Asian Fertilizer Demand
Agricultural Outlook & Implications

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• Global agriculture drivers, trends and outlook
• Macroeconomic drivers – East vs West
• Asian agriculture in the global context
• Global & Asian crop area and nutrient demand forecasts
• Risks
Pacific weather patterns becoming critical
El Nino / La Nina cycles driving S American and SE Asian weather

- **El Nino** = warming Pacific \(\rightarrow\) dryness in SE Asia, rain in S. America
- **La Nina** = cooling Pacific \(\rightarrow\) rain in SE Asia, drought to S. America

2005 Weak El Nino
2006 Weak La Nina
2007 Weak El Nino
2008 Moderate La Nina
2009 Weak La Nina
2010 Moderate El Nino
2011 Moderate La Nina
2012 Moderate La Nina
2013 Weak El Nino?

Weather-driven rallies are not new
Tightening balances since mid-2000s have increased volatility

**Fertilizer Affordability Indices**

- Index of Crop Prices
- Index of Fertilizer Prices

Supply shocks
Russian export ban
2012 rally ending?

Source: CRU
US corn now 104m tonnes lower than first forecast
Wheat relatively well supplied but well below expectations

Soya market reacted to losses in S. America
CPO suffering excess supply but demand likely to pick up
Rice demand exceeding supply for first time since 2004
Thai intervention keeping a lid on prices

Rice S&D
- Milled Production
- Consumption
- STU

Source: USDA

Main Rice Export Prices
- Thai Rice 100B Fob Bangkok
- Vietnam Rice 5% Fob

Source: IGC, Thai Rice Exporters Assoc.

Slowing economic growth ahead
Will slow growth rates of food / ag demand, but not stop it

GDP growth
% point difference from historical average

Source: Oxford Economics/Haver Analytics

Emerging markets
US
Eurozone
Developed vs developing markets
Rapid population growth + increasing affluence in Asia and S.America

Population and GDP drive meat demand

![Graph showing population and GDP drive meat demand for Brazil, China, India, Japan, and USA.]

Source: CRU

Agricultural price rises affect inflation
Slowing GDP growth and rising food prices could curb demand

Food price inflation

![Graph showing food price inflation for China, USA, and FAO Food Price Index.]

Source: IMF, FAO
Crop price forecast - A “new normal” seen
Suggests farmers will have the means to buy fertilizer needs

CRU price forecast consensus

Global area for main crops continuing to increase
CRU’s agricultural model projects main growth in soyabeans and corn
Asia accounts for 40% of total world cropping area
Dominant in a few crops, especially rice, oil palm and F&V

Emerging economies continue to lead cropping expansion
S. America, Asia and Africa growing steadily

Source: FAO, CRU
New nutrient demand methodology
CRU’s bottom-up agriculture-based forecast

A Forecast Food Demand
Based on GDP & Population

B Forecast Crop Areas
Based on food demand in (A)

C Fertilizer Application Rates
Based on external data and work done by CRU

FORECAST NUTRIENT DEMAND
= (B) x (C)

Global Nutrient Demand

Source: CRU

Asia share of world N, P and K
Accounts for 50-60% of total nutrient use for 40% of world’s cropland

N

East Asia
South Asia
SE Asia
RoW

42%
32%
7%
19%

P

42%
32%
4%
22%

K

53%
25%
10%
12%

Source: CRU
Asian nutrient demand projections
Growth across the region, East Asia continues to dominate

Asian nutrient demand projections include:
- N demand
- P2O5 demand
- K2O demand

Source: CRU

Upside & downside risks for agriculture & fertilizer demand
More upside risk seen in agriculture than fertilizer markets

Risks for Agriculture
- FSU export ban
- Change in biofuel policies
- Eurozone
- China importing wheat and corn

Risks for Fertilizers
- India subsidy regime
- Urea overcapacity in China
- Iran export declines

Source: USDA
CRU fertilizer reports & forecasts integrate agri analysis
Making a crop-based assessment of fertilizer demand

Outlook Products
• Medium & long term forecasts for N, P₂O₅, K₂O and S
• Implication of agriculture market outlook & crop prices on nutrient demand forecasts

Fertilizer Week
• Daily fertilizer market updates
• Searchable and interactive prices & data
• Regular agri market news and implications for fertilizer markets

Thank You
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> Fertilizer Week: price discovery, news and analysis
> Market Outlooks: medium term and long term demand, supply and price forecasting
> Cost Data Services: reports, profiles and cost curves for the nitrogen, phosphates, potash, sulphur and sulphuric acid industries.

For much of our fertilizer work, we are able to draw on the local knowledge and expertise of our team in Beijing, Mumbai and Santiago.
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