



Natural Resources Conservation Service  
1015 West 2nd  
Oakley, Kansas 67748

Phone: 785-672-4861  
FAX: 785-672-4223  
www.ks.nrcs.usda.gov

James Ludolph  
[REDACTED]  
[REDACTED]

December 19, 2007

Dear James,

Enclosed is a copy of the letter that our range specialist addressed to me in reply to your request about range improvement. After a field visit the following was written up for your review. After you have reached a decision please give us a call and let us know how you would like to proceed

If you have any questions please feel free to give us a call.

Sincerely

A handwritten signature in cursive script that reads "Tanya Gerstberger".

TANYA GERSTBERGER  
Soil Conservationist



Natural Resources Conservation Service  
1015 West 2nd  
Oakley, Kansas 67748

Phone: 785-672-4861  
FAX: 785-672-4223  
www.ks.nrcs.usda.gov

Tanya Gerstberger  
1015 West 2nd  
Oakley Ks 67748

December 17, 2007

Dear Tanya,

This correspondence will serve as a formal reply to observations made in the field, when I accompanied you to the W1/2 2-15-35 on December 17, 2007.

The issue was, what land use would be most appropriate for the current native rangeland adjacent (east and south) of the existing 84 ac cropland field?

The acreage of concern (native range) is heavily populated with an active prairie dog colony. The condition of the range is relatively low. At this stage it is impossible for me to determine whether this is due to the prairie dogs, past over-use by livestock, or both. Regardless, the vigor and productivity of the buffalograss / blue gramma the plant community is depressed.

The alternative of sod-breaking this area is probably neither economically nor ethically sound. The soil is Elkader Silt Loam (5-15% slope). This particular soil is highly erodible from both water and wind, and its crop yield production potential is very low. If this soil were converted to cropland; three likely problems loom: 1) production will be so low that water erosion and wind erosion will be severe. 2) Surface crop residues will be inadequate to meet FSA compliance parameters. 3) Prairie dog invasion into the cropland from adjacent areas will still occur.

Elkader soil is best suited for growing native range grasses.

While the presence of prairie dogs is ecologically natural, their density is probably a concern when livestock grazing is the most feasible income source from this range.

This rangeland *can* be improved, and it will require prairie dog control and a rest-rotation grazing scheme. Reducing prairie dog densities by an estimated 75%, and grazing the range with livestock for 3-4 growing season months (rather than 6 months) will allow reasonable grass recovery. These two management tools (along with reasonable moisture) should promote increased forage by as much as 25-50% in 5-10 years.

Maps show there is approximate 125 acres of grazed range, comprised of approximately 90 acres of Elkader and Bridgeport soil (where the prairie dogs are) and 35 acres Minnequa soil (chalk flats). The area occupied by prairie dogs realistically only has about 50% livestock grazing value. The chalk flats are normal:

### Example Scenario

\*Stockers (in at 400#, out at 600#)  $600-400=200 \times .66=133$   $400+133=533$

\*Graze 4 months, rest 2 months

### Years 1-5

90 ac. x .5 x aum/ac = 13.5 aum (Animal unit month)

35 ac. x 1.0 x .55 aum/ac = 19.3 aum

32.8 Total Aum's

$\frac{32.8 \text{aum}}{533/1000 \times 4} = \frac{32.8}{2.1} = 16 \text{ head}$

### Years 6-10

90 ac. x .5 aum/ac = 45.0 aum

35 ac. x .65 aum/ac = 22.8 aum

67.8 total aum's

$\frac{67.8 \text{ aum}}{533/1000 \times 4 \text{ mo}} = \frac{67.8}{2.1} = 32 \text{ head}$

Sincerely



ROGER TACHA  
Area Range Specialist

December 28, 2007

Mr. James Ludolph

Mr. Ludolph,

This is the data I have to date. We have taken three different measurements on your land—visual prairie dog counts, a measurement to give us an idea of number of burrows per acre, and also, 400 burrows were shoveled closed and checked at 24 and 48-hr intervals to determine the percentage of active burrows. These measurements give us the prairie dog burrow density and an estimate of prairie dog numbers. The original data is attached to this sheet.

The visual counts are an estimation of the maximum number of prairie dogs present. The average number of dogs seen on your land was 82.2. This number was determined using the largest number from each of the five minute scans three days in a row. Thus, the average was made using 9 numbers—3 each day for 3 days.

I know that you are most interested in the amount of burrows per acre. To get this number, we set up 3 transects and recorded how many burrows were found along a ten-foot swath down the length of each transect. By determining the amount of acres covered by the transect, we can get an estimate of burrow density. Then, the average number of total and active burrows along the four transects was found. In your pasture, the approximate number of burrows per acre is 99.77. However, the number of active burrows per acre is 82.8. It should be stated that in this measure we classified active burrows as being those that showed evidence that a prairie dog had recently been there. These indicators were fresh tracks, digging, scat, or recently clipped vegetation.

Finally, to see the number of burrows reopened (used) in 24 and 48-hour intervals, we plugged 100 burrows per transect (400 total) with soil. The average number of burrows opened along each transect within 24 hours of being closed was 24.5. In 48 hours, the average was 27.5.

This is all we have for now, but hopefully, in a few weeks we will also have had a chance to figure the exact area that has been colonized in your pasture.

Thanks for allowing us to collect data. Please keep in mind these are preliminary estimates.

Zac Eddy

Research Assistant-Extension Wildlife

Call Hall

Kansas State University

Manhattan, KS 66506