



Vertebrate Pest Control & Certified Organic Farming in Montana

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/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 another 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-Accredited 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 accredited Organic Certifier. The control methods listed below are ONLY provided to help stimulate conversation between you and your accredited Organic Certifier.

Control Methods for Vertebrate Pests

For organic operators, preventive practices must be implemented before any pesticides are used in accordance with §205.271. Nonsynthetics and synthetics on the National List should be used before any other substances are applied.

Synthetic pesticides not on the National List may be used only when all other means prove insufficient and only with prior approval from the certifier. Finally, measures must be taken to prevent contamination of organic food by those prohibited substances.

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. Consult with the Vertebrate Pest Specialist for further details on this method.

- **Barriers.** The use of fences and similar barriers to physically prevent unwanted animals from entering a field.
 - Structures: Excluding animals from structures is very effective and easier than many people think.
 - Landscapes: Excluding animals from landscapes and gardens is also possible but often requires more expense.

Frightening Devices

Definition: Frightening devices are non-chemical products used to invoke 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 accredited organic certifier if you are required to use non-toxic rounds.
- **Trapping.** Trapping must follow MFWP regulations and possibly local restrictions.
- **BurrowBlocker™.** The BurrowBlocker is a 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 and repellents have an EPA registration number unless classified as a minimal risk product (25b). In all cases, only products registered for use in Montana may be applied. To check a product's status, visit <https://www.npirs.org/state/> Ask your accredited organic certifier to review any material before use.

Pest management in handling facilities must adhere to the following:

By law, rodenticide bait stations with actives such as bromadiolone and bradifacum must be placed outside of food handling facilities.

Operators should take care to prevent the rodents moving poison into the facility. Only non-toxic methods, such as exclusion, nest elimination and mechanical traps should be used inside a food handling facility. Rodents might have nests inside food storage areas and can move poison bait into food if they are not fully excluded.

Cholecalciferol - Prohibited inside organic food processing and storage facilities.

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
 - IGI CO₂ (Carbon dioxide). GUP. Liphatech EPA# 7173-313. Outside use only in many sites, including crops.
- 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.
 - IGI CO₂ (Carbon dioxide). GUP. Liphatech EPA# 7173-313. Outside use only in many sites, including 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: Terad₃ Cholecalciferol. GUP Bell Laboratories EPA# 12455-106. Bait must be used within 100 ft of a structure.
- Repellents: Nothing found effective
- Birth Control. Senestech, Inc. sells ContraPest and Evolve.

Pocket Gophers

- Toxicants: None
 - IGI CO₂ (Carbon dioxide). GUP. Liphatech EPA# 7173-313. Outside use only in many sites, including crops.
- Repellents: Nothing found effective

Prairie Dogs

- Toxicants: None
- Repellents: Nothing found effective

Predators (Coyotes, foxes etc.)

- Toxicants: None
- Repellents: Nothing found effective

Rock Chucks

- Toxicants: None
 - IGI CO₂ (Carbon dioxide). GUP. Liphatech EPA# 7173-313. Outside use only in many sites, including crops.
- Repellents: None

Ungulates (Deer)

- Toxicants: None
- Repellents: Plantskydd® and other repellents may be acceptable. Discuss options with your advisor.

Voles

- Toxicants: None
 - IGI CO₂ (Carbon dioxide). GUP. Liphatech EPA# 7173-313. Outside use only in many sites, including crops.
- 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 have:

- a. not been regulated by the EPA or the Montana Department of Agriculture and
- b. 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 type does **NOT** meet organic standards.
 - **Carbon Monoxide Devices.** Brand names include, Cheetah, Burrow Rx and P.E.R.C. These devices use an internal combustion engine to create carbon monoxide gas which is injected into a burrow. These devices do **NOT** meet organic standards.

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

Landowner Assistance

Vertebrate Pest Specialist

Stephen M. Vantassel, ACE®

Montana Department of Agriculture

625 NE Main St. Ste 3

Lewistown, MT 59457
406-431-7720
svantassel@mt.gov
<https://agr.mt.gov/Vertebrate-Pests>

Organic Certification

Montana Dept. of Agriculture
Organic Program
302 North Roberts St.
Helena, MT. 59620-0201
406-444-7804
agrorganic@mt.gov

Acknowledgements

Rodent Icon: PowerPoint by Microsoft, Corp.
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