



February 2, 2018

Rebecca Tan
Policy Advisor
Ministry of the Environment and Climate Change
Climate Change and Environmental Policy Division
Air Policy Instruments and Programs Design Branch
77 Wellesley Street West
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Toronto, Ontario M7A 2T5

Dear Ms. Tan,

Re: EBR Registry Number 013-1929: Low Carbon Transportation Fuels in Ontario: Amendments to Ethanol in Gasoline (O. Reg. 535/05) and Greener Diesel – Renewable Fuel Content Requirements for Petroleum Diesel Fuel (O. Reg. 97/14) Regulations

The Beef Farmers of Ontario (BFO) appreciates the opportunity to provide comments as part of the Ontario Ministry of the Environment and Climate Change (MOECC) consultation on low carbon transportation fuels in Ontario and amendments to Ethanol in Gasoline regulation under the *Environmental Protection Act*. BFO represents the 19,000 beef farmers across Ontario by advocating in the areas of policy planning, industry development and research, animal health and welfare, and domestic and export market development.

BFO recognizes that the proposed regulatory amendments and potential funding of up to \$155 million for biofuel production and innovation through a Blenders Support Program are, in part, a response to the commitment made in *Ontario's Climate Change Action Plan 2016-2020* to increase the availability and use of lower carbon fuel in transportation. BFO supports the Ontario government's commitments to renewable energy, but firmly believes that further encouragement of the biofuels sector must focus on the production of biofuels from sources that do not affect the availability or cost of livestock feed. As such, our comments focus on MOECC's proposal to require gasoline suppliers to maintain an average of at least 10% (up from 5%) ethanol in regular grade gasoline, by volume per calendar year starting in 2020.

In Ontario, increased demand for corn due to ethanol production has driven up livestock feed prices, resulting in significantly higher operating costs for beef producers and compromising our province's economic competitiveness as a location to feed cattle. While we feel that our industry may have already absorbed any negative shocks to our input costs from the current 5% ethanol content mandate for gasoline, BFO does not believe a higher mandate could be implemented without resulting in irreparable damage to the Ontario beef industry.



The existence of an economically viable beef industry in Ontario owes itself, in large part, to the internationally competitive price at which cattle feeders can access grains, particularly corn. Ontario's capacity for corn production makes it an attractive location for cattle feeding operations, which in turn supports valuable urban and rural jobs in the province's meat processing sector, and the thousands of cow-calf farms across the Ontario countryside. Feed costs typically account for 55% to 65% of the total cost of producing livestock, and the price of corn is the most important factor in determining the cost of feeding livestock. Because corn is the dominant feed source for livestock, it is the reference price for all other substitute feeds. This means Ontario beef farmers do not have other economical options to replace corn. In other words, as corn prices rise, so do the costs of replacement feeds, including distillers grains.

As crop production is a biological process that can be influenced by numerous variables such as adverse weather, diseases, pests and other unpredictable factors, supplies of feed crops such as corn can be low in certain years, resulting in price spikes. An ethanol mandate prioritizes the use of corn for ethanol production during such times; with higher demand for corn and a locked-in quantity designated for ethanol use, the corn market has the potential to become more sensitive to changes in crop yield. Because feed grains are its primary input, the livestock industry is in direct competition with ethanol, but government content mandates and subsidies force most price adjustments to happen in the livestock feed market when there are supply shocks in the global market. The resulting impacts on prices are most strongly felt in livestock feed. While the ethanol price is supported through regulation, the price of cattle is based off of the Chicago Mercantile Exchange price, which moves independently from changes in Ontario corn prices. This poses a substantial threat to the margins of Ontario's livestock farmers.

Ontario's ethanol content mandate puts pressure on Ontario's price difference with other corn-producing jurisdictions, artificially raises the domestic price of corn, and weakens the natural economic factors that enable Ontario to produce and process livestock for the international market. According to the 2012 study from the George Morris Centre, "Impact of Canadian Ethanol Policy on Canada's Livestock and Meat Industry", approximately one-third of Ontario corn was used for ethanol from 2008 to 2011. And while the ethanol share of corn in Ontario grew by nearly 500% from 2001 to 2010, the feed share declined to about 60% over the same period of time.¹ This shift was driven by Ontario's 5% ethanol content mandate, and BFO believes that an increase to a 10% mandate will create even more stability and demand in the ethanol market. A larger guaranteed market will drive more corn towards ethanol production, and therefore result in even higher livestock feed costs.

Ethanol production that was driven by content mandates increased the price of feed grains in Eastern Canada by approximately \$15-20/tonne, which resulted in increased feed costs of \$100-\$180 per head of cattle for beef finishers. Overall, ethanol production cost Canadian livestock producers approximately \$130 million per year as a result of reduced livestock feeding margins and other losses, such as lower feeder livestock prices.² BFO believes that an increase to Ontario's ethanol content mandate will lead to additional feed costs that could be catastrophic to Ontario's beef finishing sector.

BFO often hears the argument that distillers grain production could offset livestock producers' shrunken access to feed corn. However, this effect is not large. The Agricultural Marketing Resource Center

¹ Mussell, Grier, and Rajcan. "Impact of Canadian Ethanol Policy on Canada's Livestock and Meat Industry." *George Morris Centre*. (2012).

² Ibid.



estimates that, for every bushel of corn processed into ethanol, on average about 15% to 16% is replaced by distillers grain and is promoted in the market as corn-equivalent livestock feed.³ Additionally, the higher concentration of phosphorous in distillers grain, combined with the higher levels of distillers grain needed to substitute for corn in livestock feed, results in much higher excretion of phosphorous in cattle manure versus that from an all-grain diet. Indeed, it has been reported that feeding 20-40% percent distillers grain increased phosphorous in feedlot manure by 60-120%.⁴ As Ontario seeks to reduce the phosphorus load in the Great lakes, careful consideration must be made when constructing policies that will force cattle producers to adopt more phosphorus-intensive feeding strategies in order to survive.

With the increased demand for corn that has been the result of surging ethanol production over the last decade, beef producers have seen their largest cost category increase dramatically, and this has reduced Ontario's competitiveness as a location for feeding cattle. This has also increased demand and competition for land, which farmers must contend with when establishing or expanding operations. BFO is concerned that most of the increased corn volume required for ethanol will not be able to come from yield growth, and will instead be a result of land conversion from pastureland and forage crops to more corn acres. Based on the changes seen in California and Ontario, for example, increased ethanol demand leads to forage acreage being converted to cropland and/or changing crop rotations to increase corn production.

From 2006 to 2016, corn acreage in Ontario increased by 37%, while pastureland shrank by 30% and hay acreage shrank by almost 33%.⁵ Ontario's ethanol content mandate, which encouraged and subsidized corn production, was a major contributing factor to the land use conversion seen in Ontario over the last decade. Further to this, BFO believes that land that is suitable for corn production in Ontario is already being used for this purpose. New, expanded corn production that results from an increased content mandate will come from less agriculturally capable land in Ontario that is ideal for pasture and forage production. BFO is concerned that the ethanol content mandate will encourage unsustainable crop production systems on inappropriate land.

While the ethanol content mandate increase is often interpreted as an environmentally positive move because it will reduce carbon emissions from fuel use in vehicles, policymakers must take a more comprehensive view of the environmental impacts of increased ethanol production in the province.

Pastureland is being lost at a much higher rate than cropland in Ontario, and the province cannot afford to lose more grasslands and forage production. Grasslands are widely recognized by government, industry, and environmental groups as a highly valuable ecosystem and environmental feature, and the majority of Ontario's grasslands are managed by livestock farmers. Beef farmers' businesses are dependent on healthy forages and pastures, and they are invested in protecting them. At the same time, beef farmers recognize their environmental value. Forage-based livestock improves soil fertility and structure through organic manure deposits, provides erosion control through fencerows, windbreaks and perennial crops, and promotes soil ecosystem health and carbon storage capacity through the

³ Agricultural Marketing Resource Center. "Impact of Ethanol on the Livestock and Poultry Industry." (2008).

<http://www.agmrc.org/renewable-energy/ethanol/impact-of-ethanol-on-the-livestock-and-poultry-industry/>

⁴ Trenkle. "With Increasing Availability of Distillers Grains, Will Phosphorus be a Problem for Iowa Livestock Producers?" Iowa State University Animal Industry Report (2006). http://lib.dr.iastate.edu/ans_air/vol652/iss1/47

⁵ Ontario Ministry of Agriculture, Food and Rural Affairs. "Statistical Summary of Ontario Agriculture." (2017). http://www.omafra.gov.on.ca/english/stats/agriculture_summary.htm



production of perennial forage crops that minimize tilling and soil disruption. Forages and pastureland also play an important role in maintaining water quality and reducing nutrient run-off. The Lake Erie basin has experienced a major shift in agricultural land use from forage to crop production over the last 30 years, and this land use change is cited in the draft Lake Erie Domestic Action Plan as a contributing factor to the increasing phosphorus load.

Government policy, such as the ethanol content mandate, can have a significant unintended influence over shifting production practices in Ontario. The potential environmental consequences of creating further financial disincentives for forages and pastureland range from loss of organic matter and perennial crops that store carbon, loss of wildlife habitat, release of carbon stores from land use conversion, degradation of soil health, and increased risk of nutrient run-off in our water sources.

BFO also has concerns regarding the actual GHG-mitigation benefits of ethanol and the amount of energy used in its production. According to research on corn ethanol production for California's Low Carbon Fuel Standard, the carbon dioxide released from the associated land conversion cancels out any benefits ethanol has in mitigating emissions in fuel use.⁶ In addition, a study out of Cornell University found that production of corn for ethanol requires 29% more fossil fuel energy than the fuel it produces. This finding was based on the inputs and energy used in producing corn for ethanol, such as production of pesticides and fertilizers, running farm equipment, and processing and transporting the crop.⁷

Ethanol production has already contributed to downsizing in the Ontario livestock industry through its impact on feed and land prices. And according to several economists and the U.S. Congressional Budget Office, demand for ethanol also has an impact on food prices. For example, sharp increases in U.S. food prices in 2007 and 2008 were partly blamed on ethanol policies, with some estimating that 10-15% of the price increases were attributable to ethanol demand.⁸ Climate change and geopolitics will compromise food security globally, while food production is competing with biofuel production for agriculturally capable land. An increase to the ethanol content mandate and expanded government support for the biofuel industry may compromise Ontario's ability to maintain and expand food production within the province.

BFO is aware of arguments that livestock feed prices and competition for land will not increase because ethanol production is already at capacity in Ontario, with no plans for expansion in response to a potential content mandate increase. BFO disputes this argument, and would point to the \$120-million expansion at the IGPC Ethanol Incorporated Plant in Aylmer, Ontario, which will double the plant's production capacity. Investment and expansion are occurring in the Ontario ethanol industry. We believe an increased content mandate is likely to drive ethanol production even further, which will amplify the negative economic and environmental consequences caused by the initial 5% mandate.

⁶ Hertel, Golub, Jones, O'Hare, Plevin, and Kammen. "Effects of US Maize Ethanol on Global Land Use and Greenhouse Gas Emissions: Estimating Market-mediated Responses." *BioScience* (2010) 60:3.

<https://doi.org/10.1525/bio.2010.60.3.8>

⁷ Pimentel and Patzek. "Ethanol Production Using Corn, Switchgrass, and Wood; Biodiesel Production Using Soybean and Sunflower." *Natural Resources Research* (2005) 14:65. <https://doi.org/10.1007/s11053-005-4679-8>

⁸ Congress of the United States-Congressional Budget Office. "The Impact of Ethanol Use on Food Prices and Greenhouse-Gas Emissions." (2009). <https://www.cbo.gov/sites/default/files/111th-congress-2009-2010/reports/04-08-ethanol.pdf>



BFO cannot support any government policy that encourages or subsidizes grain-based ethanol production. Finally, any increase from the current 5% mandate must be accompanied by compensation to Ontario's beef producers to offset market distortions caused by the regulatory change, preserve the province's infrastructure for feeding beef cattle, and maintain our ability to feed our own citizens.

The Beef Farmers of Ontario would like to thank the Ministry of the Environment and Climate Change for the opportunity to provide comments on amendments to Ethanol in Gasoline regulation. We would be pleased to participate in further discussions on this important issue.

Sincerely,



Matt Bowman
President

cc: BFO Board of Directors
Hon. Jeff Leal, Minister of Agriculture, Food and Rural Affairs
Deputy Minister Greg Meredith, OMAFRA

