Risk Factors Comparison 2024-02-22 to 2023-02-23 Form: 10-K

Legend: **New Text** ~~Removed Text~~ Unchanged Text Moved Text Section

Our business, financial condition or results of operations could be materially adversely affected by any of the risks and uncertainties described below. Operational Risks Our operating results are highly dependent upon and fluctuate based upon business ~~and~~ **,** economic **and other** conditions and governmental policies affecting the agricultural industry in which we or our customers operate. These factors are outside of our control and may significantly affect our profitability. The most important ~~of these~~ factors are: • weather and field conditions (particularly during periods of traditionally high crop nutrients application); • quantities of crop nutrients imported and exported; • current and projected inventories and prices, which are heavily influenced by U. S. exports and world- wide markets; and • governmental policies, including farm and biofuel policies, which may directly or indirectly influence the number of acres planted, the level of inventories, the mix of crops planted or crop prices or otherwise negatively affect our operating results. International market conditions and the ~~success~~ **effects** of ~~our~~ **recent** countervailing duty ~~petitions~~ **orders**, which are also outside of our control, may also significantly influence our operating results. The international market for crop nutrients is influenced by such factors as the relative value of the U. S. dollar and its impact upon the cost of importing crop nutrients, foreign agricultural policies, including subsidy policies, the existence of, or changes in, import or foreign currency exchange barriers in certain foreign markets, changes in the hard currency demands of certain countries and other regulatory policies of foreign governments, as well as the laws and policies of the U. S. affecting foreign trade and investment, including use of tariffs. In ~~2020~~ **2021**, ~~we filed petitions with~~ the DOC **issued CVD orders on** ~~and ITC that requested the initiation of countervailing duty investigations into~~ imports of phosphate fertilizers from Morocco and Russia **, in response to petitions filed by Mosaic. The orders were based on DOC' s determination that the imports were unfairly subsidized, and the U. S. International Trade Commission' s determination that the imports materially injure the U. S. phosphate fertilizer industry**. The purpose of the ~~petitions~~ **CVD orders** was to remedy the **injury** ~~distortions that we believe foreign subsidies have caused or are causing in the U. S. market for phosphate fertilizers,~~ and thereby restore fair competition. **CVD** ~~During the first quarter of 2021, the DOC made final affirmative determinations that countervailable subsidies were being provided by the Russian and Moroccan governments and the ITC made final affirmative determinations that the U. S. phosphate fertilizer industry is materially injured by reason of subsidized phosphate fertilizer imports from Morocco and Russia. As a result of these determinations, the DOC issued countervailing duty~~ orders **normally stay** ~~on phosphate fertilizer imports from Russia and Morocco, which are scheduled to remain~~ in place for at least five years ~~. Currently~~, **with possible extensions.** ~~the cash deposit rates for such imports are approximately 20 percent for~~ Moroccan ~~producer OCP, 9 percent~~ and ~~47 percent for~~ Russian producers **have** ~~PhosAgro and Eurochem, respectively, and 17 percent for all other Russian producers. The final determinations in the DOC and ITC investigations are subject to possible challenges before U. S. federal courts and the World Trade Organization, and Mosaic has~~ initiated actions at the ~~U~~ **CIT seeking to overturn the orders**. **Mosaic has also made claims** ~~S. Court of International Trade~~ contesting certain aspects of ~~the~~ DOC' s final determinations that, we believe, failed to capture the full extent of Moroccan and Russian **subsidies. These litigation challenges remain underway. Most recently, in January 2024, DOC and the ITC issued revised determinations on remand from the CIT, upholding their original determinations that Moroccan** phosphate fertilizer **is unfairly** ~~subsidies~~ **subsidized** ~~.~~ **, and that** Moroccan and Russian **imports materially injure the U. S. industry, respectively. The CIT is now reviewing these remand determinations. Also in January 2024, the CIT issued a ruling affirming DOC' s original determinations that Russian phosphate fertilizer is unfairly subsidized. When a CVD order is in place, DOC normally conducts annual administrative reviews, which establish a final CVD assessment rate for past imports during a defined period, and a CVD cash deposit rate for future imports. In November 2023, DOC announced the final results of the first administrative reviews for the CVD orders on phosphate fertilizers for Russia and Morocco, covering the period November 30, 2020 to December 31, 2021. DOC calculated new subsidy rates of 2. 12 % for Moroccan producer OCP and 28. 50 % for Russian producer PhosAgro. Mosaic, foreign** producers **, and a U. S. importer** have **appealed these decisions to the CIT. DOC is** also **conducting administrative reviews covering the period January 1** ~~initiated U. S. Court of International Trade actions~~, ~~seeking lower~~ **2022 to December 31, 2022. The applicable final CVD assessment rates and** cash deposit rates **for** ~~and revocation of the countervailing duty orders. Further, the cash deposit rates and the amount of countervailing duties owed by importers on such~~ imports **of phosphate fertilizer from Morocco and Russia** could change **as a** ~~based on the results~~ - **result** of ~~the~~ **these various proceedings and potential associated appeals, whether in federal courts or at the World Trade Organization. A reversal of, or change in, the ITC' s or** DOC' s **prior** ~~annual administrative review proceedings. If the final determinations~~ - **determination in** ~~are challenged and subsequently reversed,~~ the ~~results~~ **CVD investigations** could have an adverse effect on our business, ~~and / or our~~ financial condition or operating results. ~~The Covid- 19 pandemic~~ **Pandemics** ~~may~~ **, epidemics or other health outbreaks could** materially adversely affect our business operations and financial condition. ~~The Covid- 19 pandemic~~ **Pandemics** ~~continues to impact~~ **, epidemics or other health outbreaks have, and could again, adversely affect** the global economy and **have, and** could **again,** significantly disrupt our operations, key suppliers or third- party logistics providers, customers and ultimate end- users **. These disruptions could arise** due to the spread of the ~~virus, shelter in place orders,~~ **outbreak and / or from measures to contain or mitigate it such as** quarantines **and extended closures of businesses mandated by government authorities.** ~~or~~ **For example,** ~~other~~ -- **the Covid- 19** ~~measures implemented to prevent the spread of the virus. In some instances, the~~ pandemic ~~has impacted~~ **adversely affected** our ~~business. Our~~ businesses ~~have been impacted~~ **in multiple ways, including** by **creating** short- term labor shortages **,** due to illness **,** and transportation issues **,** such as trucking delays and port congestion **,** which **slowed** ~~are slowing~~ delivery of inputs to **our** facilities and products to **our** end customers. **The full impact** ~~At this time, the Company has only experienced limited adverse financial and operational Covid- 19 related conditions. Other effects~~ of ~~the Covid- 19 pandemic that are not currently foreseeable~~ **another public health event depends on various factors any of which** could materially increase our costs, negatively impact our revenue and / or adversely impact our results of operations and liquidity, possibly to a significant degree. **A public health event** ~~We cannot predict the severity or duration of any such impacts. The Covid- 19 pandemic~~ could also have the effect of heightening many of the other risks described in this Item 1A of this Form 10- K. Unfavorable worldwide economic and market conditions could adversely affect our business, financial condition or operating results. Economic and market conditions, including inflation, supply chain challenges, high interest rates and foreign exchange volatility, have and may continue to have an impact on our business. Our production costs have ~~also~~ increased due to higher prices for raw materials, including purchased nitrogen, sulfur and ammonia, as well as supply chain challenges, including increased costs and delays caused by transportation and labor shortages. These adverse economic events have adversely affected, and may continue to adversely affect our operating results. Our crop nutrient business is seasonal and varies based on application rates, which may result in carrying significant amounts of inventory and seasonal variations in working capital, and our inability to predict future seasonal crop nutrient demand accurately may result in excess inventory or product shortages. The use of crop nutrients is seasonal and varies based on application rates. Farmers tend to apply crop nutrients during two short application periods, the strongest one in the spring, before planting, and the other in the fall, after harvest. As a result, the strongest demand for our products typically occurs during the spring planting season, with a second period of strong demand following the fall harvest. In contrast, we ~~and other crop nutrient producers~~ generally produce our products throughout the year. As a result, we and ~~/ or~~ our customers generally build inventories during the low demand periods of the year in order to provide timely product availability during the peak sales seasons. The seasonality of crop nutrient demand results in our sales volumes and net sales typically being the highest during the North American spring season and our working capital requirements typically being the highest just prior to the start of the spring season. Our quarterly financial results can vary significantly from one year to the next due to weather- related shifts in planting schedules and purchasing patterns. If seasonal demand exceeds our projections, we will not have enough product ~~and our customers may acquire products from our competitors~~ , which would negatively impact our profitability. If seasonal demand is less than we expect, we will have excess inventory and higher working capital and liquidity requirements. The degree of seasonality of our business can change significantly from year to year due to conditions in the agricultural industry and other factors. Changes in transportation costs can affect our sales volumes and selling prices. ~~The~~ **Delivery** ~~cost~~ **costs are** ~~of delivery is~~ a significant factor in the total cost to customers ~~and farmers of crop nutrients~~ . As a result, changes in transportation costs, or in customer expectations about them, ~~can~~ **may adversely** affect our sales volumes and prices. A disruption ~~to~~ **at** our production, distribution or terminaling facilities could have a material adverse impact on our business. The risk of material disruption increases when demand for our products results in high operating rates at our facilities. We conduct our operations through a limited number of key production, distribution and terminaling facilities. These facilities include our phosphate mines and concentrates plants; our potash mines; and the ports and other distribution facilities through which we, Canpotex and the other joint ventures in which we participate, conduct our respective businesses, as well as other commercial arrangements with unrelated third parties. Any disruption of operations at any ~~one~~ of these facilities **may** ~~has the possibility of~~ significantly negatively ~~affecting~~ --- **affect** our production or our ability to distribute our products. Examples of the types of events that could result **, and have resulted,** in a disruption at ~~one of~~ these facilities include: adverse weather; strikes or other work stoppages; civil unrest; deliberate, malicious acts, including acts of terrorism and armed conflict; political or economic instability; cyberattacks; changes in permitting, financial assurance or certain environmental, health and safety laws or other changes in the regulatory environment in which we operate; legal and regulatory proceedings; our relationships with the other member of Canpotex and the other joint ventures in which we participate and their or our exit from participation in such joint ventures; other changes in our commercial arrangements with unrelated third parties; brine inflows at our Esterhazy, Saskatchewan mine or our other shaft mines; mechanical failure and accidents or other failures occurring in the course of operating activities, including at our gypstacks, clay settling areas and tailing dams; accidents occurring in the course of operating activities; lack of truck, rail, barge or ship transportation; and other factors. Reduced oil refinery operating rates in North America could have a material adverse impact on our business, financial condition or operating results. Reduced oil refinery operating rates in the U. S. and Canada could **, and have** ~~result~~ **resulted in, the past,** in decreased availability of molten sulfur, which could increase costs of sulfur procurement or decrease availability of sulfur needed in our phosphate fertilizer production operations. **If** ~~We have not yet become subject to such results in the sulfur procurement markets, if~~ it becomes necessary to procure sulfur at higher costs, and if we are unable to pass those costs on in our product prices, or if we are unable to procure sulfur at volumes necessary for our operations, such events could have a material adverse effect on our phosphate business, and / or our financial condition or operating results. Key inputs for the production of our finished goods, including fertilizer, sulfur and ammonia, and energy used in our businesses in the past have been and may in the future be the subject of volatile pricing and availability. Changes in the price or availability of these key inputs for production of finished goods have had, and could again have, a material adverse impact on our businesses. Fertilizer is a key input for production of our **blended** finished goods **products** . Natural gas, ammonia and sulfur are key raw materials used in the manufacture of phosphate crop nutrient products. Natural gas is used as both a chemical feedstock and a fuel to produce anhydrous ammonia, which is a raw material used in the production of concentrated phosphate products. Natural gas is also a significant energy source used in the potash solution mining process. From time to time, our profitability has been and may in the future be adversely impacted by the price and availability of these key inputs and other energy costs. For example, the ongoing conflict between Russia and Ukraine and the related sanctions have led, and may continue to lead, to disruption and instability in global markets, supply chains and volatile pricing and availability of these key inputs and raw materials. Because most of our products are commodities, there can be no assurance that we will be able to pass through increased costs to our customers. A significant increase in the price of fertilizer, natural gas, ammonia, sulfur or energy costs that is not recovered through an increase in the price of our related crop nutrients products could have a material adverse impact on our business. In addition, under an ammonia supply agreement with CF, we have agreed to purchase approximately 545, 000 to 725, 000 tonnes of ammonia per year at a price to be determined by a formula based on the prevailing price of U. S. natural gas. If the price of natural gas rises or the market price for ammonia falls outside of the range anticipated at execution of this agreement, we may not realize a cost benefit from the natural gas- based pricing over the term of the agreement, or the cost of our ammonia under the agreement could become a competitive disadvantage. At times, we have paid considerably more for ammonia under the agreement than what we would have paid had we purchased it in the spot market. On October 14, 2022, we received notice from CF to exercise the bilateral, contractual right to end the ammonia supply agreement in its current form, effective January 1, 2025. The contract allows for either party to exercise rights on certain dates through 2032 that can result in changes to terms and conditions. We are subject to risks associated with our international sales and operations, which could negatively affect our sales to customers in foreign countries as well as our operations and assets in foreign countries. Some of these factors may also make it less attractive to distribute cash generated by our operations outside the U. S. to our stockholders, or to utilize cash generated by our operations in one country to fund our operations or repayments of indebtedness in another country or to support other corporate purposes. ~~For~~ **In** ~~2022~~ **2023** , we derived approximately ~~75~~ **66** % of our net sales from customers located outside of the U. S. As a result, we are subject to numerous risks and uncertainties relating to international sales and operations, including: • difficulties and costs associated with complying with a wide variety of complex laws, treaties and regulations; • ~~unexpected~~ **unpredictable** changes in regulatory environments; • increased government ~~ownership and~~ regulation of the economy in the countries we serve; • political and economic instability ~~, including the possibility for terrorism, armed conflict, civil unrest~~ , inflation and adverse economic conditions resulting from governmental attempts to reduce inflation, such as imposition of higher interest rates and wage and price controls; • unpredictable tax audit practices of various governments; • nationalization of properties by foreign governments; • the imposition of tariffs, exchange controls, trade barriers or other restrictions, or government- imposed increases in the cost of resources and materials necessary for the conduct of our operations or the completion of strategic initiatives, including with respect to our joint ventures; and • currency exchange rate fluctuations between the U. S. dollar and foreign currencies, particularly the Brazilian real and the Canadian dollar. The occurrence of any of the above in the countries in which we operate or elsewhere could jeopardize or affect our ability to transact business there and could adversely affect our revenues and operating results and the value of our assets located outside of the U. S. In addition, tax regulations and tax audit practices, currency exchange controls and other restrictions may also make it economically unattractive to: • distribute cash generated by our operations outside the U. S. to our stockholders; or • utilize cash generated by our operations in one country to fund our operations or repayments of indebtedness in another country or to support other corporate purposes. Our assets outside of North America are located in countries with volatile conditions, which could subject us and our assets to significant risks. We are a global business with substantial assets located outside of **North America** ~~the U. S. and Canada~~ . Our operations in Brazil, China, India and Paraguay are fundamental to our business. We have a majority interest in the joint venture entity operating the Miski Mayo Mine that supplies phosphate rock to us. We also have a minority joint venture investment in MWSPC, which operates a mine and chemical complexes that produce phosphate fertilizers and other downstream products in the Kingdom of Saudi Arabia. Volatile economic, market and political conditions may have a negative impact on our operations, operating results and financial condition. In addition, unfavorable changes in trade protection laws, policies and measures, or governmental actions and policies and other regulatory requirements affecting trade and the pricing and sourcing of our raw materials, may also have a negative impact on our operations, operating results and financial condition. Natural resource extraction is an important part of the economy in Peru, and, in the past, there have been protests against other natural resource operations in Peru. There remain numerous social conflicts that exist within the natural resource **extraction** sector in Peru ~~. As a result~~ , **and** there is potential for active protests against natural resource extraction companies. If the Government of Peru' s proactive efforts to address the social and environmental issues surrounding natural resource activities are not successful, protests could extend to or impact the Miski Mayo Mine and adversely affect our interest in the Miski Mayo joint venture or the supply of phosphate rock to us from the mine. Adverse weather conditions, including ~~the impact of~~ hurricanes, and excess heat, cold, snow, rainfall and drought, have in the past, and may in the future, adversely affect our operations, and result in increased costs, decreased sales or production and potential liabilities. Adverse weather conditions ~~, including the impact of hurricanes and excess heat, cold, snow, rainfall and drought,~~ have in the past and may in the future adversely affect our operations, particularly our Phosphates ~~business~~ **operations** . In the past, hurricanes have resulted in physical damage to our facilities in Florida and Louisiana. Additionally, water treatment costs tend to increase significantly following excess rainfall ~~from hurricanes or other adverse weather~~ . Some of our Florida and Louisiana facilities have had, and others could have, high water levels that have required, or may require, treatment. High water balances in the past at phosphate facilities in Florida also led the Florida Department of Environmental Protection (" FDEP ") to adopt rules requiring phosphate production facilities to meet more stringent process water management objectives for phosphogypsum stack systems. In addition to the FDEP, the U. S. Environmental Protection Agency (" EPA ") and the Louisiana Department of Environmental Quality ~~(" LDEQ ")~~ also have similar requirements for water management objectives as outlined in our U. S. Resource Conservation and Recovery Act (" RCRA ") ~~CD~~ **Consent Decree** ' s. If **adverse weather** ~~excess rainfall or hurricanes occur~~ **occurs** in coming years, our facilities may be required to take additional measures to manage process water to comply with existing or future requirements and these measures could potentially have a material effect on our business and financial condition. Adverse weather may also cause a loss of production and may disrupt our supply chain or adversely affect delivery of our products to our customers. For example, oil refineries that supply sulfur to us may suspend operations as a result of a hurricane, and incoming shipments of ammonia can be delayed, disrupting production at our Florida or Louisiana facilities and delivery of our products. In the second half of 2021, we experienced production impacts related to Hurricane Ida ~~on~~ **at** our Louisiana operations. We also experienced down time and delayed shipments caused by impacts from Hurricane Ian which occurred at the end of the third quarter in 2022. Excess rainfall and drought have in the past, and may in the future, adversely affect us. For example, in 2019 **,** we experienced the wettest year in North America in nearly 50 years **,** which reduced fertilizer applications by farmers. Excess rainfall also resulted in higher river levels which adversely affected delivery of our products. Drought can reduce farmers' crop yields and the uptake of phosphates and potash, reducing the need for application of additional phosphates and potash for the next planting season. Drought can also lower river levels, adversely affecting delivery of our products to our customers. **For example, the Mississippi River was in drought condition for parts of 2022 and 2023, affecting barge movement on the river.** Climate change could adversely affect us. The impact of climate change on our operations and those of our customers ~~and farmers~~ remains uncertain. **The** ~~Scientists have hypothesized that the~~ impacts of climate change could include changes in rainfall patterns, water shortages, changing sea levels, changing storm patterns and intensities, and changing temperature levels and that these changes could be severe. These impacts could vary by geographic location. Severe climate change could impact our costs and operating activities, the location and cost of global grain and oilseed production, and the supply and demand for grains and oilseeds. At the present time, we cannot predict the prospective impact of climate change on our results of operations, liquidity or capital resources, or whether any such effects could be material to us. We do not own a controlling equity interest in our non- consolidated companies, some of which are foreign companies, and therefore our operating results and cash flow may be materially affected by how the governing boards and majority owners operate such businesses. There may also be limitations on monetary distributions from these companies that are outside of our control. Together, these factors may lower our equity earnings or cash flow from such businesses and negatively impact our results of operations. In 2013, we entered into an agreement to form MWSPC, a joint venture in which we hold a 25 % interest, to develop a mine and chemical complexes for an estimated $ 8. 0 billion **cost,** that produces phosphate fertilizers and other downstream products in the Kingdom of Saudi Arabia. ~~The~~ **MWSPC is now operational, but the** success of ~~MWSPC will~~ **its operations** ~~depend~~ **depends** on, among other matters, the availability and affordability of necessary resources and materials and access to appropriate infrastructure, availability and affordability of transportation, operational decisions of MWSPC management, ability to operate without material disruption to the facilities, as well as the general economic and political stability of the region. We also hold minority ownership interests in other companies that are not controlled by us. The operations and results of MWSPC ~~will be,~~ and ~~the operations or results of~~ some of the other companies are ~~,~~ significant to us, and their operations can affect our earnings. Because we do not control these companies either at the board or stockholder levels and because local laws in foreign jurisdictions and contractual obligations may place restrictions on monetary distributions by these companies, we cannot ensure that these companies will operate efficiently, pay dividends, or generally follow the desires of our management by virtue of our board or stockholder representation. As a result, these companies may contribute less than anticipated to our earnings and cash flow, negatively impacting our results of operations and liquidity. Strikes or other forms of work stoppage or slowdown could disrupt our business and lead to increased costs. Our financial performance is dependent on a reliable and productive work force. A significant portion of our workforce, and that of the joint ventures in which we participate, is covered by collective bargaining agreements with unions. Unsuccessful contract negotiations or adverse labor relations could result in strikes or slowdowns. Any disruption may decrease our production and sales or impose additional costs to resolve disputes. The risk of adverse labor relations may increase as our profitability increases because labor unions' expectations and demands generally rise at those times. Our underground potash shaft mines are subject to risks of water inflows. Over the past century, several potash mines experiencing water inflow problems have flooded. Since December 1985, we have had inflows of brine water into our Esterhazy, Saskatchewan K1 and K2 potash mines. Due to an acceleration of brine inflows, on June 4, 2021, the Company announced a closure of our K1 and K2 potash mine shafts. Our potash mines at Colonsay, Saskatchewan, Carlsbad, New Mexico and our Esterhazy, Saskatchewan K3 mine (though not contiguous with the K1 / K2 underground inflow region) are also subject to risks from ~~the~~ inflow ~~of water as a result of our underground shaft mining operations~~ . Though minor inflows are regularly managed, it is possible that significant water inflows could occur which may present risks to our employees and our operations, and which may require us to incur brine management costs, change our mining processes, or abandon our operating mines. See ~~the~~ " Key Factors that can Affect Results of Operations and Financial Condition " and " Potash Net Sales and Gross Margin " sections of our Management' s Analysis in this Form 10- K and the Esterhazy closure costs in Note 26 of this Form 10- K, which sections are incorporated herein by reference, for a discussion of costs, risks and other information relating to the brine inflows. Accidents or equipment failures occurring in the course of our operating activities could result in significant liabilities, interruptions or shutdowns of facilities or the need for significant safety or other expenditures. We engage in mining and industrial activities **, including rail transportation,** that can result in serious accidents or experience equipment failures. If our procedures are not effective, or if an accident or equipment failure were to occur, we could be subject to liabilities arising out of property damage, personal injuries or death, our operations could be interrupted and we might have to shut down or abandon affected facilities. Accidents could cause us to expend significant amounts to remediate safety issues or to repair damaged facilities and could result in significant liabilities and / or impact on the financial performance of the Company, including material adverse effects on our results of operations, liquidity or financial condition. For example: • Some of our facilities are subject to potential damage from seismic activity **or other geologic concerns** . The excavation of mines in some parts of the world can result in potential seismic events or can increase the likelihood or potential severity of a seismic event. Our Esterhazy mine and ~~southern~~ Louisiana facilities have experienced minor seismic events from time to time. A significant seismic event at one our facilities or mines could result in serious injuries or death, or damage to or flooding of operations, or damage to adjoining properties or facilities of unrelated third parties. **Geologic features may affect the integrity of our impoundments, particularly in central Florida. Our efforts to deploy new technologies to identify and repair features to mitigate impacts and risk may not be successful, adversely impacting our operations or could cause us to incur significant costs.** • Our underground potash shaft mines are subject to risk from fire. In addition, fire at one of our underground shaft mines could halt our operations at the affected mine ~~while we investigate the origin of the fire~~ or for longer periods for remedial work or otherwise. Our underground potash shaft mines ~~at Esterhazy and Colonsay, Saskatchewan, Carlsbad, New Mexico and Taquari- Vassouras, Brazil~~ are subject to risk from fire. In the event of a fire, if our emergency procedures are not successful, we could have significant injuries or deaths, or shutdowns of our facilities, or could cause us to expend significant amounts to remediate safety issues or repair damaged facilities. • We handle significant quantities of ammonia at several ~~of our facilities. If our safety procedures are not effective, an accident involving our ammonia operations could result in serious injuries or death, or result in the shutdown~~ of our facilities. We produce ammonia at our Faustina, Louisiana phosphate concentrates plant, use ammonia in significant quantities at all of our Florida and Louisiana phosphates concentrates plants and store ammonia at some of our distribution facilities. In Florida, ammonia is received at terminals in Tampa and transported by pipelines and trucks to our facilities. We also use ammonia in our Brazil phosphate operations. Our ammonia is generally stored and transported at high pressures or cryogenically. Accidents at any of our ammonia facilities could result in serious injury or death and could adversely impact our operations. • We also use or produce other hazardous chemicals at some of our facilities. If our safety procedures are not effective, an accident involving these other hazardous chemicals could result in serious injuries or death, or result in the shutdown of our facilities. We use sulfuric acid **to produce** ~~in the production of~~ concentrated phosphates in our Florida and Louisiana operations and our Brazil operations. We also use or produce other hazardous chemicals at some of our facilities. An accident involving any of these chemicals could result in serious injuries or death, or evacuation of areas near an accident. An accident could also result in property damage or shutdown of our facilities, or cause us to expend significant amounts to remediate safety issues or to repair damaged facilities. **Our business operations rely on our information systems and any material disruption or slowdown of our systems could cause operational delays or loss of revenue. We depend on information systems to, among other things, manage our inventory, process transactions, operate our websites, purchase and ship goods on a timely basis, and maintain cost- effective operations. We have invested significant capital and expect future capital expenditures associated with the implementation and integration of our information technology systems across our businesses. This process involves the replacement and consolidation of technology platforms, resulting in operational efficiencies and reduced costs. Our inability to effectively implement or convert our operations to the new systems could cause delays in product fulfillment and reduced efficiency in our operations and could have a material impact on our financial condition or operating results.** Regulatory Risks ~~The environmental~~ **Environmental** , health and safety regulations and requirements to which we are subject may have a material adverse effect on our business, financial condition and results of operations. We are subject to numerous environmental, health and safety laws and regulations **(" EHS laws ")** in ~~the U. S., Canada, China, Brazil and other~~ countries in which we operate. These **EHS** laws ~~and regulations~~ govern a wide range of matters, including environmental controls, land reclamation, discharges to air and water, remediation of hazardous substance releases and in some cases, demonstration of financial assurance. They significantly affect our operating activities as well as the level of our operating costs and capital expenditures. In some jurisdictions, environmental laws change frequently and it may be challenging for us to achieve and maintain compliance with all material environmental laws at all times. If we are not in compliance, we may be subject to enforcement or third- party claims, and may require new investment in our business. In those circumstances, our financial condition and results of operations may be materially adversely affected. The U. S. Comprehensive Environmental Response, Compensation, and Liability Act (" CERCLA ") imposes liability, including for cleanup costs, without regard to fault or to the legality of a party' s conduct, on certain categories of persons, including current and former owners and operators of a site and parties who are considered to have contributed to the release of " hazardous substances " into the environment. Under CERCLA, or various U. S. state analogues, a party may, under certain circumstances, be required to bear more than its proportional share of cleanup costs at a site where it has liability if payments cannot be obtained from other responsible parties. **We** ~~As a crop nutrient company producing and managing chemicals, we~~ periodically have incurred and may incur liabilities and cleanup costs, under CERCLA and other environmental laws, with regard to our current or former facilities, adjacent or nearby third- party facilities or offsite disposal locations. Our operations are dependent on having the required permits and approvals from governmental authorities. Denial or delay by a government agency in issuing any of our permits and approvals or imposition of restrictive conditions on us with respect to these permits and approvals may impair our business and operations. Our operations, including our mines, are dependent on having the required permits and approvals from governmental authorities. Denial or delay by a government agency in issuing, modifying or renewing any of our permits and approvals or imposition of restrictive or cost prohibitive conditions on us with respect to these permits and approvals may impair our business and operations and could have a material adverse effect on our business, financial condition or results of operations. For example, ~~In~~ **in** Florida, local community involvement has become an increasingly important factor in the permitting process for mining companies, and various counties and other parties in Florida have in the past filed and continue to file lawsuits challenging the issuance or renewal of some of the permits we require. These actions can significantly delay issuance of the permits we need to operate or expand operations. We have included additional discussion about permitting for our phosphate mines in Florida under " Environmental, Health, Safety and Security Matters – Operating Requirements and Impacts – Permitting " in our Management' s Analysis. We are, and may in the future be, involved in legal and regulatory proceedings that could be material to us. We have in the past been, are currently ~~and~~ , **and** in the future may be, subject to legal and regulatory proceedings that could be material to our business, results of operations, liquidity or financial condition. Joint ventures in which we participate could also become subject to these sorts of proceedings. These proceedings may be brought by the government or private parties and may arise out of a variety of matters, including: • Allegations that we have violated environmental, health and safety laws and regulations or that we are responsible for adversely affecting nearby properties. We are currently involved in proceedings alleging that, or to review whether, we have violated environmental laws in the U. S. and Brazil. • Allegations by private parties that our operations have resulted in personal injury, property damage or damage to business operations. • Antitrust, commercial, tax (including tax audits) and other disputes. The legal and regulatory proceedings to which we are currently or may in the future be subject may, depending on the circumstances, result in monetary damage awards, fines, penalties, other liabilities, injunctions or other court or administrative rulings that interrupt, impede or otherwise materially affect our business operations or criminal sanctions. We have included additional information with respect to pending legal and regulatory proceedings in Note 23 of our Notes to Consolidated Financial Statements and in this Form 10- K in Part I, Item 3 ~~,~~ **.** " Legal Proceedings ". Environmental, health and safety and food and crop laws and regulations to which we are subject may become more stringent over time. This could increase the effects on us of these laws and regulations, and the increased effects could be materially adverse to our business, operations, liquidity and / or results of operations. Heightened regulation on food and crop inputs (including crop nutrients) and environmental, health and safety issues in ~~the U. S., Canada, China, Brazil, Paraguay and other~~ countries ~~where~~ **in which** we operate can be expected to result in requirements that apply to us and our operations that may be more stringent than those described elsewhere in this report. These requirements may include: • Increased levels of future investments and expenditures for environmental controls at ongoing operations, which will be charged against income from future operations; increased levels of the financial assurance requirements to which we are subject, and increased efforts or costs to obtain permits or denial of permits. • New or interpretations of existing statutes or regulations that impose new or more stringent standards, restrictions or liabilities related to elevated levels of naturally- occurring radiation that arise on formerly mined land and other matters that could increase our expenses, capital requirements or liabilities or adversely affect our business, liquidity or financial condition. Environmental justice considerations could have a material adverse effect on our business, financial condition or results of operations. The U. S. federal and some state governments increasingly are adopting standards or policies requiring environmental justice reviews in some permitting actions. In general, they require governmental agencies to evaluate projects for disproportionate impacts to disadvantaged or already burdened communities. If such conditions are found, they might result in a permit denial, or restrictive or cost prohibitive conditions imposed on our operations and may impair our business and operations and could have a material adverse effect on our business, financial condition or results of operations. We are subject to financial assurance requirements as part of our routine business operations. If we were unable to satisfy financial assurance requirements, we might not be able to obtain or maintain permits we need to operate our business as we have in the past. In addition, our compliance with these requirements could materially affect our business, results of operations or financial condition. In many cases, as a condition to obtaining or maintaining permits and approvals or otherwise, we are required to comply with financial assurance requirements of governmental authorities. The purpose of these requirements is to provide comfort to the government that sufficient funds will be available for the ultimate closure, post- closure care or reclamation of our facilities. In some cases, we comply through the satisfaction of applicable state financial strength tests **; but** ~~. But,~~ if we are unable to do so, we must utilize alternative methods of complying with these requirements; if we do not, we would be prevented from continuing our operations and also could be subject to enforcement proceedings brought by relevant government agencies. Alternative compliance methods include providing credit support in the form of cash escrows or trusts, surety bonds from surety or insurance companies, letters of credit from banks, or other forms of financial instruments or collateral to satisfy the financial assurance requirements. Use of alternative means of financial assurance imposes additional expense on us **and could affect** ~~. Some of them, such as letters of credit, also use a portion of~~ our ~~available~~ liquidity ~~. Other alternative means of financial assurance, such as surety bonds, generally require us to obtain a discharge of the bonds or to post additional collateral (typically in the form of cash or letters of credit) at the request of the issuer of the bonds. Collateral that is required may be in forms that utilize a portion of our available liquidity, or in the form of assets such as real estate, which reduces our flexibility to manage or sell assets~~ . We have included additional discussion about financial assurance requirements under " Off- Balance Sheet Arrangements and Obligations – Other Commercial Commitments " in our Management' s Analysis. Regulatory restrictions on greenhouse gas emissions and climate change regulations in the U. S., Canada or elsewhere could adversely affect us, and these effects could be material. Various governmental initiatives to limit greenhouse gas emissions are under way or under consideration around the world. These initiatives could restrict our operating activities, require us to make changes in our operating activities that would increase our operating costs, reduce our efficiency or limit our output, require us to make capital improvements to our facilities, increase our energy, raw material and transportation costs or limit their availability, or otherwise adversely affect our results of operations, liquidity or capital resources, and these effects could be material to us. Governmental greenhouse gas emission initiatives include, among others, the December 2015 agreement (the " Paris Agreement ") which was the outcome of the 21st session of the Conference of the Parties under the United Nations Framework Convention on Climate Change (" UNFCCC "). The Paris Agreement, which was signed by nearly 200 nations, including the U. S. and Canada, entered into force in late 2016 and sets out a goal of limiting the average rise in temperatures for this century to below 2 degrees Celsius. Each signatory is expected to develop its own plan (referred to as a Nationally Determined Contribution, or " NDC ") for reaching that goal. ~~In May 2017, the U. S. announced that the it would withdraw from the Paris Agreement. In January 2021, the U. S. rejoined.~~ Previously, the U. S. had submitted an NDC aiming to achieve, by 2025, an economy- wide target of reducing greenhouse gas emissions by 26- 28 % below its 2005 level. The NDC also aims to use best efforts to reduce emissions by 28 %. The U. S. target covers all greenhouse gases that were a part of the 2014 Inventory of Greenhouse Gas Emissions and Sinks. While ~~the extent of the U. S.' s involvement in the Paris Agreement and~~ the status of this NDC is unclear, various legislative or regulatory initiatives relating to greenhouse gases have been adopted or considered by the U. S. Congress, the EPA or various states and those initiatives already adopted may be used to implement a U. S. NDC. Additionally, more stringent laws and regulations may be enacted to accomplish the goals set out in the NDC. Brazil ratified the Paris Agreement in September 2016, committing to an NDC that includes an economy- wide target of 1. 3 GtCO2e by 2025 and 1. 2 GtCO2e by 2030. In 2020, Brazil submitted a new NDC, which reaffirms the country' s commitment to reducing total net greenhouse gas emissions by 37 % in 2025 and by 43 % in 2030. The NDC further commits to achieving climate neutrality in 2060. Complete details surrounding Brazil' s plan for achieving the greenhouse gas emissions reductions and climate neutrality are uncertain.

The government of Brazil may intervene with new or different policy instruments to meet the goals set out in the 2020 NDC. Canada' s intended NDC aims to achieve, by 2030, an economy- wide target of reducing greenhouse gas emissions by 40- 45 % below 2005 levels. The Canadian federal government has also introduced legislation establishing a long- term target of " net- zero " greenhouse gas emissions by 2050. More stringent laws and regulations may be enacted to accomplish the goals set out in Canada' s NDC and Canada' s own long- term emissions reduction targets. In March ~~,~~ 2022, the SEC issued proposed rules on climate change disclosure requirements that, if adopted as proposed, will require disclosure of extensive detailed climate- related information. **The Company is monitoring the SEC' s proposed rules and recently enacted standards in the European Union and California on climate change disclosure and is taking necessary steps to plan for the anticipated or adopted disclosure requirements.** It is possible that such legislation and other future legislation or regulation addressing climate change, including the Paris Agreement or any new international agreements, could adversely affect our operating activities, energy, raw material and transportation costs, results of operations, liquidity or capital resources, and these effects could be material or adversely impact our competitive advantage. In addition, to the extent climate change restrictions imposed in countries where our competitors operate, such as India, ~~former Soviet Union countries~~ **China, Russia, Belarus** or Morocco, are less stringent than in the U. S., Canada or Brazil **,** our competitors could gain cost or other competitive advantages over us. We use tailings, sediments and water **dams and other impoundments** to manage residual materials generated by our facilities, including Brazilian mining operations. If our safety procedures are not effective, an accident involving these impoundments could result in serious injuries or death, damage to property or the environment, or result in the shutdown of our facilities, any of which could materially adversely affect our results of operations. Mining and processing of potash and phosphate generate residual materials that must be managed both during the operation of the facility and upon facility closure. Potash tailings, consisting primarily of salt and clay, are stored in surface disposal sites. Phosphate residuals from mining or processing are deposited in large tailing dams and in clay settling areas and phosphogypsum stacks. They are regularly monitored to evaluate structural stability and for leaks. The failure of or a breach at any of our impoundments at any of our operations could cause severe property and environmental damage and loss of life, could result in the shut down or idling of our facilities and could have a material adverse effect on our results of operations. ~~Legislation at both~~ Brazilian federal and state **governments have** ~~levels has introduced~~ new rules regarding tailings dam safety, construction, licensing and operations. We cannot predict the full impact of these ~~legislative~~ **rules** or potentially related judicial actions, or future actions, or whether or how it would affect our Brazilian operations or customers. Any accident involving our tailings or other dams, or any shut down or idling of our related mines, could have a material adverse effect on our results of operations. Competitive Risks Our competitive position could be adversely affected if we are unable to participate in continuing industry consolidation. Most of our products are readily available from a number of competitors, and price and other competition in the crop nutrient industry is intense. In addition, crop nutrient production facilities and distribution activities frequently benefit from economies of scale. As a result, particularly during pronounced cyclical troughs, the crop nutrient industry has a long history of consolidation. Mosaic itself is the result of a number of industry consolidations. We expect consolidation among crop nutrient producers ~~could~~ **to** continue. Our competitive position could suffer to the extent we are not able to expand our own resources either through consolidations, acquisitions, joint ventures or partnerships. In the future, we may not be able to find suitable companies to combine with, assets to purchase or joint venture or partnership opportunities to pursue. Even if we are able to locate desirable opportunities, we may not be able to enter into transactions on economically acceptable terms. If we do not successfully participate in continuing industry consolidation, our ability to compete successfully could be adversely affected and result in the loss of customers or an uncompetitive cost structure, which could adversely affect our sales and profitability. Our strategy for managing market and interest rate risk may not be effective. Our businesses are affected by fluctuations in market prices for our products, the purchase price of **key inputs to** ~~natural gas, ammonia and sulfur consumed in~~ operations, freight and shipping costs, foreign currency exchange rates and interest rates. We periodically enter into derivatives and forward purchase contracts to mitigate some of these risks. However, our strategy may not be successful in minimizing our exposure to these fluctuations. See " Market Risk " in our Management' s Analysis and Note 15 of our Notes to Consolidated Financial Statements ~~that is~~ **which sections are** incorporated **herein** by reference ~~in this report in Part II, Item 8~~ . A shortage or unavailability of trucks, railcars, tugs, barges and ships for carrying our products and the raw materials we use in our business could result in customer dissatisfaction, loss of production or sales and higher transportation or equipment costs. We rely heavily upon truck, rail, tug, barge and ocean freight transportation to obtain ~~the~~ raw materials ~~we need~~ **needed at** ~~to distribute raw materials among~~ our mines and concentrates facilities and to deliver our products to our customers. In addition, the cost of transportation is an important part of the final sale price of our products. Finding affordable and dependable transportation is important in obtaining our raw materials and to supply our customers. Higher costs for these transportation services or an interruption or slowdown due to factors including high demand, high fuel prices, labor disputes, layoffs or other factors affecting the availability of qualified transportation workers, adverse weather or other environmental events, or changes to rail, barge or ocean freight systems, could negatively affect our ability to produce our products or deliver them to our customers, which could affect our performance and results of operations. Strong demand for grain and other products and a strong world economy increases the demand for and reduces the availability of transportation, both domestically and internationally. Shortages of railcars, barges and ocean transport for carrying product and increased transit time may result in customer dissatisfaction, loss of sales and higher equipment and transportation costs. In addition, during periods when the shipping industry has a shortage of ships, the substantial time needed to build new ships prevents rapid market response. Delays and missed shipments due to transportation shortages, including vessels, barges, railcars and trucks, could result in customer dissatisfaction or loss of sales potential, which could negatively affect our performance and results of operations. Our success will continue to depend on our ability to attract and retain highly qualified and motivated employees. **Our** ~~We believe our~~ continued success depends on the collective abilities and efforts of our employees. **A** ~~Like many businesses, a~~ significant number of our employees, including some of our most highly skilled employees with specialized expertise in general corporate matters, potash and phosphates operations, will ~~be approaching~~ --- **approach** retirement age throughout the next decade ~~and beyond~~. In addition, we compete for a talented workforce with other businesses, particularly within the mining and chemicals industries, in general, and the crop nutrients industry, in particular. Our expansion plans are highly dependent on our ability to attract, retain and train highly qualified and motivated employees who are essential to the success of our ongoing operations as well as to our expansion plans. If we were to be unsuccessful in attracting, retaining and training the employees we require, our ongoing operations and expansion plans could be materially and adversely affected. Our most important products are global commodities, and we face intense global competition from other crop nutrient producers that can affect our prices and volumes. Our most important products are concentrated phosphate crop nutrients, including diammonium phosphate, or DAP, monoammonium phosphate, or MAP, MicroEssentials ® and muriate of potash, or MOP. We sell most of our DAP, MAP and MOP **as** ~~in the form of~~ global commodities. Our sales of these products face intense global competition from other crop nutrient producers. Changes in competitors' production or shifts in their marketing focus have in the past significantly affected both the prices at which we sell our products and the volumes that we sell, and are likely to continue to do so in the future. Increases in the global supply of DAP, MAP and MOP or competitors' increased sales into regions in which we have significant sales could adversely affect our prices and volumes. Competitors and new entrants in the markets for both concentrated phosphate crop nutrients and potash have in recent years expanded capacity, or begun, or announced plans, to expand capacity or build new facilities. The extent to which current global or local economic and financial conditions, changes in global or local economic and financial conditions, or other factors may cause delays or cancellation of some of these ongoing or planned projects, or result in the acceleration of existing or new projects, is unclear. In addition, certain of our products sold to China may be subject to additional tariffs due to ongoing trade tensions between China and the U. S. ~~.~~The level of exports by Chinese producers of concentrated phosphate crop nutrients depends to a significant extent on Chinese government actions to curb exports through, among other measures, prohibitive export taxes at times when the government believes it desirable to assure ample domestic supplies of concentrated phosphate crop nutrients to stimulate grain and oilseed production. **The** ~~In addition, the~~ other member of Canpotex is among our competitors who may, in the future, independently expand its potash production capacity at a time when each Canpotex member' s respective shares of Canpotex sales is based upon that member' s respective proven peaking capacity for producing potash. When a Canpotex member expands its production capacity, the new capacity is added to that member' s proven peaking capacity based on a proving run at the maximum production level. Alternatively, Canpotex members may elect to rely on an independent engineering firm and approved protocols to calculate their proven peaking capacity. Antitrust and competition laws prohibit the members of Canpotex from coordinating their production decisions, including the timing of their respective proving runs. Worldwide potash production levels could exceed then- current market demand, resulting in an oversupply of potash and lower potash prices. All of the foregoing events are beyond our control. The effects of any of these events occurring could be materially adverse to our results of operations. Some of our competitors and potential competitors have greater resources than we do, which may place us at a competitive disadvantage and adversely affect our sales and profitability. These competitors include state- owned and government- subsidized entities in other countries. We compete with a number of producers throughout the world, including state- owned and government- subsidized entities. Some ~~of these entities~~ have greater total resources than we do, and may be less dependent on earnings from crop nutrients sales than we are. In addition, some of these entities have access to lower cost or government- subsidized natural gas supplies, mining rights and reserves, financing, transportation and tax incentives, placing us at a competitive disadvantage. Furthermore, certain governments as owners of some of our competitors may be willing to accept lower prices and profitability on their products in order to support domestic employment or other political or social goals. To the extent other producers of crop nutrients enjoy competitive advantages or are willing to accept lower profit levels, the price of our products, our sales volumes and our profits may be adversely affected. Industry Risks Future product or technological innovation could affect our business. Future product or technological innovations by third parties, such as the development of seeds that require less crop nutrients, the development of substitutes for our products or developments in the application of crop nutrients, if they occur, could have the potential to adversely affect the demand for our products and our results of operations, liquidity and capital resources. The success of our strategic initiatives depends on our ability to effectively manage **them** ~~these initiatives~~, and to successfully integrate and grow acquired businesses. We have significant ongoing strategic initiatives ~~, including our plans to expand the annual production capacity of our potash business and MWSPC~~. **They** ~~These strategic initiatives~~ involve capital and other expenditures and require effective project management and, in the case of potential strategic acquisitions, successful integration. To the extent the processes we (or, for our joint venture, we together with our joint venture partners) put in place to manage these initiatives or integrate and grow acquired businesses are not effective, our capital expenditure and other costs may exceed our expectations or the benefits we expect from these initiatives might not be fully realized, or both, thereby resulting in adverse effects on our operating results and financial condition. Cyberattacks could disrupt our operations and have a material adverse impact on our business. **We** ~~As a global company, we~~ utilize and rely upon information technology systems in many aspects of our business, including internal and external communications and the management of our accounting, financial, production and supply chain functions. As we become more dependent on information technologies to conduct our operations, and as the number and sophistication of cyberattacks increase, the risks associated with ~~cyber security~~ **cybersecurity** increase. These risks apply to us, our employees, and to third parties on whose systems we rely **to** ~~for the~~ conduct ~~of~~ our business. **To** ~~We have experienced cyberattacks but to~~ our knowledge, we have not experienced any material ~~breaches~~ **cybersecurity incidents** of our technology systems. Failure to effectively anticipate, prevent, detect and recover from the increasing number and sophistication of cyberattacks could result in theft, loss or misuse of, or damage or modification of our information, and cause disruptions or delays in our business, reputational damage and third- party claims, which could have a material adverse effect on our results of operations or financial condition. Our crop nutrients and other products are subject to price and demand volatility resulting from periodic imbalances of supply and demand, which may cause our results of operations to fluctuate. Historically, the market for crop nutrients has been cyclical, and prices and demand for our products have fluctuated significantly. Periods of high demand, increasing profits and high capacity utilization tend to lead to new plant investment and increased production in the industry. This growth increases supply until the market is over- saturated, leading to declining prices and declining capacity utilization until the cycle repeats. As a result, crop nutrient prices and volumes have been, and are expected to continue to be, volatile. This ~~price and volume~~ volatility may cause our results of operations to fluctuate and potentially deteriorate. The price at which we sell our crop nutrient products and our sales volumes could fall in the event of industry oversupply conditions, which could have a material adverse effect on our business, financial condition and results of operations. In contrast, high prices may lead our customers and farmers to delay purchasing decisions in anticipation of future lower prices, thus impacting our sales volumes. Due to reduced market demand, depressed agricultural economic conditions and other factors, we ~~and our predecessors~~ have at various times suspended or curtailed production at some of our facilities. The extent to which we utilize available capacity at our facilities will cause fluctuations in our results of operations, as we will incur costs for any temporary or indefinite shutdowns of our facilities. In addition, lower sales tend to lead to higher fixed costs as a percentage of sales. Financial Risks During periods when the prices for our products are falling because of falling raw material prices, we could be required to write- down the value of our inventories. Any such write- down could adversely affect our results of operations and the value of our assets. We carry our inventories at the lower of cost or market. In periods when the market prices for our products are falling rapidly, including in response to falling market prices for raw materials, it is possible that we could be required to write- down the value of our inventories if market prices fall below our costs. Any such write- down could adversely affect our results of operations and the value of our assets. Any such effect could be material. Our estimates of future selling prices reflect in part the purchase commitments we have from our customers. As a result, defaults on these existing purchase commitments because of the global or local economic and financial conditions or for other reasons could adversely affect our estimates of future selling prices and require additional inventory write- downs. We may incur significant non- cash charges if our goodwill or long- lived assets become impaired in the future. Under accounting principles generally accepted in the U. S. (" GAAP "), we review goodwill for impairment on an annual basis or more frequently if events or circumstances indicate that their carrying value may not be recoverable. Other long- lived assets, including property, plant and equipment, are reviewed if events or circumstances indicate that their carrying value may not be recoverable. The process of impairment testing involves a number of judgments and estimates made by management, including the fair values of assets and liabilities, future cash flows, our interpretation of current economic indicators and market conditions, overall economic conditions and our strategic operational plans with regard to our business units. If the judgments and estimates used in our analysis are not realized or change due to external factors, then actual results may not be consistent with these judgments and estimates, and our goodwill and intangible assets may become impaired in future periods. If our goodwill or long- lived assets are determined to be impaired in the future, we may be required to record non- cash charges to earnings during the period in which the impairment is determined, which could be significant and have an adverse effect on our financial condition and results of operations. We have, in the past, and may in the future, be required to write down the value of our goodwill or other long- lived assets, and such future write downs could be material. See Note 10, Goodwill and Note 26, Mine Closure Costs, in the accompanying consolidated financial statements for further information related to charges incurred in 2019. Changes in tax laws or regulations or their interpretation, or exposure to additional tax liabilities, could materially adversely affect our operating results and financial condition. We are subject to taxes, including income taxes, resource taxes and royalties, and non- income based taxes in ~~the U. S., Canada, China, Brazil and other~~ countries where we operate. Changes in tax laws or regulations or their interpretation could result in higher taxes, which could materially adversely affect our operating results and financial condition. ~~In 2018, U. S. federal tax law changes took effect. This was a significant change to the U. S. system of taxation resulting in numerous areas open to interpretation given the newness and breadth of changes to the rules. As a result, risk exists related to developing interpretation and application of the rules that could result in higher taxes which could materially adversely affect our operating results and financial condition.~~ We are subject to periodic audits by various ~~levels of~~ tax authorities in all countries where we have meaningful operations. The due process, audit and appeal practices and procedures of such authorities may vary significantly by jurisdiction, may be unpredictable (and unreliable) in nature and may result in significant risk to us. For various reasons, some governments may issue significant reassessments on audit based positions not fully grounded in law or fact, even though, upon disputing the reassessments, a great many are overturned on administrative appeal and through the court system. Certain systems involve tax litigation as a common practice. In certain countries, there are requirements to pay a reassessment (even though the matter has not been finally decided by the tax administration or a court of law) while the taxpayer has a well- supported objection and appeals administratively or in court. This may result in tying up significant funds and / or creating adverse treasury and credit risks that may interrupt, impede or otherwise materially affect our business operations. We extend trade credit to our customers and guarantee the financing that some of our customers use to purchase our products. Our results of operations may be adversely affected if these customers are unable to repay the trade credit from us or financing from their banks. Increases in prices for crop nutrient, other agricultural inputs and grain may increase this risk. We extend trade credit to our customers ~~in the U. S. and~~ throughout the world, in some cases for extended periods of time. In Brazil, where there are fewer third- party financing sources available to farmers, we also have several programs under which we guarantee customers' financing from financial institutions that they use to purchase our products. As our exposure to longer trade credit extends throughout the world and use of guarantees in Brazil increases, we are increasingly exposed to the risk that some of our customers will not pay us or the amounts we have guaranteed. Additionally, we become increasingly exposed to risk due to weather and crop growing conditions, fluctuations in crop nutrient prices, commodity prices or foreign currencies, and other factors that influence the price, supply and demand for agricultural commodities. Significant defaults by our customers could adversely affect our financial condition and results of operations. Due to the global nature of our operations, we are exposed to currency exchange rate changes, which may cause fluctuations in earnings and cash flows. Our primary foreign currency exposures are the Canadian dollar and Brazilian real. The functional currency for our Brazilian subsidiaries is the Brazilian real. However, we finance our Brazilian inventory purchases with U. S. dollar- denominated liabilities. The functional currency of several of our Canadian entities is the Canadian dollar. For those entities, sales are primarily denominated in U. S. dollars, but the costs are paid principally in Canadian dollars. Canadian entities have significant U. S. dollar denominated intercompany loans and U. S. entities, with the U. S. dollar as functional currency, have Brazilian real denominated loans. During periods of local or global economic crises, local currencies may be devalued significantly against the U. S. dollar. During times of a strengthening dollar, our net earnings can be reduced due to transaction currency losses arising from these exposures of U. S. dollar denominated liabilities held in the Brazilian and Canadian entities and Brazilian real denominated assets held in U. S. entities. To reduce economic risk and volatility on expected cash flows that are denominated in the Canadian dollar and Brazilian real, we use financial instruments that may include forward contracts, options or collars when unable to naturally offset the exposures.