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Market Reporting
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North American Fertilizer market perspectives

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Editor, North American Fertilizer

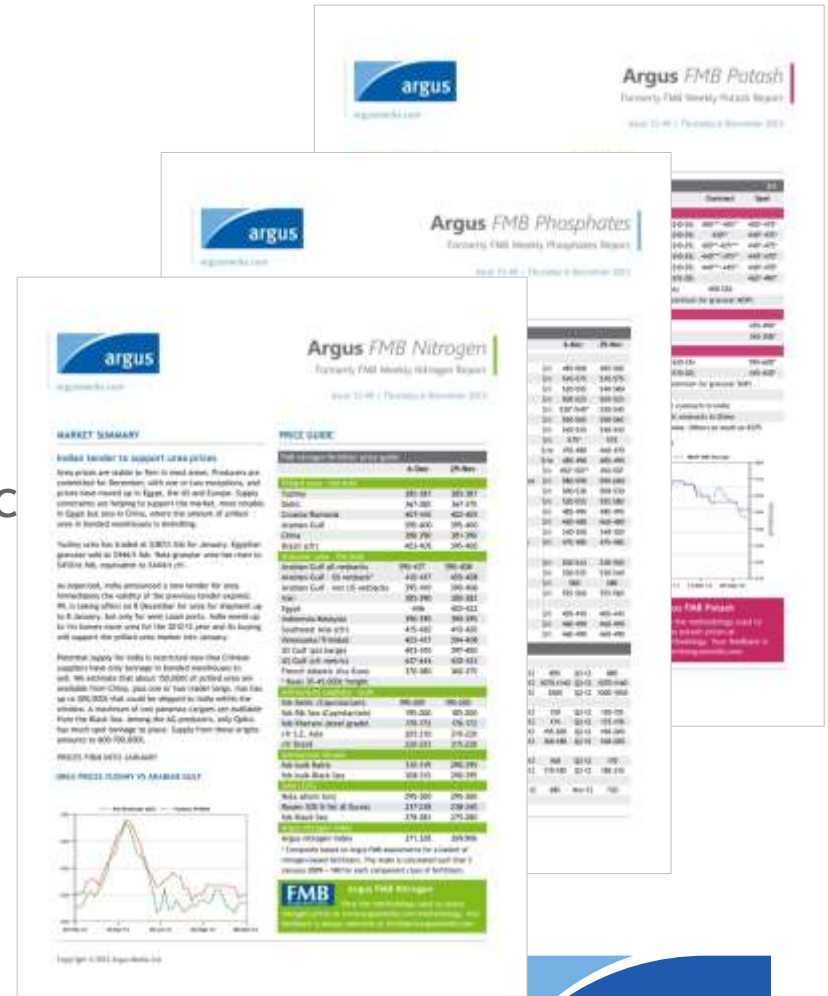
23 Sept 2014

Agenda

- Industry status
- Global developments
- North American impact
- Final points

What is Argus?

- Global energy markets publisher: reports, consultancy, conferences
- Used worldwide in energy price indexation since 1970
- Over 600 employees, 19 global offices
- Recent acquisitions
 - FMB (fertilizers)
 - DeWitt (petrochemicals)
 - JJ&A (petrochemicals)
 - Metal Pages (rare earths, metals)



Argus FMB Fertilizer

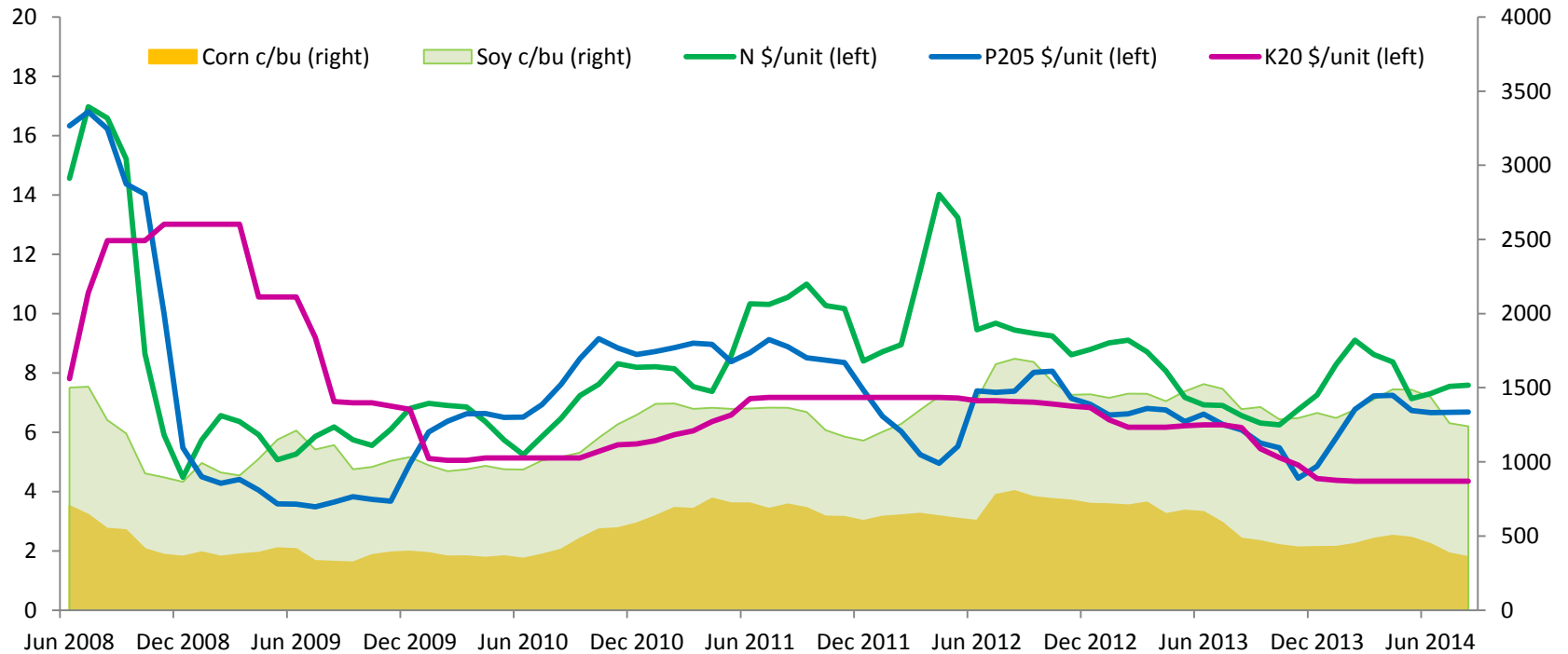
- FMB acquired in 2011
- Founded in 1982, FMB leads global fertilizer coverage
- North American Fertilizer launched in 2012



Industry status:

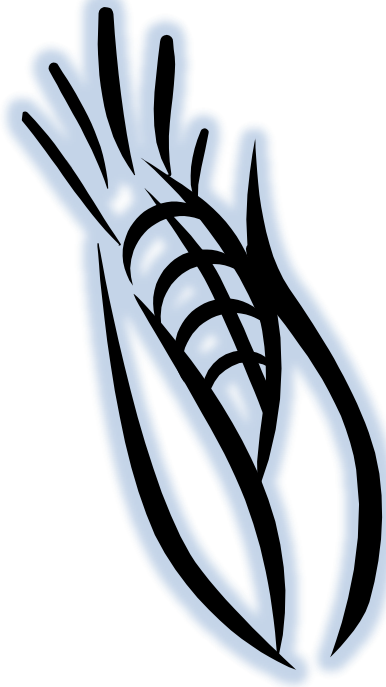
North America September 2014

A 6-year glance at nutrient and crop values



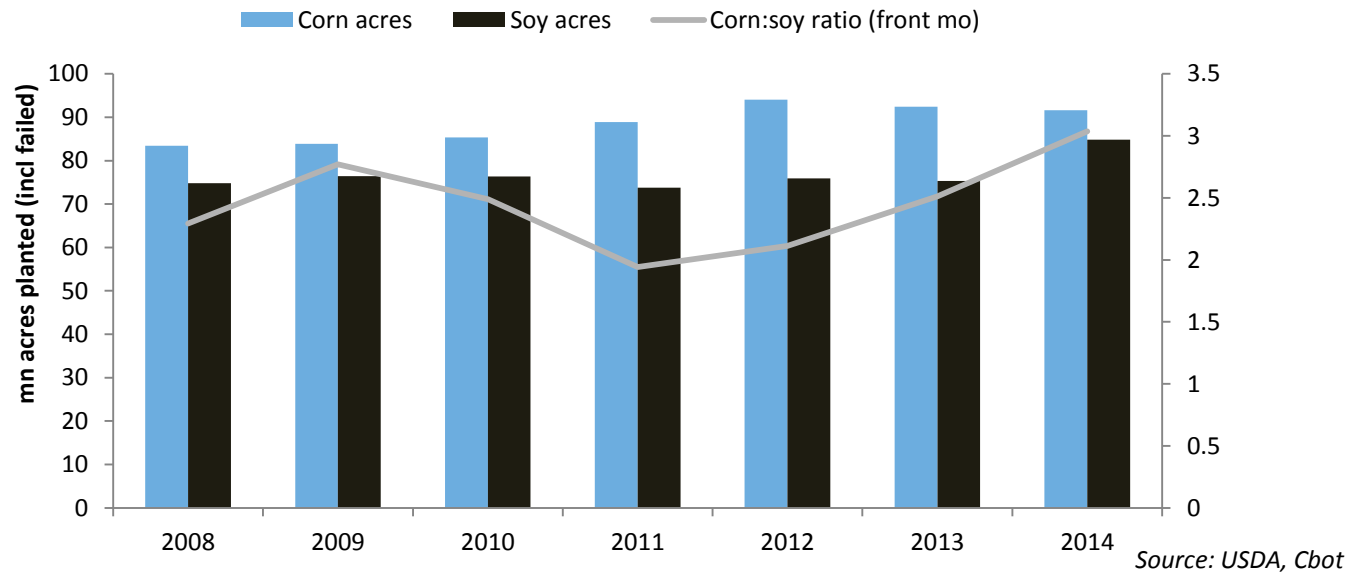
Nutrient valuation derived from US urea and DAP barge and Vancouver potash fob values. CBOT front month crop data used.

Latest WASDE, Crop Production reports



- 14.4bn bu corn production, 171.7bu/acre yield
 - Stocks to use at 14.7%
- 3.9bn bu soybean production, 46.6bu/acre yield
 - Lowered stocks to use to 3.9%
- Stronger yields lower break even costs
- Strengthening US dollar (US exports more expensive to others)

Crop prices contribute to US acreage shift

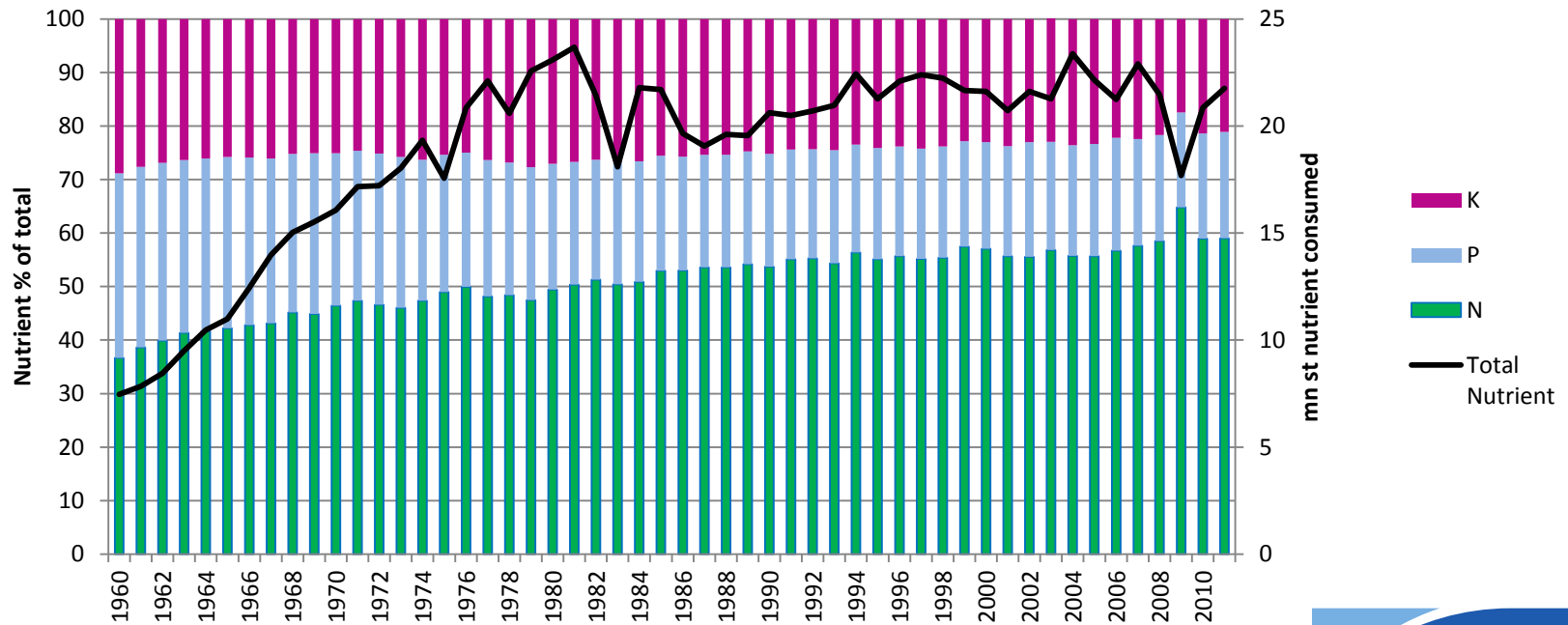


- 91.6mn acre corn, 84.1mn soy
- Crop prices high relative to pre-2007-08, similar seen in 2010
- Corn has higher floor because of RFS, low prices support ethanol demand

Relative consumption stability >21mn st/yr

- N 12.1mn st
- P205 4.4mn st
- K20 4.9mn st

P&K
reduced

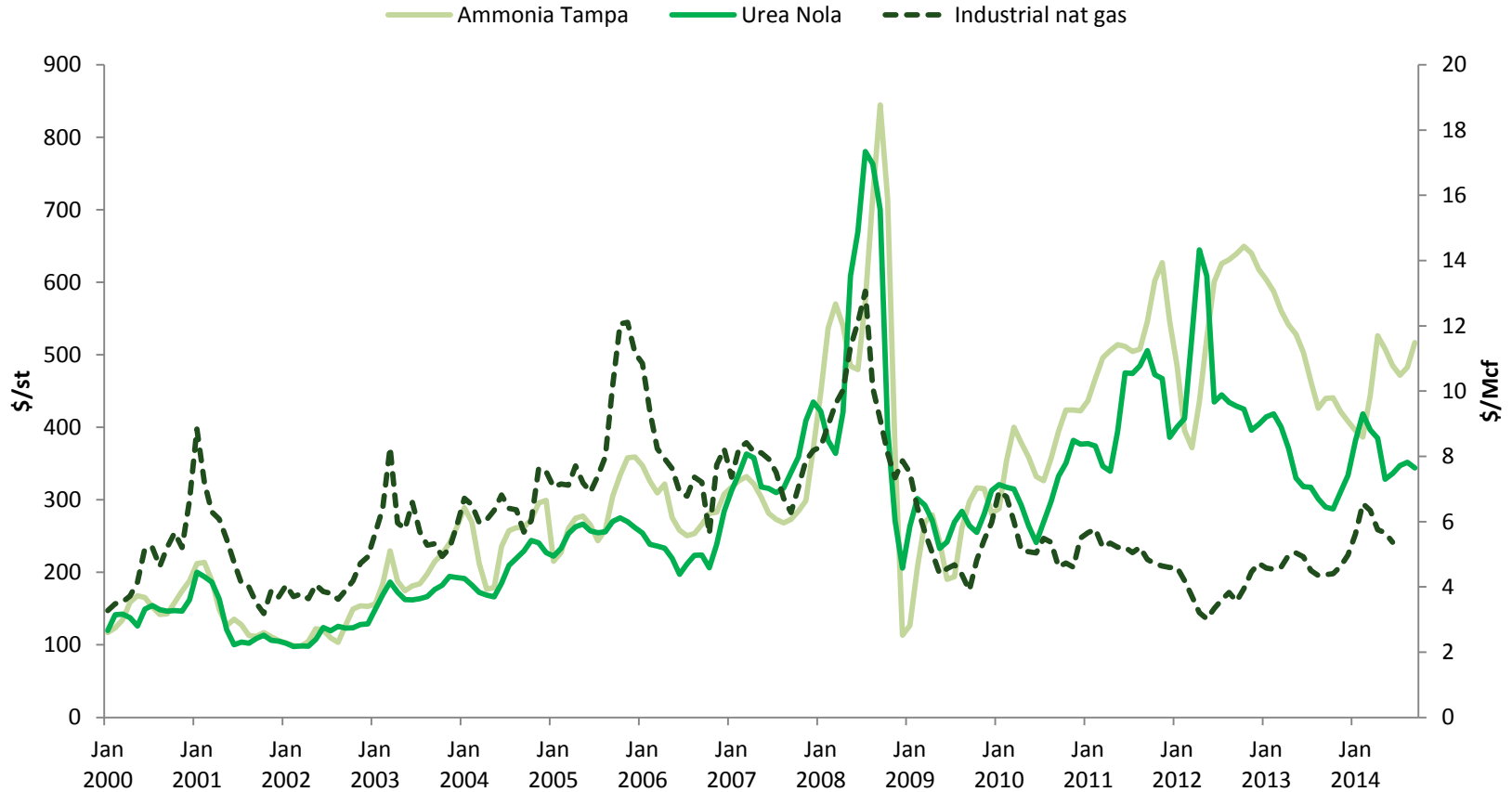


Source: USDA

US import dependence has increased

- Nitrogen production shuttered on poor margins in early 2000
- Fertilizer more susceptible to price impact of global shocks and geopolitical challenges
 - FSU disruptions felt acutely
- Driving significant change
 - Nitrogen capacity expansions
 - Less nitrogen-intensive product mixes
 - Mosaic, CF phosphate acquisition/ammonia deal
 - OCP, PCS phosphate/ammonia deal
 - CF, Yara merger talks?

Shale revolution encouraging new capacity



Operating costs determine viability

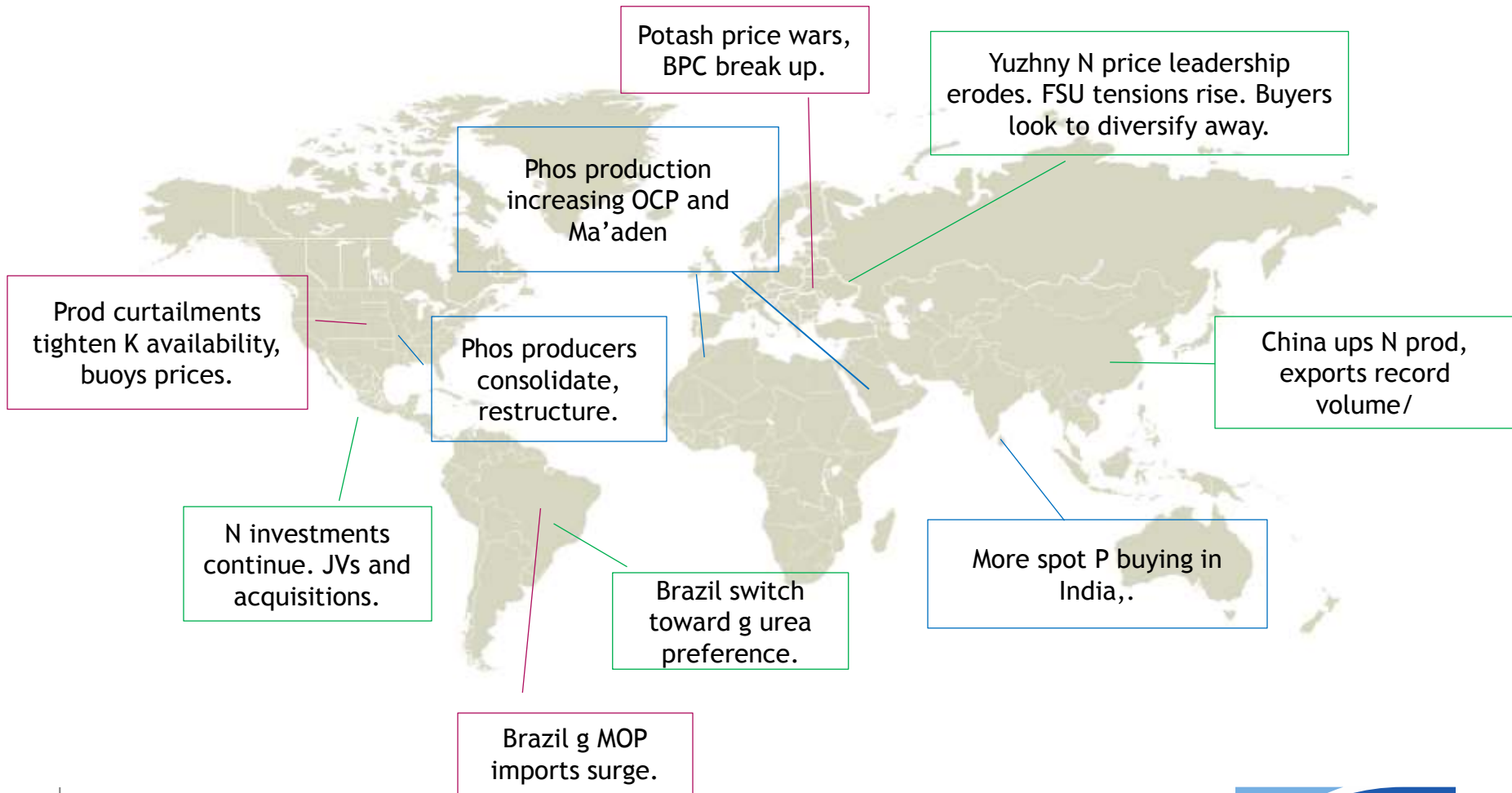
Excludes other operating costs

| Gas Price (\$/mn Btu) | 2.75 | 5 | 10 | 12.5 |
|-----------------------------|------|-----|-----|------|
| Ammonia (32 mmBtu/t) | 88 | 160 | 320 | 400 |
| Granular Urea (24 mmBtus/t) | 66 | 120 | 240 | 300 |
| UAN (16 mmBtu/t) | 43 | 79 | 158 | 197 |

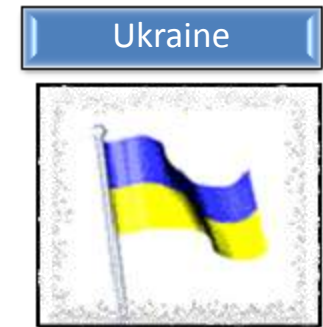
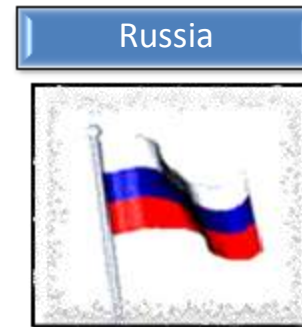
- Feedstock is primary contributor to cost of production
- US becoming far more competitive
- Cost efficient producers to maintain share of US imports, though US imports to halve in next five years

Global developments

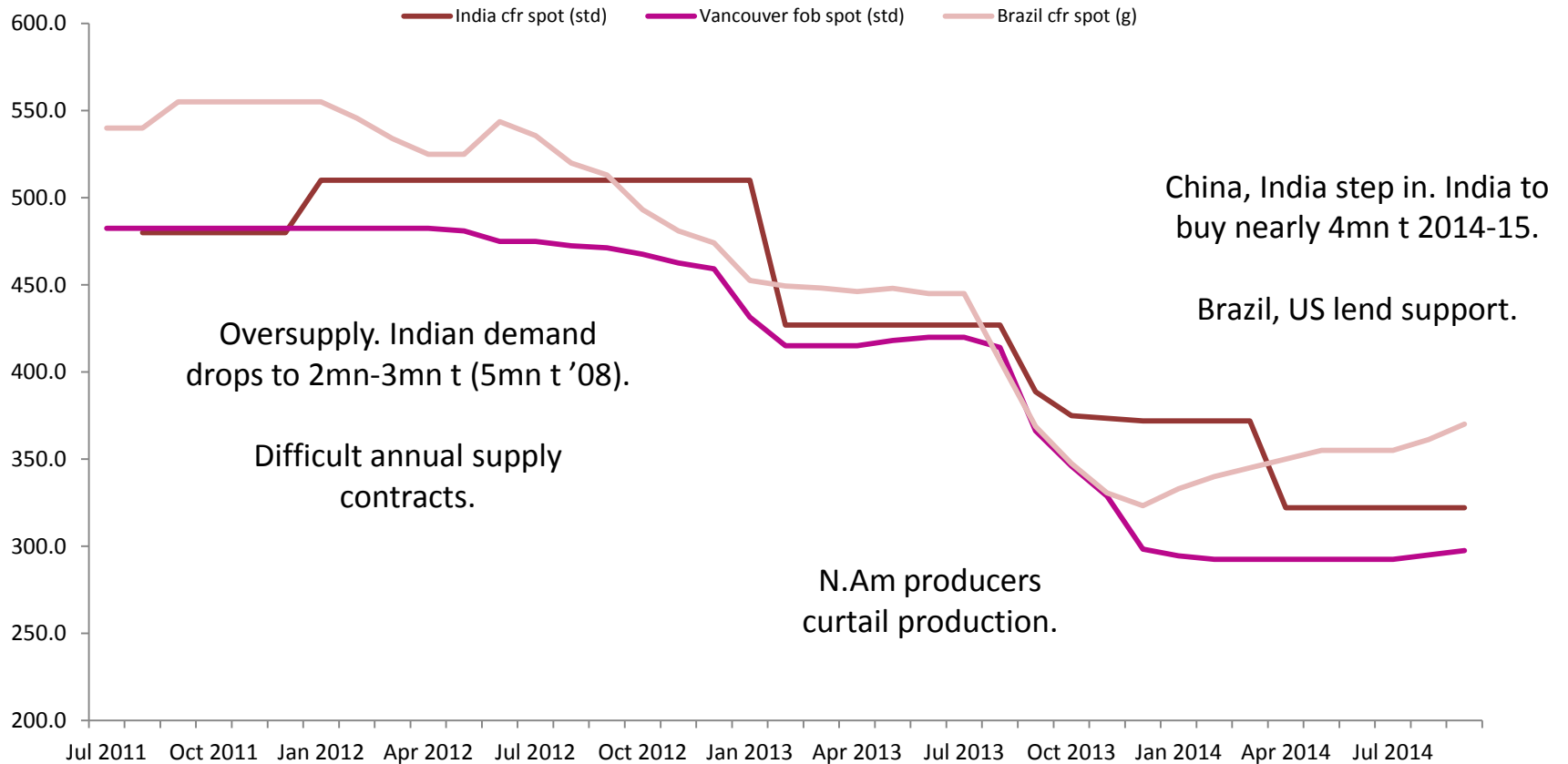
Highlights in 2013-2014



Emerging economy politics will disrupt trade



Potash: 3 yr decline reaches price floor



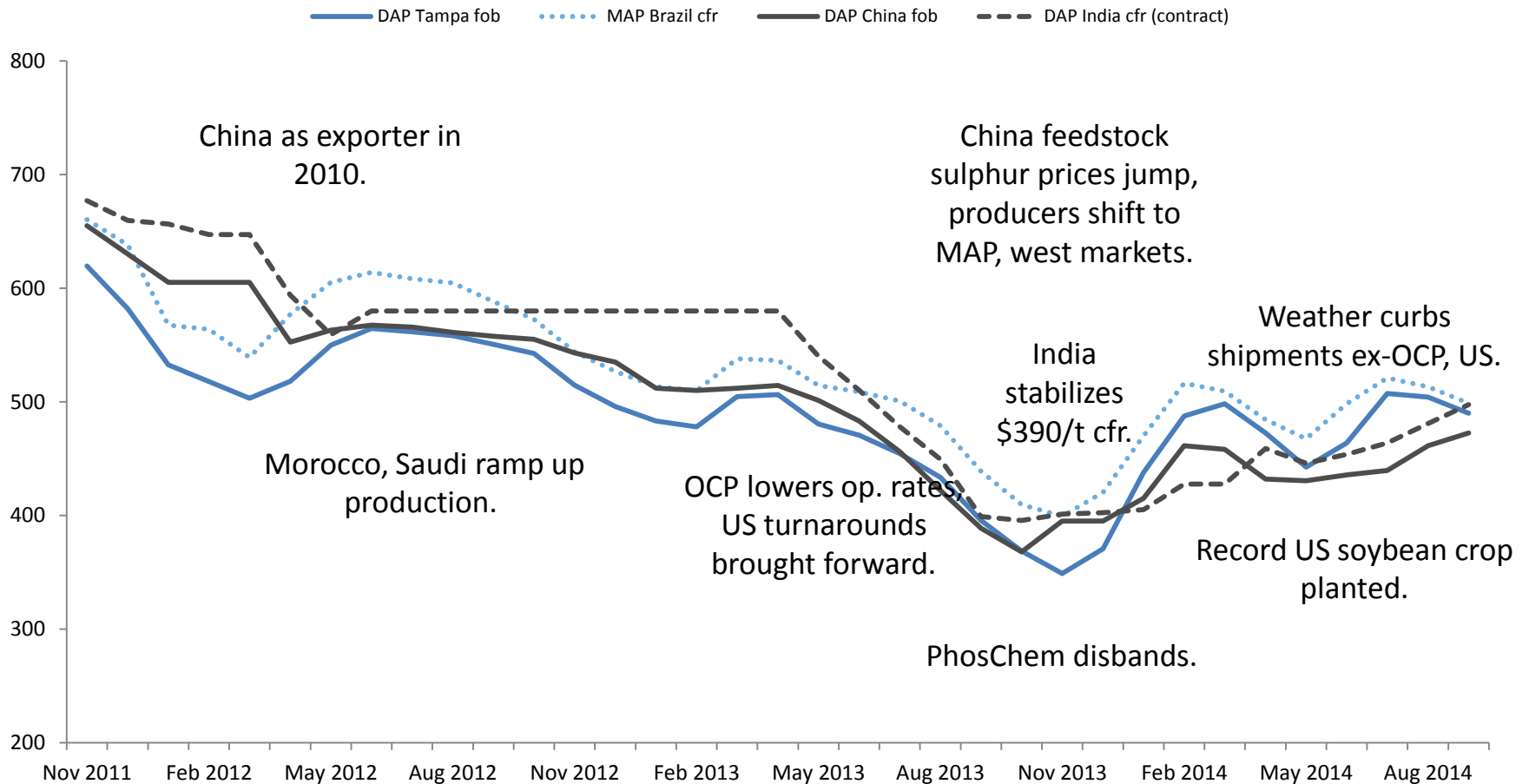
MOP trade 53mn t

| EXPORTS mn t | 2007 | 2012 | 2013 E |
|-----------------|------|------|--------|
| Canada | 17.3 | 13.7 | 16 |
| Belarus | 9 | 6.8 | 8 |
| Russia | 7.3 | 6.4 | 7 |
| Israel/Jord | 5.1 | 5.3 | 5.5 |
| Germany | 5 | 4.4 | 4 |
| IMPORTS | | | |
| US | 8 | 6.6 | 9.5 |
| Brazil | 7 | 7.7 | 8.1 |
| China | 9.2 | 5.3 | 6 |
| Indo/Mal | 3.3 | 3.9 | 3.6 |
| India | 3.9 | 2.7 | 3.5 |

- Top exporters = 96% global trade
- Top importers = 68% global trade

IFA, GTIS, Argus

Phosphate: Regionalization and consolidation



DAP trade around 15mn t

| EXPORTS mn t | 2007 | 2012 | 2013 E |
|------------------------|-------------|-------------|---------------|
| US | 4 | 3.6 | 3.2 |
| China | 1.9 | 3.9 | 3.8 |
| Morocco | 0.9 | 2 | 1.6 |
| Russ/Lith | 2.1 | 1.9 | 1.8 |
| Saudi | - | 1.4 | 1.8 |
| IMPORTS | | | |
| India | 2.5 | 5.8 | 3.6 |
| Thai/Viet | 1 | 0.9 | 1 |
| Brazil | 0.7 | 0.7 | 0.8 |
| Ethiopia | 0.3 | 0.6 | 0.4 |
| Pakistan | 1.2 | 4.9 | 0.8 |

- Top exporters = 85% of global trade

- Top importers = 60% of global trade

IFA, GTIS, TFI, Argus



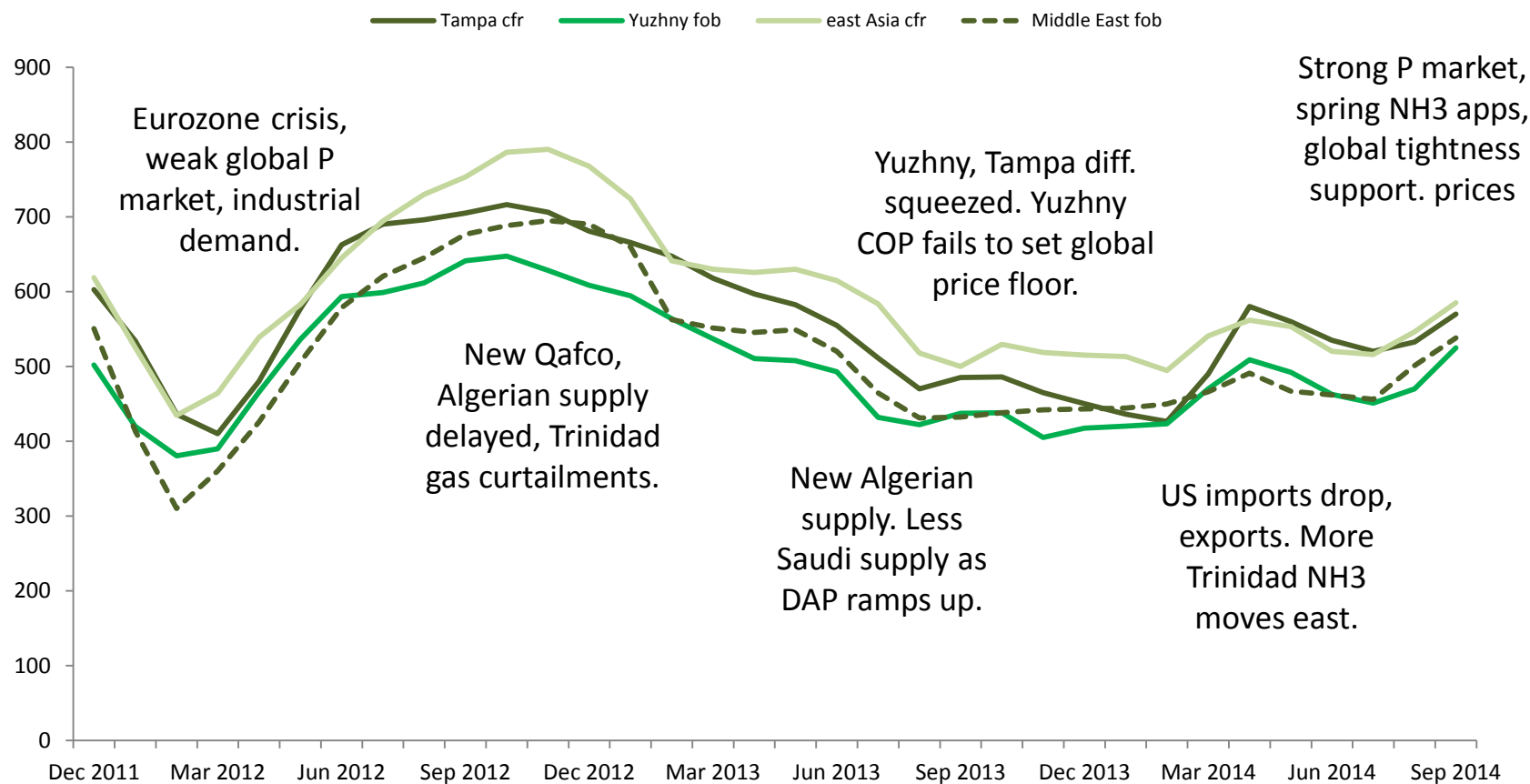
MAP global trade around 6mn t

| EXPORTS mn t | 2007 | 2012 | 2013 E |
|-----------------|------|------|--------|
| Russia | 1.9 | 1.6 | 1.9 |
| US | 1.9 | 1.5 | 1.7 |
| Morocco | 0.5 | 1.5 | 1.9 |
| China | 1.9 | 0.5 | 0.7 |
| Mexico | - | 0.4 | 0.6 |
| IMPORTS | | | |
| Brazil | 1.9 | 2 | 2.5 |
| US/Can | 0.7 | 0.9 | 1.3 |
| Argentina | 0.6 | 0.6 | 0.5 |
| Australia | 0.4 | 0.5 | 0.6 |
| India | 0.4 | 0.2 | 0.06 |

- Top exporters = 95% of global trade... with Saudi Arabia to join
- Top importers = 71% of global trade

IFA, GTIS, TFI, Argus

Ammonia: Backward integration drives trade changes



Ammonia trade around 19mn t

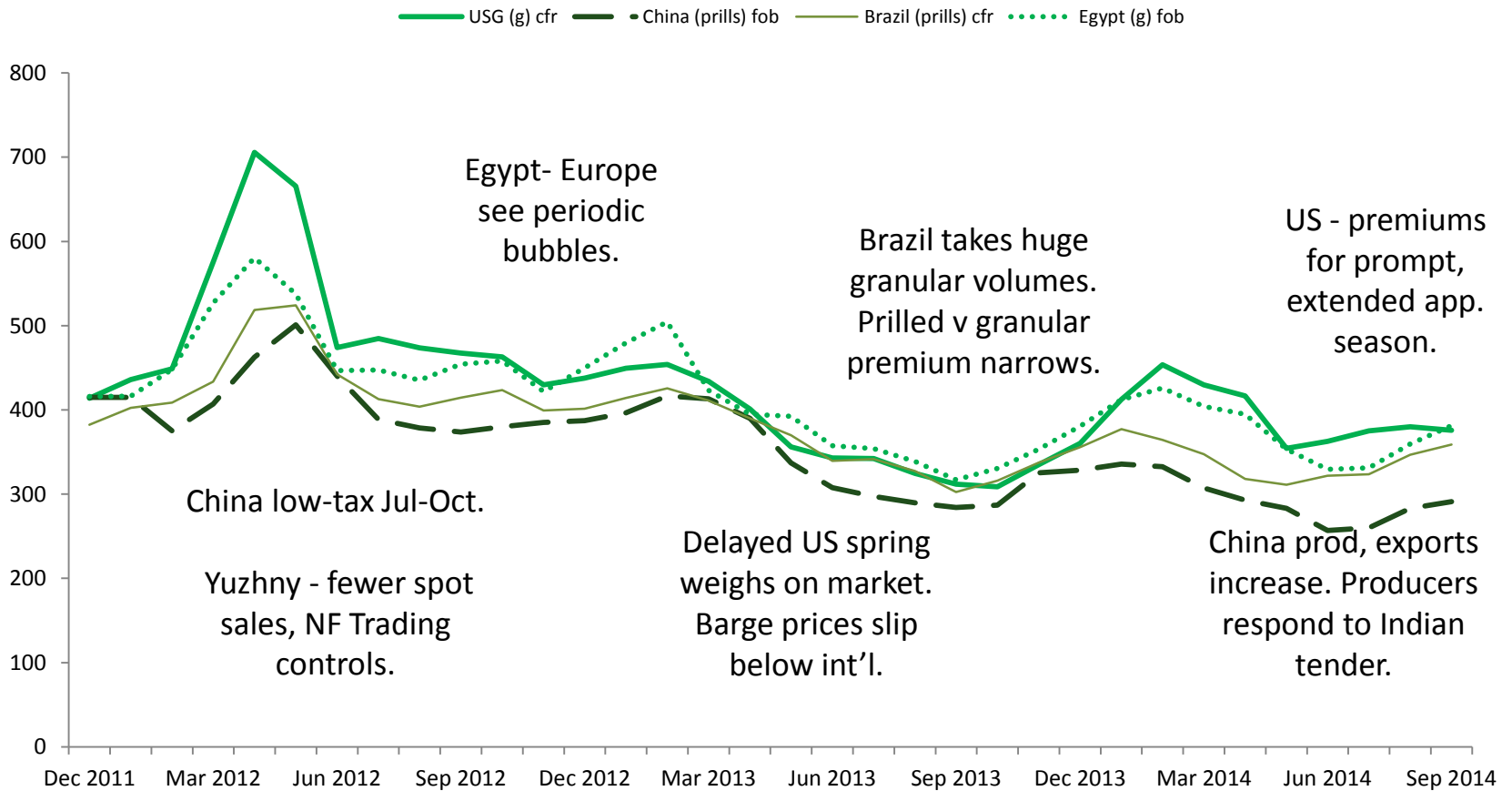
| EXPORTS mn t | 2007 | 2012 | 2013 E |
|-----------------|------|------|--------|
| Trinidad | 4.8 | 4.5 | 4.1 |
| Rus/Uk | 5.7 | 4.4 | 4.6 |
| Saud/Qtr | 1.1 | 2.2 | 2.8 |
| Canada | 1.1 | 1.1 | 1.2 |
| Indonesia | 1.4 | 0.9 | 0.8 |
| IMPORTS | | | |
| US | 7.7 | 6.2 | 6 |
| India | 1.7 | 2 | 1.9 |
| Belg/Fra | 1.4 | 1.5 | 1.5 |
| S Korea | 1.8 | 1.2 | 1.2 |
| Morocco | 0.3 | 0.7 | 0.6 |

- Top exporters = 71% global trade
- Top importers = 61% global trade

IFA, GTIS, Argus



Nitrogen: New price influencers emerge



Urea trade around 45mn t

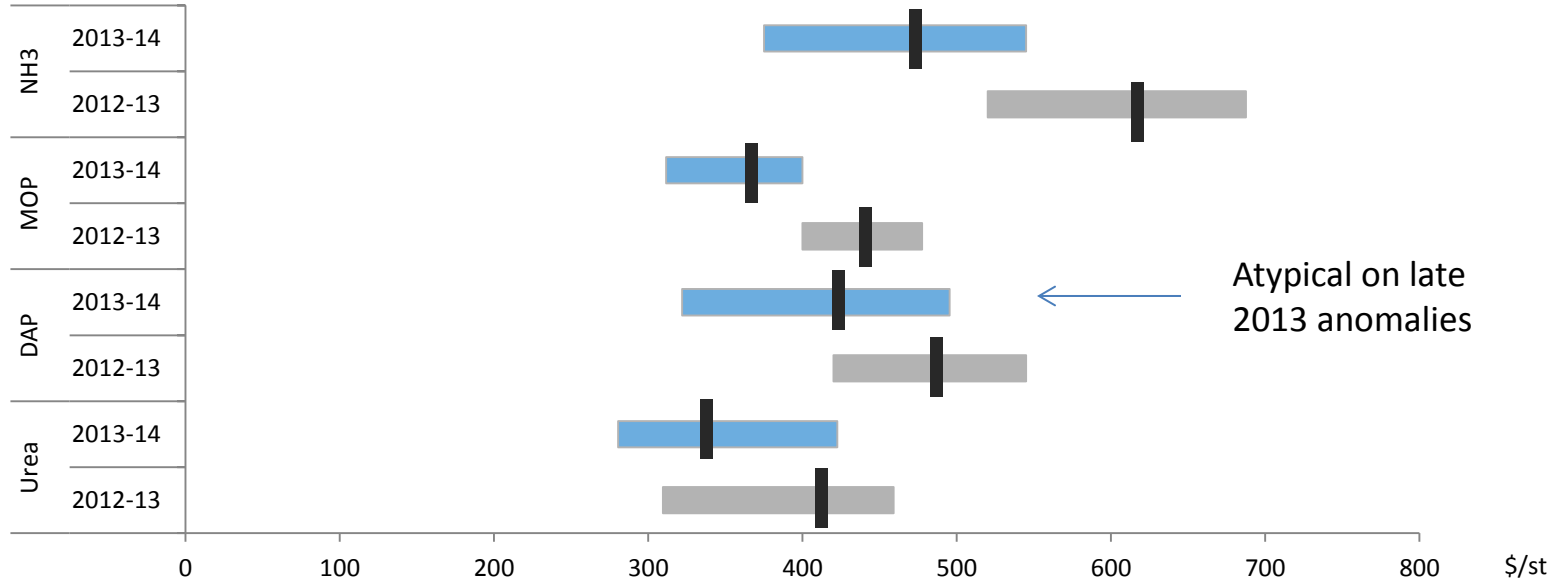
| EXPORTS mn t | 2007 | 2012 | 2013E |
|-----------------|------|------|-------|
| MidEast | 10.2 | 12.4 | 15 |
| Rus/Uk | 8 | 8.4 | 7 |
| China | 5.8 | 6.9 | 8.3 |
| Egypt | 2.3 | 2.2 | 1.5 |
| Mal/Indo | 1.5 | 1.8 | 2.3 |
| IMPORTS | | | |
| India | 6.5 | 7.9 | 5.8 |
| US | 6.3 | 7 | 6.4 |
| Brazil | 2.2 | 2.9 | 3.5 |
| Thailand | 1.7 | 2.2 | 2.3 |
| Australia | 0.8 | 1.4 | 1.7 |

- Top exporters = 81% global trade
- Top importers = 50% global trade

IFA, GTIS, Argus

North American impact

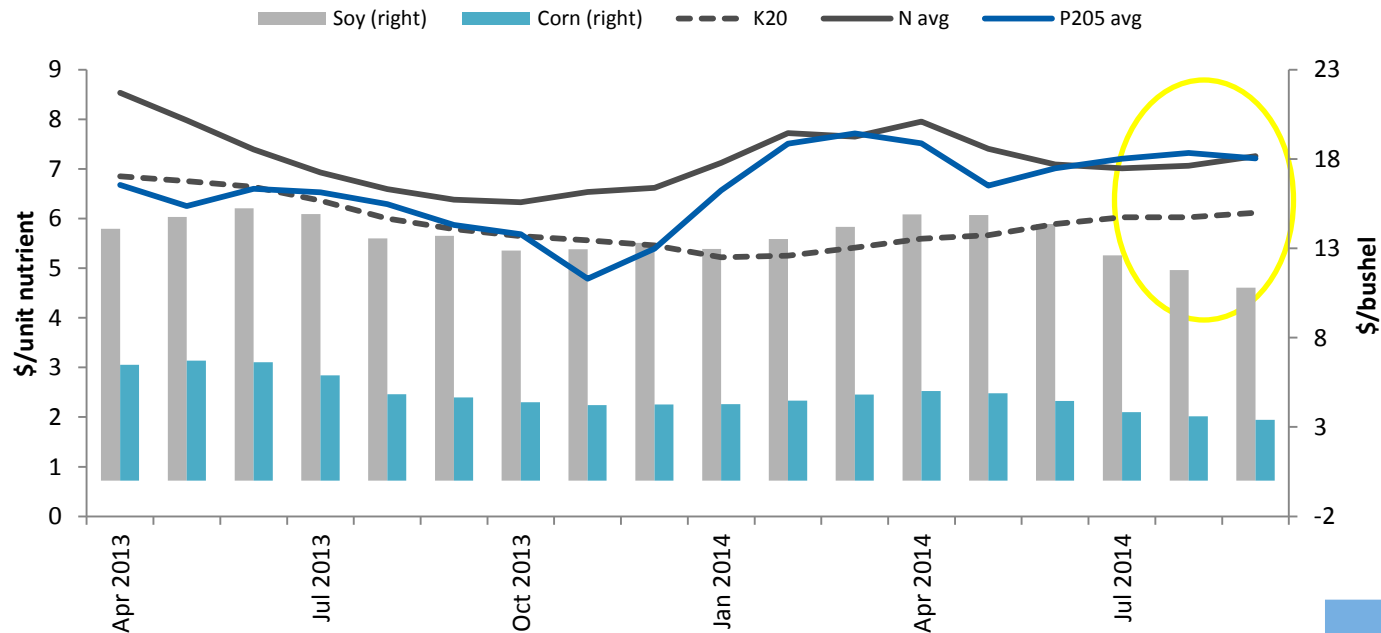
2013-14 sees much lower barge prices



- NH3 price avg \$180/st lower, MOP \$100/st lower
- DAP and urea are \$59/st and \$67/st lower, respectively
- DAP high-low spread increased (\$174/st); volatility of other products relatively unchanged

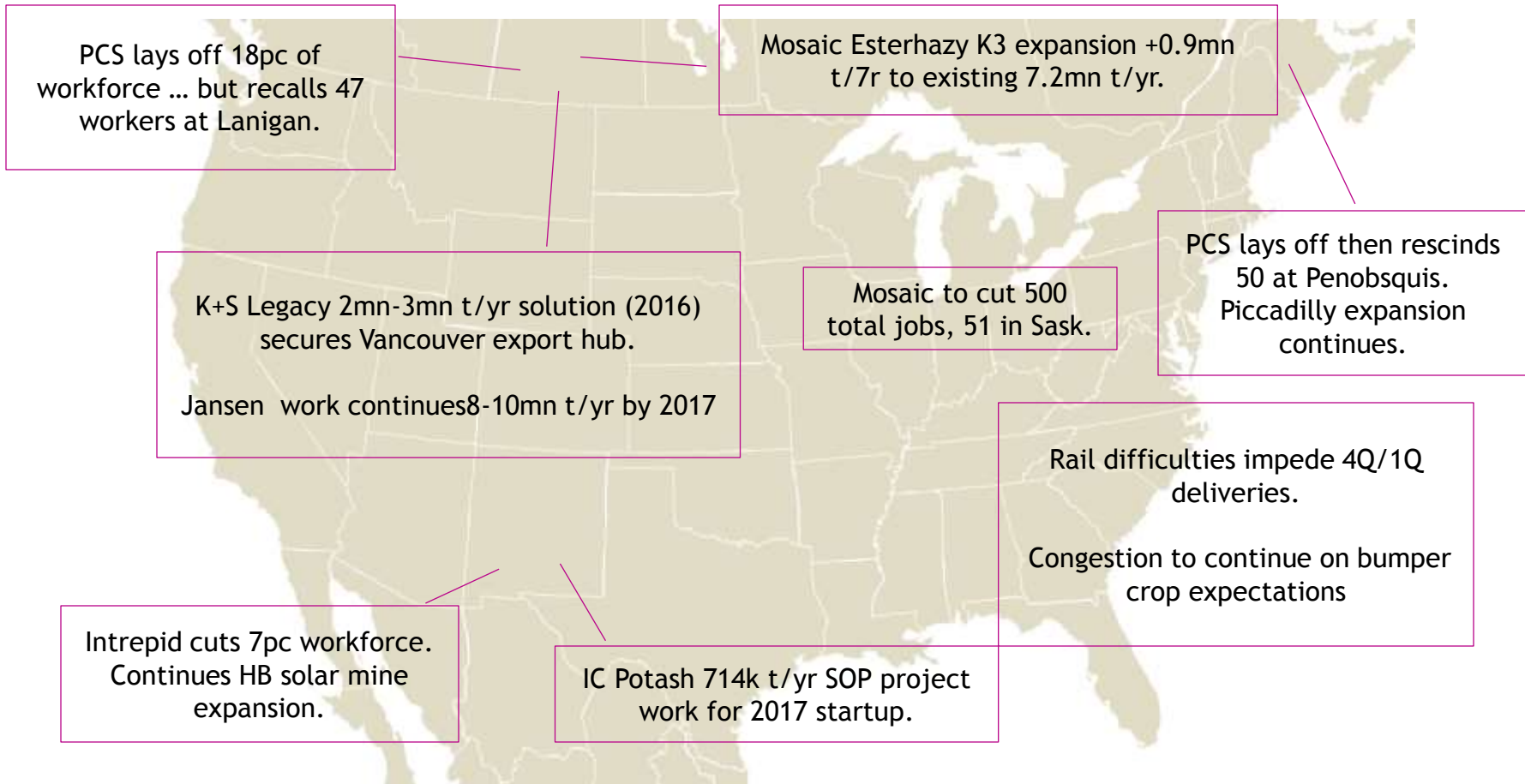
Nutrient prices supportive for consumption?

- Fertilizer price tolerance set by cash crop prices
- “Back to normal” acreage, support for P&K?

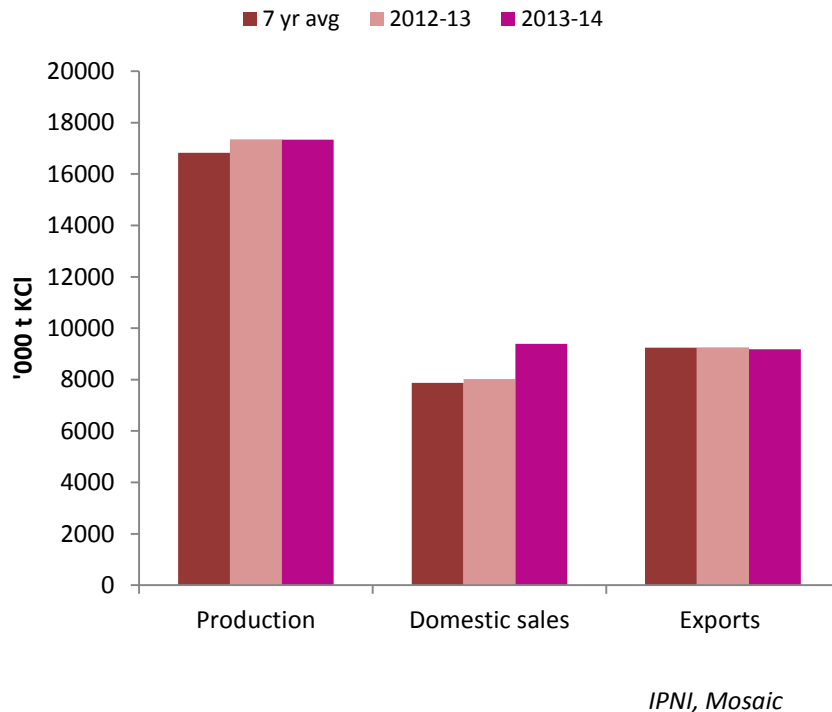


Nola barge values for nutrient prices, front mo CBOT crop prices

Potash: Tough times force belt tightening

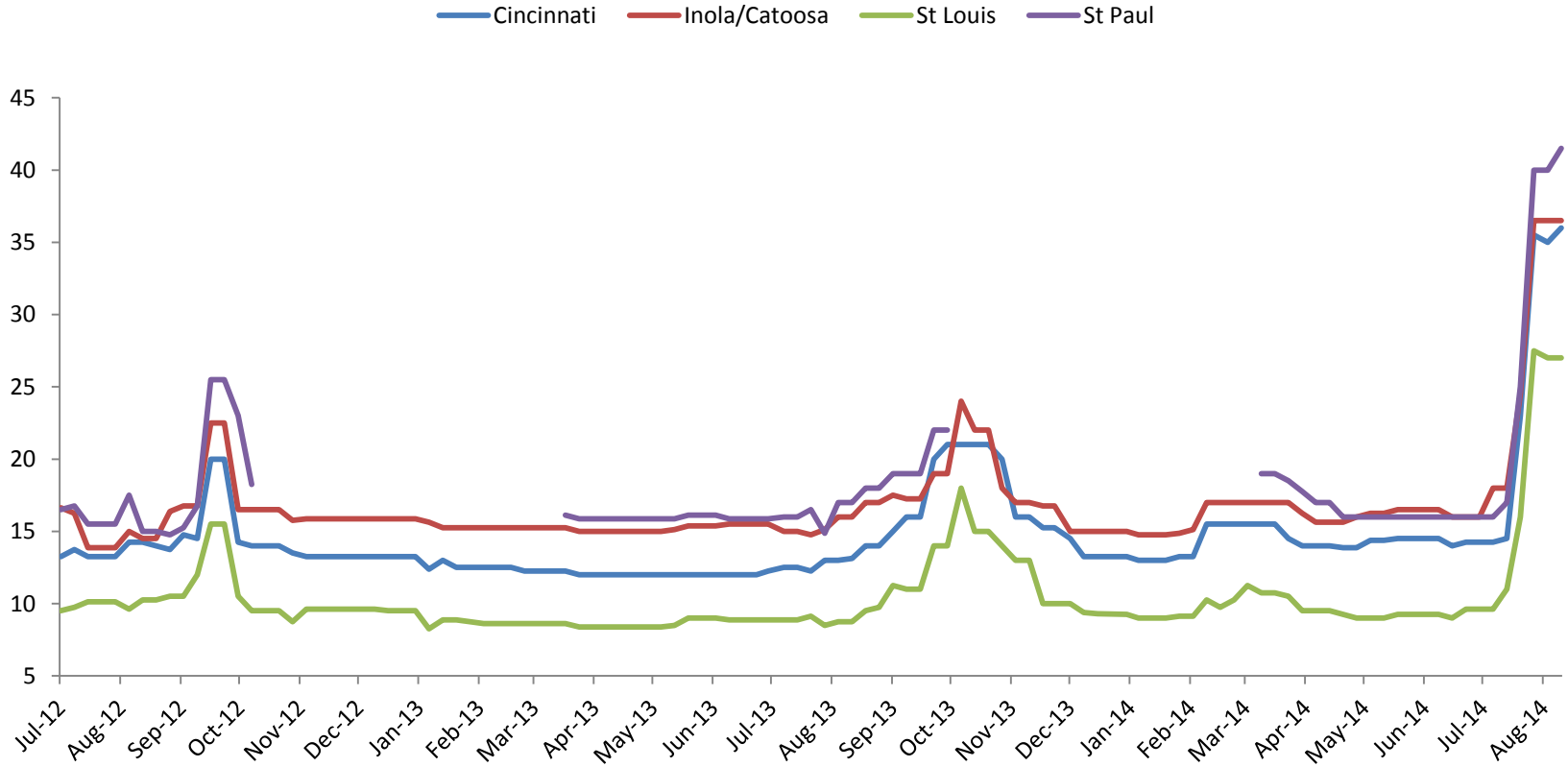


Playing the home field advantage



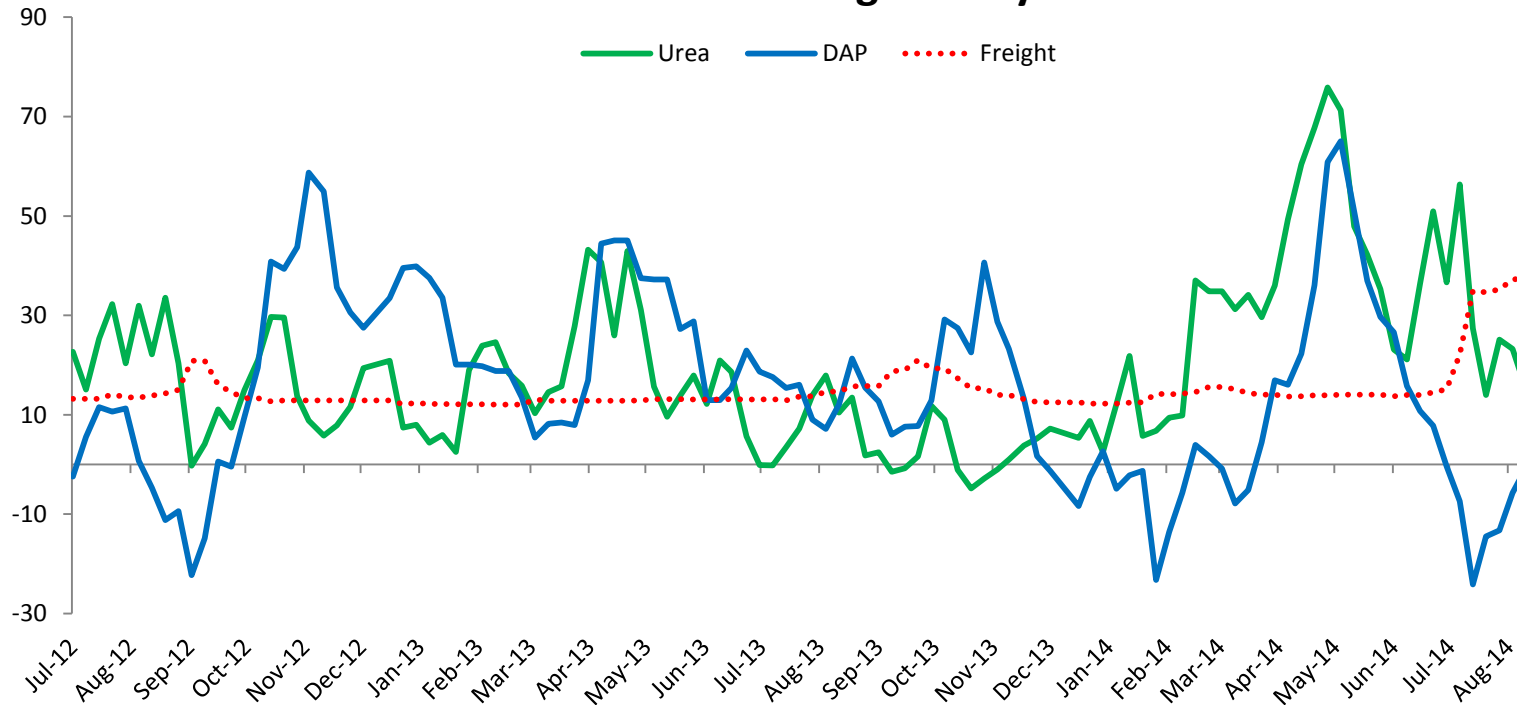
- 6 mos inventory drawdown, stronger domestic sales
- Capacity +3.2m t in next few years at existing producers
- But unexpected outages Agrium, PCS
- Huge price support from logistical bottlenecks

Northbound barge rates soar in July



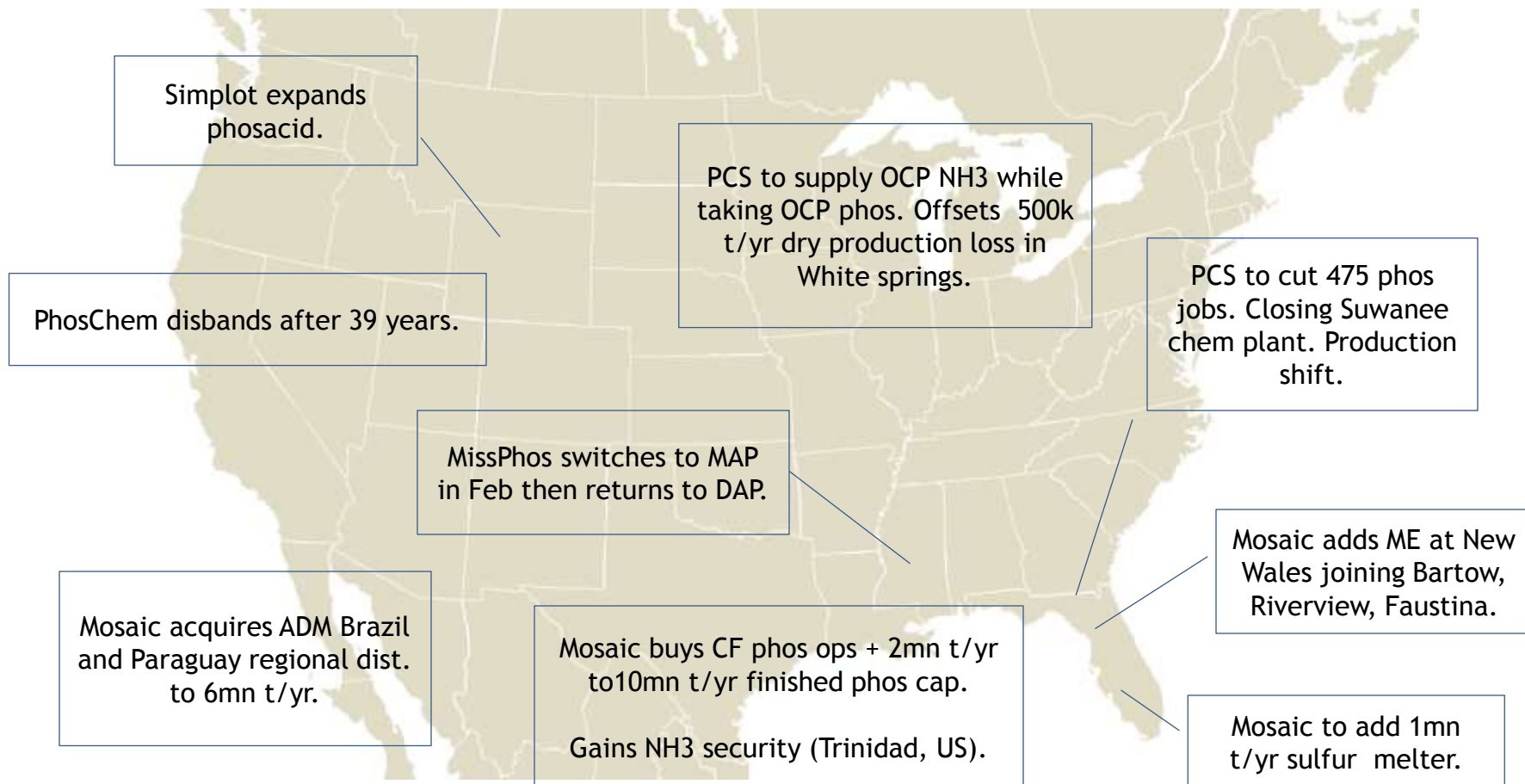
Wholesale feels squeeze, liquidity thins

Theoretical margin analysis

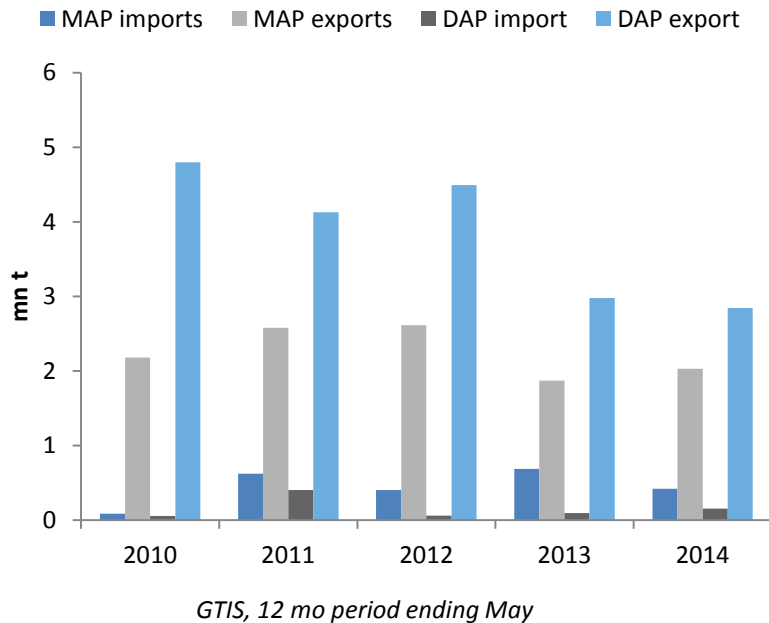


Average prices are in \$/st. Cincinnati/Jeffersonville, Inola/Catoosa, St Louis and Twin Cities used.

Phosphate: Restructuring to regain competitiveness



US becomes swing import and export market



- US production, exports declining
- Export diversification away from India toward LatAm
- Domestic market adjusting to DAP, MAP and ME options
- Chinese to join Morocco, Russia as regular imports?

Phosphate: Forward glance

High-low range, actual and forecast

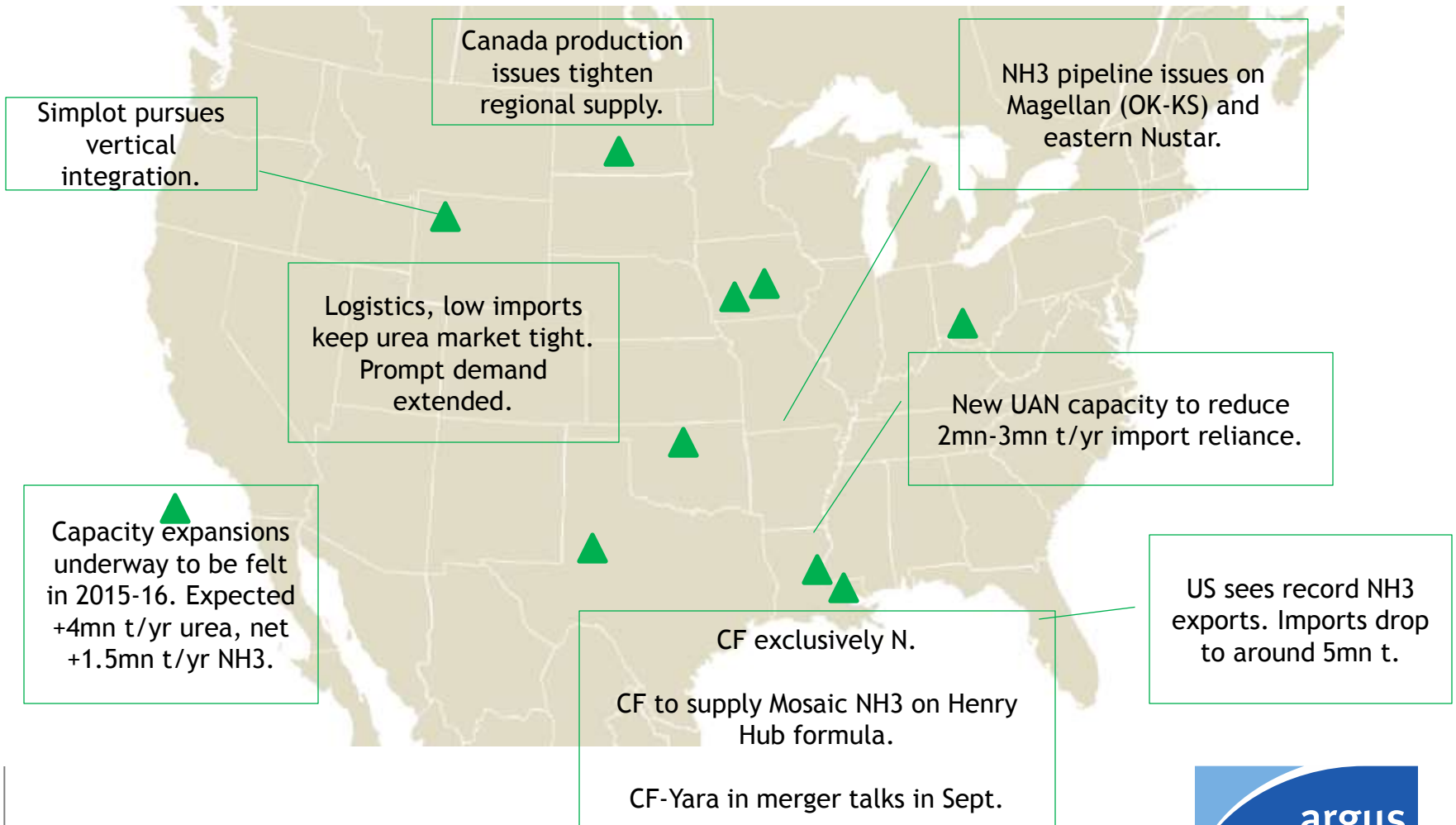


Tampa fob

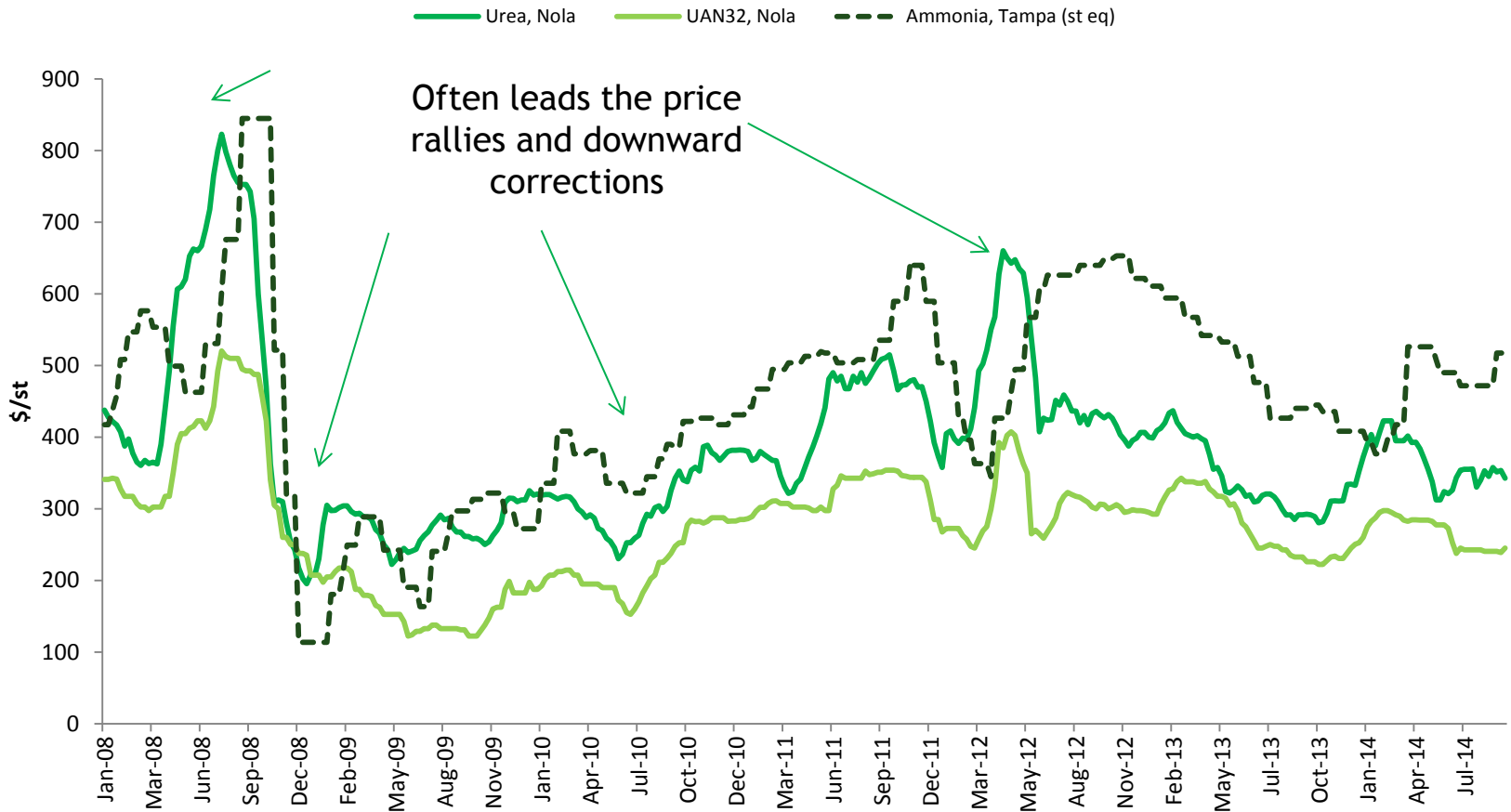
\$/t

- China, Saudi Arabia will dominate pricing: India
- India demand unlikely to grow much pending subsidy reform
- Global trade to increase toward 20-25mn t DAP/MAP in coming years

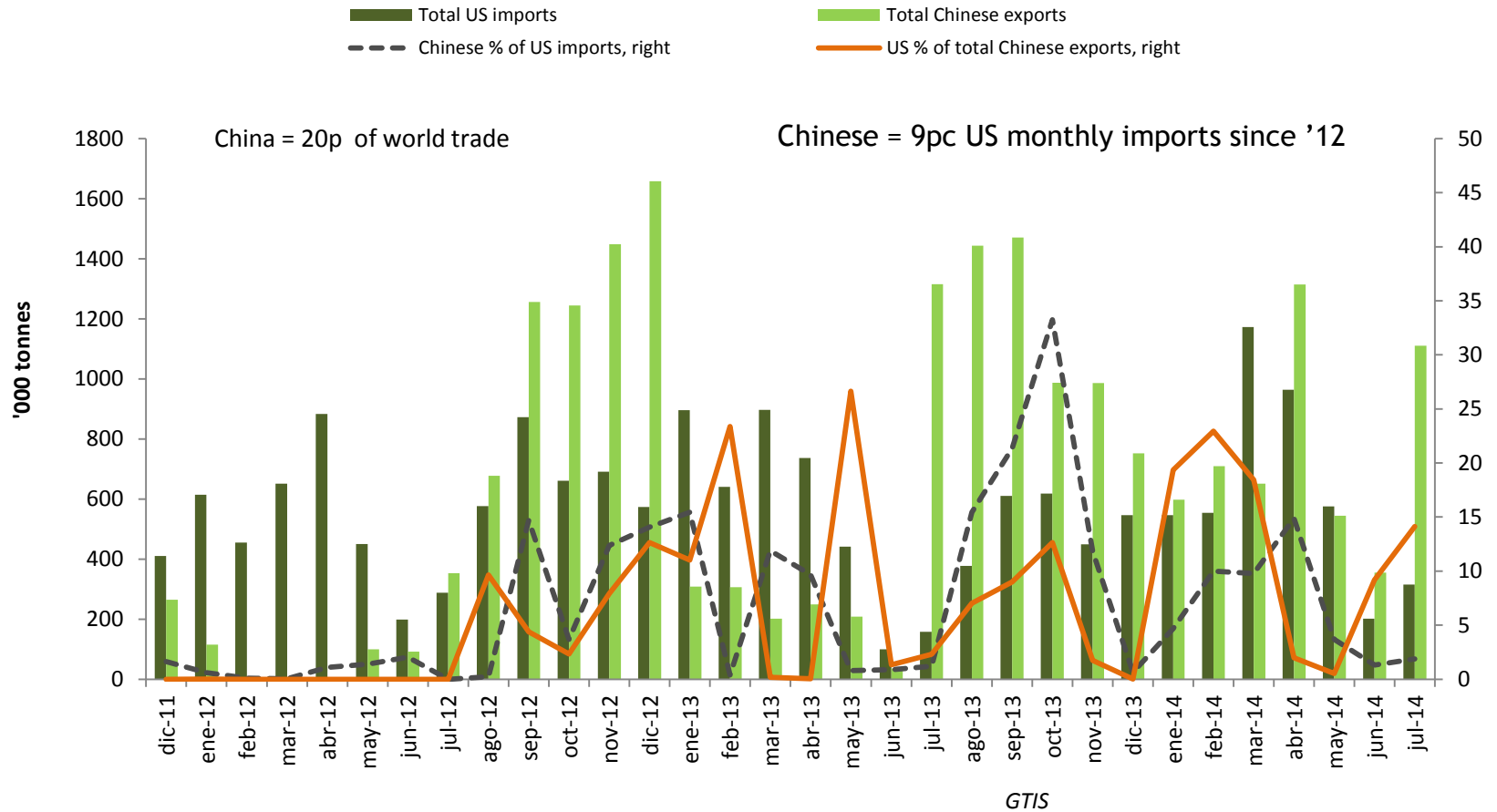
Market prepares for new nitrogen supply



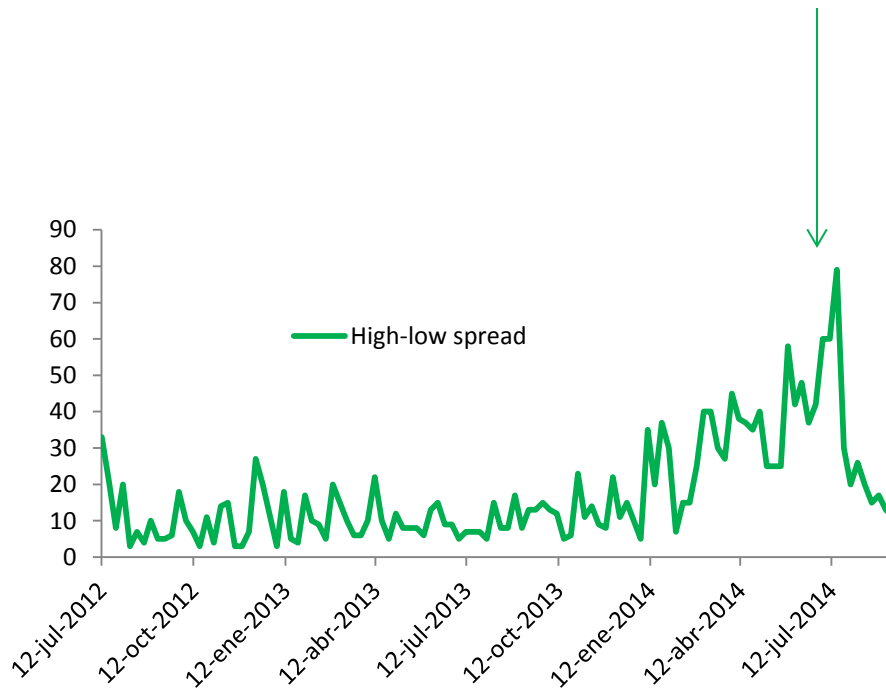
Urea is a key influencer



China to export >10mn t urea in 2014

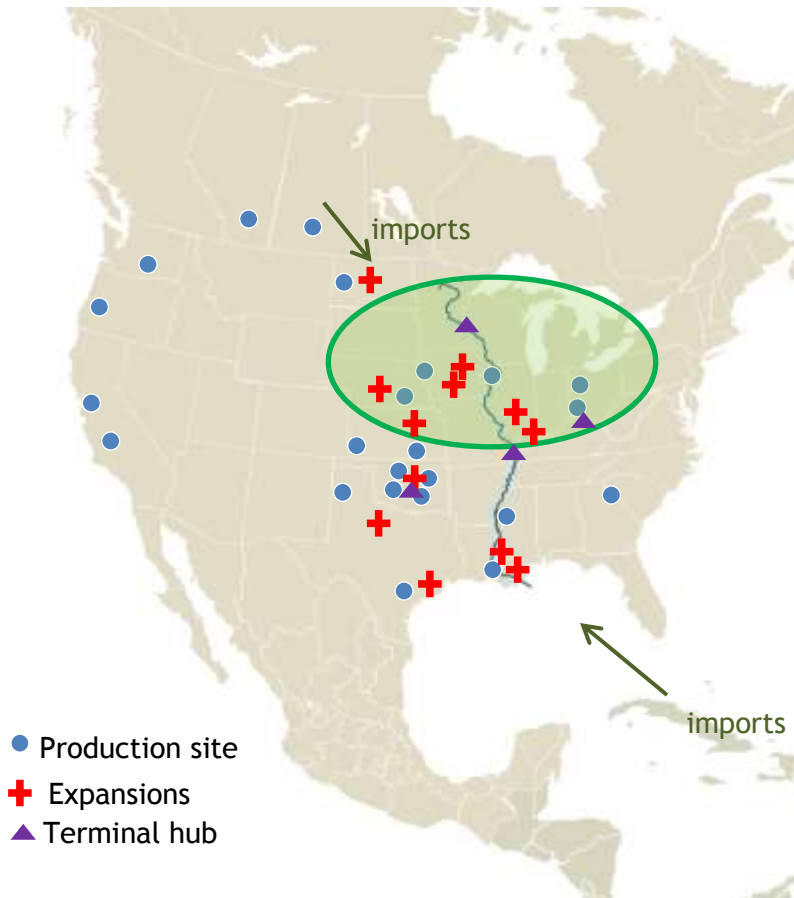


Prompt urea barge premiums surge



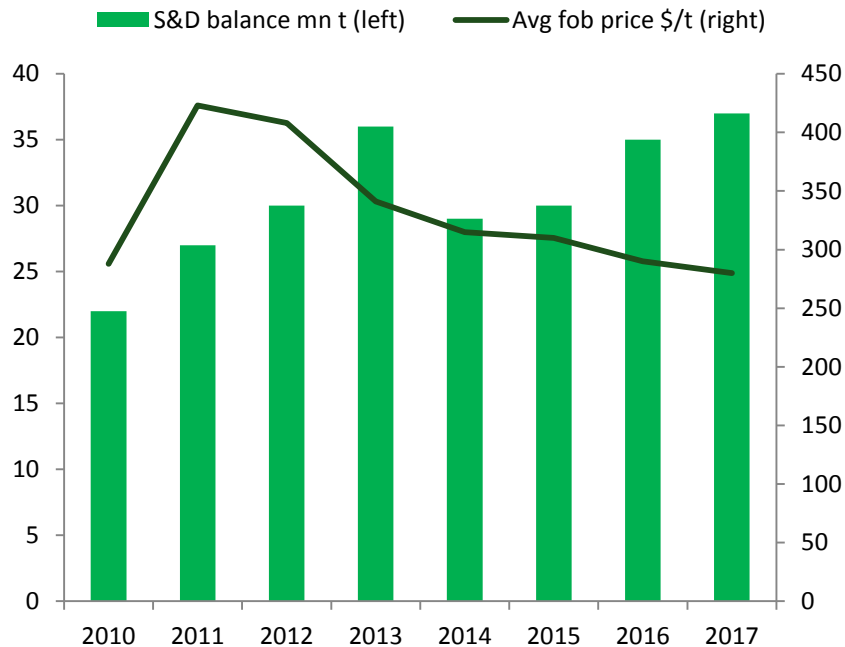
- Buying behavior change
- Frustration with traditional 30 day price range
- Argus launches upriver/prompt and volume-weighted-average

Nitrogen trade flows to change



- Increased production closer to demand center
- More buyer security, price stability
- Need for producers to have regular purchasing/offtake agreements
- Off-season nitrogen exports

Urea: Forward glance



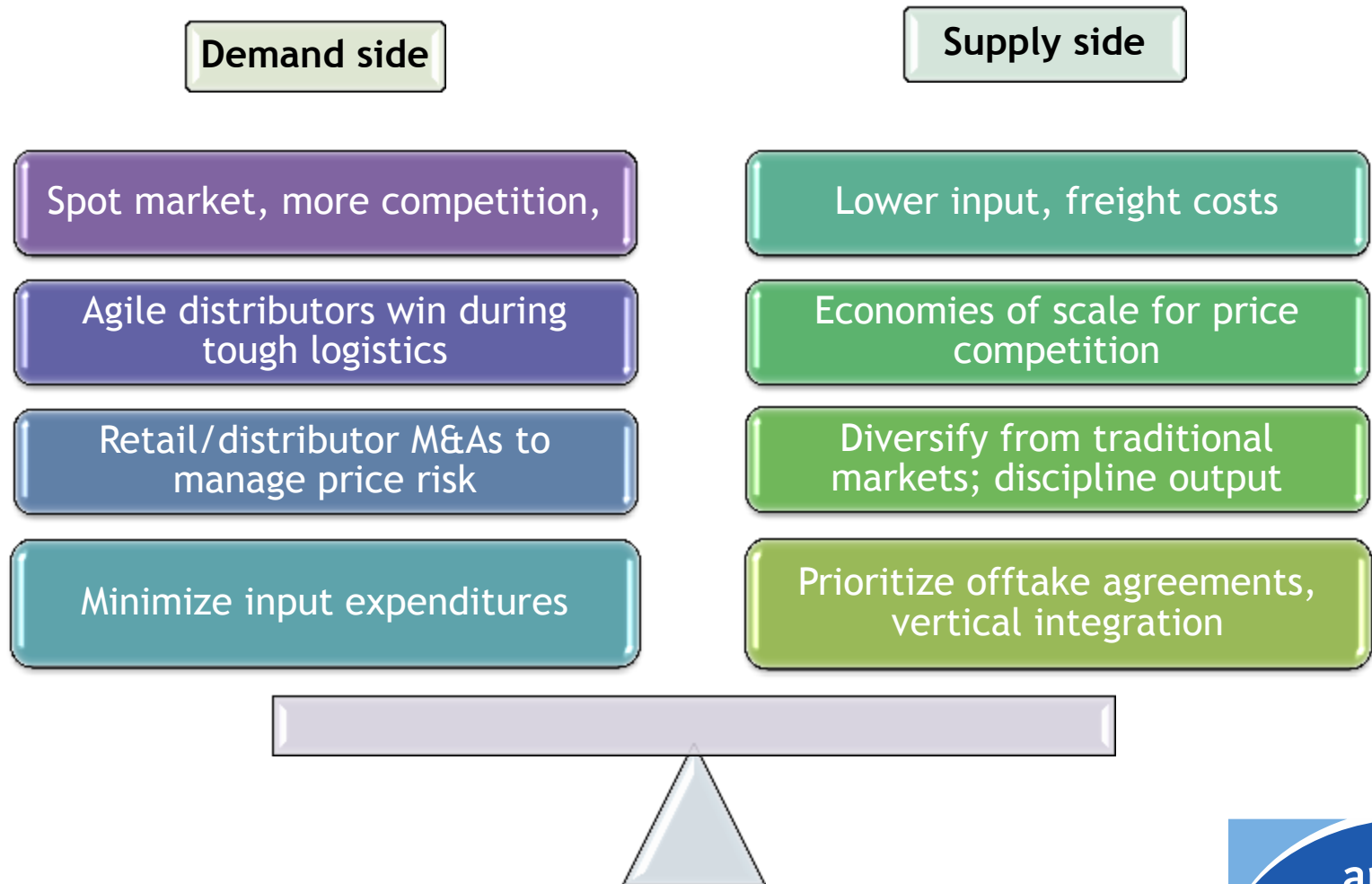
- Urea capacity to increase faster than demand - lower utilization rates
- Brownfield expansions to feature
- Global trade growth to slow 45-48mn t in coming years
- Lower prices to also incentivize demand

Final points

Thoughts from the farm level

- Demand stagnation echoes 2008... but with much less product available
- Soy-corn planting rotations prevail unless arbitrage opportunities are significant
- Banks bearing down, farm income to drop 1% this year to \$71,000
- Buyers “just in time” spot purchasing on price uncertainty... search for more hedging tools

Risk mitigation and competitive advantage



Key takeaways

- Markets entering readjustment phase to establish “new norms” - but current trends resemble the past
- North America particularly influenced by infrastructure bottlenecks - subsequent price impact
- Trade flows to consolidate intra-regionally as interior production capacity increases; seasonal nitrogen export outlets will be necessary
- Pricing as barometer for changes - new points of liquidity to emerge

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