Profercy Phosphates & NPKs

Phosphates Market Outlook 2012

TFI Fertilizer Technology & Outlook Conference

St Petersburg, Florida

16 November 2011

Introduction

- Profercy Phosphates & NPKs
  - Price discovery, forecasting; Publication
  - 2 years clocked up; but 15 years experience
- What we do
  - Market today – Price Tracking (all P_2O_5)
  - Price Forecasts & S/D Modelling
  - Longer-term Outlook Research
  - Costs & competitiveness, Entry cost

Phosphates Tomorrow

- **Short-term Specifics, & Supplier Tactics**
  - 2012-13 A turning point
  - Capacity changes: Saudi, USA, Morocco, Brazil
  - Buyer deferral vs destruction
- **Long-term Outlook & Industry Strategies**
  - Integration, stand-alone, off-shore jvs?
  - Determining the P_2O_5 destiny

…the unexpected

High-impact, unforeseen events outlying regular expectations

Unexpected, high-impact events

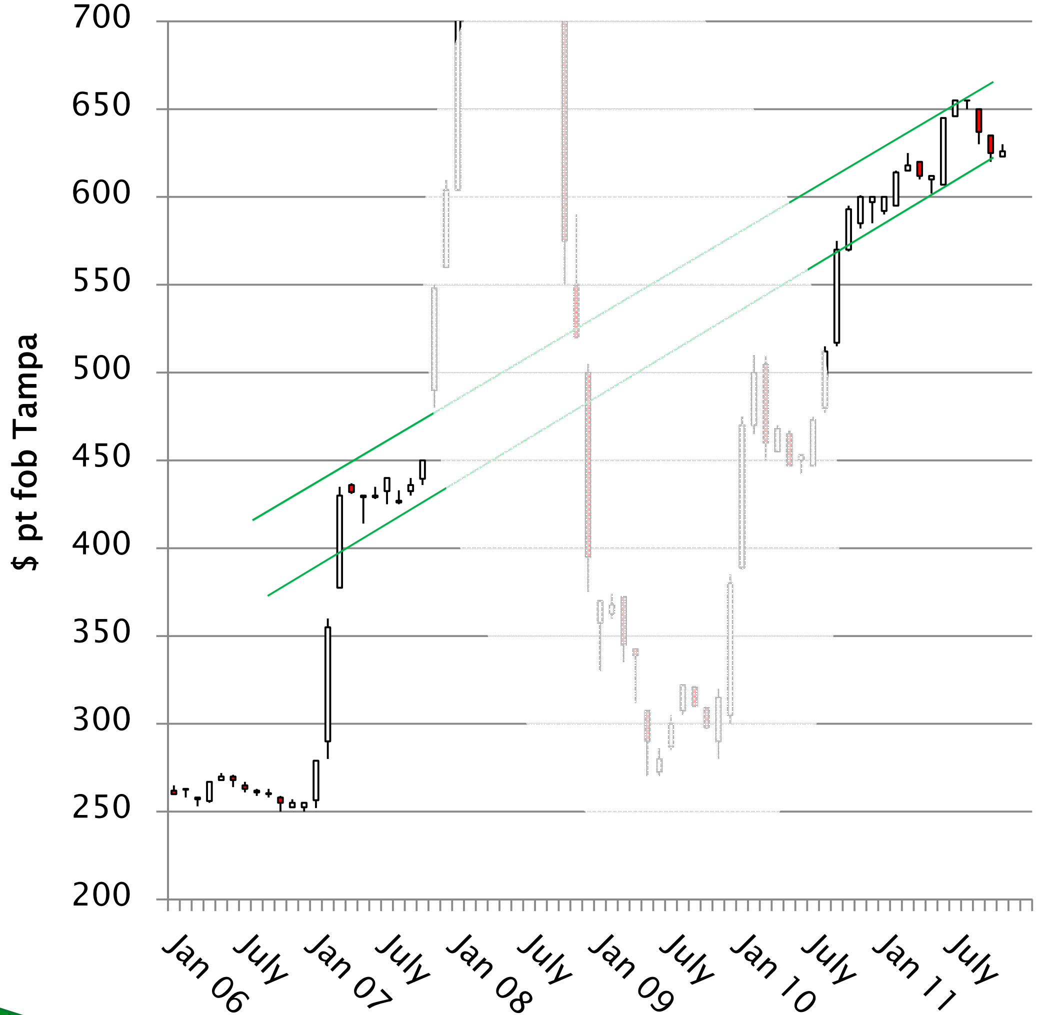
High-impact, unforeseen events
outlying regular expectations

- China export policy (but loopholes exist)
- Arab Spring; rock exports; hits Europe
- Florida rock litigation, duration, US imports

- With both industry and importer pipeline stocks thin on both sides of the equation, further supply shocks are powerful.

- Rock prices are up 50% in 18 months

Identifying The Trend: 2006-11



Challenges

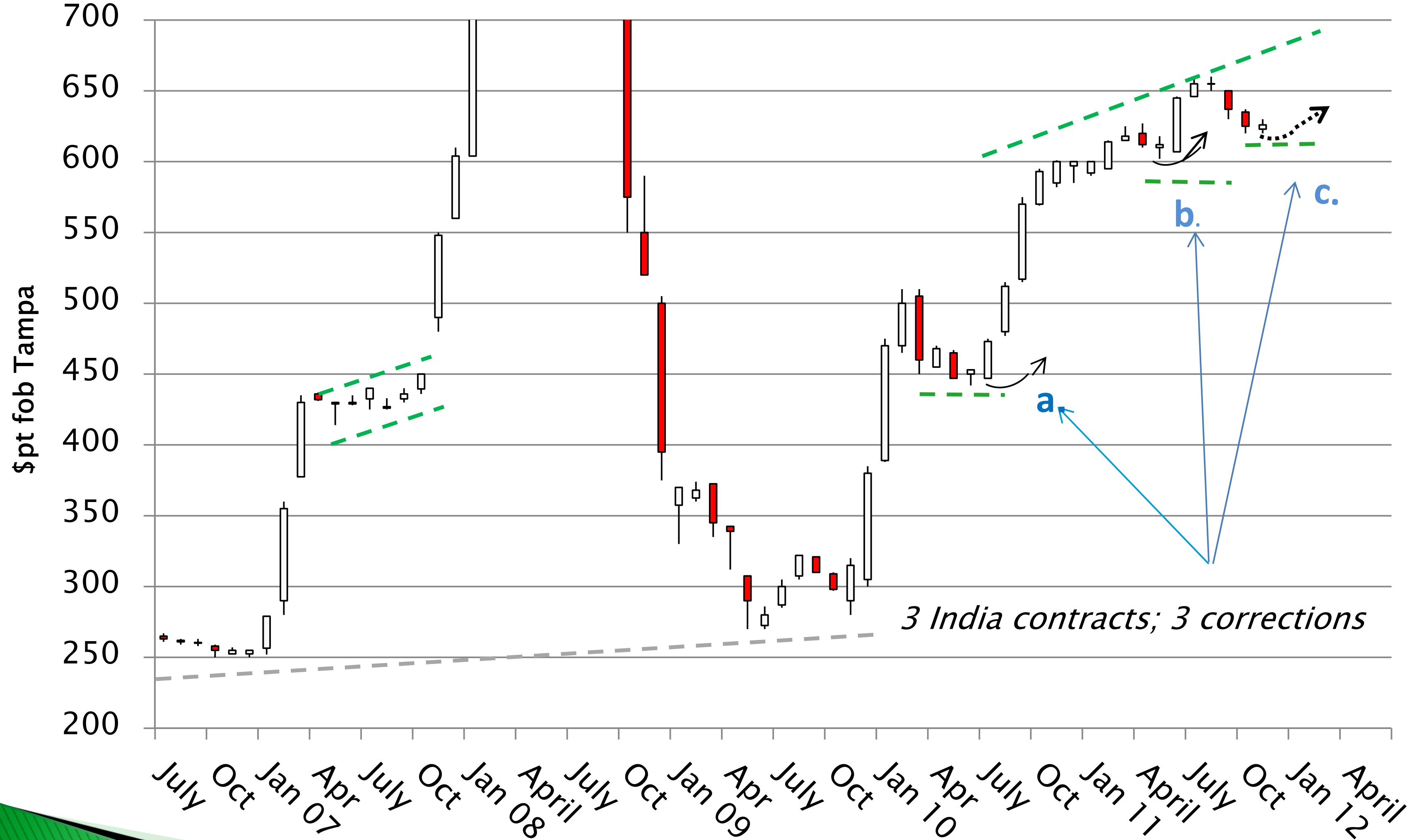
- Finite resources
- Food, Feed & Energy
- Environment
- High entry cost

Consequences

- Supply squeeze
- Price rises
- New capacity delays

US Export DAP: Price Action 2006-11

India contract buying; Distortion impact



Concentrated Phosphates Trade Shifts 2012

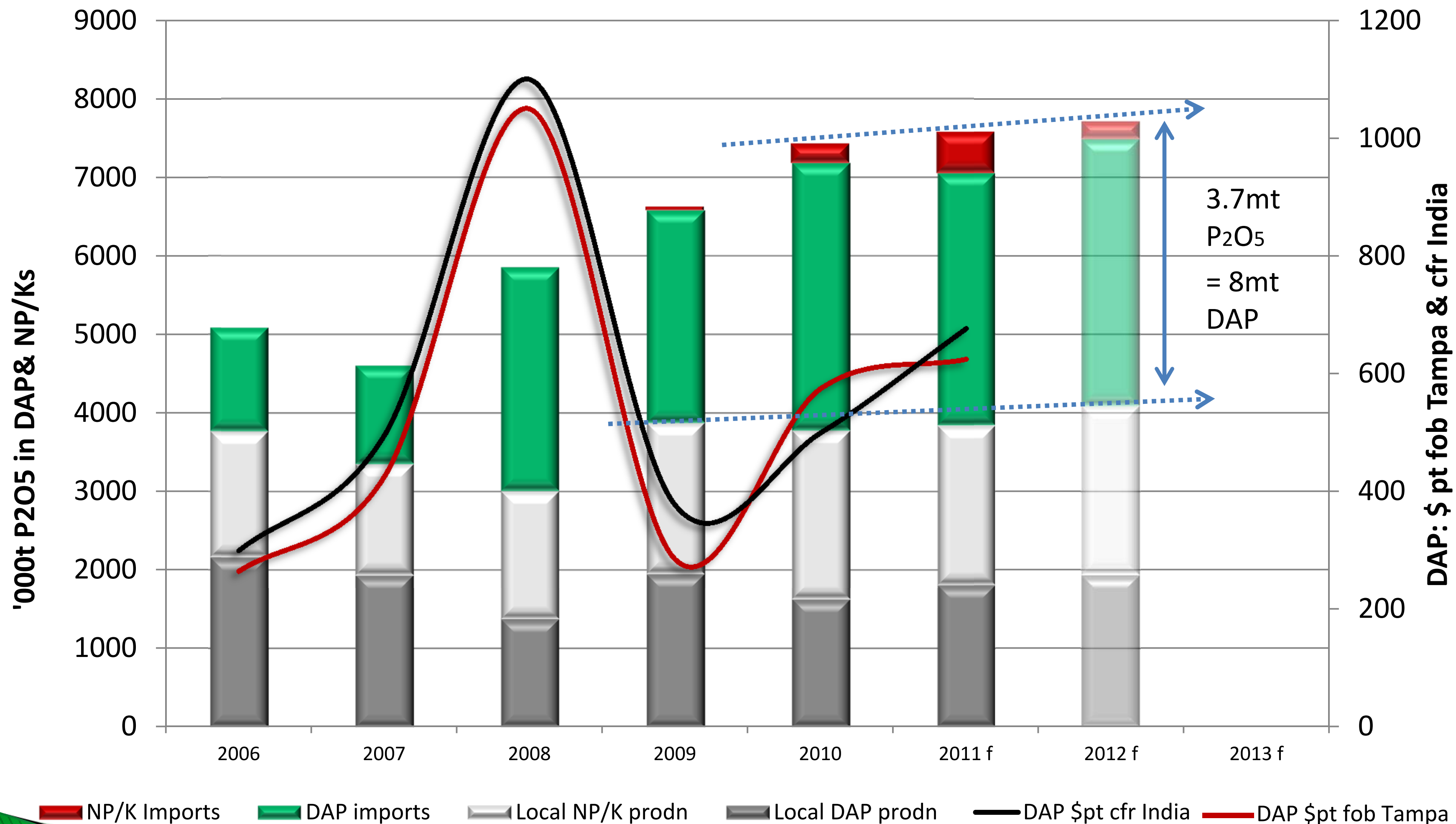
DAP/MAP/TSP & Equiv (million tonnes)			
Gains +	**Impact** +/-		**Losses -**
Saudi Exports	+1.9	-1.5	China Exports (DAP equiv. all prods)
Tunisia return	+0.6	-0.2	US Exports (Agrifos)
Tunisia phosacid (India jv)	+0.3		
Brazil MAP/TSP	+0.4		
Egypt TSP	+0.15		
Gains total	***+3.35***	***-1.70***	***Losses total***
Net impact	**+1.65**		

Conjecture	
Demand	India, Brazil (driven back to DAP/MAP?) , US imports,
Supply	China policy conf, US output? More Arab Spring rock impact?
1.65 mt net increase would restore world trade total to 2010 @ 25mt (D/MAP/TSP)	

**Bayovar first full year*

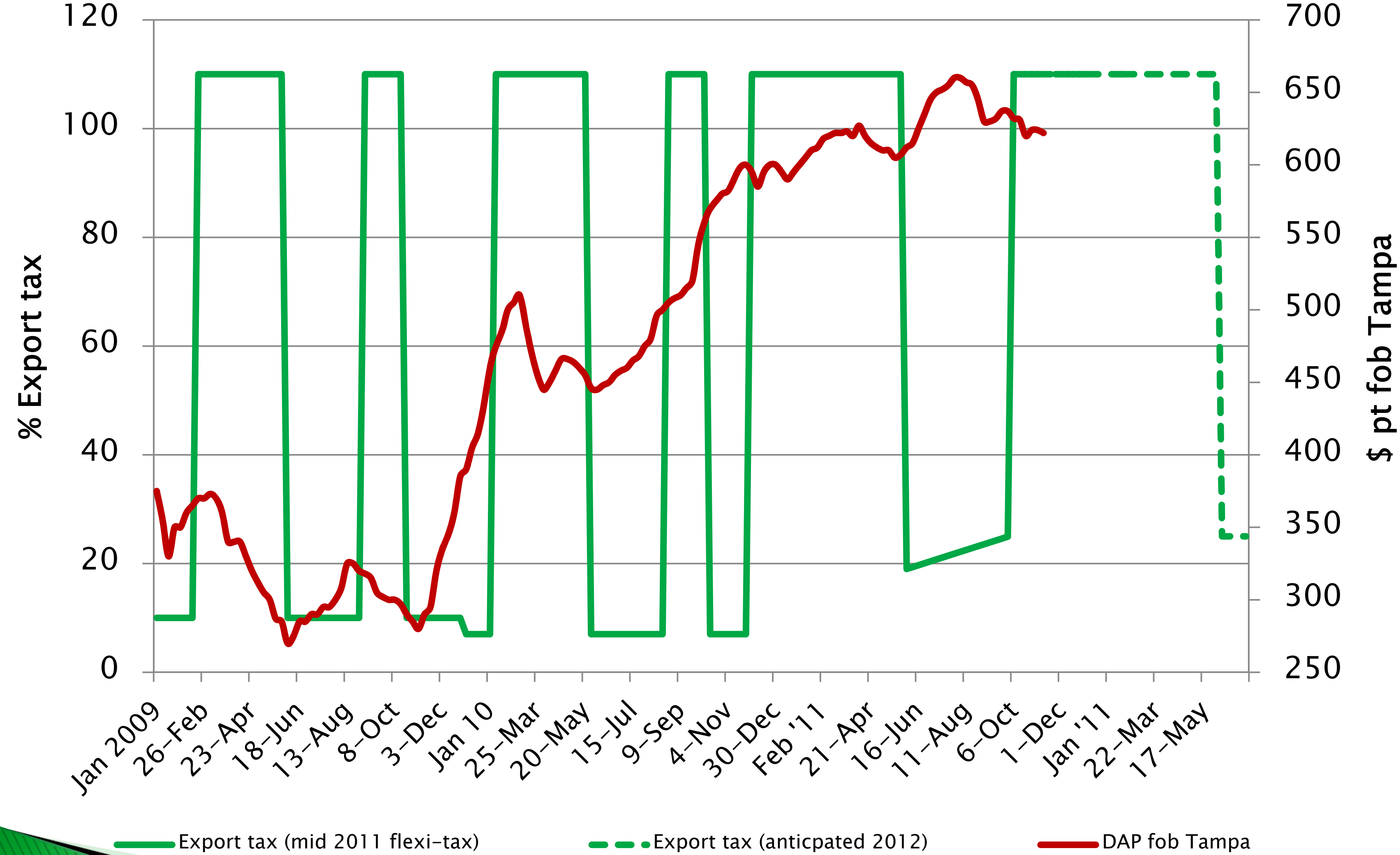
India Concentrated Phosphates Breakdown

Local DAP & NP/Ks struggles to break 4 million tpa P2O5;
Import requirement grows *and* product options narrow

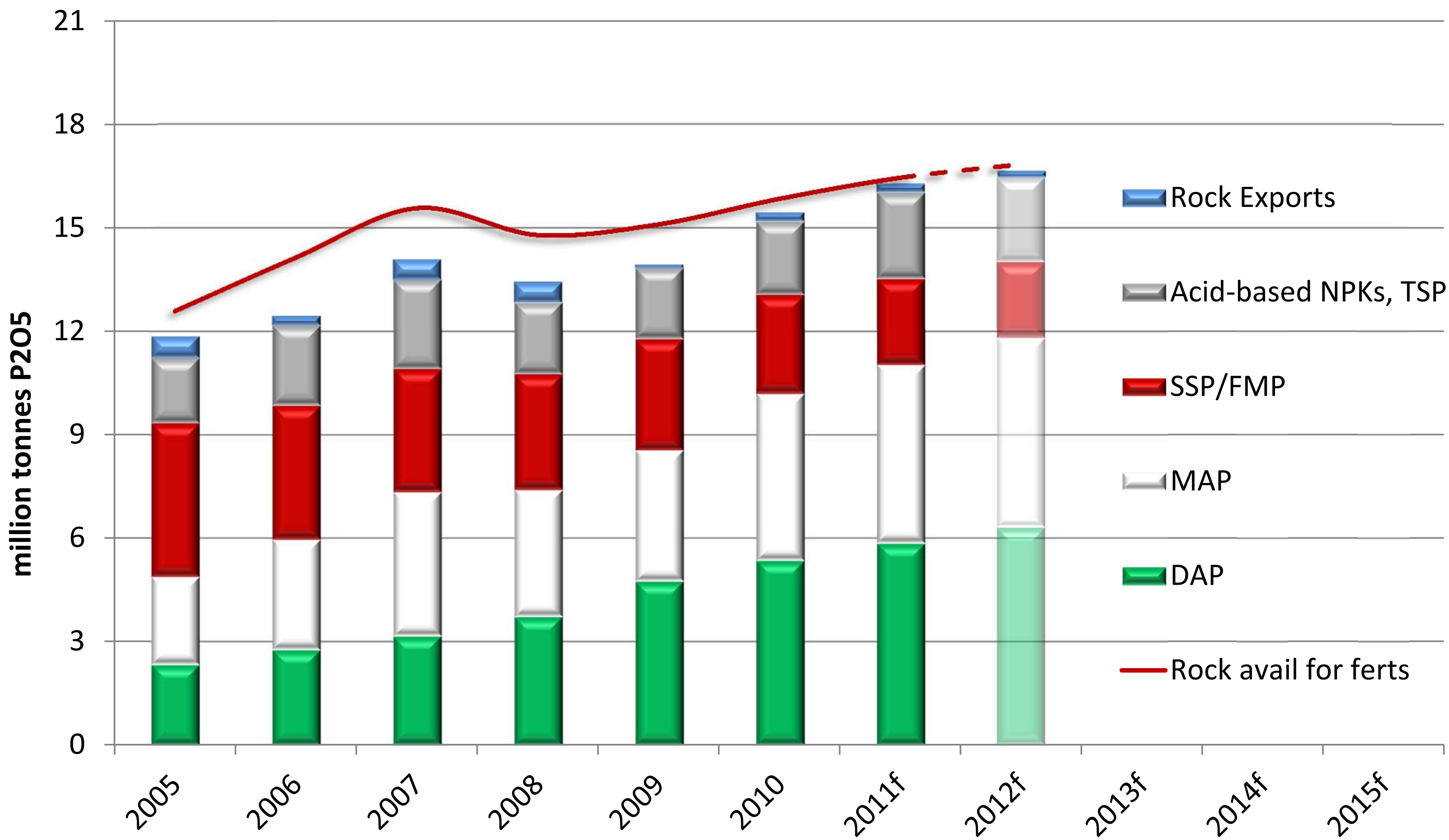


China export policy & DAP prices 2009-11

2012 policy awaited; Fine-tuning or step-change?

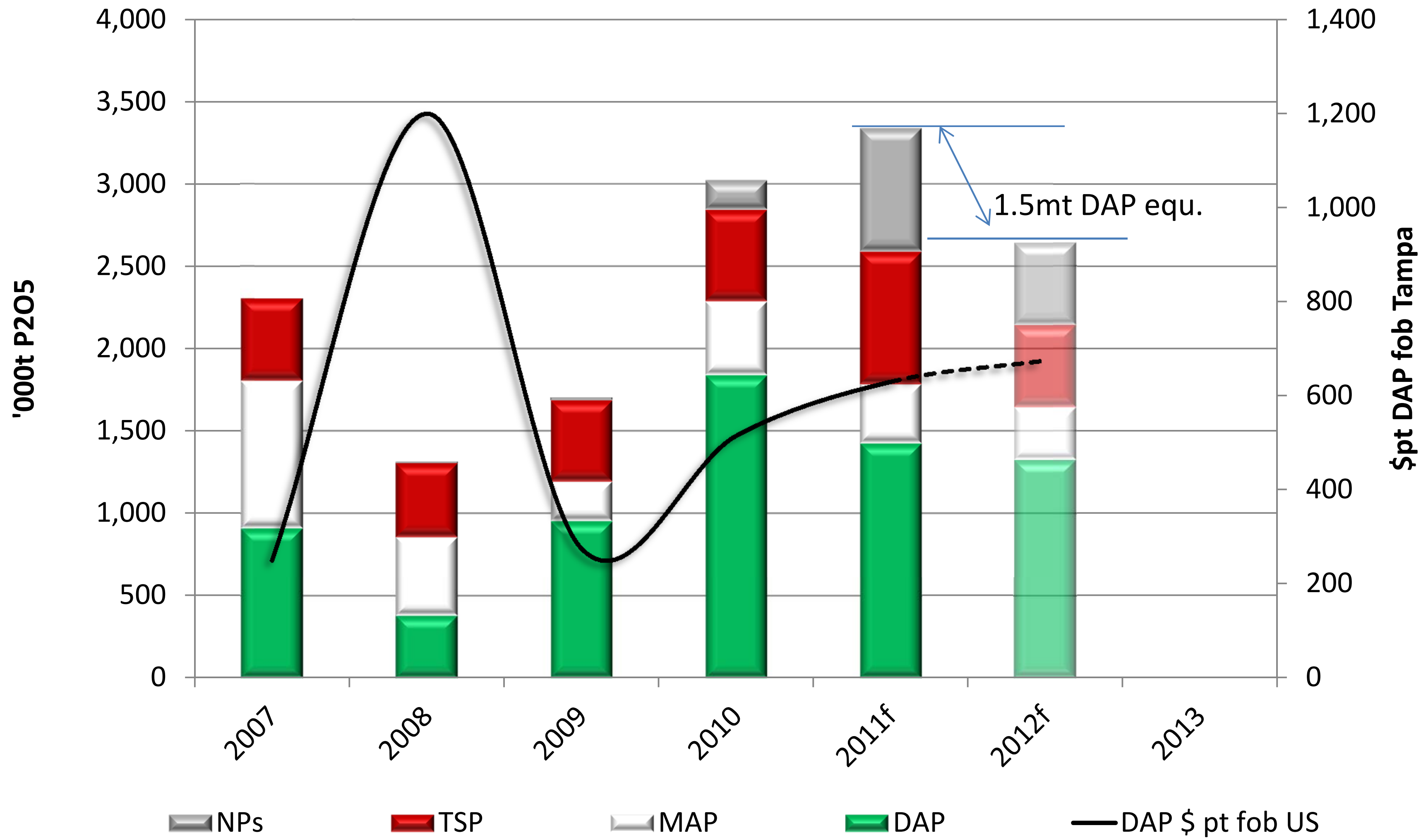


China P_2O_5 Ceiling: Growth & Substitution
All Products (P_2O_5): 3 Steps forward; 1 back



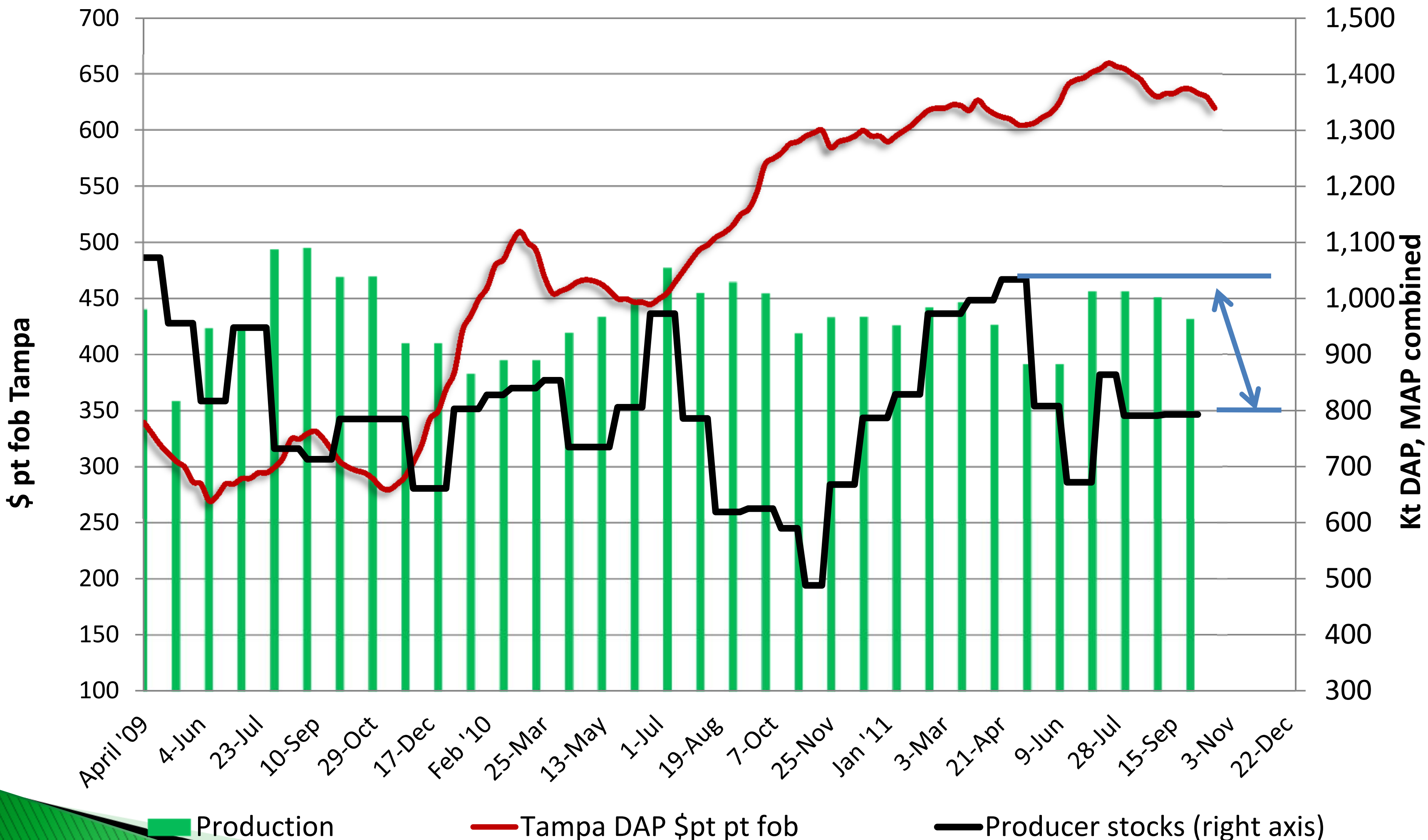
China Phosphate Fert Exports & World DAP Price

All Products (P2O5); Is there a line in the sand?

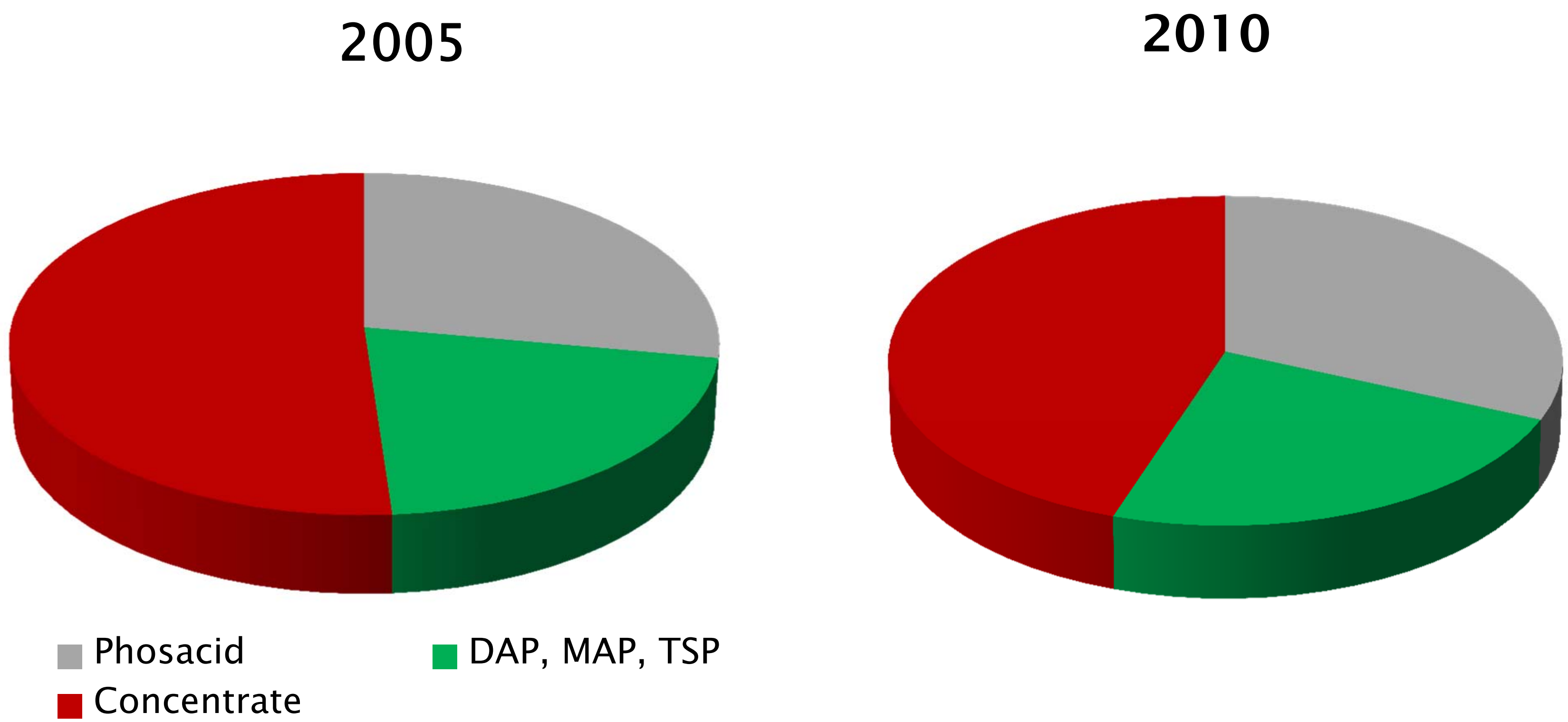


US producer DAP/MAP position

Inventory draw from producer stocks during the current pre-season (April-Seot ust'11) totals about 250,000t DAP/MAP



OCP exports diversification by product
(% total P_2O_5)

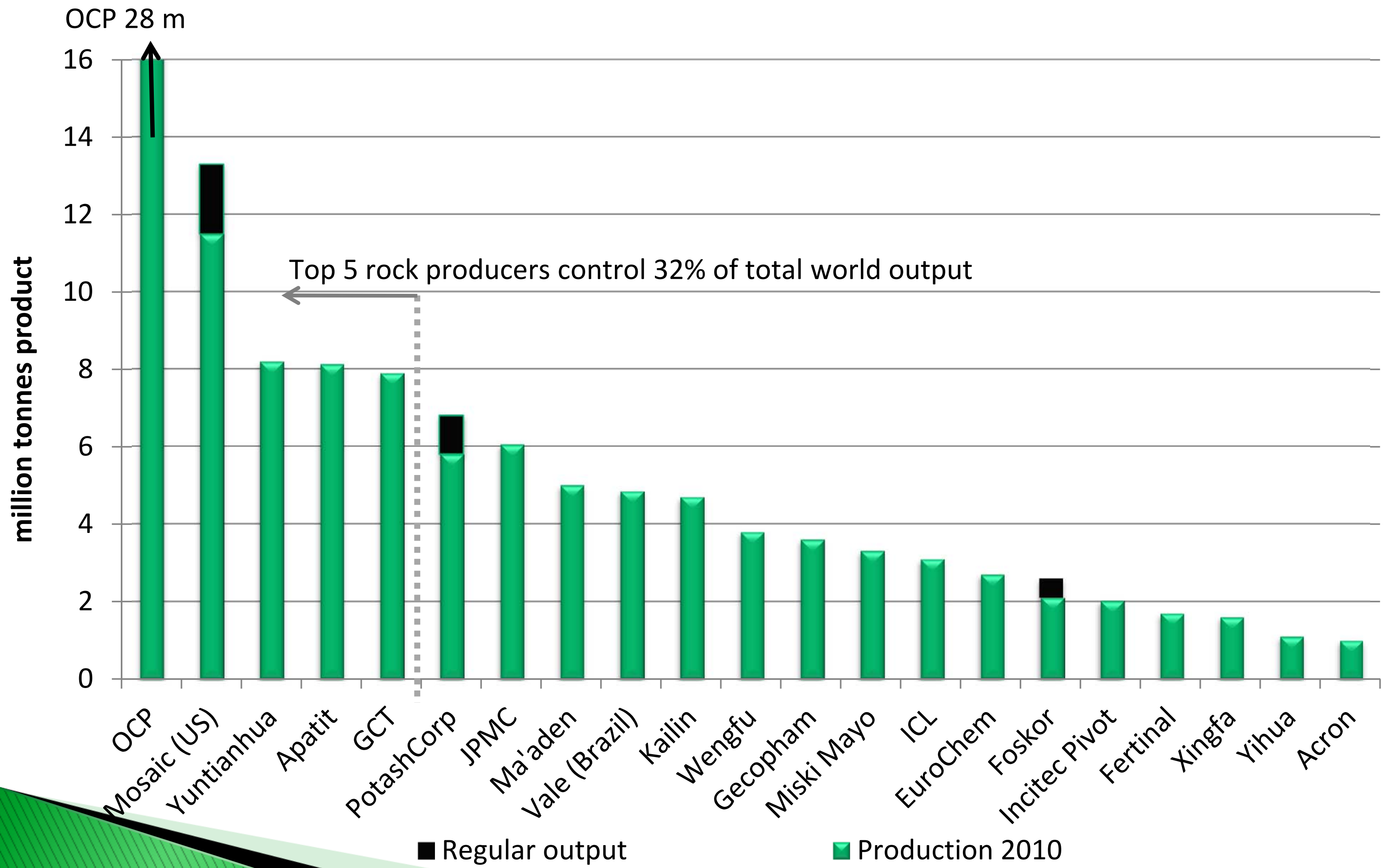


Rock: Market Shifts Today

- Middle East instability
- New & growing exports: Peru, Egypt
- Russia export squeeze
- China concentrate export collapse, export taxation
- USA production challenges

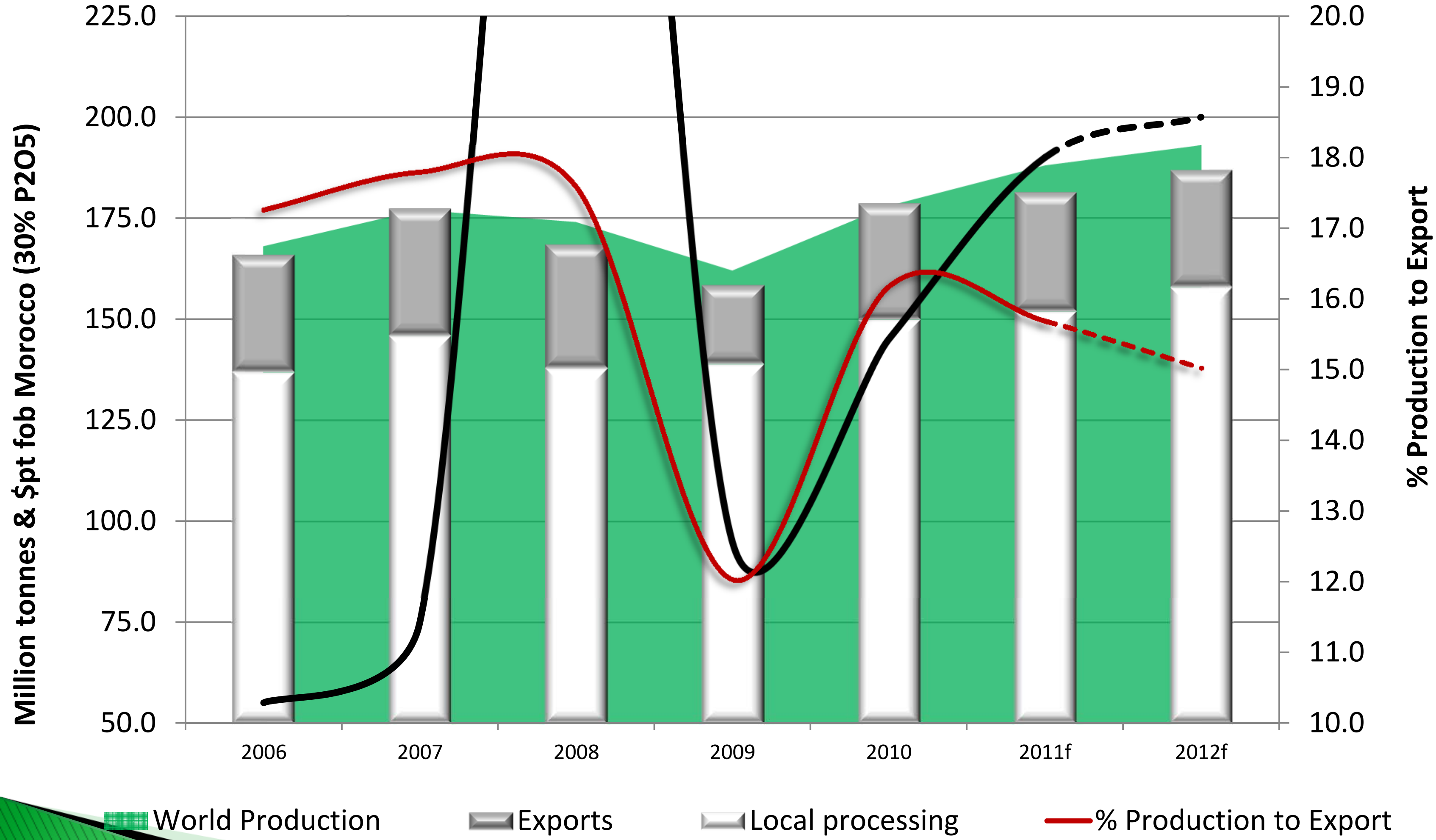
Concentrate output by company 2010-11

ranking by company, product tonnes



World Rock Destiny & Price

Local processing vs Export & $pt fob Morocco



Mine depletions to 2013 – Net impact?

Capacity growth moderated by depletions

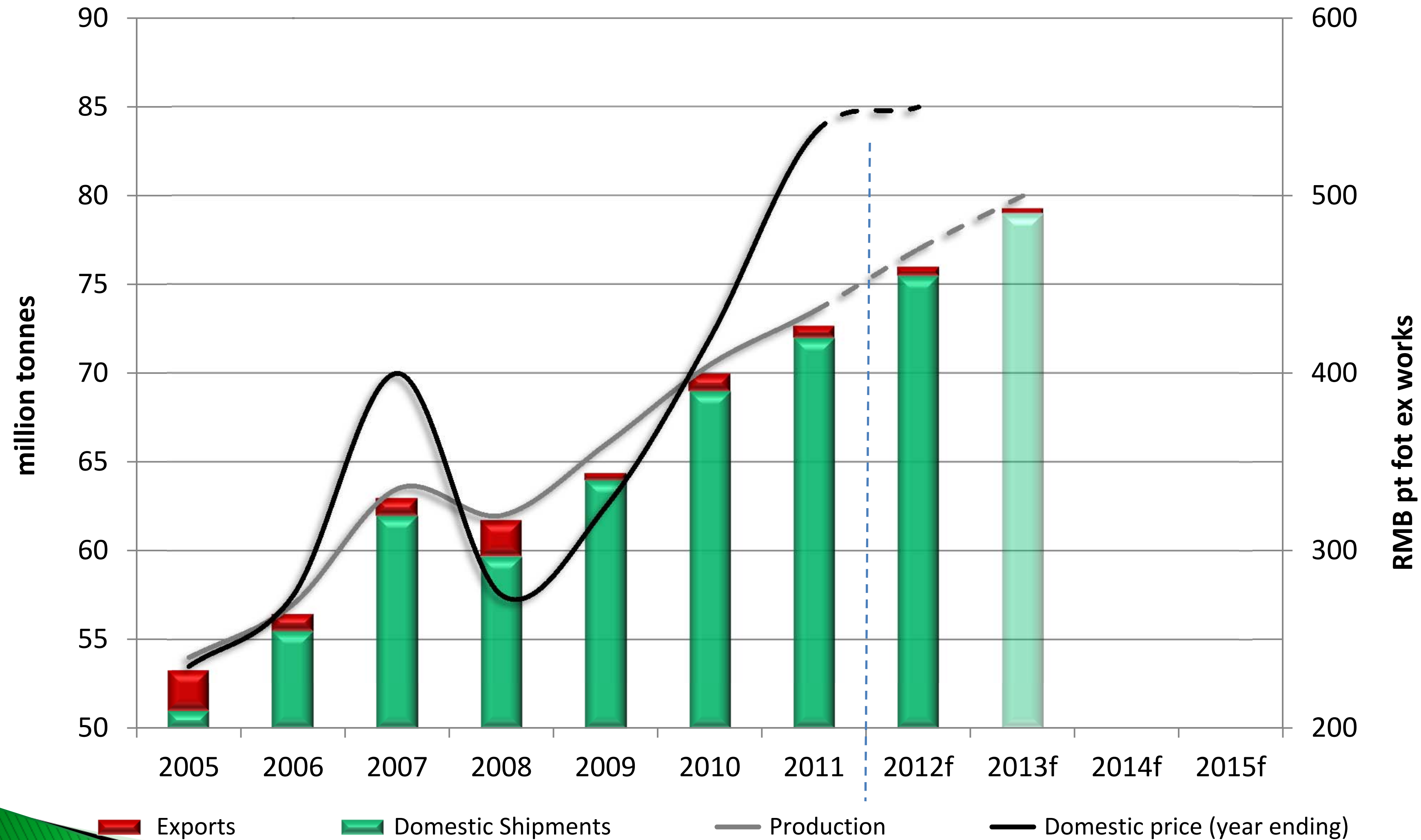
Phosphate Rock Mine Depletion			
2011-13	**Kt**	**Company, Location**	**Destiny**
2011	6,000	Mosaic, South Fort Meade, Florida, US	ID*
2011	500	Mosaic, Hopewell, Florida, US	ID
2013	900	Agrium, Kapuskasing, Ontario, Canada	ID
2012-13	5,500	China, *various South China, Sichuan, Hubei*	ID
Total	**-12,900**		

Net Impact: Cumulative Capacity Changes Kt	
New capacity	+38,115 (incl Florida, China, Saudi, Peru*, Jordan, Russia, Brazil, Tunisia, Kazakhstan
Likely depletions	-12,900
Total	**+25,215 (+*12.5% vs 2010 @ 200m tonnes or CAGR 4%***

**Bayovar first full year*

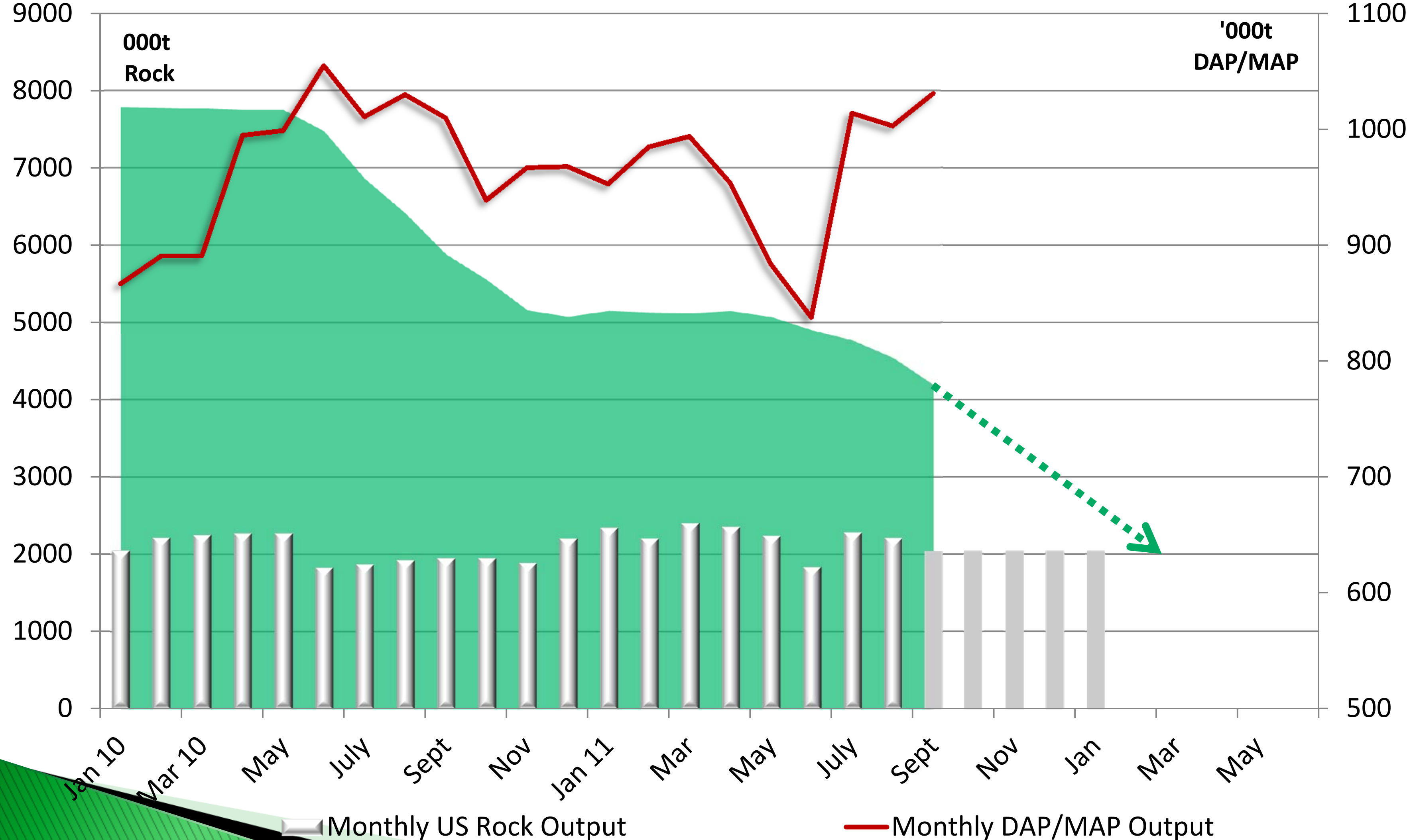
China Rock: Production, Exports & Local Price

Exports slowly squeezed out



US Rock: Production, Usage & Stocks

US industry rock deficit & inventory dive



Ma'aden Costs

Railway: $1.20bn

Mitsui & Barclay Mowen won contract to build the 1,500km link, one of the earliest contract awards in early 2007. The initial cost estimate was $770m.

Mine: $400m

Beneficiation plant: $350m

China's Guizhou Hongfu Industry Co (Wengfu) awarded $350m contract for beneficiation plant to process ore into 4.6 m tpa of dry concentrate.

Power, Substation & Desalination plants $280m & $100m

Korea's Hanwha awarded contract for power and desalination plants at Ras al Khair. Desalination unit processes max. 40,000m^3 of water per day. According to power configuration, Ma'aden may be net supplier to local grid

Ammonia plant: $950m

Samsung EPC contractor for 3,300t/day capacity ammonia plant, in turn selecting Uhde for process license & basic engineering for single-train unit.

Phosphoric acid plants: Litwin $525m

Litwin built 3 phosacid plants, total capacity of 1.45m tpa P_2O_5. Litwin selected Tekfen for construction services & Yara semi-hydrate process technology.

Sulphuric acid plant: Outotec $270m

Finland's Outotec built the world's largest sulphuric acid facility; output capacity 13,500tpd at Ras al Khair. All acid is used in the captive process.

DAP plant: Dragados (value not disclosed, but thought near $500m)

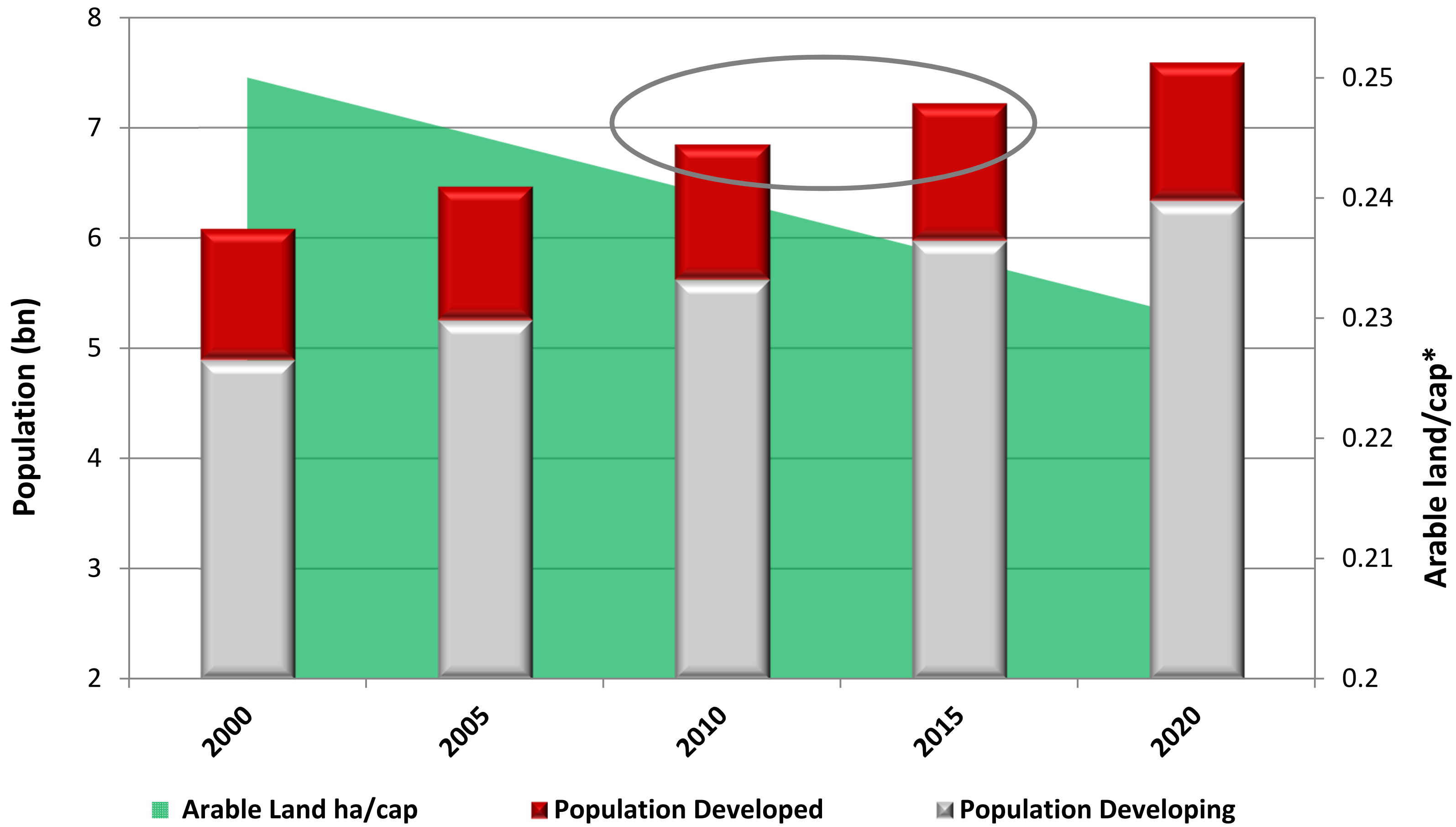
Four DAP granulation trains total 2.95m tpa DAP

Ma'aden Finance

Ma'aden investment breakdown		
Year	**Cost**	**US $bn**
2007-11	EPC contracts (*breakdown opposite*)	4.54
2008	Financing costs	0.98
	Total cost	**5.52**
	Equity	
2008	Ma'aden & Sabic (*respectively 70%/30%*)	1.66
	Finance agreements[2]	
	Conventional and Islamic facilities[1]	2.06
	Saudi Public Investment Fund	1.07
	Export-Import Bank of Korea	0.40
	Korean Export Insurance Corporation	0.20
	Saudi Industrial Development Fund	0.13
	Total investment	**5.52**

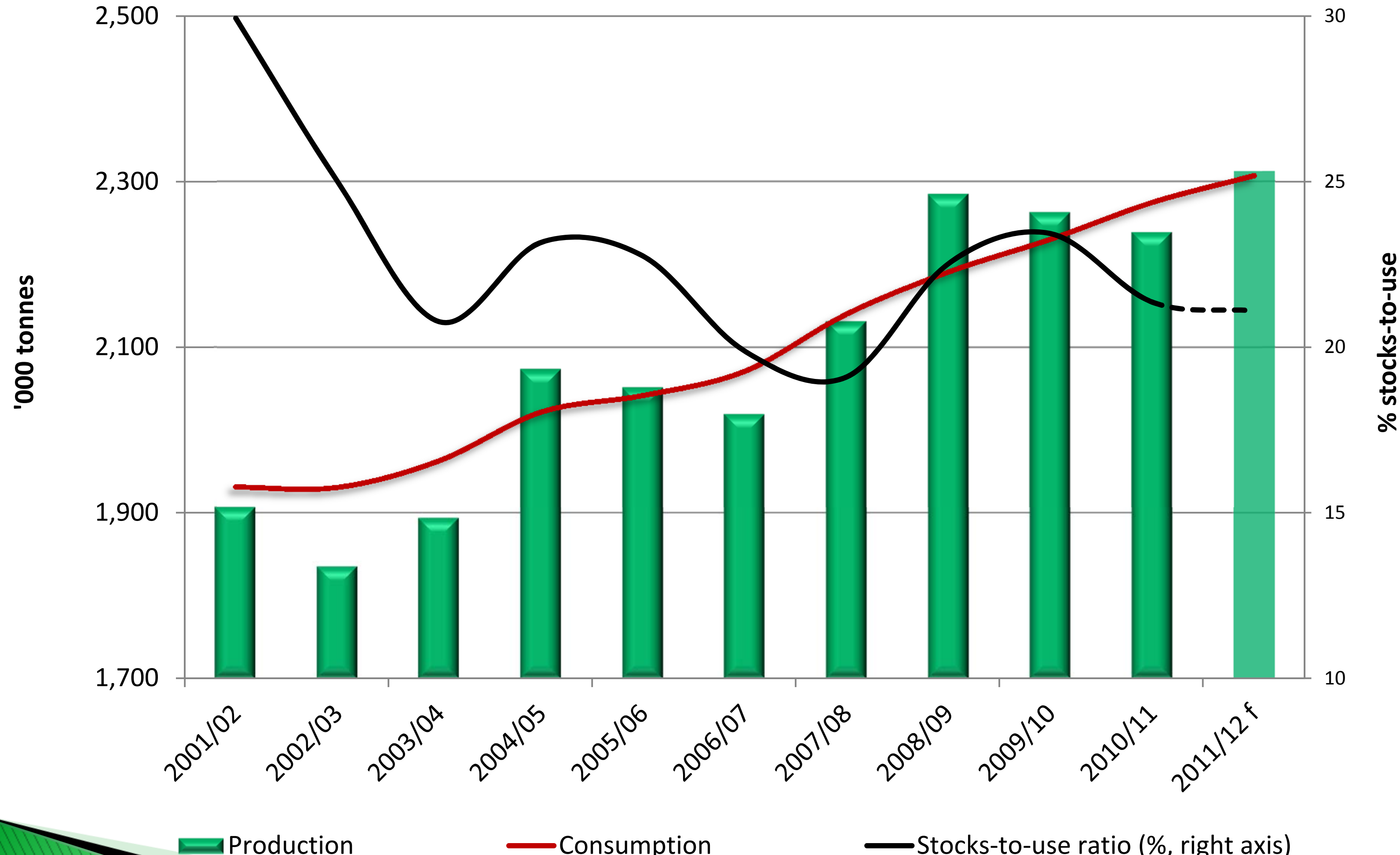
Global Fundamentals

From 2010-15 global population grows by more than those alive in the US today



FAO World Cereals Position

For global cereals supply to stay "secure", governments cannot afford another year of harvest short-fall; Stocks-to-use ratio already at just 21%



Summary:... Into 2012

Main Assumptions

- Agri-sector fundamentals to remain robust
- China export controls strict through 2012
- Ma'aden challenged; Exports thus far absorbed
- India attempted to split market again; but found limited scope
- How may India tactics be modified in 2012?
- US DAP output maxed out in 2011: What level in 2012?
- Scope for further US capacity reductions?
- May restrict US exports; lift competition for merchant DAP
- Litigation & EPA Florida Environmental Impact Study Proceeds

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Thank you

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Profercy Phosphates Horizon 2015

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