# Prairie Dog Control in New Mexico

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Many ranchers and land managers in New Mexico need to know about prairie dog control. Individuals often begin a control program without complete knowledge about effectiveness, efficiency, environmental concerns, or proper timing of the various control methods. The purpose of this publication is to provide an outline of various methods and explain the advantages, disadvantages, and precautions for each.

## PRE-TREATMENT CONSIDERATIONS

New Mexico is the home of the black-tailed and Gunnison prairie dogs. Black-tailed prairie dogs occupy most of the eastern half of the state, and Gunnison prairie dogs are found in the western half.

One of the first considerations is to determine if you have a problem. Although prairie dog control may be necessary for health concerns and other reasons, most control programs are undertaken because the rodents remove important vegetation. Prairie dogs clip and remove vegetation near their burrows, eating the vegetation and cutting it for nesting material. Prairie dogs also cut vegetation to maintain space and remove cover that might hide predators.

In general, if there are at least 10–15 prairie dog mounds per acre, the value of lost vegetation justifies the cost of a control program. If there are fewer than 10–15 mounds per acre, the cost of treatment usually outweighs the value of lost vegetation. If, however, prairie dog control is implemented to prevent or eliminate further expansion, considerations other than vegetation loss may justify the control effort.

Prairie dog colonies can be a problem for several reasons. In some situations prairie dog colonies have always been a natural part of the ecosystem. In semi-arid and short-grass prairie zones, prairie dogs will invade and flourish despite pasture management practices. In mid- to tall-grass prairies, heavy livestock foraging may encourage the establishment of prairie dog colonies. Rest rotation and light stocking rates can reduce potential prairie dog invasion.

Before beginning any control effort, it is important to determine the effect of control on nontarget animals. *When using any pesticide, read the label and follow application instructions.*

## CONTROL METHODS

### Toxicants

Toxicants are often the most practical and economical method for reducing or eliminating prairie dog colonies. Poison grain is usually 75–85% effective and only costs about 10 dollars per acre (including materials and labor).

Zinc phosphide is the only bait registered for prairie dog control in New Mexico. Zinc phosphide is a Restricted Use Pesticide, so users must be certified to purchase and use it. Contact your county Extension office for information on acquiring certification.

Ready-to-use baits commonly contain the toxicant on good quality oats or oat grains. Zinc phosphide is also available in a pellet form.

Prairie dog acceptance of baits and toxicants varies with weather, time of year, available food alternatives, amount of harassment of the prairie dog colonies, and other unknown causes. Zinc phosphide has a flavor and odor that may be disagreeable to prairie dogs. For this reason pre-bait the colony with untreated grain before applying treated grain.

Use clean rolled oats as a prebait if you are using 2% zinc phosphide-treated rolled oats. Drop a heaping teaspoon of untreated rolled oats on the bare soil at the edge of each prairie dog mound or in an adjacent feeding area. The prebait should scatter, forming about a 6-inch circle.

Apply toxic bait only after the prebait has been readily eaten, which usually takes 1 to 2 days. Apply about 1 heaping teaspoon of grain bait per burrow in the same way that the prebait was applied. Excess bait that is not eaten by prairie dogs can be a hazard to non-target wildlife or livestock. It is best to remove livestock, especially horses, sheep, or goats, from the pasture before toxic bait is applied. Apply toxic bait early in the day for best results and restrict any human disturbance for three days following treatment.

When using grain baits, certain conditions and application methods provide the most effective control. Best times for control are:

- Early spring immediately after the snow melt and thaw and during settled weather before green-up.
- Periods of dry, settled weather when vegetation is dry and dormant.
- After August 1 when prairie dogs are noticeably accepting more seeds and grains in their diet. During August and September, high competition for decreasing forage supplies improves the chance of successful treatment.
- During fall when food resources are in short supply and animals are “feeding up” for winter fat storage.
- On black-tail prairie dog colonies with limited space, over-crowding, and lack of food, treatment may be effective during periods of settled weather at any time of year. Early spring application is advantageous because prairie dog numbers are at their lowest point of the year. Under these circumstances less toxic bait will provide satisfactory control, reducing threat to non-target species and cutting down costs of bait and labor. Midsummer and early fall applications are less effective because more bait must be distribuited to the largest prairie dog population of the year. The result could be a number of missed animals and many living, bait-shy animals.

To ensure a successful and safe control program, follow all labeled instructions.

### Fumigants

Fumigants cost approximately 5 to 10 times more per acre than poison-grain baits and require greater care and safety in application. Fumigants require at least twice the application time and labor as grain baits, and cost 15 to 35 cents per borrow compared with 5 cents per burrow for grain baits. On large colonies, fumigation costs can be excessive, but a combined toxicant and fumigant control can be more cost-effective. First apply a grain toxicant, then follow up with an aluminum phosphide fumigation.

Fumigants come in several forms: aluminum phosphide in tablet or pellet form, and gas cartridges (“smoke bombs”). Efficiency for aluminum

phosphide is usually 85–95%. Gas cartridges provide only 35–65% efficiency, but are convenient, relatively safe to use, and are not a Restricted Use Pesticide. All fumigants except gas cartridges are Restricted Use Pesticides, so users must have EPA private applicator certification to buy and use them.

Aluminum phosphide (Roton®, Fumitoxin®, or Phostoxin®) comes in tablet and pellet forms. Apply tablets or pellets by mechanical dispensers or by hand, using gloves. After applying the fumigant, plug the hole tightly with sod. To apply gas cartridges, ignite the fuse and insert the cartridge into the burrow. Plug the hole tightly.

Apply fumigants when prairie dogs are active and soil is moist. Moist soils apparently seal the burrow, causing a concentration high enough to provide a lethal dosage. Fumigation failures are most frequent in dry, porous soils.

Fumigant controls kill non-target animals within treated prairie dog holes, but surface animals are usually not affected. Fumigants are practical in places where non-target wildlife mortality, public relations, and other considerations eliminate other methods.

### Traps

Conibear body grip or equivalent traps placed in burrow entrances effectively kill prairie dogs. The investment in traps and time makes this option impractical for large colonies, but for 1- to 5-acre plots where time is not a consideration, traps may be quite effective.

### Shooting

Consistent shooting of prairie dog towns can remove 65% of the population during the year. Annual shooting will cut forage losses and slow prairie dog invasion into new territory. A consistent shooting effort requires a great deal of time and money and rarely proves to be a practical form of control.

## RESPONSIBLE CONTROL

Those who undertake prairie dog control operations bear the responsibility for the safety of humans, the environment, and all non-target animals that share the habitat. In particular, two non-target animals share prairie dog habitat.

Burrowing owls are found in most parts of New Mexico. These rodent- and insect-eating birds live in the burrows of prairie dog towns. Burrows that have feathers or white droppings at the mouth probably contain burrowing owls. There will not be any prairie dogs in the burrows the owls are using.

Also be alert for black-footed ferrets. This very secretive animal depends almost entirely on prairie dogs for food. It is illegal to willfully kill a black-footed ferret, so make a thorough check for evidence of ferrets before undertaking prairie dog control.

Historical records show that black-footed ferrets have lived in New Mexico. However, they were never plentiful and no verified sightings have been made in the state for many years. The most obvious distinguishing feature of a black-footed ferret is a black mask across the face. A long dirt ramp outside the prairie dog burrow is also characteristic. If you believe you have seen a black-footed ferret or a sign of one, call New Mexico Department of Game and Fish at (505) 827-7882.

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