



Committee Report

To:	Chair Carleton and Members of the Climate Change Taskforce
Committee Date:	October 28, 2022
Subject / Report No:	Climate Action and the Agricultural Sector / CAOR-CCTF-12-22
Title:	Climate Action and the Agricultural Sector
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Reviewed by:	Randy Scherzer
Lower Tier(s) Affected:	All municipalities within Grey
Status:	

Recommendation

1. That report CAOR-CCTF-12-22 be received for information; and
2. That the County of Grey continue to advance the actions identified in Theme 1 of *Going Green in Grey* related to nature-based climate solutions and agriculture in partnership with the local Agricultural sector.

Executive Summary

Going Green in Grey sees the agriculture sector as an essential partner in reaching climate action goals. Action 3: Facilitate Ongoing Capacity Building in Sustainable Agriculture Best Practices lays out a series of recommended actions. National, provincial, and local agricultural communities have expressed concerns about Federal carbon pricing and fertilizer emissions reduction targets throughout 2022. Rather than price-based actions, *Going Green in Grey* recommends further development of sustainable, climate-friendly production methods and on-farm carbon sequestration implemented in partnership with the Agricultural sector. As other orders of government announce and implement agriculture-focused climate action programs Grey will monitor and modify our plan if warranted.

Background

In April 2022 County Council endorsed the *Going Green in Grey: Climate Change Action Plan* and declared a climate emergency, acknowledging the urgency of action by all levels of government to avoid the worst impacts of climate change. *Going Green in Grey* established a community-wide net-zero local greenhouse gas emissions target for 2050 and a series of interim targets, including a 30% reduction by 2030 to align with Federal and international commitments.

Agriculture and GHG Pollution

Agriculture was responsible for approximately 10% of Canada's greenhouse gas (GHG) emissions in 2019, or 73 Mt CO₂, which come from three main sources: enteric fermentation (24Mt), crop production (24Mt), and on-farm fuel use (14Mt) according to the 2021 National Inventory Report. Based on 2019 data, national emissions from synthetic fertilizers accounted for 12.75 Mt. While many producers in the agriculture sector are already working to improve nutrient management and reduce emissions associated with crop production, fertilizers are responsible for a growing share of overall agricultural emissions.

In Grey County, data related to agriculture operations, including on-farm fuel use and crop production, is limited. Enteric fermentation and manure management GHG emission numbers are possible to calculate based on the Agricultural Census and Federal livestock emissions factors.

Grey County data related to livestock emissions captures the production of CH₄ from enteric fermentation in livestock, as well as CH₄ and N₂O from manure management practices. Due to the large number of livestock in Grey County, this category accounted for 33 percent of all emissions occurring community-wide in 2018. At this time data is not available for Grey County related to soil and crop management, however, nationally agricultural soil management accounts for 42 percent of agricultural emissions according to the [National Inventory Report](#) in 2018.

Federal Climate Action and Agriculture Programs

In response to the opportunity to reduce emissions in the agricultural sector the Federal government has advanced several initiatives in recent years looking to work with the agricultural sector to both reduce emissions and increase carbon sequestration in agricultural operations.

The Canadian Federal Government instituted a price on carbon in 2018 through the [Greenhouse Gas Pollution Act](#) that applies to all sectors to support reaching the Federal goal of Net-Zero national GHG emissions by 2050. There are two overarching systems for pricing carbon in Canada: the fuel charge, which is the carbon tax that Canadians pay on gasoline, diesel, natural gas, and other hydrocarbon fuels; and the output-based pricing system (OBPS), which applies to large industrial emitters. In Ontario the federal fuel charge applies, but there is a Provincial version of the OBPS, the emissions performance standard (EPS) program.

The EPS does not apply to on-farm direct emissions from agricultural practices (e.g., livestock enteric fermentation, NO_x emissions from fertilizer application). Farmers are also exempted from much of the fuel charge; it does not apply to gasoline and diesel used in tractors, trucks and other machinery used on-farm; partial relief from the fuel charge is also provided for natural gas and propane used in commercial greenhouses. [Bill C-234](#) is currently under consideration by the Parliamentary Standing Committee on Agriculture and Agri-Food, which would also provide an exemption on the carbon tax for grain drying. The National Farms Union supported this exemption at the October 3rd meeting but suggested a sunset clause to ensure that the transition to low-emissions drying technologies happens in a timely manner.

Agriculture and Agri-Food Canada launched the \$165.7 million [Agricultural Clean Technology Program](#) in 2021, which earmarks \$50 million to help farmers purchase more efficient grain dryers and replace hydrocarbons. The program also focuses on research and innovation,

particularly in the areas of green energy and energy efficiency. Ultimately, these are investments that will accelerate and facilitate producers' transition away from fossil fuels.

Because a significant proportion of agriculture emissions are not the result of fuel use, nor are the direct emissions captured by the EPS for large industrial emitters, other approaches to monitor and reduce emissions are being explored (e.g., emission reduction targets for fertilizer application).

The Canadian Federal government circulated a discussion document over Summer 2022 for comment to help guide the development of a plan to achieve Canada's fertilizer emissions reductions targets of 30% by 2030 from 2020 levels: [Share ideas: Fertilizer emissions reduction target - agriculture.canada.ca](https://www.shareideas.ca/fertilizer-emissions-reduction-target-agriculture-canada-ca)

Nitrous Oxide (N₂O) has a global warming potential per tonne of 273 times CO₂, so is an area of particular attention. According to the Federal government, the intensity of N₂O emissions per hectare has nearly doubled since 1981 in Canada making it a critical issue to efficiently manage to reach global climate goals.

Discussion

Agriculture is one of the greatest areas of opportunity for climate action, and *Going Green in Grey* highlights the high relative greenhouse gas emissions reduction and sequestration potential of expanding existing best management practices across the agricultural sector.

Going Green in Grey focuses on continuing and expanding support for local organizations that are building capacity in the agriculture sector, including Alternative Land Use Services, Grey Agricultural Services and Ontario Soil and Crop Improvement Association.

The Agri-Food sector is a vital part of the climate solution, with organizations such as [Farmers for Climate Solutions](#) clearly articulating the central role farmers must play in a climate safe future.

Going Green in Grey sets the following goals:

- By 2030 20% of natural land for pasture and 30% of cropland are under best management practices for carbon sequestration;
- By 2050 60% of natural land for pasture and 90% of cropland are under best management practices for carbon sequestration; 50% of manure is managed under best practices.

Staff are working to establish baselines for these goals based on currently available data.

The Grey County agriculture sector has expressed concern about the potential financial impacts of Federal carbon pricing activities, and goals to reduce GHG emissions associated with fertilizer use. *Going Green in Grey* focuses on actions to support farmers to reduce the GHG emissions associated with their operations and increase carbon sequestration rather than price-based actions.

Grey County is proposing participation in the Experimental Acres project in 2023. The project was created by Our Food Future (OFF), a federally funded City-County partnership project between the City of Guelph and the County of Wellington that expanded to Dufferin County in

2022. Experimental Acres creates an opportunity for local producers to pilot regenerative carbon-sequestering agriculture concepts with the costs subsidized.

The development of *Going Green in Grey* included consultation with the Grey County Agricultural Advisory Committee and local agricultural organizations, and its implementation will continue to happen in partnership with the sector.

Legal and Legislated Requirements

None.

Financial and Resource Implications

None.

Relevant Consultation

Internal: Economic Development and Tourism, CAO, and Finance

External:

Appendices and Attachments

Appendix A: [Discussion document: Reducing emissions arising from the application of fertilizer in Canada's agriculture sector](#)

Appendix B: [Nitrogen Fertilizer: Critical Nutrient, Key Farm Input, and Major Environmental Problem, National Farmers Union Discussion Paper](#)