# Fertilizer Market Trends and Outlook

**December 10, 2013** 

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## **Statements**

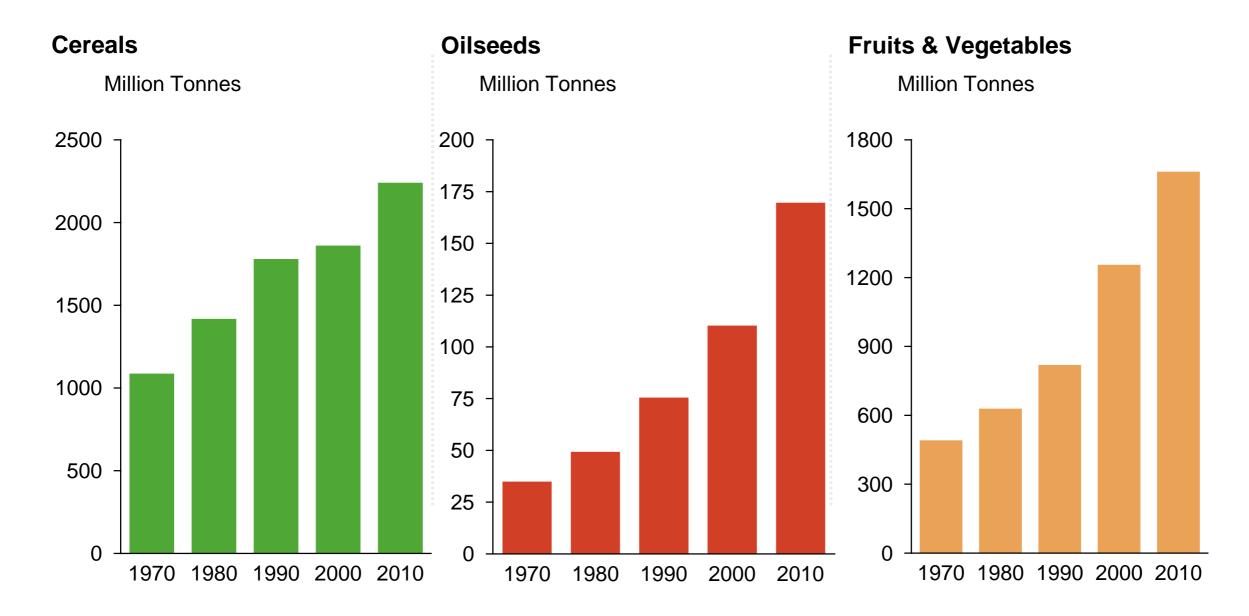
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# **Agriculture and Fertilizer**Market Update

## **World Crop Production**

Rising Crop Production Drives Need for Increased Fertilizer Use

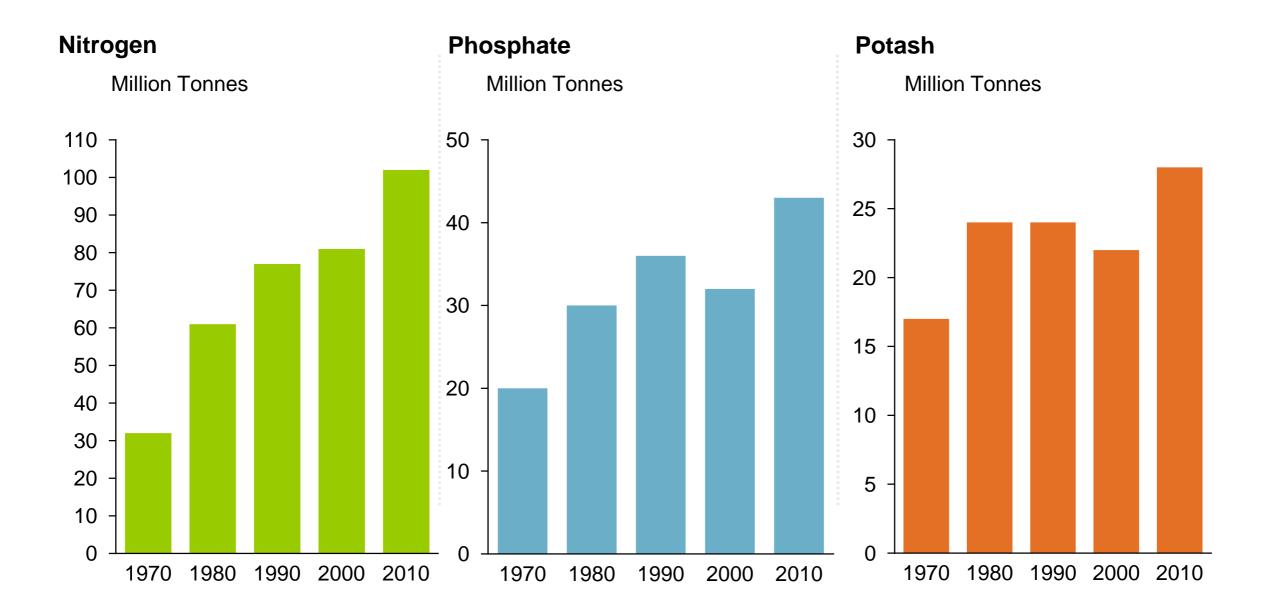




Source: FAO

## **World Fertilizer Consumption**

Rise in Consumption Tied to Crop Production; Political and Economic Events Make for Uneven Growth

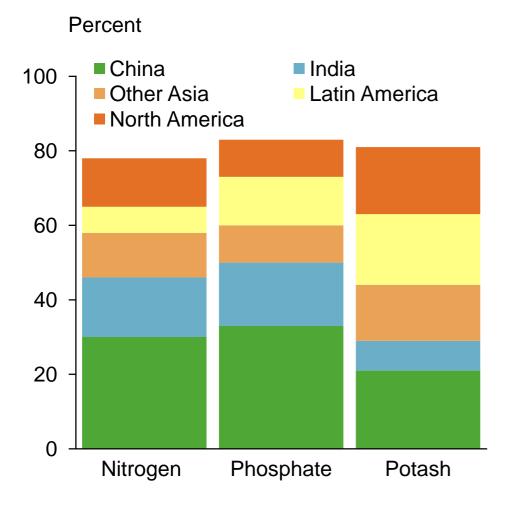




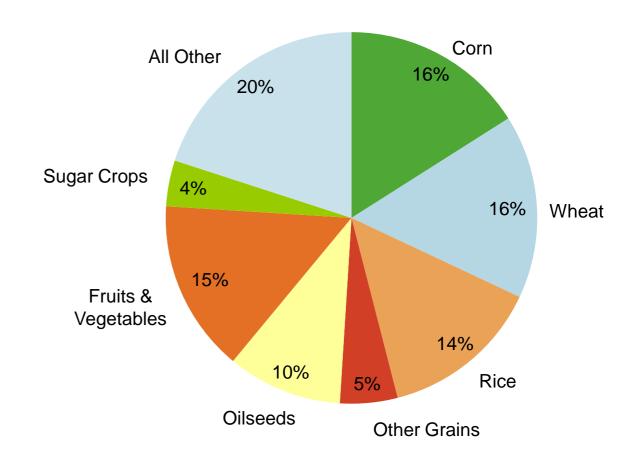
## World Fertilizer Consumption by Region and Crop

Potash Has Most Diversity Amongst Regions and Crops

#### **Fertilizer Consumption by Region**



#### **Fertilizer Consumption by Crop**



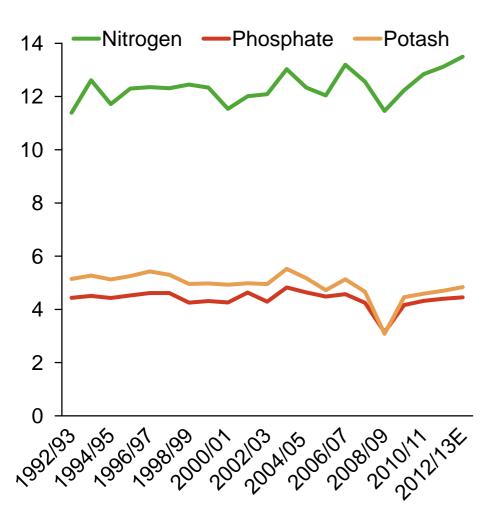


## **US Fertilizer Consumption Profile**

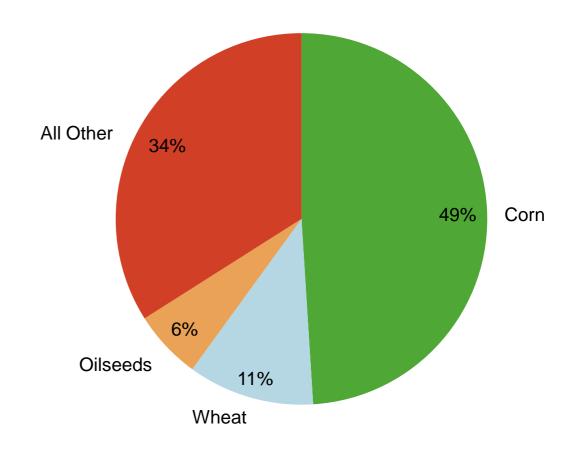
### Corn is the Major Driver of US Fertilizer Consumption

#### **Fertilizer Consumption**

Million Tons



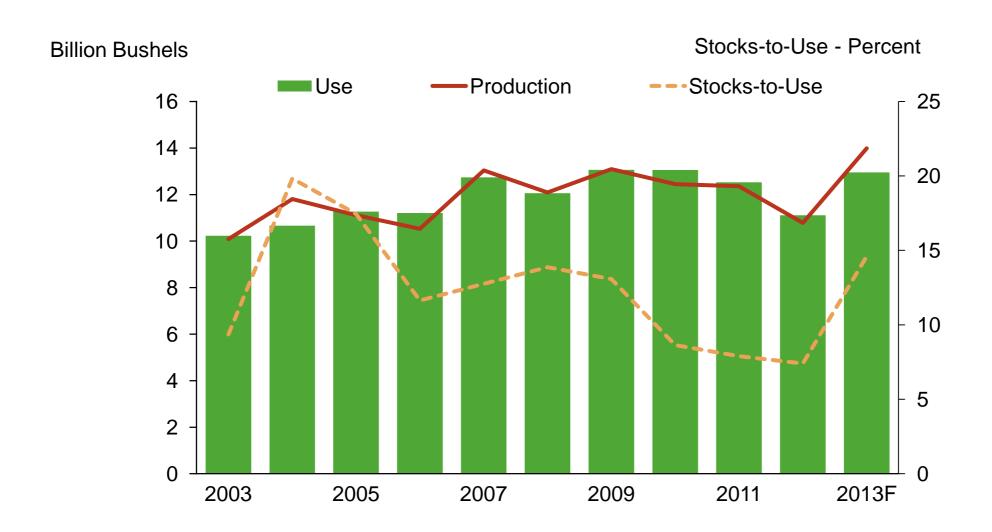
#### **Fertilizer Consumption by Crop**





## **US Corn Supply/Demand**

## **Expect Record Production and Improved Demand Prospects**



2013F refers to the 2013/14 crop year.

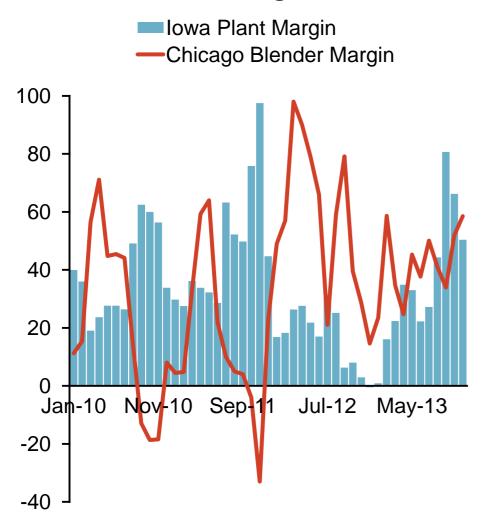


**Source: USDA** 

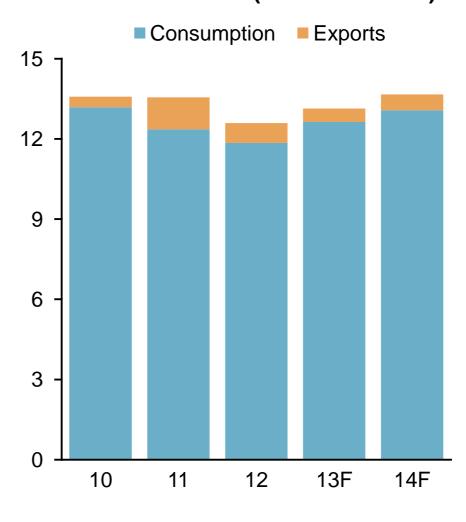
## **US Ethanol Profile**

### EPA Lowers Mandate but Positive Margins Could Support Additional Production

#### **Producer and Blender Margins – Cents/Gallon**



#### **US Corn Ethanol Use (Billion Gallons)**

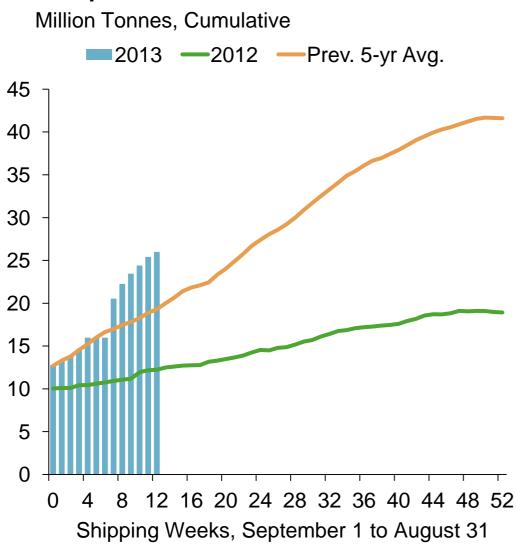




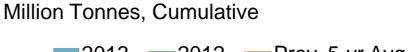
## **US Weekly Corn and Soybean Export Commitments**

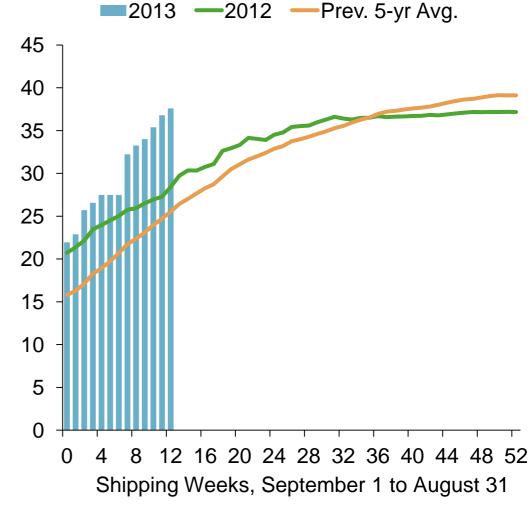
Strong Recovery in Offshore Demand for US Corn and Soybeans

#### **Corn Export Commitments**



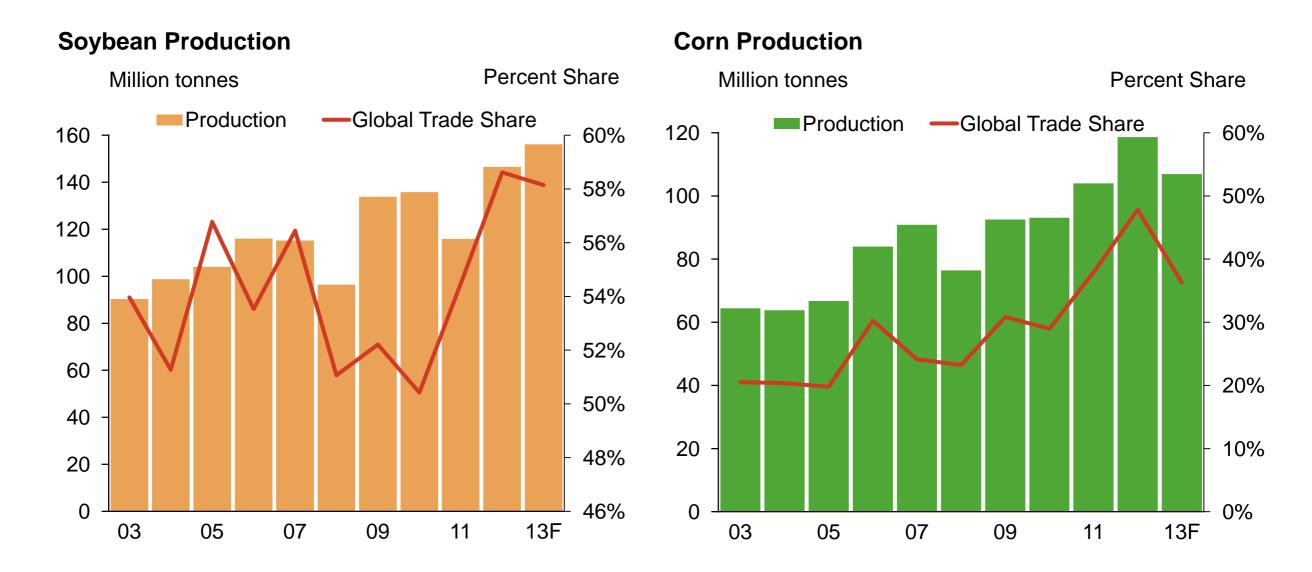
#### **Soybean Export Commitments**





## **South America Crop Production**

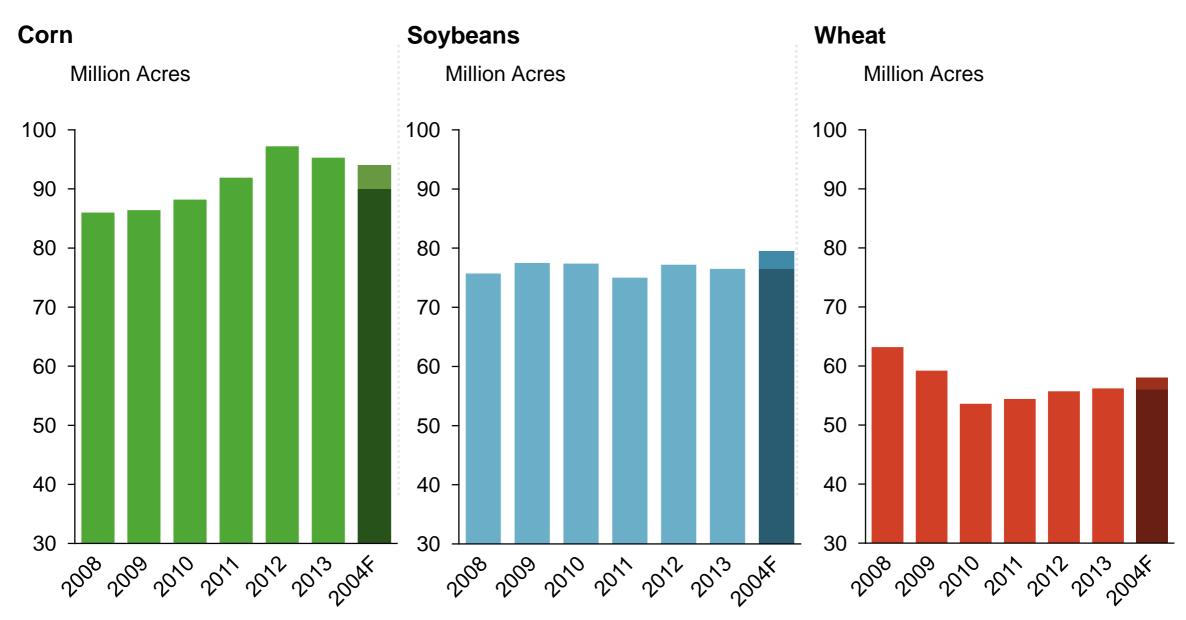
Soybean Production Expected to Rise; Corn Output to Decline





## **US Crop Acreage**

## Expect Some Acreage Shifts in 2014

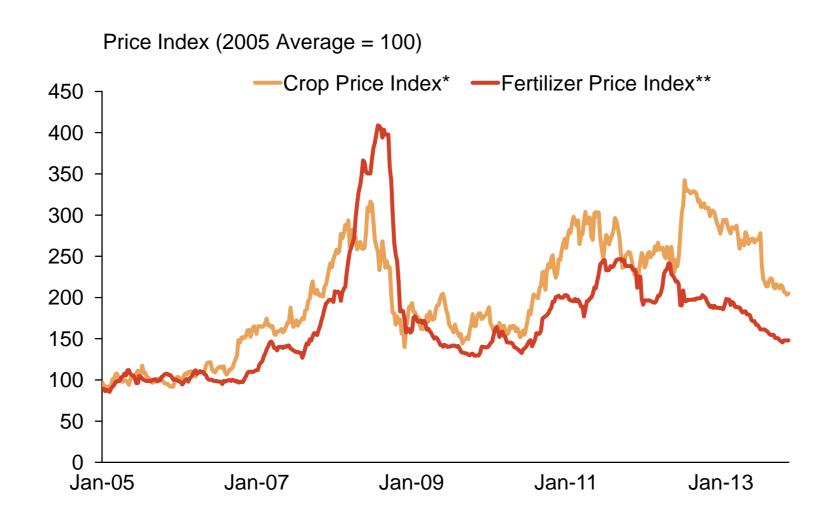


Lighter shaded area refers to forecast range for 2014.



## **Crop and Fertilizer Price Index**

#### Significant Economic Incentive for Increased Fertilizer Usage



<sup>\*</sup> Based on corn, soybean and wheat prices (weighted by global consumption)

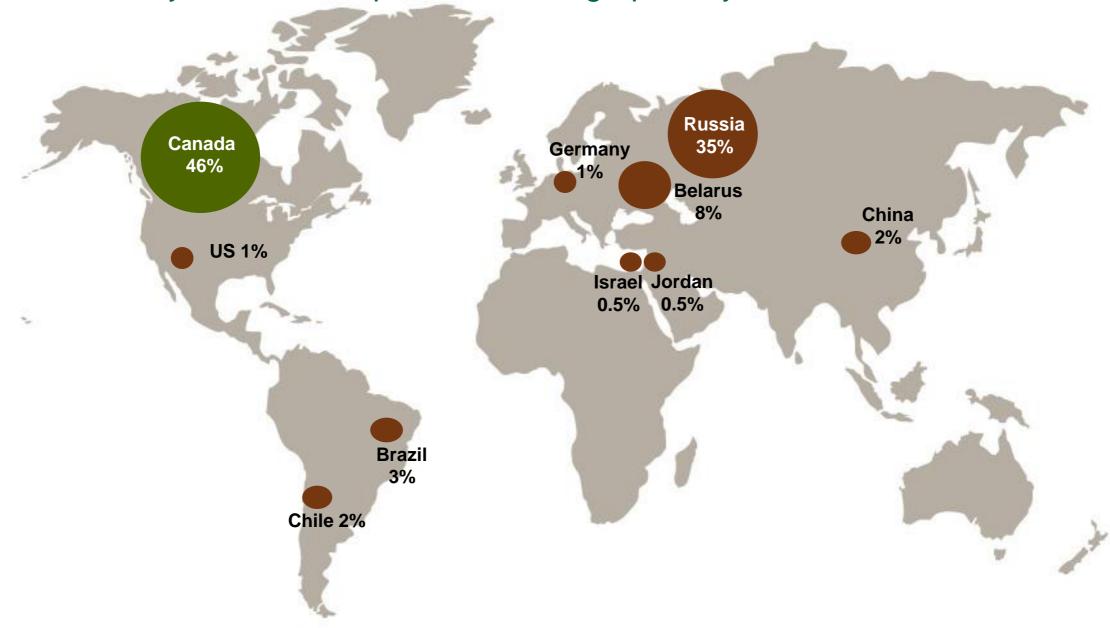


<sup>\*\*</sup> Based on urea, DAP and KCI prices (weighted by global consumption)

## **Potash Market Update**

## **World Potash Reserves\***

Economically Mineable Deposits Are Geographically Concentrated



<sup>\*</sup> Share of world's potash reserves; reserves as defined by the US Geological Survey Other countries total 1 percent

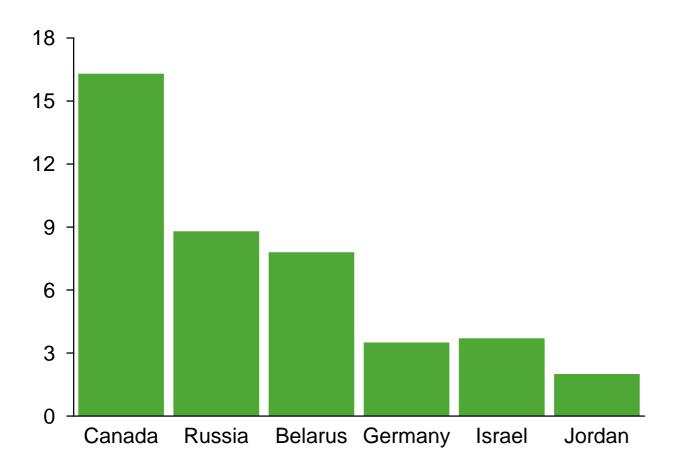


## **World Potash Trade**

#### Major Exporters and Importers

#### **Exports**

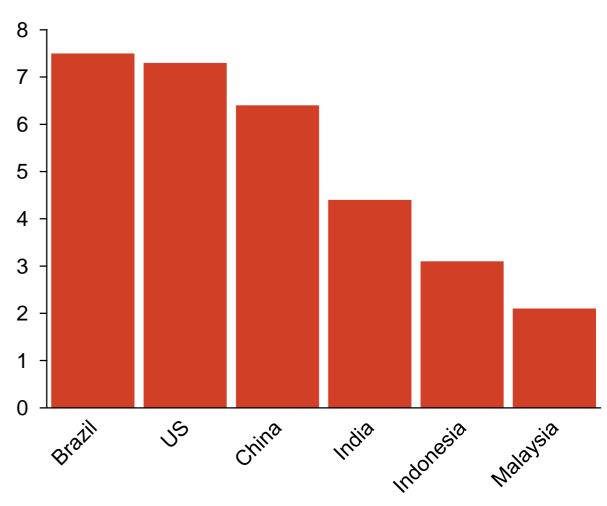
Million Tonnes KCI



World trade was approximately 44 million tonnes in 2011. Approximately three-quarters of global production is traded.

#### **Imports**

Million Tonnes KCI

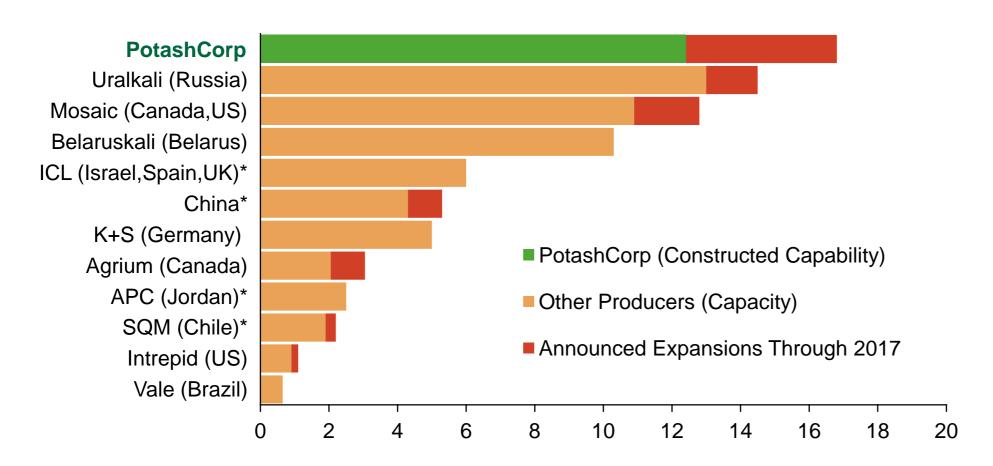




## **World Potash Producer Profile**

#### Majority of the Capacity Increases Are Expected From Existing Producers





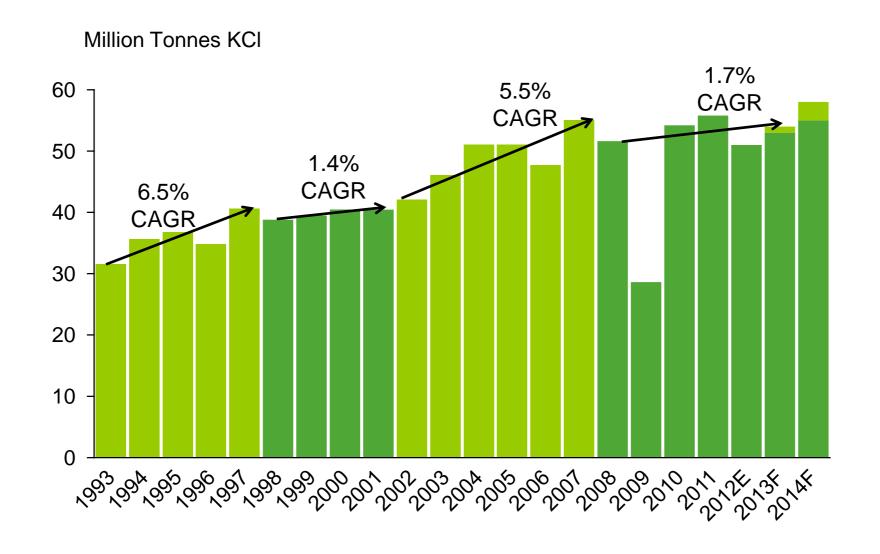
<sup>\*</sup> PotashCorp investments: ICL (14%), APC (28%), SQM (32%) and Sinofert (22%)

Note: PotashCorp based on operational capability (estimated annual achievable production) while competitor capacity is stated nameplate, which may exceed operational capability



## **World Potash Shipments**

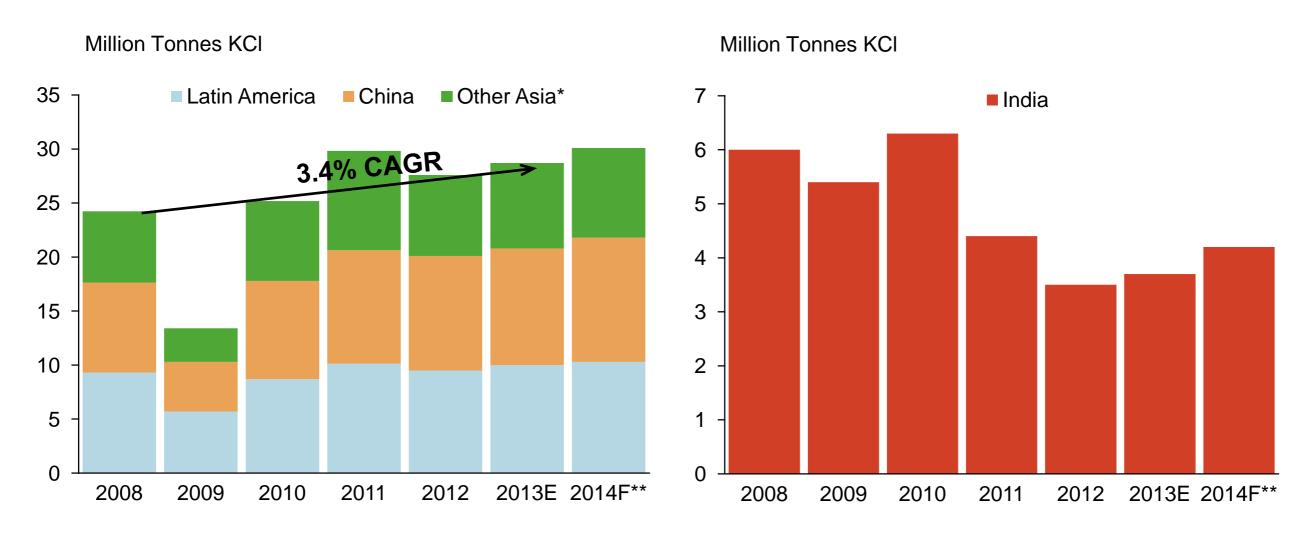
Slower Demand Periods Have Been Followed by Robust Growth





## Potash Shipments to Key Offshore Markets

Demand Has Been Relatively Strong in Markets Outside of India



<sup>\*</sup> Excludes India.

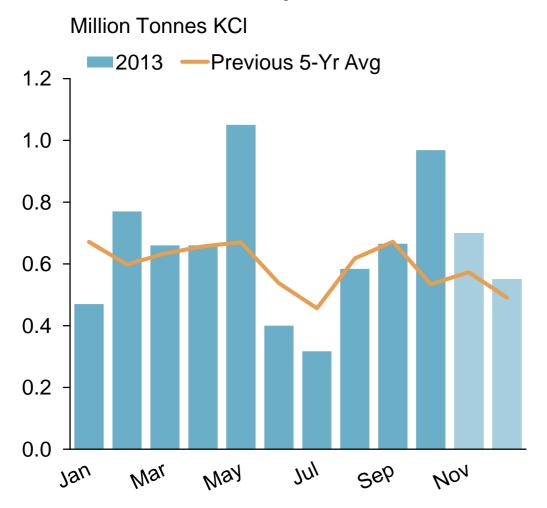


<sup>\*\*</sup>Forecast per PotashCorp; represents mid-point of range.

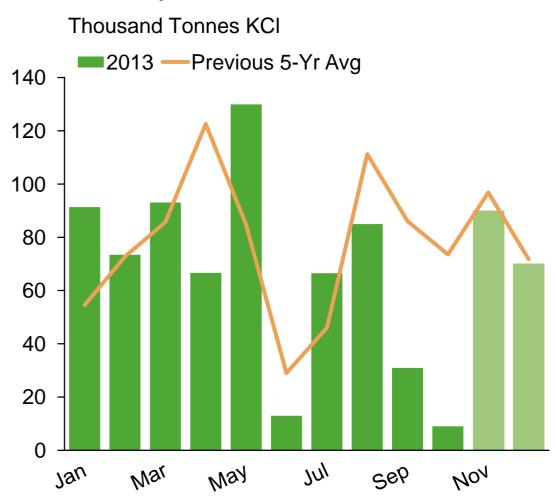
## **North America Potash Shipments**

#### Demand Has Strengthened in the Fourth Quarter

#### **Domestic Producer Shipments**



#### **Offshore Imports**

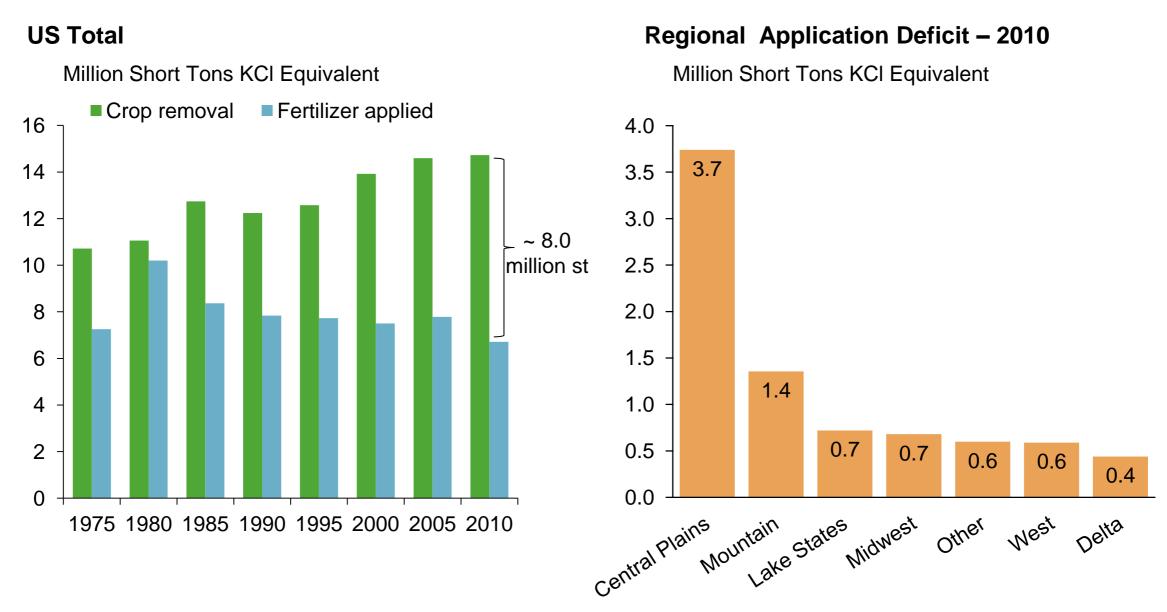


November/December shipments based on PotashCorp estimates. November/December imports based on Blue Johnson and PotashCorp estimates.



## **US Potassium Application and Crop Removal**

Application Rates Have Not Kept Pace With Higher Crop Removal



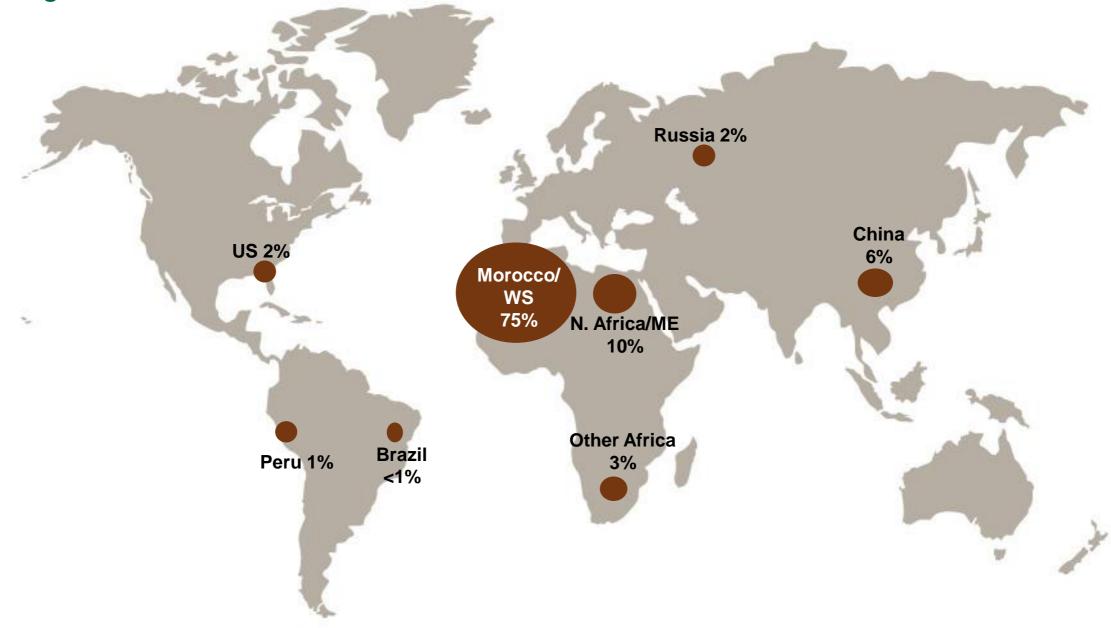
Calculation based on commercial fertilizer application data, estimated nutrients available from manure and crop removal rates for all major crops grown in the US.



# Phosphate Market Update

## World Phosphate Rock Reserves\*

Large Concentration of Reserves in North Africa & Middle East

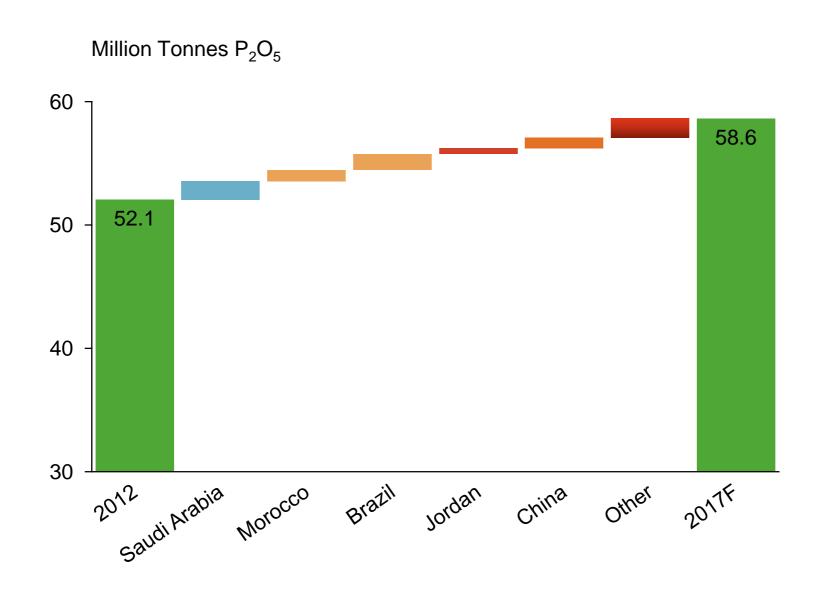


<sup>\*</sup> Share of world's phosphate reserves; reserves as defined by the US Geological Survey. Total reserves estimated at 67 billion.



## **Global Phosphoric Acid Capacity Additions**

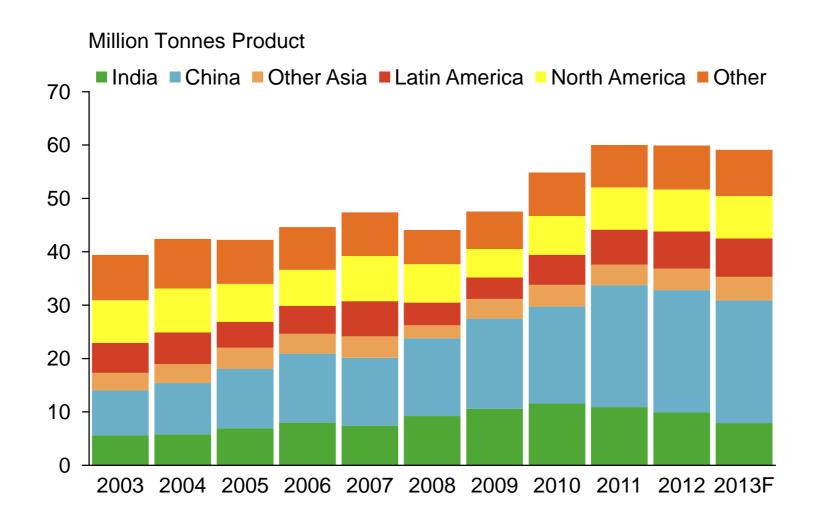
Majority of Capacity Being Developed in Saudi Arabia, Morocco and Brazil





## **World DAP and MAP Consumption**

Indian and Chinese Demand Has a Significant Impact on the Global Market

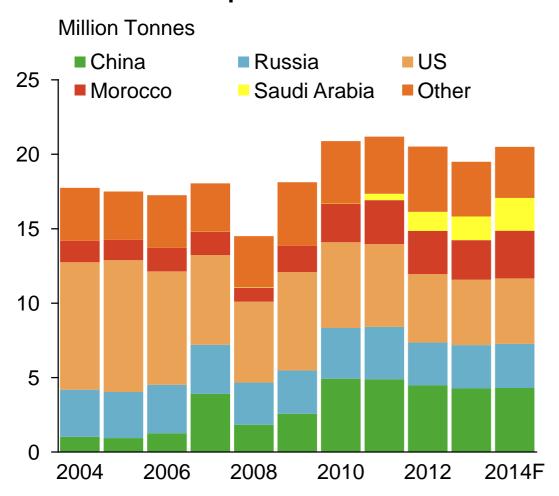




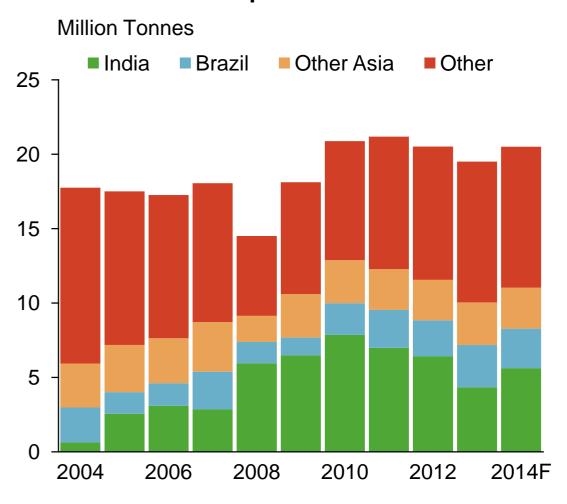
## **World DAP and MAP Trade**

#### Demand Recovery in India to Support Global Phosphate Trade

#### **World DAP/MAP Exports**



#### **World DAP/MAP Imports**





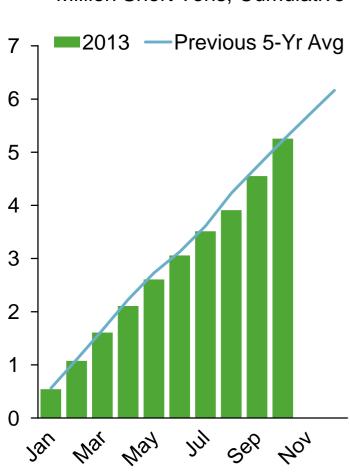
Source: CRU, TFI, PotashCorp

## **US DAP/MAP Use and Inventory Exports**

### Lower Sales Have Resulted in Elevated Inventory

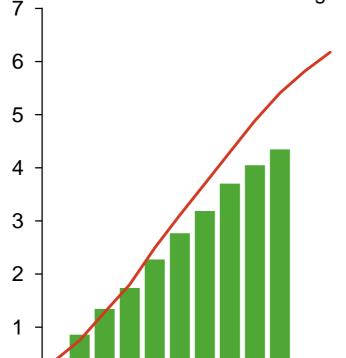
#### **Domestic Sales**

Million Short Tons, Cumulative



#### **Exports**

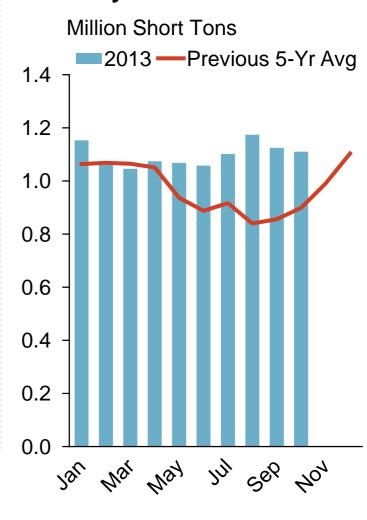




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#### Inventory



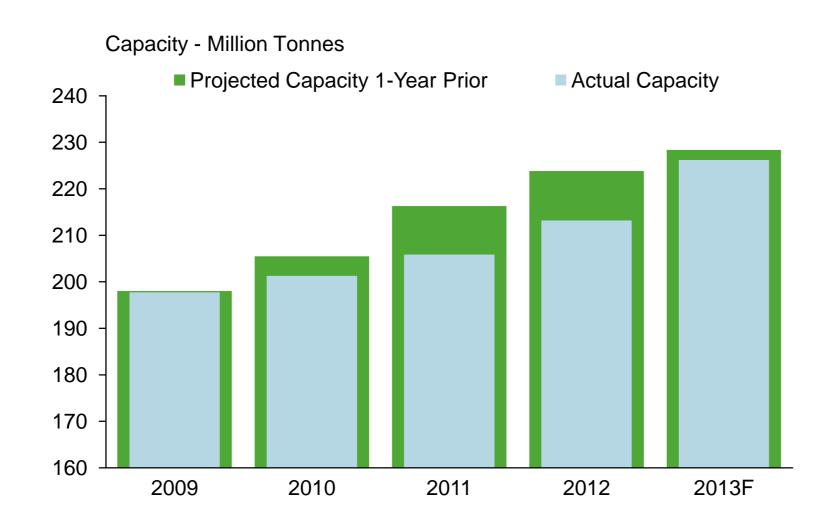


Source: TFI

## **Nitrogen Market Update**

## Ammonia Capacity Projections vs. Actual Additions

### Global Ammonia Projects Have Faced Delays

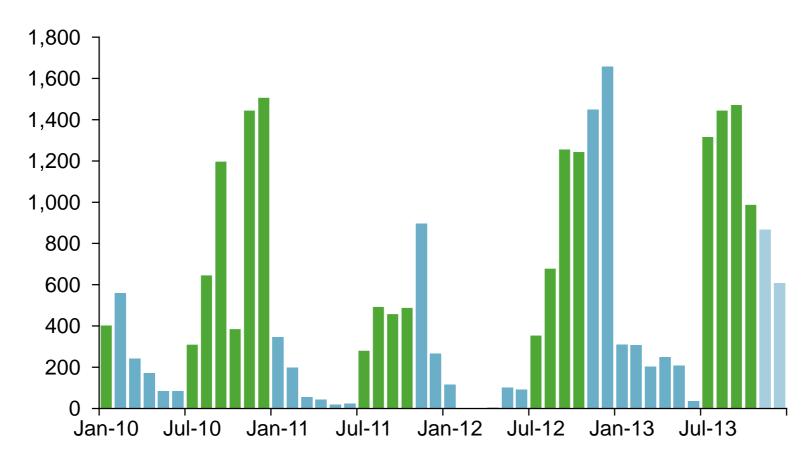




## **China Urea Exports by Month**

## Impact of China's Export Tax on Urea Trade Volumes



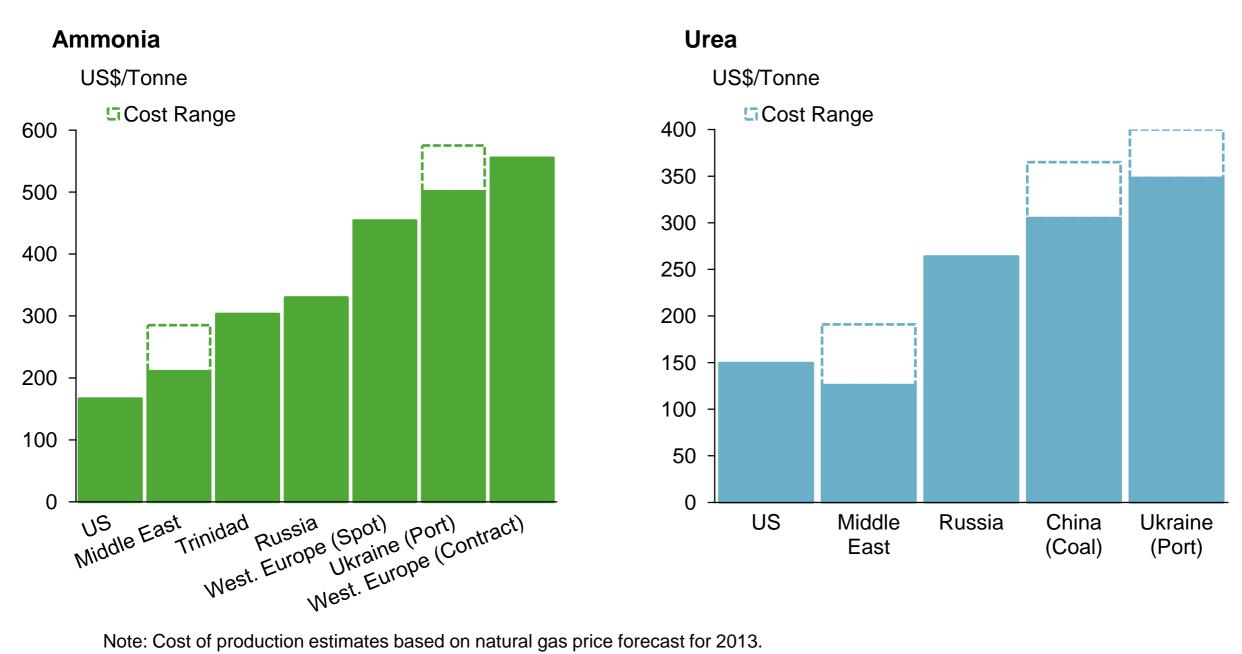


Blue denotes high export tax months; Green denotes low-tax window



## Delivered Cash Costs to the US Market

Production Costs Remain High In Several Key Nitrogen Producing Regions

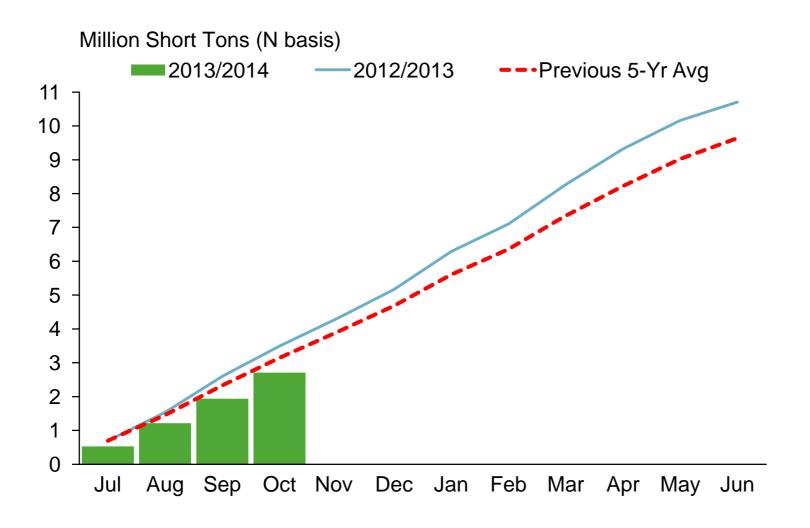


Note: Cost of production estimates based on natural gas price forecast for 2013.



## **US Cumulative Nitrogen Imports**

## Potential for a Robust Spring

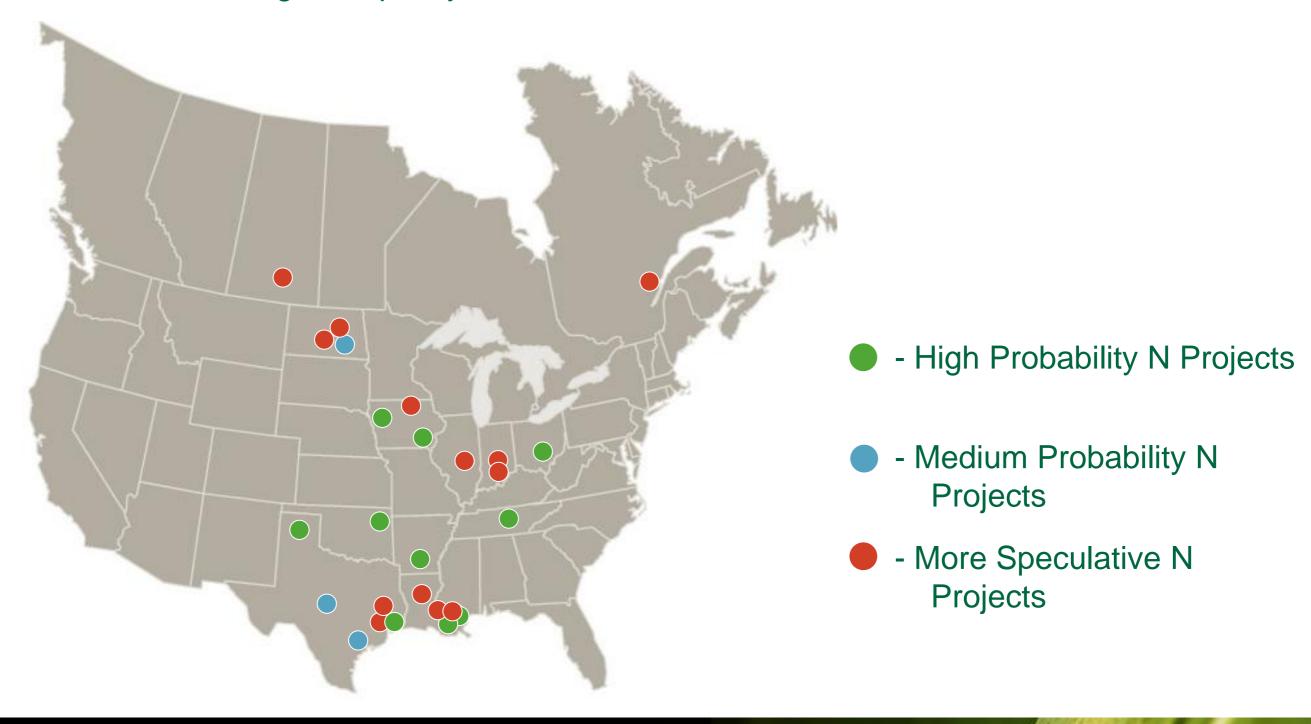


Note: Nitrogen imports include ammonia, urea, and UAN.



## Potential North American Nitrogen Project Locations

Numerous Nitrogen Capacity Announcements; Few Under Construction



## **\*\*** Thank you

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