

Questions and Answers – Additional Mitigation Measures for Rodenticides

About the Evaluation of Rodenticides

1. What are rodenticides?

Rodenticides are pest control products registered for controlling mice, rats and other rodents that pose threats to public health, critical habitats, native plants and animals, crops, and food supplies.

2. Why did Health Canada re-evaluate rodenticides?

As required under the *Pest Control Product Act*, Health Canada's Pest Management Regulatory Agency (PMRA) conducts re-evaluations of older pesticides to ensure they meet modern health and safety standards. As scientific knowledge evolves and new information becomes available, the PMRA requires that registered pesticides be re-evaluated according to modern risk assessment approaches.

The PMRA re-evaluated six rodenticides (brodifacoum, bromadiolone, chlorophacinone, diphacinone, warfarin and zinc phosphide) and published Re-evaluation Decision Documents (RRD2006-11 and RVD2007-01) in 2006 and 2007, respectively. The public was consulted prior to finalizing these decision documents (PACR2004-27 and PACR2006-08).

3. Why are additional mitigation measures required following re-evaluation?

In 2010, the PMRA required additional protective measures for several rodenticides containing the following active ingredients: brodifacoum, bromadiolone, bromethalin, chlorophacinone, diphacinone, difethialone, warfarin and zinc phosphide, as part of an overall risk-reduction strategy for rodenticides in Canada. The name of the active ingredient contained in a rodenticide product is listed on the product label under "guarantee".

Rodenticides are highly acutely toxic compounds, and can be used in residential and agricultural settings. Additional protective measures are warranted in order to prevent exposure of children, pets and non-target wildlife to these chemicals. Manufacturers have until December 31, 2012 to have new labelling in place.

The PMRA considered reports of incidents from both Canada and the United States in its assessment because the rodenticides are used in similar ways in both countries. An incident is an effect that relates to the health or environmental risk of a pesticide. Incidents include effects on humans, domestic animals, or the environment.

- In the US, the American Association of Poison Control Centers has received reports of approximately 12 000 to 15 000 rodenticide exposures in children younger than 6 years old every year.

- Since April 2007, the PMRA has received 140 reports of incidents involving the use of rodenticides in Canada.
- Available monitoring data from surveys conducted by Environment Canada's Canadian Wildlife Service also shows evidence of secondary exposure of predatory and scavenging birds to rodenticides (consumption of prey with rodenticide stored in body tissues).

4. How were the public and stakeholders informed of this regulatory decision?

The PMRA consults on all regulatory decisions. In 2007, the PMRA published a document (REV2007-04) notifying stakeholders of its' intent to consider additional restrictions for rodenticides, in line with restrictions being considered by the USEPA; this document was open for consultation. Comments received during the 2007 consultation were taken into consideration and the PMRA proposed additional restrictions for rodenticides in 2009 (REV2009-05). This document was also posted for public consultation, and comments received were taken into consideration when making the 2010 decision on additional restrictions for rodenticides (REV2010-17).

In 2008, the PMRA notified its Federal, Provincial and Territorial (FPT) Committee of the upcoming proposed regulatory decision requiring additional mitigation measures for these products. In addition, the PMRA engaged stakeholders through regular meetings, visits to the regions and ongoing work with regional officers.

5. What do first-generation and second-generation rodenticides mean?

The anticoagulant rodenticides are typically grouped into "first-generation" (chlorophacinone, diphacinone, warfarin) and "second-generation" (brodifacoum, bromadiolone, difethialone). Second-generation anticoagulants tend to be more acutely toxic than the first-generation and are retained much longer in body tissues of primary consumers mammals. They generally provide a lethal dose after one single feeding, although death is usually delayed 5 to 10 days and animals continue feeding. The first-generation compounds generally must be ingested for several days to provide a dose lethal to most individuals because they are less acutely toxic and more rapidly metabolized and/or excreted.

6. What is the difference between commercial and domestic class pest control products?

All pest control products are classified for their intended use.

Domestic Class products are sold for consumer use in and around the home. The intent of domestic classification is to provide consumers with products for control of insects and rodents within the home, weed control in lawns and gardens, and swimming pool disinfection that can be used safely.

Commercial Class products are sold for general use in the specific commercial activities listed on the label. The intent of commercial classification is to provide operators of commercial pest control operations, such as lawn care service providers, agricultural producers and government control programs with products that can be used safely and efficaciously in their particular business.

7. What are the major new requirements for domestic class rodenticide products?

Block or solid formulations are the only types allowed. Bait must be in a form that is reasonably expected to remain in bait station, except for bait removed, and crumbs created, by target rodents.

Loose bait forms (such as, meal, treated whole-grain, pelleted and liquid) and concentrated products (such as, solution, emulsifiable concentrate, dust, powder) to be diluted into solid or liquid bait are prohibited.

Domestic class products must always be used in bait stations.

Products must be sold packaged with a bait station which must meet the bait station requirements.

Domestic class products containing second-generation anticoagulants (brodifacoum, bromadiolone and difethialone) are prohibited.

8. What are the major new requirements for commercial class rodenticide products?

The regulatory actions apply to products currently registered for use in and around structures/buildings (i.e. structural uses).

Bait must either be placed in tamper-resistant bait stations or in locations not accessible to children, pets, livestock or non-target wildlife.

All outdoor, above-ground placements of bait products must be contained in bait stations. Tamper-resistant bait stations are required if the bait placement is within reach of pets, domestic animals, non-target wildlife, or children under six years-of-age.

The outdoor use of commercial class, concentrated products (such as, solution, emulsifiable concentrate, dust, powder) to be diluted into solid or liquid bait is prohibited.

The use in residential settings of commercial class, concentrated products (such as, solution, emulsifiable concentrate, dust, powder) to be diluted into solid or liquid bait is prohibited.

The use of difethialone is restricted to indoor use only.

9. Did the PMRA consider economic implications of the new requirements?

The PMRA conducts science-based evaluation of the potential risks to human health and the environment, as well as the value (e.g. contribution to pest management) of the pest control products.

While the value assessment considered the impacts for users, including the cost of implementation, in its risk mitigation strategies, this was balanced with the potential impact to human health and the environment.

Questions related to Commercial/Agricultural Uses of Rodenticides

1. What are the new restrictions for rodent control in agricultural settings?

The new restrictions on rodenticide use apply to products currently registered for use in and around structures/buildings (i.e. structural uses). They do not apply to field uses (e.g. crop land, orchards, landfills, nurseries), unless these areas are open to the public (e.g. pick-your-own sites) or the bait is accessible to pets or livestock.

Around structures and buildings, bait must be placed within 15 m of the structure (or within 100 m if the bait is placed along a fence-line and in a bait station secured to a surface), and bait stations are required if the bait is placed above-ground (i.e. exposed on the surface). As an example, bait placed in bale stacks or under a pile of grain bags would be considered “below-ground”, out-of-reach of children, and a bait station would not be required.

Baits labelled for field uses can be placed anywhere in fields, rangeland, and other crop or non-crop areas located away from farm yards/buildings without a bait station, unless these areas are open to the public or the bait is accessible to pets or livestock.

Rodenticide product labels will specify where and how each product may be used.

2. Would the placement of bait in slotted floors “gaps”, burrows, or between walls require the use of a bait station?

Locations such as slotted floors “gaps” and burrows are considered to be “below-ground”, out-of-reach of children, and would not require the use of bait stations. Indoors, placement of rodenticides in bait stations is required in locations accessible to children and non-target animals. In some indoor agricultural settings, where it can be reasonably determined that access to children and non-target animals will not occur (e.g. lofts/granaries, “between walls”, etc.) bait stations would not be required.

3. Baiting in feed bales is a common practice in rural settings. Is the bait now required to be in a bait station?

If baits are placed inside of the feed bale stacks and are not accessible to children and non-target animals, then bait stations would not be required. If the bales are located in

proximity of structures (within 15 m or 100 m along a fence line), products registered for use in and around agricultural buildings may be used; if the bales are located in fields, only products registered for field uses may be used.

4. Would the placement of out-of-reach baits within the bale stack be considered “a location not accessible to livestock or non-target wildlife”?

In general, bait applied inside a feed stack would not be accessible and would be considered ‘below-ground’, and would not require the use of a bait station.

5. Are there rodenticides which can be used inside a feed bale stack located in a barren prairie field?

There are products registered for use in fields or crop/non-crop areas that could be used. The intent of the 2010 decision is to require additional mitigation measures, including the requirement of the use of bait stations, for above-ground, outdoor placements of rodenticides around buildings and structures, to mitigate risks to children and non-target animals while protecting structures and their contents from rats and mice. Use of rodenticides in fields where there is no anticipated exposure to the public, pets and livestock are exempt from the new label requirements. Field areas open to the public such as “pick your own” crops and retail nurseries open to the public are not exempt. Specific use limitations will be outlined on product labels.

6. Can products containing warfarin be placed inside a feed bale stack located in a prairie field?

Warfarin is only registered for use indoors and around buildings [i.e., within 15 m (or 100 m along fence lines)]. Products containing chlorophacinone and zinc phosphide are currently registered for use in sites such as fields, pastures and rangeland (as specified on product labels). Products containing diphacinone are registered for use in sites such as grain fields, nurseries, and shelterbelts (as specified on product labels).

7. Can products containing diphacinone be placed inside a feed stack located in prairie field?

Products containing diphacinone that are currently registered for use in fields or crop/non-crop areas could be placed inside a green feed stack in prairie field. The use of products registered for use indoors and around buildings is restricted to within 15 to 100 m of the buildings.

8. Is there a product containing bromadiolone registered for agriculture use (e.g. use in bales in fields)?

Currently, there is no product containing bromadiolone registered for this use.

9. Is there a concentrated diphacinone product to be mixed with liquid bait (i.e. water) registered for use outdoors?

With the new requirements, concentrated products to be mixed with liquid bait can no longer be used outdoors. For outdoor use, other products containing diphacinone in other bait forms are still available.

10. What is a farm yard? Are bins, feed stacks, feed lot areas and silage pits considered part of the farm yard?

Farm yard is a general term, which could include different buildings or structures found in agricultural settings. The determining factor for the implementation of mitigation measures is the intended use site (e.g. residential building, field, agricultural buildings).

11. Is a farm yard considered a residential setting?

In farm yards, only residential buildings (e.g. house) are considered a 'residential setting'.

12. Can the second-generation anticoagulant bromadiolone be used in the farm yard if bait stations are used?

Based on current product labels, commercial products containing bromadiolone are registered for use indoors and against the outside walls of dwellings, farm buildings, food service establishments (non-food areas), empty granary bins, manufacturing/processing plants (feed, food, in non-food areas) and storage areas (non-food). On this basis, bromadiolone can be used inside and around buildings and structures in farm yards.

With the new 2010 decision, the use of rodenticides around buildings/structures will be extended to within 15 to 100 m, and placements of bait outdoors and above-ground will need to be contained in bait stations. Tamper-resistant bait stations will be required if bait is accessible to children or non-target animals.

13. Can water soluble diphacinone be used in a farm yard?

With the new decision, the use of concentrated products to be mixed with liquid or solid bait will be prohibited outdoors, and in residential settings. Thus, in farm yards, the use of water soluble diphacinone products will only be allowed inside of agricultural buildings/structures.

14. Can bromadiolone be used underneath and/or inside wooden grain bins?

Bromadiolone is registered for use inside and around agricultural buildings. Because granary bins are considered agricultural buildings, bromadiolone could be used both inside (when empty) and outside within 15 m of the granary bins. For outdoor uses, bait stations would be required if bait is placed above-ground.

15. Can bromadiolone be used outside?

Based on current product labels, commercial products containing bromadiolone can be used inside and around buildings and structures only. With the 2010 decision, the use around buildings was extended to within 15 m of buildings to reduce the risks of rodents entering these structures. The placement of commercial class rodenticide products along the fence line of properties, outside of the 15-metre limit, but within 100 metres of buildings, was also allowed because rodents reach buildings by following protected pathways such as fence-lines. Therefore, with the 2010 decision, bromadiolone can be applied outside of the 15-metre limit, but within 100 metres of buildings, if the bait is placed along fence-lines. Products registered for field uses can be used for rodent control in locations away from buildings.

Additional Information

For more information, please refer to Re-evaluation Note REV2010-17, *Risk Mitigation Measures for Eight Rodenticides*, available on the Pesticides and Pest Management portion of Health Canada's website at healthcanada.gc.ca/pmra, or through the Pest Management Information Service at 1-800-267-6315.

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