

Red Deer County



RICHARDSON GROUND SQUIRRELS (GOPHERS)

LIFE AFTER STRYCHNINE

STRYCHNINE HISTORY

In 2020, the Pest Management Regulatory Agency (PMRA) completed its review of the registration for Strychnine for Richardson Ground Squirrel (RGS) control. PMRA decided to cancel strychnine's registration. As a result, this product will no longer be an option for producers to control their RGS problems. The elimination of strychnine has occurred over the past three years, by first eliminating its production, then sales, and finally by the end of March 2023, its use.

This is not the first-time strychnine use has been cancelled. Two previous formulations of strychnine (3% and 5%) were available to producers until they were deregistered in 1992. 2% strychnine became available once again in 2001 due to a surge in ground squirrel population numbers. PMRA's verdict in this round of bans was due to too high of an environmental risk using strychnine as outlines on the label – Given this current cancellation, it is unlikely that any kind of strychnine-based products will be available in the future so we must explore other control options to address them.

CURRENT OPTIONS

The most effective and long-lasting technique to controlling a RGS infestation involves an integrated pest management approach (IPM). This consists of a variety of methods to keep pest populations in check. While chemical controls have often been considered the most effective option, especially when dealing with large areas, several other methods used simultaneously can be equally effective. Every farming operation is run differently, so no single technique will work in every application. Individuals will have to find a combination of methods that work best for them. Here is a list of several different techniques to consider:

Pesticide Controls

- While strychnine was the standard option for severe infestations, there are a few products that are still readily available and other more difficult-to-find options as well. Several pest control companies can be contracted to apply products for you. If applying these products yourself be sure to follow all label directions.

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- Chlorophacinone (trade name Rozol or Ground Force) has been an option for several years. It acts as an effective anticoagulant but requires more labour than strychnine as the ground squirrels often need to ingest the product a couple of times to consume a lethal dose. These products can often be found at agricultural supply stores ([UFA](#) or [Central AB Co-op](#))
- Another common option is using sulphur gas cartridges ([Giant Destroyers](#)). These will also require a little more labour as they are most effective when all the burrow entrances have been plugged off. Similarly, there are a handful of pieces of equipment that will fill the burrows with exhaust fumes to suffocate the ground squirrels.
- Other products that are registered for control of Richardson Ground Squirrels include: diphacinone, zinc phosphide, and a white mustard seed/sodium alpha-olefin sulfonate compound ([RoCon](#)). These products are however very difficult to source and will often only be used by pest control contractors.
- Some household products are rumoured to “displace” ground squirrels. Some examples include: fish scraps, castor oil, coffee grounds, dryer sheets, mothballs, and peppermint oil. It’s also been rumoured that Juicy Fruit Gum can be toxic to ground squirrels. However, none of these products are supported for this use by the PMRA. For more information on gopher control [Click Here](#).

Direct Controls (Physical)

A big advantage to direct control measures is they produce immediate and verifiable results. This is to say through shooting and trapping you’re able to physically count all the squirrels that have been controlled. However, these methods require much more effort because they require constant vigilance, patience and persistence.

Both lethal and live traps are available for ground squirrel control though live traps often become fairly labour intensive, expensive, and by releasing RGS elsewhere you’re just relocating the problem. As for lethal traps, many different styles and sizes exist, so some trial and error may be required to find the best match for your operation.

Ensure you’re following all firearm regulations while shooting. For help choosing the best traps for you and advice on how to use them, [Click Here](#) or [Here](#).

Indirect Controls (passive)

Some of the longest-lasting methods that require very little inputs involved the incorporation of management techniques that naturally remove or discourage ground squirrel establishments. For example, keeping grass stands over 15cm in height can discourage new infestations from occurring. Encouraging raptor or owl habitat by maintaining tall trees for nesting and hunting perches. Even installing nesting platforms and boxes can be very beneficial. For more information on indirect RGS controls, [Click Here](#).

IMPORTANT FACTORS

Continual monitoring is required with all control techniques so that adjustments can be made for inadequate methods. If some activities don’t seem to be having the desired outcomes, consider trying other methods. Also, don’t forget to factor in the lifecycle of ground squirrels. The ending and beginning of hibernation vary by age and gender. It’s important to consider this when taking on control efforts.

For more information on Richardson Ground Squirrel control, check out [Agri-Facts Managing RGS](#) or our [Alternatives For Gopher](#) control article from [The Current 2021](#).