BCRC
BEEF CATTLE RESEARCH COUNCIL

Research Facts
REVIEW

Value of Research in the Canadian Beef Industry

BCRC and Beef Cattle Industry Science Cluster

The Beef Cattle Research Council (BCRC) is Canada's national industry-led funding agency for beef research. Nationally, the BCRC receives on average 15 cents of every National Check-off dollar, which is used to fund research and development activities focused on improving the competitiveness and sustainability of Canada's beef industry.

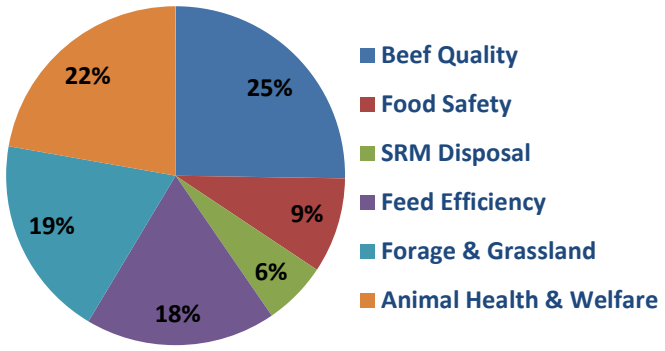
The BCRC developed the Beef Cattle Industry Science Cluster in 2009 under Growing Forward to enhance industry leadership in developing and managing applied science and technology research plans aligned with industry priorities. Industry and government funding commitments through the Cluster total $11.25 million directed to 32 research projects. This initiative, in which every National Check-off dollar is matched by six AAFC dollars, is focused on advancing priority research through the collaboration of Canada's main public and industry beef research funders. As a result of the Cluster, alignment of research resources with industry priorities achieved an increased level of industry research investment, capacity development in critical areas and improved collaboration across research institutions.

In addition to investments made through the Cluster, the BCRC has contributed over $5 million to more than 60 other research initiatives over the past ten years. These BCRC investments have leveraged other industry and government dollars, leading to total funding exceeding $20 million.

Core Areas of Focus

Collaboration and investments under the Cluster are focused on two core research objectives under which more specific research programs have been established:

- Improve production efficiencies (~65% of funding): through enhanced feed and forage production, increased feed efficiency, decreased impact of animal health and welfare issues, and improved utilization of specified risk materials.
- Improve beef demand and quality (~35% of funding): through reduced food safety incidents, defining quality and yield benchmarks supporting the Canadian Beef Advantage, improvements in beef quality, and development of post processing technologies to optimize cutout values.



With research programs under the Cluster entering their fourth year in 2012/13, focus is now placed on assessing research results and encouraging the utilization of relevant knowledge and technology by industry, and determining future research directions.

Importance of Producer Check-off Funded Research

Check-off funds are needed to trigger government investments. Federal government investments in applied beef production research and technology transfer declined by 15% in 1994-95, and another 30% between 1995 and 2008. It is difficult to maintain federal government involvement in applied beef research without matching industry investment, as evident by AAFC's departure from forage research. Through the Cluster, the BCRC was able to initiate development of three specific research programs intentionally designed to ensure the maintenance of core research expertise in food safety, carcass quality and grading, and forage breeding.

Check-off-funded research benefits producers directly. A study done for the National Check-off Agency reported that the overall return to producer check-off dollars was 9:1. Returns to marketing were 7.55:1, and returns to research were 46:1. The extremely high return to research was mainly attributed to research being historically underfunded, and the fact that applied research tools are directly available to producers.

Applied beef research has direct benefits for Canada's beef industry. Improved or new ways of producing cattle and beef can improve producers' bottom lines. For example, carcass weights have increased by an average of 7lb per year over the past 30 years due to improvements in genetics and production. This was worth $15 million in 2011 alone. Feed conversion efficiency has improved by 30% over the past 30 years; a further 1% improvement would save the feedlot sector $11.1 million annually. Returning weaning-to-slaughter survival to rates seen in the 1990's would save Canada's backgrounding, grass and finishing sectors $160 million annually.

Applied beef research has indirect benefits for Canada's beef industry. Applied beef and cattle research can also contribute to industry competitiveness and sustainability through improved consumer confidence and science-based regulation.

Antimicrobial use and resistance, for example, have received considerable negative, inaccurate attention from the media, activist groups and legislators throughout North America. Research funded by the BCRC demonstrated that less than 1% of the antimicrobial drugs used in feedlot cattle are of very high importance in human health, which explains why 2% or less of E. coli samples isolated from feeder cattle, cattle entering abattoirs and retail beef have resistance to these drugs. These results are used in communications with policy makers and government, including an appearance before the Standing Committee on Health in 2011. New technologies may allow for more precise determinations on whether antimicrobial resistance is transferring from livestock to human pathogens.

Unfounded concerns around livestock transport lead to calls for tighter regulation, reduced hours in transit and/or increased frequency and length of feed, water and rest stops. Research funded by the BCRC demonstrated that over 99.9% of cattle reach their destination without any signs of injury. This research supports outcome-based regulations and contributes to the Code of Practice for the Care and Handling of Beef Cattle, which is currently under revision.

Extension and Technology Transfer

The BCRC has committed to furthering its extension efforts and, as part of the Cluster, taking a leading role in enhancing technology transfer in the beef industry by developing a Technology Transfer and Knowledge Dissemination Strategy and hiring a Beef Extension Coordinator.

The strategy includes cultivating technology transfer skills within the research community, and connecting applied researchers to early research adopters to encourage rapid adoption of new technologies. Using web-based tools and other mechanisms, such as the national Verified Beef Production™ on-farm food safety program, the extension of research knowledge to producers related to food safety and quality, animal health, and production efficiencies will be accelerated.

Second Beef Cattle Industry Science Cluster

The first Cluster has proven to be a very successful step towards improving coordination of beef research funding in Canada. Planning for the next Beef Cattle Industry Science Cluster under Growing Forward II is underway. Desired industry research outcomes have been defined through the engagement of industry stakeholders, funding agencies, and researchers. Program planning to achieve outcomes is now underway. The BCRC intends to have a comprehensive research proposal ready for the commencement of Growing Forward II on April 1, 2013.

National Beef Research Strategy

The BCRC and national Beef Value Chain Roundtable recognize that continued focus needs to be placed on aligning other provincial and national industry and government funders to develop a single national research strategy with defined research outcomes and the commitment of major funders to achieving those outcomes. As a first step in developing a national strategy, a meeting of all major funders was convened in March 2012, at which all participants agreed that the Canadian beef industry is in need of a national framework that builds on current efforts. Core areas of focus moving forward with the national strategy include:

1. BCRC to oversee a National Research Inventory - acting as a custodian of funding portfolios, decisions, and other relevant information
2. Deliver a robust priority setting process that identifies specific national research outcomes on a 5-year basis
3. Define a strategy that considers outcomes against individual funding portfolios, infrastructure, capacity, etc., to define the most appropriate strategy moving forward
4. Gain commitments from funders to ensure all research priorities are addressed
5. Explore additional mechanisms to coordinate funding processes
6. Explore opportunities to consolidate extension efforts

Moving Forward

Canada is in a position to benefit from global growth in beef demand, supported by favorable production and regulatory conditions, and a continued focus on overall industry competitiveness. Future enhancement of competitiveness depends in large part on investment in research that helps the industry manage costs and increase efficiency. Research will also play a critical role in supporting the industry's value proposition, informing regulation and advocacy, and expanding beef exports using science-based regulations and trade agreements.