Beef & Sustainability: The untold story

Beef cattle and other ruminants have benefits that conservation experts like Ducks Unlimited Canada and Birds Canada have long recognized. Here are some of the little-known facts about raising beef that don't seem to make the headlines. There are key reasons why beef belongs as part of a healthy ecosystem.

BIRDS CANADA OISEAUX CANADA

Ducks Unlimited Canada

Cattle are part of a climate change solution.

- Just as grazing bison kept the grasslands healthy and viable for centuries, cattle grazing has the same beneficial effects. Unfortunately 74% of Canada's native grasslands like the Prairies have been lost due to cultivation or development.[1] Eliminating cattle means these vital ecosystems will deteriorate or be lost.
- In Ontario, Quebec and Atlantic regions, it is the cattle pastures that are used for grazing rather than native grasslands. Pastures and hay fields provide biodiversity, carbon sequestration and other important eco-benefits that the prairie grasslands provide.
- It's more than just the grass under your feet. Grass and pasturelands sequester (store) carbon.[2] Grass is like the solar panel that captures energy that becomes nourishment (energy) for cattle.
- Cattle provide 68% of the wildlife habitat capacity of all agricultural land in Canada.[3] That's an eco-service benefit derived from cattle grazing. Many bird species at risk and other wildlife call cattle ranges and pastures their home.

An important part of our food-scape.

- Cattle make use of food waste by consuming crops and crop bi-products that can't be used as human food. For example, in PEI cattle feed on potatoes that are not suitable for us to eat.
- Cattle can take a food that grows naturally (grass), that humans can't use to eat and turn it into one of nature's most nutrient dense foods. Now that's efficient processing.
- Cattle are typically raised on lands that can't be used for growing crops and vegetables. You can't cultivate rocky terrain, areas of brush or dry regions.
- Only 9% of annual cropland is used for growing cattle feed in Canada.[2,3]

Steeped in tradition NOT stuck in the past.

- Over a 30 year span, there has been a 14% decline in greenhouse gas emissions per kg of beef produced since 1981.[4] These improvements are largely a result of improved animal feed efficiencies, cattle breeding and other technologies that make it possible to raise cattle more efficiently, using less resources.
- Canadian studies track a reduction of 20% in water use to produce a kg of beef over a 30 year period.[5] The water that cattle use cycles through the environment and does not disappear forever.
- The Environmental Stewardship Award (TESA) is granted to beef farmers and ranchers who demonstrate leadership in conservation efforts through their practices.[6]

Don't just take our word for it.

- Conservation groups like the Nature Conservancy of Canada, Ducks Unlimited and Birds Canada support ranchers and farmers to keep their cattle grazing.

Cattle and greenhouse gases in perspective.

- Transportation in Canada accounts for 28% of Canada's GHG emissions. Raising cattle in Canada accounts for 2.4% of the GHG emissions in Canada.[1, 3] It's just a fact.

- On a global scale, Canadian beef production accounts for only 0.04% of GHG emissions.[1, 3]

Are plant-based diets better for the health of the planet?

- This should be a thoughtful conversation as there is no black and white answer. Whether growing lentils or raising beef, the act of creating any food and getting it to market has environmental impacts.

- It's complicated. The United Nations cites 14 Sustainable Development Goals. Sustainability discussions usually consider only water use and green house gas (GHG) emission factors. We need to look at the whole picture.[7]

- A comprehensive literature review study has demonstrated that choosing to consume one food over another is not the solution to reducing food production environmental impacts.[7] Removing cattle from the landscape would have significant negative consequences such as the loss of native grasslands and the fragile Prairie ecosystems.

- The FAO's study, Livestock's Long Shadow has many short-comings and errors authors themselves apologized for.[8] But once the headlines have been made, they are not easy to erase.

Dietary changes we can all do that will make a difference in reducing environmental impacts.

- Reduce waste. One third of our food production results in wasted food.[8] Use what you have and don't let it go to waste.

- Eat less. Over-eating is a type of food waste after all, so consider eating what you need and not more. Keep portions in proportion.

- Buy in season and buy local. Bringing in foods from other countries adds the burden of transportation impacts on the environment.

- Choose food that matters. Make meals with nutrient-dense foundational foods that use less resources to produce and make a valuable contribution to your health and well-being. Processed foods take more energy to manufacture and package.

For more info on how beef belongs go to:

[1] https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories/submissions-of-annual-greenhouse-gas-inventories-for-2017/submissions-of-annual-ghg-inventories-2016
[2] Statistics Canada. Human Activity and the Environment: Annual Statistics 2009. Table 1.2. Global availability of agricultural and arable land, 2005. http://www.statcan.gc.ca/pub/16-201-x/2009000/t230-eng.htm
[3] CRSB (2016) National Beef Sustainability Assessment, https://crsb.ca/assets/Pages/Sustainability-Benchmarking/Assessment/8e68cb86c3/NBSA-EnvironmentalAndSocialAssessments.pdf
[4] Legesse, G., Beauchemin, K. A., Ominski, K. H., McGeough, E. J., Kroebel, R., MacDonald, D., McAllister, T. A. (2015, December 23). Greenhouse gas emissions of Canadian beef production in 1981 as compared to 2011. Animal Production Science.
[5] Legesse, G., Cordeiro, M.R.C., Ominski, K.H., Beauchemin, K.A., Kroebel, R., McGeough, E.J., Pogue, S., McAllister, T. A. (2017, November) Water use intensity of Canadian beef production in 1981 as compared to 2011. Elsevier. Science of the Total Environment 619-620 (2018) 1030-103
[6] http://www.cattle.ca/sustainability/the-environmental-stewardship-award
[7] Ridoutt B. G., Hendrie G. A., Noakes M., Dietary Strategies to Reduce Environmental Impact: A Critical Review of the Evidence Base. Adv Nutr 2017; 8(6):933–946. https://doi.org/10.3945/an.117.016691
[8] https://www.telegraph.co.uk/news/earth/environment/climatechange/7509978/UNadmits-flaw-in-report-on-meat-and-climate-change.html

RETHINK BEEF
ENVIRONMENTALLY

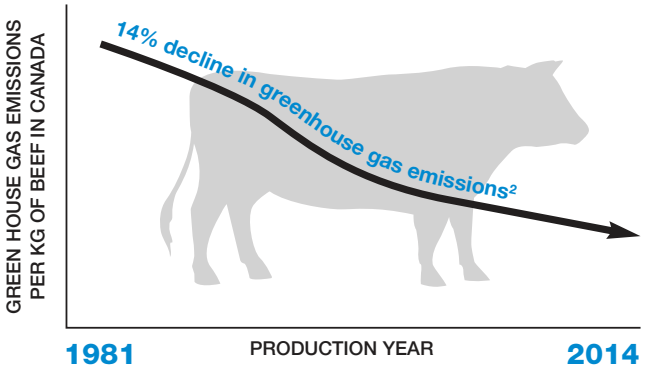
THINK BEEF.CA

Environmental Sustainability

LESS GAS EXPORTED

At 0.04%, Canadians should be proud that beef production in this country has one of the **lowest** greenhouse gas footprints in the world.[1]

IMPROVED FUEL EFFICIENCY



Beef Belongs

KEEP CALM AND GRAZE ON

Cattle ranching and farming plays an important role across the country to **preserve native** grasslands and support the habitats of **wildlife.**[3]

As the bison did for centuries, cattle play an essential role in grasslands to help preserve their function and health, including:

- soil carbon storage
- biodiversity
- wildlife habitat and migration
- water filtration
- nutrient recycling

Water Impact

SAFEGUARDING WATER

'Eat a steak, save a lake'. In their effort to preserve wetland habitat, Ducks Unlimited works to support beef farming. Raising cattle means lands are not drained for growing crops. Good for frogs, good for ducks, good for beef.

DID YOU KNOW...

Canadian beef farmers and ranchers work with conservation groups like Cows and Fish to safeguard streams and creeks.

Beef farmers work with conservation experts to develop and invest in Environmental Farm Plans to keep water safe.

Latest research verifies conservation efforts have lead to a 20% decrease in the amount of ground & surface water used to produce beef in 2011 compared to 1981.[4]

References:

[1] https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories/submissions-of-annual-greenhouse-gas-inventories-for-2017/submissions-of-annual-ghg-inventories-2016

[2] Legesse, G., Beauchemin, K. A., Ominski, K. H., McGeough, E. J., Kroebel, R., MacDonald, D., McAllister, T. A. (2015, December 23). Greenhouse gas emissions of Canadian beef production in 1981 as compared to 2011. Animal Production Science.

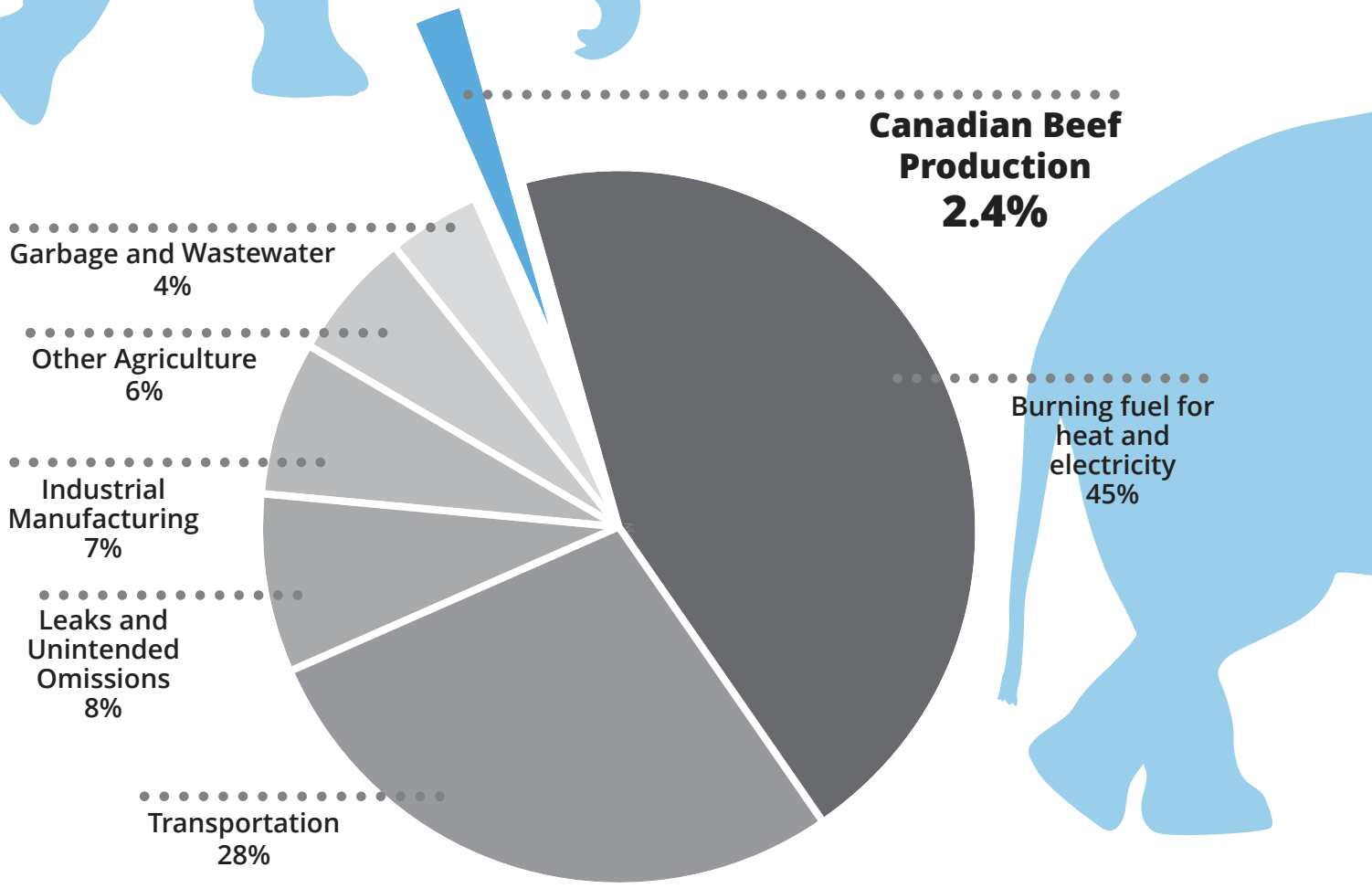
[3] CRSB (2016) National Beef Sustainability Assessment, https://crsb.ca/assets/Pages/Sustainability-Benchmarking/Assessment/8e68cb86c3/NBSA-EnvironmentalAndSocialAssessments.pdf

[4] Legesse, G., Cordeiro, M.R.C., Ominski, K.H., Beauchemin, K.A., Kroebel, R., McGeough, E.J., Pogue, S., McAllister, T. A. (2017, November) Water use intensity of Canadian beef production in 1981 as compared to 2011. Elsevier. Science of the Total Environment 619-620 (2018) 1030-1039

Greenhouse Gas Emissions in Canada:

SPOT THE ELEPHANT IN THE ROOM

Think cattle are the major contributor to greenhouse gas emissions in Canada? Think again.



· United Nations Climate Change National Greenhouse Gas Inventory Report (Canada): https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories/submissions-of-annual-greenhouse-gas-inventories-for-2017/submissions-of-annual-ghg-inventories-2016

• https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2020.html

· Canadian Roundtable for Sustainable Beef Benchmarking Life Cycle Analysis report, p. 59 (2016) https://crsb.ca/assets/Pages/Sustainability-Benchmarking/Assessment/8e68cb86c3/NBSA-EnvironmentalAndSocialAssessments.pdf

Birds Canada and cattle ranchers/farmers are on the same side of the fence when it comes to protecting Manitoba birds at risk like the loggerhead shrike, burrowing owl and Baird's sparrow.

• More than just the grass under your feet, native prairie grasslands are a unique ecosystem for bird species, pollinators and other wildlife.

• Native prairie grasslands continue to be among the most threatened ecosystems in the world. And once these grasslands are lost, it is nearly impossible to replicate them.

• Prairie is habitat for many species but also a barrier for woodland species. This fact has shaped evolution in North America. Reducing the Prairie renders thousands of grassland-obligate birds "homeless" and changes biogeographical patterns of species, with unforeseen consequences.

"The birds need the grass, and grazing is an ecosystem process that has maintained the grasslands for millennia. We no longer have roaming herds of bison, so we need the beef cattle for grazing or we will lose these birds forever."
Dr. Christian Artuso, Birds Canada

• Groups like Birds Canada and the Manitoba Habitat Heritage Corporation work with beef farmers and ranchers to ensure their cattle can keep on grazing. Cattle grazing helps bird gazing.

#beefbelongs

Learn more about the Keep Grazing initiative: https://mhhc.mb.ca/keep-grazing-project

Also, check out Canadian Geographics article by Jeremy Pittman: https://www.canadiangeographic.ca/article/how-cattle-ranching-can-help-preserve-species-risk-canadas-grasslands#.W4g7q3b9r-I.twitter

BIRDS CANADA OISEAUX CANADA

Ducks need cattle

When it comes to protecting habitat for wildlife, Ducks Unlimited Canada and cattle ranchers/farmers are on the same side of the fence.

Like the bison that grazed grasslands for centuries, there are reasons why beef belongs in the landscape:

- Cattle maintain grasslands and pastures that provide constant ground cover to combat erosion and bolster the nutrient retention of the soil.
- Cattle are part of the natural nutrient cycling that enriches and regenerates soil.
- Just like hedges need trimming, grass needs mowing to keep it vibrant and promote plant species diversity. Cattle are the ultimate lawn mower.
- Cattle co-exist with wetlands. Pressures from other land use like urban or crop expansion can encroach on wetlands - habitat loss for frogs, fish and DUCKS!

#beefbelongs

Learn more about why ducks love cattle and cattle love ducks
http://www.ducks.ca/our-work/grasslands

Ducks Unlimited Canada