



Ground Squirrel

Strychnine Control Alternatives

Richardson ground squirrels (RGS) are a common sight in Wheatland County and frustratingly taking a bite out of crop and pasture production, digging holes and being a pest. They are unregulated so they may be lawfully shot, trapped or otherwise removed where permitted. Success loves preparation and by correctly identifying populations, considering different control strategies, establishing damage and economic thresholds we can suite our integrated pest management program to reduce current and potential damages caused by these critters.

Best practices and proactive measures of encouraging predation (such as birds of prey nesting boxes), tall vegetation cover/buffers, crop rotations, etc. should be considered in context with the land suitability and characteristics. Users of pest control products should always follow label directions and best practices while considering human and environmental safety concerns.

Strychnine which was once the most popular control agent, has now had the registration cancelled by Health Canada and **the last day of permitted use will be March 4th, 2023. No sales will be available in 2022.**

Note that the most effective timing of ground squirrel control is after the adult females are impregnated and before the new young emerge (litter size averaging 6 per year). This is after males have fought over territory because females are only available

for breeding one day of the year, typically sometime between mid-March and mid-April. If a complete colony elimination in a particular area is the goal, it's important to note that unless population control of 80% + is achieved; that population will remain unchanged.

There are several different strategies of controlling ground squirrels such as shooting, asphyxiation or poisoning/baiting which are all commonly found being employed. Asphyxiation due to foam from Rocon or smoke from Giant Destroyers is effective along with baiting options using products like Rozol and Ramik Green. Shooting may be an effective component of a program if allowed. Multiple strategies may be ultimately more effective than a singular plan with timing of methods key to long term RGS control.

If baiting programs are being employed, feed before vegetative "green up" conditions occur. Do not bait at first activity in spring, adult males emerge 14 days before females and eat little before mating. Ideally shoot 10 RGS to determine sex and then bait when 50% are females.

Products described below are not meant to be a complete available list of options. These are not recommendations but are being presented as information to integrate with best practices and effective control for your specific needs and conditions.

Always follow Label directions for the product you are using.

Rozol RTU is a premixed, anticoagulant bait that is ready to be used in crop and rangeland areas with a readily available antidote. The bait has a consistent blend, is moisture resistant and can be used without pre baiting. Since vitamin K1 is the antidote to the active ingredient (Chlorophacinone) an infested alfalfa field may have a poor success rate. Purchase 20 or 50 lbs units.

Ramik Green (Diphacinone) is another anticoagulant bait which requires multiple feedings. Bait stations may be used, and the product maintains palatability due to its high protein content and waxy coating which provides resistance to moisture. Bait stations must be secured and labeled. Purchase in 5-gallon pails is available.

The Giant Destroyer Rodent Gasser eliminates burrowing rodents by suffocating via sulphur gas. The burrow exits need to be closed off to prevent escape and the device lit at the fuse and placed in the last opened entrance, then filled in quickly. This creates an asphyxiating smoke if escape is prevented. Purchase is available in 4 packs.

Rocon is a registered mustard-based pesticide that is a poison free mixture of a biodegradable foaming agent used to asphyxiate ground squirrels in their burrow system. Using an electric pump system, the mixture is injected into the burrow system while escape and other exits are closed off using plastic perforated cones. The cones allow the operator to inject the mixture to enter and spread completely throughout the underground burrow system. The foaming agent greatly reduces the amount of water necessary to fill the cavities and flows from a tank mixed solution through a wand like apparatus. Since Rocon is nontoxic there are reduced concerns about predators and scavengers consuming

carcasses and exposure to people. Purchase is available by 4x4L solution and a pump/wand combo kit.

Burrow Oat Bait and other similar bait products with zinc phosphide as the active ingredient may be a helpful choice in an alfalfa setting since vitamin K1 is not the antidote. It has a very low secondary poisoning risk for scavengers as well. This product is intended for Certified Applicators and Farmers and pre baiting 7 days before using the product is recommended for the best results. The active ingredient is a powder on the bait and when it is exposed to moisture/acid, it starts to release highly toxic phosphine gas. When the gas forms and contacts the rodents stomach acid, even more gas is rapidly generated causing asphyxiation.

Phostoxin Tablets produce phosphine gas which is an odorless gas that enters the rodent's bloodstream and causes death by asphyxiation. Aluminum phosphide is the active ingredient and reacts with moisture when tablets are applied to the burrow. All entrances will need to be sealed to ensure efficacy. Use of this product is only by licensed/certified applicators such as a Farmer Pesticide Certificate along with an Exterior Rodent Control Endorsement and can only be used in conjunction with a detailed fumigation management plan.

Hawk Post

There are 9 species of hawks in Alberta, many of which call Wheatland County home, including the common Swainson's Hawk and potentially, the provincially endangered Ferruginous Hawk.

Hawks and other birds of prey can provide a valuable service to producers and landowners in the form of pest control. One pair of nesting hawks can consume up to 500 ground squirrels in a single nesting season! Installing a hawk post can encourage hawks to nest and hunt on your land.