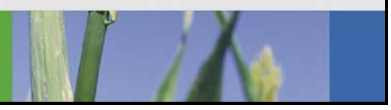
International Fertilizer Industry Association

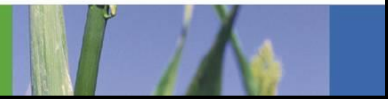
PERSPECTIVE A MOYEN TERME DE L'OFFRE ET DE LA DEMANDE MONDIALES EN ENGRAIS

Patrick Heffer et Michel Prud'homme, IFA

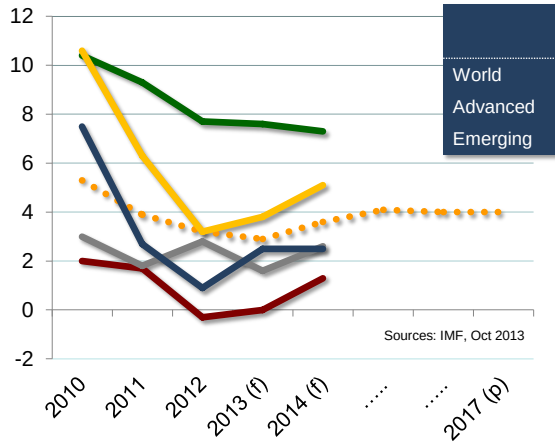
13èmes Rencontres internationales de l'AFCOME
23-25 octobre 2013, Beaune, France



WORLD ECONOMIC CONTEXT



Economic Activity (GDP Growth, %)



	2011	2012	2013 (f)	2014 (f)
World	+3.9%	+3.2%	+2.9%	+3.6%
Advanced	+1.7%	+1.5%	+1.2%	+2.0%
Emerging	+6.2%	+4.9%	+4.5%	+5.1%

Risks to the forecast remain to the downside

Commodity and Food Prices

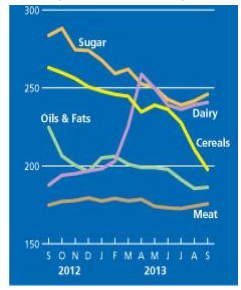
Brent (US$/barrel)

January 2002 → August 2013

IMF projects a 3% contraction of oil prices in 2014

FAO Food Commodity Price Indices

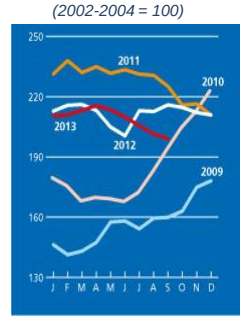
(2002-2004 = 100)



Source: FAO, Oct 2013

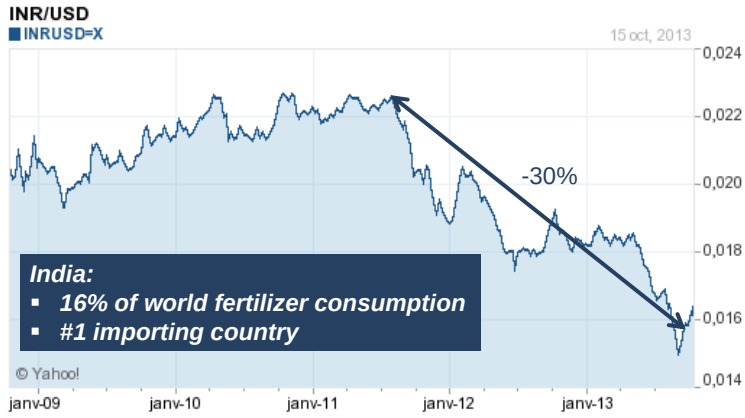
FAO Food Price Index

(2002-2004 = 100)



Source: FAO, Oct 2013

Currency Exchange Rates



GLOBAL AGRICULTURAL SITUATION

World Grain and Oilseed Production (Mt)

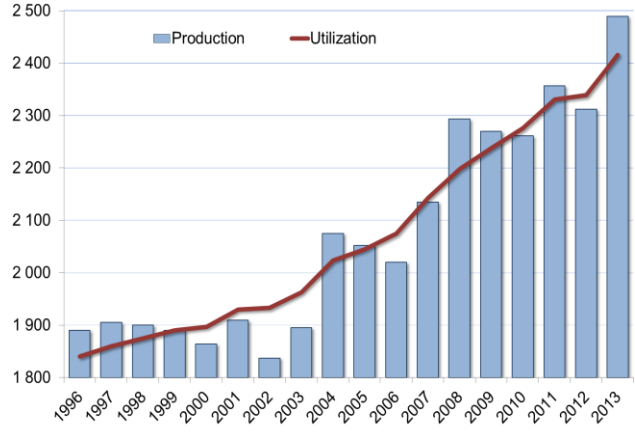
	Wheat	Coarse Grains	Rice (milled)	Oilseeds	Total
2010	652	1 100	449	457	2 658
2011	697	1 151	466	445	2 758
2012 (e)	655	1 128	469	473	2 725
Change	*-6.0%*	*-2.0%*	*+0.6%*	*+6.3%*	*-1.2%*
2013 (f)	709	1 246	477	495	2 926
Change	*+8.2%*	*+10.5%*	*+1.7%*	*+4.7%*	*+7.4%*

2012 wheat and CGs harvest impacted by droughts in the US and the CIS

Record harvests anticipated for all crops in 2013

Source: USDA, Sept 2013

World Cereal Production and Utilization (Mt)



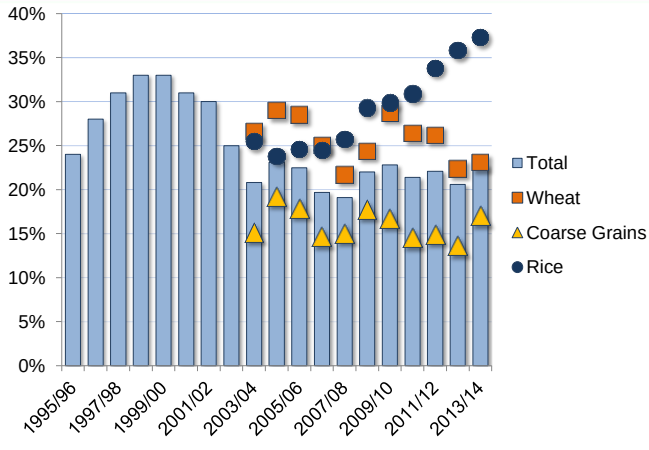
2013/14
- Production: +177 Mt
- Utilization: +77 Mt

Record maize crop in the US (+78 Mt; +28%)

Cereal harvest recovery in the CIS (+47 Mt; +32%)

Sources: FAO, Oct 2013

World Cereal Stock-to-Use Ratio



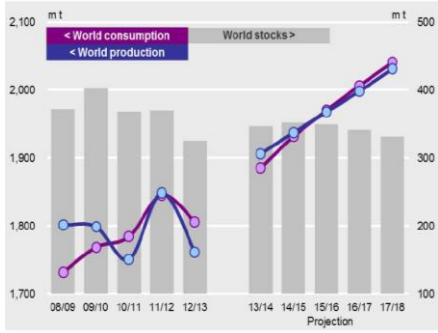
Sources: FAO , Oct 2013

Anticipated Ending Stock Changes in 2013/14 (Mt)		
	Vol (Mt)	%
Wheat	+8	+5
CGs	+45	+27
Rice	+8	+5
Total	+62	+12

Relative Evolution of Agricultural Commodity Prices

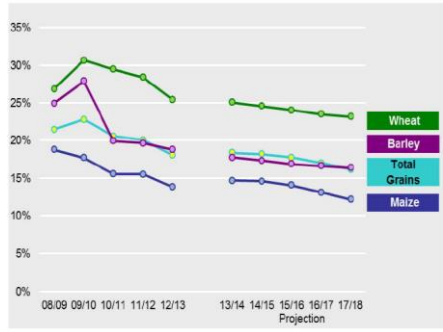
Medium-Term Outlook for Wheat and Coarse Grains

Aggregate World Supply and Demand for Wheat + Coarse Grains (Mt)



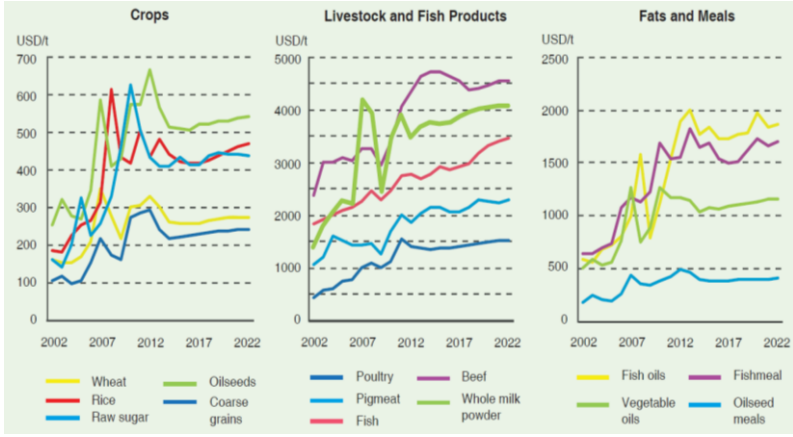
Source: IGC, Dec 2012

Stock-to-Use Ratio (%)



Source: IGC, Dec 2012

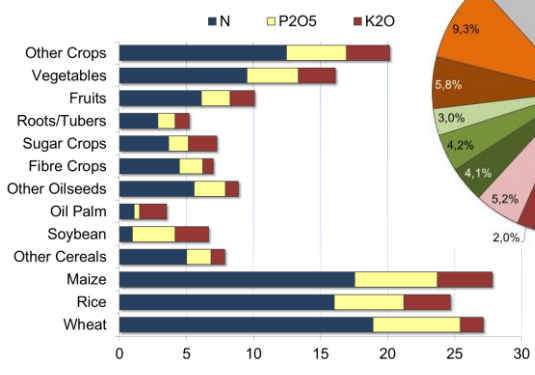
Agricultural Commodity Nominal Prices (US$/t)

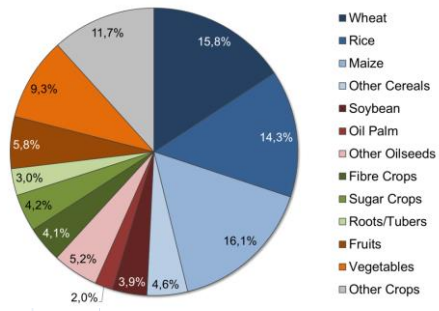


Source: OECD-FAO, Sept 2013

FERTILIZER DEMAND OUTLOOK

World Fertilizer Use by Crop at the Global Level in 2010/11





Top-3 country x crop markets:

- *Chinese vegetables: 6.2%*
- *US maize: 5.6%*
- *Indian rice: 4.8%*

Impact of the Nutrient Based Subsidy (NBS) in India

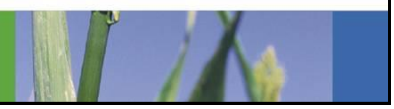
- Subsidy rates revised down in 2012/13, and again in 2013/14
- Fast rising retail prices of P and K fertilizers (due to reduction of subsidies, firm international prices and depreciation of the rupee) → disincentive for use
- Widening price differential between urea and non-urea fertilizers → distorts the $N:P_2O_5:K_2O$ ratio

NBS Rates in India (INR/kg nutrient)

	N	P_2O_5	K_2O	S
2011/12	27.153	32.338	26.756	1.677
2012/13	24.000	21.804	24.000	1.677
Change	*-11.6%*	*-32.6%*	*-10.3%*	*0.0%*
2013/14	20.875	18.679	18.833	1.677
Change	*-13.0%*	*-14.3%*	*-21.5%*	*0%*

Evolution of the $N:P_2O_5:K_2O$ Ratio in India

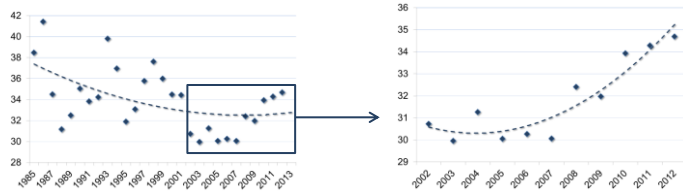
	N	P_2O_5	K_2O
2009/10	4.3	2.0	1.0
2011/12	6.9	3.1	1.0
2012/13	8.7	3.4	1.0
2013/14	7.6	3.0	1.0



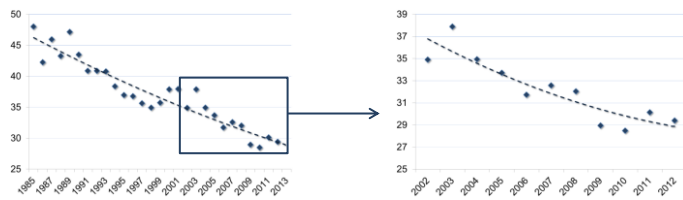
Does Fertilizer N Use Efficiency Still Decline in China and India?

kg cereals / kg fertilizer N applied

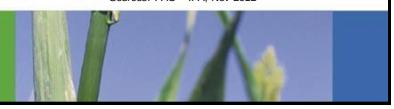
China
(29% of world consumption)



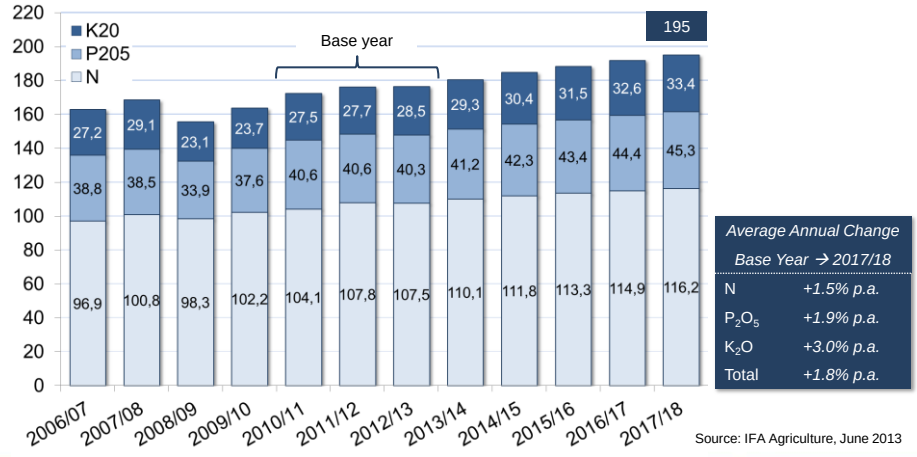
India
(16% of world consumption)



Sources: FAO + IFA, Nov 2012

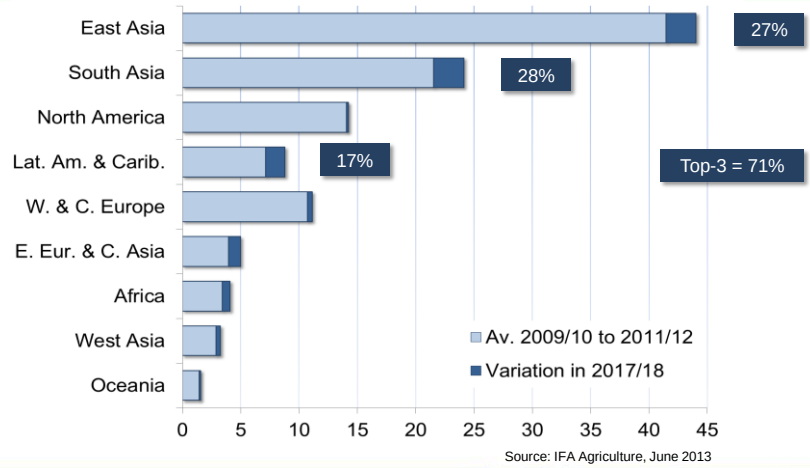


Global Fertilizer Demand
Medium-term Outlook (Mt nutrients)



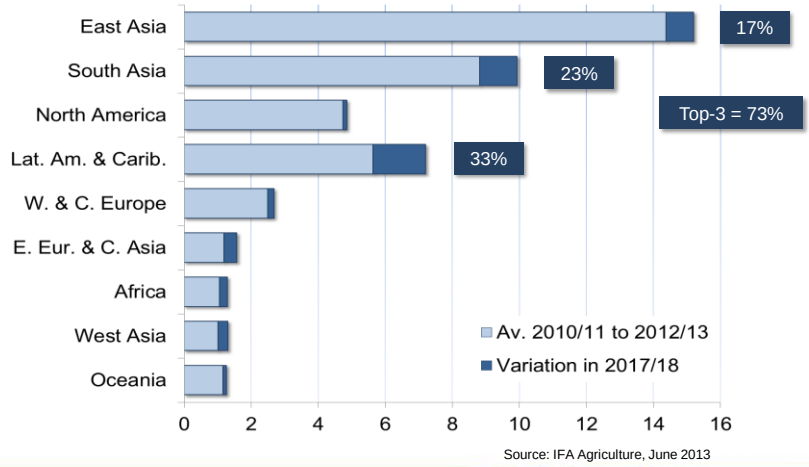
Source: IFA Agriculture, June 2013

Regional N Fertilizer Demand
Medium-term Outlook (Mt N)



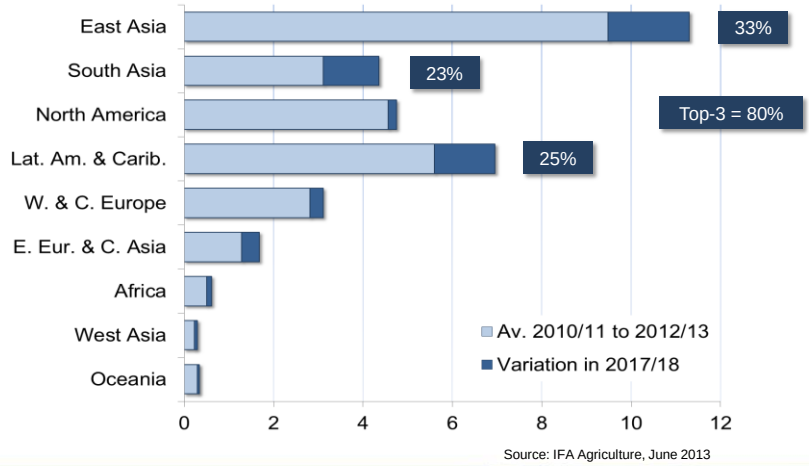
Source: IFA Agriculture, June 2013

Regional P Fertilizer Demand
Medium-term Outlook (Mt P_2O_5)



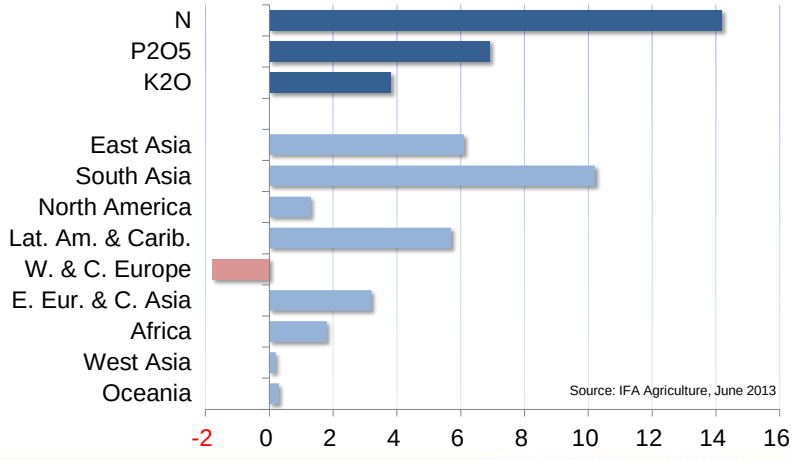
Source: IFA Agriculture, June 2013

Regional K Fertilizer Demand
Medium-term Outlook (Mt K_2O)



Source: IFA Agriculture, June 2013

World Fertilizer Demand Evolution 2017/18 vs. 2007/08 (Mt nutrients)



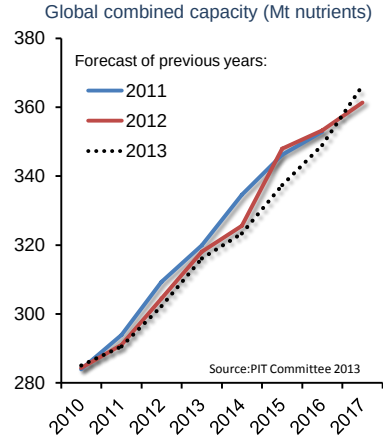
GLOBAL PROSPECTS FOR FERTILIZER SUPPLY

Main Issues Facing the Industry

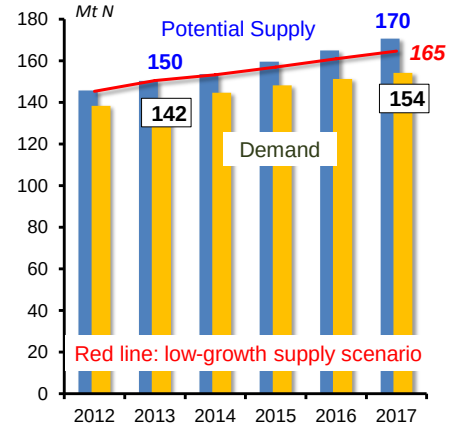
Drivers	Factors
Feedstock and access to natural resources	Natural gas supply: chronic shortfalls
	Shale gas developments
	Phosphate ore grade and quality
Economic Drivers	Capacity delays
	Financing challenges
Regulations	Environmental regulations and impact assessments
	Product safety
Policy	Export taxes
	Domestic investment policy

CapEx and Anticipated Capacity Evolution in 2010-2017

- # new plants and expansion projects: 225
- Phosphate rock projects: 20
- Capacity expansion: +166 Mt product
- CapEx equivalent: US$150 Billion
- Total capacity: 337 Mt nutrients in 2017
- Overall capacity growth 2012-2017:
  - Nitrogen: +19%
  - Phosphorus: +21% (Phosphoric acid)
  - Potassium: +31%
- Project completion delays: 1 to 3 years



World Nitrogen Potential Supply/Demand

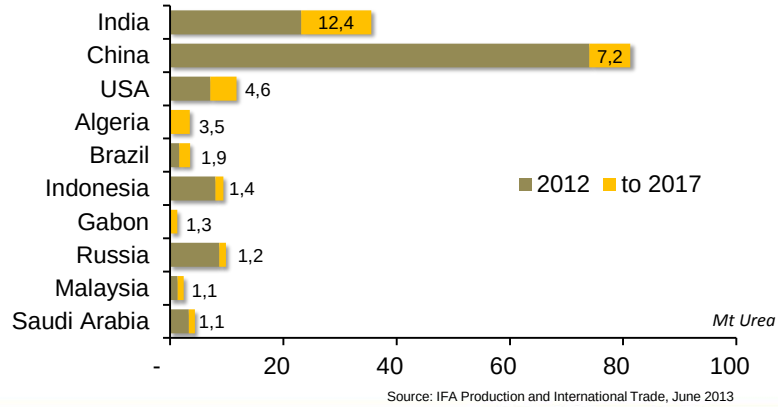


Source: IFA Production and International Trade, June 2013

- Global nitrogen potential supply: 170 Mt N in 2017; +3.3% p.a. *Low-growth → 165 Mt in 2017*
- Global nitrogen demand: 154 Mt in 2017+2.3% p.a.
- Growing import demand into Europe and South Asia; possible decline in North America and Latin America in 2016/17
- Rising export potential from Africa

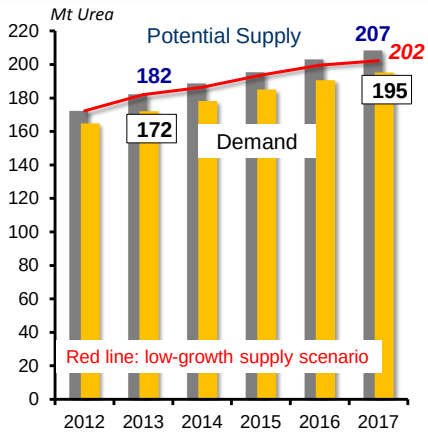
World Urea Capacity Developments

World: +43 Mt urea or +22% increase, to 241 Mt in 2017



Source: IFA Production and International Trade, June 2013

World Urea Potential Demand/Supply

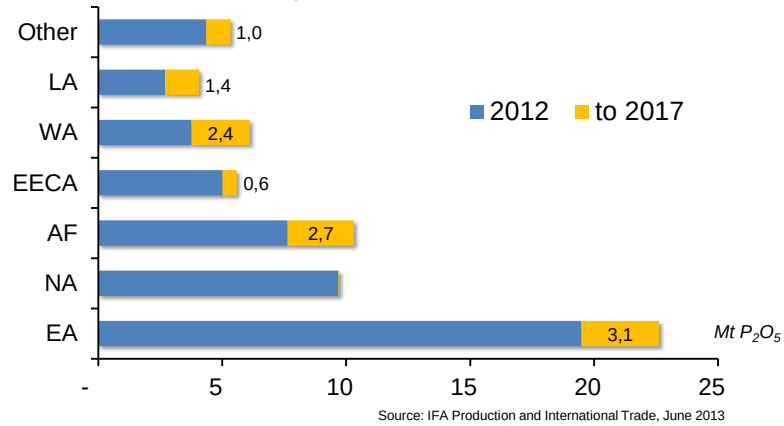


Source: IFA Production and International Trade, June 2013

- Global urea potential supply: 207 Mt product in 2017; +4% p.a. *Low-growth → 202 Mt in 2017*
- Global urea demand: 195 Mt in 2017; +3.8% p.a.
- Firm import demand into South Asia; possible decline in North America and Latin America in late 2016/17
- Massive increase of potential exportable tonnage from Africa; high tonnage availability from West Asia.
- China remains a question mark

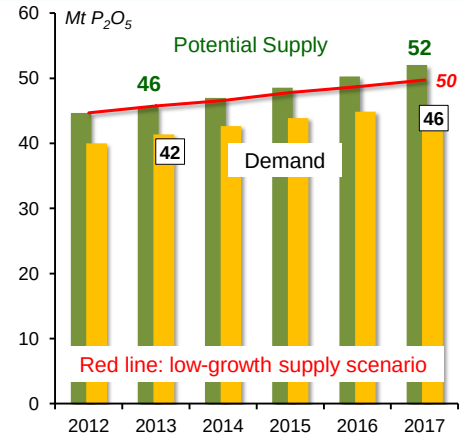
Regional Phosphoric Acid Capacity Changes

World: +11 Mt P_2O_5 or +21% increase, to 64 Mt in 2017



Source: IFA Production and International Trade, June 2013

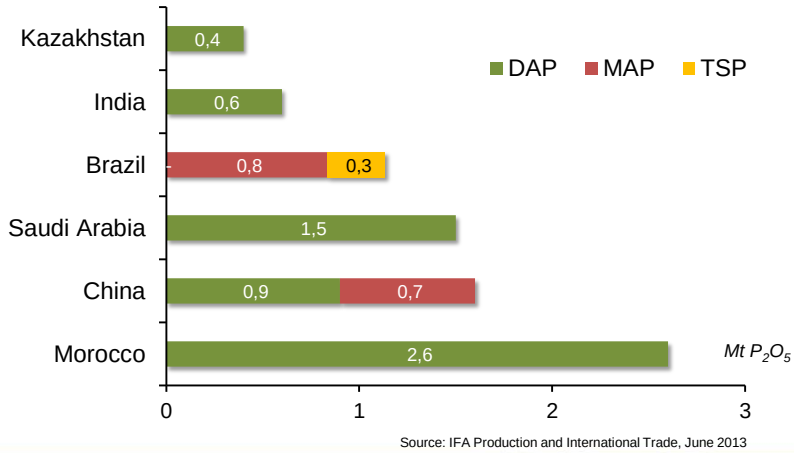
World Phosphoric Acid Potential Supply/Demand



Source: IFA Production and International Trade, June 2013

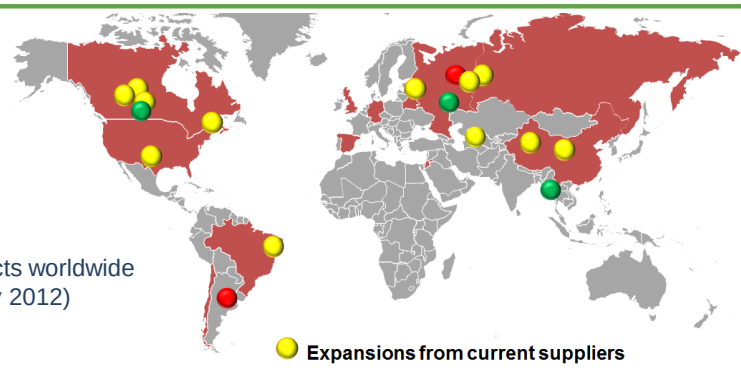
- Global PA potential supply: 52 Mt P_2O_5 in 2017; +3.3% p.a. *Low-growth → 50 Mt in 2017*
- Global PA demand: 46 Mt in 2017; +2% p.a.
- Sustained import demand into Brazil; potentially declining by 2016
- Europe imports at 2-2.2 Mt P_2O_5
- Firm demand in South Asia (DAP at 5-6 Mt/a)

Main Processed Phosphates Capacity Changes



Source: IFA Production and International Trade, June 2013

Potash Capacity Developments 2012-17



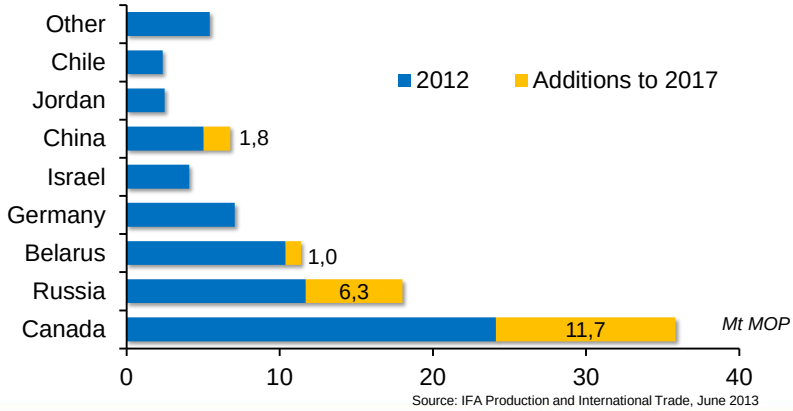
~30 projects worldwide
(50 in May 2012)

- Expansions from current suppliers
- Emerging suppliers
- Suspended or long-delayed projects

Source: IFA Production and International Trade, June 2013

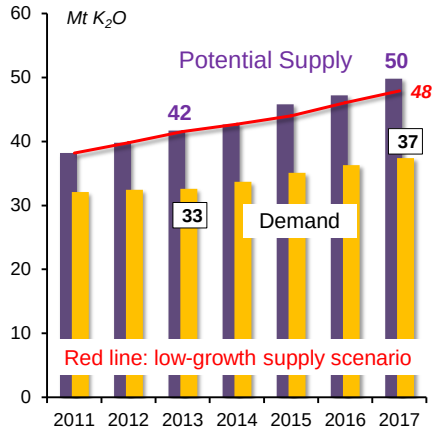
World Potash/KCl Capacity Projections

World: +21 Mt MOP or +30% increase, to 94 Mt in 2017



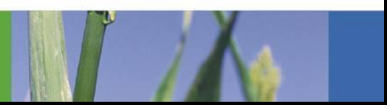
Source: IFA Production and International Trade, June 2013

World Potassium Potential Supply/Demand

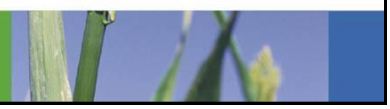


Source: IFA Production and International Trade, June 2013

- Global potassium potential supply: 50 Mt K_2O in 2017; +5% p.a. *Low-growth → 48 Mt in 2017*
- Global potassium demand: 37 Mt in 2017; +3% p.a.
- Firm import demand into South Asia, Latin America, East Asia
- Significant export tonnage from North America and EECA

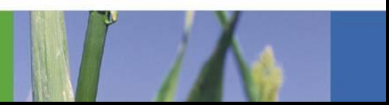


WRAP-UP



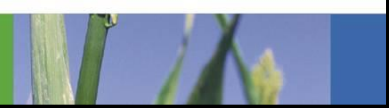
Key Messages on the Demand Side

- Agricultural commodity prices seen remaining firm in medium term as markets would remain tight
- Market fundamentals provide incentives for increasing fertilizer demand
- However, improvement in fertilizer use efficiency moderate the prospects
- World demand growth for N and P fertilizers seen slowing down, influenced by China and India
- Significant uncertainties: economic activity, weather-related crop shortfalls, fertilizer subsidies in India, biofuel mandates in US/EU, etc.



Key Messages on the Supply Side

- Fertilizer industry responds to rising demand and invests heavily in additional capacity
- Likely delays in capacity expansion due to technical, financial, economic, regulatory and other constraints → significant degree of uncertainty on the supply side as well
- Under a realistic low-growth supply scenario, markets are likely to remain relatively balanced in the medium term, especially for nitrogen and phosphates

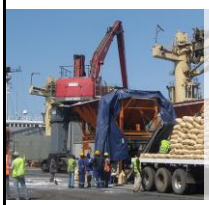


AFRICAN FERTILIZER VOLUNTEERS PROGRAMME

You want contribute to food security and smallholder access to fertilizers in Sub-Saharan Africa?

You are a fertilizer company?

- You would like to contribute to building the knowledge and skills of the African workforce by sponsoring a new program
- You have an employee engagement program that you would like to find more purpose for



You are an individual fertilizer expert?

- You have expertise in project development and financing; plant design; manufacturing; logistics; distribution; safety, health and environment in production; quality assurance; business planning; marketing; project management, etc…

➔ **JOIN** the African Fertilizer Volunteers Program and **HELP** the African fertilizer value chain to develop

➔ **SHARING** your expertise or **SUPPORTING** the program you can make a huge difference

INFORMATION | Sheila Keino skeino@afap-partnership.org

International Fertilizer Industry Association

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