

Dear Chairman Luick and Senators of the Agricultural Committee;

My name is Shelley Lenz, owner of State Ave Vet Clinic in Dickinson and Killdeer Vet Clinic. I also am the Founder and President of the international nonprofit Sustainable Vets International, which focuses on local economic development including food security. I would like to express my full support of this legislation.

I had the joy of running a Statewide campaign last election cycle. I drove my truck from Pembina to Amidon, Fargo to Williston talking with farmers, ranchers, waitresses, small business owners, oil workers, college kids and everything in between.

One unifying theme from my conversations across the state, that is reflected in the broad spectrum of urban and rural, republican and democrat co-sponsors of this bill is the importance of healthy soil. People shared concerns about local food movements, food security, bee populations, carbon sequestration/climate solutions, urban gardening, improved farm/beef production, dangerous algae blooms, access to clean water, healthy foods, and green spaces; hunting, flood/drought issues and economic resilience. All of these things have one thing in common--Healthy Soil.

North Dakota is continuing to lose on average 3-5 tons/acre of soil per year on cultivated lands [1, NDSU]. In addition, North Dakota's soils continue to lose high levels of carbon (or organic debris) instead of actually storing and retaining that carbon that is critical to plant growth and resiliency. This is unsustainable for one of North Dakota most important industries of Agriculture, costs North Dakota Farmer's hundreds of millions in losses, affects flood/drought damages and is degrading surface waters as evidenced by several lakes around our state closed in 2020 due to algae blooms. That is why it is important to add the language and incentives of soil RESTORATION to the soil conservation chapter of the North Dakota Century Code to encourage and educate our citizens to rebuild this precious North Dakota resource.

In addition, this Bill creates a statewide infrastructure connecting soil experts, conservation groups, producer groups, and local soil health champions who carry decades of local knowledge. A statewide network is not a duplication of existing services, but it is creating a consolidation and improved efficiency with the use of existing local infrastructure.

It might seem daunting to do a complete baseline soil study for North Dakota, but I'm confident that our research facilities in NDSU already have a lot of the data on hand and we just need to make sure we are asking the right questions.

Additionally, a statewide network will help address the significant disparity that exists between soil districts and more equitably provide access to soil health resources, incentives and tools. Soil health programs are place-dependent initiatives requiring active engagement with interested citizens, this community education and engagement is an additional benefit of the efficiencies that are a by-product of this legislation.

Funding for this initiative is in perfect alignment with the Outdoor Heritage Fund with the directive of *“Improving, maintaining and restoring water quality, soil conditions, plant diversity, animal systems, and by supporting other practices of stewardship to enhance farming and ranching.”* Soil health funding can come from many sources as it positively contributes to so many aspects of North Dakota life and livelihoods. In a state that is prone to flooding and drought, healthy soil has proven to stabilize our climate, our rivers, and our wetlands. One percent of organic matter holds 20,000 gallons/acre of water. [2, NRDC]. A 2017 study by the National Association of Conservation Districts found that soil health principles result in an economic return of over \$100/acre [3,NACD]. Soil health practices can increase soil carbon storage by 1 to 3 ton per acre per year [4, Nature Comm.] which can be capitalized on by Federal carbon capture initiatives.

The time for this legislation is now. The new federal administration has made its commitment to natural climate solutions known and will be looking to agricultural practices like investments in soil health to be making a significant contribution to carbon capture, clean air and water as part of a larger system of solutions for climate and environmental restoration.

I am proud to say that North Dakota has one of the best extension services in the union--coupled with our soil district leaders and local soil health champions--we can help lead the union in moving soil health practices in Federal soil carbon capture initiatives efficiently, equitably, and accurately.

This bill will assist North Dakota farmers, ranchers, gardeners, city planners, and landowners to improve the health of their soils, their water, and their local economy. It provides the opportunity to connect the dots of healthy soil to healthy water to healthy food to healthy economy and beyond.

Thank you for your consideration. I urge you to support this legislation. I will be testifying in person and will be available to answer you questions you may have. Please feel to contact me at (701)690-7339 or drshelleylenz@gmail.com

Sincerely,
Shelley J. Lenz, DVM, Ph.D.

¹<https://www.ndsu.edu/soilhealth/wp-content/uploads/2014/09/reduce-wind-erosion-for-productivity-2014.pdf>

²<https://www.nrdc.org/experts/lara-bryant/organic-matter-can-improve-your-soils-water-holding-capacity>

³<https://www.nacdnet.org/newsroom/case-studies-show-big-economic-benefits-soil-health-practices/>

⁴Machmuler, M. et al. Emerging land use practices rapidly increase soil organic matter. Nature Comm., 6:6995 (2015). <https://go.nature.com/2G087FM>

