THE INDEPENDENT AUTHORITY
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# Global Fertilizer Supply/Demand
# Five-Year Market Outlook (2012-2017)

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**2º Congresso Brasileiro de Fertilizantes**

**São Paulo, August 27, 2012**

# Presentation Outline

**Global Market Overview**

**Supply, Demand, Trade and Prices**

- Nitrogen Market Outlook
- Phosphates Market Outlook
- Potash Market Outlook

**Outlook for the Brazilian Market**

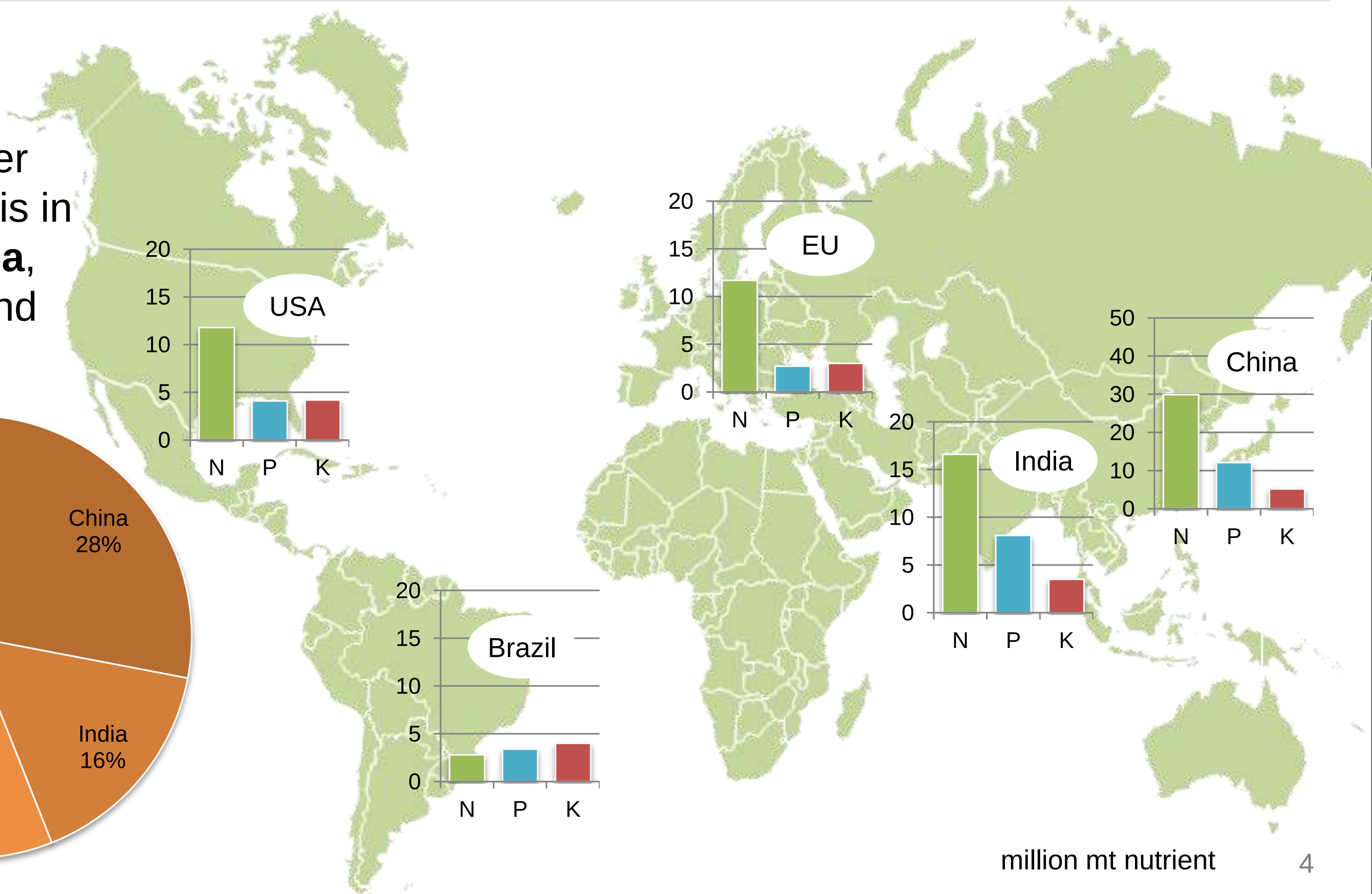
**Conclusions**

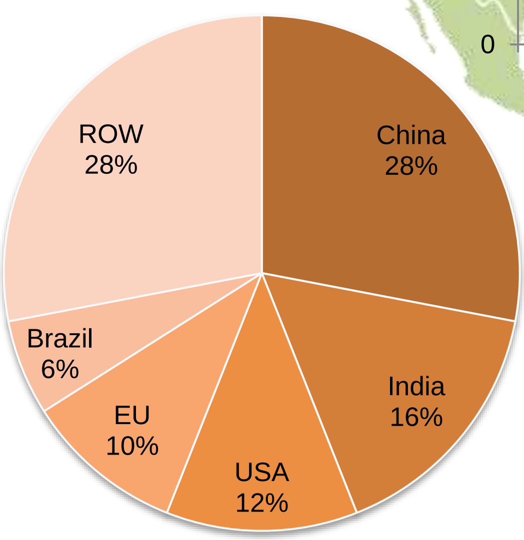
**CRU International**

# Global Market Overview

# Fertilizer Demand

>70% fertilizer consumption is in **China**, **India**, **USA**, **EU** and **Brazil**



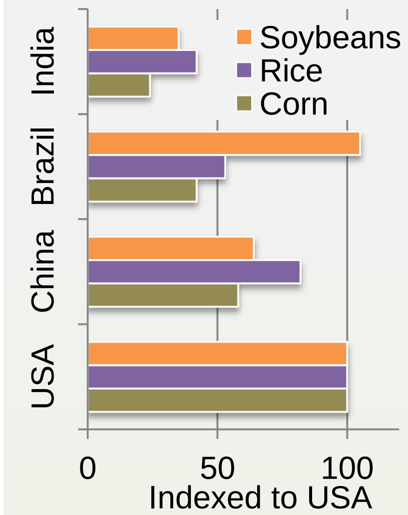

million mt nutrient

# Demand Drivers

SHORT TERM

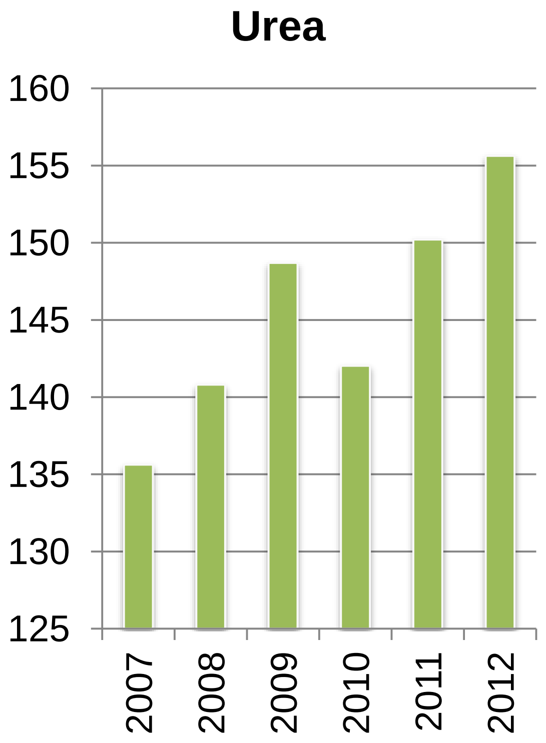
- Crop prices
- Fertilizer prices
- Tactical buying
- Weather patterns
- Non-food crops
- Better nutrient balance
- Changing diets
- Rising population

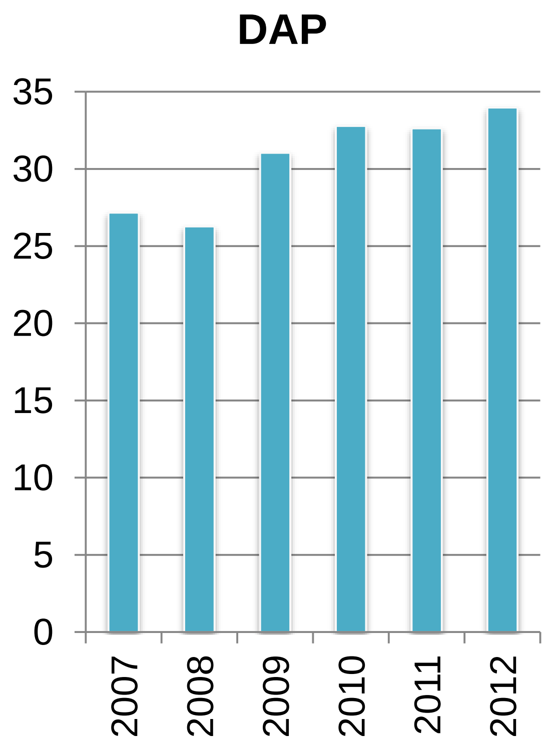
LONG TERM

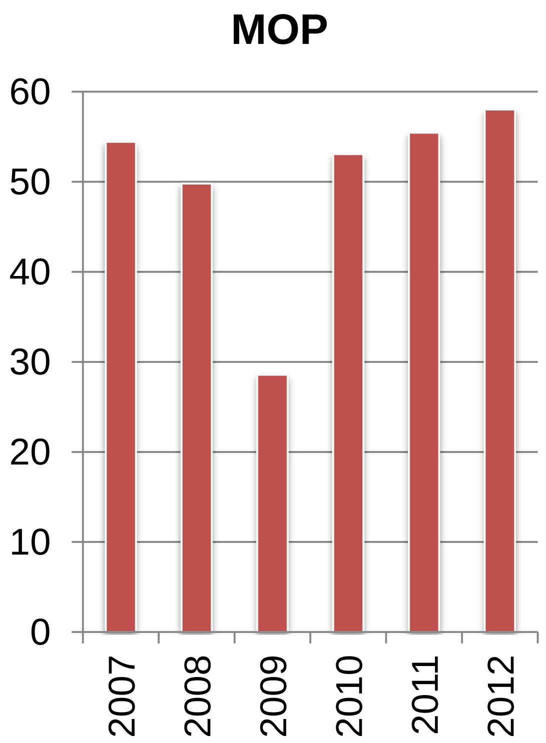



Fertilizer is widely **<u>under-applied</u>** and **<u>inefficiently applied</u>** in developing economies $\Rightarrow$ poor yields and high growth potential

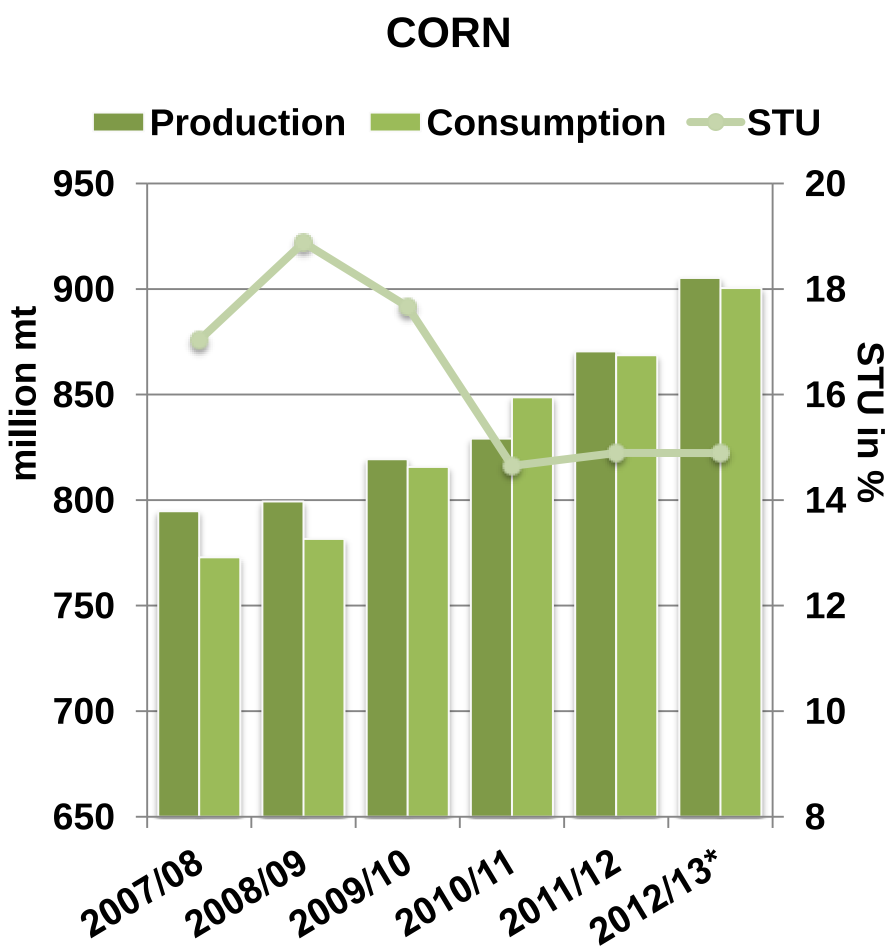
# Trends in N, P & K Demand – 2007-2012 (million mt)

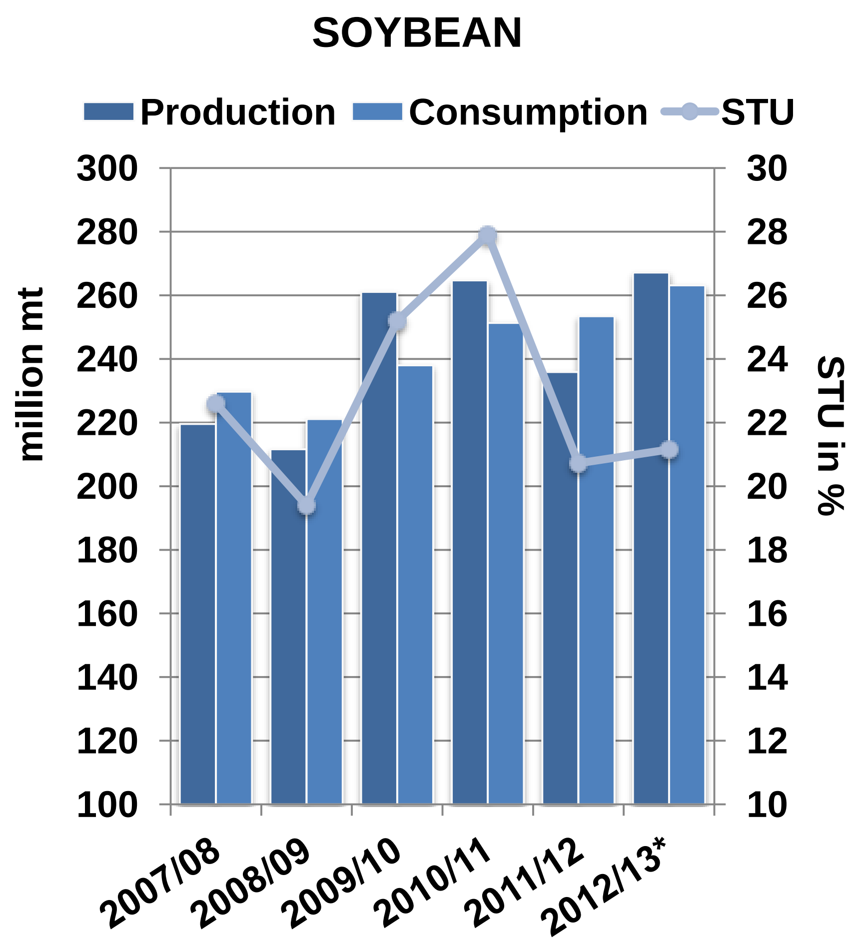


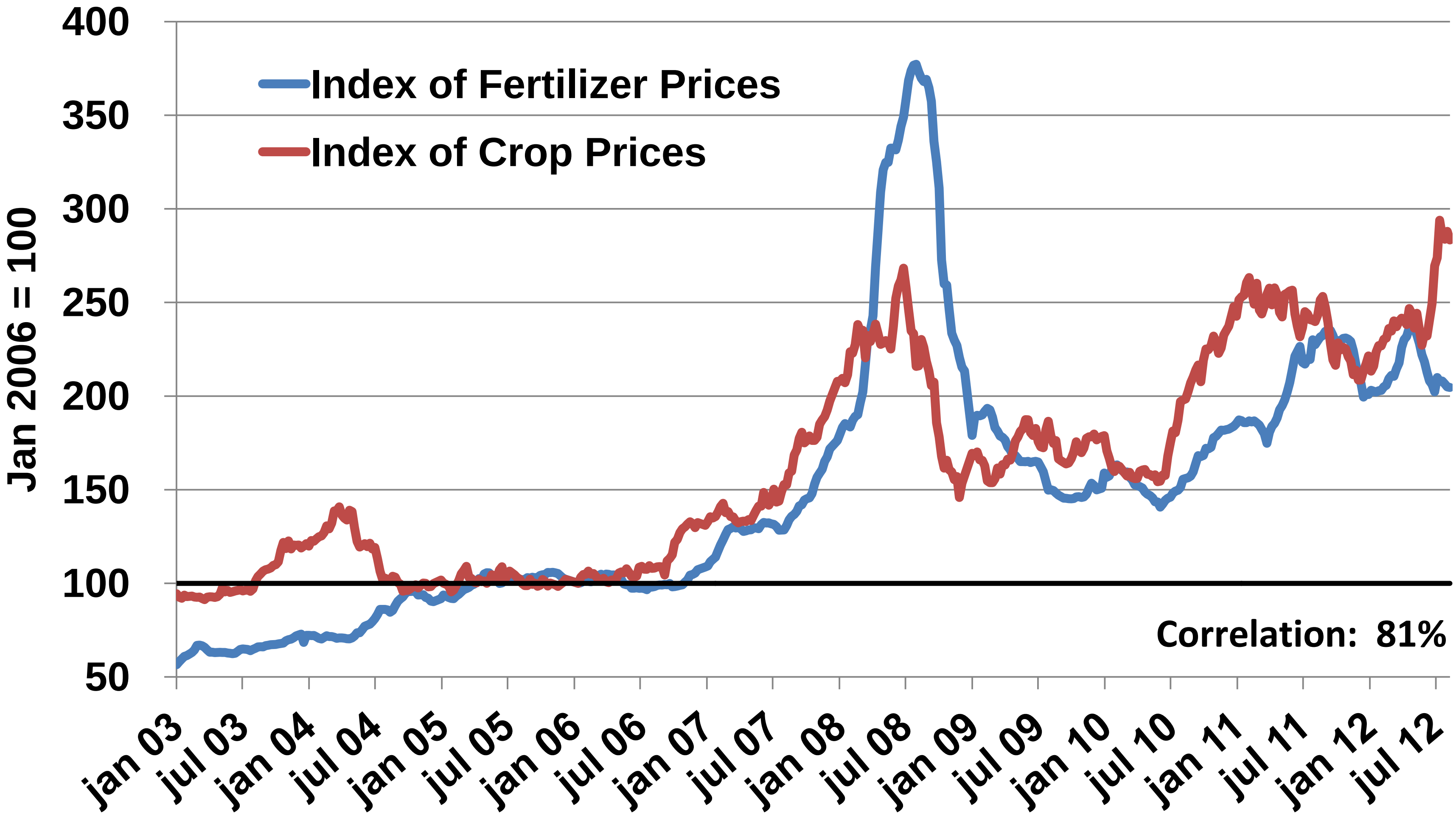



# Supply & Demand Balances for Key Crops: Corn & Soybeans

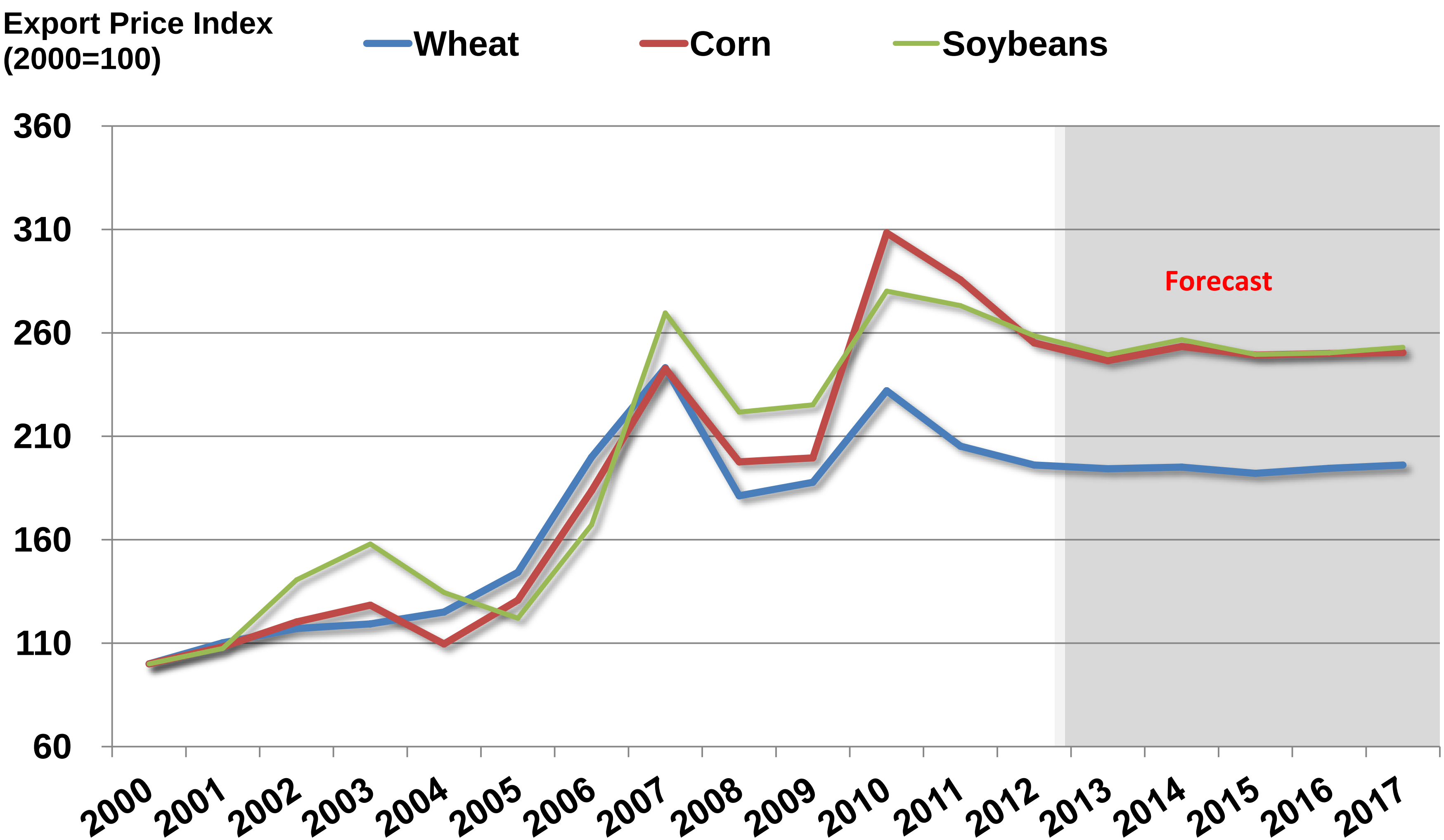


# Fertilizer Affordability Index



# CRU's Crop Price Index Forecast (2000=100)



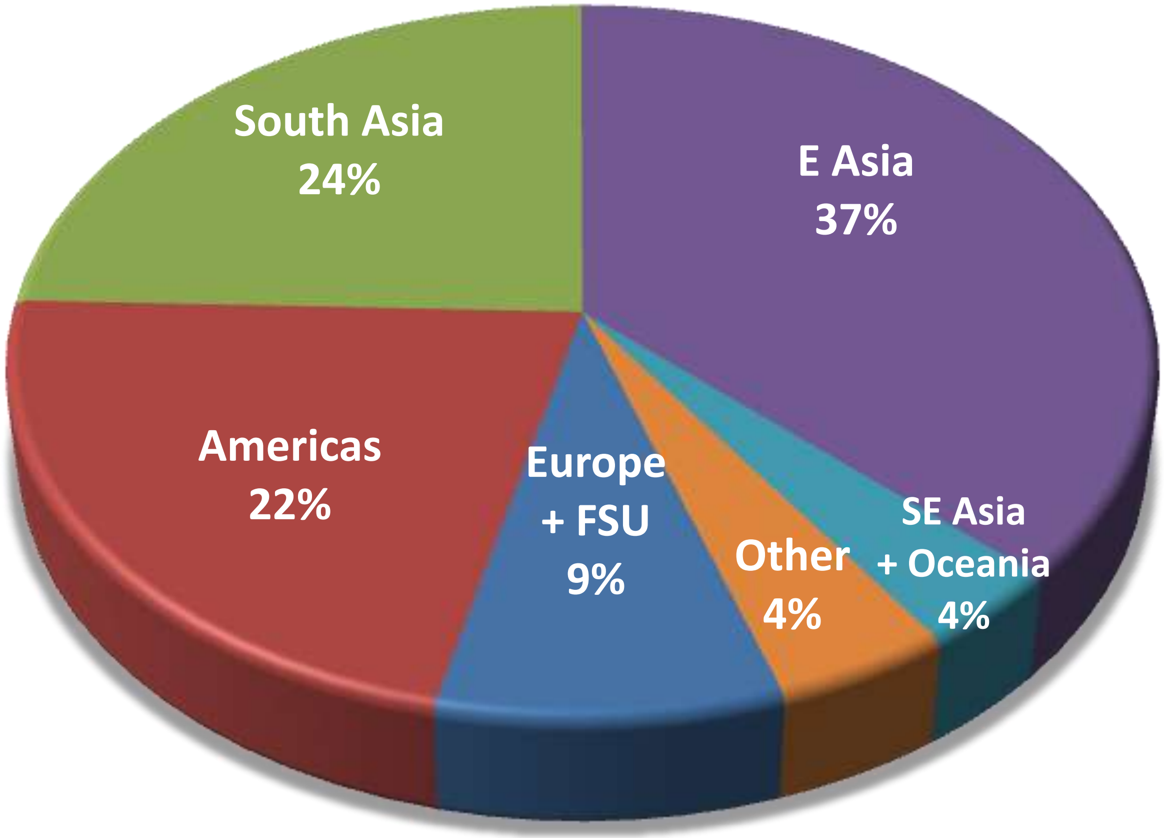
# Supply, Demand, Trade and Prices

Nitrogen Market Outlook

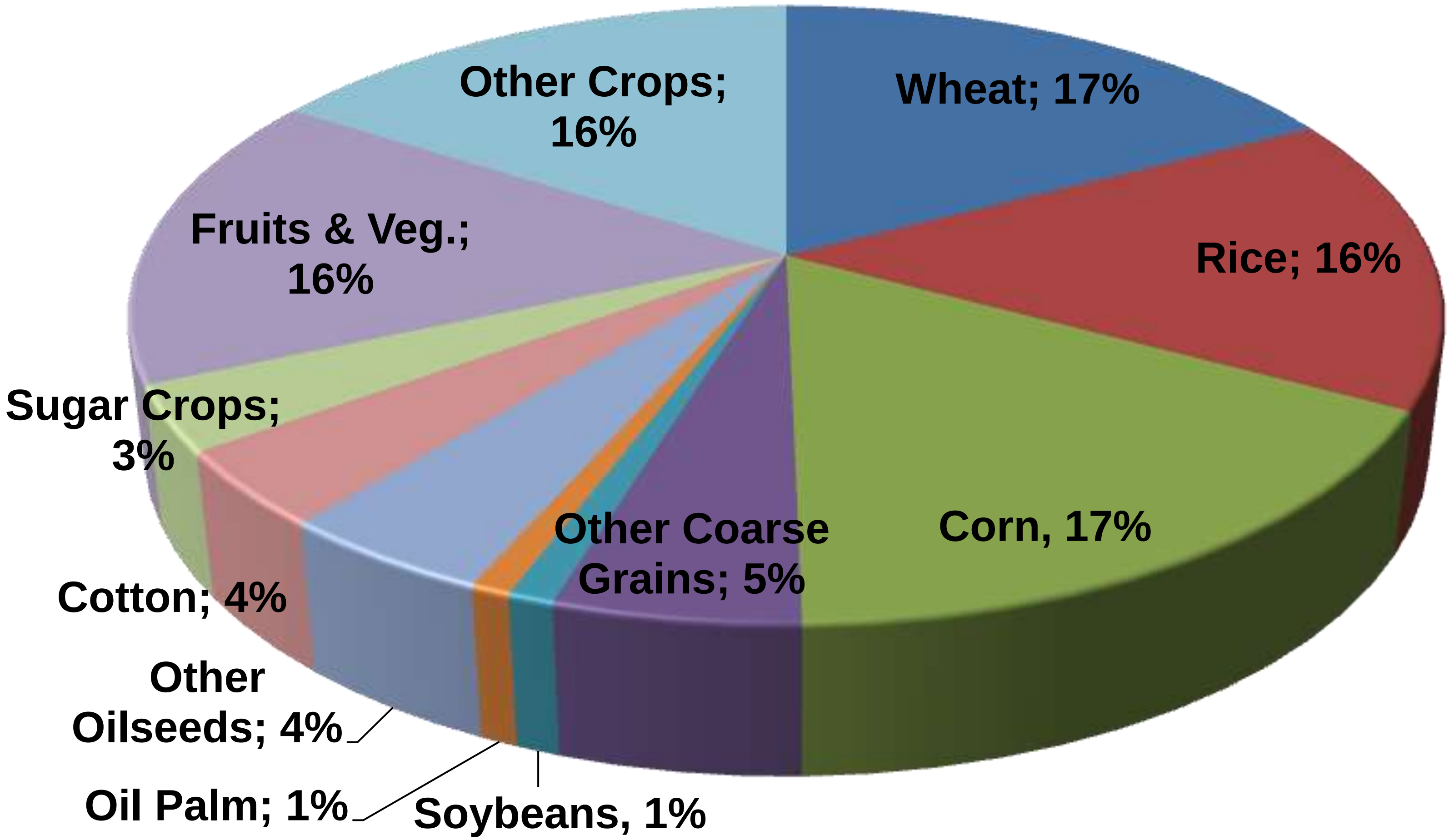
Phosphates Market Outlook

Potash Market Outlook

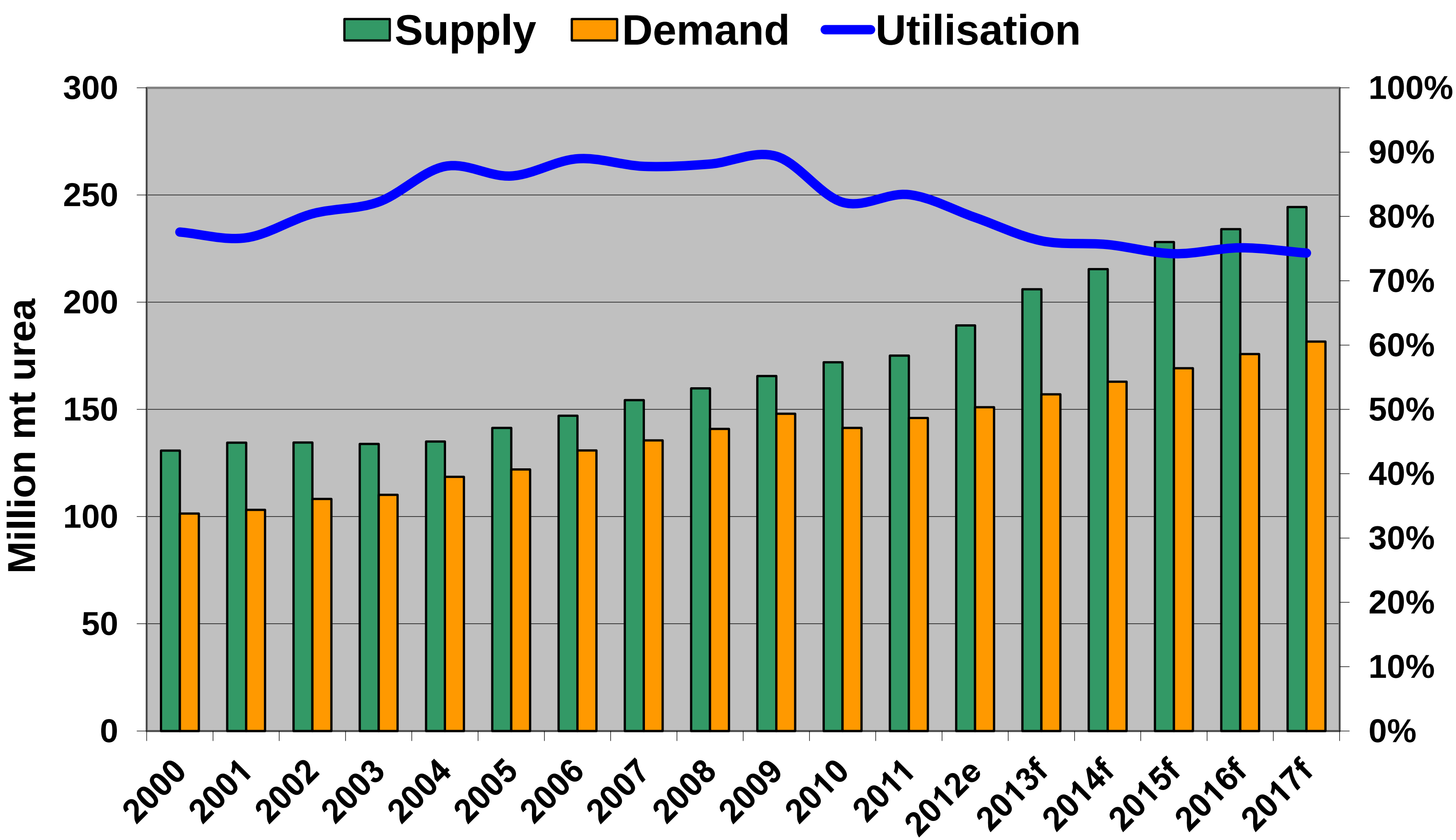
# N Fertilizer Use by Main Regions - 2010



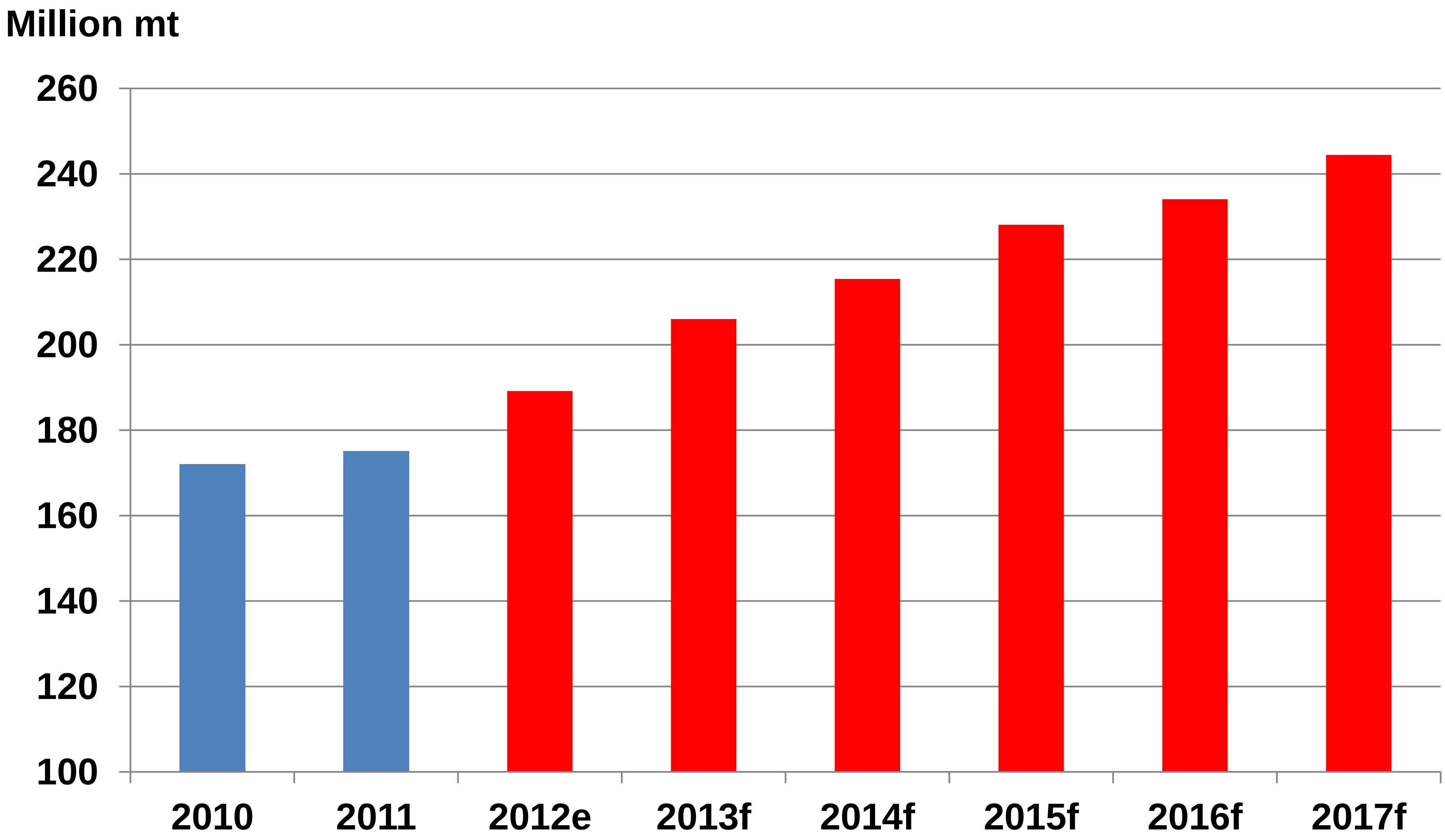
# N Fertilizer Use by Crop – 2010



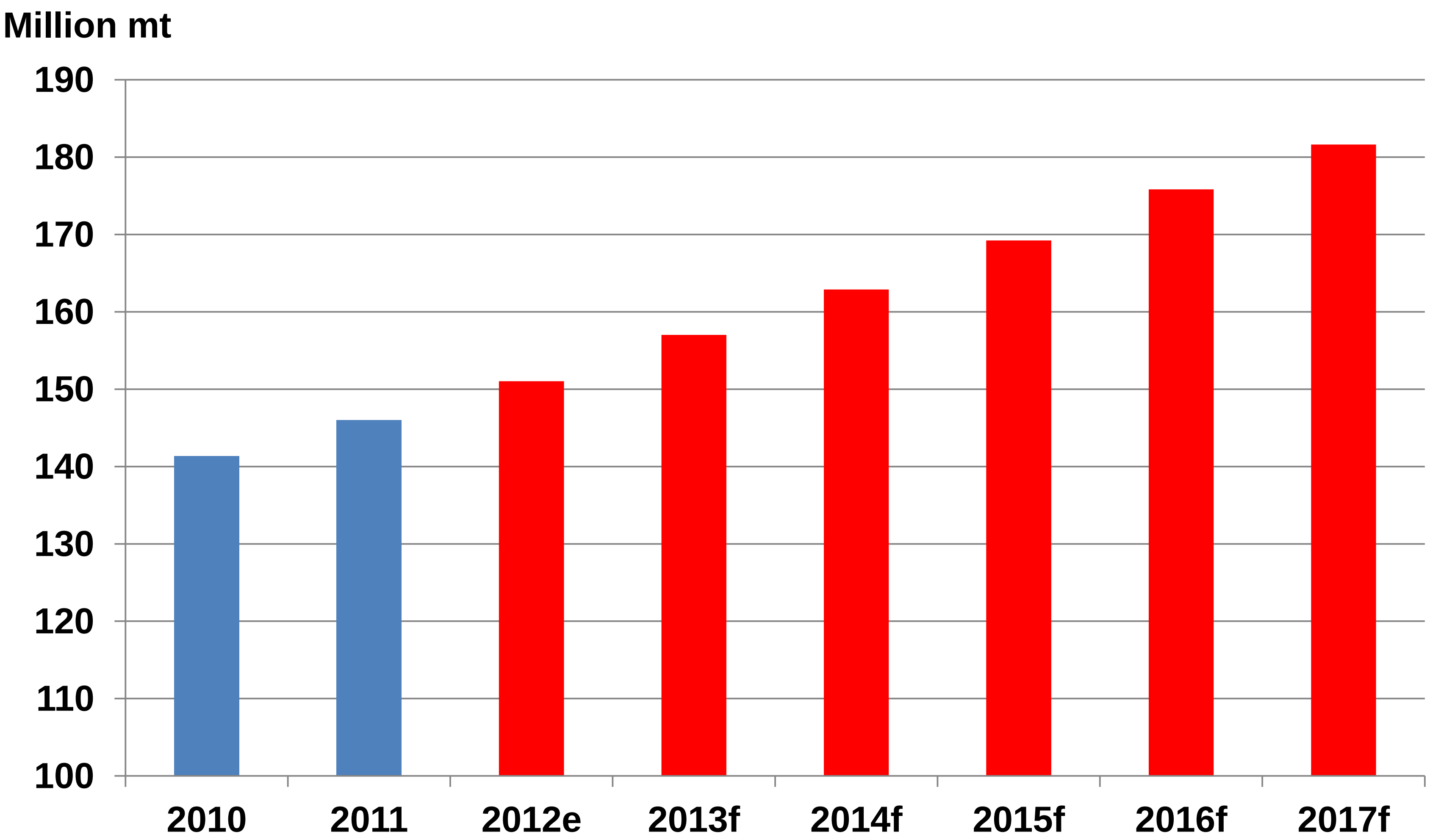
# Urea Supply/Demand Balance, 2000-2017



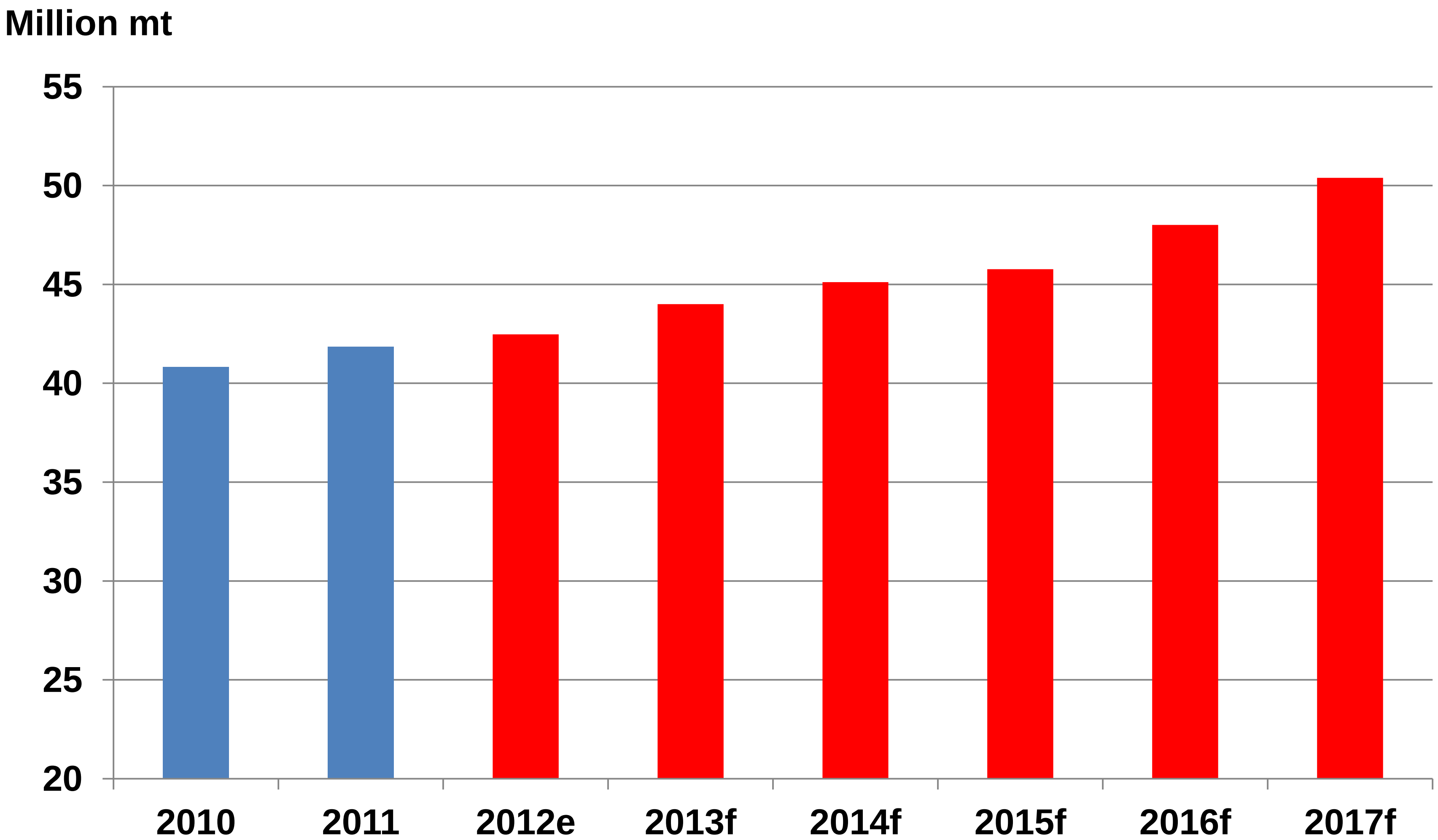
# Urea Capacity Forecast to 2017 (million mt)



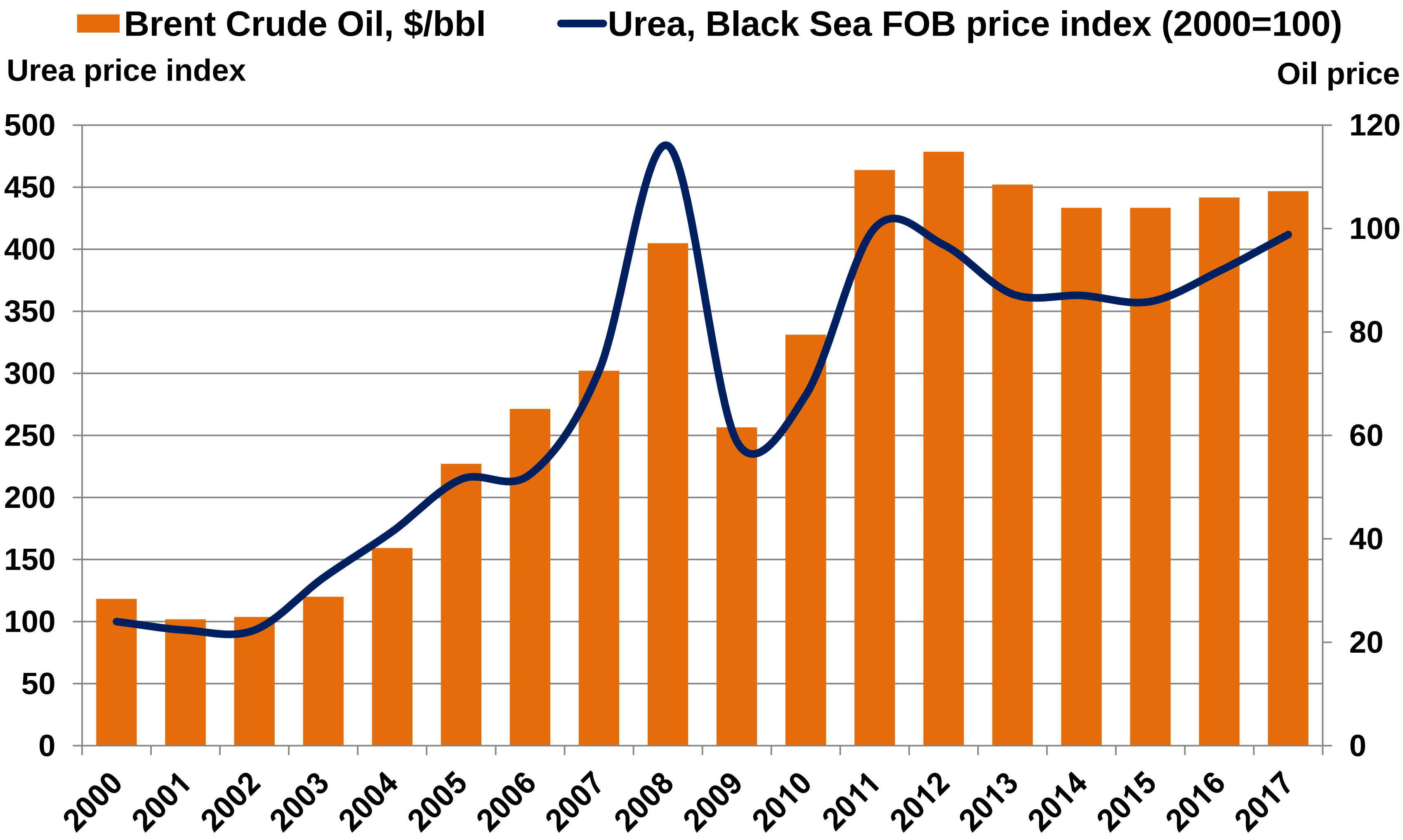
# Urea Demand Forecast to 2017 (million mt)



# Urea Trade Forecast to 2017 (million mt)

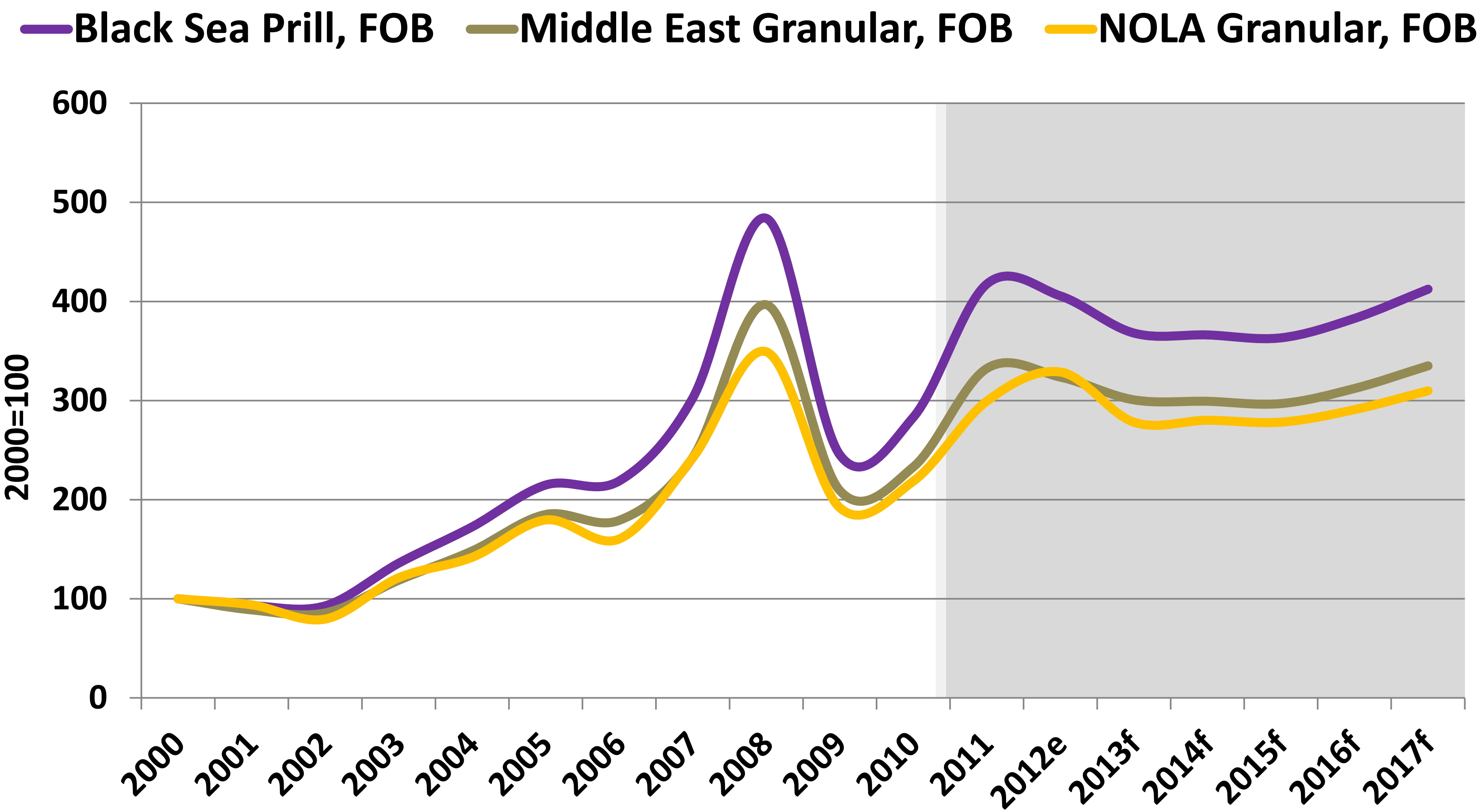


# Crude Oil and Urea Prices, History and Forecast



# Urea Price Forecast Indices, Major Benchmarks

**2000-2017 (2000=100)**



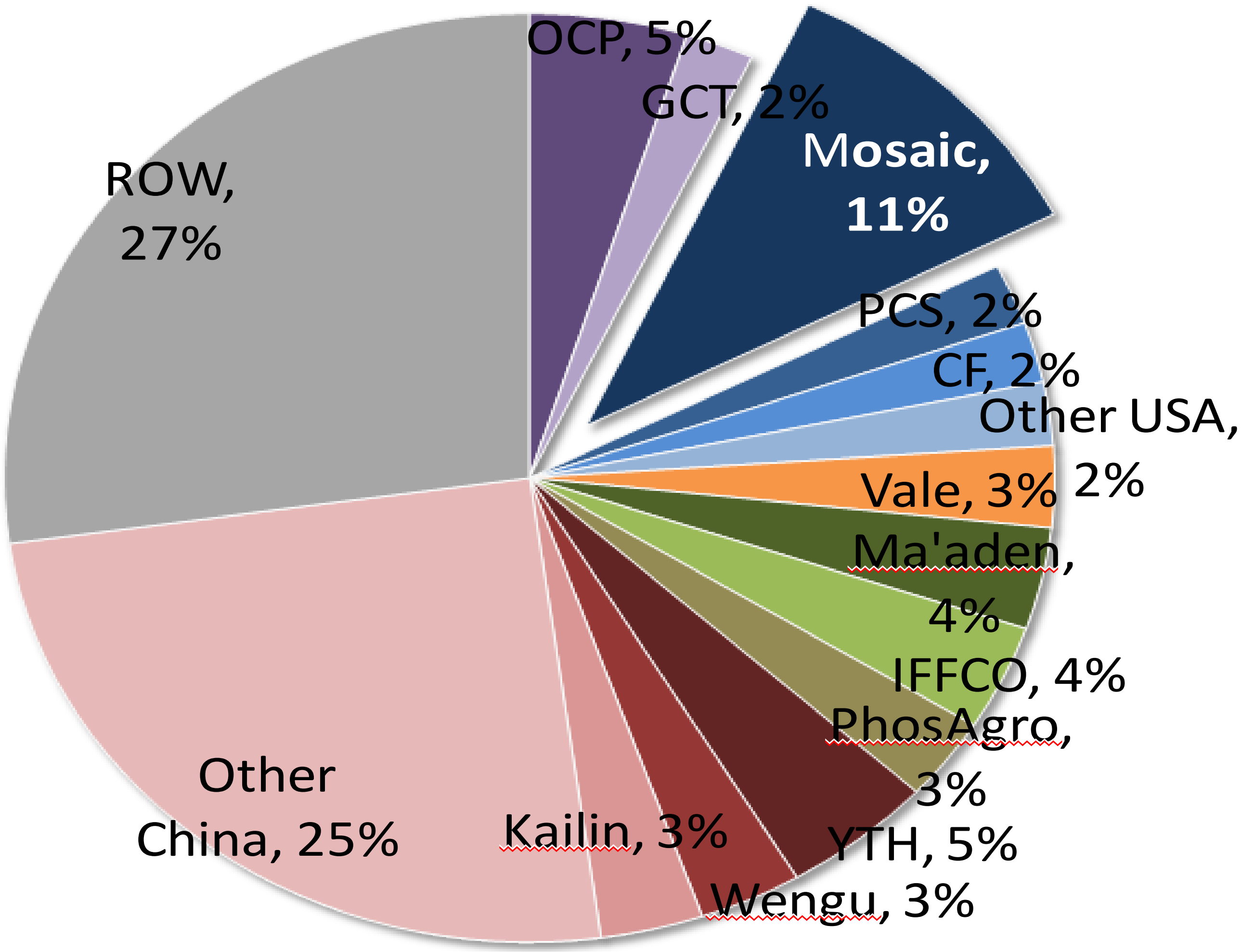
## Supply, Demand, Trade and Prices

Nitrogen Market Outlook

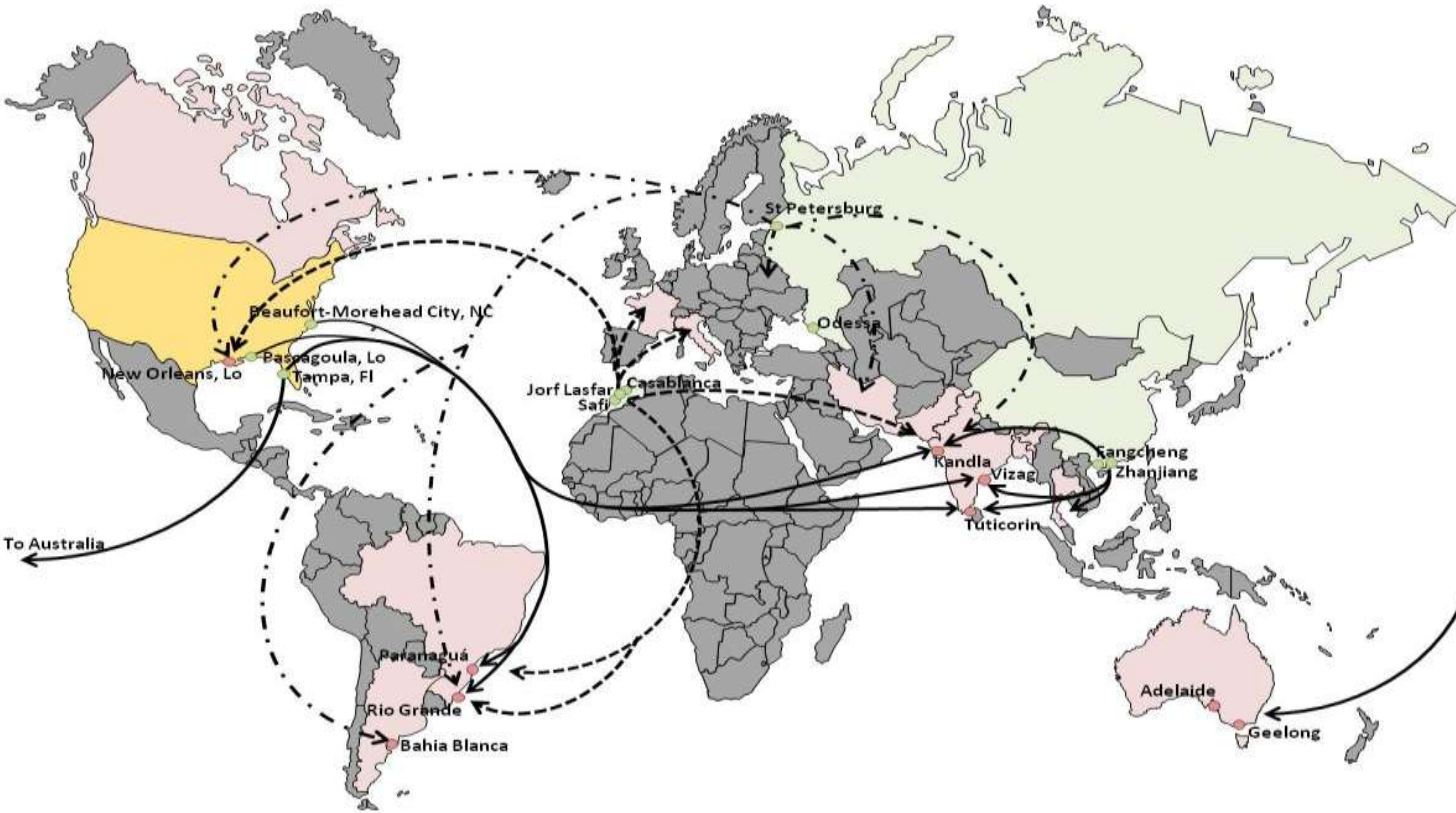
Phosphates Market Outlook

Potash Market Outlook

# Granulation capacity by major producer in 2011



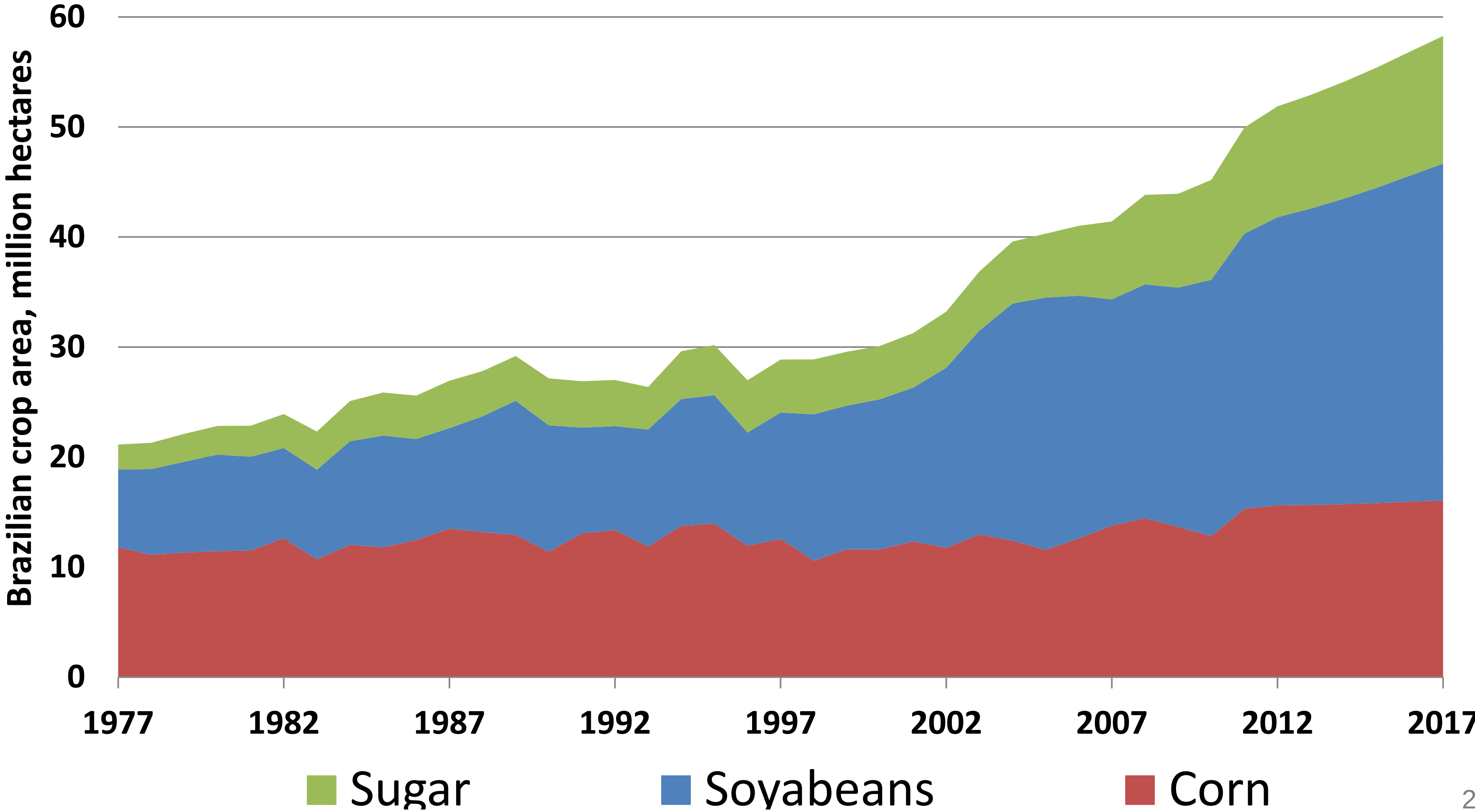
# Over 30% of annual production is traded…



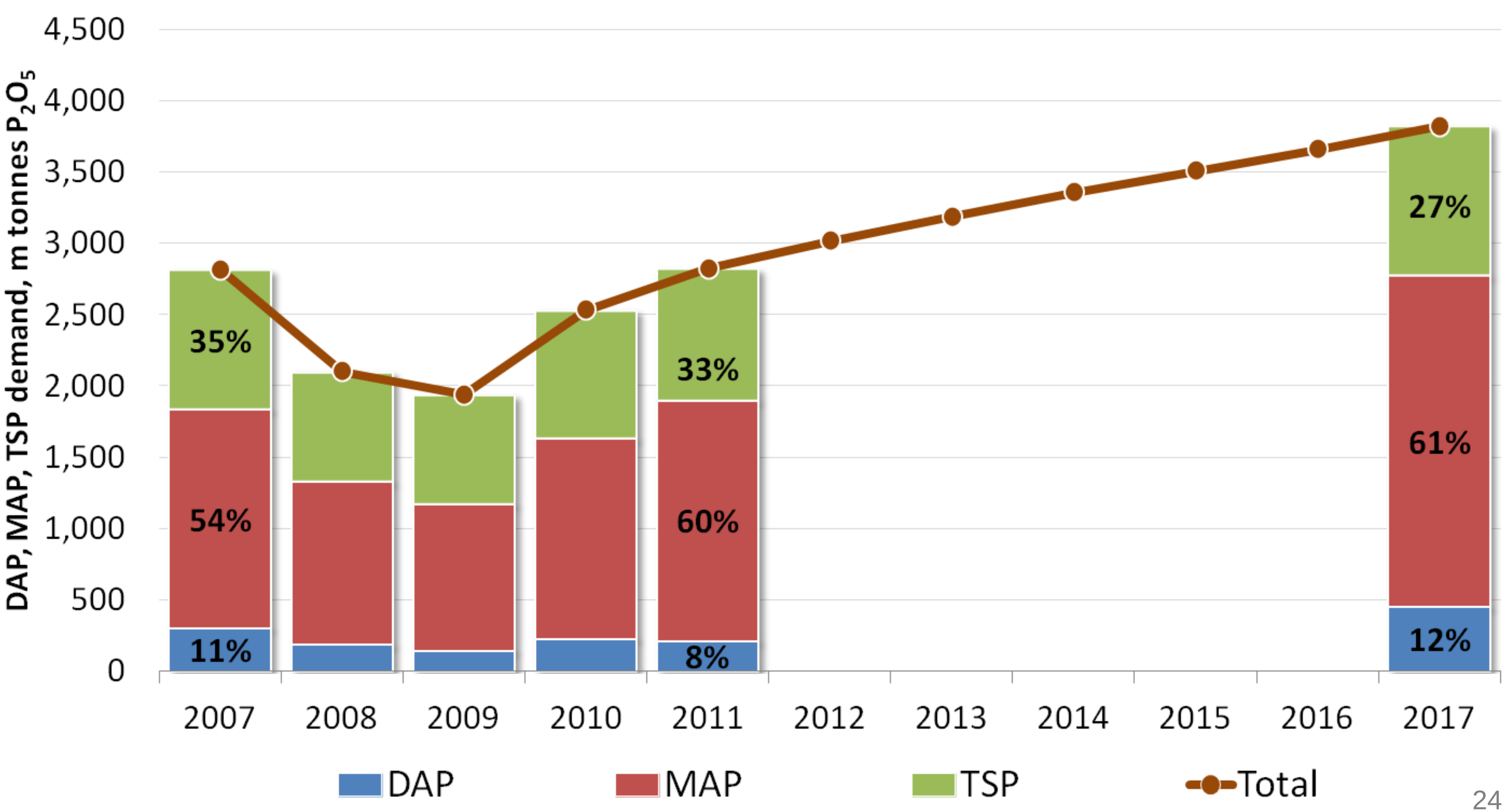
# The short term forecast is dominated by India...

1. Dec 2011: Chinese export policy tightened
2. Q1/2 2012: Production difficulties continue
3. May 2012: OCP secures Phos Acid export contract at $885/mt CFR
4. May 2012: PhosChem DAP contract agreed at $580/mt CFR
5. June 2011: Chinese producers hold out and secure $580/mt contract

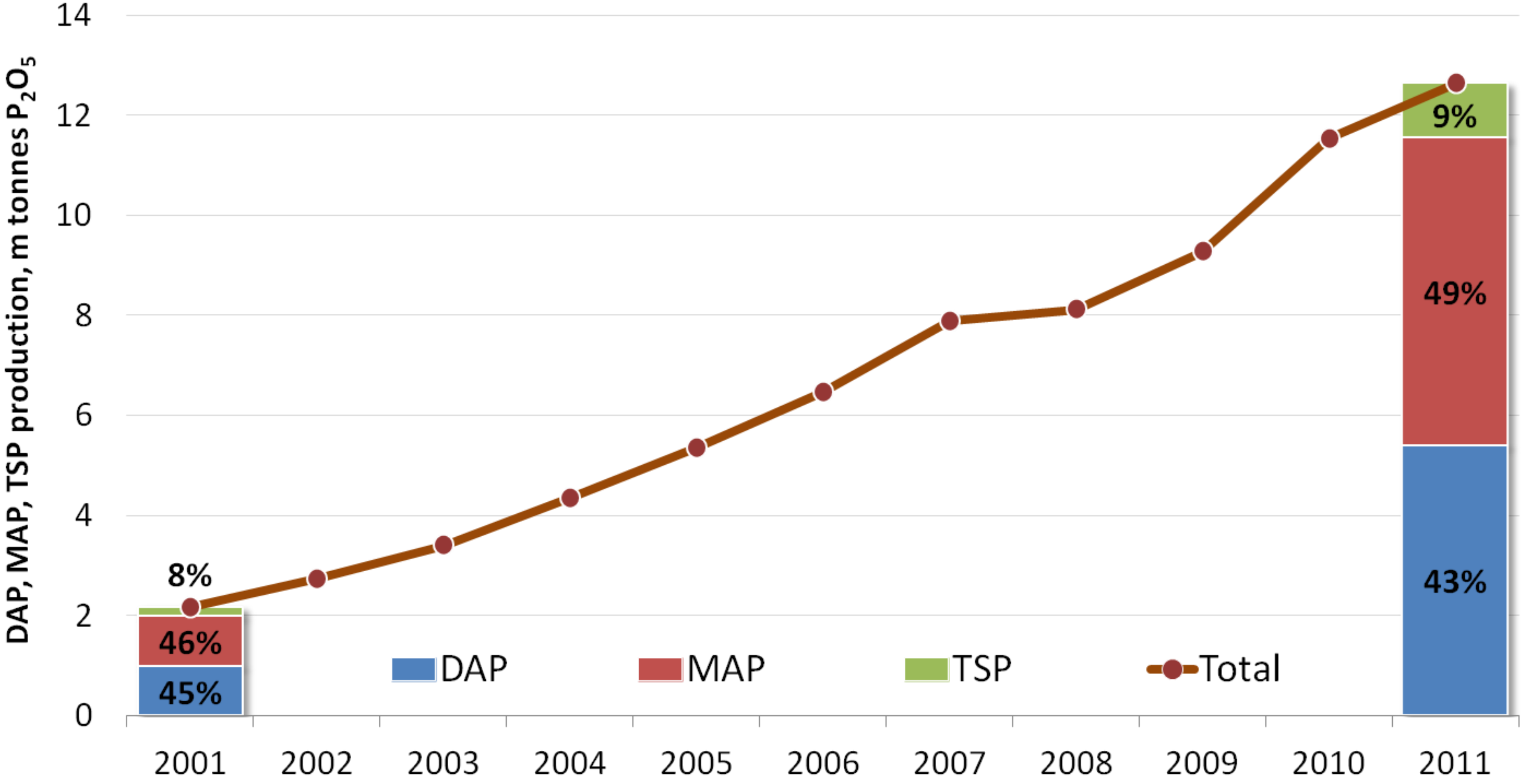
# Is anyone else able to pick the slack? Brazil!



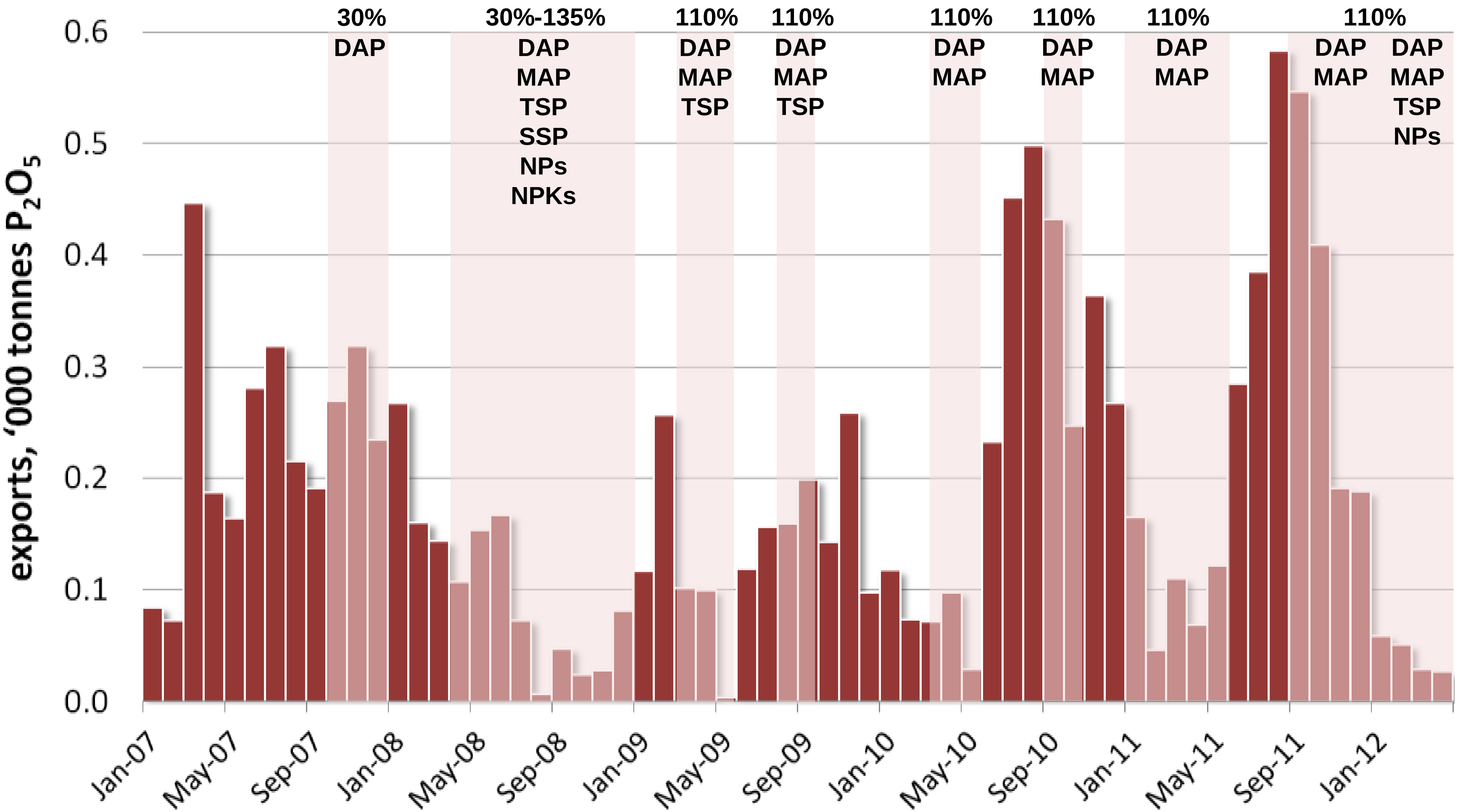
# … which will push result in Brazilian P demand growth of 5% CAGR 2011-2017



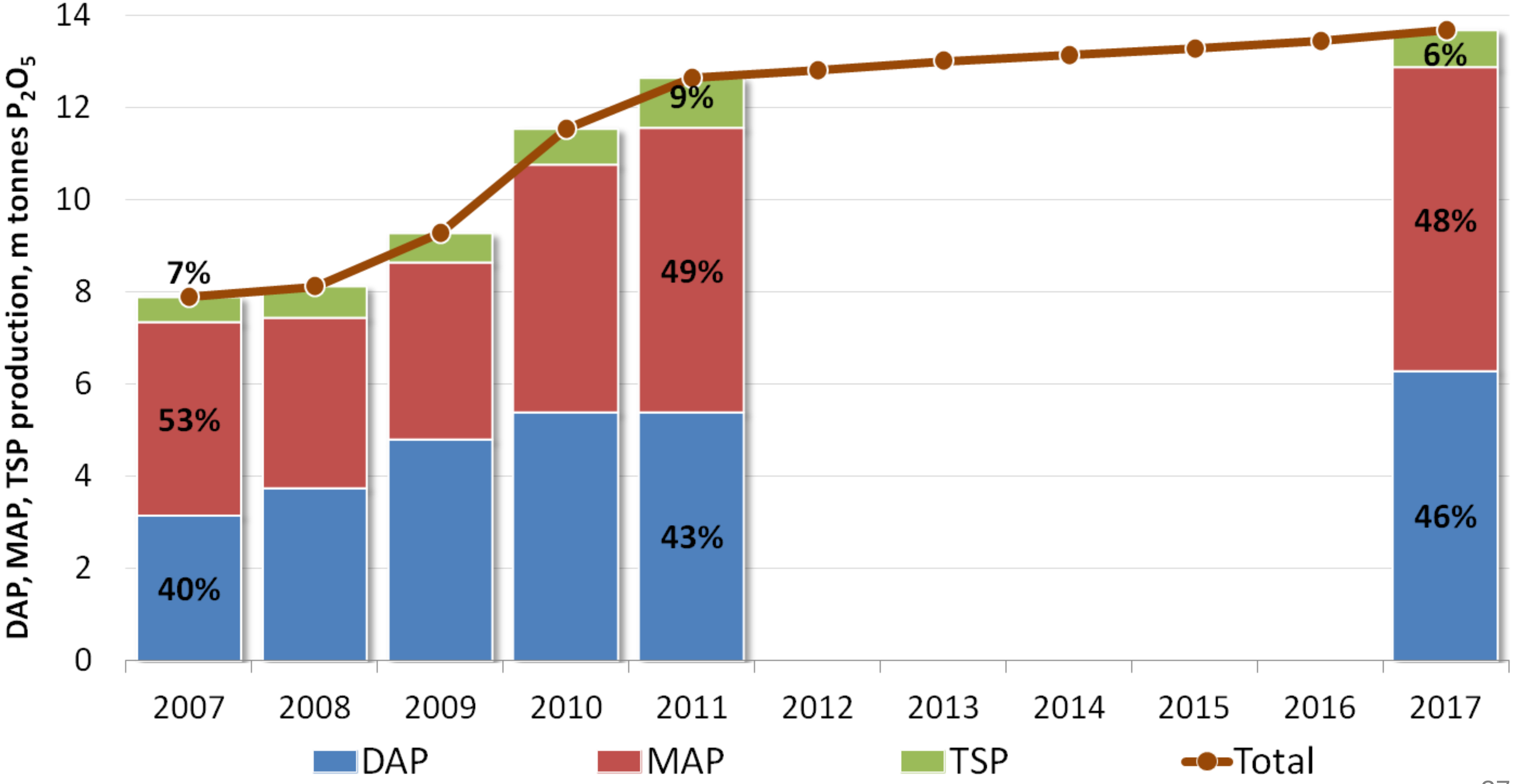
# On the supply side, China has driven global production growth over the past decade…



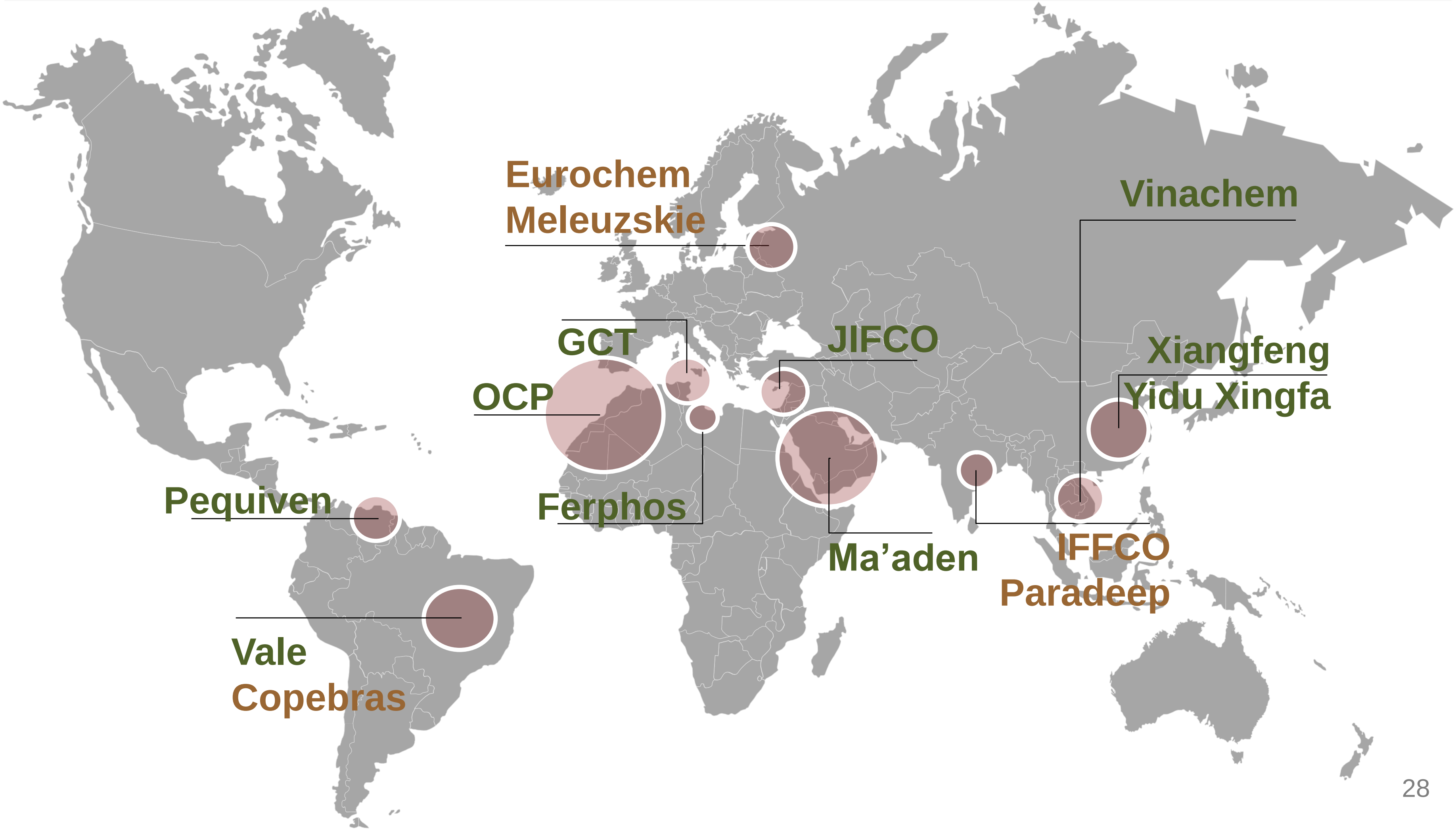
# … and exports are under pressure



# … therefore limiting future production growth



# Where is new supply going to come from?



# The outlook for prices: bulls and bears

## Bearish factors:

**Short/medium term trends:**

- Indian import are under threat (high prices, reduced subsidies, weak rupee);
- Anticipation of new supply ramping up in MENA (Ma'aden, OCP);
- Anticipation of existing supply returning to production in 2012/13 (Tunisia, Egypt);
- Chinese trade policy could promote additional DAP/MAP supply, at lower prices.

**Long term trends:**

- Further capacity growth expected in MENA  over long term, could flood market.

## Bullish trends:

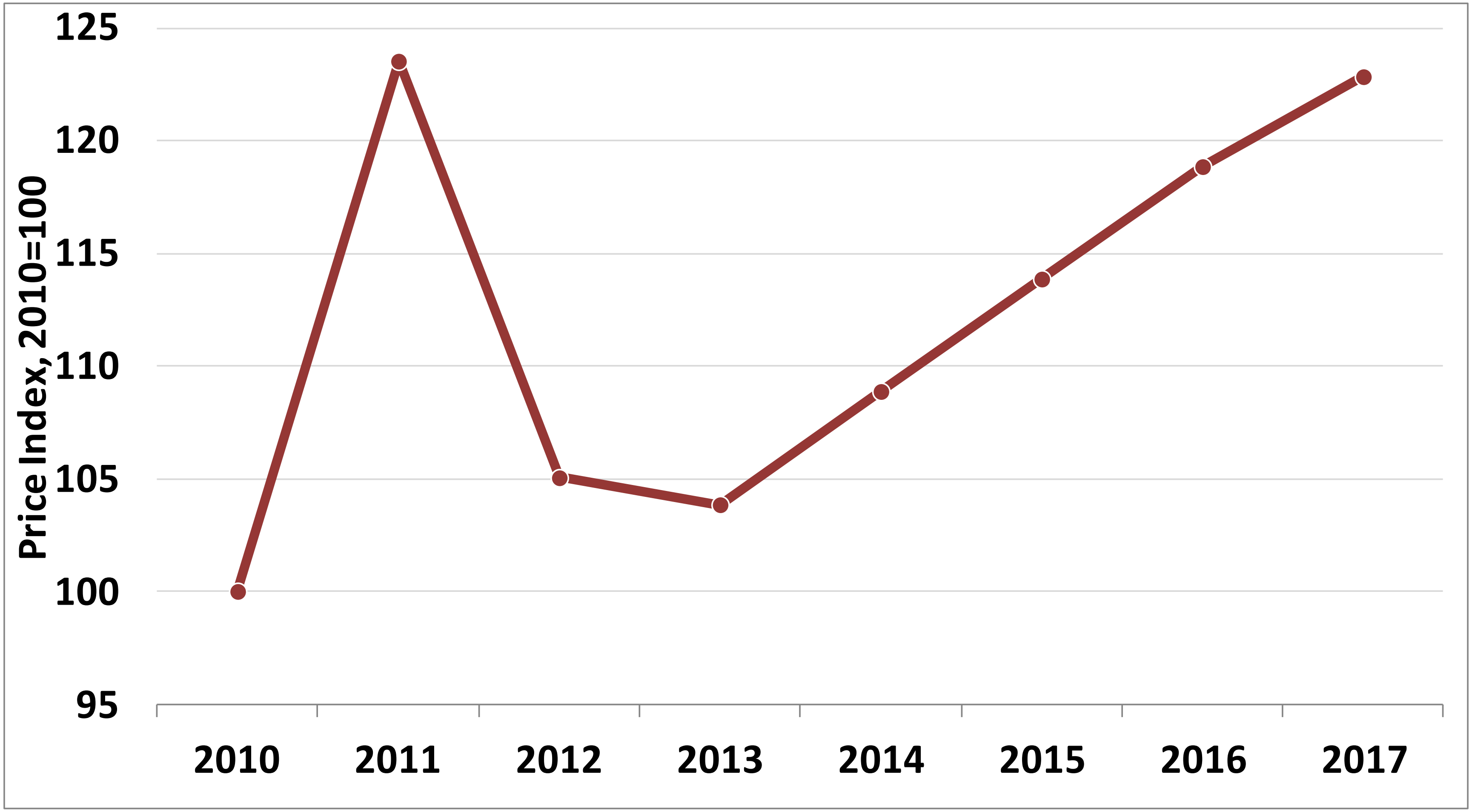
**Short/medium term trends:**

- Agricultural markets remain relatively tight (corn, soybean);
- Willingness of producers to cut production (Mosaic, PhosAgro, OCP);
- Continued technical difficulties at Ma'aden's operations;
- Continued strong P demand in Latin America over short term.

**Long term trends:**

- Higher cost structures (opex & capex);
- Continued demand growth.

# FOB TAMPA DAP Price Index forecast: 2010-2017 (2010=100)



# Supply, Demand, Trade and Prices

Nitrogen Market Outlook

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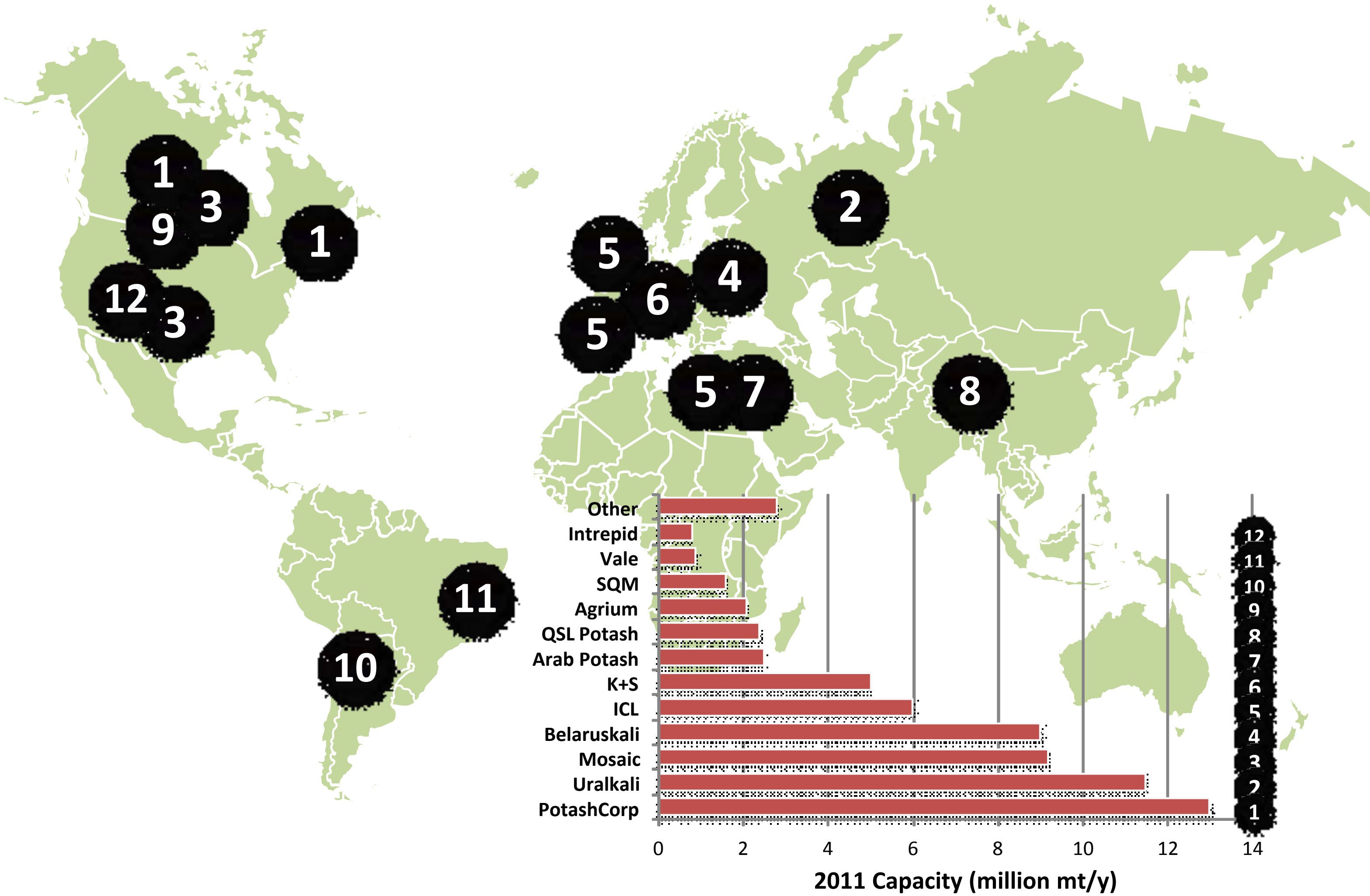
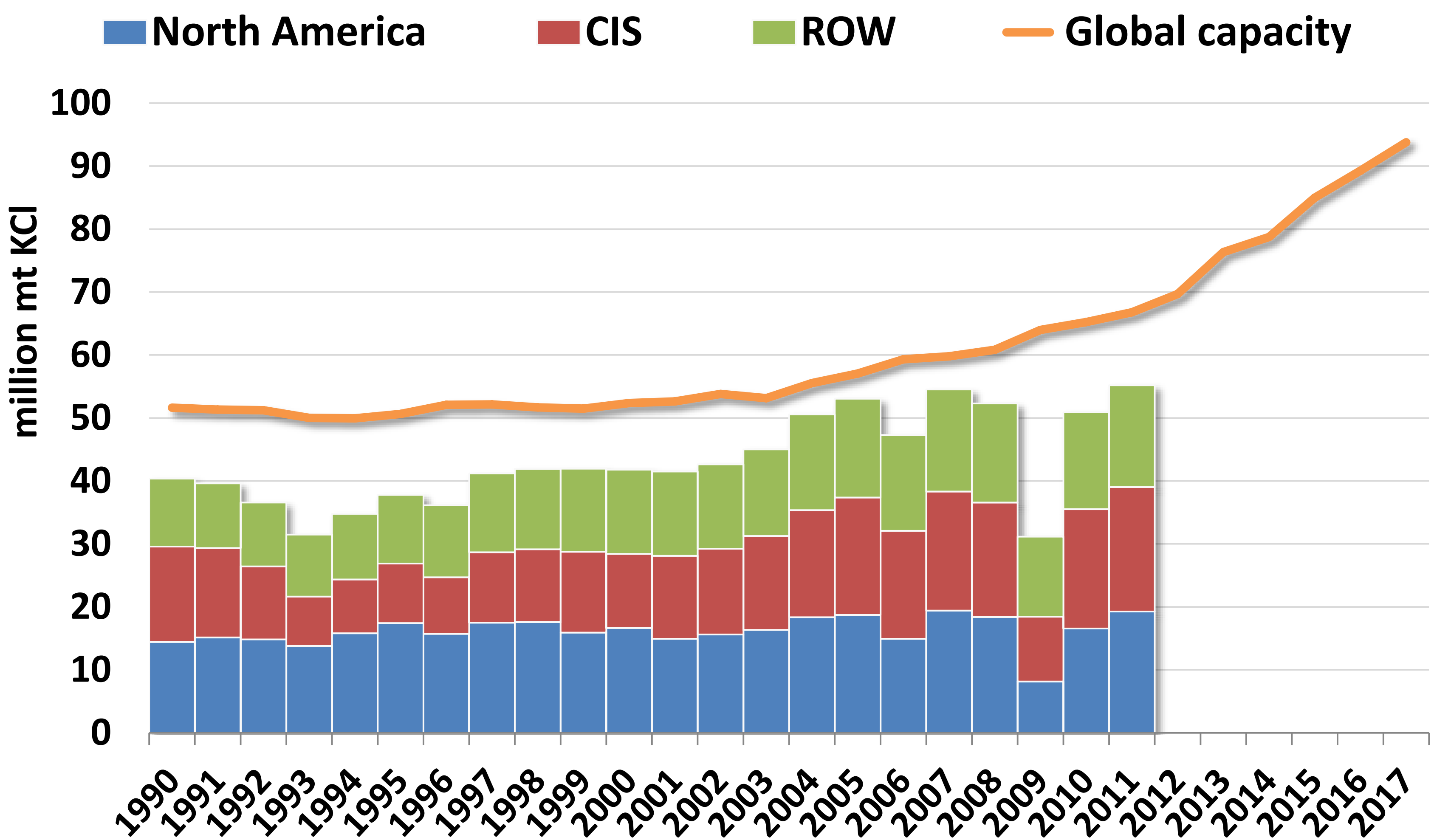
Potash Market Outlook

# World Potassium Chloride Capacity

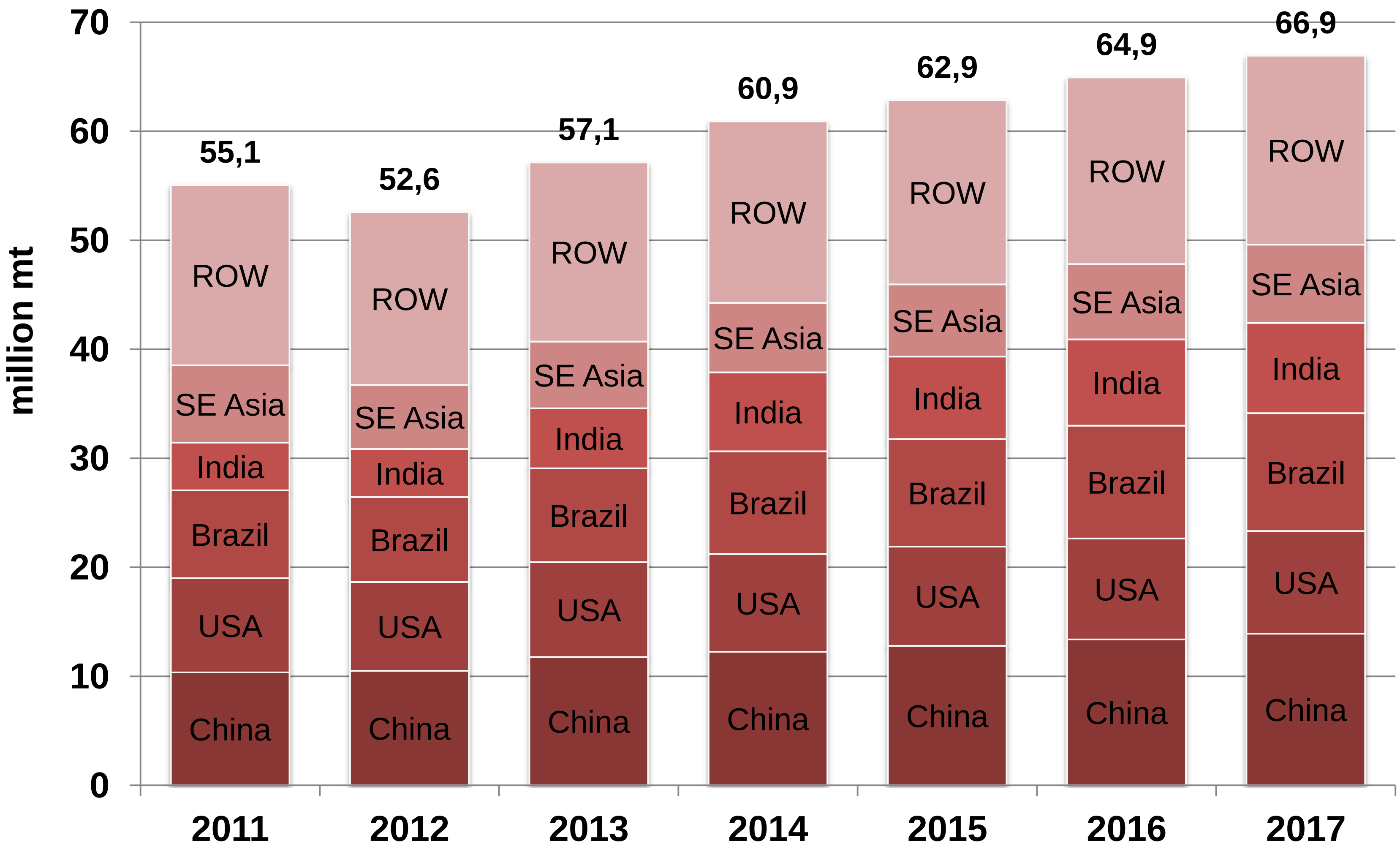


# New Potash Mines Under Construction

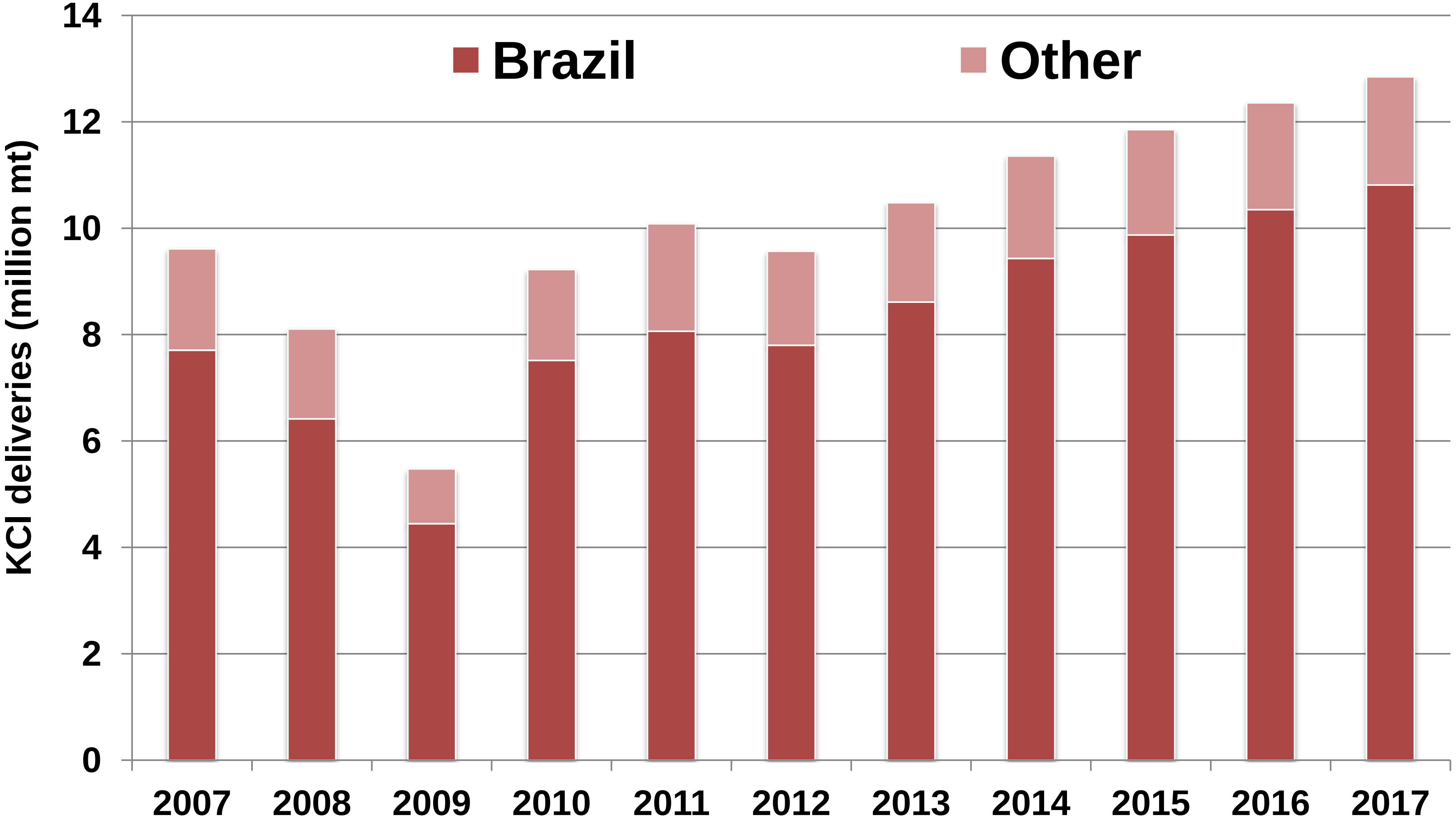
# Worldwide Capacity & Production Trend (million mt)



# Forecast of Global KCl Deliveries to 2017



# Recent & Forecast KCl Deliveries – Central & South America



# The short term forecast

1. India still making imports under 2011/12 fiscal year contract

2. China has imported strongly in H1 2012. New contracts may not be signed until Q4

3. US has been hit by severe drought, potash imports affected but largest corn planted-area in decades to lead to spring demand rebound

4. Brazil has been importing at over 1m mt/month over the last two months but producers unable to raise prices

# The outlook for prices: bulls and bears

## Bearish factors:

**Medium term trends:**

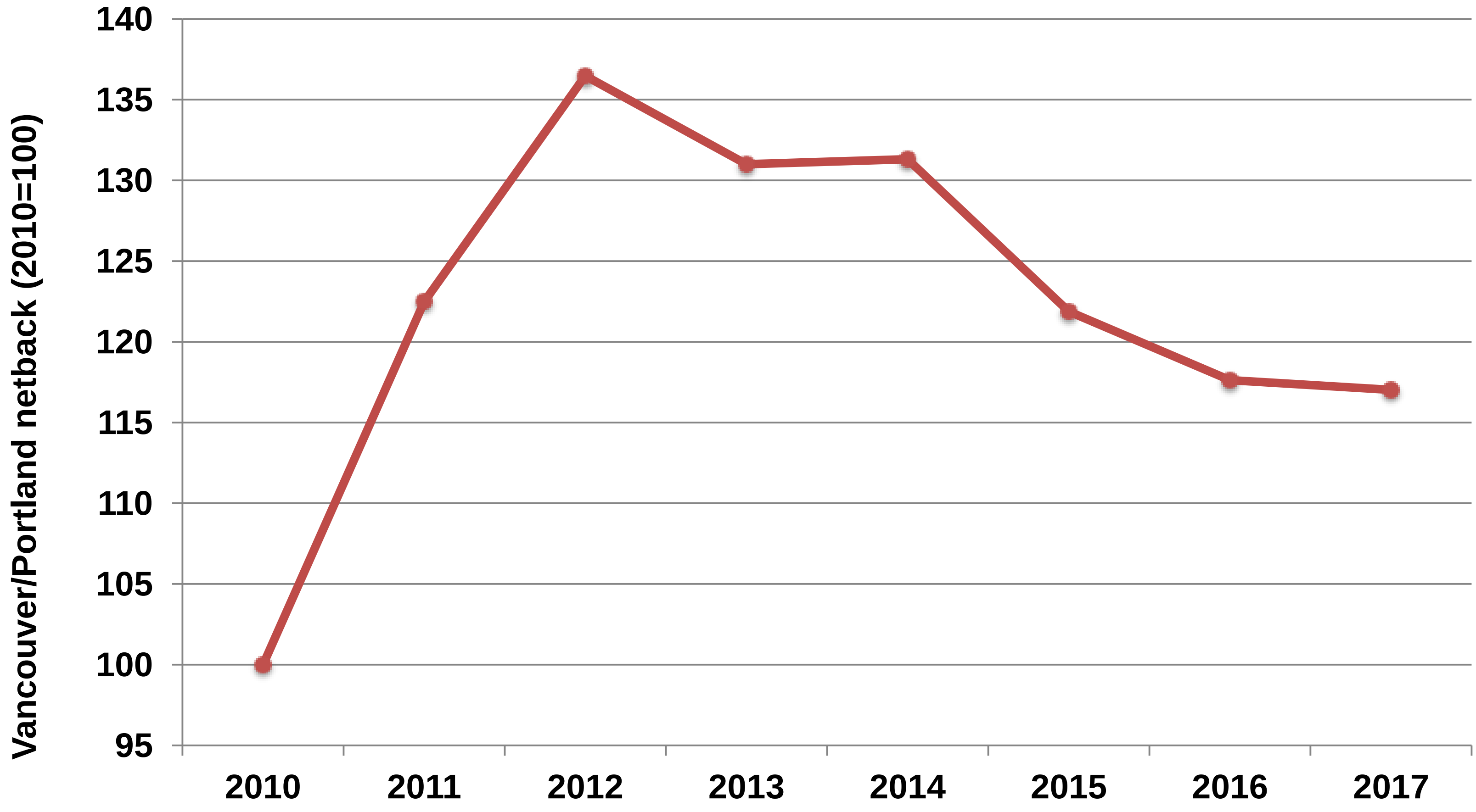
- Risk of serious over-capacity developing over the next five years, despite recent news that BHP Billiton and Vale are postponing final approval for projects.
- Concerns that producers will continue to push to maximize prices, hampering demand growth.
- India remains a major concern, with consumption at least 30% below normal levels.

## Bullish trends:

**Medium term trends:**

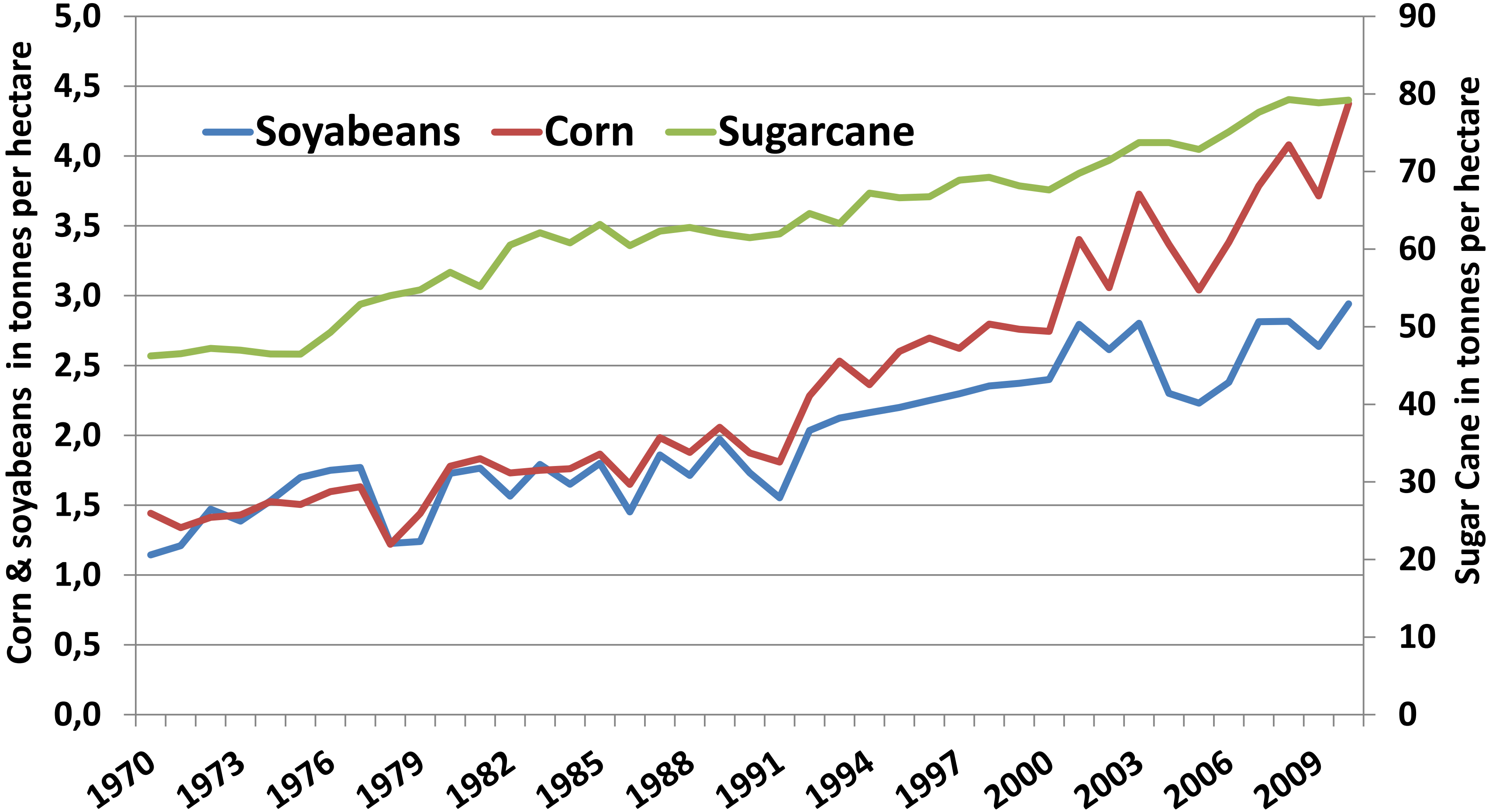
- Although some dilution of pricing power is expected but producers will continue manage production to protect prices
- There remains significant scope for demand growth in some markets: Brazil, India, China and SE Asia
- Crop prices are expect to remain high by historical standards, supporting potash prices

# KCl Annual Average Price Index Forecast to 2017 (2010=100)

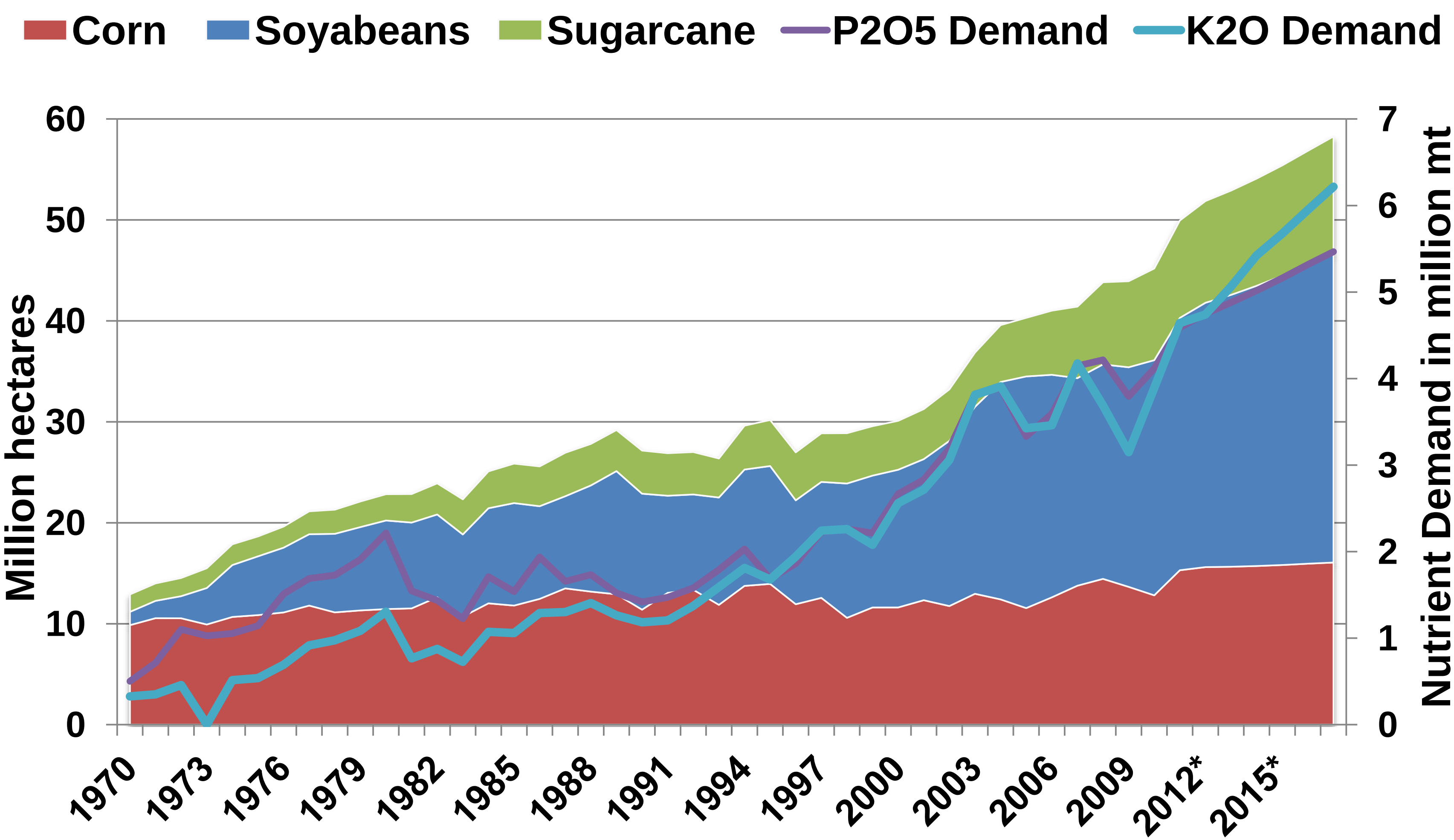


# Brazilian Market Outlook

# Brazil Yield Development (Main Crops)



# Brazilian main Crop Area & $P_2O_5$ $K_20$ Consumption (2012-2017)



# Conclusions

- Price projections corn, soybeans and wheat to stay well above first half of the 2000s on tighter stocks and ever-rising demand for food
- Urea trade to see steady growth over next five years rising to over 50 million mt by 2017 – prices to stay above post 2008-crisis levels
- Phosphate China production to stabilise over next five years; Brazilian $P_2P_5$ demand to support market; DAP pricing to rebound from 2013
- Potash weakening supply/demand balance to put downward pressure on prices over the next five years

# CRU International

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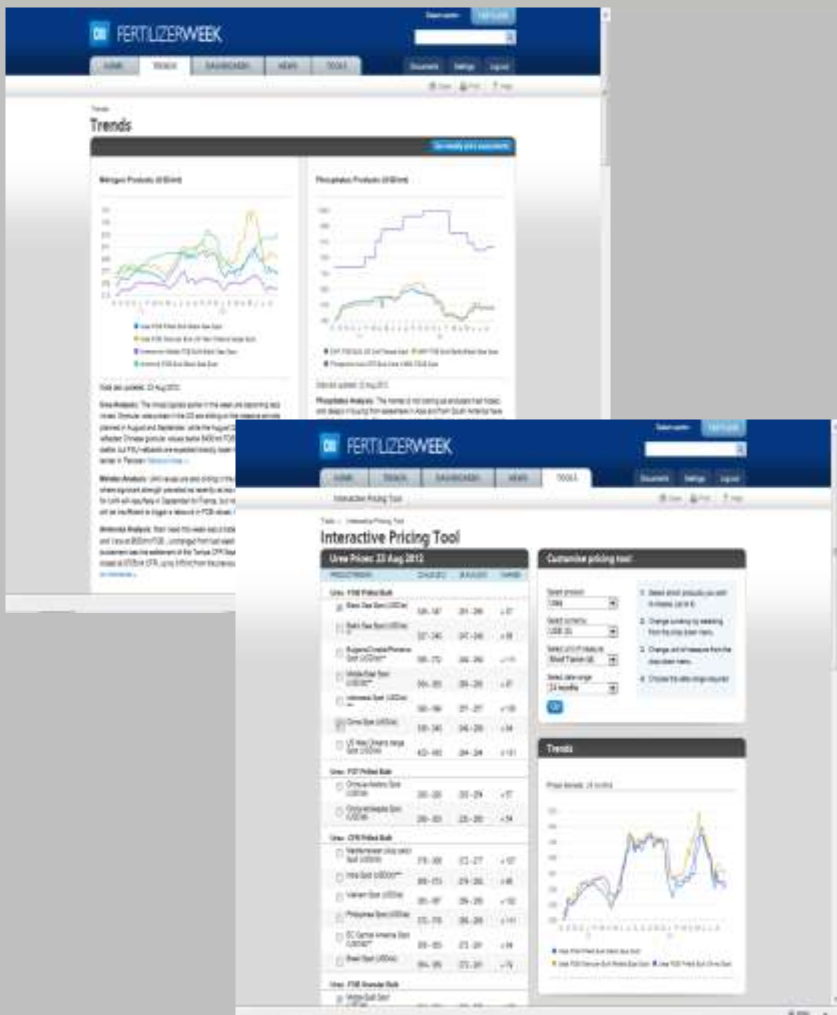
**MARKET OUTLOOK SERVICES**
- Ammonia
- Urea
- Phosphate Rock
- Phosphoric Acid, DAP, MAP & TSP
- Potassium Chloride
- Sulphur
- Sulphuric Acid

**COST SERVICES**
- Nitrogen Fertilizers
- Potassium Chloride
- Phosphate Rock
- Phosphate Fertilizers

# CRU International




**FERTILIZER WEEK ONLINE**

- Urea
- Nitrates & Sulphates
- Ammonia
- Phosphates
- Potash
- Sulphur
- Sulphuric Acid

**SHORT TERM FORECASTS**

- Urea
- DAP/MAP
- Potash

# CRU International


## CRU EVENTS

- **Sulphur 2012** - October 2012 - Berlin, Germany
- **Fertilizer Latino Americano** - January 2013 - São Paulo, Brazil
- **Nitrogen + Syngas 2013** - March 2013 - Berlin, Germany
- **Phosphates 2013** - March 2013 - Monte Carlo, Monaco

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# Por sua atenção, obrigado!

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