Public Advocacy Guide

Public and Stakeholder Engagement

An increasing emphasis toward building public trust and confidence in how cattle are raised led to the creation of the **Public and Stakeholder Engagement (PSE)** program in 2016.

PSE (formerly Issues Management) is funded by the Canadian Beef Cattle Check-Off and administered by the Canadian Cattle Association (CCA) in partnership with Canada Beef and under the oversight of the Canadian Beef Advisors.

The **PSE** team works with national and provincial beef organizations to address issues that could erode public confidence in the beef industry, train and equip industry spokespeople with advocacy tools and resources and create proactive projects with strategic partners for public audiences in Canada.

Contact us at raisingcdnbeef@cattle.ca

CANADIAN BEEF
Public and Stakeholder Engagement

PUBLIC ADVOCACY GUIDE

ABOUT

For more resources and information, use your smart phone camera to scan the QR codes to access the PSE Factsheets, along with other resources listed throughout the guide.

English Factsheets

French Factsheets

ABOUT

Consumer confidence starts with understanding that Canadian beef is a **safe, high quality, nutritious product** that is produced in a **sustainable** manner.

We hope this guide helps your communication efforts to emphasize the many positive societal benefits of **raising beef cattle in Canada.**

The Canadian Beef Industry has made substantial strides in improving its **environmental, social and economic sustainability**.

We continue to strive for further progress, as is presented in the **2030 Beef Industry Goals**.

2030

ABOUT

Research from the **Canadian Centre for Food Integrity (CCFI)** shows that **farmers and ranchers** remain the most trusted source when consumers are learning where their food comes from.

PSE consumer research shows that Canadian consumers are skeptical about the environmental benefits of beef production, yet are easily convinced (impressions improve) once presented with information about the **sector's positive contributions.**

The messages in this guide are intended to serve as a foundation in which you weave your **personal beef story**.
It's your own examples, passion, enthusiasm and tone that bring the story to life, making it **authentic, sincere and memorable**.

ABOUT

Bridging is a technique to use to help transition from one conversation topic to the specific message you want to highlight during a challenging conversation, media interview or meeting. Examples include:

- “Let’s look at it from a broader perspective…”
- “Yes, and in addition…”
- “I don’t know the answer to that specifically, but what I do know is…”
- “In fact, the opposite is true…”
- “No, let me explain…”
- “In that past that was true, but today…”
- “That is not my area of expertise, but what I can tell you is…”

ABOUT

THE CANADIAN BEEF COMMUNITY

The Canadian beef industry contributes to the Canadian agricultural and food landscape. Over **98% of beef farms** are family owned and many have been for multiple generations.

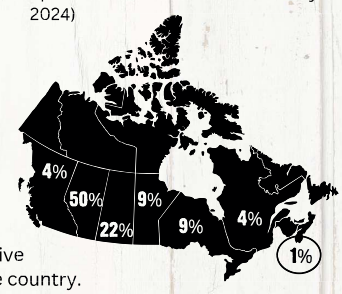
Farms and ranches vary in size, and while many have outside employees, most remain **family operated**. Many families hope to continue the tradition by passing down their farm or ranch to the next generation.

The Canadian beef industry spans the entire country, with beef producers located in every province, on 60,000 beef farms and ranches, including cow-calf, background and feedlot operations.

Canada had a total of **9.2 million beef cattle** as of January 1st, 2024. (Figure 1)

Cow-calf farms and ranches have smaller herd numbers but utilize extensive rangelands and tame pasture across the country.

Figure 1. Distribution of cattle on beef operations across Canada (January 1st, 2024)



Feedlots, where cattle are finished on a high-grain diet, typically have more animals **ranging from 500-20,000 head**.

Using a combination of these systems, Canada produces high-quality, predominantly grass-fed, grain-finished beef supporting the production of high-quality products and enabling Canadian producers to sell into **53 markets** around the world, making Canada the **8th largest exporter of boxed beef**.

Scan to learn more about the Canadian Beef Supply Chain

The Canadian cattle industry contributes:

- **$51.6 billion** in the production of goods and services
- **$21.8 billion** to the Canadian GDP
- **$11.7 billion** in labour income

Growth in **global export** marketing has led to over **$1158 more value per head** (2018-2022 average) by getting the right product to the right customer.

For every worker employed at the farm-level in Canada, **2.5 workers** are employed either directly or indirectly in the Canadian economy.

Beef farmers and ranchers in every province strive to bring good food to your table and work to be good stewards of the land and animals in their care.

The Canadian beef community is a leading exporter in the global marketplace and an example to be followed in **producing a safe, sustainable and quality product to feed a growing population.**

Canadian Beef Community

The Canadian beef community is **extremely proud** of our role in feeding people. We are also proud of our roles as **small business owners, community leaders, nutritionists, environmentalists and animal caretakers.**

The Canadian beef community's mission is to be the most **trusted** and **competitive** high-quality beef cattle producer in the world recognized for our superior **quality, safety, value, innovation** and **sustainable** production methods.

By choosing Canadian beef, you are supporting your rural neighbours and Canada's economy.

ABOUT BEEF AND THE ENVIRONMENT

FAQ - Should We Eat Less Red Meat to Help the Environment?

- Canada is one of the most **efficient** beef producing countries, with a further **15% reduction (2014-2021) in emission intensity.**
- Canada has **33.9 million acres** of native grasslands, **down 1.3 million acres** since 2016, with most of what remains in the care of beef producers.
- Grasslands are critical in storing soil carbon, contributing the majority of the **1.9 billion tonnes of carbon** on land used for beef production.
- Nature United identified the preservation of our native grasslands as the **single largest opportunity for natural climate solutions**.
- Land used for beef production contributes the **majority of wildlife habitat** used for reproduction **(74%)** on all of Canada's crop and pastureland.
- Cattle upcycle damaged crops, byproducts, food loss and food waste products that would otherwise go to the landfill.

Greenhouse Gases

In Canada, we define sustainable beef as a **socially responsible, environmentally sound and economically viable** product that prioritizes the **planet, people, animals and progress** (adopted from the Global Roundtable for Sustainable Beef – GRSB).

Beef farmers and ranchers pride themselves on being **stewards of the land.** The land upon which they work is their home, their livelihood, their history and their future. With the next generation always top of mind, they strive to **leave the land in better condition than they received it**.

Scan for our climate change factsheet

Cattle production contributes to the emission of **three main GHGs,** all differing in their impact according to their strength, lifespan and rate of emittance:

- **Methane (CH4)** is the most abundant GHG produced by **cattle,** formed during **rumination** as a natural by-product of forage digestion and is a **short-lived gas** (breaking down after ~12 years).
- **Carbon dioxide (CO2)** comes from the burning of **fossil fuels** for transportation, feed production, etc. and is a **long-lived gas**, taking centuries to break down, resulting in constant accumulation in the atmosphere.
- **Nitrous oxide (N2O)** is from excess **nitrogen**, which may come from **fertilizer** or from the **urine and manure** of animals as a by-product of consuming and digesting excess protein in the diet.

(Figure 2; Page 19)

Greenhouse Gases

Greenhouse Gases

GHGs are compared through a system referred to as **GWP100 (Global Warming Potential over 100 years)**, which standardizes the GWP of all GHGs to the **equivalence of carbon dioxide:**

(CO2= **1**, CH4 = **28**, N2O = **265**)

Meaning methane and nitrous oxide have warming potential 28 times and 265 times higher than 1 tonne of carbon dioxide over 100 years, respectively. This method does not account for the **short-lived behaviour** of gases such as **methane.**

To incorporate the behaviour of the gas, **GWP*** was developed out of Oxford University. According to GWP* , if cattle herds remain stable the methane emitted will be destroyed at the same rate it is produced thanks to the biogenic carbon cycle.

(Figure 2; Page 19)

Scan for our methane factsheet

While methane produced by cattle is part of a natural cycle, it remains a challenge we acknowledge. There is ongoing research and innovation, including a new **CFIA approved feed ingredient** commercially available as **Bovaer (3-NOP)**, shown to reduce methane on average by 45% in the feedlot stage.

The Canadian beef industry has set a goal to **reduce primary production GHG emission intensity by 33% by 2030.**

Canada is a leader in reducing GHG emissions associated with beef production. Producing 1 kg of beef* now creates **15% less greenhouse gases, on track to reach the 2030 beef industry goal** due to increased efficiency, getting cattle to market weight quicker, reducing production periods and resources needed.

*From 2014 to 2021; boneless and consumed beef

Beyond carbon emissions...

Although reducing GHGs is a large focus in the industry, a single focus on carbon emissions can fail to see all the **benefits associated with raising beef cattle in Canada.**

There are numerous benefits associated with having cattle on the land in Canada including increased **carbon sequestration**, **wildlife habitat capacity, biodiversity**, **preserving native grasslands** and other ecological services while contributing a high-quality **protein** in the form of beef to our food system.

Most are unaware that one of the **world's *most* endangered ecosystems** is right here at home - the **native temperate grasslands**, where **less than 20% remains**. The vast majority of the 33.9 million acres (natural land for pasture) remaining is under the care of beef farmers, used primarily for grazing.

These landscapes evolved with a large grazing herbivore as massive **herds of bison** once roamed the prairies. Keeping cattle on grasslands to mimic these grazing patterns helps to protect what remains of this vulnerable ecosystem, while also keeping the ecosystem healthy.

Grazing provides multiple benefits to the grass such as trampling old growth so the new shoots can emerge, providing manure as fertilizer and with appropriate grazing pressure, the stimulation of root growth.

When cattle eat and digest forages such as grass, **methane (CH4)** is produced as a by-product.

Methane contains **carbon** and is part of the **biogenic carbon cycle:**

(1) Methane is released through belches, entering the **biogenic carbon** cycle.

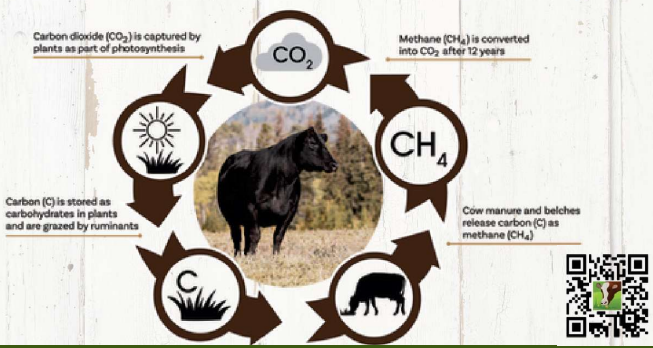
(2) The released **methane** remains in the atmosphere for a period of 10-12 years then breaks down into biogenic **carbon**.

(3) During **photosynthesis**, plants **capture and store** this **carbon**.

(4) A grazer such as cattle comes along, eats and digests the plant containing the **carbon**.

(5) Once consumed, the **carbon** is formed into **methane** and belched - entering the cycle once again.

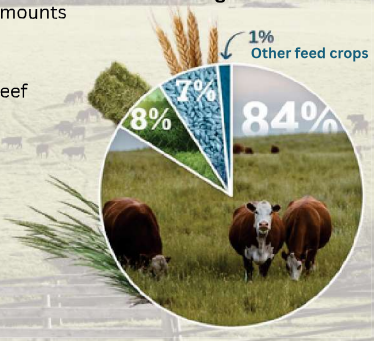
Figure 2. The Biogenic Carbon Cycle



Canada's grasslands and pastures play an important role as they store and sequester large amounts of carbon in the soil.

In fact, land used for raising Canadian beef cattle (63.1 million acres) of which **84%** (52.8 million acres) is pasture, including tame and native grassland, stores an estimated **1.9 billion tonnes** of soil organic carbon, and sequesters an **additional 7.1 millon tonnes per year.**

Figure 3. Land Use



Cultivation of these grasslands can lead to a **20-60% loss** of soil organic carbon and loss of all ecosystem services.

A study led by Nature United suggested that avoiding grassland conversion is the **single largest natural climate solution**. The amount of carbon lost through conversion would surpass overall cattle emissions.

The majority of land used to raise beef cattle in Canada is pasture, contributing significantly to maintaining and sequestering soil organic carbon.

In Canada, **one in three** acres of agricultural land are less suitable for growing crops and more **suitable for grazing cattle** (21.4 million hectares).

The unique digestive system [rumen] of cattle allows them to derive value from this land, processing **grass and other plants** humans *can't* eat **into** a **nutrient dense protein** we *can* eat.

This is a win-win as **cattle share the ecosystem.**

The grasslands provide multiple ecological services including carbon sequestration, biodiversity, habitat for wildlife, species at risk and pollinators, flood mitigation, sediment trapping and buffering, water filtration and retention and soil conversion.

2030 Beef Industry Goals:

- 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.

GUARDIANS OF THE GRASSLANDS

Canada is home to one of the **most endangered ecosystems** in the entire world - the temperate **grasslands** of the Great Plains.

Our native prairie is home to over **60 species at-risk** but it is **disappearing** and at an alarming rate. However, cattle are maintaining and preserving these iconic landscapes and providing hope for the plants and animals that call them home.

Sometimes what you thought was the problem, is really the solution.

Documentary Game

TOO CLOSE TO HOME

Managing wildfire risk where it matters most

Targeted Grazing for Wildfire Reduction.

Grass feeds fires but it also feeds cows. Grazing can change fire behaviour by helping slow, turn or stop fires from moving across the landscape. **Pilot projects** have begun across British Columbia, putting cattle hard at work to **reduce wildfire risk** for surrounding communities.

Scan to watch the documentary

Healthy rangeland and pastures encourage biodiversity by providing a natural habitat in which **native plants, insects, birds and wildlife can co-exist and thrive alongside cattle**.

In Canada, beef production spans **every province,** contributing to a variety of ecosystems. Land used to raise beef cattle contributes the **majority of critical habitat** that wildlife need for nesting and raising their young (74%) and finding food (55%) when all of Canada's crop and pastureland is considered.

Despite an overall **decrease in Canada's wildlife habitat capacity**, beef's proportion has **increased**. This indicates a strong link between grasslands grazed by cattle and habitat for wildlife that should not be overlooked.

The endangerment of grassland habitat has cascaded into the endangerment of many grassland species. Since 1970, **grassland bird populations have decreased by 87%**. Much of their remaining habitat is managed by **beef farmers and ranchers**. Pastures and grasslands support countless species of birds, mammals and insects – including over **60 species at risk.**

When cattle graze, they alter the length of the grass, while providing manure as fertilizer and trampling the ground, all of which help strengthen the ecosystem.

Cattle play a **key role in maintaining these habitats** and ensure the creatures that depend on them are around for generations to come.

2030 Beef Industry Goals:

- Maintain **35 million acres of native grasslands** in the care of beef producers.
- Maintain and enhance the **68% of wildlife habitat capacity** within agricultural lands being supported by beef production.
- Maintain healthy functioning ecosystems through well-managed grazing systems that maintain sustainable plant communities and healthy rangelands.

Wetlands

Wetlands, similar to grasslands, provide many ecological services including **flood mitigation, biodiversity conservation, energy and nutrient dissipation, forage, and habitat**.

The loss of wetlands results in a loss of the ecological services they provide. With proper management, wetlands, riparian areas and cattle can coexist in a long-term sustainable ecosystem, therefore keeping cattle on the land can **prevent further loss of wetlands.**

Research conducted by DUC has shown that land under the care of cattle ranchers provides safe and attractive nesting habitat for upland nesting waterfowl and other birds.

There are approximately **1.6 million acres of wetlands** found in **grasslands** across Canada.

Canada remains one of the most water efficient beef production systems in the world.

Between 1981 and 2011 the amount of water required to produce beef in Canada **decreased by 17%**. Additionally, between 2014 and 2021, both eastern and western Canada **decreased water use by 177L/kg** beef consumed.

Water efficiency can be attributed to faster animal growth, crop productivity, reproductive efficiency and reduced time to reach target weights for slaughter. Additional factors include the adoption of water conservation management practices, improved irrigation techniques and increased inclusion of crop by-products and residues in feedlot diets.

99.0-99.5% of water used on-farm to raise beef cattle is through the use of irrigation, of which **90% is returned to the environment**. Therefore, the vast majority of water continues through the cycle.

2030 Beef Industry Goals:

- Promote practices that **maximize water quality** and retention, to deliver healthier landscapes, resilience to drought and flood events, and groundwater recharge as appropriate to the region's precipitation.
- Improve **water use efficiency** in the beef value feed chain.

Most beef cattle in Canada spend around **80% of their lives on grassland and pasture** and are finished in a feedlot using high-energy grain rations.

Close to **95% of cattle raised in Canada are finished this way**, with the remainder being finished on grass.

The combination of raising cattle on grass and finishing them on grain allows us to produce a **year-round supply of beef** that is accessible to Canadians while **using less land, water, and emitting fewer greenhouse gases -** putting Canadian beef producers among the most efficient in the world.

Feedlot sustainability is comprised of multiple facets:

- Feedlots have strictly **formulated rations** targeted to specific growth stages and **nutritional requirements** of the animal. This means **less resources are wasted** (i.e. less nitrogen excreted in the manure) and the risk of negative environmental impacts, like leaching or eutrophication, are reduced.
- Due to the **high-grain and easily digestible diet**, less fermentation is needed in the rumen leading to **reduced methane emissions** and a smaller carbon footprint when compared to grass-finished beef.

Feedlot sustainability is comprised of multiple facets:

- **Growth promotants** are used, minimizing the inputs and resources needed for cattle to reach target weights. (Page 48-51)
- **Manure** from feedlots is a valuable **natural fertilizer** and is applied to surrounding farmland, reducing need for chemical fertilizers and increasing the organic matter content of soils.
- Feedlots use well-designed sloping pens and ditches which drain into high capacity catch basins to protect surface water such as creeks and streams.

See Animal Health and Welfare in Feedlots (Page 47)

Feedlots and Food Waste

Cattle do not compete with people for food, they make use of what is left. A global study from FAO showed that **86% of livestock feed is not suitable for human consumption.**

In Canada, **58% of the food we produce is wasted**. Emissions from municipal landfills represent the **third largest source of methane**, after fossil fuels and agriculture.

Feedlots play an important role in our food system, turning **human inedible** feedstuffs, by-products and co-products of food processing, and substandard human grade food, **into high-quality protein** with essential micronutrients.

Scan for our food waste factsheet

Cattle utilize a variety of materials to upcycle them into beef:

- **Low grade crops** (75% of the malt barley produced in Canada fails to meet the criteria necessary for beer making but can be fed to cattle).
- **Crops that are damaged** by weather (drought, floods) or pests.
- **Co-products or by-products** like canola meal from oil extraction, pea cream from processing peas into pea burgers, and soybean hulls from the processing of soybean oil used in products like margarine.
- **Produce/vegetables with cosmetic flaws** not likely to be purchased by consumers or food produced in excess that is not able to be donated.

In the USA, it is estimated that 43 billion tonnes is upcycled by livestock each year.

(Figure 4; Page 37)

Figure 4. The Food Recovery Hierarchy

Globally, food waste accounts for **8% of GHG emissions**. Rather than sending ugly fruit & vegetables, by-products and crop waste to landfills where it breaks down and creates GHGs, food waste is used to provide cattle with nutrient rich feed instead.

Reducing food waste can help save money, improve food security, support efficiency in the agriculture and food sector, and significantly reduce GHG emissions.

Scan to watch our new film: Reduce, Reuse, Ruminate

2030 Beef Industry Goals:

- Reduce food loss and waste (from processing of beef to the consumer) by 50%.
- Support consumer education on beef preparation, freezing preparation, packaging and labelling.
- Packaging innovations that enhance beef shelf life and reduce waste.

Canada is among the most greenhouse gas and water efficient beef production systems in the world.

Feedlots contribute to an efficient beef product through optimized feed rations, targeted weight gain and use of by-products in cattle rations while reducing food waste.

Grazing cattle contribute to storing and maintaining carbon in the soil while living alongside wildlife, helping to provide the majority of habitat capacity on all of Canada's agricultural land.

Maintaining and restoring Canadian (native and tame) grasslands is vital in maintaining soil carbon, wildlife habitat, and wetlands while producing a sustainable beef product.

ABOUT

ANIMAL HEALTH AND WELFARE

The **health and well-being of cattle** is the **top priority** for everyone involved in the production of Canadian beef. It is also a key area of concern for consumers.

Canadians want to know that the food they are eating is from livestock that were well cared for. Over the years, great strides have been made to improve the welfare, quality of life and health of beef animals.

High animal welfare standards are imperative – they lead to better animal health, and ultimately, a better product for consumers.

Scan for our health and welfare factsheet

The Five Freedoms:

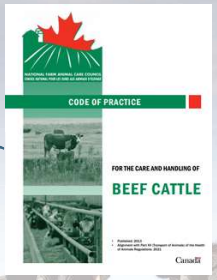
1) Freedom from hunger and thirst
2) Freedom from discomfort
3) Freedom from pain, injury and disease
4) Freedom to express normal behavior
5) Freedom from fear and distress

These are the **foundation for animal care under human control - which must be upheld.** To those who care for livestock following these freedoms tend to be **intrinsic**.

Still, demonstrating our commitment to these freedoms - and to continuously **improving animal welfare as a whole –** is important.

Further outlining the care and handling of beef cattle, a **Code of Practice** was developed by the **National Farm Animal Care Council (NFACC)** in conjunction with veterinarians, researchers, food industry experts, animal welfare groups and other stakeholders.

An update to the current Code of Practice is currently underway and is set to publish in 2026.



The Code of Practice outlines requirements and recommendations to **ensure the health and welfare of beef animals**, while outlining potential avenues to **improve** current practices.

Standards and protocols for **animal environment**, **husbandry** (painful procedures), **health**, **transport** (pre-transport decision-making, loading, and receiving) and **feed and water** are outlined.

Common consumer concerns include painful procedures, growth promotants, hormones, antibiotics, feedlot conditions, transport and processing.

Beef farmers also invest in training through programs such as Verified Beef Production Plus, which includes guidelines for low-stress cattle handling and best practices for animal care.

2030 Beef Industry Goals:

- Ensure the five freedoms of animal wellbeing by increasing adoption of on-farm management practices.
- Ensure the effectiveness of existing and future antimicrobials is preserved to support human and animal health and welfare.

When painful procedures are necessary, they should be preformed by trained and competent personnel with pain control provided under the advise of a veterinarian, following up to ensure the animal has healed without complications.

Farmers and ranchers work closely with **veterinarians** to implement pain mitigation protocols.

- **Castration** is used to avoid unwanted breeding, reduce aggression, improve human and animal safety, as well as beef quality.
- **Dehorning** is rarely performed as 90% of cattle genetically do not have horns (polled), but when performed is used to decrease the risk of injury for both handlers and other cattle and minimize the economic loss due to carcass bruising.
- **Branding** is the only permanent method of cattle identification identifiable from a distance and legally accepted as proof of ownership.

Feedlots

- Unfortunately, many consumers may associate feedlots with negative perceptions of "factory farming," often perpetuated by animal rights groups.
- This stage of production also tends to be viewed as more intensive due to the animals being fed finishing rations and being more confined than in the cow/calf stage on grass.
- Cattle are given high-quality diets balanced by ruminant nutritionists, allowing them to consume all the nutrients they need to grow efficiently.
- Cattle are group housed in pens with regular cleaning, maintenance, access to water, high-quality feed, shade and protection from summer and winter weather, and ample room for natural behaviors.

Growth promotants are an **important tool** used to increase efficiency. This means **more beef** produced with **less feed, manure and methane emissions**, all while maintaining **high standards of animal health, food safety and quality.**

Growth promotants include ionophores, beta-agonists and growth implants. These products must be **manufactured, tested and proven safe** for beef cattle and beef consumers in accordance with **Health Canada's Food and Drugs Act regulations**.

Use of growth promotants is a management decision developed in consultation with **veterinarians** and other animal health professionals to ensure optimal animal health and well-being.

Canada does not permit the use of medically important antimicrobials for growth promotion.

Types of Growth Promotants

1) Hormonal Growth Implants: A small, slow-release pellet placed under the skin of the ear releasing naturally occurring hormones to promote lean muscle growth and discouraging formation of fat – improving weight gain and feed conversion.

2) Beta-Agonists: A feed additive used to promote **lean muscle** growth that is completely broken down and used within the animal.

3) Ionophores: A type of antimicrobial not used in human medicine that works to alter the bacterial communities in the rumen, increasing efficiency while decreasing methane emissions, and preventing some diseases.

4) Melengestrol acetate (MGA): A hormone sometimes used as a feed additive which can improve growth rate and feed efficiency, but must be managed very carefully to reduce the risk of dark cutting.

Growth Promotants

The beef product [produced with hormonal implants] contains a **very low** level of hormones [not statistically differing from cattle raised without hormones] that have **no effect on human health.**

Estrogen concentration in 1 serving of cabbage = more than 1000 servings of beef produced using hormone implants.

Canadian cattle producers have ***safely*** used growth promotants for more than 60 years to more efficiently produce the lean beef consumers seek.

This means fewer resources like feed, land, and water are required to produce the same amount of beef, resulting in less environmental impact and less cost to the consumer.

Health Canada licenses and regulates all veterinary drugs and biologics. All products are labeled with the minimum withdrawal time between exposure and slaughter. The Canadian Food Inspection Agency **monitors and tests for residue levels** in our beef.

In Canada, the level of synthetic hormone residues that can be detected in beef is zero.

Consumers should know that whether they are buying Canadian beef products raised with hormone implants or 'raised without the use of hormones', the beef they are eating is **equally safe and nutritious.**

Scan for our hormone factsheet

Antibiotics

The Canadian beef industry is committed to producing a **safe, ethically raised, and quality product**.

The responsible use of antibiotics in maintaining animal health and welfare is an essential component of sustainable and humane beef production in Canada.

Vaccines and antibiotics are essential tools to prevent and manage disease in beef cattle. The beef industry uses antibiotics to treat and control disease, prevent infection - and with ionophores - promote growth.

Scan for our antibiotics factsheet

Beef farmers and ranchers manage their cattle to proactively prevent illness.

Low-stress cattle handling, proper vaccinations, low stress weaning techniques and providing high-quality feed, water and bedding are just some of the ways that cattle producers try to **prevent disease and infection**.

When these techniques aren't enough, antibiotics are an **essential** part in maintaining animal health.

Stopping the overall use of antibiotics has negative consequences for the health and well-being of animals. Failing to prevent or treat disease is irresponsible, unethical, and leads to animal suffering.

Antibiotic Use and Oversight

- Antibiotics are regulated by the federal government under the **Food and Drugs Act**.
- The **Canadian Food Inspection Agency (CFIA)** routinely conducts random sampling of beef products to check for residues.
- **The Health Canada Veterinary Drug Directorate (VDD)** evaluates and monitors the safety, quality, and effectiveness of veterinary drugs and sets standards for use to ensure they are safe for animals and humans when used as the label directs.
- In Canada, **Medically Important Antimicrobials** are only available for cattle by veterinary **prescription**, within the confines of a valid **veterinary-client-patient relationship (VCPR).**
- Programs like **Verified Beef Production Plus (VBP+)** ensure responsible and safe use of antibiotics, vaccines, etc.

A specified withdrawal time must pass after the last treatment to ensure that no residues can be detected.

All Canadian beef is antibiotic free.

99.99% of meat tested by the CFIA has no antibiotic residue, and meat that tests positive is removed from the food chain. This means that **all meat that is available for the consumer is "antibiotic free."**

Antibiotic Resistance 56

- **Antimicrobial resistance (AMR)** occurs when a bacteria no longer responds to an antibiotic agent and the drug becomes ineffective. Infections become difficult or impossible to treat.
  - Responsible use of antimicrobials means using as little as possible but as much as necessary. Responsible use minimizes the burden of resistance.
- The Public Health Agency of Canada developed the **Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS)** to monitor the AMR in bacteria isolated from humans, livestock, or retail meat.
- Due to this surveillance, CIPARS reports that AMR is low and not increasing in bacteria found in cattle or beef for the antibiotics that are of the highest importance in human medicine.

The Canadian beef industry is committed to responsible antimicrobial use.

Through research and collaborations with veterinary and human health professionals, beef producers are implementing strategies that reduce the need for antibiotics and ensuring the right measures are taken when they are needed.

Science indicates that AMR in livestock pathogen are largely the result of antibiotics used in livestock, and AMR in human pathogens is largely the result of antibiotics used in humans.

The Canadian Beef Industry takes antimicrobial stewardship very seriously and is committed to helping address One Health.

Transportation 58

All parties involved with loading, unloading and transportation of cattle are dedicated to doing so as **safely and humanely as possible**.

Before cattle are transported humanely they must be **healthy, free of injury** and at no risk of calving while in transport.

There are **maximum time limits** that cattle can be on a truck without feed, water or rest to ensure the safety and wellbeing of the animals.

Scan for our transportation factsheet

There are several authorities that regulate and ensure safe transportation of livestock into, within and out of Canada including:

- **Health of Animals Act (HAA) -** Provides the authority to make regulations to protect animal welfare.
- **Health of Animals Regulation (HAR) -** Part XII (transport of animals) outlines for specific livestock transportation.
- **Safe Food for Canadians Act (SFCA) -** Put into action by the Safe Food for Canadians Regulation ensuring the humane treatment of food animals.
- **Canadian Food Inspection Agency (CFIA) -** Enforces the work done by SFCA at federally run plants.
- Additional provincial regulations are enforced by provincial plants.

Processing 60

Upon arrival at the processing plant, all animals are **inspected**.

If any concerns arise, animals are thoroughly investigated by the **CFIA**.

The harvest process has evolved over the years based on **scientific research to ensure both humane animal treatment and the production of safe food.**

Cattle are moved inside in a **calm and orderly** manner, with excess movement and noise minimized to reduce stress.

- A mechanical stunning device is used to quickly and effectively render the animal unconscious prior to harvest.
- Skilled workers break down beef carcasses into boxed beef which are eventually further processed into finished beef cuts.

Many of today's modern packing plants are designed with the influence of Dr. Temple Grandin, one of the leading researchers in animal handling and behavior.

Dr. Grandins' research contributions have led to **proper, low-stress handling at the end of the animal's life.**

Scan for our Halal-Kosher and Activists Factsheets

Health and Welfare Key Takeaway

- Farmers and ranchers are **committed** to ensuring the health and welfare of their animals.
- Beef farmers are guided by the **Code of Practice** for the Care and Handling of Beef Cattle, which was developed through collaboration of veterinarians, humane society representatives, animal welfare scientists, government, beef farmers and the public.
- Beef cattle spend their lives living in a **herd environment**, eating primarily **grass and hay**.
- Depending on the climate, beef cattle may be housed in barns to offer protection from the heat or precipitation.
- Caring for beef cattle includes timely **treatment of illness**, handling animals in ways that **reduce stress** and providing **pain relief** for necessary procedures like castration.

ABOUT

THE BEEF ON YOUR PLATE

FAQ - Should We Eat Less Red Meat to Improve Our Health?

- Reducing meat consumption may have a **negative impact** on the health of those with inadequate dietary intakes of **protein, iron, zinc, vitamin B6, and vitamin B12**.
- Nutrient shortfalls can lead to **low energy** levels, **reduced work capacity**, lower resistance to **infections**, **fatigue**, **muscle loss** and **osteoporosis.**
- Evidence suggests the current Recommended Dietary Allowances (RDAs) may **underestimate protein** requirements by up to **50%**.
- Beef is a complete protein, meaning it contains **all 9 essential amino acids** that humans require in the right proportions.
- **Plant proteins** typically are low in one or more essential amino acids, meaning they are considered **incomplete**.

The Beef on Your Plate

Cattle and other ruminants have the natural ability to **upcycle human inedible food sources** (damaged crops and crop by-products as well as grasses) **and naturally convert it to a high-quality and nutritious protein for humans.**

Beef production in Canada is diverse in terms of region, landscape, management practices and goals.

The labels displayed on beef products are becoming equally diverse, potentially leading to uncertainty for the consumer. However, **beef production and management practices are highly regulated in Canada, ensuring consumers are purchasing a safe and healthy product regardless of how the beef was raised.**

Scan to Discover Beef's Nutrition Story

Beef Quality

There are many **online resources** to choose and prepare the right cut!

- Cooking Know How
- Canadian Beef Buying and Cooking Guide
- Canadian Beef Information Gateway

Beef Nutrition

Beef is an excellent source of **protein**, containing a variety of minerals, including easily absorbed **heme iron and zinc**, and an impressive range of **B-vitamins**.

- **Beef is protein-packed!** Protein content (35g) in one serving of cooked beef (100 g at 250 calories) = >2 cups of black beans (at 520 calories).
- **Beef has all the essential amino acids that humans need. Beans do not.**
- Compared to chicken breast, **beef has 220% more iron.**
- One serving of cooked beef (100g) = 300 mg of **potassium** (9% DV) similar to a small banana (362 mg).

Scan for more Think Beef Facts

Organic Beef

- According to the Canadian Organic Standard, all **feed and pastures** consumed by cattle must be certified as **organic**.
- During the grazing season, mature cattle must receive 30% or more of their forage from grazing on pasture.
- Once animals are moved to the finishing phase, at least 60% of their feed must consist of hay, fresh/dried coarse plant materials or silage.
- The use of antibiotics and other veterinary medications is restricted. The use of growth promotants is not permitted.
- Vaccines and medications to reduce pain are permitted.

All Canadian beef is nutritious, safe and high quality. Organic beef is not significantly different in nutrition or safety.

All cattle in Canada are raised on grass and hay for most of their lives.

Grain-finished beef cattle are gradually adjusted to a high-grain diet about 3 months before going to market, while grass-finished beef cattle remain on grass.

Nutrition

- Fat: Grass-fed beef can be leaner although the **difference is small** in the context of the total fat consumed for the foods we eat daily.
- Omega-3: Both contribute some omega-3 fatty acids, however, beef is not a significant source of omega-3.
- Cholesterol, Iron, Zinc: No difference.
- B-vitamins, Potassium: Some differences but not meaningful on a total diet basis.

All beef contributes a *significant* amount of nutrients and the nutritional differences between the two are small.

Cell-Cultured Protein

- The production of protein grown in the lab is in the **exploratory phase** and it is not at full-scale manufacturing.
- This technology could be suited to **ground products** such as ground beef but is far from replicating complex muscle cuts such as steak.
- There has been no comprehensive Life Cycle Analysis (LCA) of cell-cultured protein, making environmental comparisons with Canadian beef production difficult, although high levels of energy needed to power this technology must be considered.

Scan for our cell-cultured protein factsheet

- Canadian beef is a wholesome, home-grown source of **complete protein**, containing **essential nutrients** that are often difficult to get from other foods, such as plant-based protein sources.
- Meat differs from plant-foods in that it provides complete protein, along with **vitamin B12** and more bioavailable **iron and zinc**.
- Iron, zinc and vitamin B12 are shortfall nutrients for many Canadians.
- Research shows the best quality diets include both animal and plant foods. Balancing animal and plant foods leads to better nutritional profiles.

Plant and animal proteins are complementary, both on the farm and on your plate.

Scan for our alternative protein factsheet

Decades of research confirm that beef fits into a healthy diet

- Meat has been an important component of the human diet for millions of years.
- A worldwide study of 175 countries (90% of world's population) shows **eating meat is associated with greater life expectancy.**
- On average, unprocessed red meat (including beef) accounts for just 5% of our total calorie intake. In contrast, almost half of our calories now come from highly processed foods. A growing body of evidence links the consumption of ultra-processed foods with poor diet quality, weight gain and greater risk of chronic diseases.
- Research suggests people who eat more red meat, also tend to eat more vegetables, and have a lower BMI and waist circumference than those who eat less red meat.

Guardians of the Grasslands

Reduce, Reuse, Ruminate

Too Close to Home

CANADIAN BEEF

Public and Stakeholder Engagement

Become a Beef Advocate

BEEFADVOCACY.CA

Beef Advocacy Canada is an interactive, self-guided online program that will equip you with messages, tools and strategies to communicate in a way that will resonate with consumers.

COWS on the PLANET

Some of our favourite episodes:

- Can we eat our way out of climate change?
- Should cattle be replaced with native species such as bison?
- How much do cattle contribute to climate change?

www.raisingcdnbeef.ca

Learn more at Public and Stakeholder Engagement's Public Facing Website

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NOTES


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