desired to exclude jackrabbits. Place 6 to 9 fruit or vegetable pieces per site.

For Woodchucks, Marmots and Jackrabbits: Collect and properly dispose of untreated bait and animal carcasses after completion of the baiting program, which should be set at 72 hours under most circumstances. Extend the baiting period only if circumstances other than bait shyness appear to have adversely affected bait acceptance on one or more days. Shorten baiting period if animals other than yellow-bellied marmots, woodchucks, or black-tailed jackrabbits are taking baits.

DIRECTIONS FOR USE, (continued)

FLOATING RAFTS AND WATERWAY BORDERS (to control Muskrats and Nutria)

USE RESTRICTIONS: Baits prepared from this product may be used to control muskrats (*Ondatra zibethicus*) and nutria (*Myocaster coypus*) on floating rafts and waterway borders, where these animals damage levees, irrigation ditchbanks, or water impoundments, or where they might feed on rice, soybean, milo or corn crops, or damage turf. This product also may be used to control nutria (but not muskrats) in wetlands, marshes, or similar areas set aside for conservation of native plants and animals.

Do not apply baits made from this product directly where crops are growing. Do not apply baits where nontarget species might be adversely affected. Check with State and local authorities to determine where there are any legal restrictions against poisoning muskrats or nutria.

Use baits made from carrots, sweet potatoes, apples, or pears. Prepare baits as indicated under **MIXING DIRECTIONS**.

PREBAITING: Before preparing or using toxic baits, prebait the target populations by applying untreated carrots, sweet potatoes, apples or pears, prepared in the manner indicated under **MIXING DIRECTIONS**.

When preparing to control muskrats or nutria on large waterways (large streams, canals, ponds, lakes and bayous), place 10 pounds of prebait on large (4 feet by 4 feet) rafts spaced 1/4 to 1/2 mile apart. On small waterways (small streams, irrigation ditches), place 4 pieces of prebait on rafts that are at least 6 inches by 6 inches on the top surface. Anchor each raft appropriately for size and the body of water in which it is placed, considering such factors as size, depth, winds, current, tides, and potential for flooding. Locate rafts near burrows and runways used by muskrats or nutria or near places where these animals are causing damage.

Prebait may also be placed on the ground beside burrows or runways used by muskrats or nutria. Use 2 to 5 pieces of prebait at each ground location.

Check each raft or ground placement daily to assess the amount of prebait that has been taken.

APPLICATION DIRECTIONS: When at least half of the prebait has been taken by the target species, replace prebait with toxic bait of the same vegetable or fruit carrier.

DIRECTIONS FOR USE, (continued)

For Large Rafts: If all or nearly all of the prebait has been taken, apply 10 pounds of toxic bait to the raft. If 1/3 to 1/2 of the prebait has been taken, remove the remainder of prebait and apply 5 pounds of toxic bait. If most of the toxic bait is eaten on the first night, replenish bait to the amount originally used. Regardless of the level of initial consumption, keep at least 5 pounds of toxic bait present for a 72-hour period.

For Small Rafts and Ground Placements: Once prebaits have been eaten, apply 4 pieces of toxic bait per raft or ground placement. Maintain this level of baiting for 72-hour period.

For All Placements: Collect and properly dispose of uneaten bait and observed dead rodents after completion of the control program, or at least every 3 days if program extends beyond 72 hours. Terminate the program if nontarget animals are consuming baits. Extend the program beyond 72 hours only if there is evidence that target animals still are eating toxic bait or if factors other than bait shyness (e.g., weather) appear to have limited bait acceptance on one or more days.

Do not treat the same area with zinc phosphide bait at intervals of less than 30 days.

NON-CROP AREAS (to control Kangaroo Rats)

USE RESTRICTIONS: Baits prepared from this product may be used to control Ord's kangaroo rat (*Dipodomys ordii*), Merriam's kangaroo rat (*D. merriami*), and banner-tailed kangaroo rats (*D. spectabilis*) in noncrop areas. Bait must be applied by hand. Do not broadcast bait. Do not apply bait by air. Do not apply bait to bare ground unless artificial cover is added.

Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

APPLICATION DIRECTIONS: Place one tablespoon (about 12 grams) of bait in two locations on opposite sides of mounds, concentrating on the feeding runs near entrances to burrows.

DIRECTIONS FOR USE, (continued)

CROPLANDS, RANGELAND, PASTURES, REFORESTATION AREAS, NON-CROP AREAS

(to control Pocket Gophers)

USE RESTRICTIONS: Baits prepared from this product may be used to control pocket gophers (*Geomys spp.*, *Thomomys spp.*, or *Pappogeomys spp.*) in rangelands, croplands, noncrop areas (reforestation areas, parks, lawns, turf, airport grass). Bait must be applied directly into pocket gophers' underground burrow systems or into artificial burrow created by burrow builders. Do not broadcast bait or apply above ground in any way.

Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

APPLICATION DIRECTIONS:

Hand Baiting: Remove burrow plug from the flat side of fan-shaped mound or locate the main burrow by probing with a metal rod or wooden stick. Begin probing 6 to 12 inches from the flat side of the mound and continue until the main underground runway is located. Soil resistance against the probe will drop sharply when the tunnel is entered. Through the opening to the tunnel created by probing or removing the plug, insert one teaspoonful of bait. Bait also may be applied with a manually-operated bait-dispensing probe. Close the tunnel with a rock, sod, or other object that will exclude light. Take care that no soil falls in and covers the bait. One pound of bait will treat 1 to 8 acres, depending upon pocket gopher density. Pick up and bury all spilled bait according to **DISPOSAL DIRECTIONS**.

Burrow Builder: Follow manufacturer's instructions for the type of equipment used. Set equipment so that it creates tunnels at the same depth as the gophers' main underground runways. Apply 1 to 2 pounds of bait per acre into tunnels created by the burrow builder. Space artificial tunnels 20 to 30 feet apart. Apply bait by this method only when soil condition is proper to ensure formation of good artificial burrow. Pick up and bury all spilled bait according to **DISPOSAL DIRECTIONS**.

DIRECTIONS FOR USE, (continued)

SUGARCANE FIELDS

(to control Norway, Roof, Polynesian, Rice, Florida Water
and Cotton Rats)

USE RESTRICTIONS: Baits prepared from this product may be used to control Polynesian rats (*Rattus exulans*), Norway rats, roof rats, rice rats (*Oryzomys palustris*), Florida water rats (*Neofiber alleni*) and cotton rats (*Sigmodon hispidus*) in sugarcane fields. The bait application rate must not exceed 5 pounds of treated 2% zinc phosphide bait (0.1 pounds of active ingredient) per acre. At least 30 days must elapse between consecutive treatments. Do not make more than 4 applications to the same field in any 36-month period. Do not make more than 2 applications to the same field in any month period. Do not apply bait within 30 days of harvest. Do not graze animals in treated areas.

Use baits made from wheat, oats, barley, rye, or milo. Prepare baits as indicated under **MIXING DIRECTIONS**.

PREBAITING: Prebaiting with untreated grain of the type to be used for toxic baiting is recommended to enhance acceptance of toxic bait by rats. Begin applying prebait 1 to 2 weeks before the toxic bait is to be used. Prebait should be applied at rates appropriate for toxic baiting.

BAITING: Broadcast toxic bait by aircraft, ground-driven equipment, or by rubber-gloved hand at a rate of 5 pounds of 2% zinc phosphide bait (0.1 pounds of active ingredient) per acre. The total rate of application to any one area may not exceed 20 pounds of bait for an entire 36-month period.

DIRECTIONS FOR USE, (continued)

MACADAMIA NUT ORCHARDS (Hawaii only)

(to control Roof and Norway Rats)

USE RESTRICTIONS: Baits prepared from this product may be used to control roof rats and Norway rats in Macadamia nut orchards in Hawaii only. Bait may be applied only in bait stations, by placement directly into burrows, by hand broadcasting, or by ground-driven mechanical broadcasting equipment. Do not apply bait by air. Do not broadcast bait over growing crop when bait may lodge in trees. Do not apply bait more than 4 times to any orchard area in any one year. Except for burrow treatment baiting (see below) do not apply bait within 30 days of any harvesting round. Bait must be removed from trees prior to harvest. Do not graze animals in treated areas. Use baits made from wheat, oats, barley, rye, or millet. Prepare baits as indicated under **MIXING DIRECTIONS**.

APPLICATION DIRECTIONS:

Bait Stations: Baits may be placed in bait stations located in trees or on the ground at the bases of trees. Place 1 to 2 teaspoons (4 to 8 grams) of bait in each bait station. Uneaten bait must be removed from trees prior to shaker harvest and from ground prior to mechanized harvest.

Burrow Treatment: Place 1 to 2 teaspoons (4 to 8 grams) of bait in each burrow entrance. No preharvest interval is required if nuts are not retrieved from the ground. If nuts are to be retrieved from the ground, the 30-day preharvest interval applies.

Broadcast Baiting: Broadcast bait by ground-driven equipment or by rubber-gloved hand at a rate of no more than 5 pounds of 2% zinc phosphide bait (0.1 pounds of active ingredient) per acre per treatment. The total rate of application to any one area may not exceed 20 pounds of 2% zinc phosphide bait (0.4 pounds of active ingredient) per acre for an entire crop cycle.

DIRECTIONS FOR USE, (continued)

ARTICHOKES

(California only)

(to control California Voles)

USE RESTRICTIONS: Baits made from this product may be used to control California voles (*Microtus californicus*) in artichokes. Do not broadcast on growing crop. The bait application rate must not exceed 225 pounds of treated 2% zinc phosphide bait (0.8 pounds of active ingredient) per acre. Do not exceed one application to the same field in one 12-month period.

Use baits made from artichoke bracts. Prepare baits as indicated under **MIXING DIRECTIONS** below.

PREBAITING: Prebaiting in artichokes is not required.

MIXING DIRECTIONS (Artichokes only): Artichoke bracts should be used whole. To prepare toxic bait, mix bait with vegetable oil at a rate of 1 ounce of oil per 10 pounds of artichoke bracts. Add 7 1/2 level tablespoons (1.4 ounces) of ZINC PHOSPHIDE CONCENTRATE to mixture and blend thoroughly by manual stirring or by use of a mechanical tumbling type mixer. Continue mixing until bait, oil, and concentrate are evenly mixed.

APPLICATION DIRECTIONS:

Hand Baiting: Scatter about one ounce (4-5 bracts) of bait per artichoke plant on bare ground in vole-infested areas. Apply bait near vole burrow openings or runways. **Do not overbait.** Be careful to apply bait so that it does not directly contact any parts of the artichoke plant.

STORAGE AND DISPOSAL

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

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

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spilled bait, or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

ENDANGERED SPECIES ATTACHMENT

The endangered species considerations listed in this attachment must be regarded as part of the label for **Zinc Phosphide Concentrate for Rodent and Lagomorph Control**.

Do not use this product outdoors within 0.5 miles of the following threatened animals:

Northern Idaho ground squirrel (*Spermophilus brunneus brunneus*) in Adams and Valley counties, Idaho.

Do not use this product outdoors within 100 yards of the occupied habitats of the following endangered animals:

Alabama beach mouse (*Peromyscus polionotus ammobates*) in Baldwin County, Alabama;

Anastasia Island beach mouse (*P. p. phasma*) on Anastasia Island, St. John's County, Florida;

Choctawhatchee beach mouse (*P. p. alloparys*) in Wilton and Bay counties, Florida;

Perido Key beach mouse (*P. p. trissyllepsis*) in Baldwin County, Alabama, and in Escambia County, Florida;

Southeastern beach mouse (*P. p. niveaventris*) in Volusia and St. Lucie counties, Florida;

Key Largo cotton mouse (*P. gossypinus allapaticola*) on Key Largo, Monroe County, Florida;

Key Largo woodrat (*Neotoma floridana smalli*) on Key Largo, Monroe County, Florida;

Amargosa vole (*Microtus californicus scirpensis*) in Inyo County, California;

Florida salt marsh vole (*M. pennsylvanicus dukecampbelli*) in the Waccasassa bay area in Levy County, Florida;

Hualapai Mexican vole (*M. mexicanus hualpaiensis*) in Mohave County, Arizona;

Fresno kangaroo rat (*Dipodomys nitratoides exilis*) in Fresno and Merced counties, California;

Giant kangaroo rat (*D. ingens*) in Merced, Fresno, Kings, Tulare, Kern, San Luis Obispo, and Santa Barbara counties, California;

Morro Bay kangaroo rat (*D. heermanni morroensis*) in San Luis Obispo County, California;

Stephen's kangaroo rat (*D. stephensi*) in Riverside, San Diego, and San Bernardino Counties, California;

Tipton kangaroo rat (*D. nitratoides nitratoides*) in Kings, Tulare, Kern, and Fresno counties;

Salt marsh harvest mouse (*Reithrodontomys raviventris*) in Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, San Mateo, and San Francisco counties, California;

Silver rice rat (*Oryzomys palustris natator*, aka *O. argentatus*) on Big Torch, Johnston, Middle Torch, Raccoon, Saddlebunch, Little Pine, Summerland, and Water keys in Monroe County, Florida;

Point Arena mountain beaver (*Aplodontia rufa nigra*) in Mercedino County, California;

Delmarva Peninsula fox squirrel (*Sciurus niger cinereus*) on the Delmarva Peninsula in Delaware, Maryland, and Virginia;

Lower Keys rabbit (*Sylvilagus palustris hefneri*) on Sugarloaf, Weeles, Annette, Hopkins, Geiger, Boca Chica, and Big Pine keys in Monroe County, Florida.

Do not use this product outdoors within 100 yards of occupied habitat of the following organisms unless the bait is used in tamper-resistant bait stations capable of excluding the endangered animal in question:

Attwater's greater prairie chicken (*Tympanuchus cupido attwateri*) in Austin, Fort Bend, Galveston, and Refugio counties, Texas;

Nene Hawaiian goose, (*Nesochen sandvicensis*) on the islands of Hawaii, Kauai, and Maui; and

Mariana crow (*Corvus kubaryi*) on Guam.

Do not use this product outdoors within the occupied habitats of the following endangered animals:

Carolina northern flying squirrel (*Glaucomys sabrinus coloratus*) in North Carolina and Tennessee; and

Utah prairie dog (*Cynomys parvidens*) in Garfield, Iron, Kane, Wayne, Sevier, and Piute counties, Utah.

Do not use this product outdoors within the occupied habitats of the following organisms unless the bait is used in tamper-resistant bait stations capable of excluding the endangered animal in question:

Louisiana black bear (*Ursus americanus luteolus*) in Louisiana and Mississippi;

San Joaquin kit fox (*Vulpes macrotis mutica*) in Alameda, Contra Costa, Fresno, Kern, Kings, Merced, Monterey, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Santa Clara, Stanislaus, or Tulare counties, California;

Alala (Hawaiian Crow, *Corvus hawaiiensis*) on the island of Hawaii;

Mississippi sandhill crane (*Grus anadensis pulla*) in Jackson County, Mississippi;

Puerto Rican plain pigeon (*Columba inornata wetmore*) in Puerto Rico;

Yellow-shouldered Blackbird (*Agelaius xanthomus*) in Puerto Rico; and

San Clemente sage sparrow (*Amphispiza belli clementae*) on San Clemente Island, California.

Do not use this product in habitats occupied or occasionally visited by whooping cranes (*Grus americana*) during the period from 30 days before the expected arrival of cranes to 30 days after the time of their usual departure, unless the bait is applied in tamper-resistant bait stations that appear to be capable of excluding cranes.

Do not use this product within 7 kilometers (4.34 miles) of any prairie dog town to limit risks to the black-footed ferret (*Mustela nigripes*) from exposure to Zinc Phosphide or destruction of its prey base, unless the colony is an isolated black-tailed prairie dog town less than 80 acres in size or an isolated white-tailed or Gunnison prairie dog town less than 200 acres in size, or unless the town has been appropriately surveyed, using methods acceptable to the U.S. Fish and Wildlife Service, and found by the FWS not to be a suitable site for ferret reintroductions.

To protect the Hawaiian coot (*Fulica americana alai*) and the Hawaiian duck (*Anas wyvilliana*), do not use this product within 100 yards of any water or wetland on or adjacent to any golf course or turf farm on the islands of Kauai, Oahu, or Maui, unless the bait is in a tamper-resistant bait station believed to be capable of excluding these birds.

Unless the local U.S. Fish and Wildlife Service office has determined that there are no gray wolves (*Canis lupus*) or grizzly bears (*Ursus arctos horribilis*) in the general vicinity of bait applications in Arizona, Colorado, Idaho, Michigan, Minnesota, Montana, New Mexico, Oregon, Wisconsin, and Wyoming, do not apply this product outdoors within occupied habitat of these species unless the bait is applied in tamper-resistant bait stations capable of excluding these species.