Fertiliser Supply Chain Dynamics

Changing roles and responsibilities

Dirk Jan Kennes
Global Strategist Farm Inputs
Food & Agribusiness Research and Advisory
Rabobank International

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Prices for what we sell and buy have changed so much…

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...that it is almost impossible to feel confident about the decisions we make

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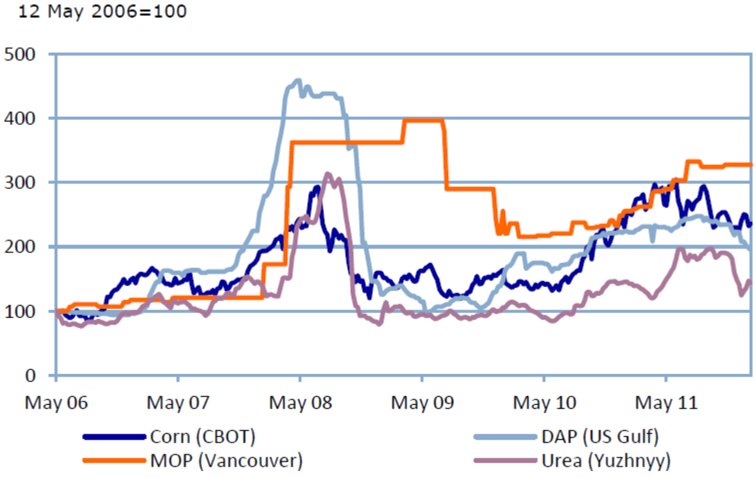
Changing market drivers; switching from buyers’ to sellers’ market

- *Fertiliser prices did not rise as much in the last agri commodity price boom*
- *Raw material costs were also at more manageable levels during the last agri-commodity price boom*
- *Market drivers are switching more regularly from a* ***buyers’ market*** *(cost plus margin model) to a* ***sellers’ market*** *(charge what the market tolerates)*

Indexed fertiliser prices vs. corn price, May 2006 – Jan 2012



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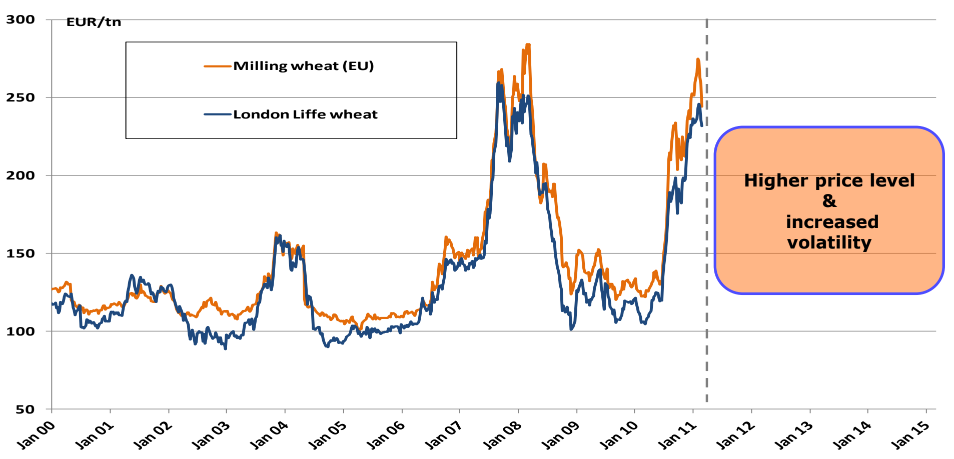
Prices to be higher and more volatile

Long-term outlook on wheat prices



Source: Bloomberg, Rabobank, 2011

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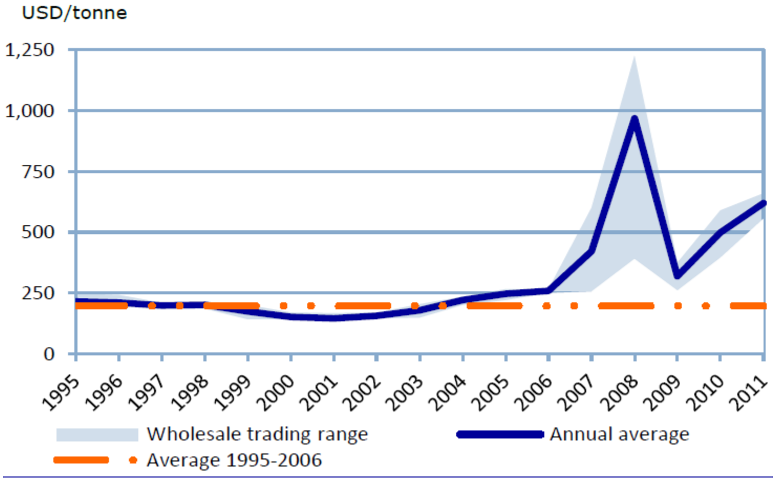
Price volatility is emphasising supply chain management

- *Fertiliser prices are trading at higher averages prices compared to the flat conditions of the 1990s and early 2000s*
- *Greater annual price variance for fertiliser prices has caused fertiliser supply chains to shift to **shorter trading cycles***

International benchmark DAP prices, 1995 - 2011



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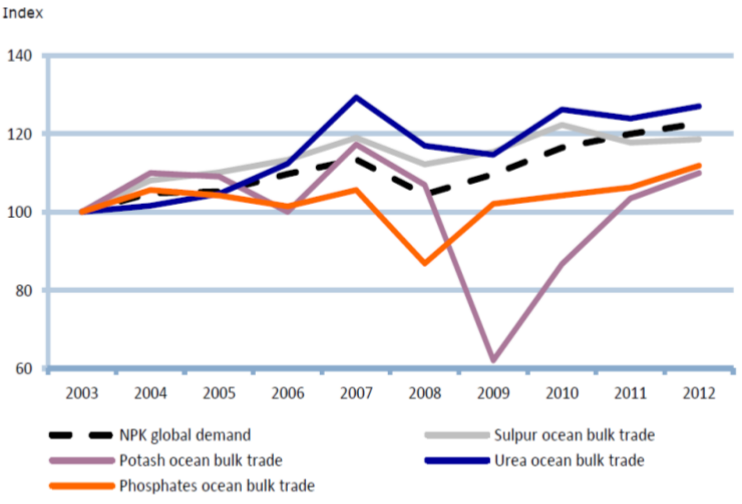
Fertiliser demand elasticity and the impact on trade conditions

- *Fertiliser demand at farm level shows that **elasticity is now more pronounced**. Total fertiliser demand collapsed by 8% in 2008. Fertiliser demand is now back at historic highs and is expected to increase by 2.3% YoY in 2012*
- *Fertiliser trade for ocean bulks collapsed in 2008/09 as supply chains focused on bringing down inventory that had built-up before the demand collapse*

Indexed nutrient demand and fertiliser ocean bulk trade, 2003 – 2012f



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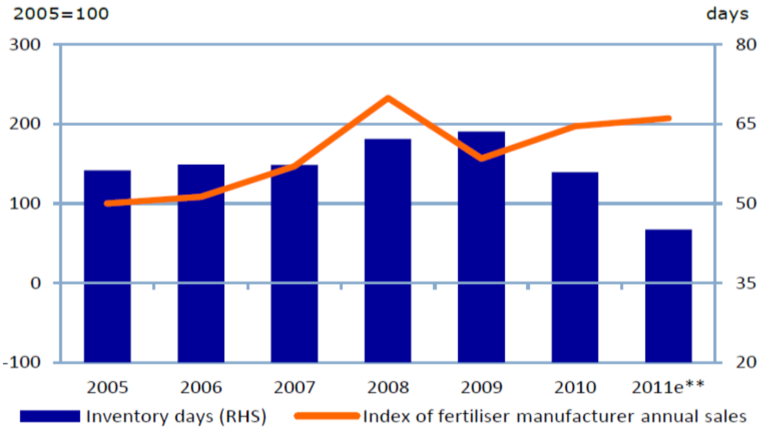
Upstream fertiliser players managing tighter levels of stock

- *Fertiliser sales for major players reached a record high in 2008 given the high prices. Upon the collapse of demand for fertiliser in 2008/09, built-up inventory reached industry-average conditions of 64 days compared to the 55 days that the market was used to*

- ***Upstream fertiliser players are taking more control of inventory** with the aim of keeping conditions at much lower levels*

Fertiliser sales and inventory operating days for major industry players*, 2005 – 2011e



*: Sample group of 17 publicly listed players

**: 2011 figure is based on available data as of June 2011

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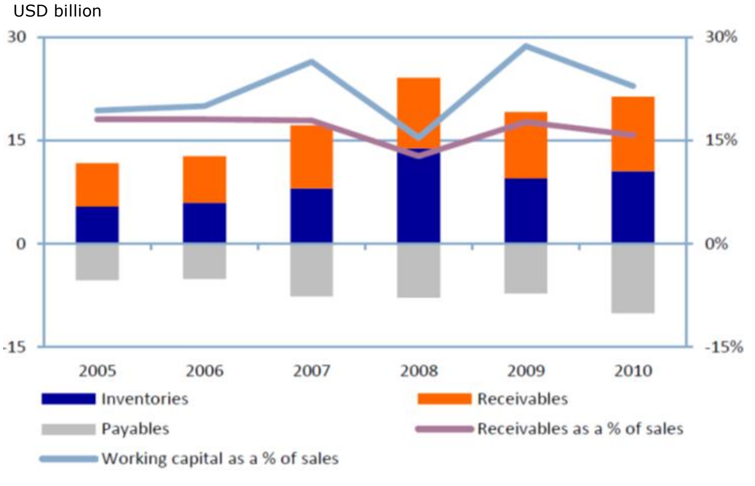
Upstream players encountering variable operating conditions

- *The upstream fertiliser players are seeing the need for more flexibility with working capital conditions due to the changes in demand and supply chain dynamics*

- ***Manufacturers are adjusting facility utilisation rates on a more regular basis** to avoid excess supply*

Fertiliser manufacturers' operational trends, 2005 – 2010



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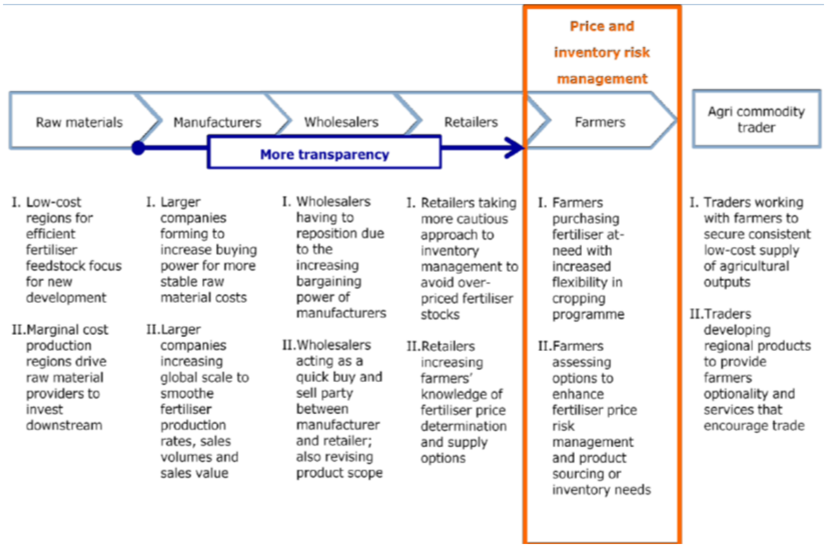
Price/stock risks shifting to farmer; more transparency is key

- *As farmers increase the elasticity of their fertiliser demand conditions,* ***more price and inventory pressure has come onto the farming end of the supply chain***
- *For the supply chain to operate effectively under these conditions, the* ***upstream fertiliser players will need to increase transparency*** *in order to capture farmer demand and smooth out issues with sales volumes and margin constraints*



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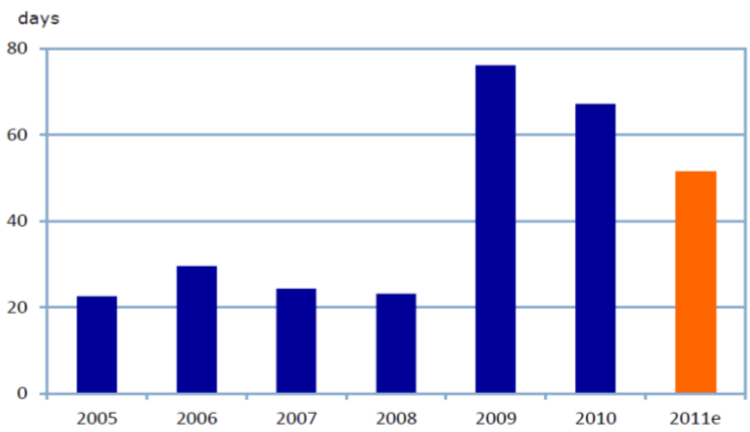
The fertiliser supply chain is adjusting to meet farmers' needs

- *Farmers are looking at ways to manage higher costs for farming.* ***Cash flow constraints are key issues for fertiliser purchasing decisions***
- *Upstream fertiliser players need to be aware of the changing cash flow conditions and will need to adjust supply models in order to maintain market sales*

Farming companies payable accounting trends, 2005 – 2011e



[1] sample group of upto 6 publicly listed players over the time period

[2] 2011 figure is based on latest available company figures for 2011

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Examples of strategies to assist supply chain management

- Global fertiliser manufacturers/traders utilising **regional field representatives** to relay information on farmer **short-term demand conditions** and fertiliser product awareness (**brand and supply option recognition**).
- FIS' **fertiliser swaps** business grew 20% YOY in 2011 and continues to attract increasing interest as prices remain volatile.
- Mosaic have stated that there is a much healthier appreciation of risk management. The industry has helped with that by making contracts available to dealers/retailers; in Mosaic's case these had been **future price determent contracts** – where the future price is deferred **(FDPs)**. FDPs are when a dealer signs a contract with Mosaic and they put fertiliser into a warehouse. The dealer takes ownership of that fertilizer and assumes the insurance risk and the quality risk. It's the dealer's product but it has not been priced. The dealer can **price the fertiliser product within a certain window at 60 or 90 days** from a certain date, relative to certain reference points.
- **Barter finance**, where by commodity accumulators/traders exchange inputs for sales contracts for crops.
- **Grower Account Purchasing Facilities:** those that a farm input supplier manages with farmers subject to underwriting approvals from a financial lender.
- **Pre-ordering contracts and deferred payment terms** based on the commitment for early farm delivery of fertiliser. Farmer agrees to purchase fertiliser at a given price up to 6 months before application. To ensure quality supply and the agreed price, the farmer must accept ownership and storage of the product at an early stage. The farmer is offered terms for deferring payment until crop harvest; normally 8 months' interest is accrued following the physical farm delivery.

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