

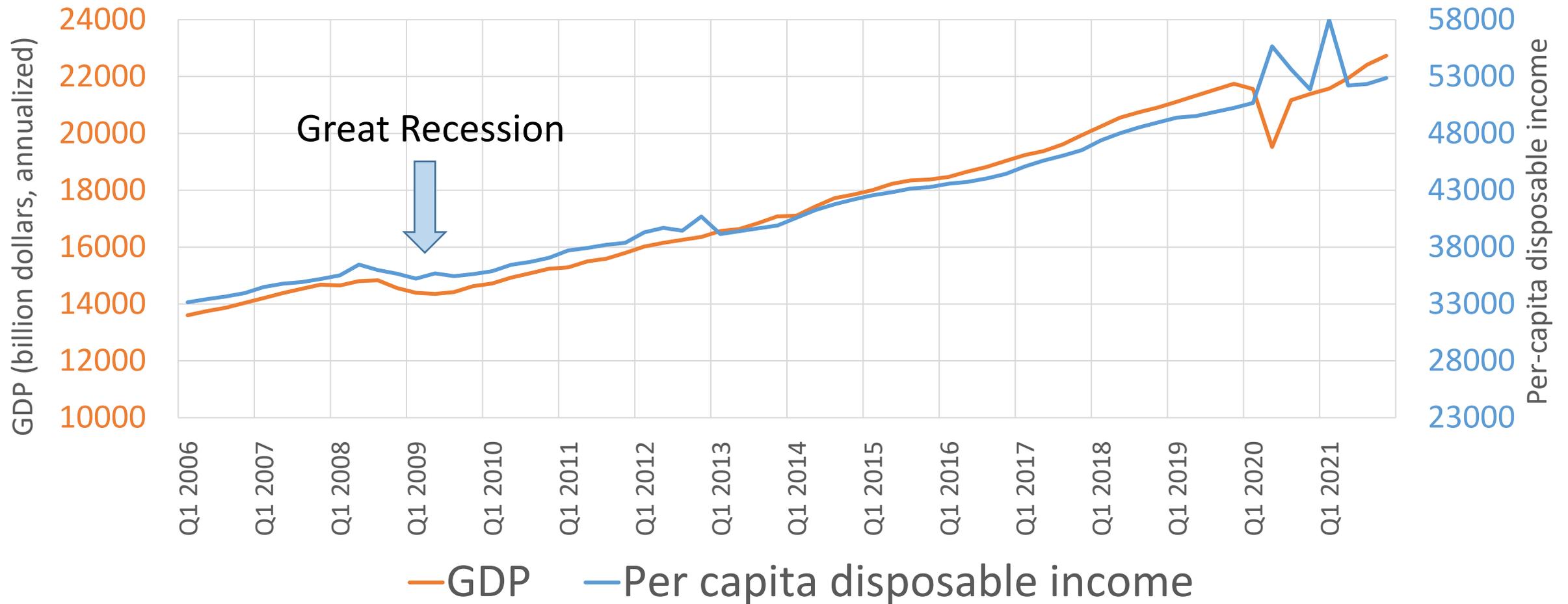


2021 Agricultural Outlook

Seth Meyer,
Chief Economist, USDA

U.S. GDP and Disposable Income

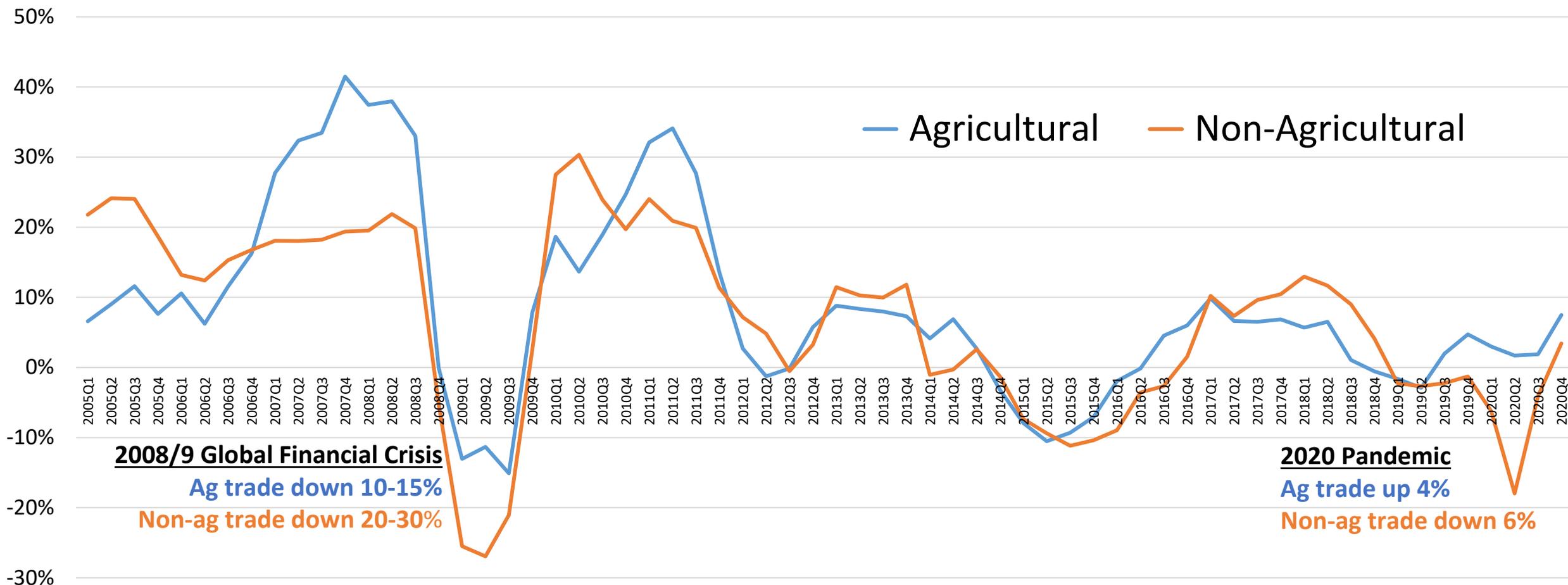
moved in opposite directions in 2020 and may unwind in 2021



Global trade quarterly growth rates

Fluctuations in agricultural trade under global pandemic appear modest

Quarterly growth in trade (Change from same quarter of previous year)



2008/9 Global Financial Crisis

Ag trade down 10-15%

Non-ag trade down 20-30%

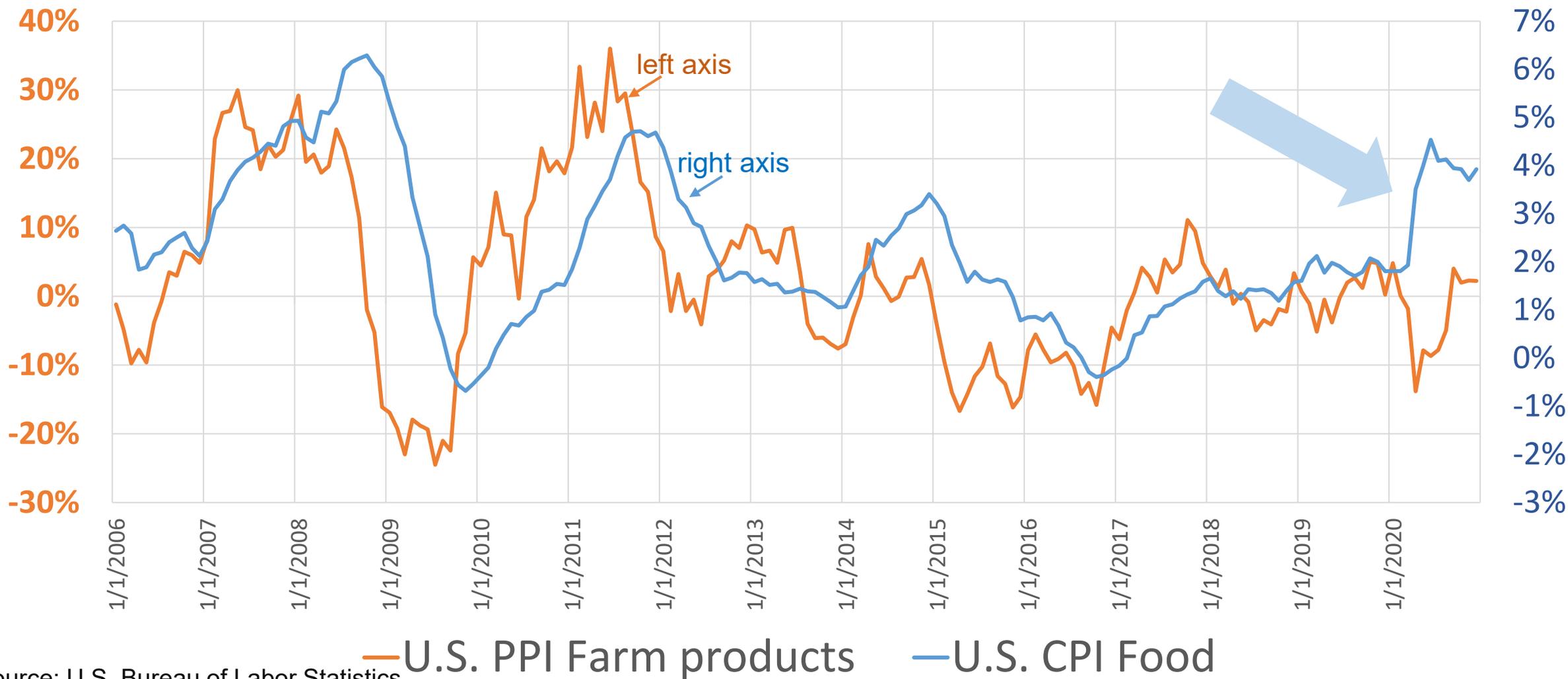
2020 Pandemic

Ag trade up 4%

Non-ag trade down 6%

COVID-19 drove wedge between farm & consumer prices

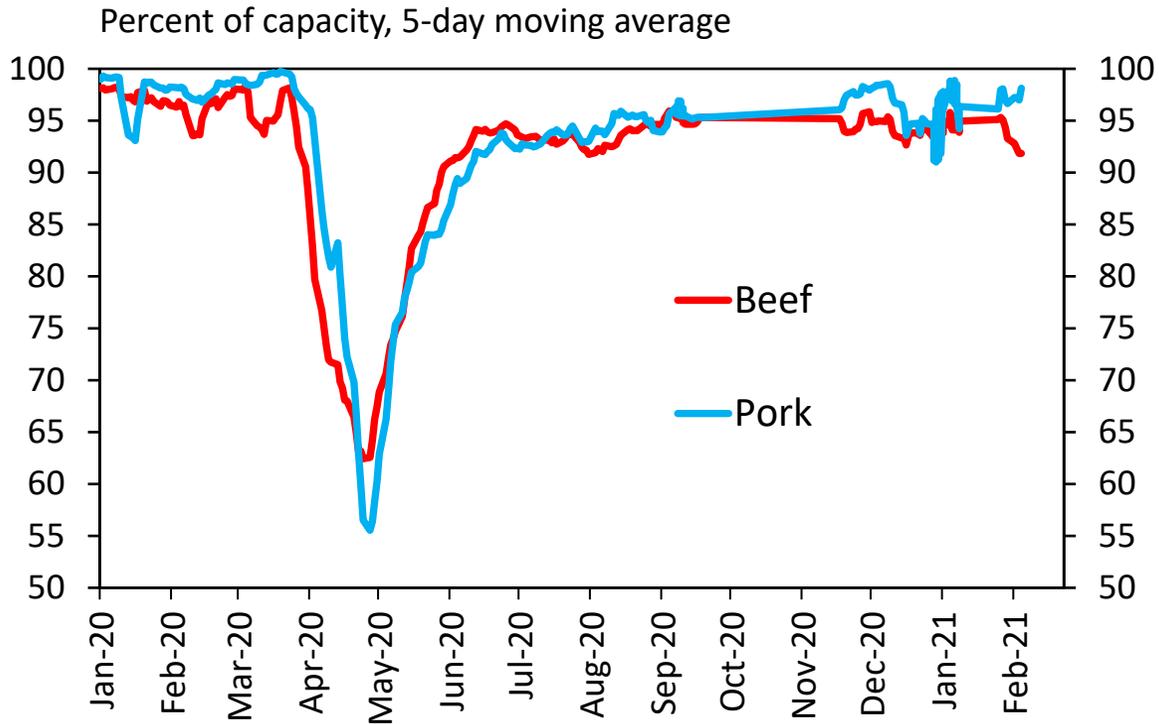
percent change from one year ago



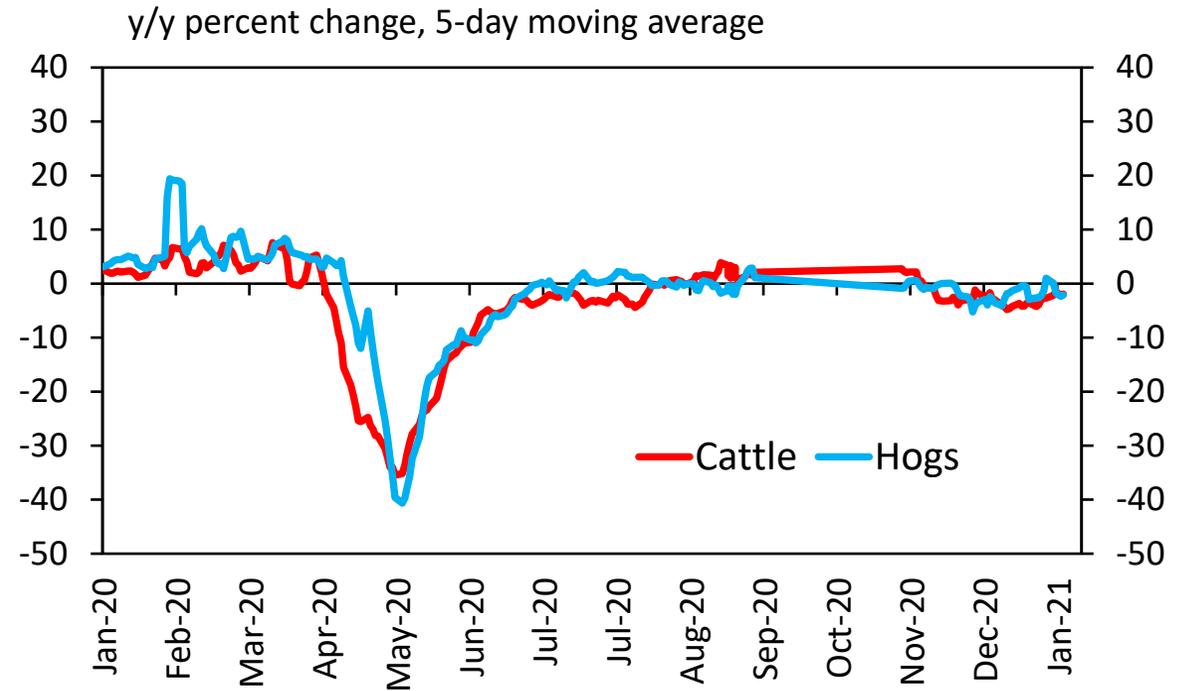
Source: U.S. Bureau of Labor Statistics

A drop in beef and pork plant capacity utilization was followed by a return to near normal

U.S. Beef and Pork Plant Capacity Utilization



Daily Cattle and Hog Slaughter

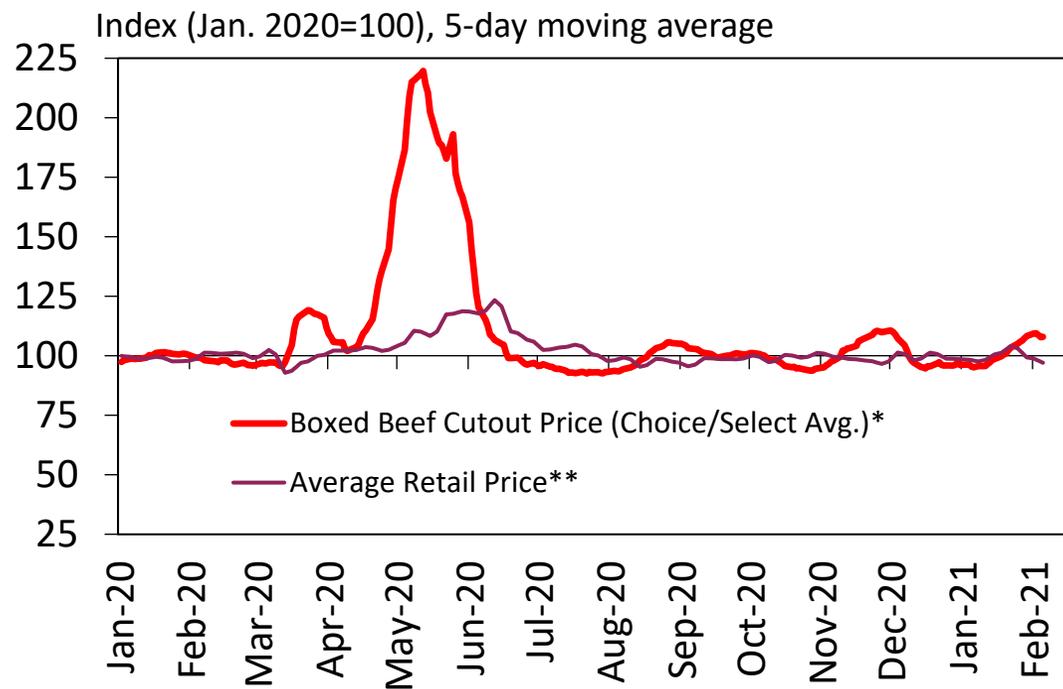


Note: Excludes weekend operations. Adjusted to account for holiday operations.

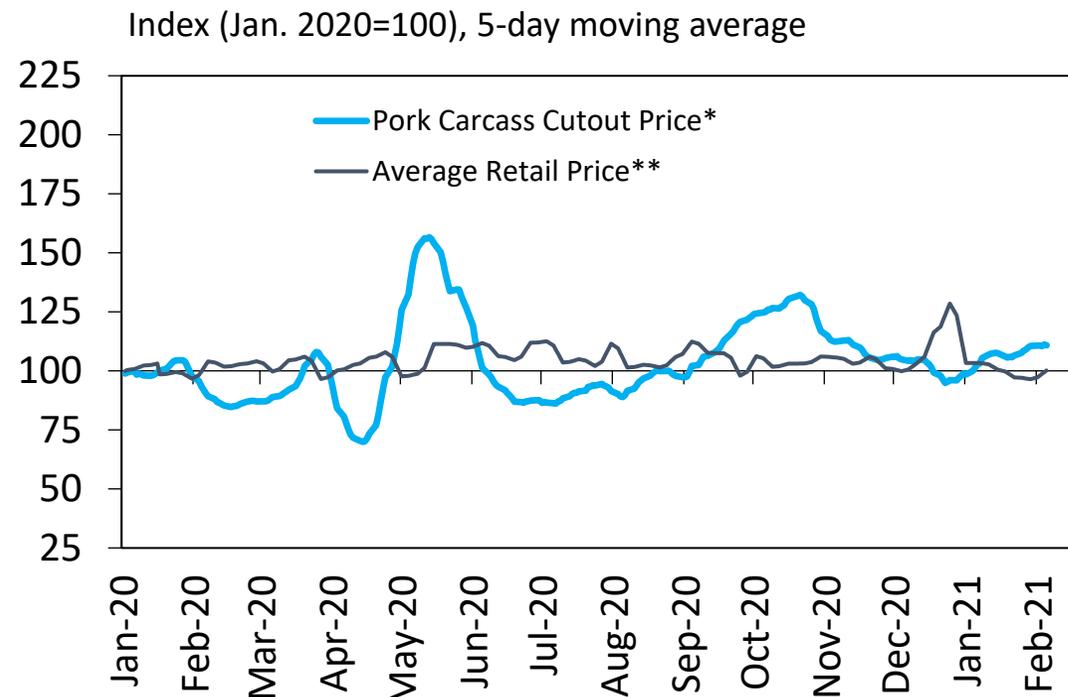
Sources: USDA, National Pork Board, and KC Fed Calculations

Temporary divergence in wholesale and retail beef and pork prices

Wholesale and Retail Beef



Wholesale and Retail Pork



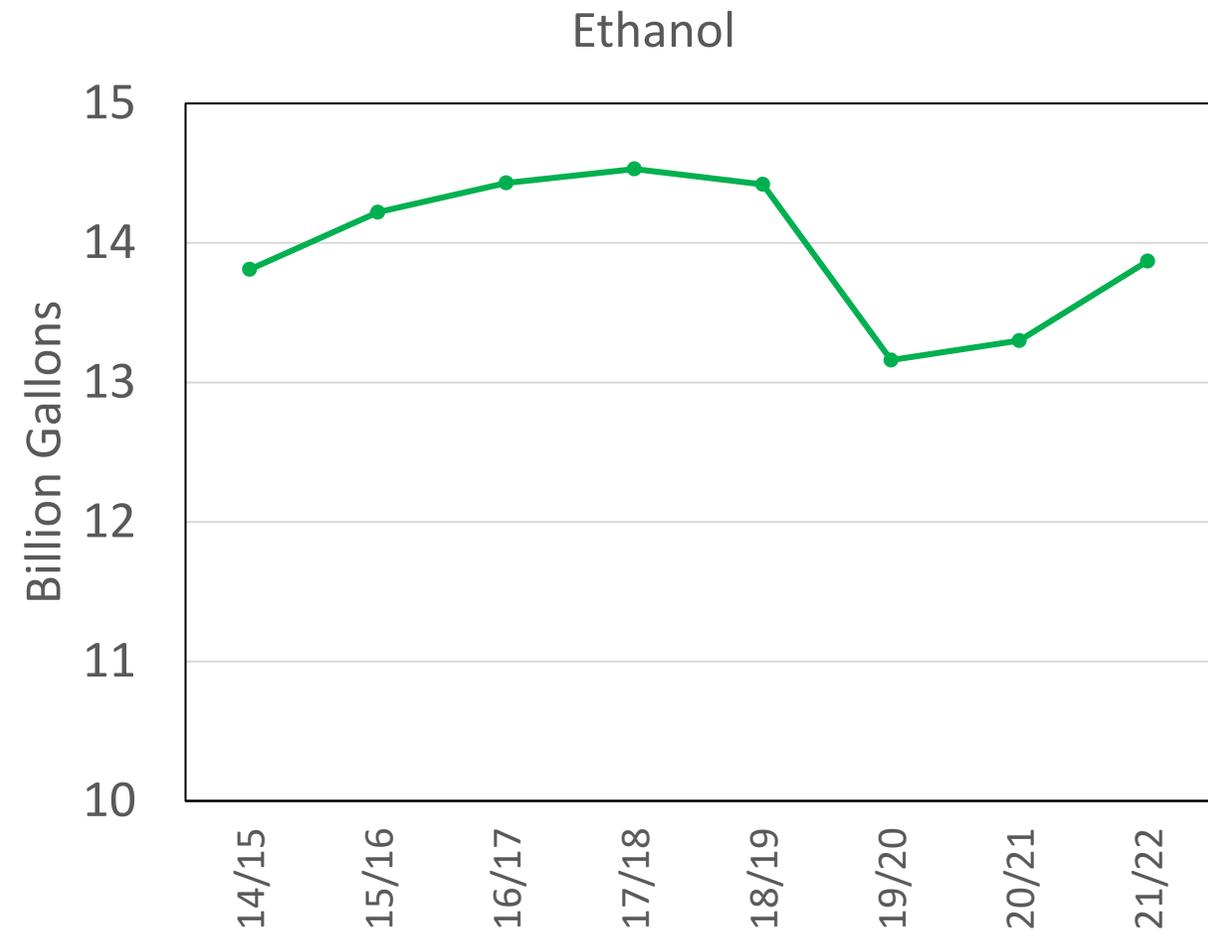
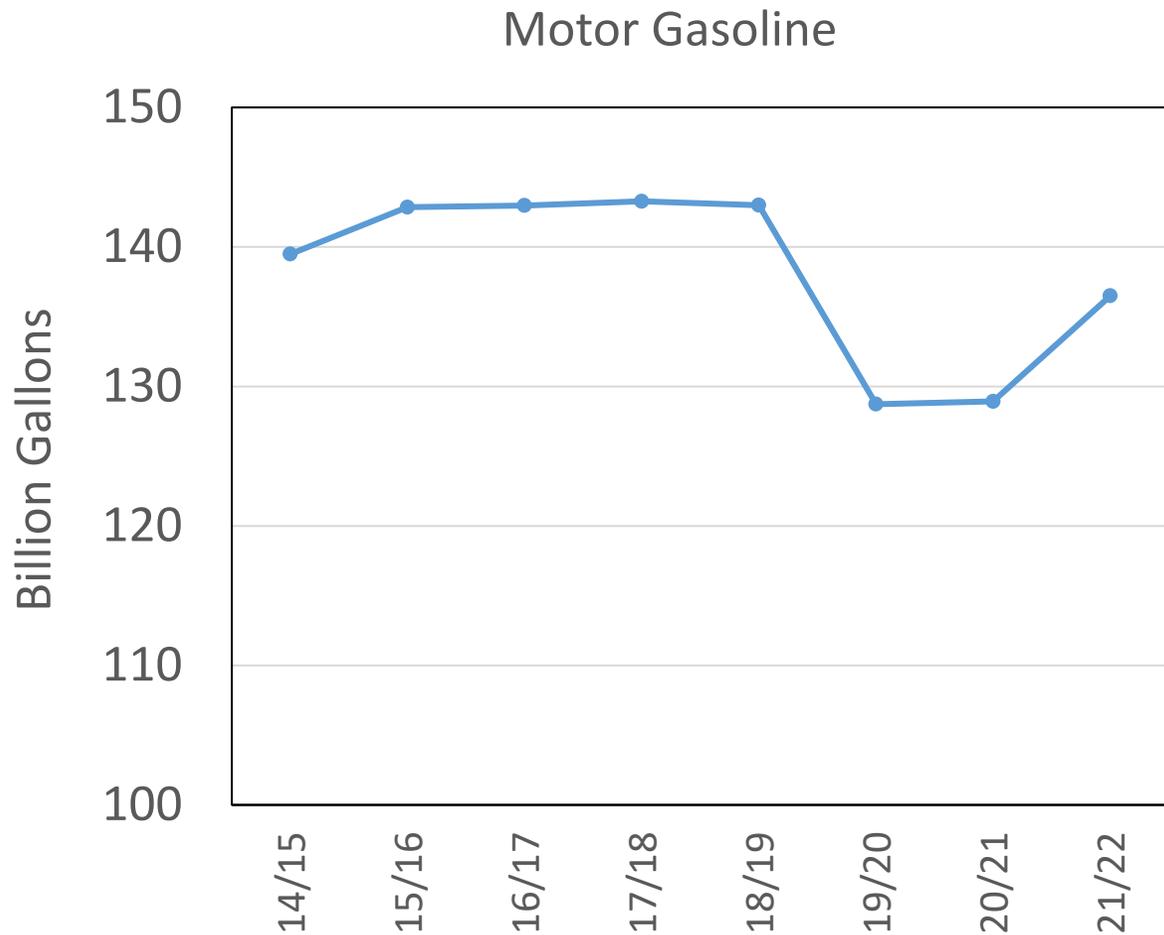
*Beef: negotiated prices and volume of boxed beef cuts delivered within 0-21 days and on average industry cutting yields. Pork: negotiated prices and volume of pork cuts delivered within 14 days and on average industry cutting yields.

**Based on weekly national average of advertised prices, weighted based on carcass composition and interpolated to daily average

Source: USDA and KC Fed calculations.

U.S. Motor Gasoline and Ethanol Domestic Use

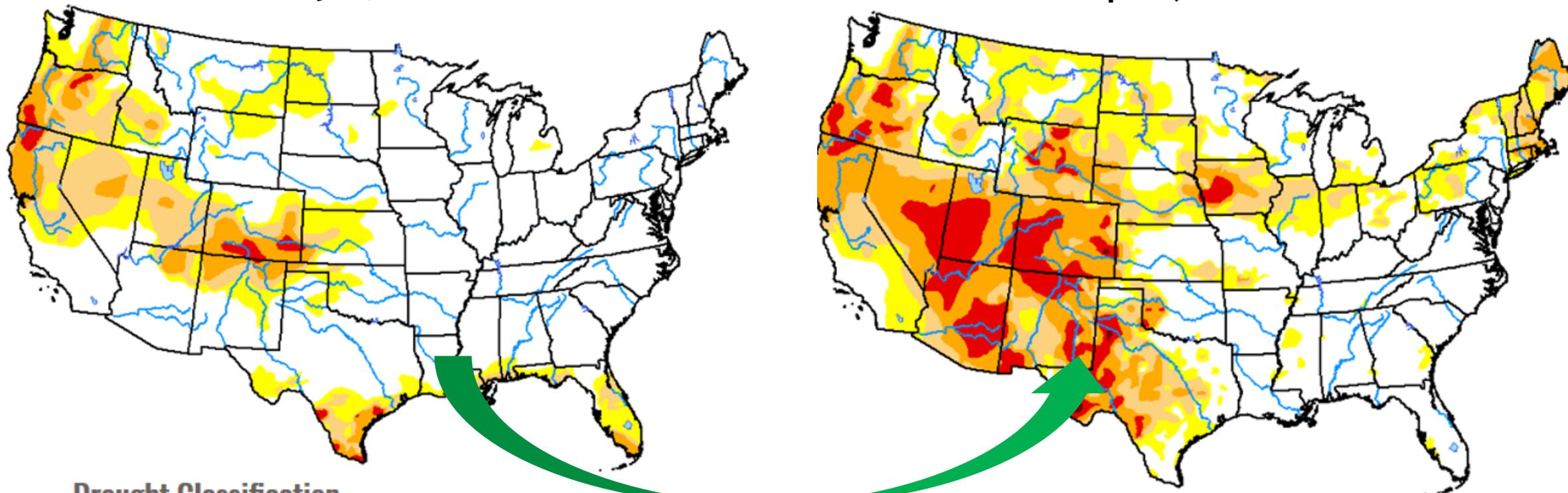
corn marketing year



Drought/dry conditions expand

May 5, 2020

Sept 1, 2020



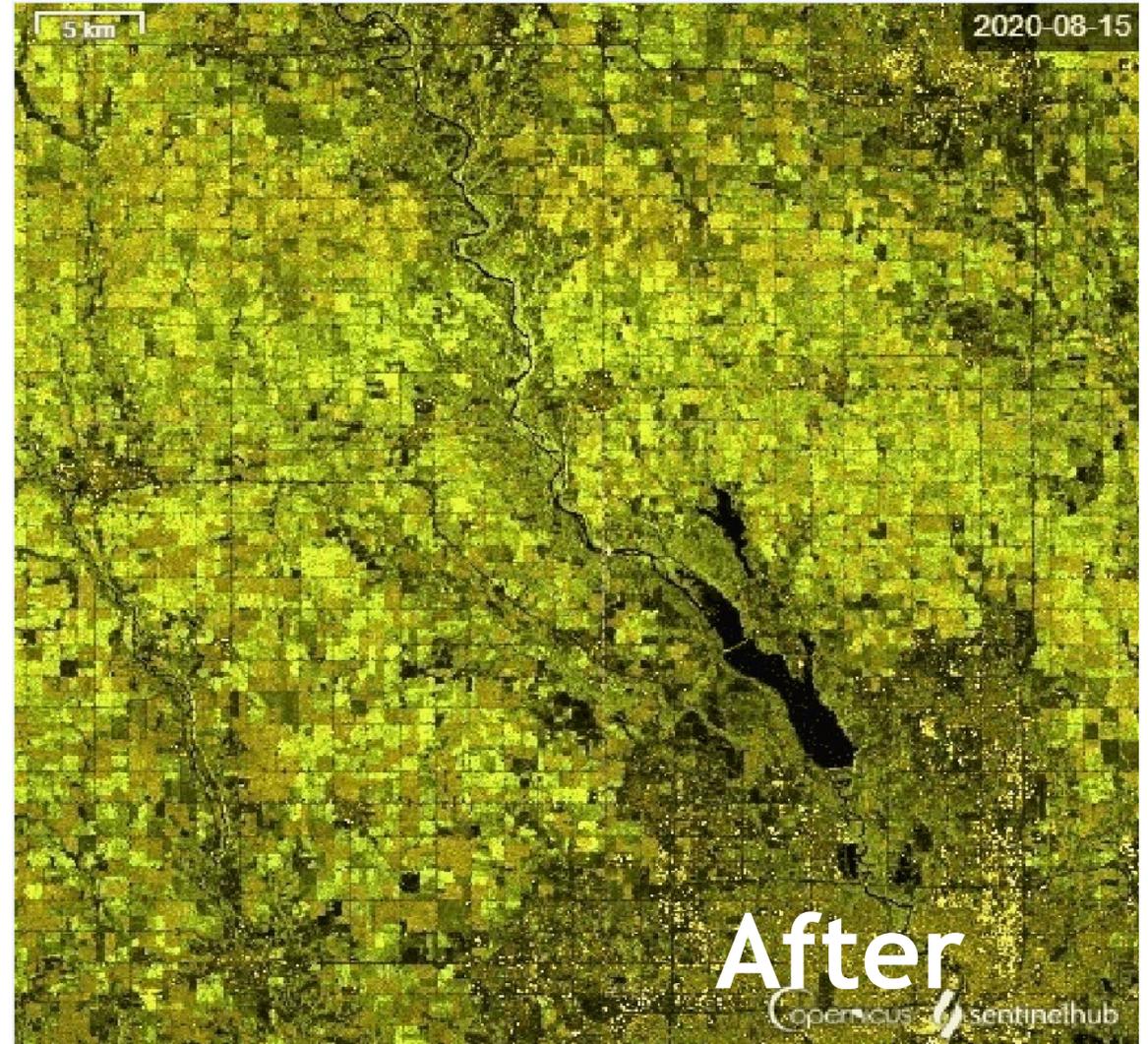
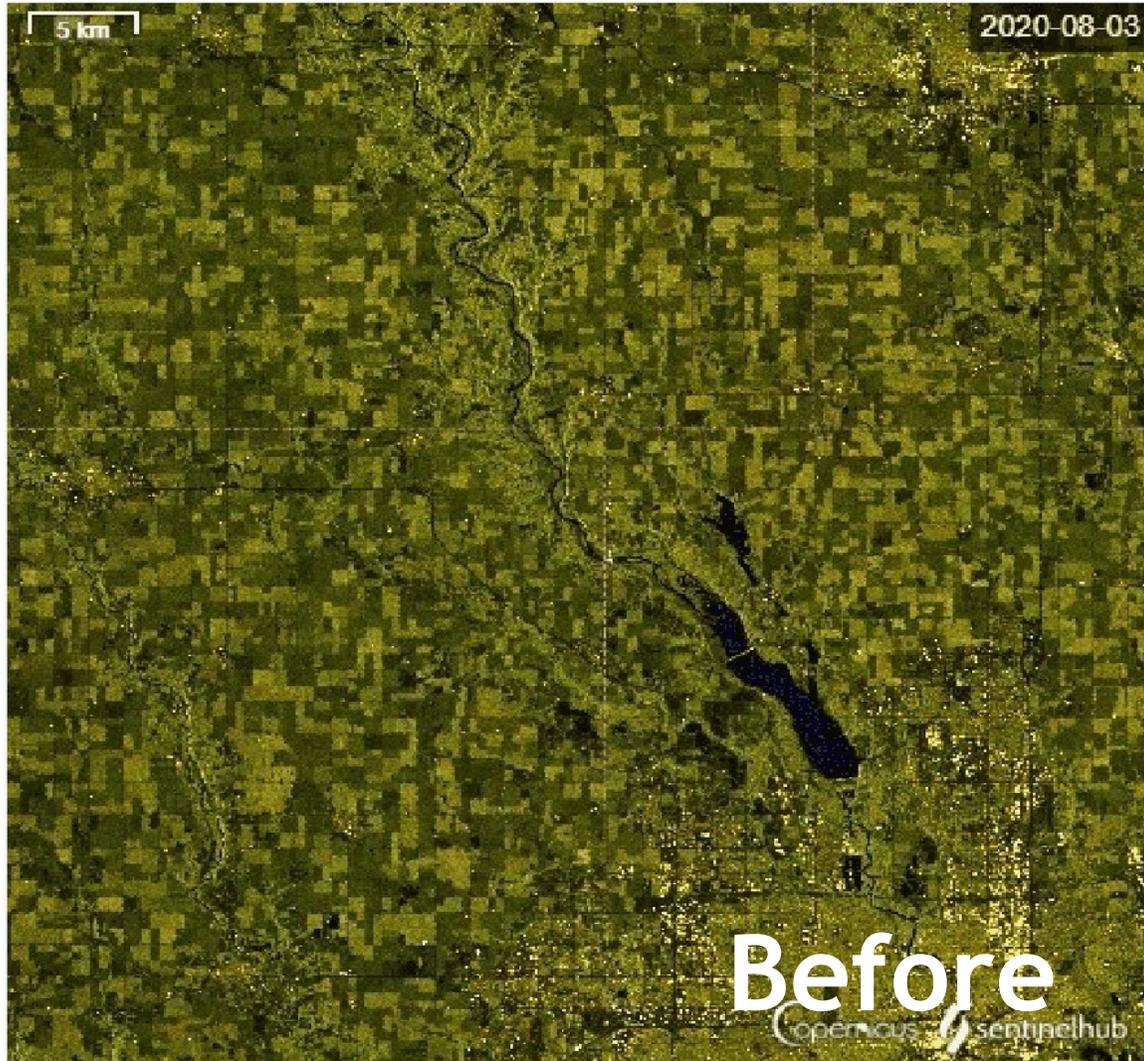
Drought Classification

- | | |
|-----------------------|--------------------------|
| None | D3 (Extreme Drought) |
| D0 (Abnormally Dry) | D4 (Exceptional Drought) |
| D1 (Moderate Drought) | No Data |
| D2 (Severe Drought) | |

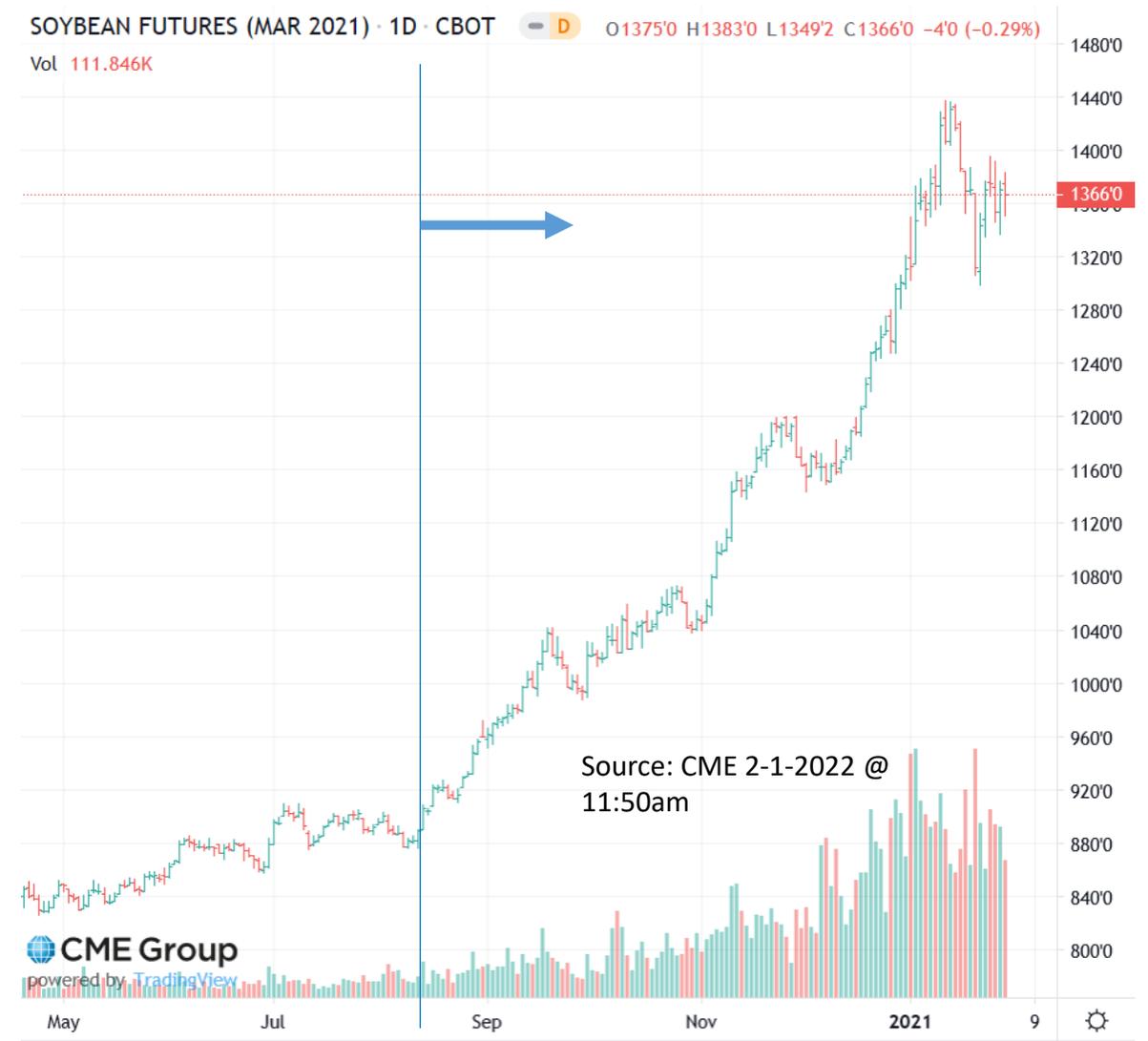
Source: U.S. Drought Monitor

Derecho as seen by Synthetic Aperture Radar (SAR)

NASAharvest.org Iowa derecho impact analysis

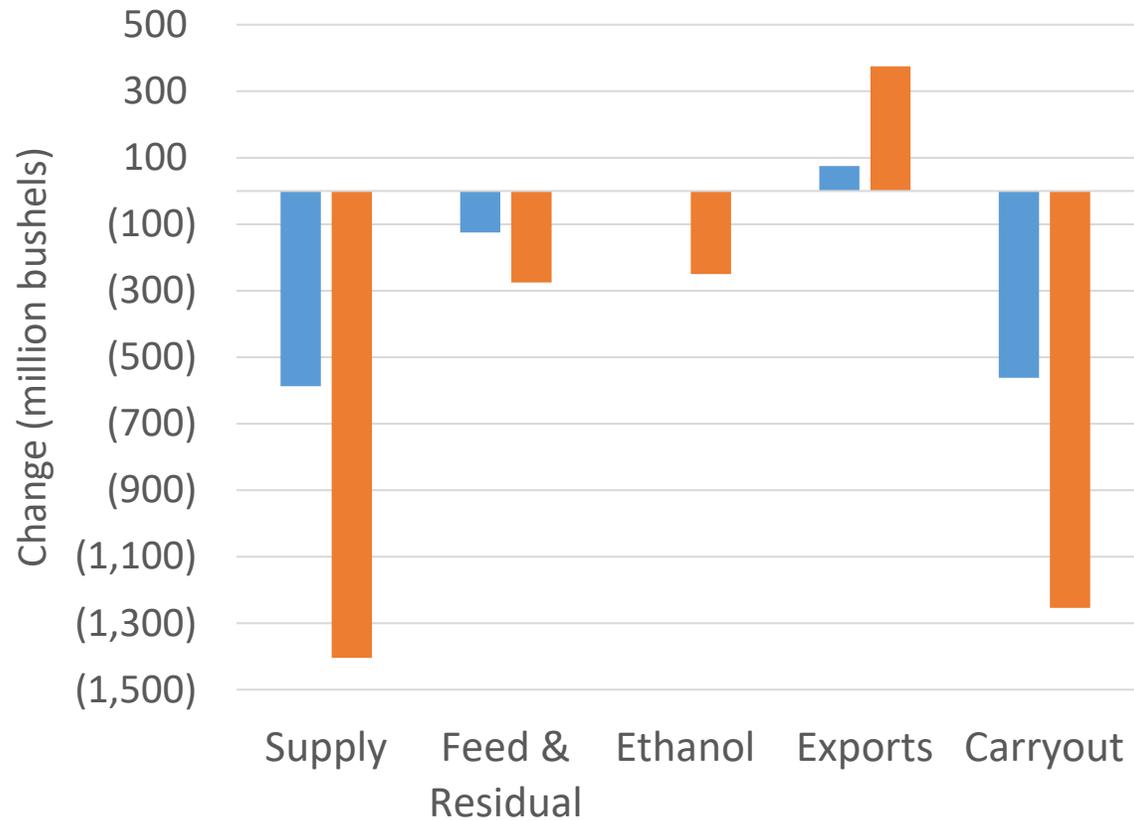


U.S. corn & soybean prices have been surging

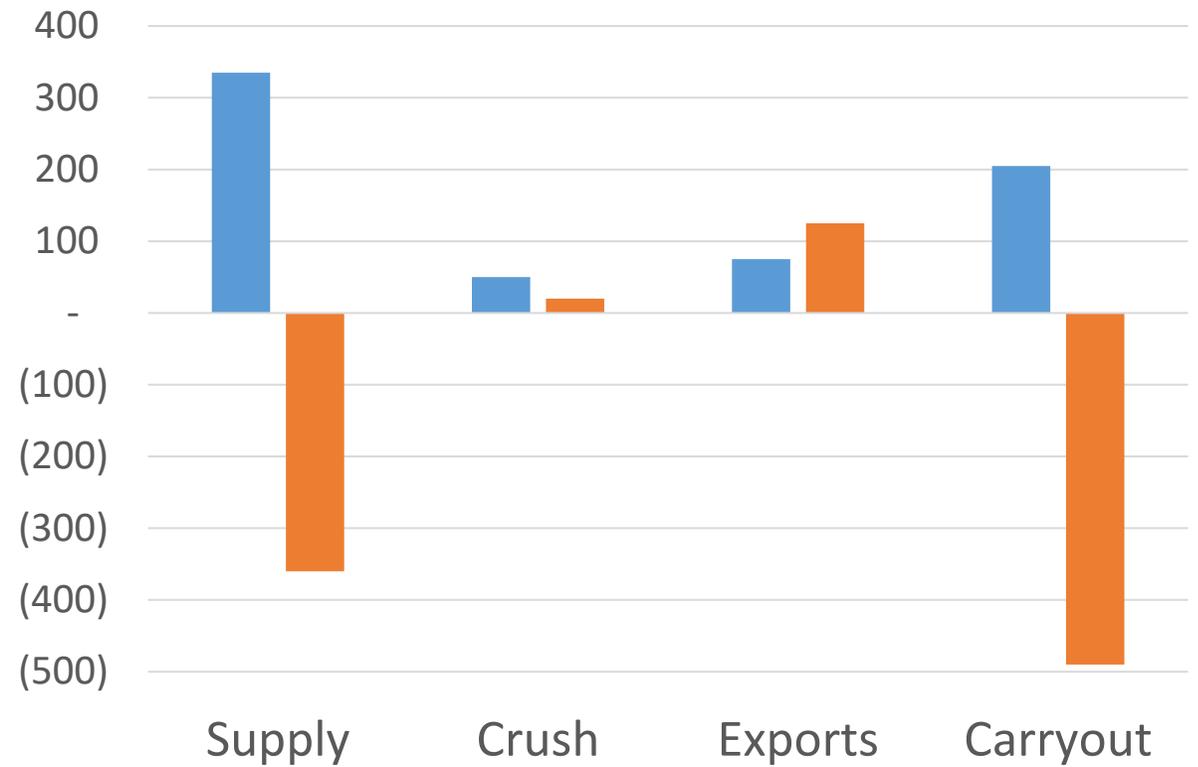


Soybean and corn export demand expands even as the crop size shrinks

Corn



Soybeans

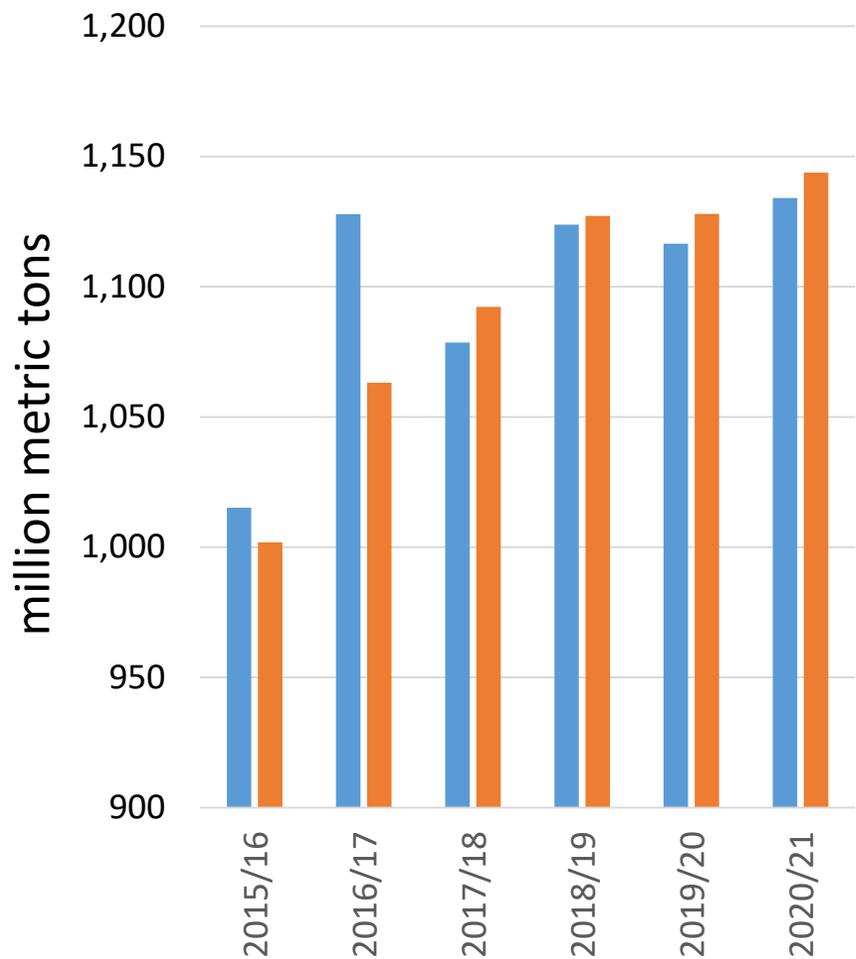


■ May to August

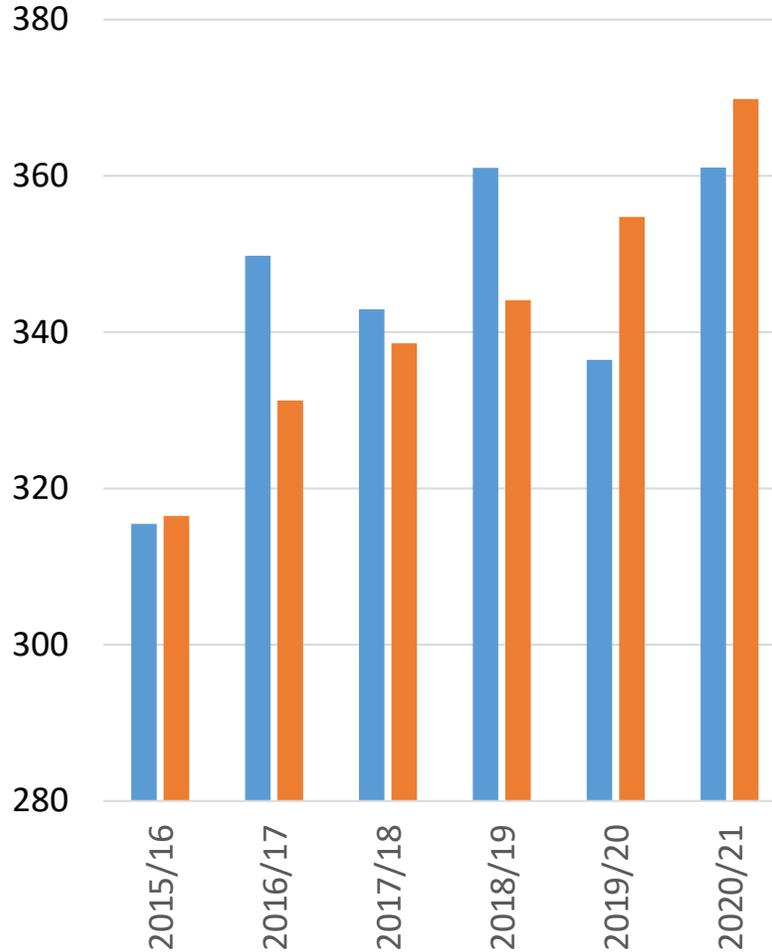
■ August to February

Global crop supplies have tightened

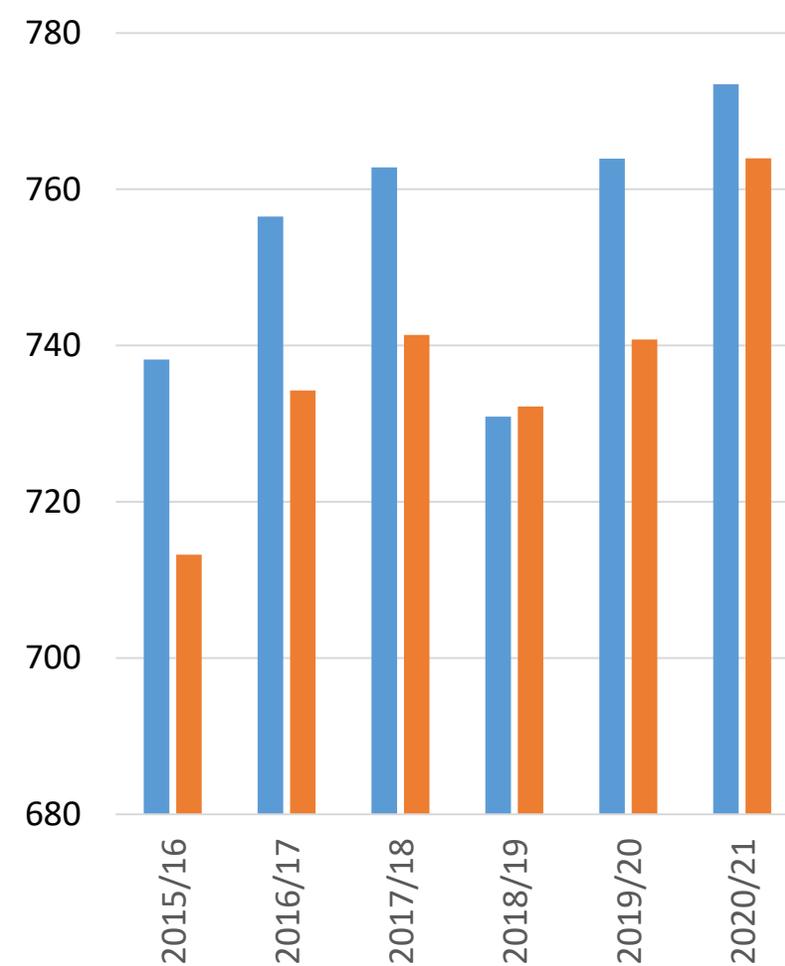
Corn



Soybeans

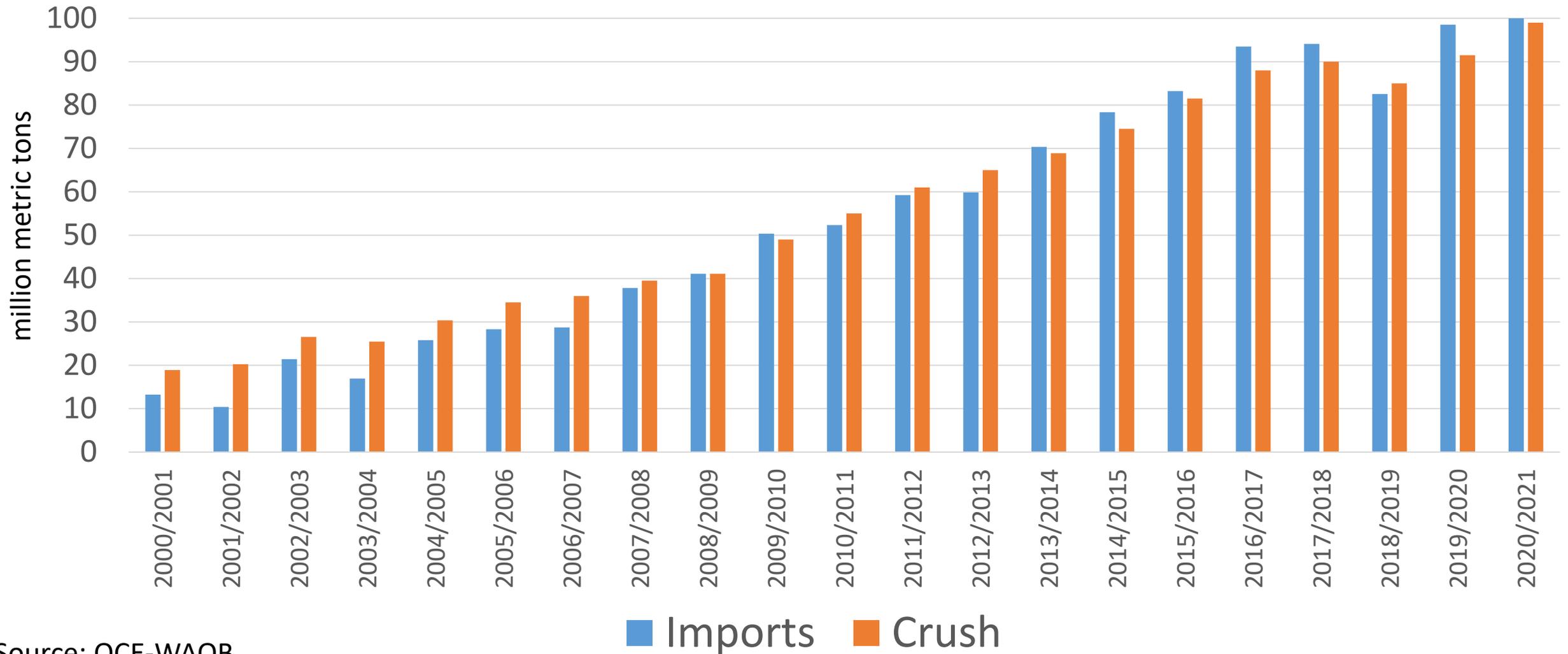


Wheat

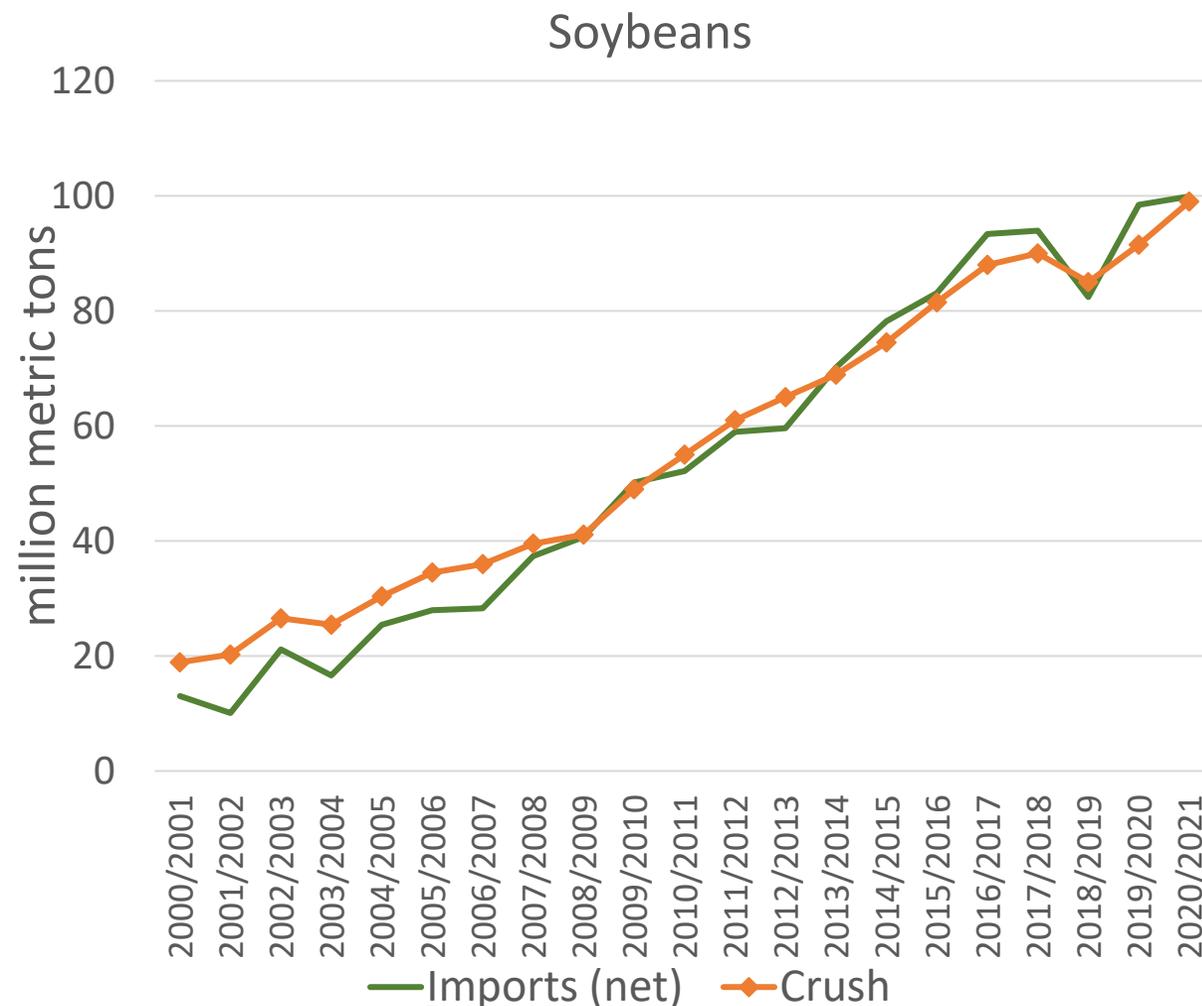
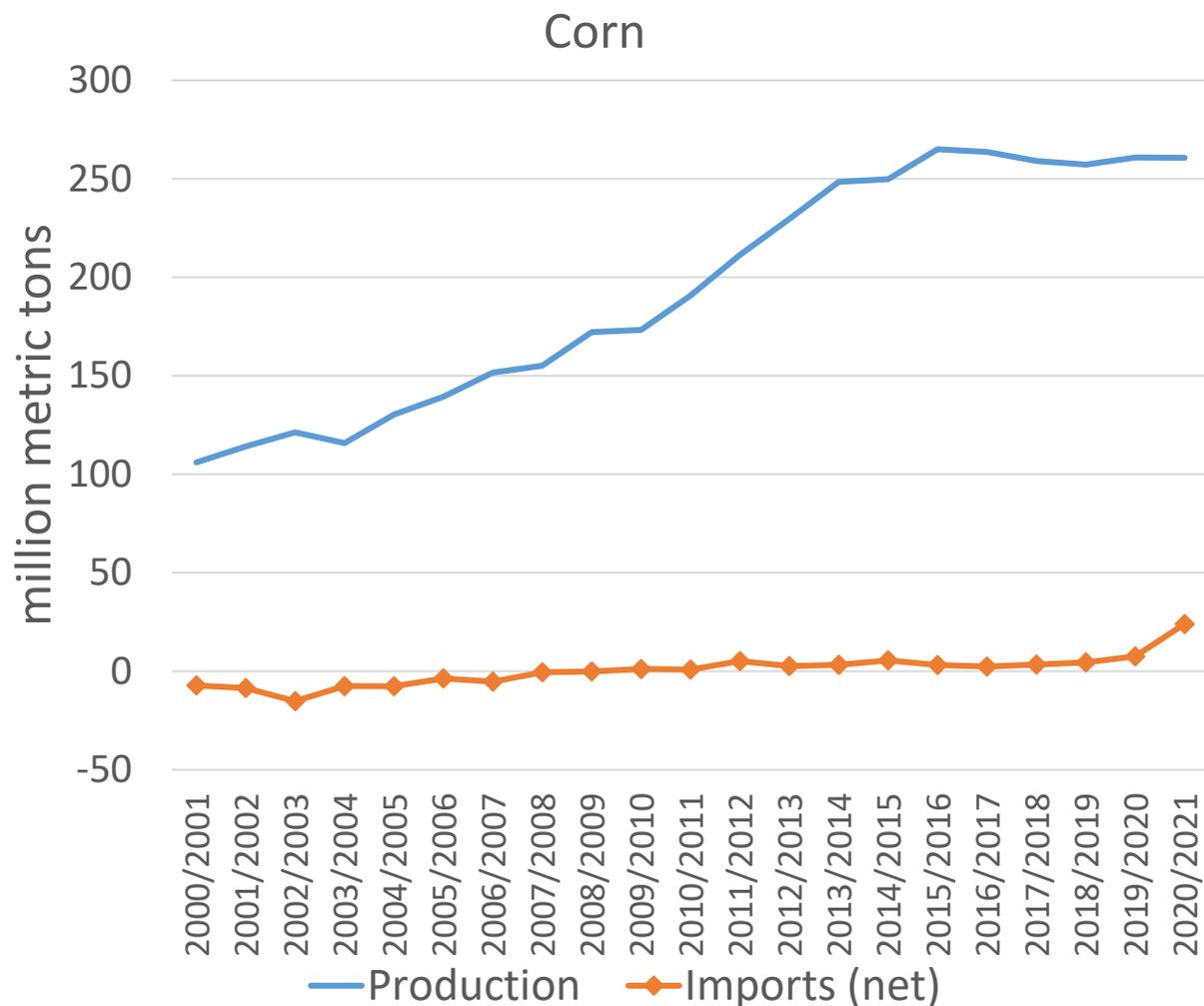


■ Production ■ Consumption

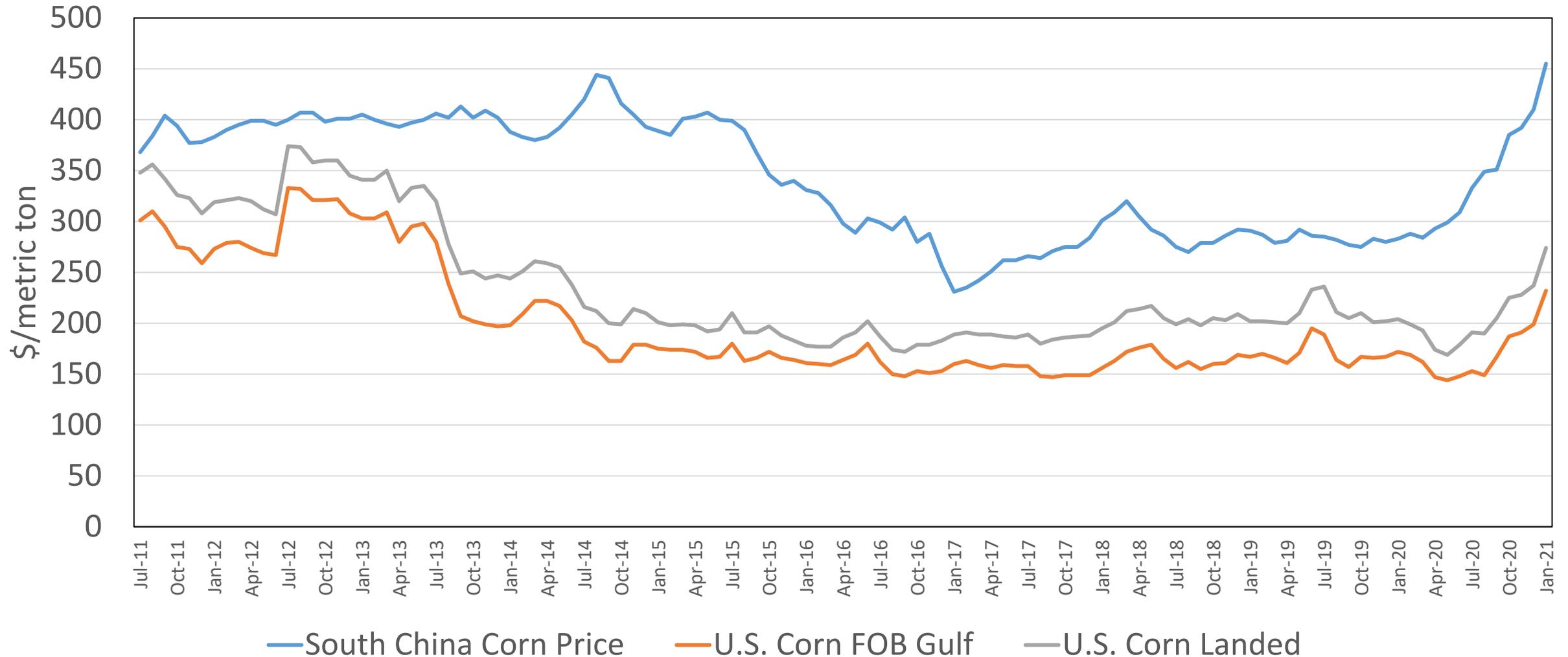
Chinese soybean imports and crush suggest a strong turn around in their hog herd



China's corn and soybean trade *(and trade dependence)*

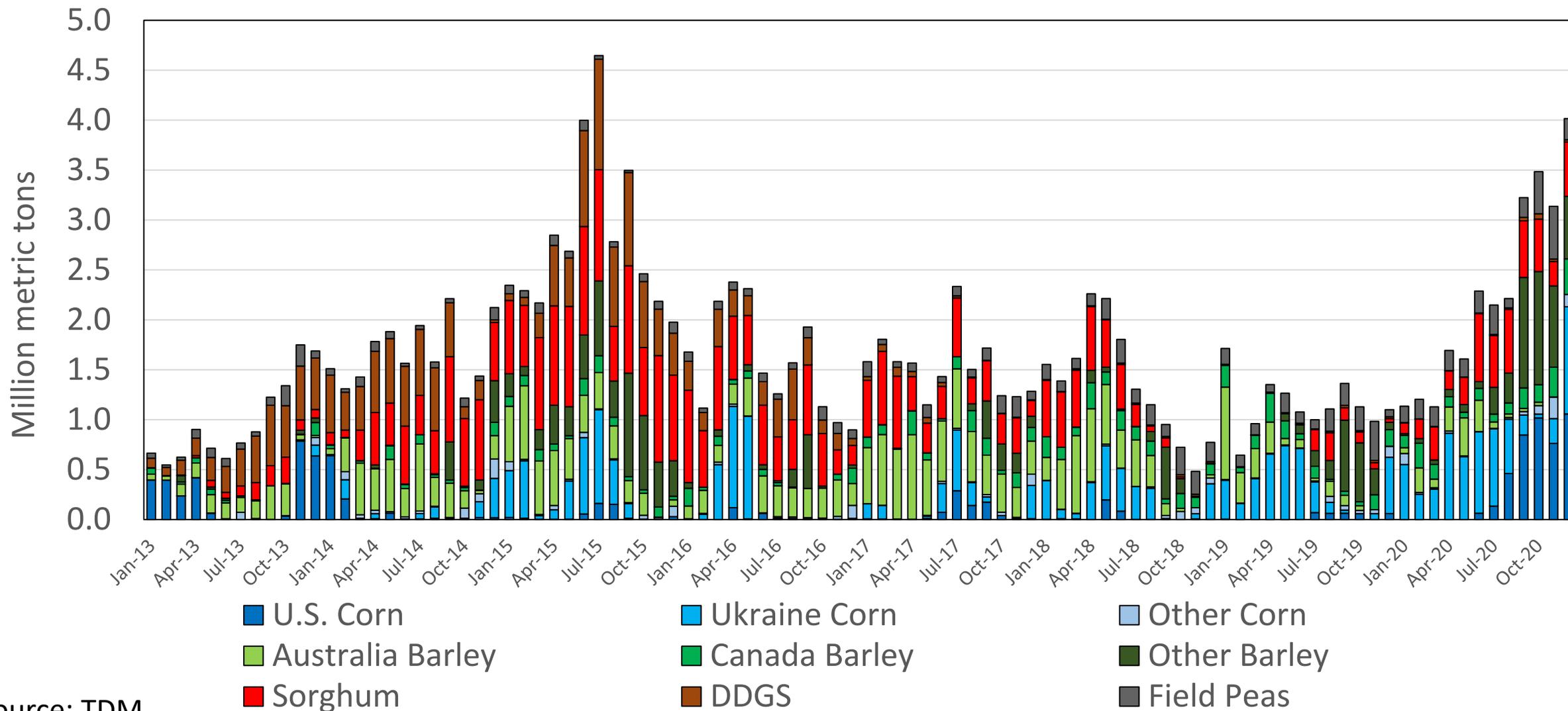


China's domestic corn prices surge boosting import margins



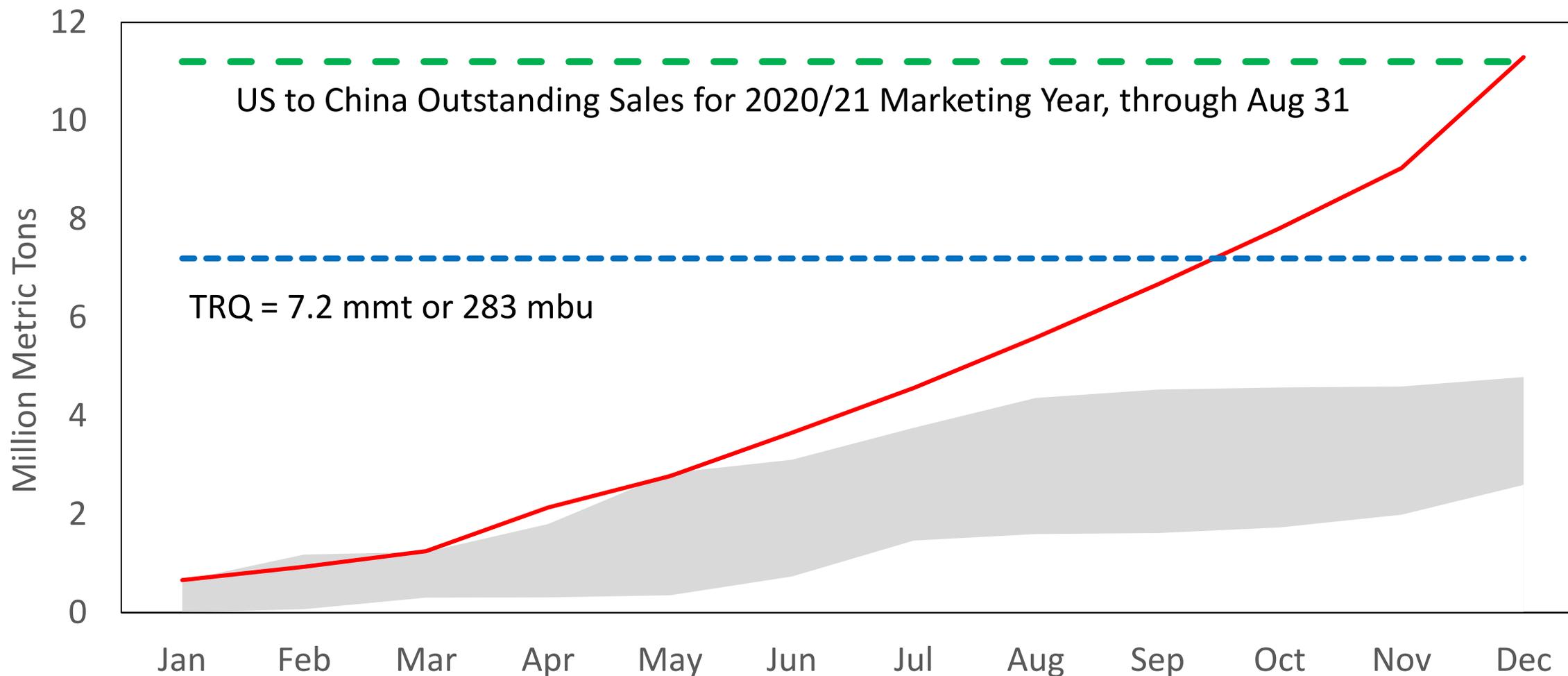
Source: CNGOIC and USDA *Landed does not include VAT or tariff.

China Energy Feedstuff Imports Forecast Record High, Exceeding 2014/15



China's Corn Imports Exceeded TRQ For First Time in 2020

more on the books just from the US than total TRQ for 2021



Range 2014-2019

2020 Imports

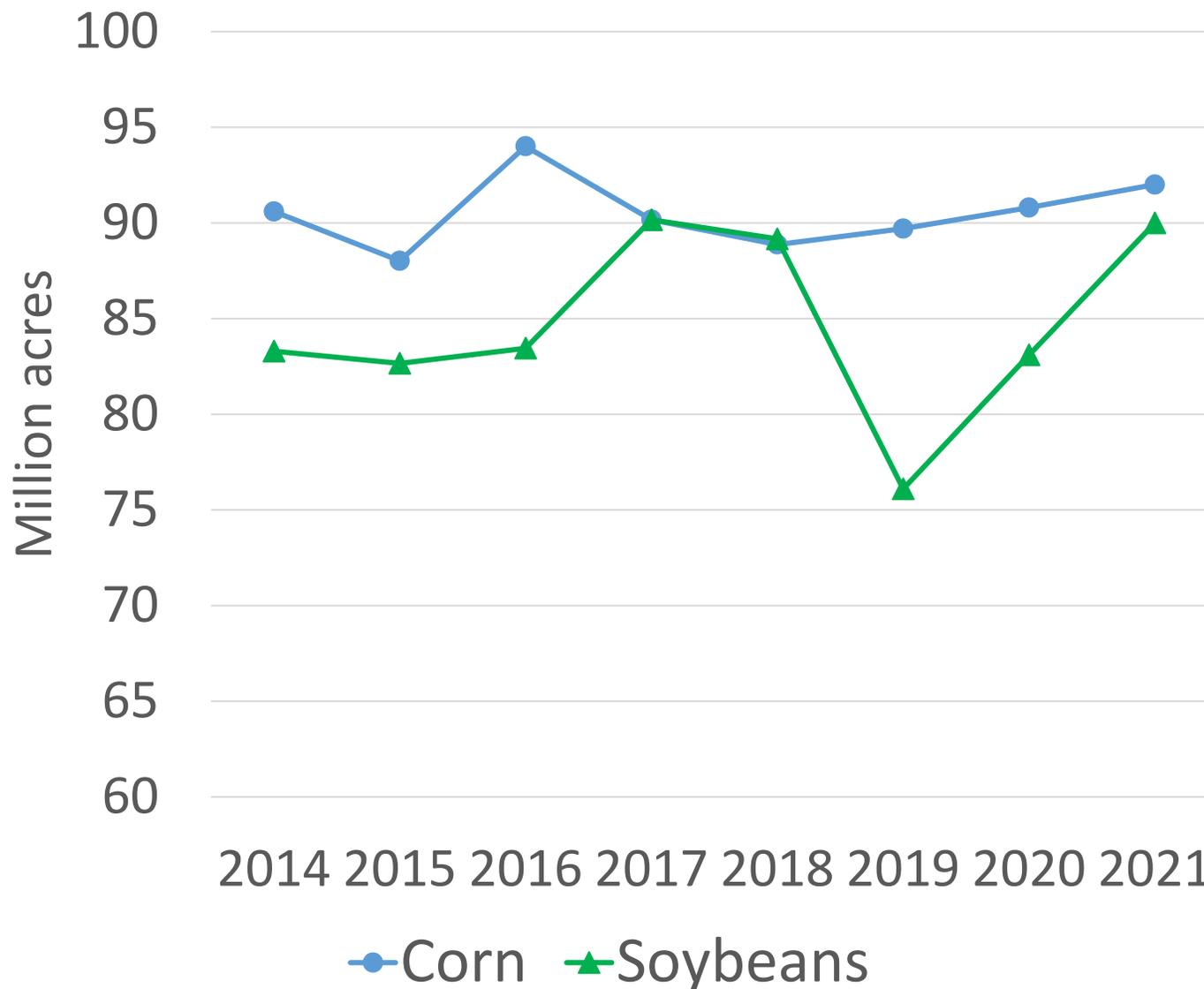
TRQ

Outstanding Sales

Data: TDM and USDA-FAS Export Sales

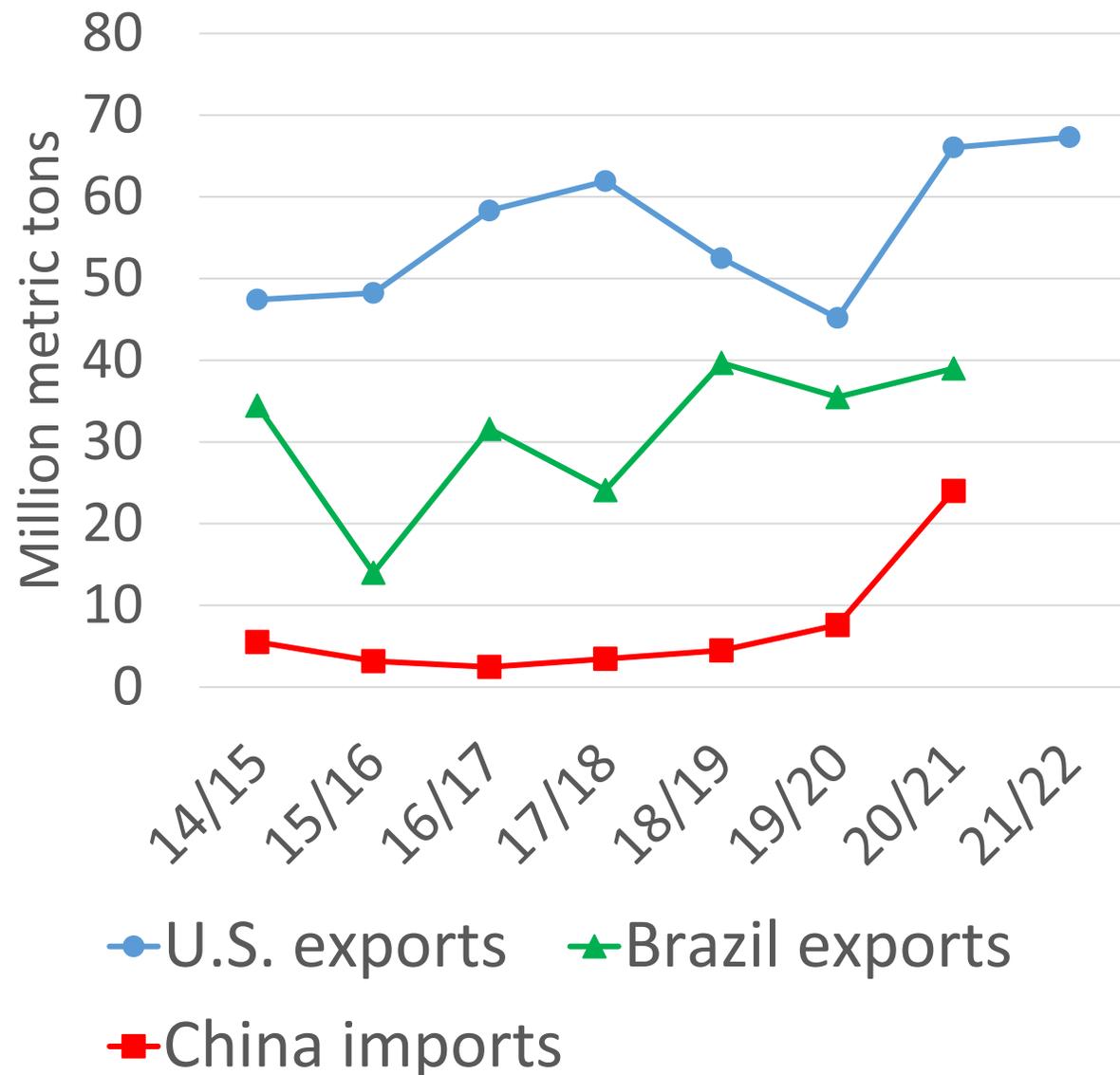
U.S. corn and soybean planted acreage

- In both 2019 and 2020 area considered 'prevent plant' was above average
- Simply going back to normal planting weather would increase total planted acres by several million acres
- Forecast prices, would further incentivize expanded acreage. Corn and soybean area expected to be a combined record 182 million acres



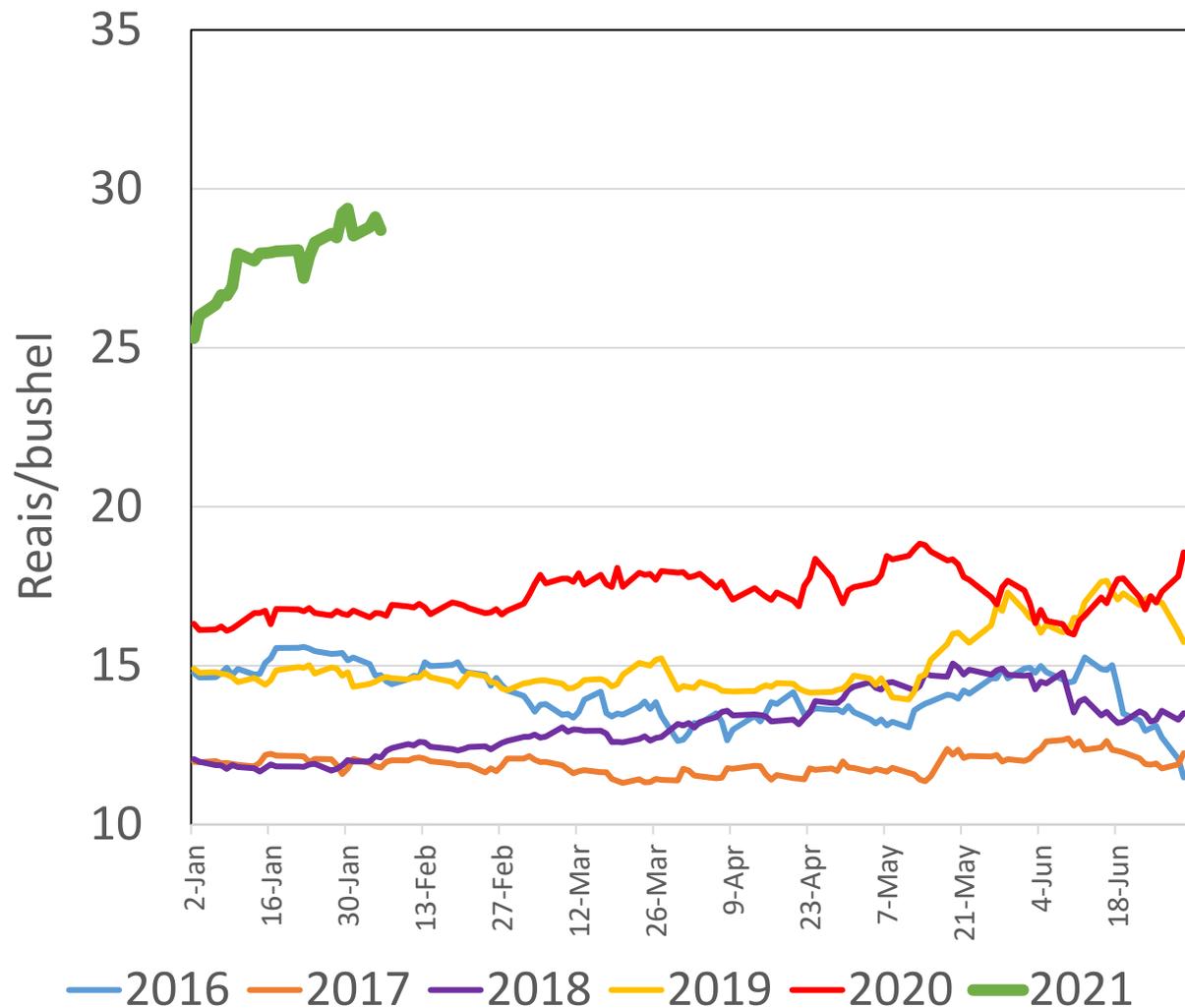
Corn exports

- China strong corn import demand expected to continue to support solid US exports
- Brazil's *safrina* corn area is up, but late planting limits yield prospects.
- Current phytosanitary restrictions in place by China on Brazilian corn is expected to reduce U.S. market share in key traditional export markets during the summer/fall.

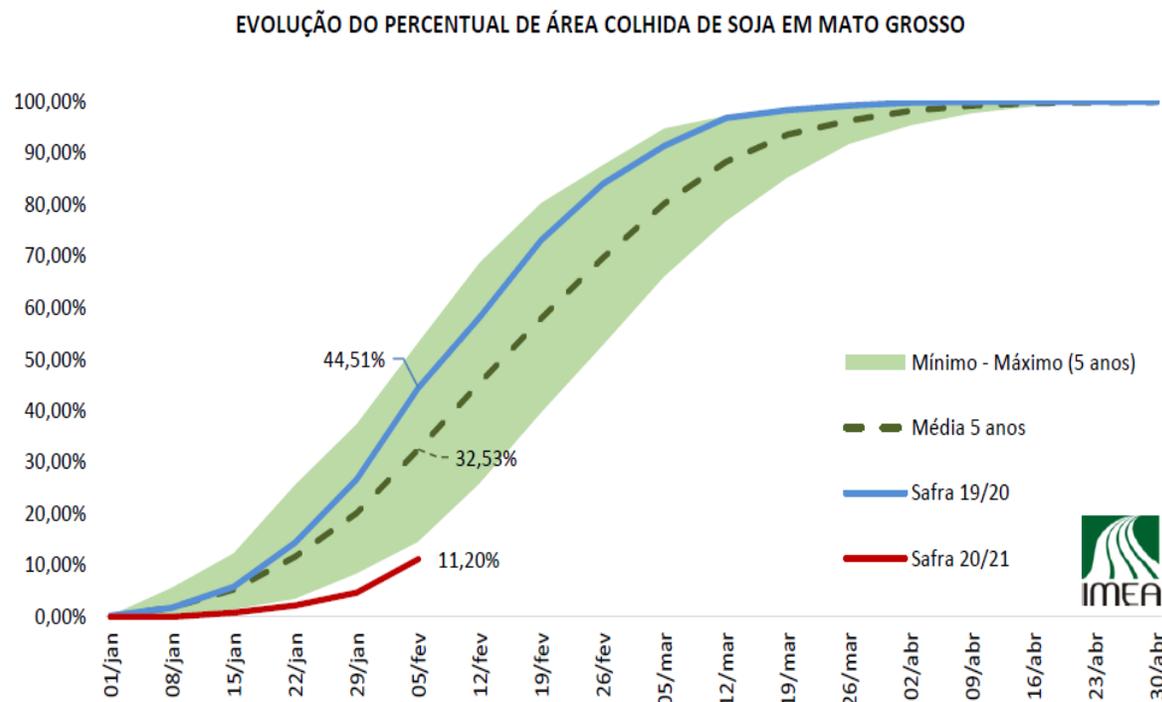


Local price strength leading to record Brazil corn area

July corn futures in Reais



Slow soybean harvest in Brazil means delayed planting of the safrina corn crop



Fonte: Imea

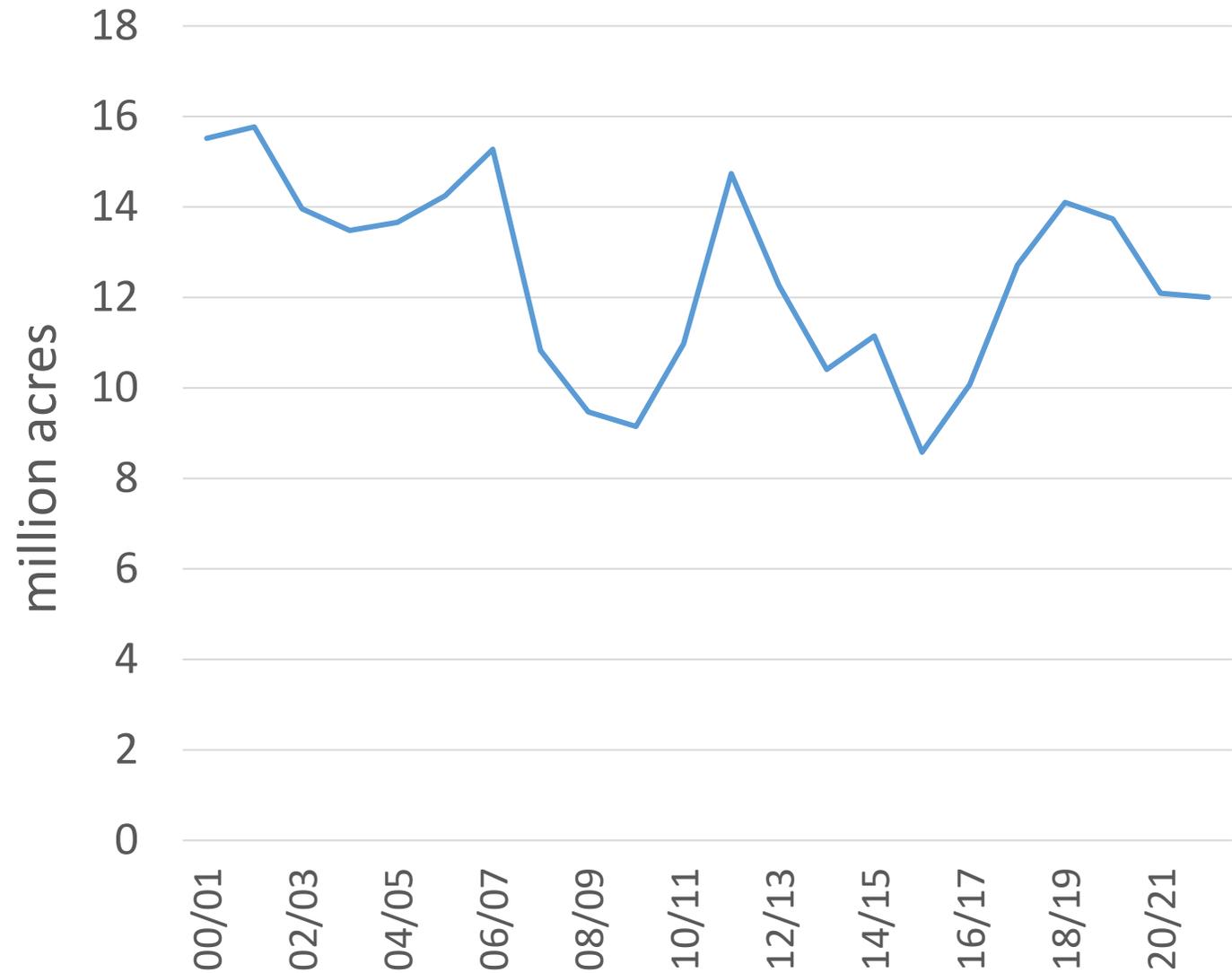
U.S. wheat planted acres continue to decline

- ▶ Wheat area has declined as gains in corn and soybean productivity push into wheat area
- ▶ Wheat area expected to rise slightly, off the lowest area on record last year.
- ▶ Winter wheat harvested area remains a question given prolonged dryness and recent extreme cold temperatures.



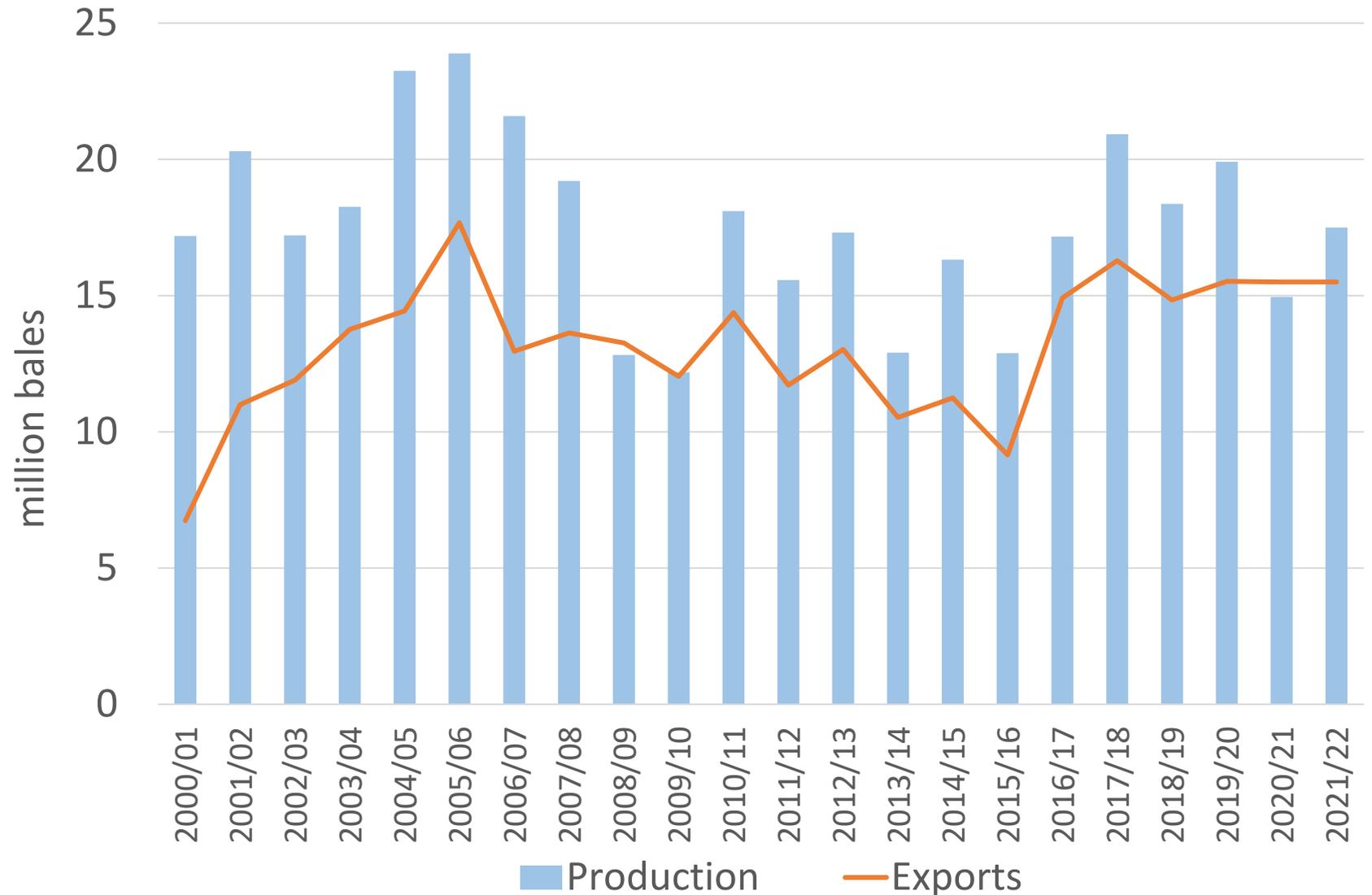
- ▶ Cotton planted area held in check by better returns in other crops and despite what are historically strong cotton prices.
- ▶ Cotton area harvest remains in question given persistent dryness in some major cotton areas.

U.S. cotton planted area to remain flat



U.S. cotton exports

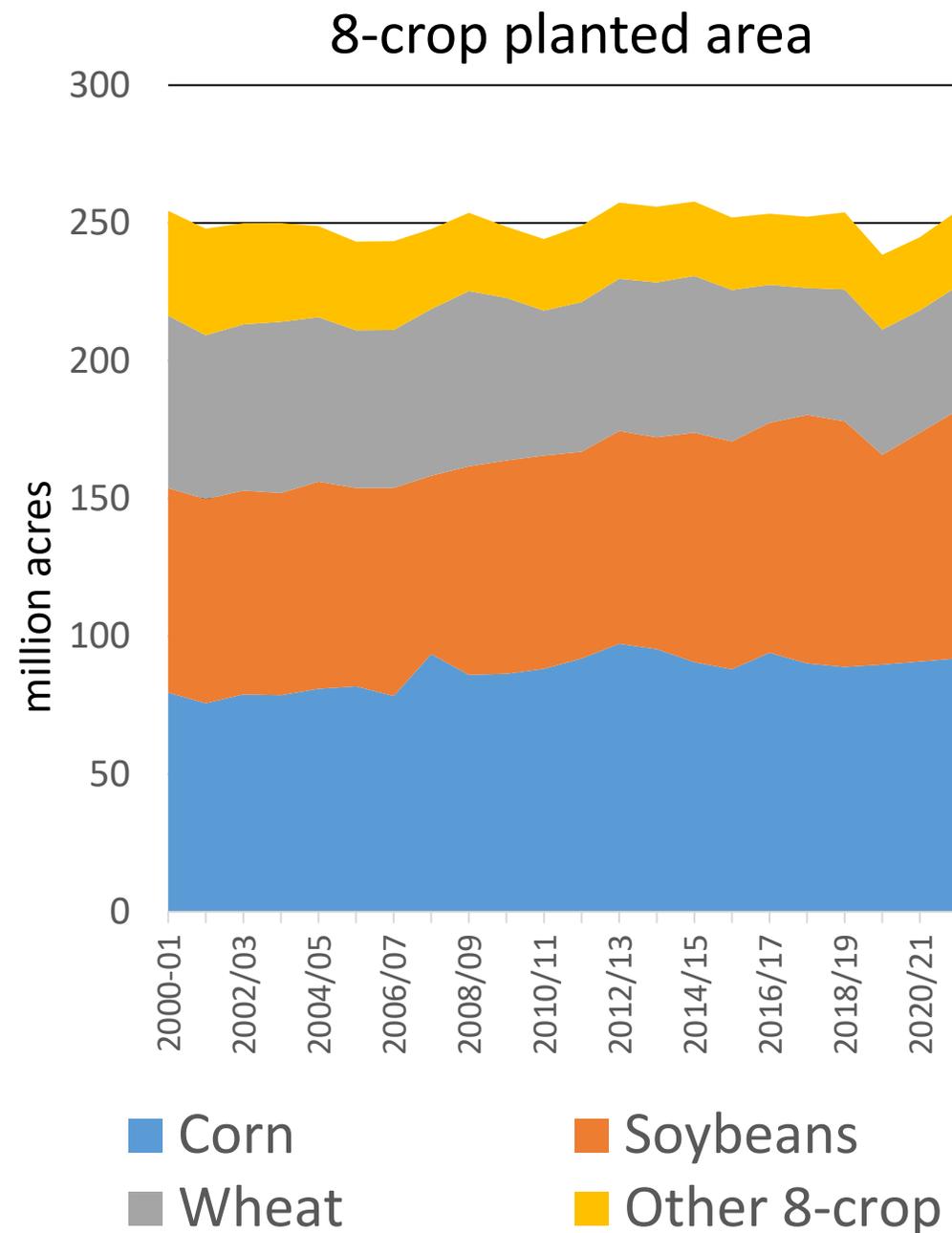
- ▶ Cotton stocks fell last year on a smaller crop and solid exports
- ▶ Cotton demand held up well in total and relative to other fibers in 2020
- ▶ Despite the projected larger crop, carryout stocks are expected to tighten further



U.S. crop prices and area

Prices (\$/unit)

	2010/11 to 2014/15 avg	2015/16 to 2019/20 avg	2020/21	2021/22
Corn	5.29	3.50	4.30	4.20
Soybeans	12.26	8.96	11.15	11.25
Wheat	6.71	4.65	5.00	5.50
Rice	14.40	12.34	13.40	13.60
Upland Cotton	76.3	65.5	68.0	75.0

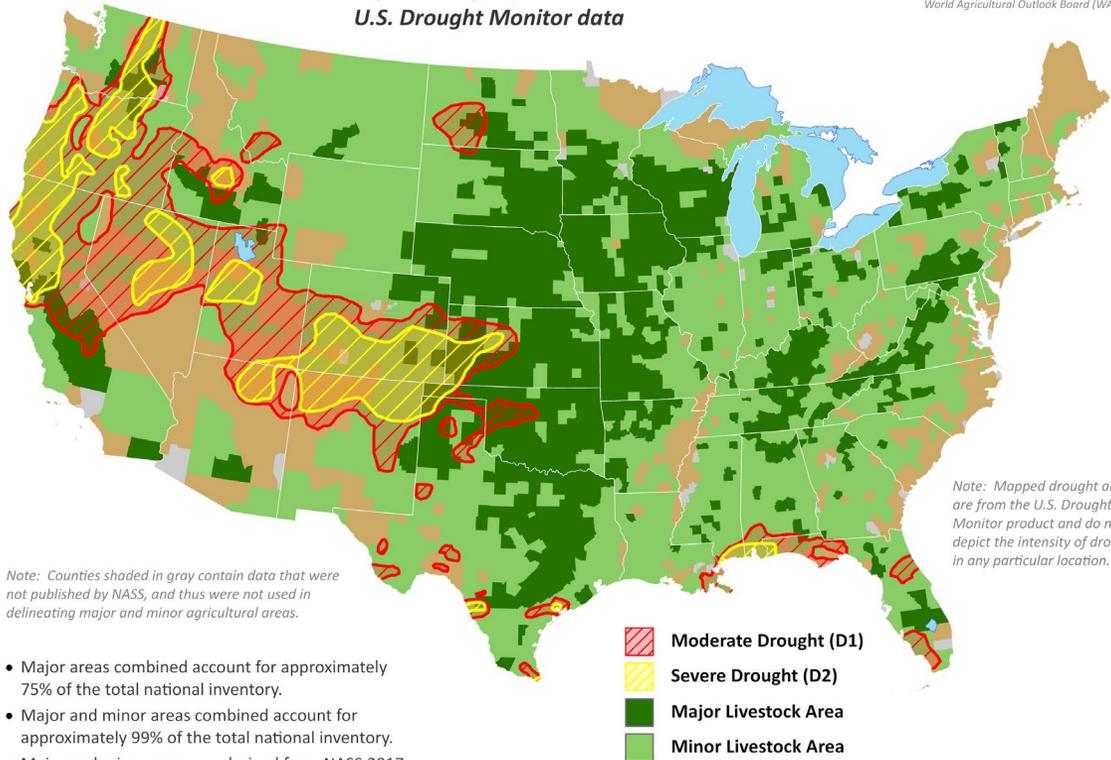


Supplies of forage may be an issue for cattle given prior dry conditions and current heavy feeding needs during cold

U.S. Cattle Areas Experiencing Drought

Reflects May 26, 2020
U.S. Drought Monitor data

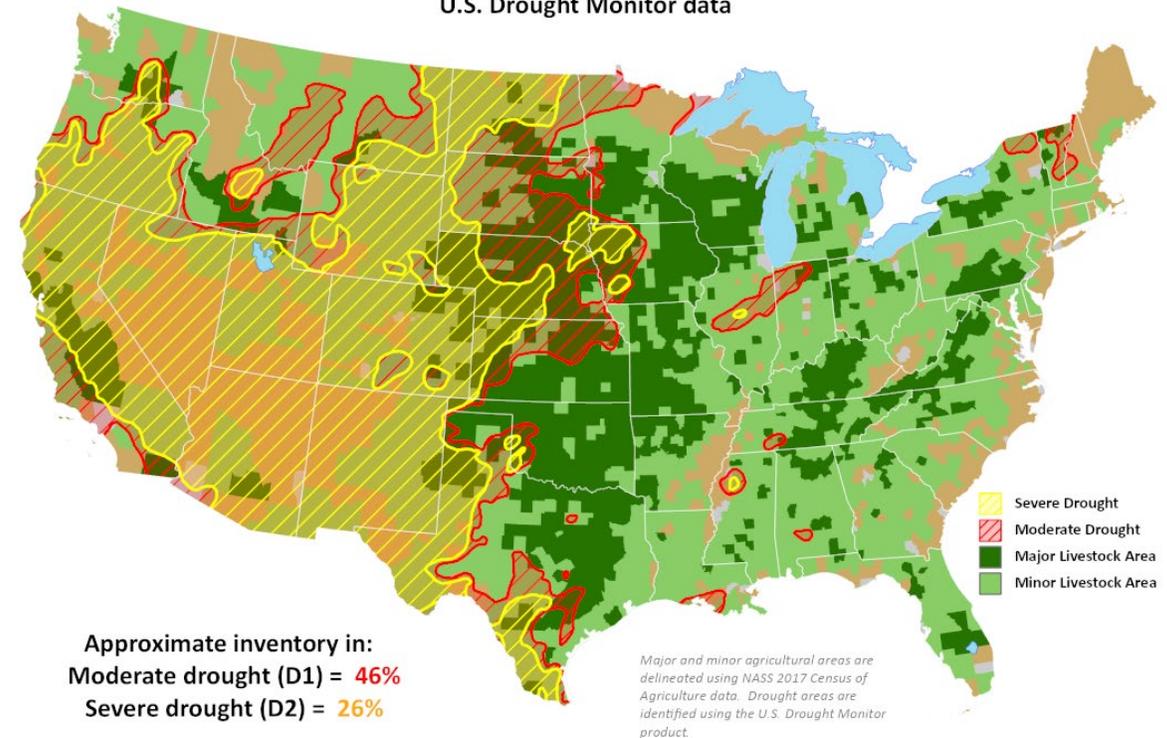
USDA United States Department of Agriculture
This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)



Cattle Areas in Drought

Reflects January 26, 2021
U.S. Drought Monitor data

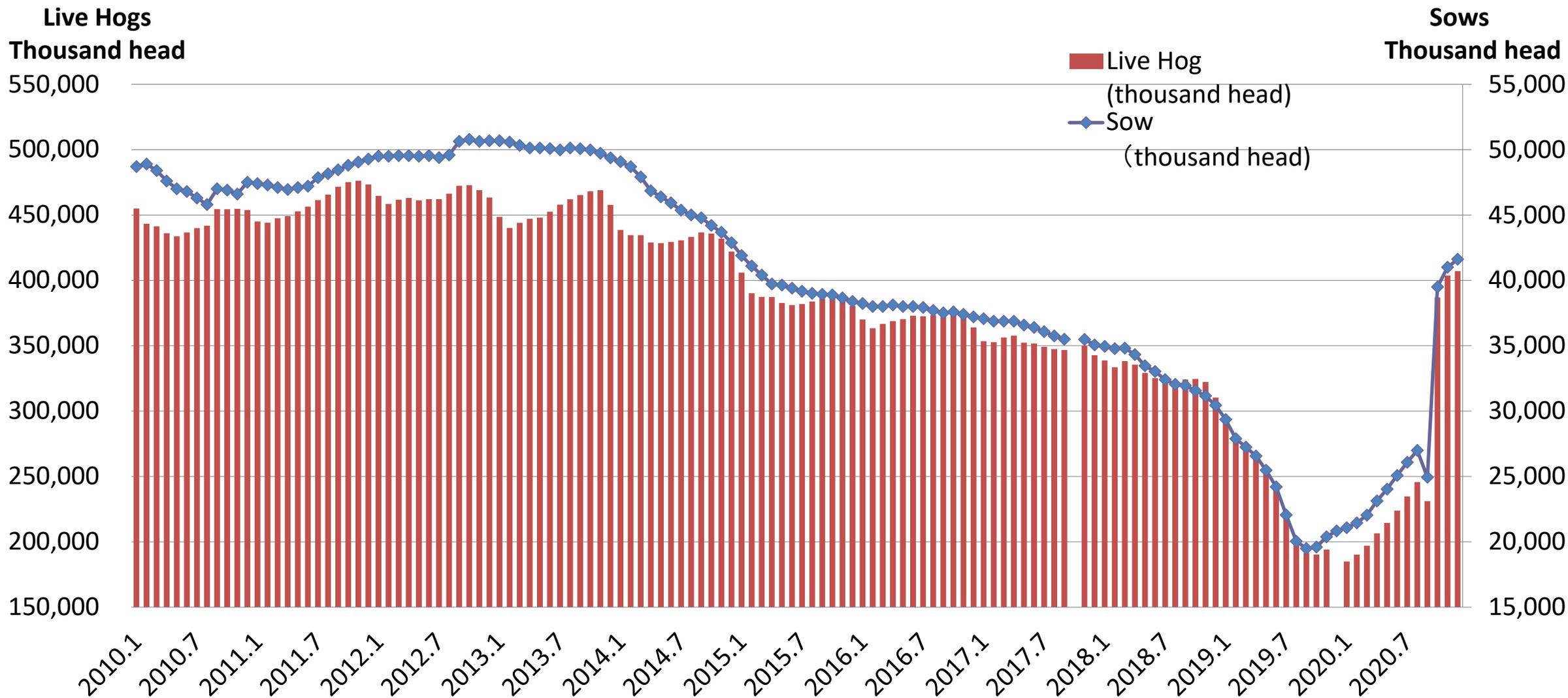
USDA United States Department of Agriculture
This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)



Livestock prices

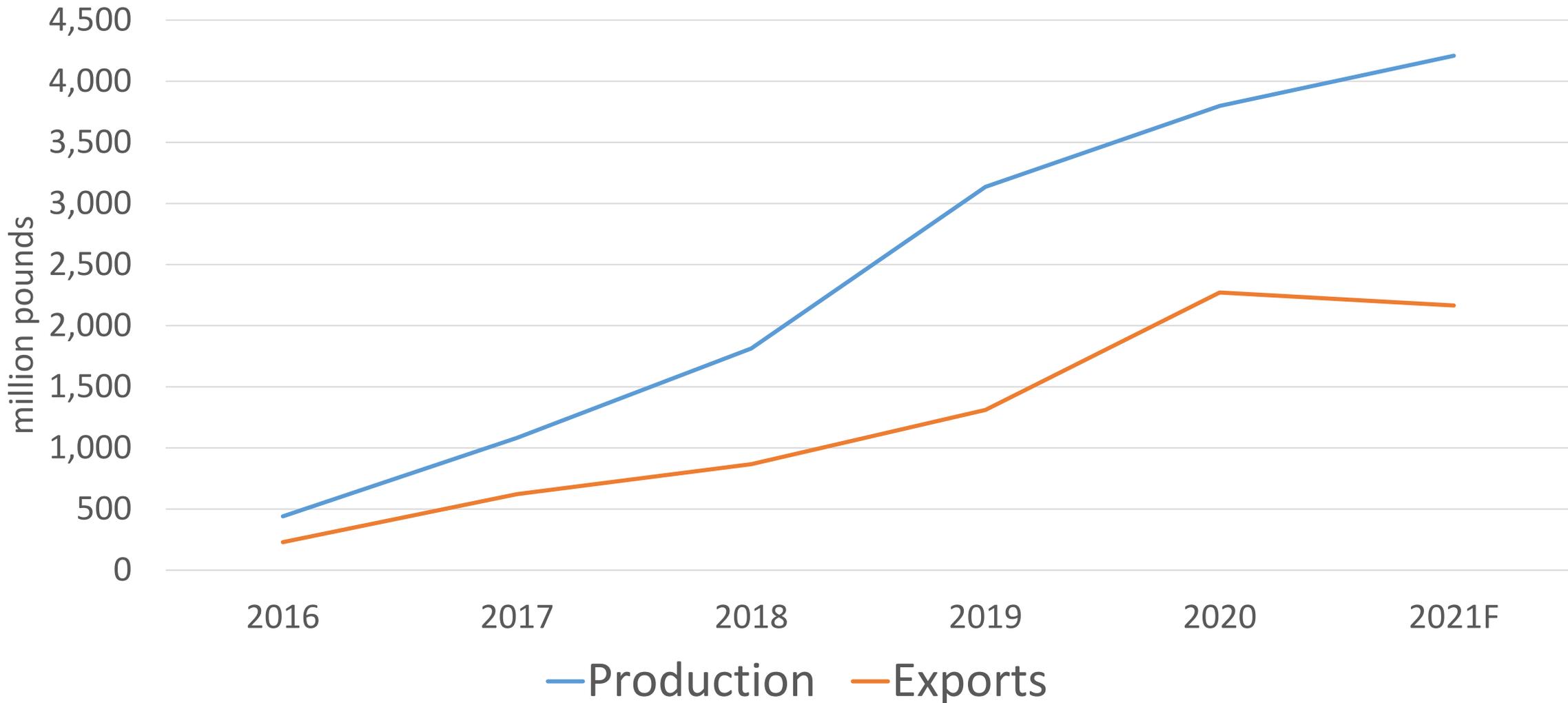
	2016	2017	2018	2019	2020	2021f
	dollars per hundredweight					
Cattle	120.86	121.52	117.12	116.78	108.51	115.00
Hogs	46.16	50.48	45.93	47.95	43.18	50.50
	cents per pound					
Broilers	84.3	93.5	97.8	88.6	73.2	84.5
Turkeys	117.1	96.1	80.2	89.2	106.5	110.8
	cents per dozen					
Eggs	85.7	100.9	137.6	94.0	112.2	111.8

China's Live Hog and Sow Inventories

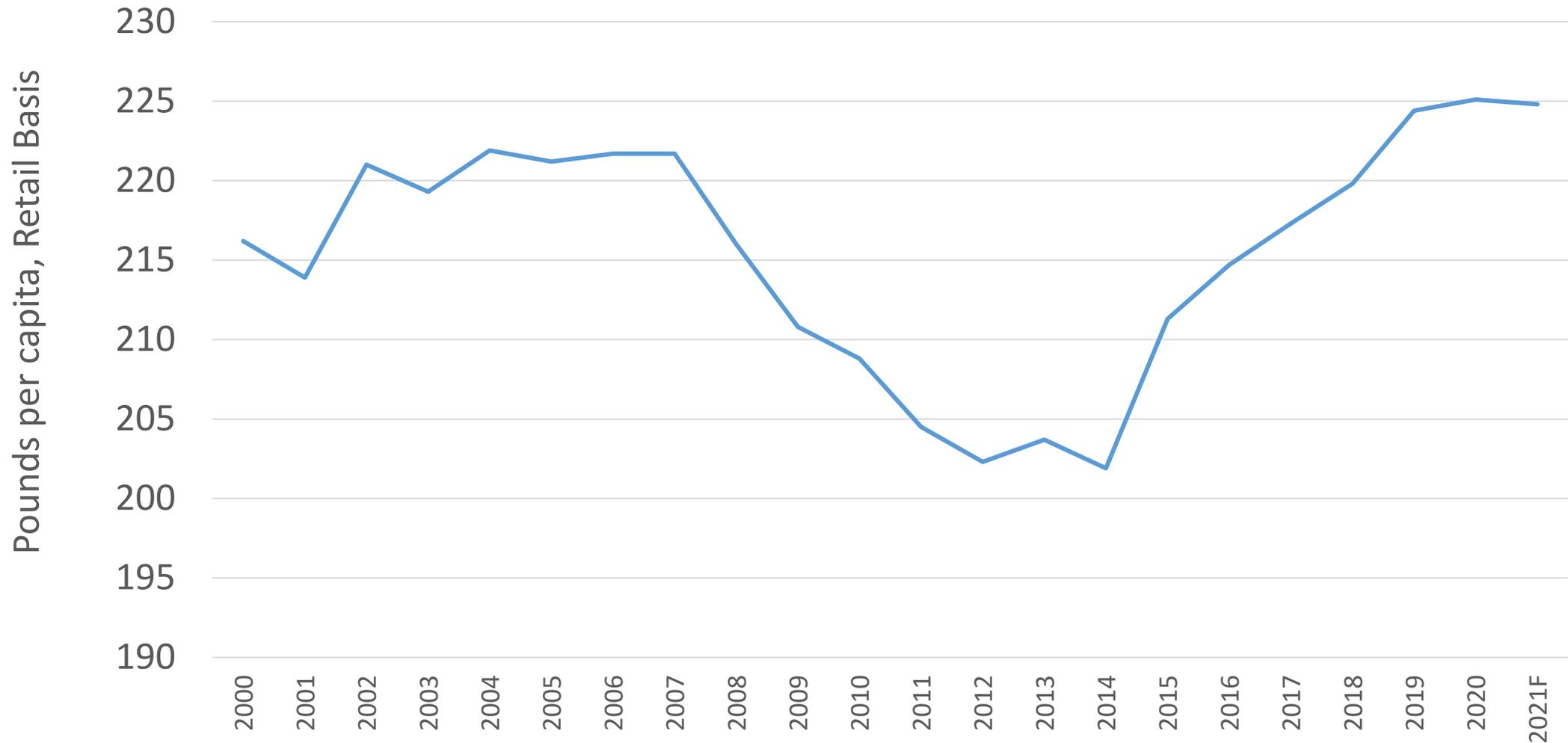


Source: MARA, USMEF

Pork export strength continues to absorb production growth *(growth since 2015)*

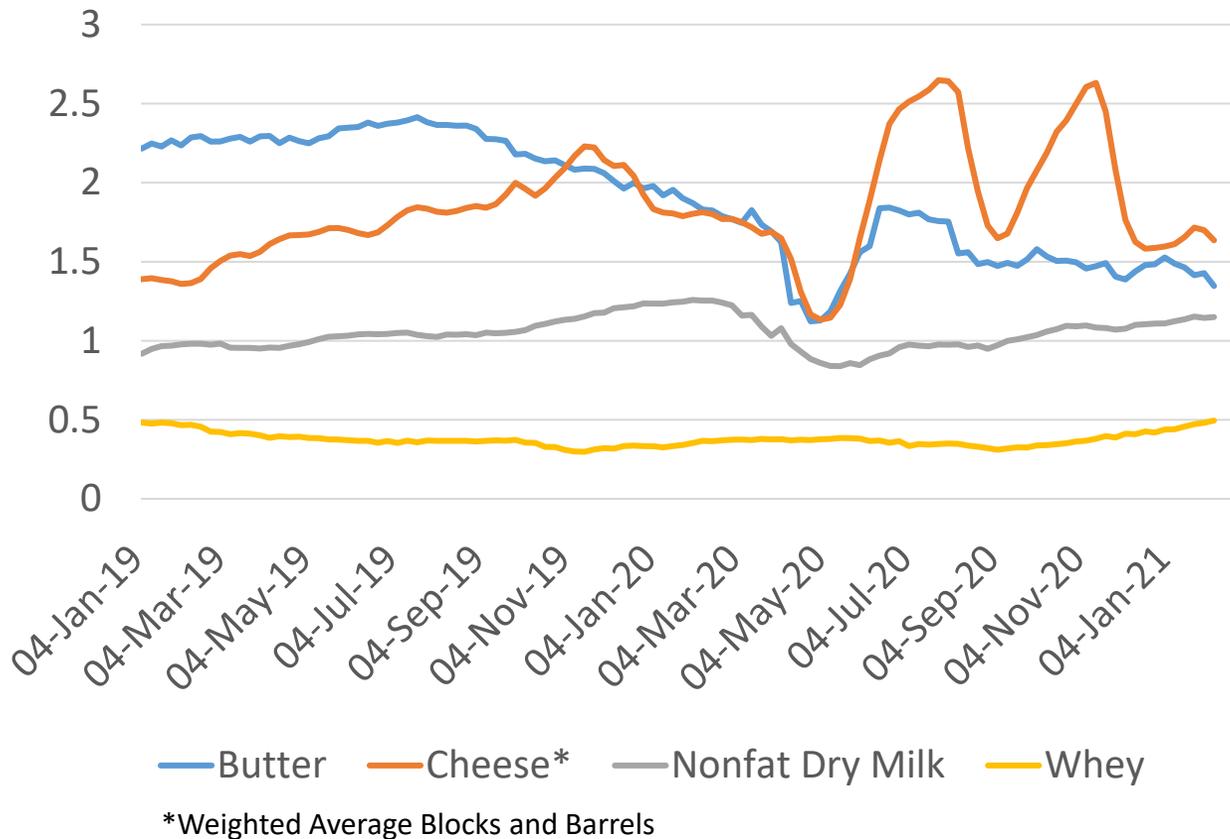


U.S. Per-Capita Meat Disappearance



Considerable Dairy Product Price Volatility

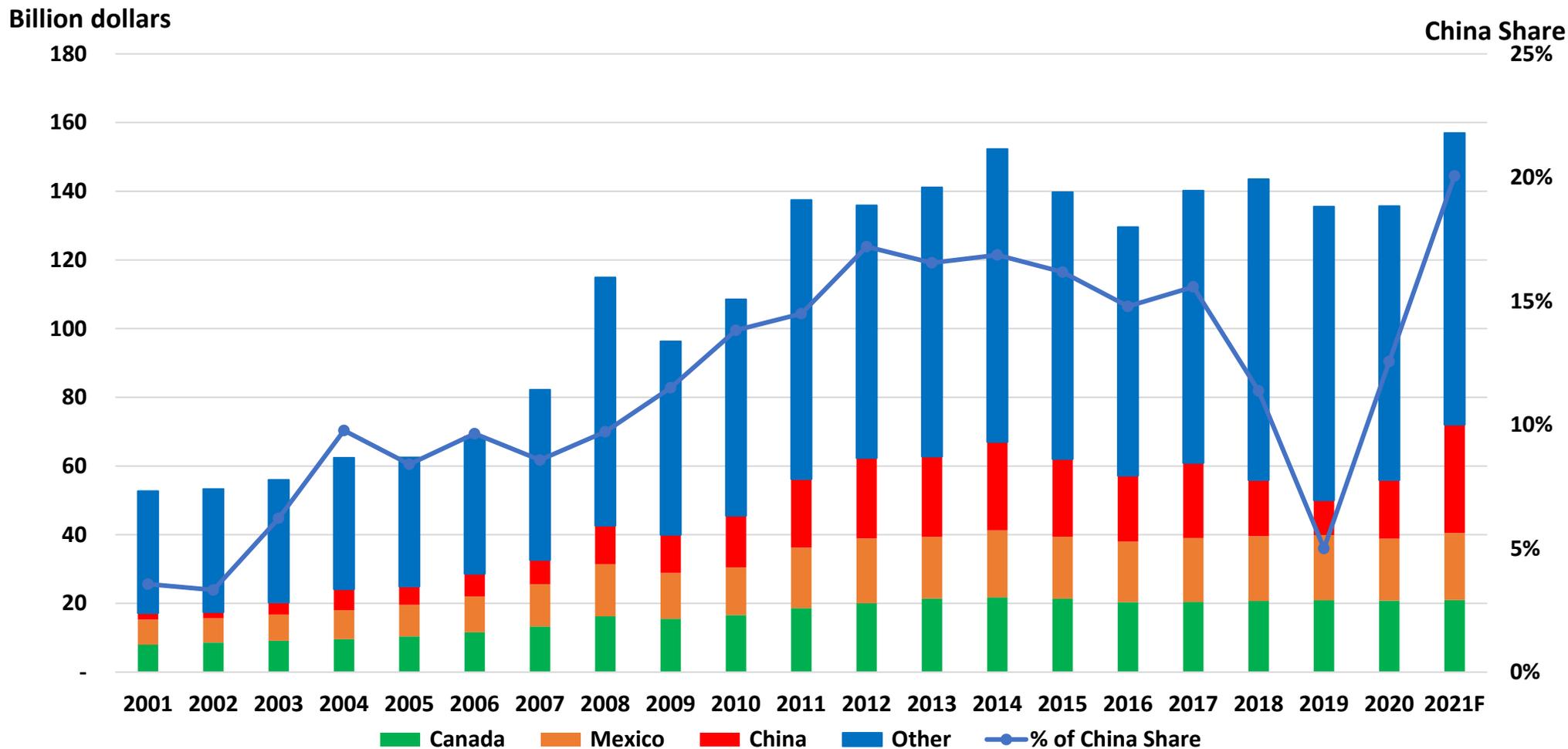
Weekly National Dairy Product Sales Report



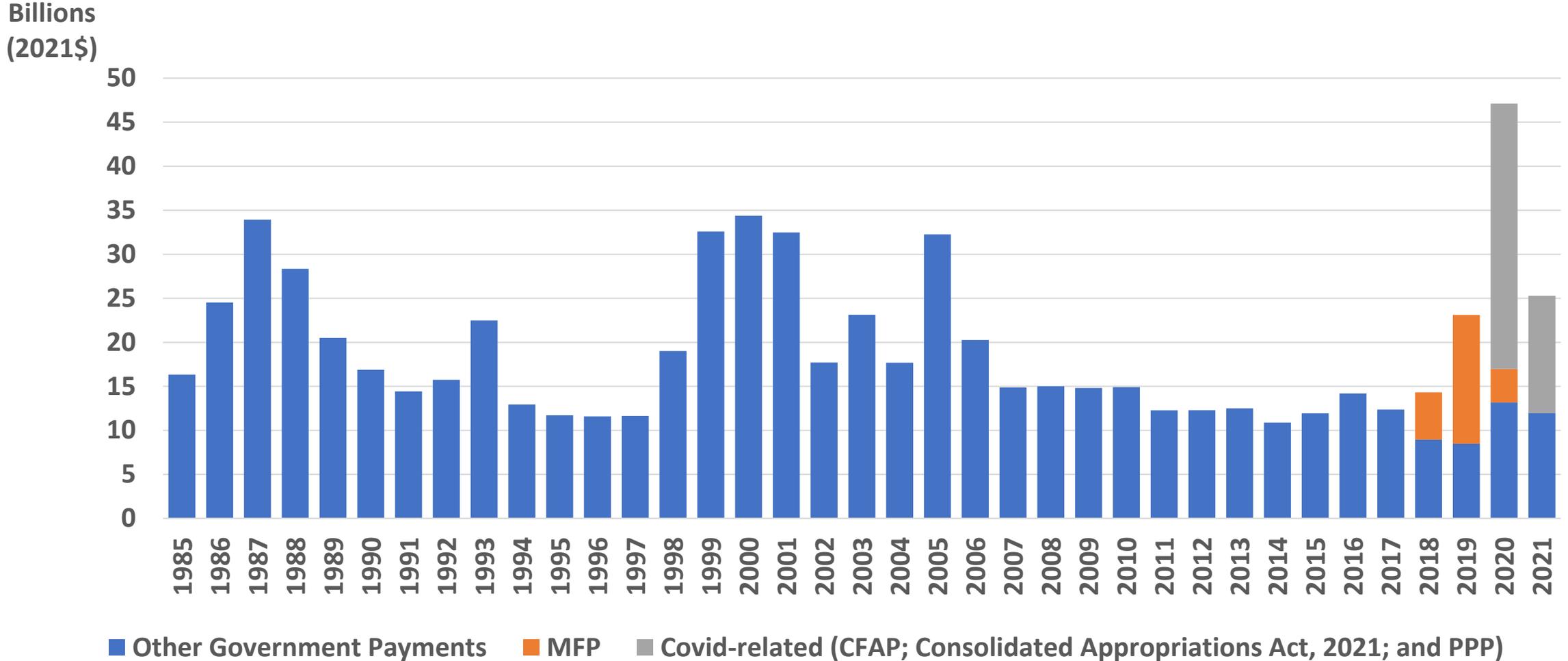
	2019	2020	2021F
Butter (\$/lb)	2.2431	1.5808	1.455
Cheese (\$/lb)	1.7586	1.9236	1.695
Nonfat Dry Milk (\$/lb)	1.0419	1.0417	1.125
Whey (\$/lb)	0.3799	0.3621	0.480
All Milk (\$/lb)	18.63	18.30	17.15

U.S. Ag exports forecast up in FY2021 to a record \$157B on strong China demand

Record exports to China forecasted: \$31.5B



Total government payments increased as a result of adverse circumstances but are projected to fall in 2021

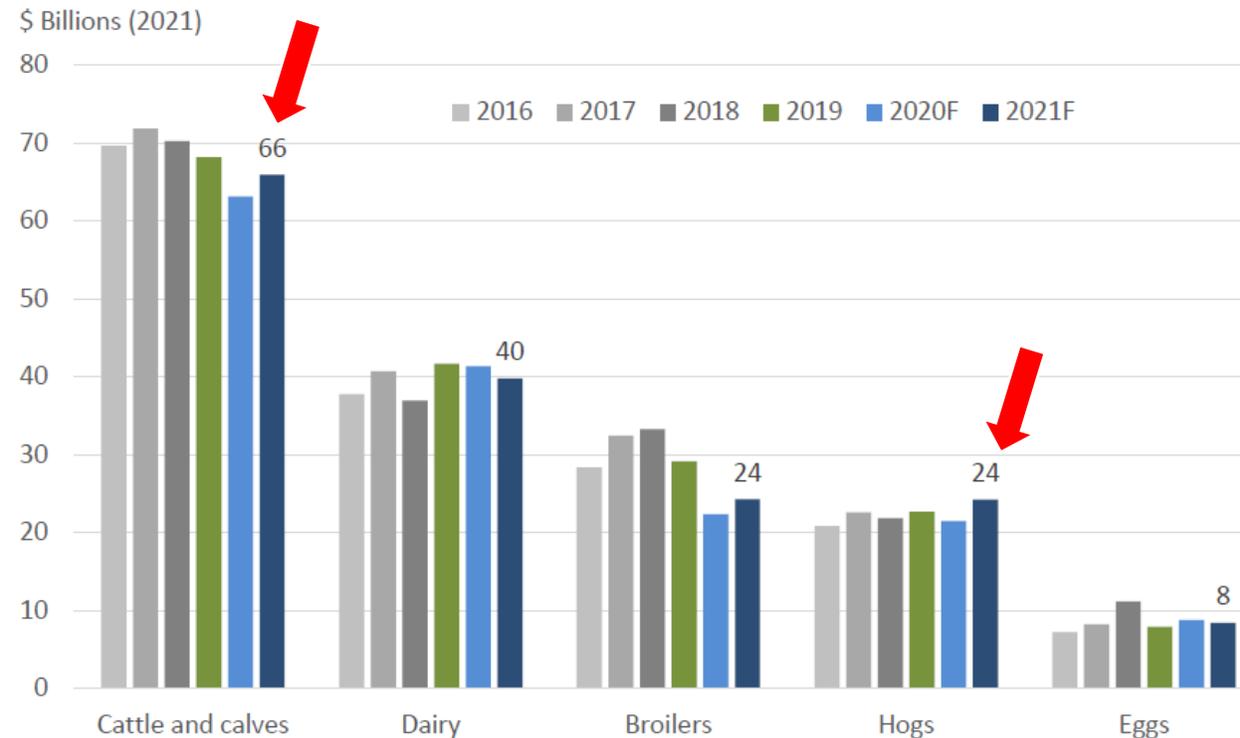
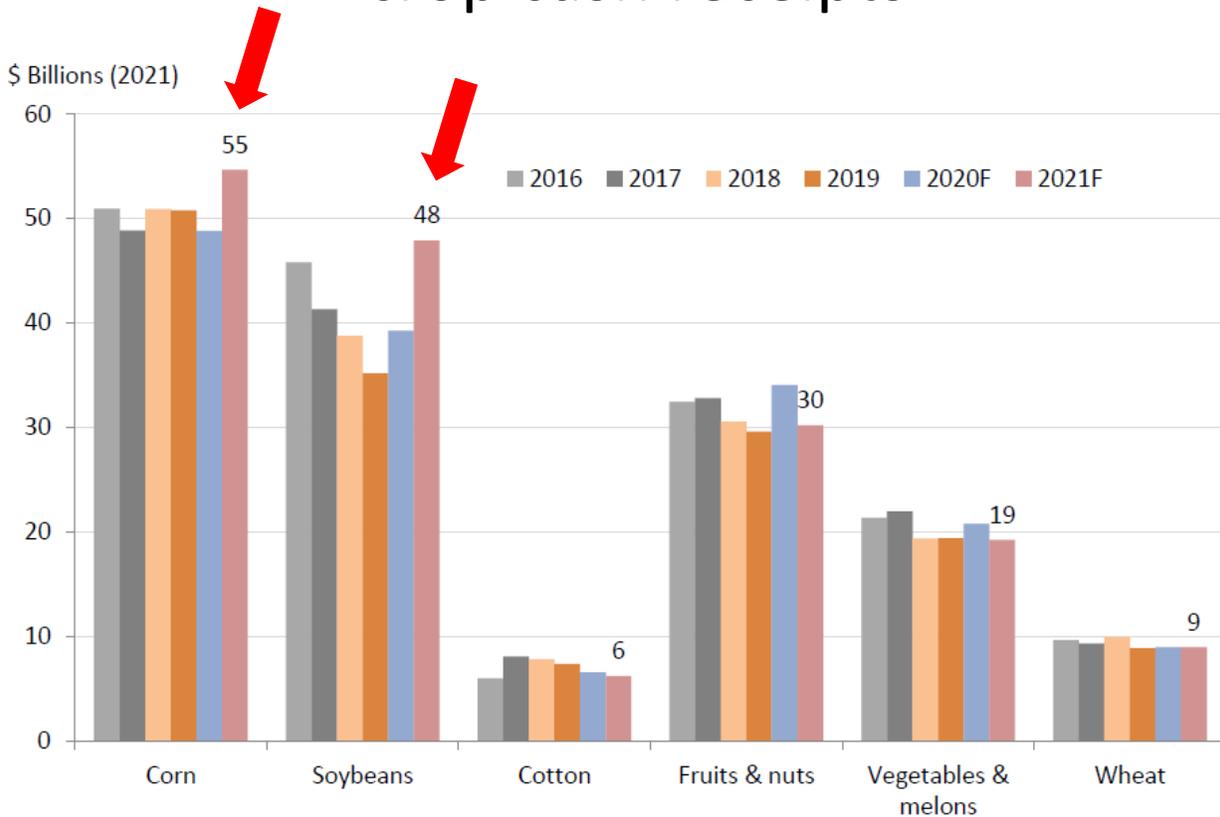


Source: Economic Research Service *Farm Income*

Corn, soybeans, cattle and hogs push receipts higher and drive the \$20.4 billion dollar increase in receipts

crop cash receipts

livestock and dairy cash receipts

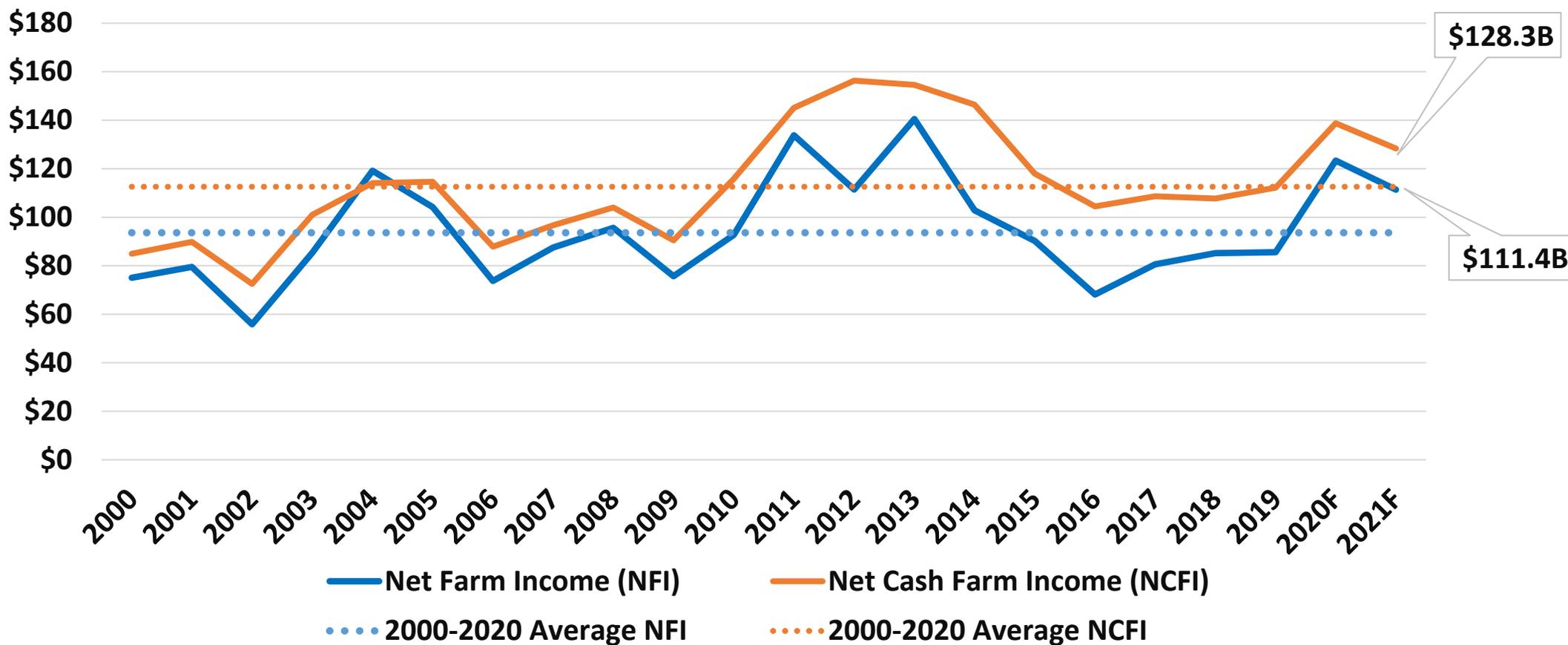


F= Forecast. Values are adjusted using the chain-type GDP deflator, 2021=100
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of February 5, 2021

F= Forecast. Values are adjusted using the chain-type GDP deflator, 2021=100
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics
Data as of February 5, 2021

Net cash farm income and net farm income are forecast to decrease in 2021

Billion dollars (2021\$)



Outlook is positive - Uncertainties remain

- GDP expected to rebound, disposable income less certain.
- Supply chain disruptions have moderated, at some cost.
- Prospects for crops supported by solid domestic demand continued strong exports.
- Livestock outlook supported by continued strong domestic demand and stable exports.
- Trade, particularly to China, a key element for 2021.
- Good dairy demand but large product stocks.
- Receipts from the market replacing ad-hoc assistance.
- ***Weather will have the last say on supplies.***

Visit the OCE website for the latest USDA commodity reports and Agriculture Outlook Forum information @ www.usda.gov/oce

Questions? Seth.Meyer@usda.gov

USDA's 97th Annual Agricultural Outlook Forum: February 18-19, 2021



Crop Progress

Released September 18, 2019, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA)

Corn Drought - Selected States
(These 10 States reported 62% of the 2019 corn acreage)

State	Week ending			
	September 16, 2019	September 8, 2019	September 1, 2019	2018/2019 Average
Alabama	87	86	84	87
Arkansas	100	100	100	100
California	100	100	100	100
Florida	98	98	97	98
Georgia	100	100	100	100
Illinois	100	100	100	100
Indiana	100	100	100	100
Iowa	100	100	100	100
Mississippi	100	100	100	100
North Carolina	100	100	100	100
South Carolina	100	100	100	100
Tennessee	100	100	100	100
Virginia	100	100	100	100
West Virginia	98	97	98	98
All States	99	99	97	99

Corn Dented - Selected States
(These 10 States reported 62% of the 2019 corn acreage)

State	Week ending			
	September 16, 2019	September 8, 2019	September 1, 2019	2018/2019 Average
Alabama	86	85	84	86
Arkansas	100	100	100	100
California	100	100	100	100
Florida	98	98	97	98
Georgia	100	100	100	100
Illinois	100	100	100	100
Indiana	100	100	100	100
Iowa	100	100	100	100
Mississippi	100	100	100	100
North Carolina	100	100	100	100
South Carolina	100	100	100	100
Tennessee	100	100	100	100
Virginia	100	100	100	100
West Virginia	98	97	98	98
All States	99	99	97	99

World Agricultural Supply and Demand Estimates

Released September 18, 2019, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA)

WHEAT: U.S. wheat ending stocks for 2019/20 are raised 30 million bushels on lower feed and residual use which more than offsets a slight import reduction. At 1,150 million bushels, ending stocks are projected to reach a near 30-year high. Feed and residual use is lowered 20 million bushels to 190 million which reflects lower-than-expected disappearance for the December-February and September-November quarters, as indicated by March 1 and revised December 1 reports from the March 31 Grain Stocks report. The import change is based on the pace to date with reductions for soft red winter and durum.

Global 2019/20 wheat supplies are raised 1.7 million tons due to higher projected beginning stocks and a 0.3-million-ton increase in production. The change to beginning stocks stems from a 1.4-million-ton reduction in 2019's domestic consumption, primarily in the EU. World exports are lowered 0.3 million tons led by 0.5-million-ton decreases each for Australia, Canada, Kazakhstan, and Russia. Forty countries are higher projected exports for the EU and Ukraine. Total global consumption for 2019/20 is lowered 0.6 million tons to 740.8 million with a 1.0-million-ton decrease in the United States, more than offsetting a small net increase for foreign countries. With supplies rising and use declining, global ending stocks are raised 2.3 million tons to 252.3 million.

COARSE GRAINS: This month's 2019/20 U.S. corn outlook is for increased corn used to produce ethanol and residual use and unchanged ending stocks. Corn used to produce ethanol is raised 50 million bushels to 5,450 million based on the most recent data from the Grain Crushings and Co-Products Production report which estimated the amount of corn used to produce ethanol to be up 60 million bushels in December-February. The pace of weekly ethanol production during March accelerated by 5 million gallons. Administration data has also been more optimistic. Offsetting is a 50 million bushel reduction in projected feed and residual use to 5,500 million bushels based on disappearance reported during the first half of the marketing year in the March 31 Grain Stocks. With offsetting usage changes, ending stocks are unchanged from last month. The season-average corn price received by producers is unchanged at the midpoint with the range narrowed to \$3.25 to \$3.50 per bushel.

Global coarse grain production for 2019/20 is forecast 4.6 million tons higher from last month to 3,240.1 million. This month's foreign coarse grain outlook is for increased production, consumption, trade, and stocks relative to last month. Brazil corn

Volume 104, No. 15 <http://www.usda.gov/oc/bulletin> April 11, 2017

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Weather Service U.S. DEPARTMENT OF AGRICULTURE National Agricultural Statistics Service World Agricultural Outlook Board

Total Precipitation (Inches) April 1 - 8, 2017

HIGHLIGHTS
April 2 - 8, 2017

Multiple weeks of showers and locally severe thunderstorms swept across areas from the central and western Plains into the midwest and western Atlantic States, providing generally beneficial precipitation for growing or falling cotton, corn, local broilers, and remaining in scattered wet damage. Some of the heaviest rains fell in the Southeast, where 2 to 4 inch totals were common. A low incidence in western Florida and the central Gulf Coast States received as much as 10 to 15 inches. Most of the Northeast precipitation fell in the

Contents

- Crop Outlook Report 1
- World Agricultural Outlook Board 2
- World Agricultural Outlook Board 3
- World Agricultural Outlook Board 4
- World Agricultural Outlook Board 5
- World Agricultural Outlook Board 6
- World Agricultural Outlook Board 7
- World Agricultural Outlook Board 8
- World Agricultural Outlook Board 9
- World Agricultural Outlook Board 10
- World Agricultural Outlook Board 11
- World Agricultural Outlook Board 12
- World Agricultural Outlook Board 13
- World Agricultural Outlook Board 14
- World Agricultural Outlook Board 15
- World Agricultural Outlook Board 16
- World Agricultural Outlook Board 17
- World Agricultural Outlook Board 18
- World Agricultural Outlook Board 19
- World Agricultural Outlook Board 20
- World Agricultural Outlook Board 21
- World Agricultural Outlook Board 22
- World Agricultural Outlook Board 23
- World Agricultural Outlook Board 24
- World Agricultural Outlook Board 25
- World Agricultural Outlook Board 26
- World Agricultural Outlook Board 27
- World Agricultural Outlook Board 28
- World Agricultural Outlook Board 29
- World Agricultural Outlook Board 30
- World Agricultural Outlook Board 31
- World Agricultural Outlook Board 32
- World Agricultural Outlook Board 33
- World Agricultural Outlook Board 34
- World Agricultural Outlook Board 35
- World Agricultural Outlook Board 36
- World Agricultural Outlook Board 37
- World Agricultural Outlook Board 38
- World Agricultural Outlook Board 39
- World Agricultural Outlook Board 40
- World Agricultural Outlook Board 41
- World Agricultural Outlook Board 42
- World Agricultural Outlook Board 43
- World Agricultural Outlook Board 44
- World Agricultural Outlook Board 45
- World Agricultural Outlook Board 46
- World Agricultural Outlook Board 47
- World Agricultural Outlook Board 48
- World Agricultural Outlook Board 49
- World Agricultural Outlook Board 50
- World Agricultural Outlook Board 51
- World Agricultural Outlook Board 52
- World Agricultural Outlook Board 53
- World Agricultural Outlook Board 54
- World Agricultural Outlook Board 55
- World Agricultural Outlook Board 56
- World Agricultural Outlook Board 57
- World Agricultural Outlook Board 58
- World Agricultural Outlook Board 59
- World Agricultural Outlook Board 60
- World Agricultural Outlook Board 61
- World Agricultural Outlook Board 62
- World Agricultural Outlook Board 63
- World Agricultural Outlook Board 64
- World Agricultural Outlook Board 65
- World Agricultural Outlook Board 66
- World Agricultural Outlook Board 67
- World Agricultural Outlook Board 68
- World Agricultural Outlook Board 69
- World Agricultural Outlook Board 70
- World Agricultural Outlook Board 71
- World Agricultural Outlook Board 72
- World Agricultural Outlook Board 73
- World Agricultural Outlook Board 74
- World Agricultural Outlook Board 75
- World Agricultural Outlook Board 76
- World Agricultural Outlook Board 77
- World Agricultural Outlook Board 78
- World Agricultural Outlook Board 79
- World Agricultural Outlook Board 80
- World Agricultural Outlook Board 81
- World Agricultural Outlook Board 82
- World Agricultural Outlook Board 83
- World Agricultural Outlook Board 84
- World Agricultural Outlook Board 85
- World Agricultural Outlook Board 86
- World Agricultural Outlook Board 87
- World Agricultural Outlook Board 88
- World Agricultural Outlook Board 89
- World Agricultural Outlook Board 90
- World Agricultural Outlook Board 91
- World Agricultural Outlook Board 92
- World Agricultural Outlook Board 93
- World Agricultural Outlook Board 94
- World Agricultural Outlook Board 95
- World Agricultural Outlook Board 96
- World Agricultural Outlook Board 97
- World Agricultural Outlook Board 98
- World Agricultural Outlook Board 99
- World Agricultural Outlook Board 100

USDA Agricultural Projections to 2029

Office of the Chief Economist
World Agricultural Outlook Board
Long-term Projections Report OCE-2020-1
February 2020

Interagency Agricultural Projections Committee

World Agricultural Outlook Board, Chair
Economic Research Service
Farm Production and Conservation Business Center
Foreign Agricultural Service
Agricultural Marketing Service
Office of the Chief Economist
Office of Budget and Program Analysis
Risk Management Agency
Natural Resources Conservation Service
National Institute of Food and Agriculture