NDSU | CENTRAL GRASSLANDS RESEARCH EXTENSION CENTER

Central Grasslands Research Extension Center – Interim Director Kevin Sedivec' s Testimony

- The livestock industry continues to be under-siege by food and nutrition, and environmental activist groups as being bad for the human diet and the environment.
- We hear time and time again that livestock are bad for the environment; they destroy habitat and pollute our water and air, need to be eliminated from our range and pastureland, and meat and dairy cause obesity and cancer.
    - The Central Grasslands Research Extension Center cannot directly study the issue of beef as a nutritional food source; however, the NDSU main station can and are addressing the fallacies of these reports and mis-guided stories.
    - The center has, can and will continue to conduct research to show the true value of livestock grazing on the environment and assess management strategies that actually enhance the land, water and air, while providing a valuable protein source to our growing population (*food security listed as #1 global issue by the UN*).

- The current movement in grazing management is adaptive management or revitalizing lands.
- The drivers to enhancing range and grasslands are soil biology and biodiversity (*biodiversity is listed by the UN as the #1 global environmental issue*).
    - We need to create greater biodiversity if we want to improve soil biology.
    - We need better soil biology to:
        - capture carbon and other greenhouse gases,
        - clean water,
        - tie-up excess nutrients caused by fertilization, chemicals, and manure,
        - and increase microbial populations and species that consume and convert chemicals and minerals produced from fertilizer, herbicides, and manure to usable sources by the plants.
    - Greater plant diversity creates high quality habitat for pollinators, birds and other wildlife species.

- It is our job as a research center to conduct studies that not only create greater opportunities for ranchers to be profitable, but address these environmental issues and improve ecosystem services.
    - To date; we have studied strategies that have increased grazing efficiency by 30 to 60 percent,
    - added economic value to our grazing lands by 25 to 35 percent,

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- reduced exotic cool-season grasses by 5 to 15 percent, and
- increased plant diversity by 2 to 3-fold.
- In 2020, we started investigating carbon capture, methane bacteria, and microbial populations to assess the soil biology as a part of the Agrobiome Initiative funded in 2019.
- In 2020, we initiated an integrated livestock/cropping system trial to assess soil chemical and physical properties, livestock performance, crop production, microbial action of microorganisms, and economics.
- In 2019, we started evaluating forage production and quality of 16 different forage crop varieties and 24 different corn silage varieties to determine which forages and varieties best fit different management operations.
- We continue to assess the environmental conditions present within the Missouri Coteau region, and how minerals and energy affect fetal development.

- We continue to conduct projects that work in collaboration with the main station scientists and other RECs. We have worked with 13 NDSU main station scientists in five different departments, almost all of the other RECs, numerous Extension agents and specialists, as well as local ranchers in the past four years.

- We strive to publish our findings in peer-reviewed journal articles – which is needed if we want to prove livestock and livestock grazing are good – and be "useable-defendable" by policy makers, advocate groups, and the scientific community.
    - We rely on NDSU Extension to "get the message out" to our constituents through Extension programming. Although Extension only received one bullet in my testimony, it may be the most important bullet if we want research findings interpreted and implemented.

- In summary, research is expensive – especially large-scale environmental research that takes time, labor, infrastructure, and a lot of soil and forage analysis. Since I started my role as director of Central Grasslands Research Extension Center, we have experienced a 12.1 percent budget reduction. The center will continue to find ways to address the needs of the agricultural and environmental communities, and the citizens of North Dakota while being fiscally responsible. We truly appreciate your support. Our final request is a hold-even budget.

Sincerely,

Kevin Sedivec, PhD
Interim Director,
Central Grasslands Research Extension Center