

Rodenticide Stewardship in Vermont

- ❖ First-generation Anti-coagulants Rodenticides (FGARs)
 - ❖ Warfarin
 - ❖ Diphacinone
 - ❖ Chlorodiphacinone
- Developed as rodenticides before 1970.
- These compounds are more toxic when feeding occurs on several successive days rather than on one day only

Second Generation Anti-coagulants Rodenticides (SGARs)

- ❖ Brodifacoum
 - ❖ Bromodialone
 - ❖ Difenacoum
 - ❖ Difenthialone
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- Developed after 1970
 - Used to control rodents that resistant to first-generation anticoagulants.
 - More likely to kill after a single night feeding.
 - Tend to remain in animal tissues longer than do first-generation ones.

Non- anti-coagulant Rodenticides

- ❖ Bromomethalin
- ❖ Cholcalciferol
- ❖ Zinc Phosphide

Different modes of action

Secondary toxicity varies

Number of 1st gen products registered	47
Number of 2nd gen products registered	69
Number of zinc phosphide products registered	19
Number of cholecalciferol products registered	11
Number of bromomethalin products registered	80

Number of pesticide companies that do pest control

89 Active Companies

Number of persons certified in pest control

272 Active Commercial

9 Active Government

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
READ THIS LABEL: Read this entire label and follow all use directions and use precautions. Use only for sites, pests, and application methods described on this label.

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

1. Store unused product out of reach of children and pets.
2. Apply bait 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 bait stations when they are lifted, units must be secured or otherwise immobilized. Stronger bait stations are needed in areas open to hooved livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container and unused, spoiled, or unconsumed bait as specified on this label.

Bait stations are mandatory for outdoor, above-ground use. Tamper-resistant bait stations must be used wherever children, pets, non-target mammals, or birds may have access to the bait placement location.

USE RESTRICTIONS: This product may only be used to control the following rodent pests in and around man-made structures: House mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), Roof rat (*Rattus rattus*), Cotton rats* (*Sigmodon hispidus*), Eastern harvest mouse* (*Reithrodontomys humulii*), Golden mouse* (*Ochrotomys nuttalli*), Polynesian rat* (*Rattus exulans*), Meadow vole* (*Microtus pennsylvanicus*), White-throated woodrat* (*Neotoma albigula*), Southern plains woodrat* (*Neotoma micropus*), and Mexican woodrat* (*Neotoma mexicana*). This product must be used in and within 100 feet of man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations. Examples of such structures include homes and other permanent or temporary residences, food processing facilities, industrial and commercial buildings, trash receptacles, agricultural and public buildings, transport vehicles (ships, trains, aircraft), docks and port or terminal buildings and related structures around and associated with these sites. Fence and perimeter baiting, beyond 100 feet from a structure as defined above, is prohibited. This product must not be applied directly to food or feed crops.

Burrow baiting with Ditrac All-Weather Blox is prohibited.

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

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

SELECTION OF TREATMENT AREAS: Determine areas where rats, mice or meadow voles* will most likely find and consume the bait. Generally, these areas are along walls, by gnawed openings, in corners and concealed places, between floors and walls, or in locations where rodents or their signs have been seen. Protect bait from rain and snow. Remove as much alternative food as possible.

APPLICATION DIRECTIONS:

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

When baiting sewers, securely attach one end of wire to each block and the other end to a stationary structure such as the bottom step of a manhole ladder or a sewer grate. Allow just enough wire for the block to rest on manhole benching. If benching is not present, suspend each block a few inches above the high water mark or secure block on a board supported by opposing steps of the ladder. Securing blocks in this manner will reduce

587DT-8

Product Code: DI4024



Mold Resistant • Moisture Resistant PEANUT FLAVORED

ACTIVE INGREDIENT:	
Diphacinone (CAS #82-66-6):	0.005%
OTHER INGREDIENTS:	99.995%
TOTAL	100.000%

KEEP OUT OF REACH OF CHILDREN CAUTION

See side panels for First Aid and additional precautionary statements.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store only in original container in a cool, dry place inaccessible to children and pets. Keep containers closed and away from other chemicals.

Pesticide Disposal: Dispose of wastes resulting from the use of this product in trash or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. [Plastic:] Offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill; or by incineration. In most states, burning is not allowed.

WARRANTY: To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

NET WEIGHT: 18 lbs (8.2 kg)

EPA REG. NO.: 12455-80

EPA EST. NO.: 12455-WI-1

Manufactured by:



3699 Kinsman Blvd.
Madison, WI 53704 U.S.A.
www.belllabs.com
MADE IN USA

DIRECTIONS FOR USE (Continued from other panel)

chances that they will be removed by rats or water. Use 3 to 16 blocks per manhole, depending upon the apparent intensity of rat activity. Maintain an uninterrupted supply of fresh bait for at least 10 days or until there are no signs of new feeding by rats.

MICE AND MEADOW VOLES*: Apply 1 block per typical placement in infested areas. Space placements at 8 to 12 foot intervals. Two blocks may be needed at points of very high activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until signs of mouse or meadow vole* activity cease.

FOLLOW-UP: Replace contaminated or spoiled bait immediately. Using waterproof gloves, collect and dispose of all dead, exposed animals and leftover bait. To prevent reinfestation, limit sources of rodent food, water, and harborage as much as possible. If reinfestation does occur, repeat treatment. Where a continuous source of infestation is present, establish permanent bait stations and replenish as needed.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. Keep away from children, domestic animals and pets.

All handlers (including applicators) must wear shoes plus socks, and gloves. Any person who retrieves carcasses or unused bait following application of this product must wear waterproof gloves.

User Safety Requirements

Follow manufacturer's instruction for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.

FIRST AID

HAVE LABEL WITH YOU WHEN OBTAINING TREATMENT ADVICE

If Swallowed	<ul style="list-style-type: none"> • Call a poison control center, doctor, or 1-877-854-2434 immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor.
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NOTE TO PHYSICIAN

If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. If ingested, administer Vitamin K₁ intramuscularly or orally. Repeat as necessary based on monitoring of prothrombin times.

TREATMENT FOR PET POISONING

If animal eats bait, call veterinarian or 1-877-854-2434 at once.

NOTE TO VETERINARIAN

Anticoagulant Diphacinone: For animals ingesting bait and/or showing poisoning signs (bleeding or elevated prothrombin times), give Vitamin K₁.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to mammals, birds and other wildlife. Dogs, cats and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten this bait. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

*Not permitted for use against the following species in California: Cotton rat, Eastern harvest mouse, Golden mouse, Polynesian rat, Meadow vole, White-throated woodrat, Southern plains woodrat, and Mexican woodrat

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www.Agriculture.Vermont.gov

Directions For Use

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

1. Store unused product out of reach of children and pets.
2. Apply bait 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 bait stations when they are lifted, units must be secured or otherwise immobilized. Stronger bait stations are needed in areas open to hooved livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container and unused, spoiled, or unconsumed bait as specified on this label.

Directions For Use

Bait stations are mandatory for outdoor, above-ground use. Tamper-resistant bait stations must be used wherever children, pets, non-target mammals, or birds may have access to the bait placement location.

DO NOT SCATTER BAIT IN OPEN AREAS

Directions For Use

This product must be used in and within 100 feet of man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations.

Examples of such structures include homes and other permanent or temporary residences, food processing facilities, industrial and commercial buildings, trash receptacles, agricultural and public buildings, transport vehicles (ships, trains, aircraft), docks and port or terminal buildings and related structures around and associated with these sites.

Fence and perimeter baiting, beyond 100 feet from a structure as defined above, is prohibited.

This product must not be applied directly to food or feed crops.

Rodenticides in Vermont Wildlife

- Vermont Agency of Fish and Wildlife tests Bobcats and Fishers to rodenticides
 - Animals sampled were trapped for fur
 - Test results provided for 2018-2022
 - Livers tested for:
 - brodifacoum
 - bromadiolone
 - chlorophacinone
 - difenacoum
 - difethialone
 - diphacinone
 - warfarin

Rodenticides in Vermont Wildlife

Rodenticides in Fishers 2020-2021 Results	
Number of Compounds Detected	Number of Fishers
ND	0
1	2
2	6
3	12
4	5
5	4
6	1

Rodenticides in Bobcats 2022 Results	
Number of Compounds Detected	Number of Bobcats
ND	10
1	5
2	8
3	12
4	6

Rodenticides in Vermont Wildlife

Compounds Detected

Consumer use:

- chlorophacinone
- diphacinone
- warfarin

Farm/Pest Control Use:

- brodifacoum
- bromadiolone
- difenacoum
- difethialone

2024 Legislative Activity

In 2024 all SGARs classified as Restricted Use

- brodifacoum
- bromadiolone
- difenacoum
- difethialone

Resulted in twelve products reclassified to Restricted Use

Consumer Education Efforts



**To explore the Vermont Agency of Agriculture, Food and Markets, please visit: [www.agriculture](http://www.agriculture.vermont.gov)

ALERT: RODENT BAIT **REQUIREMENTS FOR USE OF MICE OR RAT BAIT**

BAITS USED TO CONTROL MICE, RATS, AND MEADOW VOLES ARE PESTICIDES AND MUST BE USED PROPERLY.

IMPROPER USE CAN RESULT IN POISONING OF CHILDREN, PETS, DOMESTIC ANIMALS, OR WILDLIFE.

IT IS ILLEGAL TO USE THESE BAIT OUTDOORS WITHOUT A BAIT STATION!

ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR USE

INDOORS

PLACE BAIT WHERE CHILDREN, PETS, DOMESTIC ANIMALS, AND WILDLIFE CANNOT REACH THE BAIT.



OUTDOORS

BAITS MUST BE PUT INTO A TAMPER RESISTANT BAIT STATION



THE VERMONT AGENCY OF AGRICULTURE, FOOD AND MARKETS
INVESTIGATES REPORTS OF PESTICIDE MISUSE.
INCIDENTS CAN BE REPORTED TO 802-461-7160



USEPA Final Biological Evaluation



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 21, 2024

PC Codes: 067701, 067705,
067707, 076901, 086002, 086003,
086601, 112001, 112701, 112802,
19901, 128967, 202901

MEMORANDUM

SUBJECT: **Rodenticides:** Final Biological Evaluation, Effects Determinations, and Mitigation Strategy for Federally Listed and Proposed Endangered and Threatened Species and Designated and Proposed Critical Habitats

USEPA Final Biological Evaluation

In this final BE, EPA evaluated the effects of the 11 rodenticides to 1827 listed species (including species proposed for listing) and 927 designated and proposed critical habitats in the United States and its territories. For purposes of listed species-specific effects determinations, EPA first grouped each of the 11 rodenticides by mode of action (*e.g.*, anticoagulants, neurotoxins, etc.) and then further grouped by use pattern (*i.e.*, bait station³, in-burrow, or broadcast). EPA distinguished between these three use patterns because they have different exposure routes to non-target animals. For each species, EPA made effects determinations for each chemical group (*i.e.*, mode of action), consisting of one determination for each of the use patterns associated with that chemical group.

EPA determined whether each of the 11 rodenticides will have No Effect (NE) on, or May Affect (MA), an individual of each listed species or CH. For those species and CHs with MA determinations, EPA performed additional analyses to determine if each rodenticide is Not Likely to Adversely Affect (NLAA) or Likely to Adversely Affect (LAA) an individual species or a CH. EPA made NLAA determinations when effects are either discountable (highly unlikely to occur), insignificant, or wholly beneficial.

USEPA Final Biological Evaluation

EPA determined that the currently labeled uses of the 11 rodenticides evaluated in this assessment:

- Will have **no effect** on 88% of listed species and 95% of critical habitats;
- Are **not likely to adversely affect** 4% to 11% of listed species—depending on the chemical and application type—and 1% of critical habitats;
- Are **likely to adversely affect** 1% to 8% of listed species—depending on the chemical and application type—and 4% of critical habitats; and,
- Have a **likelihood of future Jeopardy/Adverse Modification for less than 5% of listed species** and less than 1% of critical habitats.

Rodenticide Stewardship

- ❑ **Use IPM Strategies** – baits should not always be the first step in rodent control
- ❑ **Don't overapply** - apply labeled amount for target pest
- ❑ **Maintain bait stations**- applicators are responsible for maintaining bait stations
 - *If a bait station is damaged and baits can be accessed, it is the responsibility of the applicator to remove the damaged station and replace it*
 - *Remove bait stations when no longer being serviced*



Recommendations for Rodenticide Stewardship

- ❑ **Carcass removal** – Remove dead or dying rodents from the bait station and/or the surrounding areas.
 - *Carcasses are attractive to pets and wildlife and can result in poisoning of non-target animals*
- ❑ **Keep stations clean** – debris can conceal carcasses, spoiled bait.



Questions

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