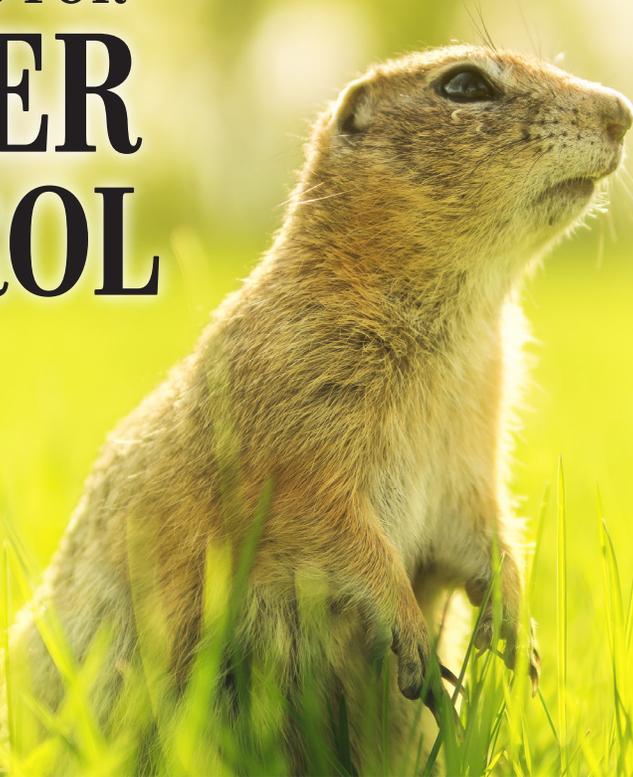


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## ALTERNATIVES FOR GOPHER CONTROL



*By Cody McIntosh, Red Deer County Agricultural Services Manager*

**G**ophers or Richardson Ground Squirrels (RGS) are currently listed under the Agricultural Pest Act as a nuisance species. The Act and this designation give a landowner or livestock manager the ability to control a pest or nuisance species on land that they own or manage.

As fieldwork begins in the spring, the presence of gopher activity and damage becomes obvious, but to successfully control RGS planning and action should begin before crops are going into the ground. Once we see the first signs of spring, (usually mid to late March), adult males begin to emerge from hibernation. If at that time of year there is a presence of large male RGS, there will be problems later in the spring and summer as young crops develop. About 2-4 weeks after the first presence of the males in March, the females emerge and mating begins. Mating season will last only 2-3 weeks and gestation is about 23 days. Gopher pups are developed enough to begin exploring only 4 weeks after birth. When we add this all together,

gopher juveniles usually emerge from mid-May to early June, depending on the timing of the spring emergence of adult males.

Knowing the life cycle is always a key step in controlling a pest; whether it is a plant or a rodent, we can choose our most effective action in a time that is most critical in their reproduction. For a RGS, the best control is achieved after first emergence in March. Successful control of RGS will be significantly improved if there is still snow on the ground rather than taking action in June or July. Unfortunately, most of our RGS calls occur in July when the hilltops have been stripped of acres of seedlings; they especially have a taste for canola at this time of year.

Popular control methods at this time are shooting or baiting with poison-laced grains. However, the Pest Management Regulatory Agency (a division of Health Canada) has recently cancelled the registration of Strychnine bait, one of the most popular control

products available. PMRA is phasing out the sale and distribution of strychnine over the next 3 seasons and it will not be available for purchase after March 4th, 2022. Strychnine cannot be used after March 4th, 2023. Further compounding the problem, is that raw Strychnine comes from India and since world trade has been affected due to COVID-19, there is a shortage (or complete lack of) Strychnine product available this spring.

When we are outside of the effective baiting season and soon one of the most effective baiting products will be unavailable, we need to explore other options to control these pests for this and future seasons. Other baits are registered and available for RGS control; one product - known as Rozol - is available through most Ag retailers like UFA and Co-op Farm and Ranch Centres. These baits are less effective as the season progresses and new green grass is the food of choice for gophers when it is available.

Biological control is an excellent option that works continuously and requires little effort from the producer or land manager. By encouraging natural predators, like hawks and other raptors through the use of raptor stands or man-made nest structures (2 round bales stack on end), control can be directed to area's that need attention. Other beneficial species include coyotes, weasels and even badgers, however the holes that badgers leave behind can cause their own set of problems.

Leaving grasses longer (over 30 cm) is also an option, as RGS are thought to prefer short grass prairie when available. An early spring application of fertilizer may give the crop or grass a boost and, as an added benefit, can also drive RGS away. Crop rotation could be an effective tool, if pasture or hay stands are infested, a switch to annual cropping may push the rodents out. However, this could lead to infestations elsewhere.

These methods are usually more labour intensive than Strychnine. Methods like trapping, or fumigation have immediate results, but are costly to administer on a large scale across a quarter section (or more) of cropland. Their best use is in specific and defined infestations where the damage is a high value per acre, areas like golf courses or vegetable and turf crops for example.

Creating an effective control plan first involves identifying the pest of concern and establishing an

acceptable level of pest numbers or crop damage. Knowing we can accept a few gophers on a parcel, at what number of holes per acre or % of crop loss do we need to take control action? Most control methods cost time and money and it may not be cost-effective to eliminate every gopher that exists on a particular parcel. However, once we determine that the pest levels are too high and decide to take control action, we have to select what control methods are most effective in our situation. To do this we have to consider how safe the method is (to the environment, to the person using the product and the general public). Another consideration is the resources required to take this action. Do we have the time to take this action? Can we afford the cost of control? Which method gives us the best results for our dollar? To select only one control method makes it simple to evaluate the return on our investment, but when we use multiple control strategies, we can sometimes multiply the return. An example of this would be to complete a baiting program in the early spring and also commit some time to shoot in the early spring as well. Male gophers that were missed in the baiting program can still be controlled before the females emerge. After that round of control, continue to watch for the emergence of the females and complete another round of baiting/shooting when they emerge. Then encourage birds of prey to nest nearby or other predators of small rodents and they could keep your numbers down for the rest of the season and even years to come. Then leave a longer grass/crop residue in the fall and any remaining ground squirrels will move along to a more hospitable site. It is possible to spend the same amount of time and money, but by timing our efforts and using multiple methods in our approach we can achieve lasting results that save over years.

The need for effective pest control will always exist for agricultural producers, however, overreliance on toxicants and singular control methods has a reduced effect over time. Integrated Pest Management (IPM) strategies must be implemented using multiple methods and will give greater and more sustainable results over time.

