



Advancements of technology in the agriculture industry to support Canadian exports

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Presentation by Sarah Fedorchuk, Vice President of Government Relations and Public Affairs, The Mosaic Company

to

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Thank you for the introduction, Mr. Chairman. Good afternoon to the members of the committee. I appreciate the invitation and your time today. My name is Sarah Fedorchuk, and I'm the Vice President of Government Relations and Public Affairs for The Mosaic Company.

For those of you who aren't familiar, let me tell you a little about Mosaic and the work that we do.



Mosaic is the world's largest producer and marketer of concentrated potash and phosphate fertilizers with over 16,000 employees globally – about 2,200 of them in Saskatchewan. Our operations and joint ventures span across nine countries. All of our Canadian operations produce potash.

We completed \$7.4 billion in global sales in 2017 and have \$3 billion in expansion projects underway, including the world's largest potash mine shaft project at our Esterhazy location in east-central Saskatchewan. In less than a decade Mosaic will have invested more than \$6 billion into Canadian expansion.

We own assets through the full spectrum of the value chain that take minerals from raw ore right to finished product that are delivered to our customers in over 40 different countries.

Canada is the world's largest producer of potash, with over 30% of global supply. Farmers around the globe depend on our products to help nourish their crops— they need to grow more food on every acre of farmland.



Mosaic has developed a number of premium products that increase crop yields and combat nutrient deficiency, while using the same amount or less of our products. These products are highly sought after by customers in Asia, South America, and across North America.

Our mission is to ensure global food security by helping the world grow the food it needs. The United Nations estimates that the world population will climb to 9 billion by 2050. The world's farmers must produce more food and fuel, and will need more fertilizers to do it. In fact, fertilizers are currently responsible for producing half of the world's crop yields.

The last several years in particular, have been characterized by challenging conditions in agricultural and broader commodities markets.

Adding to those challenges are the difficulties we have seen with rail transportation across Canada this year.



Potash is Canada's largest mineral export both by volume and in economic terms. A reliable, safe rail transport system is absolutely critical to ensuring that exports can not only continue, but continue to grow. As it stands, 95% of Mosaic's potash is exported from Canada each year, almost half of which is shipped to offshore customers through Canpotex.

In a challenging economic climate, innovation is more important than ever as an ingredient to success. We've conducted more than 1,000 product trials in recent years with highly regarded private researchers and universities, as well as customers and growers.

Mosaic's innovation pipeline encourages bottom-up idea generation from within our workforce. On an annual basis, Mosaic spends approximately \$11 million on continuous improvement, research and development, and on new technology development.

Our Canadian R&D team evaluates ideas and advances the most suitable ones for further development. The process has created several major successes:



- Our Aspire premium product combines potash with boron – the world’s second most deficient crop nutrient – allows growers to save energy, time and money by applying both nutrients at once. Aspire also has a slower release time allowing less leaching and run off. This product was created by Mosaic and is now being marketed globally and exported from our mine in Colonsay, Saskatchewan
- Automation – Mosaic’s automation projects, using our in-house engineers and other specialists, are aimed at increasing our mining efficiency, sustainability and safety. Though this project is in its pilot stage, we see this as a potential game changer in the coming years.

Mosaic fully supports the continuation of the Scientific Research and Experimental Development (SRED) tax credit for mining as this program can make a significant impact on Canadian R&D investment decisions. However, we believe there’s a need to review the current application process. We’ve experienced a process that is cumbersome and difficult to navigate, and potentially dissuades Canadian companies from further investment in Canadian R&D. A more efficient, streamlined process would benefit and grow our Canadian economy.



GHG Emissions

Recent research conducted by a third-party on behalf of Mosaic shows that Canadian potash producers are best in class in terms of greenhouse gas emission intensity around the world.ⁱ In 2014, Canada's full lifecycle GHG emission intensity for potash was only 29% of the global average and significantly lower than other major potash regions.ⁱⁱ At the same time, we face taxation rates and shipping costs that are far higher than our main competitors, specifically Russia and Belarus, which negatively impacts Canada's competitiveness.

We encourage the government to think holistically when considering agriculture and Canadian exports and to bear in mind the cumulative impact of current and proposed regulations – right now there are several major initiatives underway: carbon pricing; the Impact Assessment review and regulations; and Clean Fuel Standards. These must not be viewed in silo as the cumulative impacts of federal regulations could discourage global companies from continuing to make investments in innovation for the betterment of both the environment and the economy.



We recommend that the government earmark funding to establish an energy efficiency program that will assist with up-front capital costs for new projects and for retrofits of existing operations. This would help support Mature, Energy Intensive, Trade Exposed Sectors such as ours as we work to access remaining emissions reduction opportunities and increase competitiveness.

Mosaic is pleased to continue this conversation with you at any time, and I am happy to answer your questions now.

ⁱ Source: Carbon Footprint for Canadian Potash Production, prepared by Cheminfo Services Inc., Jan. 22, 2018.

ⁱⁱ Same source as above.