

Prairie Dogs: Are They Really What We Think?

By Ben Seaberg

Prior to European settlement of the United States, there was a diminutive rodent species that assisted in turning our country into the agricultural giant it is today. While frequently presumed to be pests or vectors of disease, prairie dogs have played an integral role in America's growth. However, instead of preserving these short-tailed distant relatives of the groundhog, farmers, land developers, and civilians alike have formed undue pressure on these rodents. Instead of destroying and uprooting their populations with reckless abandon, prairie dogs should be vigorously conserved so that they can thrive once again and assist us in our agricultural industry and in the restoration of our prairie ecosystem that is often overlooked and forgotten.

There are myriad reasons as to why prairie dog mistreatment should be put to an end, one being that prairie dogs are of great assistance in the agricultural industry. When prairie dogs build mounds for refuge and extend their burrows and colonies, they stimulate the flow of fresh air under the soil of fields above them through a natural aeration process. If there is a tunnel that is underneath a crop field, the crop soil above the tunnel will become much more fertile due to an increased level of oxygen and nitrogen in the dirt, both being essential to plant virility. This allows for crops to grow at an accelerated rate, yield more product, and be planted for longer before soil requires re-nitrogenation. Their burrowing also churns and loosens soil. This leaves fertile soil on top for plants to grow. As a result, farmers in the crop business can gain more money. Cattle and other livestock also benefit from prairie dogs because of the churned soil producing more nutritious grass to graze. Prairie dog populations will also attract predators, such as the ferruginous hawk, which feed upon true farm pests and potential hazards to crops such as rats and mice.

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Prairie dogs also need to be conserved due to how vital they are to our prairies. This is proven true by their role as a keystone species. A keystone species is a type of animal, plant, bacteria, or fungus that hugely supports their ecosystem, and, if eliminated, would cause other species to go extinct as well. This means that if the prairie dog were to be removed from the prairie, their habitat would be dramatically affected due to the removal of a food source, means of shelter, and many other commensalistic relationships. If the prairie dog were to go extinct, the prairie ecosystem would likely be destroyed with it. For instance, burrowing owls, rattlesnakes, and the endangered black-footed ferret all rely on the prairie dog as food, a source of shelter, or both. Several species of animals, reptiles, and amphibians make their home in abandoned prairie dog burrows. Moreover, due to their diet of grasses and tubers, prairie dogs benefit grazing animals such as bison, antelope, and others. As the less nutritious, nitrogen poor grass on a prairie is consumed by a prairie dog, the wholesome nitrogen-rich grass is left behind for larger herbivores. Over 150 other prairie species rely on this rodent for their survival in some way or another, including the badger, numerous raptors, and the Great Plains toad. With prairie dog populations dwindling, our country's prairie and its fauna have been put in peril.

With their necessity in the prairie ecosystem and significance in farming, one would likely expect prairie dogs to be plentiful and that they were treated as a valuable resource. However, this is just the opposite. Farmers frequently try to eradicate colonies on their farms due to unfounded beliefs of these rodents being vectors of disease, such as the plague, and that they pose a hazard for livestock because of the larger animals breaking their legs by tripping in a prairie dog mound. Both of these ideas are untrue.

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Burrows only pose a threat to large livestock in stampede situations where they panic and are not paying attention to their surroundings. Prairie dogs only become carriers of plague when an infected flea bites it. Infected fleas can bite any species of mammal and cause infection, so it isn't isolated to the prairie dog alone. Additionally, if the prairie dog was a risk to livestock due to burrows posing a tripping hazard, you could expect that the same concerns would arise for other rocks, boulders, and holes that were not generated by the prairie dog. Our bison population before European settlement didn't die out due to them tripping in prairie dog burrows, but from our expansion and over culling of their populations. Before our arrival, bison thrived, living among prairie dog colonies in a symbiotic relationship where bison grazed the grasses low while the prairie dogs provided more nutritious grass to graze. Other colonies on empty plots of land are usually bulldozed for land development due to growing human population, adding to their troubles due to destruction of their habitat. This mistreatment needs to be ended immediately. Human development causes continual disappearance of their habitat where large concentrations of prairie dogs are crowded onto small segments of land with little resources as we build and expand around them. These pocketed concentrations of prairie dogs make us mistakenly believe that they are prolific in number when in fact, we've simply surrounded them from all sides onto these small parcels of land like islands. Due to our interference, almost every species of prairie dog is endangered or on the brink of it. For example, the black-tailed prairie dog, the most common and plentiful type of this rodent, once numbered in the billions in the population size, being found in the United States, southern Canada, and northern Mexico. Today,

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this species covers less than 2% of their historical range, and reside in only a few of the mid-western states.

Fortunately, a select few wildlife organizations have been alerting the government and the people about the prairie dog's plight and importance. National parks have re-introduced prairie dogs to the land where they once thrived, giving these rodents a safe place for these rodents to thrive. However, more still needs to be done to help the prairie dog. For instance, pamphlets and posters displayed in community areas such as farmer's markets, fairs, and other venues presenting information about prairie dogs and how they are beneficial to agriculture could be given to farmers to encourage them to not harm populations they might have and to tell them about humane methods to relocate them to where they are protected. Laws concerning construction could be created that prevents land development until any prairie dog colony had been relocated to an area that could support a coterie, not bulldozed or poisoned. A proper point of relocation for a prairie dog colony would have plentiful supplies of short grasses and little long grass, which is harder to digest and makes a population more vulnerable due to the cover and camouflage provided for predators. The relocation process is very easy to carry out; although it costs money to accomplish, in fact, it is so simple that even I have assisted in it numerous times when I was younger.

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Relocation is less expensive to carry out than poisoning due to having to repeatedly apply the poison in order for it to work as poisoning initially may exterminate a small fractional percentage of the population which continual reapplication of poison into the environment ends up costing more than permanent removal and relocation. Relocation is also more humane and has a lower environmental impact than poisoning as the chemicals used may harm the environment for years after the prairie dogs were killed by harming and potentially killing other plants, insects, and animals. An inspection for relocation could be administered by an inspector, providing a valuable job, that would assess whether there is evidence of an active colony. Evidence of recent prairie dog activity would include visual observation, checking for fresh fecal waste and evidence of digging and burrowing if all the prairie dogs are underground. If there was no evidence presented after conducting several site surveys this would indicate that the population

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was relocated and that the plot would be legal to build upon. Building could commence as soon as the inspector verified the new location of the coterie and that resources available could support that population of prairie dogs. Lastly, they could be positioned at a higher point on the endangered species list so that priority would be placed on conserving them.

Even though they are helpful to both humanity and the prairie ecosystem, prairie dogs have been mistreated and put under unfair pressure for far too long. While we have already begun to take action to save this rodent, more still needs to be done to spread the message about their plight and what we can do about it. Prairie dogs are highly beneficial to both agriculture and our prairie, and we must help these rodents now in order to not suffer the consequences of their extinction.

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Works Cited

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