

Fertilizer in Canada

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Good morning ladies and gentlemen, and thank you for the opportunity to join you today. My name is Delaney Ross Burtnack, and I am the President & CEO of CAAR, the Canadian Association of Agri-Retailers. I am pleased to bring you an overview and update on the fertilizer industry in Canada.

Presentation Outline

- Who is CAAR?
- Key Players in Canadian Fertilizer
- Fertilizer in Canada
- Trends Impacting Canada
- Fertilizer Production Outlook



My presentation will cover five areas: I'll give you a brief overview of CAAR and what we do. I'll also give a brief overview of the major fertilizer manufacturers in Canada. The main part of my presentation will be details on the fertilizer products that are produced in Canada, as well as what we use domestically and what we trade. I'll also talk about some trends in Canada that are impacting how the farming, retail and manufacturing sectors operate. Finally I will review some future trends and where manufacturers in Canada see our industry going.

Forward Looking Statements

- Certain statements in this presentation may constitute forward-looking statements. Such forward-looking statements involve known and unknown risks and uncertainties, which may cause the actual results to be materially different from any future expectations expressed or implied by such forward-looking statements. A number of factors could cause actual results to differ materially from those in the forward-looking statements, including, but not limited to: weather conditions, crop prices, the future supply, demand and price level for major crop inputs and the accuracy of data reported by the agencies or organizations referenced in the document. Except as may be required under applicable U.S. federal securities law or applicable Canadian securities legislation, CAAR and any contributors to this presentation disclaim any intention or obligation to update or revise any forward-looking information as a result of new information or future events.



Before I begin, there are a few forward looking statements at the end of this presentation so I would like to make the lawyers happy with this disclaimer.

Special Thanks

- Special thanks to our Members who contributed to this presentation:
 - Agrium
 - Yara
 - CF Industries
 - PotashCorp
 - Canadian Fertilizer Institute



I'd also like to acknowledge our Members who took the time to contribute to this presentation, including Agrium, Yara, CF Industries, PotashCorp, and the Canadian Fertilizer Institute.

Who is CAAR?

- Serving over 1000 agri-business locations in Canada
 - Over 700 retail locations
 - Over 350 supplier locations
- 5 Main Service Areas
 1. Advocacy
 2. Education and Training
 3. Communications
 4. Networking
 5. CAARPerk\$ discount program



I'm sure many of you are not familiar with CAAR. We are the only national association in Canada representing agricultural retailers. We also work closely with suppliers and manufacturers of crop inputs and equipment. In all, we serve over 1000 agri-business locations in Canada, including over 700 retail locations and over 350 supplier locations.

We have 5 main services areas that we offer retailers. We advocate on their behalf, primarily related to regulations for fertilizer and crop protection products. We offer education and training to ensure they work safely in their businesses and keep their certifications current. We have a professional magazine that goes out 5 times a year, as well as other newsletters and communications to keep them up to date. We offer networking events, including our annual Conference which will be held in Montreal, Quebec, Canada this year. Finally, we also offer discounts on everyday products and services, such as health care benefits and travel, that we call our CAARPerk\$ program.

Who is CAAR?

- Mission:
To enhance the business of Canadian agri-retail
- Vision:
To be a partner of value and necessity to all
Canadian agri-retailers



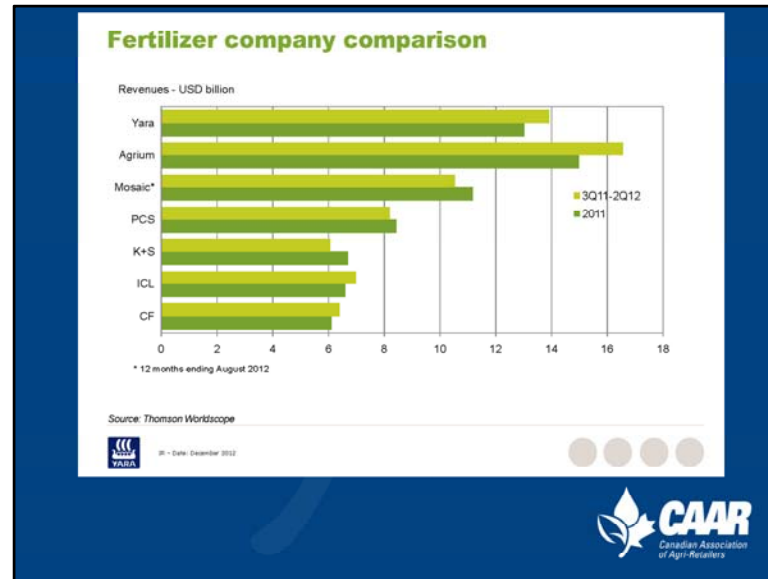
CAAR is a few months away from launching a new brand, so you are the first to see our newly approved mission and vision statements. Our new mission – which really just better defines what we already do – is to enhance the business of Canadian agri-retail. Our vision is to be a partner of value and necessity to all Canadian agri-retailers.

Key Players in Canadian Fertilizer Production

Nitrogen	Phosphorus	Potash
– Yara	– Agrium	– PotashCorp
– Agrium		– Mosaic
– CF Industries		– Agrium
– Koch		– K+S (2017)



For those of you who are not familiar with the key fertilizer manufacturers in Canada, here are the top companies. In nitrogen production, the top manufacturers include Yara, Agrium, CF Industries and Koch. We only have one major phosphorus manufacturer in Canada, which is Agrium. And in our biggest sector, potash, we have the largest manufacturer, PotashCorp, followed by Mosaic, and Agrium also has some potash production. I have also included K + S Potash, who is projected to be the newest player in potash by 2017.



Yara was kind enough to provide me with a comparison of revenues to August 2012 in US dollars for the major fertilizer companies. Agrium was a leader in revenues as of the fall of 2012 reaching upwards of \$16.5 billion, follow by Yara at nearly \$14 billion. Mosaic was third overall at about \$10.5 billion in revenues. PCS, being PotashCorp, was 4th at just over \$8 billion in revenues. K+S potash, Israel Chemical (or ICL), and CF Industries were comparable at between \$6 and 7\$ billion.

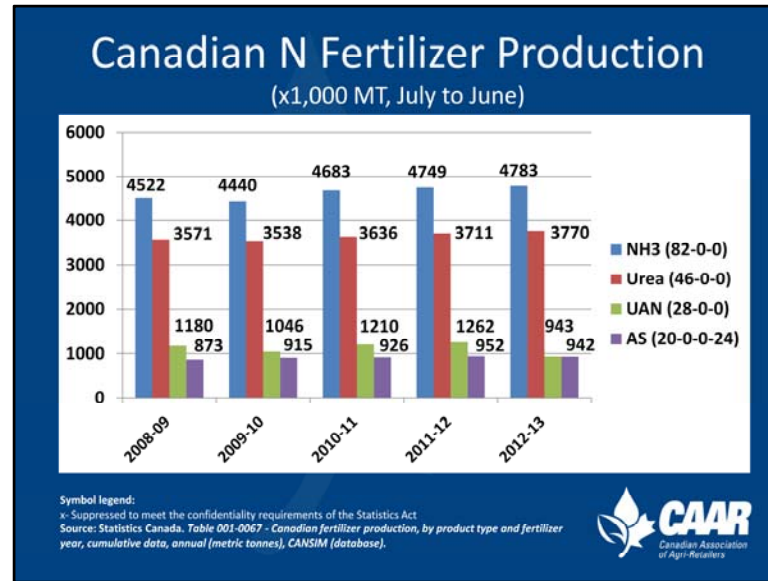
Canada on a Global Scale

- Among the Top 10 largest countries for:
 - Potash production (1st)
 - Ammonia production (8th)
 - Ammonia exports (5th)
 - Urea production (9th)
 - Urea exports (9th)

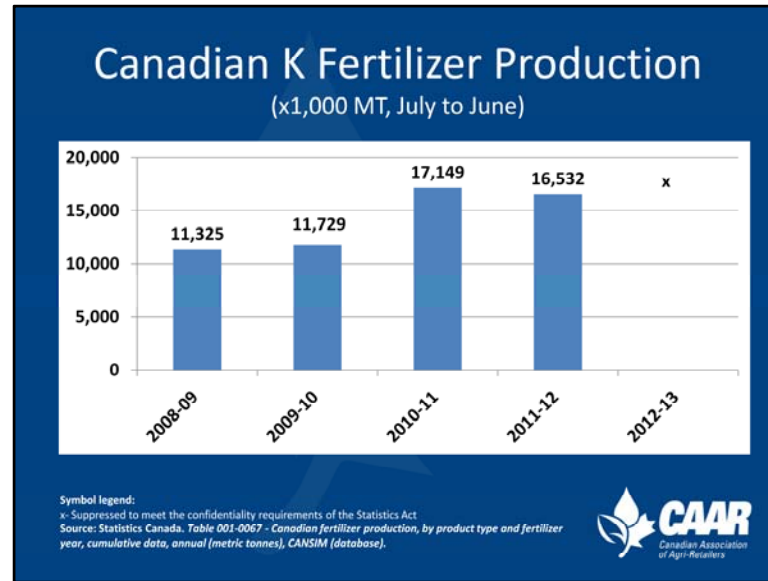


To put Canada into perspective on a global scale, we are among the top 10 countries in the world in a few areas. We are among the global leaders in potash production, ranking 1st in 2012 and producing 15.2 million MT at the end of that fertilizer year. The next closest producer was Russia at 9.1 million MT.

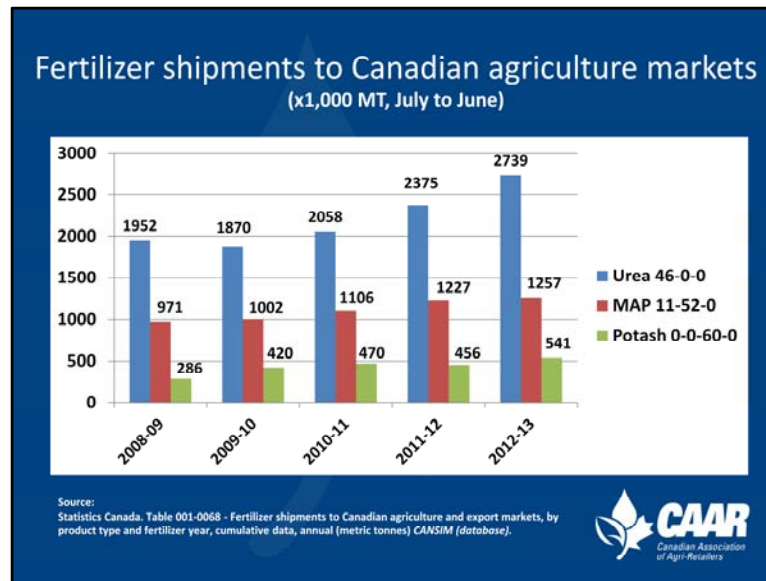
We recently ranked 8th in the world for ammonia production, and 5th for ammonia exports. Production of ammonia reached nearly 4.8 million MT in 2012-13. For urea, Canada recently ranked 9th in both production and exports, as we produced nearly 3.8 million MT of urea in 2012-13.



Statistics Canada reports the Canadian fertilizer production, which I have included here for some major products: ammonia, urea, urea ammonium nitrate, and ammonium sulphate. As you can see, production for ammonia (in blue) and urea (in red) and been on a fairly steady incline since 2008. UAN (in green) was on an increasing trend until this past year where production was reduced. AS (in purple) has been on a slow uptrend as use increased.



Unfortunately due to confidentiality requirements from Statistics Canada, recent phosphorus data was unavailable for me to report. However, potash production was available for the most part, and showed a significant increase in production beginning in 2010-11. There was a slight downturn in 2011-12, and data was not available for 2012-13.



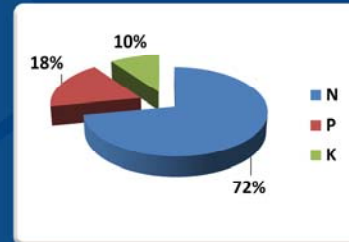
Statistics Canada also records fertilizer shipments to both domestic and export markets. Here I have shown shipments in Canada, though I will also comment on shipments to the U.S. The growth in Canadian domestic urea shipments (in blue) has been significant in recent years. This growth has been driven by a couple of years in a row of historically high overall crop acreage, but primarily by increased application rates. The 2012/13 domestic shipments approached full-year 2009/10 levels prior to April-June quarter. Urea shipments outside of Canada, which are primarily to the U.S., were on an increasing trend to 2010-11, peaking at nearly 1.9 million MT, but dropped to 1.3 million MT in 2011-12 as our domestic shipments grew. Unfortunately data was not available to me for 2012-13.

2012/13 was another strong year for Canadian MAP shipments, which likely exceeded previous record levels. Strength in MAP shipments in Canada has been supported by high application rates and high acreage. The recent crop mix has also been supportive of MAP. Unfortunately I can't comment on any shipments of MAP or DAP outside Canada as that data was not available.

For potash, Canadian shipments have been on a fairly steady increase, peaking in 2012-13 at 541,000 MT. However, as Canada exports more than 95% of its potash production, exports to the U.S. were significantly higher, peaking in 2010-11 at 6.3 million MT, dropping to 4.1 million in 2011-12, and rising again to 5.1 million MT this past fertilizer year. Unfortunately data for international exports was unavailable.

Fertilizer Use in Canada - NPK

- **N: 72%** (4.2 million tonnes)
 - Urea: 33.1%
 - UAN: 16.2%
 - AS: 11.6%
 - Ammonia: 9.6%
 - AN: 1.7%
- **P: 18%**
(1.1 million tonnes)
- **K: 10%**
(0.6 million tonnes)



Source: Agriculture Canada, 2010



In terms of the breakdown of fertilizer sources used in Canada, N fertilizer is by far the most significant input at 72% of fertilizer used, or about 4.2 million metric tonnes. Phosphorus fertilizer is well behind at 18% of the total fertilizer used, or 1.1 million tonnes, and potash made up 10%, or 0.6 million tonnes. To break down the types of nitrogen fertilizer further, urea is the dominant form at 33.1% of the total N fertilizer use. UAN is just over 16%, ammonium sulphate is just under 12%, ammonia is nearly 10% and ammonium nitrate is less than 2%.

Regional Differences

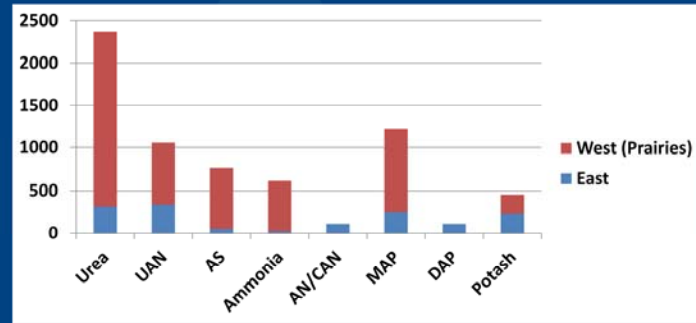
- Western Canada and Eastern Canada are very different agriculturally
 - **Western Canada:** primarily cereal crops and canola on large acre farms
 - **Eastern Canada:** more diverse crops due to longer season and smaller acres



While the breakdown I presented was across Canada, there are significant differences in different regions on Canada. We can basically be broken into two regions: east and west. In western Canada, the season is a little shorter, and there are vast expanses of land that mean much bigger farms are more common. The primary crops are cereal crops and canola, though there is a growing acreage of longer season crops like soybean and corn.

In eastern Canada, there is a longer growing season and generally smaller acreage farms. The crop types are far more diverse there, and are typically oilseed crops like corn and soybean, as well as horticultural crops.

Fertilizer shipments to Canadian agriculture: West vs. East (x1,000 MT, July to June)



Source:
Statistics Canada, Table 001-0068 - Fertilizer shipments to Canadian agriculture and export markets, by product type and fertilizer year, cumulative data, annual (metric tonnes) CANSIM (database).



These regional differences mean significantly different fertilizer requirements, as demonstrated by the shipments of fertilizer to the different regions. Here you can see western Canada in red, uses a far greater volume of most N products, as well as MAP and potash. There is no use of ammonium nitrate or DAP in western Canada. For eastern Canada, in blue, volumes are much reduced compared to the west, and there is some use of AN and DAP.

Fertilizer Use in Canada

- Peak application seasons:
 - 6 weeks in spring (April-June)
 - 6 weeks in fall (Sept-Nov)
- Primarily precision application
 - Applied with seed or sidebanded
 - Requires high quality product, which impacts fertilizer source
 - One of few direct application markets of ammonia



Just as general information if you are not already familiar, our peak fertilizer application seasons in Canada are about 6 weeks in spring and 6 weeks in fall. Also, fertilizer is typically precision applied either with the seed or sidebanded, which impacts the quality and type of fertilizer we can use successfully. We are also one of the few direct application markets for ammonia.

Timely Transportation is Key

- Logistics can be a challenge
 - Transportation between east and west is challenging and costly
 - Short application window means short delivery window
 - Road restrictions in spring limit transportation
- Retailers rely on terminal storage



Because our agricultural production area is spread across nearly 5000 kilometers coast to coast, logistics can be a challenge. One of our fertilizer members said it's like shipping to a different country to ship products east, and freight is often cheaper when importing from outside of Canada rather than from western Canada. Further challenges like our short application season and road use restrictions in the spring when the roads are soft and thawing make it even more challenging. Retailers rely heavily on regional terminal storage to keep an inventory of fertilizer readily available.

Timely Transportation is Key

- West relatively self-sufficient
 - Some imports from the U.S. for N and P
 - N exports primarily to the U.S.
 - K exports more global
- East relies heavily on imports
 - N has similar supply lines as western Europe (North Africa, former Soviet Union)
 - P from U.S.
 - K from Western Canada



Fortunately for western Canada, they are relatively self sufficient for fertilizer. There are a few imports of N and P that come up from the U.S., but trade is primarily through export of N to the U.S. and potash around the world.

Eastern Canada is a different story. It relies heavily on imports of all products. Potash is the only nutrient that is primarily imported from Western Canada. Importation of N and P are easier and cheaper from outside of Canada. P comes from the U.S., and N has similar supply lines as western Europe.

Trends Impacting Fertilizer

- Currently, we are functioning well to serve the needs of our farmers, but new trends are emerging:
 1. Larger farms with increased storage capacity
 2. Increased risk adversity
 3. Increased safety regulations
 4. Increased public scrutiny



There are some other trends that are impacting Canada that are worthy of mentioning. They include larger farm sizes, increased risk adversity of both farmers and retailers, increased safety regulations, and increased public scrutiny.

Trends: Larger Farms

- Especially Western Canada
 - 1,500 acres (600 ha) used to be common
 - Now 5,000-10,000 ac (2,000-4,000 ha) not unusual
 - Even 50,000-60,000 ac (20,000-25,000 ha) becoming a reality



Especially in Western Canada, the trend is toward fewer and larger farms. In 1991, Statistics Canada reported over 280,000 farms in Canada. In 2011 there were just over 205,000. Where a 600 hectare farm used to be a common size, now 2-4000 hectares is not unusual, and there are a growing number of 20-25,000 hectare farms. Statistics Canada reported that in 1991 there were 4200 farms over 1300 hectares in size, in 2011 there were nearly 8500.

Trends: Larger Farms

- Larger farms means increased opportunity, and increased pressure for retailers
 - Larger equipment means faster application rate
 - One pass seeding in spring is a growing trend
 - On farm storage increasing dramatically
 - Storage may have started for convenience
 - Since 2008-09 market issues, also to manage price

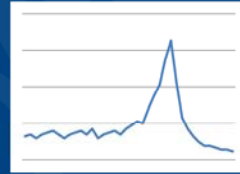


These large farms put a lot of pressure on retailers to manage very large orders in a short time. A growing trend to one pass seeding, where farmers are putting fertilizer down with the seed in spring, also puts tremendous pressure to deliver all the product in that 6 week (or less) spring application window.

These larger farmers are also taking more control of their fertilizer by building their own storage facilities. This trend of on-farm storage may have started out of convenience for large farmers who need large volumes in such a short time, but some savvy farmers now also use their own storage to manage fertilizer price.

Trends: Risk Adversity

- Market spike in 2008 and crash in 2009 significantly impacted retailers and farmers
- Seeing risk adversity on both sides



This leads to the next trend: risk adversity. The fertilizer market spike in 2008 and crash in 2009 significantly impacted both retailers and farmers, and now both are very wary of price risk.

Trends: Risk Adversity

- Farmers are more knowledgeable and aware of price
 - Internet makes prices available in real time
 - Much more transparency in pricing structure
- On farm storage of fertilizer used as a risk/price management tool for farmers



Farmers are using the internet and blogs to track and discuss pricing in real time. There is now much more transparency in the pricing structure of fertilizer, and some larger farmers are using their own storage as a way to manage that price risk.

Trends: Risk Adversity

- Price transparency challenges retailers to defend their value
 - Farmers can calculate wholesale fertilizer price
 - Difference between that and the retail price is the “value” that the retailer adds
 - Retailers are working hard to ensure they continue to add value to retain customer loyalty



This price transparency also challenges the retailer to defend their value. Farmers can easily work out the wholesale price of fertilizer, and any difference between that and the retail price is the perceived “value” of the retailer. Retailers are working hard to bring a wide range of services and knowledge that add that value and retain customer loyalty.

Trends: Safety Regulations

- With growing global concern about public safety, governments are increasing safety regulations related to products at risk, like fertilizer
- Canada is no exception, and is a global leader in safety measures



Society's perception of risk related to fertilizer is another trend that is impacting everyone in the fertilizer industry. Safety regulations for ammonia and ammonium nitrate are now just two among a growing trend of increased safety regulations for fertilizer. Canada is certainly no exception, and fortunately we are a global leader in fertilizer safety.

Trends: Safety Regulations

- Ammonia and AN are governed by:
 - Federal regulations
 - Provincial regulations
 - Industry Codes
- CAAR is active at all 3 levels of governance
 - We help develop regulations and codes
 - We offer safety certification to retailers and farmers for fertilizer handling



For ammonia and ammonium nitrate, safe handling of those products in Canada are governed at three levels: federal, provincial, and with industry codes that are mandatory for retailers to meet if they want to remain in business.

CAAR is active at all three levels, and we helped to develop the regulations and codes that currently govern fertilizer handling. We also offer safety certification to our retail industry and farmers for handling, transporting, and applying fertilizer, as well as testing ammonia tanks.

Trends: Public Scrutiny

- As in Europe, the Canadian public is taking a closer look at what goes into the food they eat
- Our challenge is to help the public understand the safety and importance of all agricultural production methods and tools, including fertilizer
- We are working together as an industry to send a clear and consistent message



This level of care is important for the fertilizer industry, as public scrutiny of our industry is growing. Our challenge is to help the public understand the safety and importance of all agricultural productions methods and tools, including fertilizer. Fortunately there are many in our industry who have finally realized the urgency of this task, and there are many collaborations underway to help advance agriculture in Canada.



Among them is an initiative called Agriculture More Than Ever. This is an industry-owned campaign that is encouraging strong, positive messaging about agriculture. It include many facts and statistics, resources, and branded items like hats and t shirts that are available for our industry as well as the public.

Trends: Looking Ahead

- Larger acreage, more price savvy farmers facing stricter demands on how they produce their crops are shaping the direction of the agri-retail industry
- However, a rapidly growing population is pushing for more yield on less land with fewer inputs
- Canada will increase production to meet demand

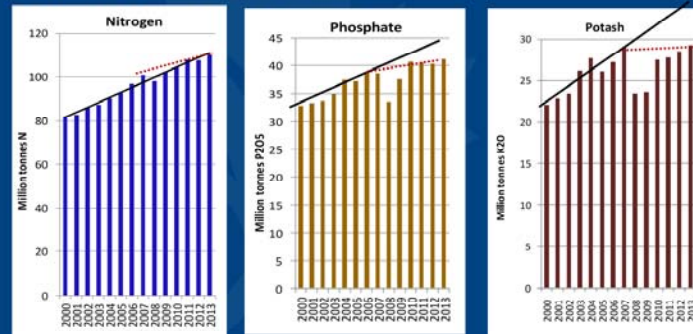


To sum up our current trends before I wrap up with some projections, more price savvy farmers operating larger and larger farms are facing stricter demands on how they produce their crops, and this is driving the direction of the agri-retail industry. However, a rapidly growing population is also pushing for more yield on less land with fewer inputs per unit of production. Like many other countries, Canada will need to continue to grow our fertilizer production in order to meet this growing demand.

Historical Nutrient Demand

Next 5 slides courtesy of Agrium

- Growth in nutrient demand is critical in order to meet global food consumption
- P and K demand growth are below historical trend over the past 4-5 years
- 2007-2013 demand trend is unsustainable

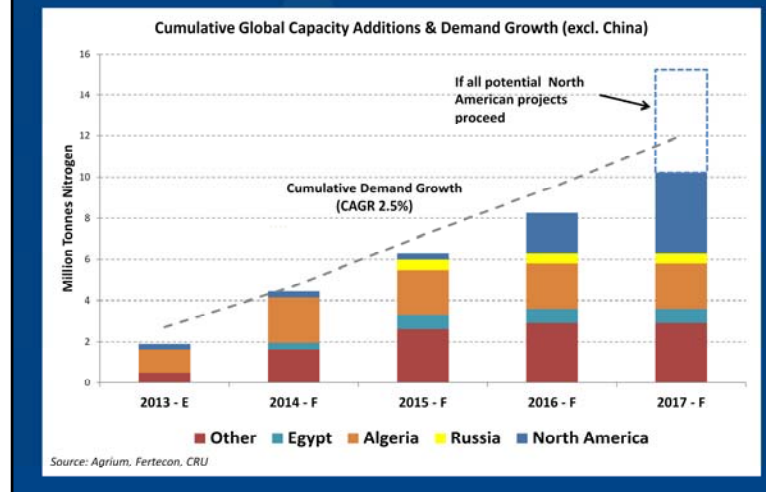


My thanks to Agrium for use of the next 5 slides. These graphs show the historical rate of nutrient demand for nitrogen on the left, phosphate in the middle, and potash on the right from the year 2000 until 2013. The black line on each graph shows the rate of nutrient demand from 2000 to 2007, where N, P and K demand grew at a very strong rate relative to history. In 2007, before the market spiked and fell in 2008-09, many predicted this pace of growth was the new normal and projections were for future growth at unsustainably high rates.

Since 2007, crop nutrient demand growth has slowed to lower than historical levels, as shown by the red dotted line. This rate of nutrient demand growth is also unsustainable if global crop production is to keep pace with growing demand.

The most likely situation in the near term is that nutrient demand growth will trend somewhere between the unsustainably high rate of 2000-2007 and unsustainably low 2007-2013 period. There is no question that as pressure on crop yield increases, demand for crop nutrients will also increase.

Global Nitrogen Capacity and Demand Growth



For nitrogen production, it's a whole new ball game with shale gas, as Daren Coppock discussed yesterday. Capacity for N production in North America is expected to increase after 5 years, but less than half of the at least 18 projects announced to date are expected to be completed. Canada's nitrogen manufacturing companies that I spoke with generally agree that somewhere between 5 and 7 new facilities in North America are likely, though one company noted that as few as 3 may be likely. As more production comes on stream it will put downward pressure on prices, lowering the margin and making N production unfeasible for some smaller manufacturers. Factors like increased production in the Arab Gulf and massive increases in China will also impact global supply and demand, further pressuring the North American market.

One point of note from Agrium: They exclude China as Chinese capacity additions can dwarf those occurring in the rest of the world and distort the overall supply/demand picture. New capacity in China is partially offset by the closure of inefficient capacity, but those figures are less well known. What matters is how much China exports, which is driven by global supply/demand conditions, prices and Chinese export policies.

CRU Group lists Chinese urea capacity at 71 million mt in 2012 and 79 million mt in 2013. Through the end of May, 2013, Chinese urea exports were 1.3 million mt, relative to 0.2 million mt in the same period of 2012.

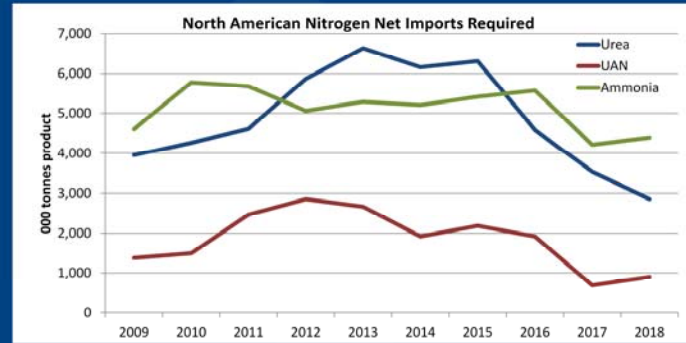
For North American capacity growth, projects that appear feasible include:

- CF industries expansion in Louisiana and Iowa, which represent a 2 million MT increase in capacity
- Agrium's expansion project in Texas is expected to proceed, adding 115K MT
- Koch's expansion in Oklahoma will add 100K MT
- Two other expansions in Louisiana from Mosaic and Dyno Nobel will add a total of just over 1.2 million MT capacity
- OCI Nitrogen in Iowa, an Egyptian company, is expected to go ahead at an additional 600K MT, but it is located 3 miles from the Mississippi river, a main means of transportation, so they will need to develop their transportation logistics
- 3 projects in North Dakota look like they may proceed, but they also appear to have little infrastructure for transport and will need to invest heavily
- Projects in Indiana, Ohio and Illinois have been described at a 50% likelihood of proceeding

Most likely capacity increase is 3.6 million mt of N by 2018. The total N capacity assuming all projects totals over 8 million mt.

An interesting point came from Yara, one of the biggest N producers in the world, that they have some increased capacity planned but have put their expansion project on hold due to inflated labour and construction costs and weak N market projections for the next couple of years. This action is a likely indicator that any new or smaller companies planning new nitrogen projects rather than expansions may be significantly challenged to bring them online.

North American Nitrogen Net Imports



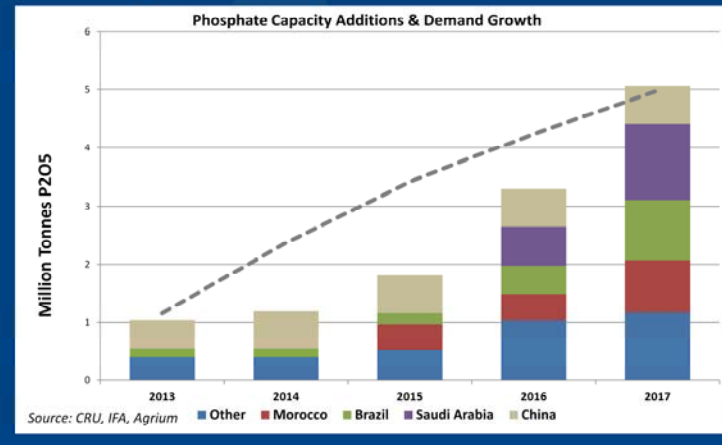
Source: Fertecon, IFA, IFDC, Blue, Johnson & Associates, TFI, Agrium



In terms of the impact on North American trade, CF Industries suggested that imports based on price will be coming in whether we build new capacity or not. Regions like Algeria and the Arab Gulf have access to very cheap natural gas, giving them a price advantage. However, they do expect that increased North American production will trim imports significantly and will redistribute trade flows within North America.

Global Phosphate Capacity and Demand Growth

- Near term global balance will depend on Indian demand

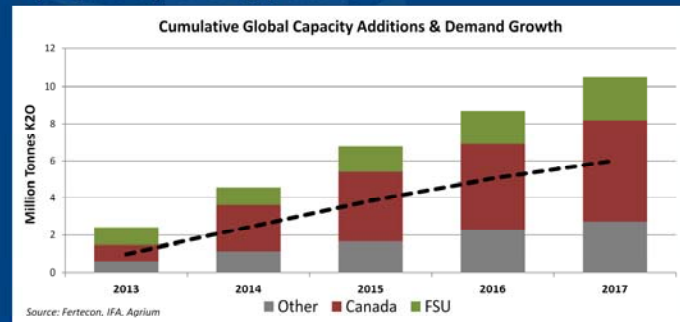


A reduction in Indian subsidies for P and K has significantly reduced demand in India, upwards of 50% reduction in imports, or around 3 million MT, which has had a strong impact on the market. If Indian demand does not recover it may leave the market in an oversupply situation, and even if it does recover as projected some manufacturers are still expecting a long position because of growing production capacity.

For North American P production capacity, Agrium expects continued decline. One indicator that supports this projection is growing investment in overseas mines by Mosaic, which holds 55% of the P market in North America. There are a couple of mines being permitted in the Rocky Mountain vein in North America, but they may do more to replace mined out areas than have a real impact on supply. The quality of rock in Florida continues to decline, so North American manufacturers are looking to import from Morocco and Saudi Arabia. Morocco, Saudi Arabia and Brazil are projected to continue to bring production online.

Global Potash Capacity and Demand Growth

- Potash deliveries projected to grow to 55-57 million tonnes in 2013 versus 52 million tonnes in 2012
- All capacity expansions through to 2015 are brownfield projects by existing producers



In potash, Canada is investing in significant brownfield potash capacity that will be added over the next five years. This will position Canada to meet a strong rate of demand growth. Over the past 5 years, approximately 9 million mt of potash capacity has been added. Over the next 5 years, Agrium indicates that approximately 15.5 million mt of potash capacity is projected to be added across Canada.

PotashCorp's projections were slightly lower at 12-14 million MT increased capacity by 2018 for brownfield expansions. However, PotashCorp further identified one greenfield mine in Saskatchewan proposed by K + S. This would be the first new greenfield mine since the 1960s in Canada, and is projected for completion in 2017. They also noted that BHP may be considering a project but have yet to give final approval on construction.

PotashCorp says that 100% of Canada's domestic K needs are supplied by domestic producers, however, Canada's demand for potash is relatively small, particularly in Western Canada where soils have high residual levels of K. In terms of total production, PotashCorp indicates that we use less than 5% of our total production, and about 95% is exported out of Canada. North America's domestic needs are about 90% served by the Canadian potash supply, with about 10% imported from offshore sources like Russia, Israel and Chile.

Conclusions

- Agri-retail is being shaped by the demands of the farmer and the public
- Growing world population will continue to push crop yield capacity beyond current levels
- Fertilizer will be critical to achieving yield growth



Conclusions

- Global production of N, P and K will need to grow to meet demand
- Canada's capacity for N and particularly K is projected to grow significantly over the next 5-10 years



Thank you! Merci!

Questions?

