Beef — second only to wheat

Cattle production is ranked second only to wheat production as the most important sector in North Dakota’s agricultural economy. Research at NDSU provides critical links between laboratory research and field research conducted throughout the state.

The NDSU Beef Cattle Research Center, coordinating with the NDSU Beef Systems Center of Excellence and the NDSU feedlot at Carrington Research Extension Center, is an essential component of the research infrastructure that is vital for moving North Dakota forward in beef cattle nutrition, reproduction, genetics, meat science, food safety, nutrient management and economics.

Beef Cattle Research Center: An important investment

- Feed is the largest single cost in beef cow-calf production
- Feed quality and quantity affect the animal in every stage of production, from reproduction to finishing
- Research at the Beef Cattle Research Center will use state-of-the-art equipment to monitor and research feed quality and quantity to optimize feeding costs
- A 10% improvement in feed efficiency is estimated to be worth $40 million annually to the North Dakota beef industry.

$2.6 million required to complete facility
Rangeland management/maintenance critical

- 25% of North Dakota is classified as rangeland.
- Rangeland management is the backbone of the livestock industry, particularly cow-calf production.
- In 2007, this industry resulted in direct receipts of $691 million and a total contribution of $3.1 billion to North Dakota’s economy.
- Rangeland is being used intensively and needs to be managed carefully.

Cow-calf production $691 million direct receipts - total contribution $3.1 billion (ND 2007)

Research indicates:
Consumers value tenderness in steak and are willing to pay more for tender cuts.
Ensuring the customer has a tender product will ensure livestock production continues to thrive.

From Conception to Consumption, the Meat Science program covers it all

Working within the NDSU Beef Systems Center of Excellence, the Meat Science program uses applied and molecular research procedures to understand the connections and interactions of genetics, nutrition, environment and processing to achieve the best quality beef for the consumer.

- Nutrition: Growth starts in the uterus, and the calf’s development depends on the mother’s health and nutrition, which affect how animals grow throughout their life.
- Environment: Production practices, transportation and animal handling that minimize stress on livestock have a positive impact on beef cattle welfare, improve growth efficiency and can improve beef palatability.
- Processing: New and innovative beef processing techniques can enhance palatability and improve marketability of lower-quality beef.
- Cellular and muscle level: Research into the physiological mechanisms that regulate growth and development can lead to differences in muscle structure and affect beef tenderness.

Tourism and environment count

- Wildlife and waterfowl all inhabit rangeland areas and depend on it for food, cover and water.
- Wetlands produce 50% of waterfowl in the U.S. and therefore are valuable resources to maintain.
- Recreation and tourism based on rangeland activities such as hunting, horseback riding, wildlife viewing, hiking and biking is a multimillion dollar industry.
- Multiple land use (farming, grazing, recreation and wildlife) and maximizing profitability are a new challenge for landowners and managers.