



FERTILIZER CANADA

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FOR IMMEDIATE RELEASE

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10 Best Management Practices Proven to Help Atlantic Growers Improve Environmental and Economic Goals

Key Findings of the Canadian 4R Research Network Demonstrate Canadian Fertilizer Industry's Role in Sustainable Agriculture

OTTAWA, ON – A new report published by Fertilizer Canada, *Key Findings of the Canadian 4R Research Network*, highlights 10 scientifically-proven 4R Nutrient Stewardship Best Management Practices (BMPs) across a range of cropping systems from Atlantic Canada through to the Prairies amply demonstrating the universality of the 4R Nutrient Stewardship approach.

Following three years of extensive research engaging nine scientists across the country, the Canadian 4R Research Network quantified the economic, social and environmental benefits resulting from advanced fertilizer management systems under 4R Nutrient Stewardship, using the *Right Source @ Right Rate, Rate Time, Right Place®*. These results enable growers from regions across the country to confidently implement practices that will increase the profitability of their farms while also reducing greenhouse gas emissions, leaching of nutrients through the soil and impacts on surrounding water resources.

“This research initiative strengthens the science behind the 4R principles providing Canadian growers with the information they need to enhance competitiveness, increase productivity and adapt to market needs, while addressing the sustainable intensification of agriculture,” said Clyde Graham, Executive Vice President at Fertilizer Canada.

In Atlantic Canada, research has shown significant benefits in applying the Right Rate of nitrogen fertilizer at the Right Time. Research demonstrated that splitting nitrogen fertilizer (**Right Source**) by applying 60 per cent at planting and 40 per cent as in-season foliar urea (**Right Rate and Right Time**) resulted in the same crop yield compared to a full application at planting, but reduces greenhouse gas emissions – thereby increasing environmental sustainability without compromising economic efficiency.

Research has also demonstrated that implementing 4R practices in Atlantic Canada can reduce nitrate leaching into the soil by as much as 32 per cent. “Understanding which soils pose a risk of nutrient loss in the region can assist agricultural producers in managing nutrients more efficiently and in protecting the environment,” said Dr. David Burton, Professor in the Department of Plant, Food, and Environmental Sciences at Dalhousie University. “Adjustments in the crop nutrient source and application rate, timing, and placement method have been shown to greatly reduce the risk of nutrient losses.”



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Research further demonstrated the importance of assessing inherent soil nitrogen to determine the **Right Rate** of nitrogen fertilizer application. Results show improved nitrogen use efficiency and reduced environmental impact. “This is where the value of Fertilizer Canada’s 4R Climate-Smart Protocol could play a role,” explains Graham. “These results further support our [national strategy](#) to reduce on-farm emissions of greenhouse gas under the Protocol, which creates real reductions and produces a carbon credit, rewarding farmers for their environmental stewardship and incentivising further use of these best management practices.”

Read the [Key Findings of the Canadian 4R Research Network](#) report to discover how research is changing the landscape of sustainable agriculture in your region today.

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Fertilizer Canada represents manufacturers, wholesale and retail distributors of nitrogen, phosphate, potash and sulphur fertilizers. The fertilizer industry plays an essential role in Canada’s economy, contributing \$23 billion annually and over 76,000 jobs. The association is committed to supporting the fertilizer industry with innovative research and programming while advocating sustainability, stewardship, safety and security through standards and Codes of Practice. Please visit fertilizercanada.ca.

Canadian 4R Research Network funding was provided by Agriculture and Agri-Food Canada’s AgriInnovation Program (Growing Forward 2), contributing Fertilizer Canada member companies to the North American 4R Research Fund and Fertilizer Canada’s Science Cluster Program.

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