

Advancing and recognizing beef sustainability in Canada: The role of the Canadian roundtable for sustainable beef

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Abstract

The paper describes the Canadian Roundtable for Sustainable Beef (CRSB)'s role in advancing and recognizing beef sustainability in Canada. It provides a brief overview of the organization's three core pillars of work: 1) Sustainability Benchmarking; 2) Certification Framework; and 3) Sustainability Projects. The paper also highlights the sustainability performance of Canadian beef and how multi-stakeholder collaboration can support sustainability efforts and impacts.

Key words: CRSB, beef, sustainability

Introduction

The Canadian Roundtable for Sustainable Beef (CRSB) was formed in 2014 with a mission to advance continuous improvement of Canadian beef industry sustainability through multi-stakeholder engagement, collaboration, communication and science. Currently, the organization has over 110 members and observers, representing beef producers, processors, retail and food service companies, non-governmental organizations, food and agriculture businesses, academic institutions, scientific researchers, and various levels of government. The CRSB membership collaborates to advance the organization's mission and its three core pillars of work: 1. sustainability benchmarking; 2. certification framework; and 3. sustainability projects.

CRSB has adopted the definition and five principles of sustainable beef established by the Global Roundtable for Sustainable Beef. The definition is "a socially responsible, environmentally sound and economically viable product that prioritizes Planet; People; Animals; and Progress"¹⁰. The five principles that guide this definition include Natural Resources, People and the Community, Animal Health and Welfare, Food, and Efficiency and Innovation¹⁰, all of which are underpinned by economic viability.

This paper describes the CRSB's three pillars of work as well as the sustainability impacts achieved through multi-stakeholder collaboration.

Sustainability benchmarking

The National Beef Sustainability Assessment is a comprehensive farm-to-fork benchmarking study of the social, economic and environmental performance of the Canadian beef industry⁵. It was conducted in 2014-16, by Deloitte LLC and Canfax Research Services. The environmental assessment portion of the study included two main segments: an Environmental Life Cycle Assessment (E-LCA) and a Land Use Assessment (LUA). The E-LCA examined the beef industry's impact on climate change, fossil fuel use, water use, and air and land pollution potentials. The E-LCA followed the principles and framework for life cycle assessment of the International Organization for

Standardization 14040. The Food and Agriculture Organization of the United Nations Livestock Environmental Assessment and Performance guidelines were also applied. The life cycle inventory was made using SimaPro, an LCA software program. Seventy-seven beef producer surveys, as well as several expert consultations, informed the modeling assumptions. Canadian specific data were used to assess most environmental topics; however, data availability and quality were limited for some topics, and in these cases, the most appropriate international sources were used as proxies.

The LUA assessed topics not well addressed in standard life cycle assessments such as biodiversity, carbon soil sequestration, and water risk. Innovative techniques were developed to assess these topics in this study.

The social assessment (S-LCA) followed the United Nations Environment Programme/Society of Environmental Toxicology and Chemistry guidelines. The S-LCA provided a baseline of industry hotspots pertaining to working conditions, animal welfare, and antimicrobials. Producer viability and consumer resilience were the key focus areas for the economic assessment.

Over the past 30 years (1981-2011), the Canadian beef sector has been able to reduce its greenhouse gas footprint by 15% through advancements in technology and management³. Comparing the same time periods, it took 29% fewer cattle in the breeding herd and 24% less land to produce the same amount of beef¹¹.

The National Beef Sustainability Assessment provided baseline performance metrics for the Canadian beef sector. It showed that Canadian beef has one of the lowest greenhouse gas footprints in the world and lands used by beef farmers and ranchers store approximately 1.5 billion tonnes of carbon. The assessment also provided information about the biodiversity potential of Canadian beef production; for example, lands managed by Canadian beef farmers and ranchers provide 68% of the wildlife habitat capacity on only 33% of the Canadian agricultural land used for beef production⁵.

To complement the assessment, a National Beef Sustainability Strategy was then developed in consultation with the CRSB membership. The strategy contains key performance indicators, action items and goals for continuous improvement in sustainability performance⁶. An interim report in 2020 showed that, of the 42 action items identified in the strategy, 76% (32) have been partially or completely addressed through industry and stakeholder activities⁷.

Building on the assessment and strategy, as well as other work in Canada, the seven national organizations that comprise the Canadian Beef Advisors, including CRSB, established a suite of ambitious ten-year goals across seven key topics areas to demonstrate how to address continual improvement in how cattle

are raised, and the importance of enhancing the natural environments under the care of beef farmers and ranchers¹². These goals, completed and released in 2021, include, but are not limited to, the following:

- Greenhouse gas and carbon sequestration
 - Safeguard the existing 1.5 billion tonnes of carbon stored on lands managed with beef cattle;
 - Sequester an additional 3.4 million tonnes of carbon every year;
 - Reduce primary production GHG emission intensity by 33% by 2030; and
 - Reduce food loss and waste (from secondary processing to consumer) by 50% by 2030.
- Animal health and welfare
 - Ensure the five freedoms of animal wellbeing by increasing adoption of on-farm management practices; and
 - Ensure the effectiveness of existing and future antimicrobials is preserved to support human and animal health and welfare.
- Land use and biodiversity
 - Maintain the 35 million acres of native grassland in the care of beef producers; and
 - Maintain a network of natural landscapes and healthy functioning ecosystems through well-managed grazing systems that maintain sustainable plant communities and healthy rangelands.

Certification framework

Consumers are more and more interested in how their food is produced. Launched in December 2017, CRSB developed the Certified Sustainable Beef Framework to demonstrate sustainability in Canadian beef production and processing, to assist retail and foodservice companies in meeting sustainable sourcing commitments, and to provide clear, transparent, science-based messaging to the public about beef sustainability in Canada.

The Framework consists of four main components: 1) two standards; 2) assurance protocols; 3) chain of custody requirements; and 4) sustainability claims. The standards include the indicators, goals and outcomes that are measured to certify beef production and primary processing operations for sustainability^{9,8}. The assurance protocols provide requirements for the certification process². The chain of custody requirements outline the technical and administrative guidelines for tracking beef from CRSB Certified operations³. The communications, claims and labelling guide provides direction on how to communicate about the framework⁴.

The standards are organized around the five principles of sustainable beef. Finalized in 2013, the Code of Practice for the Care and Handling of Beef Cattle was developed through a collaborative process by a consensus and science-based organization called the National Farm Animal Care Council. The code of practice contains the animal care requirements and recommended practices for farmers and ranchers raising beef cattle in Canada¹³. The code of practice is the foundation of the animal health and welfare indicators in the Sustainable Beef Production Standard.

The Framework followed international guidelines in its development – which included two rounds of public consultation on each of the two standards – and was guided by three multi-stakeholder committees. It was an iterative process that spanned almost three years.

Framework uptake continues to grow. In 2020, 17% of the Canadian cattle herd was raised on CRSB Certified farms and ranches, four processors were certified, four packers and further processors were audited for chain of custody, and three companies were sourcing beef from CRSB Certified farms and ranches¹³.

Sustainability projects

The sustainability projects pillar is focused on building a stronger and more united beef sustainability community by increasing awareness of sustainable beef production. This is achieved through four core areas: 1) aligning initiatives within the sustainability strategy goals; 2) connecting what is being by others through an online Projects Inventory; 3) collaborating with others doing similar work; and 4) communicating through an annual projects survey.

The Projects Inventory is a database of completed and ongoing projects that align with the goals from the National Beef Sustainability Strategy⁶. These sustainability projects are designed to demonstrate, pilot or promote sustainability practices. Currently, there are 51 projects in the inventory, being undertaken by a wide range of stakeholders that help advance the goals of the sustainability strategy.

Conclusion

Multi-stakeholder collaboration and engagement leads to meaningful sustainability impacts, as is exemplified by the progress made to date by the CRSB. Continual improvement and learning are key parts of sustainability. The CRSB is currently reviewing and updating its National Beef Sustainability Assessment and Strategy and its Certified Sustainable Beef Framework. The organization is also facilitating and supporting partnerships and collaborations that deliver on the sustainability strategy as well as the ten-year goals described above. In addition, the CRSB is actively engaged in beef sustainability not only in Canada, but also globally, through the Global Roundtable for Sustainable Beef and its community of regional roundtables around the world.

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