# Investor Information

## Second Quarter 2018


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Mosaic

# Safe Harbor Statement

*This presentation 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 anticipated benefits and synergies of our acquisition of the global phosphate and potash operations of Vale S.A. previously conducted through Vale Fertilizantes S.A. (which, when combined with our legacy distribution business in Brazil, is now known as Mosaic Fertilizantes) (the "Transaction"), 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: difficulties with realization of the benefits and synergies of the Transaction, including the risks that the acquired business may not be integrated successfully or that the anticipated synergies or cost or capital expenditure savings from the Transaction may not be fully realized or may take longer to realize than expected, including because of political and economic instability in Brazil or changes in government policy in Brazil; 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 performance of the Wa'ad Al Shamal Phosphate Company (also known as MWSPC), 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, and the future success of current plans for MWSPC and any future changes in those plans; the risk that protests against natural resource companies in Peru extend to or impact the Miski Mayo mine, which is operated by an entity in which we are the majority owner; 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; 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, carbon taxes or other 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, Canada or Brazil, 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.*

# The Mosaic Company Overview

# Executive Summary

**1 Constructive Outlook**

- Raising full year adjusted EBITDA to $1.7B - $1.9B and adjusted EPS guidance to $1.20 - $1.60 per share*:
  - Expect to recoup most logistics related shipment delays
  - Expect market momentum to continue through 2018
  - Ahead of schedule on debt pay-down, targeting $500 million in 2018

**2 Strong Execution**

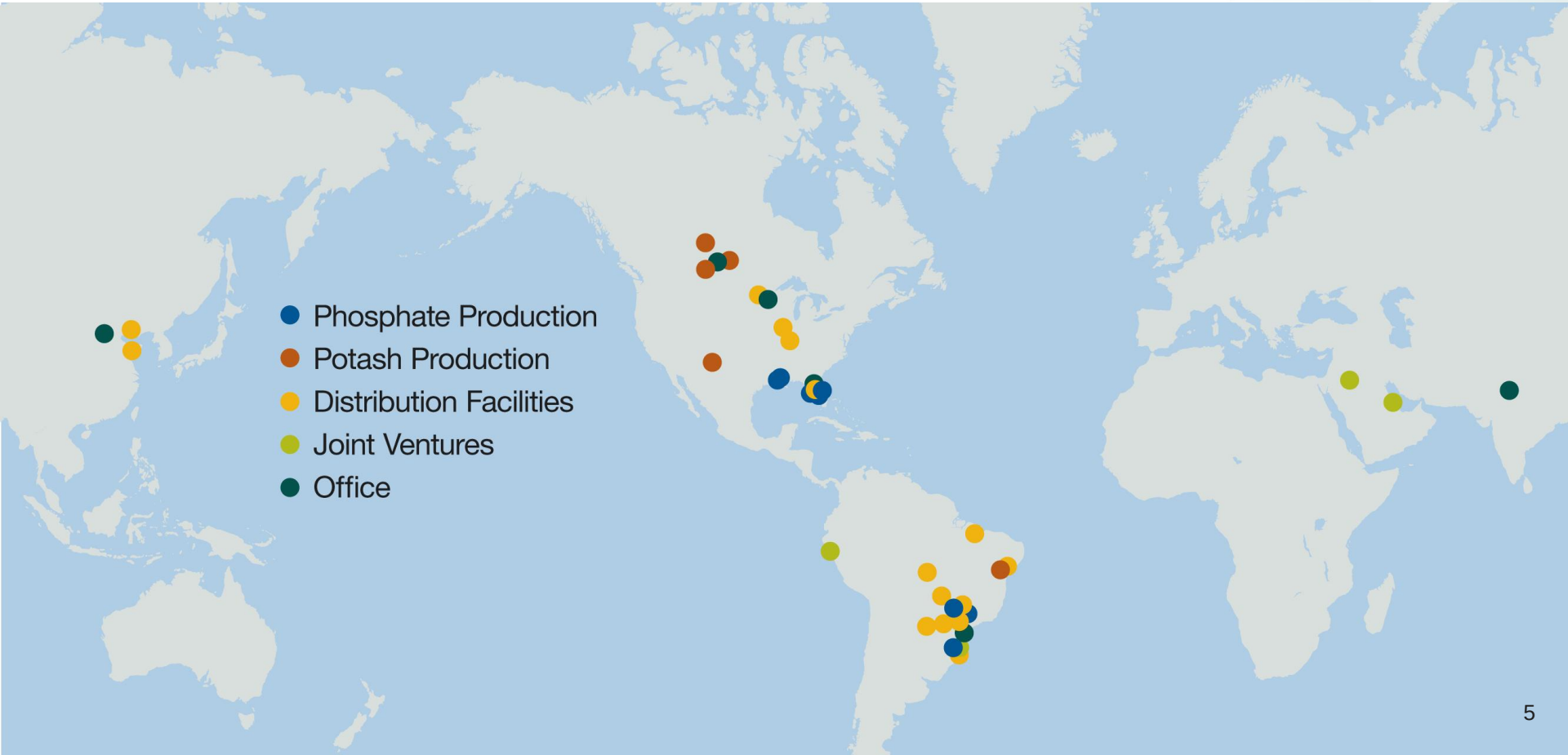
- Solid execution across three business units, despite logistics related challenges:
  - Cash costs of mined Florida rock down to $35 per tonne; Cash costs of conversion down to $68 per tonne
  - MOP cash costs of production flat at $86 per tonne, despite a negative containment related impact

**3 Transformation progress**

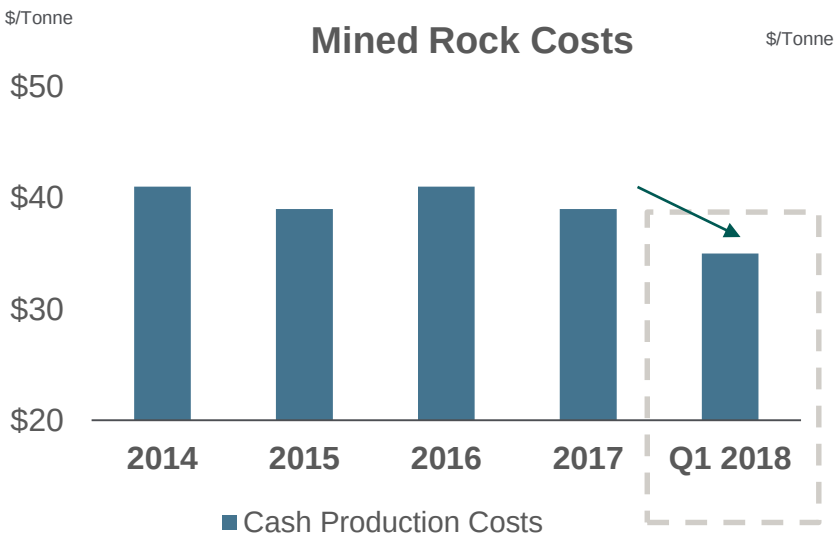
- Remarkable progress on Mosaic Fertilizantes transformation:
  - Actions taken in Q1'2018 alone expected to deliver $100 million in annualized EBITDA contribution
  - Cadence of realization in 2018: 1/3$^{rd}$ in H1, 2/3$^{rd}$ in H2

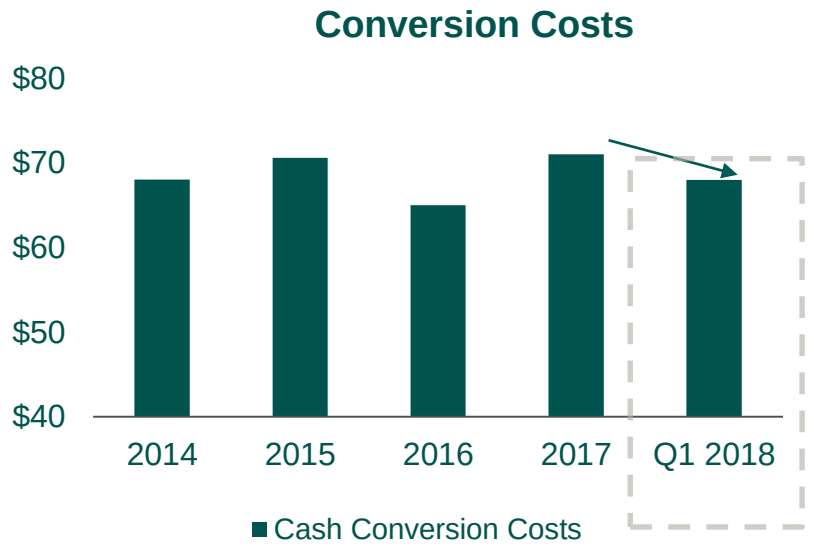
**Adjusted EPS guidance now assumes full year effective tax rate of ~30%, up from prior expectation of ~20%.*

# Mosaic Assets: Global, Long Life, Low Cost



# Transformation:
# Idled Plant City

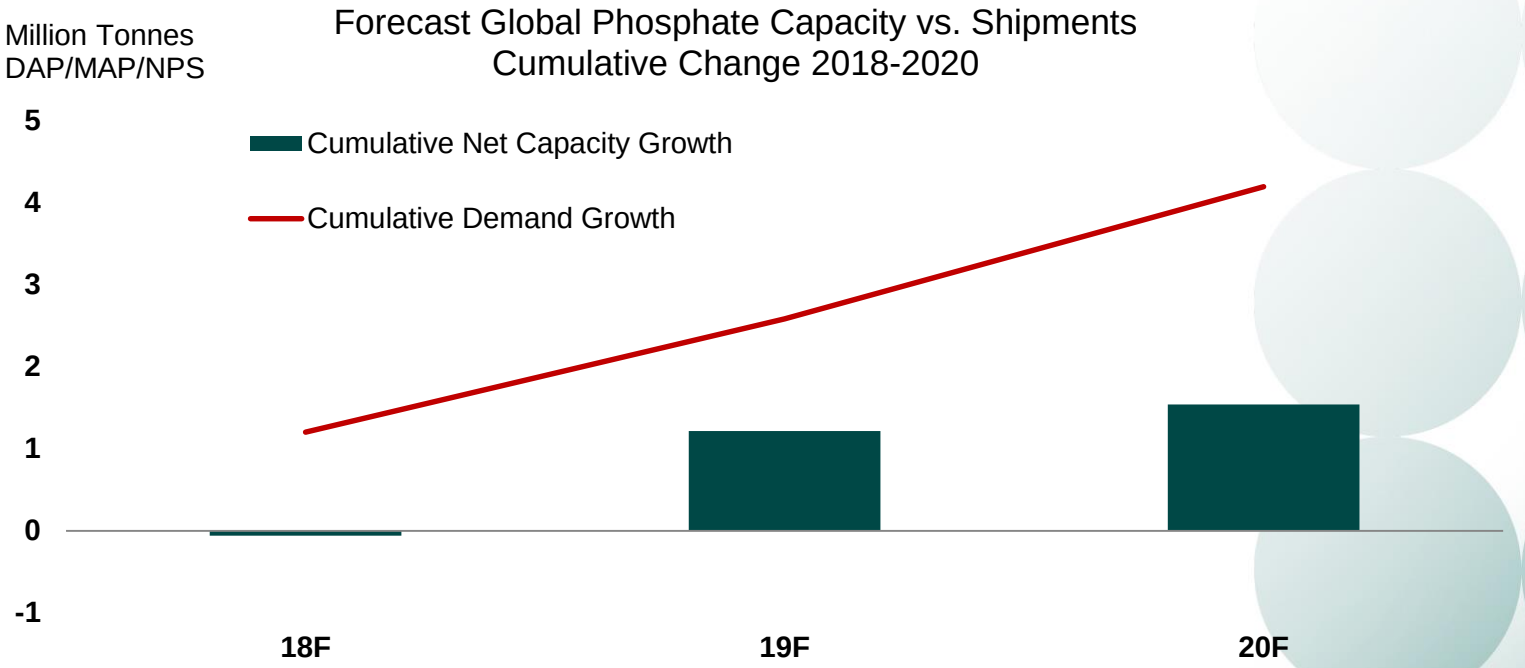



* Phosphate cash conversion costs are reflective of actual costs, excluding realized mark-to-market gains and losses. These costs are captured in inventory and are not necessarily reflective of costs included in costs of goods sold for the period.

**Transformation:**

# Anticipated S&D Impact of Idling Plant City

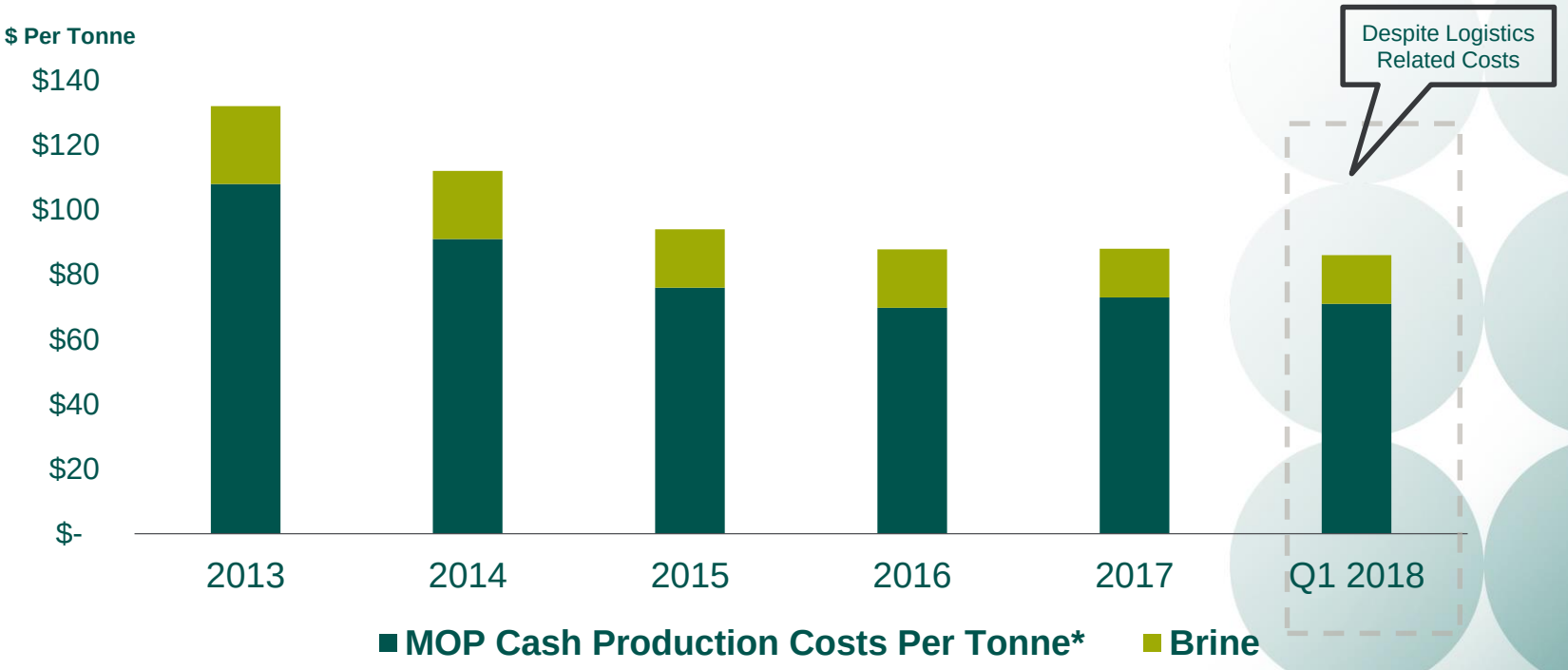



Source: CRU and Mosaic

***Tightened phosphate supply & demand even without expected China capacity rationalization***

## Transformation in Potash:

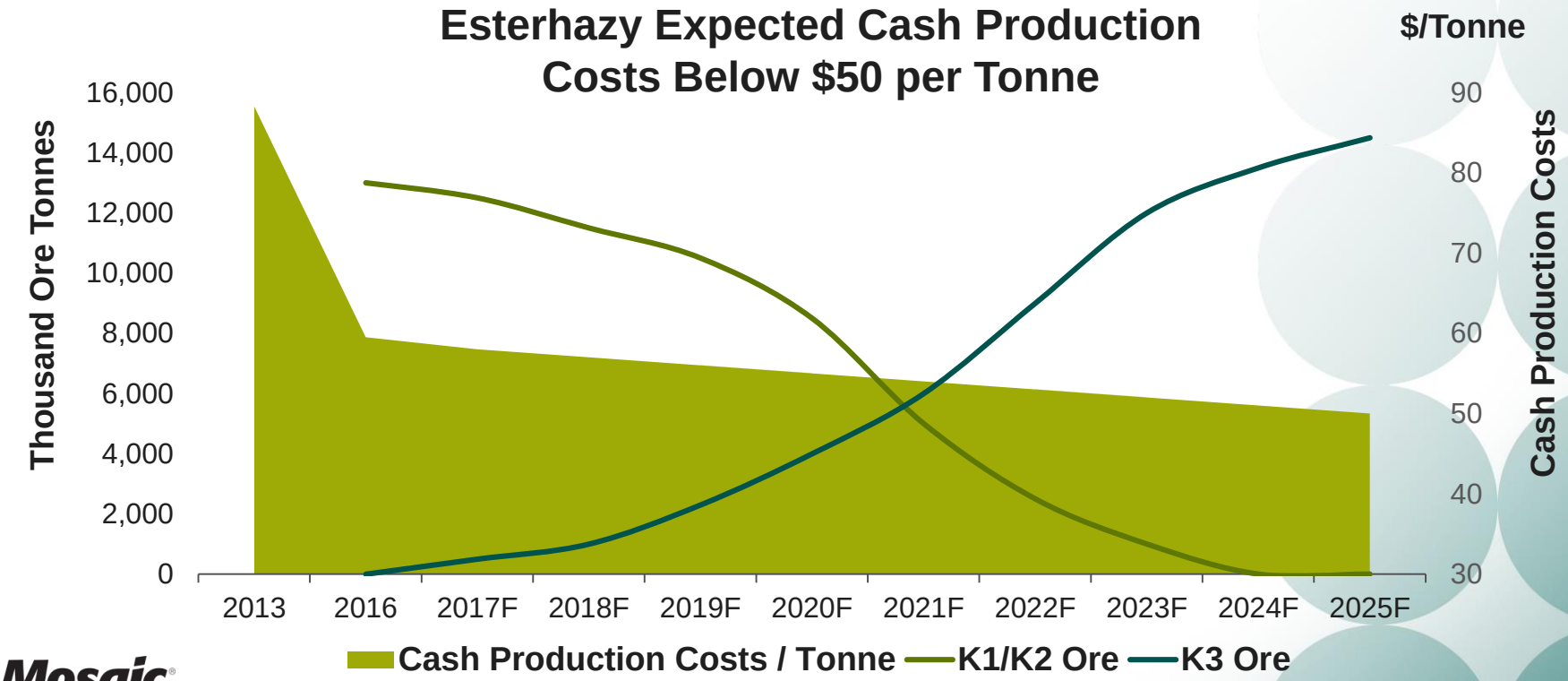
# Asset Optimization and Cost Control




*MOP cash production costs are reflective of actual costs during the quarter, excluding CRT and realized mark-to-market gains and losses. These costs are captured in inventory and are not necessarily reflective of costs included in costs of goods sold for the period.

Transformation in Potash:

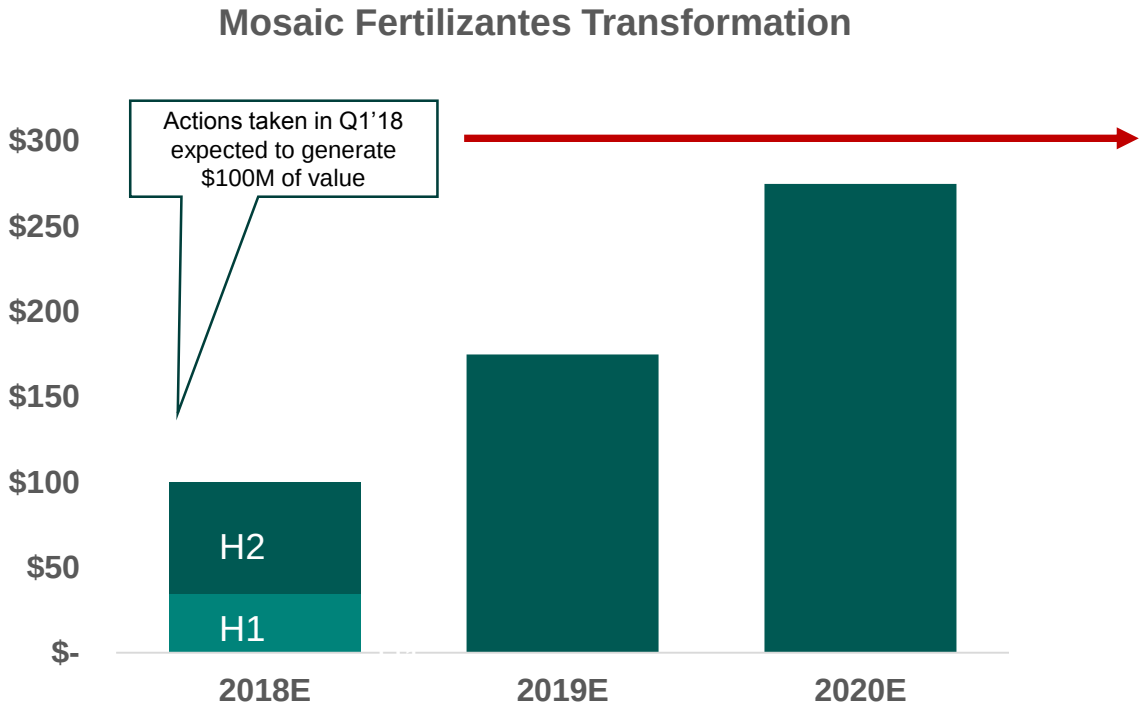
# Expected Elimination of Brine Management Costs




Forecast as of April 12, 2017

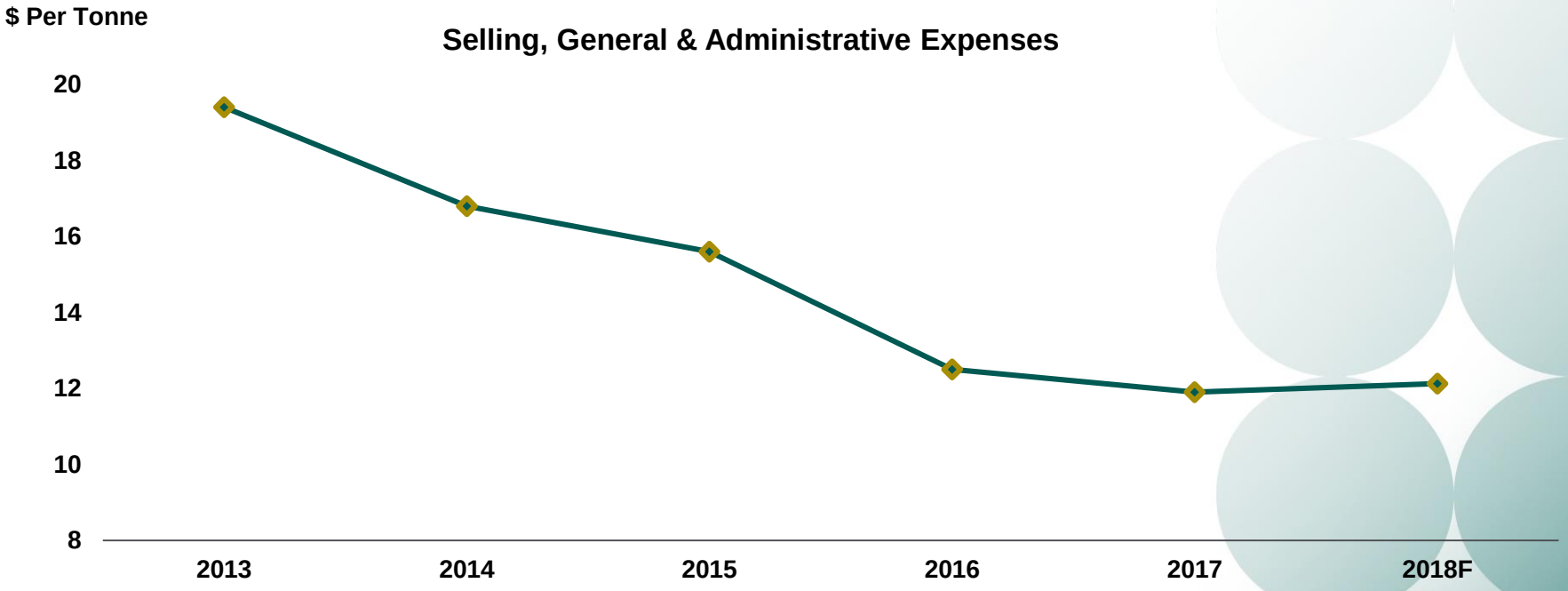
*MOP cash production costs are reflective of actual costs during the quarter, excluding CRT and realized mark-to-market gains and losses. These costs are captured in inventory and are not necessarily reflective of costs included in costs of goods sold for the period.

# Mosaic Fertilizantes Transformation on Track




| Categories | Run rate initiatives (US$ M) |
|---|---|
| Operations | 48 |
| Organization | 19 |
| Procurement | 15 |
| Supply Chain | 9 |
| Commercial | 8 |
| Others | 2 |
| **Total** | **100** |

# Visible Cost Controls




*Does not include the intra-segment volume eliminations, which are negative impacting SG&A/Tonne metric starting in 2018 as a result of the Vale Fertilizantes acquisition

# Capital Allocation Philosophy




Further accelerating debt repayment in 2018

# Tremendous Upside Leverage

($ in billons)

| | Low | High | |
|---|---|---|---|
| | $ 1.70B | $ 1.90B | **Adjusted EBITDA guidance dated 05/08/18** |
| **2018 Guidance** | | $ 0.00 | Income taxes paid |
| | | $ 0.20 | Interest expense paid |
| | | $ 0.00 | Other working capital changes |
| | | $ 0.20B | Total adjustments to estimate cash flow from operating activities |
| | $ 1.50B | $ 1.70B | Estimated cash flow from operating activities |
| | $ 0.90B | $ 1.10B | Capital expenditure guidance dated 05/08/18 |
| | $ 0.40B | $ 0.80B | **FCF = cash flow from operating activities – capital expenditures** |
| **Planned Actions*** | | $ 0.18 | Additional Mosaic Fertilizantes synergies |
| | | $ 0.12 | Annual cash brine management costs |
| | | $ 0.23 | Lower annual K3 growth capital expenditure |
| | | $ 0.53B | Total improvement from plans in place |
| | $ 0.93B | $ 1.33B | **FCF range after execution of plans** |
| **Through-Cycle Prices**** | | $ 0.90B | Impact of average prices and stripping margins from 2009-2017 |
| | | | *Assumes potash prices at the mine of $302 / tonne* |
| | | | *Assumes DAP stripping margin of $275 / tonne* |
| | | | *Assumes no incremental cash taxes* |
| | $ 1.83B | $ 2.23B | **FCF range after execution and assuming through-cycle prices** |

*Assumes K3 is fully operational and all Mosaic Fertilizantes synergies are achieved. Prices unchanged from 2018 estimates. Assumed no incremental benefits of additional K3 capacity or associated reduction in operating costs.

**Assumes K3 is fully operational, all Mosaic Fertilizantes synergies are achieved and 8 year average selling prices.

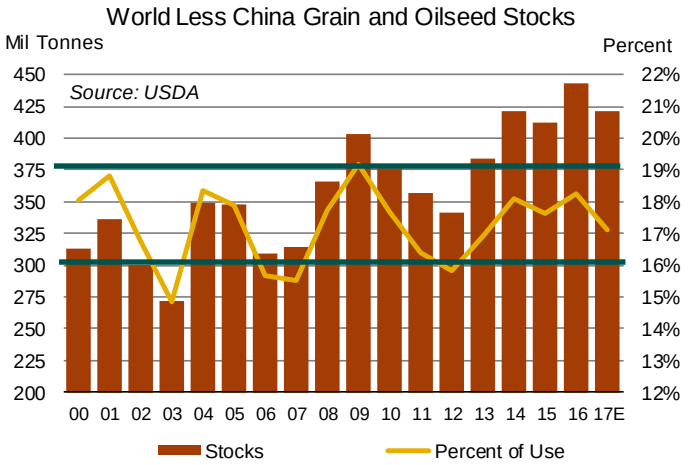
EBITDA is defined as net income less income taxes, less interest expense, less depreciation, depletion and amortization.

See "Non-GAAP Financial Measures" included in Mosaic's May 7, 2018 earnings press release which is incorporated herein by reference.

# Markets

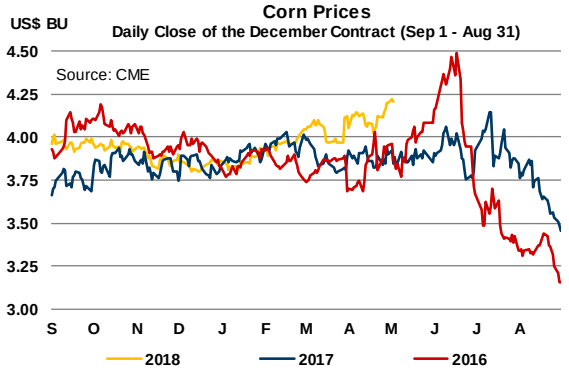
## Agricultural Outlook

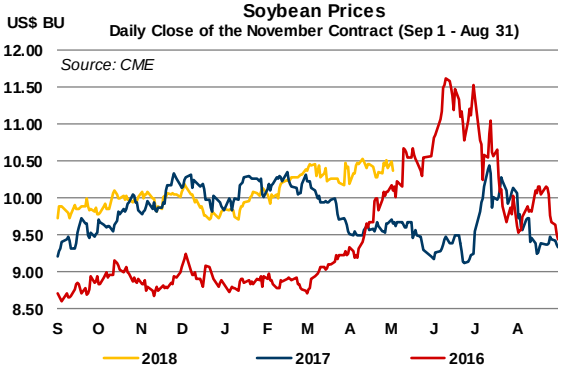
# Agricultural Fundamentals Begin to Tighten Following a String of Bin-Busting Harvests

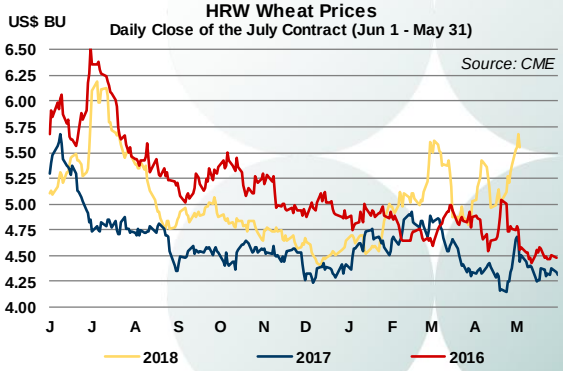


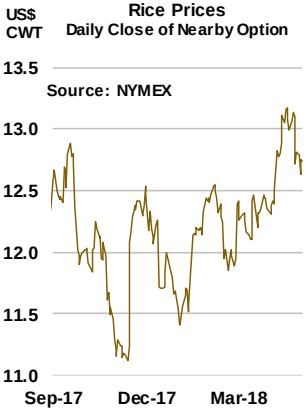

- A big step-up in global production since 2012/13
- But continued strong and steady demand growth
- Stocks ex China increased to a record high in 2016/17
- Inventories ex China projected to decline in 2017/18
- Stocks as a percentage of use projected to drop into the lower half of the 16%-19% range by the end of 2017/18
- The Food Story is not in vogue but it still is intact!

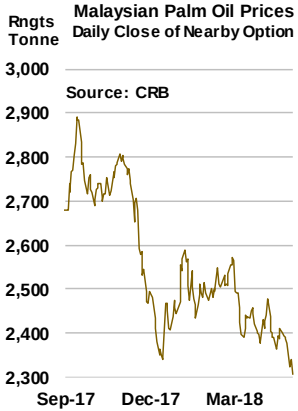
# Mostly Firm Crop Prices Underpin Positive P&K Demand Outlook

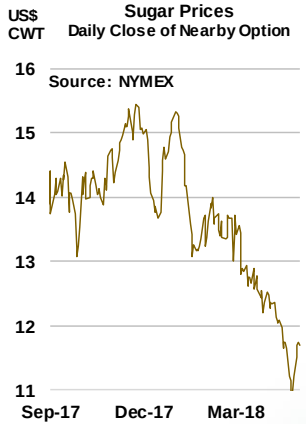


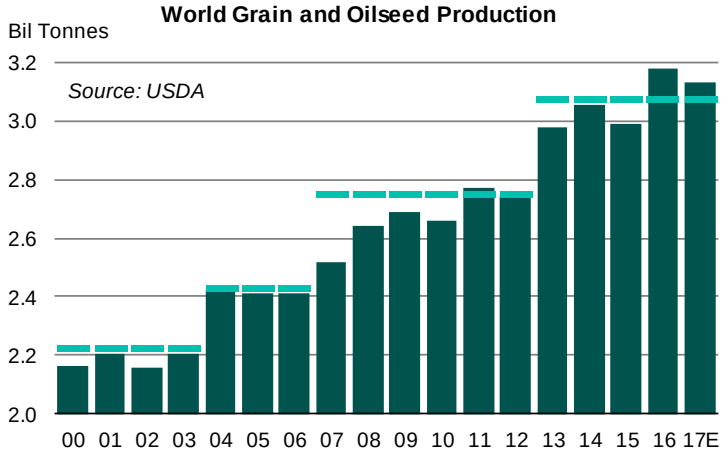






# Positive Agronomic & Economic Demand Drivers

## Record Harvests Remove Record Amounts of P&K

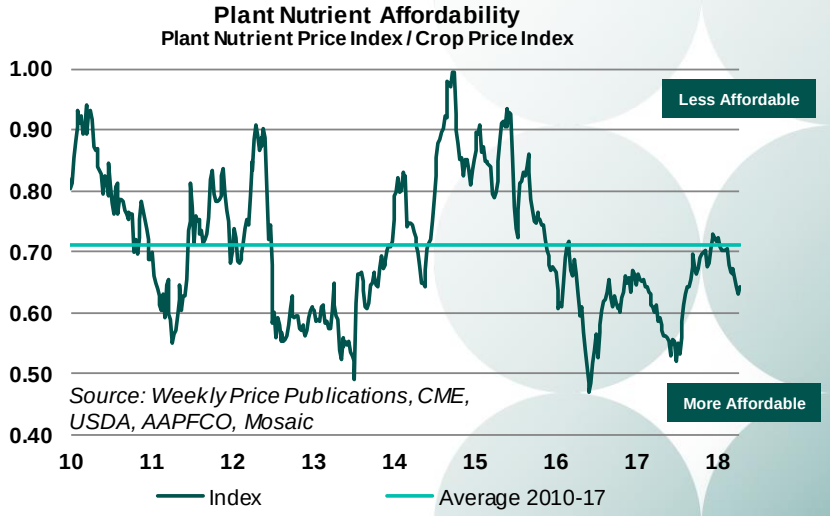



### Estimated World Grain & Oilseed Nutrient Removal

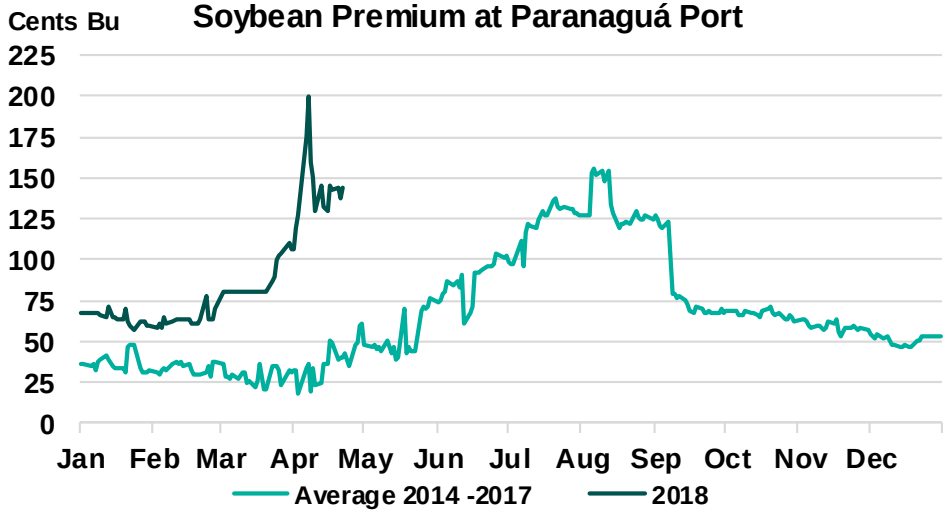
| Mil Tonnes | 2007-12 Stoop (2.74 bmt) | 2013-17 Stoop (3,06 bmt) | Change | Percent Change |
|---|---|---|---|---|
| N Removal | 59.3 | 66.2 | 6.9 | 11.6% |
| $P_2O_5$ Removal | 22.9 | 25.4 | 2.5 | 10.9% |
| $K_2O$ Removal | 19.2 | 21.5 | 2.2 | 11.7% |

*Source: USDA, IPNI, Mosaic*

## Plant Nutrients Still Affordable



# Brazil Farmers Benefit from the Argentine Drought, a Weaker Real, and the Threat of a U.S.-China Trade War

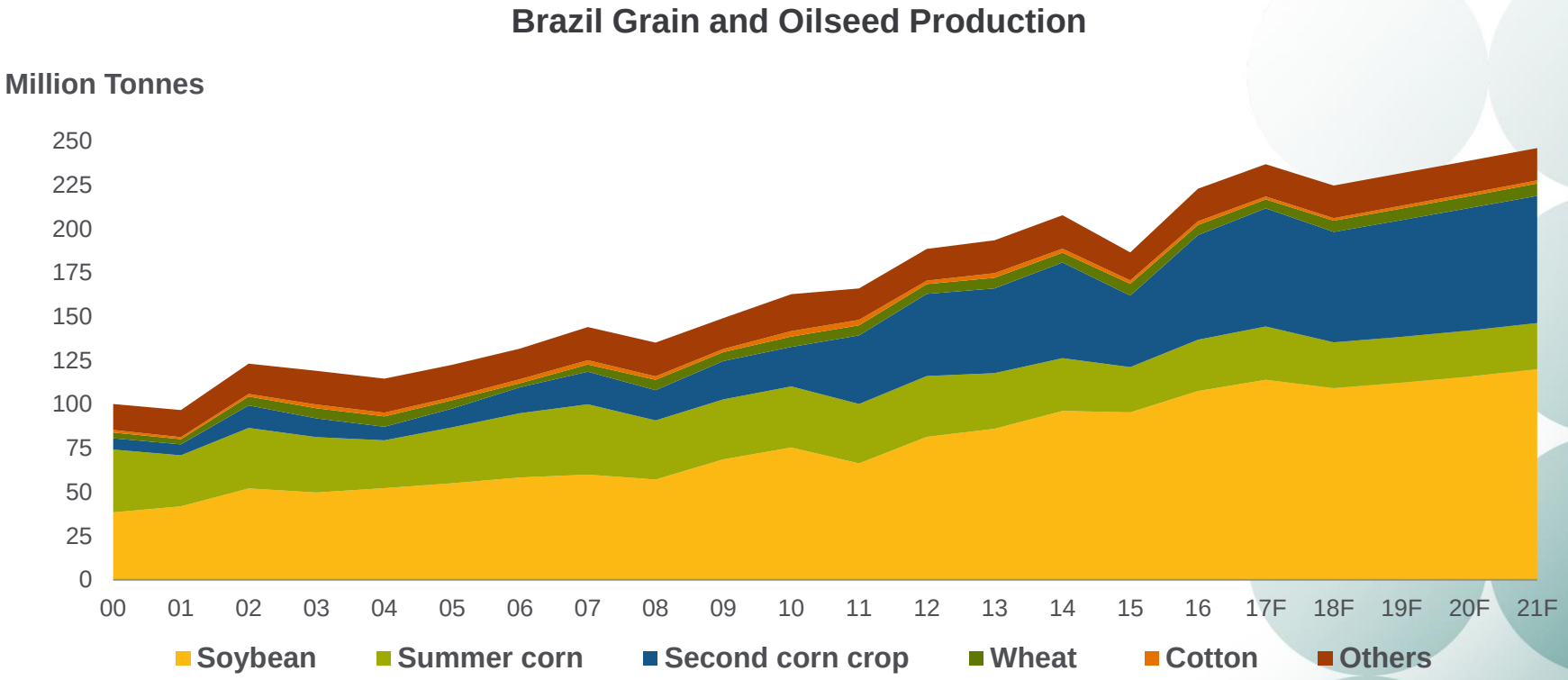



| Soybean Premium at Paranaguá Port | | | |
|---|---|---|---|
| Cents Bu | 2018 | Four-Year Average | Change |
| January | $0.64 | $0.36 | 77% |
| February | $0.64 | $0.34 | 91% |
| March | $0.88 | $0.29 | 204% |
| April | $1.46 | $0.39 | 274% |

# Markets

## Brazil

# Brazil: Agricultural Powerhouse

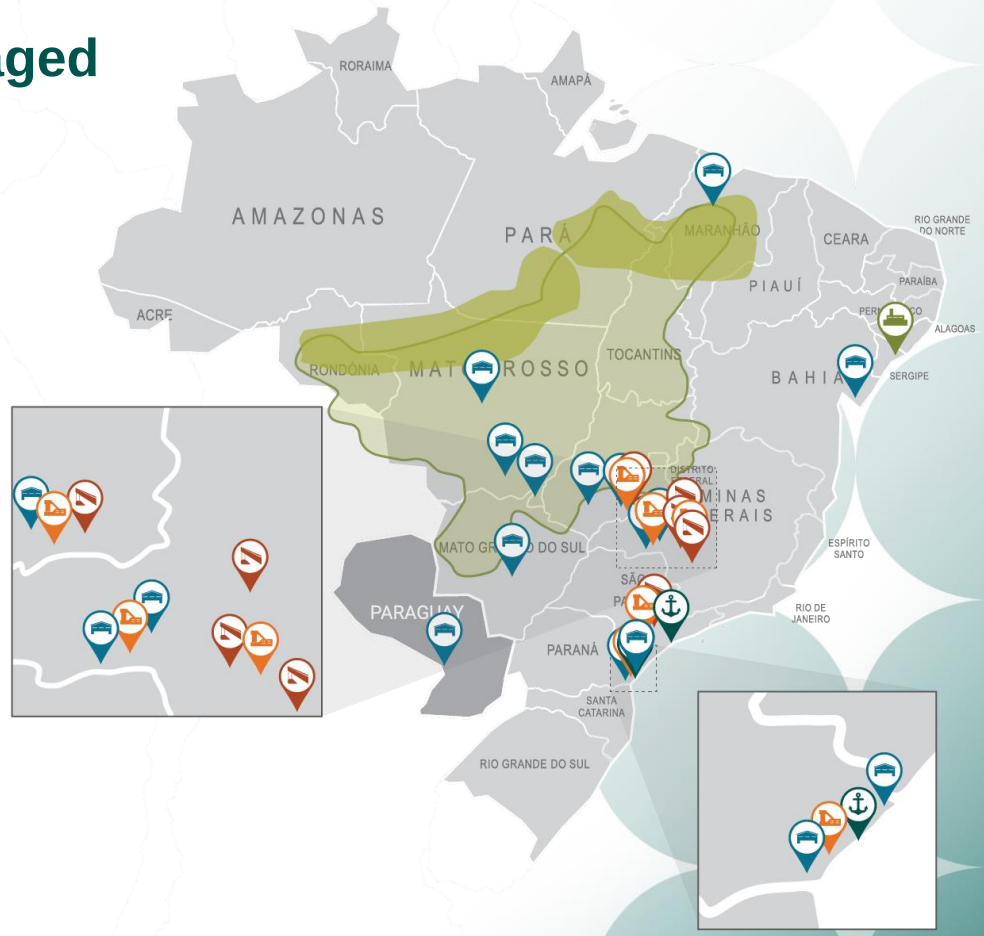



Source: CONAB and projections from FIESP Outlook

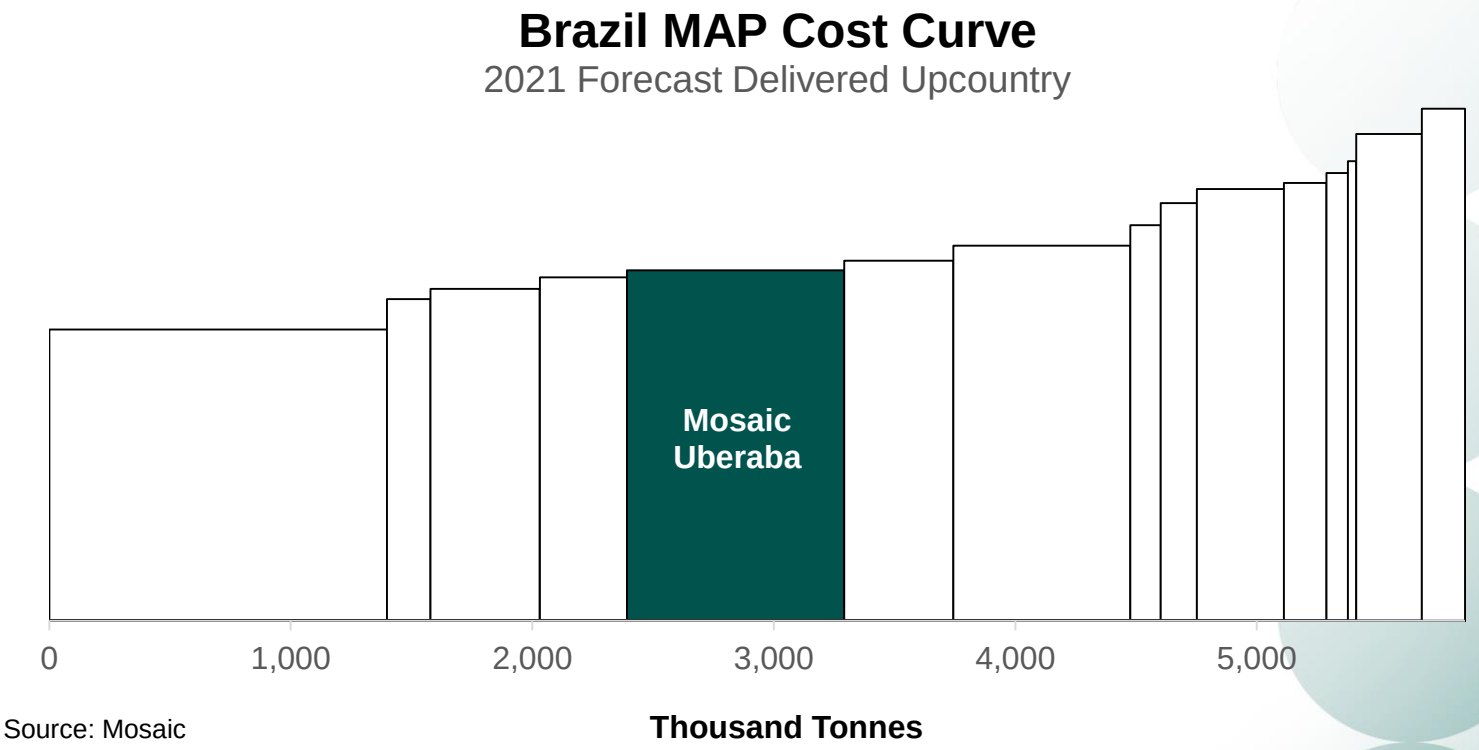
# Mosaic is Logistically Advantaged to Key Growing Areas

- Exposure to the Cerrado region
- Just-in-time deliveries
- Long-term relationship with customers
- Integrated logistics



# Post Transformation: Competitive Delivered Basis

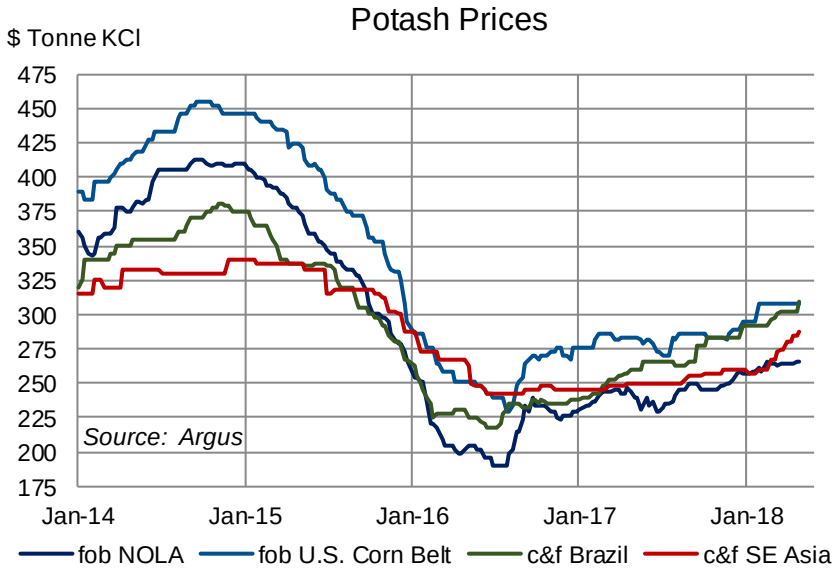



Source: Mosaic

# Markets

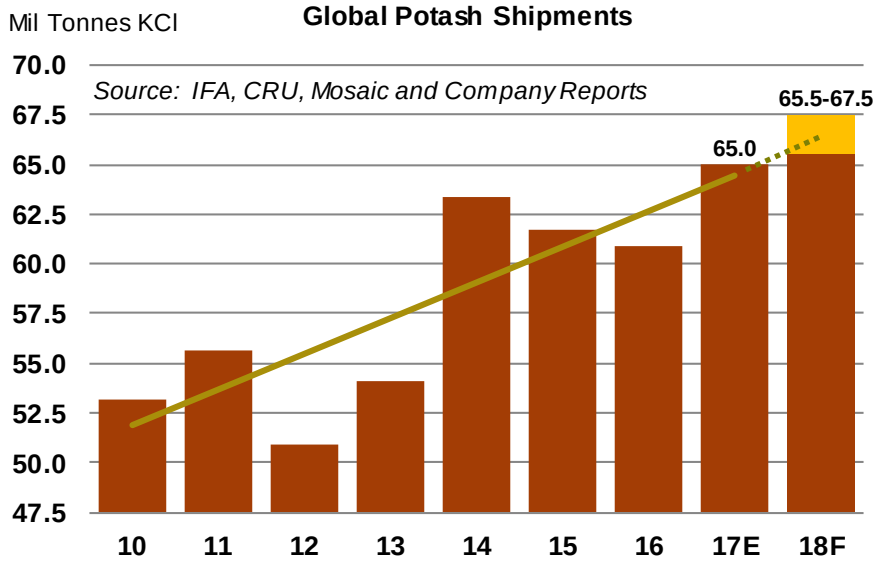
## Potash Outlook

# Key Prices Move Up




- Strong broad-based demand growth
- Optimized/restructured operations
- No immediate threat from new capacity

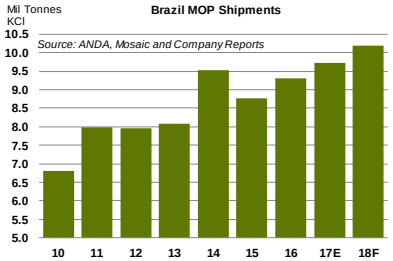
# Strong, Broad-Based and Less Volatile Demand Growth



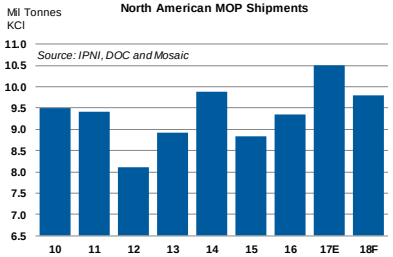

- After declining during the two previous years, we estimate that global MOP shipments jumped 6.8% or 4.1 million tonnes KCl to 65.0 million in 2017. Shipments are forecast to increase another 2.6% or 1.7 million tonnes to 66.7 million this year.
- In its outlook report released at the end of February, CRU estimated that MOP shipments totaled 65.5 million tonnes in 2017 and projected that shipments would increase to 66.6 million tonnes this year.

Mosaic

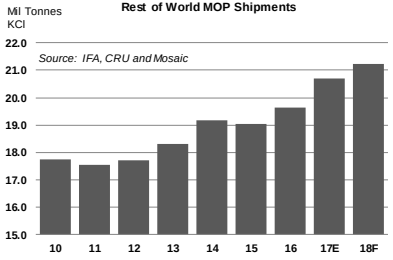
# Strong and Broad-Based Demand Growth



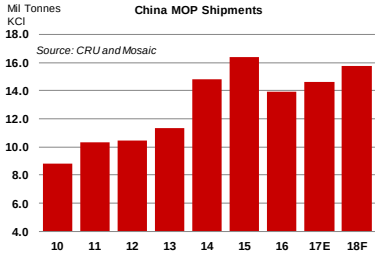

Brazil demand continues its upward march driven mainly by steady increases in soybean production. Shipments are forecast to breach the 10 million tonne mark this year.



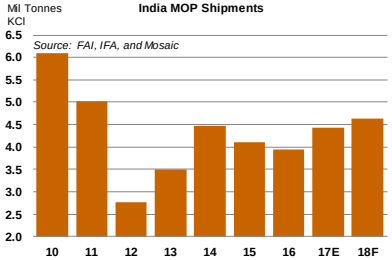

North American shipments surged to 10.5 million tonnes KCl in 2017 due to a strong fall application season and early positioning of 2018 needs. On-farm demand is expected to stay stable this year, but shipments are projected to drop to about 9.8 mmt this year.



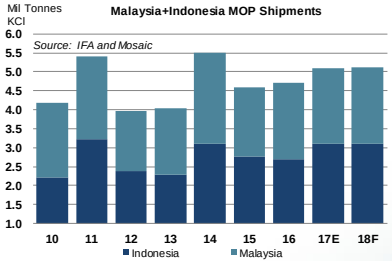

Shipments outside the “Big Six” countries/regions have taken off led mostly by other Asian and other Latin American countries as well as a doubling of African use during the last five years (albeit from a low starting point).




Chinese shipments also are trending up due to record crop production as well as efforts to improve nutrient balance. Higher domestic MOP production met much of the recent growth, but domestic output likely has plateaued, implying strong growth in import demand.




India shipments are beginning to recover following 2010/11 subsidy changes that resulted in a near tripling of retail potash prices. Higher crop support prices and initial forecasts of a normal monsoon rainfall also are aiding the recovery this year.




Indonesian and Malaysian shipments also have trended upward with surges in 2011 and 2014. Gains are driven mostly by increases in palm oil production, but positive rice profitability also has helped to underpin potash use in this region as well as in other Asian countries.

# Global Potash Shipment Forecasts by Region (May 2018)

| Muriate of Potash Million Tonnes (KCl) | 2015 | 2016 | 2017E | Low 2018F | High 2018F | Source: IFA, CRU and Mosaic (Numbers may not sum to total due to rounding) Comments |
|---|---|---|---|---|---|---|
| China | 16.4 | 14.0 | 14.6 | 15.6 | 15.9 | *2017 shipments were revised down to 14.6 mmt due to lower production (7.3 mmt production plus 7.3 mmt net imports). 2018 shipments are projected to rebound to 15.8 mmt (7.5 mmt production plus 8.3 mmt net imports) due to high crop prices, moderate potash prices and low channel stocks especially at NPK plants.* |
| India | 4.1 | 3.9 | 4.4 | 4.5 | 4.7 | *CY 2017 shipments were revised down to 4.4 mmt based on the final import statistics. 2018 shipments are forecast to increase to 4.6 mmt due to higher minimum support prices for key crops, moderate K prices, a stable rupee, workable import economics, and initial forecasts of a normal monsoon this year.* |
| Indonesia+Malaysia | 4.6 | 4.7 | 5.1 | 5.0 | 5.2 | *2017 shipments were revised up again based on final import statistics. Shipments are expected to increase in 2018 due to still favorable palm oil and rice prices and the expectation of normal rainfall this year.* |
| Other Asia | 4.4 | 4.8 | 5.0 | 5.2 | 5.3 | *Shipments to this region jumped in 2017 led by big gains in Thailand, and Vietnam. Demand continues buoyed by good weather, favorable policies, OK crop prices and moderate K prices.* |
| W. Europe | 4.8 | 5.0 | 4.8 | 4.7 | 4.9 | *We estimate that shipments dropped in 2017 as a result of elevated channel inventories and the aftermath of the drought in southern Europe last year. Shipments are forecast to stay in the 4.8 mmt range this year.* |
| E. Europe+FSU | 4.7 | 4.6 | 5.2 | 5.3 | 5.5 | *Shipments here are following the increase in agricultural output. Demand is underpinned by mostly favorable weather, strong local-currency crop prices (bolstered by still weak currencies) and moderate K prices.* |
| Brazil | 8.8 | 9.3 | 9.7 | 10.0 | 10.2 | *Based on 2017 ANDA statistics, shipments were revised up to a record 9.7 mmt last year (.49 mmt production plus 9.20 mmt net imports). 2018 shipments are expected to breach the 10.0 mmt mark due to continued good weather and positive agronomic and economic demand drivers.* |
| Other L. America | 2.6 | 2.8 | 3.0 | 2.9 | 3.1 | *2017 shipments were revised up as a result of broad-based gains in Central and other South America countries. Shipments this year are forecast to stay flat due to continued positive farm economics.* |
| N. America | 8.8 | 9.4 | 10.5 | 9.6 | 9.8 | *2017 shipments were revised up slightly due to another strong fall application season and early positioning of 2018 needs ahead of announced price increases. In 2018, on-farm use is expected to stay flat at higher new normal levels, but shipments are projected to drop to 9.8 mmt as some tonnage shipped late last year.* |
| Other | 2.5 | 2.4 | 2.7 | 2.7 | 2.9 | *Africa accounted for about two-thirds of the increase last year. Shipments are forecast to increase modestly this year with additional but less robust gains in Africa, Oceania and the Mideast.* |
| **Total** | **61.7** | **60.9** | **65.0** | **65.5** | **67.5** | *Final statistics for 2017 show that shipments surged 6.8% or 4.1 mmt to 65.0 mmt last year. All regions except Western Europe posted gains last year. Shipments this year are forecast to increase to 65.5-67.5 mmt with a point estimate of 66.7 mmt, a gain of 2.6% or 1.7 mmt.* |

# Supply and Demand Scenarios

**Potential Potash Supply/Demand Changes in 2018**

| Mil Tonnes KCl | Price Scenario | | |
|---|---|---|---|
| | Low | Likely | High |
| Shipment Increase | 1.00 | 1.70 | 2.50 |
| Met from Drawdown of Producer Inventories | 0.60 | 0.50 | 0.40 |
| Supply Net Changes | 1.90 | 1.40 | 0.95 |

| | *Price Scenario* | | |
|---|---|---|---|
| | *Low* | *Likely* | *High* |
| *ICL Boulby Closure* | *-0.20* | *-0.20* | *-0.20* |
| *Garlyk Ramp-Up* | *0.15* | *0.10* | *0.05* |
| *K+S Bethune Ramp-Up* | *1.25* | *1.00* | *0.75* |
| *Eurochem Usolskiy Start-Up* | *0.65* | *0.50* | *0.35* |
| *Eurochem Volgakaliy Start-Up* | *0.05* | *0.00* | *0.00* |

| | | | |
|---|---|---|---|
| Supply Surplus (+) or Deficit (-) | 1.50 | 0.20 | -1.15 |

- Demand/shipment swing factors
  - How much did 2017 steal from 2018 in North America?
  - Will crop prices hold up?
  - Will China post a big gain in shipments as forecast for this year?
- Supply swing factors
  - Are FSU producers topped out for now?
  - How quickly will new capacity ramp up this year?
  - Will Canadian producers further optimize operations?

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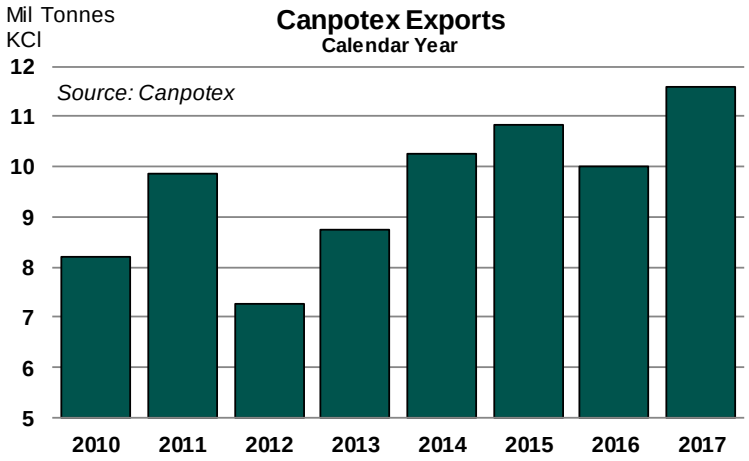
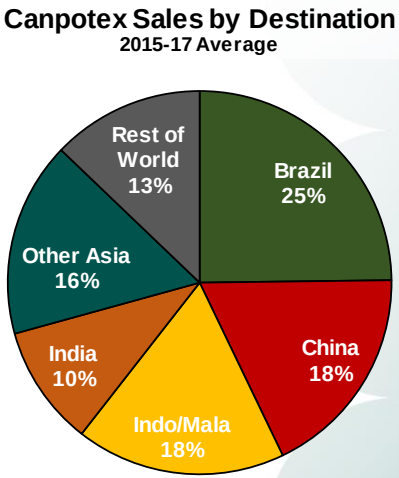
# Record Canpotex Exports Required to Meet Record Demand




- Canpotex exported a record 11.6 million tons in 2017 in order to meet the big jump in global demand last year.
- Exports are projected to increase to another record this year. Shipments likely will climb to 12.0-12.5 million tonnes in 2018.

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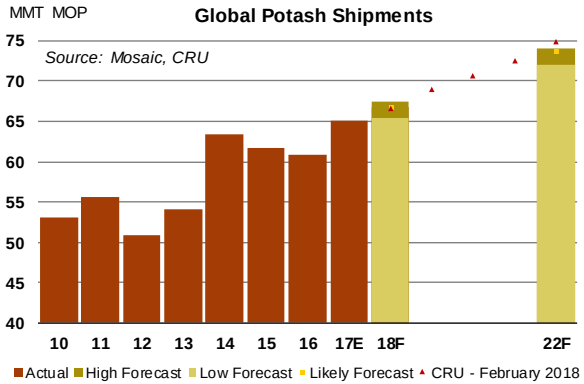
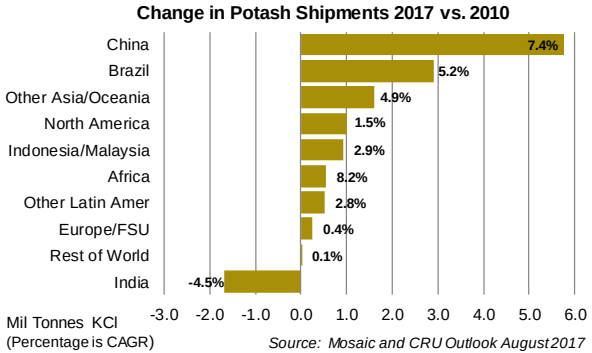
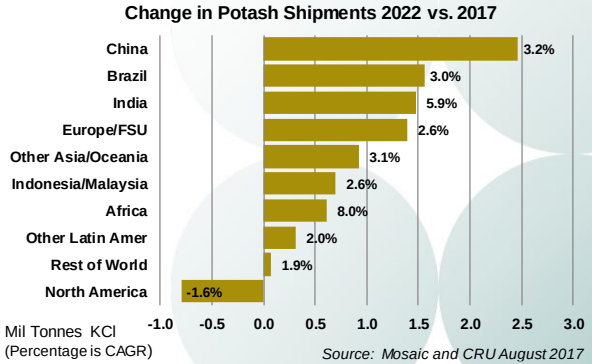
# Five-Year Outlook: Strong, Broad-Based and Less Volatile Demand Growth the Key Feature



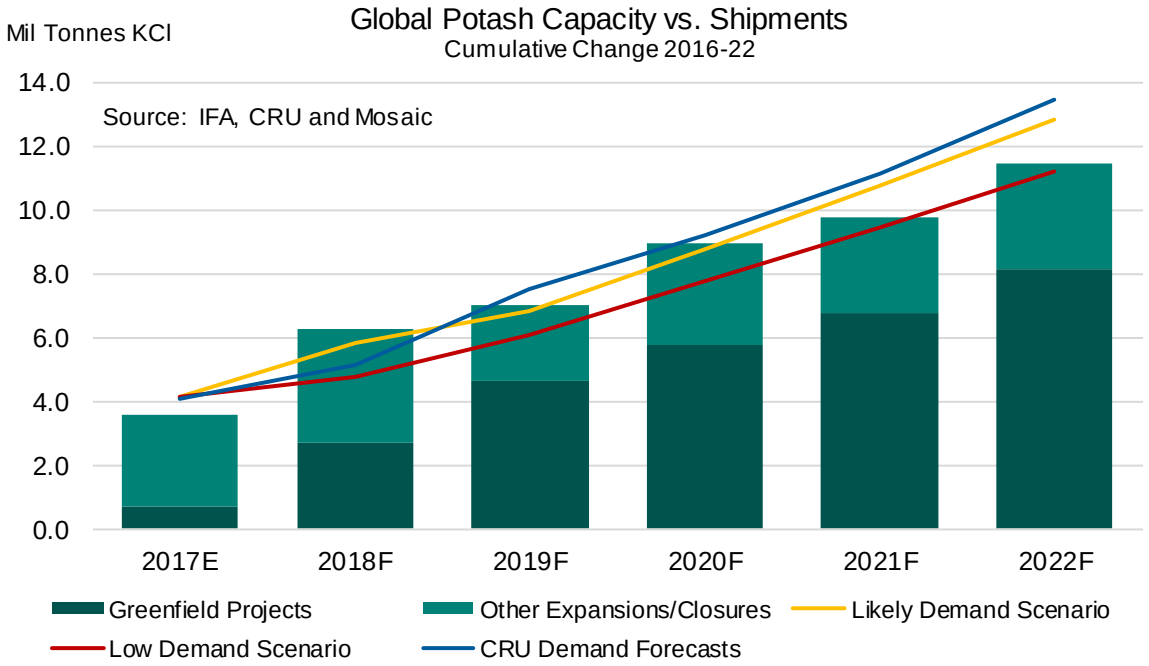




| Global Potash Shipments | | | | |
|---|---|---|---|---|
| | Mosaic Scenario | | | CRU |
| *Mil Tonnes KCl* | Low | Likely | High | Aug 17 |
| 2010 Shipments | na | 53.1 | na | 53.6 |
| 2017 Shipments | na | 65.0 | na | 65.5 |
| Change 2010-17 | na | 11.9 | na | 11.9 |
| CAGR 2010-17 | na | 2.9% | na | 2.9% |
| 2022 Forecast | 72.0 | 73.7 | 74.0 | 74.9 |
| Change 2017-22 | 7.0 | 8.7 | 9.0 | 9.4 |
| CAGR 2017-22 | 1.7% | 2.5% | 2.2% | 2.7% |

- By our count, global shipments increased 2.9% per year or 11.9 million tonnes from 2010 to 2017. Growth was erratic with most of the gain coming in 2014 and 2017. Shipments increased in four years and decreased in three years. India was a drag on growth due to subsidy cuts and a tripling of retail MOP prices in 2010/11.
- Shipments are forecast to increase 2.5% per year or 8.7 million tonnes from 2017 to 2022. We estimate that shipments surged 6.8% or 4.1 million tonnes to 65.0 million in 2017. Demand drivers continue to look positive, and strong and less volatile growth is expected during the next five years given lower and more stable potash prices as well as continued moderate agricultural commodity prices. An expected rebound in India shipments and continued growth in China and Brazil are key features of our forecast.
- The traditional growth geographies - Brazil, China, India, Indonesia, and Malaysia account for almost 70% of the projected gain from 2017 to 2022, but other regions such as the former Soviet Union (FSU), other Asian countries and Africa are expected to post notable increases during the next five years.

# Demand Growth Projected to Keep Pace with the Likely Ramp-Up of New Capacity




- After declining during the two previous years, we now estimate that global MOP shipments jumped 6.8% or 4.1 million tonnes KCl to 65.0 million in 2017. Shipments are forecast to increase another 2.6% or 1.7 million tonnes to 66.7 million this year.
- CRU's February 2018 estimated MOP shipments of 65.5 million tonnes in 2017 and 66.6 million tonnes this year.

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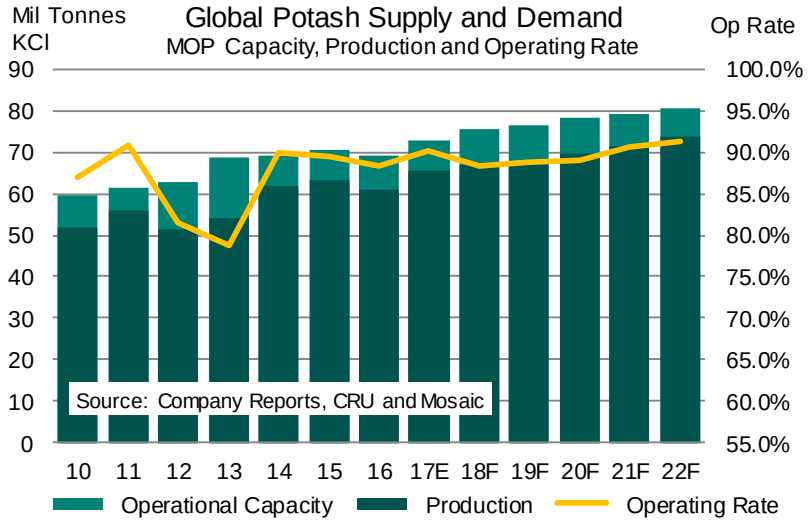
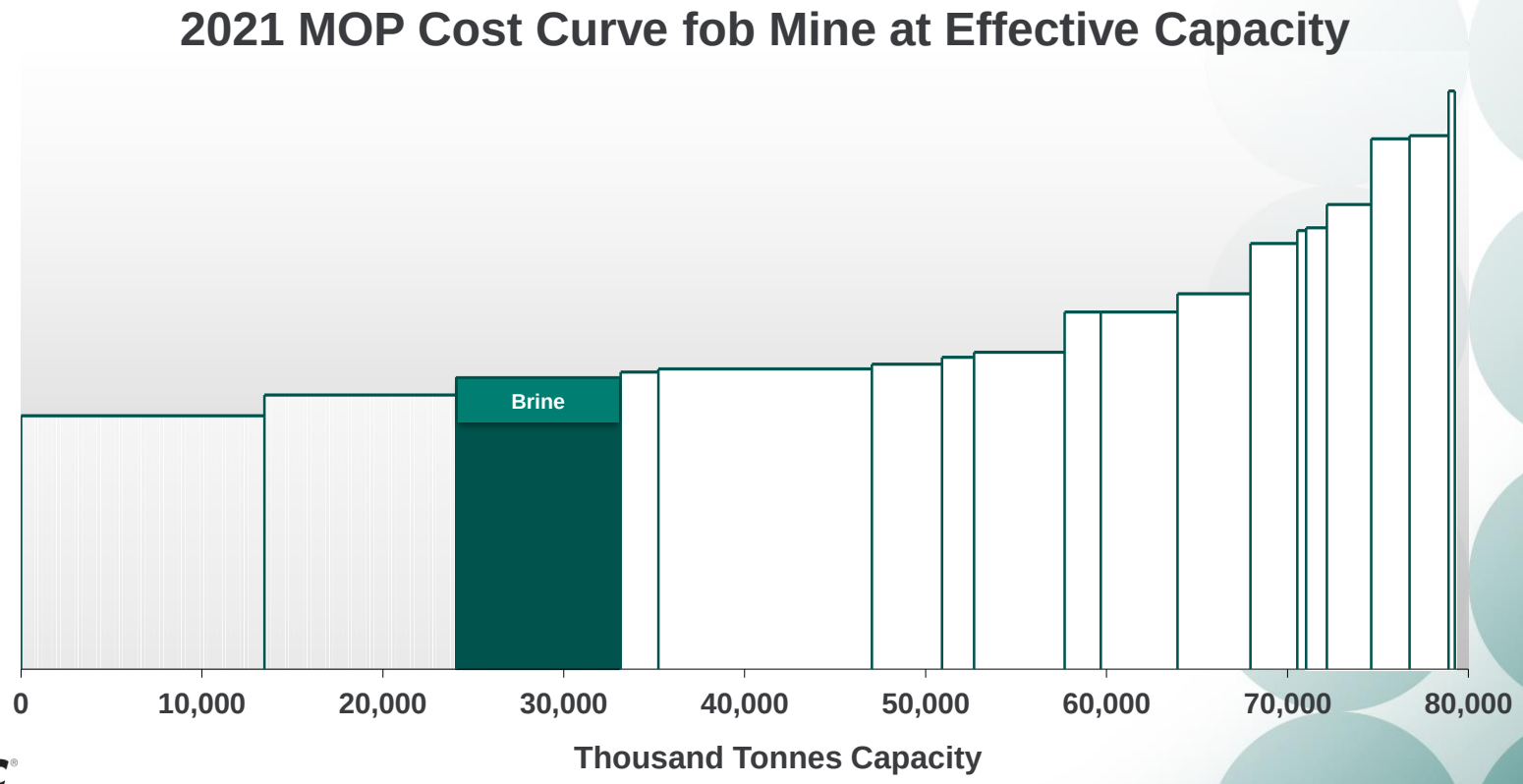
# Five-Year Outlook: Mosaic Forecasts (May 2018)




- We project no chronic or severe long term supply and demand imbalance. Global operational capacity is projected to increase 7.9 million tonnes from 72.9 million in 2017 to 80.7 million in 2022. This assumes no additional optimization of capacity in Canada or elsewhere.
- The global operating rate is forecast to dip from 90% in 2017 to 88% in 2018 before trending slowly upward to 91% by the end of the forecast period.
- This analysis assumes that global demand will grow 2.5% per year and that the four greenfield projects in Turkmenistan, Saskatchewan and Russia (2) will ramp up based on production estimates in the table below:

| Mil Tonnes KCl | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Production | .35 | 1.95 | 3.01 | 4.23 | 5.07 | 6.53 |

# 2021 Cost Curve Forecast

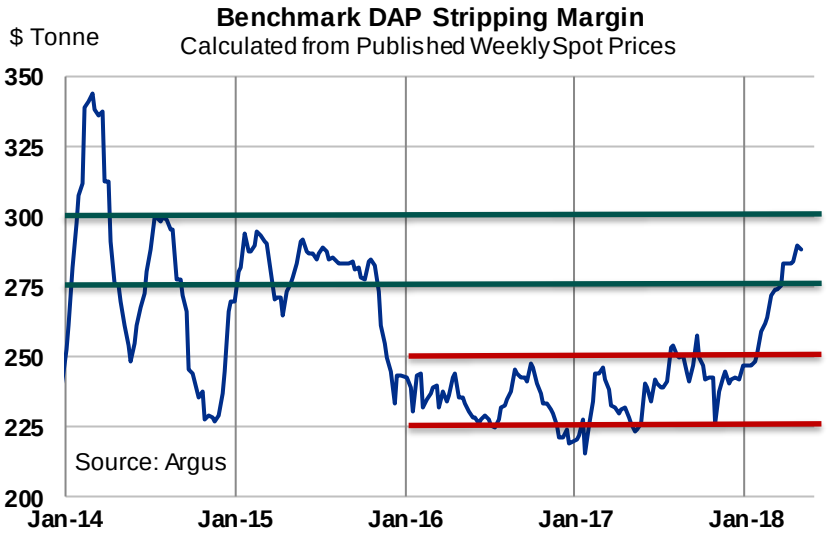



Source: CRU, Mosaic

# Markets

## Phosphate Outlook

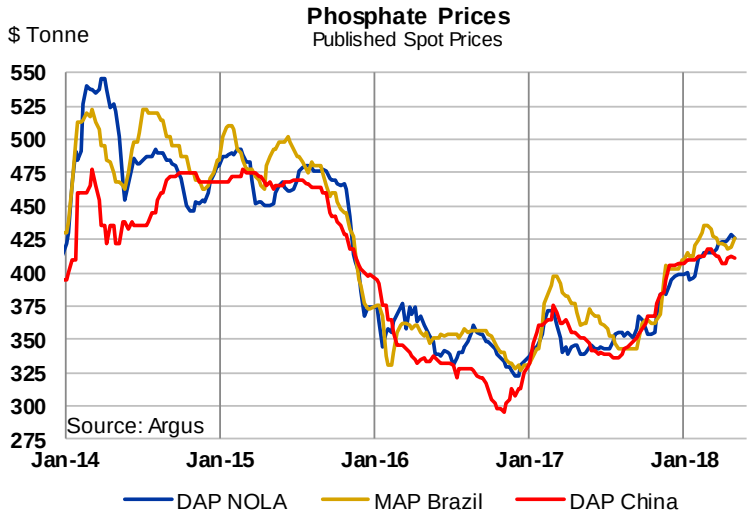
# Phosphate Margins Move Up in Response to Constructive Fundamental Developments

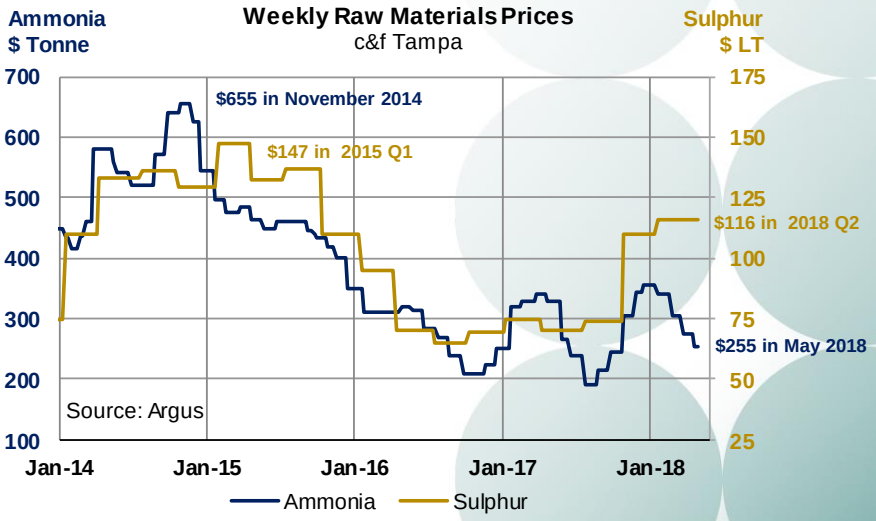



- Strong broad-based demand growth
- Supply adjustments are taking hold including the temporary idling of Mosaic's Plant City facility as well as a recent drop in Chinese exports
- Slower-than-expected ramp-up of new capacity
- Lower ammonia costs
- A shift in sentiment

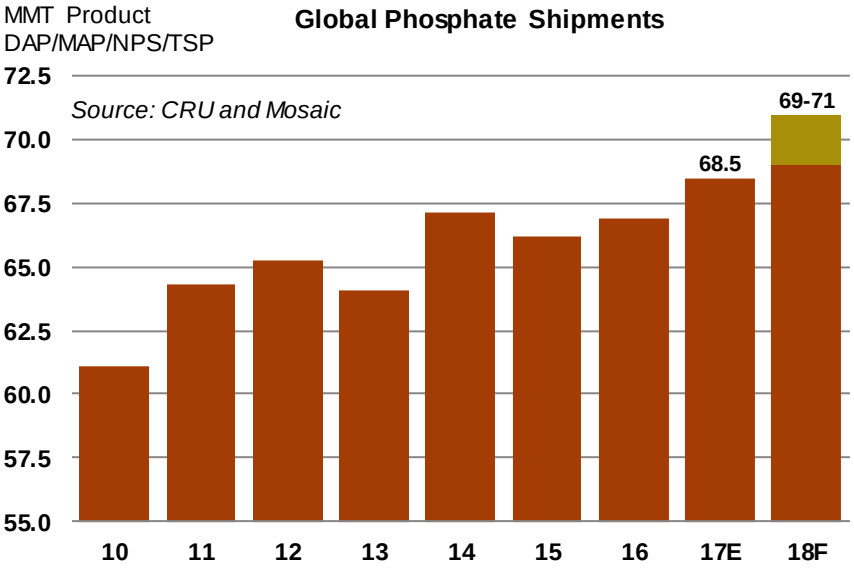
Mosaic

# Both Higher Prices and Lower Ammonia Costs Have Boosted Margins



# Pace of Demand Growth Has Picked Up




- Global shipments of the leading phosphate products increased just 0.8% per year from 2011 to 2016. Shipments increased 2.4% or 1.6 million tonnes to 68.5 million in 2017 and are forecast to increase 1.8% or 1.2 million tonnes to 69.8 million in 2018.
- The pace of demand growth has picked up for several reasons. China and India no longer are a drag on demand. Chinese shipments have stabilized, and Indian shipments are back on a growth trajectory following cuts to the subsidy that more than doubled retail prices in 2010/11 and cratered demand.
- Demand elsewhere is strong as a result of the agronomic need to replace record amounts of phosphate removed by record harvests during the last five years as well as continued affordability due to stable crop prices and more moderate NPK costs.

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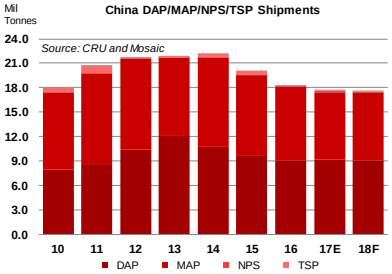
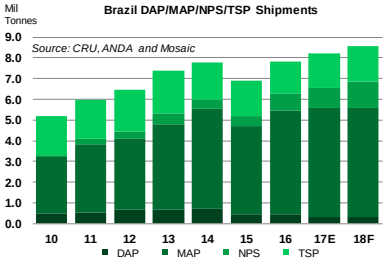
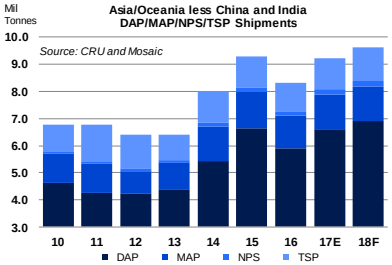
# Strong Broad-Based Demand Growth



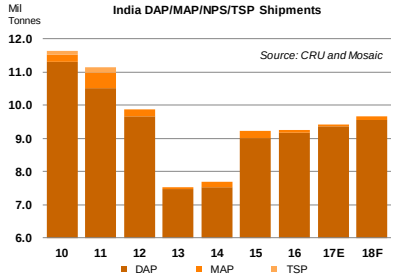

Chinese shipments peaked at more than 22 million tonnes in 2014. Growth was driven by high support prices for leading crops such as corn and a build-up of strategic reserves. Shipments are expected to stabilize in the 18 million tonne range in the new policy environment.



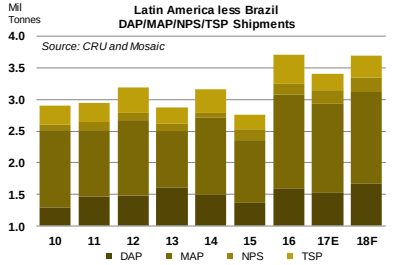

Phosphate demand in Brazil continues its strong upward trend driven mainly by steady increases in soybean production. The growth in NPS shipments – mostly Mosaic's MicroEssentials – is noteworthy.



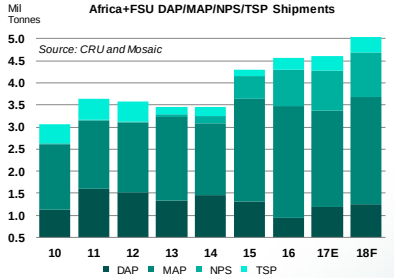

Shipments in the rest of Asia have increased significantly since 2013. The biggest gains were in Pakistan, Vietnam and Indonesia, but most countries registered increases during this period. Profitable farm economics underpin solid demand growth.




Indian shipments collapsed following subsidy cuts in 2010/11 that resulted in a doubling of retail prices. Shipments are growing again due to high crop procurement prices, moderate phosphate prices, a workable subsidy, and average or better monsoons.




Shipments in the rest of Latin America dropped last year after the surge in 2016 that was driven largely by gains in Argentina following the elimination or reduction of grain export taxes. Shipments are projected to increase in 2018 due to generally profitable farm economics throughout most of the region.




African demand is taking off (and these statistics exclude NPKs) due to good public-private sector programs to boost productivity. In addition, the pace of recovery in the former Soviet Union is picking up in response to moderate crop prices, weak currencies and a run of generally good harvests.

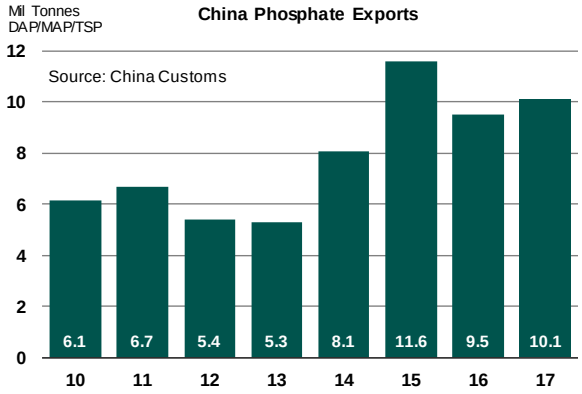
# Global Phosphate Shipment Forecasts by Region (May 2018)

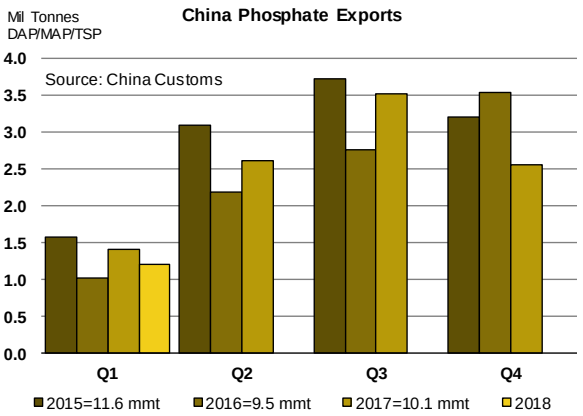
Source: IFA, CRU and Mosaic
(Numbers may not sum to total due to rounding)

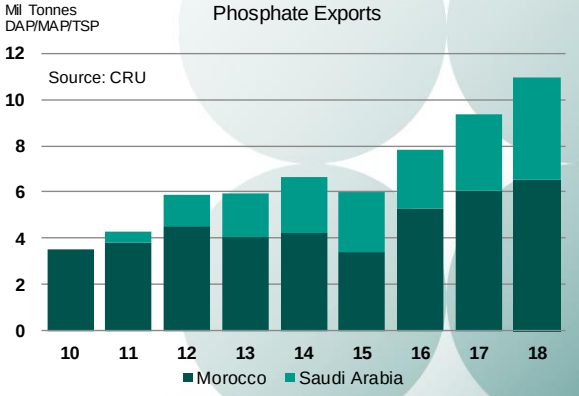
| DAP / MAP / NPS/ TSP (Million Tonnes) | 2015R | 2016R | 2017E | Low 2018F | High 2018F | Comments |
|---|---|---|---|---|---|---|
| China | 20.1 | 18.3 | 17.7 | 17.7 | 18.0 | *Shipments are projected to tick up due to high domestic crop prices and low channel inventories. After peaking at more than 22 million tonnes in 2014, we expect that shipments will stabilize in the 18-million-tonne range – a bit more than some consultants forecasts.* |
| India | 9.2 | 9.2 | 9.4 | 9.5 | 9.8 | *Inventories at the start of the year were at the lowest level in three years and have prompted early and strong purchases in Q2. Positive momentum is expected to continue, aided by a normal monsoon and a small lift in the MRP that has offset the recent decline in the rupee.* |
| Other Asia/Oceania | 9.3 | 8.3 | 9.2 | 9.6 | 9.8 | *Our 2017 shipment estimate was pared back based on updated trade statistics. However, channel inventories at the start of 2018 likely were below average given strong demand drivers. Assuming normal weather, shipments are projected to post a solid increase this year.* |
| Europe and FSU | 4.9 | 5.5 | 6.1 | 5.7 | 5.9 | *Our 2017 estimates for both Europe and Russia were revised up based on recent trade and production statistics. A modest drop in shipments is forecast due to prospects of broadly flat on-farm demand and destocking of the distribution pipeline, particularly in Europe.* |
| Brazil | 6.9 | 7.8 | 8.2 | 8.4 | 8.7 | *Assuming normal weather, shipments are forecast to trend higher again in 2018, rising about 3% from last year. Demand is underpinned by recent gains in soybean export prices – boosted by both fears of a China/U.S. trade dispute and higher CME prices – and a weaker real.* |
| Other Latin America | 2.8 | 3.7 | 3.4 | 3.6 | 3.8 | *We revised lower our 2017 shipment estimate, but have left our 2018 estimate little-changed due to continued profitable farm economics in most regions.* |
| North America | 8.9 | 9.4 | 9.8 | 9.7 | 9.9 | *Despite the late start to spring fieldwork, early indications are that on-farm demand is holding firm. Steady-to-higher application rates are expected in 2018, and our expectations for acreage remain at 90+ million for both corn and soybeans. We project that shipments will stay steady at last year's elevated level as little volume was pulled forward into 2017.* |
| Other | 4.2 | 4.7 | 4.7 | 4.8 | 5.1 | *Forecasts for Africa and the Middle East were revised slightly. We project that shipments will grow at a moderate clip led by continued development in Africa (note NPKs are excluded).* |
| **Total** | **66.2** | **66.9** | **68.5** | **69.1** | **71.1** | *Our 2017 shipment estimate is slightly higher at 68.5 mmt – an increase of 2.4% or 1.6 mmt from 2016. We maintain our call on 2018 shipments of 69-71 mmt, with a current point estimate of 69.8 mmt, a gain of 1.8% or 1.2 mmt.* |

# Supply Adjustments are Taking Hold

- Mosaic's idling of its Plant City facility in December 2017 impacts both fundamentals and sentiment.
- Later start-up and slower ramp-up of new capacity with commissioning of OCP JPH 4 now delayed until late Q2 2018, but still a significant but needed increase in Moroccan and Saudi exports this year.
- Chinese phosphate exports during the last six months (17Q4 - 18Q1) declined 24% or 1.2 million tonnes from the same period a year earlier. The decline is the result of both a strong domestic pull as well as more stringent environmental regulations.



# Fundamentals Math

**Potential Phosphate Supply/Demand Changes in 2018**

| Mil Tonnes DAP/MAP/NPS/TSP | Price Scenario | | |
|---|---|---|---|
| | Low | Likely | High |
| Shipment Increase | 1.00 | 1.20 | 1.40 |
| Supply Changes | 0.60 | -0.30 | -1.20 |
| *Price Scenario* | | | |
| *Low* / *Likely* / *High* | | | |
| *Plant City Idling* | *-1.50* | *-1.50* | *-1.50* |
| *OCP JPH 3 Ramp-Up* | *0.60* | *0.50* | *0.40* |
| *OCP JPH 4 Start-Up* | *0.45* | *0.40* | *0.35* |
| *MWSPC Ramp-Up* | *1.55* | *1.30* | *1.05* |
| *Chinese Exports* | *-0.50* | *-1.00* | *-1.50* |
| Supply Surplus (+) or Deficit (-) | -0.40 | -1.50 | -2.60 |

***Supply and demand changes this year likely will result in a deficit that is expected to support prices and margins at levels that curb a bit of demand growth and boost production and exports.***

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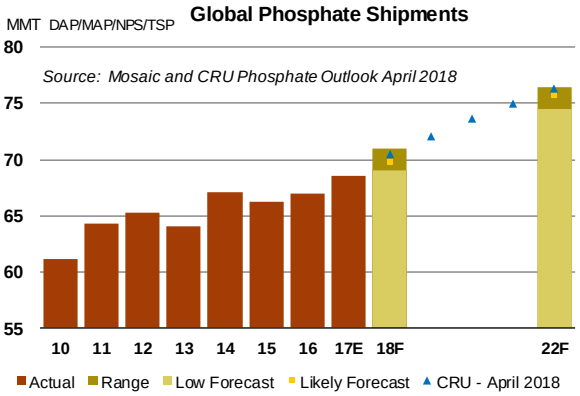
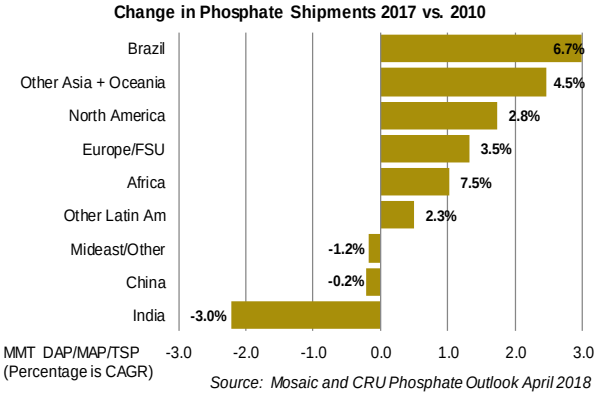
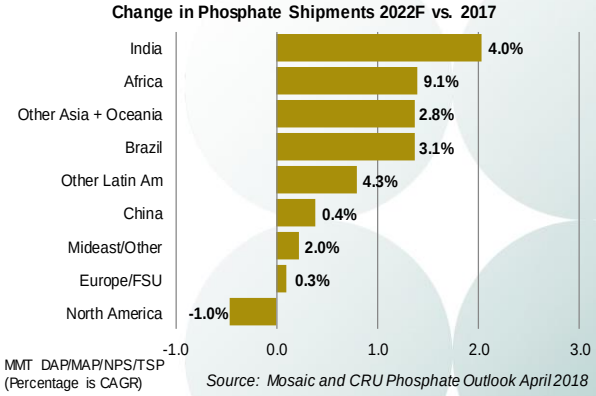
# Five-Year Outlook: Positive Demand Outlook




**Global Phosphate Shipments**

| Mil Tonnes DAP/MAP/NPS/TSP | Mosaic Scenario Low | Likely | High | CRU Apr 2017 |
|---|---|---|---|---|
| 2010 Shipments | | 61.1 | | 61.0 |
| 2017 Shipments | | 68.5 | | 71.5 |
| Change 2010-17 | | 7.4 | | 10.5 |
| CAGR 2010-17 | | 1.6% | | 2.3% |
| 2022 Forecast | 74.5 | 75.7 | 77.0 | 76.5 |
| Change 2017-22 | 6.0 | 7.2 | 8.5 | 5.0 |
| CAGR 2017-22 | 1.7% | 2.0% | 2.4% | 1.4% |

Source: Mosaic and CRU Phosphate Outlook April 2018

- Global shipments increased 1.6% per year or 7.4 million tonnes from 2010 to 2017. India was a heavy drag on demand with shipments dropping 2.2 million tonnes during this period due to subsidy cuts that resulted in a doubling of retail phosphate prices. Demand declined slightly in China with shipments increasing significantly during the first half of this period but then declining during the second half.
- Shipments are forecast to increase 2.0% per year or 7.2 million tonnes from 2017 to 2022. Prospects for lower and more stable raw materials costs are expected to help keep phosphate prices at moderate levels and fuel steady gains. Indian demand also is expected to recover due to high domestic crop prices, a workable subsidy, and a relatively stable rupee. Africa, other Asia/Oceania, and Brazil are projected to post strong gains during this period.
- CRU projects that demand will grow at a much slower rate of 1.4% from 2017 to 2022, but that mostly is the result of their much higher baseline demand estimate for 2017.

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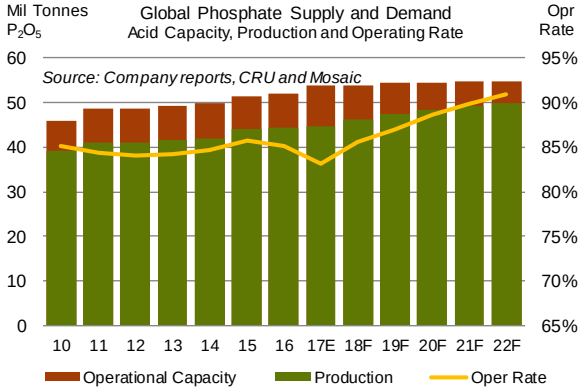
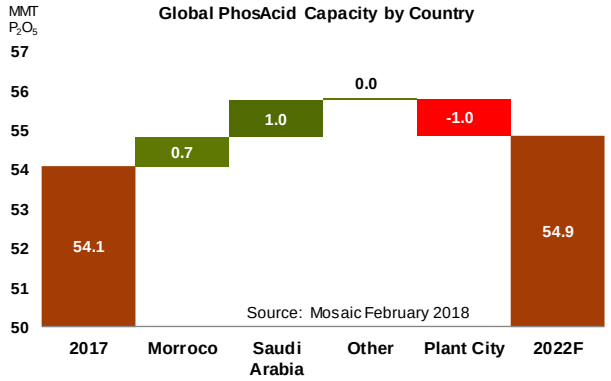
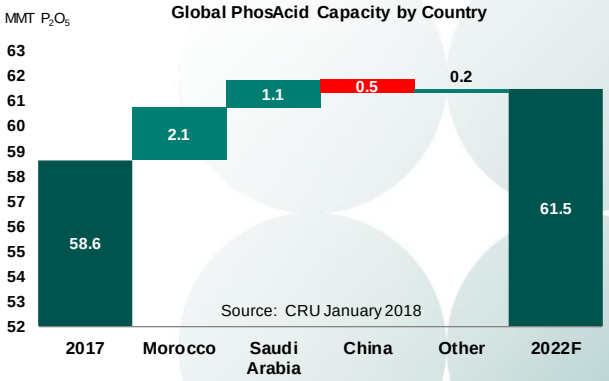
# Five-Year Outlook: Mosaic Forecasts (February 2018)




- We project that global phosphoric acid capacity will increase less than a million tonnes $P_2O_5$ from 2017 to 2022, with Morocco and Saudi Arabia accounting for all of the net increase, but largely offset by the idling of Plant City. Nearly all of the projected increase is on line by 2019. This analysis incorporates just a nominal 300,000t $P_2O_5$ net change in Chinese capacity, although we expect a restructuring of the industry with the permanent closure of less efficient plants and higher and more consistent operating rates at cost competitive facilities.
- Production required to meet projected phosphate demand is forecast to increase 5.1 million tonnes $P_2O_5$ during this same period. As a result, the global effective capacity operating rate is projected to move up from 83% in 2017 to 91% by the end of the forecast period. The projected rate increases in 2018 due to the combination of moderate demand growth and the closure of our Plant City facility that offsets much of the expected ramp-up of new capacity next year.
- There are no world-scale projects in the pipeline behind the first four OCP Jorf Phosphate Hubs (JPH 1-4) in Morocco and the Ma'aden Wa'ad al Shamal Phosphate Company (MWSPC) JV in Saudi Arabia. We do not expect additional capacity from either debottlenecking in Morocco or the next round of expansions in Saudi Arabia and Morocco until after the forecast period. This is a primary difference between our forecast and CRU's, which includes both a new line and debottlenecking at Jorf, as well as the commissioning of a first phosphoric acid complex at Laayoune within the forecast period.

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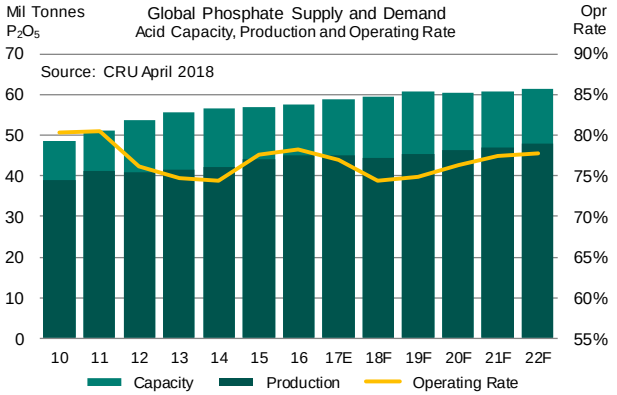
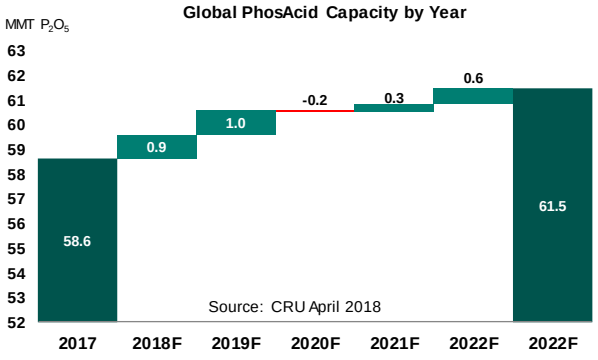
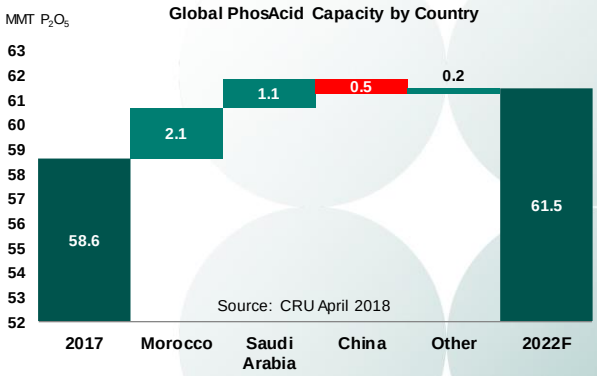
# Five-Year Outlook: CRU Forecasts (May 2018)



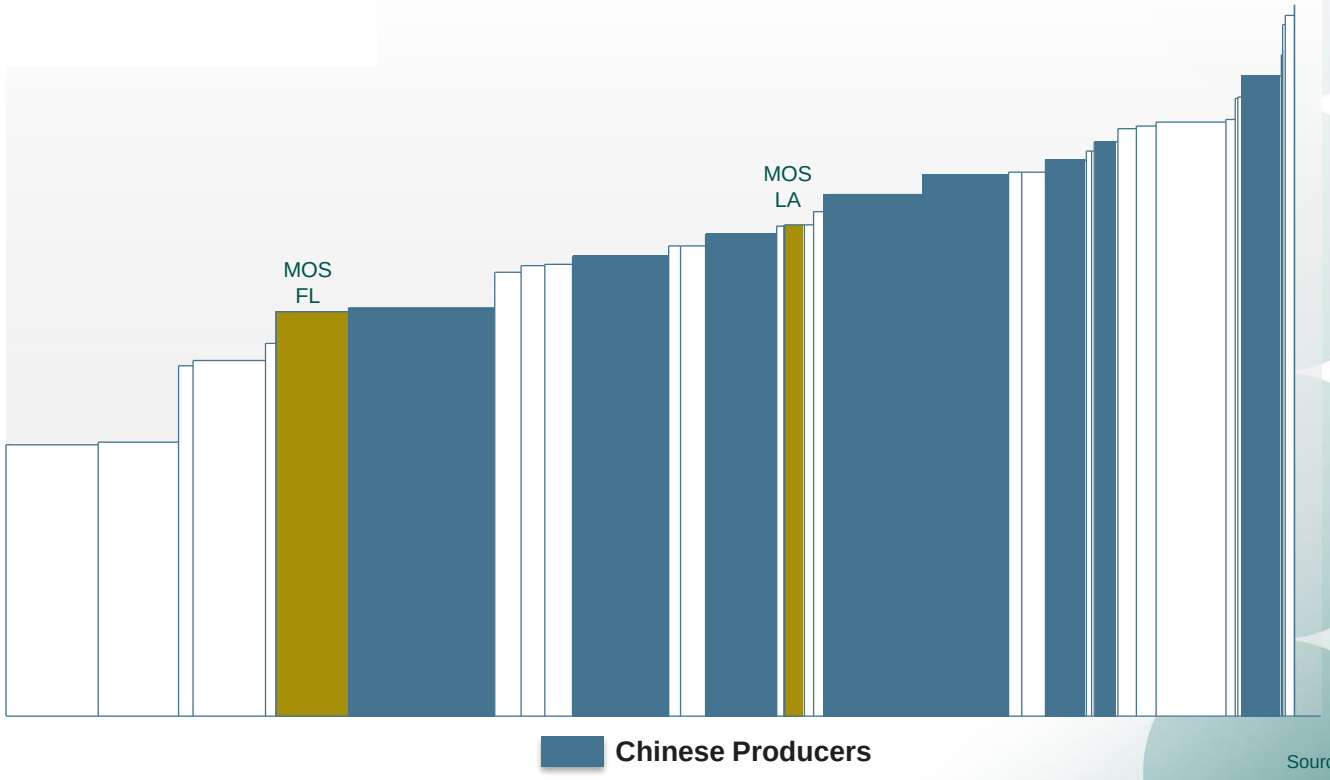




- CRU projects that global phosphoric acid capacity will increase 2.8 million tonnes $P_2O_5$ from 58.6 million in 2017 to 61.5 million in 2022. Morocco and Saudi Arabia account for all of the net increase, and little new capacity is expected online after 2019. Estimates include the temporary idling of our Plant City facility at the end of 2017 as well as a net reduction of 500,000 tonnes of Chinese capacity during this period.
- Production required to meet projected phosphate demand is forecast to increase 2.6 million tonnes $P_2O_5$ during this period. The global operating rate dips with the expected ramp up of new capacity in Morocco and Saudi Arabia during the next year but then trends upward during the rest of the forecast period. The projected rate in 2022 is equal to the rate at the start of the forecast period. In other words, CRU sees no deep or prolonged cyclical downturn, and with a bit more optimistic demand forecasts and a more significant restructuring of the Chinese industry the projected operating rate would trend even higher.
- There are no world-scale projects in the pipeline behind the first four OCP Jorf Phosphate Hubs (JPH 1-4) in Morocco and the Ma'aden Wa'ad al Shamal Phosphate Company (MWSPC) JV in Saudi Arabia. CRU factors in capacity growth from the debottlenecking existing plants in Morocco, but the next wave of expansions in both Morocco and Saudi Arabia are not expected on line until after the forecast period.

Mosaic®

# 2021 Cost Curve Forecast

2021 DAP Cost Curve fob Plant at Effective Capacity




Source: CRU, Mosaic