

## Senate Bill 2020 Testimony

January 20, 2021

North Dakota Agricultural Experiment Station Testimony

Greg Lardy, Director, NDAES

Good afternoon Senator Holmberg and members of the Senate Appropriations Committee.

As I stated earlier, my name is Greg Lardy and I am a native of Sentinel Butte, ND where I grew up on a ranch and small grain operation. I have been at NDSU since 1997, first serving as the beef cattle extension specialist and then as department head in Animal Sciences. Thank you for your support of our base budgets and the SBARE initiatives in 2019.

When I appeared before this committee in 2019 I was serving as the acting director of the ND Agricultural Experiment Station. I'm thrilled to be with you today as director of the ND Agricultural Experiment Station an agency which plays a vital role in the future of North Dakota especially as it relates to agriculture.

I would describe the ND Agricultural Experiment Station as the research and development arm of North Dakota agriculture. We develop solutions to short and long term production challenges, develop technology that helps growers adjust to changing consumer preferences, market challenges, and disease threats. We work to provide things like more cost effective feeding and grazing solutions for livestock producers, plant varieties better suited for our conditions, and research-based solutions to a variety of technological challenges faced by growers. Our scientists seek solutions to production problems, develop new crop varieties and improved livestock production practices, and they help identify new uses for our agricultural commodities. Our REC network is strategically located across the state and serves the needs of the unique growing regions and commodities which are grown in the various locales.

This afternoon you will hear from a number of the grass roots users of our research programs. They will brief you on the impacts that these programs have on their farms, ranches, and agribusinesses and how the work we do leads to a brighter future for ND agriculture and the state's economy as a whole.

Agriculture touches every corner of North Dakota. The impact of agriculture is felt by businesses throughout the state, whether you are talking about the local farm supply cooperative in Ashley, an implement dealership in Stanley, or a technology company working on solutions for monitoring conditions at remote grain storage locations. Each of these businesses benefits directly or indirectly from the work conducted by the ND Agricultural Experiment Station.

#### A. Description and mission statement

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The agricultural experiment station shall develop and disseminate technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment.

As Chairman Birdsall mentioned, SBARE has listened carefully to the needs of agriculture and these needs can be found on pages 21-22 of the budget book. I will briefly touch on the top ranked initiatives for both agencies.

In late December, we received a letter from Legislative Council requesting additional information on 16 items related to our agency. We have included information related to that request in our budget book handout. I will specifically mention that we did receive funding from the CARES Act for ND Agricultural Experiment Station. These funds were used for items directly related to the pandemic and which were not previously in our budget. Thank you to the Budget Section for providing those funds.

The critical priority for this legislative session as identified by SBARE is restoration of the proposed reductions to our budgets identified in the Governor's Executive Budget. These cuts total approximately \$7.9 million for the ND Agricultural Experiment Station and nearly \$900,000 for the REC network. Collectively, these cuts would severely undermine our ability to deliver the research-based solutions and information our citizens rely upon to make informed decisions regarding their businesses, farms, and ranches.

The top ranked programmatic initiative for the ND Agricultural Experiment Station is the 'Big Data' initiative. As you might expect, agricultural operations generate more and more data. Our scientific enterprises are no exception. Work in almost every discipline has become increasingly focused on data. Advances in agricultural sensors, computational speeds and networking technologies produce massive volumes of monitoring data, and advances in precision agriculture will only increase data production at a rapid pace. The demand for data storage, management and analysis within agriculture and food production is greatly needed to provide the producer with meaningful management outputs that will improve their operations. In addition, weather is the primary impacting factor on all fields of agriculture, and the ability to monitor, process and analyze weather and climatic data is essential to improve producer management and reduce risk. The North Dakota Agricultural Weather Network (NDAWN) is a mesonet of more than 150 stations and generates a tremendous amount of data which can greatly improve agricultural operations through more timely applications of crop inputs, determining planting and harvesting dates, minimizing risk, etc. However, improved data utilization and a more robust mesonet are required to provide these additional capabilities for local producers. The estimated cost for this initiative is \$1.66 million.

The second ranked initiative is the Plant Initiative. This initiative is a comprehensive initiative aimed at increasing the research needed to address a variety of challenges related to crops and cropping systems in North Dakota. It includes expertise to strengthen our efforts in pulse crop and soybean breeding which continue to grow in popularity across all of North Dakota. In addition, it would provide expertise to combat emerging plant disease threats such as clubroot fungus in canola which continues to present challenges in northeast North Dakota as well as addressing

agronomic concerns in southwestern North Dakota through the addition of a research agronomist at our Dickinson Research Extension Center. The cost of this initiative is \$1.58 million.

SBARE also ranks the capital improvement project request for the ND Ag Experiment Station. A summary of the ranked list of capital improvement projects can be found on page 57 of your budget book.

In addition, the Governor's Executive Budget contained a funding recommendation for \$500,000 in one time monies for extraordinary repairs. This funding would help the Experiment Station address critical repair needs across both the Main Station and REC's.

I would also be remiss if I failed to mention the importance of a compensation package for our ND Agricultural Experiment Station employees. We believe that a compensation package will allow us to continue to retain and recruit the caliber of scientists and other personnel that the citizens of North Dakota have come to expect from our agency. We ask for your consideration of a compensation package for our employees as you consider this budget.

The ND Agricultural Experiment Station works to provide timely solutions to a variety of challenges faced by agricultural producers across the state. These solutions provide return on investment through improved yield and milling characteristics in new grain varieties, more cost effective fertilizer solutions, and improved livestock performance just to name a few. Perhaps more importantly, these solutions also provide a means for enhancing the economic conditions across the state and improve the economy of communities, both large and small, by allowing farmers and ranchers to reinvest those returns at main street businesses. In short, when we provide research-based solutions, farmers, ranchers, and agribusinesses are more profitable and they reinvest those dollars locally. Here are just a few examples of some of our impacts.

AES Impacts

- Established agribiome programs focused on soils, plants, and livestock. Began to characterize the microbiome and health of soils in spring wheat fields across the state.
- Began conducting human coronavirus testing at the Veterinary Diagnostic Laboratory in conjunction with the ND Department of Health. Also worked collaboratively to develop corona virus testing capabilities for wastewater samples in order to identify potential rising case numbers earlier.
- Released new varieties of spring wheat, hard red winter wheat, field peas, and soybeans.
- Continued to develop work in precision agriculture impacting both crop and livestock enterprises. Work includes unique collaborations with a variety of corporate and NGO's at the Grand Farm.
- Developed supplementation strategies to help livestock producers prevent the negative consequences of poor maternal nutrition and improve productivity of cattle production.

The Governor's proposed cuts would severely impact our ability to respond proactively to and address the research needs of the state's agricultural industries in key areas such as plant disease management, livestock feeding and nutrition, plant breeding, soil fertility management, farm management and economics, and other core areas. The cuts would also continue to impact our ability to attract and retain the high caliber of scientists you and our constituents have come to expect and would have lasting detrimental effects on our agency.

I ask that you consider restoring these cuts and funding our base budget per the SBARE request and also that you look favorably on the initiatives which are prioritized by SBARE.

We also have a number of individuals who wish to testify on behalf of the ND Agricultural Experiment Station. At this point I will conclude my testimony and answer any questions you may have.

Thank you for your questions and consideration of our request. At this point Blaine Schatz, director of the Carrington REC will begin testimony from our REC Network.

REC Senate: <https://youtu.be/iU7DP0Ao7h8>