# Anticoagulant Prairie Dog Bait Risk Mitigation Measures to Protect Endangered Species

Improper use of anticoagulant prairie dog bait products can harm threatened and endangered (listed) species. EPA's Endangered Species Protection Program aims to protect listed species from pesticides while minimizing the impact of the program on pesticide users. This webpage contains information on how certified pesticide applicators can use anticoagulant prairie dog bait products such as Rozol and Kaput-D while minimizing exposure risks to listed and non-target species.

On this page, you will find:

- How anticoagulant Prairie Dog dog baits can affect non-target organisms
- Mitigation steps before application
- Mitigation steps after application

## How Anticoagulant Prairie Dog Baits Can Affect Non-Target Organisms

Although there is potential for unintended exposure to non-target wildlife when using any rodenticides, the use of anticoagulants, specifically products with chlorophacinone and diphacinone as the active ingredients, can be especially harmful to animals that eat poisoned prairie dogs. These animals include raptors, like eagles and large hawks, and predators, like swift foxes and black-footed ferrets. Exposure of non-target animals to the anticoagulant rodenticide occurs either directly, by feeding on the bait, or secondarily, by consuming poisoned prey.

A prairie dog may live for 1-3 weeks after it first ingests the bait. During this time, the prairie dog can accumulate the pesticide in its tissues from multiple feedings, resulting in symptoms including:

- Loss of attentiveness.
- Lethargy.
- Swollen or closed eyes.

After ingesting the bait, prairie dogs may come above ground and become easy targets for predatory non-target wildlife. Lethargy and other symptoms make the animals easier prey and increase their chance of being eaten by non-target species. Carcasses of prairie dogs that die above ground after eating the bait may also attract scavenging non-target wildlife.

Non-target wildlife's exposure to anticoagulant rodenticides can lead to decreased survival in several ways:

- Eating the bait directly, resulting in toxic effects.
- Eating poisoned prey, also resulting in toxicity.
- Killing off other species or habitat important to their survival.

For example, the federally endangered northern aplomado falcon <https://ecos.fws.gov/ecp/species/1923> may become sick or die if it eats poisoned prey. Furthermore, northern aplomado falcons do not build their own nests but instead use nest sites constructed by other raptors or ravens that may also become depleted from exposure to anticoagulants, thereby reducing the number of available nests.

The number of non-target animals, including raptors and predators, that die from exposure to anticoagulant prairie dog bait is believed to be higher than what is typically reported because of the amount of time it takes for an animal to succumb to the pesticide. Prior to death, the non-target animal may remain mobile, could continue consuming poisoned prey or bait, and may seek a place to hide off site, thereby making detection of these affected animals unlikely or difficult.

# Mitigation Steps Before Application

We worked with the U.S. Fish and Wildlife Service to come up with ways pesticide applicators can help reduce the risk of poisoning listed and other non-target species. These required actions are listed on the Rozol and Kaput-D pesticide labels.

Prior to applying the pesticides, applicators must follow these steps:

1. Consult Bulletins Live! <https://epa.gov/endangered-species/bulletins-live-two-blt-tutorial> for geographically specific use and timing restrictions no more than 6 months before you intend to use the product.
    - Geographically specific pesticide use limitations include:
        - no use of the anticoagulant prairie dog baits in all 13 black-footed ferret reintroduction areas;
        - no use within the Blackfeet and Crow reservations in Montana, as listed on the product labels; and
        - no use of the anticoagulant prairie dog baits within five counties in southwestern New Mexico to protect five species.
    - Timing restrictions to delay or shorten the application window are in place to protect listed species, specifically the grizzly bear and the Preble's meadow jumping mouse:
        - For the grizzly bear, the application of the anticoagulant prairie dog bait is delayed in the fall by 2 months, until December 1, and ends earlier in the spring by 2 weeks, on March 1. These restrictions exist in 13 counties in Montana.
        - For the Preble's meadow jumping mouse, the application of the anticoagulant prairie dog bait is limited to the period November 1 - March 15 in seven counties in Colorado and four counties in Wyoming.
    - For specific counties in New Mexico and Texas, as indicated in Bulletins Live!, USFWS must be contacted prior to applying anticoagulant prairie dog bait.

2. Conduct site assessments and perform line transects to make sure that applicators are familiar with the area where they will be applying the anticoagulant prairie dog bait and to ensure that carcass searches can be conducted post application.
    - See EPA Carcass Search and Recovery Guidelines for Black-Tailed Prairie Dogs <https://epa.gov/endangered-species/carcass-search-recovery-guidelines-black-tailed-prairie-dogs>.
    - The Line Transect Method explains how to conduct a carcass search.

# Mitigation Steps After Application

Once the pesticide is applied, the applicator is responsible for the following steps to help protect listed and non-target species:

1. Do not allow children, pets, domestic animals or persons not involved in the application to be in the area where product is being applied.
2. Do not allow livestock to graze in treated areas for 14 days after treatment and until no bait is found above ground.
3. Perform carcass searches to limit the availability of dead and dying black-tailed prairie dogs to protect listed and non-target species.
4. Report any dead listed or non-target species:
    - For all dead or dying non-target animals, call the National Pesticide Information Center at (800) 858-7378 as soon as possible.
    - For any apparently injured or sick federally listed species, report immediately by calling (303) 236-7540 (if located in Colorado, the Dakotas, Kansas, Montana, Nebraska or Wyoming) or (505) 248-7889 (if located in Texas, New Mexico or Oklahoma).
    - For any poisoned black-footed ferret, call (970) 897-2730, extension 224.

5. Remove or bury any poisoned animals found:
    - Dead prairie dogs must be buried on site in holes dug at least 18 inches deep or in inactive burrows (burrows no longer being used by prairie dogs or other species).
    - The hole or burrow must be packed with soil to avoid scavenging by non-target animals.
    - If burial is not practical (because the ground is frozen, etc.) and other disposal methods are allowed by state and local authorities, collected carcasses may be disposed of by other methods to ensure that the carcasses are inaccessible to scavengers.

Although not specifically stated on the label, the most effective method for disposing of carcasses and minimizing risks of secondary poisoning to predators and scavengers is to dispose of the collected carcasses by state-approved methods that ensure the carcasses are inaccessible.

# For More Information

- Rodenticide Use on Black-tailed Prairie Dogs and Unintended Consequences to Non-target Wildlife <https://ecos.fws.gov/ecp/species/1923>
- Certified Applicator Training for Anticoagulant Rodenticides <https://epa.gov/endangered-species/certified-pesticide-applicator-training-anticoagulant-rodenticides>
- Certified Applicator Training with Videos <https://pested.unl.edu/training-and-certification/>
- EPA Carcass Search and Recovery Guidelines for Black-Tailed Prairie Dogs <https://epa.gov/endangered-species/carcass-search-recovery-guidelines-black-tailed-prairie-dogs>.
- The Line Transect Method explains how to conduct a carcass search.

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