



FERTILIZER CANADA

FERTILISANTS CANADA

907 – 350 Sparks, Ottawa ON K1R 7S8

T (613) 230-2600 | F (613) 230-5142

info@fertilizercanada.ca

fertilizercanada.ca | fertilisantscanada.ca

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Submitted through the Environmental Registry of Ontario

Re: Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health

On behalf of Fertilizer Canada, and our members, we welcome the opportunity to respond to the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health.

Fertilizer Canada represents the manufacturers, wholesalers and retail distributors of nitrogen, phosphate, potash and sulphur fertilizers – the backbone of Canada’s agri-food economy. Responsible for half of the world’s current food production, fertilizer is fundamental to the future of agriculture and farmers’ ability to feed a growing global population.

As the world seeks to grow more food from a decreasing land base, farmers will continue to rely on the sustainable use of fertilizer to increase production efficiency while conserving our soil, water, and air. To meet this challenge, farmers will require more than just new and innovative technologies; they will require a framework for understanding and implementing the core principles and practices of sustainable agriculture.

4R Nutrient Stewardship has been designed for this purpose. For more than a decade, Fertilizer Canada has worked with Canadian farmers and the fertilizer industry to promote 4R Nutrient Stewardship - a science-based approach to fertilizer management that involves applying the Right Source @ Right Rate, Right Time, Right Place ®. Use of the 4Rs optimizes plant nutrient uptake, maximizes yield and increases profitability, while also minimizing nutrient runoff.

In 2018, a Memorandum of Cooperation (MOC) was re-signed between Fertilizer Canada, the Government of Ontario’s Ministry of Food Agriculture and Rural Affairs, the Ontario Agri Business Association, the Grain Farmers of Ontario, the Ontario Federation of Agriculture, and the Christian Farmers Federation of Ontario. With a combined industry investment of \$382,500 over three years, the MOC aims to increase awareness and adoption of 4R Nutrient Stewardship and formalized our commitment to sustainable agriculture and environmental action in the province.

With a common commitment to improve the long-term quality of Lake Erie and the Great Lakes basin, the 4R Ontario Steering Committee has developed and implemented a 4R Nutrient Stewardship Certification program for Ontario agri-retailers. Since the program’s launch in Fall 2018, three Ontario agri-retailers have completed an audit to become 4R Certified and 22 retail sites have completed a pre-audit towards 4R Certification.

In addition, the Committee supports 4R Nutrient Stewardship research in Ontario. Researchers have recently proven several benefits from implementing 4R practices on Ontario farms, such as:

- Reducing GHG emissions, up to 75 per cent, by combining the use of urea-ammonium nitrate (UAN) with nitrification inhibitors at the eighth-leaf growing stage of corn;
- Increasing corn yields by as much as 20 per cent and eliminating harmful ammonia loss to soil by combining injection placement with UAN fertilizer, compared to broadcasting;
- Reducing phosphorus runoff by 60 per cent by subsurface banding instead of broadcasting.

Recommendations

- **Continue the framing of phosphorus load reduction.** It is important that any future agreements, actions, or communication material continue to frame the solution of algal blooms as a reduction of phosphorus load in bodies of water, rather than as phosphorus reduction targets. 4R Nutrient Stewardship is a holistic approach that, in addition to application rate, considers the nutrient source, timing of application and placement method to ensure crop nutrient uptake and reduced nutrient loss. To feed a projected population of nine billion people by 2050, food production will have to increase its per acre intensity by 70 per cent. In tandem with industry stewardship, fertilizer will be essential in intensifying crop production sustainably. It is important that any environmental strategy recognizes this reality and supports frameworks, like 4R Nutrient Stewardship, that balance environmental stewardship with agricultural production goals.
- **Developing a Canadian Nutrients Strategy for Lake Ontario with stakeholders.** Fertilizer Canada applauds the governments of Ontario and Canada for their call to create a Canadian Nutrients Strategy for Lake Ontario. We emphasize the need for such a document to explicitly recognize 4R Nutrient Stewardship as the framework for addressing environmental and water quality concerns around agricultural use. In addition, the strategy should be developed in consultation with a number of stakeholders from farm organizations, conservation groups, academia and industry to ensure that it is grounded in science-based and aligned with industry-led efforts.
- **Continued support of 4R Nutrient Stewardship research, awareness and uptake.** Fertilizer Canada is pleased to note that the Ontario-Canada Agreement on Great Lakes Water Quality and Ecosystem Health, and likely the ensuing Canadian Nutrients Strategy, have committed funds for research in area of nutrient stewardship. Science-based 4R best management practices (BMPs) are the foundation of the 4R Nutrient Stewardship framework, providing Canadian growers with the information they need to improve on-farm economics, feed a growing global population, and protect the environment. Through the 4R Research Fund, Fertilizer Canada member companies support ongoing research that identifies and continuously improves 4R BMPs for Canadian growers. Additional government funding would allow us expand the number and size of research projects, and support successful knowledge transfer of this information to Ontario growers.

Concluding Remarks

Fertilizer Canada stands ready to work with the Government of Canada and the Government Ontario as you continue to develop your Agreement on Great Lakes Water Quality and Ecosystem-Health, or the Canadian Nutrients Strategy. We welcome the opportunity to meet with you and your colleagues to further discuss our industry, its advocacy, and how our industry-led 4R framework should be part of any solution.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cotton', written in a cursive style.

Cassandra Cotton
Vice President, Policy & Programs
Fertilizer Canada