

Vertebrate Pest Control & Certified Organic Farming in Montana

Date: April 30, 2020. The information contained below is believed to be accurate as of the date listed above.

Governing Rules

The Organic Foods Production Act of 1990 established national standards for the production and handling of food labeled as “organic”. The federal rule administered is USDA NOP 7CFR 205. Rule 205.105 defines allowed and prohibited substances, methods, and ingredients. 7CFR 205 Subpart G 205.600-607 is the National List of Allowed and Prohibited Substances.

How to Use This Document

This document is to help Certified Organic Producers identify potential methods to control vertebrate animals that are damaging their crops or livestock. The decision key below is to guide you through the complex process of resolving conflicts with vertebrate pests, while maintaining your status as a Certified Organic producer.

Step 1. Identification: It is essential to identify the cause of the problem correctly. Sometimes damage is blamed on a species incorrectly. The Vertebrate Pest Identification Key available at <https://agr.mt.gov/Topics/Vertebrate-Pests> may help you identify the problem. For assistance, contact Stephen M. Vantassel, Vertebrate Pest Specialist at the contact information at the end of this publication). If the problem is caused by a vertebrate

animal (an animal with a spine), go to Step 2.

Step 2. Is the vertebrate pest a rodent, bird, ungulate (i.e. deer, elk), predator (e.g. wolf, coyote, bear etc.) or other vertebrate?

- a.  If rodent, proceed to Step 4.
- b.  If bird, is it a pigeon, house sparrow, European starling, or Eurasian-collared dove, black bird, woodpecker or Canada goose? If yes, proceed to Step 4. If No, proceed to Step 3a.
- c.  If ungulate, proceed to Step 3a. If not, proceed to Step 4.
- d.  If predator, is it a wolf, bear, wolverine, bobcat, or lynx? If Yes, proceed to Step 3a. If No, proceed to Step 4.
- e.  If other, proceed to Step 3b.

Step 3a. Contact Montana Fish, Wildlife & Parks (MFWP) 406-444-2535. They can explain the process for what can be legally done to address your wildlife conflict. Once you have your list of options, proceed to Step 4.

Step 3b. Contact Montana Department of Agriculture's (MDA) Vertebrate Pest Specialist (contact information is located at the end of this publication). Once you have finished with this step, proceed to Step 4.

Step 4. Review the methods below and contact your Certified Organic Certifier to discuss which of the options may be applied to your land. The methods and products located below MAY be permitted for the control of vertebrate pests on Certified Organic fields. Methods are listed by category. For the sake of clarity, we have also listed several prohibited methods.

Keep in mind that control methods may only be used, if they are legal in the State of Montana AND authorized by your Certified Organic Certifier. The control methods listed below are ONLY provided to help stimulate conversation between you and your Certified Organic Certifier.

Control Methods for Vertebrate Pests

Habitat Modification

Definition: Habitat modification is the practice of changing the environmental conditions (food, water, shelter) that allow the species to live in that given area.

- **Deep Plowing.** Deep plowing to destroy burrows. Best if used during or before onsite of freezing, rain, ice, snow conditions.
- **Flooding.** Flooding can eliminate/suppress a variety of rodent species. Those that survive will move to higher ground.

- **Tall Grass.** Allow grass and vegetation to grow tall. This method can reduce ground squirrel and prairie dog immigration. Unfortunately, tall grass can increase the presence of voles.

Exclusion

Definition: Exclusion involves the use of materials to prevent unwanted animals from getting access to a given area.

- **Barriers.** The use of fences and similar barriers to physically prevent unwanted animals from entering a field.

Frightening Devices

Definition: Frightening devices are non-chemical products used to invoke a fear and flight response in animals much in the same way some people react to seeing a spider or a snake. Frightening devices are classified by their mode of action, namely, visual (e.g. owl effigy or Mylar™ tape), audible (e.g. propane cannon), audio-visual (e.g. pyrotechnics) and biological (e.g. raptor screech).

- **Visual, audible, audio-visual and biological frightening devices** are effective only for a few days as animals quickly habituate (become accustomed) to the frightening device. Frightening devices do not work on rodents. As a rule, there is limited effectiveness on ungulates (e.g. deer) and birds.

Mechanical Controls

- **Shooting.** Shooters must follow all safety guidelines and state and local regulations before discharging a gun, air rifle, bow or other projectile device. Ask your Certifier if you are required to use non-toxic rounds.
- **Trapping.** Trapping must follow MFWP regulations and possibly local restrictions.

- **BurrowBlocker™**. The BurrowBlocker is machine that fills burrows with a slurry of sand and water. Simultaneously, the device kills animals present in the burrow and fills the burrow making it more difficult for another rodent to occupy the space. Learn more at BurrowBlocker.com.

Pesticides & Repellents

Definition: Pesticides and Repellents are chemicals regulated by the Environmental Protection Agency (EPA) and the Montana Department of Agriculture. All pesticides have an EPA registration number. It is only legal to use products that are registered for use in Montana. To check, visit <https://mtplants.mt.gov/ProductRegFSA/BrandSearch.aspx> to see if your pesticide/repellent is registered for use in Montana.

We are hoping that carbon dioxide will be registered for control of field rodents in the near future.

ACRONYM KEY:

- **GUP**—General Use Pesticide A Pesticide license is not required to purchase or use on your own ground.
- **RUP**—Restricted Use Pesticide A pesticide license is required to purchase and use. To obtain a pesticide license, contact your county Extension Agent or MDA.

Beaver

- Toxicants: None
- Repellents: Nothing found effective

Birds

- Toxicants: None
- Repellents: Methyl Anthranilate

Deer Mice

- Toxicants: None
- Repellents: Nothing found effective

House Mice

- Toxicants: Terad3 Cholecalciferol. GUP Bell Laboratories EPA# 12455-106 Bait must be used within 100 ft of a structure.
- Repellents: Nothing found effective.

Ground Squirrels (Richardson's and Columbian ground squirrels)

- Toxicants: None
- Repellents: Nothing found effective

Muskrats

- Toxicants: None
- Repellents: Nothing found effective

Norway Rats

- Toxicants
 - Rat Ice® (Carbon dioxide). GUP. Bell Laboratories EPA# 12455-148. Outside use only around structures, golf courses, public parks and commercial nurseries. Not labelled for crops.
 - Terad₃™ (Cholecalciferol). GUP. Bell Laboratories EPA# 12455-106. Bait application restricted to within 100 ft of a permanent structure.
- Repellents: Nothing found effective

Pack Rats

- Toxicants: None
- Repellents: Nothing found effective

Pocket Gophers

- Toxicants: None
- Repellents: Nothing found effective

Prairie Dogs

- Toxicants: None
- Repellents: Nothing found effective

Predators (Coyotes, foxes etc.)

- Toxicants: None
- Repellents: Nothing found effective

Ungulates (Deer)

- Toxicants: None

- Repellents: Plantskydd® and other repellents may be acceptable. Discuss options with your advisor.

Voles

- Toxicants: None
- Repellents: None

Predators

Predators refers to using animals that will protect wanted animals from predation by keeping other animals on the landscape to deter or kill the unwanted animals.

- **House cats.** House cats are **not** an effective predator of rodents. Free-range cat predation is not limited to rodents but includes many advantageous species as well. Free-range cats are not compatible with the goal of harmony with nature.
- **Livestock Protection Animals.** Dogs, llamas, and donkeys have been found effective in reducing predation on livestock.
- **Raptors/Owls.** Installation of perch poles and owl boxes can reduce the intensity of spikes in rodent populations. Contrary to many claims, predators will not eliminate rodent presence.

Unregulated Products

Unregulated products refer to control methods that are:

- a. not regulated by the EPA or the Montana Department of Agriculture and
 - b. have only been developed in recent decades.
- Prohibited Methods for Organic Production
 - **Propane-oxygen Devices.** Brand names include Rodenator or Gophinator. The device injects a

mixture of oxygen and propane into a burrow which is then ignited. Presently, this device does **NOT** meet organic standards.

- **Carbon Monoxide Devices.** Brand names include, Cheetah, Burrow Rx and P.E.R.C. The device uses an internal combustion engine to create carbon monoxide gas which is injected into a burrow. This device does NOT meet organic standards.

Disclaimer: Reference to commercial products or trade names is made with the understanding that no discrimination is intended of those not mentioned and no endorsement by the Montana Department of Agriculture is implied for those mentioned.

Landowner Assistance

Vertebrate Pest Specialist

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Organic Certification

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