

# Richardson's Ground Squirrel Management

Health Canada has declined to renew the product registration for 2% liquid strychnine concentrate. As a result, this product is being phased out and will no longer be available for purchase as of **March 4, 2022**. Producers will have one year to use the product following the last date of sale.

Alternative management products are described in Table 1.1.

*\*Alberta and Saskatchewan have filed a notice of objection to the PMRA on the deregistration of strychnine. This was done the beginning of March, 2020.*

## Lethal Control

There are four recognized methods of lethal control:

- Poison
- Fumigation
- Trapping
- Shooting

When selecting which control method to use, the following criteria must be considered:

- Human safety
- Hazards to livestock, pets and wildlife
- Cost
- Effectiveness of control
- Appropriateness

Further to this, the efficacy of some methods is dependent on the behaviour and feeding habits of the ground squirrels. Bait usage should be limited to early spring, before more desirable feed is available. Bait "shyness" can be avoided by "pre-baiting" gophers with untreated grain. Only apply treatment to areas where the presence of Richardson's ground squirrels has been confirmed.



Figure 1. Richardson's ground squirrel

## Bait Stations

Bait stations are appropriate for the distribution of baits described in Table 1.1. **Bait stations are not appropriate for use with strychnine.** Bait stations for all products must meet the following criteria:

- Constructed of high-strength material and resistant to destruction
- Have an entrance designed so that children non-target animals can't reach the bait
- Have an internal structure which prevents the bait being shaken loose
- Have an access panel which fastens securely
- Capable of being securely fastened to a surface
- Bear the product name, active ingredient, P.C.P. number and contact information
- Be resistant to destruction or weakening by weather
- Additional restrictions may be required for specific products – **read instructions carefully and always follow directions.**

### Manufacturing bait stations:

You can manufacture your own bait station using PVC tubing. See figure 2. PVC no smaller than 10 cm in diameter should be used for Richardson's ground squirrels. The long, upright end is where the bait is placed. Each bait station should contain about 500 grams of product, and each station will expose rodents 50 to 100 meters from the bait.

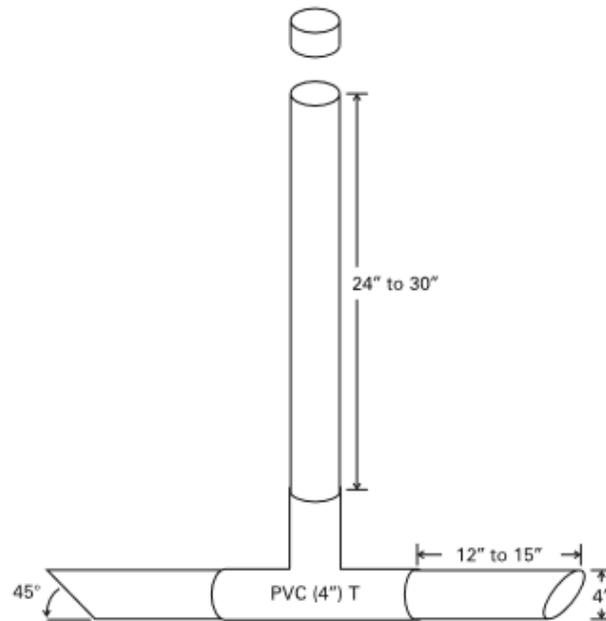


Figure 2. Inverted "T" homemade PVC bait station.

### Integrated Pest Management Strategy:

Cypress County encourages an integrated approach regarding Richardson's ground squirrel control. Management practices which incorporate a variety of strategies serve to reduce reliance on traditional rodenticides and will reduce the overall cost of pest management.

Habitat modification can reduce the pest's preference for an area and assist in improving predator success. Examples of this strategy include utilizing raptor platforms and nest boxes to increase predation in the vicinity of ground squirrel colonies. Grazing practices favouring taller grass stands should also be considered as Richardson's ground squirrels have a preference for short grass. Vegetation cover should be maintained at a height greater than 15 centimeters to deter ground squirrels from colonizing.

Table 1.1 Alternate Products for the Control of Richardson's Ground Squirrel

Trade Name	Active Ingredient	Formulation	Mode of Action	Application Considerations	Risk of Secondary Poisoning
Burrow Oat Bait & ZP Rodent Bait	Zinc phosphide	Granules	Acute - single dose poison Causes production of phosphine gas in stomach – fast acting, no anti-dote	Hand baiting directly into burrow entrances or used approved bait station	Very low (death is quick and most die underground)
Rozol RTU	Chloropacinone	Pellets	Anti-coagulant Requires multiple feedings and is slow acting (4-8 days)	Hand baiting directly into burrows, rebait in 48 hours, third rebaiting may be necessary. If using bait stations, provide an uninterrupted supply for a minimum of 3 weeks	Low – most die underground. Dying ground squirrels may be a target for raptors and coyotes when they are sick and slow.
Ramik Green	Diphacinone	Pellets <b>*Possibly unappealing to RGS due to flavour</b>	Anti-coagulant Requires multiple feedings and is slow acting (4-8 days)	Hand baiting directly into burrows, rebait in 48 hours, third rebaiting may be necessary. If using bait stations, provide an uninterrupted supply for a minimum of 3 weeks	Low – most die underground. Dying ground squirrels may be a target for raptors and coyotes when they are sick and slow.

Trade Name	Active Ingredient	Formulation	Mode of Action	Application Considerations	Risk of Secondary Poisoning
Phostoxin	Aluminum phosphide	Tablets	Asphyxiant Tablets slowly sublimate and release phosphine gas	<b>Written fumigation management plan is required. Farmer Pesticide Applicator's Certification is required.</b>	None
RoCon  Ag Services has the required equipment available for rent.	Non-poison asphyxiant	Liquid	Asphyxiant/drowning agent	Specialized equipment is required as product must be pumped into burrows using pressurized tank and handheld wand. Softened water is required to ensure efficiency.	None