

STATE BOARD OF AGRICULTURAL RESEARCH AND EXTENSION

Dr. William Nganje, Chair; December 12th, 2023

i. Background and Accomplishments

Achieving Exceptional Educational Successes: Student placement rate at a stellar 98 percent.

- Growing Graduate Programs Providing Stakeholder R&D and Contributing to NDSU R1 Mission: Approximately 40 graduate students (MS and PhDs), multiplying SBARE graduate student support by more than 10X.
- Global Recognition: Ranked among the leading Applied Economics Departments worldwide with several national award-winning faculty multiplying SBARE efforts with grants, publish 2.5x more than national average with five esteemed journal editors/associate editors.
- Collaboration with Stakeholders: Engaging stakeholders through R&D efforts from five cutting-edge research centers and faculty, with significant endowment funds.
- Livestock extension specialist now working on grants to expand hogs and other livestock receipts for ND.
- Empower Industry Professionals and Stakeholder Groups: Hosting three extension conferences on Crop Outlook, Insurance, and Ag Lenders on multiple locations in the state.
- Driving Innovation and Stakeholder Needs: All research faculty with 30% research lead Hatch projects considerable extramural funding on research and extension initiatives.

- Two Endowed Chair (CHS and AgCountry): Plus a recent federal \$2 million underway for the Midwest Ag Policy Center.
- Building a Strong Future: Active fundraising for two endowments (Commodity Trading and Burdick Center for Cooperatives).

ii. Research Needs for State Level Agricultural Impacts/Contributions, Policy and Trade Analysis

- Agricultural Policy, Trade and Contribution of the Ag Sector (CAPTS).
- Demand-side agricultural Issues are becoming more complex and volatile for producers.
- The state's reliance on agriculture and trade.
- Unstable relationship with China and trade volatility.
- Russia-Ukraine war and its impact on food security.
- Pandemic and global trade disruption.
- Success of our state is deeply intertwined with the success and sustainability of its farmers, ranchers and agribusinesses.
- Agriculture in North Dakota face unique trade challenges with port bias issues, higher production risks, and in-land location.

CAPTS has a long-standing record of excellence, enabling the center to provide critical insights into agricultural policy changes and global market dynamics that is particularly crucial for North Dakota's farmers, ranchers and agribusinesses.

CAPTS Funding Limitation.



iii. Research Need for Knowledge Continuity of the Commodity Trading Room

- The CTR has been functioning in the ABAE since 2012 and it has been highly successful. It is a state-of-the-art financial and commodity trading laboratory for data access, risk analysis, analytical software and related computational resources. It is fully supported by an endowment, with two endowed chairs (CHS and AgCountry).
- Besides research and teaching, the CTR has been the resource for numerous extension and outreach programs for ND commodity groups (about 3-5 multi-day programs per year), NCI week-long programs (2-4 weeks per year) and trade teams (5-7 per year).
- The value of the CTR to research and extension is that it has access to extensive and sophisticated technologies including data, information and analytical software.
- However, a limitation of the CTR is that it had never planned for a technology manager who would serve multiple purposes including 1) assuring that all the software and computer technologies are working correctly, 2) efficiently accessing the large number of databases, 3) preparing material and software for programs, and 4) expanding functions within CTR.

Manage the computer functions of the CTR: The position would manage the current software, software upgrades and other technology in the CTR. This will ensure all technology and software is functioning appropriately.

Data management (including crop insurance data): The software and technology in the CTR have access to a very large amount of data relevant for conducting much of the research in the ABAE. Over time, the intention of the endowment is to continually update and upgrade these resources to serve the needs of the department and industry.

Big Data: An important area of future research by faculty in the ABAE is that related to Big Data, Artificial Intelligence, Machine Learning, etc. Several faculty have been active in this research for a number of years and have had success in research and student placement. Accessing big data from the CTR will significantly improve research. Faculty could be liaison to efforts elsewhere in the AES and NDSU.

Organization and Reporting: The position is specified to serve the needs and improve the efficiency of faculty researchers and extension. The position will increase the effectiveness of the CTR by allowing more faculty to more efficiently use the CTR and will speed the adoption of new technology (AE, machine learning and big data analytics).

iv. Extension Needs for Farm & Range Transition Planning

- Production agriculture has become a complex and dynamic industry that requires a wide range of skills and strong financial resources to be successful. In addition, the 2017 Census of Agriculture estimates that 96% of all farms and ranches in the U.S. are family owned. As a result, the process used to transition management and ownership from the current generation of farmers and ranchers to the next generation can have a significant impact on the long-term success of the farm/ranch operation.
- The NDSU Extension has developed materials and offered workshops titled "Design Your Succession Plan". These workshops help farm and ranch families have open discussions about transition ownership and provide a structure to guide them through the process. The workshops focus on the information that is needed before legal and financial specialists are invited into the process for their technical assistance.
- This proposal is requesting resources to enhance and expand these educational efforts on transition management and add the continuity in leadership that is needed to reach a wider group of farm/ranch families across North Dakota.

v. SBARE Asks

- AES: CAPTS
 - \$1 million for FTEs and operating budget
 - 3 M.S. or Ph.D. in the areas of Policy, Trade and Contribution studies.
- AES: Center for Risk and Trading (Commodity Trading Room)
 - One FTE M.S. or Ph.D. in the areas of Agribusiness, Applied Economics, or Statistics; and/or an MBA with a focus/specialty in data analytics or other big data field.
- Extension: transition planning
 - One FTE for farm transition and ownership

vi. Other Efforts

- CAPTS
 - A recent federal \$2 million underway for the Midwest Ag Policy Center
 - Need for a base to address ND issues and hire long term staff
 - Endowed Chair/Professor effort to retain top faculty
- CTR
 - Two fully funded Endowed Chair (CHS and AgCountry)
 - Ongoing search for AgCountry Endowed Chair in Agribusiness
 - Fundraising support for the CTR
 - We have a top outreach leadership program (Leading for Results)