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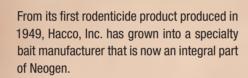




944 Nandino Blvd. • Lexington, KY 40511 **800/621-8829** (USA/Canada) • 859/254-1221 inform@neogen.com • www.neogen.com Rats and mice destroy an estimated \$30 billion in food products per year, spread bacteria and leave associated filth in food and feed supplies. Reducing stress on food animals and damage to crops by effectively reducing the adverse effects of rodents and the dangerous pathogens they carry has a significant impact on the subsequent safety and quality of food and animal health.







Hacco and its team of professionals are recognized leaders in rodenticide formulation development, manufacturing and packaging.

Hacco has an extensive facility with flexible production capabilities. Formulation techniques and packaging expertise, learned through years of innovative problem solving, have resulted in significant technological improvements incorporated into these products.

Quality Assurance and Quality Control laboratories are also located onsite at our Randolph, Wisc. facilities. The research capabilities of Hacco include product evaluation, product development and laboratory testing. Formulations—including grain baits, extruded bars, pellets and paraffin blocks—are thoroughly researched and tested for target species acceptability and efficacy. Testing is performed by a highly skilled and experienced technical staff with state-of-the-art equipment.

Turn the page to view useful tips and our extensive line of rodenticide products ideal for the agricultural industry.









# Neogen's 4-Step Rodent Control Program

Control rats and mice in and around your facilities

## Step One: PREVENT

Clean, clear and implement preventative measures.

- a. Eliminate debris and other harborage for rodents in and around the facility.
- Remove easily accessible rodent food sources, including spilled feed. Eliminating food sources increases the effectiveness of rodent baits.
- c. Clear/mow around the facility (~3 feet) to discourage rodents from entering.

## Step Two: IDENTIFY

Find the location and severity of the problem.

- a. Examinations done at dawn or dusk work best.
- b. Are there fresh droppings, burrows, tracks or gnaw marks? Be sure to inspect ceilings, other elevated runways and facility grounds.
- c. Do you have rats, mice, or both?

## Step Three: **EXECUTE**

Implement baiting strategy according to target rodents and locations.

- a. Outside: Along the perimeter, place bait stations 15–30 feet apart for rats and 8–12 feet for mice. Use Havoc®-XT Bloks, Havoc Chunks, CyKill™ Blocks, or Di-Kill® Blocks and replace eaten bait at least weekly to start.
  - Determine areas where rats and mice will most likely find and consume the bait. Generally, these areas are along walls, by gnawed openings, beside burrows, in corners and concealed places, between floors and walls, or in locations where rats or their signs have been seen. Protect bait from rain and snow. Remove as much alternative food as possible.
- b. Inside: Use bait stations. Chunk or block baits can be nailed or zip-stripped directly to overhead locations. Place packs should be set in attics, ceilings, or other hard to access areas that rodents are using. Contact Neogen for more specific baiting suggestions.

## Did you know?

 Rats and mice are known to carry and transmit more than 35 diseases that are threats to humans and domestic livestock.

• At least 20 percent of the world's food is eaten or contaminated by rats and mice each year.

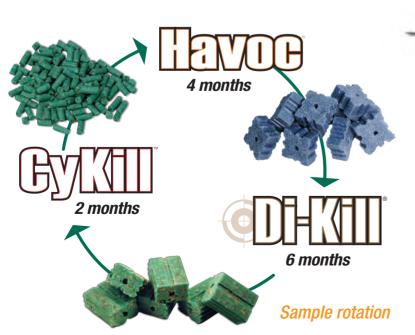


## Step Four: MONITOR

Monitor the effectiveness of your program with record keeping.

- a. Frequency of baiting should change with increased activity.
- b. A sample audit form is available on page 30 of this guide.

This information is intended for use only as a guide in providing general information regarding the directions, warning and cautions associated with the use of rodenticide products. As with any pesticide, always follow the label instructions on the product packaging before using.





#### BETTER BAIT. BETTER RESULTS.

Neogen's **Rotational Baiting Program**breaks the cycle of anticoagulant
resistance. Your Neogen representative
can help you get started with a
customized plan.

800/621-8829 (USA/Canada)

# Ramik

## **Diphacinone Bait Products**



Ramik comes in various forms and package sizes suitable for any use, from rat infestations encountered in livestock and poultry production facilities to the occasional mouse in the house. See the size offerings and usage guides on the following pages to choose a Ramik product that's right for your particular needs.

- First generation anticoagulant: diphacinone
- Available in nugget, bar and mini bar configurations
- Fish flavored for high palatability
- Food-quality grain mix
- Can be used indoors and outdoors
- Especially suited for wet or damp areas



#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	100.000%
OTHER INGREDIENTS:	99.995%
Diphacinone	0.005%





Ramik Green is available in rat and mouse ½" large bait nuggets (left) or  $\%_6$ " small bait nuggets (right).





Ramik Mini Bars (left) are perfect for making multiple bait placements by hanging on wire, pegging or securing in bait station boxes. Ramik Bars (right) can be used whole, or easily broken into individual pieces.

#### **Product** Intended Use **Application** Item **Packaging** Ramik Green Target Rodents: Norway Rats. Roof Rats and This product is for control of only Norway 116300 20 lb bucket rats, roof rats and house mice in and around House Mice (3/16" nuggets) homes, industrial, commercial, agricultural, Rats: Place 4 to 16 ounces of bait per placeand public buildings, and similar man-made 116303 50 lb box ment. Space placements at intervals of 15 to structures. May also be used in transport (3/16" nuggets) 30 feet in infested areas. Maintain an unintervehicles (ships, trains, aircraft) and in and rupted supply of fresh bait for at least 10 days around related port or terminal buildings. Do 116336 4 lb resealable or until there no longer are signs of new feeding not apply further than 50 feet from buildings. by rats. pouch Do not use in edible product areas of food or (1/2" nuggets) Mice: Apply 1/4 to 1/2 ounces (1-2 level tablefeed processing plants or other areas where spoons) of bait at each placement location. food or feed is commercially prepared or 116339 15 x 4 lb Space placements at 8- to 12-foot intervals. processed. Do not contaminate food/feed or resealable Larger placements (up to 2 ounces) may be food/feed handling equipment or place near pouches - display needed at points of very high house mouse acor inside ventilation duct openings. Do not (1/2" nuggets) tivity. Maintain an uninterrupted supply of fresh broadcast bait. When used in USDA-inspect-116336 bait for at least 15 days or until there are no ed facilities, this product must be applied in longer signs of new feeding by house mice. tamper-resistant bait stations. Target Rodents: Norway Rats, Roof Rats and **Ramik Green Bait** For control of Norway rats, roof rats and 116305 60 x 4 oz bait house mice in and around homes, industrial House Mice packs (15 lb) **Packs** and agricultural buildings, and similar manbucket Rats: Place 1 to 4 bait packs per placement. (1/2" nuggets) made structures. This product is especially Space placements at intervals of 15 to 30 feet suited for use in wet or damp areas, includ-116341 16 x 4 oz bait in infested areas. Maintain an uninterrupted ing river banks, gullies, irrigation ditches, packs (4 lb) supply of fresh bait for at least 10 days or until railroad tracks, loading areas, under grathere no longer are signs of new feeding by rats. resealable pouch naries, along fences, garbage dumps and Mice: Open package and apply 1/4 to 1/2 ounces landfills. (1-2 level tablespoons) of bait at each placement location. Space placements at 8- to 12-foot intervals. Larger placements (up to 2 ounces) may be needed at points of very high house mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there are no longer signs of new feeding by house mice. 116305 Target Rodents: Norway Rats, Roof Rats and This product is for control of only Norway Ramik Green 116316 45 x 1.5 oz bait House Mice rats, roof rats and house mice in and around packs (4 lb) **Mini Bait Packs**





116316

Rats: Place 2 to 8 bait packs per placement. Space placements at intervals of 15 to 30 feet in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until there no longer are signs of new feeding by rats.

Mice: Open package and apply 1/4 to 1/2 ounces (1-2 level tablespoons) of bait at each placement location. Space placepacks at 8- to 12-foot intervals. Larger placements (up to 2 ounces) may be needed at points of very high house mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there are no longer signs of new feeding by house mice.

homes, industrial, commercial, agricultural, and public buildings, and similar man-made structures. May also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. Do not apply further than 50 feet from buildings. Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. Do not contaminate food/feed or food/feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait. When used in USDA-inspected facilities, this product must be applied in tamper-resistant bait stations.

bucket 116319 300 x 1.5 oz bait packs (28 lb) bulk tub

continued >

116334

Ramik Bars (16 oz bars)

Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 4 to 16 one-ounce Ramik® Bars per placement. Space placements at intervals of 15 to 30 feet in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until there no longer are signs of new feeding by rats.

Mice: Break Ramik® Bar into discrete 1-ounce pieces. Apply one 1-ounce piece per placement. Space placements at 8- to 12-foot intervals. Placement of two 1-ounce pieces may be needed at points of very high house mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there no longer are signs of new feeding by house mice.

This product is for control of only Norway rats, roof rats and house mice in and around homes, industrial, commercial, agricultural, and public buildings, and similar man-made structures. May also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. Do not apply further than 50 feet from buildings. Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. Do not contaminate food/feed or food/feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait. When used in USDAinspected facilities, this product must be applied in tamper-resistant bait stations.

4 x 16 oz bars, (4 lb) box

Ramik Mini Bars (1 oz bars)



Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 4 to 16 one-ounce Ramik® Mini Bars per placement. Space placements at intervals of 15 to 30 feet in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until there no longer are signs of new feeding by rats.

Mice: Place one 1-ounce Ramik® Mini Bar at each placement location. Space placements at 8- to 12-foot intervals. Placement of two 1-ounce pieces each may be needed at points of very high house mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there no longer are signs of new feeding by house mice.

This product is for control of only Norway rats, roof rats and house mice in and around homes, industrial, commercial, agricultural, and public buildings, and similar man-made structures. May also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. Do not apply further than 50 feet from buildings. Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. Do not contaminate food/feed or food/feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait. When used in USDA-inspected facilities, this product must be applied in tamper-resistant bait stations.

116331 64 x 1 oz pouch (4 lb), 4 per case

116332 64 x 1 oz pail, 4 per case

116345 9 lb pail, 4 per case

116350 320 x 1 oz bucket

640 x 1 oz tub

116326

000700

Ramik Mouser (pre-baited disposable station)

THIS BAIT STATION IS NOT TAMPER RESISTANT.



**Target Rodents:** House Mice

Disposable station is baited with a 1 oz Ramik Mini Bar. No touch, no mess! Two openings for mice to readily enter and feed on bait inside.

Place a single unit at each placement location. Space placements at 8- to 12-foot intervals. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there are no longer signs of new feeding by house mice. DO NOT USE THIS PRODUCT OUTDOORS OR IN AREAS ACCESSIBLE TO CHILDREN, PETS, DOMESTIC ANIMALS, OR NON-TARGET WILDLIFE.

This product may only be used to control house mice (*Mus musculus*) in homes, and in industrial, commercial, or agricultural buildings. Do not use this product outdoors. Do not place this product in areas where there is a possibility of contaminating food, animal feed, water or surfaces that come in direct contact with food, feed, or water. Do not place station near or inside ventilation equipment or ventilation duct openings.

000600 Ramik Mouser Station, 2-pack box, 12 per case

> Ramik Mouser Station, 3-pack bag, 12 per case

## **Brodifacoum Bait Products**

# Havoc



Brodifacoum is the strongest anticoagulant rodenticide available\*. Havoc products combine brodifacoum with a special mixture of highly attractive bait ingredients along with patented food processing techniques. The result is a superior, single-feed rodenticide with a unique bait delivery system.

Havoc is available in pellets, chunks or blocks. The multiple dimension designs of both the Havoc Chunks and the Havoc-XT Blok include a hole through the center of each block allowing for secure bait placement.

See the size offerings and usage guides on the following pages to choose a Havoc product that's right for your particular needs.

- Second generation anticoagulant—the strongest available\*
- May kill both rats and mice in a single night's feeding
- Available in chunk, pellet and block configurations
- Contains Bitrex®, a child and non-target deterrent
- Havoc-XT blocks are weather-resistant and low-profile

#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	100 000%
OTHER INGREDIENTS:	99.995%
Brodifacoum	0.005%







Havoc-XT's (above left) unique shape makes it easy for rats and mice to gnaw on. Havoc Chunks (above right) can withstand tough weather conditions and have a center hole in each piece for secure placement. Havoc pellets (left) are available in bulk or in convenient place packs.

<sup>\*</sup>based on comparable LD<sub>50</sub> values of currently registered rodenticide active ingredients.

116372

## Havoc Place Packs and Bulk Pellets



116372

#### **Place Packs**

**Application** 

Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 2–8 place packs (usually at intervals of 15–30 ft.) per placement. Maintain an uninterrupted supply of fresh bait for 10 days or until signs of rat activity cease. Two place packs contain enough bait (100 g) to kill 1–3 rats.

**Mice:** Open pack and apply ½–½ oz. of bait per placement. Space placements at intervals of 8–12 ft. Larger placements (up to 2 oz.) may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.

#### **Bulk Pellets**

Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 4–16 oz. of bait (usually at intervals of 15–30 ft.) per placement. Maintain an uninterrupted supply of fresh bait for 10 days or until signs of rat activity cease.

**Mice:** Apply 1/4–1/2 oz. of bait per placement. Space placements at intervals of 8–12 ft. Larger placements (up to 2 oz.) may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.

For control of Norway rats, roof rats and house mice in and around homes, industrial, commercial, agricultural and public buildings, and similar man-made structures. Do not apply further than 50 feet from buildings. Do not place 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 broadcast bait.

pack, 8.8 lb pail, 4 per case

Bulk pellets,
50 lb box

# **Havoc-XT Blok** (20 g blocks)



116362

**Target Rodents:** Norway Rats, Roof Rats and House Mice

Rats: Apply 4 to 22 (20 g [0.7 oz.]) Havoc®-XT Bloks (usually at intervals of 15–30 ft.) per placement. Maintain an uninterrupted supply of fresh bait for 10 days or until signs of rat activity cease.

**Mice:** Apply 1 bait block per placement. Space placements at intervals of 8–12 feet. Two blocks may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.

For control of Norway rats, roof rats and house mice in and around homes, industrial, commercial, agricultural and public buildings, and similar man-made structures. Do not apply further than 50 feet from buildings. Do not place 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 broadcast bait.

116362 8 lb resealable pouch

116361 10 lb pail

20 lb pail

116369

# **Havoc Chunks** (1 oz chunks)



Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 4 to 16 Havoc® Chunks per placement. Space placements at intervals of 15–30 feet in infested areas. Maintain an uninterrupted supply of fresh bait for 10 days or until fresh signs of rat activity no longer are apparent.

Mice: Use one Havoc® Chunk per placement. Space placements at intervals of 8 to 12 feet. Two chunks may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.

This product may be used to control Norway rats, roof rats, and house mice in and around agricultural buildings. Do not apply further than 50 feet from agricultural buildings. Do not use in homes or other human residences. Do not use in edible product areas of feed processing plants or other areas where feed is commercially prepared or processed. Do not contaminate feed or feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait.

116377 320 x 1 oz bucket

Always read container label for a complete list of uses and instructions.

# **CyKill**



Bromethalin was developed to combat a worldwide perceived problem of rodent resistance to warfarin-like anticoagulant rodenticides. Bromethalin is not an anticoagulant but a highly potent neurotoxin rodenticide that provides a lethal dose to rodents in a single feeding. Bromethalin attacks the central nervous system; rodents usually consume a lethal dose within a single night's feeding, with first dead rodents appearing within 2 days. CyKill is available in bait blocks or place packs. CyKill is best used as part of Neogen's Rotational Baiting Program.

- Palatable bait is preferred over most feeds, food sources and competitive baits
- Rodents stop feeding after consuming a lethal dose; this results in a consumption of 80% less bait than with traditional baits
- No known resistance, neurotoxicant formulation
- Reduced risk of secondary toxicity

## **Rotational Baiting Program**

Use Neogen's Rotational Baiting Program and break the cycle of rodent anticoagulant resistance. At right is a sample rotation.

Contact your Neogen representative for more information.

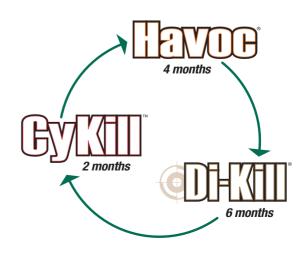
#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	100.000%
OTHER INGREDIENTS:	99.99%
Bromethalin [63333-35-7]	0.01%





CyKill pellets (left) come in ready-to-use place packs. No need to open pouches; rodents will eat through the package. CyKill Blocks (right) are highly palatable and have a center hole for easy placement.



# **CyKill Place Packs** (pellets)



112835

Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Use 2 to 8 place packs per placement. Make placements at intervals of approximately 15 to 30 feet at appropriate locations in infested area. Adjust the amount of bait provided according to the level of rat feeding expected at each placement location.

**House Mice:** Use 1 place pack per typical placement. Space placements at intervals of 8 to 12 feet in appropriate locations in infested areas. Up to 2 place packs may be placed at points of extremely high house mouse activity.

This product may only be used to control Norway rats, roof rats, and house mice in and around homes, and in industrial, commercial, and public buildings. This product may also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. This product may be used in alleys. Do not use in sewers.

Do not place bait in areas where there is a possibility of contaminating food or surfaces that come in direct contact with food. Do not broadcast bait. Wear waterproof gloves if you handle bait or dead animals.

112835 0.75 oz Place Packs, 100 packs per pail

## **CyKill Blocks** (0.75 oz blocks)



112830

**Target Rodents:** Norway Rats, Roof Rats and House Mice

Rats: Use 2 to 8 blocks per placement. Make placements at intervals of approximately 15 to 30 feet at appropriate locations in infested area. Adjust the amount of bait provided according to the level of rat feeding expected at each placement location.

**House Mice:** Use 1 block per typical placement. Space placements at intervals of 8 to 12 feet in approximate locations in infested areas. Up to 2 blocks may be placed at points of extremely high house mouse activity.

This product may only be used to control Norway rats, roof rats, and house mice in the sites indicated below for Urban Areas and Non-Urban Areas. Do not place bait in areas where there is a possibility of contaminating food or surfaces that come in direct contact with food. Do not broadcast bait. Wear waterproof gloves if you handle bait or dead animals.

**Urban Areas:** This product may be used in and around (within 15 feet of) homes, and in industrial, commercial, and public buildings. This product may also be used in transport vehicles (ships, trains, aircraft) and in and around (within 15 feet of) related port or terminal buildings. This product may be used in alleys.

**Non-Urban Areas:** This product may only be used inside of homes and agricultural buildings.

112830 0.75 oz Blocks 9 lb pail, 192 count

112825 0.75 oz Blocks 4 lb pouch, 86 count

## Did you know?

Rodent feces and urine are a source of gastrointestinal diseases such as Salmonellosis or *E. coli* infections.







Difenacoum is the latest in rodent control. This hard-hitting second generation anticoagulant can knock down rodents in 4–5 days. Difenacoum has outstanding control of mice. It takes more than 2 times as much bromadiolone to kill mice than with Di-Kill. Available in blocks, place packs and bulk pellet configurations, Di-Kill is best used as part of Neogen's Rotational Baiting Program.

- Hard-hitting second generation anticoagulant
- Palatable formulation made from food-grade ingredients
- Lower primary toxicity—less toxic than other bait to non-target animals\*
- Kills warfarin-resistant rodents

#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	100.000%
OTHER INGREDIENTS:	99.995%
Difenacoum	0.005%



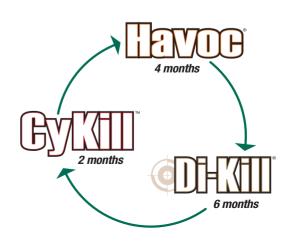


Di-Kill pellets (left) come in convenient place packs. No need to open the pouches—rodents eat through the packaging. Di-Kill Blocks (right) are made with gnawing edges and an attractive formulation to encourage palatability.

## **Rotational Baiting Program**

Use Neogen's Rotational Baiting Program and break the cycle of rodent anticoagulant resistance. At right is a sample rotation.

Contact your Neogen representative for more information.



<sup>\*</sup>based on comparable LD50 values of currently registered rodenticide active ingredients.

#### **Di-Kill Place Packs** and Bulk Pellets



373420

#### **Place Packs**

Target Rodents: Norway Rats. Roof Rats and House Mice

Rats: Apply 4 to 16 ounces of bait per placement, using bait stations as required under "IMPORTANT". Space placements at intervals of 15 to 30 feet in infested areas pertaining to structures. Maintain an uninterrupted supply of fresh bait for at least 10 days or until fresh signs of feeding by rats cease to appear.

Mice: Apply 1/4 to 1/2 ounce of bait per placement, using bait stations as required under "IMPORTANT". Space placements at intervals of 8 to 12 feet in infested areas pertaining to structures. Larger quantities (up to 2 ounces) may be made in areas of extremely high mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until fresh signs of feeding by mice cease to appear.

#### **Bulk Pellets**

Rats: Apply 4 to 16 ounces of bait per placement, using bait stations as required under "IMPORTANT". Space placements at intervals of 15 to 30 feet in infested areas pertaining to structures. Maintain an uninterrupted supply of fresh bait for at least 10 days or until fresh signs of feeding by rats cease to appear.

Mice: Apply 1/4 to 1/2 ounce of bait per placement, using bait stations as required under "IMPORTANT". Space placements at intervals of 8 to 12 feet in infested areas pertaining to structures. Larger quantities (up to 2 ounces) may be made in areas of extremely high mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until fresh signs of feeding by mice cease to appear. This product may be used to control Norway rats, roof rats, and house mice in and around agricultural buildings only. Do not use in homes or other human residences. Do not apply further than 50 feet from agricultural buildings. Do not use this product in sewers. Do not place bait near to or inside of ventilation duct openings. Do not contaminate water, food, feed, food or feed handling equipment. milk or meat handling equipment, or any area where there is a possibility of contaminating food, feed, milk, or meat, or surfaces that come into contact with food. feed, milk, or meat. Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. All outdoor placements of this product must be made in bait stations. Tamper-resistant bait stations must be used for outdoor and indoor placements of this product if children, pets, non-target mammals, or birds may access bait. All placements of this product in USDAinspected facilities must be in tamperresistant bait stations. Do not broadcast bait. Wear water-resistant gloves when handling

373421 43 a Place Packs, 100 per pail 373420

Bulk Pellets. 10 lb pail

### **Di-Kill Blocks** (0.75 oz blocks)



373425

Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 3 to 10 blocks per placement, using bait stations as required under "IMPORTANT". Space placements at intervals of 15 to 30 feet in infested areas pertaining to structures. For treating burrows, place 1 to 4 blocks deep into each active burrow. Check treated burrows each morning and evening to make sure that baits have not been pushed out of burrows. Maintain an uninterrupted supply of fresh bait for at least 10 days or until fresh signs of feeding by rats cease to appear.

Mice: Apply 1 block per placement, using bait stations as required under "IMPORTANT". Space placements at intervals of 8 to 12 feet in infested areas pertaining to structures. Larger placements, up to 2 blocks, may be used at points of extremely high mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until fresh signs of feeding by mice cease to appear.

This product may be used to control Norway rats, roof rats, and house mice in and around agricultural buildings only. Do not use in homes or other human residences. Do not apply further than 50 feet from agricultural buildings. Do not use this product in sewers. Do not place bait near to or inside of ventilation duct openings. Do not contaminate water, food, feed, food or feed handling equipment, milk or meat handling equipment, or any area where there is a possibility of contaminating food, feed, milk, or meat, or surfaces that come into contact with food, feed, milk, or meat. Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. All outdoor placements of this product must be made in bait stations. Tamper-resistant bait stations must be used for outdoor and indoor placements of this product if children, pets, non-target mammals, or birds may access bait. All placements of this product in USDAinspected facilities must be in tamperresistant bait stations. Wear water-resistant gloves when handling bait.

373425 Bulk Blocks. 9 lb pail

373426 Bulk Blocks, 18 lb pail

Always read container label for a complete list of uses and instructions.

## Warfarin Bait Products

# KOI BX





Micro-encapsulated warfarin, a hydroxycoumarin anticoagulant rodenticide, is contained in all Rodex bait formulations. In early research trials, rat acceptance of micro-encapsulated warfarin baits was 3 to 10 times greater than uncoated warfarin baits. This anticoagulant is a multi-feed chronic rodenticide, and is considered the lowest hazard to non-target animals of any anticoagulant rodenticide\*. Rodex bait formulations are available in both pellets and blocks.

\*based on comparable LD50 values of currently registered rodenticide active ingredients.

- Highly effective against both rats and mice
- **Excellent products to use when risk to non**target animals is of utmost importance
- Blocks are moisture-resistant, making them especially suitable for placing in moist or damp areas

#### **ACTIVE INGREDIENT:**

Warfarin

3-(a-Acetonylbenzyl-4-hydroxycoumarin) ......0.025%

**OTHER INGREDIENTS:**......99.975%

TOTAL INGREDIENTS: ......100.000%





Rodex pellets (left) contain micro-encapsulated warfarin to reduce bait shyness. Pellets are now available in a resealable pouch to maintain bait freshness. Rodex Blox-1 (right) also contain microencapsulated warfarin. One pound blocks easily break into smaller pieces. Packaged in a convenient grab and go 4 pound box.



Roof rats and Norway rats are the two most common rats to invade homes and buildings. They can enter a structure through openings as small as a quarter.

116348

#### **Rodex Pelleted Bait-1**



**Target Rodents:** Norway Rats, Roof Rats and House Mice

Rats: Apply 3 to 16 ounces of bait per placement. Space placements at intervals of 15 to 30 feet in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until there no longer are signs of new feeding by rats.

Mice: Apply ¼ to ½ ounces of bait at each placement location. Space placements at 8- to 12-foot intervals. Larger placements (up to 2 ounces) may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there are no longer signs of new feeding by house mice.

For control of only Norway rats, roof rats and house mice in and around commercial, homes. industrial. agricultural, and public buildings, and similar man-made structures. May also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. Do not apply further than 50 feet from **buildings.** Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. Do not contaminate food/feed or food/feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait. When used in USDA-inspected facilities, this product must be applied in tamperresistant bait stations.

4 lb resealable pouch

Rodex Blox-1 (16 oz bars)



**Target Rodents:** Norway Rats, Roof Rats and House Mice

Each Rodex Blox-1 consists of a 16-ounce block scored so that it can be broken into eight 1 oz. pieces.

Rats: Apply 3 to 16 ounces of this product per placement. Space placements at intervals of 15 to 30 feet in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until there no longer are signs of new feeding by rats.

Mice: Apply ¼ to ½ ounces of bait at each placement location. Space placements at 8- to 12-foot intervals. Larger placements (up to 2 ounces) may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until there no longer are signs of new feeding by house mice.

For control of only Norway rats, roof rats and house mice in and around industrial, homes. commercial. agricultural, and public buildings, and similar man-made structures. May also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. Do not apply further than 50 feet from **buildings.** Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. Do not contaminate food/feed or food/feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait. When used in USDA-inspected facilities, this product must be applied in tamperresistant bait stations.

116349 4 lb box, 4 x 16 oz bars



# Zinc Phosphide Pellets 50 lb size RESTRICTED USE PESTICIDE

Zinc phosphide, a powerful acute rodenticide, is contained in all Prozap rodent bait formulations. The fast-acting baits are formulated with a special blend of processed grains that are especially appealing to rodents.

#### RESTRICTED USE PESTICIDE

Due to hazard to non-target species. For retail sale to and for use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

- Controls voles, rats and mice, prairie dogs, pocket gophers, kangaroo rats, and Columbian and Richardson's ground squirrels
- Prozap pellets may be used in field applications
- May also be used on no-till corn, cucurbits, Christmas tree nurseries, potato crops and sugar beets
- Pellets utilize a special hardening agent
- Contains an attractive protein concentration of 19–24%
- Contains less dust than the competitor formulations
- Can withstand 1.5" rainfall before melting
- Easily filters through vegetation
- Has exclusive label uses
- Size and density of the 1/8" Prozap pellet aids in application accuracy

Item No.	Packaging	
0283390	50 lb bag. 40 bags per pallet	

#### **ACTIVE INGREDIENT:**

100.00%
98.00%
2.00%



Use Prozap pellets for spot treatments in and around buildings, orchards and groves, vineyards, rangeland and non-crop areas such as lawns, ornamentals, golf courses, parks and nurseries.

### Did you know?

Voles are often called meadow or field mice, but their stocky build and smaller eyes distinguish them from true mice.



Refer to the application and usage guides on the following pages.

50 lb size • RESTRICTED USE PESTICIDE

Application	Species Controlled	Use Restrictions	Broadcast Baiting and Restrictions	Applicable States
Alfalfa	Vole complex	Applications must occur shortly after cutting of the hay and prior to the new growth attaining a length of 2 inches. Forage from treated areas must not be harvested until it reaches maturity. Do not apply within 30 days of harvest.	Yes; by air or ground. Apply at a rate of up to 10 lbs. per acre. A second application may be made after 10 days. A maximum of 20 lbs. per acre may be applied per year.	Use in ID, OR, WA only
Barley	Vole complex	Do not apply post harvest or pre-plant. Do not apply within 50 days of harvest.	Yes; by air or ground. Apply at a rate of up to 6 lbs. per acre. Two applications may be made at a minimum interval of 25 days. A max of 12 lbs. per acre may be applied per year. All applications must be made prior to the boot stage.	Use in ID, OR, WA only
Dry Beans	Prairie voles, meadow voles, house mice, deer mice, white- footed mice, thirteen- lined ground squirrels, banner tailed kangaroo rats, Ord's kangaroo rats and Merriam's kangaroo rats	Do not treat any area more than once per growing season. Do not apply within 30 days of harvest.	Yes; by air or ground. Apply at a rate of 6 lbs. per acre. Apply only once per growing season.	Use in ID, OR, WA only
Bushberries and Caneberries	Prairie voles, meadow voles, pine voles	Only apply in the dormant season (after final harvest and not later than the beginning of leaf emergence in the spring). Do not apply when ground is snow covered. Minimum preharvest interval is 70 days.	Yes; by cyclone seeder or by gloved hand. When applying by hand, throw tablespoon amounts into heavy cover along bushes, rock outcrops, and fence lines. Make up to 2 applications at a minimum interval of 21 days at the rate of 6–10 lbs. per acre per application.	No state restrictions
Christmas Tree, Ornamental, Non-Bearing Fruit Tree Plantations and Nursery Stock	Prairie voles, meadow voles, pine voles	None	Yes; by cyclone seeder or by gloved hand. When broadcasting, concentrate treatments in areas with the heaviest vegetation cover. Do not broadcast bait on bare ground. Apply at a rate of 6–10 lbs. per acre. Hand Baiting: near the base of the infested stock, place teaspoonful quantities of pellets in 2–4 locations, either on surface trails or at the mouths of holes leading to underground burrows. Do not allow pellets to be exposed on bare ground. Do not disturb the runway system. Bait at a rate of 2–3 lbs. per acre.	No state restrictions
Cucurbits, Reduced Tillage and No-Till Corn Crop	Prairie voles, meadow voles, house mice, deer mice, white- footed mice, thirteen- lined ground squirrels, Ord's kangaroo rats, banner tailed kanga- roo rats, Merriam's kangaroo rats and cotton rats	Only use equipment designed for infurrow delivery and properly adjusted to avoid crushing pellets into pieces too small to be effective. Make 1 application at planting, or pre-planting, at a rate of 4–6 lbs. per acre.	No broadcast baiting.	No state restrictions

Application	Species Controlled	Use Restrictions	Broadcast Baiting and Restrictions	Applicable States
Grape Vineyards	Meadow voles, prairie voles, pine voles, white-footed mice and meadow jumping mice	Do not broadcast bait pellets over growing crops when the pellets may lodge on the plant. Do not apply to bare ground.	Yes; by cyclone seeder or by gloved hand. Broadcast pellets evenly on the ground between the rows by cyclone seeder or by hand. Apply pellets at a rate of 6–10 lbs. per acre.	No state restrictions
Macadamia Nut Orchards and Adjacent Non-Crop Areas	Roof rats	Bait may be placed in bait stations on the ground or in stations in nut orchard trees. Place 1–2 teaspoon of bait in stations at the base of each tree and in each station in trees. Orchards may be treated up to 30 days prior to a harvesting round. May also place 1–2 teaspoon of bait in each burrow in the orchard—no pre-harvest interval is required provided nuts aren't retrieved from burrows.	Yes; by cyclone seeder or hand. Broadcast pellets evenly on the ground between the rows by cyclone seeder or by hand. Apply pellets at a rate of 5 lbs. per acre. Not to exceed four applications per year.	No state restrictions
Orchards and Groves	Prairie voles, meadow voles, pine voles	Apply during the dormant season, after harvest while the orchard or grove is in a non-bearing phase. Don't apply to bare ground. <b>Spot baiting:</b> Place 1 teaspoon of pellets in surface trails or at the mouths of holes leading to burrow systems. 2–4 bait spots should be made near the base of each infested tree. Use 2–3 lbs. per acre. <b>Bait station:</b> Place 2.5 oz under at least 2 established stations per tree. Stations should be established 2–3 months prior to the baiting period by placing 15"x15" pieces of asphalt shingles, fiberboard trays, wood or metal at the tree drip line.	Yes; by air, cyclone seeder, or by gloved hand. Broadcast pellets evenly on the ground between the rows by cyclone seeder or by hand. Apply pellets at a rate of 6–10 lbs. per acre.	No state restrictions
Potatoes	Vole complex	Do not apply post harvest or pre-plant. Do not apply this product to potatoes within 30 days of harvest.	Yes; by air or ground. Apply at a rate of up to 10 lbs. per acre, or 2 applications at the rate of up to 5 lbs. per acre. Maximum application rate is 10 lbs. per acre per year.	Use in ID, OR, WA only
Rangeland	Prairie dogs: black-tailed, white- tailed and Gunnison's in Western United States. Ground squirrels: Columbian and Richardson's	Prairie Dogs: Prebait for best acceptance. After all or most of the prebait has been eaten, apply pellets to only areas where prebait was consumed. Apply pellets by hand as a 6" bait spot on the edge of each mound. Apply at the rate of 1 teaspoon per bait spot during late summer or fall (July—December). Do not apply more than once during this period.  Ground Squirrels: Apply pellets by hand as a 6" bait spot on edge of each mound	No broadcast baiting.	Prairie dogs: AZ, CO, KS, MT, NE, NM, ND, OK, SD, TX, UT and WY. Ground squirrels: No state restrictions
		or in adjacent feeding area. Apply at the rate of 1 teaspoon per bait spot.		
Rangeland and Non-Crop Areas	Ord's kangaroo rat, banner-tailed kanga- roo rat and Merriam's kangaroo rat	Place 1 tablespoon of pellets at 2 locations on opposite sides of mounds. Attempt to place pellets in feeding runs near the entrance to burrows.	No broadcast baiting.	No state restrictions

continued >

Application	Species Controlled	Use Restrictions	Broadcast Baiting and Restrictions	Applicable States
Sugar Beets	Vole complex	Do not apply bait post harvest or pre- plant. Do not apply within 30 days of harvest.	Yes; by air or ground. Apply at a rate of up to 10 lbs. per acre at planting. A second application may be made at this rate. Max application rate per year is 20 lbs.	Use in ID, OR, WA only
Sugarcane	Polynesian, Norway, rice, Florida water, cotton and Roof rats	Prebait for best acceptance. Do not apply within 30 days of harvest. Do not apply to adjacent noncrop areas. Total number of applications must not exceed 4 per crop period, and the total amount shall not exceed 20 lbs. per acre.	Yes; by air or ground. Apply 5 lbs. of pellets per acre per treatment.	No state restrictions
Timothy, Timothy/ Alfalfa for Hay and Timothy for Seed	Vole complex	Do not apply to actively growing timothy and timothy/alfalfa mixtures. Do not apply within 60 days of harvest. A minimum of 158 days must pass between an application and any livestock foraging activity. Pellets applied shall not exceed 20 lbs. per acre.	Yes; by ground equipment or gloved hand. Use at a rate of up to 10 lbs. per acre during crop dormancy. A max of 20 lbs. per acre may be applied annually.	Use in ID, OR, WA only
Wheat	Vole complex	Do not apply bait post harvest or pre- plant. Do not apply to wheat within 50 days of harvest.	Yes; by air or ground. Apply at a rate of up to 6 lbs. per acre. A second application may be made within 25 days. The max application rate per year is 12 lbs.	Use in ID, OR, WA only
Alfalfa, Lawns, Golf Courses and Other Non- Crop Areas	Plains pocket gophers, Southeastern pocket gophers, yellow-faced pocket gophers and <i>Thomomys</i> spp.	Hand Baiting: Drop 1 teaspoon of bait into the main runway at each baited point. Cover the opening with sod to exclude light. Take care not to cover the bait with soil. Make 2–5 bait placements per burrow system, depending on mound density. Burrow Builder: Apply at a rate of 2–3 lbs. per acre.	No broadcast baiting.	No state restrictions
Lawn and Non-crop Areas	Meadow voles, prairie voles, pine voles, thirteen-lined ground squirrels, California ground squirrels, Columbian ground squirrels and Richardson's ground squirrels	Prebait to increase acceptance. Apply 1 teaspoon of pellets around each active burrow or runway. Allow pellets to fall through grass to ground surface but don't apply to bare ground. Do not place pellets in piles. Do not apply on roads, over water or to where plants are grown for food or feed.	No broadcast baiting.	No state restrictions
Non-Crop Rights-of-Way	California ground squirrels	Prebait to increase acceptance. Use on noncrop rights-of-way next to canal and ditch banks and other noncrop borders during late spring and summer. Do not apply on roads, near residential areas, over water, or where plants are grown for food or feed.	Yes; by hand or ground. Broadcast pellets in a 10–15 ft. swath along rights-of-way using hand or ground-driven dispensing devices. Don't exceed 6 lbs. per acre. Don't treat any area more than once per year. When applying next to canals, apply only to the canal right-of-way between the base of the levee and adjacent properties. Do not treat the canal and levee.	No state restrictions
In and Around Buildings	Norway rats, roof rats and house mice	Rats: Apply 1–2 teaspoons of bait per placement. Maintain an uninterrupted supply of fresh bait for at least 10 days.	No broadcast baiting.	No state restrictions
		Mice: Apply 1 teaspoon of bait at 8–12 foot intervals. Maintain an uninterrupted supply of fresh bait for at least 15 days.  Rats and Mice: Do not treat the same		
		area with product at less than 30 day intervals.		



# Zinc Phosphide Rodent Pellets AG 12 lb size NON-RESTRICTED USE PESTICIDE

Prozap Zinc Phosphide Rodent Pellets AG provide rapid and economical control of large infestations of mice or rats in and around livestock and poultry buildings. Gophers can be effectively controlled with direct burrow application.

- Fast acting; works within hours
- So effective that 1–3 pellets is fatal to small rodents
- Pellets utilize a special hardening agent
- Contains an attractive protein concentration of 19–24%
- Contains less dust than the competitor formulations
- Can withstand 1.5" rainfall before melting
- Easily filters through vegetation

#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	100.00%
OTHER INGREDIENTS:	98.00%
Zinc Phosphide	2.00%



Use Prozap pellets for spot treatments in and around buildings, orchards and groves, vineyards, rangeland and non-crop areas such as lawns, ornamentals, golf courses, parks and nurseries.

#### Item No. Packaging

114600

12 lb bucket, 4 per case

#### **Target Rodents**

#### **Applications**

#### **Pocket Gophers**

For use against pocket gophers in lawns, golf courses, and other noncrop areas. Do not apply in gardens and areas where food or feed may be contaminated. Only apply the bait underground. Collect and bury all dead animals found above the ground. This product is to be used in manual applications only. Burrowing pocket gophers (*Thomomys* spp. and *Geomys* spp.) throw out low, fan-shaped mounds on either side of their underground tunnel. These lateral tunnels coming to the surface are on the flat side of the fan and are plugged with soil. With a long-handled spoon, carefully remove the plug. Insert a teaspoon of this product as far down as possible. Reclose the opening being careful not to cover the bait with soil.

#### **Use Restrictions**

For use in and around homes, industrial and agricultural buildings, and similar man-made structures. Do not place bait in areas where there is a possibility of contaminating food or surfaces that come in direct contact with food. Do not broadcast bait.

#### Norway Rats Roof Rats House Mice

**Rats:** Apply 1 to 2 teaspoon amounts of this product per placement. Maintain an uninterrupted supply of fresh bait until all signs of feeding have stopped.

**Mice:** Apply 1 teaspoon of bait at 8 to 12 foot intervals. Maintain an uninterrupted supply of fresh bait until all signs of feeding have stopped.

For control of only Norway rats, roof rats and house mice in and around homes, industrial, commercial, agricultural, and public buildings, and similar man-made structures. This product may only be used inside and within 50 feet of buildings or inside of transport vehicles (ships, trains, or aircraft). Do not apply further than 50 feet from buildings. Do not use in edible product areas of food or feed processing plants or other areas where food or feed is commercially prepared or processed. Do not contaminate food/feed or food/feed handling equipment or place near or inside ventilation duct openings. Do not broadcast bait. When used in USDA-inspected facilities, this product must be applied in tamper-resistant bait stations.



# Zinc Phosphide Pellets Mole and Gopher 1 lb size NON-RESTRICTED USE PESTICIDE

- Kills moles and gophers right where they live direct baiting to underground burrows, tunnels and mounds
- Fast acting; works within hours
- Attractive protein concentration of 19–24%
- Measuring scoop included for easy application
- Intended for residential use only Not for sale in CA, HI, IN, NC and NH

Item N	lo.	<b>Packaging</b>
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112845 1 lb jar

#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:10	0.00%
OTHER INGREDIENTS: 9	8.00%
Zinc Phosphide	2.00%



Prozap Zinc Phosphide Pellets are perfect for the homeowner. Intended for the control of moles and gophers by direct baiting to their underground burrows.

#### **Target Rodents**

#### **Applications**

#### Moles Gophers

- Bait must be applied directly into mole and pocket gopher burrow systems.
- Any person who retrieves carcasses or unused bait following application of this product must wear waterproof gloves.
- This product may only be used to control moles and pocket gophers in manual below ground applications.
- Do not apply in gardens where food or feed may become contaminated.
- Do not apply this product by use of an artificial burrow builder.

#### **Use Restrictions**

**Specific Directions for Moles:** The presence of moles may be indicated by a network of surface ridges in the turf, by a series of conical mounds of earth pushed up from deep burrows, or by damage to flower bulbs.

**Surface Ridges:** Prior to treatment, determine which burrows are active according to one of the following two methods: Either press down a small section of the tunnel or remove a 1 inch section of the tunnel's roof. Mark these sections and recheck in 24 hours. The burrow is considered active if the flattened runway has been raised up or if the roof has been repaired. Only treat active burrows. Carefully, with a long-handled spoon, punch a hole in the top of active tunnels, drop a teaspoon amount of this product and carefully close the hole with sod or stone. Do not collapse the runway again or allow loose soil to cover the bait. After a few days check to see if the burrows are still active according to one of the two methods described above. If so, repeat treatment.

**Conical Mounds:** With a long-handled spoon carefully remove the center plug from each conical mound. Drop a teaspoon amount of this product into the underground tunnel. Close the opening with a rock or sod. Do not allow loose dirt to cover bait. If mole activity persists after one treatment, a second treatment may be made. If mole activity persists after two treatments, abandon use of this product and seek another method for controlling moles.

**Flower Bulb Protection (Fall Planted):** Pack about one-quarter inch of soil against each flower bulb. Place several pellets at sides of and around the flower bulb. Then cover.

**Specific Directions for Pocket Gophers:** Burrowing pocket gophers (*Thomomys* spp. and *Geomys* spp.) throw out low, fan-shaped mounds on either side of their underground tunnel. These lateral tunnels coming to the surface are on the flat side of the fan and are plugged with soil. With a long-handled spoon carefully remove the plug. Insert a teaspoon of this product as far down as possible. Reclose opening being careful not to cover bait with soil.

**FOLLOW-UP:** Wearing waterproof gloves, collect and dispose of all dead, exposed animals and dispose of leftover bait in accordance with disposal instructions. Use detergent and hot water to wash spoons. Do not use spoon for mixing, holding or transferring food or feed. If reinfestation does occur, repeat treatment.








### Did you know?

If left unchecked, gophers can cause extensive damage to household utilities as well as plants. The pocket gopher has been known to chew through irrigation lines and utility cables as well as weaken a home's foundation. The plant damage they may cause can include stem girdling and clipping, root pruning, and even root exposure. Gophers may also smother some plant life when creating mounds.





# Zinc Phosphide Oat Bait 50 lb size RESTRICTED USE PESTICIDE

Zinc phosphide, a powerful acute rodenticide, is contained in all Prozap rodent bait formulations. The fast-acting baits are formulated with a special blend of processed grains that are especially appealing to rodents.

#### RESTRICTED USE PESTICIDE

Due to hazard to non-target species. For retail sale to and for use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

- Contains an attractive protein concentration of 14-22%
- Bait uses food-grade, steam-rolled oat groats for improved palatability
- De-hulled groats will not germinate
- Kiln dried process eliminates germination and kills bacteria and mold

### Did you know?

Ground squirrels live communally in burrows, which may reach 4 feet or more below ground. These extensive burrows can undermine building structures and roads. The ground squirrel's feeding activities damage many fruit and nut trees, crops and ornamental plants.

Item No.	Packaging
0002980	50 lb bag, 40 bags per palle

#### ACTIVE INGREDIENT:

TOTAL INGREDIENTS:	100.00%
OTHER INGREDIENTS:	98.00%
Zinc Phosphide	2.00%



Use Prozap Zinc Phosphide Oat Bait for spot treatments in and around buildings, orchards and groves, vineyards, rangeland and non-crop areas. For broadcasting by ground spreader or aircraft in non-bearing orchards, sugarcane fields and specified noncrop areas. For broadcasting by ground spreader in vineyards.



guides on the following pages. Always read container label for a complete list of uses and instructions.

Application	Species Controlled	Use Restrictions	Baiting	Broadcast Baiting and Restrictions
Alfalfa and Timothy Hayfields	Meadow voles	Apply during the dormant season only. Bait must be placed in secured, tamper-resistant bait stations. Place bait stations in areas where meadow voles are foraging.	Place at least 4 oz. of bait per bait station. Maintain an uninterrupted supply of bait until stations are removed from fields. Remove stations before plant growth resumes in spring.	No broadcast baiting.
Alfalfa, Lawns, Golf Courses and Other Non-Crop	Plains, Southeastern, yellow-faced and <i>Thomomys</i>	For subterranean applications only.	Hand Baiting: Locate underground runways. Drop 1 teaspoon of bait into the main runway. Cover the opening with sod, a rock or soil to exclude light. Do not cover the bait with soil. Make 2–5 placements per burrow system.	No broadcast baiting.
Areas	spp., pocket gophers		Burrow Builder: Drop teaspoonful quantity of bait at 4–5 ft. intervals in the artificial burrow made by the machine. Space rows at 20–30 ft. intervals. Apply at a rate of 2–3 lbs. per acre.	
Grape Vineyards	Meadow, prairie and pine voles, white- footed mice and meadow jumping mice	Do not broadcast bait over growing crops when the bait may lodge on the plant. Do not apply to bare ground.	Apply at a rate of 6–10 lbs. per acre. Do not apply by air.	Yes; by cyclone seeder or hand.
Macadamia Nut Orchards	Roof rats	Spot treatment: Uneaten bait must be removed from trees prior to shaker harvest or from ground prior to mechanized harvest. Orchards may be treated up to 30 days prior to harvesting. Burrow treatment: No preharvest interval is required provided nuts are not retrieved from burrows.	Spot Treatment: Bait must be placed in bait stations on the ground or in trees. Place 1–2 teaspoons of bait in bait stations.  Burrow Treatment: Place 1–2 teaspoons of bait in each burrow.  Broadcast Baiting: Broadcast at the rate of 5 lbs. per acre. Number of applications shall not exceed 4 per year. The total amount of bait applied should not exceed 20 lbs. per acre per year.	Yes; by ground or gloved hand.
Nursery Stock, Ornamental and Non- Bearing Fruit Trees	Meadow, prairie and pine voles		When broadcasting, concentrate treatment in areas with the heaviest vegetation cover. Do not broadcast bait on bare ground. Apply at a rate of 6–10 lbs. per acre. Hand baiting: near the base of the infested stock, place teaspoon quantities of bait in 2–4 locations, either on surface trails or at the mouths of holes leading to underground burrows. Do not allow bait to be exposed on bare ground. Do not disturb the runway system. Bait at a rate of 2–3 lbs. per acre.	Yes; by cyclone seeder or gloved hand.
Orchards and Groves	Meadow, Prairie and Pine voles	Apply during the dormant season only. Apply bait after harvest while the orchard or grove is in a non-bearing phase. Do not apply to bare ground.	Spot or Trail Baiting: Place 1 teaspoon of bait in surface trails or at the mouths of holes leading to underground burrow systems. 2–4 bait placements should be made near the base of each infested tree. Use 2–3 lbs. per acre.  Bait Station Placement: Establish 2 stations per tree or 320 stations per acre, 2–3 months prior to the baiting period by placing rectangular pieces (15" x 15") of shingles, fiberboard trays, wood or metal at the dripline. Place 1–2 level tablespoons under each station. Apply at the rate of 6–10 lbs. per acre.  Trailbuilder: Drop teaspoon quantity of bait at 4–5 ft. intervals in the artificial trail just inside the dripline on both sides of the trees. Apply at the rate of 2–3 lbs. per acre.  Broadcast Baiting: By air, cyclone seeder, or by gloved hand	Yes; by aircraft, cyclone seeder or by gloved hand.
			When applying by hand, throw tablespoon amounts into heavy cover along tree rows, rock outcrops and fence lines. Apply at the rate of 6–10 lbs. per acre.	continued

Application	Species Controlled	Use Restrictions	Baiting	Broadcast Baiting and Restrictions
Rangeland	Prairie dogs, black-tailed, white-tailed and Gunnison's on rangeland where nontarget species will not be endangered in AZ, CO, KS, MT, NE, NM, ND, OK, SD, TX, UT and WY.	Before baiting for prairie dogs, contact the nearest U.S. Fish and Wildlife Service office to determine whether a black-footed ferret survey is required.	Prebait with 1 teaspoon of untreated oat groats per mound 1–2 days prior to using the oat bait. After most or all of prebait has been eaten, apply to areas where prebait was consumed. Apply by hand as a 6 inch spot on edge of each mound or in adjacent feeding area. Apply 1 teaspoon per spot, during late summer or fall (July–December). Don't apply more than once during this period.	No broadcast baiting.
	Columbian and Richardson's ground squirrels		Prebait with 1 teaspoon of untreated oat groats per mound 1–2 days prior to using the oat bait. Apply bait by hand as a 6 inch bait spot on edge of mound or adjacent feeding area. Apply at the rate of 1 teaspoon per spot.	No broadcast baiting.
Rangeland and Non-Crop Areas	Ord's kangaroo rat, banner- tailed kangaroo rat and Merriam's kangaroo rat		Place 1 tablespoon of bait at 2 locations on opposite sides of mounds. Attempt to place bait in feeding runs near the entrance to burrows.	No broadcast baiting.
Sugarcane	Polynesian, Norway, rice, Florida water, cotton and roof rats	Do not apply within 30 days of harvest or adjacent to noncrop areas. Total number of applications must not exceed 4 per crop period, and the total amount applied shall not exceed 20 lbs. per acre.	To increase acceptance, broadcast 3 lbs. of untreated oat groats per acre 1–2 weeks prior to using the toxic bait. Apply 5 lbs. of toxic bait per acre per treatment.	Yes; by air, ground or gloved hand.
Non-crop Rights-of-Way	California ground squirrels and meadow, prairie and pine voles	Prebait to increase acceptance. Use on non-crop rights-of-way next to canal and ditch banks and other noncrop borders during late spring and summer. Do not apply on roads, near residential areas, over water, or where plants are grown for food or feed.	Broadcast bait in 10–15 ft. swath along rights-of-way using hand or ground-driven dispensing devices. Don't exceed 6 lbs. per acre. Don't treat any area more than once per year. When applying next to canals, apply only to the canal right-of-way between the base of the levee and adjacent properties. Do not treat the canal and levee.	Yes; by ground or gloved hand.
Hand Baiting in Non-Crop Areas: Lawns, Ornamentals, Golf Courses, Parks and Nurseries	Meadow, prairie and pine voles, thirteen-lined, California, Columbian or Richardson's ground squirrels	Prebait to increase acceptance. Do not apply on roads, near residential areas, over water, or where plants are grown for food or feed.	Prebait with 1 teaspoon of untreated oat groats around each active burrow 2–3 days prior to using toxic bait. then apply 1 teaspoon toxic bait around each active burrow or runway. Allow bait to fall through grass to ground surface, but do not apply to bare ground. Do not place bait in piles.	No broadcast baiting.
In and Around Buildings	Norway rats, roof rats and house mice	Apply bait in locations out of reach of children, pets, domestic animals and nontarget wild-life, or put in tamper-resistant bait stations. For use in and around homes, industrial, and agricultural buildings and similar man-made structures. Do not contaminate food/feed or food/feed handling equipment. Do not place near or inside ventilation duct openings. Do not use in edible product areas or food/feed processing plants, resturants, or other areas where food or feed is commercially prepared or processed.	Rats: Apply 1–2 teaspoon amounts of bait per placement. Maintain an uninterrupted supply of fresh bait for at least 10 days.  Mice: Apply 1 teaspoon of bait at 8–12 ft. intervals. Maintain an uninterrupted supply of fresh bait for at least 15 days.  Rats and Mice: Do not treat the same area with product at less than 30 day intervals.	No broadcast baiting.



# Zinc Phosphide Oat Bait 1 lb size NON-RESTRICTED USE PESTICIDE

Zinc phosphide, a powerful acute rodenticide, is contained in all Prozap rodent bait formulations. The fast-acting baits are formulated with a special blend of processed grains that are especially appealing to rodents.

- Controls moles and gophers
- Easy to apply and fast acting—perfect for the homeowner
- Contains an attractive protein concentration of 14–22%
- Bait uses food-grade, steam-rolled oat groats for improved palatability
- De-hulled groats will not germinate
- Intended for residential use only Not for sale in CA, HI, IN, NC and NH

#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	100.00%
OTHER INGREDIENTS:	98.00%
Zinc Phosphide	2.00%



Prozap Oat Bait 1 lb size is perfect for the homeowner. Bait is easy to apply and requires only minimal amounts to be effective against moles and gophers.

Item No.	Packagin
112855	1 lb jar

#### **Target Rodents**

#### **Applications**

#### Moles Gophers

- Bait must be applied directly into mole and pocket gopher burrow systems.
- Any person who retrieves carcasses or unused bait following application of this product must wear waterproof gloves.
- This product may only be used to control moles and pocket gophers in manual below ground applications.
- Do not apply in gardens where food or feed may become contaminated.
- Do not apply this product by use of an artificial burrow builder.

#### **Use Restrictions**

**Specific Directions for Moles:** The presence of moles may be indicated by a network of surface ridges in the turf, by a series of conical mounds of earth pushed up from deep burrows, or by damage to flower bulbs.

**Surface Ridges:** Prior to treatment, determine which burrows are active according to one of the following two methods: Either press down a small section of the tunnel or remove a 1 inch section of the tunnel's roof. Mark these sections and recheck in 24 hours. The burrow is considered active if the flattened runway has been raised up or if the roof has been repaired. Only treat active burrows. Carefully, with a long-handled spoon, punch a hole in the top of active tunnels, drop a teaspoon amount of this product and carefully close the hole with sod or stone. Do not collapse the runway again or allow loose soil to cover the bait. After a few days check to see if the burrows are still active according to one of the two methods described above. If so, repeat treatment.

**Conical Mounds:** With a long-handled spoon carefully remove the center plug from each conical mound. Drop a teaspoon amount of this product into the underground tunnel. Close the opening with a rock or sod. Do not allow loose dirt to cover bait. If mole activity persists after one treatment, a second treatment may be made. If mole activity persists after two treatments, abandon use of this product and seek another method for controlling moles.

**Flower Bulb Protection (Fall Planted):** Pack about one-quarter inch of soil against each flower bulb. Place several pellets at sides of and around the flower bulb. Then cover.

**Specific Directions for Pocket Gophers:** Burrowing pocket gophers (*Thomomys* spp. and *Geomys* spp.) throw out low, fan-shaped mounds on either side of their underground tunnel. These lateral tunnels coming to the surface are on the flat side of the fan and are plugged with soil. With a long-handled spoon carefully remove the plug. Insert a teaspoon of this product as far down as possible. Reclose opening being careful not to cover bait with soil.

**FOLLOW-UP:** Wearing waterproof gloves, collect and dispose of all dead, exposed animals and dispose of leftover bait in accordance with disposal instructions. Use detergent and hot water to wash spoons. Do not use spoon for mixing, holding or transferring food or feed.



# Ramik brown

# Diphacinone Bait 50 lb size RESTRICTED USE PESTICIDE Weather-Resistant

Use Ramik Brown for the control of pine and meadow voles in apple, pear, peach and nectarine orchards and in nut orchards and Christmas tree farms, commercial nurseries and tree plantations. Also controls commensal rats and mice in terrestrial nonfood/nonfeed areas.

- Weather-resistant
- Diphacinone bait effective against rats, mice and voles
- Proven orchard product
- Extruded formula spreads evenly and accurately
- Apple flavored ¾6" nuggets

Item No.	Packaging	
0033370	50 lb box	

### **Applications: for listed states ONLY**

#### Fruit Tree Orchards (Bearing and Non-Bearing)

Aerial application is only permitted in the following states where aerial is listed next to the state name.

Connecticut	Georgia	Idaho - aerial
Massachuetts	Michigan - aerial	Missouri
Montana - aerial	New Hampshire	North Carolina
Utah - aerial	Ohio - aerial	Vermont - aerial
Oregon - aerial	Virginia - aerial	Pennsylvania - aerial
Washington - aerial	South Carolina	West Virginia - aerial

#### **ACTIVE INGREDIENT:**

TOTAL INGREDIENTS:	.100.000%
OTHER INGREDIENTS:	99.995%
Diphacinone	0.005%



Ramik Brown's %6" apple-flavored nuggets are effective against rats, mice and voles.



#### **Nut Orchards**

ldaho	Montana	0hi
Oregon	Washington	

# **Christmas Tree Farms, Commercial Nurseries** and Tree Plantations

Georgia	Michigan	Missouri
North Carolina	South Carolina	Washington

Also for the control of commensal rats and mice in terrestrial nonfood/ nonfeed areas. There are no state restrictions for commensal rat and mice for such usages.

#### **Application**

Target Rodents: Norway Rats, Roof Rats and House Mice

Rats: Apply 4–6 oz. of bait per placement. Place bait at about 15–30 ft. intervals. Maintain an uninterrupted supply of fresh bait for at least 10 days or until signs of rat activity cease.

**Mice:** Place  $\frac{1}{4} - \frac{1}{2}$  oz. (1–2 level tablespoons) of bait at 8–12 ft. intervals. Larger placements (up to 2 oz.) may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until signs of mouse activity cease.

#### **Use Restrictions**

May only be used in and around (within 15 ft.) of homes, industrial, agricultural, public, port, and terminal buildings and similar man-made structures. May be used in transport vehicles (ships, trains, aircraft) and alleys. May also be used in river banks, irrigation ditches, gullies, railroad tracks, fences and sanitary landfills; however, all of the above placements must be in a tamper-resistant bait station or placed deeply into rat burrows.

Always read container label for a complete list of uses and instructions.

# Rodenticide Information by Active Ingredients

		Trade Name	<b>O</b>		Acul	<b>Toxicity</b> Acute Oral LD <sub>50</sub> (mg/kg)*	*(b)	ı	
Active Ingredient	Neogen	Motomco	Liphatech	Туре	MOUSE (M. musculus)	NORWAY RAT (R. norvegicus)	ROOF RAT (R. rattus)	Info/Dose	Notes
Brodifacoum	Havoc®	Jaguar		Anticoagulant	0.4	0.22	0.65-0.73	2nd generation. Death may occur within 4–5 days after a lethal dose is consumed. Rodent continues to feed after lethal dose has been ingested.	Havoc offers better palatability, higher acceptability. Available in XT-blok and sweet corn-based chunks as well as pellets and place packs. The active has the lowest lethal dose in the market and is 180 times stronger than Warfarin.
Difenacoum	Di-Kill®			Anticoagulant	0.8	1.8–2.6		2nd generation. Death may occur within 4–5 days after a lethal dose is consumed. Rodent continues to feed after lethal dose has been ingested.	First new active introduced in the United States in over 16 years. More than two times as lethal to mice than Bromadiolone.
Bromadiolone		Hawk	Boot Hill	Anticoagulant	1.75	1–1.8	0.38	2nd generation. Death within 5–7 days post-feeding. Rodent continues to feed after lethal dose has been ingested.	Higher lethal dose than Difenacoum and Brodifacoum (it takes more to kill rodents).
Difethialone			Hombre	Anticoagulant	1.29	0.56	0.38	2nd generation. Slow acting death 5–7 days post-feeding. Rodent continues to feed after lethal dose has been ingested.	Not as cost-effective, and has a higher lethal dose than Havoc.
Chlorophacinone			Rozol	Anticoagulant				2nd generation. Slow acting death 5–7 days post-feeding. Rodent continues to feed after lethal dose has been ingested.	Active is very similar to Ramik, but breaks down quickly in sunlight. Pellets are not hotextruded and lack the weatherability and acceptance of Ramik products.
Diphacinone	Ramik®	Tomcat		Anticoagulant	141.0–340.0	2.3–43.0		First generation. Death may occur within 4–5 days after a lethal dose is consumed. Rodent continues to feed after lethal dose has been ingested.	Ramik is fish flavored for higher acceptability. Hot-extruded nuggets are weather-resistant without wax. Food quality grain mix is used.
Warfarin	Rodex™			Anticoagulant		10–20		First generation. Death may occur within 4-5 days after a lethal dose is consumed. Rodent continues to feed after lethal dose has been ingested.	Economical. Rodex contains micro- encapsulated Warfarin to improve palatability and acceptance. The hazard of secondary poisoning to non-target animals is lower when Rodex is used.
Bromethalin	CyKill™	Rampage	Gunslinger	Neurotoxicant	5.3–8.1	2.0–2.5	9.9	Acute toxicant. Death may occur within 1-2 days after a lethal dose is consumed. Rodents stop feeding after lethal dose has been consumed.	Control high infestations quickly. Stop feed action means that rodents stop feeding after a lethal dose has been consumed, resulting in less bait needed. Lower risk of secondary poisoning.
Cholecalciferol		Agrid		Vitamin D	23.7–42.5	43.6–56.0		Acute toxicant. Death within 5 days post-feeding.	Old technology. Lacks palatability and is not economical.
Zinc Phosphide	Prozap®	Eraze	Ridall-Zinc	Systemic Toxicant	32.3–53.3	27.0–40.5	21.0	Acute toxicant. Death may occur within 2 days after a lethal dose is consumed.	Food-grade ingredients are more palatable and have higher acceptability. Available in two pellet sizes and oat bait. Variety of sizes and label claims.

<sup>\*</sup>LD<sub>00</sub> - Median Lethal Dose. A statistically derived single dose that can be expected to cause death in 50% of the test animals when administered by the route indicated (oral, dermal, inhalation). It is expressed as a weight of substance per unit weight of animal, e.g., mg/kg. The rodenticides listed represent the most commonly used in the pest managment industry and sold over-the-counter in the United States. All trade names copyright of their respective owners.

\*Reference: Robert M. Corrigan. \*Rodent Control: A Practical Guide for Pest Management Professionals. GIE Inc., Publishers, September 30, 2001.

# **Bait Stations and Traps**

#### **Rodent Café Bait Station**

- Low-profile design for increased rodent activity
- High-capacity bait chamber built to allow horizontal and vertical bait placement
- Ramped entrance into bait chamber helps prevent any water from entering and affecting bait
- Heavy-duty design using thick-walled plastic designed to withstand being stepped on without damage
- Rotating hinge design provides years of dependable service, unlike most stations that use a hinge permanently attached to the base
- Heavy-duty key and rod packs included
- Use with Ramik Mini Bars, Havoc-XT Chunks,
   Di-Kill Blocks or CyKill Block baits (sold separately)

Item No.	Product	
000560	Rodent Café - case count 6	





## **Multiplex<sup>™</sup> High-Density Bait Station**

- Perfect for use with Havoc-XT Blok bait (sold separately); fit up to eight 20-gram blocks per horizontal rod
- Vertical and hanging block layouts; vertical rods can withstand an inch of water
- Superior strength walls with overlapping cover edges that prevent "finger holds" for high tamper resistance
- Gray color keeps station cooler, resulting in less melted bait
- Can also house two standard mouse snap traps

Item No.	Product
000404	Multiplex Bait Station - case count 6 Minimum order 1 case

#### Tips for controlling rodents with bait stations

- Use enough stations. Ideally, bait stations should be placed every 20-50 feet around the exterior perimeter of livestock buildings, and on both sides of every doorway, or other easy building access points for rodents. For heavy rodent infestations, place stations every 20 feet.
- Keep bait fresh. After initially filling a bait station, check in seven
  days. Replace eaten bait and continue to check once a week for
  three weeks. After three weeks, check stations every 30 days,
  or as needed. Clean the station when necessary to keep the bait
  palatable to rodents.

#### Ramik® Rodent Bait Station

- Lockable and tamper-resistant
- Interior vertical rods for securing bait
- Two openings for rodents
- Use with Ramik Mini Bars, Havoc-XT Chunks, Di-Kill Blocks or CyKill Block baits (sold separately)

Item No.	Product
000500	Ramik Rodent Bait Station - case count 12 Minimum order 1 case



## Ramik® Snap Traps

- Available in two sizes: rat (large) and mouse (small)
- One-touch trap setting is easy to set
- Touch-free rodent disposal
- Fill deep bait well with food or nesting material

Item No.	Product
116221	Ramik Mouse Snap Traps, 2 pack
116231	Ramik Rat Snap Trap, 1 pack

## **Catchmaster® Snap Traps**

A new twist on an old standby. Our heavy duty snap traps now feature expanded triggers to make baiting and setting a snap.

Item No.	Product
602	Mouse Snap Traps, 2 pack, 36 per case
610	Rat Snap Trap, 1 pack, 12 per case

## Ramik® Glue Traps and Glue Boards

- Non-toxic, disposable and ready-to-use
- Traps without poisons, no additional baits needed
- Premium glue



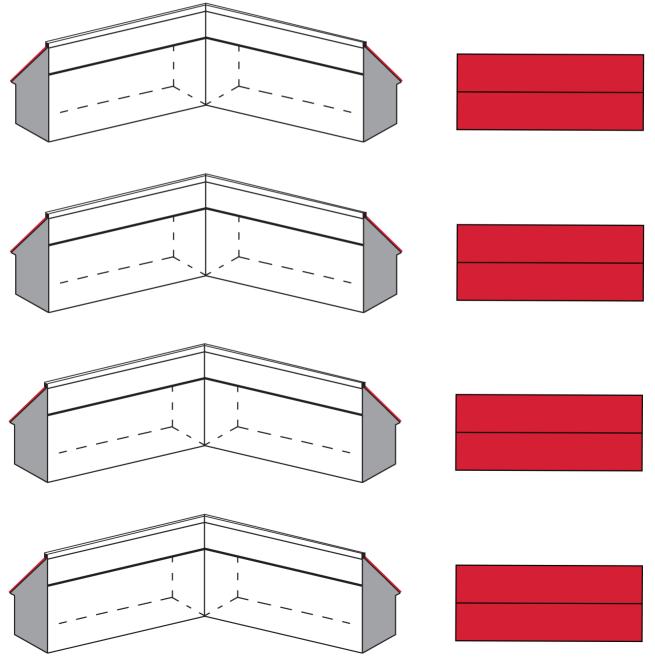
Item No.	Product
116220	Ramik Mouse Glue Traps, 4 pack, 12 per case
116230	Ramik Rat Glue Traps, 2 pack, 12 per case
940	Ramik Mice and Insect Glue Boards, 4 pack, 18 per case





# **Audit Form**

Farm/Facility Name	
Date of Audit	Date of Last Audit
Mark areas of concern on each house with an "x" and denote hou "b" will denote bait station placement.	se number or name.



### **General Observations:**

Rodents Present	Droppings	Rodents Visible	Overall Infestation Level			
Rats (Norway and Roof)	Y or N	Y or N	Low	Intermediate	High	
Mice	Y or N	Y or N	Low	Intermediate	High	

Area	Rodents Present	1 =		t <b>ivity L</b> o = sever	<b>evel</b> e infest	ation	Bait Present	Monitoring Needed
Entrance (Doors/Frames)	Y or N	1	2	3	4	5	Y or N	Y or N
Walkways	Y or N	1	2	3	4	5	Y or N	Y or N
Perimeter (Burrows)	Y or N	1	2	3	4	5	Y or N	Y or N
Attics	Y or N	1	2	3	4	5	Y or N	Y or N
Insulation	Y or N	1	2	3	4	5	Y or N	Y or N
Feed Bins/Slabs	Y or N	1	2	3	4	5	Y or N	Y or N
Storage Room	Y or N	1	2	3	4	5	Y or N	Y or N
Cool Cell Room	Y or N	1	2	3	4	5	Y or N	Y or N
Rafters	Y or N	1	2	3	4	5	Y or N	Y or N
Curtains (Sidewalls)	Y or N	1	2	3	4	5	Y or N	Y or N

Date of next audit:
General comments:
Include recommendations
and house-specific follow up information




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