

# Potash Outlook

## TFI Fertilizer Outlook & Technology Conference

November 15, 2017

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Market & Strategic Analysis  
The Mosaic Company



# Forward Looking Statements

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*This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements about our proposed acquisition of the global phosphate and potash operations of Vale S.A. ("Vale") conducted through Vale Fertilizantes S.A. (the "Transaction") and the anticipated benefits and synergies of the proposed 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 risks and uncertainties arising from the possibility that the closing of the proposed Transaction may be delayed or may not occur, including delays or risks arising from any inability of Vale to achieve certain specified regulatory and operational milestones, and the ability to satisfy any of the other closing conditions; our ability to secure financing, or financing on satisfactory terms and in amounts sufficient to fund the cash portion of the purchase price without the need for additional funds from other liquidity sources; difficulties with realization of the benefits of the proposed 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) and the entity operating the Miski Mayo mine, the risk that protests against natural resource companies in Peru extend to or impact the Miski Mayo mine, the ability of MWSPC to obtain additional planned funding in acceptable amounts and upon acceptable terms, the timely development and commencement of operations of production facilities in the Kingdom of Saudi Arabia, the future success of current plans for MWSPC and any future changes in those plans; difficulties with realization of the benefits of our long term natural gas based pricing ammonia supply agreement with CF Industries, Inc., including the risk that the cost savings initially anticipated from the agreement may not be fully realized over its term or that the price of natural gas or ammonia during the term are at levels at which the pricing is disadvantageous to Mosaic; customer defaults; the effects of Mosaic's decisions to exit business operations or locations; 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 or Canada, and including potential hurricanes, excess heat, cold, snow, rainfall or drought; actual costs of various items differing from management's current estimates, including, among others, asset retirement, environmental remediation, reclamation or other environmental regulation, Canadian resources taxes and royalties, or the costs of the MWSPC, its existing or future funding and Mosaic's commitments in support of such funding; reduction of Mosaic's available cash and liquidity, and increased leverage, due to its use of cash and/or available debt capacity to fund financial assurance requirements and strategic investments; brine inflows at Mosaic's Esterhazy, Saskatchewan, potash mine or other potash shaft mines; other accidents and disruptions involving Mosaic's operations, including potential mine fires, floods, explosions, seismic events, sinkholes or releases of hazardous or volatile chemicals; and risks associated with cyber security, including reputational loss, as well as other risks and uncertainties reported from time to time in The Mosaic Company's reports filed with the Securities and Exchange Commission. Actual results may differ from those set forth in the forward-looking statements.*



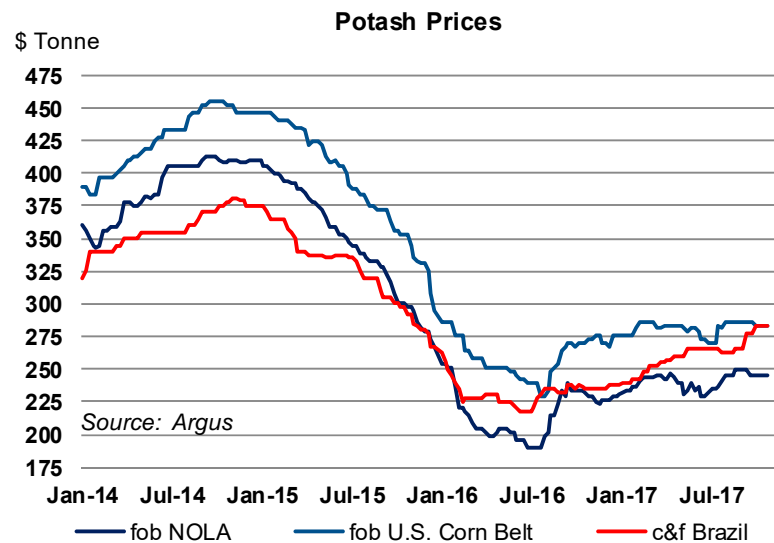
# Take-Aways

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- Prices have trended upward since mid-2016 but they remain below prior peaks
- Demand projected to grow 3% per year during the next five years
- Greenfield projects have come on line this this year and more will start up in 2018
- But no chronic or severe supply/demand imbalance is forecast



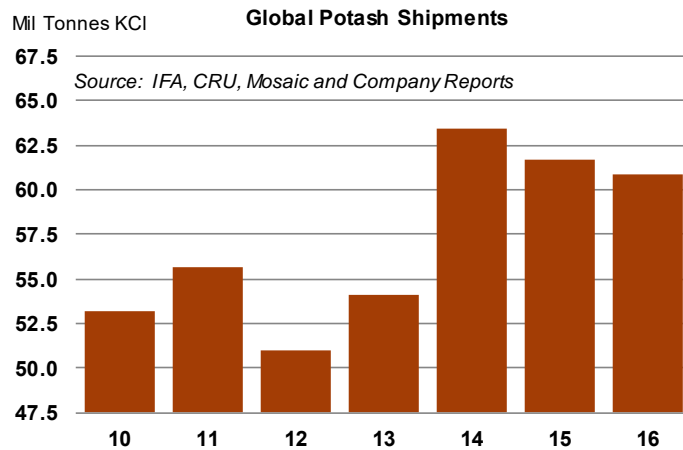
# Prices have trended up since mid-2016



- Strong broad-based demand growth
- Restructured/optimized operations
- Stable to stronger potash export currencies
- No immediate threat from new capacity

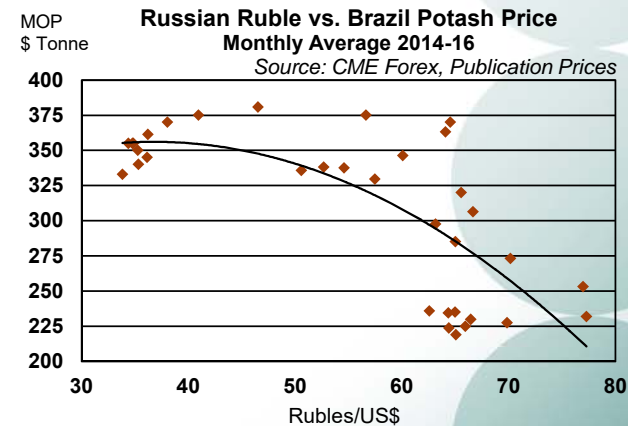
# Prices have trended up since mid-2016

(A quick recap)



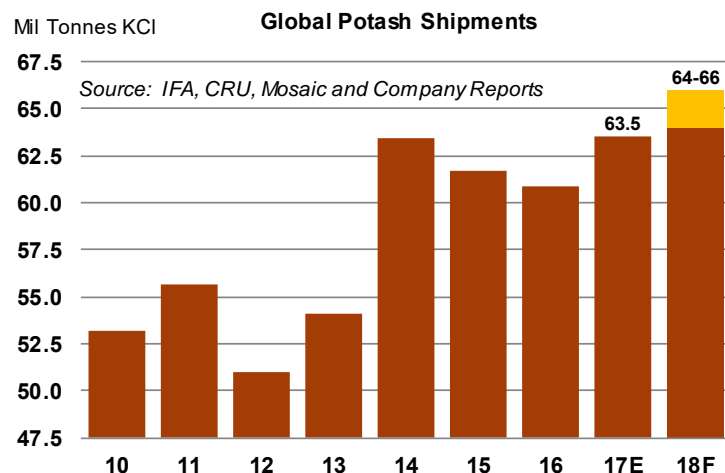
## What Happened in 2015-16?

1. Global shipments declined in 2015 and 2016 following the 9+ million tonne surge in 2014.
2. Five Canpotex proving runs added nearly 7 million tonnes of new capacity between 2013 and 2016. Other producers also brought brownfield expansions on line.
3. Key potash export currencies, particularly the Russian and Belarussian ruble, collapsed with the price of oil in 2015.



# Prices have trended up since mid-2016

(Looking ahead)



- We project global MOP shipments will rebound ~4% or 2.7 million tonnes KCl to **63.5 million in 2017**.
- Our first look at 2018 shows shipments will increase another ~3% or 1.7 million tonnes to **64-66 million**.



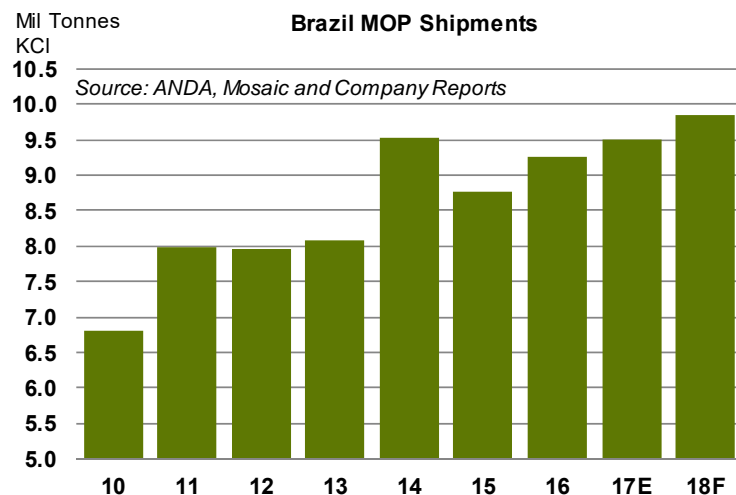
## What is Driving the Recovery Since Mid-2016?

1. A broad-based rebound in global shipments is underway.
2. North American producers have optimized operations following the completion of several brownfield expansion projects.
3. Key export currencies have stabilized or strengthened and inflationary cost pressures have picked up in these regions.

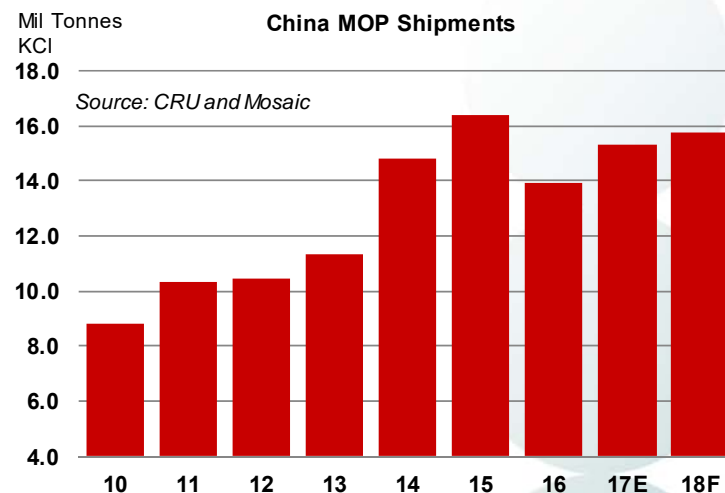
Company	Facility	Capacity (Tonnes)	Date Closed
Mosaic	Hersey	50,000	Mid-2014
Mosaic	Carlsbad	450,000	December 2014
PotashCorp	Penobsquis	800,000	December 2015
PotashCorp	Picadilly	2,000,000	December 2015
PotashCorp	Cory Red	600,000	November 2016
Intrepid	West Mine	350,000	July 2016
Intrepid	East Mine	200,000	Conversion to Trio
<b>Total</b>		<b>3,650,000</b>	

*Picadilly was a larger replacement for the Penobsquis mine so the net loss in Eastern Canada is 2.0 million tonnes KCl.*

# Strong Broad-Based Demand Growth

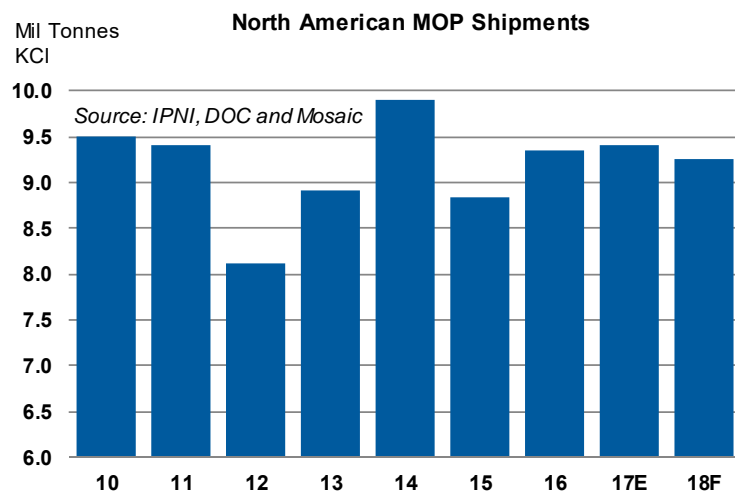


- Steady increases in soybean production in particular
- Decent farm economics despite stronger real
- MOP imports up 14% Jan-Oct 2017

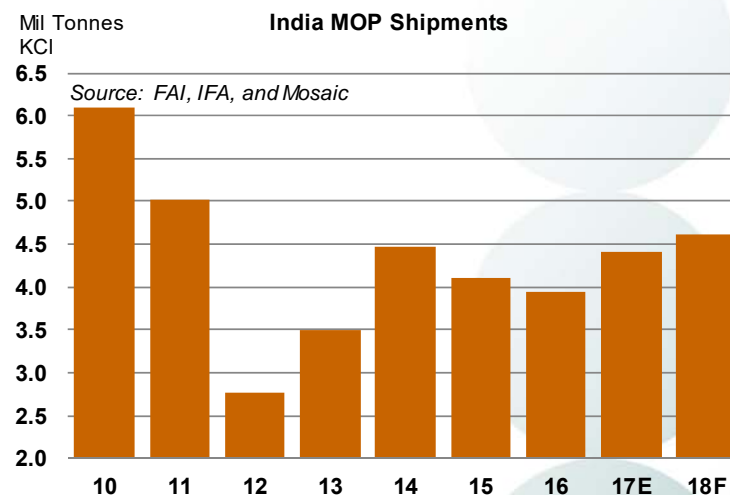


- Record crop production year after year
- Efforts to improve its potassium balance
- Big import recovery in 2017 combined with gains in domestic production
- Despite farm program uncertainties, changes in crop mix unlikely to impact on-farm K use in 2018

# Strong Broad-Based Demand Growth



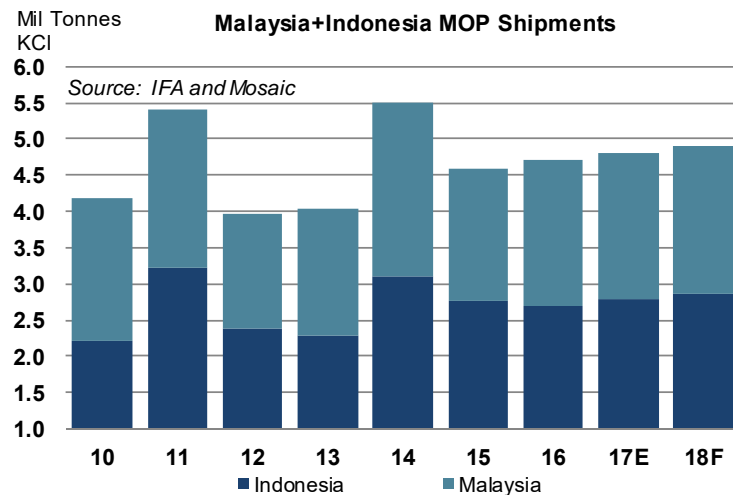
- MOP shipments typically range bound after a few volatile years driven by weather and fill program timing
- On-farm use projected about flat despite changes in crop mix
- Shipments also staying stable at 9.2-9.4 in CY 2017 and 2018



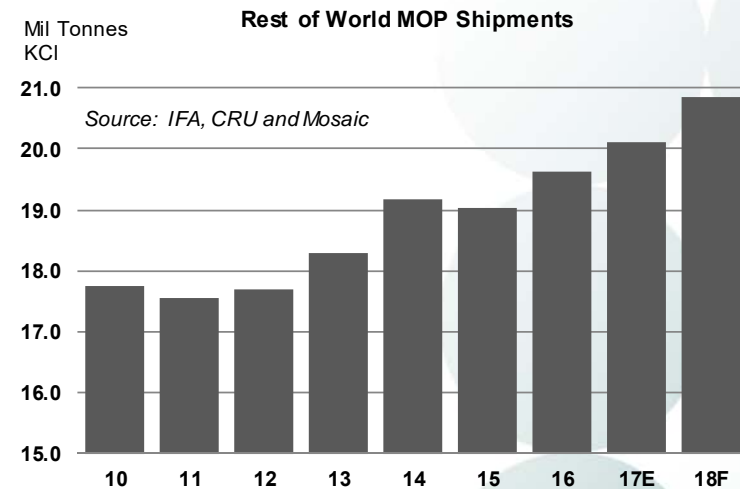
- Indian shipments slowly recovering from subsidy changes in '10/11 that resulted in a near tripling of retail potash prices
- A good monsoon, higher minimum crop support prices, rupee strength, and moderate K prices have underpinned demand growth



# Strong Broad-Based Demand Growth



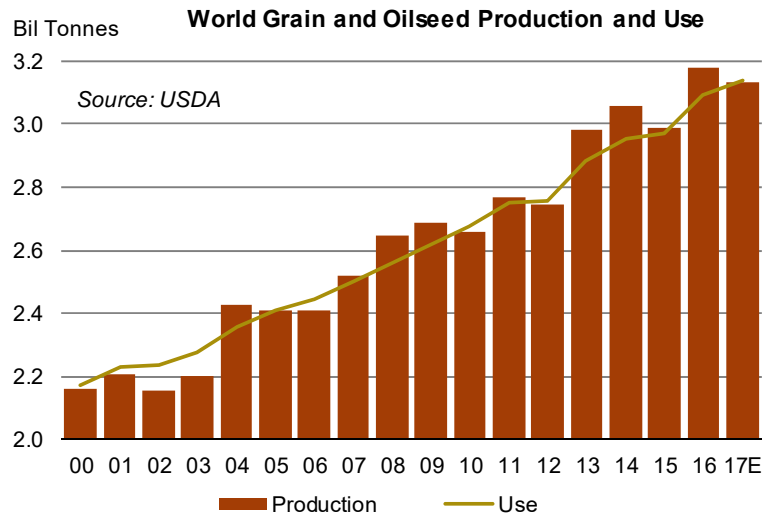
- Indo/Malay shipments have trended steadily upward (with a couple surges) driven mostly by palm oil production
- Normal rainfall this year, moderate palm oil prices, and higher rice prices underpin near-term demand gains



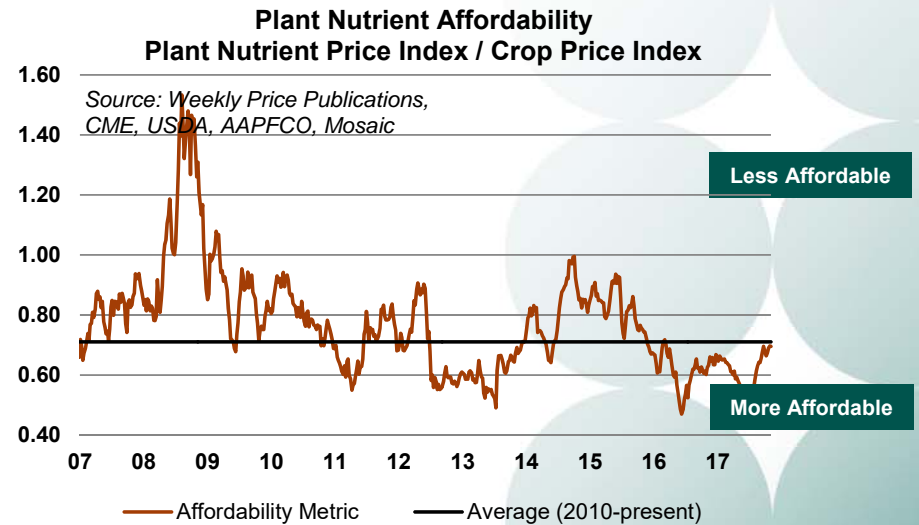
- Shipments outside the “Big Six” countries/regions have taken off
- Led mostly by other Asian and other Latin American countries as well as a doubling of African use (albeit from a low starting point)

# What's driving demand growth?

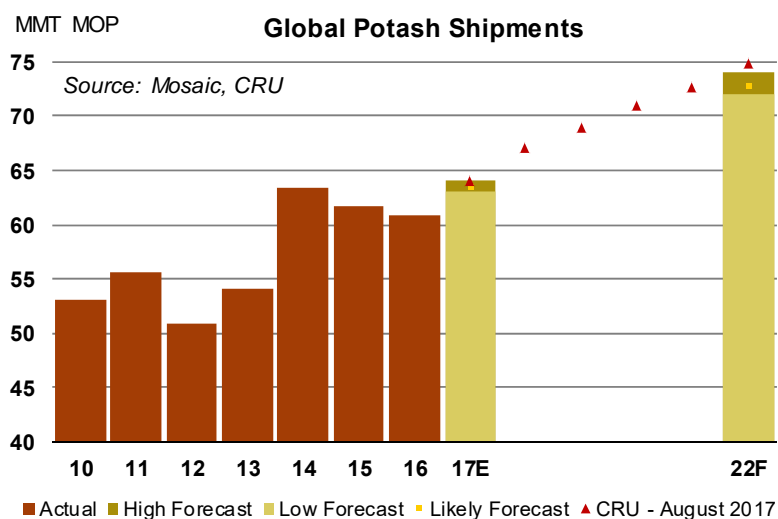
## Record harvests have removed record nutrients



## Affordable nutrients spur demand

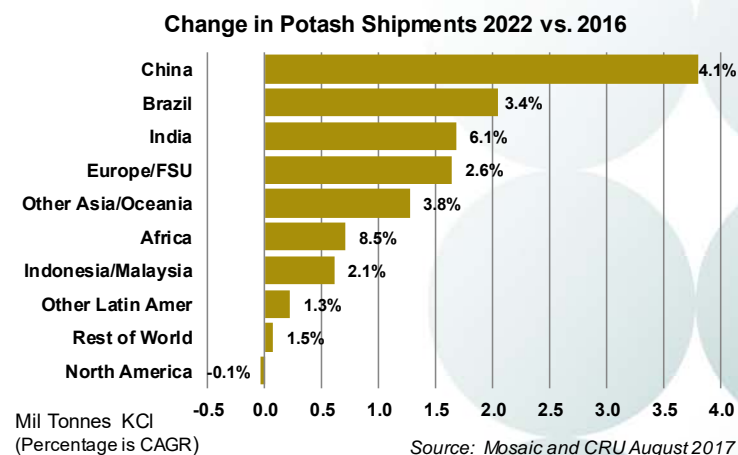
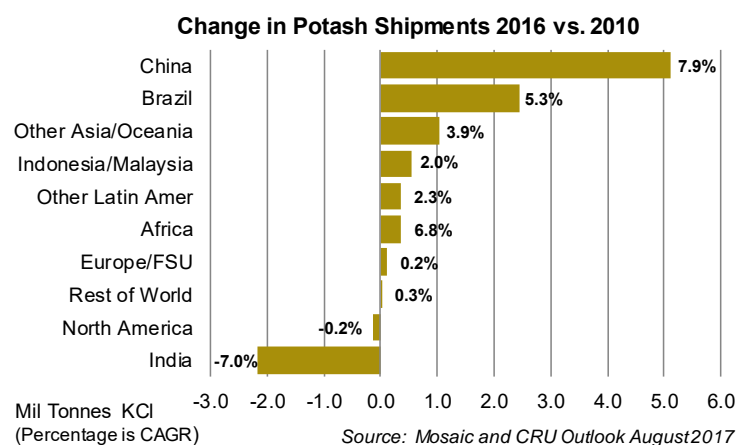


# Longer-term view: Broad-based demand growth



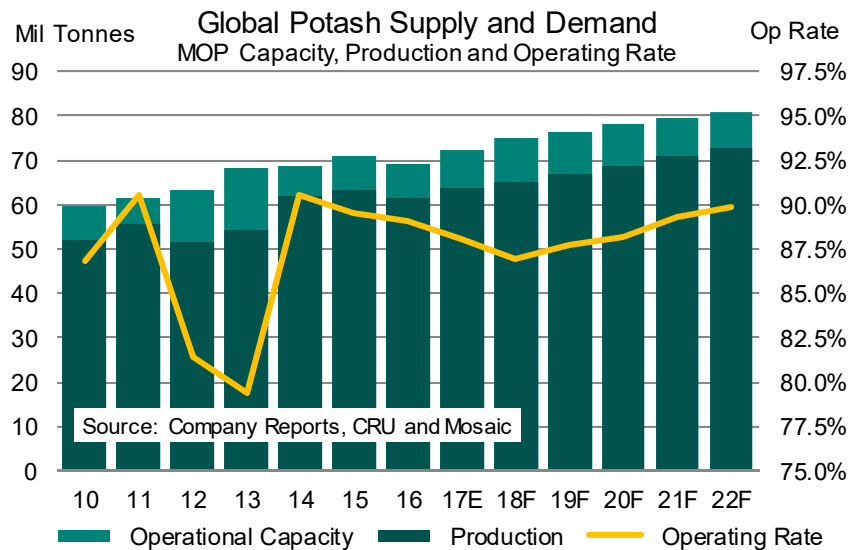
- Global MOP shipments increased 2.3% per year or 7.7 million tonnes from 2010 to 2016.
- **Shipments are forecast to increase 3.0% per year or 12.0 million tonnes from 2016 to 2022.**
- Demand drivers remain positive, and more rapid and consistent growth is expected.

# Longer-term view: Broad-based demand growth



- The traditional growth geographies - Brazil, China, India, Indonesia, and Malaysia account for almost 70% of the projected gain from 2016 to 2022, but other regions such as the former Soviet Union, other Asian countries and Africa are expected to post significant increases during the next five years.

# No long-term supply and demand imbalance



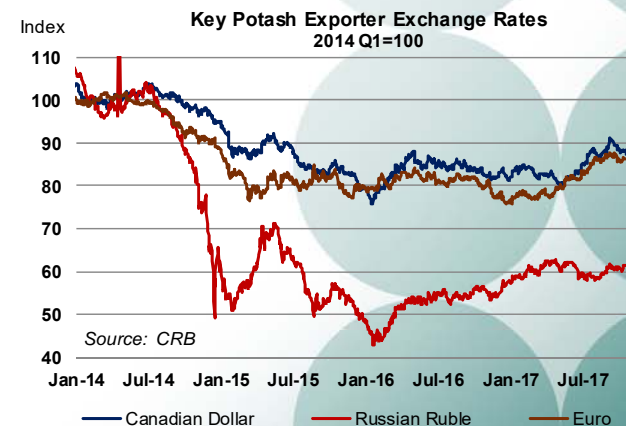
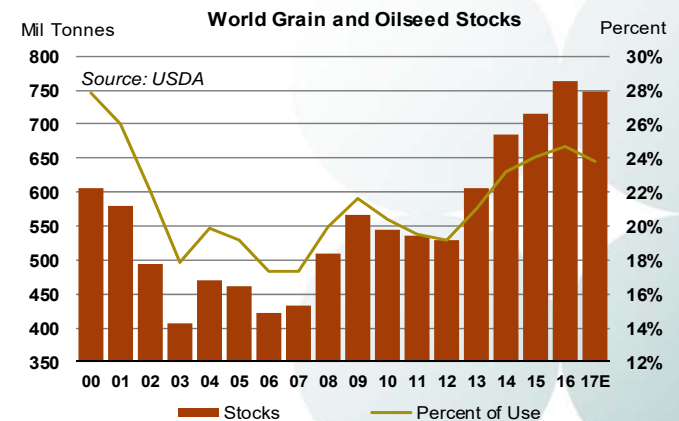
- Strong demand outlook leads to a tighter S&D from 2019 forward.
- Global operational capacity is projected to increase 12.8 million tonnes from 69.0 million in 2016 to 81.8 million in 2022.
- The global MOP operating rate is forecast to dip to ~86% in 2018 before moving back up to the 89% range by 2022.
- Assumes global demand will grow 3% per year and the four greenfield projects in Turkmenistan, Saskatchewan and Russia (2) will ramp-up based on cumulative production increases below:

Mil Tonnes KCl	2017	2018	2019	2020	2021	2022
Production	.50	2.1	3.2	4.5	5.7	6.9



# Factors to Watch

- Agricultural commodity prices
  - Will demand continue to soak up big supplies?
- Ramp up of new capacity
  - Timelines, operating strategies
- Industry consolidation and optimization
- Demand in Africa, FSU, India
  - India back on track or still a drag on global shipments?
- Key exchange rates
  - Will producer currencies continue to appreciate?
- Government policies
  - Subsidies, taxes, farm programs



# Thank you!

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