

## NDSU Animal Sciences

*Our mission is to generate and share knowledge about the health and welfare of animals, the products they produce, and the roles they play in improving human lives.*

### Developing and Enhancing North Dakota's Animal Agriculture

Animal and animal products contributed 13.2% of North Dakota Agriculture Sector Value in 2020 (\$1.213B), whereas animals and their products make up 38.4% of Minnesota, 38.0% of South Dakota, and 31.7% of Montana's value (USDA ERS). North Dakota's feed resources are exported to surrounding states where value is added in the form of animals and their products. Development of livestock operations in North Dakota will strengthen the state's economy, improve resiliency of farms, and contribute to a healthier society.

### Our Need

The department is known nationally and internationally for contributions in the area of developmental programming, meat quality, animal well-being, human-animal interactions, and sustainability. Our Extension personnel are active in research and programming across the state.

To maintain competitiveness with granting agencies, recruiting and keeping faculty, recruiting graduate students, and growing a stronger workforce, our infrastructure needs updating and expanding. Maintaining a department of diverse species interest and disciplines will strengthen our ability to answer complex questions and deliver transformative Extension programs.

- Today the average dairy cow produces over 23,000 lb. of milk (>2,600 gal.) in one lactation. In 1978, when the 1940s-era NDSU dairy barn was last updated, cows were producing 11,000 lb. of milk. Our dairy herd is recognized consistently by Holstein Association USA ([https://www.holsteinusa.com/pedigree\\_info/recognition\\_list.html](https://www.holsteinusa.com/pedigree_info/recognition_list.html)) as one of the top university herds in the country.
- The swine barn was built in 1982 when sows produced 8 pigs/litter. Presently our sows farrow over 12 pigs/litter consistently. We have recently renovated and installed state-of-the-art gestation and farrowing areas, which helped garner a USDA NIFA grant this spring. To ensure these facilities are comprehensive and applicable to modern swine production, we need to expand and update our growing and finishing areas.
- The Beef Cattle Research Complex, completed in 2011, garners national attention. This facility helped us secure 4 of 5 USDA NIFA grants this spring. This has created a strain on our facility.
- Weather variability continues to challenge production of forage. Responding to the state needs strained both livestock producers and Extension personnel this past summer.

### Our Request

- Support infrastructure improvements at our aging dairy and swine facilities to support research and Extension in modern facilities.
- Support to add to our beef cattle research complex with replicated pen feeding.
- Support for an Extension Livestock Forage Specialist

#### DEPARTMENT OF ANIMAL SCIENCES

College of Agriculture, Food Systems, and Natural Resources

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## Improving the Health of Humans with Animals

Healthy animals improve the health of the humans who care for them. This is an old concept that has evolved and is now termed One Health (<https://www.cdc.gov/onehealth/>). However, the evidence of the interaction between humans and animals goes well beyond the connection between animal health and production, and human health. Research in this area has increased 5-fold in the last decade. Evidence shows beneficial aspects of human-animal interactions on learning, mental health, and non-cognitive skills such as team building, leadership, social and emotional intelligence, and problem solving. Community health, vitality, and resiliency also are positively impacted.

### ***Our Need***

Our Bison Strides program builds on the One Health design and embodies land-grant ideals through innovative education, research and outreach. This equine-based program serves youth, veterans, and clientele with physical and occupational therapy needs. We also have partnered with personnel from the NDSU Counselling Center to offer community programming for cancer survivors, as well as troubled youth from Home on the Range.

Expanding this program will help us reach more students locally and across the state who are at-risk by partnering with schools and offering experiential leadership opportunities to develop emotional intelligence and essential skills. Adult programming will also increase locally and across the state through recruitment and training of volunteers.

### ***Our Request***

- Support for an additional faculty member with an Extension and research appointment (with operating) to expand our research and outreach endeavors to improve and build resilient communities and people.
- Support for an additional arena to the NDSU Equine Center critical to implement mental health, therapeutic wellness, and assisted learning for North Dakotans.

## The Department

### ***Our People***

	Tenure track	Non-tenure track
Faculty	16	9
Research FTE	8.60	1.00
Extension FTE	2.65	—
Teaching FTE	4.50	8.00
Staff		
Research (AES)	10	
Livestock units (AES)	15	
Office (AES, Ext, CAFSNR)	4	
Students		
Ph.D.	8	
M.S.	15	
B.S.	323	