Regional Demonstration of Continued Progress

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Canadian Roundtable for Sustainable Beef
THREE Core Pillars of work

Sustainability Assessment
Farm to fork analysis, key performance indicators and strategy to advance continuous improvement in the Canadian beef sector

Verification Framework
Verification framework to assess the sustainability of individual operations along the beef value chain

Projects
Projects guided by the Sustainability Strategy to strategically advance sustainability within the Canadian beef sector
National Beef Sustainability Assessment & Strategy
A comprehensive assessment of the social, environmental and economic impacts of the beef industry

Identifies focus areas and strategies for the CRSB and our membership to continually advance the sustainability of the Canadian beef industry

Benchmarking and setting a path for the future
Sustainability Assessment

There were three main sections to the National Beef Sustainability Assessment

Environmental Assessment
Assessed climate change, fossil fuel use, water use and air and land pollution potentials through the E-LCA and biodiversity, carbon soil sequestration, land use, water use and water risk through the land use assessment

Social Assessment
Assessed the practices and processes that promote the well being of stakeholders including, workers, local communities as well as animals

Economic Assessment
Assessed: long-term profitability, long term cost of production, domestic consumer demand international consumer demand
Sustainability Strategy

**Overarching Goal #1:** Build a stronger and more united Canadian beef sustainability community

**KPI:** Number of CRSB members and Observers
- Diversity of CRSB membership

**Baseline:** As of June 30, 2016 CRSB had 53 members and 40 observers

**Action Items:**
1. Build a trusted go-to forum on sustainable beef in Canada through diversity in membership, leading scientific information and robust frameworks to measure and advance sustainability
2. Enable the further engagement of the scientific community in the CRSBs work and membership
3. Through communications activities, engage, inform and enable information sharing that assists the Canadian beef industry in advancing sustainable practices

93 Members & Observers
Environmental Assessment
Environmental Assessment

E-LCA
- Climate change
- Fossil fuel use
- Water use
- Air pollution
- Water pollution
- Followed ISO and LEAP guidelines

Land-Use Assessment
- Biodiversity
- Soil carbon sequestration
- Water use and risk

Environmental life cycle stages

FARMING → TRANSPORTATION
between farms and packers → PACKING → SECONDARY PROCESSING → RETAIL → CONSUMPTION
Functional Unit

kilogram of live weight
refers to just the farming stage of the life cycle; and

kilogram of packed boneless beef (delivered and consumed)
includes all stages in the life cycle, from farming to consumption
Environment Summary Results

Water 631 L (BB) or 235 L (LW)
GHG Footprint 30.8 (BB) or 11.4 (LW) CO₂ eg./kg
Soil Carbon Stock 1.5 billion tonnes
Land Use Total 21 Mha
Meat Waste 19%
Sustainability Strategy Goals

Environment

**Climate Change**
Goal #2. Reduce the Greenhouse Gas Footprint of Canadian Beef per unit of product produced (CO2 eq./kg)

**Land Use & Biodiversity**
Goal #3: Enhance ecosystem services and biodiversity on lands managed by beef producers

**Water**
Goal #4: Enhance riparian health and reduce the blue water footprint of beef production

**Meat Waste**
Goal #5: Reduce post-harvest meat waste
Social Assessment
Social Assessment

The S-LCA utilized the surveys to identify hotspots.

Survey
The S-LCA utilized the surveys to identify hotspots.

Desk Top Assessment
Survey results were further analyzed with a desk top assessment and regulatory review.
Assessment Stages

LIFE CYCLE STAGES
- Cattle Operations
- Processors
- Upstream Value Chain
- Associations (of beef producers and processors)
- Downstream Value Chain
- National (legal and regulatory environment)

STAKEHOLDERS
- Workers
- Local Communities
- Value Chain Actors
- Society
- Consumers
Results Social Assessment
Areas where industry is performing well

Health & Safety
Training and policies in place to ensure health and safety within the workforce

Animal Care
Sickness and disease prevention, health assessment, handling practices, housing and feeding, transport

Working Conditions
Scope of benefits, overtime, unionization, work load

Socio-Economic
Commitment
Commitment to sustainability issues (water, biodiversity), local community support, odor reduction, responsible procurement
Results Social Assessment

Four higher risks were identified across the value chain:

- **National**
  - Rights of foreign workers

- **Distribution**
  - Median income

- **Suppliers**
  - Rate of fatal and non-fatal injuries

- **Cattle operations**
  - Work load
Sustainability Strategy Social Goals

**Farm Safety & Working Conditions**
- Goal #6: Promote farm safety and responsible working conditions

**Animal Care**
- Goal #7: Promote excellence in animal care

**Antimicrobials**
- Goal #8: Support the further development, monitoring and dissemination of best practices regarding antimicrobial use
Economic Assessment
ECONOMIC SUSTAINABILITY

Defn: Is the ability of a system to maintain productivity in the face of a major disturbance, as well as slow shifts in consumer preferences.
Economic Assessment Framework

Four indicators were chosen to benchmark the economic sustainability of the Cdn. Beef industry:

- Producer Viability
  - Long Term Profitability
  - Long Term Cost of Production

- Consumer Resilience
  - Domestic Consumer Demand
  - International Consumer Demand
Results  Producer Viability

**Long term cost of production**, 2013 baseline (deflated)
- Cow/calf $1.20/one hundred pounds (cwt), or $0.03/kg
- Feedlot $106.67/cwt, or $2.35/kg

**Long Term profitability**, 2013 baseline (deflated)
- Cow/calf $93.03/cow, $93.03/cow
- Feedlot -$0.09/cwt (cash), or -$0.20/ckg

Average long-term margins for a 200 head cow herd provides an **annual income** of **$17,559**

Between **74%** and **85%** of the cow/calf sector relies on an **off-farm income**.

Find the facts at [www.crsb.ca](http://www.crsb.ca)
Consumer Resilience Results

- Domestic Demand
- International Demand

**DEMAND** is a consumer’s willingness to pay for a specific quantity and quality of product.

**TRENDS** are the result of fundamental changes in technology, society and the economy that play out over years or even generations.

**FADS** are driven by changes in current consumer inclinations; they come and go.
Sustainability Strategy

Economic Goals

Goal #9
Increase financial viability of beef production in Canada

Goal #10
Increase demand for Canadian beef through consumer awareness of sustainable beef production
Thank-You!

A sincere thank-you to everyone who contributed to the success of this project.

<table>
<thead>
<tr>
<th>Steering Committee</th>
<th>Research Teams</th>
<th>Producers &amp; Processors</th>
<th>External Experts</th>
<th>CRSB Stakeholders</th>
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<tbody>
<tr>
<td>The steering committee consisted of CRSB members and observers, industry experts and scientific advisors.</td>
<td>Canfax and Deloitte researchers with expertise spanning across social, environmental and economic sustainability topics.</td>
<td>Surveys were filled out by producers and packers. We estimate this involved the contribution of well over 120 individuals.</td>
<td>8 external reviewers and 8 industry experts contributed their expertise.</td>
<td>CRSB membership and observers contributed to the development of strategy through priority setting and identification of KPIs</td>
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<td>12</td>
<td>18</td>
<td>120</td>
<td>16</td>
<td>75</td>
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