



**House Bill 1379**  
**Senate Appropriations Committee**  
**Senator Bekkedahl, Chairman**  
**March 21, 2023**

Chairman Bekkedahl and members of the Senate Appropriations Committee,

Thank you for allowing me to provide testimony. For the record, my name is David Cook. I'm the President of North Dakota State University (NDSU), and I am submitting this written testimony in support of HB1379 and the establishment of an economic diversification research fund (the Fund).

**A. Purpose.**

The purpose of HB1379 is to stimulate economic activity and help diversify North Dakota's economy. It achieves these goals through the creation of the Fund that will provide grants to all of the institutions under the control of the State Board of Higher Education, not just the two research universities. These grants will fund research aimed specifically at the state's key economic needs: (1) stimulating economic activity across the state through innovation of new technology, concepts, and products; (2) promoting job creation and career and wage growth; (3) enhancing health care outcomes; (4) addressing loss of revenue and jobs in communities with economies that depend primarily on the fossil fuel industry; and (5) providing experiential learning opportunities for students.

The Fund will encourage partnerships with both industry leaders and other granting agencies that provide matching funds. Finally, HB1379 provides oversight of the Fund by requiring both an internal and an external advisory committee along with extensive reporting requirements to legislative management.

**B. NDSU's Research Capabilities and Anticipated Uses of the Fund.**

NDSU has a framework for research and economic success that positions us to capitalize on the additional resources HB1379 would provide. This starts with being a partner among the eleven colleges constituting the North Dakota University System. Within the NDUS, NDSU is the 1862 Land Grant University with a strong focus in agriculture, which accounts for 60% of our overall research portfolio. Our seven research extension centers across the state routinely collaborate with industry and commodity partners, which aligns with the goal of HB1379. Similarly, our College of Engineering has a rich tradition of research activity that collaborates with industry, generating positive economic outcomes for the state. Finally, our College of Health Professions has researchers in pharmacy, nursing and public health who are enhancing health care outcomes – a specific aim of HB1379.

NDSU has leveraged federal programs to become a regional research leader, having been designated as one of only 146 Carnegie Classified Research One (R1) higher education institutions in the country. Being R1 is important as it positions NDSU to compete for talent and federal research investments with the likes of the University of Minnesota, Iowa State University and the University of Nebraska; major Midwest land-grant institutions. In FY21, NDSU garnered \$164M research expenditures placing it within the top 100 public research universities in the United States.

Some recent research successes include:

- Acquiring 92 patented technologies, including a recent autonomous farming patent, and \$3.1M in intellectual property licensing in FY21 and FY22.
- \$7.4 million from two NSF awards to support artificial intelligence to safeguard energy infrastructure and healthcare technology.
- \$9.7 million from the National Institutes of Health for early detection and therapeutic protocols for controlling pancreatic cancer.
- \$2.9 million to build a STEM workforce from recently graduated undergraduates; \$4.8 million since July 2022 for STEM education research (NSF).
- \$6.4 million since 2016 for NDSU-Sanford Health collaboration on obesity-related research funded by the NIH.
- Nearly \$8 million in multiple awards in cybersecurity to strengthen protections for sensitive systems such as protecting computer systems from online attacks (DOD, NSF, others).
- A five year \$4.4 million USDA-ARS research on impacts in soil fertility and health, breeding for phenotyping and varietal trait selection, and crop protection for site-specific and autonomous weed control has facilitated industry-university collaborations on soil health and autonomous data systems at the Grand Farm.
- An NDSU led NSF Great Plains I-Corps Hub that directly supports entrepreneurship at NDSU and 7 universities, including UND.

On a going-forward basis, NDSU will be prioritizing research in four key areas that impact North Dakota: (1) Food, Energy and Water Security; (2) Cybersecurity, Computer Science and Software Engineering; (3) Life Sciences; and (4) Entrepreneurship and Innovation. The grants supplied by the Fund would allow NDSU to pursue these critical topics faster and in greater depth. These investments may also translate into new technologies, services, and startups – which in turn leads to increased tech-based economic development in the state.

Finally, the Fund's investment dollars will provide increased opportunities for students to work on real-world problems, positioning them for success in their future endeavors, whether in the workforce or in launching ventures of their own.

To summarize, HB1379 provides a wonderful framework for the colleges in North Dakota to collaborate across the system and with industry to spark economic activity across the state. NDSU's historical strengths along with recent strategic planning efforts to transform its educational and research enterprises make the timing of the kind of investment HB1379 provides particularly exciting. Thank you for your time and consideration.

Respectfully submitted,



David Cook