State of the Fertilizer Industry

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Safe Harbor

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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 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.

Mosaic – Leading Miner of Agricultural Minerals

Based on 2014 production
P₂O₅ production based on PACID and SSP production
K₂O production based on MOP, SOP, and KMS production
Source: Company reports, IFA, CRU, Fertecon and Mosaic
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

Potash Sales 2012-15

North America 46%
Offshore 54%

North American Offshore Potash Sales

Colonsay
Regina
Belle Plaine
Esterhazy K1 & K2

Corporate Headquarters
Business Unit Office
Deep Shaft Mine
Solution Mine
Port

Mosaic
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
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
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.

<table>
<thead>
<tr>
<th>Year</th>
<th>Soybeans</th>
<th>Sugar</th>
<th>Coffee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2006</td>
<td>105</td>
<td>105</td>
<td>105</td>
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<tr>
<td>2007</td>
<td>110</td>
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<td>2008</td>
<td>115</td>
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<tr>
<td>2009</td>
<td>120</td>
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<td>2010</td>
<td>125</td>
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<td>2014</td>
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<tr>
<td>2015</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>2016</td>
<td>155</td>
<td>155</td>
<td>155</td>
</tr>
</tbody>
</table>

Prices in Brazilian Reais
Monthly Average of Front Month Contract
2005 = 100

Source: CME and CRB Forex

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

Global Phosphate Shipments

<table>
<thead>
<tr>
<th>MMT Product</th>
<th>DAP/MAP/NPS*/TSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source: CRU and Mosaic</td>
<td></td>
</tr>
<tr>
<td>* NPS products containing 45 or more combined units of N and P₂O₅</td>
<td></td>
</tr>
</tbody>
</table>

* NPS products containing 45 or more combined units of N and P₂O₅
So Why Does the Market Feel ‘Loose’ in 2016? Fewer Plant Closures and Unplanned Outages

2015 Global Production Shortfalls:

- 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

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

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

- 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)

- 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).

![Global Phosphate Shipments](image-url)

Source: Mosaic and CRU Phosphate Outlook April 2016
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 P₂O₅ (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

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

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**Global Potash Shipments**

Source: CRU and Mosaic

- 2000: 35 Mil Tonnes KCl
- 2001: 36 Mil Tonnes KCl
- 2002: 40 Mil Tonnes KCl
- 2003: 45 Mil Tonnes KCl
- 2004: 50 Mil Tonnes KCl
- 2005: 55 Mil Tonnes KCl
- 2006: 60 Mil Tonnes KCl
- 2007: 65 Mil Tonnes KCl
- 2008: 65 Mil Tonnes KCl
- 2009: 60 Mil Tonnes KCl
- 2010: 55 Mil Tonnes KCl
- 2011: 50 Mil Tonnes KCl
- 2012: 45 Mil Tonnes KCl
- 2013: 40 Mil Tonnes KCl
- 2014: 35 Mil Tonnes KCl
- 2015: 30 Mil Tonnes KCl
- 2016: 25 Mil Tonnes KCl
- 2017: 20 Mil Tonnes KCl

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 accelerate MOP imports expected in Brazil in 2H

- 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.

**Brazil MOP Import Demand**

**Brazil Plant Nutrient Imports**

<table>
<thead>
<tr>
<th></th>
<th>Year-To-Date</th>
<th>% Chg</th>
<th>% Chg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000 MT YTD</td>
<td>YTD</td>
<td>Prior</td>
</tr>
<tr>
<td></td>
<td>2016 2015</td>
<td>Yr Avg</td>
<td></td>
</tr>
<tr>
<td>DAP</td>
<td>264 300</td>
<td>-12%</td>
<td>325</td>
</tr>
<tr>
<td>MAP</td>
<td>1,228 1,149</td>
<td>7%</td>
<td>886</td>
</tr>
<tr>
<td>TSP</td>
<td>314 370</td>
<td>-15%</td>
<td>426</td>
</tr>
<tr>
<td>Total</td>
<td>1,806 1,819</td>
<td>-1%</td>
<td>1,679</td>
</tr>
<tr>
<td>SSP</td>
<td>320 282</td>
<td>13%</td>
<td>217</td>
</tr>
<tr>
<td>MOP</td>
<td>3,811 3,712</td>
<td>3%</td>
<td>3,368</td>
</tr>
<tr>
<td>Urea</td>
<td>1,616 1,411</td>
<td>14%</td>
<td>1,122</td>
</tr>
</tbody>
</table>

Source: CRU and Mosaic

Source: ANDA

Data through June
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
Thank You!

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