

## Central Grasslands Research Extension Center Written Testimony for SB 2020 for the House Appropriations Committee – March 9, 2021

- Chair Delzer and House Appropriation Committee members. For the record, my name is Kevin Sedivec, Director for Central Grasslands Research Extension Center located near Streeter.
- I want to thank the committee for the opportunity to provide testimony today. For those who do not know me, I am a native of North Dakota, born and raised in the Mandan area.
- North Dakota has 1.8 million head of cattle, with
  - Almost 95% of our beef cattle cow/calf pairs,
  - Roughly 1/3 of North Dakota is range and pasture land, and considered the fundamental base acres for the cow/calf industry,
  - These grasslands are also considered critical habitat for wildlife and pollinators; and an important resource for capturing carbon and producing high quality water for human consumption,
    - They are also a valuable recreational resource for hunting, hiking, and other outdoor activities
  - The Central Grasslands Research Extension Centers, in collaboration with Main Station Scientists and other RECs, have, can and will continue to conduct research to show the value of livestock grazing on the environment and assess management strategies that enhance the land, water and air, while providing a valuable protein source to our growing population,
  - The impacts of energy development and livestock grazing on the environment and climate change have become polarizing issues that can be viewed quite differently between most North Dakota citizens versus large populated urban regions of the country and our national politicians,
  - The common thread – irrelevant of the where the power lies – is science! Then it is our job as Extension to educate through programming (including at the local, regional and national level).
- What we can study at the national and local level - related to the environment - is creating healthy grasslands. We address this question by focusing on the soil biology and biodiversity.
- ***(Biodiversity was listed by the United Nations as the #1 global environmental issue in 2020).*** Ahead of deforestation and climate change!

- 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,
  - provide clean water,
  - increase microbial activity that consumes and converts chemicals and minerals produced from contaminants to a usable resource by the plants, and
  - create healthy grasslands for livestock production.
- 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,
  - 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, and
  - Initiated an integrated livestock/cropping system trial to assess soil chemical and physical properties, livestock performance, crop production, microbial activity, and economics.
- It is our job as a research center to conduct studies that not only create greater opportunities for farmers and ranchers to be profitable and produce a safe food, but also address environmental issues and improve ecosystem services.
- In summary,
  - Large-scale environmental research is needed; which takes time, labor, infrastructure, and a lot of soil, livestock and forage analysis – Big Data.
    - The RECs will continue to find ways to address the needs of the agricultural and environmental communities by creating a safe food while enhancing ecosystem services
  - The Central Grasslands Research Extension Center supports the 2021 Senate’s approved budget (SB2020) that enhances our livestock facilities, allows for construction of a director’s residence, and increases deferred maintenance to create new, innovative research and a safe environment for our staff and livestock.