

Control of Prairie Dogs—the Easy Way

Glen P. Snell and Bill D. Hlavachick

One Kansas rancher is effectively reducing his prairie dog problem by using natural biological controls and good range management. Black-tailed prairie dogs are usually on the increase rather than on the decrease in this part of southern Kansas, 8 miles west of Medicine Lodge, in the beautiful rolling red hills of Barber County bordering Oklahoma.

In 1977, Bob Larson, owner-manager of the 3,600-acre Gant-Larson ranch, rested from livestock grazing his Dry Creek pasture to regain vigor in the grass and to begin using it for winter grazing. That winter, as part of the Sunflower Resource Conservation and Development (RC&D) Range-Forage-Livestock program, Larson decided to initiate a planned system on his ranch.

In Dry Creek pasture was a 110-acre prairie dog town that had been in existence for many years. Due to its large size and scattered nature more manpower and money would be needed to poison the town than was feasible. There were several examples in the Great Plains that indicated that resting overgrazed conditions of dog towns might reduce or eliminate prairie dogs.¹ The dog town in this pasture seemed to be reduced in size after only one season of rest and the necessary control factors seemed to be available.

The town is dissected with sharp draws which offer good hiding and travel-ways for coyotes, foxes, badgers, and other predators. Bob had seen coyotes in the pasture many times in the past. The decision was to try natural biological control for a few years to see if it really would accomplish anything. A Kansas Fish and Game Commission biologist and a predator control specialist from Kansas State University worked up suggestions to complement the resting program. These efforts were aimed at growing more range vegetation and furnishing travel cover for predators. The whole idea was to create a physical environment unsuitable to the prairie dog through increased vegetative growth, more predator access, food changes, and social stress while at the same time being economical, time and money-wise. The biologist was to help monitor the results of this trial each spring, summer, and fall.

The first effort involved resting the pasture each growing season during June, July, and August. Cattle grazing pressure in early spring was doubled to offer competition with the prairie dogs for early forage such as annual cheat grass and other cool-season plants. Then the cattle were removed so the warm-season plants could grow rapidly to furnish predator cover, grow winter cattle forage, and provide a visual barrier to the prairie dogs.

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¹Smith, Ronald E. 1958. Natural history of the prairie dog in Kansas. University of Kansas Misc. Publ. No. 16.

An attempt for increased screened predator access was the next step. Wire-tied hay bales were placed in general lines about 15 to 20 feet apart, leading from the edge of the draws into the dog town. This was to furnish cover for predators where grass had been kept short.

In the third effort, about 30 pounds of nitrogen per acre was applied in the middle of the dog town to encourage rapid vegetative growth. The results were not the success that had been hoped for. The fertilized area was grazed severely by the prairie dogs. Consequently, it looked more like a golf green and probably improved the prairie dog's diet. Also, it cost more in money and time than had been expected.



Prairie dog posing

SCS Photo

Placing the bales for predator travel cover was also costly in terms of man hours. It had been hoped that this item might be held to a minimum. Surprisingly, the dog population in the area where no bales were placed seemed to decrease as fast as did the ones with the bales.

Two other practices paid off very well. Whenever a cow died in the winter, the carcass was placed in the middle of the town. This was to further attract coyotes into the area. In February and March of 1979, Bob's son, Robert, trapped 26 coyotes around one carcass. In addition, prairie dog hunters were invited to shoot when no cattle were in the pasture.

Dry Creek pasture has now been deferred for four successive growing seasons. The original 110-acre prairie dog town has been reduced to 12 acres. The acreage of active holes can be fairly accurately measured from delineations on

aerial photo maps which show there was a reduction in density of active holes, especially at the outer perimeter of the active area. Evidence of predation was heaviest around the outer holes (more prairie dog bones and bits of bone and hair in coyote and badger droppings). Bob noticed a reduction in the average litter size each spring. Litters, once four or five, now average three. (Nutritional shortages? Social pressures? Easier access by predators?)

The average annual precipitation for this area is 25 inches. In 1977 the official measure at Medicine Lodge was 28 inches with a wet August. It was a little over 22 inches in 1978 with a summer that was hot and dry in July and August. In 1979, it was again 28 inches with 6 inches coming in one storm on October 29 after the growing season. The average growing season is 195 days. Soil in the prairie dog town is mostly Vernon clay loam with a 5 to 15 percent slope. The range site is Red Clay Prairie whose potential plant community is dominated by short grasses and some mid-grasses when in excellent condition. Range conditions in the active dog town varied from low fair to about as poor as you can get without plowing the land.

Changes in the vegetation within the prairie dog town first took on a dominance of red and purple threeawn grass with an increase of yellowspine thistle and various annuals. Then came an increase of western ragweed, buffalo grass and a start of silver bluestem. The outer perimeter is now dominated by a heavy cover of silver bluestem and sand dropseed. Blue grama is becoming more obvious among the silver bluestem and sand dropseed. Even scattered clumps of little bluestem can be found. Apparently, remnant rootstock had remained dormant for many years under grazing stress which brings about effects similar to extreme drought conditions, and under favorable growing conditions it began to grow again.

Three areas of the old prairie dog town no longer are active and are totally abandoned. The last two are dividing into four smaller units. We are watching these with great interest to see if they will level off at a minimal stable population.

Recommendations Regarding This Prairie Dog Article

Anyone wishing to pursue our treatments on natural prairie dog control is encouraged to do so. Admittedly, our work was not treated as a scientific investigation, but rather,



(Barber county Conservation District, SCS Great Plains Program.)

Native vegetation reclaiming an abandoned prairie dog hole.

was a combination of measures tried in an attempt to control prairie dogs without using toxic chemicals. We have no data on one treatment versus another and there was no control unit.

Future investigations should be made to determine the value of the use of fertilizer to promote vegetative growth for predator cover and visual barriers. Another treatment that might be tried is one that was discussed but not used—the placing of several raptor (predator bird) perches throughout the town to encourage bird predation and sociological stress.

Probably the most beneficial treatment was the deferring of cattle grazing during June, July, and August for four successive growing seasons. On land where wild grazing animals are the primary users, this may not be a viable treatment.

As the dog town shrinks, usually from the periphery inward, the evacuated portions could be seeded to local native grass and forb mixture to hasten reestablishment of native vegetation and to discourage penetration by pioneering prairie dogs from other sites. ●

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