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# Integrated Pest Management Program - IPM Manual for Home & Garden Pests in B.C. - Chapter 10

# **Integrated Pest Management**

### IPM Manual for Home and Garden Pests in British Columbia

# Chapter 10: Other Pesticides — Rodenticides and Molluscicides Learning Objectives

When you have completed this chapter, you should be able to:

- 1. Describe the properties of the pesticides described, including:
- pests controlled
- areas of use
- activity and residual effects
- toxicity to people, wildlife or pets
- 2. Describe precautions for using each pesticide.



#### Introduction

This chapter lists the key characteristics of three commonly used rodenticides' active ingredients and one commonly used molluscicide for slug control. The active ingredient is shown on every pesticide product label after the word **Guarantee**. Dispensers



should have a good understanding of these pesticides because they are so frequently used (based on a survey of BC vendors).

Dispensers should be able to readily explain how these rodenticides work, the type of pests they

control, and safety precautions. There are many less frequently used rodenticides not described here. Dispensers should be able to look up information on these in other reference resources as needed. If a customer has not selected a pesticide and wants to know what to use for a given pest, see Section III, Pest Management.

# **Rodenticides**

# **Brodifacoum, Bromadiolone, Warfarin**

# **General Description**

- anti-coagulant compounds that cause animals to die from internal bleeding
- sold as solid baits, warfarin is also available as a water soluble formulation

#### Controls

mice and rats

#### Areas of Use

- use outdoors near and around buildings
- use indoors, such as attics, crawl spaces, and storage rooms



# **Application Notes**

Baits should be used only in tamper-proof bait-stations. These are sturdy, lockable containers that only allow rodents to get in through small entry holes. Some rodenticides are sold already packaged in disposable bait stations.

- place bait stations along walls, behind appliances, in attics, in crawl spaces, and in darkened corners
- stations should be secured so that they cannot be upset or dragged away
- keep bait stations continuously supplied with fresh bait for at least a 10-15 day period (longer for warfarin)
- water based formulations of warfarin are for use in areas where water sources for rodents are limited

#### **Precautions**

- Do not put bait stations in areas frequented by children or pets.
- Do not place bait stations in food storage, preparation, or eating areas.
- Always wear gloves when handling rodenticides as they can be absorbed through the skin.

#### Be cautious when using these pesticides!

#### **Health and Environmental Information**

- all rodenticides, especially brodifacoum and bromadiolone, are highly toxic to humans and non-target animals, such as pets and wildlife
- rodenticides are moderately toxic to fish and birds (warfarin is of low toxicity to fish)



# **Molluscicides**

# Metaldehyde

# **General Description**

- synthetic compound that acts as a stomach poison, also upon contact
- sold as liquid and solid baits, liquid concentrates
- · moderate residual effects

#### Controls

slugs and snails

#### **Areas of Use**

• Use outdoors on the ground between plants. Some products may be applied to foliage of ornamentals (none are for use on edible plants).

# **Application Notes**

- liquid formulations are usually applied to soil in a thin band around plants, between rows or around areas to be protected
- pelleted bait formulations should only be used in bait stations (see illustration) out of reach of children, pets, and other animals
- foliar spray products may be applied to lawns and foliage of ornamentals
- some pellet products contain a bitter compound to make it less palatable to animals and birds, however, dogs may still be attracted to eat it

#### **Precautions**

- Do not apply any metaldehyde products to foliage or edible parts of crop plants, use only on soil surface around such plants.
- Keep children, pets, poultry, and other domestic animals away from treated areas. Dogs in particular are attracted to metaldehyde baits and may eat enough to be poisoned. May be fatal to dogs.

#### **Health and Environmental Information**

- moderate mammalian toxicity
- may cause irritation to eyes and skin
- toxic to birds and other wildlife



- non-toxic to fish, bees and other insects
- low persistence in soil and water



# **STUDY QUESTIONS**

Answers are provided <u>here</u>.

- 1. List three precautions for using rodenticides.
- 2. Describe how to use metaldehyde to reduce the risk that dogs will find it and eat it.

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