



LIVESTOCK AND FORAGE CENTRE OF EXCELLENCE

usask.ca/lfce



LIVESTOCK AND FORAGE CENTRE OF EXCELLENCE

Field Day – June 21st

Google “LFCE FIELD DAY”



LIVESTOCK AND FORAGE CENTRE OF EXCELLENCE

Our Vision

The LFCE is an internationally recognized **collaborative** research facility that brings together scientists and stakeholders across multiple sectors ...
... to facilitate and support innovative livestock and forage **research**, student **training** and outreach, and **knowledge mobilization**.



LIVESTOCK AND FORAGE CENTRE OF EXCELLENCE

Our Mission

To facilitate innovative change in the livestock and forage industries that promotes sustainability, quality, profitability and environmental stewardship — from soil to forage to animals to people.

ECONOMIC AND ENVIRONMENTAL SUSTAINABILITY

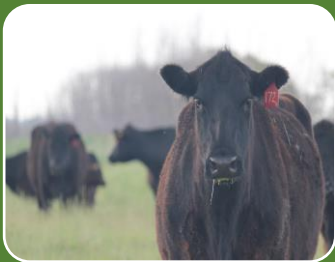


LFCE Sites



Beef Cattle Research Teaching Unit

- 1250 hd capacity
- 4 Animal Care Technicians
- Metabolism Unit



Forage & Cow-Calf Research Teaching Unit

- 300 cow-calf pair
- 6 Animal Care Technicians



Goodale (intensive research) / Native Hoofstock Centre

- 100 heifers / Bulls / Bison
- 4 Animal Care Technicians



Strategic Advisory Board

- 5 Producers: Tamara Carter (CHAIR), Duane Thompson Neil Block, Lance Leachman, Robert Johnson
- 2 Govt : Grant Zalinko, Lee Auten
- 1 National Expert: Andrea Brocklebank
- 1 International Expert: Dan Thompson (Iowa State)
- 2 University: Deans Ag-Bio and WCVM (ex-officio)
- 1 LFCE Director: Scott Wright (ex-officio)

STRATEGIC DIRECTION

PROJECTS



FUNDING

Operations

Approved Research Projects

Connectivity Funding?

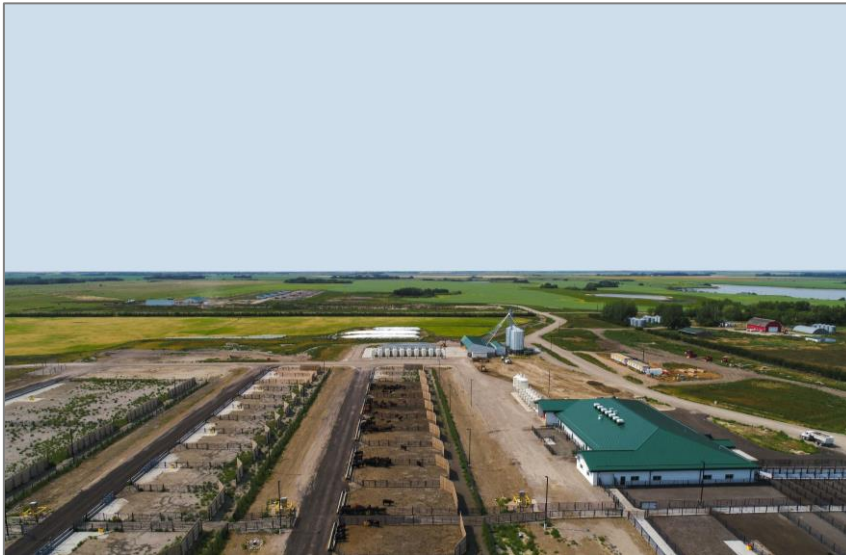
Capital Deficit?

Donors



LFCE: BUILT ON PARTNERSHIP

USask (AGBIO, WCVM, ENGINEERING), in partnership with **industry and governments**, established the LFCE in 2018. This positioned USask as a partner in innovation by promoting increased profitability and sustainability for the livestock and forage industries. LFCE will span intensive and extensive research mandates...



COST-EFFECTIVE HERD MANAGEMENT

As input costs increase, livestock producers must adopt the most efficient methods of managing their herds. The operation of the LFCE reflects every stage of the cattle production chain. Scientists can analyze the pros and cons of adopting a single cost-saving measure along the production chain in a real-world setting, which can be passed along to producers.



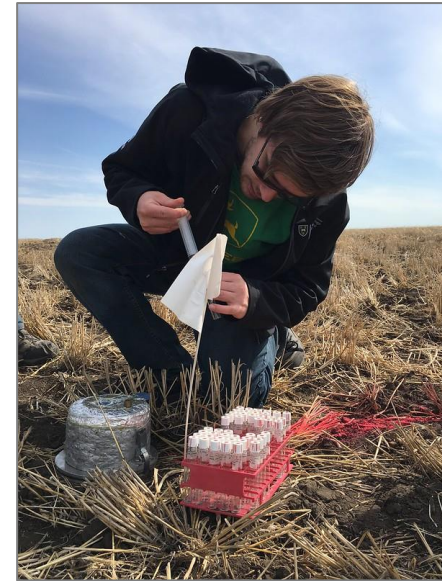
SCIENCE-BASED ANSWERS TO CONSUMERS' QUESTIONS

Consumers have questions about how western Canadian livestock producers raise animals and about understanding the value generated from grasslands. At the LFCE, researchers investigate different aspects of livestock production “from soil to supper” and test drive new options to enhance animal welfare, animal health, product quality, and food safety on Canada’s farms.



A SMALLER ENVIRONMENTAL HOOF PRINT

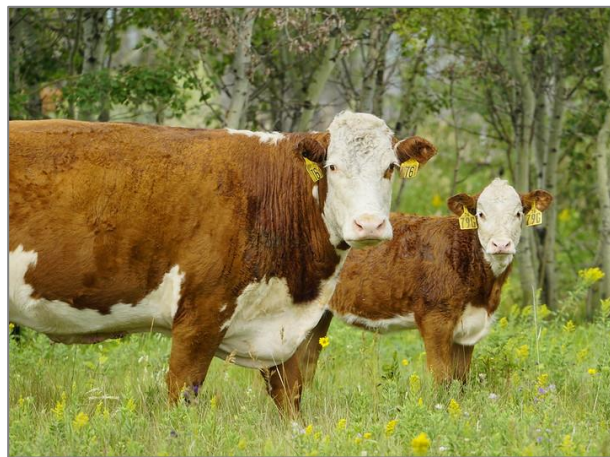
USask environmental researchers study the impact of intensive livestock operations on a greenfield site over five years of development and production. Nothing like this has been done in Canada. Based on these results, the research team will develop best practices — what makes the best site for a feedlot and what modifications are necessary to minimize the impact on soil and water resources. What are the ‘best’ grazing practices – Regenerative AG?



PRACTICAL TEACHING AND TRAINING

Students have access to the newest technologies, advanced handling facilities and a large number of animals — cow-calf pairs and feeder cattle — all located close to Saskatoon.

Rotations - Courses - Labs



LINKING PEOPLE TO KNOWLEDGE

Using the centre's facilities, agricultural, environmental, and veterinary researchers connect with producers, extensionists, and industry representatives.

Students, researchers, clients, producers, and trainees also benefit from hands-on demonstrations and training at the LFCE.



LFCE Focus Areas

Integrated Research, teaching and outreach will be the core activities, including:

- Environment and sustainability
- Genetics
- Reproductive physiology
- Herd health and nutrition
- Forage development
- Grazing and pasture management
- Feedlot management, nutrition and health
- Economics



Integrated Forage Development

Variety Development

Yield

Regrowth

Seed

In Vitro Evaluations

NIR Predictions

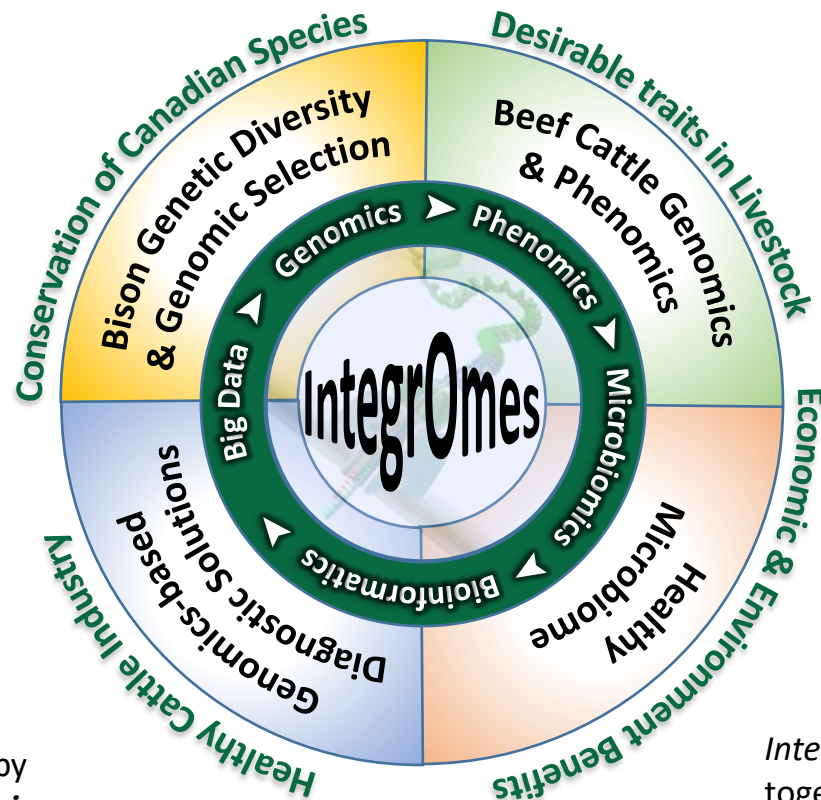
Intake

Digestability

Feeding / Grazing
Evaluations



Integrated Omics for sustainable animal agriculture and environmental stewardship



Themes brought together by
*over-lapping goals and omic
tools.*

IntegrOmics is a vehicle to bring
together diverse expertise and interests
within and among institutions



Genomic ASSETS for Livestock

ASSETS = **A**ntimicrobial **S**tewardship **S**ystems from **E**vidence-based **T**reatment **S**trategies

Partners:



Funding:



GenomeCanada



GenomePrairie



GenomeAlberta



Government of Saskatchewan



Agriculture and Agri-Food Canada

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Genomic ASSETS aims to:

- Provide **diagnostic solutions** to support **antimicrobial stewardship** in livestock
 - **Practical & cost effective** tools based on metagenomic & RPA technologies
 - Must be **timely & evidence-based** to **inform decision-making** for antimicrobial use
 - *treatment choices for groups of calves*



ON THE HORIZON

- Foraging the path ahead: A new chair in integrated forage management and utilization
- The economic lens – from production profitability to EG&S
An Industry partnership on economic valuation
- Principles and priorities – our animal numbers and facilities are over becoming subscribed, with more interested research opportunities.
 - Land base
 - Feedlot
 - Perennial Rotations



CONTACT

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