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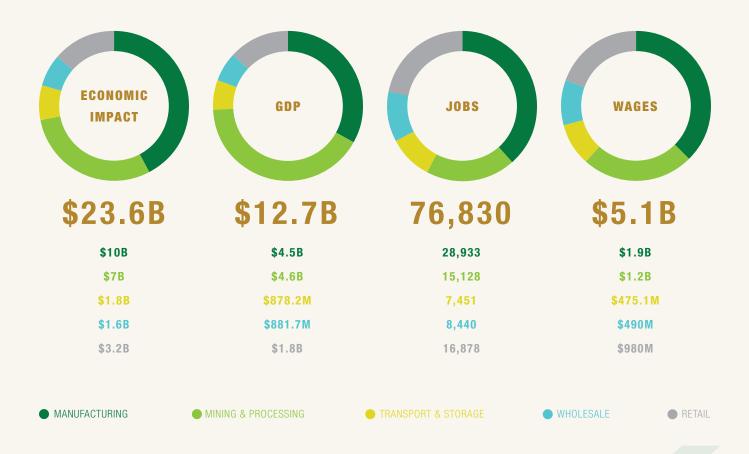
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WHO WE ARE

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 for sustainability, stewardship, safety, and security through standards and Codes of Practice. As the foundation of Canada's agri-food sector, Fertilizer Canada continues to make changes that positively impact the environment, economy, and social fabrics of Canadian life.



MESSAGE FROM The chair

Fertilizer Canada is working to develop and implement innovative policies and programs, that allow the Canadian fertilizer industry to conduct its day-to-day business and maintain its social license to operate. The programming and initiatives led by the association offer value in the benefits they provide for the entire industry, allow the Canadian fertilizer industry to remain globally competitive, avoid unnecessary regulations, which provide opportunities for continued investment by our members, boosting the industry's reputation.

Members can be assured that their business operations and economic outlook will not be subject to unnecessary regulation. Fertilizer Canada has developed a reputation as a leading association in Canada, through **innovative programming**, engaging stakeholders to **solicit support**, building **awareness** of issues to political leaders and providing **solution-based responses** to regulatory issues through a **consensus-based approach**.

Each of Fertilizer Canada's five organizational pillars has made great strides this year to ensure completion of the current strategic plan. To that end, the Industry Reputation pillar conducted a perception survey of key external industry and government stakeholders–focusing on their perception of the fertilizer industry in Canada. The primary objective was to assess attitudes toward the industry and its association. Government and stakeholders agreed that, both the industry and the association, particularly in the last three years, has taken a progressive approach to agriculture in Canada. The association has worked to address environmental concerns and risks, increasing research related to production, return on fertilizer investment and worked with partners to have Canada viewed as a global leader in sustainable agricultural production. The fertilizer industry is the foundation of Canadian agriculture. It is a critical element in achieving economic, social, and environmental goals within Canada. Fertilizer Canada will continue to work towards furthering the industry's programs and policies and cementing the industry as a global leader. Here are four examples of where Fertilizer Canada is taking a leadership role:

• At the Forefront of Safety and Security

With three Codes of Practice in place, Fertilizer Canada has solidified its position as a global leader in the safe and secure use of fertilizer products. The association is also committed to providing relevant resources to ensure the safe and secure use of fertilizer at all levels of the supply chain.

 Implementing a Climate Smart Agriculture Strategy

Now is the time for the fertilizer industry to embrace its role as a leader in sustainable agriculture. The industry must demonstrate successes in measurable ways while at the same time identifying areas of potential improvement. Supporting innovative programming like 4R Nutrient Stewardship addresses not only the challenge of global food security but provides sciencebased evidence of improved on-farm environmental performance. Fertilizer Canada believes that the 4R Nutrient Stewardship program is a solution to help increase agricultural productivity in both developed and developing countries, leading to increased profitability for farmers while safeguarding the future of the agricultural industry.

Climate Change Regimes

Fertilizer Canada works collaboratively with federal and provincial governments to ensure that their climate regimes are reflective of the fertilizer industry's efforts to sustainably feed a growing global population. While highly energy-intensive and trade-exposed, the fertilizer industry is unable to pass along any additional costs to production, or risk displacement of that production to other potentially higher-emitting jurisdictions.

• Showcasing the Economic Impact of the Sector Fertilizer Canada's economic report, Impacts of the Canadian Fertilizer Industry, included updated statistics on the industry's contributions to the economy through GDP, number of jobs held, and more. As the seventh largest global consumer of fertilizer, it is critical to provide updated figures for these data points to inform decision makers of both the international, as well as domestic importance of the Canadian fertilizer industry.

As a leading association, Fertilizer Canada is continuing to build momentum through its environmental, economic and social commitments, as outlined in the Vision 2020 Strategic Plan. As the Strategic Plan nears completion, we will now look to strengthen the foundation that has been built by completing a new strategic plan early next year. The pillars will continue to operate and align with the business needs of our membership. I look forward to leading the Association through this process, as I complete my final year as Chair.

Brian Mark

Nutrien Chair of the Board of Directors



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FERTILIZER CANADA HAS DEVELOPED A REPUTATION AS A LEADING ASSOCIATION IN CANADA, THROUGH INNOVATIVE PROGRAMMING, ENGAGING STAKEHOLDERS TO SOLICIT SUPPORT, BUILDING AWARENESS OF ISSUES TO POLITICAL LEADERS AND PROVIDING SOLUTION-BASED RESPONSES TO REGULATORY ISSUES THROUGH A CONSENSUS-BASED APPROACH.

BRIAN MARK CHAIR OF THE BOARD OF DIRECTORS

MESSAGE FROM The president

In today's global marketplace, the ability for an industry to have continued growth and investment is critical to its economic success. The Canadian fertilizer industry has worked to ensure it is well-positioned to compete globally. Our industry's commitment to invest in increased domestic supply, develop international markets, and the safe and sustainable production of our products has positioned us as international leaders.

Fertilizer Canada is doing its part by working with all levels of government – federal, provincial and municipal – to influence government policy so that it focuses on not only maintaining, but improving, our competitiveness, continued growth, and investment. This is necessary to ensure the future of the Canadian fertilizer industry remains strong.

It is important our industry is free to operate without unnecessary regulations. That is why Fertilizer Canada influences governments to create legislation that encourages trade, effective transportation networks, and environmental programs that recognize the industry's initiatives related to its potential in reducing greenhouse gas emissions. Fertilizer Canada has worked to ensure that governments across Canada see the fertilizer industry as a positive participant, supporting their agenda, and saving our members from undue policy and regulatory harm.

Our positive working relationships with federal and provincial governments and key industry stakeholders was reinforced by a recently conducted perception survey by Fertilizer Canada. The survey found that ninety-three per cent of industry and government stakeholders have a favourable opinion of the Canadian fertilizer industry and fifty-four per cent agreed that their opinion of the industry has become more favourable over the past three years.

The above-mentioned perception audit allowed Fertilizer Canada to not only hear from government and industry stakeholders, but from a number of our members as well. We wanted to get an understanding of how our messages and mandate were being received by external audiences, and internal audiences as well. The message was clear: Our programming is well established and we now need to shift more of our focus to an advocacy-first approach.

And we are listening. This past year we had the opportunity to restructure our association, which allowed us to put more

emphasis on our government relations and public relations efforts. As we move into the renewal of our Strategic Plan we will work to focus our mandate to include these efforts, and gain a greater understanding of the needs of the membership to better advocate for the industry at not only the federal level, but provincial levels as well.

Rest assured, our programming will not be left behind. We will continue to advance our programs and policies.

Our world-class safety, security and sustainability programming creates a positive environment that enables our industry to thrive. Fertilizer Canada's Codes of Practice were developed in collaboration with industry, stakeholders, and government agencies. Fertilizer Canada's three Codes of Practice create standardized best practices for handlers and users of ammonium nitrate, calcium ammonium nitrate, and anhydrous ammonia..

The Codes of Practice are a proactive approach to improving the safety and security of the fertilizer supply chain in Canada. Coupled with resources and training through our eLearning platform, the Canadian fertilizer industry is improving the safety and security of its products with thousands of users – including farmers and first responders. This commitment to safety and security creates a competitive advantage by reducing the number of incidents and creating a positive reputation with both regulators and the public.

The Canadian fertilizer industry also leads the world in the stewardship of fertilizer products. The 4R Nutrient Stewardship innovation (*Right Source @ the Right Rate, Right Time, Right Place®*), has seen significant endorsement both nationally and internationally as the standard for sustainable nutrient management. Fertilizer Canada has formal agreements in six Canadian provinces to implement 4R Nutrient Stewardship as a measure to improve crop yields and profitability while reducing environmental impacts such as greenhouse gas emissions and nutrient losses to water. Three of those provinces (Saskatchewan, Manitoba, and Ontario) have included 4R Nutrient Stewardship in their provincial climate plans as a measure to meet environmental targets.

The Canadian fertilizer industry is also working to implement this program on an international scale, with 4R Nutrient Stewardship being recognized by the Food and Agriculture Organization of the United Nations, and the International Joint Commission.

Further, Fertilizer Canada and its partners, the Cooperative Development Foundation of Canada, Global Affairs Canada and IPNI Canada, recently announced the \$17-million 4R Solution project, which will bring 4R Nutrient Stewardship to 80,000 smallholder farmers in Ghana, Ethiopia and Senegal. The 4R Solution project will work to implement 4R best management practices to improve food security, profitability and climate smart agriculture in sub-Saharan Africa.

Through innovative programming on the sustainable use of our products, and positive working relationships with our stakeholders, Fertilizer Canada continues to ensure that governments implement measures to attract additional business investment, grow the economy, recruit and maintain skilled employees. Our primary goal is to do whatever it takes to support and sustain the competitive position of Canada's fertilizer industry.

Garth Whyte President & CEC



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OUR POSITIVE WORKING RELATIONSHIPS WITH FEDERAL AND PROVINCIAL GOVERNMENTS AND KEY INDUSTRY STAKEHOLDERS WAS REINFORCED BY A RECENTLY CONDUCTED PERCEPTION SURVEY BY FERTILIZER CANADA.

GARTH WHYTE PRESIDENT & CEO

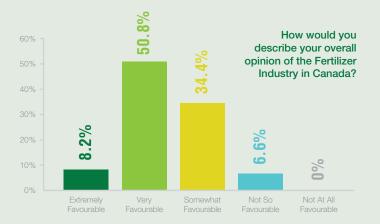
INDUSTRY Reputation

The Industry Reputation pillar plays a critical role in ensuring that the Canadian fertilizer industry maintains its license to operate through communications initiatives on the economic, environmental and social impacts of the fertilizer industry in Canada. Through these initiatives Fertilizer Canada works with stakeholders, governments and other key audiences to inform them on the goals and accomplishments of the industry and association. This raises the profile of the fertilizer industry as one that contributes significantly to Canada's economy and ensures Canadian farmers can grow the food needed to feed a growing global population.

STAKEHOLDER SURVEY

In 2019, Fertilizer Canada conducted a perception audit of key external Industry and government stakeholders. Our objective was to collect information to refine our messaging and strengthen our communications initiatives. It also created a new baseline from which to measure attitudes and/or market awareness, as well as set the stage for an in-depth assessment of stakeholder sentiment.

In total, 93 per cent of industry and government stakeholders surveyed have a favourable opinion of the Canadian fertilizer industry.





Kerry-Leigh Burchill, Director General, Canada Agriculture and Food Museum and Catherine King, Vice President Public Affairs, Fertilizer Canada signing the renewed Memorandum of Understanding between the two organizations.

GLOBAL FERTILIZER DAY

Global Fertilizer Day celebrates the achievements of our industry. In its third year, momentum gained with members, stakeholders and industry representatives that participated in the celebration.



The association launched the #FertilizerProud initiative, consisting of the message "I am #FertilizerProud because...". The campaign highlighted the innovative accomplishments of the industry and showed the faces behind fertilizer.

The Global Fertilizer Day campaign gave the Canadian public the opportunity to gain a better understanding of how the industry works, why it is important to the Canadian economy, and the role fertilizer plays in feeding the world. In conjunction with Global Fertilizer Day, representatives from both Fertilizer Canada and the Canada Agriculture and Food Museum renewed the Memorandum of Understanding (MOU) between the two organizations, which aims to explore creative ways to educate Canadians – both young and old - about the 13 essential nutrients found in soil, with a focus on the three most important to soil health and food production: nitrogen, phosphorus and potassium, or NPK.

While Global Fertilizer Day is only one day, the association works throughout the year to ensure the fertilizer industry's accomplishments are highlighted. By taking the time to acknowledge each individual achievement, we foster the opportunity to review major milestones and gain the ability to contribute to future successes.

#FERTILIZERPROUD 210,623 SOCIAL MEDIA IMPRESSIONS 55,769 ACCOUNTS REACHED





CHIP TRUCK

Fertilizer Canada hosted a fast food truck during the 2019 parliamentary forum to promote farmers' contributions to advancing agricultural sustainability in Canada. Staff handed out over 400 bags of 4R french fries made with PEI potatoes and cooked in Saskatchewan canola oil.

The event drew significant crowds, providing an opportunity to educate the public about how 4R Nutrient Stewardship helps Canadian farmers reduce environmental impacts, while providing a return on fertilizer dollars spent.



Fertilizer Canada staff educating the public on the 4R Nutrient Stewardship framework.



Brian Mark, Nutrien Ltd., Garth Whyte, President & CEO, Fertilizer Canada and Mitch Rezansoff from CAAR enjoying some 4R french fries during the 2019 Parliamentary Forum.

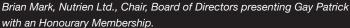
73RD ANNUAL CONFERENCE

Fertilizer Canada's 73rd Annual Conference was hosted in Quebec City, Quebec, where members and industry experts celebrated the industry and looked toward the future. The conference theme, Value Add, reflected on the role of Fertilizer Canada as the unifying representative of the Canadian fertilizer industry. The programming and initiatives lead by the association provided value in the benefits offered to the collective industry, boosting social licence, reputation and competitiveness.

During the conference, the Board of Directors appointed Brian Mark, Nutrien Ltd., as Chair for a two-year term, succeeding Kathy Jordison who served from 2016-2018.

Gay Patrick was recognized for his long-standing commitment to the Canadian fertilizer industry with an Honourary Membership during the conference gala. For five decades, Gay worked in the potash industry developing new and innovative ways to increase financial returns for potash companies through tax negotiations and environmental savings.









Top: Dan Mulder, Federated Co-operatives Limited, accompanied by, Tanis Mulder, Brent Watchorn, Richardson International Limited accompanied by, Mary Watchorn. **Bottom**: Hugh Loomans, Sylvite, Corrine Ricard, The Mosaic Company, Matthew Rosgen, Cargill, Gord McKenzie, The Mosaic Company, Brenda Loomans, Glenn Houser, Cargill, Casper Kaastra, Sollio Agricultur, Louis Ricard, Alain Fortier, William Houde Limitée, and Martine Salvas.





Top: Fertilizer Canada's Executive Vice President Clyde Graham participating in the golf tournament at the 73rd Annual Conference with Brendon Sayers, Eurochem Group, Kelly Simonson, Koch Industries, and Tom Barrie, Koch Industries. **Bottom**: K+S North America staff, Richard Pinner, Rafael Blanco de Luna, and Trey Few.

PARTNERSHIP COLLABORATION

4R Nutrient Stewardship was featured on the Grain Farmers of Ontario's (GFO) podcast, GrainTALK. Steph Kowalski, CCA-ON 4R-NMS Agronomy Lead at Agronomy Company of Canada Ltd. and Charles Lalonde at CJ Agren Consulting, spoke about the 4R program in Ontario. The podcast focused on 4R Certification and the opportunity for Ontario agriretailers to showcase their commitment to the program. They also touched on how agri-retailers can offer their grower customers the best in environmentally sustainable nutrient management advice without compromising their profitability.





GrainTALK Podcast Guests: 4R advocates Steph Kowalski and Charlie Lalonde; Hosted by Rachel Telford and Maegan MacKimmie.

PARAMEDIC MOU

In 2008, Fertilizer Canada partnered with the Canadian Association of Fire Chiefs to launch a training and communications program on anhydrous ammonia safety for the first responder community, **Anhydrous Ammonia: Information and Training for First Responders**.

Ten years later, Fertilizer Canada and the Paramedic Association of Canada signed a Memorandum of Cooperation (MOC), agreeing to work together to update the training program to provide all emergency responders with the information and training they need to safely deal with an anhydrous ammonia incident. The course will be updated in the Fall of 2019 and will teach all first responders how to identify anhydrous ammonia's basic properties, respond to an indecent, perform first aid in the event of exposure to anhydrous ammonia and establish emergency plans.



Chris Hood, Past-President of the Paramedics Association of Canada, MP, Pam Damoff, and Garth Whyte, President & CEO, Fertilizer Canada.



CANADA'S PARAMEDICS PLAY A CRITICAL ROLE IN PROTECTING THE SAFETY OF THE PUBLIC, COMMUNITIES, AND THE ENVIRONMENT EVERY DAY. BY COLLABORATING WITH THE CANADIAN FERTILIZER INDUSTRY WE ARE ENSURING THAT OUR MEN AND WOMEN WHO ARRIVE ON THE SCENE EVERYDAY HAVE THE INFORMATION AND NECESSARY TRAINING THEY REQUIRE TO SAFELY DEAL WITH ANHYDROUS AMMONIA.

CHRIS HOOD PAST-PRESIDENT OF THE PARAMEDIC ASSOCIATION OF CANADA

INDUSTRY Competitiveness

INNOVATION

Fertilizer Canada seeks to ensure that governments across Canada see the fertilizer industry as a positive participant, resonating with their agenda. As a result, this saves our members from undue policy and regulatory harm. Fertilizer Canada's ability to understand the political, social and economic environments, its support for stakeholder coalitions and focus on developing policies which successfully communicate the fertilizer industry's interests, allows the association to effectively advocate and influence federal, provincial and other key stakeholders to have a positive impact on our sector.

MODERNIZATION OF THE FERTILIZERS REGULATIONS

The modernization of the *Fertilizers Regulations* by the Canadian Food Inspection Agency (CFIA) has been a lengthy process with extensive engagement from Fertilizer Canada members. Through the Canadian Fertilizer Products Forum (CFPF), members of Fertilizer Canada were able to provide early input to help shape the modernized regulations. Our association has completed a technical review of the draft regulatory text, compiling a summary of industry recommendations with technical amendments to further improve the draft regulations.

Effective, science-based regulatory oversight of fertilizer and supplement products safeguards the safety of products in the Canadian marketplace. Amendments to the *Fertilizers Regulations* that keep pace with science, industry developments and international harmonization improve timely access to safe and dependable products for Canadian farmers.

FAIR REGULATORY OVERSIGHT FOR NITROGEN STABILIZERS

Fertilizer Canada and its member companies worked extensively with the Canadian Food Inspection Agency (CFIA) and the Pest Management Regulatory Agency (PMRA) to achieve a successful resolution for fair and science-based regulatory oversight of nitrogen stabilizers (nitrification and urease inhibitors) in Canada. Nitrification and urease inhibitors improve the agronomic and environmental performance of nitrogen fertilizers and are key tools for achieving industry standards for nutrient and environmental stewardship.

Through an exemption, nitrification inhibitors have now been protected from dual regulation under *The Pest Control Products Regulations*. This allows nitrogen stabilizer products imported and sold in Canada to be exclusively regulated as supplements by CFIA. CFIA is moving forward with a phased-in implementation period for registration of nitrification and urease inhibitors imported and sold in Canada.

Fertilizer Canada continues to work closely with CFIA during the phase-in implementation period to ensure a smooth transition with minimal disruption for companies importing or selling nitrification and urease inhibitors in Canada, and to continue to further agri-business and product stewardship.

80+ WEBINARS, WORKSHOPS AND STAKEHOLDER MEETINGS

FEDERAL AND PROVINCIAL GOVERNMENT

68 WRITTEN SUBMISSIONS

CONSULTATIONS

MEETINGS WITH FEDERAL SENIOR OFFICIALS, POLITIAN'S AND STAFF QN

BRIDGING THE GAP

POTASH MANUFACTURING TOUR



Fertilizer Canada staff accompanied provincial and federal regulators on a tour of the Mosaic Esterhazy K3 mine expansion and the K+S Potash Canada Bethune mine.

POLITICAL FORUMS

parliamentarians. These face-to-face meetings allow



Garth Whyte and Brian Mark with MPPs at the Legislative Forum.



Fertilizer Canada's President & CEO Garth Whyte and The Honourable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food at the 2019 Parliamentary Forum joint reception with The Co-operative Development Foundation of Canada.

MAINTAINING INFRASTRUCTURE AND COMPETITIVENESS

CLEAN FUEL STANDARD

As part of their strategy to combat climate change, the Government of Canada committed to developing a first-ofits-kind system which would reduce the carbon footprint of fuels, including fuels for transportation, buildings and industry. To ensure the impacts of such a complex goal were sufficiently considered, it is Fertilizer Canada's priority to ensure that the time is taken to consider the technical needs of the fertilizer industry and to safeguard it against competitiveness impacts.

The Clean Fuels Standard, which will mandate renewable content in liquid, solid and gaseous fuels – amounting to 30 megatonnes of annual reductions – has been delayed and a phased-in approach adopted. Final regulations the requirements for liquid fuels is delayed until 2021, with implementation on January 2, 2022. Solid and gaseous fuels regulations will be delayed until 2022, with implementation in 2023 – an 18 month reprieve. Fertilizer Canada continues to work for the recognition of the needs of the fertilizer industry as the development process continues.

CARBON PRICING

Fertilizer manufacturing is one of Canada's most energyintensive and trade-exposed industries and is highly sensitive to increased costs of production that are not borne by producers in competitor jurisdictions. This reality was reflected in the federal government's carbon pricing program for large industrial emitters – the Output-Based Pricing System (OBPS) – with fertilizer being one of four sectors initially granted extra protections against competitiveness impacts.

Fertilizer Canada has worked extensively over the past three years with both federal and provincial governments to ensure that when a carbon price is applied, it reflects the realities of fertilizer manufacturing. The industry has invested proactively in their operations to significantly decrease its environmental footprint and has little remaining opportunities to reduce emissions. Canadian facilities ship their product domestically and worldwide and must remain competitive against producers in other parts of the world who have not been held to the same environmental standards.

Fertilizer Canada is working on behalf of our members to ensure that greenhouse gas reduction policies are meaningful and the federal and provincial governments hear our message, not hurt our industries competitiveness.

BILL C-69

Bill C-69, the *Impact Assessment Act*, proposes major changes to the environmental assessment processes for approving natural resource projects in Canada. Consultations for the *Impact Assessment Act* and its Regulations were held in parallel with its review by the House of Commons and Senate towards Royal Assent. The Act's un-released project list, which decides the projects that would need a federal assessment for approval, created uncertainty for Canadian businesses. With the fertilizer industry already subject to rigorous environmental assessment processes under their provincial regulators, it was essential that the experience and expertise from years of provincial oversight be recognized by the federal government and maintained. A regulatory update released in May 2019 indicated that this message had been heard – fertilizer manufacturing was not included on the draft project list. Bill C-69 was passed, receiving Royal Assent on June 21, 2019, with significant amendments to its original language. With this approval, the federal government can now develop the regulations which will make changes to their process for assessing and approving major projects.

WESTAC PRESENTATION

Ensuring an effective and efficient transportation system is an integral factor to the fertilizer industry's global competitiveness. Canada's export-driven fertilizer industry calls for safe, secure, and accessible transportation of its products into domestic, U.S. and offshore markets.

During the 2019 Western Transportation Advisory Council (WESTAC) Spring Member Forum, Fertilizer Canada participated in a panel discussion on current transportation service issues challenging the Canadian fertilizer industry.

The panel also discussed how to ensure Canadian companies remain globally competitive and potential opportunities for Canadian companies to expand commodity exports over the next 10-20 years. Participants in the Forum included leaders from the transportation sector, including the Ministers of Transportation from British Columbia, Saskatchewan and Manitoba.

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INFRASTRUCTURE IS TOO IMPORTANT TO THE COUNTRY'S WELL BEING TO BE POLITICIZED IN THE ELECTION CAMPAIGNS EVERY TWO YEARS.

CANADA ECONOMIC STRATEGY Agri-food table report



During Western Transportation Advisory Council (WESTAC) 2019 Spring Member Forum, Patricia Mohr, former VP, Economics and Commodity Market Specialist, Scotiabank, Garth Whyte, President & CEO, Fertilizer Canada, Mark Hemmes, President, Quorum Corporation, Kevin Birn, Vice President, North American Crude Oil Markets,IHS Markit, Hamir Patel, Director, Paper & Forest Products, Institutional Equity Research, CIBC, Capital Markets, Darryl Anderson, Managing Director, Wave Point Consulting

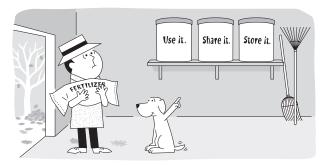
URBAN FERTILIZER

Fertilizer Canada continues to advocate for our lawn and garden members, ensuring that the Ontario government is fair in the allocating the Municipal Hazardous and Special Waste program surplus to stewards, including our members, who have paid into the program.

In order to better educate homeowners, urban members developed a Greener World program, about how to fertilize lawns and gardens responsibly by following 4R Nutrient Stewardship: The Right Source of fertilizer at the Right Rate, the Right Time and the Right Place®.

12,000 PEOPLE REACHED THROUGH THE 2018 GREENER WORLD CAMPAIGN





SAFETY AND Security

CODES OF PRACTICE – SAFETY, SECURITY & SUSTAINABILITY

The safety and security of fertilizer products is a top priority for Fertilizer Canada. Fertilizer Canada's Codes of Practice create industry-led solutions to product safety and security and demonstrates the industry's commitment to the stewardship of its products. The association also provides training resources in the form of videos and online eLearning courses for audiences from farmers to agri-retailers to first responders, Fertilizer Canada has three industry-leading Codes of Practice: Anhydrous Ammonia, Ammonium Nitrate, and Calcium Ammonium Nitrate.

SUPPORTING SAFETY AND SECURITY

Fertilizer Canada created the Code of Practices to provide uniform safety and security practices for the handling, transportation, storage, and sale of fertilizer at agri-retail facilities and on-farm use in Canada. The Codes were written with input from fertilizer manufacturers, distributors and agri-retailers, along with engagement from government agencies and other stakeholders. While existing regulations, safety programs and training have greatly reduced the incidence of accidents involving fertilizer, compliance with the Codes further reduces this risk. They are the first industry-led programs of this magnitude in North America for the safe and secure handling of Anhydrous Ammonia, Ammonium Nitrate and Calcium Ammonium Nitrate.

The intent of the **Anhydrous Ammonia Code of Practice** is to provide uniform safety and security practices for agriretail sites, ensuring they are in full compliance with the Code protocols including mandatory regulatory requirements as well as industry best practice standards that further mitigate risks.

Mandatory code compliance is based on third-party audits and is vital to the process. Providing the entire Canadian ammonia agri-retail network with a framework for the safe handling, transportation and storage of anhydrous ammonia that is verified on a continuous basis.

The Anhydrous Ammonia Code is reviewed on a five-year cycle, with the next revision scheduled to come into force in 2022. Ongoing efforts are being made to implement updates and improvements into the Anhydrous Ammonia Code for the next revision to maintain the integrity and intent of the Code.

The **Ammonium Nitrate Code of Practice** (AN Code) aims to assist retail and distributors in their compliance with Canadian federal regulations and industry best practices for ammonium nitrate. The AN Code covers environmental, safety and security requirements and follows the supply chain to include transportation, storage, handling and sale. Similar to the Ammonia Code, it is an audited program where members of Fertilizer Canada must complete an audit for certification through a third-party process as a condition of membership.

416 AMMONIUM NITRATE AND AMMONIA CODE SITES CERTIFIED

Fertilizer Canada developed the new **Calcium Ammonium Nitrate (CAN) Security Code of Practice** as a proactive approach to expected new regulatory requirements for CAN resulting from the current review of the Explosives Regulations by Natural Resources Canada. It aims to provide uniform security practices for the handling, transportation, storage and/or sale of CAN in Canada. As of January 1, 2019, the CAN Code is in its implementation period with sites required to be certified by December 31, 2019.

1096 FARMERS COMPLETED A COMBINATION OF ONLINE AND IN-PERSON ANHYDROUS AMMONIA SAFETY TRAINING

HALIFAX POLICE DOGS

This year, Fertilizer Canada and Truro AgroMart worked with the Halifax Regional Police to provide a sample of Calcium Ammonia Nitrate (CAN) and facilitated the training of four of their explosives detection dogs. The dogs can now scent-recognize CAN and alert police of a potential explosives threat.

This training ensures the Halifax Regional Police can provide comprehensive service in detecting any material that can be used in an explosive device, increasing public safety.

Fertilizer Canada is pleased to have strong working relationships with police, firefighters and paramedics across Canada. Working cooperatively and collaboratively with first responders helps maintain a strong social license for the Canadian fertilizer industry on the safety and security of our products.



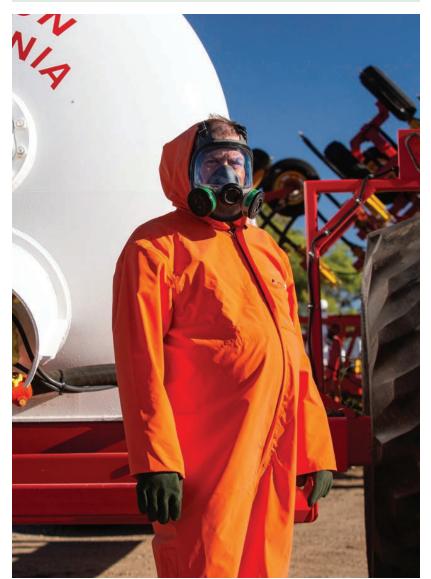


UPDATED ANHYDROUS AMMONIA SAFETY TRAINING AVAILABLE FOR FARMERS

Farmers are now able to renew their training on the safe handling and use of anhydrous ammonia fertilizer – a key nitrogen input – with Fertilizer Canada's newly-updated educational manual and video that delivers comprehensive information. The Anhydrous Ammonia Safety & the Farmer video and accompanying training manual provides farmers with free, important information on how to transport, handle and use the product on their fields. The materials are available for agri-retailers to use in their farmer customer training programs.



SINCE THE NEW TRAINING PROGRAM WAS LAUNCHED IN MARCH 2019, OVER 730 FARMER CUSTOMERS HAVE BEEN TRAINED BY AG-RETAILERS WITH THE NEW MATERIALS.



NUTRIENT Stewardship

Canadian farmers spend approximately \$5 billion annually on fertilizer. 4R Nutrient Stewardship helps growers optimize crop nutrient uptake and see a profitable return on fertilizer dollars spent.

THE 4R PROGRAM HELPS IN A SUSTAINABLE WAY

Canada has the opportunity to become a world leader in reducing greenhouse gas (GHG) emissions on-farms by helping growers become climate-smart.

4R Nutrient Stewardship is a framework of science-based, verified best management practices (BMPs) that are proven to optimize nutrient uptake and reduce nutrient loss. When managed responsibly through the *Right Source @ Right Rate, Right Time, Right Place®*, fertilizer is a crucial input that allows Canadian farmers to increase yields and profitability while minimizing environmental impacts.

With the global population expected to exceed 9.7 billion people by 2050, it is important now more than ever to get sustainable agriculture right. Together, we have the opportunity to play a major role in reducing impacts on the environment by adopting sustainable agriculture practices.

RIGHT SOURCE

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RIGHT TIME

RIGHT PLACE



The **Right Source** means ensuring a balanced supply of essential plant nutrients including granular fertilizers, liquid fertilizers and/or manures.

The **Right Rate** is applying just enough fertilizer to meet the needs of the plant while accounting for the 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 where the plants can easily use fertilizer and where it is less likely to be lost to the water or air.



RESEARCH

Fertilizer Canada member companies have committed \$1.2 million of over the next five years towards soil fertility research focused on 4R Nutrient Stewardship in Canada. Ongoing scientific research in the area of 4R Nutrient Stewardship helps create better opportunities for growers to contribute to Canada's climate commitments under the United Nations' Sustainable Development Goals and Paris agreements, and national agricultural export priorities from the Advisory Council on Economic Growth. Following the renewal of the North American 4R Research Fund in 2018, Fertilizer Canada member companies contributed more than \$11.8 million towards 4R Nutrient Stewardship research over the past decade.

Supporting the 4R Climate Smart Strategy, Fertilizer Canada has scientifically verified 10 4R Nutrient Stewardship BMPs that allow growers to confidently implement sustainable nutrient use on their farms. It is through these BMPs that growers around the world can achieve emission reductions of up to 35 per cent, among other environmental benefits, while significantly increasing yields and profitability. Continued research strengthens the science behind the 4R Nutrient Stewardship framework, creating further understanding of its ability to reduce emissions which supports the program's validity on an international scale. While this research was conducted in Canada, the 4R framework is universally applicable with 4R Nutrient Stewardship BMPs being customizable to fit each farm's unique climatic, soil, cropping and operational conditions.

Fertilizer Canada is committed to continuing the scientific research of 4R Nutrient Stewardship to improve BMPs for Canadian growers in all crop regions. These recommendations improve confidence for Canadian growers who are facing increasing pressure to boost yields for export while contributing to national and provincial climate change goals.

CLIMATE SMART STRATEGY

The 4R Climate Smart Strategy is a science-based framework using the principles of 4R Nutrient Stewardship to create an actionable outline for widespread implementation of sustainable agriculture. Under the Strategy, new research has shown that if the 4R Climate-Smart Strategy were implemented across Western Canada, it would reduce nitrous oxide emissions by 2-3 MT CO₂e annually.



CONTINUED RESEARCH STRENGTHENS THE SCIENCE BEHIND THE 4R NUTRIENT STEWARDSHIP FRAMEWORK, CREATES FURTHER UNDERSTANDING OF ITS ABILITY TO REDUCE EMISSIONS AND SUPPORTS ITS VALIDITY ON AN INTERNATIONAL SCALE.

CLYDE GRAHAM EXECUTIVE VICE PRESIDENT OF FERTILIZER CANADA



4R CERTIFICATION AND DESIGNATION

Fertilizer Canada members demonstrate their commitment to advancing sustainable agriculture by participating in the 4R Designation or the 4R Certification programs. By participating in these programs, our retail members can verify their grower customer's 4R acres towards Fertilizer Canada's national 4R acre goal.

CERTIFICATION

4R Certified agri-retailers offer their grower customers science-based 4R Nutrient Stewardship BMPs that are proven to reduce nutrient loss and increase crop nutrient uptake and productivity.

The Ontario agri-retailer community continues to demonstrate their commitment to sustainable agricultural practices, with over 20 sites that have completed a 4R Certification pre-audit and are moving towards full 4R Certification. Earlier this year Thompsons Limited, AGRIS Co-operative Ltd, and Setterington's Fertilizer Service Ltd were the first agri-retail facilities to become 4R Certified.

The 4R Certification program is expanding in Canada to Prince Edward Island (PEI). The 4R Certification standards have been developed to represent PEI's landscape, crops and agricultural practices. The program will be officially launched on the island Fall 2019.

DESIGNATION

The 4R Designation program is a national program that is implemented in western Canada. 4R Designated agri-retailers are retail facilities with accredited, trained professionals capable of providing 4R Nutrient Stewardship advice to their grower customers. By advising on 4R BMPs, agri-retailers can help growers reduce environmental impacts while increasing economic returns.

Fertilizer Canada's goal is to use these agri-retail programs to verify acres under 4R Nutrient Stewardship management and to demonstrate the industry's commitment to sustainable agriculture and environmental stewardship. The 4R Designation program in Canada has verified 348,158 acres in 2018.

FERTILIZER USE SURVEY

The Fertilizer Use Survey assists in understanding the current state of fertilizer management in Canadian crop production and how growers use and make decisions about fertilizer applications. The 3-year survey has collectively captured data on fertilizer use from 3,292 Canadian growers who have completed an online survey detailing fertilizer use practices on 8.3 million acres of cropland. The survey results found that although an average of 70% of Canadian growers are currently implementing basic practices of 4R Nutrient Stewardship, only 30% are aware they are compliant with 4R or are working with a certified professional.

The challenge for our industry is the validate these acres through 4R Designation or 4R Certification program.

AS AN AGRI-RETAILER, WE NEED TO DO EVERYTHING WE CAN TO PROTECT THE ENVIRONMENT AND BE GOOD STEWARDS OF AGRICULTUREAND I THINK THAT'S EXACTLY WHAT 4R NUTRIENT STEWARDSHIP DOES.

CASSANDRA LOOMANS VICE PRESIDENT AT SYLVITE

ENVIRONMENT PLANS ENDORSING 4Rs

The Conservative Party of Canada's climate plan, 'A *Real Plan to Protect the Environment*', recognizes the work farmers are doing to fight climate change through the use of 4R Nutrient Stewardship. In addition, the federal government and a number of provincial governments have included 4R Nutrient Stewardship in their respective climate change strategies, highlighting the good work industry and farmers are doing in response to climate change in Canada:

- The Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy To support the adoption and implementation of 4R Nutrient Stewardship in the province, the Saskatchewan government has set a Resilience Target of 25 per cent of Saskatchewan's cropland under 4R Designation by 2025.
- A Made-in-Ontario Environment Plan
- A Made-in-Manitoba Climate and Green Plan
- The Federal Environment Committee's report Clean Growth and Climate Change in Canada: Forestry, Agriculture and Waste, Protecting the Great Lakes: Action Plan 2030

Fertilizer Canada continues to work closely with grower groups such as, the Canadian Canola Growers Association, who have included the adoption of the 4R Nutrient Stewardship in their sustainability targets with a goal to have 50 per cent of canola production acres under 4Rs by 2025.

4R NUTRIENT STEWARDSHIP SPECIALTY CONTINUES TO GAIN MOMENTUM

Local retail and agronomic providers are often a Canadian farmer's first choice for reliable resources and advice when making on-farm decisions. Providing formally-recognized training to Certified Crop Advisors (CCAs) will ensure that farmers receive trusted information about 4R Nutrient Stewardship as a practical tool to enhance profitability and environmental sustainability.

Over the past year, the Prairie CCA Board has collaborated with Fertilizer Canada to develop the 4R Nutrient Management Specialty (NMS) through an expert review committee process, to determine the performance objectives of the exam for fulfilling the Prairie 4R NMS. Similar to the 4R NMS CCA program in Ontario that was launched in early 2016, Fertilizer Canada has worked with the Prairie CCA Board to develop a Prairie specific 4R NMS CCA exam and study guide. Currently, the two CCA Boards have certified 143 CCAs across Canada as Nutrient Management Specialists.



4R Nutrient Stewardship Agri-Retailer Award: Cassandra Cotton, Vice President of Policy and Programs at Fertilizer Canada, presented Kevin Poole, manager of agronomic services at Nutrien Ag Solutions, with the fifth annual 4R Nutrient Stewardship Agri-Retailer Award, which is presented to an agriretail company each year during the Canadian Association of Agri-Retailers (CAAR) Conference.

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FERTILIZER CANADA IS PLEASED TO SEE THE INCLUSION OF 4R NUTRIENT STEWARDSHIP AS A SOLUTION TO CLIMATE CHANGE IN PROVINCIAL STRATEGIES. CANADIAN FARMERS HAVE THE OPPORTUNITY TO BE GLOBAL LEADERS IN ON-FARM ADOPTION OF 4R NUTRIENT STEWARDSHIP PRACTICES. WE STAND READY TO WORK WITH THE FEDERAL AND PROVINCIAL GOVERNMENTS TO MEET THEIR AMBITIOUS GOALS.

GARTH WHYTE

PRESIDENT AND CEO OF FERTILIZER CANADA

4Rs ACROSS CANADA

4R Nutrient Stewardship can help improve agricultural productivity. Optimizing nutrient management is simply good business. Higher crop yields are well documented with better crop and soil management. Improved fertilizer efficiency increases the quantity produced per acre for each unit of nutrient applied, without sacrificing yield potential.

ALBERTA

82% of Alberta growers apply primary nitrogen fertilizer at seeding which is shown to increase profitability and reduce GHG emissions.

BC

WESTERN

\$34,516 to \$56,457 Per season projected benefit for a 960-acre farm growing canola, wheat and barley.

SASKATCHEWAN

Over 78% of canola acres and 97% of spring wheat acres receive in-soil placement of phosphorus at planting which can reduce phosphorus run-off by up to 75%.

SK

MANITOBA

MR

37% of spring wheat growers in Manitoba applied an enhanced efficiency fertilizer (EEF) or urea in the spring at or before planting and 14% of Manitoba wheat growers used an EEF. These BMPs have been shown to reduce GHG emissions by up to 20% and 55%, respectively.

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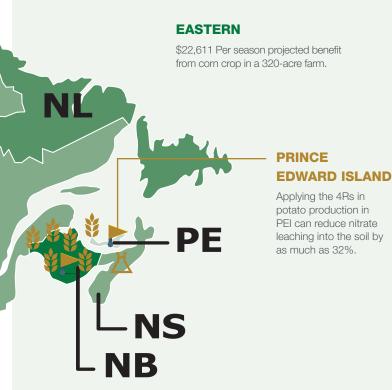
THE PROVINCE OF QUÉBEC REPRESENTS A SIGNIFICANT OPPORTUNITY TO ADVANCE SUSTAINABLE AGRICULTURE IN CANADA. WITH OVER 28,000 FARMS, THE QUÉBEC AGRI-FOOD SECTOR ACCOUNTS FOR ONE OUT OF EIGHT JOBS AND CONTRIBUTES SIGNIFICANTLY TO THE PROVINCIAL ECONOMY. WE ARE LOOKING FORWARD TO WORKING WITH FERTILIZER CANADA ON IMPLEMENTING WAYS FOR GROWERS TO REDUCE THEIR ENVIRONMENTAL IMPACTS WHILE MAINTAINING PROFITABILITY.

YVAN LACROIX

PRESIDENT AND CEO OF THE PROFESSIONAL ASSOCIATION IN CROP NUTRITION'S (PACN)

ONTARIO

70% of Ontario corn growers apply phosphorus by banding or seed-placement, which has been demonstrated to reduce phosphorus run-off by as much as 60% (in comparison to broadcast application).



ATLANTIC

4R Demonstration trials over the last six years have found that the average crop value of harvests increased by \$80 to \$200 per acre compared to standard practice plots due to better yield and quality.



Fertilizer Canada's President & CEO, Garth Whyte joined by Yvan Lacriox, President & CEO of PACN, Casper Kaastra, Sollio, and Sylvain Lavoie, Synagri.



Fertilizer Canada joined by, the Government of PEI, the PEI Federation of Agriculture, the PEI Potato Board and the Kensington North Watersheds Association for the renewed PEI MOU signing.



Fertilizer Canada, joined by, Grain Farmers of Ontario (GFO), the Ontario Agri Business Association (OABA), the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), the Ontario Federation of Agriculture (OFA) and the Christian Farmers Federation of Ontario (CFFO) will ensure the continued advancement of sustainable agriculture in Ontario for the renewed MOC signing.



MOUs/MOCs

In the last year, Fertilizer Canada renewed a Memorandum of Cooperation with Saskatchewan, Manitoba, Ontario, Québec and PEI to deliver sustainable solutions for the provinces' farmers, and lead the development of the 4R Climate-Smart Strategy as a tool to quantify, validate and credit on-farm use of 4R Nutrient Stewardship.



Fertilizer Use Survey

Canadian 4R Research Network

The Fertilizer Use Survey was conducted between the 2014 and 2017 growing seasons, in cooperation with the Canadian Field Print Initiative, the survey gathers data on fertilizer management practices and current knowledge of 4R Nutrient Stewardship from growers across the country.

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Nine leading researchers in Canada are working to scientifically prove the efficacy of 4R Nutrient Stewardship best management practices at these sites.

4R SOLUTION

In addition to our work nationally, Fertilizer Canada is committed to creating and advancing sustainable agriculture on a global scale. Our association supports international development by improving access to climate-smart and sustainable 4R practices for smallholder farmers with a focus on women. Through a Memorandum of Understanding (MOU) with the Cooperative Development Foundation of Canada (CDF), Fertilizer Canada is improving food security and sustainable agriculture in developing countries.

This partnership aims to advance sustainable agriculture in Ethiopia, Ghana and Senegal as part of the 4R Solution Project. The project is supported by Global Affairs Canada and focuses on the incorporation of the 4R Nutrient Stewardship (*Right Source @ Right Rate, Right Time, Right Place®*) into fertilizer management practices in order to increase incomes for over 80,000 smallholder farmers.

The program supports improvements in the co-operative business structure and the incorporation of 4R Nutrient Stewardship into agricultural practices. Its goal is to help smallholder farmers grow more nutritious and marketable crops, increase revenues, productivity and profit margins.

The 4R Solution Project is an innovative partnership that will leverage Canadian funding and expertise to integrate the principles of co-operative development and sustainable agriculture management to support improved socioeconomic opportunities and will have a focus on addressing the needs of women farmers in sub-Saharan countries.

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OUR GOVERNMENT IS PROVIDING \$15 MILLION OF FUNDING TO BRING A CANADIAN INNOVATION IN AGRICULTURE – 4R NUTRIENT STEWARDSHIP BEST MANAGEMENT PRACTICES – AND THE DEVELOPMENT EXPERTISE OF THE CO-OPERATIVE DEVELOPMENT FOUNDATION OF CANADA TO ADDRESS FOOD SECURITY AND ECONOMIC WELLBEING OF SMALLHOLDER FARMERS IN ETHIOPIA, GHANA AND SENEGAL.

HON. MARIE-CLAUDE BIBEAU MINISTER OF AGRICULTURE AND AGRI-FOOD



From left to right – Victor Neagu, Co-operative Development Foundation of Canada, Tom Bruulsema, International Plant Nutrition Institute, Fertilizer Canada's Vice President, Policy,& Programs, Cassandra Cotton, Executive Vice President, Clyde Graham, followed by, The Hon. Marie-Claude Bibeau, Minister of Agriculture and Agri-Food, Fertilizer Canada's Vice president, public Affairs, Catherine King, and President & CEO, Garth Whyte.



The 4R Solution Funders in Montreal, QC at the 2019 IFA Conference. Clyde Graham, Executive Vice President, Fertilizer Canada, Garth Whyte, President & CEO, Fertilizer Canada, Cassandra Cotton, Vice President, Policy & Programs, Charles (Chuck) Margo, President & Chief Executive officer, Nutrien, William (Tip) O'Neill, President, International Raw Materials Ltd, USA, Mostafa Terrab, OCP Chairman & Chief Executive Officer, Benoit Andre, Executive Director, CDF Canada, Catherine King, Vice President, Public Affairs, Fertilizer Canada, and Candace Laing, Vice President, Sustainability and Stakeholder Relations, Nutrien. Not present in the photo, Sollio Agriculture and Simplot.

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WE BELIEVE THAT BY WORKING TOGETHER WITH FERTILIZER CANADA, MEASURABLE ECONOMIC, SOCIETAL AND ENVIRONMENTAL BENEFITS CAN BE ACHIEVED FOR SMALLHOLDER FARMERS IN THE AMERICAS AND AROUND THE WORLD. TOGETHER, WE ARE JOINTLY COMMITTED TO WORK FOR AN AGRICULTURE THAT IS BROADLY SUSTAINABLE, INCLUSIVE AND RESILIENT.

CLAUDIA BARNETT IICA'S FORMER REPRESENTATIVE IN CANADA

INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE (IICA) MOU

Farmers in the Americas will have enhanced access to 4R Nutrient Stewardship best management practices (BMPs) through a new Memorandum of Understanding (MOU) with Inter-American Institute for Cooperation on Agriculture (IICA). This agreement will allow for the exchange of knowledge on implementing on-farm 4R Nutrient Stewardship practices leading to increased crop yields and profitability for farmers.

The partnership between Fertilizer Canada and IICA will enable progress towards a common goal of strengthening rural development and increasing food security, productivity and competitiveness for smallholder farmers in the Americas by improving access to 4R Nutrient Stewardship.



Fertilizer Canada's President & CEO Garth Whyte and IICA's Former Representative in Canada, Claudia Barnett signing the MOU between the two companies.



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