Global Fertilizer Markets

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1) Title slide – Global Fertilizer Markets

Good afternoon!

Thank you for this opportunity to update you on the global fertilizer markets.

I am very pleased to be able to return once again to Australia for this conference and for a chance to visit my friends and associates.

My topic provides the outlook for the three major nutrients, N, P and K.

2) Forward-Looking Statements

Before I begin, I need to mention that this presentation contains forward-looking statements. Future events may differ, due to the risks and uncertainties outlined on this slide.

3) Growth Drivers

A number of global factors are creating a tremendous need for food, specifically more fruits and vegetables, and increased protein from animal sources. This creates a great opportunity for those of us in the food supply chain.

4) World Population

As recently as 1970, the world’s population was under 4 billion people. In less than 40 years, this has grown to almost 7 billion. Each year, global population increases by about 75 million people.
Much of this growth is occurring in major offshore fertilizer markets, including China, India, Brazil, Indonesia and Malaysia.

The growth taking place is occurring in the cities of the world. The percentage of people living in cities is projected to increase from less than 40% in 1970 to about 55% by 2020. Not only do city dwellers not produce food, they also consume more farm products than urban dwellers.

5) World Economic Growth Profile

China, India and other Asian countries – which represent approximately 60 percent of the world’s population – are expected to have the greatest economic growth in the years ahead. According to the International Monetary Fund, annual GDP growth in China is projected at over 9% and for the remaining Asian countries is forecast to be at least 7% for the next several years.

More people will have enough money – and the desire – to buy better food.

However, the path of growth is not a straight line. While it moves mainly upward, infrequent downward spikes do occur. Following the 1.1% drop in world GDP in 2009, the IMF in April of this year projected global GDP to grow 4.6% in 2010. This level of growth exceeds the long-term average GDP increase of 3.2%. The increased level of confidence provided by this renewed growth is expected to provide farmers around the world with the incentive to return to more normal fertilization practices.

7) Land: Increasing Challenge for Farmers

Global population growth, infrastructure and urban development make less land per person available for agriculture.

By 2020, we expect there will be barely 0.2 hectares per person for animal and crop production, less than half the level in 1950. This will put continued pressure on farmers to grow more grain on fewer acres.

8) World Crop Production Growth

80% of the increase in farm production between now and 2050 is expected to take place in the developing countries.

As there is projected to be only minor population growth in the developed countries, much of their additional crop production is expected to be exported to the developing countries. This will increase the demands on our farmers, and also on us as their fertilizer suppliers.
9) Low Corn Yields

Tremendous opportunities exist around the world for increasing corn and soybean production. Together, the US, China, the EU, Brazil, and Mexico produce over three-quarters of the world’s corn. The US, with a well-balanced fertilization program, achieves high corn yields. The low yields experienced in China, Brazil and Mexico indicate substantial room is available for improvement.

10) Low Soybean Yields

Excellent soybean yields have been achieved by the US and Brazil. China and India, with substantially lower yields, again require improvements to their fertilization programs to increase production levels.

11) Increasing Biofuels Production

Demand from the biofuels sector for crops as feedstocks also supports crop prices and drives fertilizer use. Growth in global biofuel production is driven by government mandates in several countries, including the US, the world’s largest ethanol producer. In Brazil, the second largest ethanol producer, the industry has benefited from decades of investment, a well-developed infrastructure and growth in sales of flexible-fuel cars.
12) Total World Grain Consumption

Around the world, food uses of grain, for direct human consumption and animal feed, account for around 95 percent of consumption of these crops. Growth in grain used for ethanol has increased in recent years, but remains a very small portion of total consumption.

13) Increasing Demand for Meat

Meat consumption in the entire developing world is less than 40% of the levels we are accustomed to in North America and much of Europe. In Asia and Africa, consumption is still lower.

Substantial room for growth exists.

14) Desire for Protein-Rich Diets in China

However, the gap is narrowing as Asian economies grow. In China, for example, meat consumption has more than tripled in less than 20 years.

After years of surviving on starch-based diets, people in many developing countries are spending more on protein from animal sources. In China, meat consumption increased more than eightfold over the past 30 years and continues to grow.

Producing the animals required to support this long-term trend takes more grain than would be needed to provide a starch-based diet.

This pattern of rising meat consumption is expected to continue.
15) **Global Meat Production Projection**

The current annual global meat production of 280 million tonnes is expected to increase to 480 million tonnes by 2050.

Much of this growth will take place in the developing countries to meet their need for increased protein consumption.

This will drive increased crop production, and with it the global need to consume more fertilizer.

16) **Fertilizer Cost Percentage of Crop Revenue**

In response to the tight global grain supply/demand balance, futures prices for grains and oilseeds remain well above historical levels. These futures prices could be weakened by excellent global growing conditions or strengthened if those conditions are adverse. Rising demand is expected to keep prices for the coming growing season above historical averages.

Beyond these higher commodity prices, lower input costs have improved farmer margins and are expected to encourage efforts to maximize yields in 2010. In the US, for example, cash margins near historically high levels are anticipated. Strong margins for most major global crops are improving confidence among farmers and should support a return to more normal fertilizer application practices.
17) **Agriculture Commodity Prices**

Prices for most major crops grown around the world remain well above their 10-year averages. Rice and sugar, at more than 50 percent above the average, are an excellent example.

According to the United Nations Food and Agriculture Organization, two key factors are expected to keep crop prices above historic levels in the medium term.

Growing demand for agricultural commodities for food and energy is the primary driver. This is combined with insufficient investment in productive capacity, especially in developing countries. Strong crop prices are supportive to growth in fertilizer use.

18) **Nitrogen**

We will now leave the global drivers of fertilizer growth and turn to the outlook for the three nutrients, beginning with nitrogen.
19) **Ammonia Production Cash Costs**

Through most of 2009, global nitrogen prices, particularly for ammonia, fell below the break-even point for the highest-cost world producers. This forced the shutdown of nitrogen capacity in regions of high-cost natural gas such as Ukraine and Western Europe. Ukraine’s merchant ammonia supply was curtailed for most of 2009 due to its unfavorable cost position.

Through 2010, Ukraine and West Europe are expected to continue as the high-cost ammonia producers.

20) **World Ammonia Consumption**

World ammonia consumption declined in 2009. This was due primarily to a reduction in demand from the industrial sector, which had been adversely impacted by the economic crisis.

In 2010, we are seeing global industrial ammonia demand rebounding, led by growth in Asia and the US. Crop prices above the ten-year average and rising demand for food should encourage strong growth in nitrogen fertilizer consumption.
21) World Urea Imports

In 2009, world urea imports increased by about 7 percent compared to 2008. Although import demand declined in major markets such as India, Brazil and the US, increased demand from Pakistan, Thailand and Vietnam more than offset the lower imports by the top three markets.

Global urea trade is increasing in 2010 as inventories were drawn down in 2009 in the major import markets.

22) Global Urea Capacity Additions

New export-oriented plants in Iran, Qatar and Algeria are expected to provide most urea capacity additions outside of China. Approximately 6 million tonnes of new capacity is projected to come on stream in 2010 and 2011. By the end of 2012, about 10 million tonnes of urea could be brought to the market in these low-cost gas regions. About 90 percent of this capacity is likely to compete in the export market.

Any market tendency towards softness as this new capacity comes on line is expected to be offset by marginal capacity being taken off-line in the high-cost gas regions.

Due to the relatively short construction lead time, projects after 2012 are still speculative at this stage and may be delayed or cancelled.
23) Phosphate

Next, we will turn to the phosphate markets.

24) Non-Integrated Phosphate Producer Cash Cost

The cost of DAP production for producers lacking their own phosphate rock production is currently well above historical average levels. Phosphate rock prices are more than double the long-term average and account for more than 50 percent of non-integrated producer costs.

Ammonia and sulfur prices rose in early 2010, further increasing phosphate production costs.
25) World DAP and MAP Imports

Since the beginning of the decade, there has been a significant shift in global phosphate trade. China increased its domestic production capacity and went from being the world’s No. 1 importer of DAP and MAP in the early 2000s to the No. 3 exporter in 2008.

Brazil’s DAP and MAP inventories were drawn down in 2009, which should support higher imports in 2010. Additional domestic DAP and MAP capacity is expected to come on line in Brazil in the next few years, potentially delaying its rebound to previous peak import levels.

India’s share of global DAP and MAP imports has increased from 6 percent in 2000 to approximately one-third in 2009. A limited quantity of low quality phosphate rock is produced domestically but it is not suitable for DAP production. India’s DAP imports are expected to remain strong as its domestic consumption grows.
26) New Global Phosphoric Acid Capacity* vs Demand

Most phosphoric acid expansions in the next few years are expected to take place in China, associated with new granulated phosphate capacity. Morocco’s OCP, plans to increase its phosphoric acid capacity in 2012, providing the opportunity to bring its excess granulation capacity on stream.

In Saudi Arabia, industry consultants expect a delay to the announced end of 2010 start-up date for the Ma’aden 3-million tonne per year DAP project. This is due to the need to complete the railway linking its phosphate rock mine in northern Saudi Arabia with its DAP plant on the Arabian Gulf. Initial plant process testing may be carried out using rock hauled by truck from the mine to the plant on the Gulf. Commercial DAP production is expected to be achieved at the beginning of 2012. As this new production enters the market, some high-cost non-integrated global producers are expected to shut down.

27) Potash Overview

We will conclude our look at the three nutrients with potash.

28) Potash Plant Start-Up Dates

More than 80 percent of current global potash capacity was constructed before 1980. The last major greenfield mine was completed nearly 25 years ago and the last greenfield mine in Saskatchewan nearly 40 years ago. With limited new capacity coming on stream during this period, rising global demand tightened the supply/demand balance.
29) World Potash Production and Operating Rate

By 2007, immediately prior to the economic downturn, the global potash operating rate reached a high level.

The economic downturn, which began in the second half of 2008, was accompanied by a large reduction in global potash demand.

In 2009, in response to this drop in demand, the operating rate of the global potash industry fell to approximately 50 percent, with industry curtailments estimated at over 25 million tonnes.

30) World Potash Shipments and Consumption

We believe the sharp reduction in potash use and de-stocking of the distribution system in 2009 created the need for a multi-year replenishment, which we are seeing in 2010. We estimate shipments of approximately 50 million tonnes, marking the transition between the historical lows of 2009 and a return to higher demand in 2011.

Potash shipments near or above trend are expected from 2011 through 2014 in order to restore distributor inventory and nutrient levels in the soil.
31) **World Potash Supply/Demand**

We project potash demand growth from 2000 through 2020 will average 3.0-3.5 percent per year, similar to historical growth rates and an equivalent of a small potash mine every year. The need to restore distributor inventory and nutrient levels in the soil could support above average growth rates over the next 5 years. This is expected to drive the need for long-term capacity reinvestment.

32) **Global Potash Capacity Additions**

Over the five-year period from 2010 to 2014, we anticipate more than half of the total capacity additions in the world will come from PotashCorp. In addition, our offshore investments, ICL, APC and SQM, have each announced capacity expansion plans.

33) **PotashCorp Debottlenecking & Expansion Projects**

Between 2005 and the end of 2012, we will have added 10.1 million tonnes of potash constructed capacity through debottlenecking and expansion, half of the constructed capacity attributable to industry projects being built worldwide in that time. Our total investment is estimated at CDN $7 billion. These projects - which we have funded and expect to continue to fund primarily through our strong cash flow - are progressing on schedule.
Conclusions

1) Global population growth and a shift to improved diets are the major drivers for growth in world fertilizer consumption.

2) The “Great Recession” during the second half of 2008 and in 2009 led to a cautious mindset. Around the world, farmers reduced fertilizer applications and fertilizer dealers reduced their inventory levels. Producers responded by reducing production.

3) We are currently in a period of recovery, with the IMF projecting above average economic growth in 2010 for the world.

4) The other long-term drivers of global fertilizer growth remain solidly in place. These include declining arable land per capita, unbalanced fertilizer applications combined with low crop yields in the developing world, the growing demand for biofuels and supportive crop prices.

While some economic challenges persist, there is no doubt that the future of the fertilizer industry is bright.

I look forward to working with you in helping to feed the world.

Closing Slide – Thank you

Thank you for your interest. I would be pleased to answer your questions.