

Strychnine Stewardship Program

Overview

The Strychnine Stewardship Program allows the targeted use of strychnine for Richardson's ground squirrel (RGS) management when significant economic damage is occurring or imminent in eligible areas of Saskatchewan. Strychnine cannot be used in residential or public areas or any other areas that may be open to the public.

The program prioritizes environmental protection, including species at risk and other non-target species, user accountability and integrated pest management (IPM). The program ensures the requirements of the current Emergency Use Registration (EUR), which is valid until November 1, 2027, are met.

Purpose

The Strychnine Stewardship Program provides users in eligible areas facing serious infestations of RGS with access to strychnine to control RGS within the constraints of the approved EUR. Strychnine can only be used on agricultural land.

Strychnine is an important tool for control, but it must be used in an integrated approach with other registered alternatives and cultural control.

Integrated Pest Management (IPM)

IPM is critical for long-term sustainable management of RGS. IPM methods for RGS include the use of alternative rodenticides to strychnine, as well as cultural and biological management methods. Used together, all these methods can reduce RGS pressure.

A key biological and cultural control method for RGS is the tolerance of natural predators. RGS are native to Saskatchewan and have a huge variety of natural predators that can have a significant impact on RGS populations. Certain RGS predators, such as badgers and coyotes, can cause issues for producers, but it is important to tolerate these nuisances as much as possible, since these species actively hunt RGS and are critical in keeping populations in control. Weasels, raptors and snakes can also be important predators of RGS and other pests.

Vegetative height management can reduce the number of RGS, because of their preference for short grasses. Whenever possible, maintain vegetation on pastures or forage at a height greater than 15 centimetres. Hunting and trapping are more labour-intensive management strategies, but they can also contribute to effective management.

Proper use and storage of control products is critical. It is important to read the product label for the rodenticide you plan to use. For example, moisture and high temperatures in storage or transport can reduce the efficacy of zinc phosphide. To maintain its efficacy, strychnine must be stored above freezing temperatures.

Producers should tolerate low numbers of RGS that will not cause significant economic losses. This will promote healthy, natural predator populations and reduce unnecessary costs for producers.

Training

Training is mandatory for all strychnine users and distributors:

- All users and RMs participating as a strychnine distributor vendor must complete mandatory training. Training is available online through the SARM website (sarm.ca/strychnine-stewardship-training).
- Proof of training completion is required before strychnine can be purchased. Ensure you select the RM office where you plan to pick up your strychnine. This will ensure that the RM receives your records and can validate that you have completed your training.
- Training must be completed every year strychnine is used.

How Do I Obtain Strychnine?

- Through the Strychnine Stewardship Program, strychnine will be distributed by RM offices that have completed the mandatory training and have expressed interest in participating as a distributor.
- First Nation Communities within the eligible strychnine use area may obtain strychnine from the nearest RM that is distributing strychnine.
- RMs in eligible areas have the choice to opt out and not participate as a distributor. In this case, strychnine will not be available within the RM unless the RM makes an agreement to have a neighbouring RM in the eligible area distribute it on their behalf.
- Users must sign a Treatment Plan and Declaration Form.
 - In the Treatment Plan and Declaration Form, users will commit to follow all label restrictions, adhere to requirements of the Strychnine Stewardship Program and participate in field audits when requested.
- Producers will purchase strychnine from the participating RM office they selected as their primary RM on their training documentation.
- With limited supplies, users can expect a per-producer cap on purchases of two per cent liquid strychnine.
 - The user may apply strychnine that they purchased in their primary RM in other eligible RMs where they occupy land.
 - All treatment locations must be within the EUR approved use area.
- Supplies will be limited this growing season. The recommended window for spring application of strychnine ends June 15, after which application is less effective. We encourage producers to use other [RGS management options](#) this spring as early intervention and an integrated approach provide the best control outcomes.
- Strychnine will be available for the late summer application window from July 15 to September 1.

Species-at-Risk (SAR) Assessments

All potential strychnine application sites must be listed in the Treatment Plan and Declaration Form. Each land location will be reviewed prior to strychnine sale to determine if additional risk mitigation is required to protect SAR. The presale SAR assessment focuses on mitigating risk to the highest-risk SAR species. The RM office will complete a presale SAR assessment of the locations provided by the user using a SAR Land Location Verification Tool prior to the sale of strychnine.

During the presale SAR assessment, the critical habitat and breeding occurrences are considered for the most sensitive SAR, including: black-tailed prairie dog, burrowing owl, swift fox, Ord's kangaroo rat, ferruginous hawk and greater sage grouse.

Prior to strychnine application, an additional in-field SAR assessment must be conducted by the strychnine user with consideration for SAR that are vulnerable to strychnine poisoning.

There are four potential outcomes of the presale SAR assessment, which are outlined below:

1. **Prohibited use of strychnine in certain locations.** Strychnine cannot be purchased to treat these locations.
2. **Prohibited spring application.** Strychnine cannot be applied in spring or early summer. Even after the prohibited spring period, it is recommended to be delayed until August.
3. **Enhanced monitoring required.** Enhanced monitoring consists of twice-a-day monitoring for the first week, followed by the standard weekly monitoring for three additional weeks.
4. **No additional risk mitigation measures required.** The mandatory four-week monitoring period must still be followed with once-a-day monitoring in the first week and all other risk mitigation measures outlined in the Strychnine Stewardship Program and strychnine [product label](#).

To provide an overview of the areas of the province affected by the outlined additional risk mitigation measures, provincial maps have been developed. The maps illustrate the proportion of each RM impacted by each level of restriction. The maps are available on [Strychnine Use in Saskatchewan](#).

In addition to the presale SAR assessment, all users of strychnine must conduct an in-field SAR assessment at the treatment sites to assess for the presence of SAR prior to applying strychnine. If SAR are present, strychnine cannot be applied (as specified in the strychnine product label). Users must also monitor for the presence of SAR throughout the mandatory monitoring period after application.

SAR assessments are necessary to ensure that strychnine is being used in a way that poses acceptable risk to the environment, including SAR. If this is not followed, the regulator (Pesticides Regulatory Directorate, formerly the Pest Management Regulatory Agency) may determine that additional EURs or full registration of strychnine are not acceptable in the future.

To ensure users are following the SAR assessment results, users must document the prescribed additional risk mitigation (if any) and note details of the actions they have taken to adhere to the prescription in the Product Evaluation Form.

Monitoring

Mandatory monitoring is required for all RMs and users as outlined below:

- At a minimum, all users must monitor the site at least daily for the first week after application, looking for RGS carcasses present on the soil surface and ejected bait. Weekly monitoring must continue for an additional three weeks (four-week total monitoring period). Additional monitoring may be required based on the presale SAR assessment. If carcasses are found, they must be disposed of properly (see Disposal section below).
- As noted in the SAR Assessment section, increased monitoring may be required as a result of the presale SAR assessment. This may include documenting two monitoring events per day for the first week of application, followed by the standard three-week period of weekly monitoring (four-week total monitoring period).
- Users must monitor and report any presence of SAR.
 - Key SAR species present in Saskatchewan include swift fox, burrowing owl, ferruginous hawk, short eared owl, American badger, black-tailed prairie dog and Ord's kangaroo rat.
 - Information on species at risk can be found [here](#).
- Users must also monitor and report non-target poisoning. This includes SAR and all other non-target animal species.

Emergency Use Restrictions

Geographical restrictions were a requirement put forward by the Pesticides Regulatory Directorate (PRD). Under the approved EUR, the eligible area in Saskatchewan includes 208 rural municipalities located in roughly 15 crop districts located in southern and western Saskatchewan. RMs included in the eligible area were selected based on a careful consideration of species at risk presence, the ministry's RGS survey results and Saskatchewan Crop Insurance claims data.

Strychnine use is only recommended within the following application windows: March 1 to June 15 and July 15 to September 1.

Audits

Auditing is a requirement of the Strychnine Stewardship Program. Two types of audits will occur:

- **Audits of records:** This will include the RMs sales records, including information from all mandatory forms. RMs must also track the training status of users. It is the RMs responsibility to ensure users have provided complete and accurate information.
- **In-field audits:** Audits will be conducted by qualified personnel to ensure strychnine is being used properly. Users of strychnine must agree not to prevent audits before they are able to access strychnine.

What Happens If I Do Not Follow the Stewardship Program?

You will lose access to strychnine. Close adherence to all EUR restrictions is mandatory. The Strychnine Stewardship Program includes risk mitigation measures to reduce risks to an acceptable level and allowed the EUR to be granted. The EUR includes a limited geographic range and product use restrictions aimed to reduce risks to non-target animals. There is an increased level of effort required by both users and participating RMs. Potential users that are unable to meet the requirements of the Strychnine Stewardship Program must not apply strychnine.

Future Access to Strychnine

The current EUR is valid until November 1, 2027. The registration status beyond this date is unknown. The registration status is determined federally by PRD. Future access to strychnine will be impacted by the following:

- Users' adherence to the current EUR, including all required directions on the product label.
- RMs and users adhering to the Strychnine Stewardship Program.
- Proper record-keeping, with accurate and complete information provided.
- The PRD's review of the annual report submitted by the province, which will include audit results.

Disposal

Proper disposal is required for unused strychnine, surface carcasses and ejected bait:

- Any strychnine not used during the season for which it was purchased must be returned to the applicator's RM office where the strychnine was purchased. The RM office will document the returned strychnine and ensure the amount of strychnine reported to be used by the user matches the number of returned bottles. If the records are falsified or excess strychnine has not been returned, the user will not be able to purchase additional supply the following year.
- Carcasses of RGS and any other non-target animals found on the surface must be disposed of properly. Ejected bait found on the surface must also be properly disposed of.
 - Disposal instructions are outlined on the strychnine label: "All carcasses and all uneaten bait present must be disposed of by incineration or burial in a pit no less than 46 cm (approx. 18 inches) deep then covered to prevent scavengers from unearthing them."
- Non-target carcasses need to be recorded and reported.

Contact

For any questions regarding the strychnine EUR or the Strychnine Stewardship Program, please contact rgs@gov.sk.ca.