ENVIRONMENTAL CONTRIBUTION OF AGRICULTURE AND SOIL HEALTH

Opening Statement to the House of Commons Standing Committee on Agriculture and Agri-Food

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Representing Canada's plant science industry | Représentant de l'industrie de la phytologie du Canada

Mr. Chair, Honourable Committee members;

My name is Dr. Justine Taylor and I am the Director of Stewardship and Sustainability for CropLife Canada. Joining me today is Ian Affleck Vice President, Biotechnology.

There is clearly a global imperative to address the issue of climate change and agriculture is poised to contribute positive sustainable outcomes, not only for the environment but also for food security and the economy. A key element in the success of Canadian agricultural has been the adoption of innovation. We believe innovation will be critical to furthering sustainable development both in Canada and internationally and that will form the basis for our comments today.

Canada's Global Standing in Sustainability

It is important to put Canadian agriculture in a global context. Agriculture accounts for eight percent of Canada's greenhouse gas emissions, as compared to 23% globally. Today's Canadian farm can produce twice as much output as 50 years ago, using the same total inputs.

While production has increased significantly, total emissions from Canadian agriculture have been relatively stable for twenty years, resulting in a decrease of GHG emission intensity of 50% between 1997 and 2017, as compared to a 36% decrease for the economy as a whole.

The Role of Innovation in Improved Sustainability

We believe that innovation will be key to the ongoing success of Canadian agriculture in the face of a changing climate. Advancements in biotechnology and crop protection products have helped make the seeds we plant resilient, effectively fighting off competing weeds, insects and diseases to ensure a productive harvest. New innovations in this space have made pesticide use in Canada more efficient and when combined with precision agriculture allow farmers to be more targeted than ever in their pesticide and crop input applications.

Preserving Biodiversity

Given the increased productivity Canadian farmers are now able to achieve, we estimate nearly 34 million acres are maintained in a natural state preserving wildlife habitats and biodiversity. Without plant science innovations farmers would need 44% more land to produce what they do today[3]. Far from being a threat to biodiversity, modern agriculture is one of the solutions to protecting it.

Reducing GHGs and Improving Soil Health

Modern agricultural practices are helping to reduce greenhouse gas emissions and address climate change concerns. No-till and conservation tillage practices have helped to sequester carbon in the soil, preventing 16.5 billion kgs of CO2 from being released between 1996 and 2018.

Canadian farmers continue to increase their no-till acres with 58% of our 33 million crop land acres being no-till. Reduced fuel use as a result of no/low tillage practices has prevented 3.3 billion kgs of CO2 from entering the atmosphere between 1996 – 2018. Without plant breeding innovations like herbicide tolerant traits and the active ingredient of glyphosate, this progress would not have been possible.

In addition, no-till systems can reduce soil runoff by 79% while also increasing plant nutrients in the soil. More than 80% of Canada's farmland is now at a very low risk of soil erosion – a large improvement from forty years ago when soil erosion was a significant issue.

Lastly, no/low tillage practices increase organic matter in the soil and show a 71% increase in soil microbes.

Continuous improvements

While we are proud of the progress that modern Canadian agriculture has made, we are not stopping here in our support of sustainability. There are ongoing investments and continuous research into new biopesticides, precision agriculture, and gene editing. Gene editing is a particularly exciting field, as advancements will make it possible to create new varieties more resistant to climate change and more able to feed a growing global population. We believe that Canada can, and should be, an agriculture technology hub for much of this research and development.

Recommendations

In order to further improve the sustainability of Canadian agriculture, we need a clear commitment on the part of the government of Canada to work with industry and to establish a regulatory climate that facilitates and rewards innovation.

Our recommendations are the following:

1. **Focus on regulatory modernization as a tool to encourage innovation.** Our industry needs a regulatory system that is prompt, predictable and science based so we can continue to advance agricultural sustainability. Regulatory oversight for agriculture is interwoven between many departments and a whole of government approach must be embraced and realized.

2. **Incentivize and reward efforts by Canadian farmers.** Canadian farmers are world leaders in the adoption of technologies that enable the sequestration of carbon. However, at present, those efforts are not recognized by government policy.

3. **Promote and defend Canadian sustainability.** We would like to see the government of Canada promote the sustainability success story of Canadian farmers on the world stage, and ensure that it is recognized in all international forums and negotiations.

4. **Support exports by promoting science-based trade rules**. We ask the government to better use international mechanisms and institutions to ensure science-based, predictable and transparent trade rules for agriculture. We are at risk of non-science-based decisions in export markets impacting the adoption of innovation in Canada and jeopardizing our progress on sustainability.