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Email: proposals@beefresearch.ca

CALL FOR LETTERS OF INTENT

RESEARCH PROJECT

The Beef Cattle Research Council's (BCRC) mandate is to determine research and development priorities for the Canadian beef cattle industry and to administer national check-off funds allocated to research. The BCRC invites letters of intent for research aimed at achieving specific priority outcomes in identified program areas.

The deadline to submit letters of intent is September 2, 2025 at 11:59 PM MT.

Application Forms and Information

Letters of intent must be prepared using the file entitled 'BCRC Letter of Intent Form - Research' provided by the BCRC and submitted electronically to proposals@beefresearch.ca. The form, as well as instructions and guidelines for submission, must be downloaded from beefresearch.ca and viewed with Adobe Reader. In the interests of improved funding efficiency, the BCRC reserves the right to share letters of intent with other research funders.

Project Timeframe

Preference will be given to projects that are up to three years in duration; if the need for a longer timeframe can be clearly demonstrated, four or five-year projects may be considered. Projects will commence no earlier than May I, 2026, with flexibility available after May Ist to ensure start dates work for the project workplan. An approved project cannot start until confirmation of matching funds has been received.

Timelines

September 2, 2025 – deadline to submit letters of intent

Late October 2025 – applicants will be notified if they have been invited to submit a full proposal

January 19, 2026 – deadline to submit invited full proposals

Early April 2026 – researchers will be notified of the funding decision

Research Outcomes

The BCRC has established clearly defined research objectives. Please refer to the detailed research outcomes beginning on page 2 before deciding to submit a letter of intent.

RESEARCH OUTCOMES DRAWN FROM THE CANADIAN BEEF RESEARCH AND TECHNOLOGY TRANSFER STRATEGY

Through the <u>Canadian Beef Research and Technology Transfer Strategy</u>, the beef industry has defined several core principles under which more specific priorities and research outcomes are established.

For the competition, the BCRC welcomes any letters of intent that work towards the achievement of one or more of the **specific research outcomes listed below** by priority area.

Priority: Feed Efficiency and Utilization

Outcome 1: Improve feed grain and silage yields through plant breeding, agronomic practices and harvest strategies

- 1. Develop new, high-yielding feed grain and silage varieties with superior agronomic performance and nutritional quality
- 2. Investigate agronomic, harvest and ensiling practices to optimize feed and silage yield, nutritional quality and animal health and performance

Outcome 2: Investigate feed processing, by-products, additives, supplements or other feeding strategies that optimize productivity and profitability

- 1. Develop rapid and cost-effective ways to assess potential toxins, nutritional value, digestibility, and optimal processing of feedstuffs and by-products
- 2. Develop cost-effective methods to measure, and feeding strategies to ensure optimal and uniform supplement intake on pasture
- 3. Re-investigate and update nutritional recommendations to maintain optimal animal health and performance

Priority: Forage & Grassland Productivity

Outcome I: Improve the management and productivity of native/naturalized pastures to enhance profitability and discourage land conversion

 Identify management practices (e.g., mob grazing, integration of grasslands into the whole grazing system and drought resiliency) that optimize utilization and resilience of pastures which may include indicators of appropriate recovery times

Outcome 2: Better understand the impact of grazing management on plant, animal, and soil interactions and how the overall system contributes to plant and animal health and productivity

- Quantify the impact of agronomic practices on economic and environmental outcomes such as plant health, forage yields and quality, animal performance, soil health and quality, water infiltration and nutrient cycling in different ecoregions of Canada
- 2. Identify and validate technology to simply and cost-effectively manage grazing systems and quantify improvements in forage productivity
- 3. Identify simple, practical, cost-effective indicators of soil quality that have impacts on forage quality and productivity

Outcome 3: Cost-effectively improve the agronomic performance, yields, nutritional quality, and palatability of annual and perennial tame species for grazing or stored forages

2. Develop and evaluate new varieties with improved germination, emergence, yield, digestibility, salinity, drought and flood tolerance, reduced fall dormancy, and improved winter hardiness and plant persistence

Priority: Environmental Sustainability

Outcome 1: Develop cost-effective ways to reduce greenhouse gas emissions, maintain or improve biodiversity, increase soil carbon, or improve infiltration on pastures and range

- 1. Validate grazing practices that improve water infiltration, forage yield and soil organic matter in Canadian conditions across a variety of ecoregions
- 2. Evaluate the roles of the soil microbiome and plant-soil interactions in short-, medium- and long-term soil carbon storage and sequestration, plant yield and water holding capacity
- 6. Develop technologies and identify practices to reduce odors associated with feedlot collection ponds

Outcome 2: Develop cost-effective ways to reduce feedlot greenhouse gas emissions and evaluate the impacts of manure nutrients on pasture and cropping systems

- 2. Quantify the effectiveness of forages to mitigate the nutrient mobility associated with extended winter grazing practices
- 3. Develop manure handling and processing technologies and strategies that enable manure to be transported and spread more cost-effectively

Outcome 3: Identify cost-effective ways to improve air, water and soil outcomes associated with beef packing and processing

3. Develop technologies that reduce odors associated with packing plants

Priority: Animal Health, Welfare & Antimicrobial Resistance

Outcome 1: 92% of cows wean a calf each year through cost-effective improvements in nutritional and overall management

- I. Refine nutritional and related management strategies to improve rebreeding success, calf survival and herd retention in replacement females
- 2. More precisely define micronutrient requirements and develop regionally-appropriate supplementation recommendations for breeding cattle of different ages throughout the production cycle in extensive winter feeding systems

Outcome 2: Develop and promote the adoption of cost-effective management practices and technologies that reduce the need for and preserve the effectiveness of antibiotics

2. Controlled trials to independently assess or validate the cost-effectiveness of promising traditional or alternative animal health products and/or management strategies

Outcome 4: Improved prevention and mitigation of animal disease issues

- I. Develop vaccines and delivery systems to cost-effectively prevent economically important production-limiting diseases
- 3. Develop point-of-care and other diagnostic tools that rapidly, accurately and cost-effectively identify infectious disease, immune/vaccination status, antimicrobial susceptibility/ resistance or nutritional status

Outcome 5: Improved prevention and mitigation of animal welfare issues

- 2. Develop cost-effective and easily administered options to alleviate procedural pain associated with castration, branding and dehorning
- 4. Develop cost-effective preventions, treatment options, and methods to control or limit lameness

Priority: Beef Quality

Outcome I: Improved customer satisfaction with Canadian Beef

2. Develop and implement processes and technology to capture carcass and offal quality defect data at processing plants in real-time

Priority: Food Safety

Outcome I: Ensured food safety along the beef supply chain

- Develop and implement cost-effective technologies targeting multiple pathogens in cattle and beef production and processing facilities, including heat- and acid-resistant E. coli and biofilm forming bacteria
- 2. Identify key spots in processing plants that are prone to contamination and difficult to clean, and develop alternative designs, surfaces and cleaning strategies to facilitate effective cleaning and identification and removal of biofilms

Outcome 2: Validate the efficacy and safety of new technologies in support of the rational regulatory approval and adoption of improved food safety interventions throughout the supply chain

2. Develop technologies and identify practices to reduce odors associated with packing plants, renderers and settling ponds