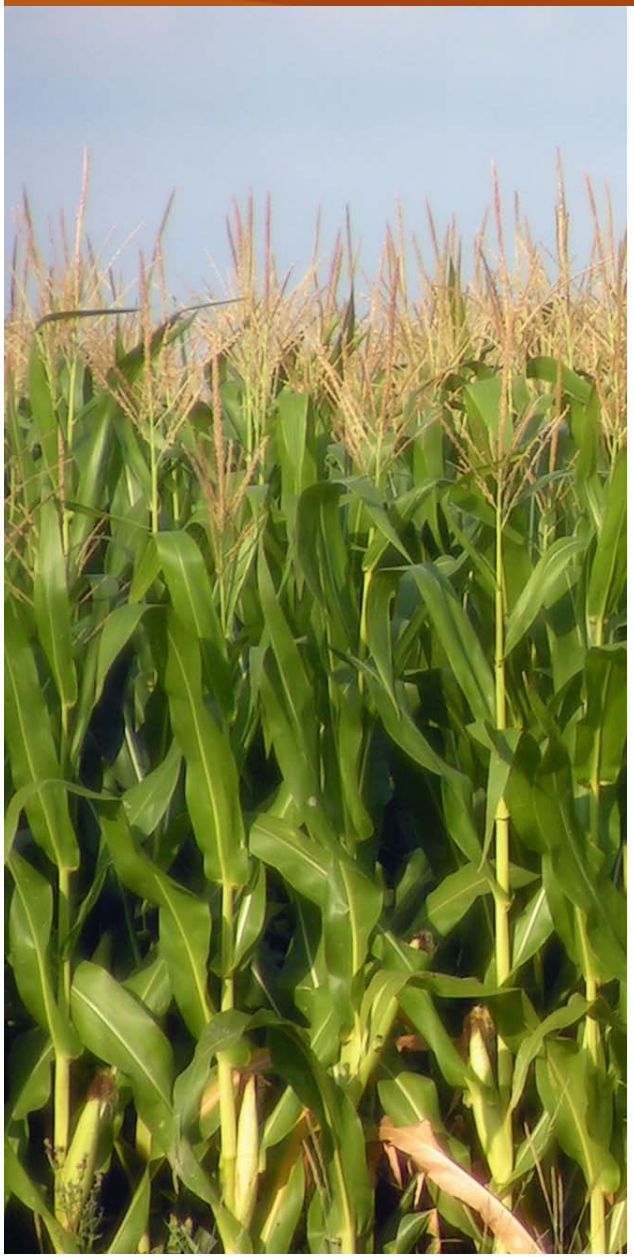
State of the Fertilizer Industry

Piper Jaffray Global Agriculture Symposium
Minneapolis, MN
August 2, 2016

Andy Jung
Director, Market and Strategic Analysis
The Mosaic Company

Safe Harbor

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements about the Wa'ad Al Shamal Phosphate Company (also known as MWSPC) and other proposed or pending future transactions or strategic plans and other statements about future financial and operating results. Such statements are based upon the current beliefs and expectations of The Mosaic Company's management and are subject to significant risks and uncertainties. These risks and uncertainties include but are not limited to risks and uncertainties arising from the ability of MWSPC to obtain additional planned funding in acceptable amounts and upon acceptable terms, the timely development and commencement of operations of production facilities in the Kingdom of Saudi Arabia, the future success of current plans for MWSPC and any future changes in those plans; difficulties with realization of the benefits of our long term natural gas based pricing ammonia supply agreement with CF Industries, Inc., including the risk that the cost savings initially anticipated from the agreement may not be fully realized over its term or that the price of natural gas or ammonia during the term are at levels at which the pricing is disadvantageous to Mosaic; customer defaults; the effects of Mosaic's decisions to exit business operations or locations; the predictability and volatility of, and customer expectations about, agriculture, fertilizer, raw material, energy and transportation markets that are subject to competitive and other pressures and economic and credit market conditions; the level of inventories in the distribution channels for crop nutrients; the effect of future product innovations or development of new technologies on demand for our products; changes in foreign currency and exchange rates; international trade risks and other risks associated with Mosaic's international operations and those of joint ventures in which Mosaic participates, including the risk that protests against natural resource companies in Peru extend to or impact the Miski Mayo mine; changes in government policy; changes in environmental and other governmental regulation, including expansion of the types and extent of water resources regulated under federal law, greenhouse gas regulation, implementation of numeric water quality standards for the discharge of nutrients into Florida waterways or efforts to reduce the flow of excess nutrients into the Mississippi River basin, the Gulf of Mexico or elsewhere; further developments in judicial or administrative proceedings, or complaints that Mosaic's operations are adversely impacting nearby farms, business operations or properties; difficulties or delays in receiving, increased costs of or challenges to necessary governmental permits or approvals or increased financial assurance requirements; resolution of global tax audit activity; the effectiveness of Mosaic's processes for managing its strategic priorities; adverse weather conditions affecting operations in Central Florida, the Mississippi River basin, the Gulf Coast of the United States or Canada, and including potential hurricanes, excess heat, cold, snow, rainfall or drought; actual costs of various items differing from management's current estimates, including, among others, asset retirement, environmental remediation, reclamation or other environmental regulation, Canadian resources taxes and royalties, or the costs of the MWSPC, its existing or future funding and Mosaic's commitments in support of such funding; reduction of Mosaic's available cash and liquidity, and increased leverage, due to its use of cash and/or available debt capacity to fund financial assurance requirements and strategic investments; brine inflows at Mosaic's Esterhazy, Saskatchewan, potash mine or other potash shaft mines; other accidents and disruptions involving Mosaic's operations, including potential mine fires, floods, explosions, seismic events, sinkholes or releases of hazardous or volatile chemicals; and risks associated with cyber security, including reputational loss, as well as other risks and uncertainties reported from time to time in The Mosaic Company's reports filed with the Securities and Exchange Commission. Actual results may differ from those set forth in the forward-looking statements.

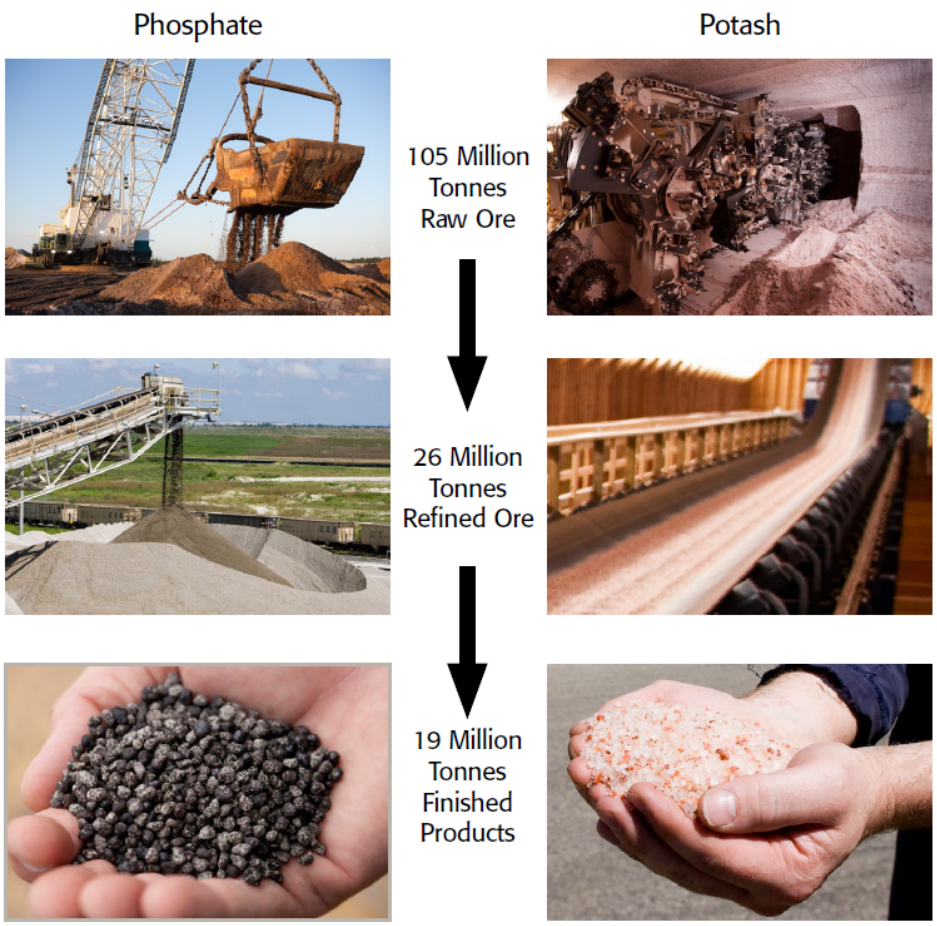


Topics and Take-Aways

- The Mosaic Company
- Agricultural Observations and Outlook
  - Near term: Pressure on grain prices in classic weather market
  - But no crash expected and the long term food story remains intact
- Plant Nutrient Observations and Outlook
  - **Phosphate**
    - Cautious sentiment in 1H 2016, but positive demand prospects
    - Balanced S/D for the remainder of the decade
  - **Potash**
    - Potash supply adjustments taking place in response to prices
    - Solid demand drivers and forecasts
    - Relatively balanced supply/demand forecast

The Mosaic Company

Overview of The Mosaic Company



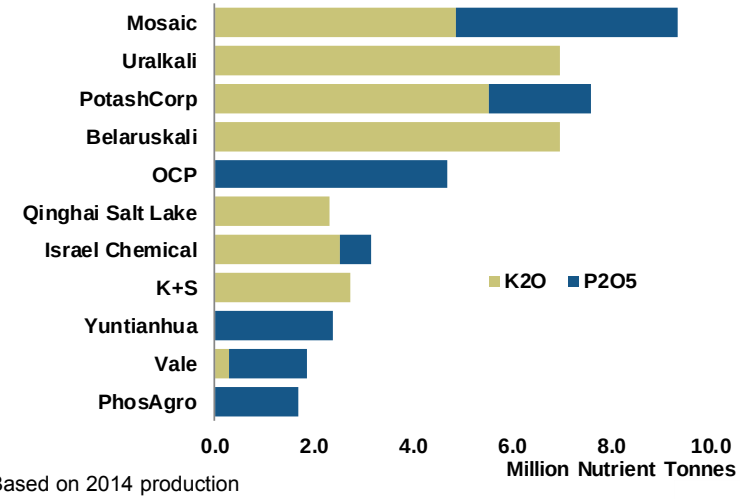
Mosaic – Leading Miner of Agricultural Minerals

Mosaic helps the world grow the food it needs by mining phosphorus (P) and potassium (K) minerals and refining these ores into plant nutrient products that are essential for global agriculture.

In big round numbers, our North American operations typically dig, pump, cut, convey and hoist 105 million tonnes of raw P&K ores from the earth each year. We remove the sand, clay, salt and other elements to produce roughly 26 million tonnes of refined ores.

We then process these refined ores into about 19 million tonnes of finished products using an additional six million tonnes of purchased or manufactured raw materials such as sulphur and anhydrous ammonia.

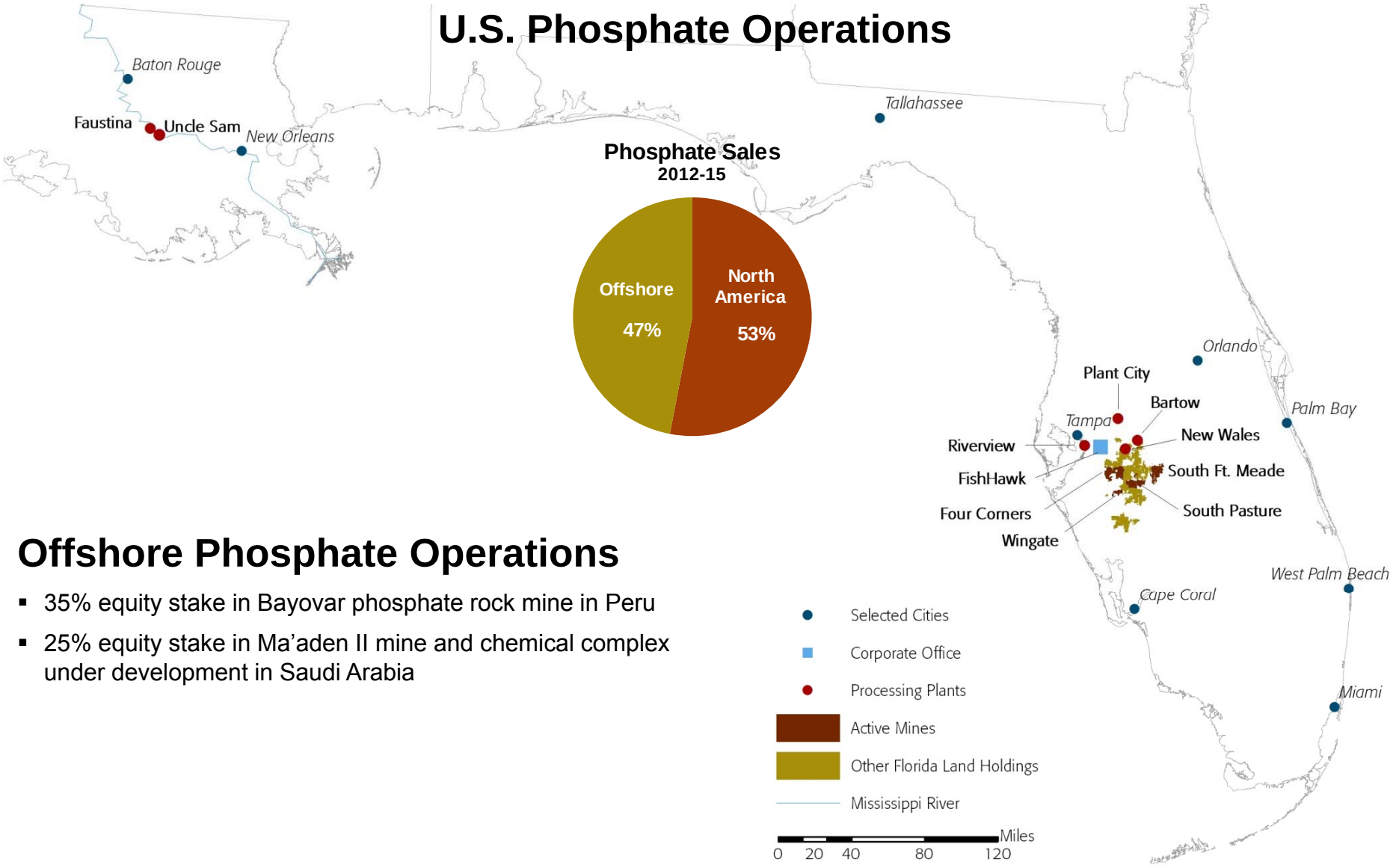
The Largest P&K Company in the World



Based on 2014 production
P_2O_5 production based on PACID and SSP production
K_2O production based on MOP, SOP, and KMS production
Source: Company reports, IFA, CRU, Fertecon and Mosaic

Phosphate Operations

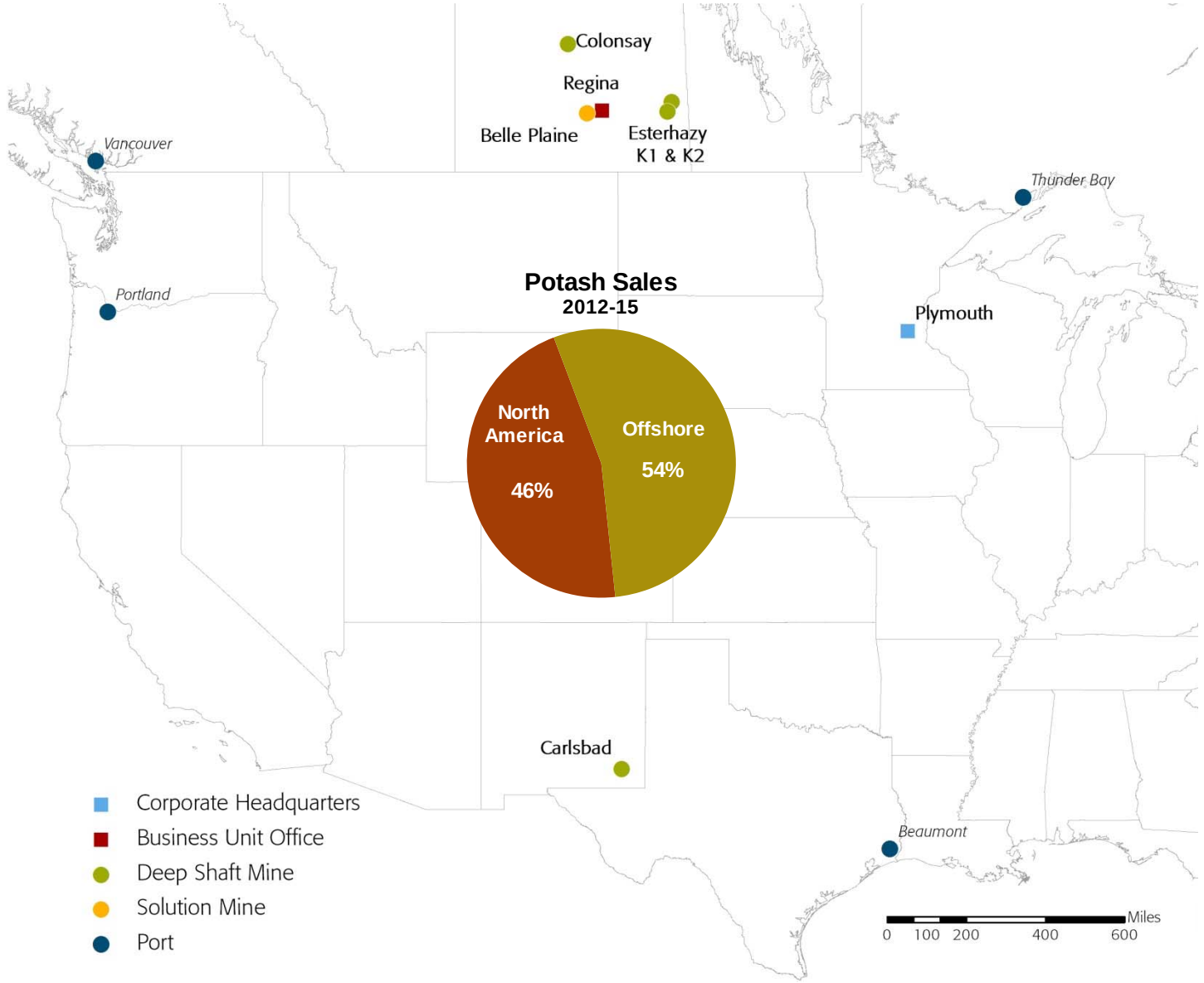
U.S. Phosphate Operations



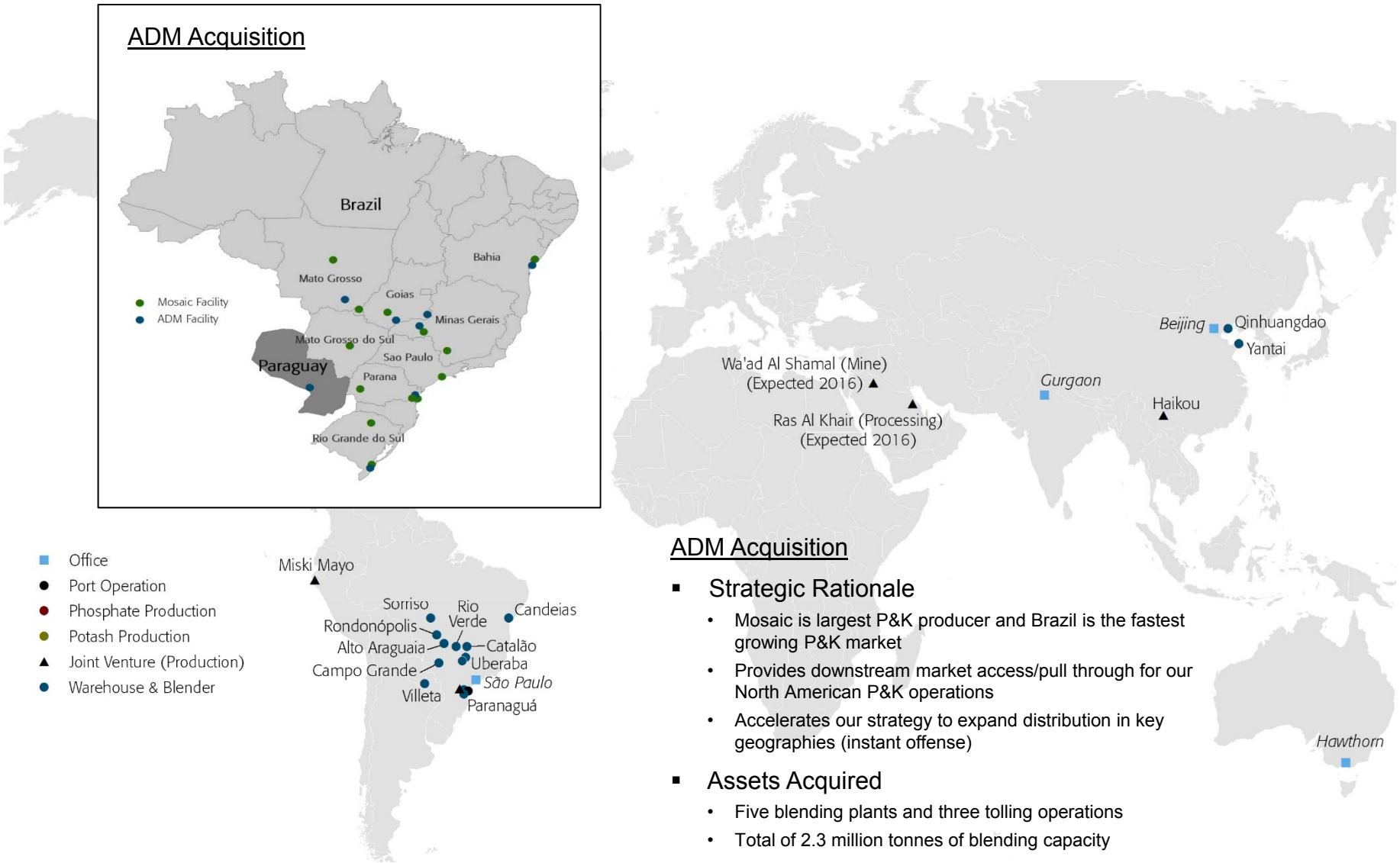
Offshore Phosphate Operations

- 35% equity stake in Bayovar phosphate rock mine in Peru
- 25% equity stake in Ma'aden II mine and chemical complex under development in Saudi Arabia

North American Potash Operations



Mosaic International Distribution

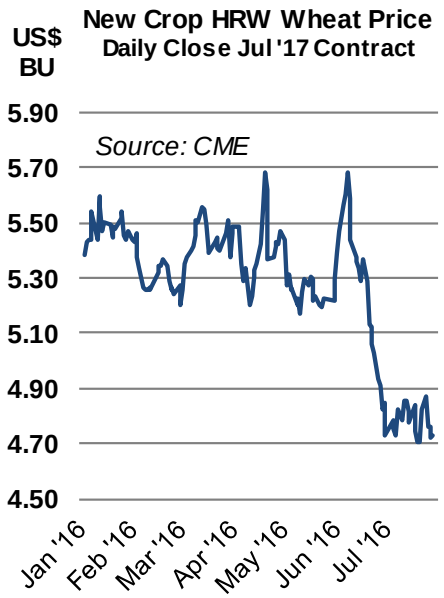


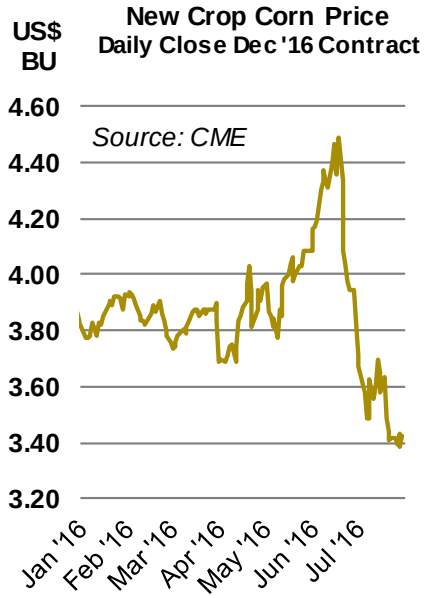
ADM Acquisition

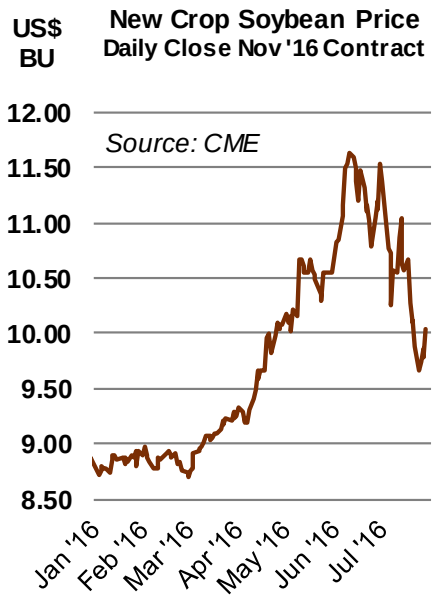
- Strategic Rationale
  - Mosaic is largest P&K producer and Brazil is the fastest growing P&K market
  - Provides downstream market access/pull through for our North American P&K operations
  - Accelerates our strategy to expand distribution in key geographies (instant offense)
- Assets Acquired
  - Five blending plants and three tolling operations
  - Total of 2.3 million tonnes of blending capacity

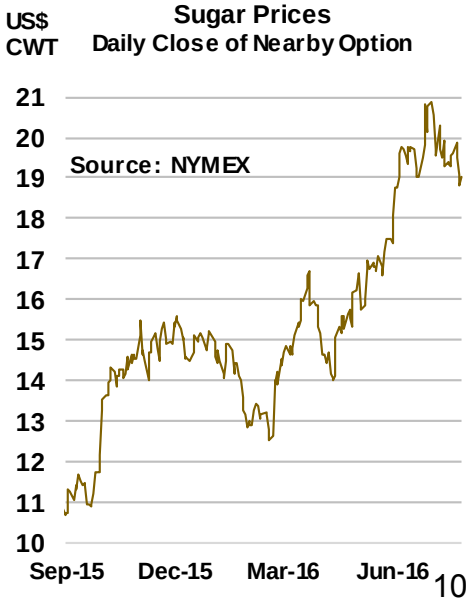
Agricultural Observations and Outlook

Wild swings in agricultural commodity markets…





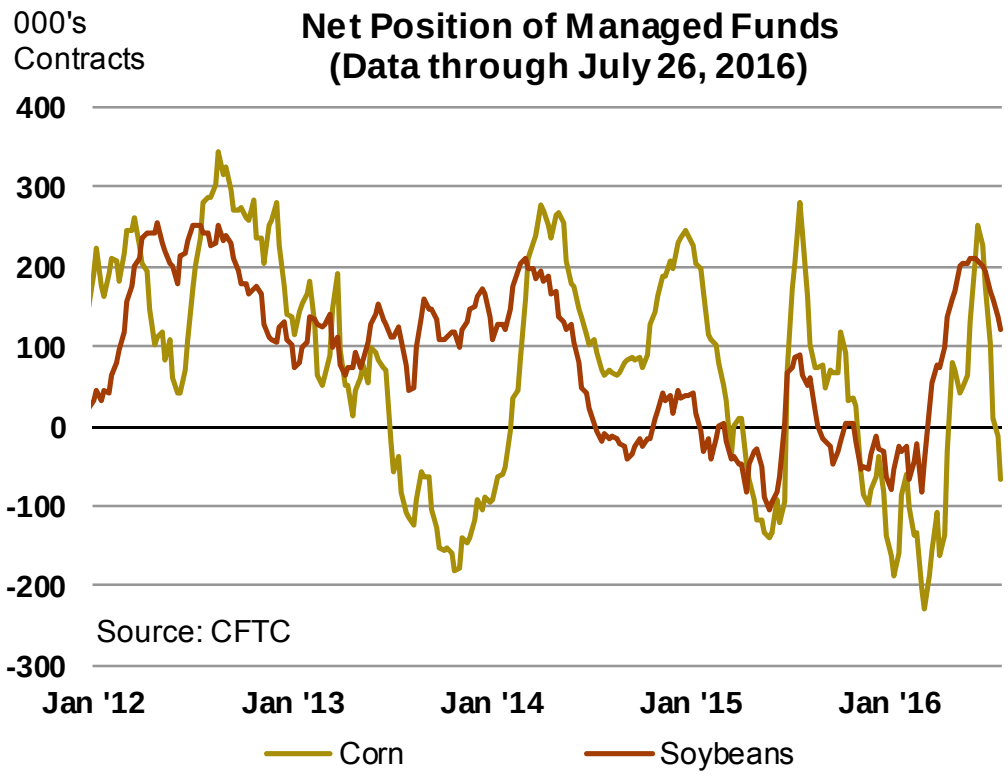




- Key crop prices declined rapidly during the last six weeks
  - World wheat supplies are ample
  - Timely rainfall across U.S. Midwest and non-threatening forecasts pressure corn and soybean prices
    - The 2016 Dec corn contract closed at $3.43 bu on July 29, off 24% or $1.06 per bu from its peak on June 17
    - The 2016 Nov soybean contract closed at $10.03 bu on July 29, off 14% or $1.60 per bu from its peak on June 10
- But prices of some other globally important crops – e.g. sugar, coffee, cotton – remain strong
  - Sugar is up over 50% since the Feb low

Data through July 29, 2016

… As managed funds switch their outlook

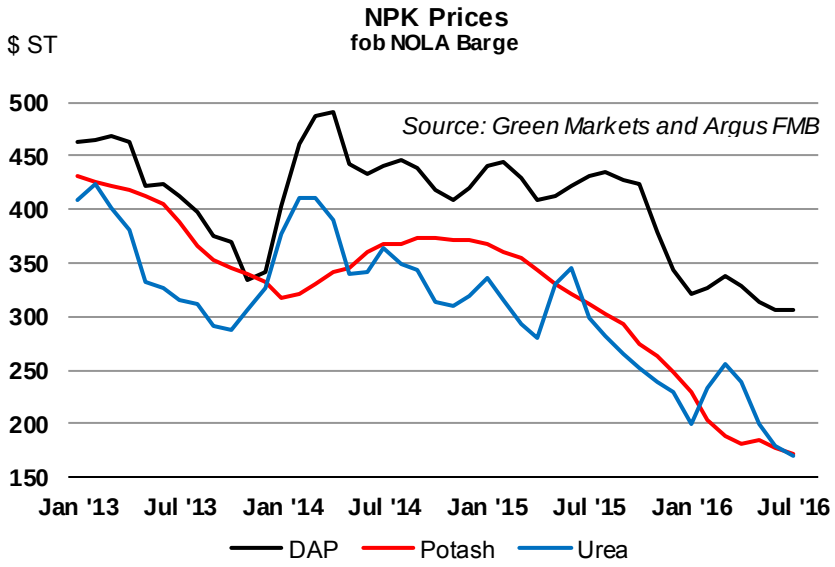


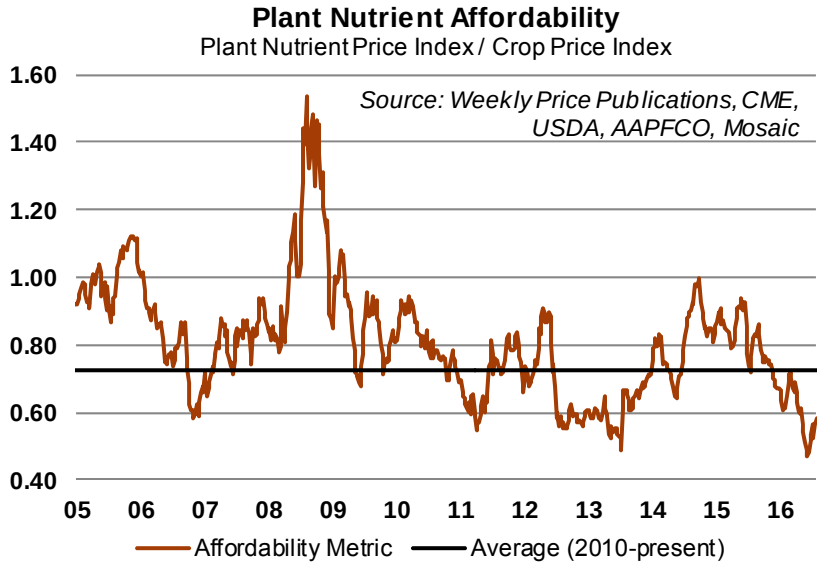
- Funds built large net long positions during the first half of 2016, following a disappointing South American harvest and fears of a La Niña weather impact on North America.
  - Corn net long was built to over 252,000 contracts on June 14.
  - Soybean net long built to over 210,000 contracts on June 7.
- But funds moved quickly from the long side of the market during first half of July as weather was largely benign.
  - In the case of corn, funds swung to a net short position of nearly 66,000 contracts or 328 million bushels on July 26 – a 1.6 billion bushel swing in just 6 weeks!
  - In the case of soybeans, managers trimmed their long position by 42% to about 122,000 contracts or 608 million bushels, as there remains some weather premium in

Phosphate and Potash Fertilizer Market Observations & Outlook

Mosaic®

NPKs remain affordable and generate high ROIs





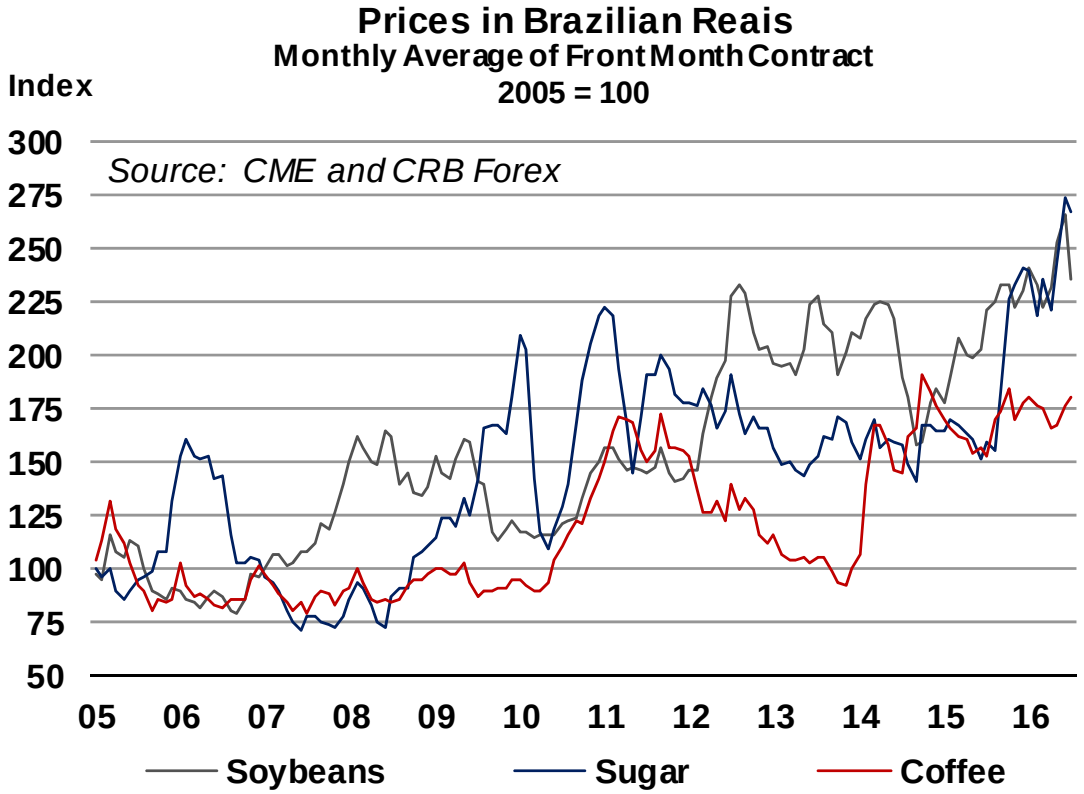
- Nitrogen: continued strong demand, low raw materials costs, large Chinese supplies, and new capacity coming on stream
- Phosphate: continued strong demand, lower raw materials costs, moderate Chinese exports and new capacity from Morocco and Saudi Arabia
- Potash: continued strong demand, increased FSU supplies, strong dollar lowers costs for all major exporters, new capacity on the horizon

- Our plant nutrient affordability metric indicates that plant nutrients are very affordable
- The metric measured just .47 during the second week of June, the lowest level seen in our records dating to 2005
- The metric registered .58 at the end of July, off from .81 a year ago and well below the 2010-present average of .73
- Compared to a year ago, affordability has improved due mostly to the drop in plant nutrient costs

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Data through July 29, 2016

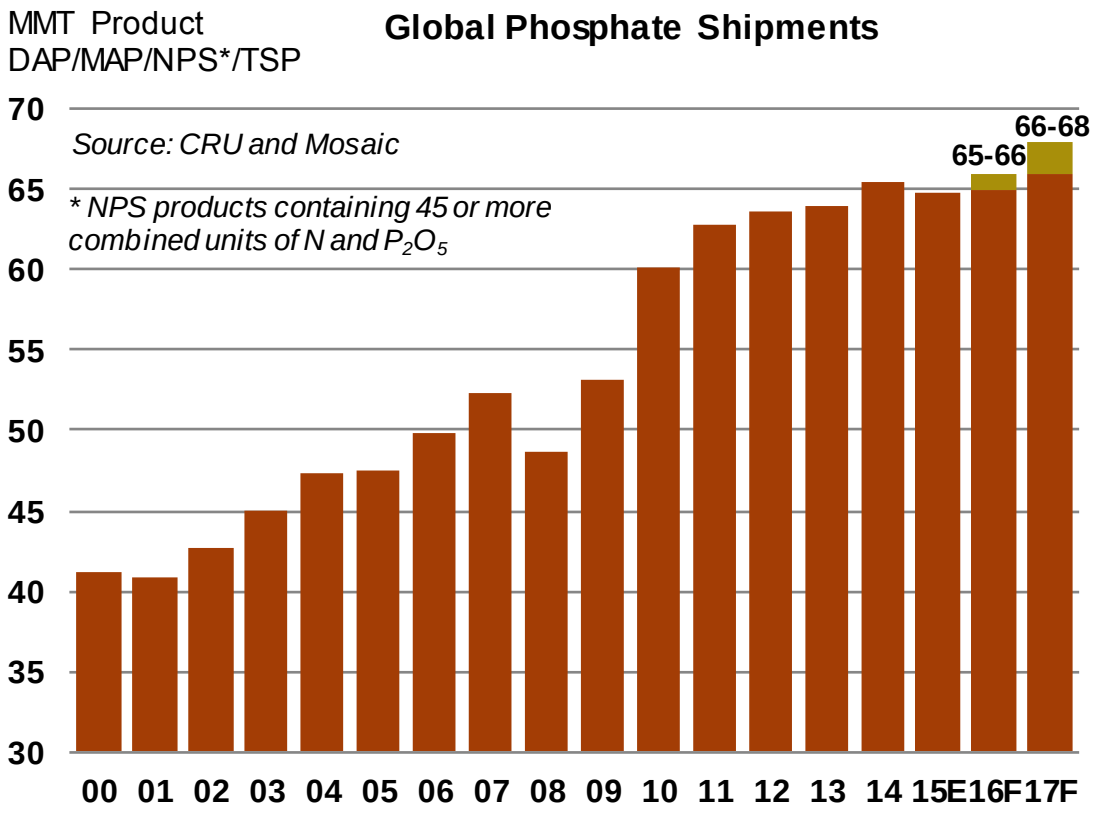
Demand Prospects, an example: Strong Dollar ► Advantage Brazil



- Despite the strengthening of the *real* (July MTD 3.28/US$ vs. 4.05 in January), local currency prices of soybeans, sugar and coffee are at or near record levels today. This underpins recent upward revisions in total plant nutrient shipments in 2016 and 2017.

Data through July 29, 2016

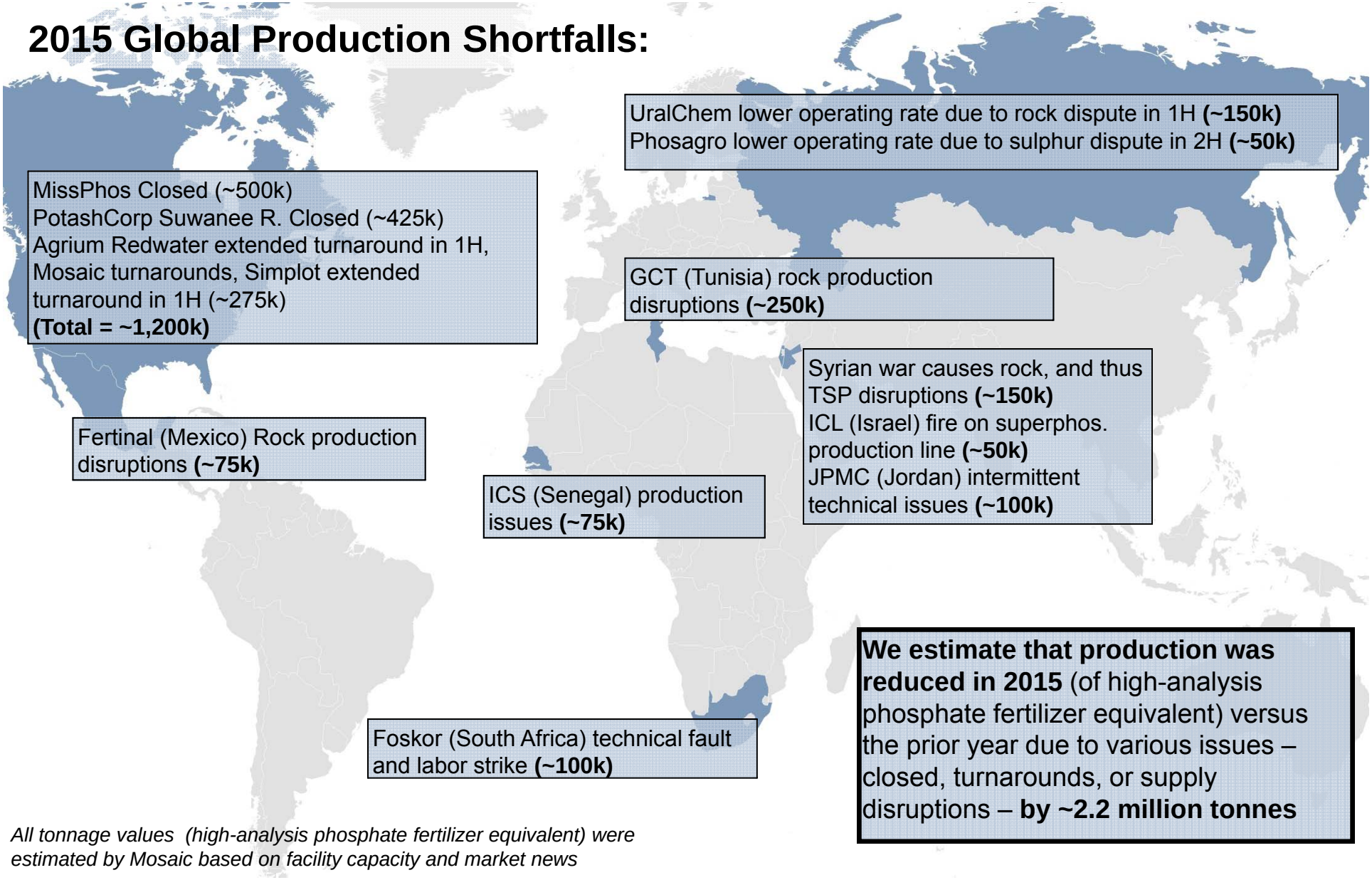
Phosphates: Cautious sentiment persists in 1H 2016, but positive demand prospects in 2H and into 2017



- Modest rebound in shipments in 2016…
- …before posting a more pronounced recovery in 2017
  - Moderate prices
  - Strong uptake in India stemming from current good monsoon and above average reservoir storage going into 2017
  - Strong pull from Brazil continues
  - Offsets destocking taking place in 2016

So Why Does the Market Feel 'Loose' in 2016? Fewer Plant Closures and Unplanned Outages

2015 Global Production Shortfalls:



UralChem lower operating rate due to rock dispute in 1H **(~150k)**
Phosagro lower operating rate due to sulphur dispute in 2H **(~50k)**

MissPhos Closed (~500k)
PotashCorp Suwanee R. Closed (~425k)
Agrium Redwater extended turnaround in 1H,
Mosaic turnarounds, Simplot extended turnaround in 1H (~275k)
(Total = ~1,200k)

GCT (Tunisia) rock production disruptions **(~250k)**

Syrian war causes rock, and thus TSP disruptions **(~150k)**
ICL (Israel) fire on superphos. production line **(~50k)**
JPMC (Jordan) intermittent technical issues **(~100k)**

Fertinal (Mexico) Rock production disruptions **(~75k)**

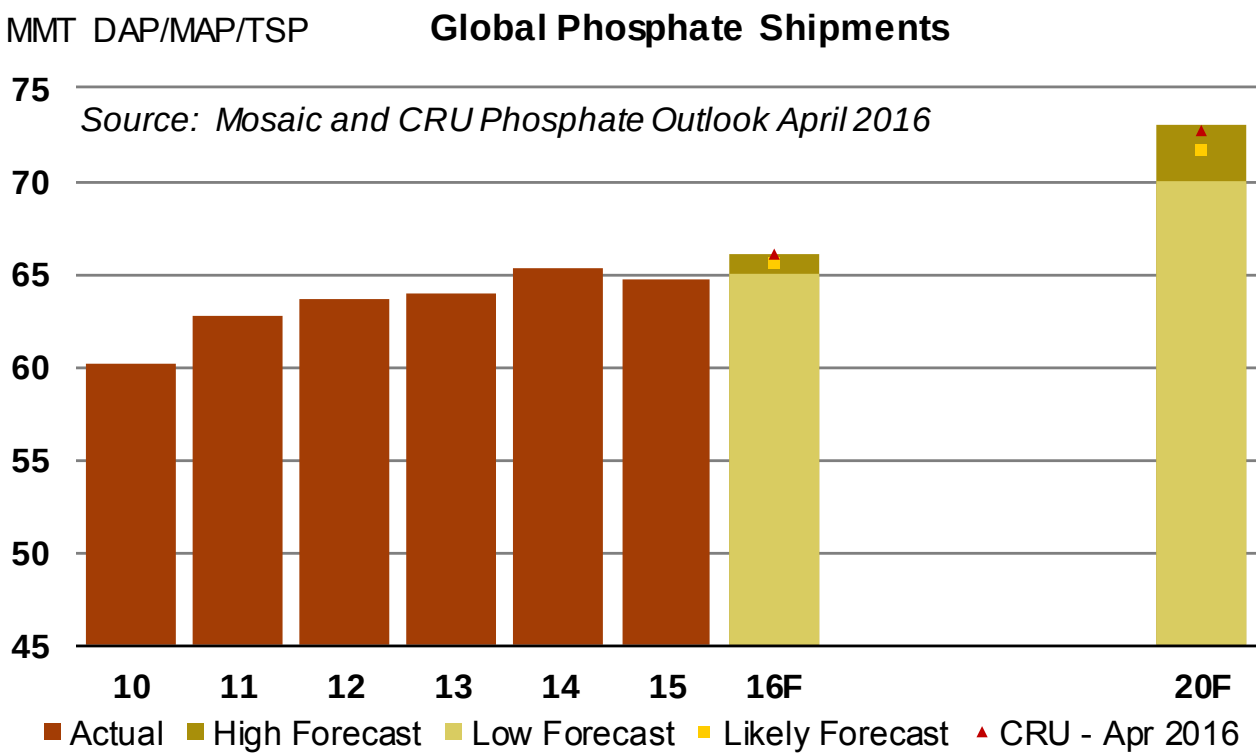
ICS (Senegal) production issues **(~75k)**

Foskor (South Africa) technical fault and labor strike **(~100k)**

We estimate that production was reduced in 2015 (of high-analysis phosphate fertilizer equivalent) versus the prior year due to various issues – closed, turnarounds, or supply disruptions – **by ~2.2 million tonnes**

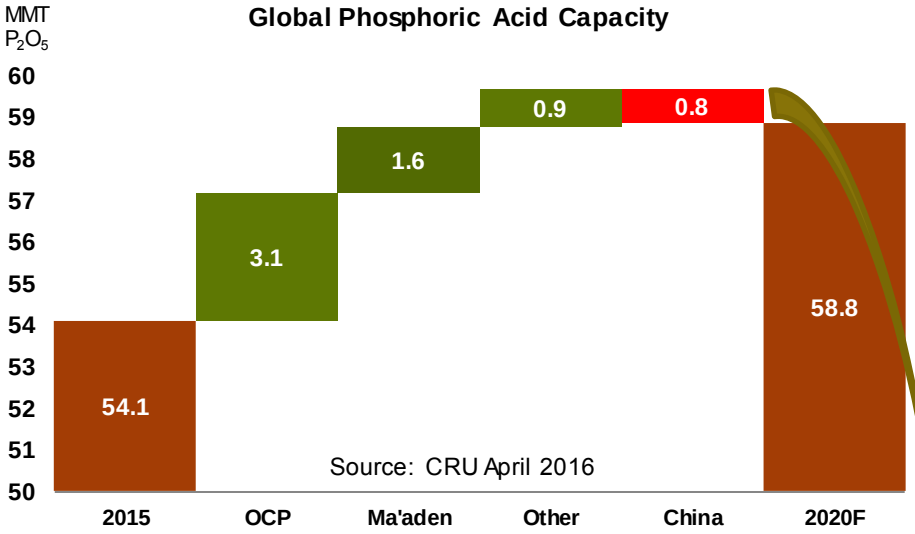
All tonnage values (high-analysis phosphate fertilizer equivalent) were estimated by Mosaic based on facility capacity and market news

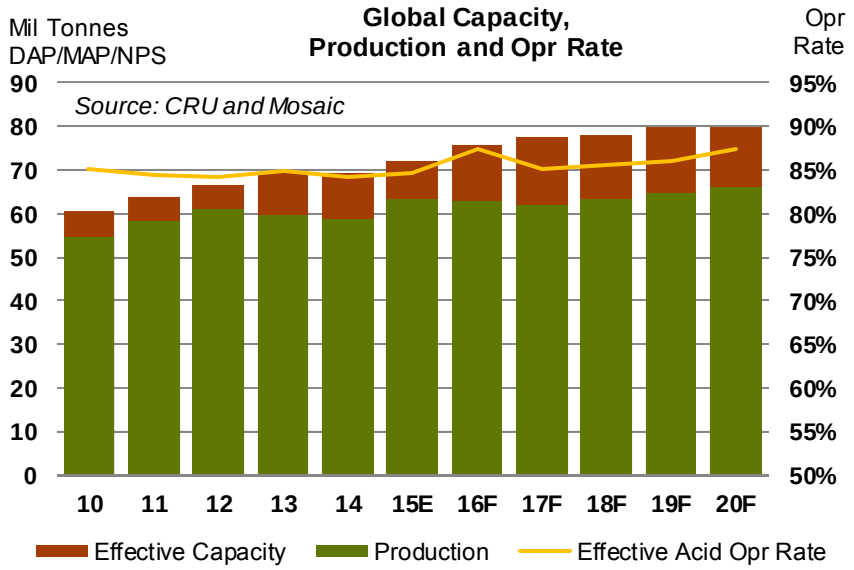
Solid medium term demand drivers and forecasts



- Global shipments increased 3.9 mmt from 2010 to 2015 led by China, Brazil and SE Asia, but the growth was front-loaded during this period
- India was a major drag on global demand growth, but expected to be a major driver over the next 5 years
- Shipments are projected to return to a more robust growth path from 2015 to 2020, rising 6.9 mmt with gains led by India and Latin America (and despite a modest tick lower in Chinese demand)

Stable (or perhaps a tightening) supply/demand balance





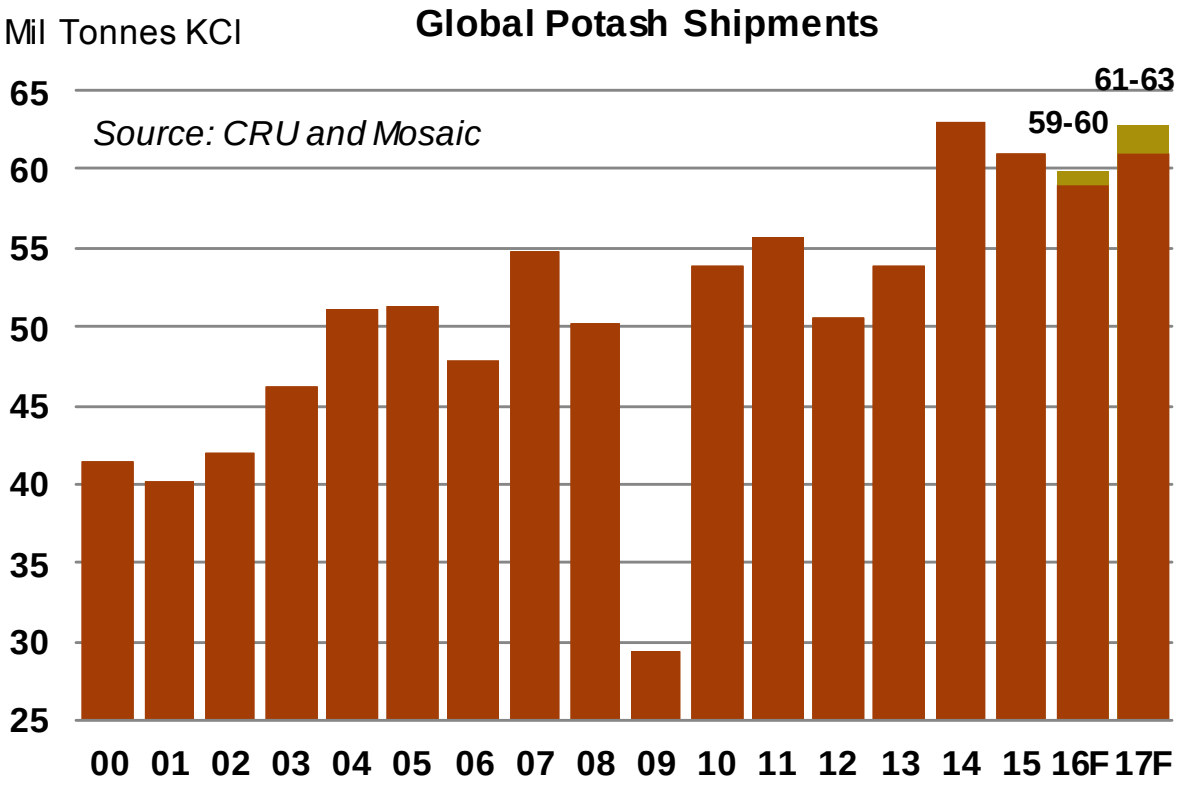
- China accounted for all of the net increase in phosphate supplies since 1995
- China is embarking on permanent closure of some uncompetitive capacity
  - **Possibility of a much more significant contraction in capacity, with the latest ideas out of China* calling for closure of ~3 million tonnes of P_2O_5 (which is not included in our base case forecast at right)**
- Future demand growth will be met by supplies mostly from Morocco and Saudi Arabia

- We (as does CRU) project modest capacity and moderate demand increases during the next five years, but demand grows slightly faster than capacity so operating rates trend upward
- We expect more rapid demand growth and higher and relatively stable global operating rates in the mid-high 80% range
- China capacity, production and exports remain the biggest wild card

** Source: Ideas for Development of the Phosphate Fertilizer Industry in 2016-2020, presented at the 23rd National Phosphate and Compound Fertilizer Industry Annual Conference*

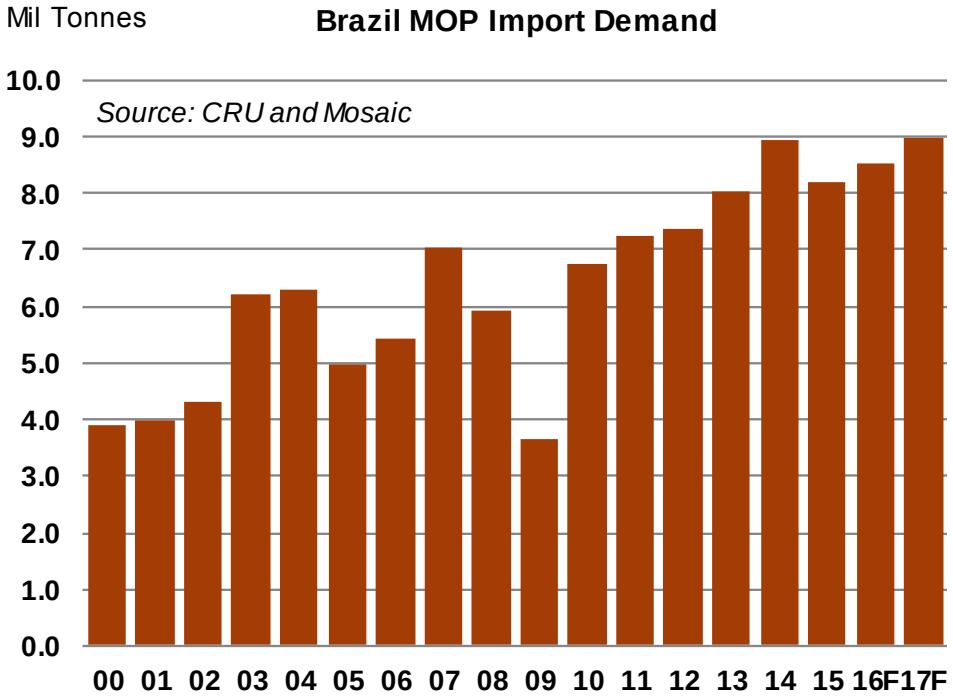
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Potash: Caution stoked by delays to the China contract settlement, but demand rebound forecast in 2017



- We have left unchanged our shipment estimates for 2016 and tabled preliminary forecasts for moderate growth 2017
- MOP shipments are forecast to total 61 to 63 million tonnes next year, led by a rebound in China and continued growth in Brazil

Acceleration of MOP imports expected in Brazil in 2H



Brazil Plant Nutrient Imports

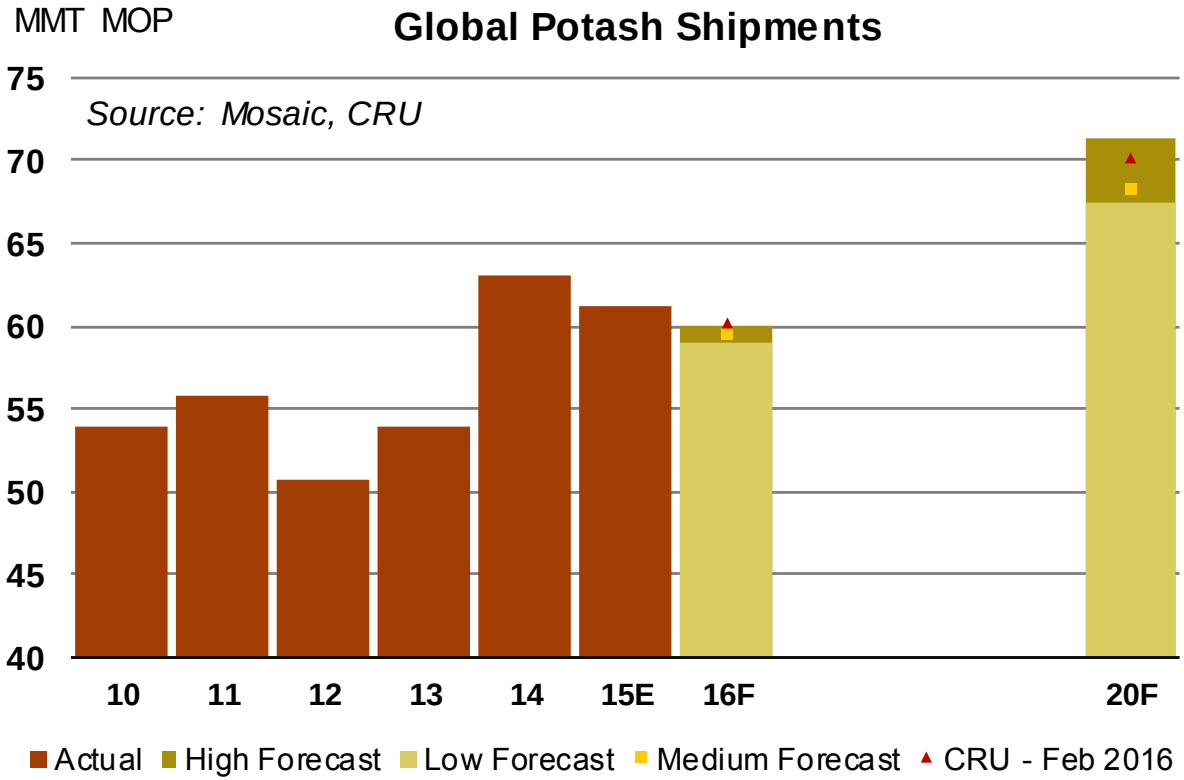
Year-To-Date					
1000 MT	**YTD 2016**	**YTD 2015**	**% Chg Prior Yr**	**7-Yr Avg**	**% Chg 7-Yr Avg**
DAP	264	300	-12%	325	-19%
MAP	1,228	1,149	7%	886	39%
TSP	314	370	-15%	426	-26%
Total	*1,806*	*1,819*	*-1%*	*1,679*	*8%*
SSP	320	282	13%	217	48%
MOP	3,811	3,712	3%	3,368	13%
Urea	1,616	1,411	14%	1,122	44%

Source: ANDA *Data through June*

- Potash shipments were up 16%, while imports were up only 3% or 100,000 tonnes in the first half of this year. As a result, MOP inventories declined 180,000 tonnes during the first half.
- MOP imports are projected to total 8.5 million tonnes this year, with 3.9 million tonnes in the first half and 4.6 million required during the second half of this year.

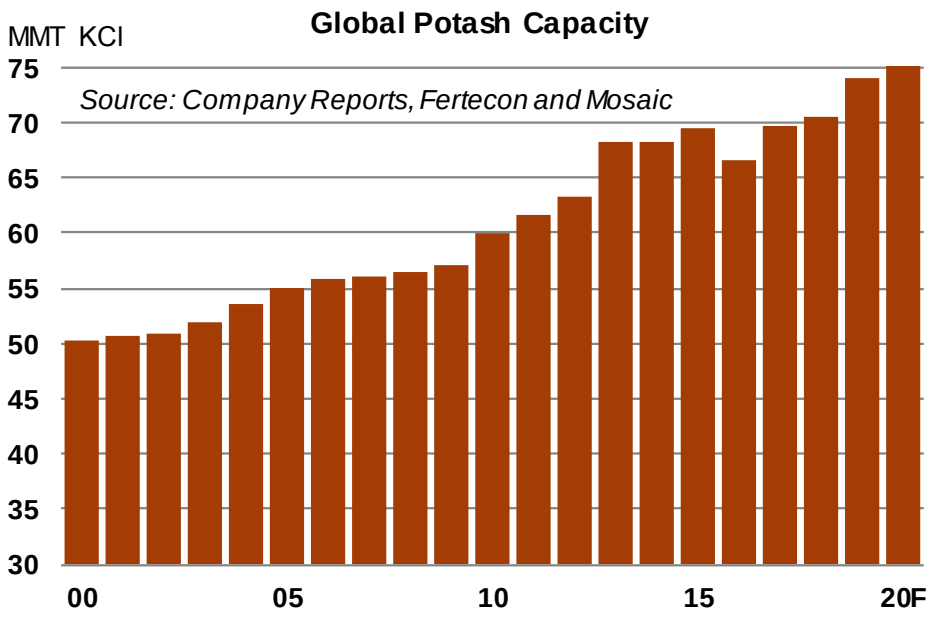
Mosaic

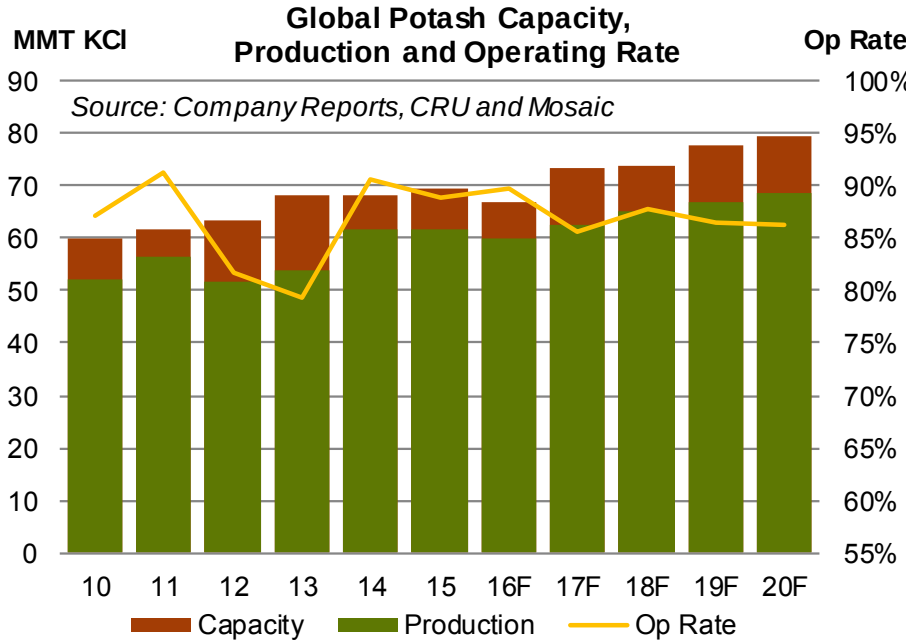
Solid medium term demand drivers and forecasts



- Global shipments have increased 7.2 mmt from 2010 to 2015
- Growth led by China and Brazil, with help from other regions
- India was a major drag on global K demand, but expected to be a positive driver over the next 5 years
- Shipments projected to increase 7.1 mmt from 2015-2020, with gains led by Brazil, India and SE Asia

Stable supply/demand balance going forward





- 2016 sees a contraction of global potash capacity as the industry adjusts to new market conditions
- New greenfield plants are still expected to come on stream later in the decade, but few (if any) projects not already under construction appear likely to move forward in the near term

- *Based on our assessment of operational capacity (approximately 80 million tonnes in 2020)*, the global operating rate is expected range from 85-90% for the remainder of this decade
- Further supply adjustments (or project delays) could boost operating rates, given our demand expectations

Mosaic

Thank You!

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