Potash Corporation of Saskatchewan

A takeover bid focuses attention on the potash market

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In August of 2010, BHP Billiton, the Australia-based mining giant, launched a $38.6 billion hostile bid to take over the Potash Corporation of Saskatchewan (PotashCorp). The takeover, one of the largest to be attempted since the onset of the global recession in 2008, focused unaccustomed attention on both potash, a vital fertilizer, and Saskatchewan, the lightly-populated Canadian province under whose surface a large percentage of the earth’s potash reserves were located.

PotashCorp’s management rejected the BHP bid, a scant 17% over its share price, as insultingly low. The potash market had been on a rollercoaster over the past years. Potash spot market prices had reached an all time peak in March of 2009 and then crashed by some 60% over the next few months. PotashCorp’s management charged BHP with trying to take advantage of a temporary market anomaly to “steal” the company. The company argued that the fundamentals for potash prices remained strong — the developing world’s need to boost agricultural yields would fuel demand and the cost and long time required to develop a mine would constrain supply. PotashCorp, the company with the world’s largest capacity for producing potash, argued that it was uniquely positioned to take advantage of the market as it recovered.

The BHP bid concerned Saskatchewan’s provincial government. Historically, the government had been financially and organizationally interconnected with potash production. In addition to normal corporate income tax, the government collected a potash royalty that contributed about four percent of all its revenues. PotashCorp itself was a government-created entity. While the government had sold its shares in 1988, PotashCorp remained the lead member of Canpotex, a government-organized cartel that bought and marketed all of Saskatchewan’s potash to overseas customers. Believing BHP would take PotashCorp out of Canpotex as well as hurt the province’s revenues from potash royalties, Saskatchewan Premier Brad Wall announced his opposition to the sale.

Surprisingly, the Canadian federal government agreed with the province. BHP had expected that the federal government would offer no resistance to the bid since it was headed by conservative, pro-business Prime Minister Stephen Harper. Harper’s government had approved four previous takeovers of Canadian mining companies by foreign suitors, arguing that “Canada was open for business.” Nonetheless when it came to the BHP bid, the prime minister’s government ruled that the proposed deal was “not in the best interests of Canada.” Soon after the federal government’s assessment, BHP withdrew its bid.

But the interest in potash engendered by the takeover attempt fueled continuing controversy. Observers wondered: What were the PotashCorp’s prospects over the coming years and what was its true value? Why had potash prices been so volatile? Would they ever settle down and at what level? How should PotashCorp manage its production and marketing of potash? How would the entry of mining giants like BHP affect the potash market?
The Real Special K

Plants draw nutrients from the soil, a fact that savvy farmers have recognized and manipulated for centuries. From medieval times, farmers found that rotating crops and allowing fields to lie fallow for a period of time could boost crop yields. They also devised direct methods to boost the fertility of their fields. Farmers fortified the soil with everything from manure to rags to bone.

One of the most frequently applied soil treatments was potash, the leached residue of wood ashes. As farmers realized the power of potash in the 1600s, demand for the material increased. Fortunately, the English colonies of North America had vast wood lands and restive populations that were clearing the forest as they made their way west. The wood these settlers cleared was often turned to potash and what was not used locally was shipped to Europe.

When the United States became independent, potash remained an important export. Indeed, a method for improving the production of potash from wood was the very first patent issued by the newly-formed U.S. government. With this patented methodology and seemingly endless expanse of forest, the U.S. remained the leading supplier of potash to Europe until the 1860s.

The role of potash in plant growth was explained in the 19th century. Chemists determined that potash consisted of chlorine and an element that became known as potassium (though scientists gave it the neo-Latin label 'kalium' and represented it with the chemical symbol 'K'). Potassium was shown to be one of three basic elements (along with nitrogen and phosphorus) necessary for plant life. Experimentation further demonstrated that all three nutrients were required for plant growth (one element was not substitutable for another). The findings explained centuries of agricultural practice – farmers were using whatever they had on hand to reintroduce nitrogen, phosphorus, and potassium to fields where the growth of crops had sucked these elements from the soil.

The 1800s also brought a change to the way potash was produced. In 1861, miners in Straßfurt, Germany discovered deposits of potash 100 meters or so below the surface of the earth. Extracting potash from the ground proved to be more efficient than chopping and burning trees and from that point on, potash changed from being a by-product of agriculture to a product of mining. Germany replaced the United States as the world’s leading supplier until the discovery of potash in Canada.

The scientific investigation of plant growth led to the introduction of commercial fertilizers. Commercial fertilizers are formulated and sold by their N-P-K (nitrogen, phosphorus and potassium) ratio (e.g. fertilizer labeled 10-20-30 consists of 10% nitrogen, 20% phosphorus, and 30% potassium). The best NPK ratio depended on the crop to be grown and the existing composition of the soil, so commercial suppliers would mix numerous variations. Since potassium is found largely in plant foliage, leaf crops such as hay and alfalfa (used primarily as animal fodder) benefitted from high levels of potash. Cereals such as wheat, corn and rice have high potassium requirements, though an appreciable portion may be returned to the soil from decomposing plant stalks after a harvest. Finally, starch and sugar crops, such as potatoes, beets and sugar cane, required large amounts of potassium for optimal yields.

The utilization of commercial fertilizers varied from place to place and often depended on the finances of a farmer. Especially in developing regions of the globe, strapped farmers found that they needn’t apply fertilizer every year; crop yields might fall but there would still be some production. If prices for their crops dipped, farmers would reduce or eliminate the amount of fertilizer they bought or revert to more traditional (if less effective) soil supplements.

In more developed regions such as the United States, farmers discovered there were limits to the amount of fertilizer it was efficient to apply. Indeed, fertilizer runoff into streams created environmental problems. The United States also had instituted restrictions on the amount land under cultivation in order to stabilize crop prices, so fertilizer demand had been flat since the 1970s (1979 was the peak year for U.S potash consumption).
Globally, the widespread availability of commercial fertilizers and the knowledge of their most efficient use led to increased crop yields. This not only allowed agriculture to sustain larger populations, but also led to changes in the average diet. The gains in crop yields permitted the increased production of livestock, as animal fodder became cheaper and more abundant. Diets throughout the world began to change as people were able to obtain more meat and dairy products.

**Potash Mining in Saskatchewan**

*The little cartel on the prairie*

In the 1940s, oil prospectors discovered potash in Saskatchewan as they were drilling exploratory wells. The potash was located a kilometer beneath the surface in a geological formation called the Williston Basin that stretches from southern Saskatchewan to northern Montana and North Dakota. The Williston Basin included the remnants of a large inland sea that evaporated 350 million years ago, leaving behind organic material that became potash.

However, it took engineers nearly two decades to devise a method to allow for the extraction of the potash. The mineral deposits rested below the Blairmore Formation, a 250-foot layer of porous, water-drenched sediment. Efforts to tunnel through this formation proved futile as the force of the water flooded mine shafts. Finally, engineers came up with a scheme to freeze all of the area around a prospective shaft with refrigerated pipes. This kept the water at bay long enough to place cast iron tubes through the Blairmore to the potash deposits.

In 1962, the first potash mine in Saskatchewan opened in Esterhazy. The deposits proved to be worth the effort. Saskatchewan potash is extremely high-grade, with nearly twice the potassium content of potash mined anywhere else. (Potash prices were determined by the percentage of pure potassium in the ore.) The potash lay in a thick, even layer, making mining the material relatively easy. The quality of the ore and its placement meant that in spite of high initial costs to get to the deposits, Saskatchewan’s potash miners would be the world’s low-cost producers. What’s more, the potash proved to be plentiful. Geologists determined that the deposits in the Williston Basin constituted more than half of the known potash reserves on earth and could keep the world supplied with potash for centuries.

Since Saskatchewan was primarily agrarian, the provincial government was anxious to encourage investment in potash production to diversify the region’s economy. Over the 1960s, the government offered a range of incentives to mining interests, including a royalty holiday during the first three years of a mine’s operation and very low rates afterwards, three years worth of tax exemptions on all federal and provincial corporate taxes and accelerated depreciation on all mining equipment.

Ten mines (all operated by different companies) opened over the next decade. Saskatchewan potash production rose to 5 million tons in 1969, constituting nearly a sixth of world production. The new supply, however, depressed global prices. Average U.S. prices (spot and contract) fell over 50% (in real terms) between 1962 and 1969 and the global spot market dropped 40% from 1964 to 1969. (Potash producers generally negotiated 1-3 year contracts with large customers. The terms of these deals were often not disclosed, but were related to the spot market price. The spot price was negotiated at the Port of Vancouver and were prices FOB – including transport cost to the port, but not from the port to the final destination. See Exhibits 1 and 2 for overview of potash prices and production)

By the late 1960s, mines in Saskatchewan and New Mexico (the other major North American locale with potash mines) were on the verge of closing. The Governor of New Mexico met with the Premier of Saskatchewan and agreed to create an organization that would ration production among the various mines in their jurisdictions. Normally this kind of collusion is prohibited, but an exemption in the anti-trust law in both the U.S. and Canada allowed companies from different countries to work together in
order to build export markets. The cartel, therefore, could act as sales agent for potash producers only outside the U.S. and Canada. Canpotex, the name given the cartel, would be owned and governed by the participating potash producers. Each of the producing companies in New Mexico and Saskatchewan were given an equal share and vote (no matter what their capacity or reserves).

Canpotex went into operation on January 1970 and set production limits for its member companies. Potash cannot be stored for long periods of time as exposure to the air degrades the useable potassium. Therefore, the cartel had to control the mining at the source because whatever was mined had to be shipped and used immediately. In deciding on how to allocate production, Canpotex took into account the lower costs of production at the mines in Saskatchewan that allowed the Canadian producers to cover their fixed costs with less volume. Therefore, production at the Saskatchewan mines was limited to about 40 percent of capacity while the New Mexico mines were permitted to operate at 80 percent capacity. (See Exhibit 3 for Saskatchewan production and capacity figures.)

Canpotex’s market interventions proved efficacious. U.S. average prices for potash shot up 40% during 1970. Even at their reduced capacity, the Saskatchewan mines became profitable. A 1971 study by the U.S. Bureau of Mines concluded that Canpotex allowed the companies operating in Saskatchewan to earn an average annual return on investment of 29 percent.

Partial nationalization

The establishment of Canpotex forced potash prices higher through much of the early 1970s. However, this hardly meant smooth sailing for Saskatchewan’s potash producers.

In 1974, the Canadian federal government passed legislation which denied resource extraction enterprises, such as the potash mines, the ability to claim provincial royalties and taxes as deductions on their federal corporate taxes. At the same time, the provincial government instituted a much higher royalty on potash production. Saskatchewan’s potash producers protested and demanded that the provincial government rollback their planned royalty increases. When the provincial government refused, potash companies cancelled expansion plans, sued the government and withheld tax payments. The provincial government complained that the potash producers refused to give accurate records of costs and capacity.

At the same time, discord was erupting within Canpotex. One company sued Canpotex because its production quota did not allow it to meet its long-term potash production commitments to its parent company. Another threatened to leave the cartel and undercut its prices.

With the potash industry in uproar, Saskatchewan’s Premier, Allan Blakeney, announced plans to nationalize half of the potash production in the province. Under Canadian law, provinces were allowed to create “crown corporations” owned by the provincial government. Blakeney, a member of the left-leaning New Democratic Party, had already nationalized oil extraction companies into SaskOil and the province had a long history of creating crown corporations for natural resources and utilities, including SaskEnergy (natural gas), SaskWater (water provision) and SaskTel (telephone service).

Blakeney’s nationalization was initially opposed by the potash producers, the Canadian federal government, and the United States government. Nonetheless, the province created the Potash Corporation of Saskatchewan (PotashCorp) in January of 1976 and began purchasing assets. Quickly, opposition faded. An analyst explains:

The first nationalization was the Duval mine, owned by Pennzoil of Texas. The original investment in the mine was $80 million. The Saskatchewan government paid the U.S. corporation $128.5 million. Pennzoil was overjoyed... With this payment the corporate opposition to the nationalization virtually ceased. The lawsuits were dropped. It seemed like they all wanted to be bought out. The stated “fair market value” was around 93 percent of
replacement value. The price paid by Saskatchewan’s taxpayers produced a windfall profit for the private investors.¹⁴

By 1980, the PotashCorp had taken over the mines of four companies and the reserves of a fifth company (the company that had been threatening to leave Canpotex), giving the company control of over 40 percent of Saskatchewan’s potash production. In addition, the remaining independent potash producers signed agreements with the provincial government ending all legal disputes and agreeing to an increased, yet simplified royalty structure.¹⁵

**PotashCorp privatization and expansion**

PotashCorp operated profitably during its first six years as a crown corporation. However, elections in 1982 brought in a new conservative government at the same time that potash prices dropped due to a global recession. The new government demanded that PotashCorp increase capacity (to maintain employment). However, the private producers in Canpotex did not allow PotashCorp to increase its sales to overseas markets. Furthermore during the mid-1980s, a ruinous price war broke out among the Saskatchewan producers in their sales to the United States.¹⁶ Stuck with high costs, declining prices and increasing unused capacity, PotashCorp began to incur heavy losses.¹⁷

The conservative government had been ideologically opposed to the idea of crown corporations and PotashCorp’s losses gave it a rationale to privatize the enterprise. The government put PotashCorp on the market in 1988 and over the next three years disposed of all of its shares.

As a public corporation, PotashCorp returned to profitability, aided by an anti-dumping lawsuit brought by the U.S. Commerce department that was resolved by setting legally binding price floors on all Saskatchewan potash sales into the United States. Though the lawsuit was brought by U.S producers against Canadian producers, the remedy to the action actually benefitted Saskatchewan’s industry by ending the price war among the Saskatchewan’s producers (and thereby hurting U.S. farmers).¹⁸

During the next 15 years, PotashCorp’s management steadily changed the profile of the company. First, to secure its place as the world’s largest potash company, the company bought two existing potash mines in Canada (one in Saskatchewan and the other in New Brunswick). Then PotashCorp began making international acquisitions. The company purchased a 14% share in Israel Chemicals Ltd. (the world’s fifth largest producer of potash), a 28% stake in the Arab Potash Company, a 32% stake in SQM (a Chilean potash company) and a 22% stake in Sinofert, China’s leading potash distribution company.

During this time period, the company also diversified into other fertilizers. PotashCorp bought significant nitrogen and phosphate-producing facilities. By 2002, the company had not only the greatest capacity in the potash market, but also significant nitrogen and phosphorus producing capacity throughout the world.

Other than acquiring existing potash producers, PotashCorp did not build any additional greenfield potash mines. Instead, PotashCorp built more incremental capacity during the 2000s by improving operations at its existing mines. Potash production required a number of steps after the ore was scraped from the deposits. By “debottlenecking” operations, capacity could be substantially increased. PotashCorp made $1.76 billion capital investments at five of its Saskatchewan mines through 2008. (See Exhibits 4 and 5 for PotashCorp’s potash-producing capacity.)

**Canpotex, foreign competition and the potash market**

Over the 1980s, Canpotex role in setting production quotas was de-emphasized and officially the organization claimed to not be “involved in the independent production decisions of our shareholders.” Instead, the company’s efforts were directed towards increasing demand through market development and arranging the logistics for transporting potash from the mines to the purchasers.
In the late 1970s, Canpotex launched a campaign to convince Chinese officials to buy potash. The organization sponsored trips by agricultural officials extolling the virtues of potash to increasing crop yields. Canpotex made contacts with key leaders in the Chinese bureaucracy and after three years of work, secured the first order for potash. By 1990, the organization was selling 550,000 tons of potash to the country and China was well on its way to becoming the major importer of potash in the world.²⁰

By 2010, Canpotex made sales to 30 offshore markets and maintained overseas offices in Singapore, Hong Kong and Tokyo. The company’s five leading markets were Brazil, China, India, Indonesia and Malaysia. These five countries accounted for nearly 70% of Canpotex sales.

Besides marketing, Canpotex built infrastructure to transport potash. While Saskatchewan did offer vast, high quality potash deposits in a politically stable environment, the province was over 1500 km from an ocean port, across the rugged Rocky Mountains. Besides the distances and the rugged terrain, Canpotex had to transport potash through extreme climatic conditions.

To get the potash from the mines to ships, Canpotex operated a fleet of 5,500 covered railroad hopper cars and had made arrangements with the Canadian Pacific and other rail lines to carry the potash. To keep the hopper cars running, the company operated a large maintenance facility in Saskatchewan.

In addition, Canpotex controlled and operated two port terminals – a terminal that could handle 3.5 million tons a year in Portland, Oregon and a facility with a 10.5 million ton per year capacity in Vancouver, British Columbia. In 2010, Canpotex announced plans to build a third facility in Prince Rupert, British Columbia – a port just south of the Alaska-Canada border and the deepest ice-free natural harbor in North America.

Seventy-five to ninety percent of Canpotex sales were made on a CFR (Costs and Freight) basis, meaning the company was responsible for hiring and managing the vessel carrying the potash through to the port of discharge. This high reliance on ocean-shipping led the company to invest in building its own fleet, spending $900 million on shares in 15 cargo ships operated by U-Sea.

Canpotex’s ownership had changed dramatically over the decades. Through acquisition, the 14 original potash producers had consolidated to only three by the 1990s. Besides PotashCorp there was Mosaic and Agrium. Agrium, headquartered in Alberta, Canada, was the world’s ninth largest potash producer. The company boasted of being “the only publicly traded company that crosses the entire agricultural value-chain” and sold other fertilizers and offered agricultural services. Mosaic, a U.S.-based firm, was the second largest global potash producer by capacity. The company had taken over three potash mines in Saskatchewan, a mine in New Mexico and a mine in Michigan. Like PotashCorp and Agrium, Mosaic had significantly grown its phosphate and nitrogen producing capacity to become a more comprehensive fertilizer company.

Canpotex had dominated overseas potash marketing since its creation in 1970. However, when the Soviet Union collapsed in 1991, the potash industry underwent a dramatic change. Three major producers, BPC (Belarusian Potash Corporation – a state-owned enterprise), and Russia’s newly privatized Uralkali and Silvinit, began exporting. The three companies added over 15 million tons of potash producing capacity to the world market. Prior to the Soviet Union’s collapse these companies had sold potash only within the Eastern Bloc.

Nonetheless, the market remained concentrated with the top ten producers accounting for over 90% of global production. BPC marketed exports not only from its own production facilities but also for Russia’s Uralkali. The K+S Group of Germany, which primarily served the European market, and Israel Chemicals Limited and Arab Potash Company accounted for most of the rest of global export sales.²⁰ (See Exhibits 6 and 7 for comparisons of the leading potash producers.) In terms of known reserves, Canada, Russia and Belarus held over 80% of the world’s deposits.
Cashing in on pink gold

Price swings in potash and agriculture

Despite the addition of capacity from the former Eastern Bloc, the potash markets remained relatively stable during the 1990s and early 2000s. However in 2005, potash prices began trending upward and then in 2007, prices increased precipitously. In March of 2007, the spot price were $177 a ton; two years later the market hit an all-time peak of $872.50 (an increase of nearly 400%). (See Exhibit 8 for potash spot market prices.) The percentage of potash production capacity in use rose to all-time highs as well. (See Exhibit 9.)

The potash price increases tracked the prices of agricultural products. (See Exhibit 10.) Commodity prices had slumped from 1995-2002, but then had started to recover. In 2006, prices began spiking, especially for cereal crops (e.g. rice, wheat, corn). The FAO food price index rose by 7 percent in 2006 and 27 percent in 2007, and that increase persisted and accelerated in the first half of 2008. By mid-2008, the world was facing the highest food prices (in real terms) in 30 years.²¹

The usual explanations for agricultural prices increases – bad harvests due to natural disasters, however, were not applicable. The Economist argued:

That is why this year’s price rise has been so extraordinary. Since the spring, wheat prices have doubled and almost every crop under the sun – maize, milk, oilseeds, you name it – is at or near a peak in nominal terms. The Economist’s food-price index is higher today than at any time since it was created in 1845. Even in real terms, prices have jumped by 75% since 2005. No doubt farmers will meet higher prices with investment and more production, but dearer food is likely to persist for years. That is because “agflation” is underpinned by long-running changes in diet that accompany the growing wealth of emerging economies – the Chinese consumer who ate 20kg (44lb) of meat in 1985 will scoff over 50kg of the stuff this year. That in turn pushes up demand for grain: it takes 8kg of grain to produce one of beef.²²

An FAO investigation concluded that were many factors that led to the run-up in food prices, but that an increase in bio-fuel production was one of the major drivers. In both the United States and Brazil increasing amounts of corn (United States) and sugar cane (Brazil) were being allocated to bio-fuel. (See Exhibit 11 for bio-fuel production figures.) A run-up in oil prices made subsidized bio-fuels such as ethanol an attractive energy alternative (See Exhibit 12 for comparison of gasoline and ethanol). Bio-fuel production globally was expected to triple over the next few years.²³ The FAO report noted:

Bio-fuel production may reduce the availability of food commodities on the market because “effective” demand for grains, sugar or oils and other basic food staples as feedstock for fuel production could outbid that for food where the prices of oil and feedstocks favor bio-fuel production. This new source of demand has been playing an important role in influencing prices. For example, out of the increase of nearly 40 million tonnes in total world maize use in 2007, almost 30 million tonnes were absorbed by ethanol plants alone.²⁴

The upward swing in potash prices improved the fortunes of all the participants in the potash market. PotashCorp reported record earnings. (See Exhibit 13 for PotashCorp financials.) The company’s stock market cap rose from $17 billion in March of 2007 to a high of nearly $75 billion in June of 2008, making the company Canada’s most valuable corporation for a period of time. (See Exhibit 14 for PotashCorp market capitalization.) The province of Saskatchewan reaped increased royalty and tax payments, moving it from an also-ran in Canada’s economy to a leading province. One commentator noted:

What was for years an unremarkable export [potash] has suddenly become one of the most treasured commodities on Earth -- pink gold you might call it -- which alongside surging sales of oil, uranium and even grain is suddenly making Saskatchewan the economic envy of the nation.²⁵
However in early 2009, major potash customers rebelled and began refusing to sign long-term deals with producers at existing price levels. Many farmers also took a holiday from applying fertilizer, relying for the short run on their land’s existing store of nutrients. (See Exhibit 15 for application rates of potash in the United States.) After some months of this “customer’s strike,” BPC signed a deal with China for $350 a ton CFR – well below the spot market price. Bill Doyle, the CEO of PotashCorp, slammed the agreement, arguing:

[BPC’s] settlement with China was too low. To tie in at this pricing level for the whole year would have been a mistake for us. BPC has proved to be a bit of a panic seller. They are basically inexperienced marketers. They have panicked in both directions.”

The break in the customer’s strike caused spot prices to fall to $313 a ton in just a year (a 65% decline). Over the same time period, prices for agricultural commodities also declined.

PotashCorp’s market cap also took a hit (no doubt aided by the downswing in all global equities after the 2008 market collapse). The company’s value fell to less than $25 billion in mid-2009, recovering to $33 billion in August of 2010, just before the BHP Billiton offer.

During 2009, global potash production declined 40%. Nonetheless PotashCorp and the other Canpotex producers remained optimistic about the future of the potash market and continued their planned capacity expansions.

BHP Billiton bid

When BHP Billiton made its $38.6 billion all-cash bid for PotashCorp in August of 2010, commentators noted that it was one of the few companies in the world that could support such a bid in the credit-constrained environment.

BHP Billiton, headquartered in Melbourne Australia, was the world’s largest mining company by revenue and one of the top ten corporations in the world by market cap. The company was diversified across many mineral products and was one of the world’s leading extractors of iron, aluminum, copper, lead, zinc, titanium and diamonds. In 2010, BHP Billiton brought in $48 billion of revenue and claimed operating income of $20 billion with a profit of $12 billion. The company reported net debt of only 12% of EBITDA, as well as substantial cash reserves.

BHP’s bid for PotashCorp was not the corporation’s first foray into Saskatchewan potash. In 2008, the company began development work on a potash mine in the Jansen Lake region of Saskatchewan. The Jansen mine was projected to produce 8 million tons/year and include associated infrastructure such as on-site roads and rail. If the mine project did not encounter any regulatory or engineering delays, observers expected the site to be operational by 2015 at a cost of $12-13 billion. These estimates were in line with estimates by the PotashCorp of the cost and time for building a greenfield potash mine in Saskatchewan. (See Exhibit 16 - capital investment and time were nearly twice as expensive for potash as for nitrogen and phosphate producing facilities.) The mine would be the first greenfield potash mine opened in Saskatchewan since the late 1960s.

Even as they were doing feasibility studies on the Jansen mine site, BHP management began eyeing a run at PotashCorp. On August 12, 2010, BHP CEO Marius Kloppers approached PotashCorp’s CEO Bill Doyle in Doyle’s hometown of Chicago, Illinois (while PotashCorp’s headquarters was officially in Saskatoon Saskatchewan, most of the executives lived in Chicago and worked at PotashCorp’s offices there). During a 35-minute meeting, Kloppers presented Doyle with a bid that represented a 17% premium over PotashCorp’s closing the previous day. Doyle then met with his board and they were not pleased for being “lowballed.” Rather than communicating their rejection privately and hoping that BHP would sweeten the offer, Doyle publically announced BHP’s offer and his company’s rejection of it. In turn, BHP declared that it would go directly to PotashCorp shareholders and attempt a hostile takeover.30
Analysts argued that if BHP were to take over PotashCorp, it would affect the entire industry. For one, BHP projected that it would take PotashCorp out of Canpotex, which would undoubtedly cause the cartel to fold. One commentator noted, “BHP is the world’s biggest miner: it thinks big and acts big. The group has built success on iron ore, handling contracts in the tens and hundreds of millions of tons. Concern is rife that BHP… will destroy a delicate pricing structure through the policy of running a mine at 100% and forcing product onto the market through lower prices.”

PotashCorp had always operated as the “swing producer” in the industry, moderating its production to create an adequate price floor when demand for potash dropped. In contrast when asked about his plans should BHP take over, Kloppers told analysts:

Our basic philosophy is to run our assets at full capacity and take the market prices, which effectively means that we maintain full employment throughout the cycle. Also continuing our investment programs throughout the cycle. We do this by always ensuring that we have got low-cost assets on their respective cost curves which means that logically they are the assets that should be run in good times and in bad… Philosophically, our demeanor is always sell it yourself, stand in front of the customer yourself, market your own product, run at full capacity, take the market price, be low cost.

**PotashCorp responds**

In announcing PotashCorp’s rejection of BHP’s bid, CEO Doyle said, “I'm not saying I’m opposed to a sale, but I’m opposed to a steal of the company. This unsolicited proposal is so far beyond opportunistic there wasn’t a constructive basis for negotiation.”

In the weeks and months after the BHP bid, PotashCorp told everyone who would listen that the market valuation of the company in 2010 was “an anomaly.” The BHP bid did not reflect “the strategic importance, scarcity value and quality of the company’s assets.” The company was poised to deliver strong earnings growth, since the market was on the verge of “an inflection point, where potash demand will return to historical trend-line growth, supply will tighten, and pricing will improve.”

The reason for the company’s optimism was its reading of the underlying trends in global agriculture:

The powerful long-term drivers of the fertilizer business – population growth and improving diets in developing nations – changed little as a result of the global downturn, and the catalysts expected to fuel near- and medium-term demand are accelerating. A rising demand for food – coupled with historically low global grain inventories – support a powerful period of growth for agriculture.

According to most observers, China, India and Brazil represented particularly attractive markets to producers of potash (see Exhibit 17 and 18). Of the three countries, Brazil had some as yet unexploited potash deposits, China had a few working potash mines and India had no known domestic sources of potash. In all three countries growing urban populations were dependent on the hinterlands for food, yet spreading urban areas were also taking arable land out of production (see Exhibit 19). Hence there were more mouths to feed, but less land from which to do it. Rising affluence also would put pressure on farmers to produce more animal protein. Meat consumption in China, for example, more than doubled in the last 20 years as per capita income grew, and it was expected to climb even higher (see Exhibit 21 for meat consumption and Exhibit 22 for cereal consumption).

China was in the forefront of using fertilizer to boost crop yields. For years, the Chinese government had subsidized the purchase of fertilizers for farmers and the country had made impressive increases in its yields. In many areas, Chinese farmers were equal or ahead of the EU farmers in productivity per acre and trailed only the United States. However, China also had relatively little arable land and so had to make every acre count. India, on the other hand, had more arable land but poorer yields. Some believed that a
second green revolution emphasizing fertilizer was necessary before the country could make dramatic economic strides. (See Exhibit 23 for yield chart.)

With these demand drivers in place, the PotashCorp maintained that its assets and capabilities gave the company a number of unique points of leverage that the BHP bid undervalued. PotashCorp management argued that as a price maker, the company was positioned to take advantage of the potash market once demand increased and prices improved. Furthermore, the company had committed to a program to build capacity at its existing mines – a far more cost effective way of boosting production than building greenfield mines. Finally, the company’s investments in other potash companies would increase in market value as the potash market recovered.

Industry action

While BHP and PotashCorp wooed shareholders and the Canadian government, there were other moves in the potash industry that could potentially influence the industry structure.

The management of PotashCorp went searching for a possible white knight to counter BHP’s offer. Observers argued that the reason BHP had offered such a small premium was that there were little chance that another company could offer more. However, the Chinese chemical company SinoChem emerged as a possible bidder since it could arrange financing through the Industrial and Commercial Bank of China, the world’s largest bank by market capitalization. The Chinese were the world’s leading importers of potash and the government already subsidized fertilizer purchases, so analysts argued that the move made strategic sense. However, the Chinese did not want to get into a lengthy battle and were looking for assurances from Canadian government officials that their bid would not be blocked on political grounds.

The trade press also carried stories about rumored greenfield developments. Besides BHP’s Jansen mine, the Brazilian mining company Vale and the German potash firm K+S were also looking into developing mines in Saskatchewan. A number of small companies had also developed specifically to explore and possibly develop potash mines in the province.

Outside Saskatchewan, there were potential greenfield developments in Kazakhstan, Congo and Brazil. Owing to the expense and long lead times, no significant greenfield potash mine had been developed in the world since the 1980s. But in wake of the attention and the high prices for potash during 2007-09, developers were once again exhibiting interest in building new mines.

The BHP bid sparked renewed speculation that the two Russian potash producers Uralkali and Silvinit might merge. A Russian businessman owned substantial interests in both companies and was said to be interested in consolidation. The resulting company would have the world’s second largest potash capacity.

The Canadian government closes the door

After Doyle phoned him on August 16 to inform him that BHP was pursuing PotashCorp in a hostile bid, Saskatchewan Premier Brad Wall spent the next month and a half considering BHP’s offer and the future of the potash industry in his province. Together, PotashCorp, Agrium, and Mosaic were extremely important to provincial public revenues. The companies paid not only federal and provincial corporate income taxes, but also a significant potash resource royalty to the province. Over the 2003 to 2009 period, potash royalties accounted for approximately 4 percent of the provincial government’s total revenues.

On potash mined in Saskatchewan, potash royalties consisted of two parts: a potash production tax and a “resource surcharge.” The resource surcharge was calculated as a percentage total revenues and the potash production tax was based on profits. According to the potash production tax rates set in 2003, potash producers paid 15% of total profits for profits below $58.15 (Canadian) per ton. For profits above $58.15 per ton, producers paid a tax of 35% of total potash profits. Deductions to those royalties were...
allowed for capital expenditures devoted to expanding potash production and various other specified expenditures. For example, only the salaries of corporate executives residing in Saskatchewan were allowed as expenses in calculating profits. The royalty payments represented a significant expense for the companies; PotashCorp paid more in royalties than wages for most of the 2000s. (See Exhibit 24 for how Saskatchewan’s royalties compare against those of other locales.)

To advise him on the deal, Premier Wall commissioned the Conference Board of Canada to study the proposal. The study’s authors concluded that the deal would have minimal effect on Saskatchewan, but that it could mean reduced tax revenues for the province, as BHP would be able to write off the development costs for their Jansen mine against profits from PotashCorp in calculating the provincial potash production tax. The study also concluded that the deal might mean the end of Canpotex, although the study’s authors noted that it was difficult to see how exiting Canpotex would ultimately be in BHP’s best interest. These negative effects were sufficient for the Premier to call for blocking BHP’s bid. In an October 2010 speech, he noted:

In this deal, we would lose a proud Canadian company. We would lose our international leverage in the potash sector, a loss of our marketing agency, along with the good will and contacts which it provides. And we would transition from being price leaders to price takers. I don’t see how there is a net benefit there, then, in terms of the strategic interests of the country.

However, the provincial government did not have the power to scuttle the deal, only the federal government could do that. BHP had every reason to believe that the federal government would agree to let the deal go forward. The government, headed by conservative prime minister Stephen Harper, had allowed four other large Canadian mining companies to be taken over by foreign suitors and the PM had signaled that he was generally opposed to intervening in the market.

Nonetheless in November 2010, the federal government concurred with the provincial assessment, announcing that potash was a “strategic resource” and that the deal was not in the best interests of Canada. Pundits argued that the decision represented a triumph of politics over principle, as the Harper government sought to shore up its support among western voters.

After the assessment by the national government, BHP could have appealed the decision or sweetened its bid. Instead, it withdrew its offer. “I don’t think BHP spent 10 minutes looking at the local politics,” a high ranking official at another mining company said. The Globe and Mail, Canada’s national newspaper, concluded “[BHP Billiton] needed to convince investors, politicians and the public that its takeover proposal would enrich them, financially and economically, and it failed on all counts.”

After the BHP’s bid was blocked, PotashCorp announced that its executives including CEO Bill Doyle would be moving from Chicago to Saskatoon, Saskatchewan. In addition, the company said it would donate one percent of its before tax income to Saskatchewan charities and community groups.

For its part, BHP continued its development of the Jansen mine site, committing nearly $500 million to the project in 2011.

**Post-bid future of potash**

PotashCorp’s decision to reject BHP’s takeover offer and the Canadian government’s decision to block the takeover continued to be the object of some controversy. From a public policy standpoint, pundits debated what message the government’s decision sent to outside investors.

From a corporate standpoint, PotashCorp would have to justify the valuations it placed on its assets. Would potash demand increase to justify the company’s valuations? Was management’s rejection of
BHP’s premium justified? Could the company and Canpotex withstand increased competition from BHP’s Jansen Lake facility or any other new site that might come online?

This case has been developed for pedagogical purposes. The case is not intended to furnish primary data, serve as an endorsement of the organization in question, or illustrate either effective or ineffective management techniques or strategies.

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Endnotes

1 William S. Beinecke Professor of Finance and Economics, Yale School of Management.
2 Director of Case Research, Yale School of Management
16 “Fertilizer Pricing in Canada”, Agriculture and Agri-Food Canada accessed @ http://www4.agr.gc.ca/AAC/display-afficher.do?id=1179244042728&lang=eng
16 Richard Foot, “Resource boom puts have-nots on top; Saskatchewan and Newfoundland climb out of the cellar and onto the financial throne” Vancouver Sun, July 19, 2008.
22 Jacqie McNish, Brenda Bouw and Eric Reguly, “Potash: the deal that didn’t have to die,” Globe and Mail, November 5, 2010.
25 Eric Lam, “PotashCorp CEO Bill Doyle: ‘I’m opposed to a steal of the company’”, Canada.com, August 17, 2010 accessed @ http://www.canada.com/sports/PotashCorp+Bill+Doyle+opposed+steal+company/1509144/story.html
26 “PotashCorp’s Board of Directors Rejects BHP Billiton’s Unsolicited, Non-Binding Proposal as Grossly Inadequate”, Potash Corporation Website, August 17, 2010, accessed @ http://www.potashcorp.com/news/990/

43 Jacquie McNish, Brenda Bouw and Eric Reguly, “Potash: the deal that didn’t have to die,” *Globe and Mail*, November 5, 2010.

44 Brenda Bouw, Carrie Tait, "Potash Corp CEO takes a home in Saskatoon" CTV News, accessed @ http://www.ctv.ca/generic/generated/static/business/article1907060.html
Exhibit 1: Potash (KCl) Annual Average Spot Market Price 1960-2010 in constant dollars (Yr 2000 = 100) per metric ton

Source: World Bank
Exhibit 2: Global Potash (KCl) Annual Production 1961 - 2009 in metric tons

Source: U.S. Geological Survey
Exhibit 3: Saskatchewan Potash Capacity and Production 1962-77 in metric tons

### Exhibit 4: PotashCorp Expansion 2000-2015

<table>
<thead>
<tr>
<th>Location</th>
<th>Investment (in Billion $CDN)</th>
<th>Capacity Added</th>
<th>Expected Construction Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocanville</td>
<td>$0.13</td>
<td>0.75 MMT</td>
<td>Complete (2005)</td>
</tr>
<tr>
<td>Allan</td>
<td>$0.21</td>
<td>0.40 MMT</td>
<td>Complete (2007)</td>
</tr>
<tr>
<td>Lanigan</td>
<td>$0.41</td>
<td>1.50 MMT</td>
<td>Complete (2008)</td>
</tr>
<tr>
<td>Patience Lake</td>
<td>$0.11</td>
<td>0.36 MMT</td>
<td>Complete (2009)</td>
</tr>
<tr>
<td>Cory I</td>
<td>$0.89</td>
<td>1.20 MMT</td>
<td>Q2 2010</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>$1.66</td>
<td>1.20 MMT</td>
<td>Q4 2011</td>
</tr>
<tr>
<td>Rocanville</td>
<td>$2.80</td>
<td>2.70 MMT</td>
<td>Q4 2012</td>
</tr>
<tr>
<td>Cory II</td>
<td>$0.22</td>
<td>1.00 MMT</td>
<td>Q4 2012</td>
</tr>
<tr>
<td>Allan</td>
<td>$0.55</td>
<td>1.00 MMT</td>
<td>Q4 2012</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$6.98</strong></td>
<td><strong>10.11 MMT</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Source: PotashCorp*

### Exhibit 5: PotashCorp Total Operational Capacity 2005-2015 (in Million Tons KCl)

*Source: PotashCorp*
# Exhibit 6: Leading Global Potash Producers 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Headquarters</th>
<th>Production base</th>
<th>Annual capacity, in millions of tons KCl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Potash Corp. of Saskatchewan</td>
<td>Canada</td>
<td>Saskatchewan</td>
<td>11-12</td>
</tr>
<tr>
<td>2</td>
<td>The Mosaic Co.</td>
<td>USA</td>
<td>Saskatchewan</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>K+S Group</td>
<td>Germany</td>
<td>Germany</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Belarus Potash Company</td>
<td>Belarus</td>
<td>Belarus</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Uralkali</td>
<td>Russia</td>
<td>Russia</td>
<td>5.5</td>
</tr>
<tr>
<td>6</td>
<td>Silvinit JSC</td>
<td>Russia</td>
<td>Russia</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>ICL (Israel Chemicals)</td>
<td>Israel</td>
<td>Dead Sea</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Arab Potash Co.</td>
<td>Jordan</td>
<td>Dead Sea</td>
<td>2.5</td>
</tr>
<tr>
<td>9</td>
<td>Agrium Inc.</td>
<td>Canada</td>
<td>Saskatchewan</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>SDIC Xinjiang Potash</td>
<td>China</td>
<td>Xinjiang</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Source: Industrial Minerals*
Exhibit 7: Potash Producers by Market Share* and Operating Cost** (US$ per ton)

* The width of each column represents a producer’s share of the market.
** Operating costs include only those expenses involved with extraction and refinement of potash and do NOT include royalties or transportation costs.

Source: MagIndustries estimates for operating costs and Industrial Minerals magazine for market share
Exhibit 8: Potash Monthly Spot Market Price January 2004- December 2010 (US$ per ton KCl, Vancouver FOB)

Source: World Bank
Exhibit 9: Global Potash Industry Percentage of Operational Capacity in Use

Source: PotashCorp
Exhibit 10: Monthly FAO Global Food Price Indices 1990-2010

Source: FAO
Exhibit 11: Ethanol production (in millions of liters)

Source: OECD-FAO
Exhibit 12: Gasoline* and Ethanol** Prices (in US$ per 100 liters)

* Gasoline price from annual average consumer price in Los Angeles – source: EIA

** Ethanol price from average world ethanol price, including subsidies – source: OECD-FAO
**Exhibit 13: Selected Financials PotashCorp**

### Income Statement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>6538.6</td>
<td>3976.7</td>
<td>9446.5</td>
<td>5234.2</td>
<td>3766.7</td>
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<tr>
<td>Freight, Transportation and Distribution</td>
<td>487.6</td>
<td>319.1</td>
<td>457.3</td>
<td>470.2</td>
<td>389.9</td>
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<tr>
<td><strong>Net sales</strong></td>
<td>6051.0</td>
<td>3657.6</td>
<td>9892.8</td>
<td>4764.0</td>
<td>3376.8</td>
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<tr>
<td><strong>Cost of goods sold</strong></td>
<td>3426.0</td>
<td>2643.0</td>
<td>4128.4</td>
<td>2882.8</td>
<td>2374.8</td>
</tr>
<tr>
<td><strong>Total gross margin</strong></td>
<td>2625.0</td>
<td>1014.6</td>
<td>4860.8</td>
<td>1882.1</td>
<td>961.3</td>
</tr>
<tr>
<td><strong>Depreciation and amortization</strong></td>
<td>410.7</td>
<td>312.1</td>
<td>327.5</td>
<td>291.3</td>
<td>242.4</td>
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<tr>
<td>Share of earnings of equity investees</td>
<td>174.3</td>
<td>133.7</td>
<td>255.8</td>
<td>76.2</td>
<td>54.4</td>
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<tr>
<td><strong>Dividend income</strong></td>
<td>162.6</td>
<td>71.7</td>
<td>107.0</td>
<td>58.1</td>
<td>21.1</td>
</tr>
<tr>
<td>Other (expenses) income</td>
<td>(92.4)</td>
<td>138.0</td>
<td>(29.3)</td>
<td>(8.8)</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Finance costs</strong></td>
<td>99.1</td>
<td>120.9</td>
<td>62.8</td>
<td>68.7</td>
<td>85.6</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>642.8</td>
<td>79.2</td>
<td>1059.8</td>
<td>416.7</td>
<td>142.3</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>1806.2</td>
<td>980.7</td>
<td>3465.9</td>
<td>1104.0</td>
<td>606.9</td>
</tr>
<tr>
<td>Net income per share - diluted</td>
<td>1.98</td>
<td>1.08</td>
<td>3.64</td>
<td>1.13</td>
<td>0.63</td>
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### Income by Product

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</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>3000.6</td>
<td>1315.8</td>
<td>4068.1</td>
<td>1797.2</td>
<td>1227.5</td>
</tr>
<tr>
<td>Potash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphate</td>
<td>1821.6</td>
<td>1374.4</td>
<td>2880.7</td>
<td>1637.1</td>
<td>1255.1</td>
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<tr>
<td>Nitrogen</td>
<td>1716.4</td>
<td>1286.5</td>
<td>2497.7</td>
<td>1799.9</td>
<td>1284.1</td>
</tr>
<tr>
<td>Gross margin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potash</td>
<td>1796.0</td>
<td>730.4</td>
<td>3055.5</td>
<td>912.3</td>
<td>561.1</td>
</tr>
<tr>
<td>Phosphate</td>
<td>319.2</td>
<td>92.4</td>
<td>1067.9</td>
<td>433.7</td>
<td>84.6</td>
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<tr>
<td>Nitrogen</td>
<td>509.8</td>
<td>191.8</td>
<td>737.4</td>
<td>536.1</td>
<td>315.6</td>
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### Potash Division

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</tr>
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<tbody>
<tr>
<td>Potash Sales (US$ million)</td>
<td>3000.6</td>
<td>1315.8</td>
<td>4068.1</td>
<td>1797.2</td>
<td>1227.5</td>
</tr>
<tr>
<td>Freight, Distribution, Transport</td>
<td>258.5</td>
<td>93.8</td>
<td>209.4</td>
<td>217.2</td>
<td>169.3</td>
</tr>
<tr>
<td>Net sales</td>
<td>2742.1</td>
<td>1222.0</td>
<td>3858.7</td>
<td>1580</td>
<td>1058.2</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>946.1</td>
<td>496.1</td>
<td>803.2</td>
<td>667.7</td>
<td>497.1</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>1796.0</td>
<td>725.9</td>
<td>3055.5</td>
<td>912.3</td>
<td>561.1</td>
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#### Potash Sales Volumes by Geographic Region (tonnes-thousands)

<table>
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</thead>
<tbody>
<tr>
<td>North America</td>
<td>3355</td>
<td>1093</td>
<td>2962</td>
<td>3471</td>
<td>2785</td>
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<tr>
<td>Offshore</td>
<td>5289</td>
<td>1895</td>
<td>5585</td>
<td>5929</td>
<td>4411</td>
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#### Net Sales (US$ millions)

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</thead>
<tbody>
<tr>
<td>North America</td>
<td>1222.3</td>
<td>506.8</td>
<td>1307.5</td>
<td>656.9</td>
<td>470.5</td>
</tr>
<tr>
<td>Offshore</td>
<td>1505.7</td>
<td>698.9</td>
<td>2526.8</td>
<td>909.6</td>
<td>576</td>
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<tr>
<td>Misc/purchased products</td>
<td>14.1</td>
<td>16.3</td>
<td>24.4</td>
<td>13.5</td>
<td>11.7</td>
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#### Potash average realized price per tonne (US$

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</thead>
<tbody>
<tr>
<td>North America</td>
<td>364.3</td>
<td>463.7</td>
<td>441.4</td>
<td>189.3</td>
<td>168.9</td>
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<tr>
<td>Offshore</td>
<td>284.7</td>
<td>368.8</td>
<td>452.4</td>
<td>153.4</td>
<td>130.6</td>
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#### Provincial Potash taxes (NOT included in COGS, US$ million)

<table>
<thead>
<tr>
<th>Type</th>
<th>2010</th>
<th>2009</th>
<th>2008</th>
<th>2007</th>
<th>2006</th>
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<tbody>
<tr>
<td>production tax</td>
<td>0</td>
<td>-8.7</td>
<td>431.3</td>
<td>84.2</td>
<td>28.6</td>
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<tr>
<td>resource surcharge</td>
<td>76.5</td>
<td>37.7</td>
<td>112.1</td>
<td>51.2</td>
<td>37.9</td>
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#### Total shutdown weeks (summed across mines)

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<tr>
<td></td>
<td>40.4</td>
<td>152.8</td>
<td>49.9</td>
<td>18.7</td>
<td>65.9</td>
</tr>
</tbody>
</table>

*Source: PotashCorp*

Source: CRSP Database
Exhibit 15  U.S. Rate of Potash Application on Selected Crops (100 = historic average)

Source: Mosaic Corp
Exhibit 16: PotashCorp Estimates for Cost and Time of Building a 2 Million Ton Capacity Greenfield Potash Mine in Saskatchewan

Source: PotashCorp
Exhibit 17: PotashCorp Demand Estimates for China, India and Brazil

Source: PotashCorp
Exhibit 18: Potash Usage (KCl tonnes per 1000 hectares of arable land)

Source: FAO
Exhibit 19: Arable Land per Capita (hectares per person)

World Total

India

China

Source: FAO
Exhibit 20: Population Forecast as Percentage of 1990 Population

Source: FAO
Exhibit 21: Meat Consumption per capita 1970 -2007 (kg per capita per year)

Source: FAO
Exhibit 22: Cereal Consumption per capita 1970-2007 (kg per capita per year)

Source: FAO
Exhibit 23: Cereal Yield (hg/ha)

Source: FAO
Exhibit 24: Comparison of Royalty Rates as a Percentage of Net Revenue from Potash

Source: Saskatchewan Mining Journal