



FERTILIZER CANADA
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August 31, 2017

The Honourable Lawrence MacAulay, P.C., M.P.
Minister of Agriculture and Agri-Food
1341 Baseline Road
Ottawa, Ontario
K1A 0C5

Re: Response to consultations on *A Food Policy for Canada*

Dear Minister MacAulay;

On behalf of Fertilizer Canada and our members, thank you for the opportunity to provide feedback on *A Food Policy for Canada*.

Fertilizer Canada is an industry association which represents manufacturers, wholesale and retail distributors of nitrogen, phosphate, potash and sulphur fertilizers. Healthy soils are the foundation of the agri-food sector and fertilizer positively impacts soil health, the economy, and the social fabrics of Canadian life. Fertilizer keeps soils productive, accounting for roughly 50 per cent of current food production; but incorrect nutrient use may lead to negative impacts on a grower's return on investment and risks increased impacts on the environment.

As the world seeks to feed a burgeoning population with high-quality foods from a decreasing land base, farmers around the world will continue to rely on fertilizer to increase production efficiency while conserving our soil, water and air.

Meeting this challenge is not the job of farmers alone but will require a strong commitment by the entire human community to the development and deployment of ecologically friendly food production systems. Producers will require more than just new and innovative technologies; they will require a new framework for understanding and implementing the principles and practices of sustainable agriculture.

The 4R Nutrient Stewardship Program (Right Source @ Right Rate, Right Time, Right Place®) has been designed for this purpose. The 4R approach brings together universal principles of nutrient management with local evidence-based agronomy. The result is best management practices that make sustainable agriculture a reality on the farm. The 4R Nutrient Stewardship framework encompasses the four main principles of fertilizer application and is designed to link the practices used to manage nutrients in the cropping system to an integrated approach.

- The **Right Source** means ensuring a balanced supply of essential plant nutrients including granular or liquid fertilizers or manures.
- The **Right Rate** is applying just enough fertilizer to meet the needs of the plant while accounting for nutrients already in the soil.
- The **Right Time** means applying fertilizer when the plant will get the most benefit and avoiding times when fertilizer can be lost to the environment.
- The **Right Place** is applying fertilizer where the plants can easily access the fertilizer and where it is less likely to be lost to the water or air.



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To achieve its objectives to grow more high-quality food while better addressing water and soil conservation, Canada's fertilizer industry encourages the government, through *A Food Policy for Canada*, to support 4R Nutrient Stewardship as an innovative solution that embraces the themes of *A Food Policy for Canada*:

- It promotes innovative science-based nutrient management practices, enhancing competitiveness and strengthening competitive advantages.
- It is climate-smart, delivering measurement against sustainability goals which includes commitment to mitigate greenhouse gas emissions (nitrous oxide) and nutrient runoff.
- It increases the efficiency of agricultural nutrient use practices for enhanced food production.
- It encourages a nutrient decision system that accounts for impact on all connected stakeholders, to help improve the growth of value-added agriculture and agri-food sectors.
- It can result in downstream assurance of sustainable and responsible use of nutrients in farming, securing public trust in the sector.

The fertilizer industry works collaboratively in shared-value partnerships in order to respond in a proactive and cohesive manner to the challenges and opportunities presented by the growing global demand for sustainably grown ingredients.

Fertilizer Canada works with the Government of Canada as well as provincial governments - Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, and Prince Edward Island -, reaching agreements in partnership with other stakeholder groups including farm groups and environmental groups to deliver regionalized 4R Nutrient Stewardship programming. Fertilizer Canada has reached several significant milestones in these partnerships.

4R Designation 4R Nutrient Stewardship promotes the use of Certified Crop Advisers to help farmers assess soil and environmental conditions to develop a customized nutrient management plan that is site-specific. Based on feedback, adjustments in practices, research and extension programming is made to further enhance sustainability.

4R Designation is a national voluntary program for agri-retailers and Certified Crop Advisers to encourage farmer adoption of 4R Nutrient Stewardship. The overarching objective of the 4R Designation program is to increase awareness and adoption of 4R Nutrient Stewardship among farmers by providing agri-retailers with relevant, comprehensive and accessible information to share with their farm customers. The program allows Fertilizer Canada to count acres under 4R Nutrient Stewardship and demonstrate the tangible commitment being made by Canada's agricultural industry.

Nitrous Oxide Emission Reduction Protocol As Canada continues to develop a national framework to grow the economy while reducing greenhouse gas emissions, Fertilizer Canada is working to ensure the fertilizer industry is at the forefront of climate-smart agriculture practices that align with the country's priorities. Using the principles of 4R Nutrient Stewardship, the Nitrous Oxide Emission Reduction Protocol (NERP) can help growers better manage crop nutrition, maximize yields, minimize losses of nitrogen fertilizer and reduce greenhouse gas emissions by up to 25 per cent. Further, following input and discussion with Canada's fertilizer industry, the provinces of Ontario and Quebec have selected NERP as the candidate fertilizer management protocol for adaptation for use in their respective Cap and Trade programs.



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4R Research Network Over the last seven years the fertilizer industry has invested in research to demonstrate how 4R Nutrient Stewardship plays a critical role in reducing environmental impacts from the application of fertilizer. In March 2015, Agriculture and Agri-Food Canada announced \$1.1 million in matched funding for Fertilizer Canada’s project entitled “A Canadian Research Network to Improve 4R Nutrient Stewardship for Environmental Health and Crop Production.” Under the 4R Research Network, nine leading Canadian researchers are conducting 10 projects to quantify economic, social and environmental benefits resulting from 4R Nutrient Stewardship. We expect additional economic and environmental outcomes such as reductions in greenhouse gas emissions, nitrogen losses to the atmosphere and groundwater, phosphorus losses to surface waters and improved productivity, efficiency and profitability of production. This continued research will be essential in furthering Canada’s position as a world leader in global environmental stewardship.

Environmental Farm Planning In 2016, the inaugural National Environmental Farm Plan Summit came to order in an effort to take all provincial environmental farm plans (EFPs) and form the framework for a Canadian-wide approach to the EFP. As an outcome of this summit, the parties agreed that 4R Nutrient Stewardship could become integrated as the recognized sustainable approach to the nutrient management component of the EFP, thereby supporting environmental sustainability of Canadian farmers. A pilot program on the Alberta EFP is in development to set the stage for national implementation of 4R Nutrient Stewardship and how that translates to the EFP in terms of fulfilling its requirements for environmental sustainability.

International Joint Commission 4R Nutrient Stewardship has been endorsed by the International Joint Commission (IJC). In the 2014 report on the Lake Erie ecosystem, *A Balanced Diet for Lake Erie: Reducing Phosphorus Loadings and Harmful Algal Blooms*, 4R Nutrient Stewardship was identified for accelerated implementation:

“The 4R program – the right fertilizer source, right rate, right time and right place – provides a useful framework for guiding fertilizer application in the Lake Erie Basin and beyond. The 4Rs can be effective in reducing nutrient export from fields, while meeting plant nutrition needs and therefore maximizing crop yields.”

The IJC has published its 2016 Progress Report of the Parties (Canada and the US), documenting the actions taken since the 2012 Great Lakes Water Quality Agreement (GLWQA). The report recognizes industry contributions, citing 4R Nutrient Stewardship.

International outreach Through a Memorandum of Understanding with the Canadian Co-operative Association, Fertilizer Canada has committed to increasing food security for smallholder farmers in five developing countries (Colombia, Ethiopia, Ghana, Senegal and one in Southeast Asia). Pending federal government approval, the proposal focuses on educating smallholder farmers on the most efficient and climate-smart uses of fertilizer products on-farm and also on gaining increased integration of these best management practices into official agricultural policies and programs. The project aims to improve farm productivity and the profitability of 120,000 smallholder farmers, 40 per cent of whom are women.

The 4R Solution proposal will support the achievement of key United Nations Sustainable Development Goals and also contributes to all six pillars of Canada’s international assistance policy.



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4R Nutrient Stewardship will help the agricultural and food sectors innovate and adapt to changing production conditions and market demands.

Sustainable production has become a significant new dynamic in maintaining and growing market access and market share for Canadian crops. Increasingly, importing countries are factoring in environmental and social considerations when formulating national trade policy, while food companies are looking at sustainability as they develop product sourcing specifications. In some cases, participants along agriculture-based value chains are being, or will soon be, asked to demonstrate compliance with pre-determined sustainability requirements in order to gain access to a particular international market or the distribution network of a particular wholesale, retail or food service organization.

Food companies and sustainable supply chain initiatives recognize the value of the 4R Nutrient Stewardship framework so we can assist growers to address compliance questions and assist in accessing new markets for their products. Additionally, the Canadian Roundtable for Sustainable Crops has emerged. This initiative is a national collaboration with the goal of creating an integrated metrics platform which will allow the agriculture industry to respond to market needs with respect to sustainability performance.

Youth education is critical to creating the knowledge and skills needed for the next advances in agriculture.

It is important that the public is informed about the sustainable use of nutrients to increase the health and quality of our soil, and to improve production of nutritious food.

To address this, Canada's fertilizer industry is working to establish a personal link between communities and our nation's food production system. The most effective way to create an informed and positive relationship with food is through hands-on, experiential learning. The Nutrients for Life Foundation Canada is a registered charitable organization committed to bringing educational materials to the classroom, focusing on soil science and agricultural sustainability.

The Government of Canada has a unique opportunity to take advantage of the progress made by our industry, and to develop a policy that balances environmental and economic performance.

The Government of Canada should consider the following while developing *A Food Policy for Canada*.

- Adopt and support science-based decision-making on matters affecting *A Food Policy for Canada*;
- Recognize the voluntary actions undertaken by the fertilizer industry, farmers and stakeholders through the 4R Nutrient Stewardship program, and formally adopt 4R Nutrient Stewardship as the recommended approach to management of crop nutrition for production of abundant and nutritious food;
- Support opportunities for systems based research funding in agriculture and recognize the research accomplishments of the Canadian 4R Research Network on managing soil fertility and nutrients as an important component of maintaining and improving Canada's agricultural soils, improving quality of water and air, and mitigating greenhouse gas emissions;



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- Create a better understanding in the consumer public of the factors that result in sustainable agriculture and support the development of the science and technology that enables improved production practices in Canada;
- Support and enable the creation of an environmental goods and services market for agriculture to support benefits that accrue to all of society as a result of improved agricultural production practices;
- Ensure adequate consultation and ongoing dialogue; and
- Consider existing policy initiatives already in place to achieve the objectives of *A Food Policy for Canada* and ensure alignment.

While Fertilizer Canada is committed to funding research, programming and awareness-building initiatives, there is more that can be done. Environmental stewardship and sustainability are not new ideas for our industry, nor for our customers who have long embraced best management practices in their farms and business operations. But, as we move forward, it is increasingly important to demonstrate our successes in measurable ways and also to identify areas of potential improvement.

Thank you for the opportunity to comment on this important matter. We look forward to the opportunity to further discuss this with you at your convenience.

Regards,

Garth Whyte
President & CEO