

## **a Malthusian Check?**

Richard (Rick) Mills  
www.aheadoftheherd.com

"The power of population is indefinitely greater than the power in the earth to produce subsistence for man". Thomas Robert Malthus

In 1798 32 year-old British economist Malthus anonymously published "An Essay on the Principle of Population" and in it he argued that human population's increase geometrically (1, 2, 4, 16 etc.) while their food supply can only increase arithmetically (1, 2, 3, 4 etc.). Since food is obviously necessary for us to survive, unchecked population growth in any one area or involving the whole planet would lead to individual pockets of humanity starving or even mass worldwide starvation.

Given the "dust bowl" droughts now gripping countries that make up almost two thirds of the worlds breadbasket - the US, many countries in South America, Australia, China and parts of Canada, the price of food staples - wheat, rice, corn, soybeans etc, will continue to rise.

"The whole global picture is flagging up signals that we're moving out of a period of abundant food supply into a period in which food is going to be in much shorter supply." Henry Fell, chairman of Britain's Commercial Farmers Group.

If we're hit by a particularly bad harvest or if a severe El Nino strikes, food supplies could get totally out of control in many countries.

### **The Ghost of Thomas Malthus**

The U.N. calls the global food crisis a "silent tsunami" and faith in the ability of local and global commodity markets to fill 6.6 billion bellies, never mind the projected 2.7 billion more by 2050 (U.N. projections say the world's population will peak at 9.3 billion in 2050) has been shaken.

Are the words of Thomas Malthus coming back to haunt us?

Going forward there are circumstances that are going to greatly impact the availability of arable land and commodities demand.

One of the greatest threats facing us is the loss of arable land that was used for food production. Land is being used for production of bio-fuels, topsoil is eroded away by wind and water and the agriculture land base is being paved over as we become more and more urbanized.

Global warming is threatening the world's rivers and lakes by melting the glaciers they rely on for much of their volume. Global warming is also going to decrease our agricultural land base as more and more of it turns to semi-arid and desert conditions. Continuing climate change is a fact, unseasonable weather and permanent changes in precipitation patterns are becoming the norm rather than the exception.

But the most alarming trend is the growth of the Asian economies. China is leading the way and has, or soon will have, a middle class of 250 – 300 million people. The more people there are on this planet and the more Asians, and others, decide they want a western style diet the more grains/oilseeds are needed to feed them. And many of those very same grains are needed to raise the protein, the beef, pork and chicken they want.

Farming practices are going to have to improve and every possible acre that can be planted is going to have to be utilized and producing at its optimal level. We have to grow more food on a shrinking agricultural land base while using depleted supplies of fresh water. So the question becomes - how do farmers get higher yields per acre?

## **Higher Yields**

There are several ways to get higher yields:

Using Genetically Modified Organism (GMO) seed  
Pesticides  
Fertilizers  
Satellite (GPS) farming

In this article I'm focusing on Fertilizer, specifically the potash component.

### **Potash is fuel for food**

In order for a plant to grow and thrive, it needs a number of different chemical elements. Three of these are the macronutrients nitrogen, phosphorus and potassium (a.k.a. potash, the scarcest of the three). Potassium makes up 1 percent to 2 percent of any plant by weight and is essential to metabolism. The availability of nitrogen, phosphorus and potassium in the soil, in a readily available form, is the biggest limiter to plant growth.

“Significantly higher potash prices and extraordinarily tight supply have become much more firmly entrenched...With the intense pressure on global food production and continued growth in potash demand, this is the reality for our industry for the foreseeable future.” Potash Corp. president and chief executive officer Bill Doyle

I agree wholeheartedly with Mr. Doyle, its all about feeding people, its all about food, its all about the supply of a basic human need. Demand for foodstuffs will never go away and food supplies will only increase arithmetically while our population, as Malthus said so long ago, increases geometrically. We need potash to help grow these various grains and oilseeds, more and more of it every year. There's certainly longevity to the potash story and as more and more investors become aware of it the most leveraged companies could very well deliver spectacular gains for their shareholders.

Below are four potash plays. All four should be of interest to anyone looking to invest in this sector.

### **Amazon Mining AMZ-TSX.v**

Share Structure and Cash

Shares outstanding: 28,373,231

Warrants (C\$1.55, expires: November 09): 7,650,000

Cash Available: C\$8.5M

Share Price (02/07/09): C\$1.26

Market Cap: C\$36M

Management and Board Interest: 15%

Amazon's potash in Brazil has an almost unique twist – it's at surface. This deposit, if developed, would be an open pit mine. That should mean dramatically lower capital costs than the deep potash mines of Saskatchewan, Canada.

With only 28 million shares out there is a lot of leverage in the stock. Having a small float they can raise money without shareholders suffering too much further dilution.

Amazon's proposed product is called Thermopotash and they have an agreement with ArcelorMittal to fund argonomic tests.

While the deposit does not yet have a resource, the potash is known to cover an area measured in kilometers, it grades around 10% potash.

### **Potash One KCL-TSX**

#### Share Structure and Cash

Shares Outstanding: 77,132,424  
Fully Diluted: 102,234,486  
Share Price: \$2.35  
Market Cap: \$180 million  
Cash: \$40 million

Potash One is the acknowledged leader among the junior potash companies; they might own the first potash mine built in Saskatchewan in 40 years.

President Paul Matysek founded, built and sold Energy Metals for over \$7/share to Uranium One during the uranium boom. Chairman Robert Friedland has a storied and successful career, most notably for selling the Voisey Bay nickel deposit to Inco in 1996 for \$4.3 billion.

Potash One just announced it has started a feasibility study on its Legacy Project, a solution potash mine (meaning they inject fluids down into the potash beds, dissolve it, bring it up in solution, and precipitate it out at surface). Potash One has a NI 43-101 compliant Measured and Indicated Mineral Resource of 251 million tonnes of KCl grading 26% and an Inferred Mineral Resource of 852 million tonnes of KCl grading 23.8%. The Legacy Project is adjacent to the largest producing solution potash mine in the world (Mosaic's Belle Plain). They also have \$40 million cash.

Seven research analysts cover the company.

### **Athabasca Potash API-TSX**

#### Share Structure and Cash

Shares Outstanding: 37,070,041  
Fully Diluted: 40,566,273  
Share Price: \$5.75  
Market Cap: \$213 million  
Cash: \$20 million

Like Potash One, Athabasca is a development stage company, and is also right beside an existing potash mine - Potash Corp's Lanigan Mine, one of the largest operating mines in the world.

Athabasca Potash's Burr deposit contains a Measured Mineral Resource of 125,800,000 tonnes at a grade of 21.27% K<sub>2</sub>O, an Indicated Mineral Resource of 299,000,000 tonnes at a grade of 23.07 % K<sub>2</sub>O, and an Inferred Mineral Resource of 186,900,000 tonnes at a grade of 23.55% K<sub>2</sub>O

A prefeasibility study is expected to be completed in the third quarter of 2009. API is proposing to develop a potentially low cost conventional potash mine that would produce 2 Mt/yr of potash over a planned 40 years of operation at the Burr Project.

### **Encanto Potash EPO-TSX.v**

#### Share Structure and Cash

Shares Outstanding: 114,097,834  
Fully Diluted: 141,492,324

Share Price: \$0.16  
Market Cap: \$18 million  
Cash: \$5 million

Encanto Potash has a unique business model. All the good potash ground in Saskatchewan – the potash capital of the world - has been staked for years. So newcomer Encanto got creative – they signed joint venture deals with the province’s First Nations groups to develop a potash resource on their lands. And the properties Encanto has access to are right in the heart of the provinces potash belt. The other benefit of the First Nations arrangement is that all their community input comes from one group, streamlining and fast tracking approvals.

Like Amazon, Encanto has yet to prove up a resource so it’s still considered exploration. But oil wells just outside their property, on all four sides, show potash beds present, with grades up to 50%. Encanto has the backing of the Endeavour Financial group. Drilling starts this month, October 2009.

### **Conclusion**

The potash story is just starting, unlike other resource plays there is no cycle, demand is always going to be there and its rising year over year. The total number of listed potash companies is extremely small, the best areas are already staked, most potash deposits will take 7-8 years to actually put into production and mines are extremely expensive to build.

Potash might just be the perfect investment over the short, medium and long term.

\*\*\*

If you're interested in the junior resource market and would like to learn more please come and visit us at [www.aheadoftheherd.com](http://www.aheadoftheherd.com)

Richard (Rick) Mills  
[www.aheadoftheherd.com](http://www.aheadoftheherd.com)  
[rick@aheadoftheherd.com](mailto:rick@aheadoftheherd.com)

Bio - Richard is host of [www.aheadoftheherd.com](http://www.aheadoftheherd.com) and invests in the junior resource sector. His articles have been published on over 60 websites including - Wall Street Journal, 321Gold, Kitco, National Post, USA Today, SafeHaven, Stockhouse, Casey Research, The Gold/Energy Reports, Gold-Eagle, Market Oracle and Financial Sense.

\*\*\*

**Legal Notice / Disclaimer** This document is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. Richard Mills has based this document on information obtained from sources he believes to be reliable but which has not been independently verified; Richard Mills makes no guarantee, representation or warranty and accepts no responsibility or liability as to its accuracy or completeness. Expressions of opinion are those of Richard Mills only and are subject to change without notice. Richard Mills assumes no warranty, liability or guarantee for the current relevance, correctness or completeness of any information provided within this Report and will not be held liable for the consequence of reliance upon any opinion or statement contained herein or any omission. Furthermore, I, Richard Mills, assume no liability for any direct or indirect loss or damage or, in particular, for lost profit, which you may incur as a result of the use and existence of the information provided within this Report.

Richard Mills does not own shares in any company mentioned in this article and no company mentioned is an advertiser on [www.aheadoftheherd.com](http://www.aheadoftheherd.com)

