

Agricultural Business Risk Management

TOWARD THE CREATION OF AN AGRIRESILIENCE PROGRAM

Équiterre

Submission to the Members of the House of Commons Standing Committee on Agriculture and Agri-Food as part of the Study on Agricultural Business Risk Management Programs

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Introduction

On February 25, 2020, the members of the House of Commons Standing Committee on Agriculture and Agri-Food adopted the following motion: “That, pursuant to Standing Order 108(2), the committee conduct a comprehensive study into the Business Risk Management (BRM) suite of programs to do a gap analysis, identify improvements, to ensure that they are adequately meeting the challenges of farming in the 21st century[.]”

In this submission, Équiterre identifies the main challenges associated with farming in the 21st century and provides recommendations to prevent and mitigate threats to farm viability at the source.

Making resilience and nature-based solutions a priority

There are many challenges facing Canadian farming in the 21st century, but there are solutions. We believe that the most promising solutions are nature based, minimize the use of chemical fertilizers and focus more on regenerating soil health.

This submission explains how climate risk affects agricultural finance and why more sustainable farming practices will promote the development of a more resilient agricultural industry in Canada. It proposes creating a new business risk management program called **AgriResilience** that will stimulate innovation, reduce the impact of climate risk on agricultural production and revenue, and mitigate the inherent risks associated with the transition toward new farming practices.

Findings

A. Crises

1. Climate change and its impact

Greenhouse gas emissions (GHG) from agriculture in Quebec and Canada currently represent 10% of GHG emissions, and that percentage will rise by 2030. Meeting our emissions reduction targets is a major challenge for both Quebec and Canada, and experts in Quebec¹ and abroad² agree that all sectors, including the agricultural sector, must contribute by reducing their carbon footprint.

Meanwhile, farmers are among the first to feel the ever-growing impacts of climate change. Crop losses attributable to the growing impacts of climate change affect the GDP, profitability, the viability of rural communities and the mental health of farmers, as well as government insurance programs, for which spending is bound to increase.

It is therefore essential that the agricultural industry reduce its GHG emissions while adapting to the growing impact of climate change in an increasingly unstable environment in order to ensure decent living conditions for farmers and food security for Canada and the rest of the world, both now and in the long term.

2. Degradation of soil quality

There has been a noticeable decline in soil quality in eastern Canada, partly because of farming practices.³ Scientists from around the world agree that healthy soil helps address and mitigate the impacts of climate change. Degraded soil produces less. It absorbs carbon less efficiently, which makes climate change worse, which exacerbates soil degradation by increasing precipitation intensity, flooding, drought frequency and intensity, heat stress and wind.

As a result, degraded soil makes farms more vulnerable in terms of their productivity and their contribution to the economy. The degradation of soil cost \$3.1 billion in yield losses in 2011 and a cumulative loss of \$40 billion to \$60 billion between 1971 and 2011.⁴

¹ Dunsy Energy Consulting, June 2019. [TRAJECTOIRES DE RÉDUCTION D'ÉMISSIONS DE GES DU QUÉBEC – HORIZONS 2030 ET 2050](#).

² IPCC, 2019. SPECIAL REPORT. [Climate Change and Land](#).

³ Agriculture and Agri-Food Canada. [Soil Organic Matter Indicator](#).

⁴ Lobb, David & Badreldin, Nasem & Loro, Marita & Li, Sheng & Mcconkey, B.G. (2017). [Soil degradation: The cost to agriculture and the economy](#). 10.13140/RG.2.2.35666.45768.

3. COVID-19 pandemic

The pandemic further highlighted the fragility of our food production and distribution chain because that chain is based on the growing distance between production and consumption sites and our dependence on imports, foreign workers, trade agreements and other external factors.

Experts predict that the climate crisis will only grow worse and that even more health crises are likely in the future.⁵ Farmers will have to adapt even more quickly in order to deal with all these crises. Our response to the crisis must therefore be structuring for the agricultural community.

Équiterre is therefore of the opinion that the federal government must encourage farmers who choose to balance the objectives of increasing the agricultural industry's production and enhancing their resilience as a business and our collective resilience as a society. By adopting practices that regenerate soil and ensure the sustainability of this essential resource, these businesses are protecting our ability to produce food in the medium and long term.

B. Risk management programs

Équiterre finds that, since the business risk management programs' main goal is to help farmers stabilize their income, they are primarily compensation programs. However, the AgriInvest program offers farmers the opportunity to make investments to manage risk. Although AgriInvest provides a worthwhile opportunity for farmers, overall the business risk management programs do not promote innovating toward new farming practices that would help to reduce certain risks and they do not address climate-related challenges. These programs are not designed to address climate risk.

The existing business risk management programs meet short-term needs but do not encourage the industry to adapt to changing contexts, such as climate change.

Recommendations

A. Nature-based solutions

Healthy soil is part of Canada's solution for dealing with climate risk. Plants in healthy soil draw carbon from the air and lock it in the ground with the help of microorganisms. It is a natural process and it means that healthy soil does not need chemical fertilizers (nitrogen fertilizers are in and of themselves strong emitters of greenhouse gases) to make it fertile. This reduces GHG emissions.⁶

Regenerative farming practices (based on soil regeneration) have many co-benefits in addition to reducing GHG emissions. Not only do such practices improve soil fertility and thus crop yield, they also

⁵ The Guardian, [Pandemics result from destruction of nature, say UN and WHO](#).

⁶ [Les sols: une solution méconnue pour le climat](#).

enhance the nutritional quality of food, improve water absorption and filtration capacity and increase biodiversity. Finally, farms that implement such practices considerably improve their resilience to the impacts of climate change, which has a positive effect on all agricultural ecosystems.

In agriculture, adapting to the impacts of climate change and reducing greenhouse gas emissions requires healthy soil, and many innovative farmers are already implementing these sorts of practices. However, farmers need clear signals and incentives if regenerative farming practices are to be fully adopted.

B. AgriResilience

In order to help Canada's agricultural industry adapt to the challenges of the 21st century, ensure food security for citizens and contribute to the federal government's efforts to fight climate change, Équiterre proposes the creation of an **AgriResilience** program, which would reward innovation and the adoption of new, more resilient farming practices, thereby helping to reduce climate risk.

This program aims to achieve two objectives:

- Help the agricultural industry **adapt** to a changing climate;
- Contribute to the **fight** against climate change.

The program would be aimed primarily at farmers who **adopt practices to promote healthy soil** and it would be intended for both conventional and organic producers.

Research and field experience show that **advisory services that are not related to the agricultural inputs sales industry** (pesticides, fertilizers) have a positive impact on the adoption of environmentally friendly farming practices. The AgriResilience program must therefore include independent advisory services.

This program is not designed to replace existing programs but to complement them by promoting innovating toward more nature-based farming practices. We are of the opinion that the economic and environmental benefits of adopting nature-based solutions that regenerate soil would outweigh the risks associated with maintaining the status quo.

Conclusion

In the context of a climate crisis that has a direct impact on the viability and productivity of Canadian farms, combined with a health crisis that has made us aware of the importance of enhancing the resiliency of the entire agricultural value chain, we ask the members of the Standing Committee on Agriculture and Agri-Food to consider the creation of a new business risk management program, **AgriResilience**, to meet the industry's actual and anticipated challenges.

Équiterre's agricultural expertise

In September 2019, Équiterre launched a Canada-wide project to promote the widespread adoption of practices to regenerate and protect farmland in the long term. This project is being carried out in Quebec and in various other provinces.

To that end, this project brings together a number of experts, including farmers, agronomists, scientists and other stakeholders, in order to:

1. Establish a common understanding of the challenges associated with the widespread adoption of practices to promote healthy soil and solutions to those challenges;
2. Mobilize stakeholders, share and validate knowledge in this regard; and
3. Make Canadians aware that agriculture is part of the climate solution.

Given the pan-Canadian nature of this project and its technical mandate, Équiterre recruited scientists, agronomists, farmers' groups and many experts and professionals in the agricultural industry to join its advisory committee. The committee meets regularly to guide Équiterre on the project strategy, provide their technical expertise, share relevant information and review the project outcomes.

What is more, in 2020, Équiterre launched the Quebec component of the healthy soil project, funded by the MAPAQ. The project is a farming technology showcase on soil conservation approaches for large conventional crops and its purpose is to draw attention to farmers who implement these practices that are good for the environment, the health of their soil and the profitability of their businesses. This component of the project is coordinated in partnership with Coordination services-conseils (CSC). An oversight committee made up of representatives from the MAPAQ, the Producteurs de grains du Québec (PGQ), the IRDA, the CSC, Équiterre and soil health experts has the mandate of advising and supporting the coordination team in planning and carrying out all stages of the project.