

The Fertilizer Market - A View from Wall Street

Fertilizer Outlook & Technology Conference

RBC Dominion Securities Inc.

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All values in U.S. dollars unless otherwise noted.

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RBC Capital Markets®

Overview

- The Role of “Wall Street” and the Fertilizer Industry
- How Do Investors Value Fertilizer Companies?
- Relationship Between Fertilizer Company Share Prices and Fertilizer Prices
- Factors that Impact Fertilizer Prices

The Role of Wall Street

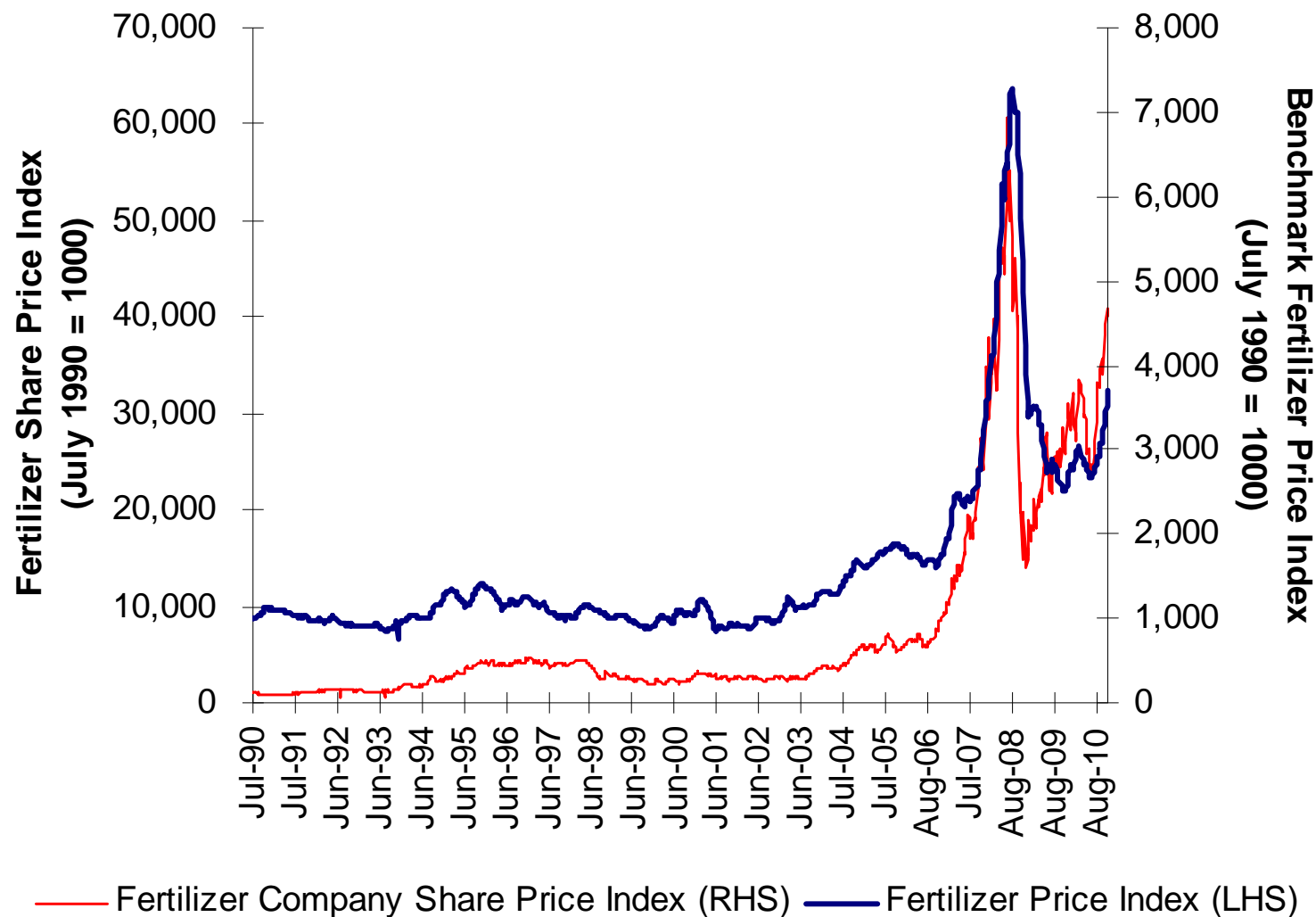
- Wall Street Not Homogenous
 - Sell Side firms vs. Buy Side firms
 - Global industry
- Sell Side Firms
 1. Investment banking services
 - Raising of capital through the issuance of securities (i.e., common stock, debt, etc.)
 - Merger and acquisition advice
 2. Sales and Trading
 - Distribution of new securities
 - Trading of securities (agency, proprietary, market makers)
 3. Research
 - Investment recommendations
 - Fundamental versus quantitative / technical / top-down
 - Sector knowledge
- Buy Side Firms
 - Institutional investors (mutual funds, insurance cos., pension funds, hedge funds, etc.)

How Do Investors Value Fertilizer Companies?

- Time Value of Money
 - Investors want to be compensated for investing their capital in a company.
 - Return can consist of income (i.e. dividends or interest income) and/or capital appreciation (reinvestment of cash retained and/or change in future expectations).
- Fertilizer Companies Represent a Stream of Future Cash Flows
 - Investors will assign a value to these future cash flows.
 - Assigned value will depend on risk.
 - Cash flows closely linked to earnings.
- Research Analysts Focus on Forecasting and Valuing Future Earnings and Cash Flows
 - Earnings = (Price X Volume) Less Expenses
 - Fertilizer share prices are closely linked to fertilizer prices.
 - Strive to understand factors that impact fertilizer prices.

Historical Relationship Between Share Prices and Fertilizer Prices

- Approx. 83% of the variation in fertilizer share prices can be explained by fertilizer prices.



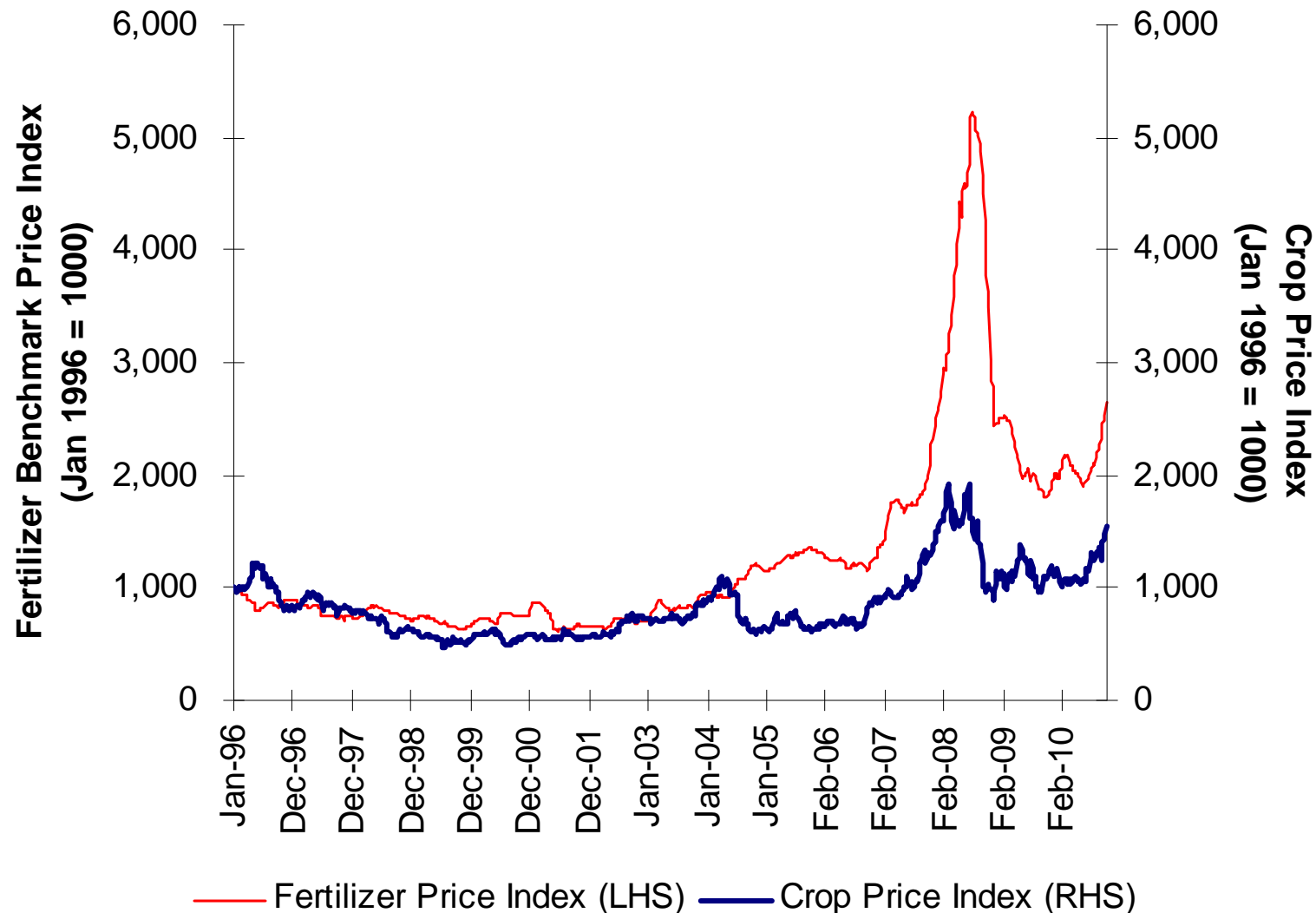
Source: Bloomberg, Fertilizer Week, RBC Capital Markets

Various Factors Can Impact Fertilizer Prices

- Crop Prices
 - Grain supply versus demand
 - Global economic conditions
 - Agronomy
- Nutrient Supply & Demand Balances
 - Expected demand growth versus forecast supply growth
 - Inventory levels
- Supply Side Factors
 - Marginal cost of production
 - Greenfield and brownfield economics
 - China fertilizer export tariffs
 - Producer operating rates
- Demand Side Factors
 - India, China & Brazil
 - Global economic conditions
 - Farmer returns
 - Ethanol economics

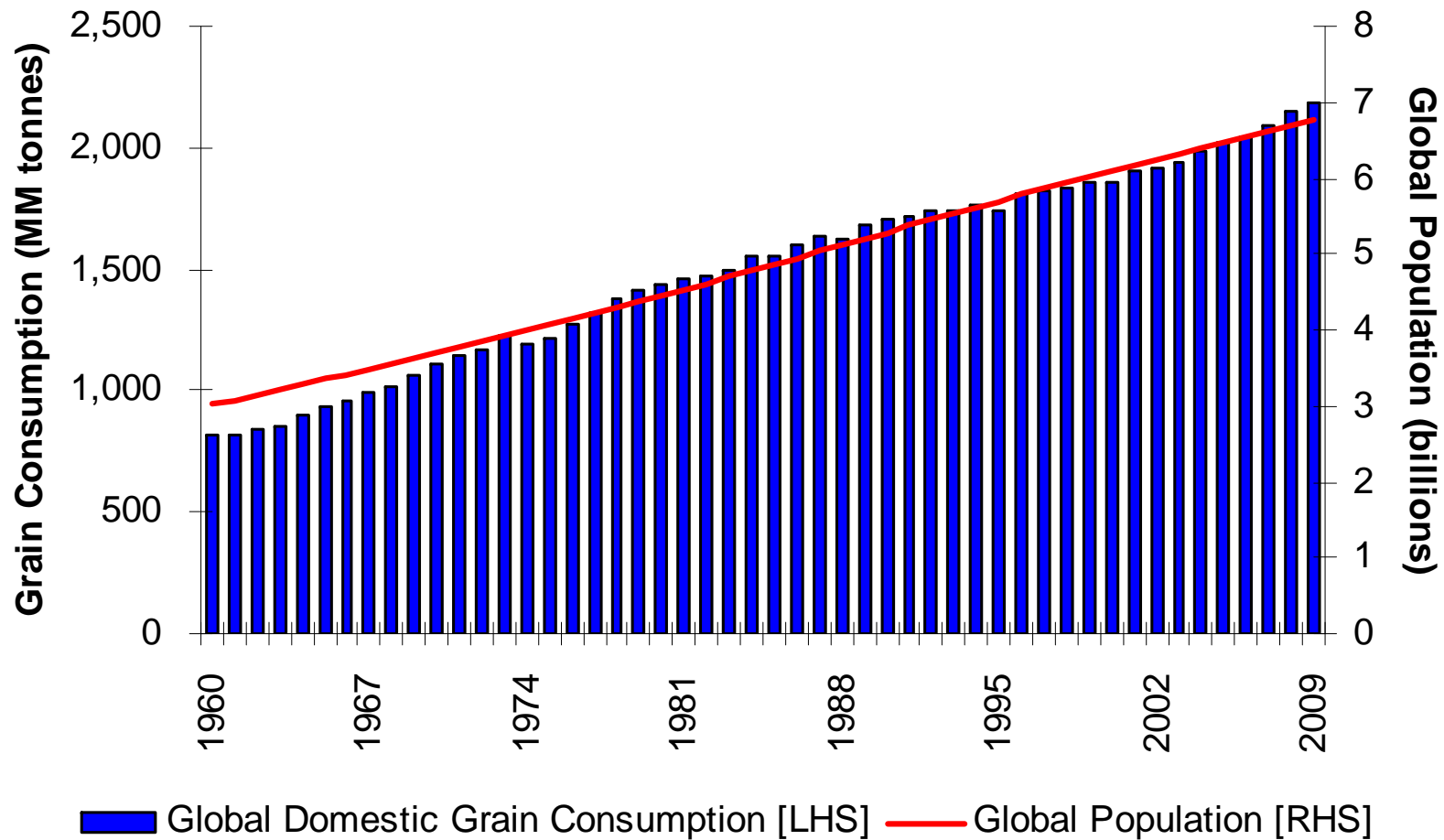
Historical Relationship Between Fertilizer Prices and Crop Prices

- Approx. 63% of the variation in fertilizer prices can be explained by crop prices.



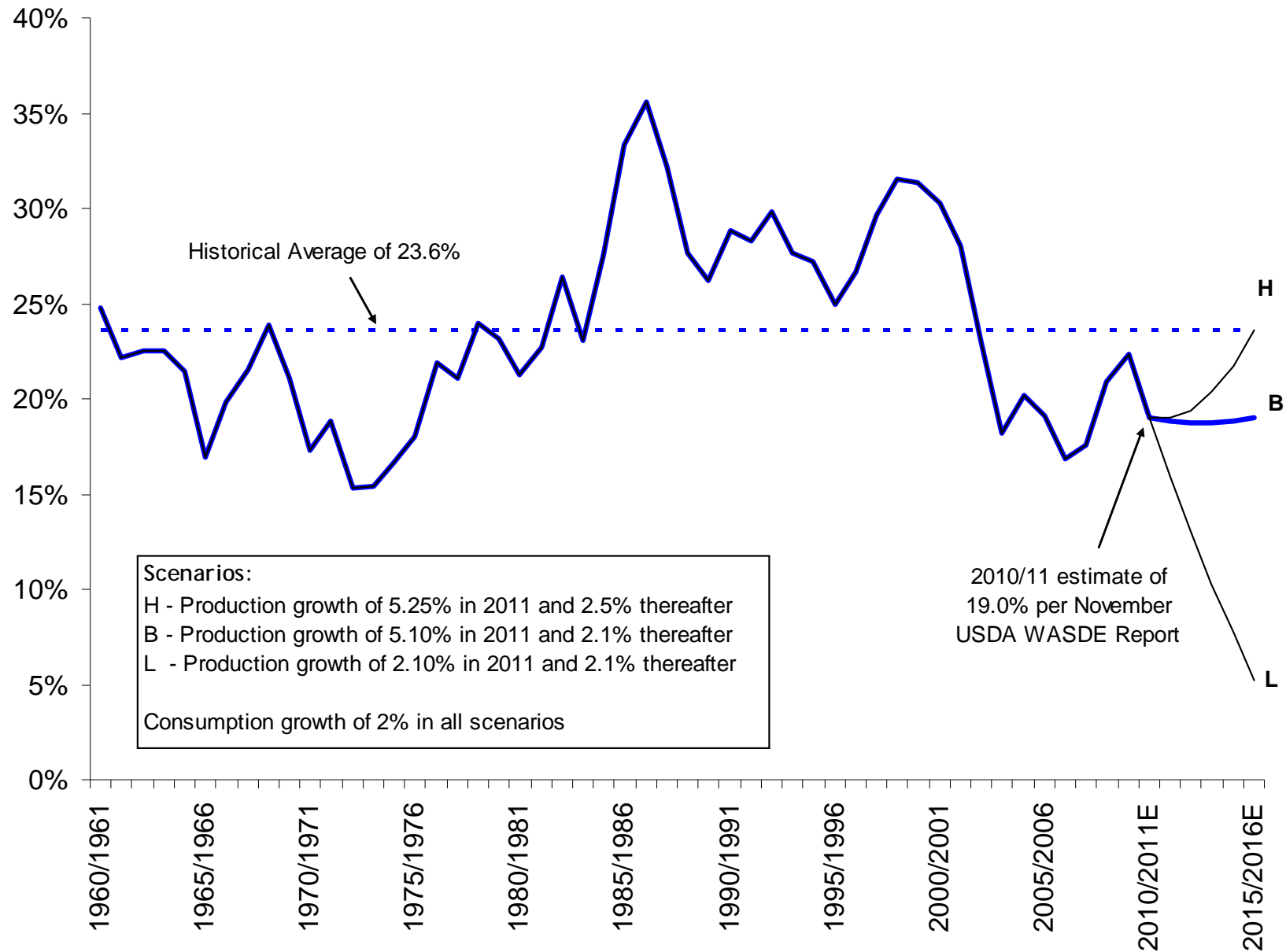
Source: Bloomberg, Fertilizer Week, RBC Capital Markets

Grain Consumption Driven by Population Growth



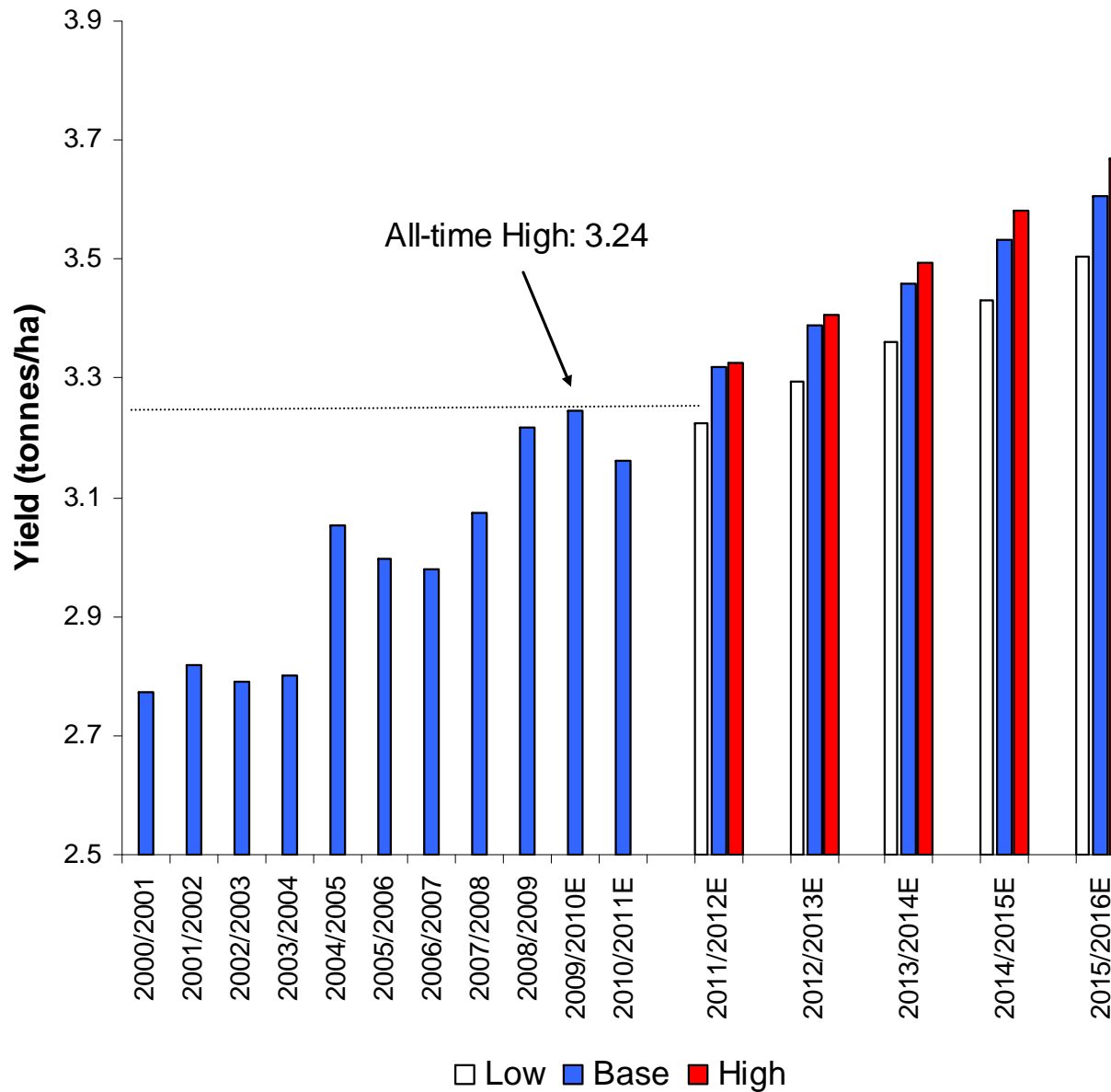
Source: US Census Bureau, USDA

Global Grain and Supply Scenarios



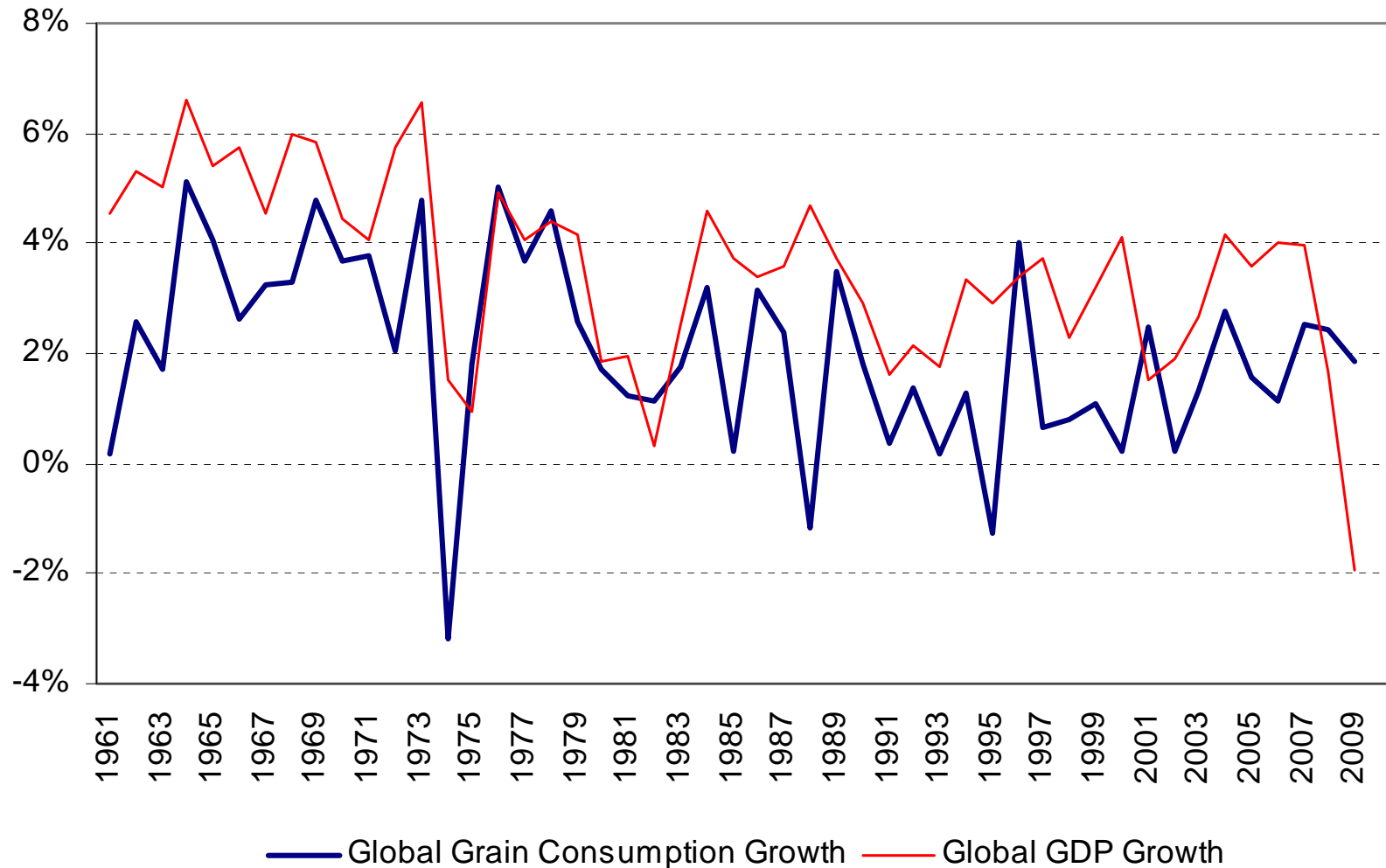
Source: USDA, RBC Capital Markets estimates

Higher Global Yields Required to Keep Pace with Consumption



Source: USDA, RBC Capital Markets estimates

Relationship Between Grain Consumption and Global GDP Growth

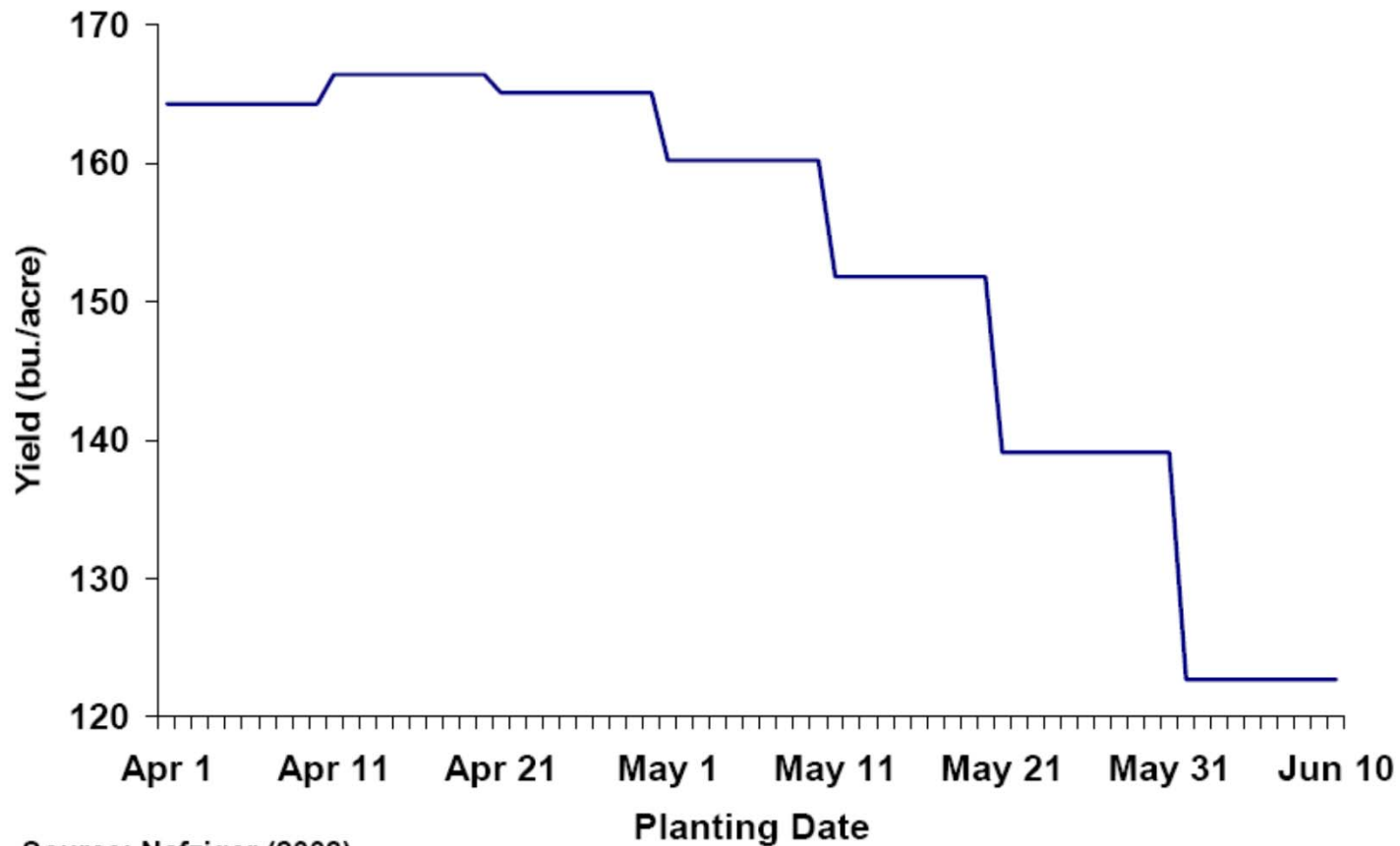


Source: USDA,, World Bank, RBC Capital Markets estimates

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Agronomy Matters

Response of Corn Yield in Central Illinois to Planting Date (University of Illinois)



Source: Nafziger (2008)

Nutrient Supply and Demand – Balanced to Tight Outlook in 2011

- Nitrogen
 - Expect market to remain relatively balanced in 2011.
 - Could be impacted by marginal cost economics and seasonality.
 - Market conditions relatively firm at this time – possible tightening through next spring.
 - Chinese export tax policy could be a wild card.
- Phosphate
 - Expect market to remain tight until start-up of Saudi Arabia's Ma'aden facility in H2/11.
 - Inventories appear to be quite low.
 - Sulphur feedstock costs could be a wild card.
- Potash
 - Expect demand to improve in 2011 with increased demand from China.
 - Inventories are declining.
 - Limited supply additions over the next few years.
 - Chinese demand could be a wild card.

Supply Side Factors

- Marginal Cost of Production
 - Who/where is the highest cost producer?
 - Relevant when available supply exceeds demand
 - Nitrogen: natural gas and coal feedstock costs; freight
 - Phosphate: non-integrated rock costs; sulphur and ammonia feedstock costs; freight
 - Potash: mining cash costs; energy prices (solution mining)
- China Fertilizer Export Tariffs
 - Timing of export windows in 2011 and change in tax rates
 - Peak tax rate of 110% vs. 7% for non-peak tax rate
 - 2010 peak periods: Urea – Feb-June, Sept. 16-Oct. 15; DAP – Feb-May, Sept. 1-Oct. 15
- Producer Operating Rates
- Greenfield and Brownfield Economics
 - Capital costs
 - Target return
 - Life of asset
 - Operating costs
 - Royalty and tax rates
 - Political risk

Illustrative Example of Greenfield Economics

- This is an illustrative example (not a forecast) that highlights the sensitivity of greenfield economics to changes in capital cost and required return on capital.

| | Low Capex at 15% | Medium Capex at 15% | High Capex at 15% | Low Capex at 10% | Medium Capex at 10% | High Capex at 10% |
|--|------------------------|---------------------------|-------------------------|------------------------|---------------------------|-------------------------|
| Term (years) | 50 | 50 | 50 | 50 | 50 | 50 |
| Construction period to full production (years) | 8 | 8 | 8 | 8 | 8 | 8 |
| Annual production (MM tonnes) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Capital cost (\$MM) | \$2,500 | \$3,500 | \$4,000 | \$2,500 | \$3,500 | \$4,000 |
| Op. costs (\$/tonne) - Year 1 (3% CAGR thereafter) | \$100 | \$100 | \$100 | \$100 | \$100 | \$100 |
| Income tax rate | 30% | 30% | 30% | 30% | 30% | 30% |
| Unlevered equity discount rate | 15.00% | 15.00% | 15.00% | 10.00% | 10.00% | 10.00% |
| Realized flat potash price required for NPV=0 (\$/tonne FOB Saskatchewan) | \$629 | \$828 | \$927 | \$398 | \$497 | \$546 |

Source: RBC Capital Markets

Demand Side Factors

- China, India & Brazil
 - China potash imports
 - Indian fertilizer subsidy program
 - Brazilian farm economics
- Farmer Returns
 - Crop prices
 - Affordability of fertilizer
 - Future expectations
 - Weather
- Ethanol Economics & Mandate

Expect Recovery in Chinese Potash Demand in 2011

- Expect China to be a key driver of incremental demand in 2011.

Global Potash Demand Forecast

| <u>Potash Demand Analysis</u> | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010E | 2011E |
|-------------------------------|------|------|------|------|------|------|-------|-------|
| <i>MM tonnes</i> | | | | | | | | |
| China | 9.0 | 11.5 | 9.5 | 12.5 | 8.5 | 4.5 | 8.0 | 12.0 |
| U.S. | 10.0 | 9.0 | 8.0 | 9.0 | 8.5 | 3.5 | 9.0 | 10.0 |
| Brazil | 7.0 | 5.5 | 6.0 | 7.5 | 6.5 | 4.5 | 7.0 | 7.5 |
| India | 3.0 | 5.0 | 3.5 | 4.0 | 5.0 | 5.5 | 5.0 | 5.5 |
| S.E. Asia | 4.0 | 3.5 | 4.0 | 4.5 | 5.0 | 2.0 | 4.0 | 4.5 |
| ROW | 18.0 | 17.0 | 16.5 | 18.0 | 18.0 | 9.0 | 17.0 | 18.5 |
| Total global potash demand | 51.0 | 51.5 | 47.5 | 55.5 | 51.5 | 29.0 | 50.0 | 58.0 |

Source: Company reports, Fertecon, RBC Capital Markets estimates

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Indian Fixed Subsidy Program

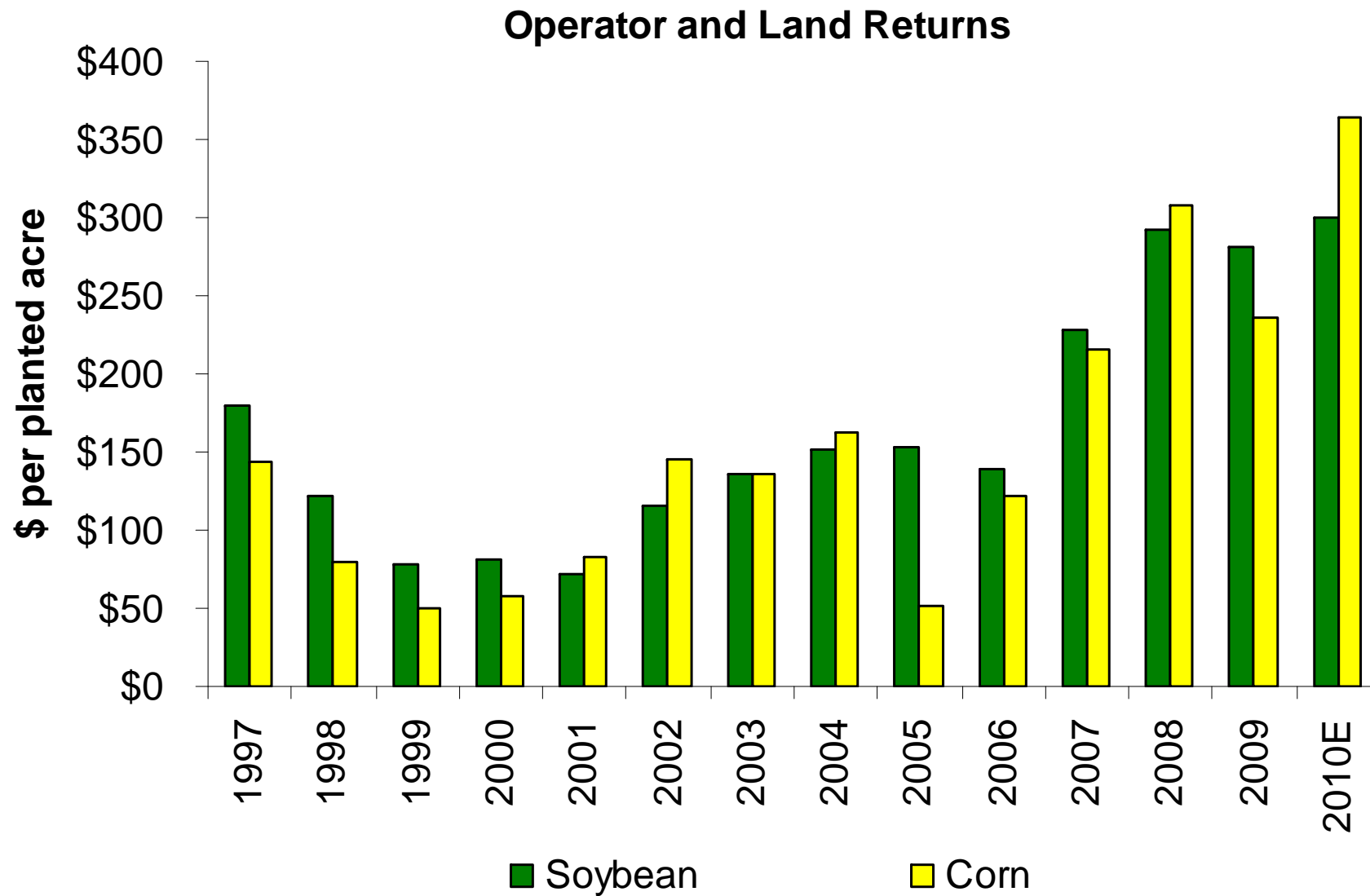
- Will India change its fixed fertilizer subsidy program in 2011?
 - Nitrogen - Rs. 23.227 per kg or ~US\$523/tonne [NPK & DAP]
 - Phosphorus - Rs. 26.276 per kg or ~US\$591/tonne
 - Potassium - Rs. 24.487 per kg or ~ US\$551/tonne
- Will urea be decontrolled and move to a fixed subsidy regime?

| | | Current Indian Fixed Subsidy | Fixed Subsidy + Retail Price |
|--------|-------|------------------------------------|---------------------------------------|
| | | Retail Price | Retail Price |
| DAP | \$366 | \$210 | \$576 |
| Potash | \$336 | \$100 | \$436 |

Source: FMB, RBC Capital Markets estimates

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Attractive Farm Economics



Source: USDA, RBC Capital Markets estimates

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2011 Outlook Summary

- Expect global grain fundamentals to remain supportive for fertilizer industry fundamentals.
- Crop prices provide necessary incentives to increase production, which is required to keep pace with growing demand. Whether Mother Nature will cooperate remains to be seen.
- Expect nutrient supply and demand balances to generally remain balanced to tight in 2011.
- Global economic conditions could be an uncertainty for the fertilizer sector.

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