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10-15-1981

PANEL DISCUSSION: ECOLOGY AND MANAGEMENT OF PRAIRIE DOGS

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Stubbendieck, James L., "PANEL DISCUSSION: ECOLOGY AND MANAGEMENT OF PRAIRIE DOGS" (1981). *Great Plains Wildlife Damage Control Workshop Proceedings*. 109. <https://digitalcommons.unl.edu/gpwcwp/109>

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DISCUSSION

Mr. Stubbendieck: Does anybody have any questions for these individuals?

Question: Mr. Garrett, when you administered the diethylstilbestrol oats, how long was it out and for what time period?

Mr. Garrett: It was applied the first week in March, the peak of the breeding season. There were two applications, two days apart. It supposedly lasts about 3 weeks.

Question: Do prairie dogs just breed once?

Mr. Garrett: Yes, which makes DES particularly appropriate for use on this animal. It minimizes the amount of treatment that is necessary.

Question: Do you have a cost estimate?

Mr. Garrett: Yes, it was pretty expensive. We bought just enough to treat this one small study colony. Twenty-five grams cost \$20.00. However, if purchased on a large scale it may be less expensive.

Question: Is this a cost per acre?

Mr. Garrett: Yes, nearly \$20.00 for the acre I treated.

Question: Do you have to apply the DES treatment every year?

Mr. Garrett: If you wanted to prevent reproduction every year, then you would. If you treat every year, colonies would eventually decrease in size. The effects of DES last about 3 weeks and only during that reproductive season. Next year we are going to test DES again to investigate the possibility of long term effects. I don't think there are.

Question: What's the annual mortality for males and for females?

Mr. Garrett: About 30%.

Question: What is the life span?

Mr. Garrett: The life span is about 6 years for females and 4 years for males, with a lot of variation.

Question: Ms. Fagerstone, in your presentation you mentioned that a colony on the map shown seemed to be interrupted by some physical barrier, either a difference in land use patterns, or a highway, or something. Can you explain what the use patterns were on the other side of that barrier?

Ms. Fagerstone: I'm not quite sure what you are referring to. There was a barrier at the Badlands National Monument border. That was toward the northern part.

Question: This was in the central part of the map.

Ms. Fagerstone: There is a road going through there and that was somewhat of a barrier to expansion. There is also a railroad and that also appeared to be somewhat of a barrier; the colonies were expanding a little bit faster, I would say, south of the road and railroad than they were to the north.

Question: Do you have any reason for the spectacular increase of 20% per year? In other words, what was the grazing situation before 1968?

Ms. Fagerstone: I think the area has been consistently overgrazed, but before 1968 prairie dogs were poisoned quite frequently. With the Presidential Executive Order that banned the use of secondary poisons on Federal lands, most poisoning was stopped, so there was no control program on the prairie dog from 1972 to 1978. I think that fact, plus the drought that occurred during that time period, caused the expansion rate of prairie dog colonies to be greater than it normally would be.

Question: On the Badlands National Monument, there's no grazing at all?

Ms. Fagerstone: There's grazing by bison and antelope, but no cattle grazing. When you look down the fenceline between the Badlands and the National Grasslands it's a very dramatic difference. The grass on the National Grasslands is short grass; the grass on the Badlands is fairly tall, up to 18 inches or so.

Question: Is this a mid-grass or a short-grass prairie?

Ms. Fagerstone: There are two different theories on that. Some people think that it should be called a short-grass prairie. I think that it's probably more of a mid-grass prairie that's kept shorter on the National Grasslands by grazing. On the Badlands you have more of the Stipas, Agropyrons, and other mid-grass species than you have on the National Grassland, and I think grazing is maintaining the short buffalograss - blue grama association on the Grassland.

Question: Ms. Fagerstone, when you talk about overgrazing of cattle, was there any cattle use there that would not be considered overgrazing?

Ms. Fagerstone: Cattle use was hard to document. The Forest Service set recommended grazing rates, but from what we saw those were rarely followed by the ranchers, and on almost every grazing allotment there were more cattle on those allotments than the recommended rate, especially during the drought period. So, I would say that almost all the areas were overgrazed in the Conata Basin.

Question: You're talking about that same area where the last speaker said there was a 26% reduction in cattle use recently?

Ms. Fagerstone: Yes, that's occurred within the last few years. We stopped looking at prairie dog colony expansion in 1978 when the Forest Service started their poisoning program. It didn't make sense to follow the expansion rates when the prairie dogs in certain areas

were being poisoned. Along with their poisoning program they started a reduction in grazing rates. But before that time it wasn't monitored that closely.

Question: Do you think there's a threshold relationship on this cattle and prairie dog business? If you have any grazing at all does this lead to an increase in prairie dogs?

Ms. Fagerstone: I doubt it. I think you can have compatibility between the prairie dog and the livestock. I don't think you will normally have a prairie dog problem on properly managed rangeland. But like I said, the degree of prairie dog - livestock competition depends on the geographic location and on the climate. Certainly the drought created a lot of the overgrazing problem. But I don't think having a few cattle on an area is going to affect it much.

Question: I have a question related to the criteria for determining overgrazing. I think that's pretty important. If for example, we have a fairly dense prairie dog town, would that be considered overgrazed? If you have a limited distribution of prairie dogs, that is, a fairly sparse count, would that be considered overgrazed? Conversely, if you have no prairie dogs and you take that same range down to that same level with cattle would that be considered overgrazed? Therefore, how do you develop the criteria by which you determine overgrazing?

Ms. Fagerstone: I think that's part of the problem that we're all facing. No one really has determined those criteria. In this instance, I'm using the term overgrazing fairly loosely based on the number of livestock the Forest Service recommended on each allotment; the Forest Service based their recommendation on the amount of forage available in the spring.

Question: I guess what I'm saying is how do you generate the criteria by which a reduction, or increase, or whatever kind of manipulation of cattle numbers takes place, and then how do you manipulate that with certain estimates of how you can alter prairie dog numbers?

Ms. Fagerstone: I think it has to be done with forage availability or forage production.

Question: So in that case, very dense prairie dog towns would be consistently overgrazed and would have no grazing permissible at all?

Ms. Fagerstone: That would probably be true.

Question: On this study, if I interpreted it right, you had a reduction of a 40-some percent in the cattle grazing. You also had a poisoning program but it seemed that the prairie dogs were doing quite well; how do you explain that if you're saying that by reducing grazing you can eliminate or drastically reduce expansion, yet when you did reduce grazing the prairie dogs still seemed to expand.

Mr. Schenbeck: Getting back to Conata Basin, in the early 70's we were running about 20,000 A.U.M.'s on that 92 square mile area, and it was reduced several times up until about 1978 when we underwent a reduction down to about 7,000 A.U.M.'s. This reduction was derived by assigning zero A.U.M.'s to the areas occupied by prairie dogs. Now, in addition to that, we controlled prairie dogs according to the guidelines presented in an Environmental Impact Statement. Conata Basin is a dry area and forage response is very slow without any mechanical renovation. Therefore, just because there was a reduction in livestock grazing and a reduction in prairie dog numbers, the forage has not responded in the same time frame; therefore we continue to have what might be termed a prairie dog problem.

Question: I don't know much about that kind of ecosystem.

Mr. Schenbeck: Hopefully, with time we'll have a forage response and perhaps our reinvasion rates back into treated colonies and our expansion into presently unoccupied territory--will be reduced but right now we're too early in the ball game.

Mr. Stubbendieck: We have time for just one more question.

Question: On these National Grasslands are there some management goals? Is the goal livestock production or black-footed ferret production or what?

Mr. Schenbeck: These are public lands; they are managed under the multiple-use concept. One of the key features of their management, though, is to demonstrate sound grassland agriculture. Therefore, you might say that the key use on those grasslands is livestock production, but we also have the other facets of multiple-use to consider.