Investor Information

Fourth 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 such as higher costs associated with the new freight tables; 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.

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Non-GAAP Financial Measures

This presentation includes certain non-GAAP financial measures, including EBITDA, adjusted EBITDA, adjusted gross margins, adjusted earnings per share*. For important information regarding the non-GAAP measures we present, see "Non-GAAP Financial Measures" in our November 5, 2018 earnings release and the performance data for the third quarter of 2018 that is available on our website at www.mosaicco.com in the "Financial Information – Quarterly Earnings" section under the "Investors" tab.*

The earnings release and performance data are also furnished as exhibits to our Current Report on Form 8-K dated November 5, 2018. We are not providing forward looking guidance for U.S. GAAP reported diluted net earnings per share or a quantitative reconciliation of forward-looking non-GAAP EPS, adjusted Gross Margins and adjusted EBITDA. Please see "Non-GAAP Financial Measures" in our November 5, 2018 earnings release for additional information.

The Mosaic Company Overview

Executive Summary

Raising full year guidance: adjusted EBITDA(1) to $1.90 - 2.00 billion; adjusted EPS(1) to $1.80 - $2.00

Raised Mosaic Fertilizantes 2018 synergy capture to $140 - $160 million, net of costs

Transformation Driving Operational Leverage

- Third quarter net earnings were $247 million and adjusted EBITDA(1) was $606 million; nine months 2018 net earnings were $358 million and adjusted EBITDA(1) was $1.4 billion, up 71%.
- Third quarter Diluted EPS was $0.64 and adjusted EPS(1) was $0.75; nine months 2018 diluted EPS was $0.93 and adjusted EPS(1) was $1.35, up 78%.
- Paid down ~$700 million in debt as of 09/30/2018, meeting 2020 debt retirement commitment.

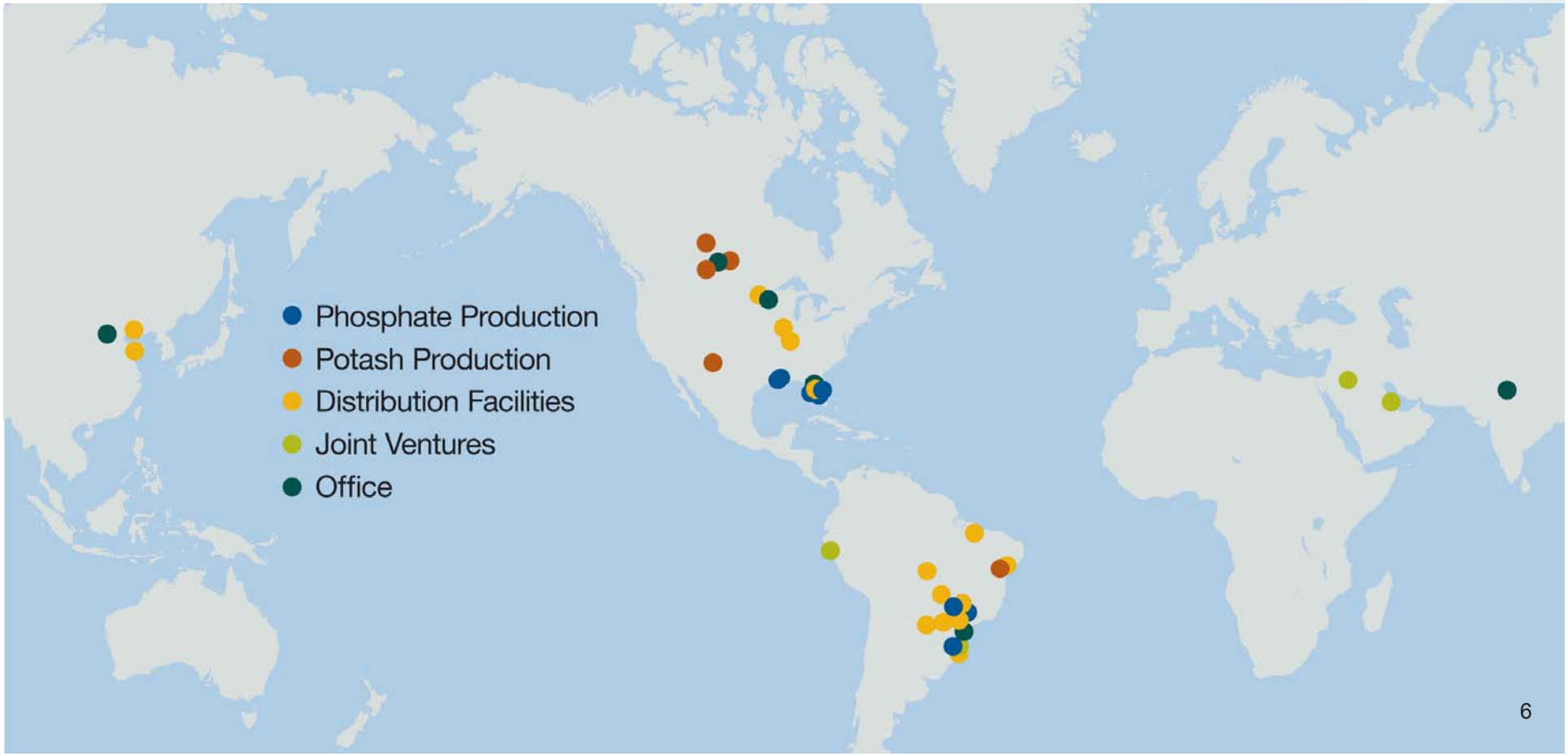
All Segments Reflect Accelerating Performance

- Third quarter Phosphates: revenue of $1.04 billion, up 34% year-over-year; operating earnings of $157 million; adjusted EBITDA(1) of $254 million, up 87% from the prior year.
- Third quarter Potash: revenue of $609 million, up 28% year-over-year; operating earnings of $136 million; adjusted EBITDA(1) of $209 million, up 31% from the prior year.
- Remarkable progress on Mosaic Fertilizantes transformation: achieved $102 million in net synergies year-to-date in 2018.

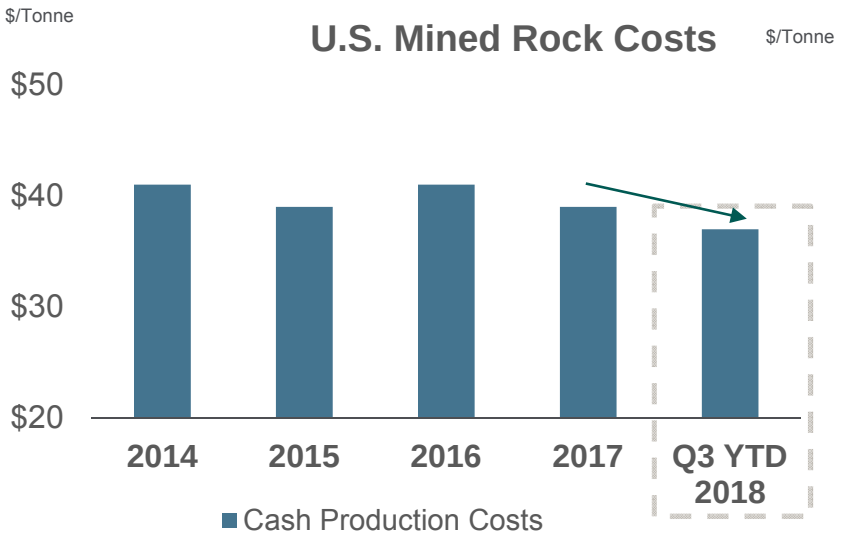
Expect momentum in all three businesses to continue.

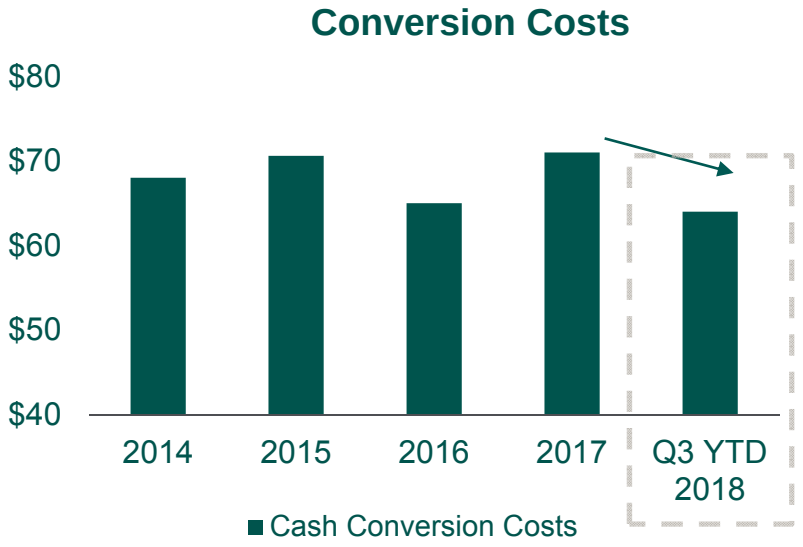
(1)See Non-GAAP Financial Measures for additional information

Mosaic Assets: Global, Long Life, Low Cost



Transformation:
Idled Plant City

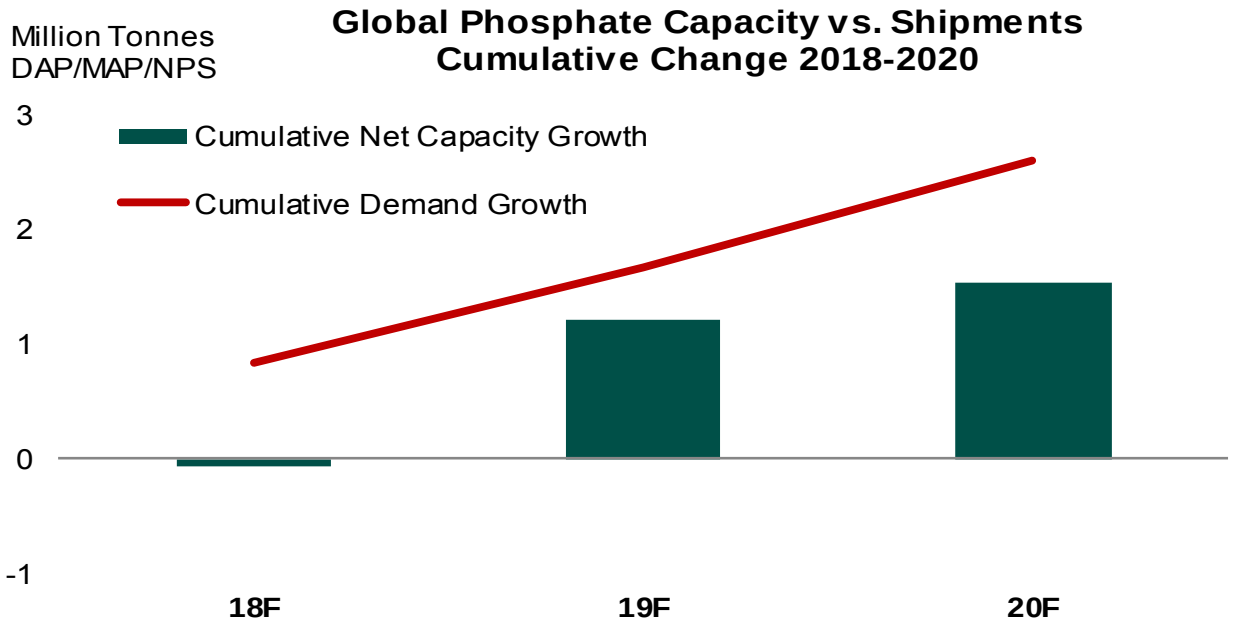




* Phosphate cash conversion costs are reflective of actual costs, excluding realized mark-to-market gains and losses. These costs are captured in inventory and are not necessarily reflective of costs included in costs of goods sold for the period.

Transformation:

Anticipated S&D Impact of Idling Plant City

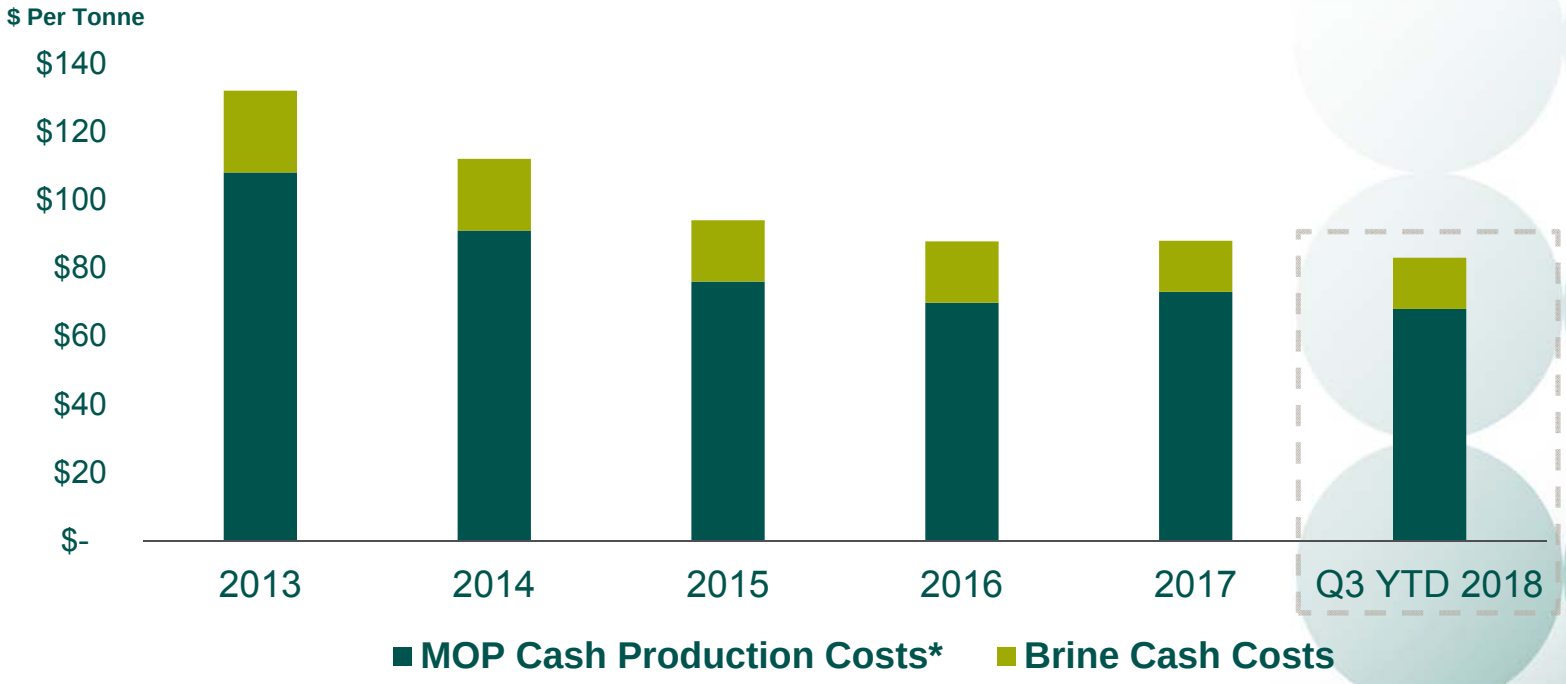


Source: CRU and Mosaic

Tightened phosphate supply & demand even without expected China capacity rationalization

Transformation in Potash:

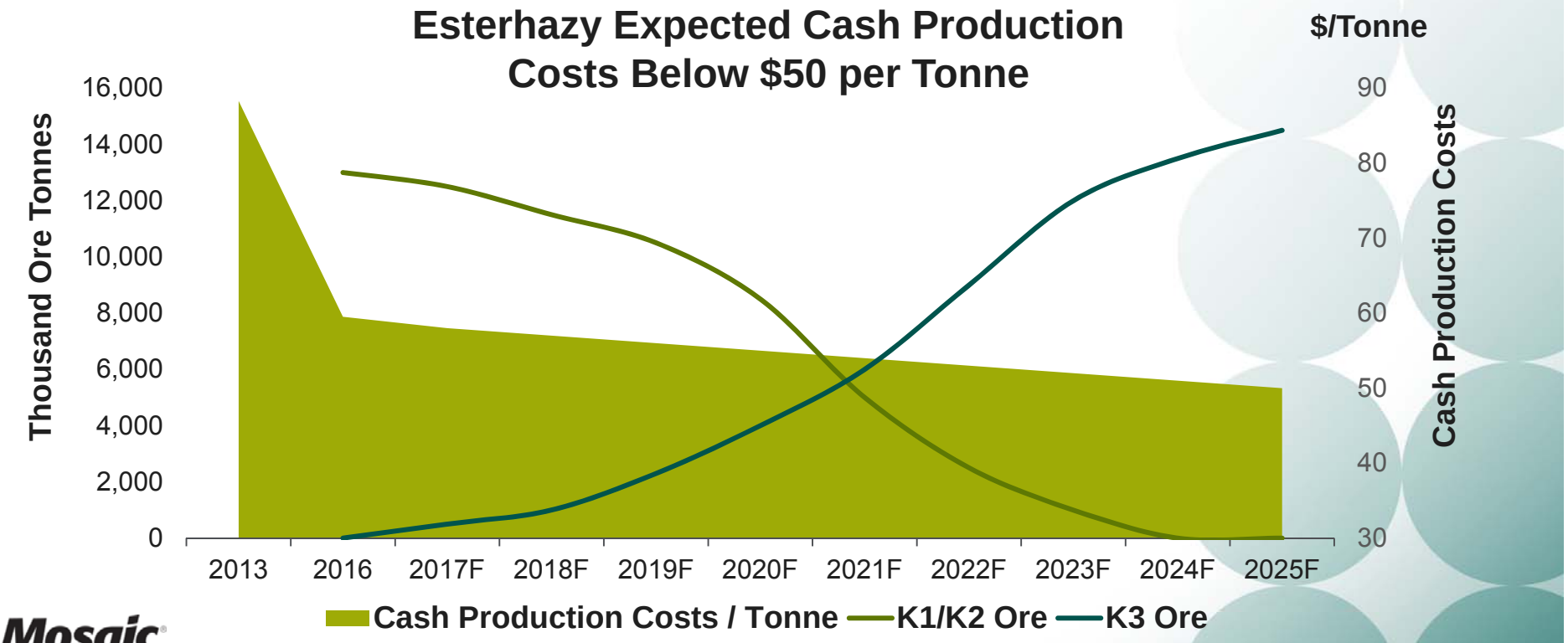
Asset Optimization and Cost Control



*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

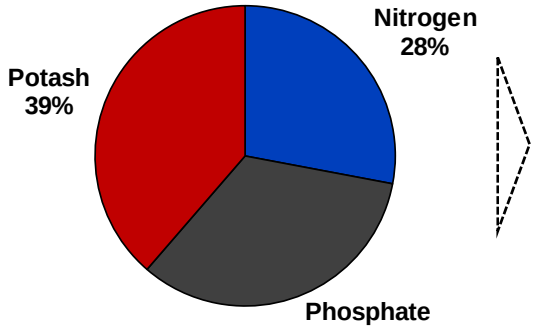


Forecast as of April 12, 2017

*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: Well Positioned

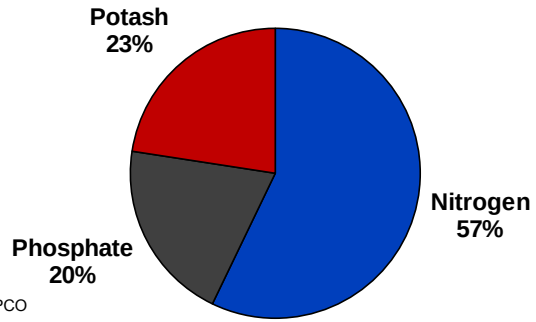
Brazil Plant Nutrient Use
2015-17 Average



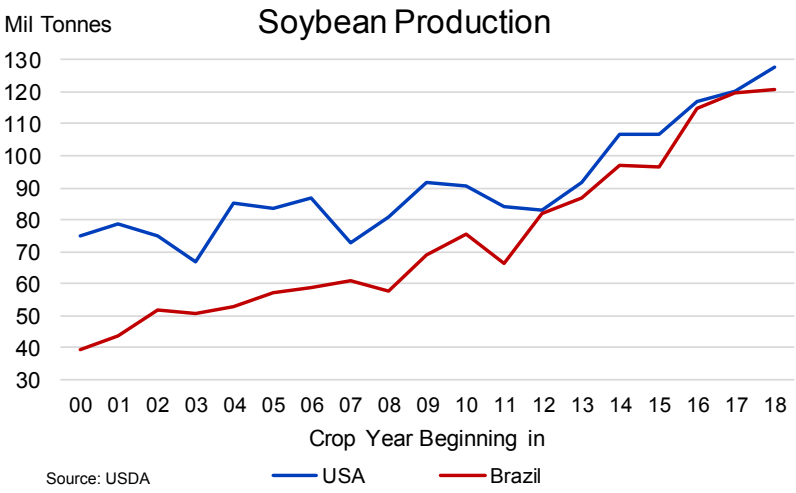
Source: ANDA

P&K accounts for almost three-fourths of all Brazilian Nutrient Use

U.S. Plant Nutrient Use
2014/15-16/17 Average



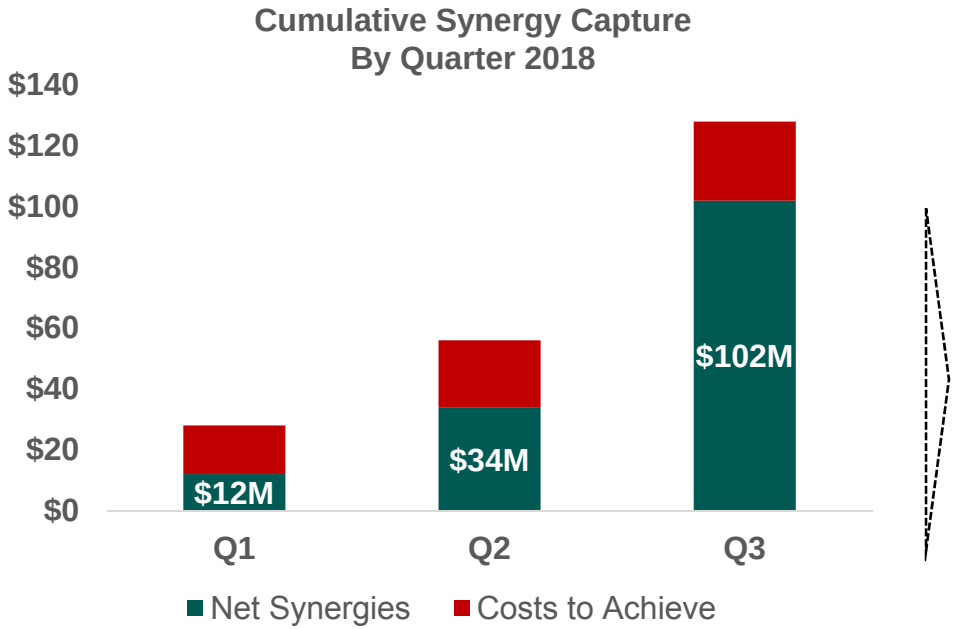
Source: TFI/AAFPCO

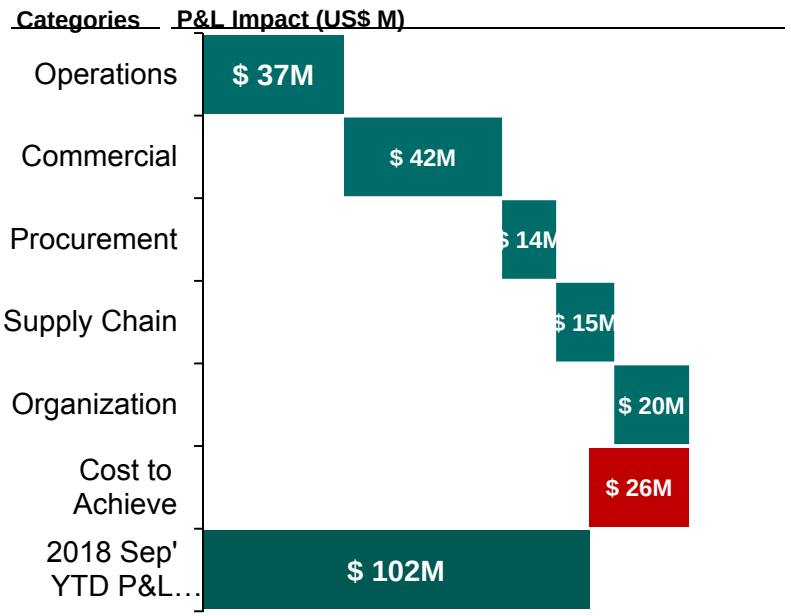


Source: USDA

Brazil soybean production now matches that of the United States, and the country is positioned to become the largest producer in the world.

Mosaic Fertilizantes Transformation Progress

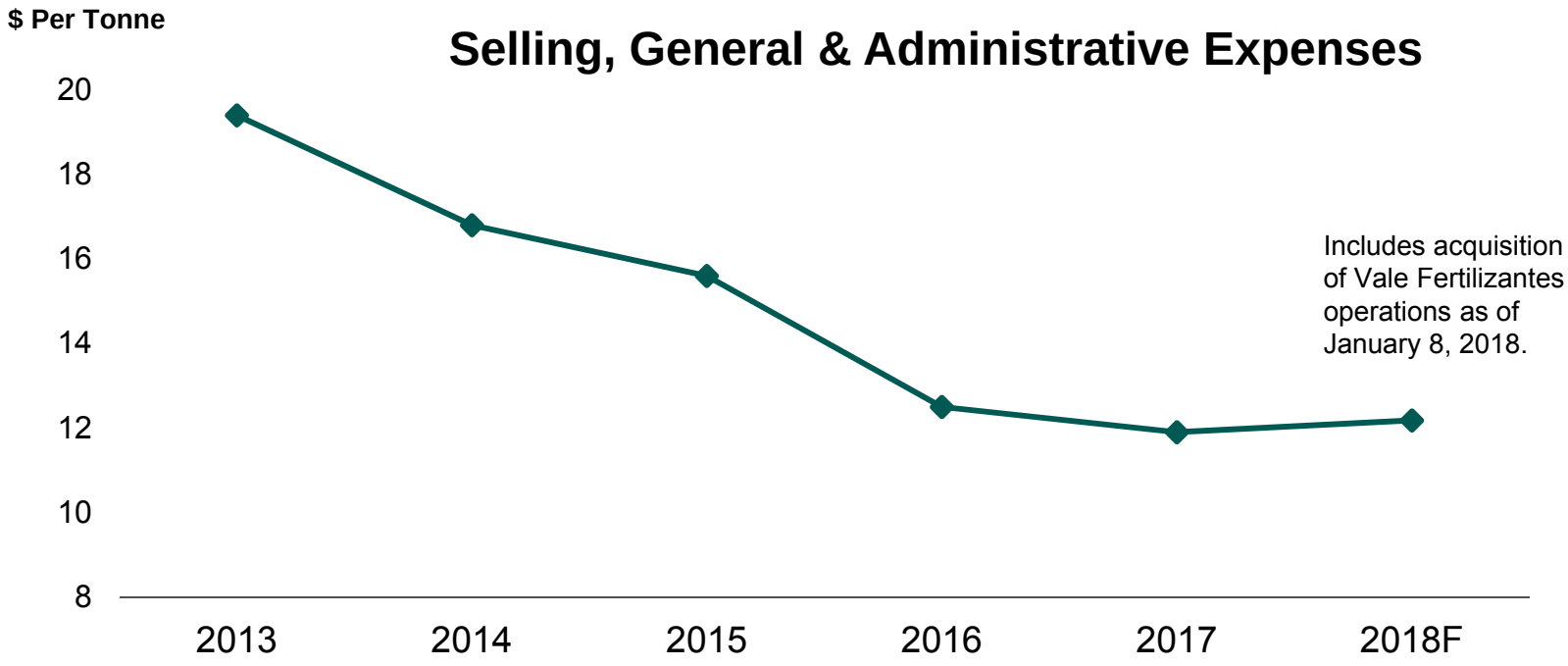




- YTD operating earnings of $144 million; adjusted EBITDA[(1)] of $277 million compared to $50 million pro forma YTD 2017.
- $68 million of net synergy capture in Q3'18.

[(1)]See Non-GAAP Financial Measures for additional information

Visible Cost Controls



*Tonnes do 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

Reaching our Balance Sheet Targets

($ in billions)	2018
Total Balance Sheet Debt[1] @ 9/30/2018	$4.610
Estimated Operating Leases[2]	$0.627
Total Debt	$5.237
Cash and Cash Equivalents	$1.030
Net Debt	$4.207
Adjusted EBITDA[3] using midpoint of guidance	$1.950
Net Debt to Adjusted EBITDA	2.2*

*Sensitive to pricing: A $20 / tonne change in P&K prices would changed this ratio by ~.4 turns.

[1] Total Balance Sheet debt includes $26 million in short term debt and $4,584 million in long term debt, including current portion
[2] Operating leases will be considered on balance sheet debt as of 1/1/2019. This estimate is based on 3x rent.
[3] See Non-GAAP Financial Measures for additional information.

Capital Allocation Philosophy



Markets

Agricultural Outlook



Take-Aways

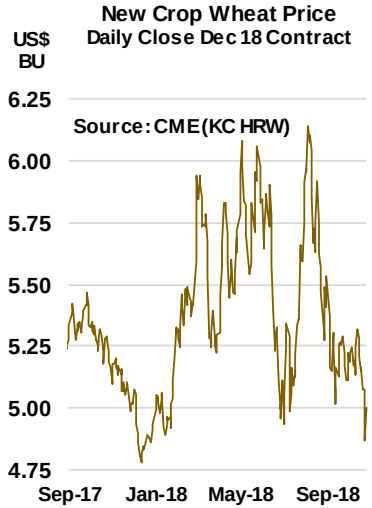
- Key crop prices are under pressure today due to the big U.S. harvest hitting the market, uncertainty about how the U.S.-China trade war plays out, and a stronger dollar.
- However, droughts shriveled crops in several key exporting regions this year, and steady demand growth has caught up to the last big step-up in global production.
- Global grain and oilseed inventories declined in 2017/18, and stocks are projected to drop again in 2018/19. Wheat and corn stocks are forecast to fall, but soybean inventories are projected to increase assuming record U.S. and Brazilian crops in 2018/19.
- The long term food story is still intact.
- P&K agronomic and economic demand drivers still point positive.

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Crop Prices Under Pressure Today



The December 2018 corn contract traded in the $3.70 per bushel range at the end of October, off from a peak of $4.27 on May 23 but up from a low of $3.43 on September 18. Another large U.S. crop has weighed on prices. However, U.S. corn inventories fell 150 million bushels in 2017/18 and are projected to drop another 325 million in 2018/19. In addition, global stocks declined 30 million tonnes last year and are projected to shrink nearly 40 million this crop year.



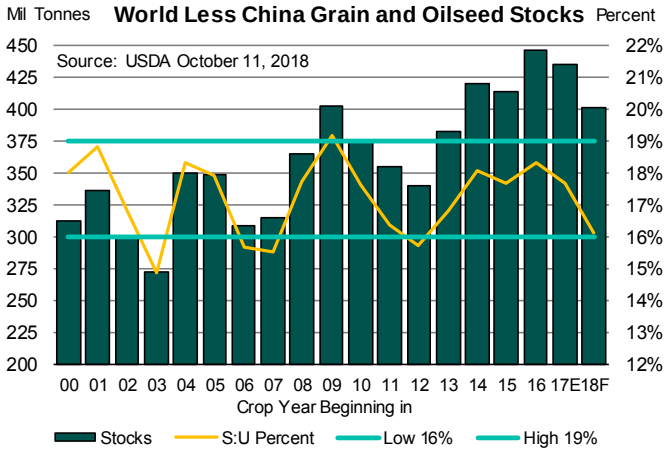
The December HRW wheat price traded in the $5.00 per bushel range at the end of October, down from a peak of $6.14 on August 6 but off the low of $4.79 on December 12, 2017. Wheat prices have been volatile as the market tries to figure out the size of the 2018/19 global harvest and export availability from key regions. Severe droughts shriveled crops in Europe, Russia, Ukraine, and Australia this year. However, bearish sentiment from top-heavy U.S. corn and soybean balance sheets has spilled over to the wheat market.



The November soybean contract traded in the $8.50 per bushel range at the end of October, a freefall from a peak of $10.54 on May 25 but up from a low of $8.14 on September 18. The collapse was triggered by the first shots fired in the U.S.-China trade war on July 6. However, a record 2017/18 Brazilian crop followed by a record 2018/19 U.S. harvest will result in a big increase in U.S. and global inventories in 2018/19. That coupled with expectations for a prolonged U.S.-China trade war continues to weigh on soybean prices.

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Agricultural Fundamentals Begin to Tighten as Demand Catches Up to Supply





- A big step-up in global production since 2012/13
- But continued strong and steady demand growth
- Inventories ex China declined in 2017/18
- Stocks as a percentage of use projected to drop to the low end of the 16%-19% range by the end of 2018/19
- More details in the July issue of Market Mosaic
- The Food Story is still intact

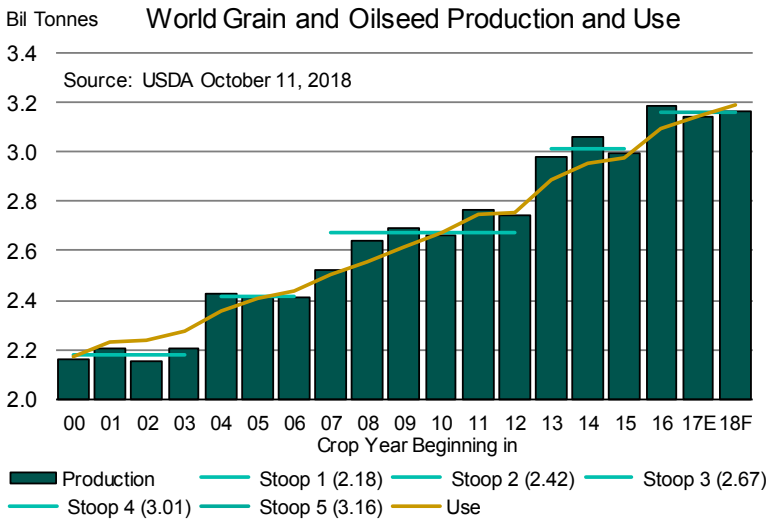
Available on the Mosaic website at:

www.mosaicco.com/resources/market_mosaic.htm

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Positive Agronomic & Economic Demand Drivers

Record Harvests Remove Record Amounts of P&K

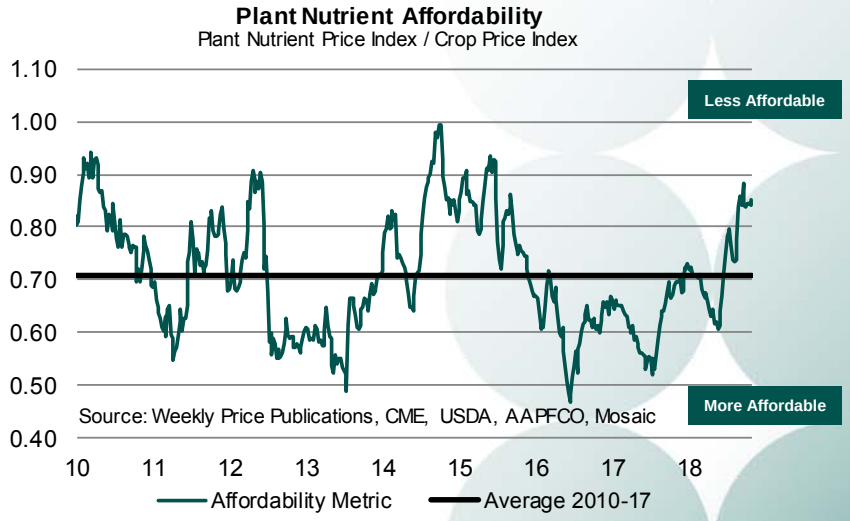


Estimated World Grain & Oilseed Nutrient Removal

Mil Tonnes	2007-12 Stoop (2.67 bmt)	2016-18 Stoop (3.16 bmt)	Change	Percent Change
N Removal	57.7	69.2	11.5	19.9%
P_2O_5 Removal	22.2	26.3	4.1	18.3%
K_2O Removal	18.7	22.4	3.7	19.8%

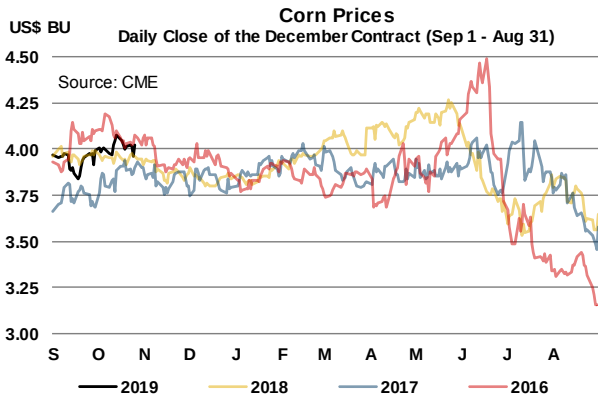
Source: USDA, IPNI, Mosaic

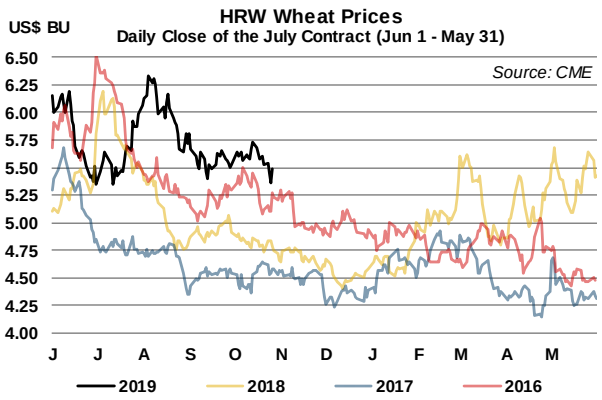
Plant Nutrients Still Affordable

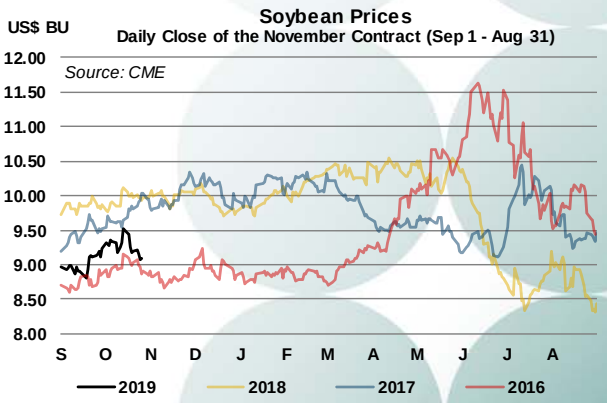


Positive Agronomic & Economic Demand Drivers

2019 new crop prices are about the same as values for the last three years







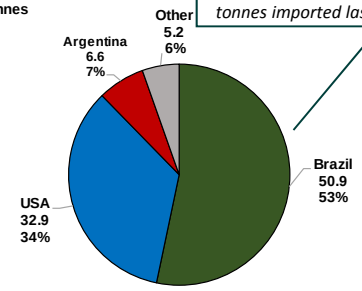
The current soybean/corn price ratio of 2.26 boosts the prospects for more corn acres in 2019

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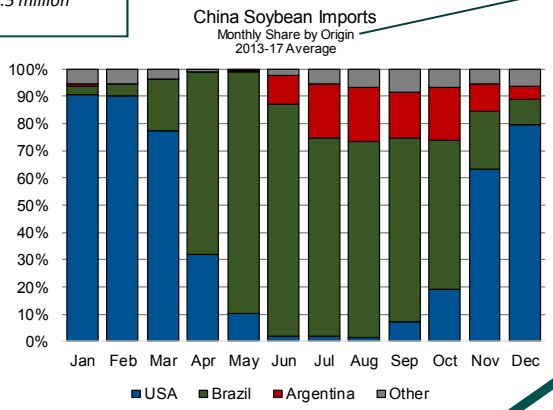
The U.S.-China Soybean War Battlefield

Brazil and the United States are the dominant exporters of soybeans to China, accounting for 87% of the 95.5 million tonnes imported last year.

2017 China Soybean Imports
95.5 Million Tonnes



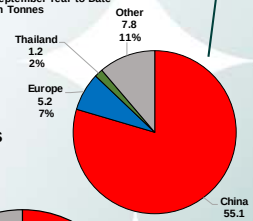
Source: China Customs via GTIS



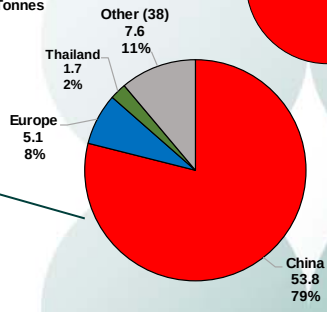
The USA supplies the majority of Chinese imports following its harvest or from November through March. South American producers account for the bulk of Chinese imports following their harvest or from April through October.

Statistics through September show that Brazil exports were up 13% or 8.0 million tonnes from last year. Shipments to China were up 15% or 7.3 million tonnes

2018 Brazil Soybean Exports
January-September Year-to-Date
69.6 Million Tonnes



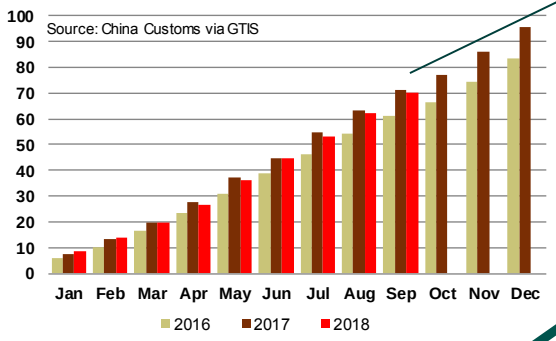
2017 Brazil Soybean Exports
68.2 Million Tonnes



Source: SECEX via GTIS

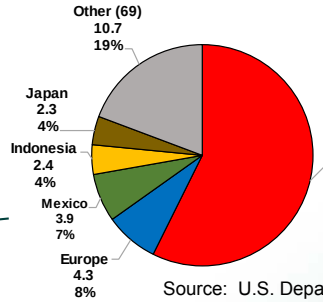
China is the largest destination for Brazil soybean exports, accounting for 79% of the 68.2 million tonnes exported in 2017.

Mll Tonnes **China Cumulative Soybean Imports**

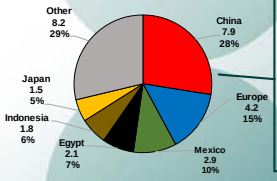


China soybean imports during the first three quarters of this year totaled 70.0 million tonnes, off just 2% from the same period last year.

2017 U.S. Soybean Exports
55.3 Million Tonnes



2018 U.S. Soybean Exports
January-August Year-to-Date
28.6 Million Tonnes



China also is the largest destination for U.S. exports, accounting for 58% of the 55.3 million tonnes exported in 2017. The numbers also show that Europe is no China.

Source: U.S. Department of Commerce via GTIS

Statistics through August show that U.S. exports were up 11% or 2.8 million tonnes from last year. Shipments to China were down 31% or 3.5 million tonnes

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Assessment of How the Trade War Plays Out

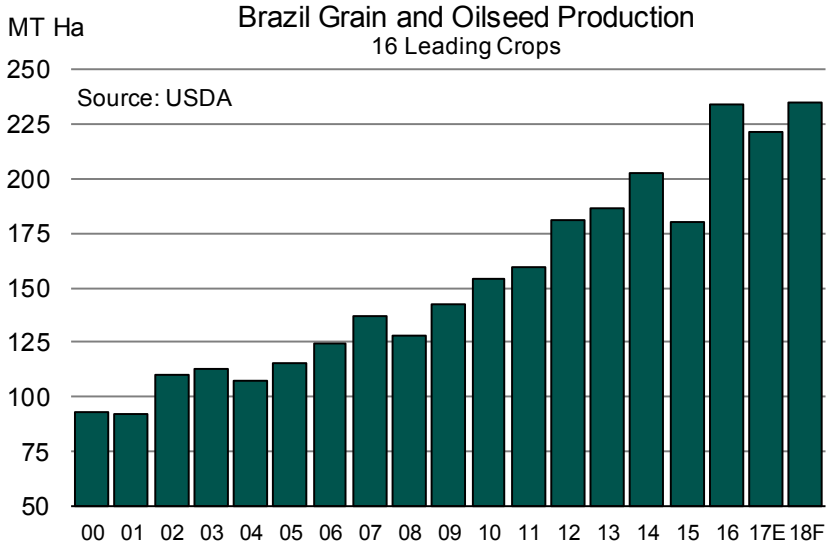
- China likely will import 85-90 million tonnes of soybeans this year. That implies imports of 15-20 million tonnes in Q4, down from 24.1 million tonnes last year.
- China will draw down inventories, maximize imports from Brazil and elsewhere, import more soybean meal and protein substitutes, and reduce the amount of protein in feed rations in order to minimize U.S. soybean imports this year.
- Imports from the United States likely will be needed in Q4 due to seasonality and logistical constraints in both Brazil and China as well as smaller supplies from Argentina this year.
- Recent developments such as the $12 billion farm aid package, other trade agreements, and plans to boost the tariff rate from 10% to 25% on the next $200 billion tranche of Chinese imports indicate that the Trump administration is prepared for drawn-out negotiations.
- The ultimate resolution to the dispute likely will include a commitment by China to increase imports of U.S. agricultural products in order to reduce its U.S. trade surplus, but the trade war likely has inflicted permanent damage on U.S. agriculture and accelerated the next round of expansion in Brazil.

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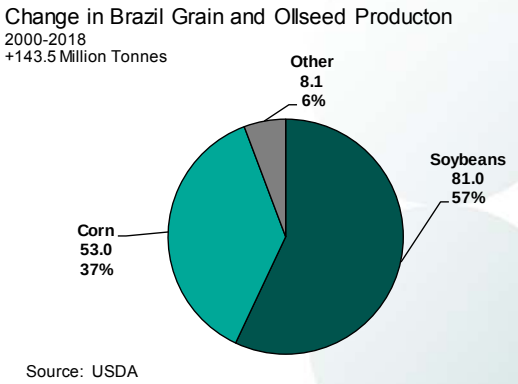
Markets

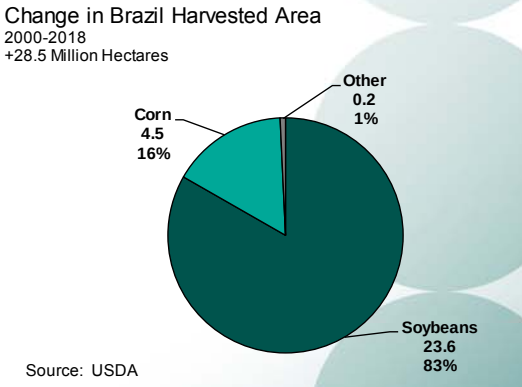
Brazil

An Agricultural Powerhouse

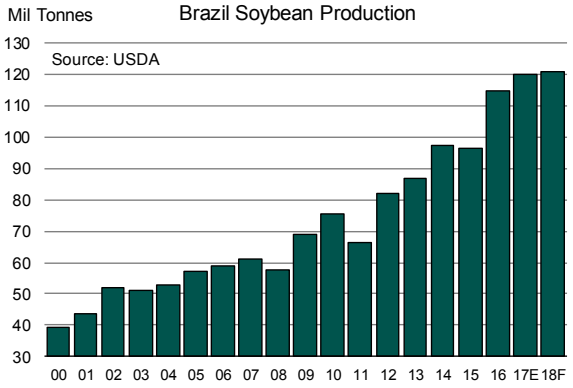


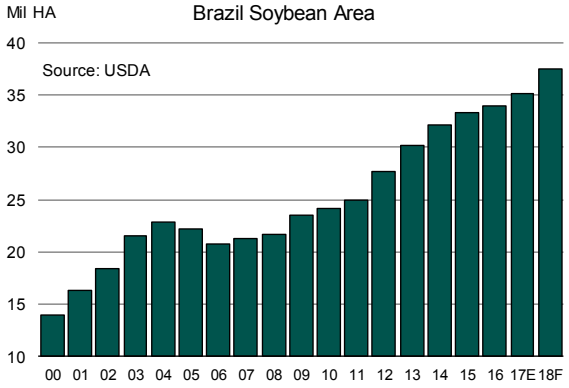
Grain and oilseed production has more than doubled since the turn of the century. Soybeans and corn have accounted for 94% of the gain in output and nearly all of the increase in harvested area during this period. The increase so far this century exceeds the largest crop ever produced in Argentina!

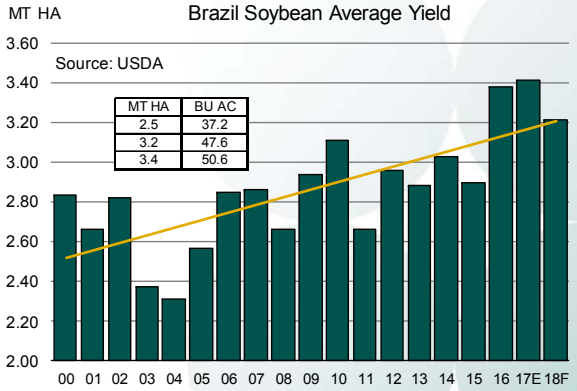


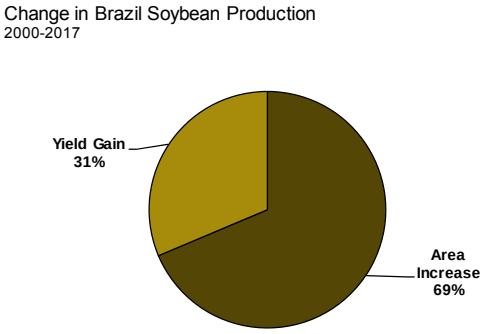


A Soybean Powerhouse

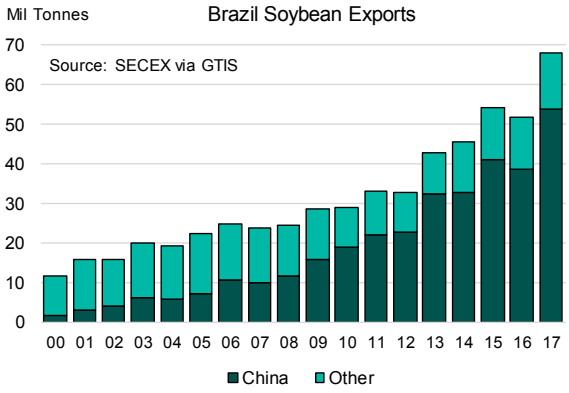








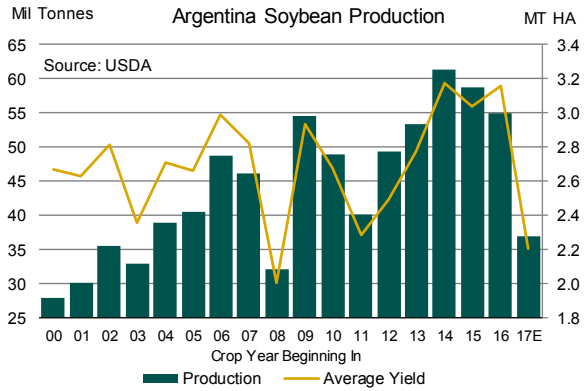
Source: USDA



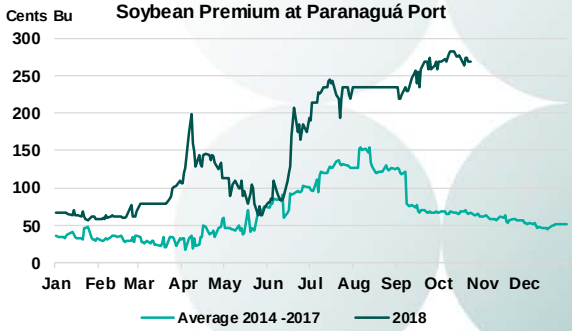
Soybean production has tripled so far this century. Increases in harvested area accounted for nearly 70% of the increase while yield gains accounted for the other 30%. Average soybean yields in Brazil are in line with those of the United States.

The increase in exports to China captured about two-thirds of the increase in soybean production.

Brazilian Farmers Benefit from the Argentine Drought, a Weaker *Real*, and the U.S.-China Trade War



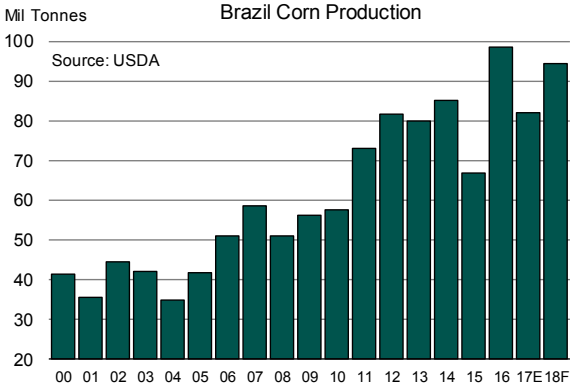


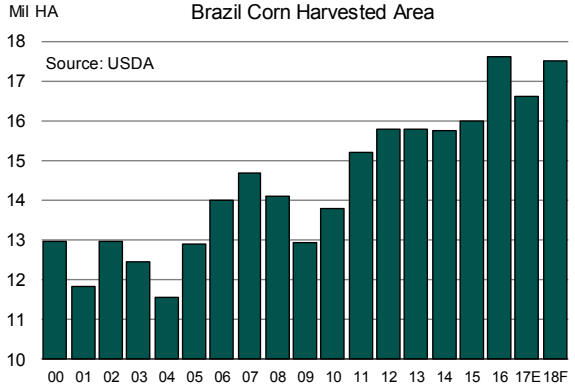


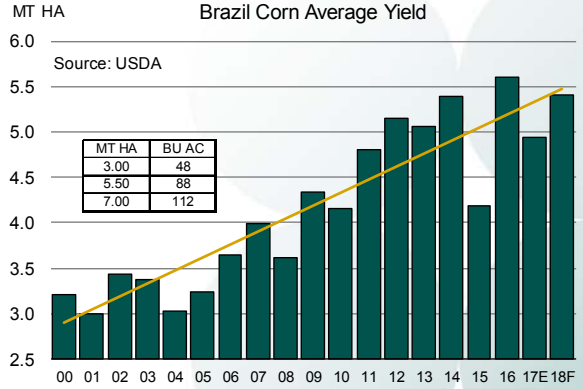
Soybean Premium at Paranaguá Port			
USD Bu	2018	Four-Year Average	Change
January	$0.64	$0.36	77%
February	$0.64	$0.34	91%
March	$0.88	$0.29	204%
April	$1.41	$0.38	265%
May	$0.91	$0.53	72%
June	$1.31	$0.87	50%
July	$2.26	$1.22	85%
Aug	$2.35	$1.33	76%
Sep	$2.48	$0.83	197%
Oct	$2.74	$0.67	310%

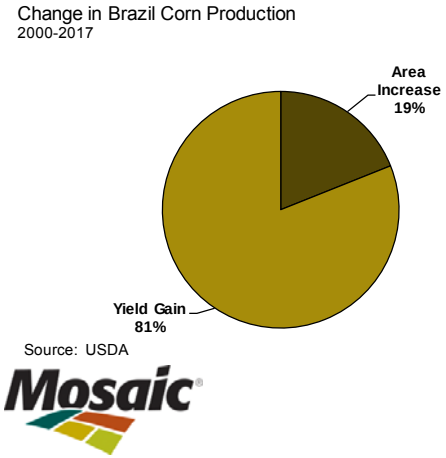
Mosaic

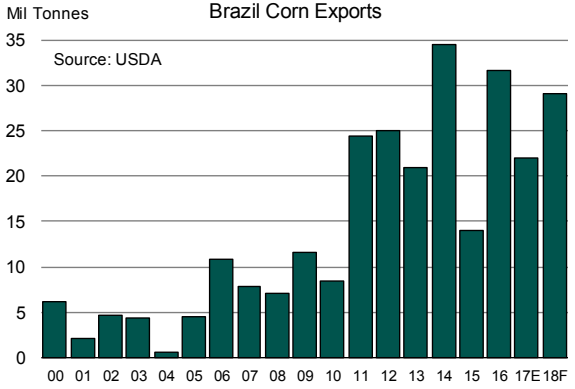
An Emerging Corn Powerhouse







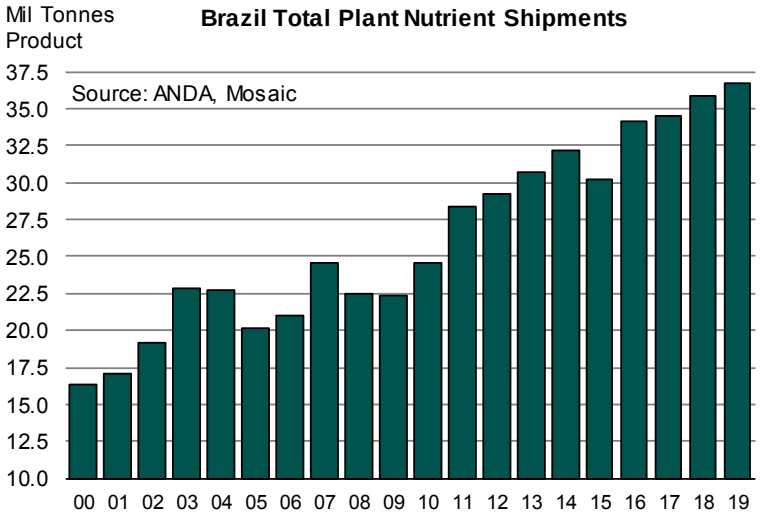




Corn production has more than doubled so far this century with nearly all the increase from the second or Safrinha crop that follows soybeans in the Midwest region. Increases in yields accounted for 80% of the gain in output while additional harvested area accounted for the other 20%. Average corn yields in Brazil still lag those in the United States. Exports captured about one-half of the increase in corn production during this period.

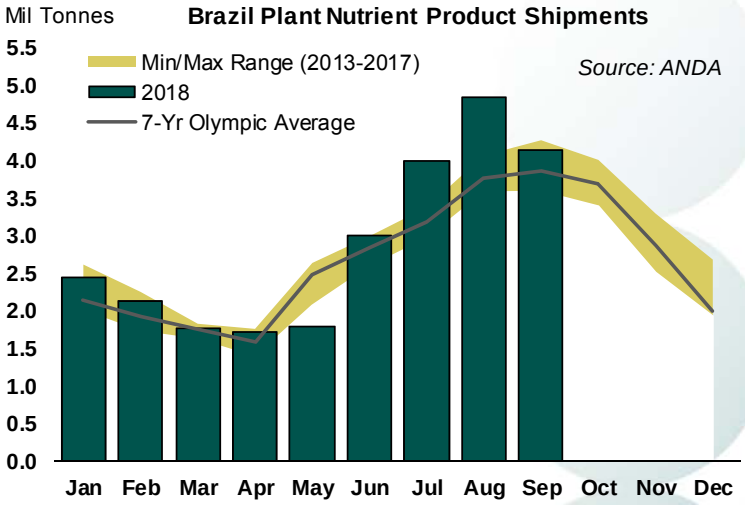
Brazil output has significant upside due to expected increases in soybean area as well as the potential for yield improvements. The key will be more profitable economics from the development of interior uses such as livestock and ethanol production.

A Plant Nutrient Powerhouse



Plant nutrient use has more than doubled since the turn of the century. Shipments of plant nutrient products increased at a compound annual growth rate (CAGR) of 4.4% from 2000 to 2017.

Our Brazilian team now projects that plant nutrient shipments will increase 3.8% or 1.3 mmt to 35.8 million tonnes this year. Shipments are projected to increase another 2.7% or 1.0 mmt to 36.8 million in 2019.



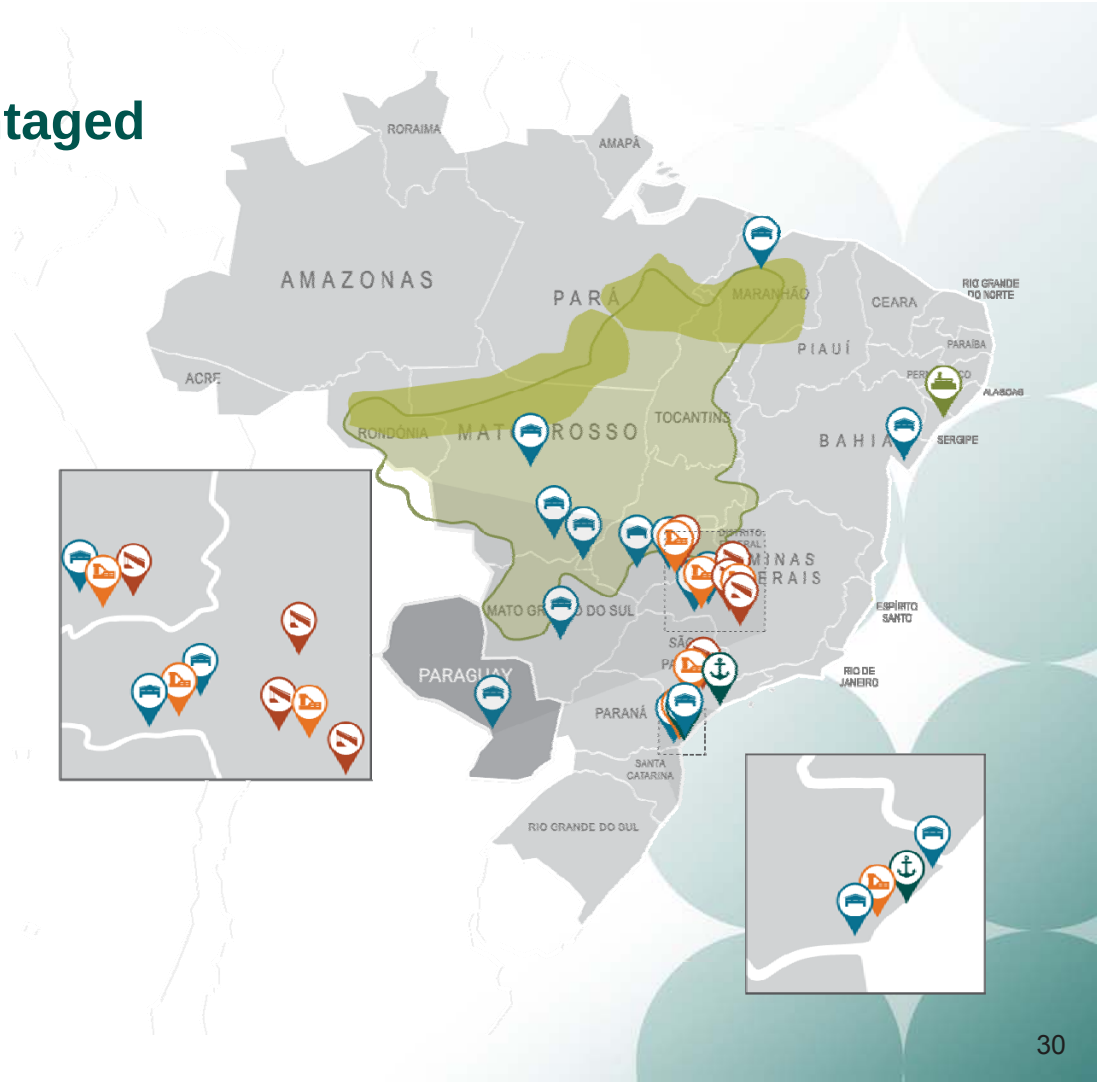
The truckers' strike reduced May shipments, but shipments during peak months from June through September surged with July and August shipments besting previous high marks for these months by wide margins.

Shipments through September totaled 25.8 million tonnes, up 4% from a year ago.

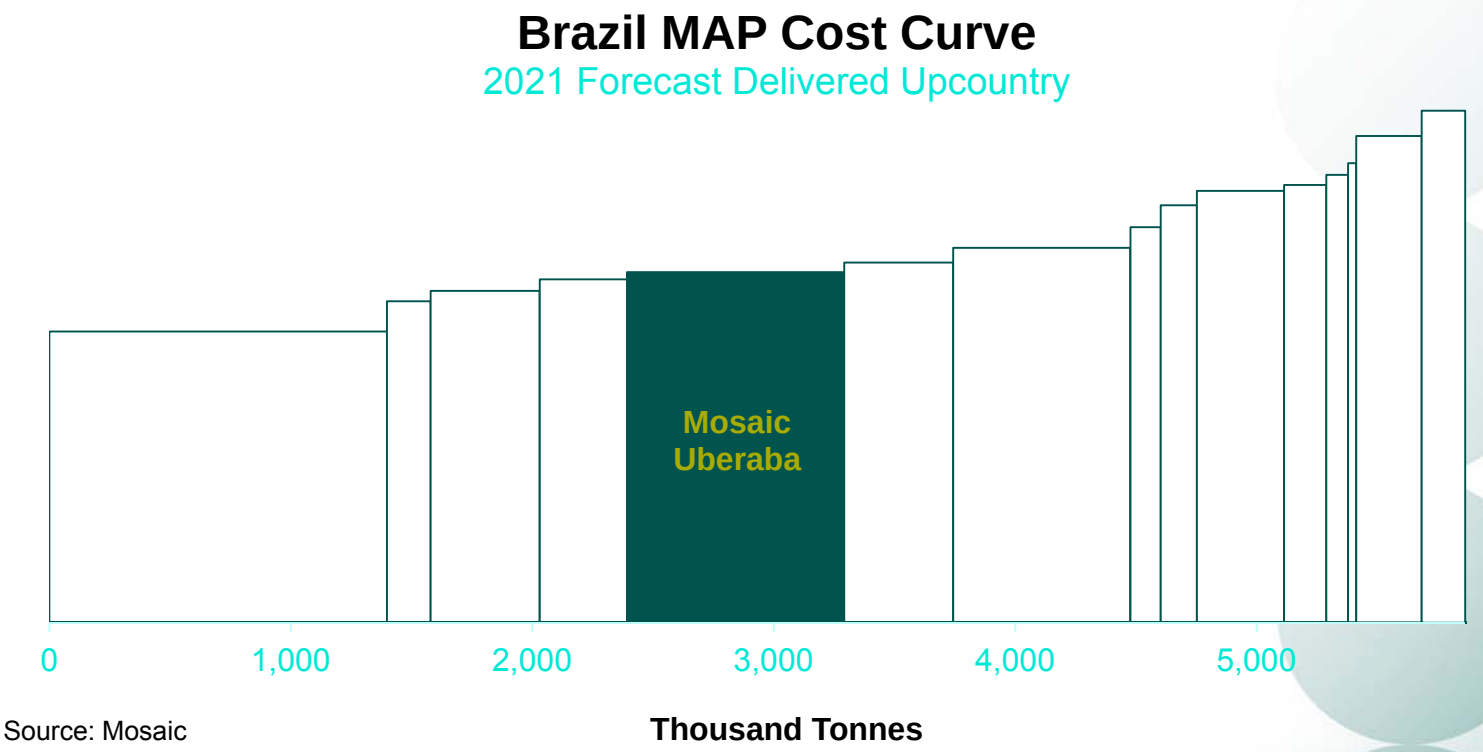
Mosaic is Logistically Advantaged to Key Growing Areas

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

Warehouse/Blender
Phosphate Production
Port
Phosphate Mine
Potash Production
Cerrado Region
High Growth Prospect



Post Transformation: Competitive Delivered Basis



Source: Mosaic

Markets

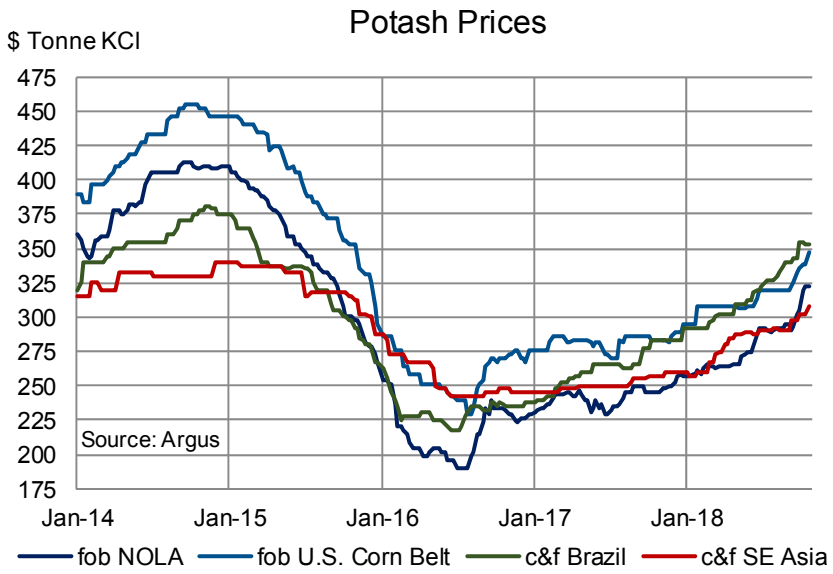
Potash Outlook

Take-Aways

- Prices continue to trend upward due to a combination of positive fundamental developments.
- Strong broad-based demand growth is one of the key drivers.
- The cumulative impact of a few production outages/changes has constrained supply this year.
- Producers are optimizing operations in order to meet demand and compete profitably.
- New capacity is starting up later and ramping up more slowly than expected.
- Demand growth is projected to roughly match new supplies during the next five years.
- No chronic long term supply/demand imbalance is forecast, but demand gains may outpace supply increases at times and capacity surges may exceed demand growth at other times.
- Crop prices, the ramp up of new capacity, and competitive dynamics are key factors to watch.

Mosaic

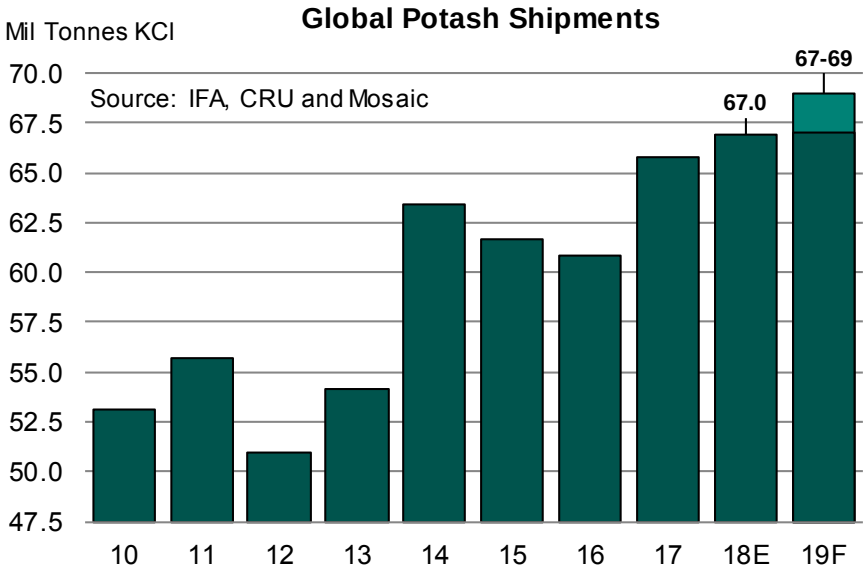
Prices Continue to Trend Up



- Strong broad-based demand growth
- Cumulative impact of production outages/changes
- Optimized/restructured operations
- Slower-than-expected ramp up of new capacity

Mosaic

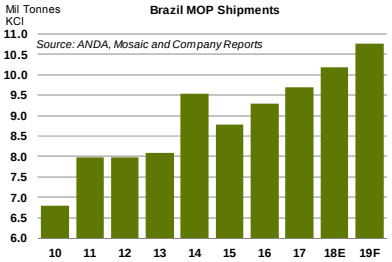
Strong, Broad-Based and Less Volatile Demand Growth



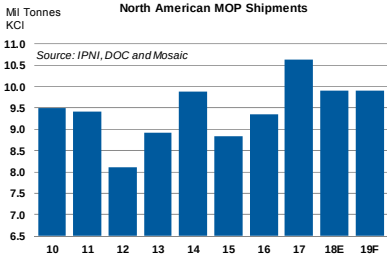
- Global potassium chloride (KCl) shipments now are projected to increase to 67.0 million tonnes this year, a 1.8% or 1.2 million tonne increase from the revised estimate for 2017. After declines in 2015 and 2016, shipments rebounded a whopping 8.1% or 4.9 million tonnes to 65.8 million in 2017.
- In its outlook report released at the end of August, CRU estimated that MOP shipments totaled 66.6 million tonnes in 2017 and projected that shipments would increase to 66.8 million tonnes this year.
- Shipments next year are forecast to increase to 67-69 million tonnes with a point estimate of 68.1 million, up another 1.7% or 1.1 million tonnes from our 2018 estimate.
- Based on final 2017 statistics, global shipments increased at a CAGR of 3.1% from 2010 through 2017, an increase of 12.6 million tonnes KCl. However, use declined in three years and increased in four with surges in 2014 and 2017. More stable crop and potash prices are expected to result in less volatile growth during the next five years.

Mosaic

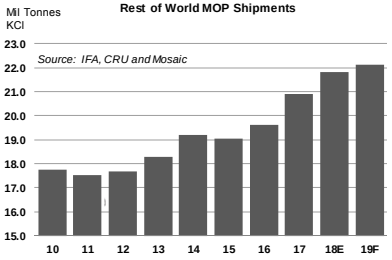
Strong and Broad-Based Demand Growth



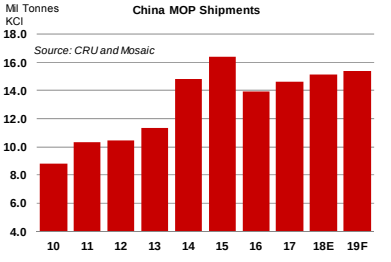
Brazil demand continues its upward march driven by steady increases in soybean production. Shipments are forecast to breach the 10 mmt mark this year and tick up again in 2019 due to prospects for another good growing season and a ~3% expansion of soybean area.



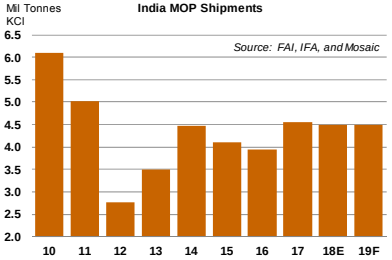
NA shipments surged to 10.6 mmt KCl in 2017 due to a strong fall application season and early positioning of 2018 needs. Shipments are expected to stay relatively high at 9.8-10.0 mmt as statistics indicate that farmers are replacing the record amounts of K removed from fields during the last few years.



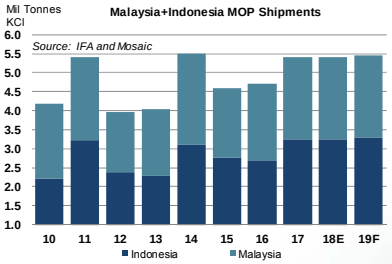
Shipments outside the “Big Six” countries/regions have taken off led mostly by other Asian and other Latin American countries as well as a doubling of African use during the last five years (albeit from a low starting point).



Chinese shipments 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 slowly recovering following 2010/11 subsidy changes that resulted in a near tripling of retail potash prices. High minimum support prices for key crops and another near-normal monsoon underpin steady on-farm demand. A switch from DAP to NPKs benefits potash demand, but sharply higher MRPs limit gains in direct application use.



Indonesian and Malaysian shipments also have trended upward with surges in 2011, 2014, and 2017. Demand looks steady despite a much weaker rupiah and ringgit, and lower crude palm oil and rice prices. However, prices in recent plantation tenders have increased in step with global values and volumes are expected to be consistent with prior years.

Global Potash Shipment Forecasts by Region (November 2018)

Potassium Chloride Million Tonnes (KCl)	2016	2017R	2018F	Low 2019F	High 2019F	Source: IFA, CRU and Mosaic (Numbers may not sum to total due to rounding) Comments
China	14.0	14.6	15.2	15.2	15.4	*Shipments are projected to rebound to 15.2 mmt in 2018 (~7.5 mmt production plus ~7.7 mmt of net imports). Demand is forecast to increase modestly in 2019. The combination of lower-but-still-high domestic crop prices and higher-but-still-moderate potash prices results in profitable farm economics. More K-intensive soybean area also provides a small boost.*
India	3.9	4.5	4.5	4.4	4.6	*High minimum support prices for key crops and another near-normal monsoon underpin steady on-farm demand. A switch from DAP to NPKs is benefiting potash demand, but the large increase in the MRP from ~R12,500 to ~R19,000 tonne KCl to counter a lower subsidy, weaker rupee, and higher potash contract prices is limiting direct application gains.*
Indonesia+Malaysia	4.7	5.4	5.4	5.3	5.5	*Demand remains steady despite a much weaker rupiah and ringgit, lower crude palm oil and rice prices, and uncertainties about agricultural and trade policies of the new Indonesian government. Nevertheless, prices in recent plantation tenders have increased in step with recent global values and volumes are expected to be consistent with prior years.*
Other Asia	4.8	5.2	5.5	5.6	5.8	*Demand continues to grow rapidly in this region. Across-the-board gains have occurred, but recent increases in Bangladesh, South Korea, Thailand and Vietnam are noteworthy. Demand is buoyed by the combination of generally good weather, favorable policies, OK crop prices and still moderate potash prices.*
W. Europe	4.9	4.9	4.9	4.8	5.0	*Shipments are projected to stay stable at 4.8-5.0 mmt. The severe drought in northern Europe last summer may constrain on-farm use in that region, but prospects elsewhere look steady and importers are beginning to position product.*
E. Europe+FSU	4.6	5.0	5.3	5.3	5.5	*Shipments increased again in 2018 following big harvests in most parts of the region in 2017. Mostly favorable weather and weak currencies have propelled crop production and plant nutrient demand in recent years. The severe drought in parts of the region last summer is expected to slow growth a bit in 2019.*
Brazil	9.3	9.7	10.2	10.6	10.8	*Shipments are expected to breach the 10.0 mmt mark this year and tick higher again in 2019 due to prospects for another good growing season, a ~3% expansion of soybean area, and continued strong agronomic and economic demand drivers. Soybean economics remain outstanding despite lower CME prices due to a weaker real and a record local basis.*
Other L. America	2.8	2.9	2.9	2.9	3.0	*Shipments in the rest of Latin America look to remain stable in the 2.9-3.0 mmt range due to generally favorable farm economics and an OK weather outlook at this point.*
N. America	9.4	10.6	9.9	9.8	10.0	*The 2017 surge resulted from a strong fall application season and early positioning of 2018 needs ahead of announced price increases. Shipments this year have remained strong, however, reflecting expectations of solid on-farm use. Statistics indicate that farmers are replacing the record amounts of potassium removed from fields during the last few years. As a result, shipments are projected to settle in the 9.8-10.0 mmt range this year and next.*
Other	2.5	3.0	3.2	3.2	3.4	*Africa accounted for much of the big gain last year, but other regions such as Oceania also registered notable increases. Africa is expected to account for most of the net gains in 2018-19 with increases in both NPK and bulk blending use.*
Total	**60.9**	**65.8**	**67.0**	**67.1**	**69.0**	*2017 shipments were revised up from 65.6 to 65.8 mmt, so the increase last year now stands at 8.1% or 4.9 mmt. Shipments this year are projected to add another 1.2 mmt to this record level, a gain of another 1.8%. Shipments are forecast to increase to 67-69 mmt in 2019. Our point estimate is 68.1 mmt is up 1.7% or 1.1 mmt from the 2018 estimate.*

Likely Supply and Demand Changes 2018-19

Potential Potash Supply and Demand Changes Excluding Canpotex

Mil Tonnes KCl	2018	2019
Projected Shipment Changes	**1.18**	**1.12**
Percent Change	*1.8%*	*1.7%*
Potential Supply Changes	**0.67**	**0.58**
Producer Inventory Draw (+) or Build (-)	*0.50*	*0.00*
ICL Boulby Closure 6/30/18	*-0.17*	*-0.17*
SQM Maximizing Lithium Production	*-0.18*	*-0.10*
K+S Werra Mine Idlings Due to Low River Levels	*-0.15*	*0.15*
K+S Sigmundshall Closure 12/31/18	*0.00*	*-0.45*
Uralkali Increased S-2 Inflow Net Impact	*-0.50*	*0.00*
K+S Bethune Ramp-Up	*0.75*	*0.50*
Eurochem Usolskiy+Volgakaliy Ramp-Up	*0.40*	*0.60*
Garlyk Ramp-Up	*0.00*	*0.03*
Miscellaneous Changes	*0.02*	*0.03*
S/D Surplus (+)/Deficit (-)	*-0.51*	*-0.54*

Source: Mosaic

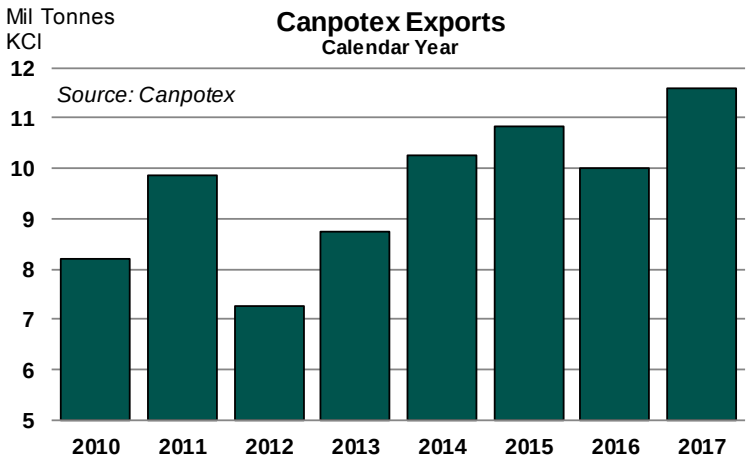
← *Solid broad-based and steady gains are forecast absent a large drop in agricultural commodity prices.*

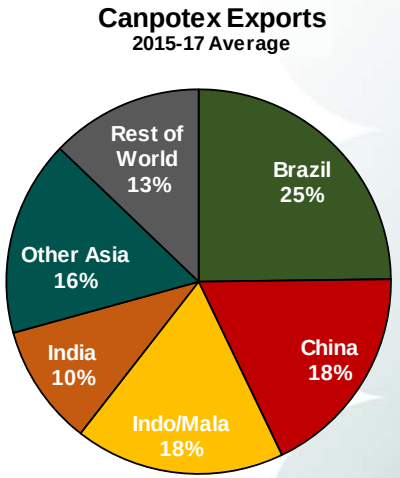
← *There are several puts and takes on the supply side. ICL ended KCl production at its UK Boulby mine around mid-year and K+S will close its Sigmundshall mine at the end of 2018. SQM is developing deposits to maximize lithium production at the expense of KCl output, and K+S lost production at their Werra complex due to low river levels. These changes offset at least part of the expected output from the ramp up of the four greenfield projects. However, it now looks like output from the K+S, EuroChem, and Turkmenistan projects will fall short of advertised production this year. In addition, recent reports indicate that increased rates of fresh water inflows at the Uralkali S2 mine may now exceed pumping and disposal capacities and could threaten production at this mine.*

← *Based on these assumption, the global market looks tight to balanced through 2019. We show one-half million tonne deficits in 2018 and 2019. We do not expect that the world will run out of potash, but this exercise indicates that prices likely will remain elevated in order to clear the market.*

Mosaic

Record Canpotex Exports Required to Meet Record Demand

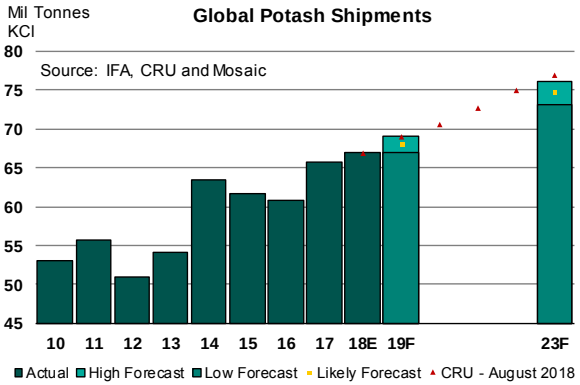


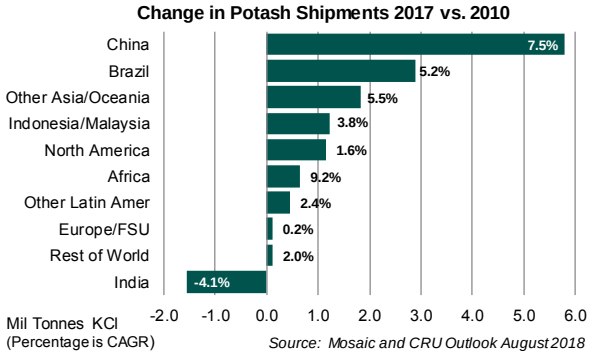


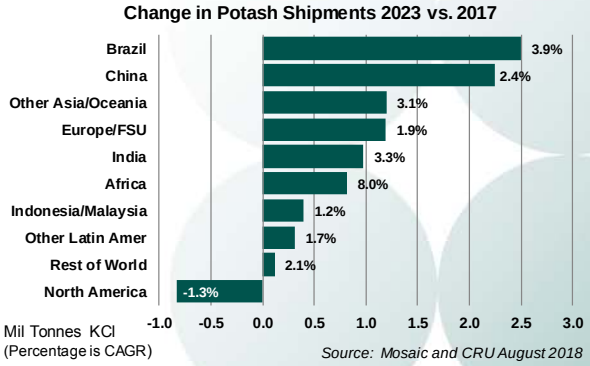
- Canpotex exported a record 11.6 million tons in 2017 in order to meet the big jump in global demand last year.
- Exports are projected to increase to another record this year. Shipments likely will climb to 12.0-12.5 million tonnes in 2018.

Mosaic

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







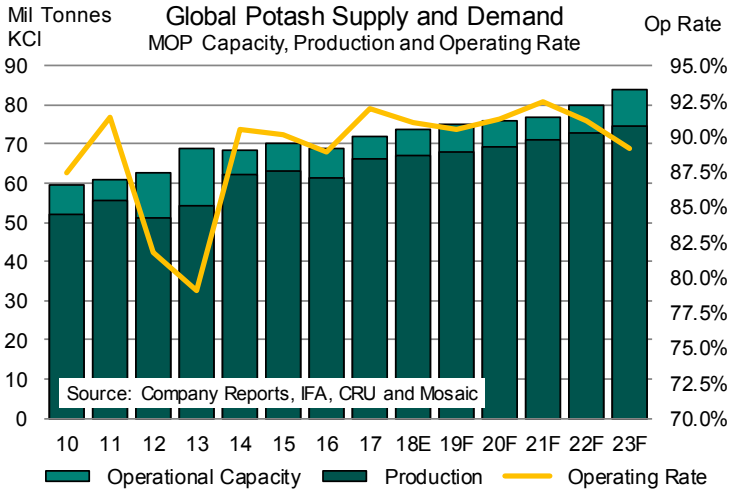
Global Potash Shipments

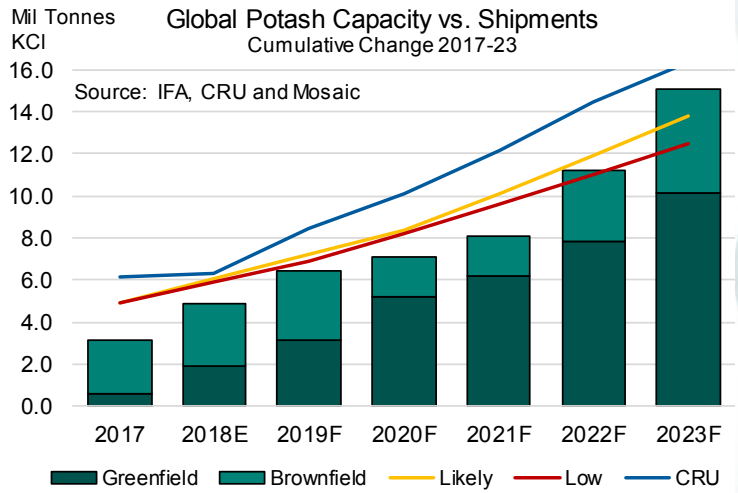
Mil Tonnes KCl	Mosaic Scenario Low	Likely	High	CRU Aug 18
2010 Shipments	na	53.1	na	53.6
2017 Shipments	na	65.8	na	66.6
Change 2010-17	na	12.6	na	13.0
CAGR 2010-17	na	3.1%	na	3.1%
2023 Forecast	73.1	74.7	76.2	76.8
Change 2017-23	7.3	8.9	10.4	10.2
CAGR 2017-23	1.8%	2.1%	2.5%	2.4%

Source: Mosaic, CRU Potash Outlook August 2018.

- By our most recent count, global shipments increased 3.1% per year or 12.6 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 2.1% per year or 8.9 million tonnes from 2017 to 2023. Agronomic and economic demand drivers continue to look positive, and strong and less volatile growth is expected during the next five years given more moderate and stable potash prices as well as stable to potentially stronger agricultural commodity prices during the forecast period. Continued growth in Brazil and China lead the demand parade.
- The traditional growth geographies - Brazil, China, India, Indonesia, and Malaysia - account for about two-thirds of the projected gain from 2017 to 2023, but other regions such as other Asian countries, the former Soviet Union (FSU)/Eastern Europe, and Africa are expected to post notable increases.

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





- We project no chronic or severe long term supply and demand imbalance. The global operating rate is forecast to range between 92% and 89% during the next five years. Six greenfield projects in Turkmenistan, Saskatchewan, Russia (2) and Belarus (2) are expected on line during this period along with a few brownfield projects (mostly replacement mines in Russia, Belarus and Canada). We assume ramp-up rates consistent with history as well as our experience.
- A comparison of cumulative changes in demand vs. new capacity shows that shipments are projected to increase 13.8 million tonnes from 2017 to 2023 while operational capacity is projected to increase 15.1 million tonnes. Demand growth outpaces capacity additions until the last year of the forecast period when the two projects in Belarus are expected on line and the two projects in Russia reach full capacity.

Mosaic

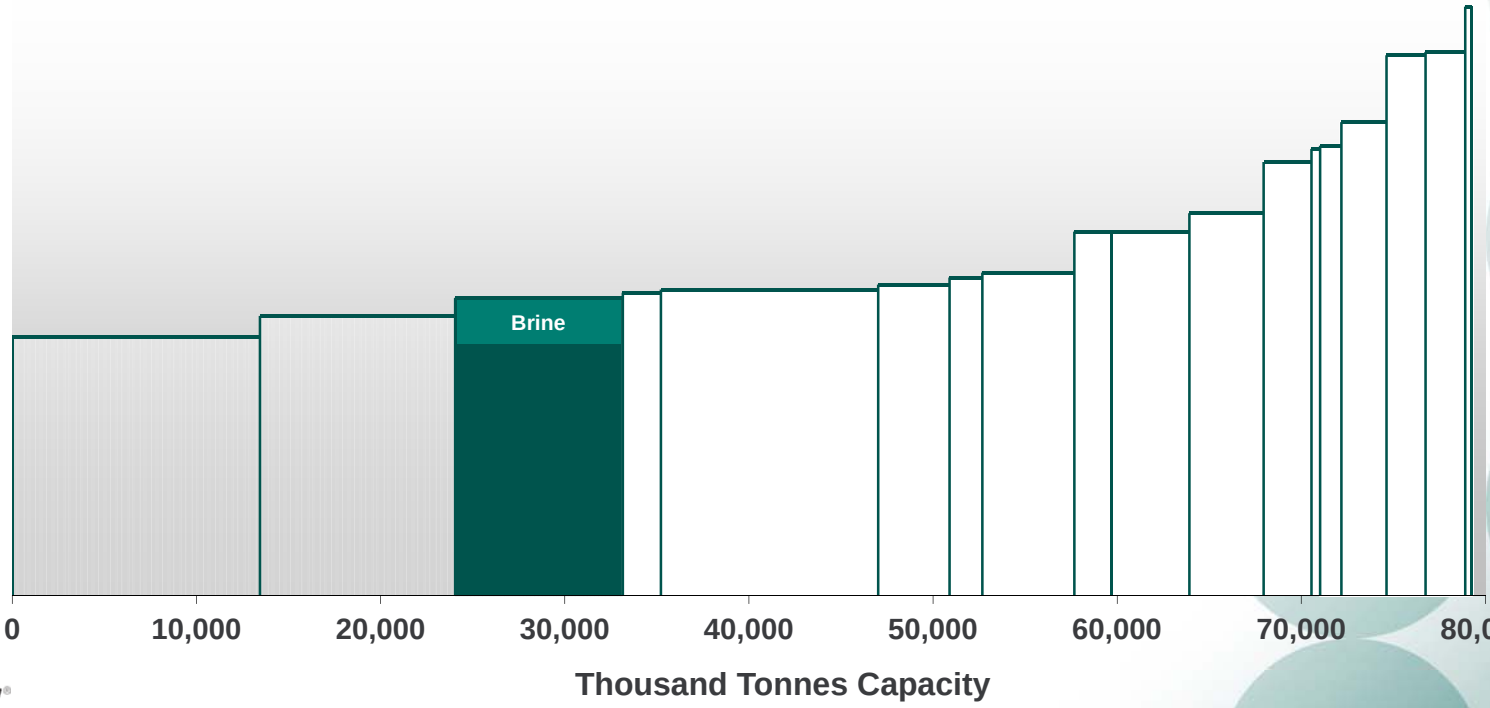
Factors to Watch

- Agricultural commodity prices
  - Farm or food crisis and impact on potash demand?
- FSU production
  - Can they maintain 2017 rates in 2018 and beyond? Is Uralkali S2/S1 at risk?
- Ramp-up of new capacity
  - Slower-than-expected or faster-than-expected?
- Competitor strategies and behaviors
  - Price over volume or volume over price?
- Currency risks/opportunities and macroeconomic/political shocks
  - Devaluation or appreciation of the key 6R potash currencies? (Ruble, RMB, Real, Rupee, Rupiah, Ringgit)
  - Trade war or peace?

Mosaic

2021 Cost Curve Forecast

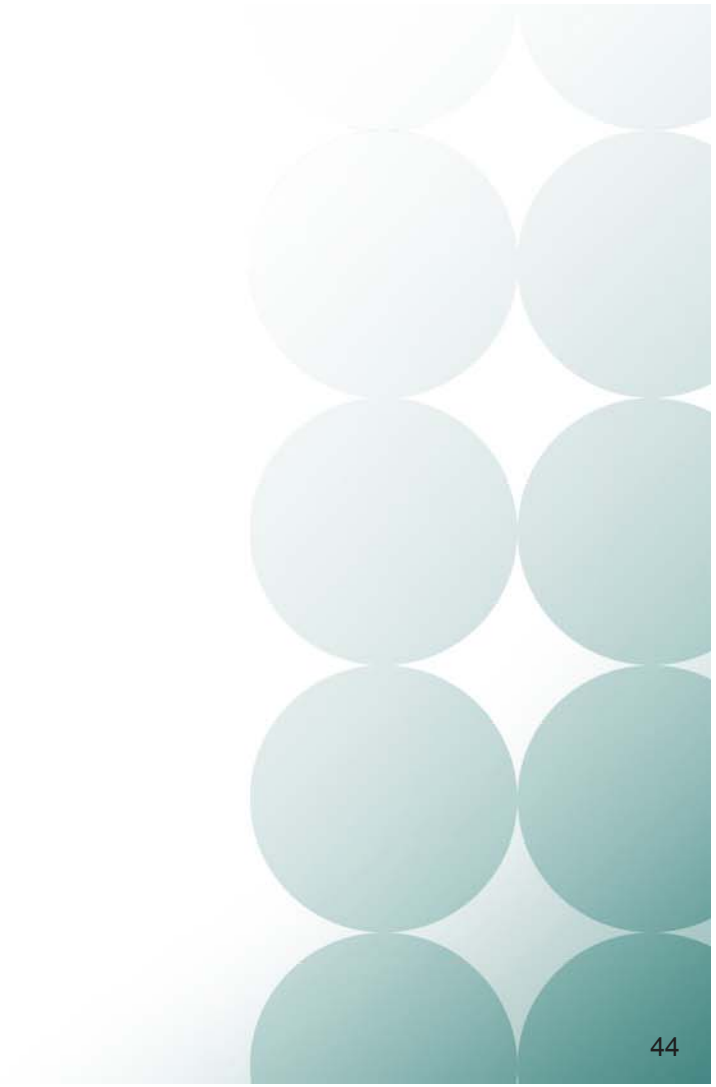
2021 MOP Cost Curve fob Mine at Effective Capacity



Source: CRU, Mosaic

Markets

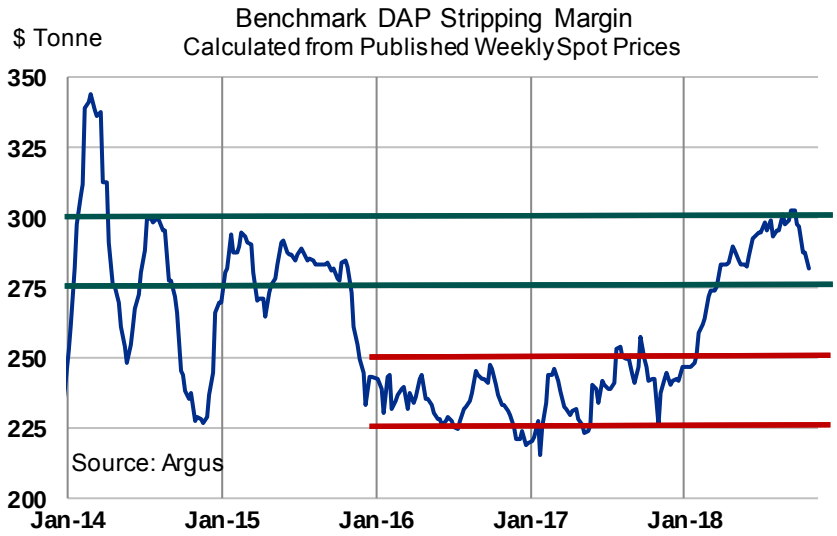
Phosphate Outlook



Take-Aways

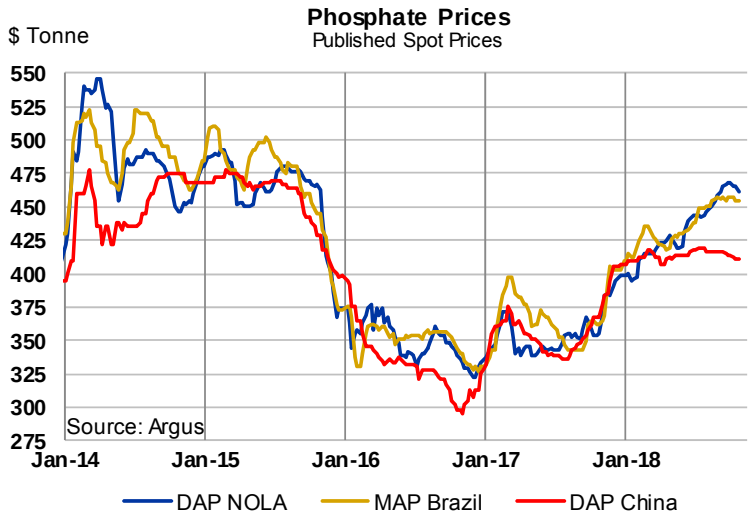
- The benchmark DAP margin increased $77 tonne between the beginning of November 2017 and end of September 2018 as a result of several positive fundamental developments.
- Three big supply adjustments have taken hold. First, our temporary idling of the Plant City facility last December took ~1.3 million tonnes off the market this year and triggered a change in sentiment.
- Second, the ramp-up of new capacity has been slower than expected. We estimate that output from new projects this year will fall short of most expectations by more than 1.0 million tonnes.
- Third, the 12-month running total of Chinese phosphate exports on September 30 was 1.2 million tonnes less than a year earlier due mainly to new environmental taxes and regulations.
- Seasonal factors are pressuring prices/margins in Q4, but fundamentals look constructive due to solid, broad-based and less volatile demand growth and no world scale-projects in the pipeline behind the Moroccan and Saudi projects that are ramping up today.
- Prices/margins are expected to remain elevated through at least 2019 in order for the global market to reach an equilibrium by trimming a little demand and pulling out a bit more supply.
- Key factors to watch include China industry restructuring, the ramp up of new capacity, crop prices, and exchange rates.

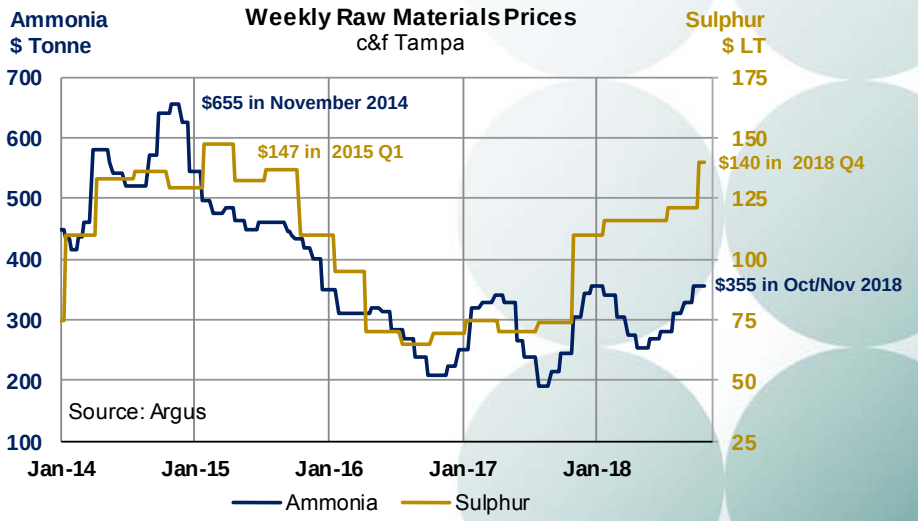
Margins Have Moved Up in Response to Several Constructive Fundamental Developments



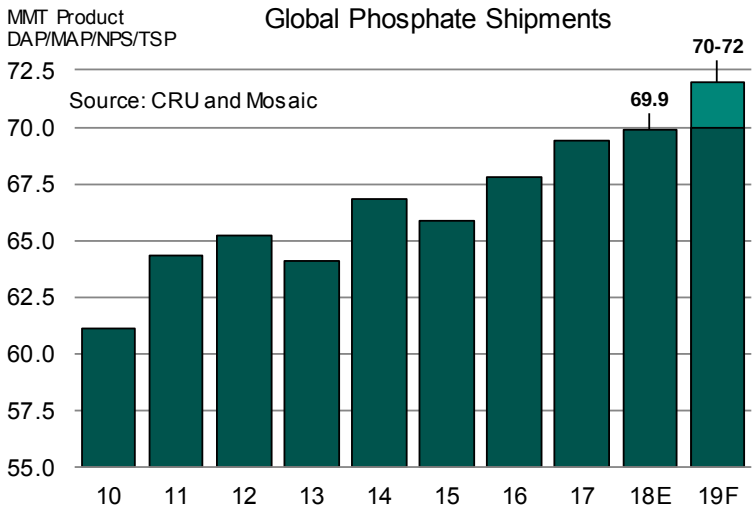
- Solid, broad-based and less volatile demand
- Big supply adjustments take hold:
  - Temporary idling of Mosaic's Plant City facility
  - Slower-than-expected ramp-up of new capacity
  - A decline in Chinese exports
- A shift in sentiment
- Q4 seasonal pressure but no change in fundamentals

Higher Raw Materials Costs Have Pushed Up Phosphate Prices





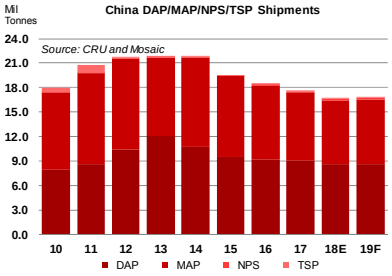
Strong, Broad-Based and Less Volatile Demand Growth



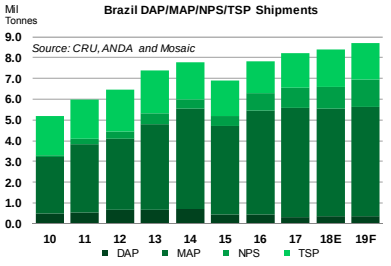
- Shipments of the leading finished phosphate products increased 2.4% or 1.7 million tonnes to 69.4 million in 2017 and are projected to increase 0.6% or 0.5 million to 69.9 million tonnes this year.
- Shipments next year are forecast to increase to 70-72 million tonnes with a point estimate of 71.1 million, a 1.8% or 1.2 million tonne gain.
- China has been a significant drag on global shipments in the past few years. Excluding China, demand increased 6.4% or 2.9 million tonnes in 2016 and 5.0% or 2.5 million tonnes in 2017. We project shipments outside China will increase 2.8% or 1.5 million tonnes this year and 2.0% or 1.0 million tonnes in 2019.
- Our initial estimates for 2019 are a bit cautious due to: 1) lower crop prices, 2) higher phosphate prices, 3) drought and lower crop production in some regions, and 4) trade and other policy issues.
- Excluding China and India, shipments elsewhere have increased at a CAGR of 4.3% or 10.7 million tonnes between 2010 and 2017. Going forward we expect that Indian shipments get back on a solid growth trajectory and Chinese shipments will stabilize at close to 17 million tonnes.
- Growth outside China and India was led by strong and steady gains in Brazil, the rest of Latin America, South and Southeast Asia, the former Soviet Union and Africa.

Mosaic

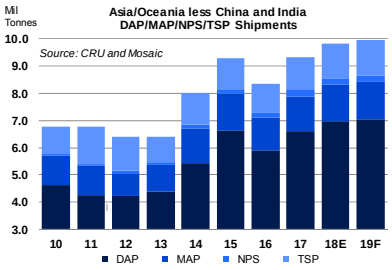
Broad-Based Demand Growth



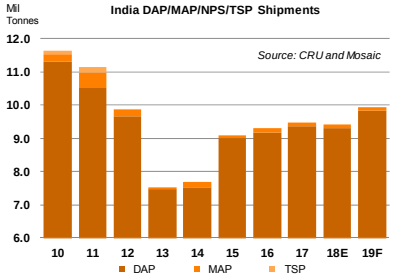
Chinese shipments peaked at more than 21 million tonnes in 2013. Growth was driven by high support prices for leading crops such as corn and a build-up of strategic reserves. Shipments are expected to stabilize in the 17-million-tonne neighborhood in the new economic/policy environment.



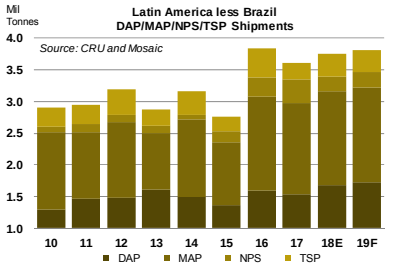
Phosphate demand in Brazil continues its strong upward trend driven mainly by steady increases in soybean production. The growth in NPS shipments – mostly Mosaic's MicroEssentials® – is noteworthy.



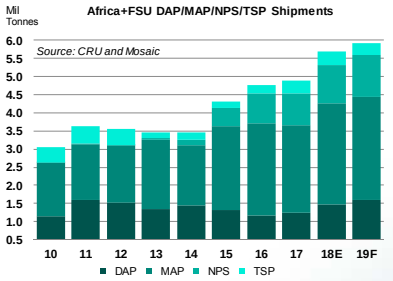
Shipments in the rest of Asia have increased significantly since 2013. The biggest gains were in Pakistan and Vietnam, but most countries registered increases during this period. Profitable farm economics due to steady crop prices and moderate phosphate costs underpin demand growth.



Indian shipments plummeted following changes in the subsidy and a doubling of retail DAP prices in 2010/11. Poor monsoons also contributed to weak demand. Shipments are beginning to recover given high local crop prices, moderate phosphate prices, a larger subsidy, and recent average or near-average monsoons.



Shipments in the rest of Latin America surged in 2016, led by large gains in Argentina following the elimination or reduction of grain export taxes. Demand dropped off but remained at elevated levels in 2017. Shipments are expected to post a solid gain this year due to generally profitable farm economics throughout 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.

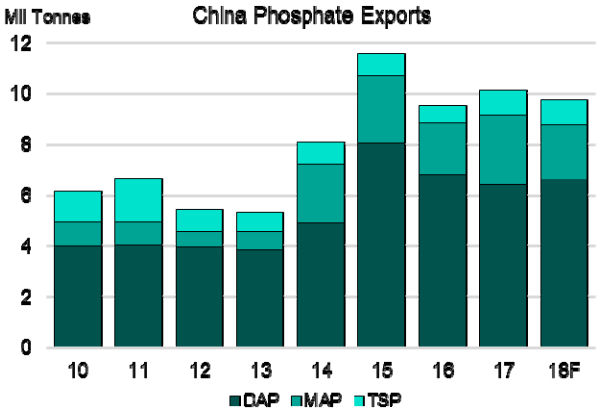
Global Phosphate Shipment Forecasts by Region (November 2018)

DAP/MAP/NPS*/TSP (Million Tonnes)	2017E	2018F	Low 2019F	High 2019F	Comments
					Source: IFA, CRU and Mosaic (Numbers may not sum to total due to rounding)
China	17.7	16.7	16.7	17.0	*Our 2019 forecast is unchanged following a slight downward revision for 2018, as we believe domestic producers will continue to show a continued focus on the export market in early Q4 with the expectation that they can "catch up" on supplying the domestic market in Q1 of 2019. Our forecast for 2018 DAP/MAP/TSP exports stands at 9.7mmt, versus 10.1mmt in 2017, as through September at 7.2mmt they trailed last year by ~300,000 tonnes.*
India	9.5	9.4	9.8	10.1	*We have revised lower our expectations for shipments in anticipation of a slowdown in offtake in Q4 subsequent to a sixth increase in the MRP to ~29,000 INR/tonne. This coincides with a reduction in our DAP production forecast to 3.6mmt (vs. 4.8mmt in 2017), with a pronounced shift to NP/NPK production. Our import forecast is boosted slightly to 5.9mmt (vs. 4.1mmt in 2017), with inventories projected to end the year at ~1.0mmt (up vs. our last forecast and end-2017 level of 0.8mmt).*
Other Asia/Oceania	9.3	9.8	9.9	10.2	*Our expectations for demand across this region are unchanged, calling for continued steady demand growth on a generally favorable ag environment, though a growing likelihood of El Niño in 2019 remains a yellow flag.*
Europe and FSU	6.3	6.3	6.2	6.4	*Demand remained robust despite drought across parts of the region, though we have revised slightly higher our 2018 forecast (after an upward adjustment to our 2017 estimate). Our 2019 forecast is at the top end of our expectations, with growth in the East to drive demand, though the impact of drought overhangs, particularly in West Europe.*
Brazil	8.2	8.4	8.7	9.0	*Farm economics continue to look very attractive on the strength of Brazilian soybean export prices, despite a recovering (though still generally weak) currency. We expect that phosphate inventories will end the year well below average on the slow pace of imports through September (down 11% y-o-y at 3.3mmt DAP/MAP/TSP), flat domestic production and strong on-farm demand with planting pace besting historical averages. This is expected to lead to an acceleration of shipment growth in 2019.*
Other Latin America	3.6	3.7	3.7	3.9	*Our 2018 and 2019 forecasts are little-changed, with demand supported by continued profitable farm economics.*
North America	9.9	10.2	9.8	10.1	*As with H1 shipments, where on-farm demand held firm despite spring arriving late in some parts, fall demand also got off to a slower-than-expected start on fall harvest delays but looks to come in as expected with recently-improved weather. Import volumes are notable, with DAP/MAP/NPS/TSP imports through October at a record-setting 2.8mmt (versus 2.2mmt last year) in the absence of Plant City's production.*
Other	4.9	5.3	5.4	5.5	*Our 2018 and 2019 forecasts are revised slightly higher, with demand supported by continued profitable farm economics and market development initiatives, though there is a small risk of some shipment deferral from Q4 2018 to Q1 2019 if the Ethiopia tender awards are further delayed.*
Total	69.4	69.9	70.2	72.2	*At 69.9mmt, our point estimate for 2018 is virtually unchanged. Excluding China, this represents an increase of 1.5mmt or 2.8% versus 2017. Our 2019 shipment forecast range remains at 70-72mmt, with a current point estimate at 71.1mmt. Excluding China, this adds another nearly 2% or 1.0mmt to global shipments.*

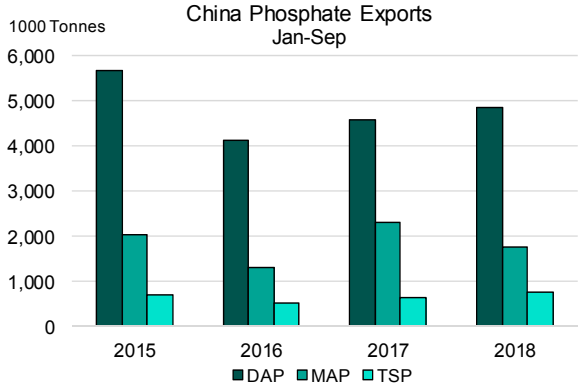
** NPS products included in this analysis are those with a combined N and P_2O_5 nutrient content of 45 units or greater.*

Supply Adjustments are Taking Hold

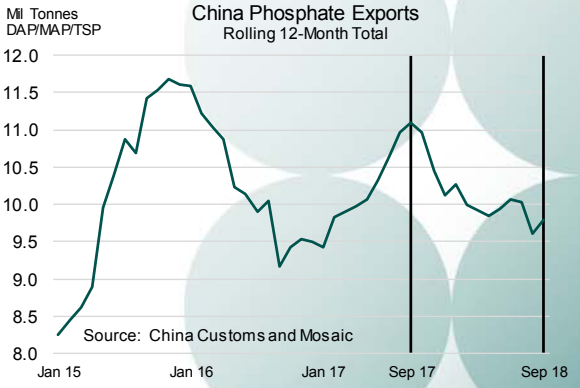
- Mosaic's idling of its Plant City facility in December 2017 took ~1.3 million tonnes off the market this year and triggered a change in sentiment.
- A slower ramp up of new capacity at the MWSPC JV in Saudi Arabia and the JPH 4 in Morocco resulted in output falling short of most expectations by more than 1.0 million tonnes.
- Chinese phosphate exports during the first three quarters of this year were off 2.5% or 190,000 tonnes from a year ago. The 12-month rolling total at the end of September was down 1.17 million tonnes from a year earlier.



Source: China Customs and Mosaic



China Phosphate Exports						
	January-September				2018 vs. 2017	
1000 Tonnes	2015	2016	2017	2018	Change	Pct Chg
DAP	5,663	4,136	4,598	4,843	245	5.3%
MAP	2,031	1,324	2,300	1,770	-530	-23.0%
TSP	708	514	660	754	94	14.3%
Total	8,402	5,974	7,558	7,367	-191	-2.5%



Fundamentals Math: 2018-2019

Potential Phosphate Supply and Demand Changes

Mil Tonnes DAP/MAP/NPS/TSP	2018	2019	
Projected Shipment Changes	**0.45**	**1.24**	← *Strong broad-based demand growth outside of China is expected absent a large step down in crop prices next year.*
Potential Supply Changes Excluding China	**0.45**	**1.27**	
Mosaic Plant City Idling	*-1.26*	*0.00*	← *Idling of Plant City tightened fundamentals and triggered a change in market sentiment this year.*
OCP			
OCP JPH 3	*0.50*	*0.00*	← *OCP is expected to complete the ramp up of JPH 3 by the end of 2018 and JPH 4 by the end of 2020. We also assume the advertised debottlenecking of current facilities results in an increase of 1.0 million tonnes of finished product by 2020. We assume that the Line F and Laayoune projects will begin to deliver small tonnage after 2019.*
OCP JPH 4	*0.30*	*0.50*	
OCP Debottlenecking	*0.20*	*0.30*	
OCP Line F Start-Up	*0.00*	*0.00*	
OCP Laayoune	*0.00*	*0.00*	
MWSPC Ramp-Up	*1.05*	*0.50*	← *MWSPC produced 447,000 tonnes of DAP in 2017. We assume production increases to 1.5 million in 2018, to 2.0 million in 2019 and to capacity in 2020.*
Nutrien Redwater Closure	*0.00*	*-0.45*	← *Nutrien is expected to close Redwater at the end of 2019 Q1 when rock inventories are depleted. The small Geismar facility is slated to close in January 2019. Nutrien will supply Innophos with acid from its North Carolina facility and that is expected to result in a small net reduction in granulated output.*
Nutrien Geismar Closure	*0.00*	*-0.15*	
Other Ramp-Ups / Closures			
GCT Sfax Closure/M'dilla Start-Up (Tunisia)	*-0.20*	*0.22*	
Phosagro Debottlenecking (Russia)	*0.28*	*0.00*	
Yara (Brazil)	*0.00*	*0.10*	← *Other small ramp-ups and miscellaneous changes also are included.*
Turkey/Egypt Greenfields	*0.00*	*0.30*	
Sterlite Shut-down (India)	*-0.28*	*-0.20*	
Miscellaneous Changes (S. Africa/Australia)	*-0.15*	*0.15*	
S/D Surplus (+)/Deficit (-) Excluding Chinese Export Changes	***0.00***	***0.04***	
Chinese Export Changes			← *Chinese export scenarios assume modest declines in 2018 based on first half statistics and high prices for much of the last half of this year. Environmental regulations are expected to have a bigger impact when producers must comply by the end of 2019.*
Less Than Expected	-0.20	-0.50	
Expected	-0.33	-0.86	
Greater Than Expected	-0.45	-1.25	
S/D Surplus (+) / Deficit (-)			← *The projected S/D deficits do not imply that the world will run out of phosphate any time soon. It does imply that prices and margins likely will stay elevated in order to clear the market. Higher prices may trim demand and incent producers to squeeze a few more tonnes from their facilities. The deficit balloons if Chinese environmental regulations take hold and significantly curtail exports.*
Less-than-Expected Decline in Chinese Exports	-0.20	-0.46	
Expected Decline in Chinese Exports	-0.33	-0.83	
Greater-than-Expected Decline in Chinese Exports	-0.46	-1.21	

Fundamentals Math: 2018

Phosphate S/D Incremental Changes, H1 2018
Mil Tonnes DAP/MAP/NPS/TSP - equivalent

Shipment Increase		0.27
Plant City Idling	*-0.64*	
OCP JPH 3 Ramp-Up	*0.15*	
OCP JPH 4 Start-Up	*0.00*	
OCP Debottlenecking	*0.00*	
MWSPC Ramp-Up	*0.79*	
GCT Sfax Closure	*-0.10*	
Phosagro Debottlenecking	*0.17*	
Misc Downtime (Tun.,S.Af.,Aus.)	*-0.15*	
Sterlite Shutdown (India)	*-0.02*	
Turkey/Egypt Greenfields	*0.00*	
Chinese Exports	*-0.05*	
Supply Changes	**0.15**	
Incremental Supply Surplus (+) or Deficit (-)	**-0.12**	

Phosphate S/D Incremental Changes, H2 2018
Mil Tonnes DAP/MAP/NPS/TSP - equivalent

Shipment Increase		0.18	
Plant City Idling	*-0.63*		
OCP JPH 3 Ramp-Up	*0.35*		
OCP JPH 4 Start-Up	*0.30*		
OCP Debottlenecking	*0.20*		
MWSPC Ramp-Up	*0.26*		
GCT Sfax Closure	*-0.10*		
Phosagro Debottlenecking	*0.11*		
Misc Downtime (Tun.,S.Af.,Aus.)	*0.00*		
Sterlite Shutdown (India)	*-0.25*		
Turkey/Egypt Greenfields	*0.00*		
Chinese Exports	*-0.15*	*-0.27*	*-0.40*
Supply Changes	**0.10**	**-0.03**	**-0.15**
Incremental Supply Surplus (+) or Deficit (-)	**-0.08**	**-0.21**	**-0.33**

Phosphate S/D Incremental Changes, 2018
Mil Tonnes DAP/MAP/NPS/TSP - equivalent

Shipment Increase		0.45	
Plant City Idling	*-1.26*		
OCP JPH 3 Ramp-Up	*0.50*		
OCP JPH 4 Start-Up	*0.30*		
OCP Debottlenecking	*0.20*		
MWSPC Ramp-Up	*1.05*		
GCT Sfax Closure	*-0.20*		
Phosagro Debottlenecking	*0.28*		
Misc Downtime (Tun.,S.Af.,Aus.)	*-0.15*		
Sterlite Shutdown (India)	*-0.28*		
Turkey/Egypt Greenfields	*0.00*		
Chinese Exports	*-0.20*	*-0.33*	*-0.45*
Supply Changes	**0.25**	**0.12**	**-0.01**
Incremental Supply Surplus (+) or Deficit (-)	**-0.20**	**-0.33**	**-0.46**

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

Mosaic

Fundamentals Math: 2019

Phosphate S/D Incremental Changes, H1 2019
Mil Tonnes DAP/MAP/NPS/TSP - equivalent

Shipment Increase		0.62	
Redwater Closure	*-0.15*		
OCP JPH 4 Ramp-Up	*0.20*		
OCP Debottlenecking	*0.15*		
MWSPC Ramp-Up	*0.01*		
GCT M'dilla Start-Up	*0.07*		
Misc Recovery (Tun.,S.Af.,Aus.)	*0.15*		
Yara (Brazil) Start-Up	*0.03*		
Sterlite Shutdown (India)	*-0.20*		
NTR Geismar Closure	*-0.08*		
Turkey/Egypt Greenfields	*0.12*		
Chinese Exports	*-0.25*	*-0.43*	*-0.63*
Supply Changes	**0.05**	**-0.13**	**-0.32**
Incremental Supply Surplus (+) or Deficit (-)	**-0.57**	**-0.75**	**-0.94**

Phosphate S/D Incremental Changes, H2 2019
Mil Tonnes DAP/MAP/NPS/TSP - equivalent

Shipment Increase		0.62	
Redwater Closure	*-0.30*		
OCP JPH 4 Ramp-Up	*0.30*		
OCP Debottlenecking	*0.15*		
MWSPC Ramp-Up	*0.49*		
GCT M'dilla Start-Up	*0.15*		
Misc Recovery (Tun.,S.Af.,Aus.)	*0.00*		
Yara (Brazil) Start-Up	*0.08*		
Sterlite Shutdown (India)	*0.00*		
NTR Geismar Closure	*-0.08*		
Turkey/Egypt Greenfields	*0.18*		
Chinese Exports	*-0.25*	*-0.43*	*-0.63*
Supply Changes	**0.72**	**0.54**	**0.35**
Incremental Supply Surplus (+) or Deficit (-)	**0.10**	**-0.08**	**-0.27**

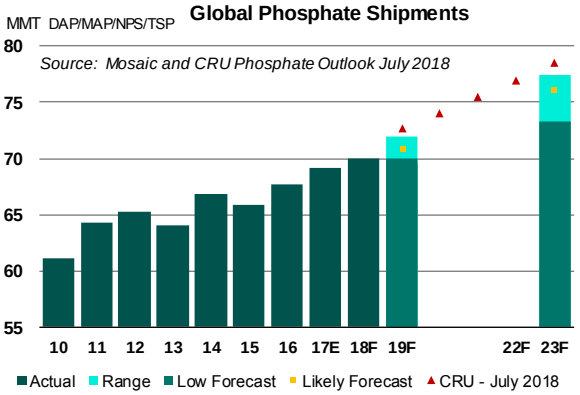
Phosphate S/D Incremental Changes, 2019
Mil Tonnes DAP/MAP/NPS/TSP - equivalent

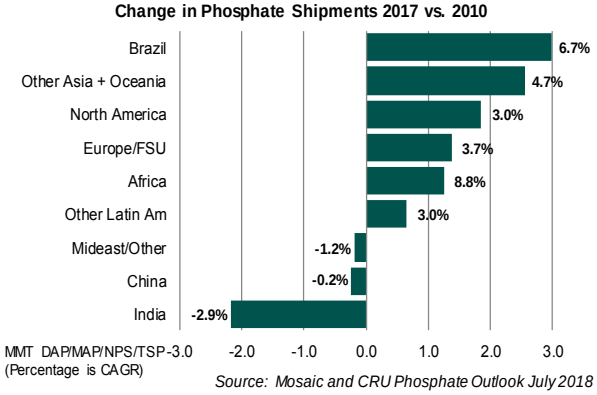
Shipment Increase		1.24	
Redwater Closure	*-0.45*		
OCP JPH 4 Ramp-Up	*0.50*		
OCP Debottlenecking	*0.30*		
MWSPC Ramp-Up	*0.50*		
GCT M'dilla Start-Up	*0.22*		
Misc Recovery (Tun.,S.Af.,Aus.)	*0.15*		
Yara (Brazil) Start-Up	*0.10*		
Sterlite Shutdown (India)	*-0.20*		
NTR Geismar Closure	*-0.15*		
Turkey/Egypt Greenfields	*0.30*		
Chinese Exports	*-0.50*	*-0.86*	*-1.25*
Supply Changes	**0.77**	**0.41**	**0.02**
Incremental Supply Surplus (+) or Deficit (-)	**-0.46**	**-0.83**	**-1.21**

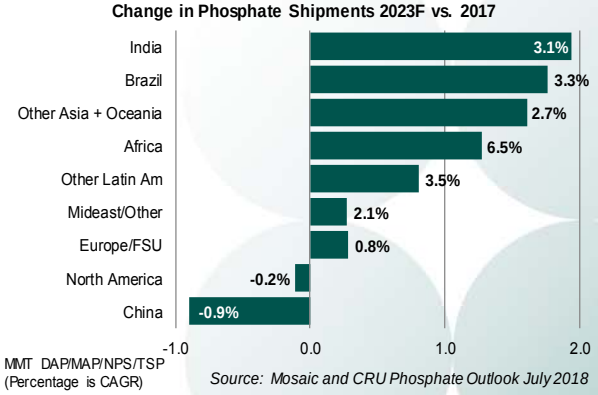
Expected changes in supply and demand likely will result in another deficit in 2019, particularly if environmental regulations significantly reduce Chinese production and exports. We do not expect the world to run out of phosphate any time soon, but this situation is expected to support prices and margins at levels that trim some demand and boost production and exports in order for the global market to reach an equilibrium.

Mosaic

Five-Year Outlook: Positive Demand Outlook







Global Phosphate Shipments

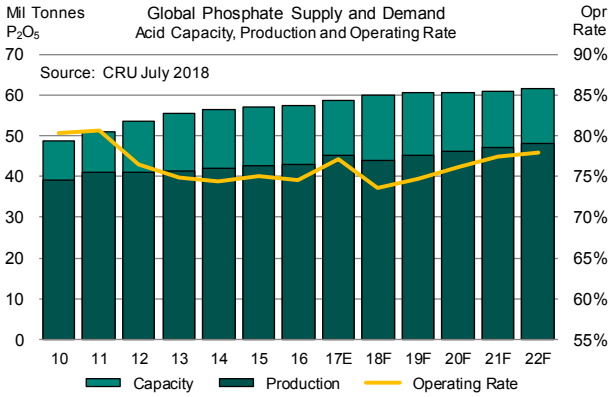
Mil Tonnes DAP/MAP/NPS/TSP	Mosaic Scenario Low	Likely	High	CRU Jul 2018
2010 Shipments		61.1		61.0
2017 Shipments		69.4		72.3
Change 2010-17		8.3		11.3
CAGR 2010-17		1.8%		2.5%
2023 Forecast	74.3	76.3	78.0	78.5
Change 2018-23	4.9	6.9	8.6	6.2
CAGR 2018-23	1.1%	1.6%	2.0%	1.4%

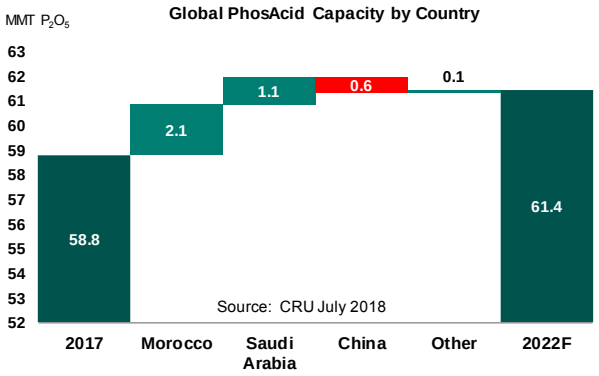
Source: Mosaic and CRU Phosphate Outlook July 2018

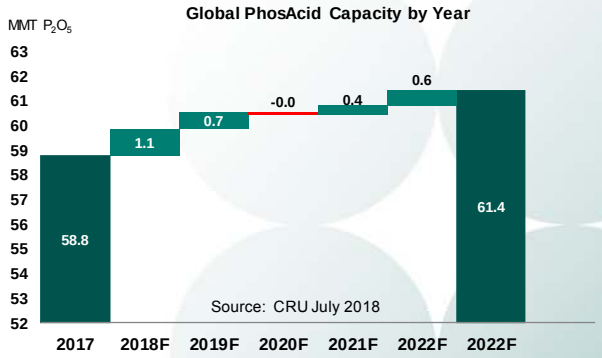
- By our most recent count, global shipments of the leading phosphate products increased 1.8% per year or 8.3 million tonnes from 2010 to 2017. India was a drag on demand with shipments dropping 2.2 million tonnes during this period due to subsidy cuts that resulted in a doubling of retail phosphate 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 1.6% per year or 6.9 million tonnes from 2017 to 2023. Indian demand is expected to recover due to generally favorable farm economics and expectations of a workable subsidy. Chinese shipments are projected to stabilize following another drop in 2018. Brazil, Other Asian countries and Africa are projected to post strong gains during this period.
- CRU projects that demand will grow at 1.4% from 2017 to 2022, but that mostly is the result of their higher baseline demand estimate for 2017.

Mosaic

Five-Year Outlook: CRU Forecasts (July 2018)







- CRU projects that global phosphoric acid capacity will increase 2.6 million tonnes P_2O_5 from 58.8 million in 2017 to 61.4 million in 2022. Morocco and Saudi Arabia account for all of the net increase, and the bulk of new capacity is expected online by the end of 2019.
- OCP is expected to add 2.1 million tonnes P_2O_5 from the ramp-up of JPHs 3&4 (0.6 mmt), the addition of Line F (0.5 mmt), the debottlenecking other Jorf lines (0.5 mmt), the start-up of the Laayoune project in Western Sahara in mid-2020 (0.3 mmt) and the start-up of JPH 5 in 2022 ((0.2 mmt). The increase in Saudi Arabia is from the ramp up of the Ma'aden Wa'ad al Shamal Phosphate Company (MWSPC) JV. The next big wave of expansions in both Morocco and Saudi Arabia are not expected on line until after the forecast period.
- CRU assumes Chinese phosphoric acid capacity will shrink 600,000 tonnes P_2O_5 as a result of industry restructuring and the enforcement of more stringent environmental regulations during this period. Several capacity changes are expected in the rest of the world, but the combined 1.6 million projected increase in Russia, Egypt, Turkey, Tunisia, Indonesia and Brazil is mostly offset by expected closures in North America (1.5 mmt).
- CRU estimates that the global operating rate dips this year due to a rapid ramp up of new capacity in Morocco and Saudi Arabia this year. The rate then trends upward during the rest of the forecast period.

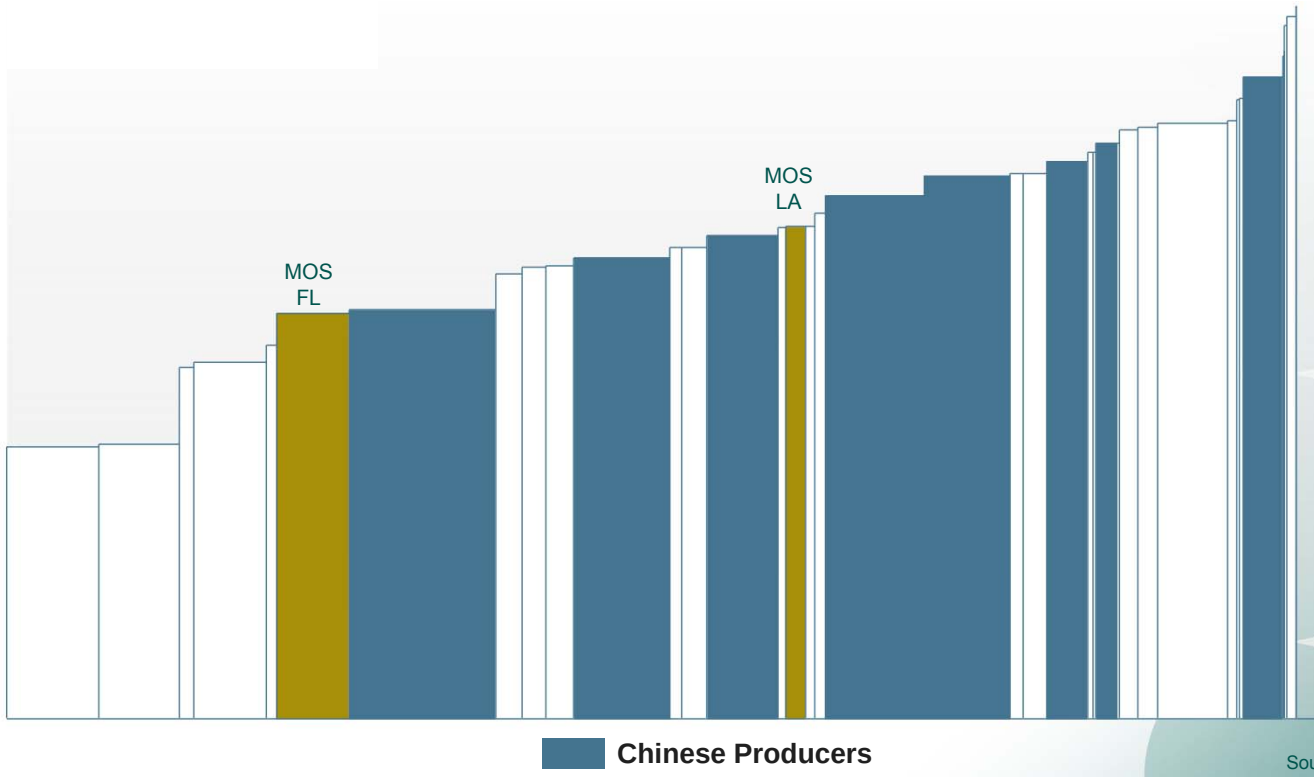
Mosaic

Factors to Watch

- Agricultural commodity prices
  - Food or farm crisis and impact on phosphate demand?
- Demand developments in key regions
  - Zero growth or declines in China?
  - Continued recovery in India?
  - An African take-off?
- Ramp-up of new capacity
  - Slower-than-expected or faster-than-expected?
- Restructuring of the Chinese phosphate industry
  - Significant closures due to environmental regulations or environmental policy backtracking and government lifelines?
- Competitor strategies and behaviors
  - Price over volume or volume over price?
- Raw materials costs
  - Price/demand impact and relative advantage or disadvantage?
- Currency risks/opportunities and macroeconomic/political shocks
  - Devaluation or appreciation of key phosphate currencies? (Real, Rupee, RMB, Ruble, Dirham)
  - Trade war or peace?

2021 Cost Curve Forecast

2021 DAP Cost Curve fob Plant at Effective Capacity



Source: CRU, Mosaic