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NEWS RELEASE

New research clarifies Canadian beef producers' true environmental footprint

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Canada's beef industry continues to improve efficiencies that lessen its environmental impacts, with production of one kilogram of Canadian beef creating 15% fewer greenhouse gas emissions in 2011 compared to 1981, a new study published in the journal *Animal Production Science* has found¹.

Continual improvements in production and feed efficiencies, crop yields and management strategies, resulting in reduced emissions and resource requirements, were largely responsible for the significant decrease in environmental impact, according to the first results of a comprehensive five-year (2013-2018) study examining the Canadian beef industry's environmental footprint.

Conducted by researchers at the University of Manitoba, Agriculture and Agri-Food Canada (AAFC) Lethbridge and Environment Canada, the study found that there has been a 15% decrease in methane, 16% decrease in nitrous dioxide and 13% decrease in carbon dioxide from beef production in Canada over the recent 30 year period. Comparing the same time periods, it took 29% fewer cattle in the breeding herd and 24% less land to produce the same amount of beef. This study explored the entire production system – from cow-calf to feedlot. Future phases of the study will assess the impact of Canadian beef production in areas such as water use, biodiversity and provision of ecosystems services.

"We're working to get a more accurate assessment of the Canadian beef industry's environmental footprint and these results indicate that the footprint per kilogram of beef produced is getting smaller," said Dr. Tim McAllister, a research scientist at AAFC Lethbridge and one of the study's principal investigators. "The decreased emissions and reduced resource requirements to produce beef over the past few decades, due in part to enhanced production and feed efficiencies, crop yields and management practices, wouldn't have happened if it weren't for investments in research and development, and the industry's ability to adopt those technologies," he explained.

Dr. McAllister is a world-renowned scientist. He works with the Food and Agriculture Organization of the United Nations on the procedures used to develop these estimates, and has served on the Intergovernmental Panel on Climate Change.

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The environmental impact of livestock production has been a contentious topic for some time, and greenhouse gases and resource use have been at the forefront of this environmental debate. For the Canadian beef industry, with over 68,500 beef farms contributing \$35 billion worth of goods and sales to the economy, clarity on this topic is important.

“Unfortunately, perceived concerns of negative environmental impacts of beef often overshadow the beneficial impacts of the beef industry,” noted Tim Oleksyn, a cow-calf producer from Shellbrook, SK and Chair of the Beef Cattle Research Council. “Beef producers are inherently motivated to be more efficient, which most often has social, economic and environmental benefits. Now that we have resource use and greenhouse gas emission benchmarks, we can move forward as an industry and more strategically target our efforts to improve.”

Canada’s beef industry currently accounts for 3.6% of Canada’s greenhouse gas production and 0.072% of global greenhouse gas production². At the same time, lands that grow grasses and legumes for cattle sequester carbon, thereby reducing greenhouse gases.

The results of this study speak to the industry’s commitment to continuous improvement and sustainability. It will also provide important historical information to the environmental component of the Canadian Roundtable for Sustainable Beef (CRSB)’s first-ever National Beef Sustainability Assessment. The CRSB sustainability assessment will benchmark the industry’s social, economic and environmental impact using 2013 as the baseline. The assessment will be completed in Fall 2016 and progress evaluated every five years.

Results from the remaining phases of the industry environmental footprint study, including water use, biodiversity and provision of ecosystems services, are expected in 2018. The study is funded by the Beef Cattle Industry Science Cluster.

The Canadian Roundtable for Sustainable Beef (CRSB) is a multi-stakeholder initiative developed to advance sustainability efforts within the industry. The CRSB is the go-to forum on sustainable beef in Canada, dedicated to connecting a network of local, regional and national leaders in the beef industry with a common vision and mission.

The Beef Cattle Research Council (BCRC) funds leading-edge research to advance the Canadian beef industry. It manages Canada’s Beef Cattle Industry Science Cluster. The Cluster is funded by the industry’s National Check-Off and Agriculture and Agri-Food Canada with additional contributions from provincial beef industry groups and governments.

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