

CALL FOR LETTERS OF INTENT

BEEF CATTLE INDUSTRY SCIENCE CLUSTER V

2028-2033

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 the fifth Beef Cattle Industry Science Cluster.

The deadline to submit letters of intent is September 28, 2026 at 11:59 PM MT.

The BCRC developed the first four Beef Cattle Industry Science Clusters in partnership with Agriculture and Agri-Food Canada. The Clusters have brought together Canada's largest public and industry funders of applied beef research including AAFC, BCRC, provincial governments, provincial cattle associations, and other industry funders, focusing dollars and priorities on a comprehensive outcome-based research program directly aligned with industry's vision and priorities.

The BCRC is planning for the fifth Beef Cattle Industry Science Cluster under AAFC's next agricultural policy framework, which would cover the period **April 1, 2028 to March 31, 2033**.

Research Outcomes

The BCRC has established clearly defined research outcomes for the fifth Beef Cattle Industry Science Cluster through a comprehensive stakeholder engagement process. Please refer to the research outcomes highlighted below before deciding to submit a letter of intent.

A webinar will be hosted by the BCRC on **August 5, 2026 from 10 am – 12 pm MT** to provide further explanation, project examples, and a Q&A session around the target Outcomes and Priorities for this call. We encourage researchers and others to attend if you are considering submitting an LOI.

[Register for the Webinar Here](#)

Application Forms and Information

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

Project Timeframe

Projects up to five years in length may be submitted. Projects will commence no earlier than April 1, 2028 (subject to AAFC approval of the Science Cluster) and must be completed by March 31, 2033.

Timelines

September 28, 2026 – deadline for submitting letters of intent

Late November 2026 – researchers will be notified if they have been invited to submit a full proposal

February 1, 2027 – deadline for submitting invited full proposals

Late May 2027 – researchers will be notified of the BCRC's decision

RESEARCH OUTCOMES

DRAWN FROM THE FIVE-YEAR CANADIAN BEEF RESEARCH AND TECHNOLOGY TRANSFER STRATEGY

Through the [Five-Year Canadian Beef Research and Technology Transfer Strategy](#), the beef industry has defined several overarching core principles under which more specific outcomes are established:

1. Develop, enhance and encourage adoption of beneficial practices and innovations that support industry sustainability, resilience and competitiveness.
2. Increase producer profitability and sector resilience by responsibly increasing productivity or decreasing costs of production and risks while contributing to broader economic growth.
3. Support continuous improvements in Canadian beef demand through advancements in the quality and safety of Canadian beef.
4. Generate and mobilize trusted science to inform decision makers, policy and beneficial management practices and to support consumer confidence and public trust.
5. Accelerate innovation by developing, enhancing and encouraging adoption of leading-edge technologies that support industry productivity, competitiveness, and sustainability.
6. Ensure the maintenance and rejuvenation of critical research capacity and infrastructure that facilitate proactive inquiry and long-term innovation to support industry advancement.

For the competition, the BCRC welcomes any letters of intent that work towards the achievement of one or more of the specific research priorities listed below.

Cattle Nutrition and Production Efficiency

Outcome 1: Improved beef cattle productivity and profitability through feed processing, by-products, additives, supplements or other feeding strategies; targeted priorities are:

- Develop and/or validate rapid tests to detect and quantify antinutritional factors (e.g., ergot, nitrates)
- Characterize the nutritional value of by-products that are available in significant volumes (e.g., hemp, lentil, peas, camelina by-products)
- Improve the digestibility of high-fiber and recalcitrant feedstuffs and by-products
- Investigate starch availability in feedlot diets and methods to formulate rations based on starch content

Outcome 3: Improved reproductive efficiency through increased understanding of beef cattle mineral requirements, supplementation practices and bioavailability; targeted priorities are:

- 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

- Investigate strategies to increase the intake, absorption and bioavailability of minerals, particularly in the presence of mineral antagonists

Outcome 4: Improved animal performance and production efficiency in feedlot cattle; targeted priorities are:

- Investigate how early-life and pre-feedlot management practices influence the health, performance and profitability of beef-on-dairy calves once they enter the feedlot

Forage and Feed Production

Outcome 1: Annual feed and forage: Improved agronomic performance, yield, nutritional quality and palatability of annual species for grazing, feed grains or stored forage; targeted priorities are:

- Develop new, high-yielding feed grain and silage varieties with superior agronomic performance and disease resistance, consistent kernel size, longer silage and greenfeed harvest window, reduced lodging and improved nutritional quality
- Investigate promising international and domestic annual species, varieties and mixtures through independent comparisons on a meaningful scale (interprovincial collaboration is encouraged) to inform producer seed selection decisions under a wide range of environmental conditions and soil types
- Evaluate how soil compaction caused by cattle grazing influences subsequent crop performance and develop practical, cost-effective mitigation strategies

Outcome 2: Tame perennial forages: Improved management and productivity of tame pastures and hay stands; targeted priorities are:

- Develop and evaluate new forage varieties with improved germination, emergence, yield, nutritive value, salinity, disease resistance, drought and flood tolerance, reduced fall dormancy, improved grazing tolerance, improved seed production, improved winter hardiness and improved plant persistence
- Investigate promising international and domestic perennial species, varieties and mixtures through independent comparisons on a meaningful scale (interprovincial collaboration is encouraged) to inform producer seed selection decisions under a wide range of environmental conditions and soil types
- Investigate cost-effective agronomic practices (e.g., optimal fertilization rates) that improve forage yield, stand longevity, germination, emergence, yield, nutritive value, stockpiled forage quality, as well as salinity, drought and flood tolerance
- Investigate grazing management practices, including the interaction between rest period and utilization rate, to improve forage yield, resilience, stand longevity and animal health and performance

Outcome 3: Native/naturalized forage: Improved management and productivity of native / naturalized pastures to enhance profitability and discourage land conversion; targeted priorities are:

- Identify grazing practices to optimize the utilization and resilience of native/naturalized pastures and restore degraded rangeland
- Identify and develop cost-effective management strategies to control the spread of invasive plant species, shrubs or woody plants on rangeland
- Develop recommended rest periods for native/naturalized pastures in response to changes in grazing pressure, timing of grazing, drought, flood or fire
- Investigate the long-term economic impacts of maintaining native grasslands on marginal soils versus conversion to annual crop production

Animal Health, Welfare and Antimicrobial Resistance

Outcome 1: Improved prevention and mitigation of economically relevant and emerging animal disease issues (e.g., neonatal diarrhea, calf pneumonia, bovine respiratory disease, histophilosis, mycoplasmosis, digestive upsets, liver abscesses, lameness; targeted priorities are:

- Advance basic research (e.g., microbiome, host-microbiome interactions, etiology, pathophysiology) into common production-limiting diseases to support development of cost-effective prevention and treatment options
- Identify, develop and validate key practices (e.g., management of cattle, feed, water, facilities) that cost-effectively maintain calf health through weaning and improve post-weaning health and feedlot productivity
- Develop and independently validate vaccines, novel health products and practices that cost-effectively support animal health, prevent economically important production-limiting diseases and reduce the need for antibiotic treatment

Outcome 2: Improved prevention and mitigation of animal welfare issues; targeted priorities are:

- Develop cost-effective and easily administered tools and strategies to manage procedural and chronic pain associated with castration, branding, dehorning and lameness
- Develop cost-effective practical alternatives to branding
- Quantify the impact of bedding and pen conditions on animal health, welfare, carcass weight and grade, performance, tag score and feedlot economics

Outcome 3: Improved technologies and strategies to rapidly, accurately and cost-effectively predict, detect and diagnose economically important production-limiting and emerging diseases to reduce the need for and preserve the effectiveness of antibiotics; targeted priorities are:

- Which animals are likely to get sick? Improved assessment of the nutritional, immune and vaccination status of cattle to predict the risk of disease before signs of clinical disease becomes apparent
- Which animals are sick? Improved disease detection in live cattle to assist with timely and appropriate treatment decisions
- What is causing sickness? Improved diagnosis of specific pathogens associated with production limiting diseases, along with their specific virulence and antibiotic resistance profiles

Outcome 4: Maintain effective surveillance of production -limiting diseases, production practices, antimicrobial use and antimicrobial resistance; targeted priorities are:

- Support ongoing surveillance of management practices and animal health and productivity information at the cow-calf, backgrounding and feedlot levels across Canada

Beef Quality

Outcome 1: Improved beef carcass quality; targeted priorities are:

- Develop and implement processes and technology to evaluate tenderness, identify tag, bruising, foreign objects and liver abscesses in real-time at processing plants
- Develop and implement processes and technology to report data gathered at processing plants back to the producer to inform improved on-farm cattle management practices
- Reassess carcass lean meat and retail cut yield predictions in Canada's current slaughter cattle population, in collaboration with broader North American initiatives

Outcome 2: Improved consumer satisfaction with Canadian beef; targeted priorities are:

- Summarize the available science regarding how ingredients and by-products commonly used in Canadian feedlot diets affect the eating quality of beef and identify critical knowledge gaps
- Summarize the available science regarding differences in eating quality between different retail cuts of Canadian beef to assist in market identification and differentiation and identify critical knowledge gaps

Food Safety

Outcome 1: Improved food safety in beef production and processing facilities; targeted priorities are:

- 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
- Identify key management practices in processing facilities that help avoid or limit biofilm formation
- Develop simple and cost-effective techniques and technologies that reliably detect biofilms in difficult-to-clean places in processing facilities

Outcome 2: Validated efficacy and safety of new technologies in support of the rational regulatory approval and adoption of improved food safety interventions throughout the supply chain; targeted priorities are:

- Develop technologies and identify practices to reduce odours associated with packing plants, rendering facilities and settling ponds

Outcome 4: Improved air, water and soil outcomes associated with beef packing and processing; targeted priorities are:

- Develop cost-effective cleaning technologies and procedures that ensure food safety with less

need for (hot) water, sanitizers and labour in large and small processing facilities

Environmental Sustainability

Outcome 1: Improved on-farm profitability through practices that reduce greenhouse gas emissions, improve biodiversity, increase soil carbon or improve water infiltration on pastures and rangeland; targeted priorities are:

- Investigate cost-effective methods to reduce greenhouse gas emissions that also improve animal performance in pasture- or forage-based systems
- Evaluate the roles of animal management, soil microbiome and plant-soil interactions in short-, medium- and long-term soil carbon storage and sequestration, plant yield and water holding capacity
- Evaluate how grazing management affects biodiversity, water quality and soil health

Outcome 2: Improved air, water and soil outcomes associated with confined cattle feeding operations; targeted priorities are:

- Evaluate the cost-effectiveness of supplements, strategies and practices used to reduce greenhouse gas emissions in the feedlot using a systems approach
- Identify and develop strategies or technologies to cost-effectively reduce odour in feedlot production systems

Outcome 3: Improved air, water and soil outcomes associated with beef packing and processing; targeted priorities are:

- Develop cost-effective cleaning technologies and procedures that ensure food safety with less need for (hot) water, sanitizers and labour in large and small processing facilities

Knowledge Mobilization

Outcome 1: Improved understanding of the impact of knowledge mobilization practices; targeted priorities are:

- I. Systematic review identifying knowledge mobilization practices that effectively contribute to measurable practice change and production metrics within different sectors of the beef industry