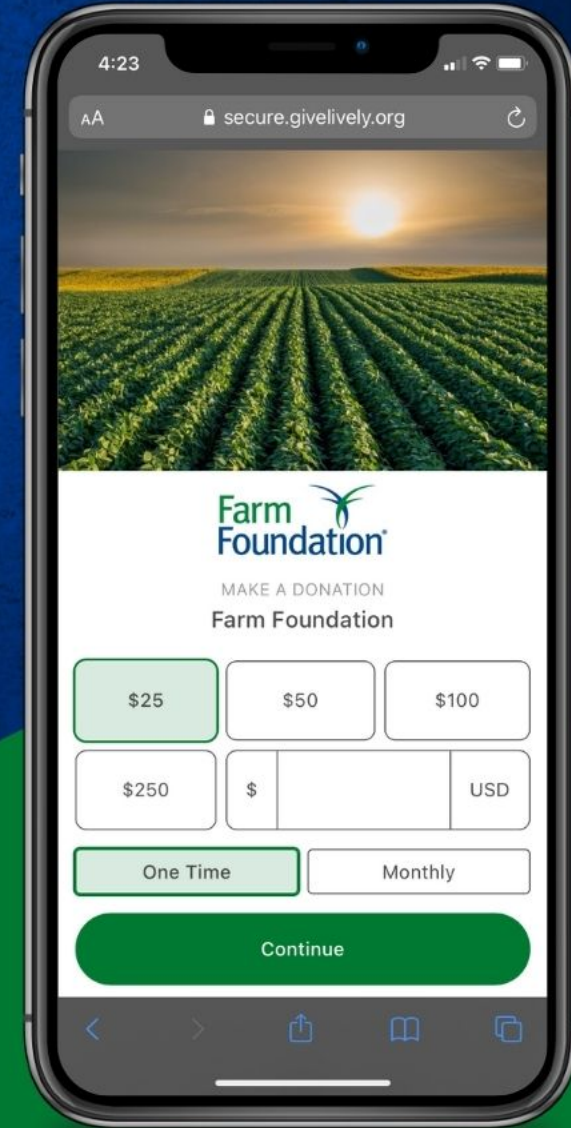
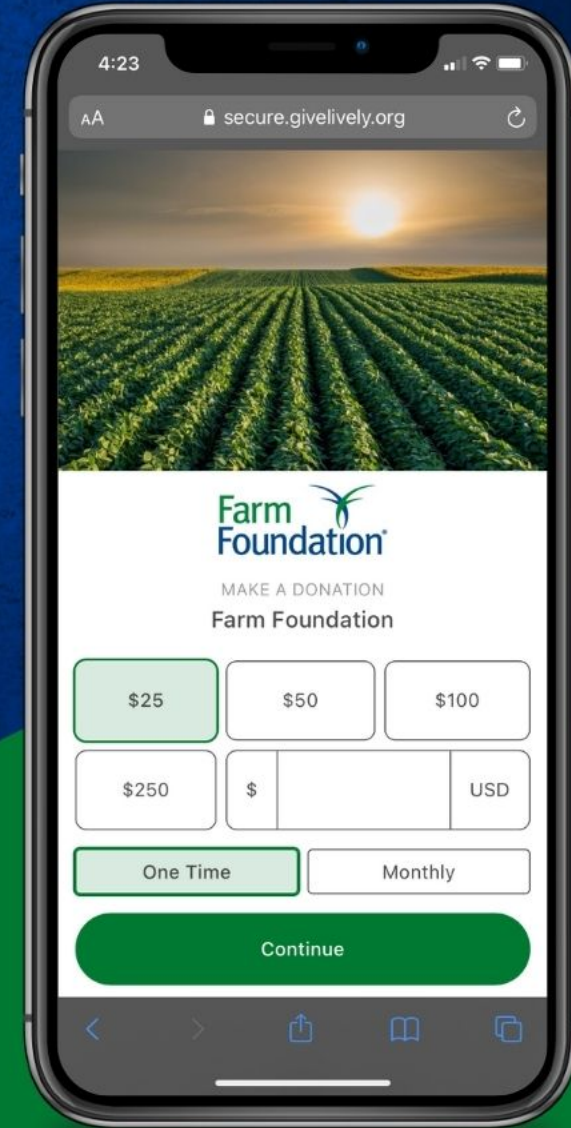


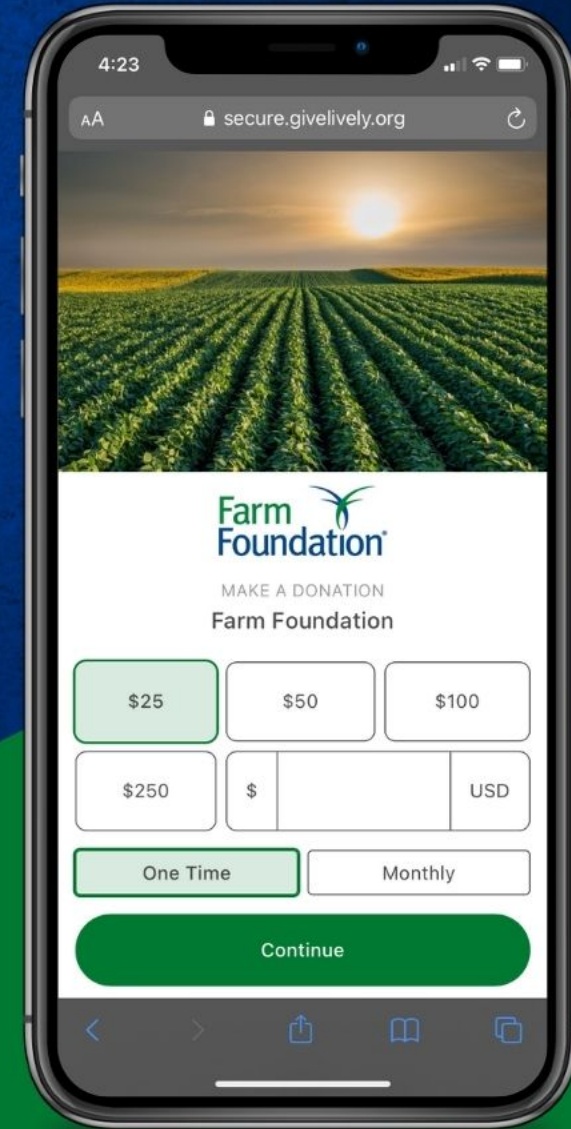
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2022 ECONOMIC OUTLOOK FOR AGRICULTURE

DECEMBER 16, 2021



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SHARI ROGGE-FIDLER

President & CEO
Farm Foundation

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into
ACTION.



OUR MISSION AND VISION GUIDE OUR WORK

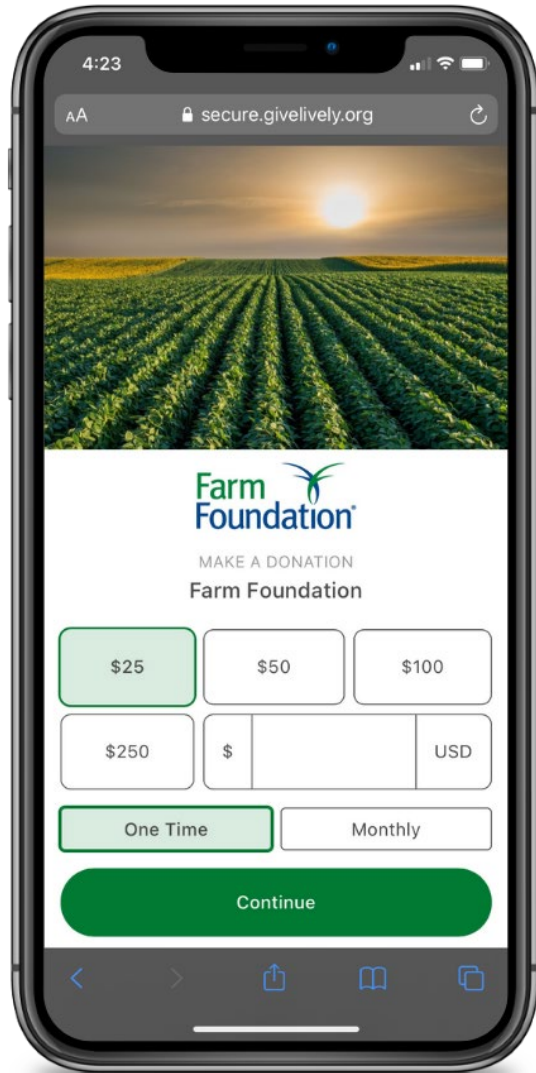
MISSION:

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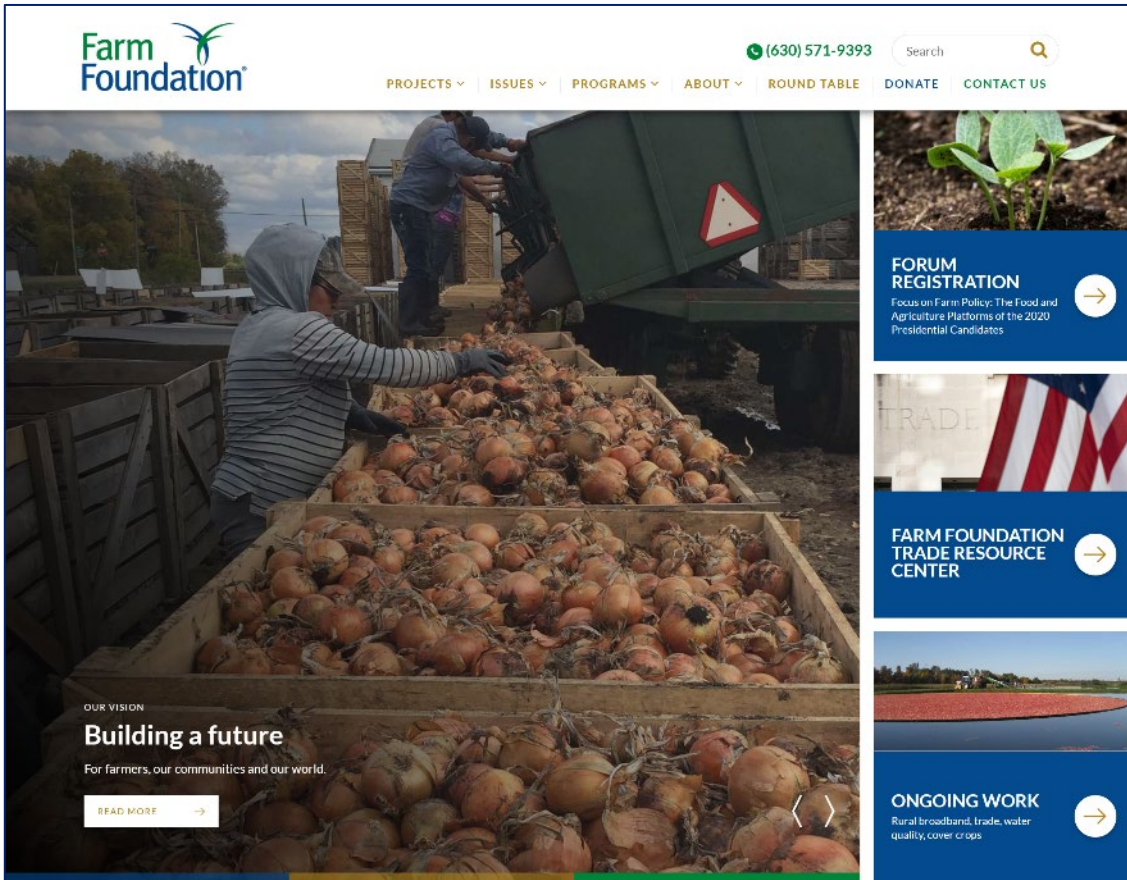
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IMPORTANT NOTES

- Submit questions by clicking on the **Q&A Button** at the bottom of your screen.
- Please **include your name and company** so questions may be contextually understood.
- Due to **time limits**, we may not be able to ask all questions submitted.
- This Forum is being recorded and will be posted on our website at **farmfoundation.org** as well as the Farm Foundation **YouTube** channel.
- Please take the **short survey** at the conclusion of the Forum.



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**2022 ECONOMIC OUTLOOK FOR
AGRICULTURE**

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GREGG DOUD

Moderator

Vice President of Global Situational Awareness
And Chief Economist
Aimpoint Research





DR. AMANDA COUNTRYMAN

Associate Professor of Agricultural Economics
Colorado State University

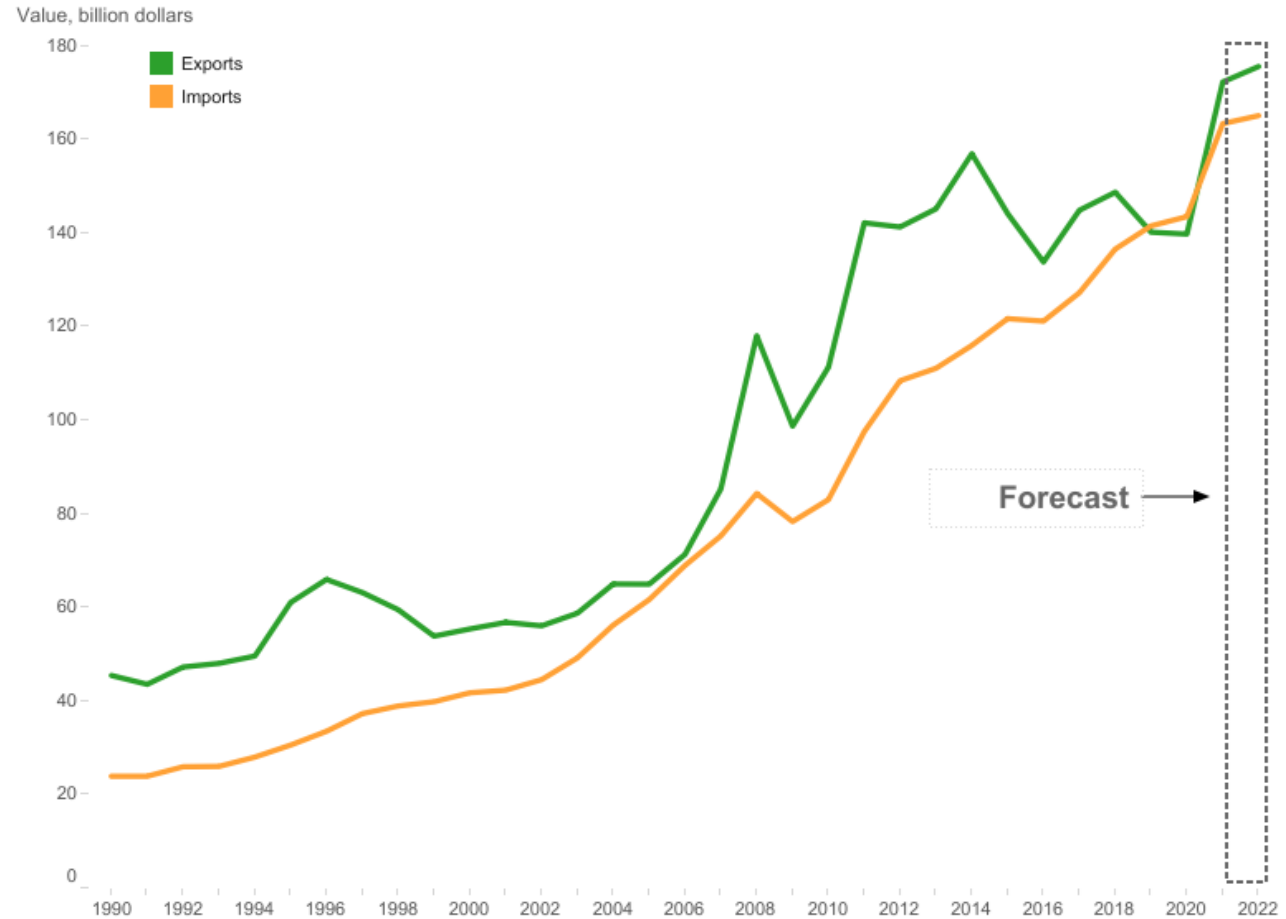
AGRICULTURAL TRADE AND POLICY OVERVIEW

- U.S. Agricultural Trade Snapshot
- U.S.-China Trade
- Trade Policy Highlights
- Global Challenges and Uncertainty

OUTLOOK FOR U.S. AG TRADE

Ag Trade Forecast FY 2022
-Exports at Record \$175.5 bn
-Imports at \$165.0 bn

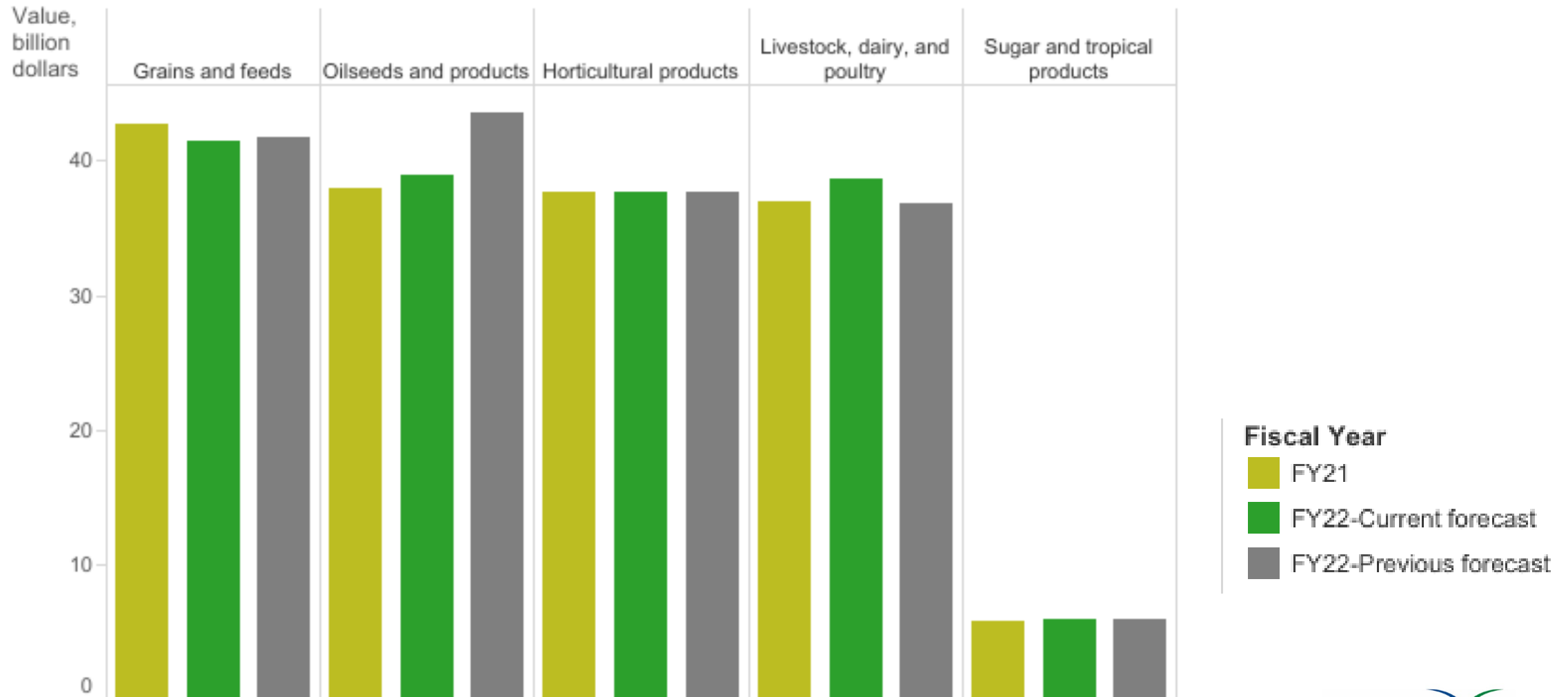
U.S. agricultural trade



Source: USDA, Economic Research Service and USDA, Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

U.S. AG EXPORTS

U.S. exports by commodity



Source: USDA, Economic Research Service and USDA, Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

FRED



— Nominal Broad U.S. Dollar Index



Source: Board of Governors of the Federal Reserve System (US)

myf.red/g/Jlf5

U.S.-CHINA PHASE 1 TRADE DEAL

- Tariffs

- September 2020 Tariffs cut in half (previous tariff rounds remain)

Commitments by China:

- Purchases of U.S. Goods & Services: >\$200bn over 2 years above 2017 levels
 - Agriculture, Manufacturing, Energy, Services
- Food Safety NTM Reductions
- Improved Foreign Investment
- Intellectual Property Protections
- Currency Commitments

Phase 2: Focus on SOEs

Total US exports to China by covered sector, billions USD

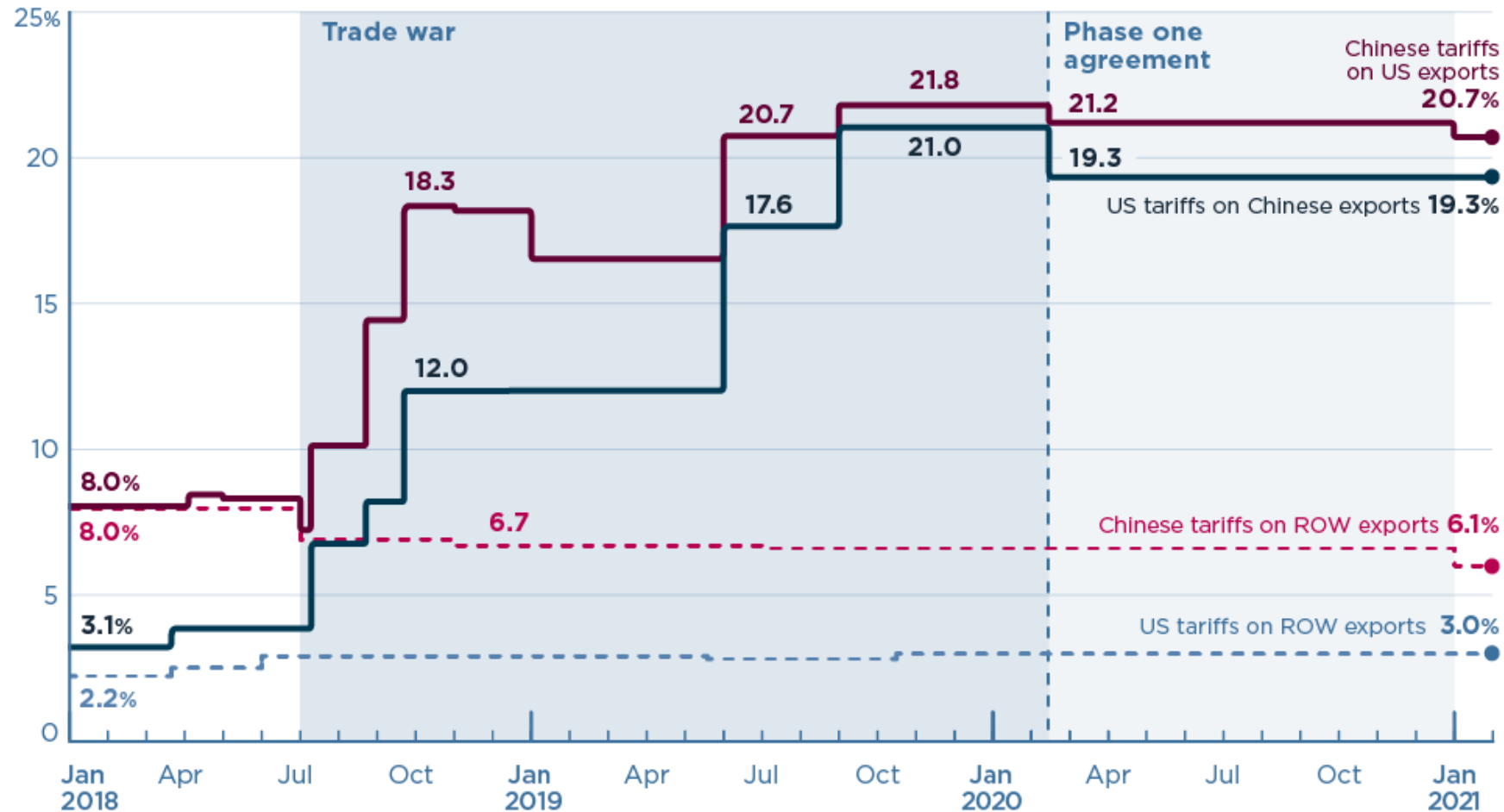
a. Agriculture



Source: Chad P. Bown (PIIE)
January 21, 2020

US-China trade war tariffs: An up-to-date chart

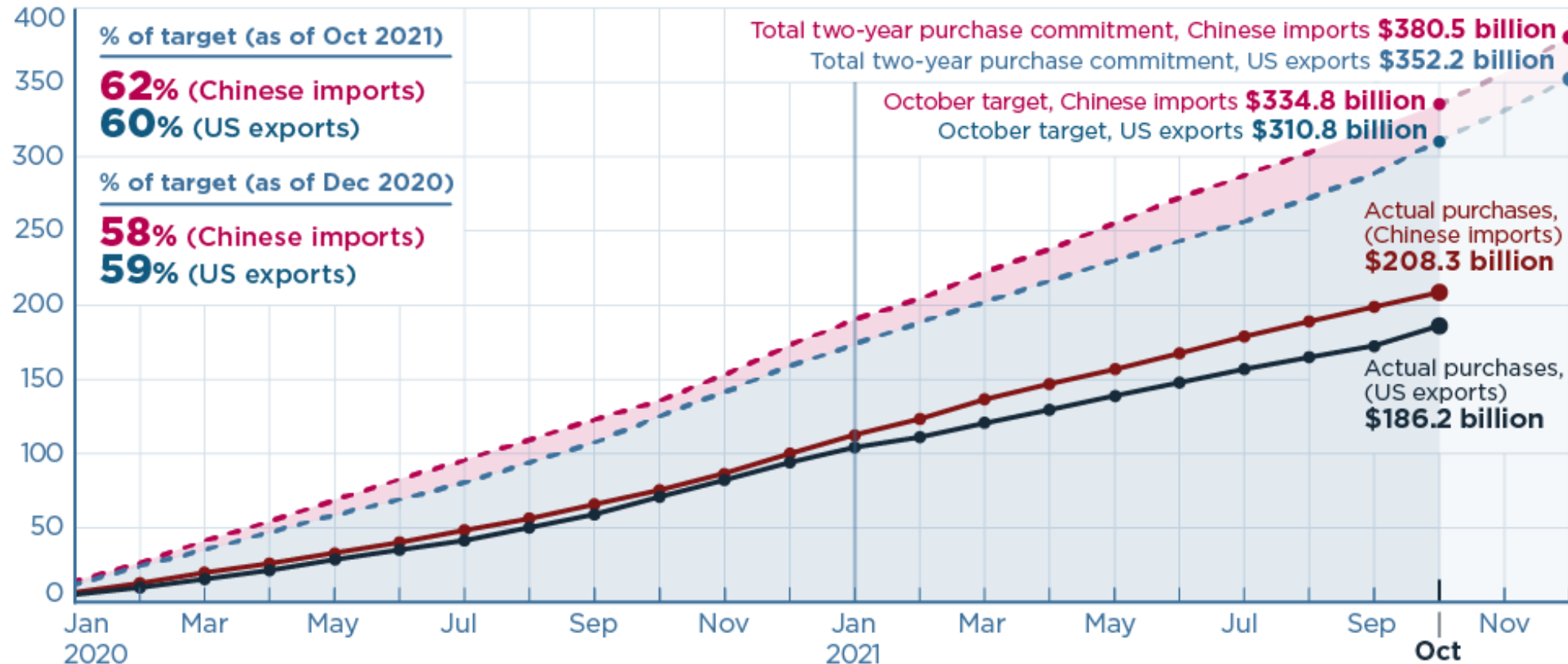
a. US-China tariff rates toward each other and rest of world (ROW)



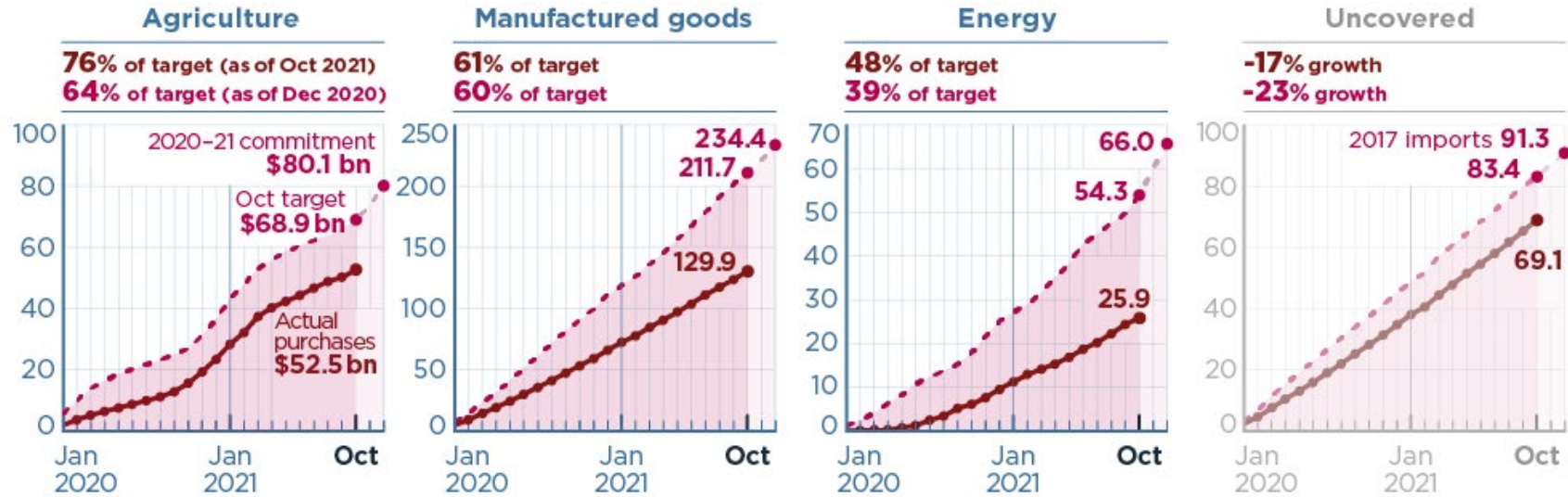
US-China phase one tracker: China's purchases of US goods in 2020 and 2021

US exports and China's imports of all goods covered by the phase one deal,
January 2020 through October 2021

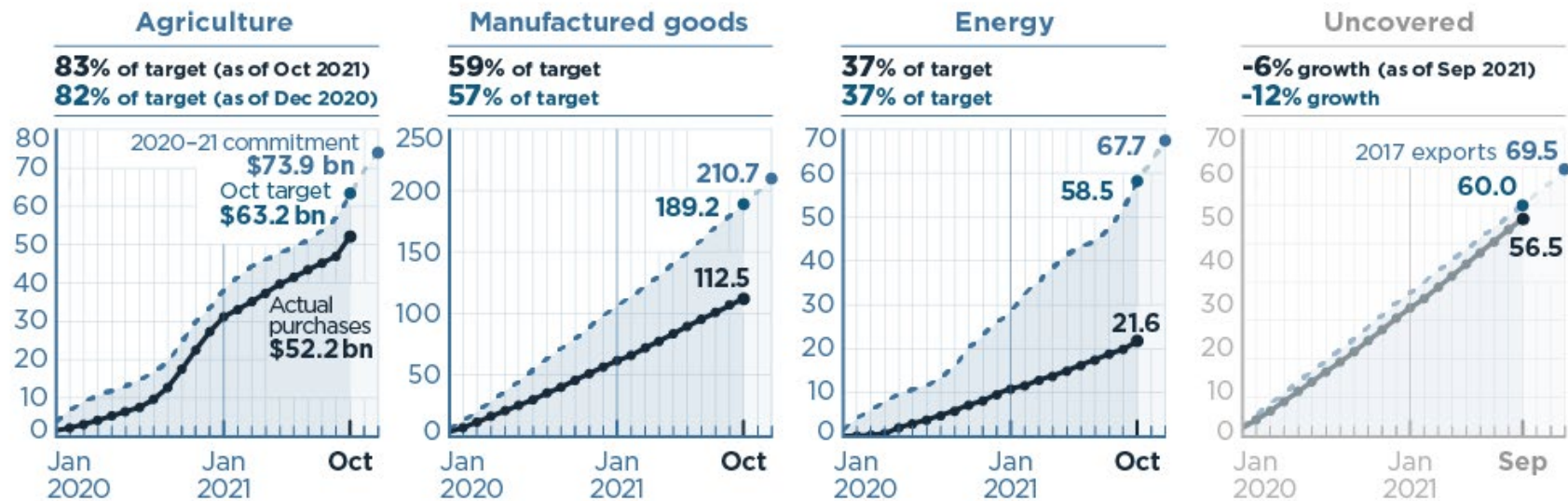
a. US exports and China's imports of all covered goods, billions USD



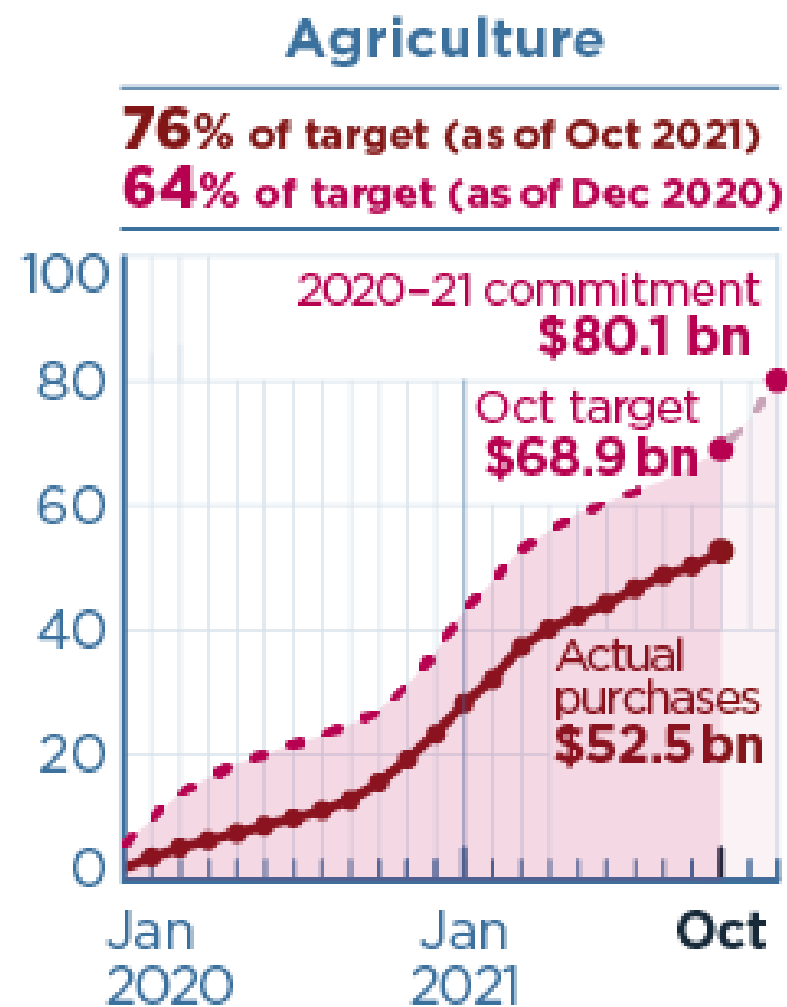
b. China's imports by product type, billions USD



c. US exports by product type, billions USD



b. China's imports by product type, billions USD



c. US exports by product type, billions USD

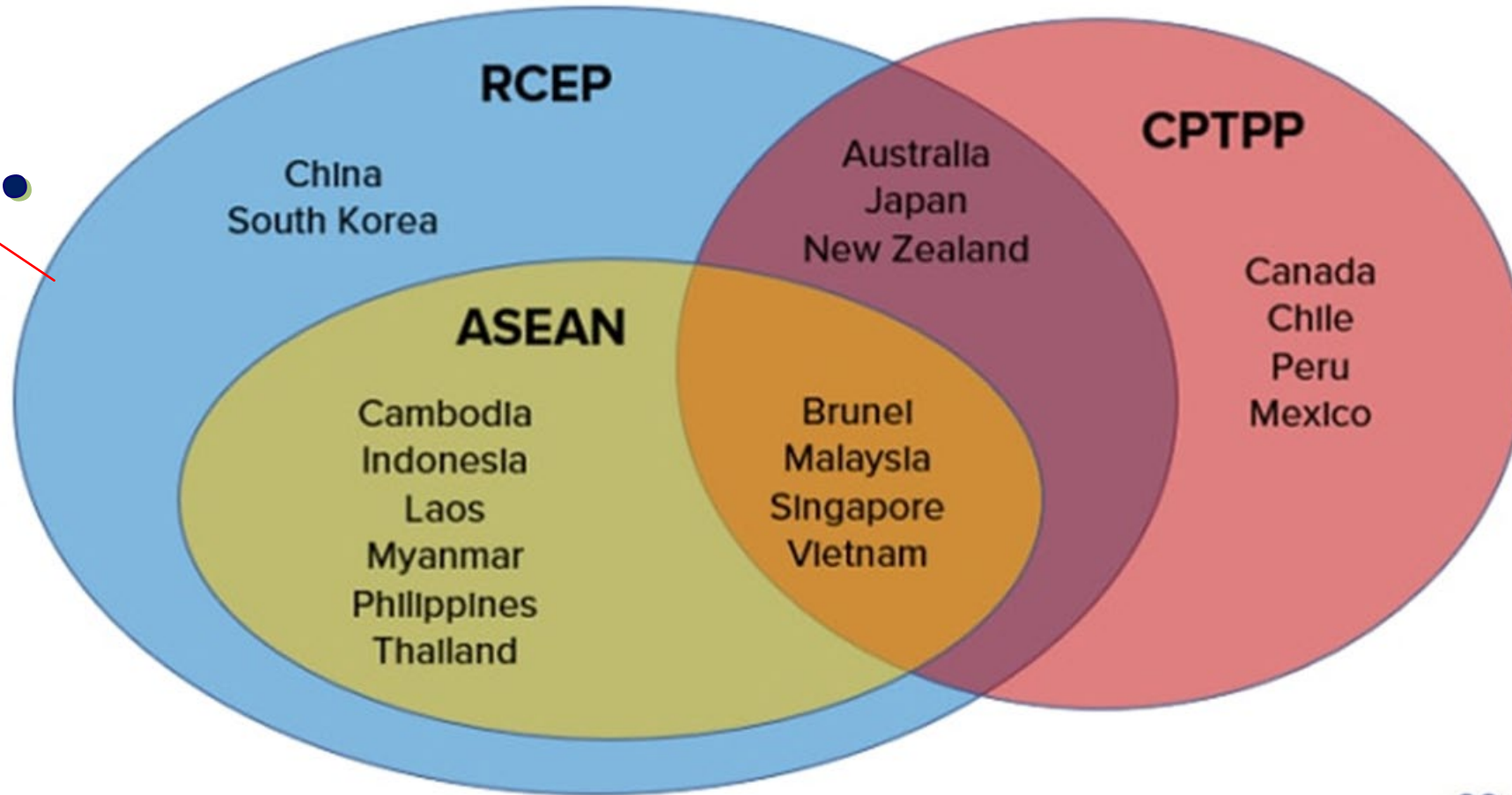


Agricultural Trade Policy Overview

- U.S.-China Trade
 - What's next?
- USMCA Highlights
 - Agriculture: Dairy and Wheat (modest improvements)
 - Manufacturing: Autos
 - Modernization
 - Intellectual Property (biotechnology)
 - Investment
 - Labor and environment
- Japan-U.S. "Mini" Trade Agreement
 - Market Access Focused
 - Captured most TPP ag market access
- CPTPP
 - 11 Pacific-Rim Countries Continued without U.S.
- RCEP
 - 15 countries; 10 ASEAN nations, South Korea, **China**, Japan, Australia and New Zealand
- U.S. Lags on Trade Deals
 - EU Expanding trade and influence
 - China petition for CPTPP

Trade groupings involving Asia Pacific nations

~~U.S.~~



SOURCE: The Economist Intelligence Unit



POTENTIAL FOR NEW AGREEMENTS

- TTIP: U.S.-EU
- Increased market access, focused on SMEs
- Harmonize regulations for trade, labor, and environment
- Binding TRQs limit US Market Access

Nontariff Measures

- Reduced restrictions on conventional US production practices seems unlikely
- Livestock, Meat, Feed and Food Crop Production
 - Livestock/meat production constraints
 - Biotech restrictions on corn, soy rice
 - Fruits and vegetables: pesticide MRLs

- UK
- Kenya
- What about Southeast Asia?
- India remains a challenge

GLOBAL CHALLENGES AND UNCERTAINTY

- Uncertainty for U.S. trade policy: focus is on domestic policy & climate
 - U.S. lags as others move forward with trade agreements
- WTO future is uncertain
- Supply chain issues persist
- Unemployment remains puzzling
- Inflation is NOT transitory: 6.8% in November, highest in 39 years
- Fed is tapering; tightening monetary policy on the horizon
- COVID-19 continues
- Agriculture faring well relative to other sectors
 - Opportunities for innovation
 - Potential for shocks: AD/CVD, animal health, energy, geopolitical concerns





DAN BASSE

President

AgResource Company



Daniel W Basse
President AgResource Company
Chicago, IL 60606
December 16, 2021
basse@agresource.com

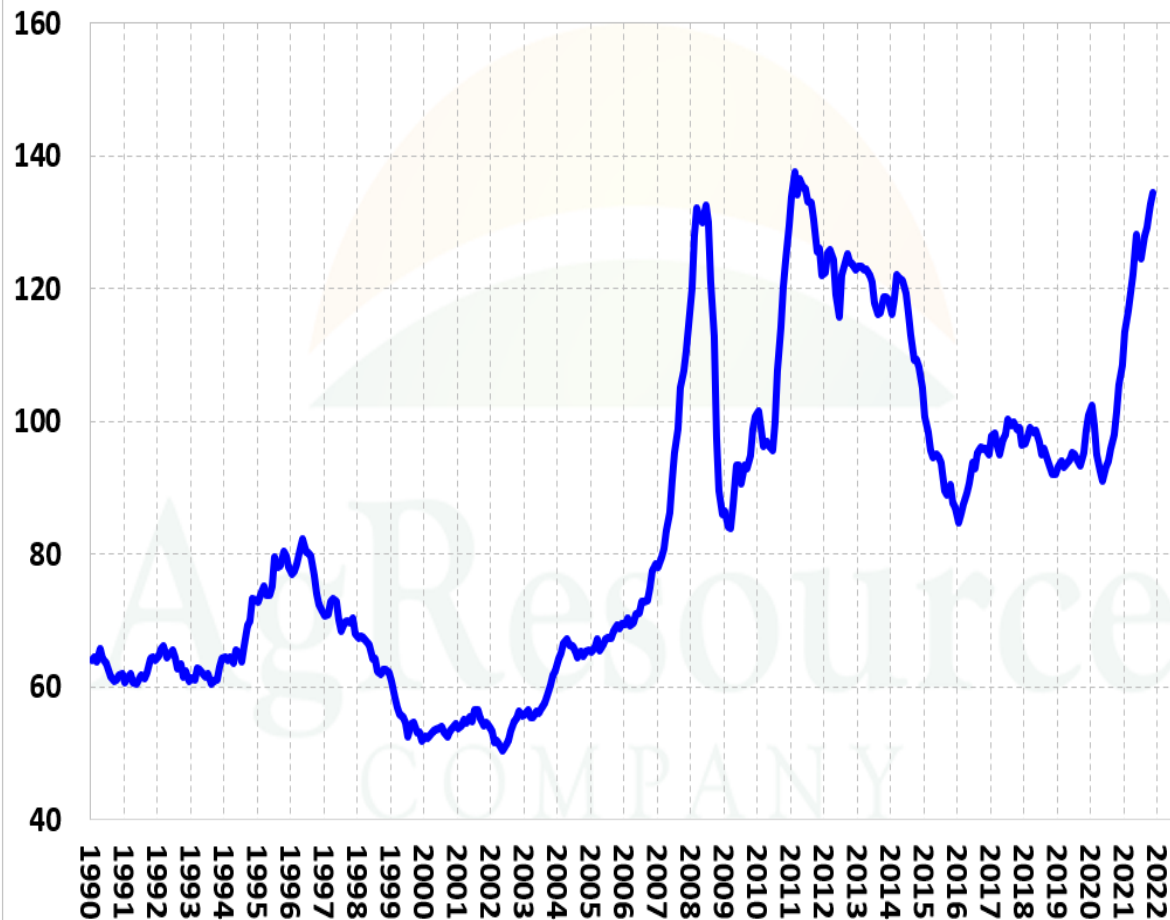
Inflation/Climate Change Collide Peak US Farmland; Ag Super Cycle Ahead?

2022 Ag Market Themes

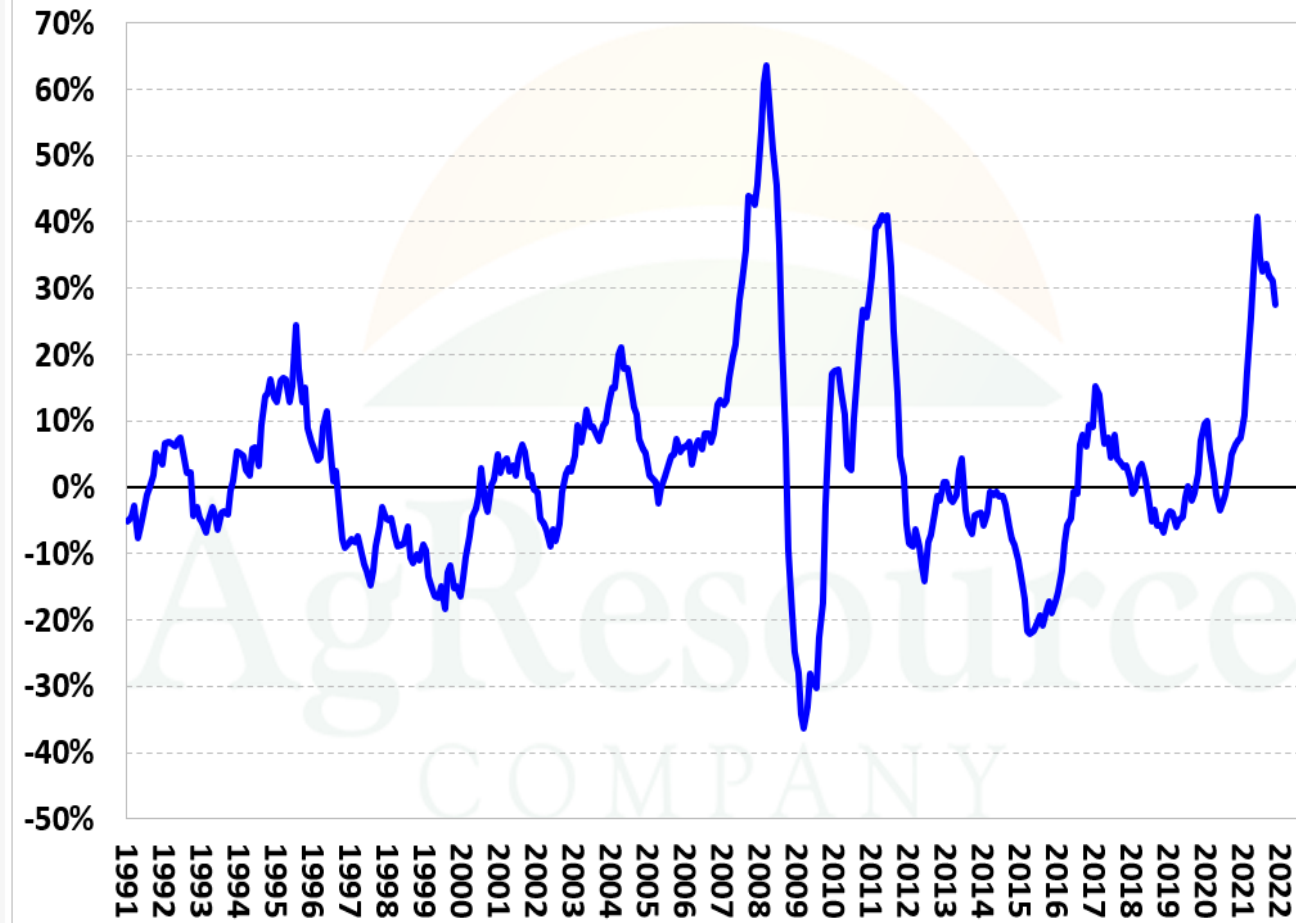
- **A New Commodity Super Cycle** should last for the next 2-3 years. Energy is the upside leader with inflation risks rising on underinvestment and the desire of politicians to be green and rebuild infrastructure. The world consumed more grain in 2021/22 than this year's record crop produced. The marketplace must secure extra acres in South America/Black Sea in 2022. The US at peak farmland?
- **Biden sees himself as a Champion for Biofuels.** Their low carbon footprint is a steppingstone to the electrification of 20% of the US transportation fleet by 2030. Biden will politically push biofuels and raise the pressure on USDA to pay farmers to sequester carbon. USDA sees farmers as part of the carbon answer in the 2023/24 US Farm Bill.
- **Two New US Ag Demand Drivers:** 1/China corn imports from the US/Ukraine and 2/US renewable diesel. Both will combine to raise farm profits to pull in an additional 15-20 Mil world crop acres into production by 2025. Most disruptive to American agriculture is renewable diesel. Like the US 2007 Energy Bill, renewable diesel will dramatically alter US crop acre mixtures in the coming years.
- **US beef and dairy cow herds in liquidation.** The decline in US protein supplies sets up a bullish dairy/beef outlook for 2022. The US dairy industry needs to play a more important role in US beef calf production. US cattle/beef prices to rise to record levels by 2023. Western US drought pushes forage prices to records as US hay acres fall to their lowest level since 1909.
- **US farmland and farm incomes rise into 2024:** China is the "demand pull" on world grain, meat and dairy demand. Yet China thru policy can reduce or increase food imports at will? One year they encourage massive grain/food imports while the next year they try to stamp out speculation. This adds to ag market volatility. China's food import policy aside, a multi year ag bull market is ahead with adverse weather amplifying the need for demand rationing. Raw material markets shine!

World food price rises sharply on demand and supply chain breakdowns. Vegoils led the increase

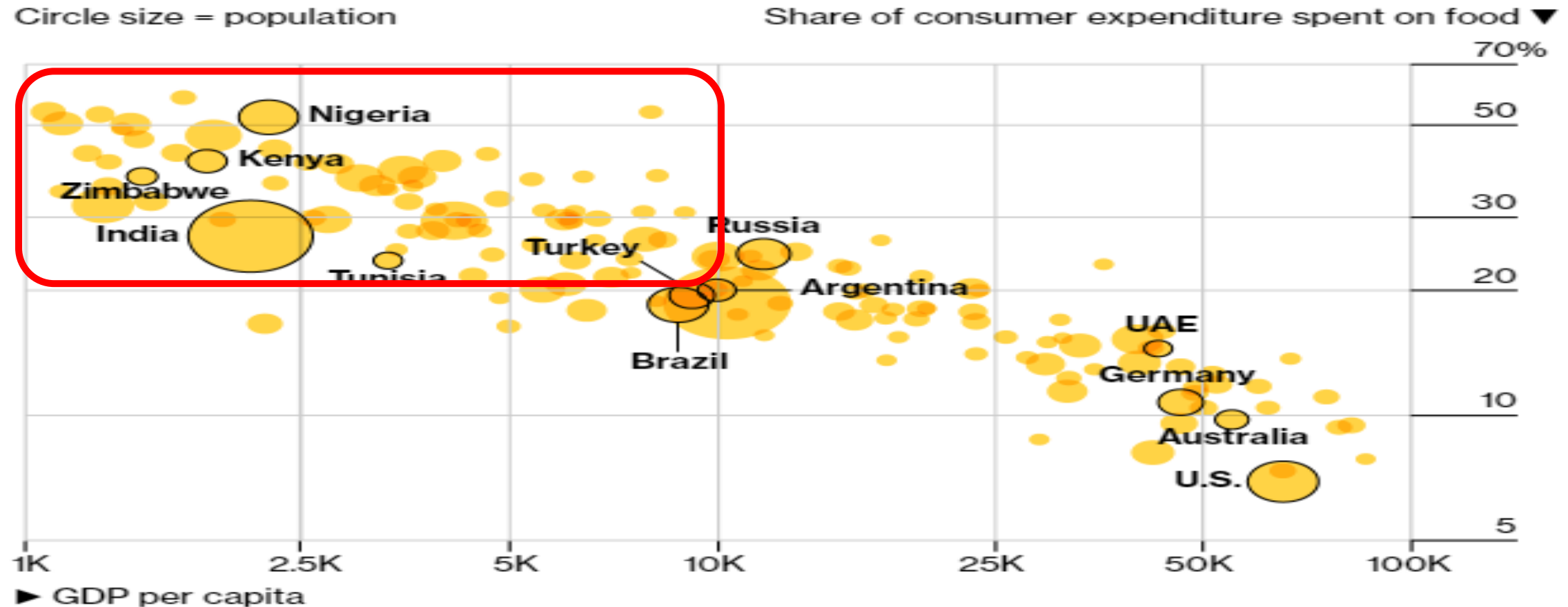
FAO World Food Price Index (2014-2016 = 100)



Yr/Yr Change in FAO World Food Price Index



Rising food prices produces new policy from world political leaders

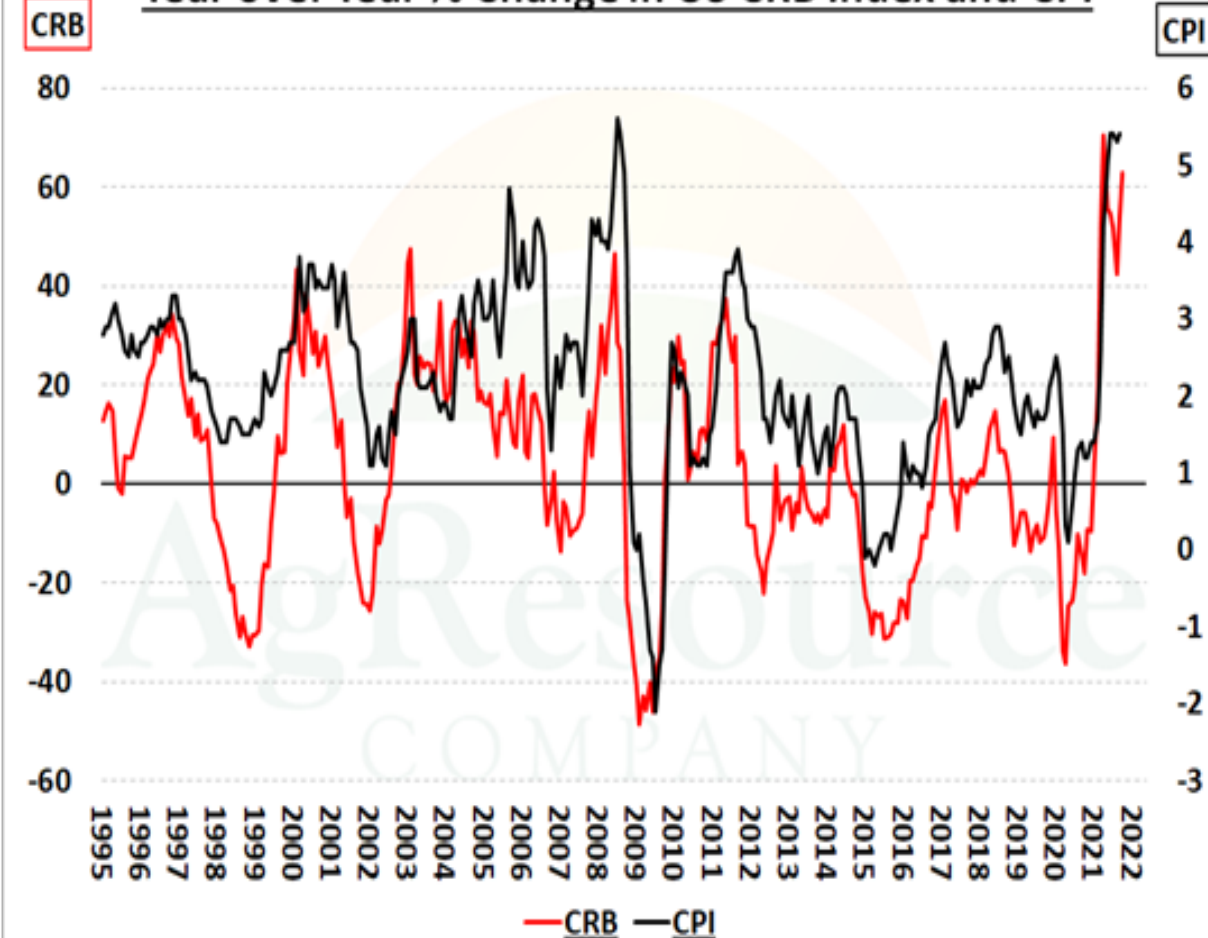


Source: World Bank

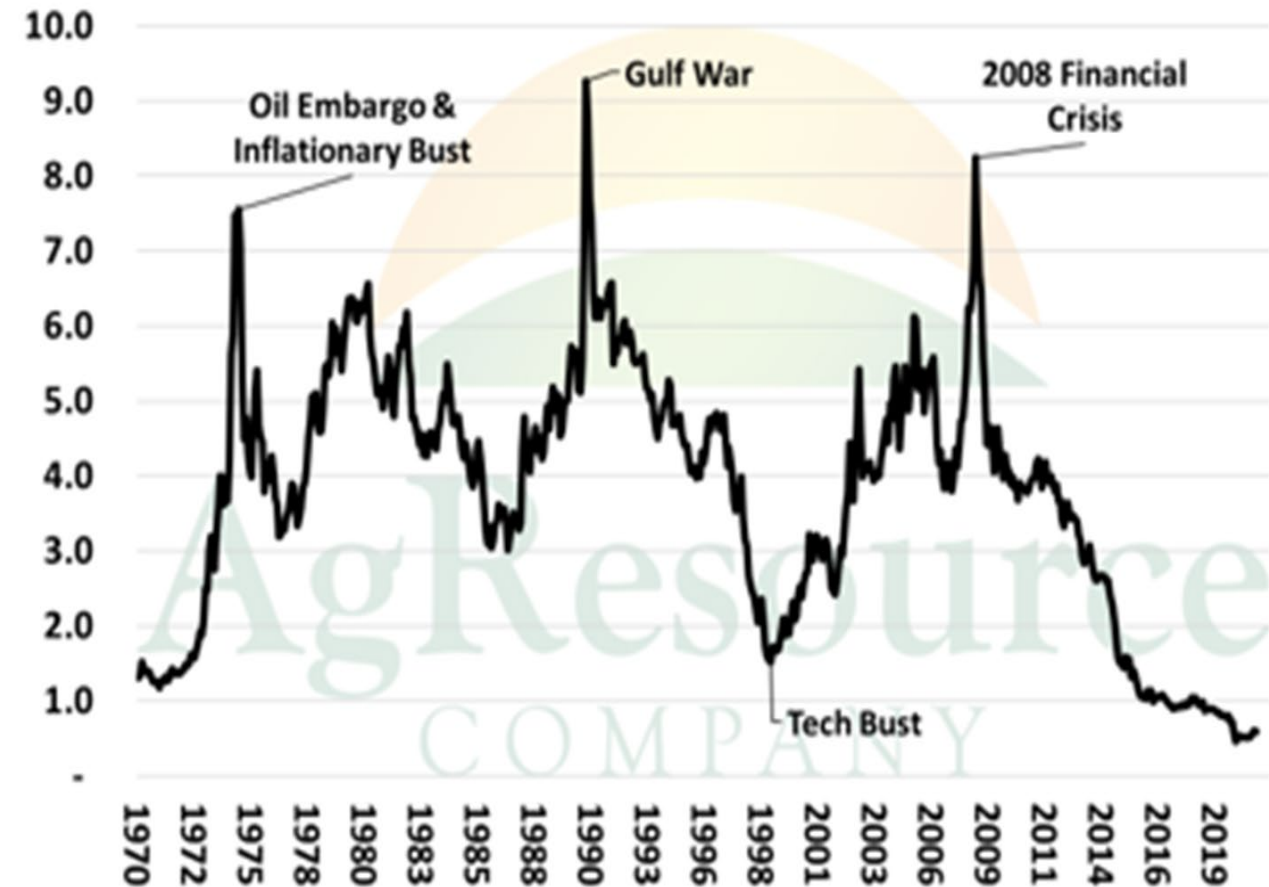
Note: Expenditure figures are from 2017. Population and GDP per capita figures are from 2019 or the most recent year available from World Bank. A log10 scale is used on both axes.

US monthly inflation soars to the highest rate in nearly 40 Years; Commodities in vogue.

Year over Year % Change in US CRB Index and CPI

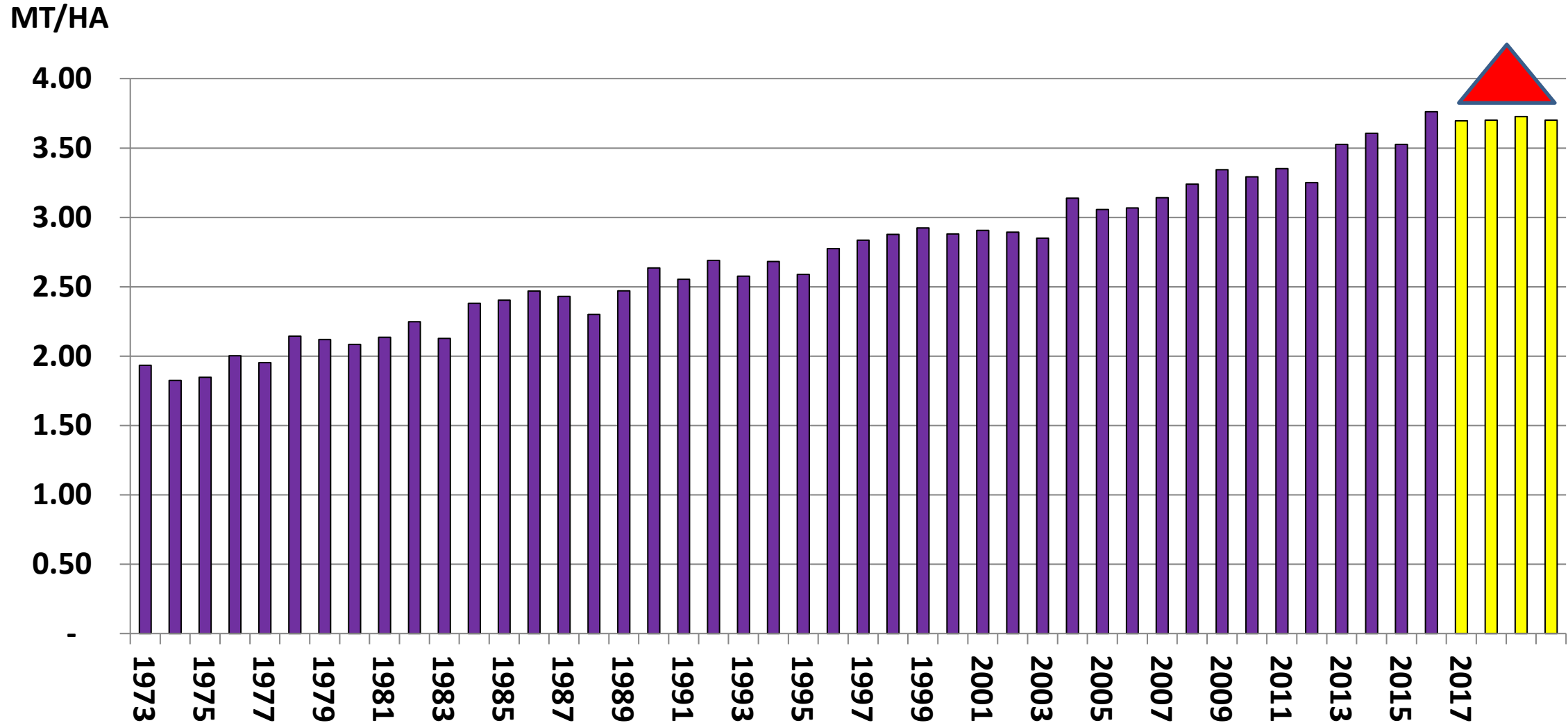


Commodities to Equities Ratio



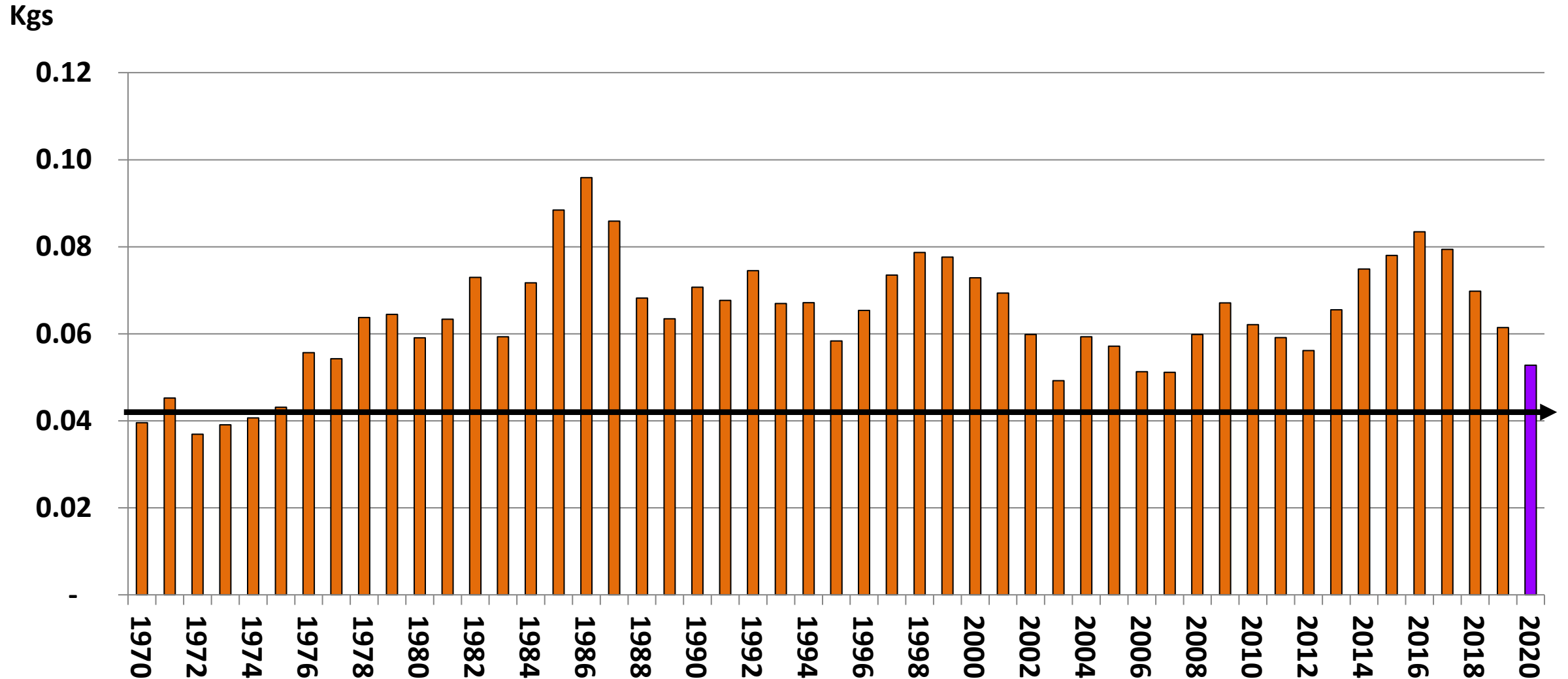
Per Capita Global Grain, Wheat & Oilseed Yield Stagnates

Climate change offsets yield technology increase?

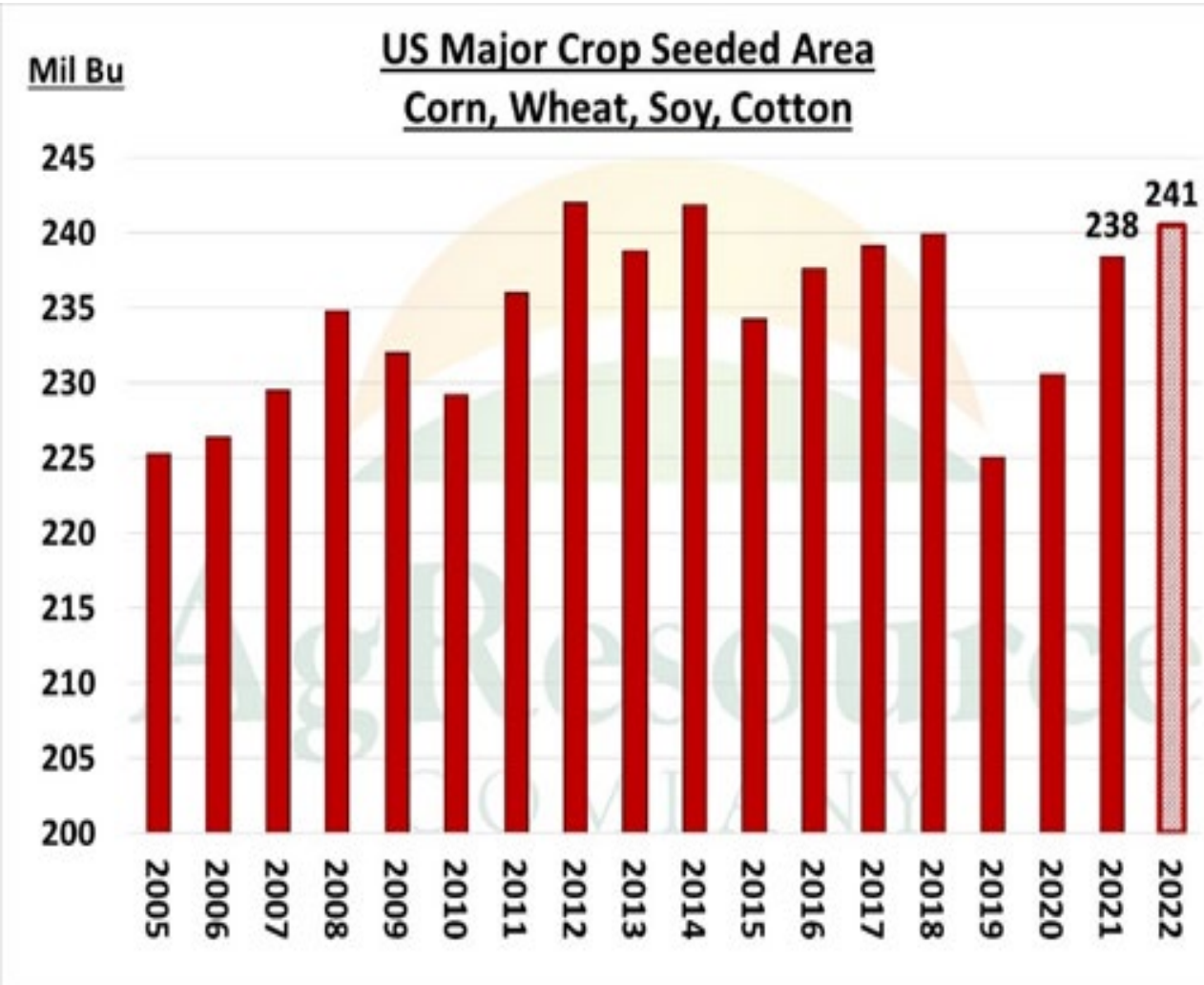
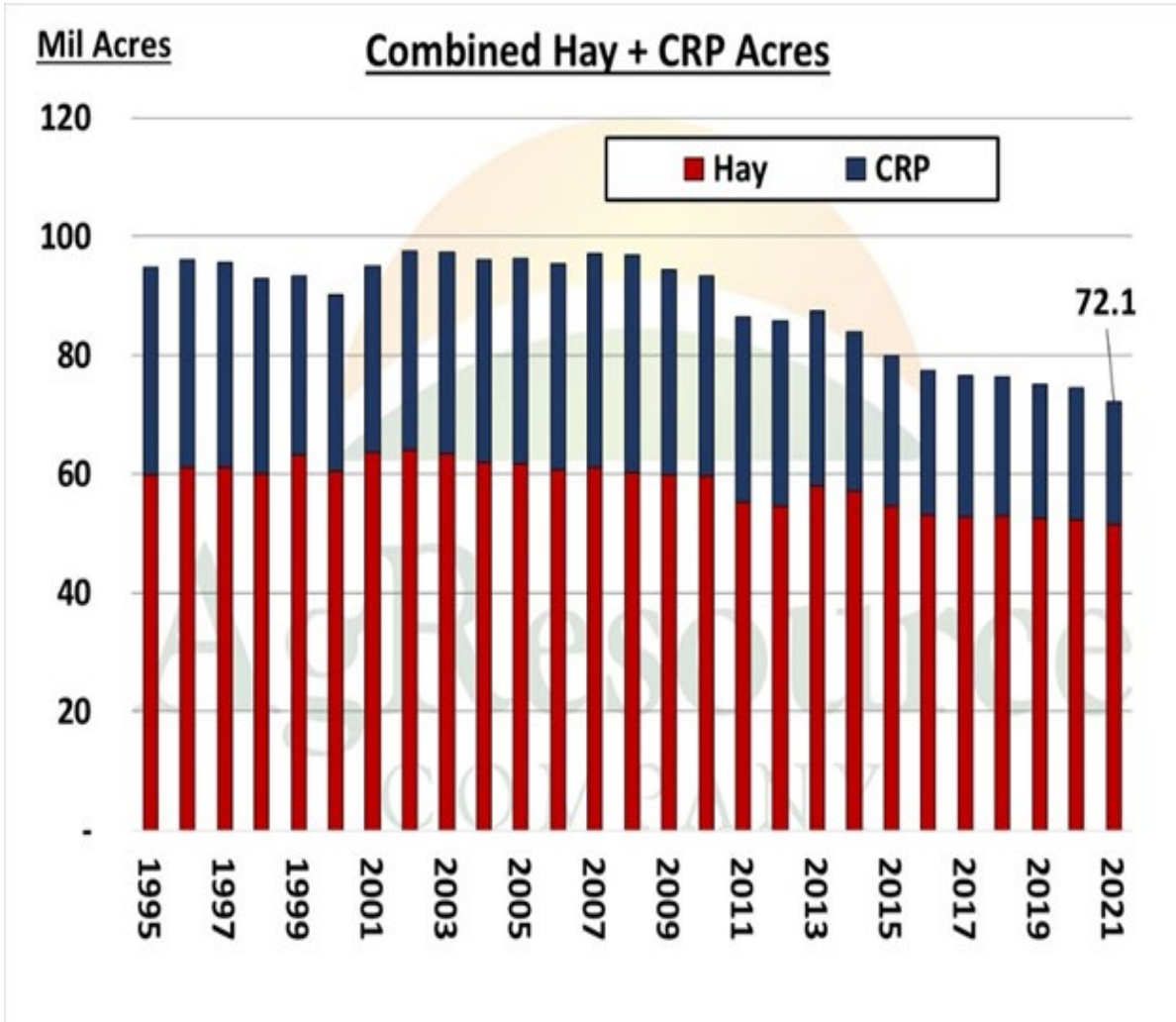


Per Capita Grain & Oilseed Stocks Since 1970

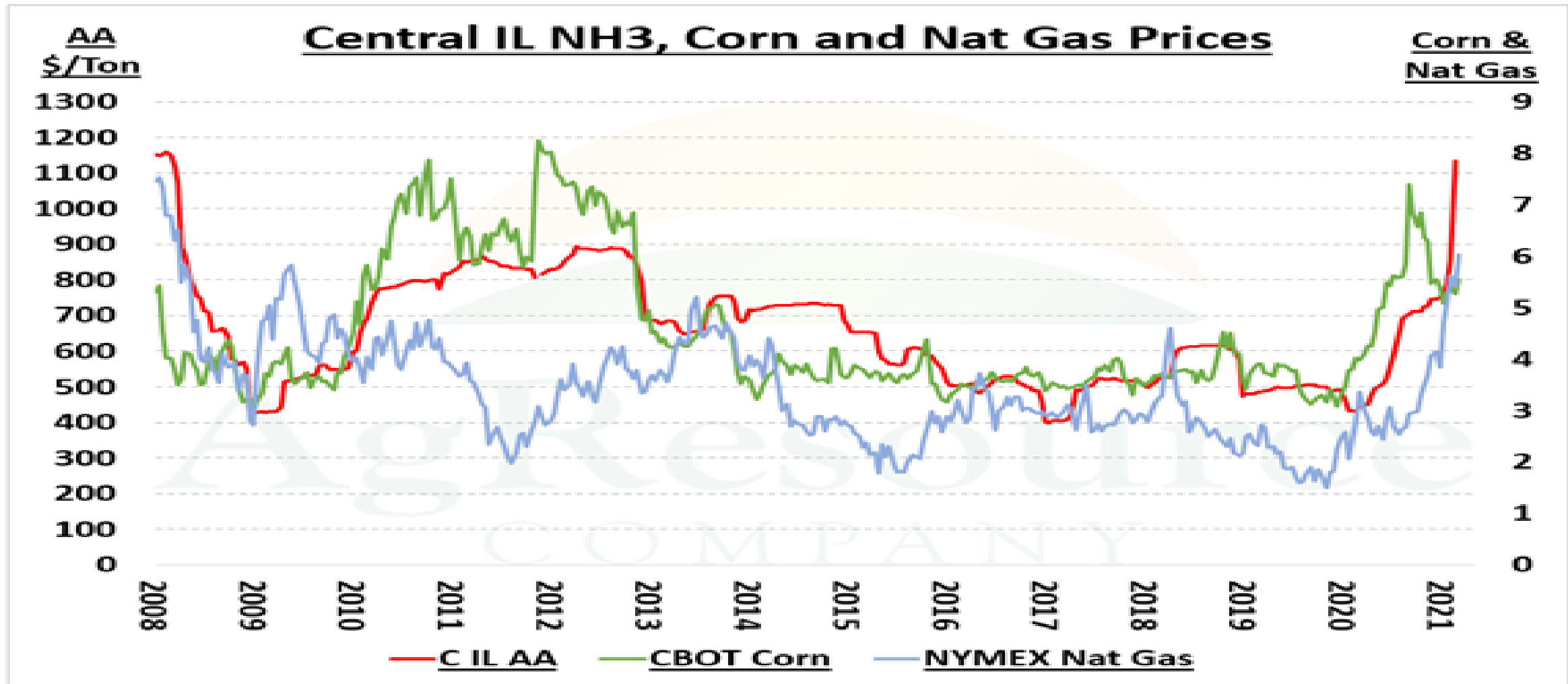
Corn, Wheat, Barley, Sorghum, Soy, Canola Stocks Combined



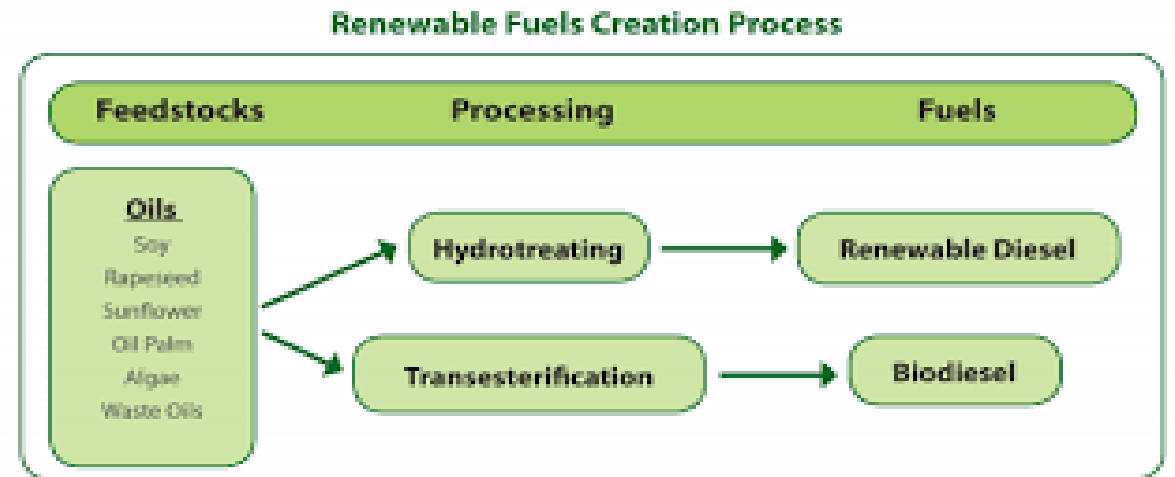
Peak US Farmland? CRP/Hay land grab ends (25 Mil acre shift since 2010) Yield gains importance!



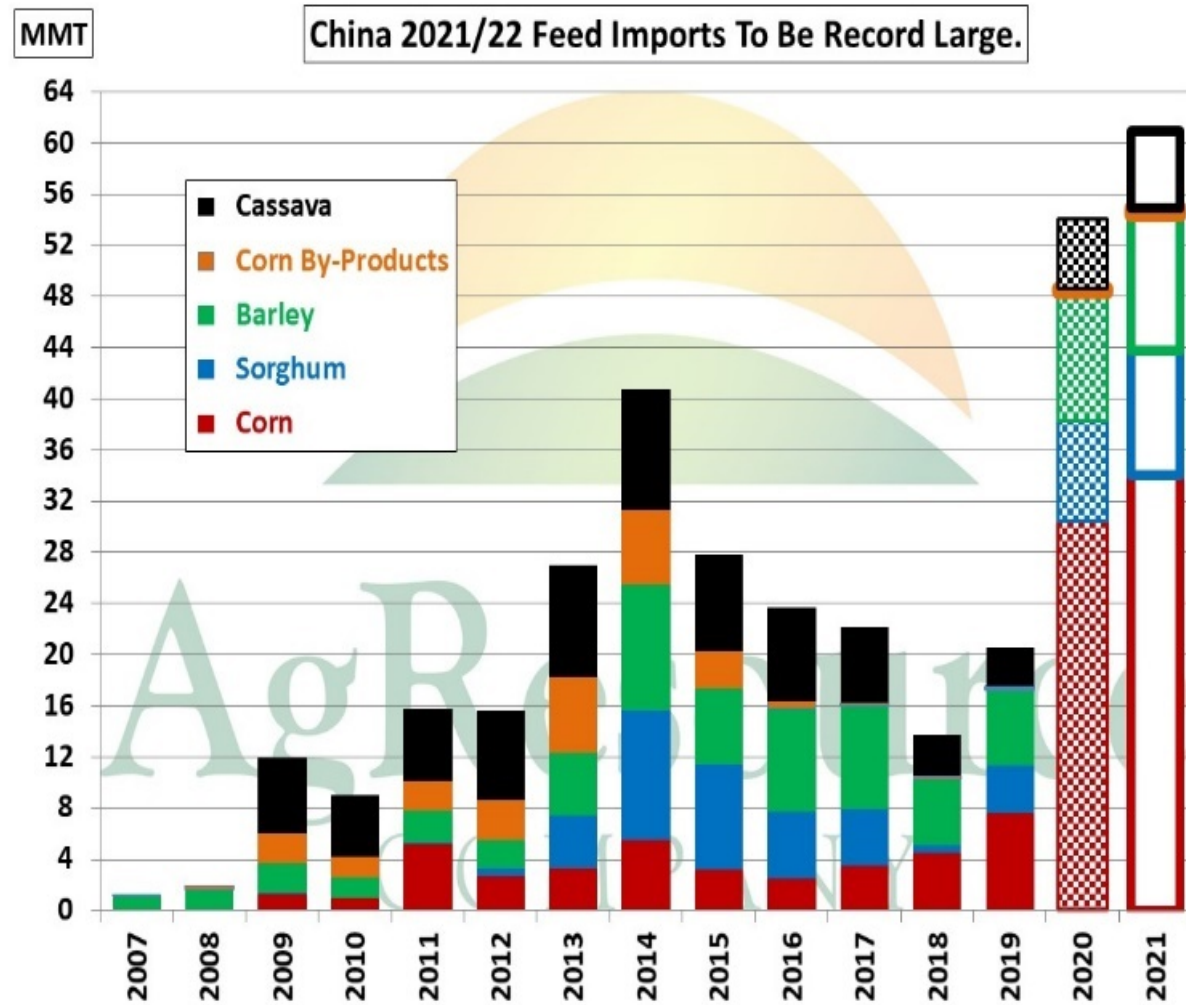
Corn, fertilizer and natural gas price correlation; Corn is fertilizer over several years!



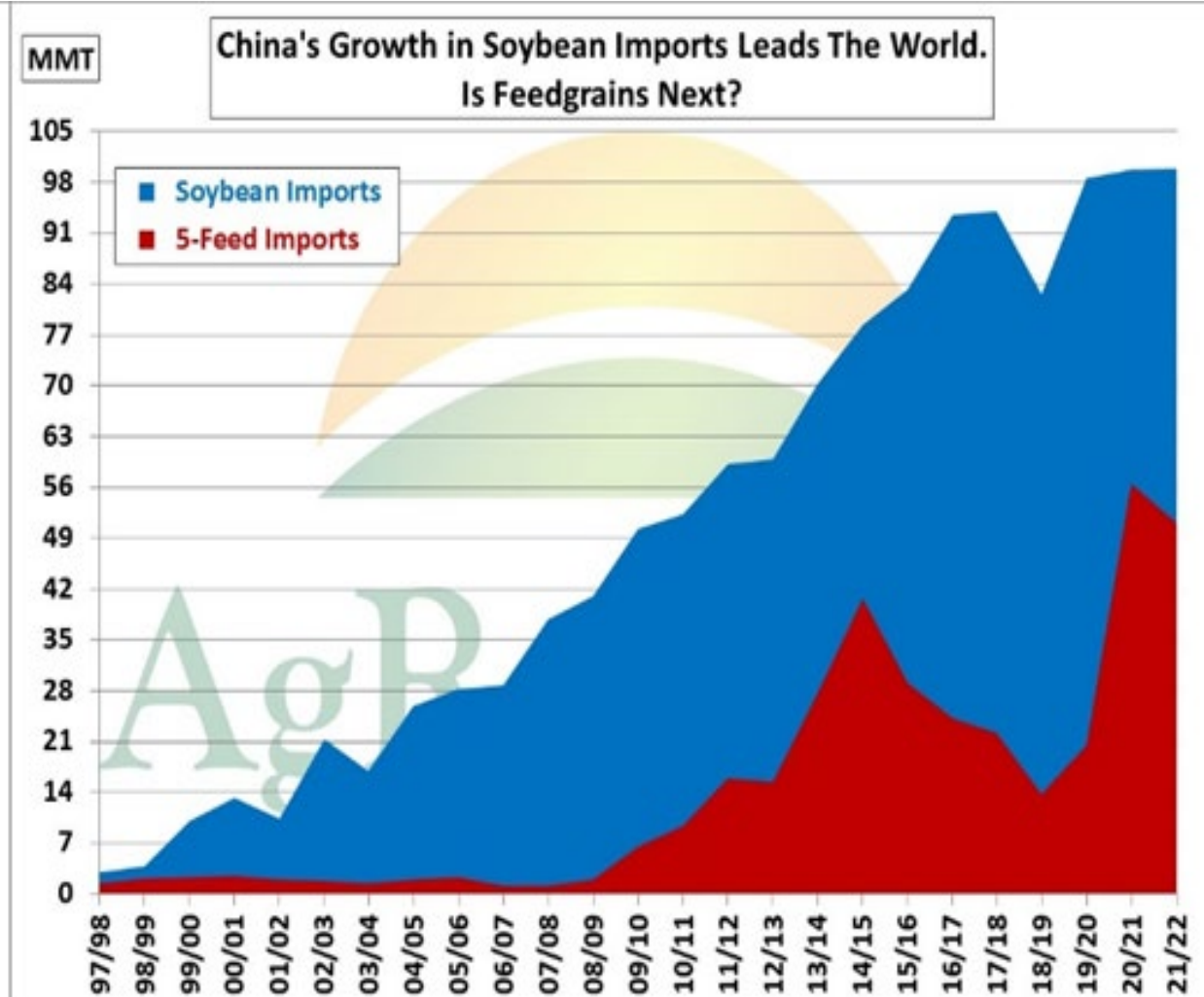
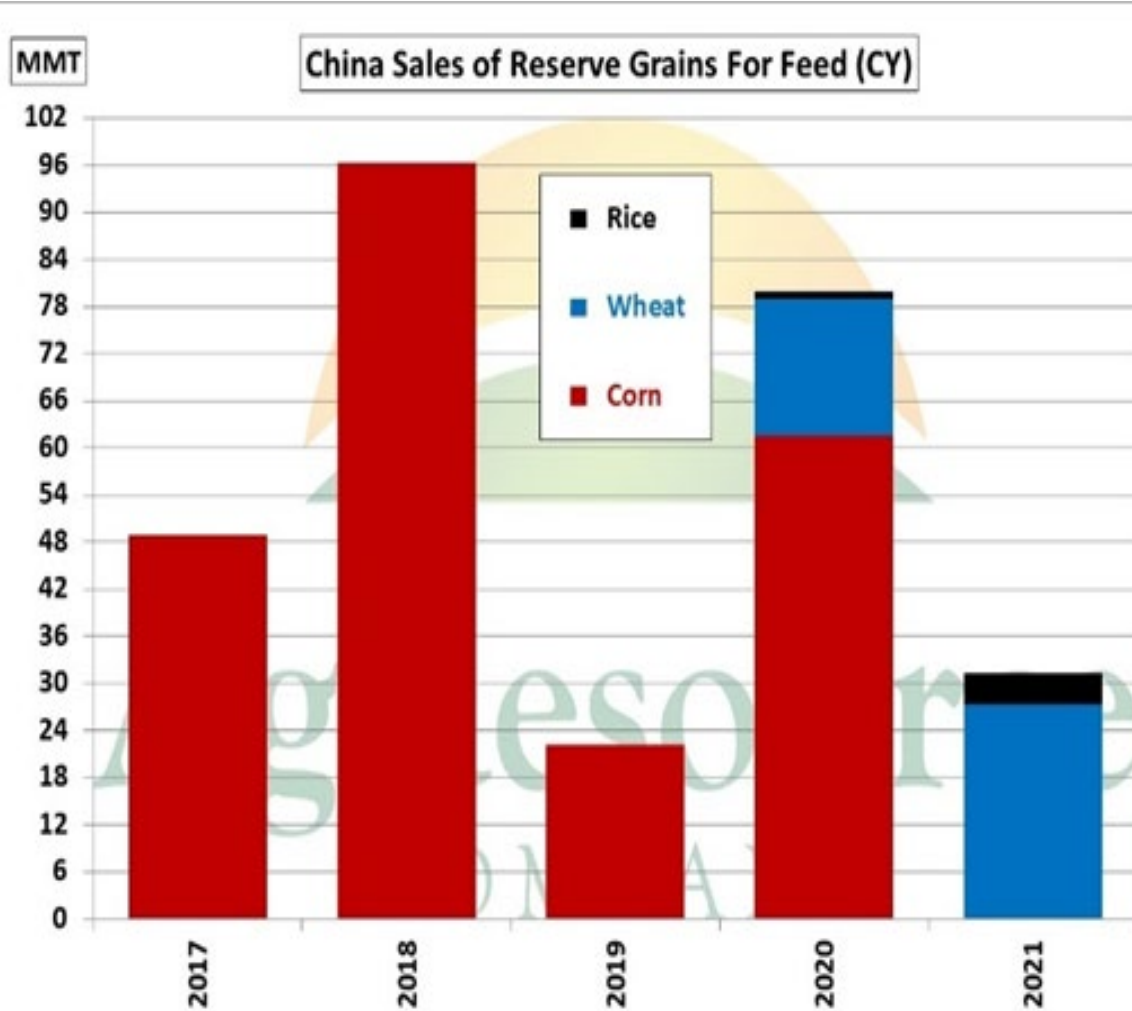
New Ag Demand Drivers: China corn imports/ US Renewable Diesel



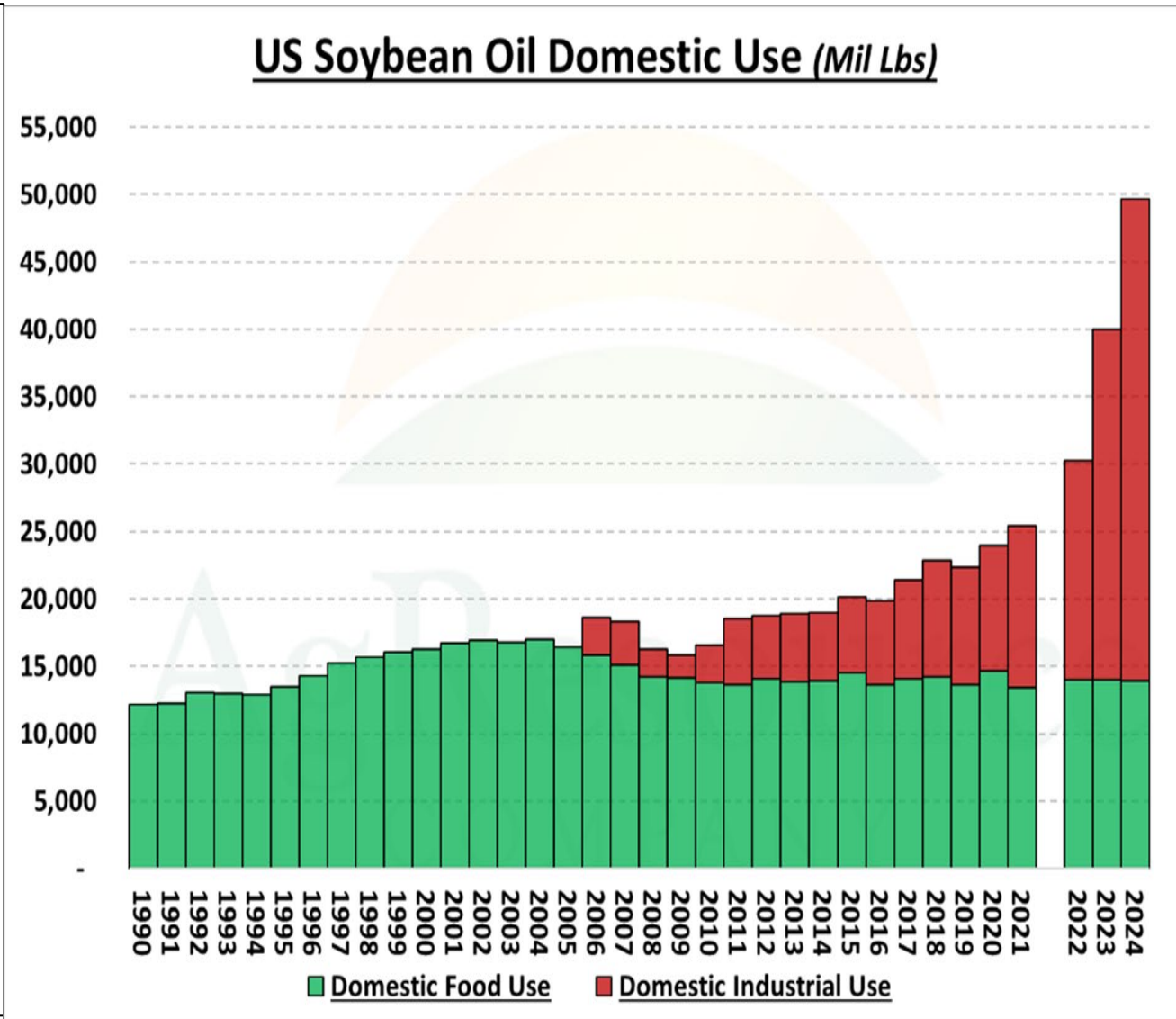
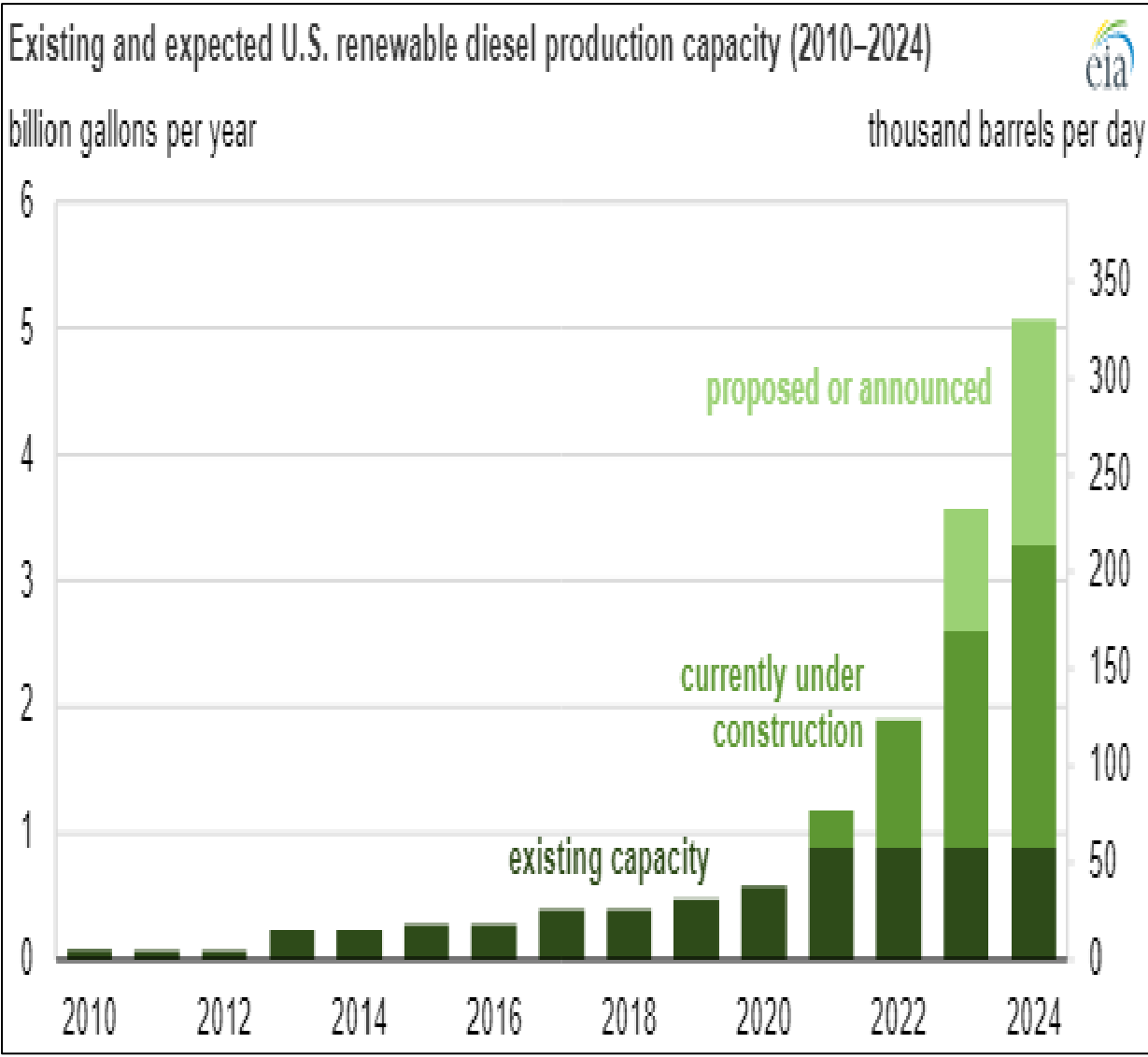
China to import 40-60 MMTs of world feed grain annually; China hog hotels multiply in



Reduced reserve sales of rice, wheat and corn leads to enlarged future China feed imports?

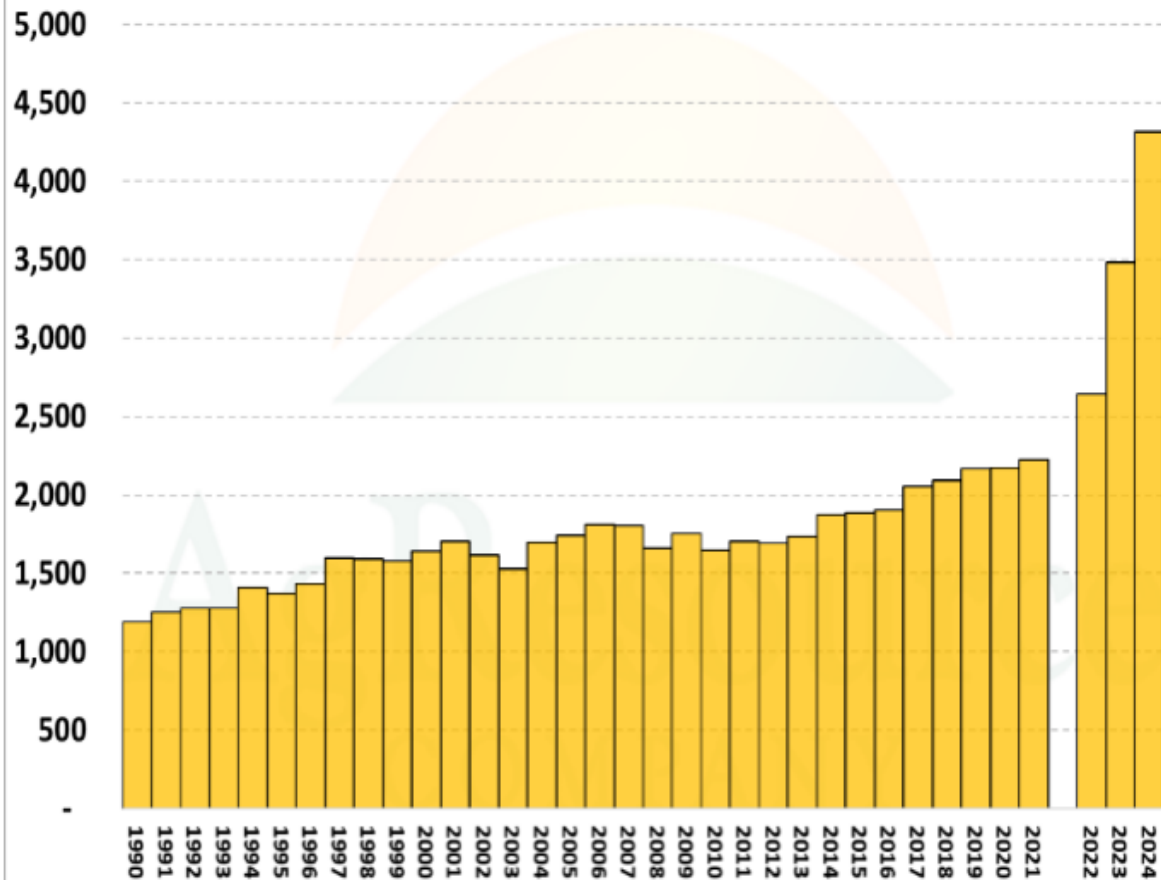


Renewable Diesel Doubles US Soyoil Demand by '24

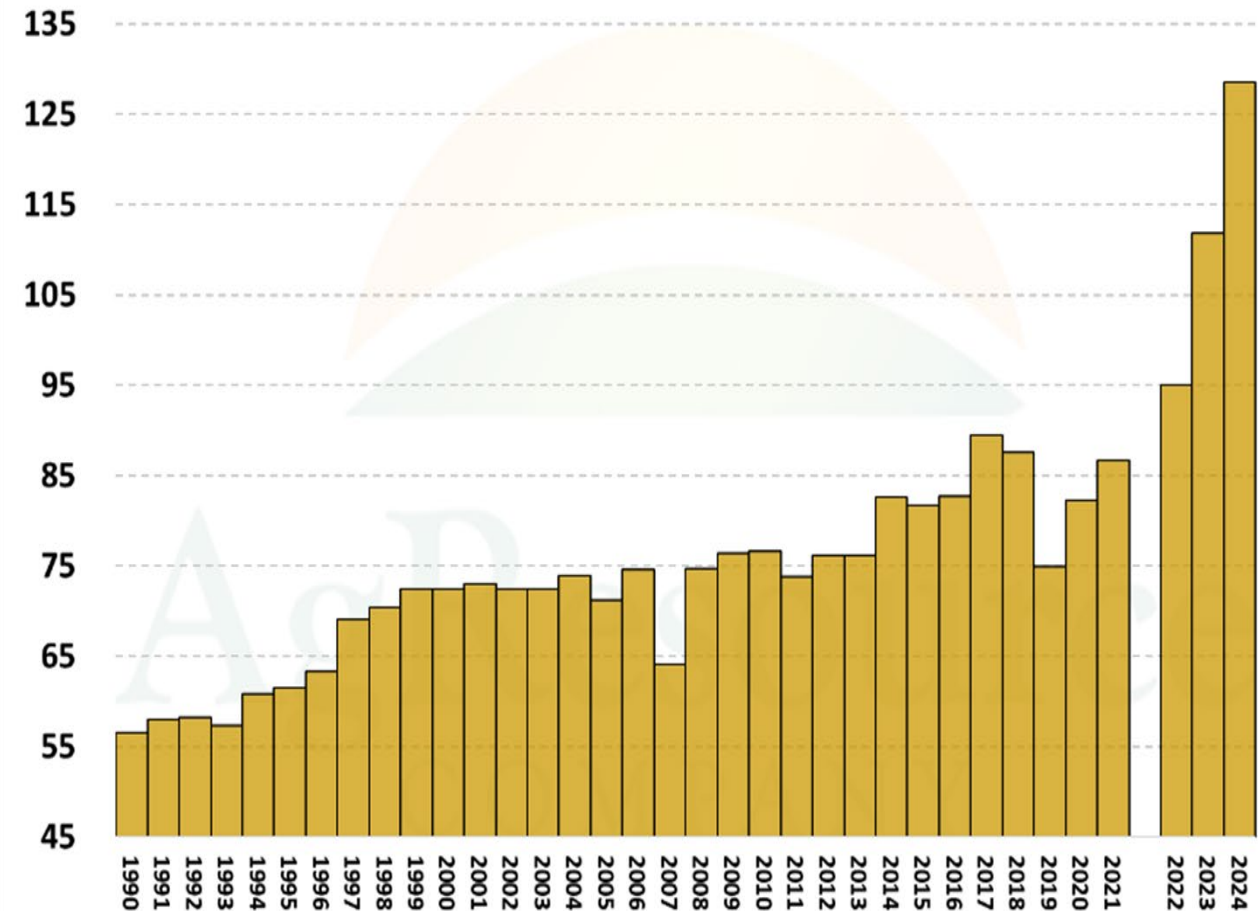


Dramatic new build in US soy crush capacity; US soybean harvested acres to rise 40 Mil? Impossible!

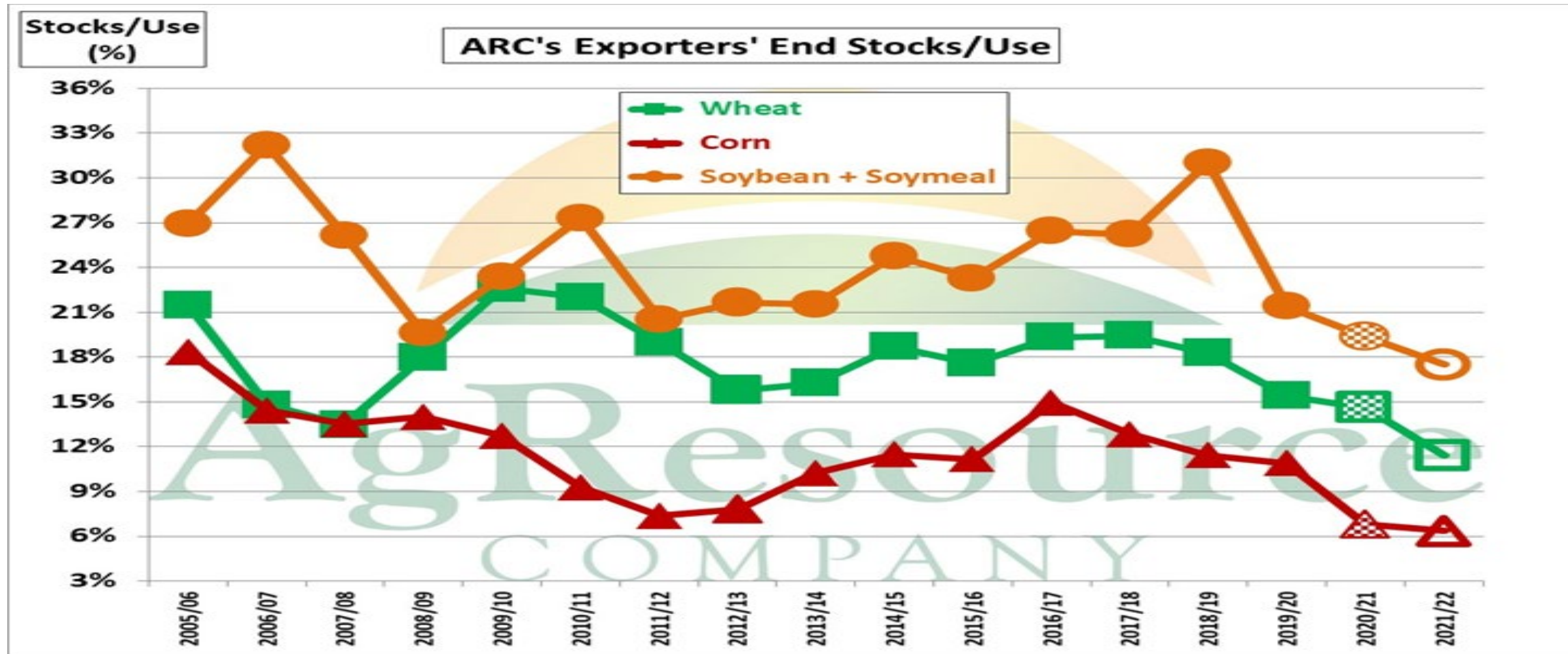
US Soybean Crush (Mil Bu)



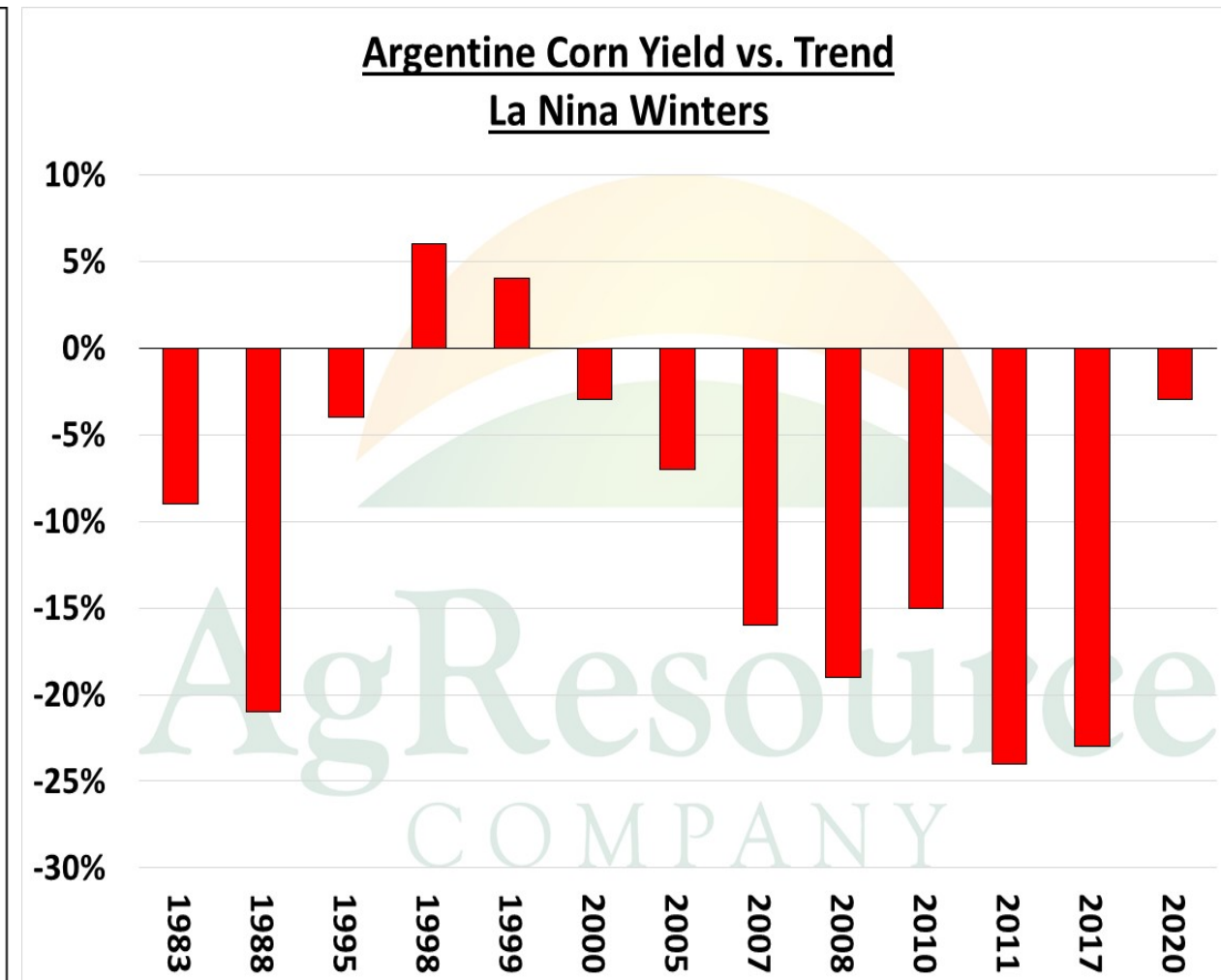
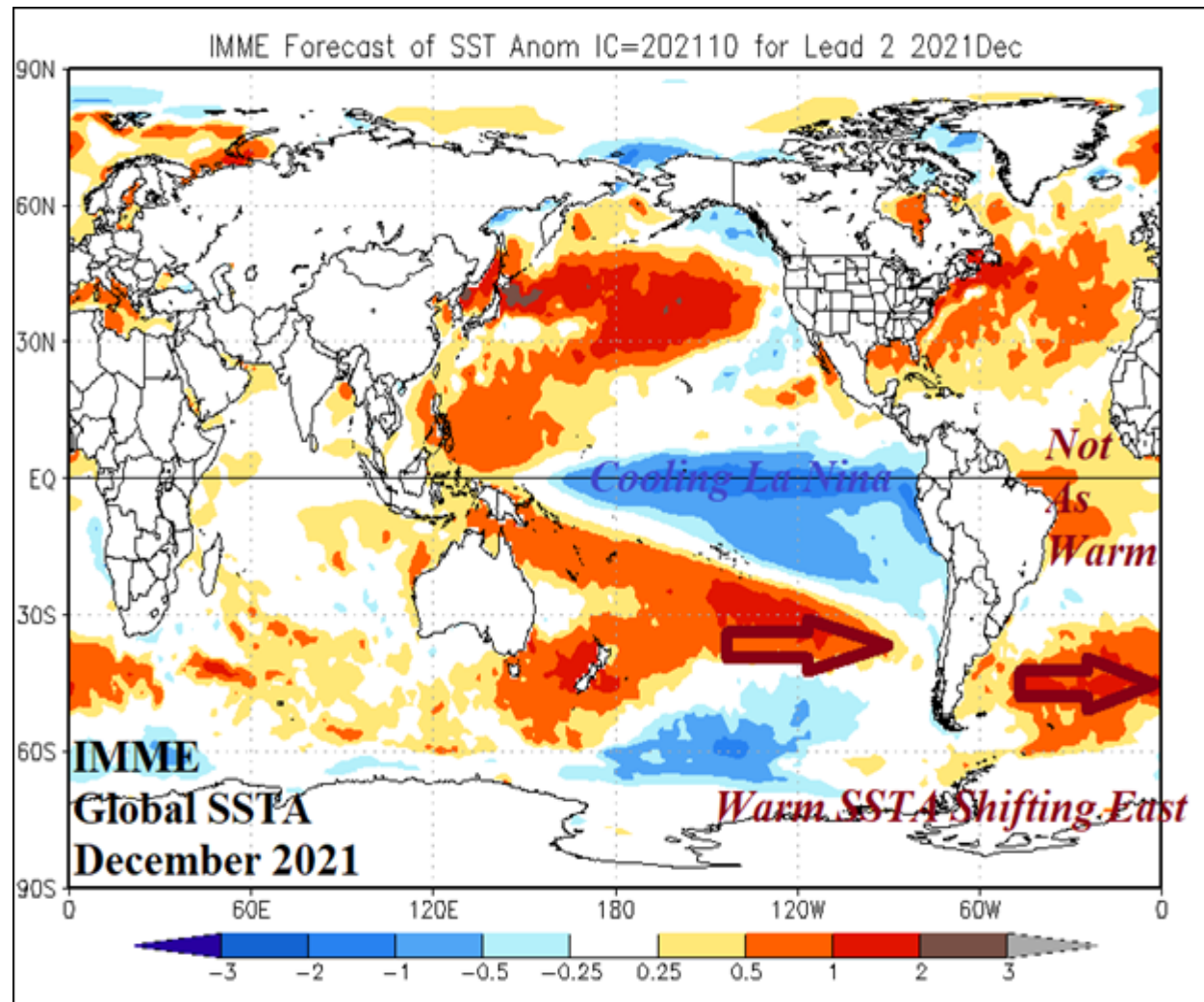
Harvested Soybean Acres



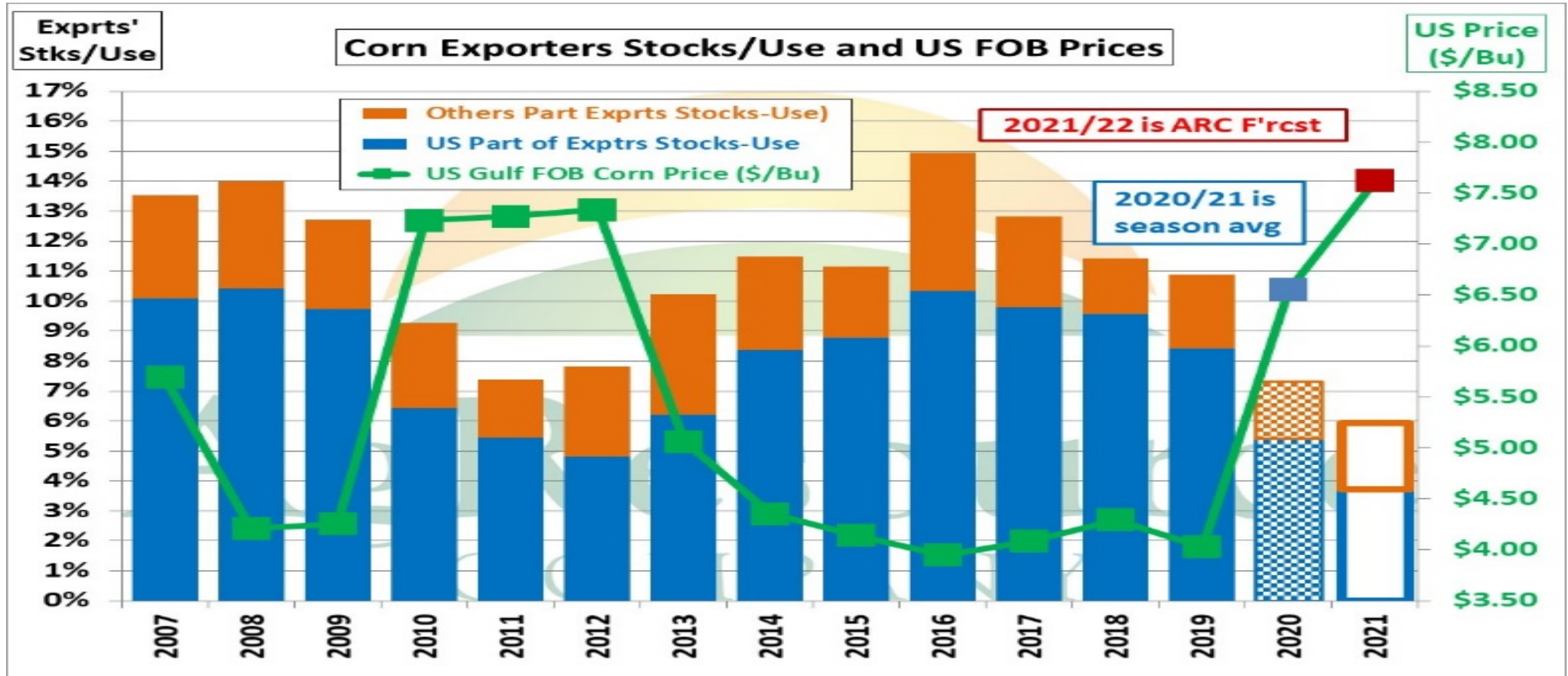
World Exporter Stock/Use Ratio in corn/soy & wheat - record low requires years to recover



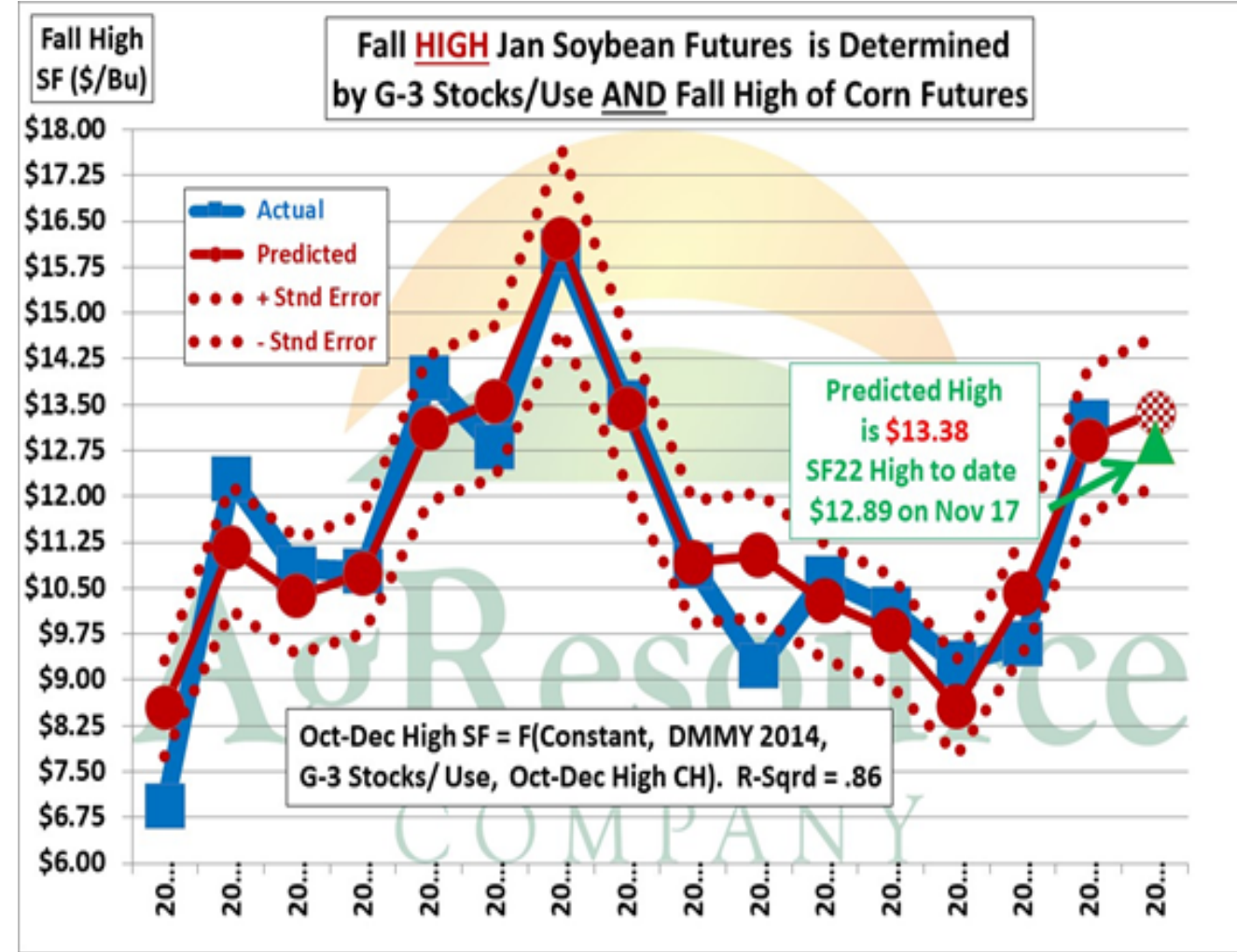
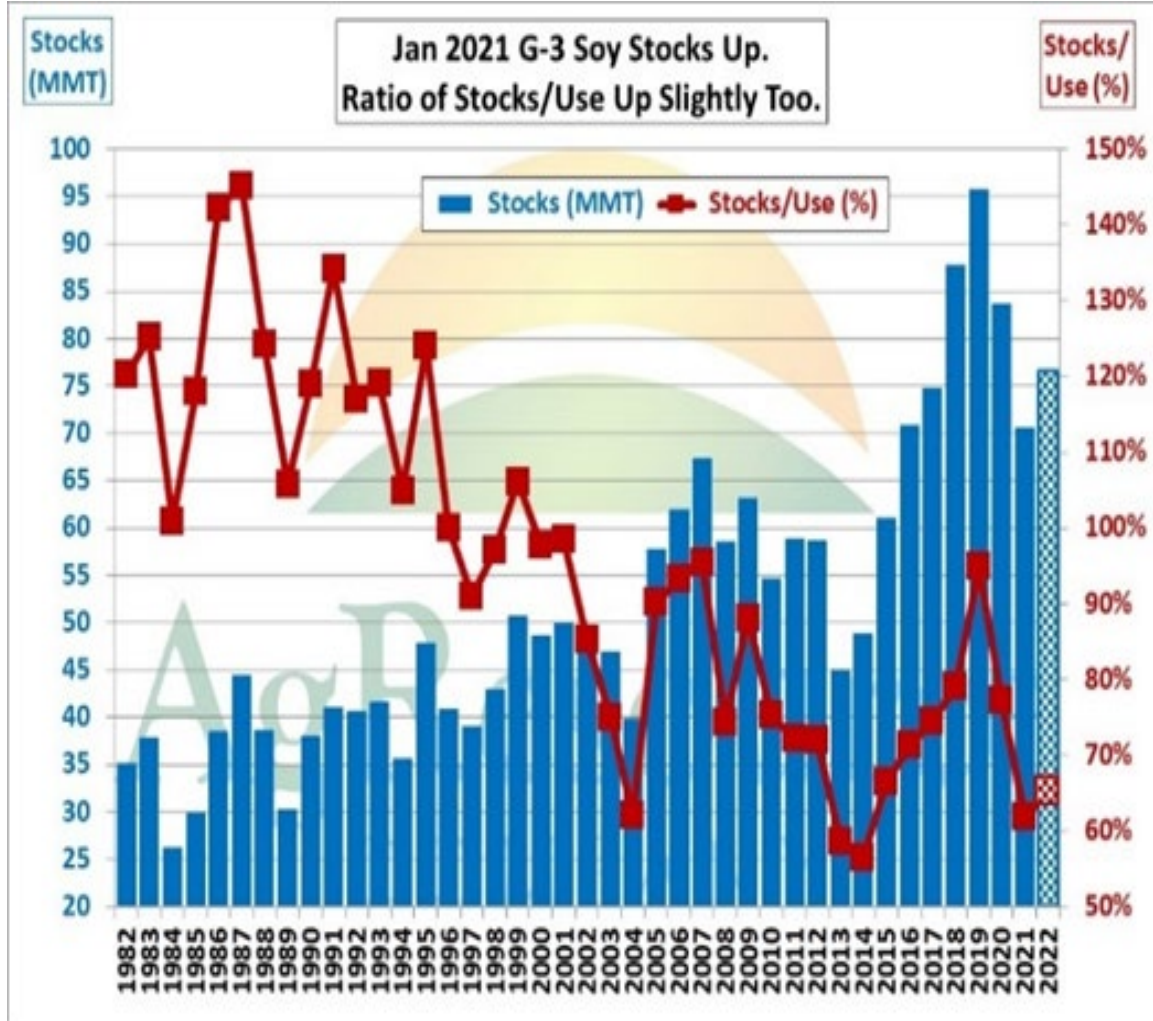
The correlation between La Nina and Argentine corn yield; Is a 2022 Argentine drought pending?



Modeling projects corn price high of \$6.40-7.20/Bu spot CBOT futures/\$7.50 Gulf FOB



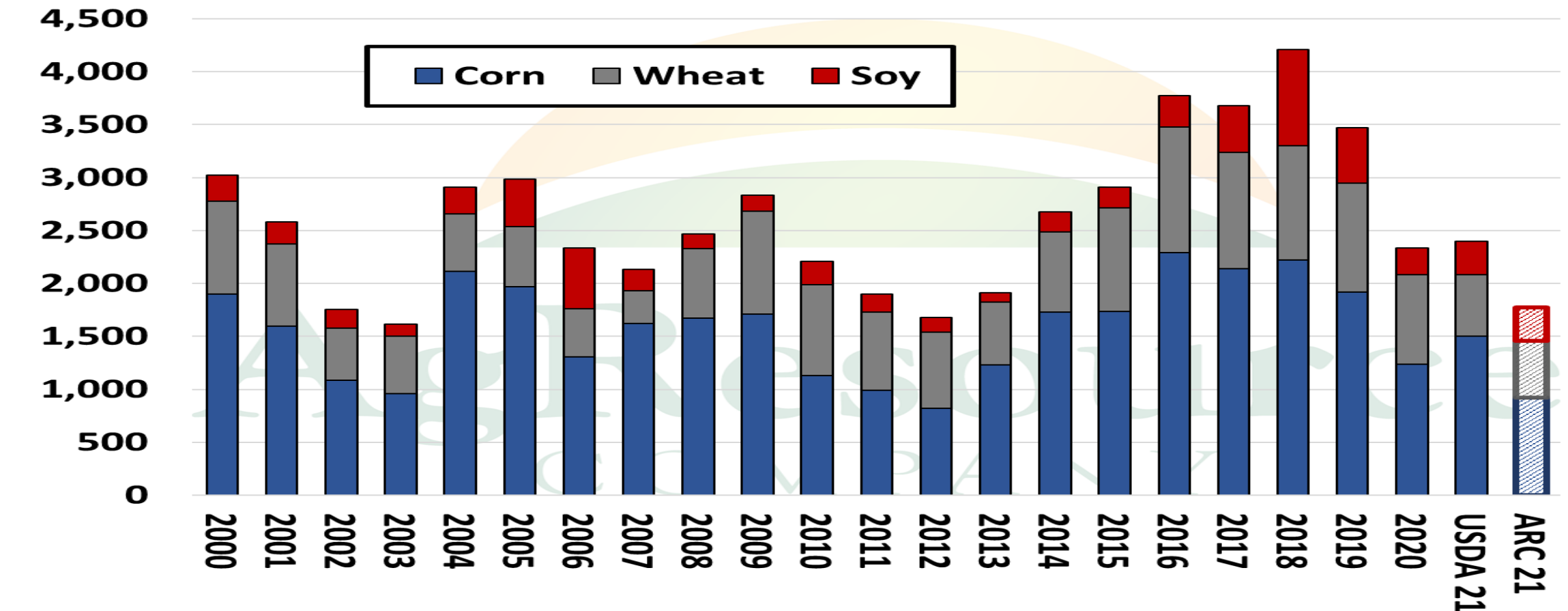
January G3 soybean stocks up 8.3%; Stock/Use ratio calls for \$12.10-13.40 CBOT March soybeans



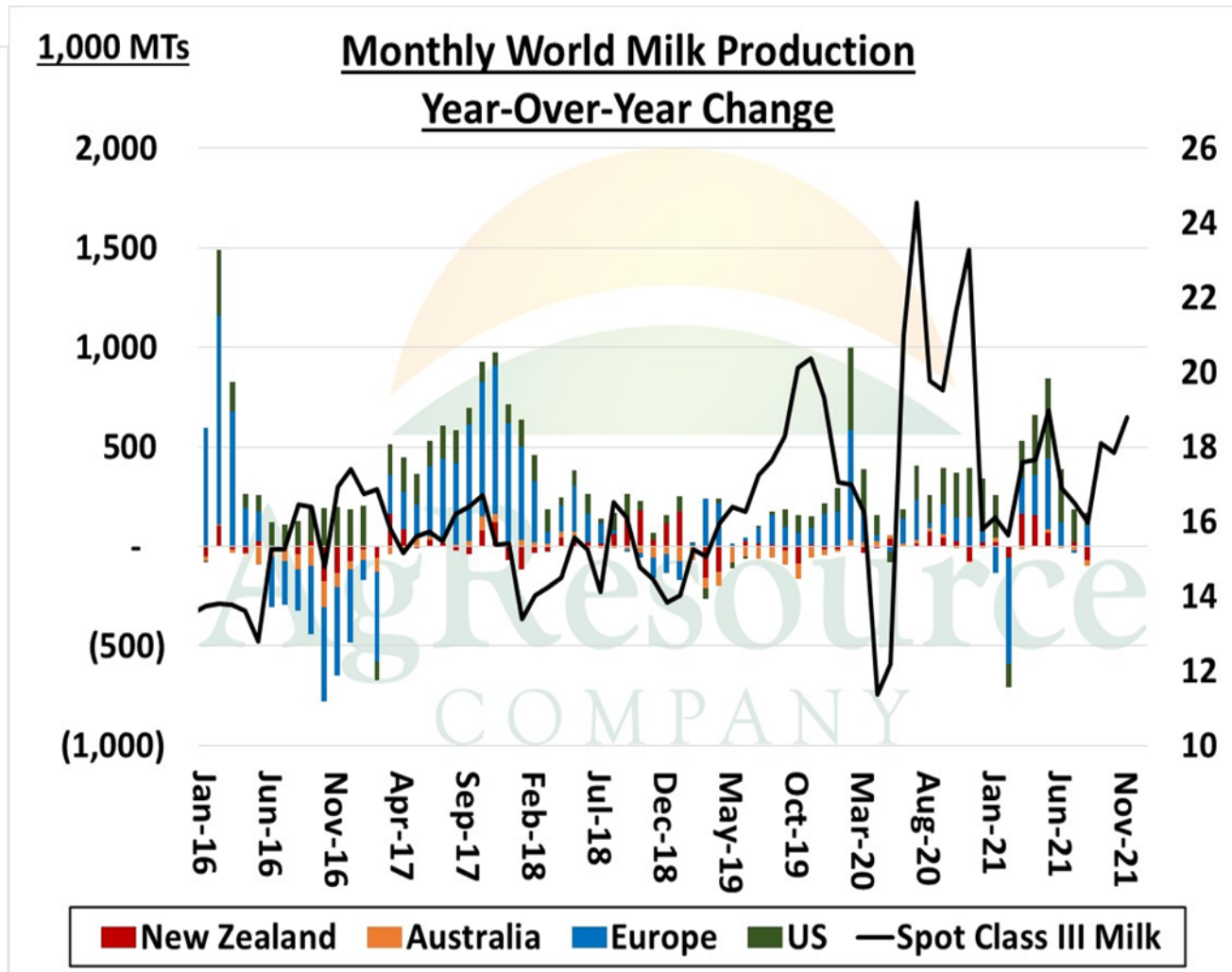
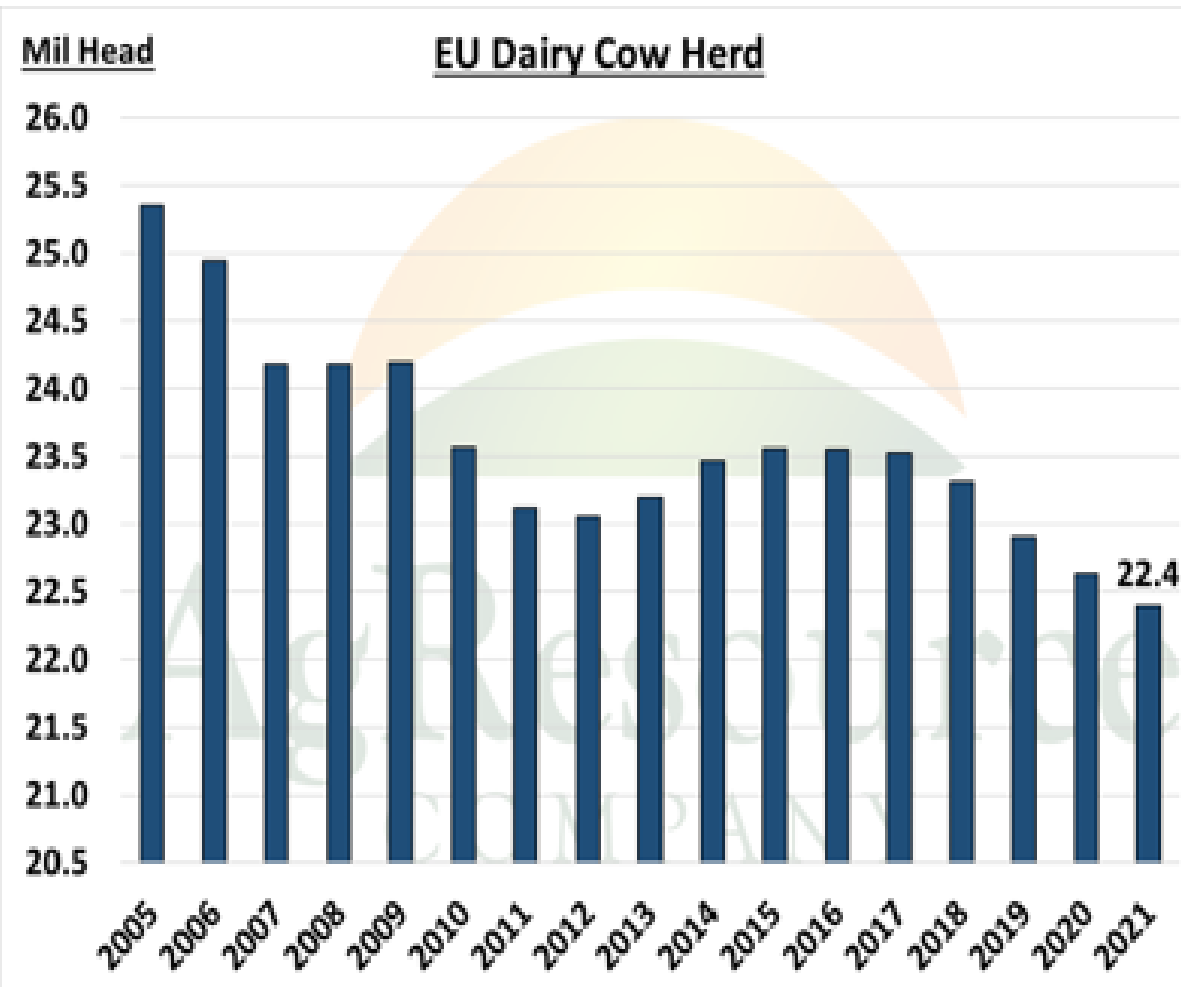
Even with near record 2021 US row crops; No room for 2022 yield loss on limited US stocks

Mil Bu

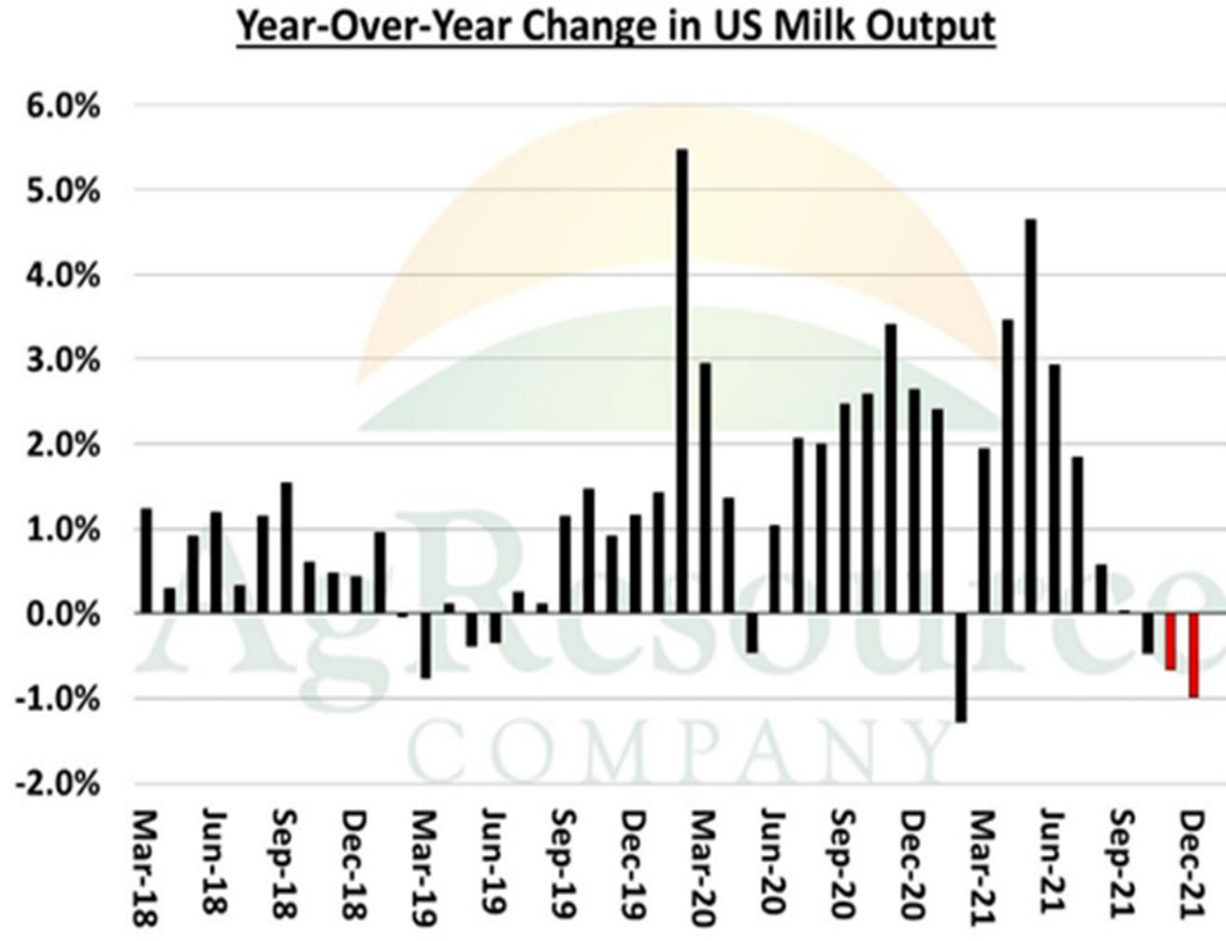
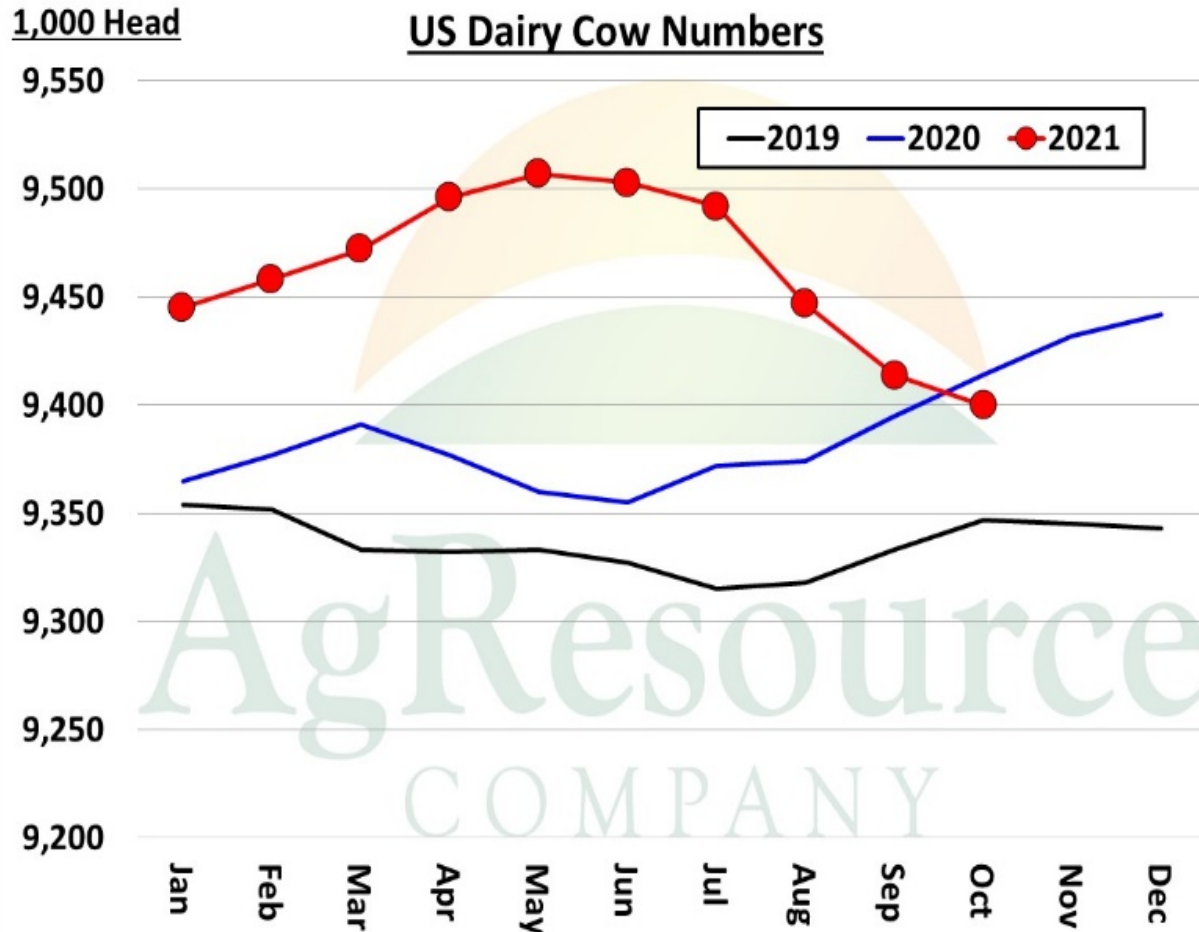
US Major Crop Stocks



EU policy forcing dairy cow numbers down/feed costs up; American dairy farmers well positioned



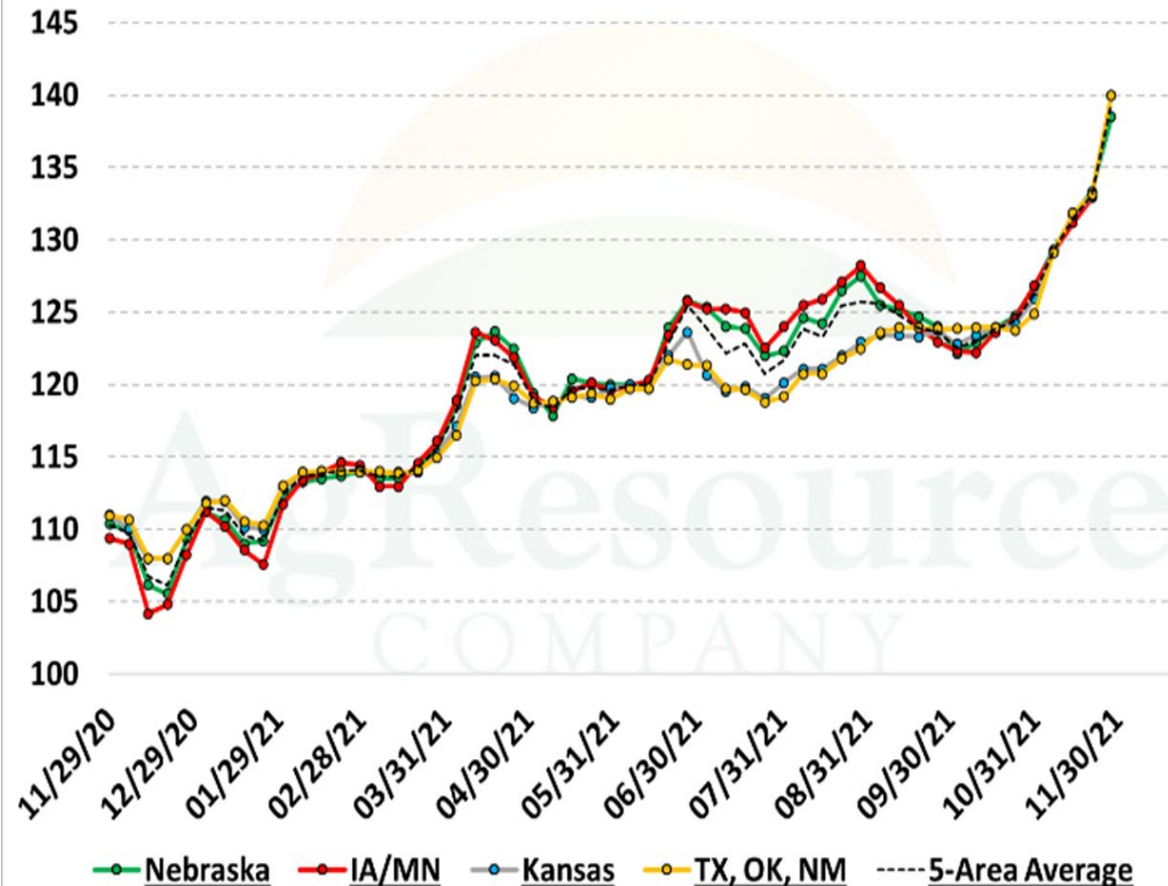
US dairy cow numbers drop below a year ago at 9.4 Mil head; 2022 US milk supply in decline



Plains cash cattle price nears December record.

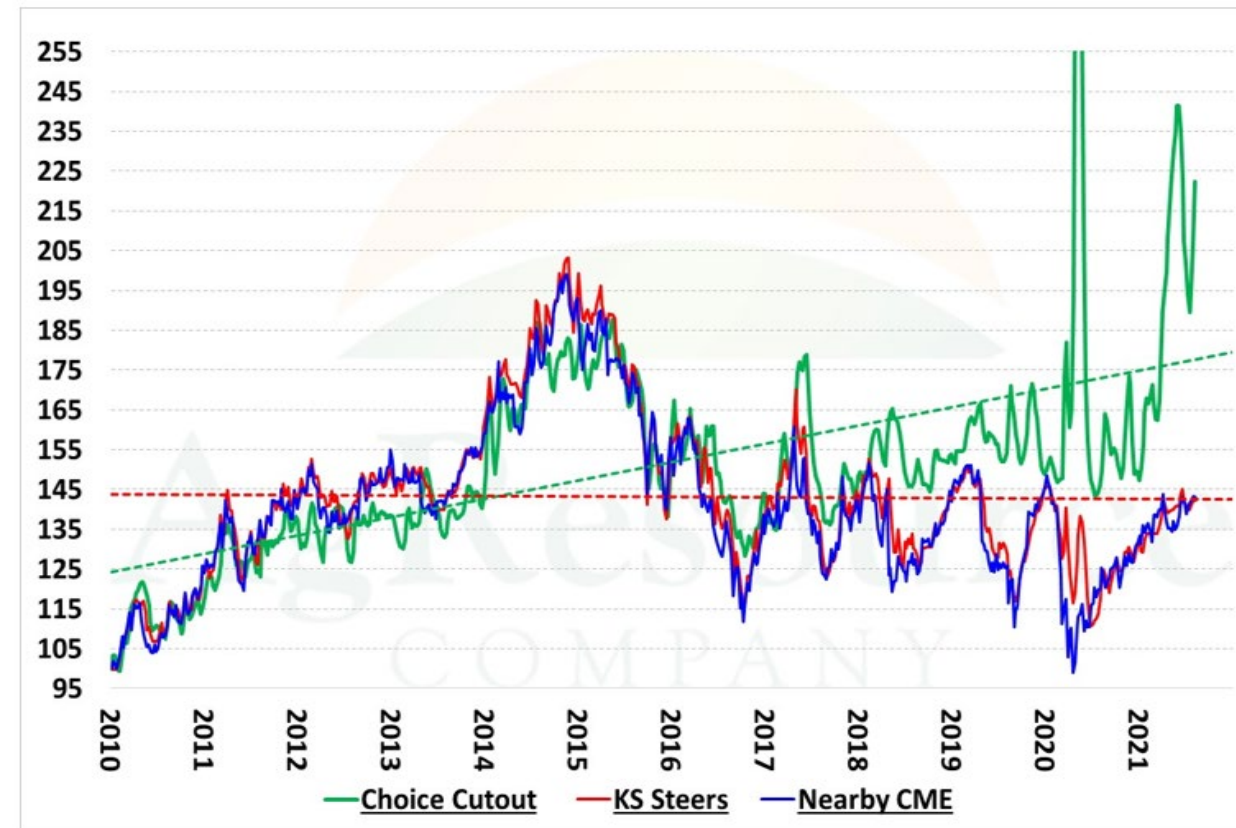
Beef/cash cattle margin dislocation started in 2018

Weekly Live Cattle Prices by Region

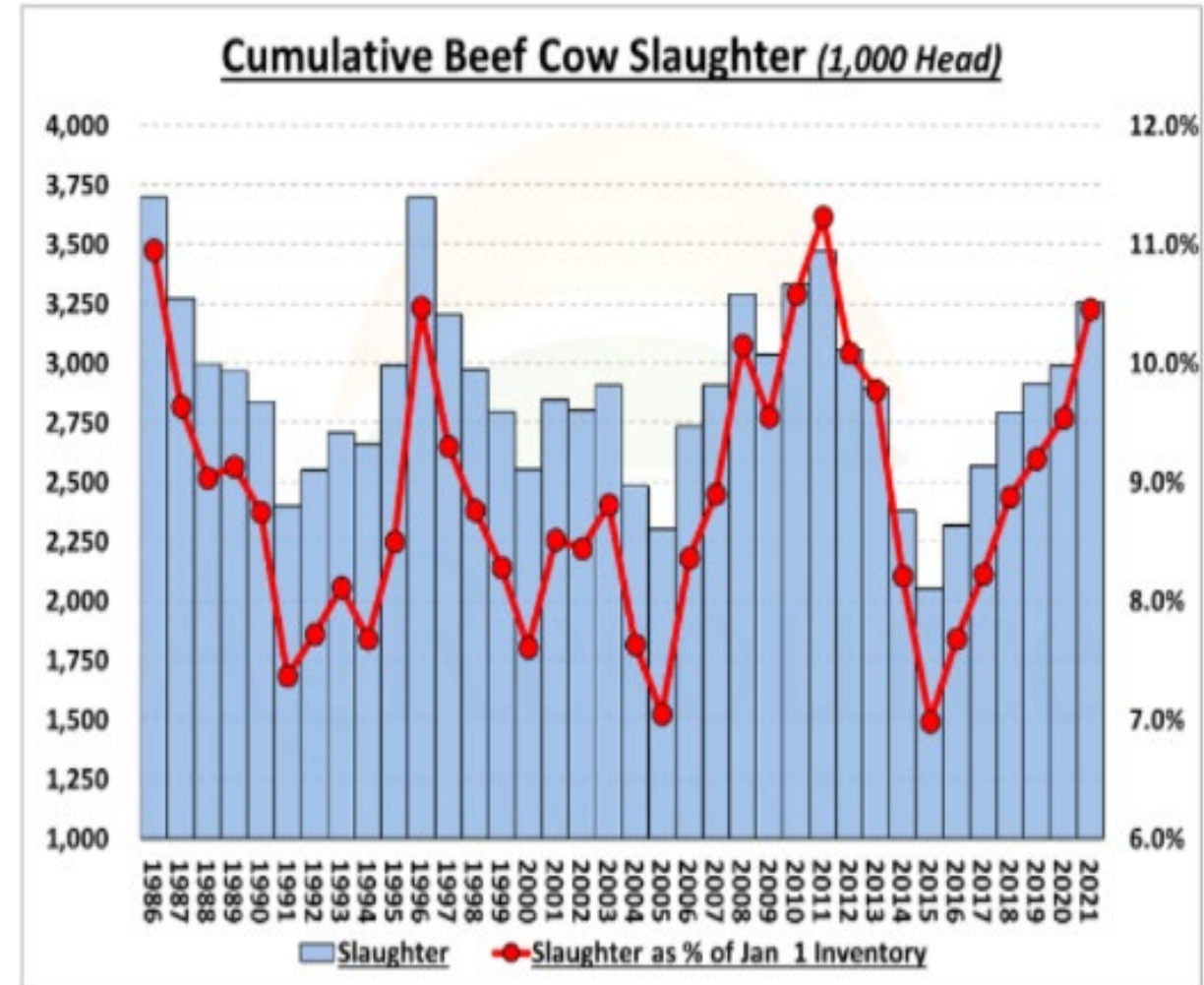
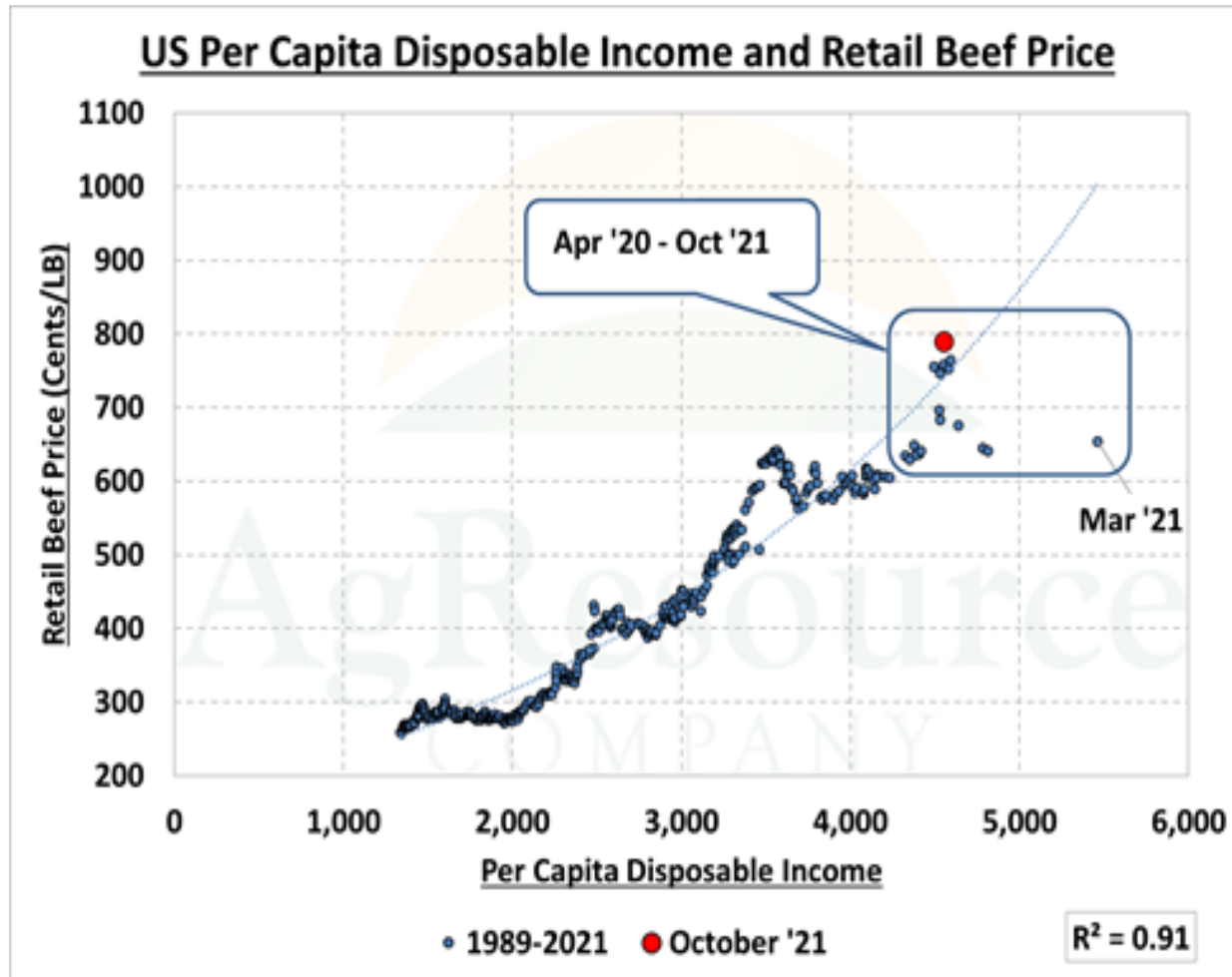


Cattle and Beef Price Indexes

Jan 2010 = 100



2021 beef cow slaughter largest since 2012 (Jan-November); US retail beef price sets record



It's not enough to know the news.
You need to trust the analysis.

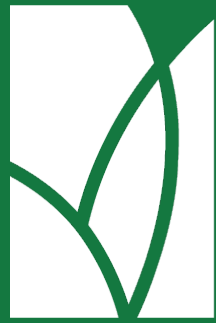
Thank You





HARRY VROOMEN

Vice President of Economic Services
The Fertilizer Institute



THE
FERTILIZER
INSTITUTE

Making Sense of Today's Fertilizer Market

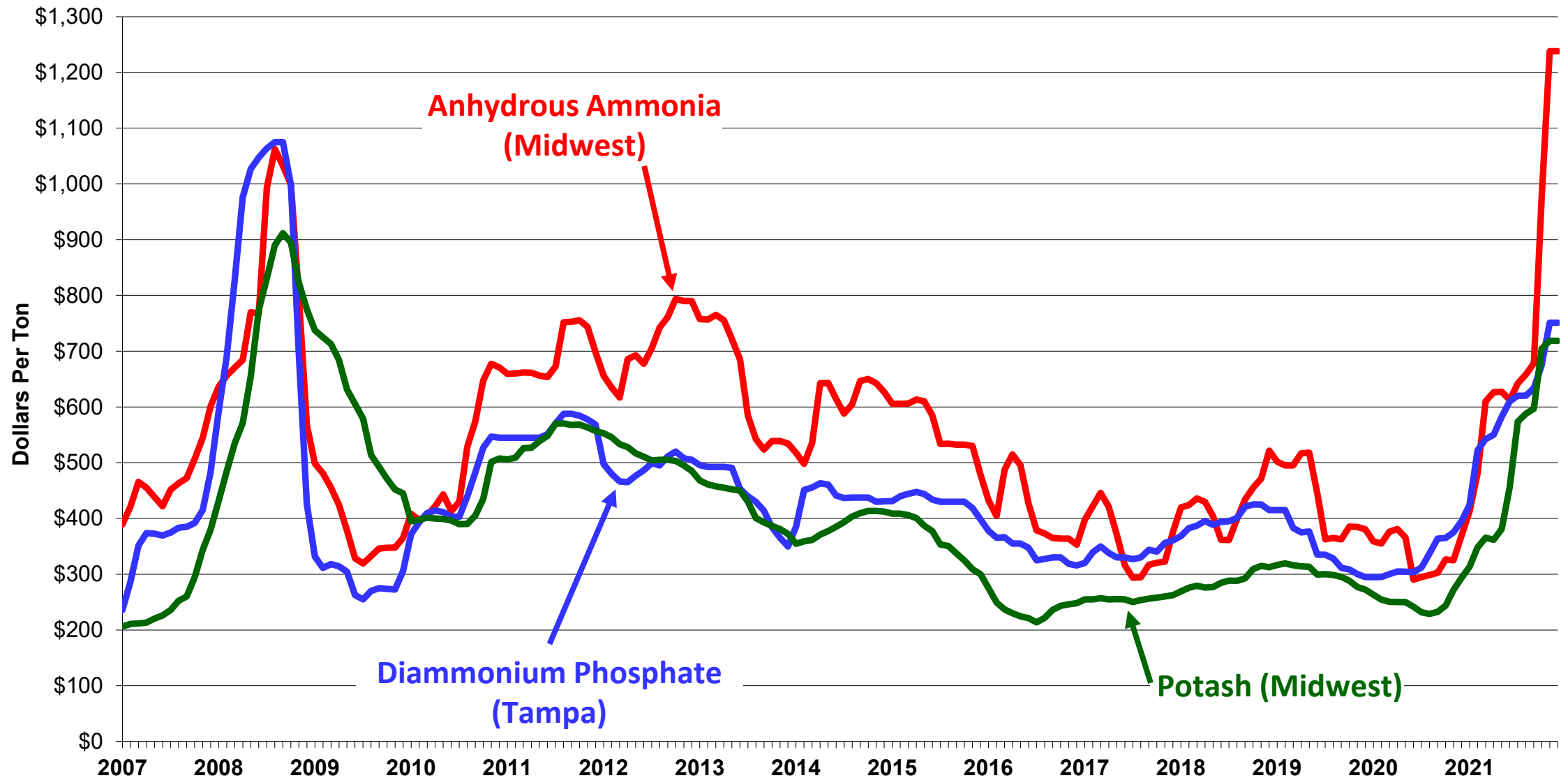
Dr. Harry Vroomen

V.P. of Economic Services

December 16, 2021



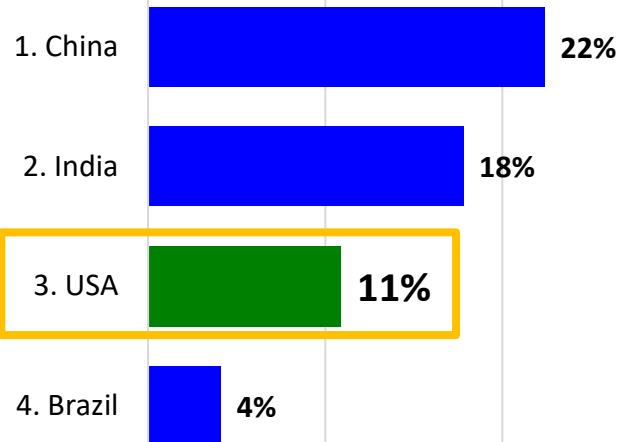
Ave. Monthly Fertilizer Prices: Jan 2007 – Dec 10, 2021



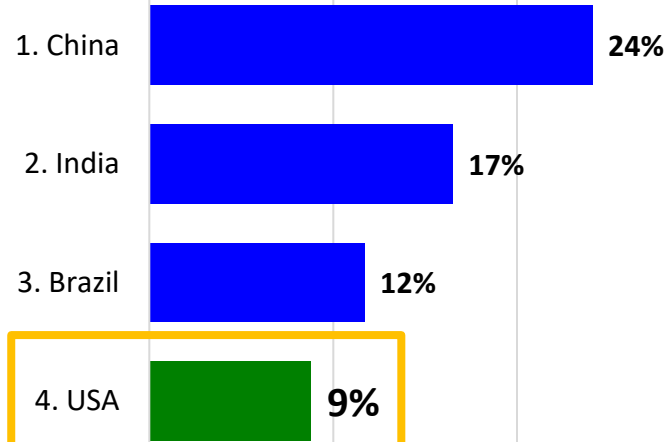


Global Consumers - 2019

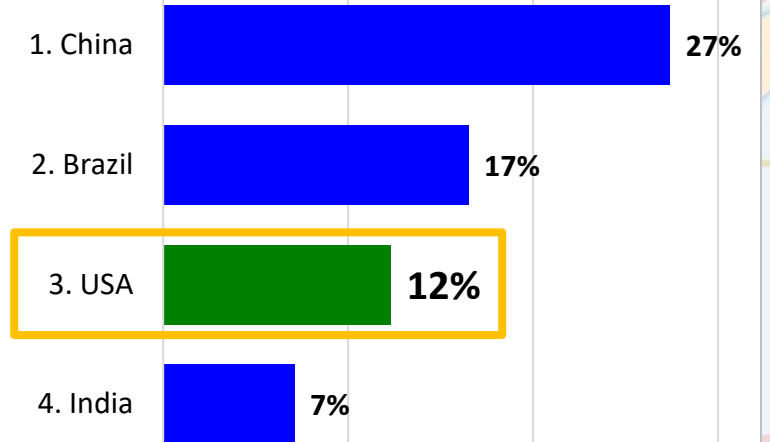
Nitrogen



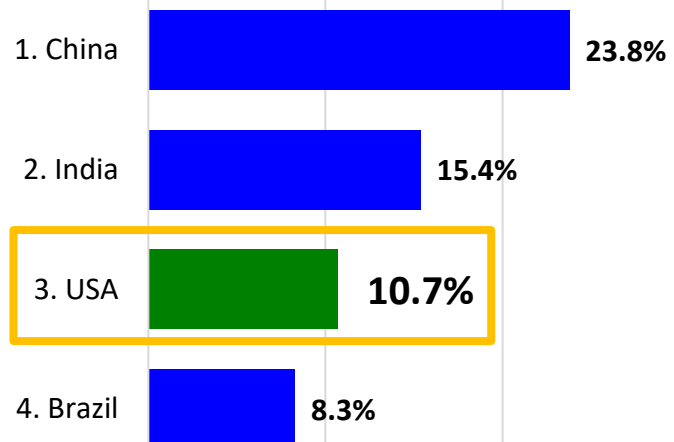
Phosphates



Potash

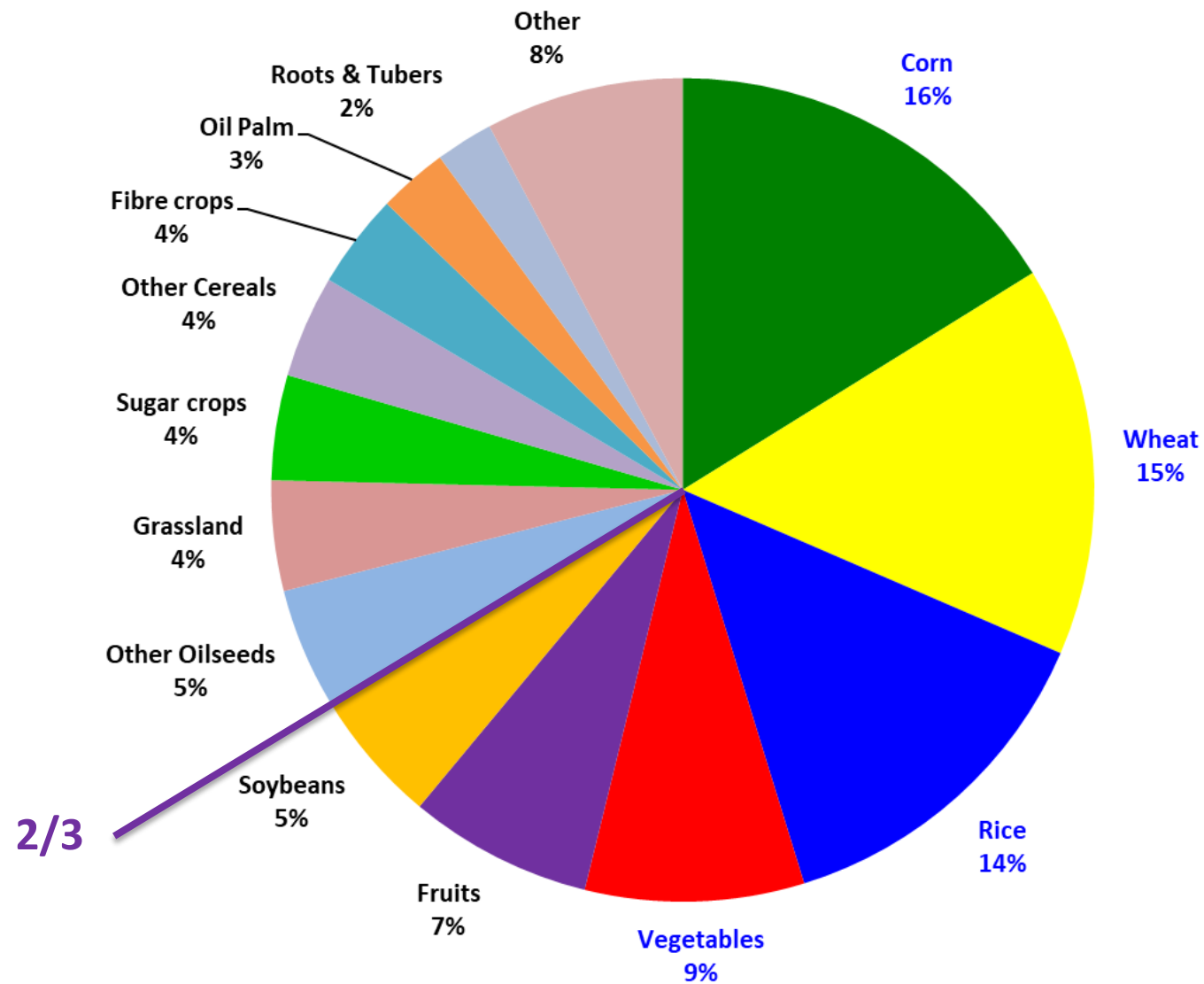


N + P₂O₅ + K₂O

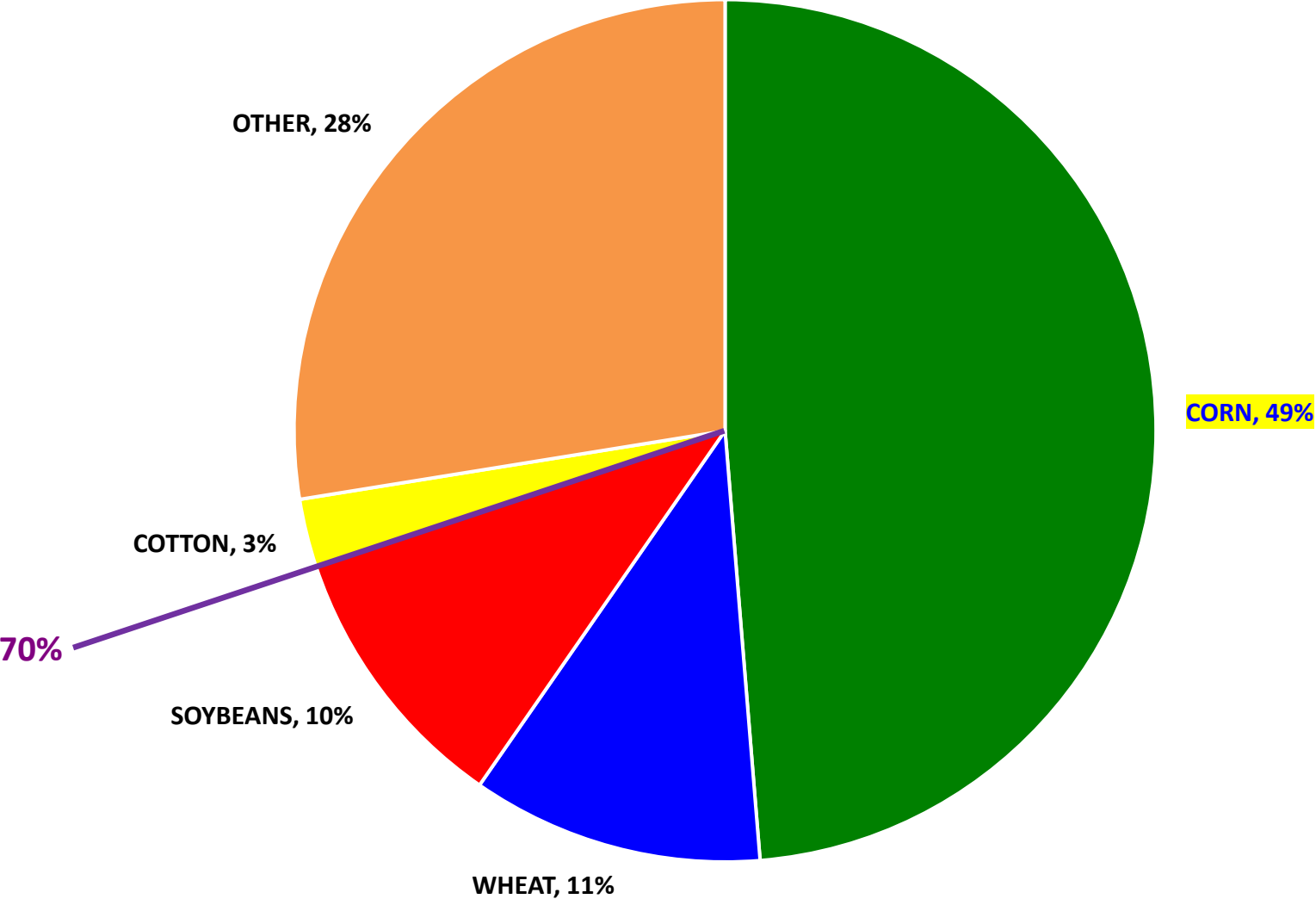


**USA is a Large Consumer;
≈ 90% of Global Nutrient
Use is Outside the USA!**

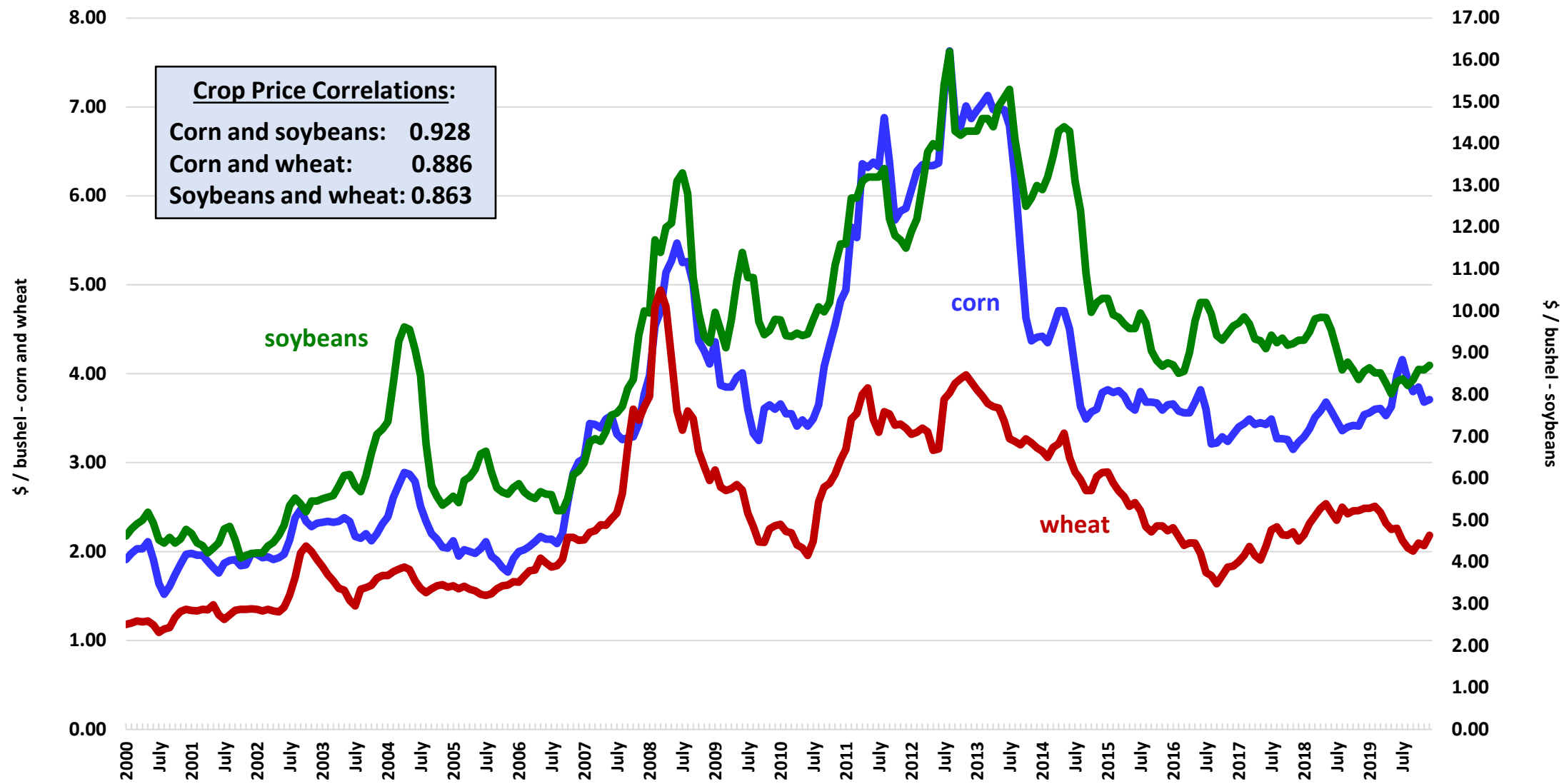
Global Nutrient Use by Crop, 2014/15



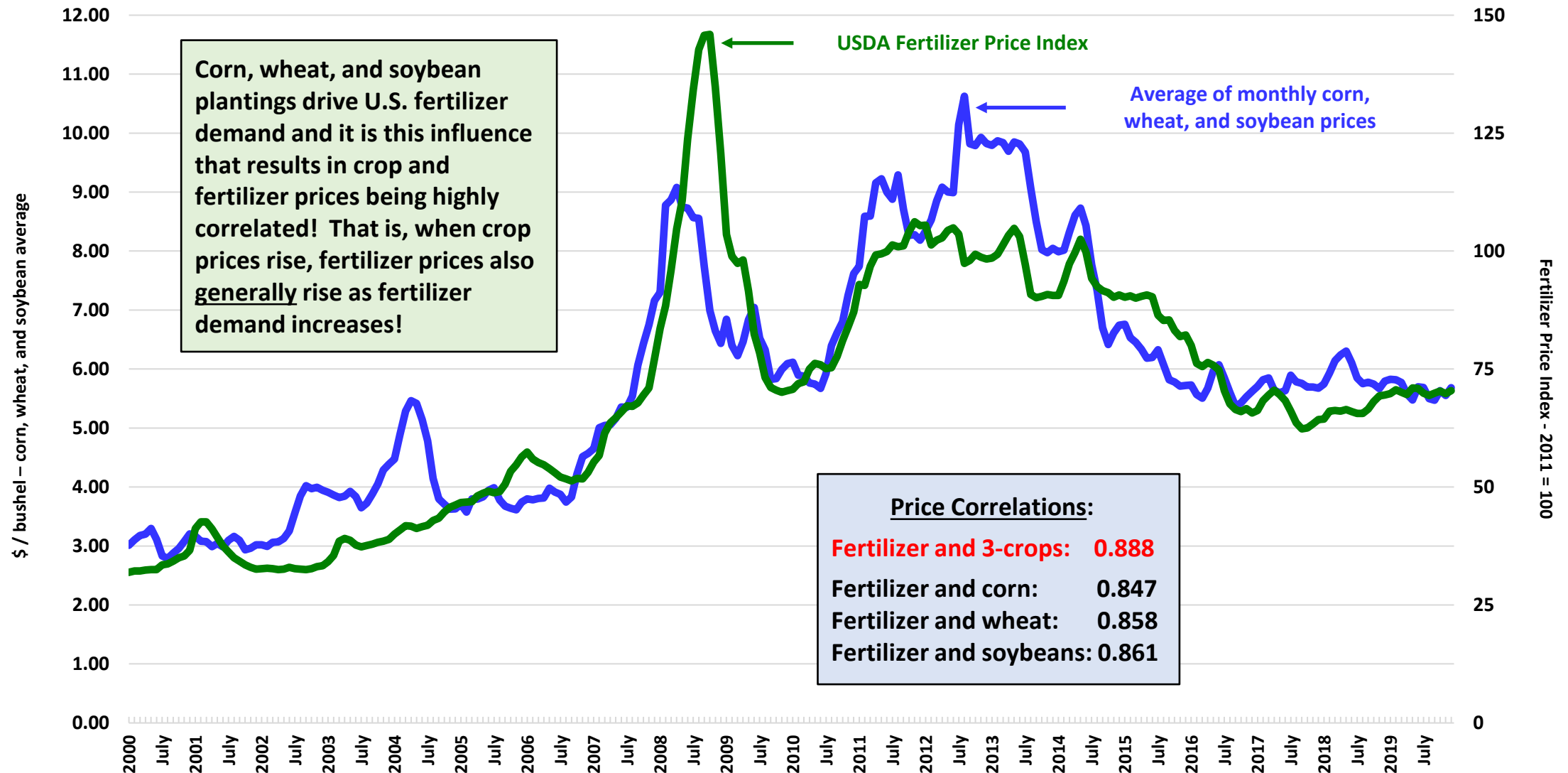
U.S. Fertilizer Nutrient Use By Crop: FY2013/14 - FY2015/16



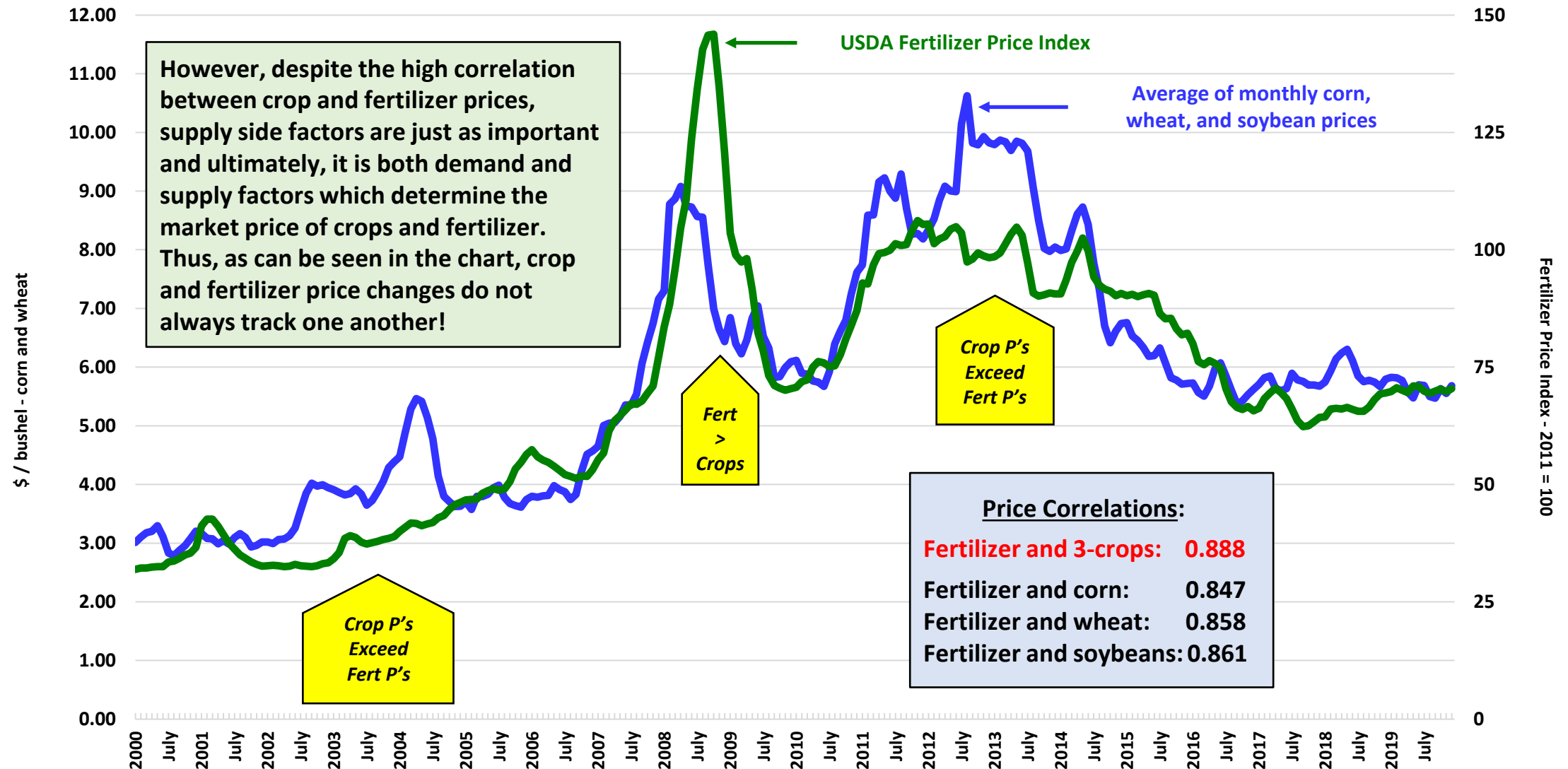
Monthly Average Crop Prices Received by U.S. Farmers, Jan. 2000 - Dec. 2019



Monthly Average Crop and Fertilizer Prices, Jan. 2000 - Dec. 2019



Monthly Average Crop and Fertilizer Prices, Jan. 2000 - Dec. 2019





(anhydrous ammonia)



NITROGEN (N)

is a primary building block for all organisms. It is essential to making proteins, helps keep plants green and is a critical component of soil structure.

COMES FROM THE AIR





PROCESSING PHOSPHATE

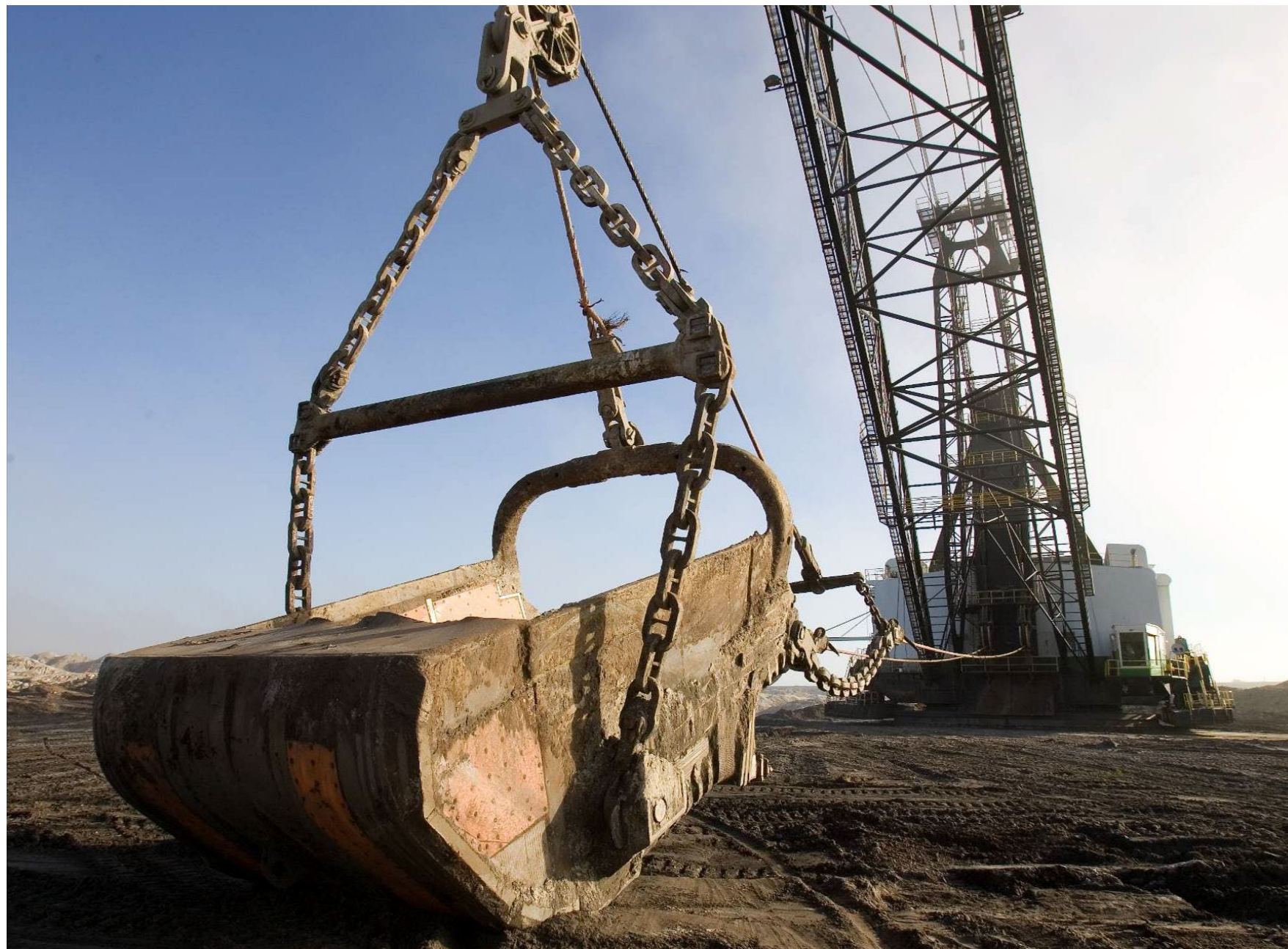
Energy Requirements:

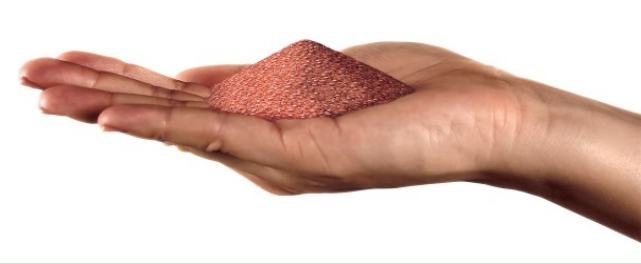
Electricity is used to power draglines, shovels, pumps, and other beneficiation equipment.

Draglines operate on electricity and account for about 80% of the total energy use per ton in surface phosphate mining.

Mining requires > 95% of the total energy used.

Beneficiation (testing, flotation, & washing) accounts for < 5%.



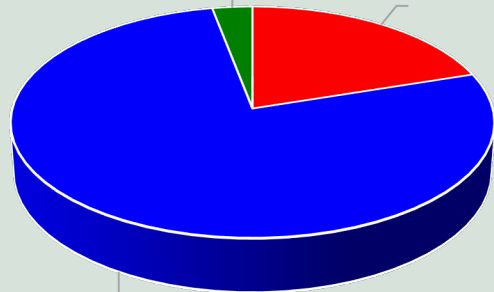


POTASH PRODUCTION

Energy Use by Type

Other (diesel, propane,
and fuel oil), 3%

Electricity,
20%



Natural Gas, 77%



Fertilizer Materials

Material

Grade

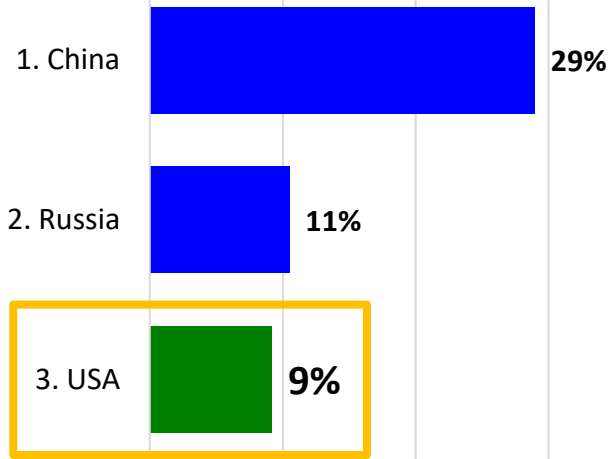
N **P₂O₅** **K₂O**
percent

Anhydrous Ammonia	82 –	0 –	0
Urea	46 –	0 –	0
Ammonium Nitrate	34 –	0 –	0
Nitrogen Solutions	28-32 –	0 –	0
Ammonium Sulfate	21 –	0 –	0
Di-ammonium Phosphate	18 –	46 –	0
Mono-ammonium Phosphate	11 –	52 –	0
Potassium chloride	0 –	0 –	60-61
Potassium sulfate	0 –	0 –	50
Multiple-nutrient Grade	9 –	23 –	30
Multiple-nutrient Grade	10 –	10 –	10

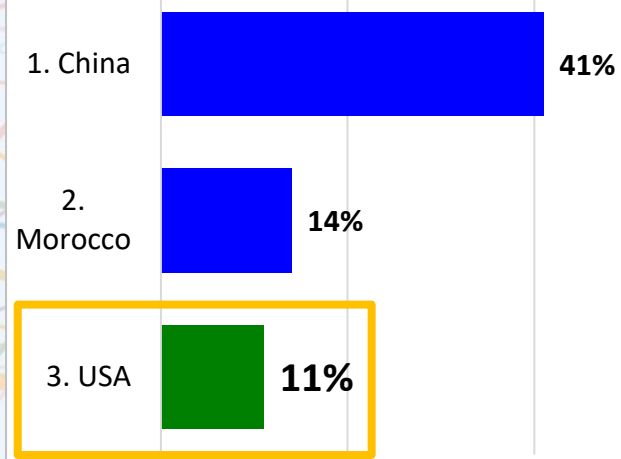


Global Producers - 2020

Ammonia

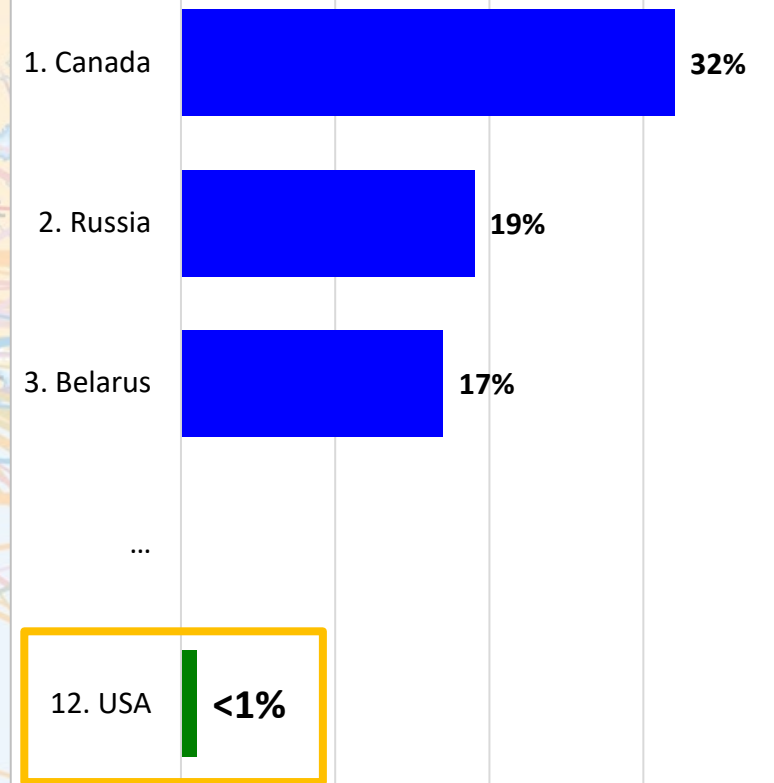


Processed Phosphates^{1/}

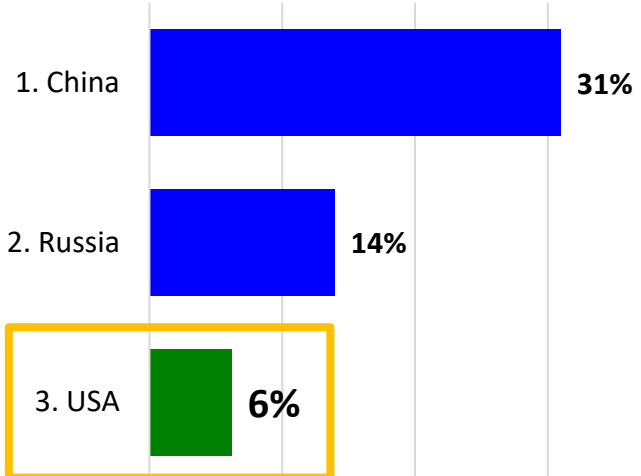


1/ DAP, MAP, and TSP.

Potash



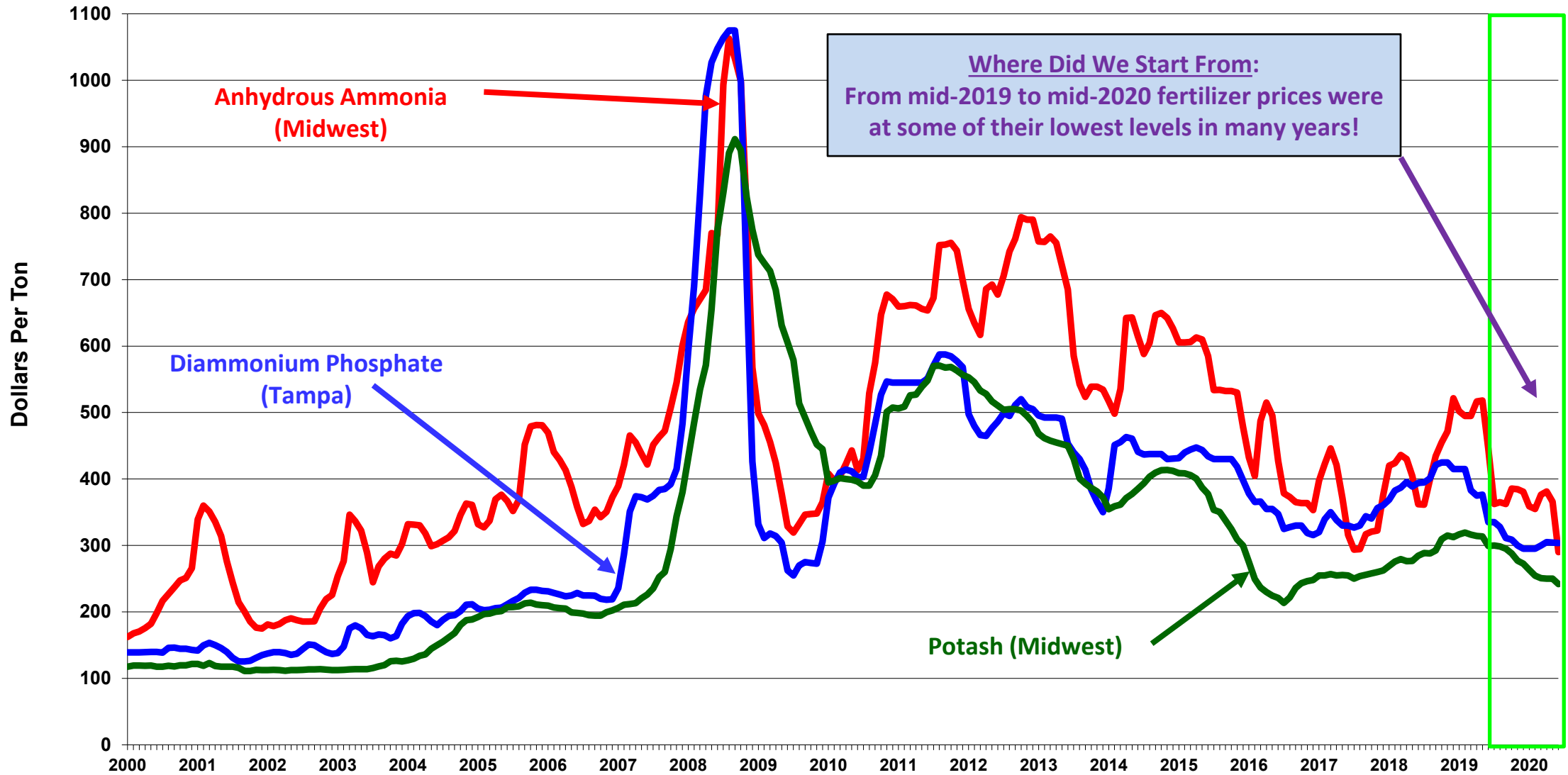
Urea





A Look Back...

Monthly Average Wholesale Fertilizer Prices: January 2000 - June 2020



A close-up photograph of a person's face, focusing on their eyes and a blue surgical mask. The mask is partially covering their nose and mouth. Overlaid on the image are several glowing, translucent virus particles, which are spherical with a textured surface and radiating spikes, resembling coronaviruses. These particles are scattered across the frame, with some appearing to be on or near the mask. The background is a soft, out-of-focus blue.

Global Pandemic

A World Bank Report

APRIL 2020

Commodity Markets Outlook

*Implications of COVID-19
for Commodities*

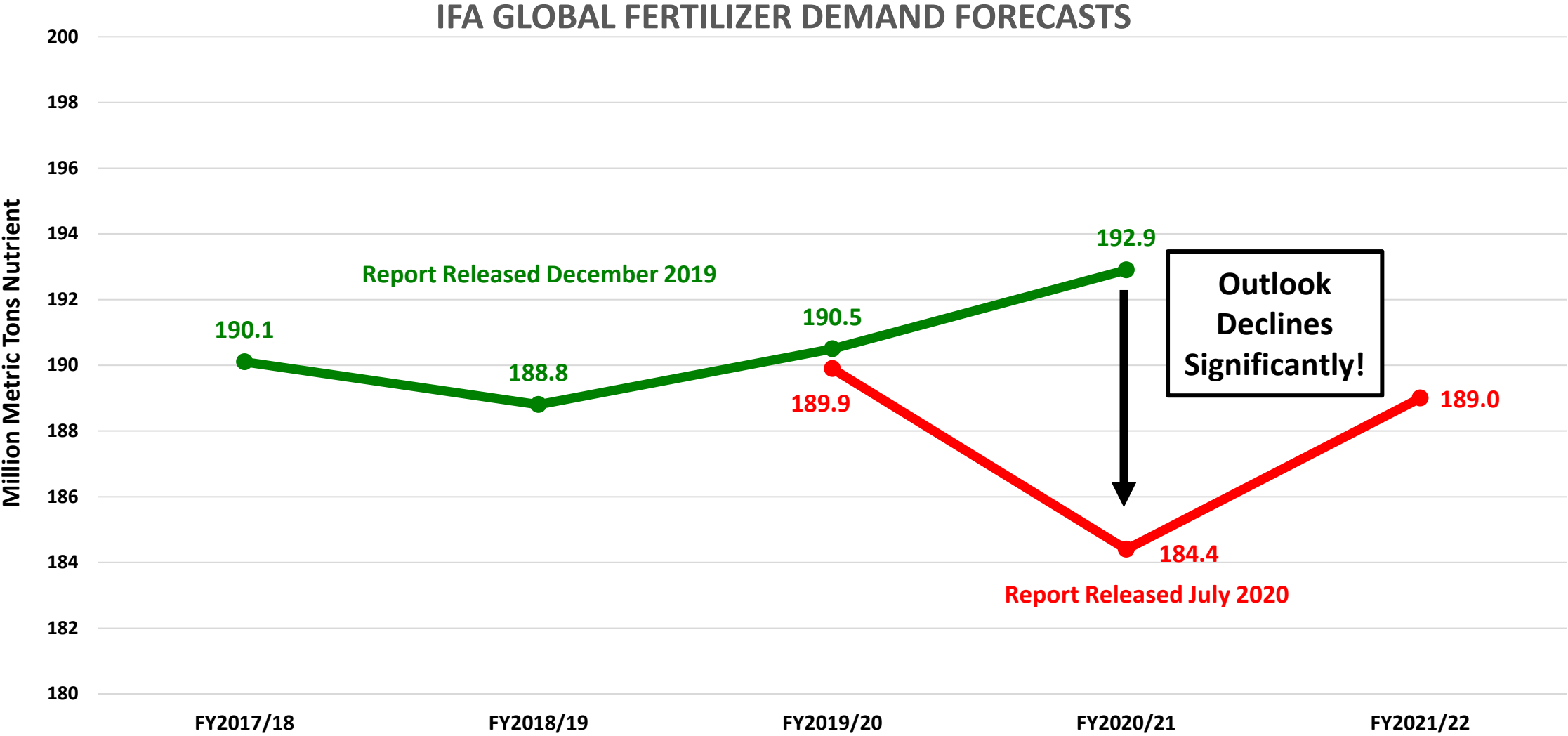


Apr
Oct

Fertilizers

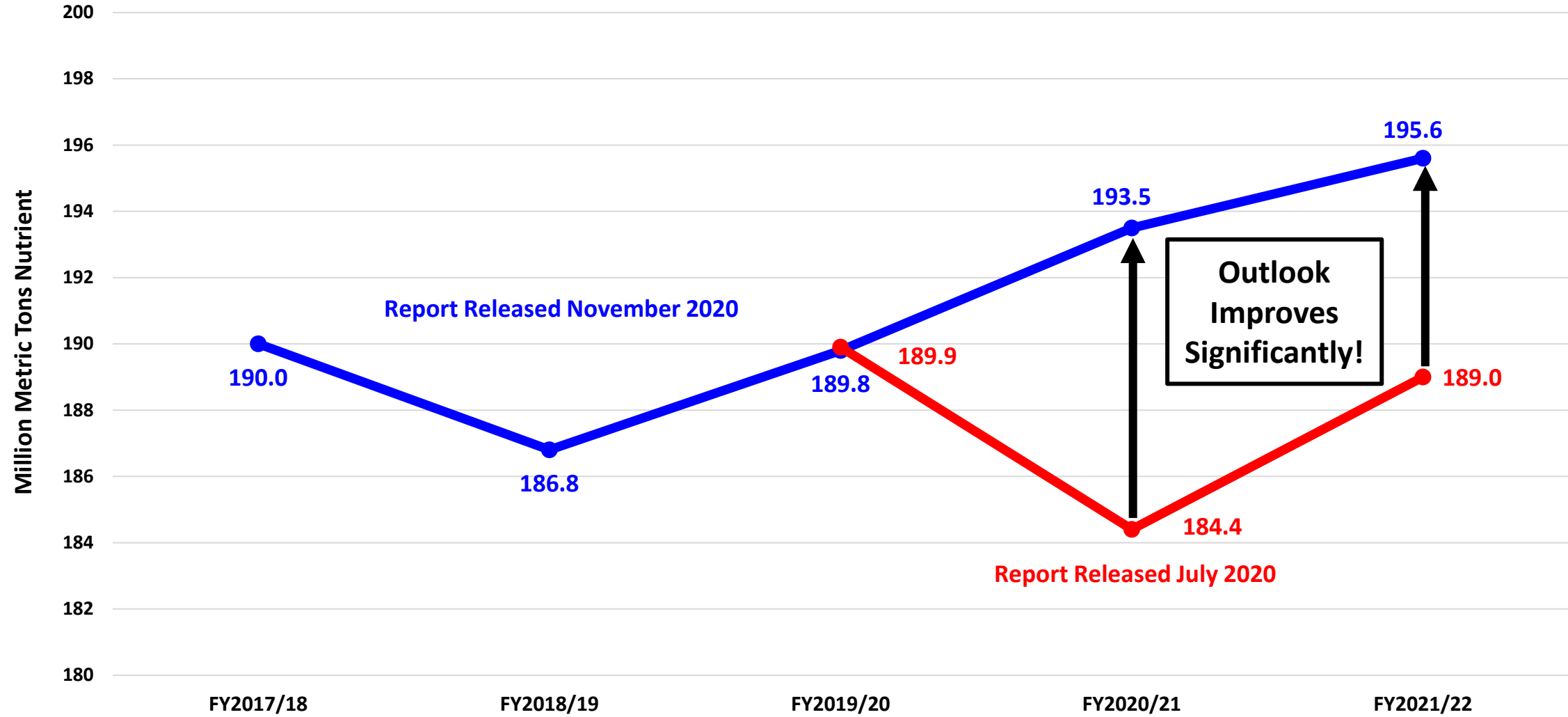
The World Bank's Fertilizer Price Index dropped 4.5 percent in the first quarter of 2020 (q/q), the seventh consecutive quarterly decline. A fall in potash and urea prices, owing to a slump in demand, pushed the index lower. However, phosphate prices increased as the COVID-19 outbreak in China severely hampered production and disrupted supply chains. In 2020, the index is projected to fall by 9.9 percent as global fertilizer supply remains plentiful. Risks to this outlook are broadly balanced. Upside risks include prolonged widespread supply disruptions, while downside risks include a slower-than-expected recovery in demand.

Production Planning



Production Planning

IFA GLOBAL FERTILIZER DEMAND FORECASTS

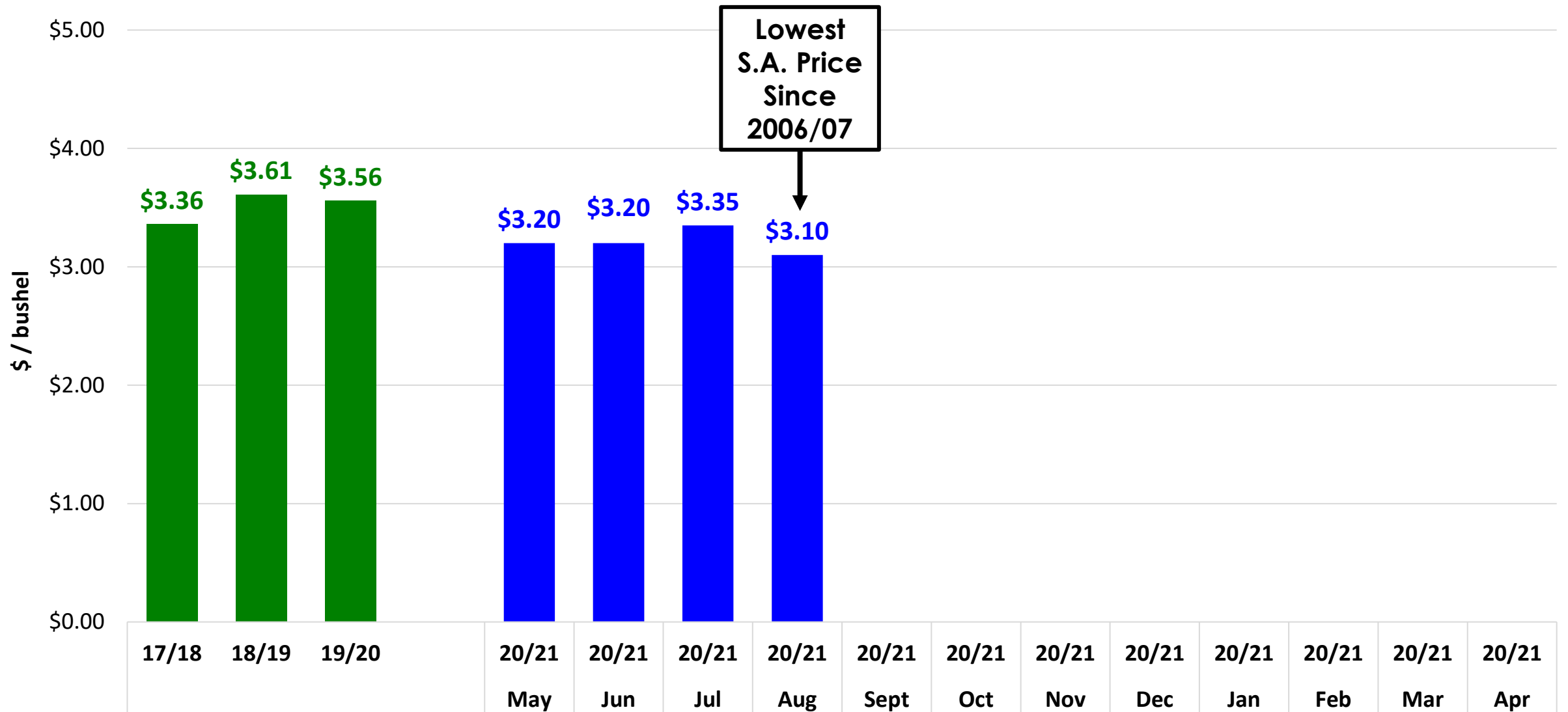


Source: International Fertilizer Association (IFA).

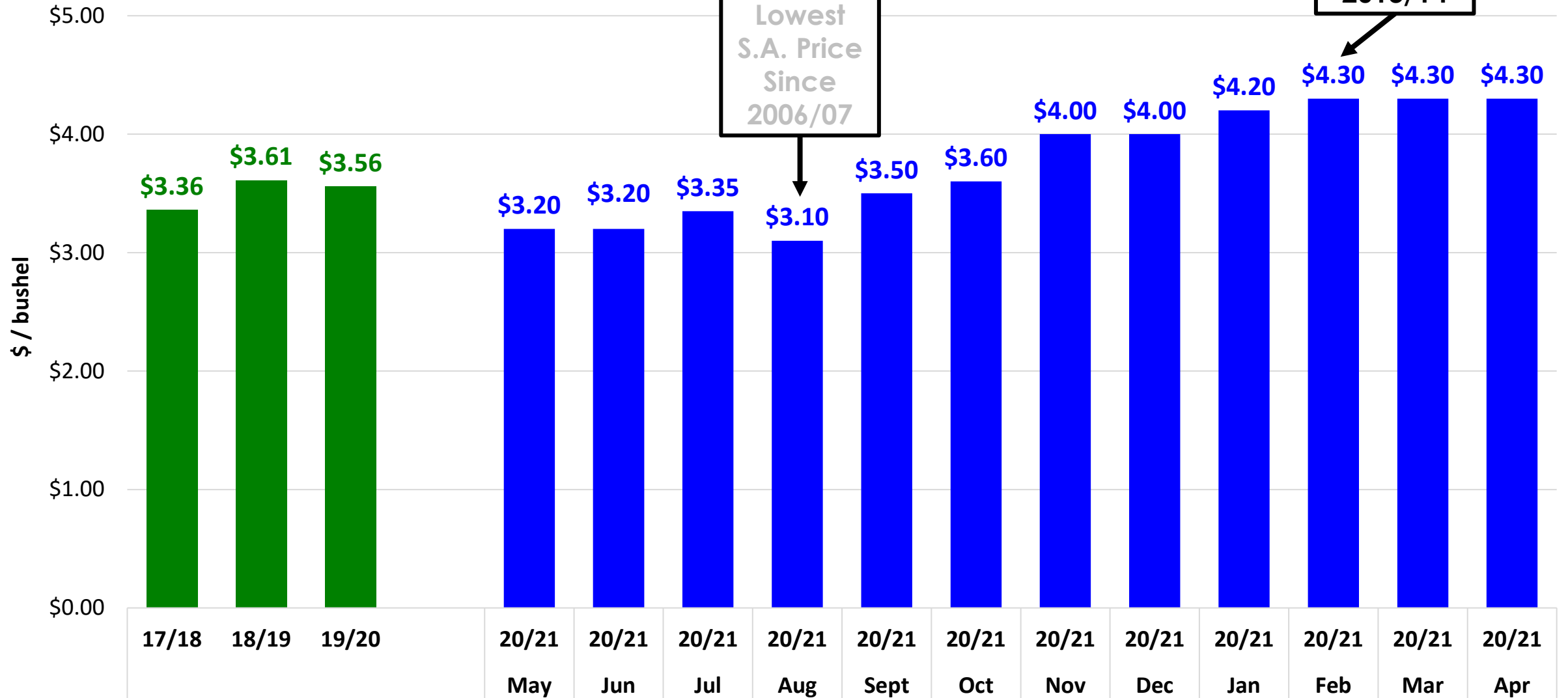
Crop Markets



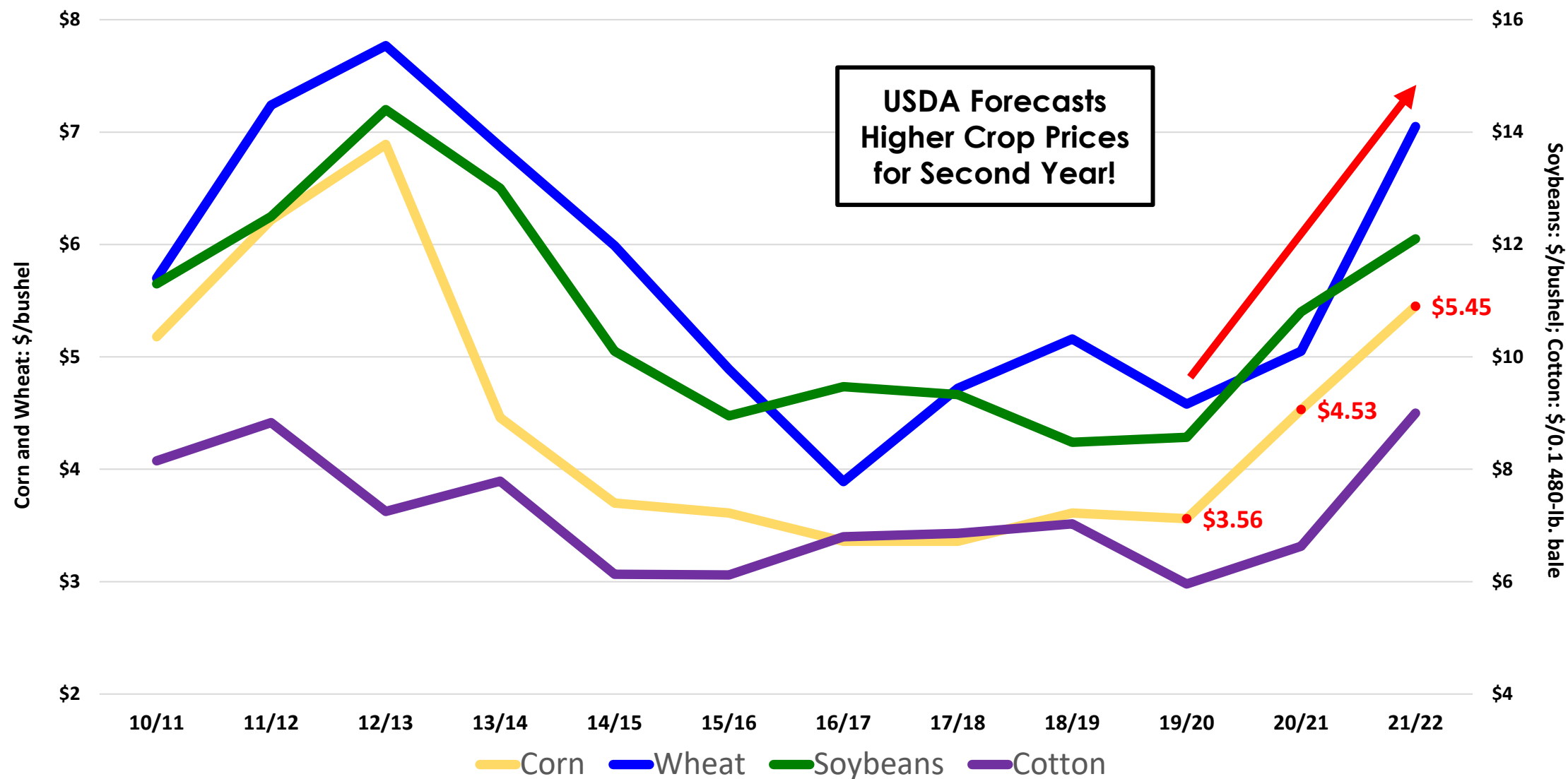
Corn – Season Average Price Forecast by USDA



Corn – Season Average Price Forecast by USDA



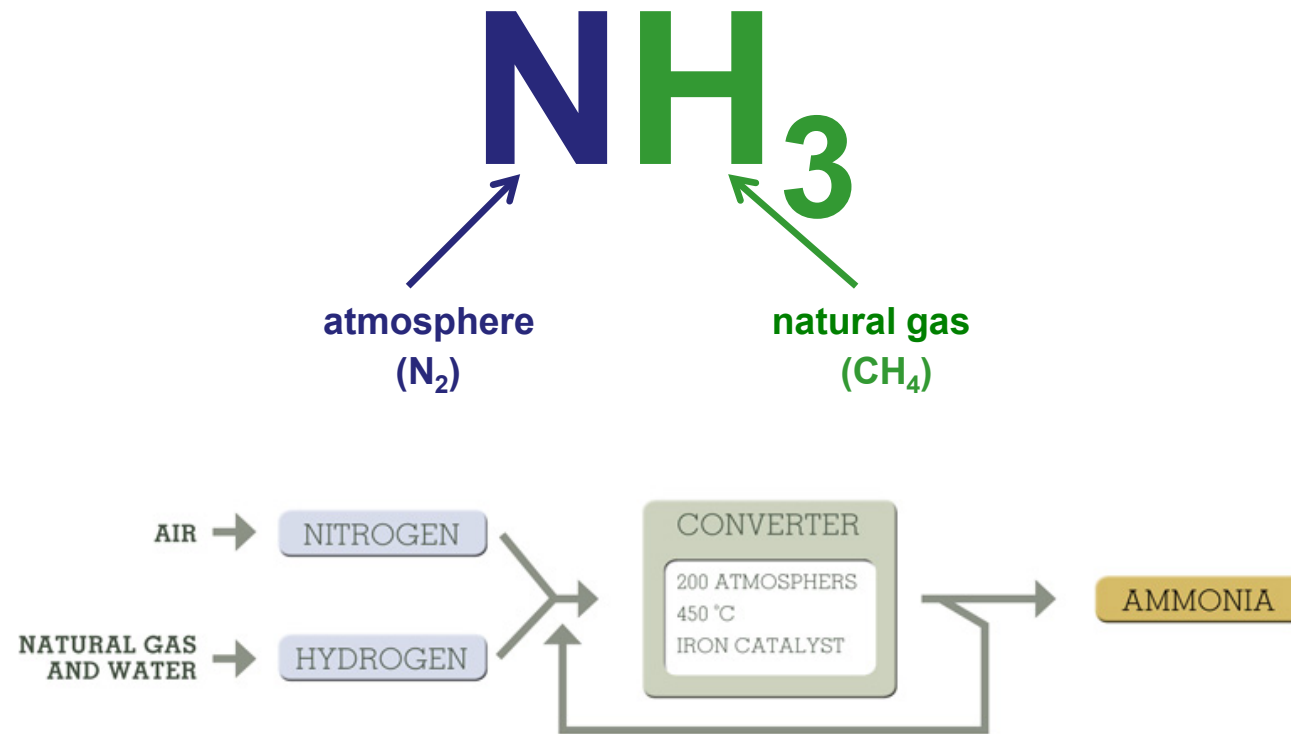
Season Average Crop Prices



PRODUCING FERTILIZER TAKES ENERGY!

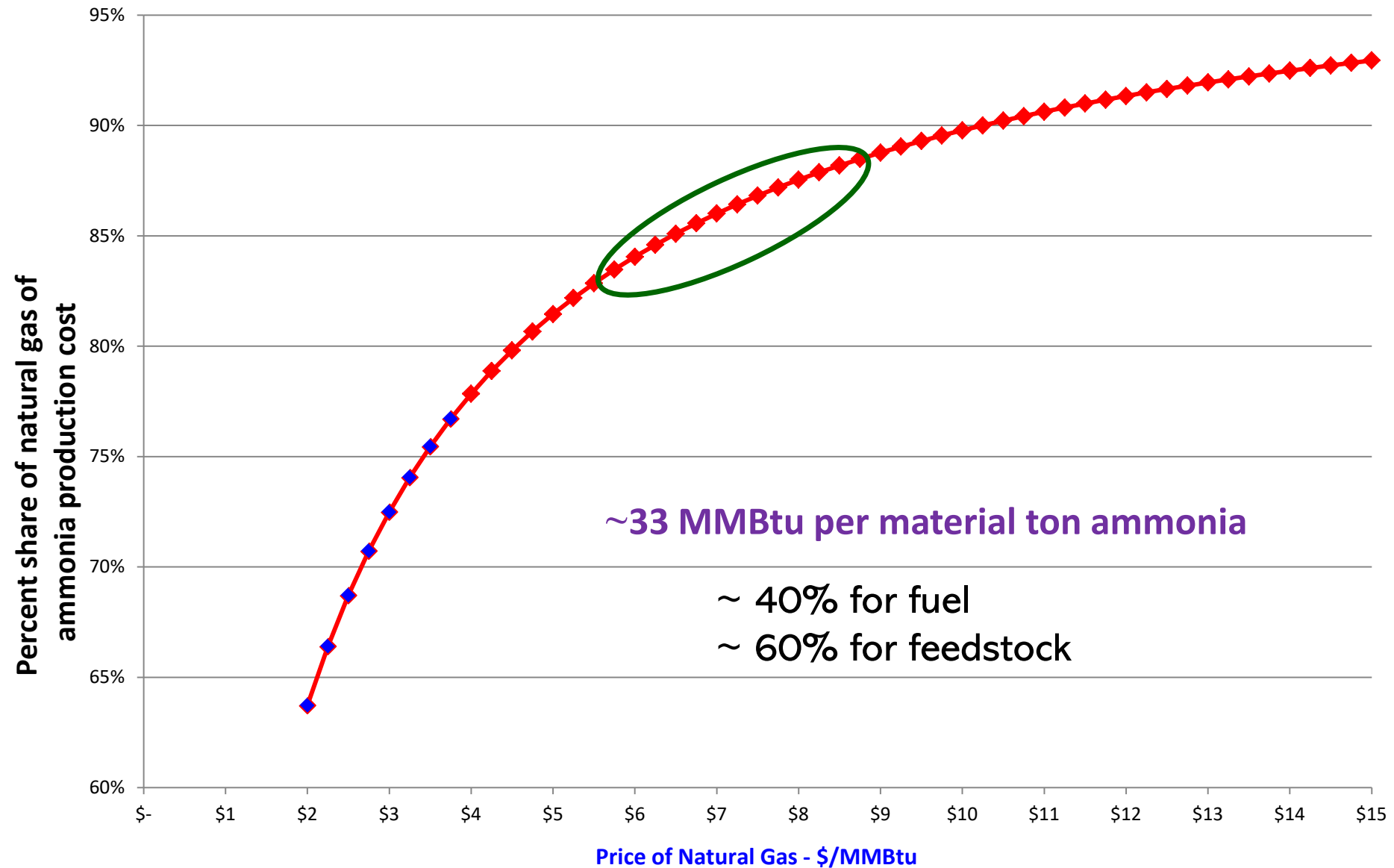


Anhydrous Ammonia

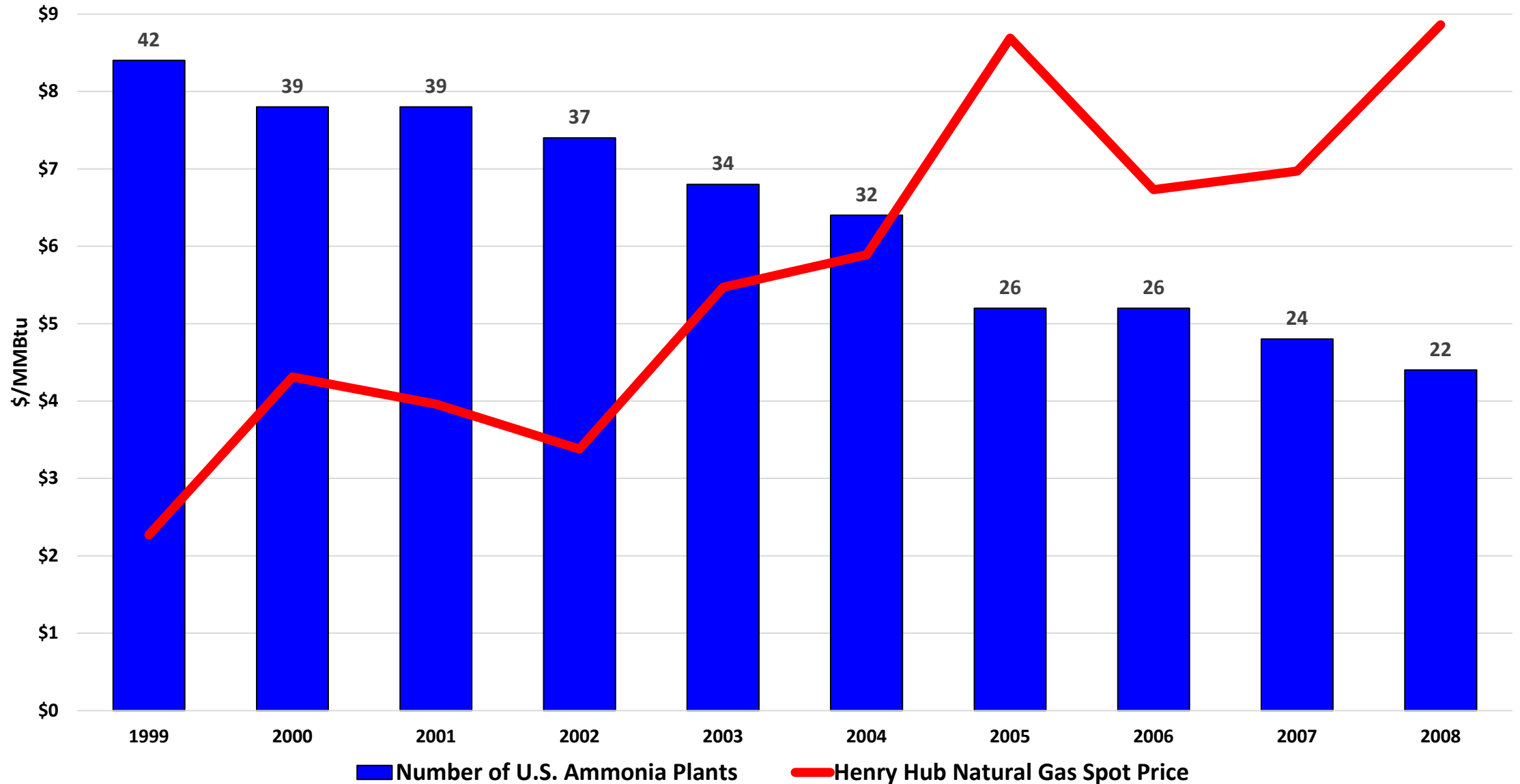


- Source of the nitrogen in fertilizer => **FEED the WORLD!**
- Grade/analysis: 82-0-0 => 82 % N; 1 short ton NH_3 = 1,640 lbs. N
- Haber-Bosch process (Fritz Haber-1909/Carl Bosch–1913-Oppau, Germany)
- ~ 33 MMBtu's natural gas per material ton of ammonia

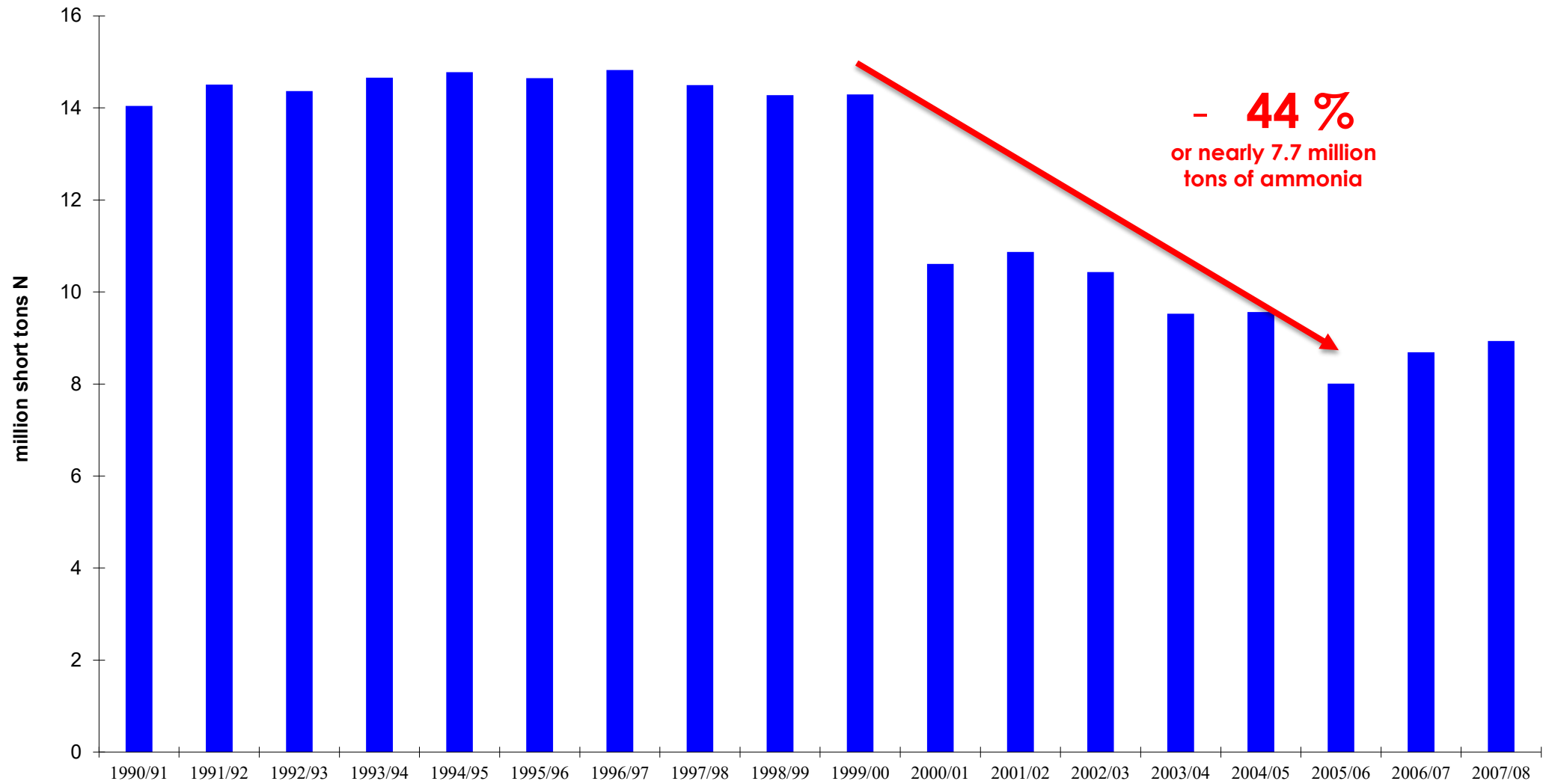
Natural Gas as a Share of Ammonia Production Cost



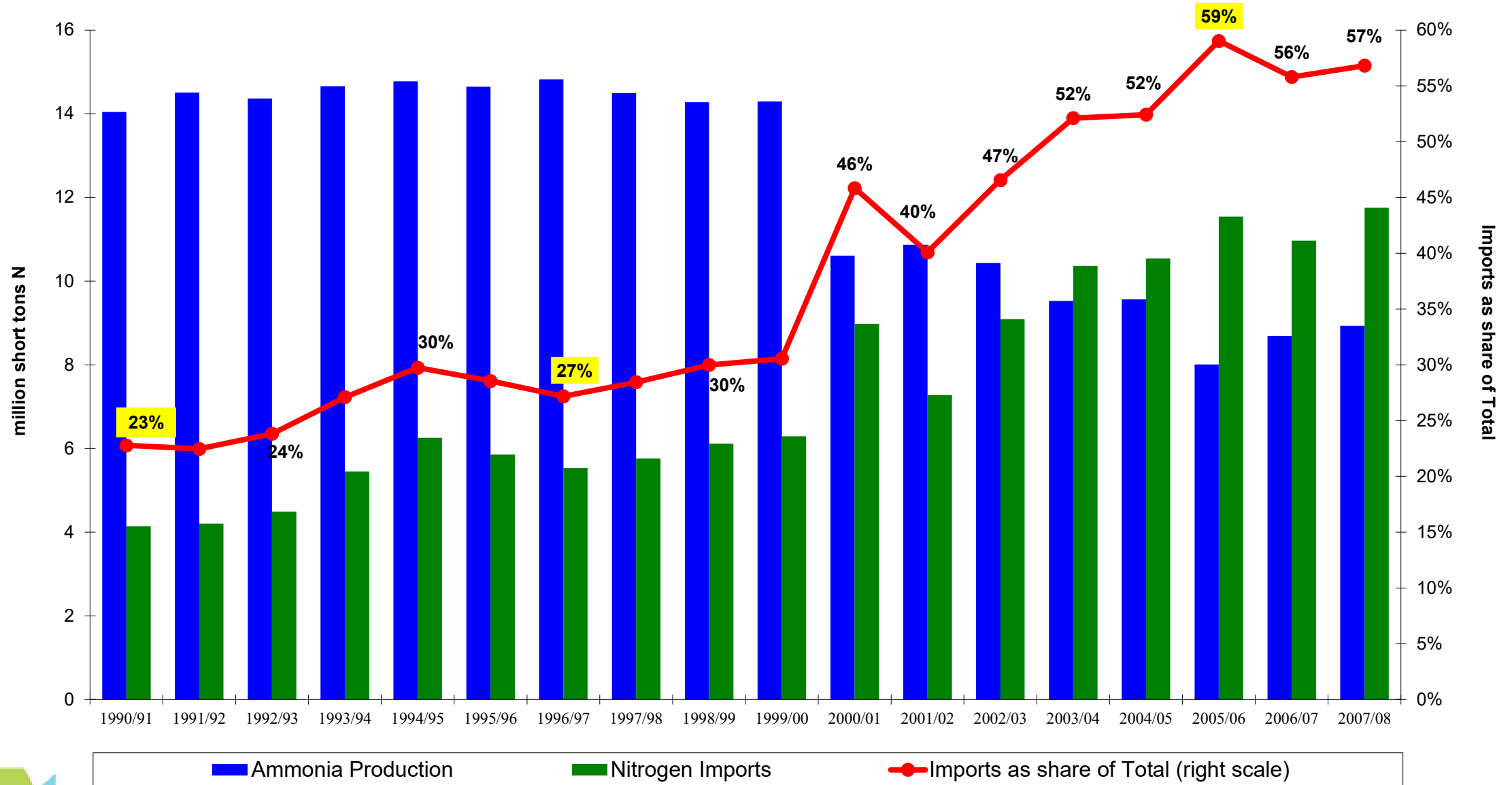
Number of U.S. Ammonia Plants vs. Price of Natural Gas



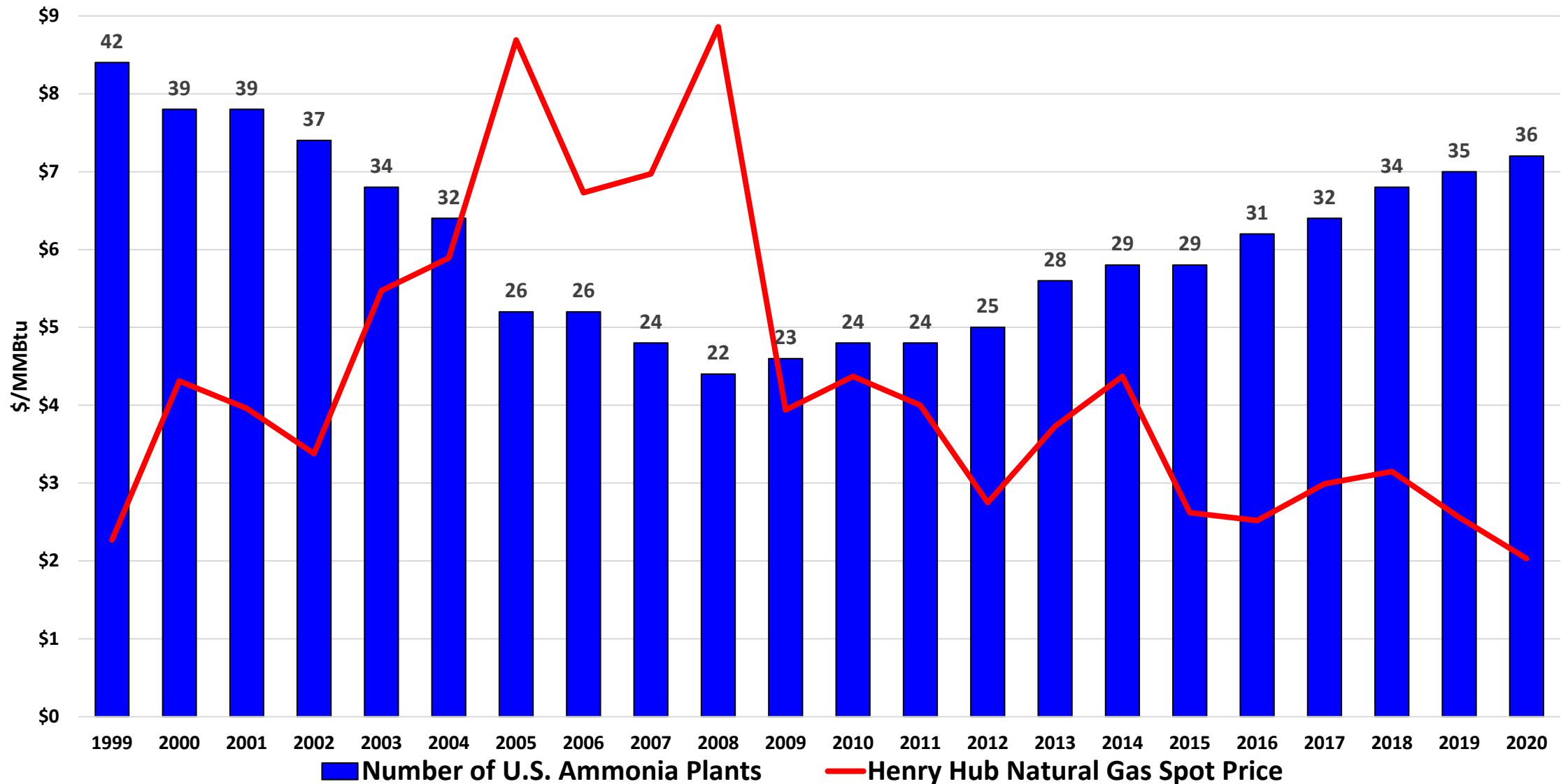
U.S. Ammonia Production



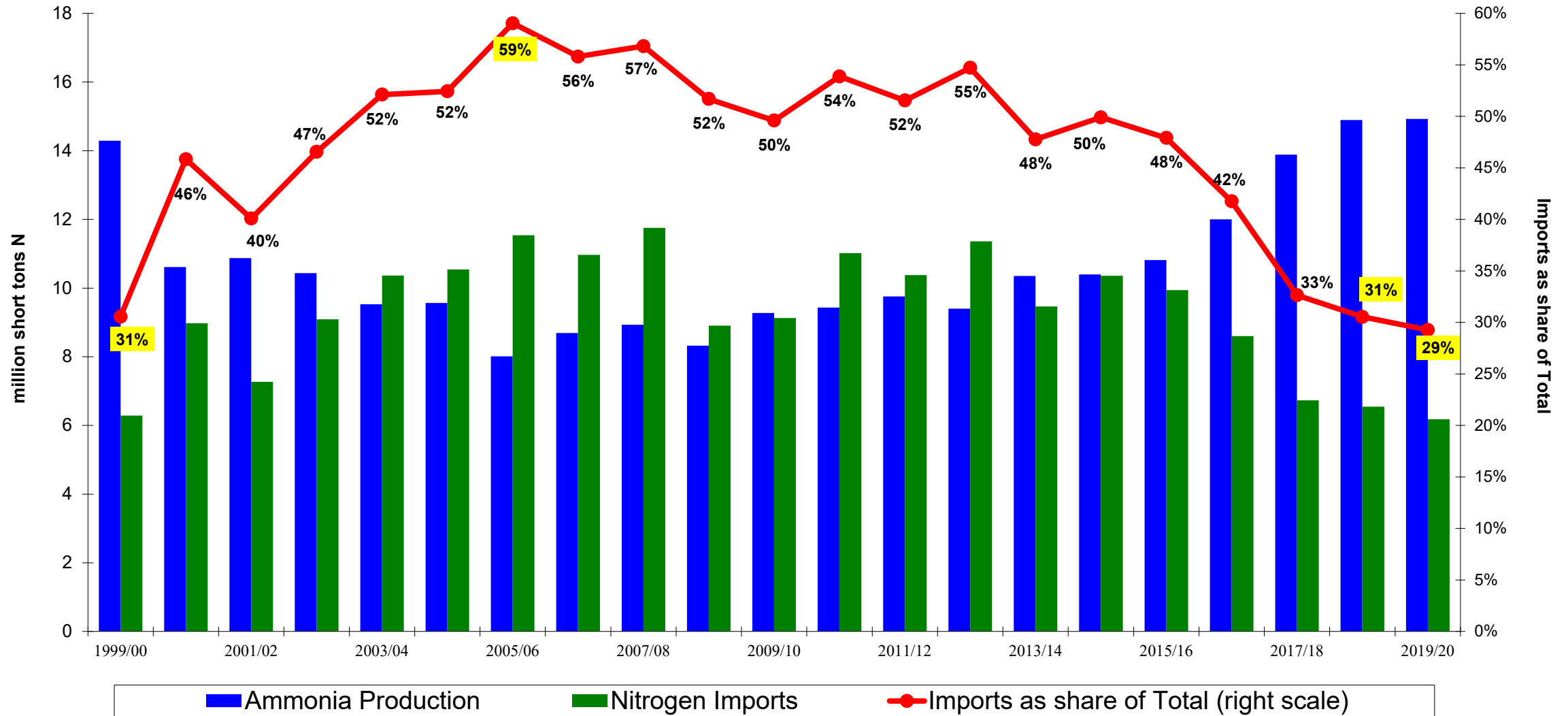
U.S. Nitrogen Sources - Ammonia Production and Total N Imports



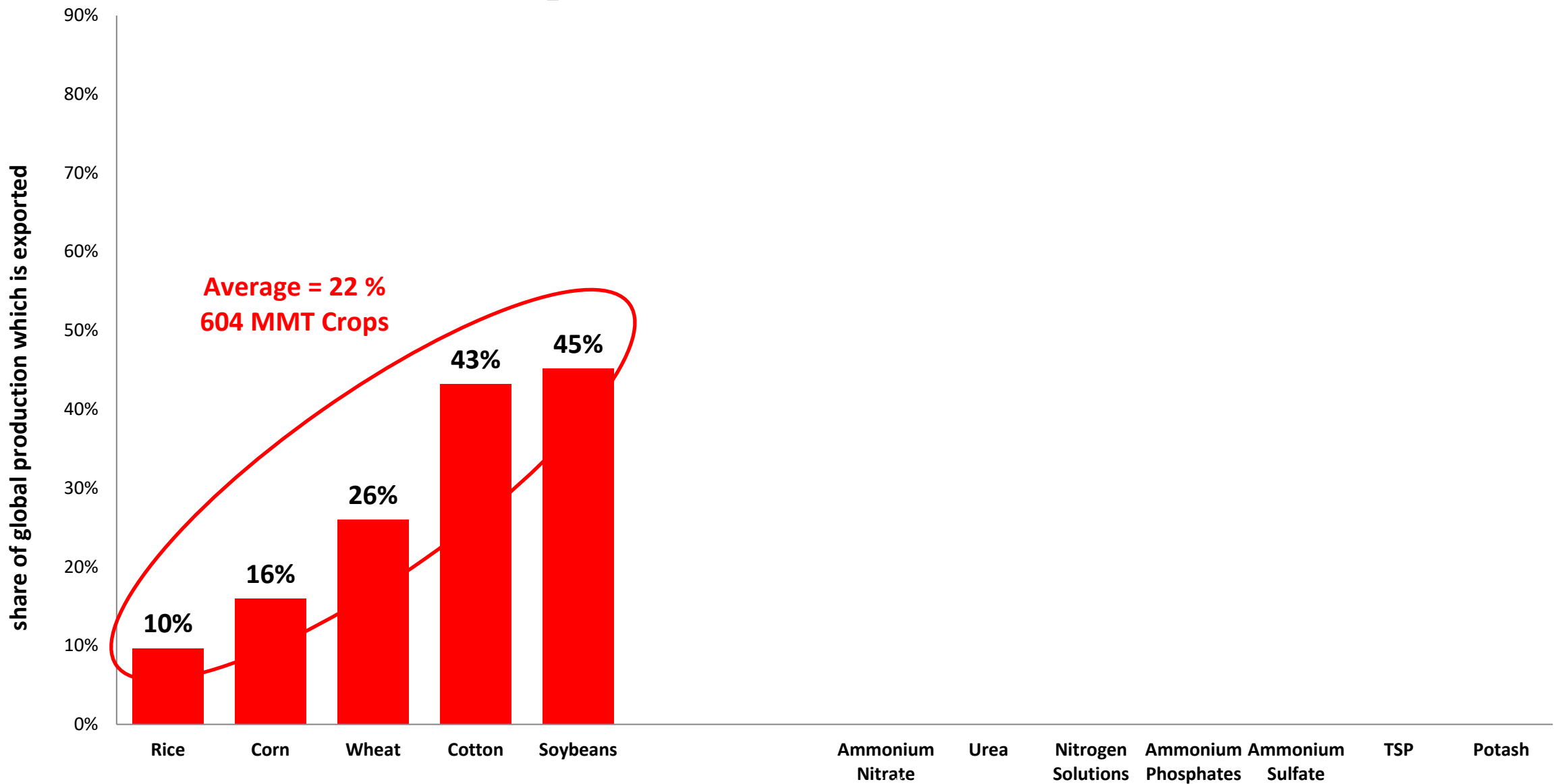
Number of U.S. Ammonia Plants vs. Price of Natural Gas



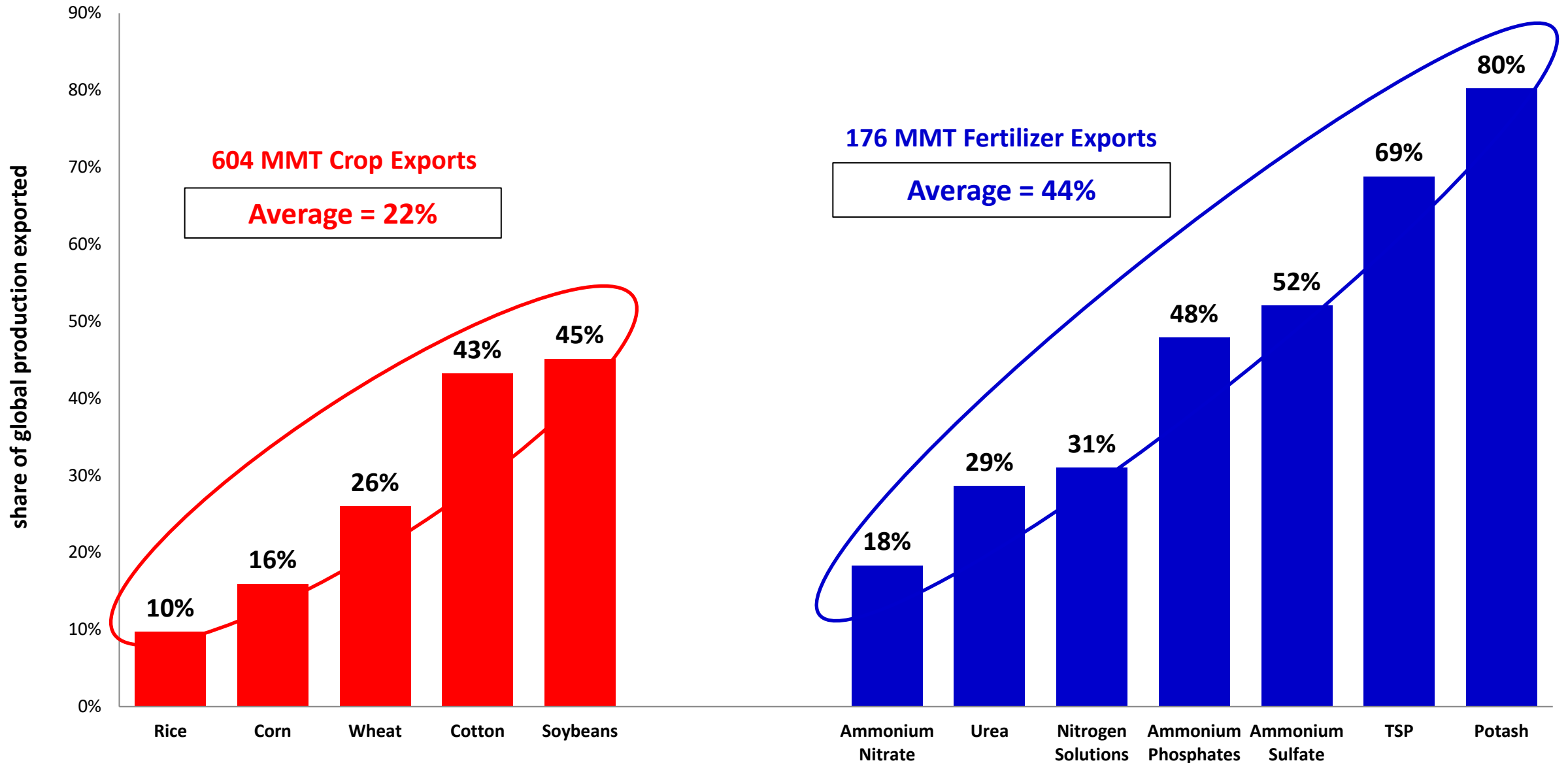
U.S. Nitrogen Sources - Ammonia Production and Total N Imports



Share of World Crop (2020/21) and Fertilizer Products (2020) Traded



Share of World Crop (2020/21) and Fertilizer Products (2020) Traded



Source: U.S. Department of Agriculture and International Fertilizer Industry Association.
Averages computed as total exports (crop or fertilizer material) divided by total production.

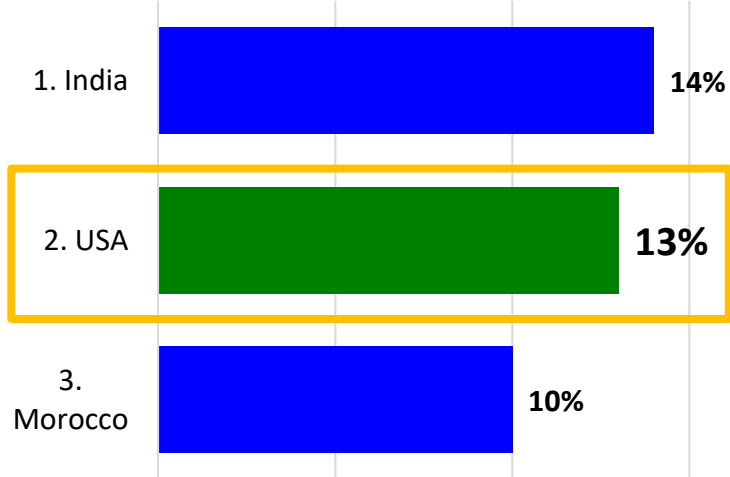


Transportation Costs

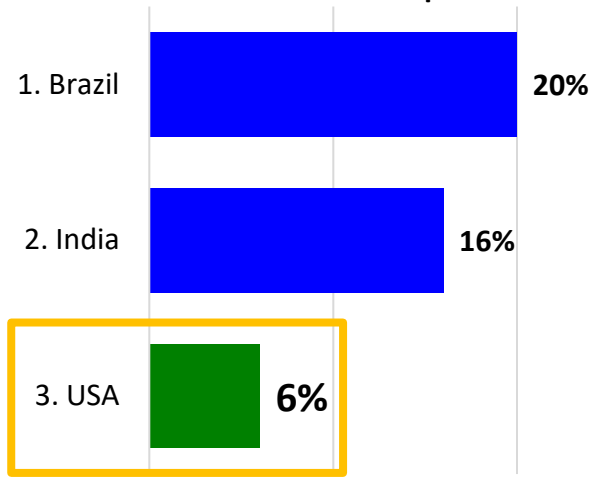
- Ocean freight rates
- Rail rates
- Barge rate
- Truck rates

Global Importers - 2020

Ammonia

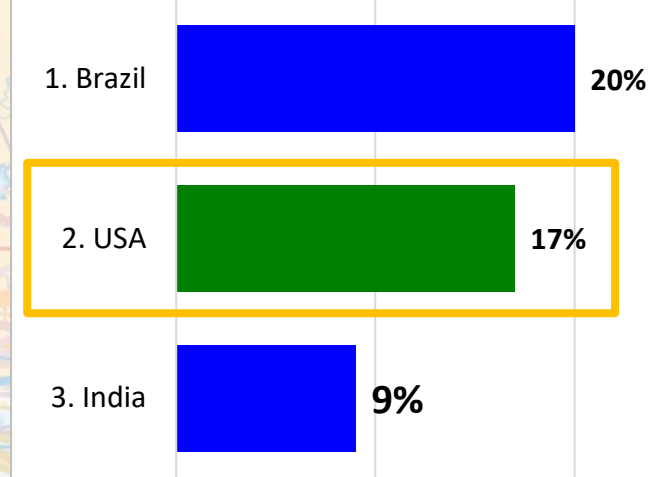


Processed Phosphates^{1/}

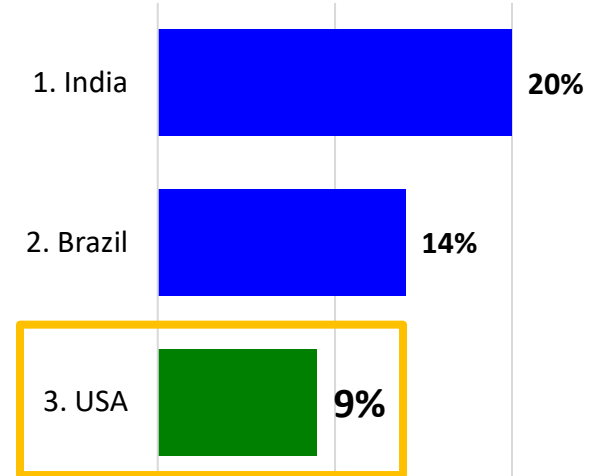


1/ DAP, MAP, and TSP.

Potash

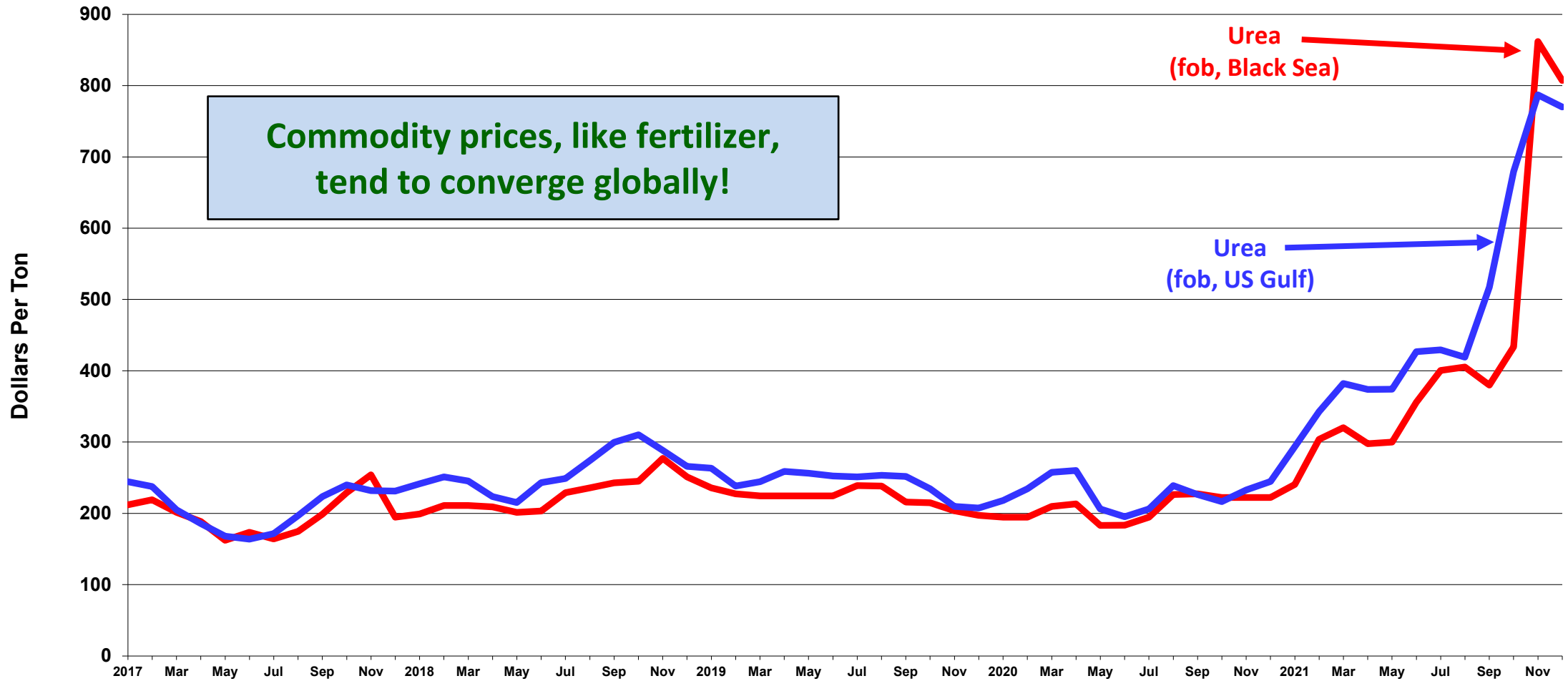


Urea



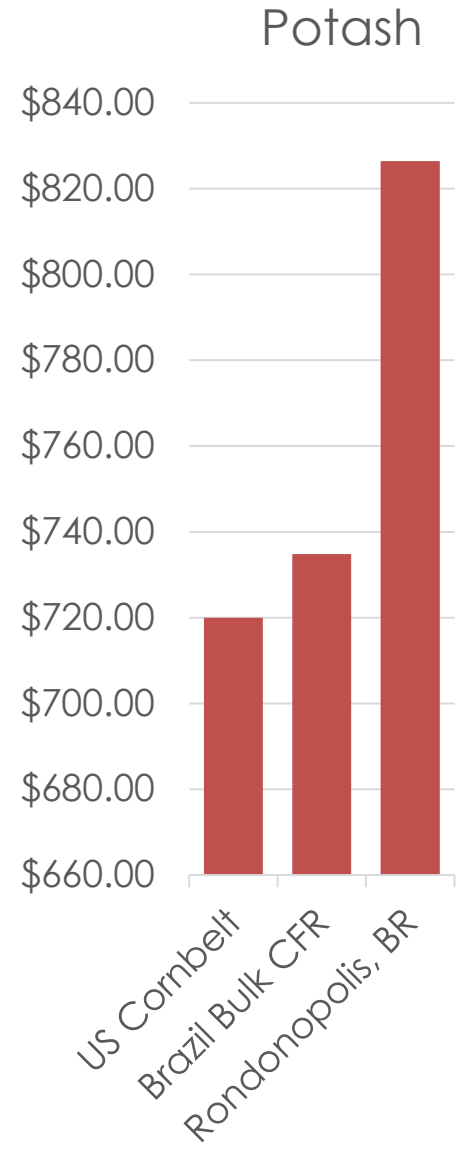
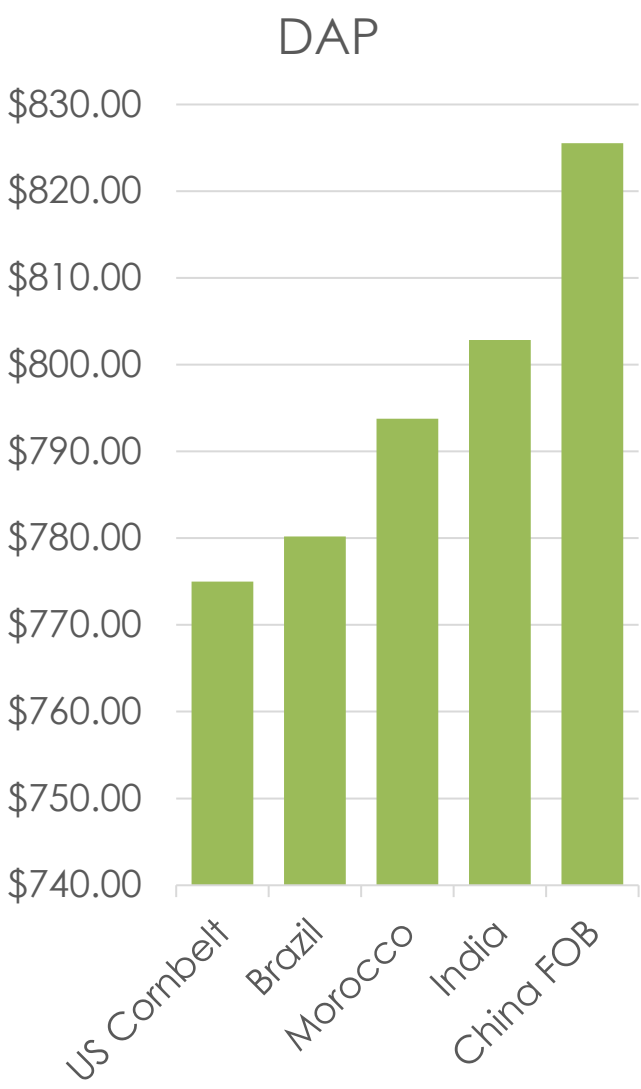
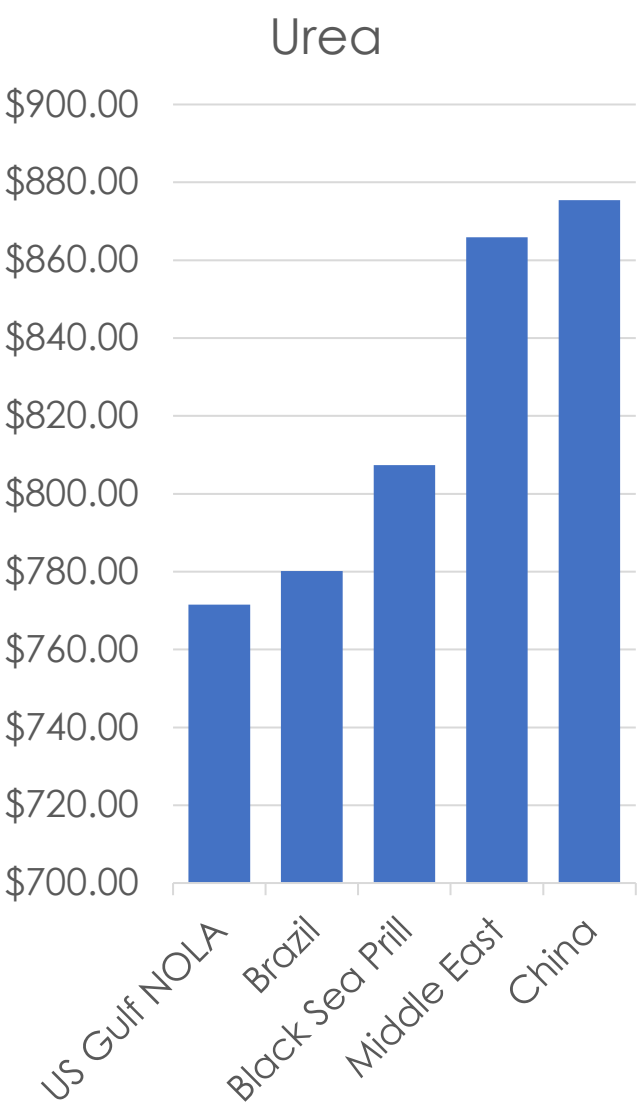
The USA is a Large Importer of fertilizer, particularly Nitrogen and Potash!

U.S. and International Urea Prices: Jan. 2017 - Dec. 2021



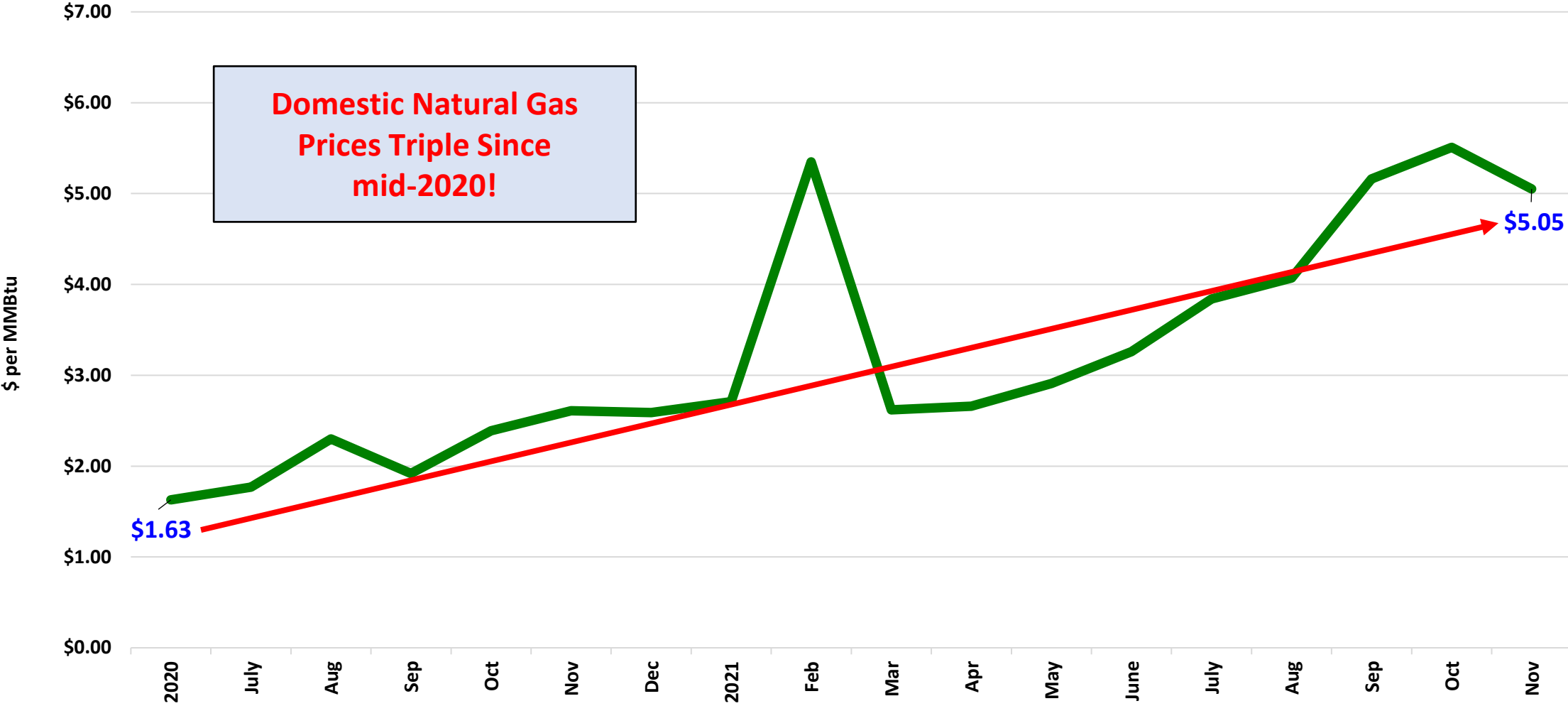
Source: Monthly averages computed from weekly prices reported in Green Markets (A Bloomberg Company).

Global Fertilizer Prices, December 10, 2021



Henry Hub Natural Gas Spot Price

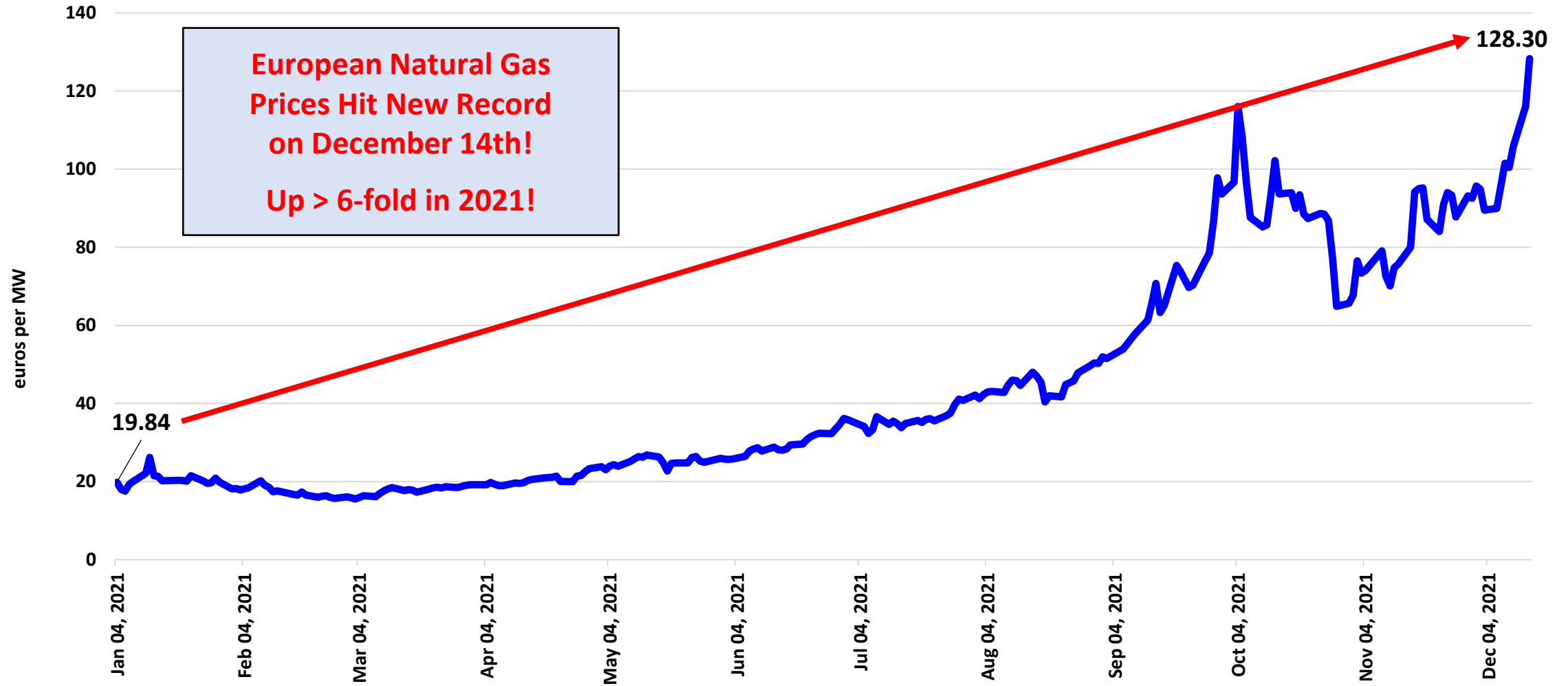
Monthly Average, June 2020 - Nov. 2021



Source: Energy Information Administration.

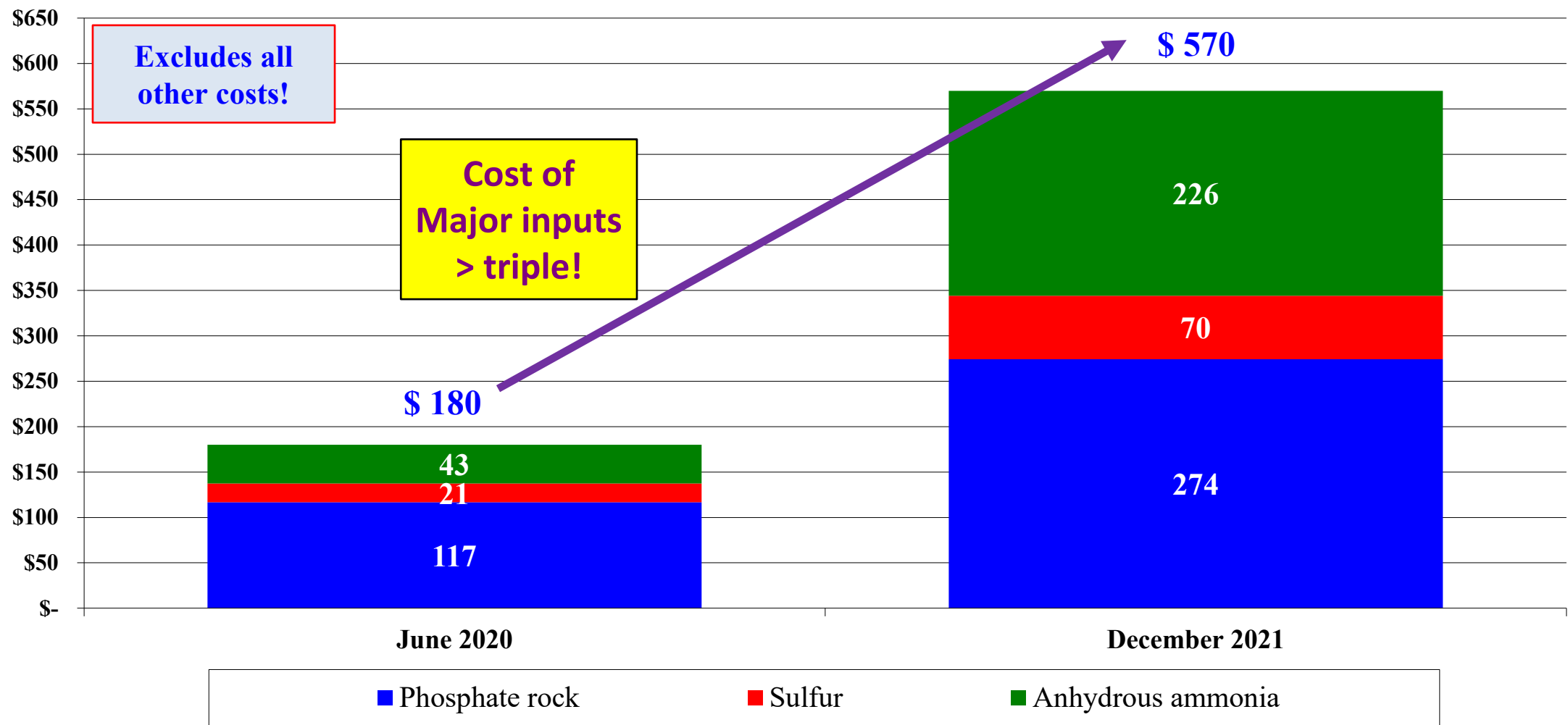
Dutch TTB Natural Gas Futures Prices

Jan 4 - December 14, 2021



Source: NY Mercantile Exchange.

Cost of Major Inputs into DAP Production



A worker in an orange protective suit and white hard hat is using a handheld device in an industrial setting. The worker is wearing a white hard hat and a bright orange protective suit with reflective stripes. They are holding a black handheld device with a screen and buttons. The background shows industrial equipment, including a large cylindrical vessel with a perforated metal mesh and various pipes and valves.


Turnarounds

Delays pandemic
related!

3 - 4 year maintenance schedule:

=> 25-33% of industry down for some time annually

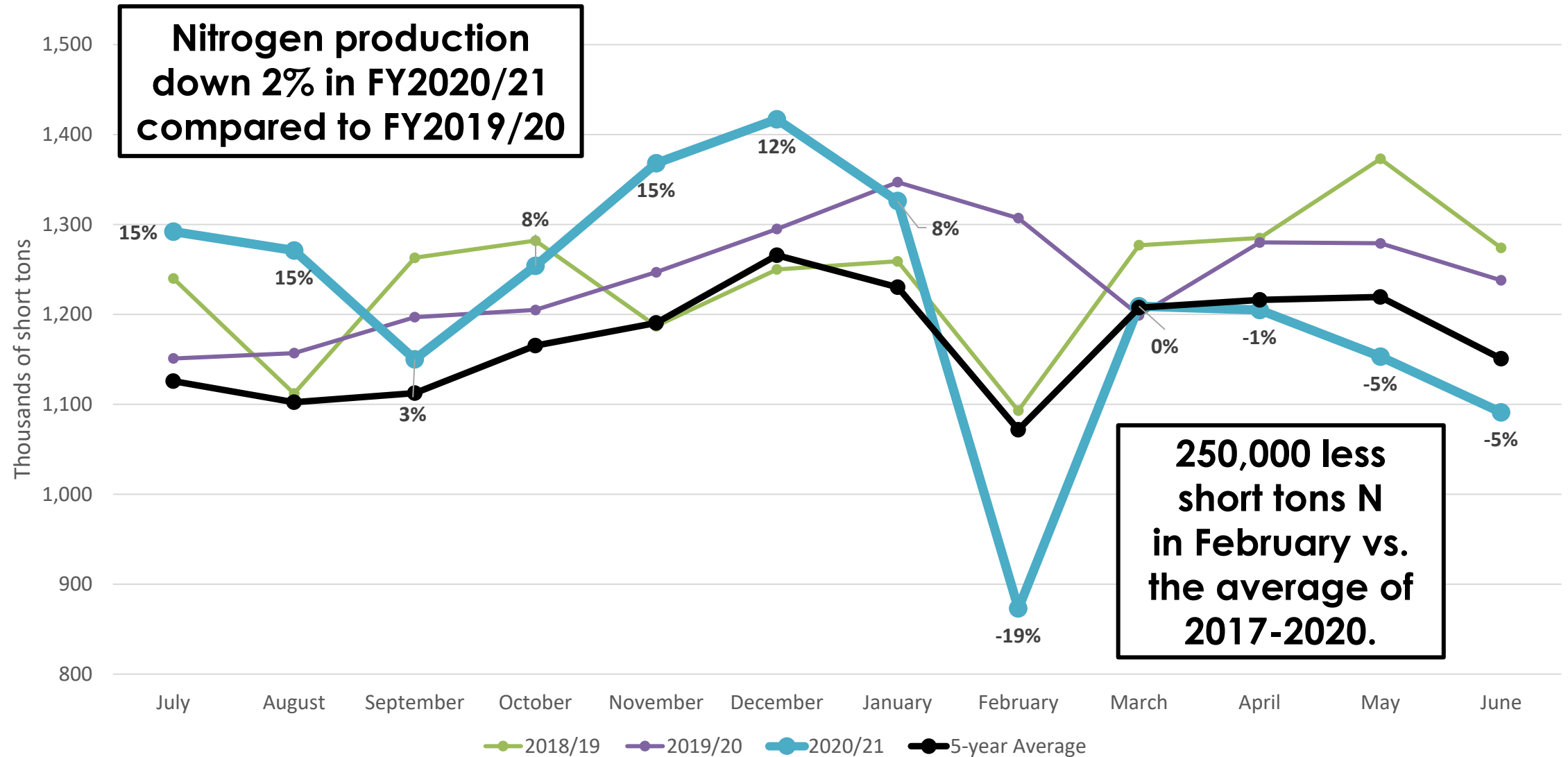
- Down for 30 – 60 days
- - Pipes and other parts, which can burst, need to be replaced
- - safety/prevent loss of life – high pressure/temp. - explosions
- Shortages of parts, labor, and engineers
 - many engineering firms in Europe
 - most parts from Italy, China, etc.
- Jan 2020 – ammonia/urea plant – Namrup, India (10+ miles!)



TEXAS

Weather Events

Monthly Production - Nitrogen (nutrient tons)



Hurricane Ida - August 26 – September 4

FOR IMMEDIATE RELEASE
September 8, 2021

EIA expects higher natural gas prices as production reductions remain following Hurricane Ida

Hurricane Ida contributes to higher natural gas prices

by **Jeff Della Rosa** (JDellaRosa@nwabj.com) · September 8, 2021 1:39 pm · 191 views

ENERGY

Hurricane Ida Hit An Important Oil And Gas Hub, Which Will Likely Drive Up Gas Prices

September 1, 2021 · 4:40 PM ET
Heard on [All Things Considered](#)

U.S. farmers face supply shortages, higher costs after Hurricane Ida

By P.j. Huffstutter and Mark Weinraub

Trade Disruptions



Phosphate Countervailing Duty Calendar of Events

Investigations Nos. 701-TA-650-651 (Final Countervailing Duty-CVD)
Phosphate Fertilizers from Morocco and Russia

Effective date	Action
June 26, 2020	Petitions filed with Commerce and the Commission; institution of Commission investigations (85 FR 40319, July 6, 2020) ¹
July 16, 2020	Commerce's notice of initiation of CVD investigations (85FR 44505, July 23, 2020)
August 10, 2020	Commission's preliminary affirmative determinations (85 FR 49394, August 13, 2020) ²
November 23, 2020	Scheduling of final phase of Commission investigations(85 FR 79033, December 8, 2020)
November 30, 2020	Commerce's preliminary affirmative CVD determinations (85 FR 76522 and 85 FR 76524) ³
February 9, 2021	Commission's hearing
February 16, 2021	Commerce's final affirmative CVD determinations (86 FR 9479 and 86 FR 9482) ⁴
March 11, 2021	Commission's affirmative vote
March 31, 2021	Commission's views to Commerce ⁵ (86 FR 17642, April 5, 2021)
April 7, 2021	Commerce's final CVD duty orders (86 FR 18037) ⁶

¹ Petition filed by Mosaic Company, Plymouth. Minnesota.

² Commission determination of reasonable indication of material injury.

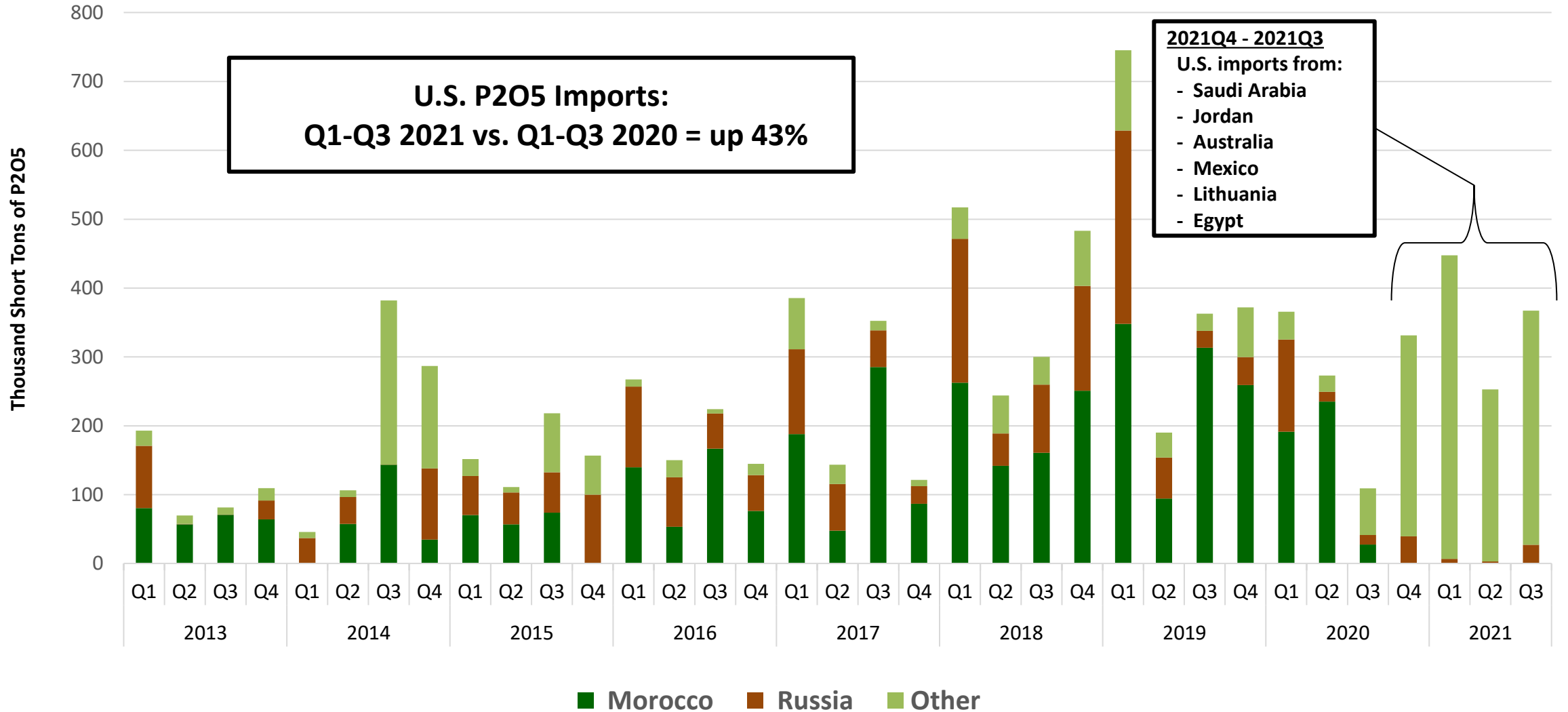
³ **Morocco:** OCP S.A. and Other CVD rates, 23.46%. **Russia:** Phosphorite LLC: EuroChem, et al, 72.50%; PhosAgro, et al, 20.94%; Other, 32.92%.

⁴ **Morocco:** OCP S.A. and Other CVD rates, 19.97%. **Russia:** Phosphorite LLC: EuroChem, et al, 47.05%; PhosAgro, et al, 9.19%; Other, 17.20%. All rates retroactive to Commerce preliminary determination, November 30, 2020.

⁵ Commission determination of material injury to the U.S. industry.

⁶ **Morocco:** OCP S.A. and Other CVD rates, 19.97%. **Russia:** Phosphorite LLC: EuroChem, et al, 47.05%; PhosAgro, et al, 9.19%. Other, 17.20%. All rates except for cash exempt liquidated entries between March 30, 2021 and April 6, 2021, are retroactive to Commerce preliminary determination, November 30, 2020.

U.S. DAP and MAP Imports, 2013 – 2021 Q3



Belarus Sanctions

DTN Retail Fertilizer Trends

Potash Prices Show Strength Amid Supply Issues

6/30/2021 | 9:30 AM CDT

EU sanctions expected to hit Belarus's potash, oil and finance

By Victoria Waldersee and Robin Emmott

UPDATE 1-Belarus potash exporter says sanctions will increase global prices

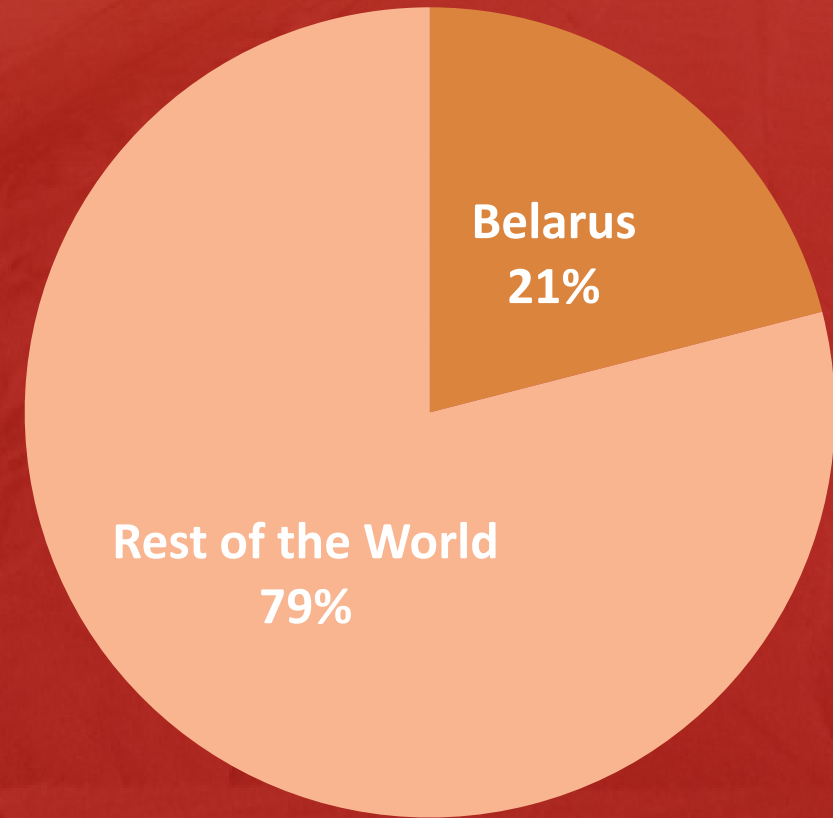
By Reuters Staff

3 MIN READ

August 9, 2021

Belaruskali Named in Biden Sanctions

Global Potash Exports



China Curbs Exports

Producers Face Fertilizer Price Squeeze

China Phosphate Fertilizer Export Freeze Adds to Global Supply Challenges

9/30/2021 | 4:45 PM CDT

China customs to inspect fertilizer exports from 15 Oct

Published date: 13 October 2021

China's General Administration of Customs will start inspections on fertilizer exports from 15 October, according to an official notice published today.

Share:

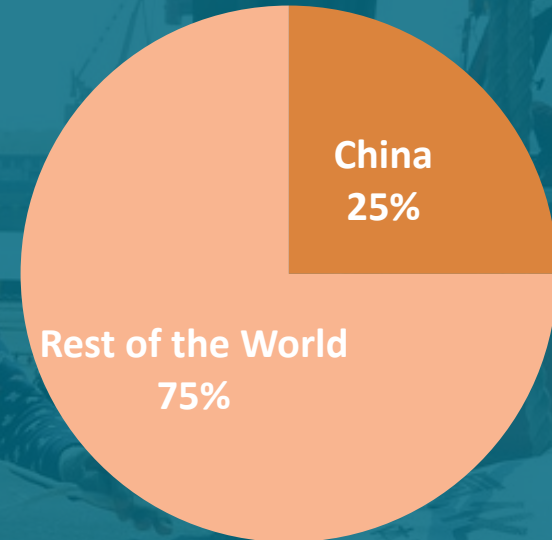
COMMODITIES

Chinese urea futures slide from record highs on new export measures

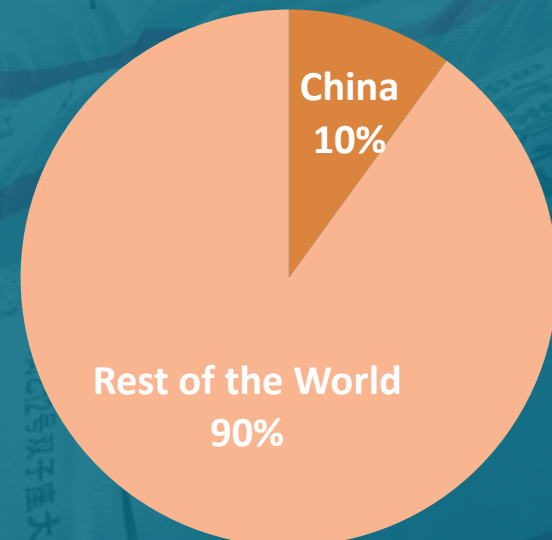
CONTRIBUTOR
Emily Chow — Reuters

PUBLISHED
OCT 14, 2021 5:56AM EDT

Global Phosphate Exports

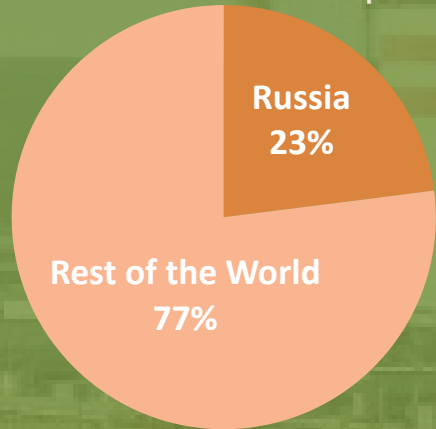


Global Urea Exports

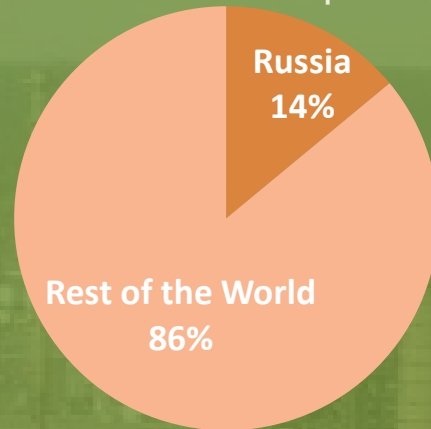


Russia Restricts Exports

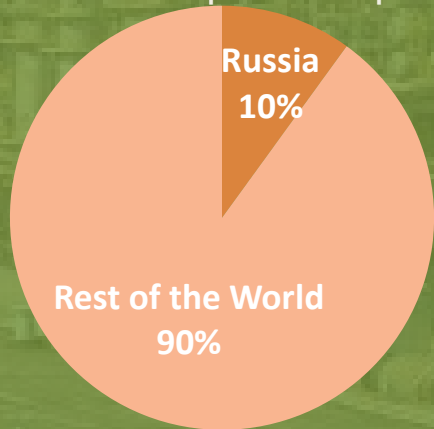
Global Ammonia Exports



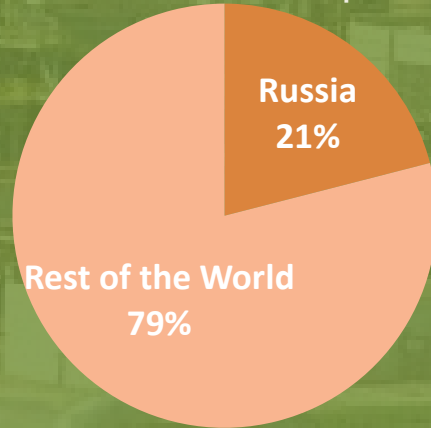
Global Urea Exports



Global Phosphate Exports



Global Potash Exports



03 Nov 2021

Russia to impose export quotas on nitrogen, complex fertilizers

November 3, 2021

Russia to Impose Nitrogen, Complex Export Quotas

Russia halts nitrogen, phosphate fertilizer exports to support local farmers

Market

Russia sets 6 month quotas for fertilizer exports from Dec. 1

3 Nov 2021 | [Masha Belikova](#)

Additional Market Impacts

October 12, 2021

India Approves \$3.8 B Increase in Fert Subsidy

India will provide an additional 286.55 billion rupees (\$3.8 billion) to fertilizer companies as compensation for selling products at lower than market prices to farmers, according to *Bloomberg* citing a government statement said.

A cabinet meeting chaired by Prime Minister Narendra Modi approved the enhanced subsidy for winter-sown crops late Tuesday. The subsidy on of DAP is being raised by 438 rupees per bag and 100 rupees per bag for nitrogen, phosphorus and potassium fertilizers.

=> Artificially holds up demand!

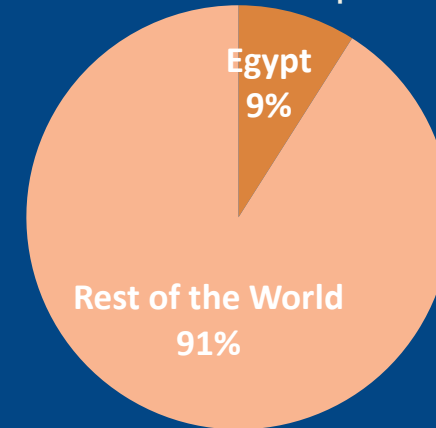
=> Supply Disruption!

08 Nov 2021

Egypt: Tighter regulations imposed on fertilizer producers

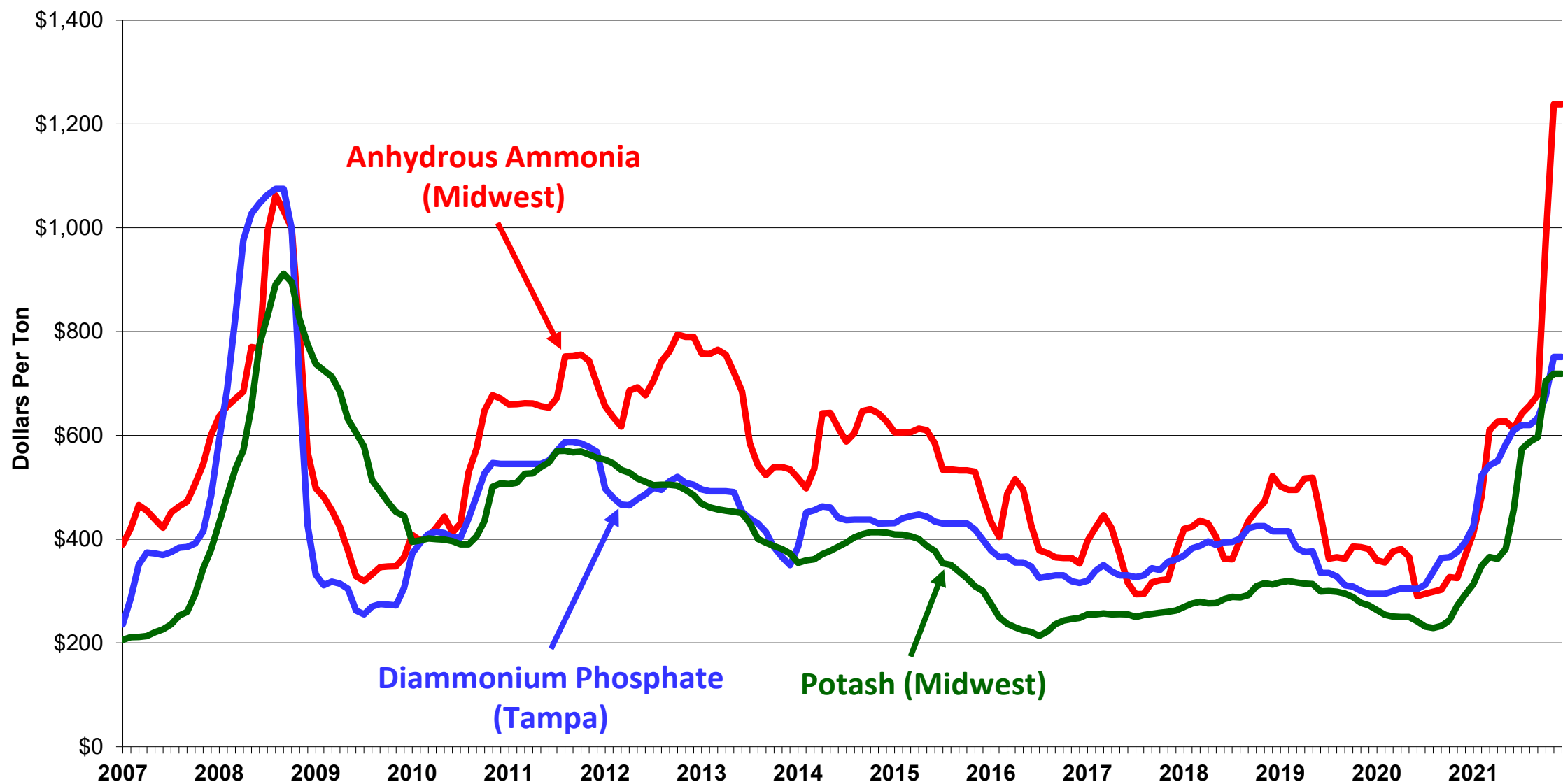
Fresh regulations have been imposed on Egyptian fertilizer producers to ensure domestic supply, according to local sources.

Global Urea Exports



➔ Market tightens further!

Fertilizer Prices: Jan 2007 – Dec 10, 2021



Source: Weekly prices reported in Green Markets (A Bloomberg Company).





KANLAYA BARR

Senior Economist

John Deere

Supply Chain and Machinery Demand in 2022

Kanlaya Barr, Ph.D.
Lead Economist



JOHN DEERE

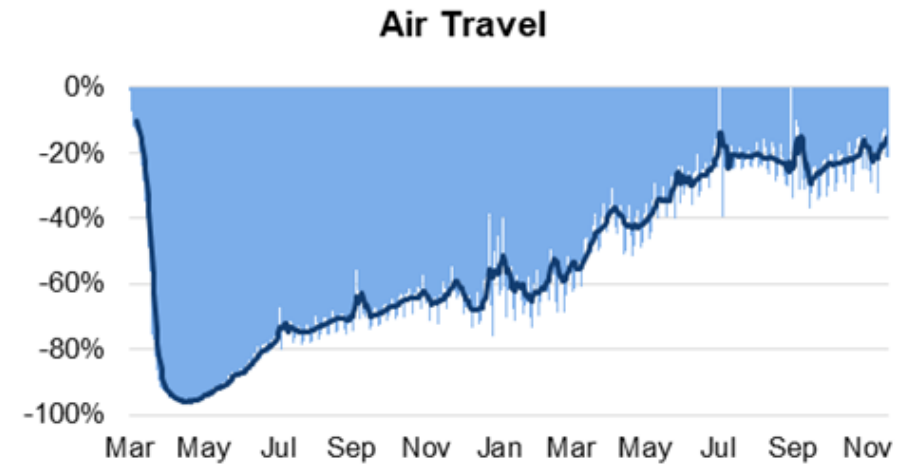
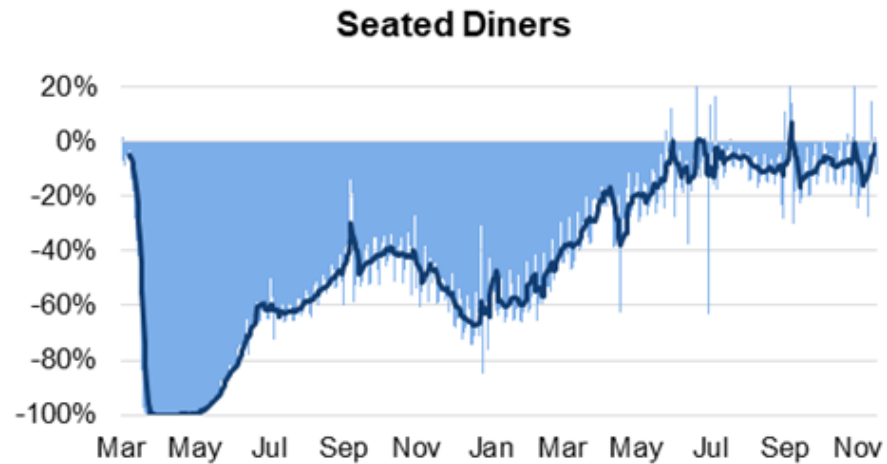
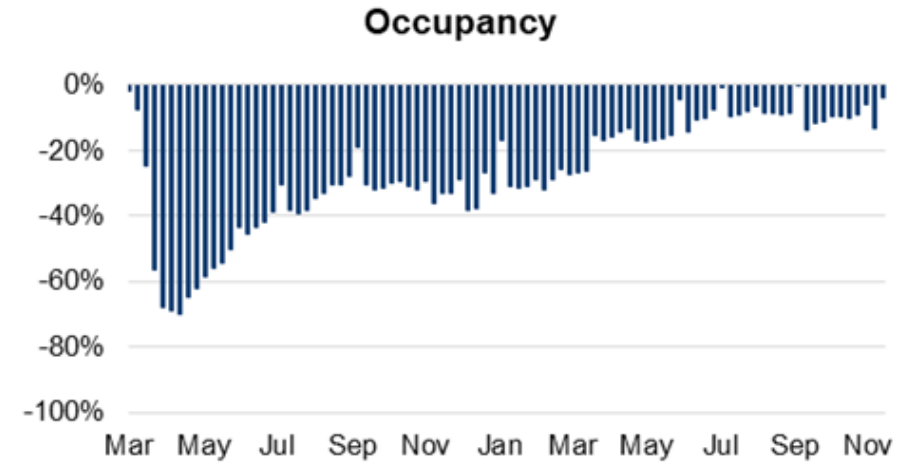
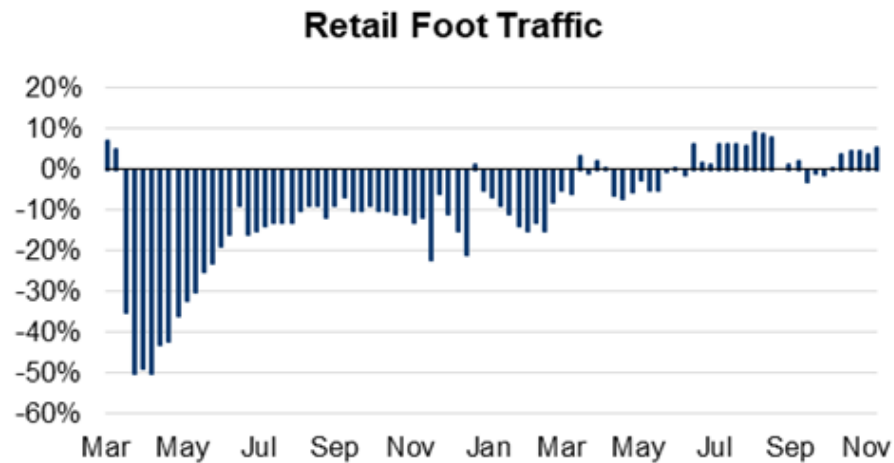


Supply Chain and Machinery Demand in 2022

- General economic recovery continues, but slower pace
- Supply chain disruption continues, some relief starting H2
- Ag machinery demand remains strong
- Path of the virus and weather remain crucial



High frequency indicators shows a pickup in mobility



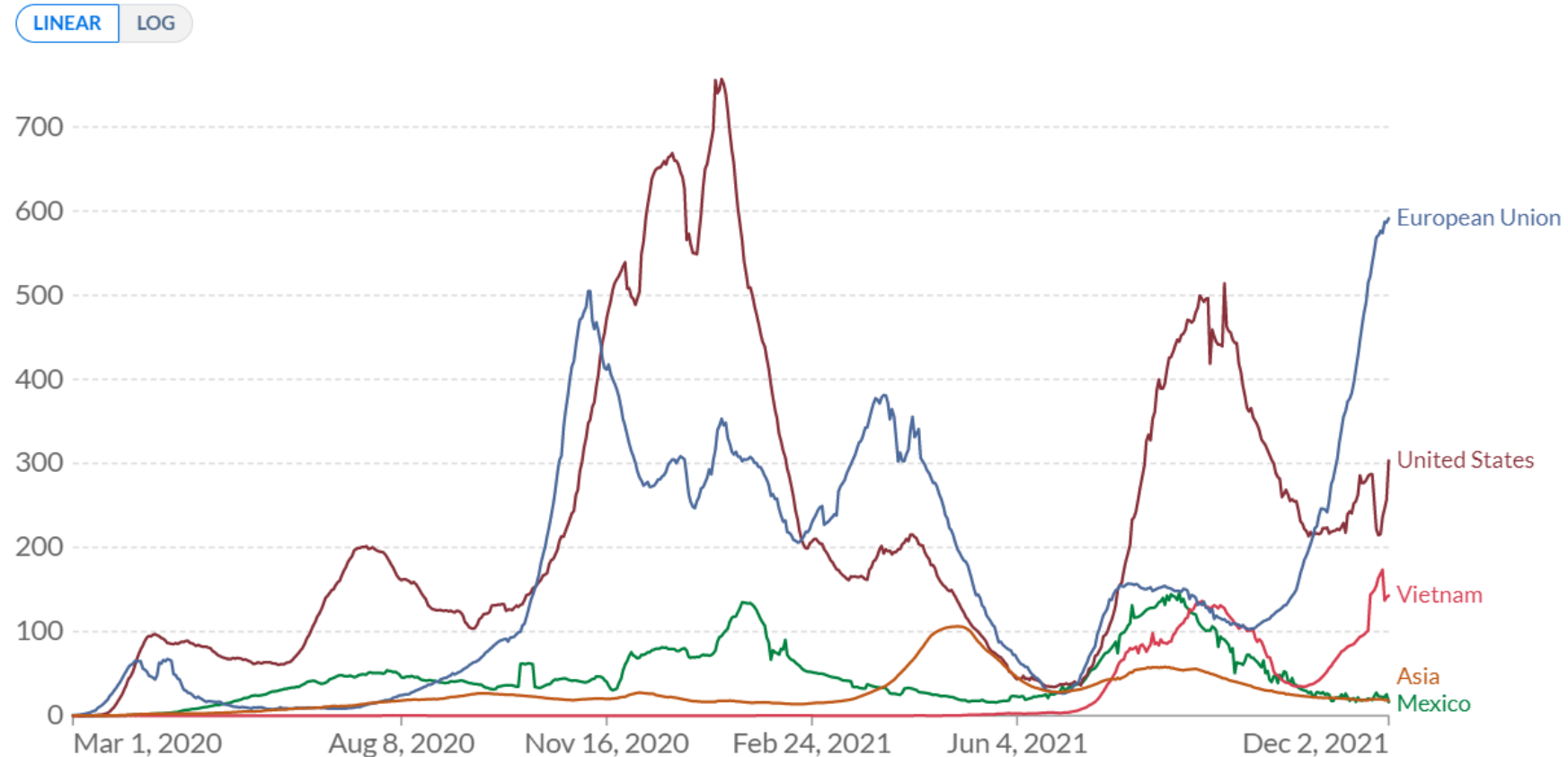
Source: Cleveland research, 20 November 2021

Resurgence of COVID-19 in various geographies could impact supply chain and global recovery throughout 2022

Daily new confirmed COVID-19 cases per million people

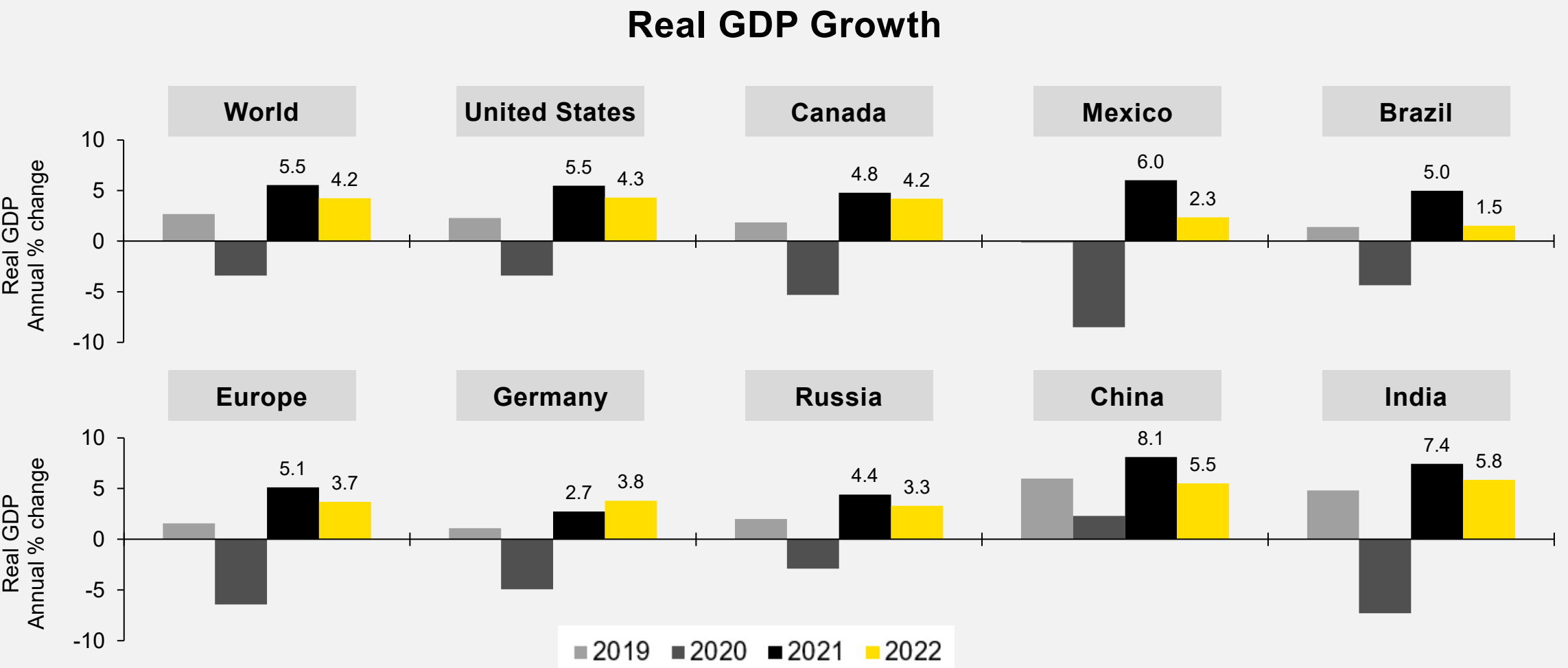
7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.

Our World
in Data



Source: Johns Hopkins University CSSE COVID-19 Data

U.S. economic recovery continues in 2022 at a slower pace



Source: IHS, November 2021

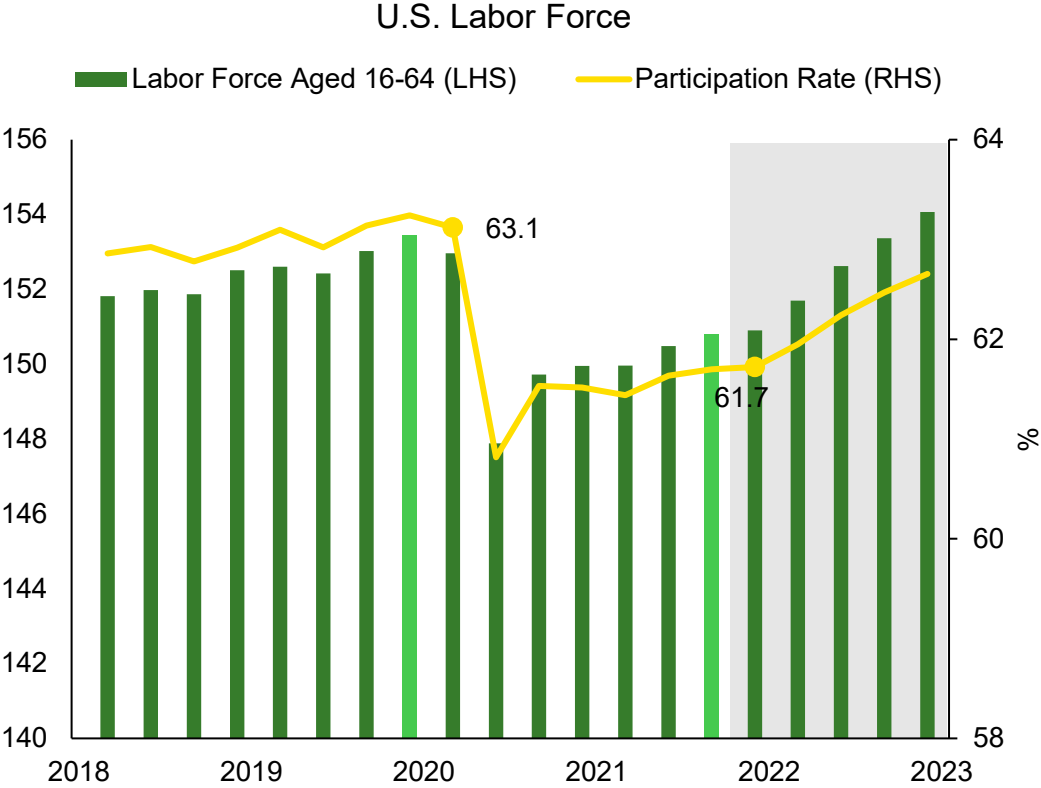
Consumers: Household income and saving rate decline as stimulus impact wanes and the economy reopens



Source: FRED, Nov 24, 2020

Labor market: Wage growth still has further room to run.

Labor supply should improve throughout 2022.

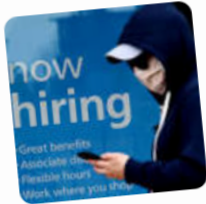


Bloomberg.com

Tightest U.S. Job Market Since 1950s Set to Drive Inflation

Fueled by a persistent shortage of available workers, wage pressures will take over as the dominant driver of U.S. inflation in the second half of next year...

1 week ago



Statista

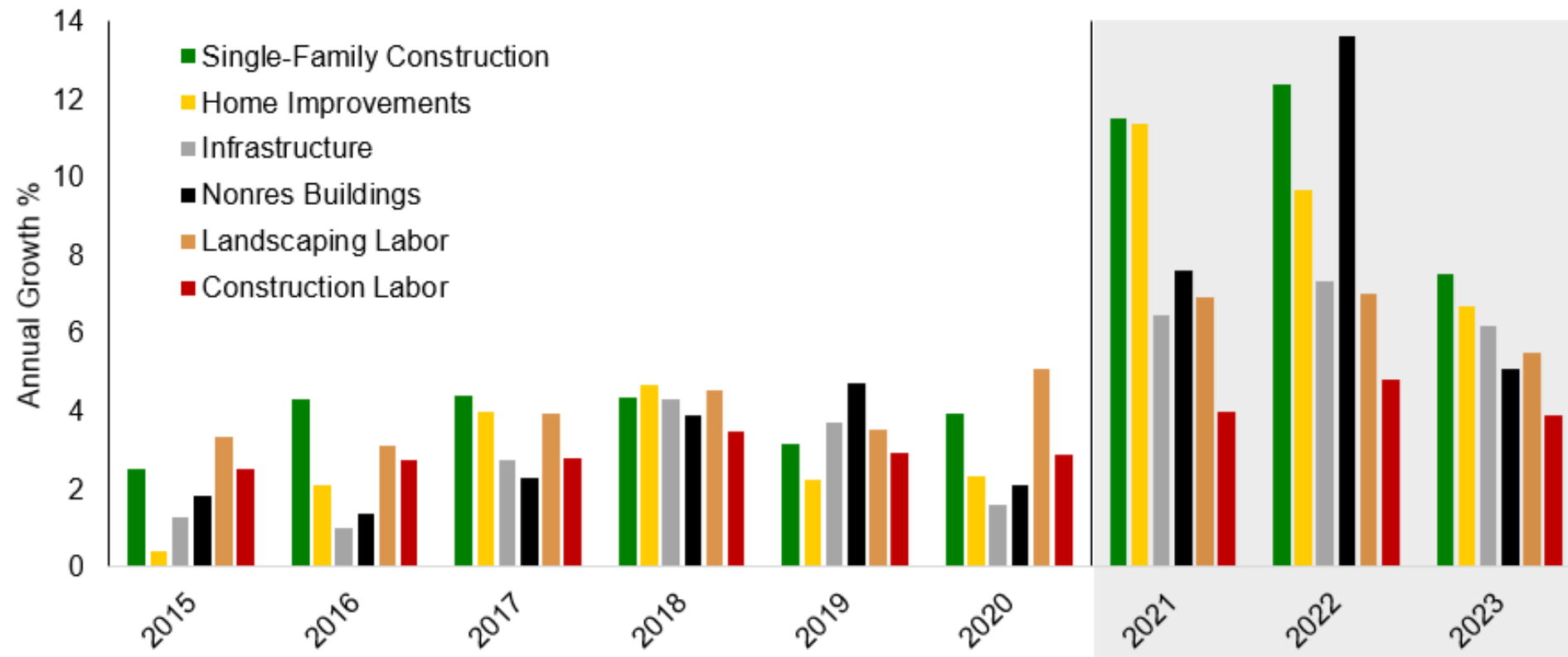
The Great Resignation

In the wake of the unprecedented jobs crisis brought about by the COVID-19 pandemic, a new trend has emerged in the U.S. labor market, as more and more...

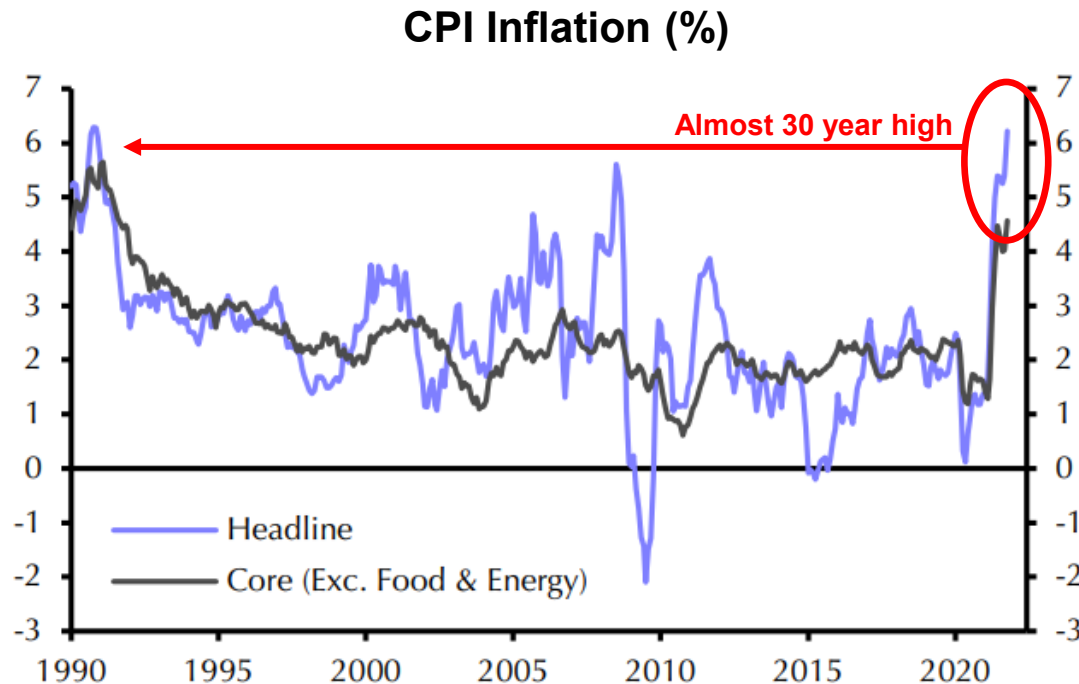
1 week ago



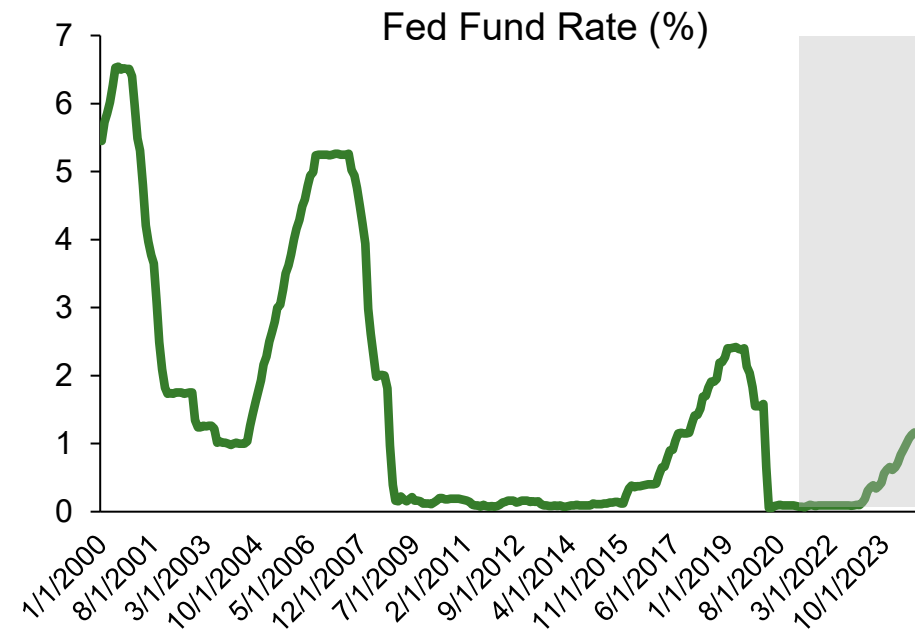
Input cost growth remains well above trend amid tight material and labor availability



Inflation and interest rate: Persistent inflation could force Fed to raise interest rate sooner

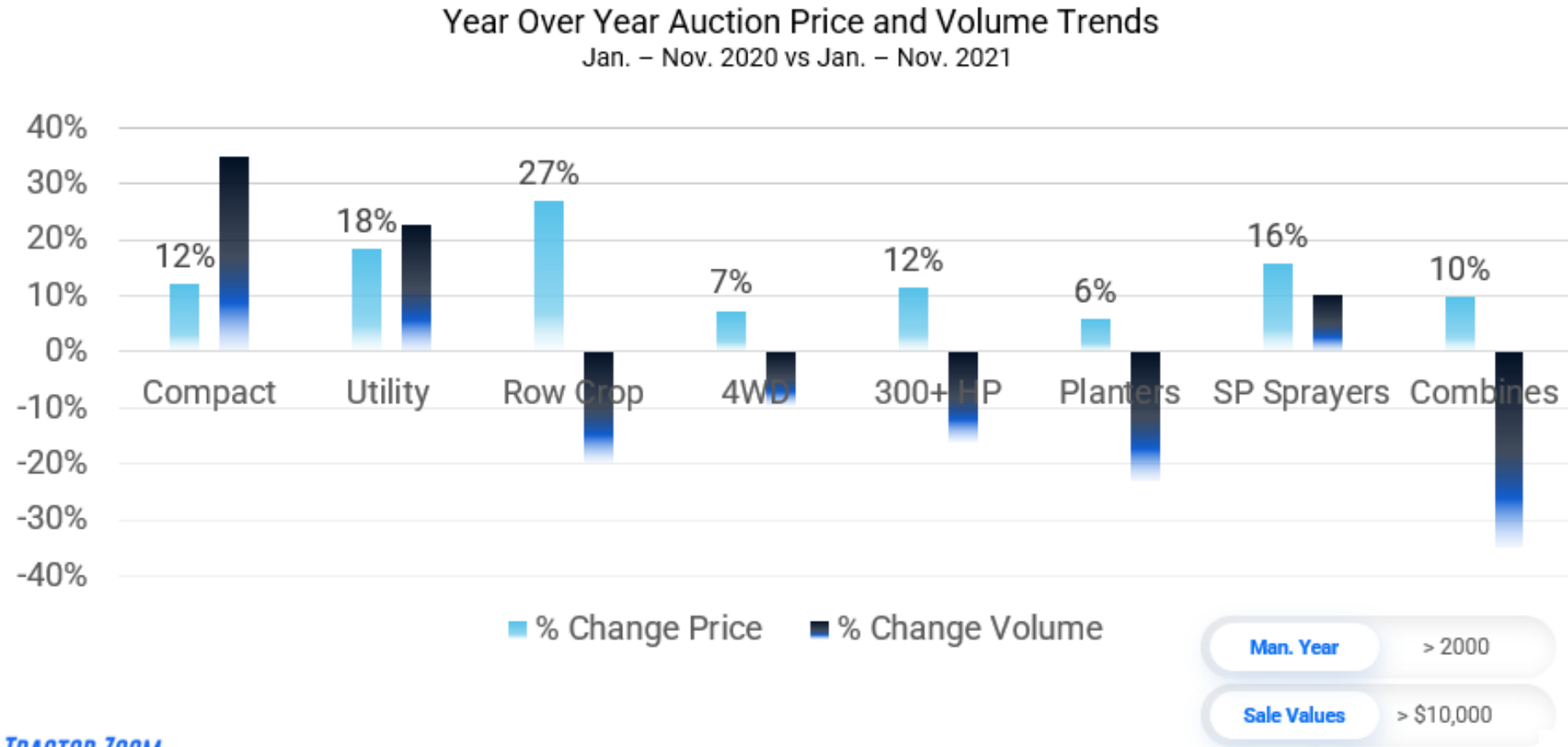


Source: Capital Economics, Refinitiv, 20 November, 2021

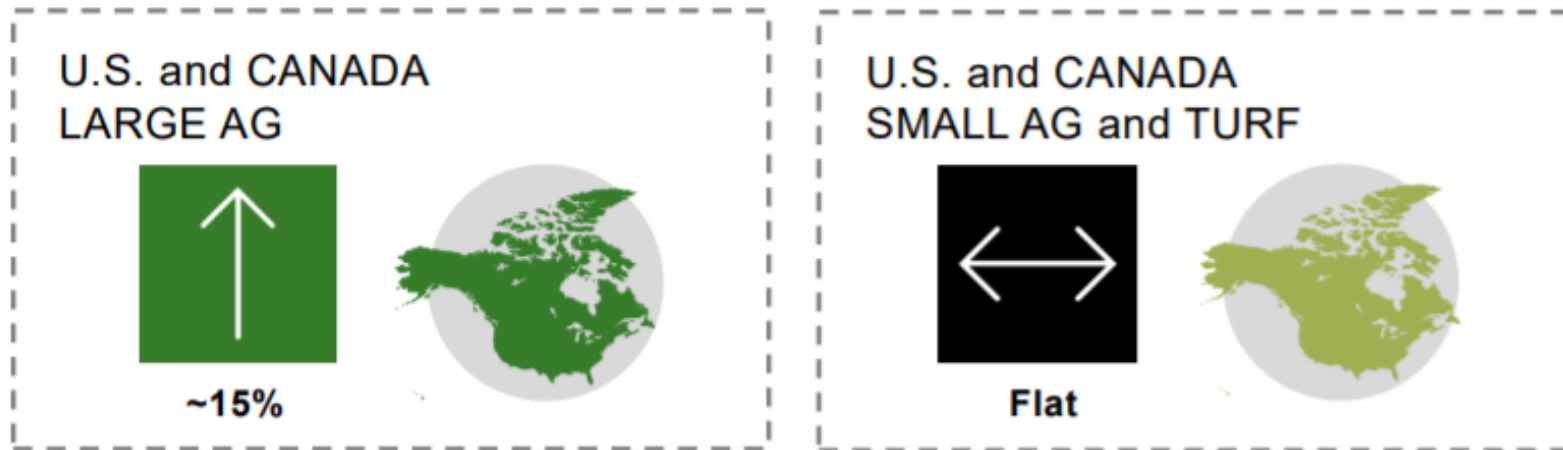


Source: IHS Markits, 15 November, 2021

Used equipment market remains tight



Ag industry looking strong in 2022



Source: Deere and company earnings call , November 2021

Supply Chain and Machinery Demand in 2022

- General economic recovery continues, but slower pace
- Supply chain disruption continues, some relief starting H2
- Ag machinery demand remains strong
- Path of the virus and weather remain crucial







THANK YOU!

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- Become a Friend of Farm Foundation
- See the link in the chat function

We hope to see you at a future event!

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