U.S. & World

Corn, Sorghum, Ethanol & DDGS

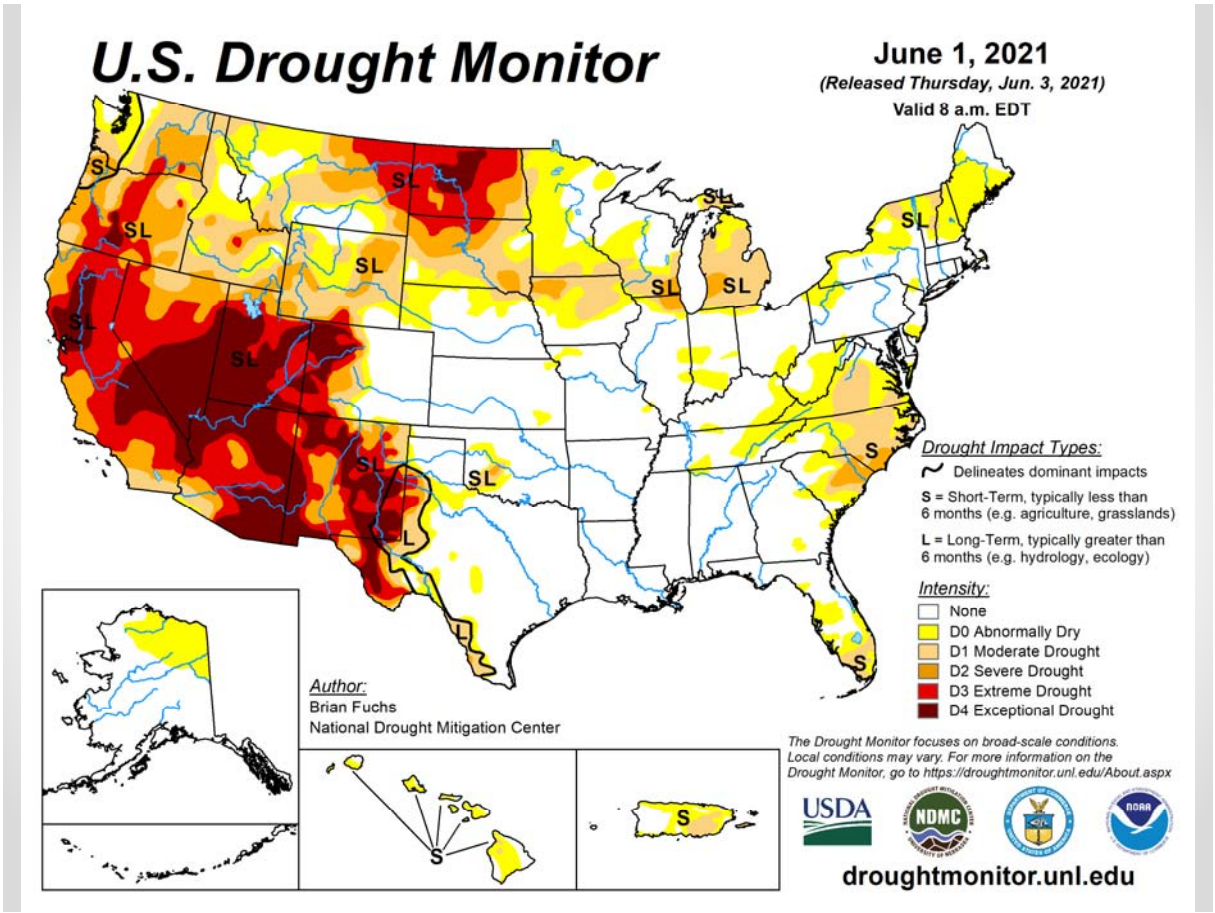
Market Outlook

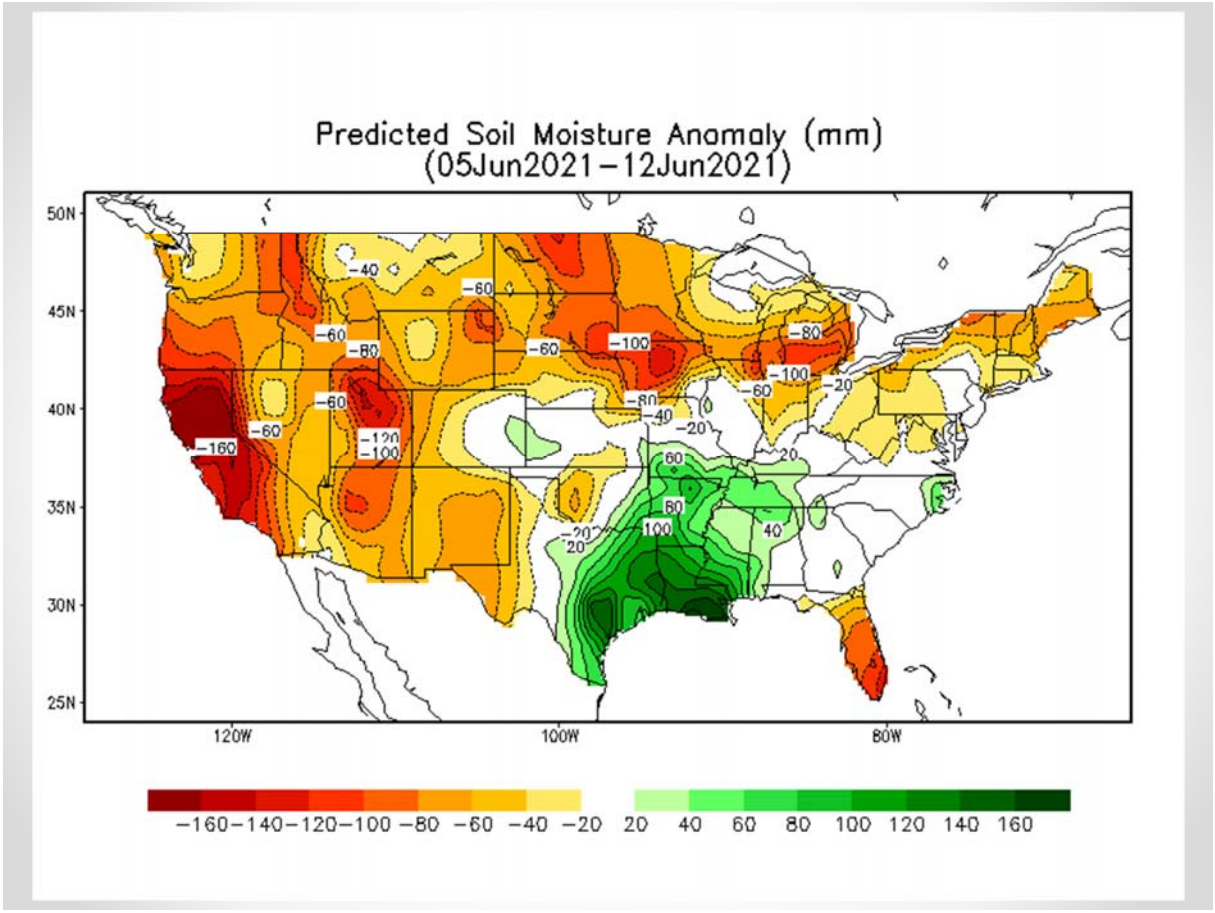
Information for the U.S. Grains Council

June 7, 2021

Daniel O'Brien, Ph.D.
Extension Agricultural Economist
Kansas State University

Corn Markets


U.S. Drought Monitor
June 1, 2021
(Released Thursday, Jun. 3, 2021)
Valid 8 a.m. EDT
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Brian Fuchs
National Drought Mitigation Center
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
USDA
NDMC
droughtmonitor.unl.edu


Predicted Soil Moisture Anomaly (mm)
(05Jun2021–12Jun2021)
50N
45N
40N
35N
30N
25N
120W
100W
80W
−160 −140 −120 −100 −80 −60 −40 −20 20 40 60 80 100 120 140 160

International

South Asia – Tropical Cyclone Yaas

- Tropical Cyclone Yaas moved into **northeastern India**, bringing downpours to major rice-producing areas, including in **Bangladesh**.

East Asia – Rain in southern China

- *Heavy showers* in **the Yangtze Valley** boosted moisture supplies for vegetative summer crops.
- *Rainfall* in **northeastern China** improved moisture conditions for corn, soybeans & rice establishment, but some locales remained dry.

Southeast Asia – Monsoon Showers

- Wet weather overspread **Thailand** & **the surrounding areas**, boosting moisture supplies for rice & other wet-season crops.

World Agricultural Outlook Board, Weekly Briefing Week ending May 29, 2021

International

Mexico – Rain continued in eastern farming areas

- *Scattered showers* benefited summer crops in **eastern production areas**, but farmers *awaited rain* for planting in **western summer corn areas**.

Canada – Cool, showery weather overspread the Plains

- *Warmer weather was needed* for developing spring grains & oilseeds.

Middle East – Rain In The North, Dryness & Heat Elsewhere

- *Showers* aided vegetative summer crops across **northern parts of Turkey** & **Iran**
- *Dry, hot weather* further lowered yield prospects for filling wheat & barley in **central Turkey**.

International

Europe – Continued Cool With Early-Week Rain

- **Cool temperatures & early-week rain** favored reproductive to filling winter wheat & rapeseed across central & northern Europe, though crops were still vegetative in northeastern growing areas.
- Drier weather later in the period favored late summer crop planting and other seasonal fieldwork.
- Dry, warm conditions in **Spain** reduced moisture for filling winter grains and emerging summer crops.

Australia – Welcome Rain In The Southeast

- In the west, soaking rain maintained *near ideal growing conditions* for wheat, barley, and canola.
- Showers arrived in the southeast, promoting winter crop germination and triggering additional sowing.
- In the northeast, sunny skies favored late-season summer crop harvesting.

World Agricultural Outlook Board, Weekly Briefing Week ending May 29, 2021

International

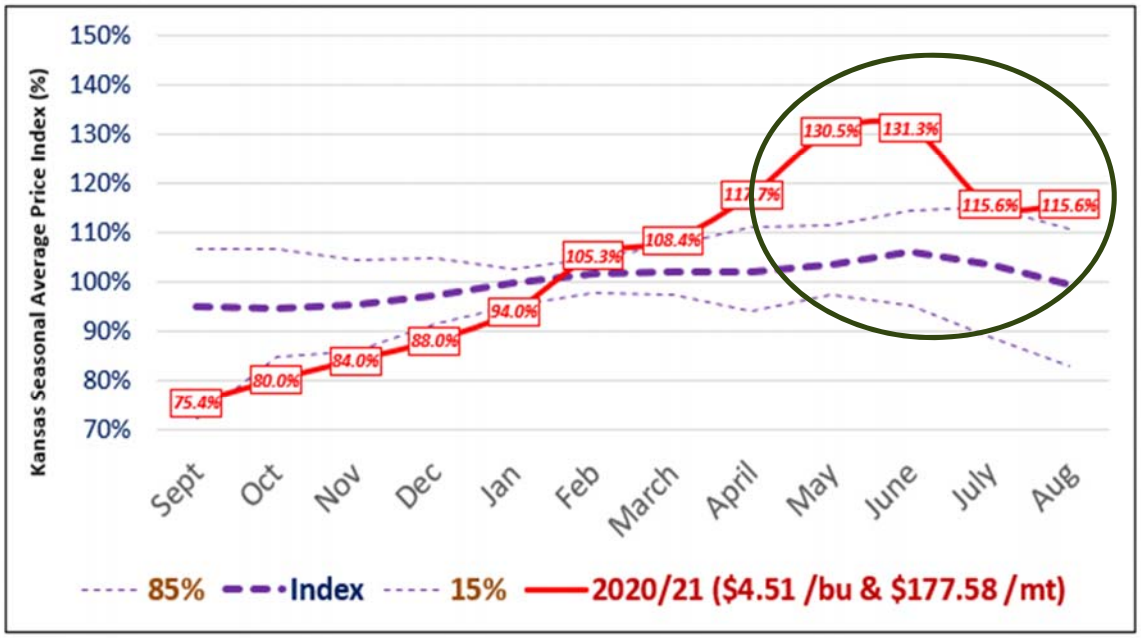
Western FSU – More Rain ⇨ West; Heat & Dryness ⇨ East

- *Additional rain* in **Ukraine** & **western Russia** benefited reproductive to filling winter wheat, barley, and rapeseed, though there were enough days suitable for fieldwork for late summer crop planting.
- *Hot, dry weather* in **Russia's eastern Volga District** promoted fieldwork but rapidly reduced soil moisture for spring grain establishment.

Eastern FSU – Drought & Excessive Heat

- *Extreme drought & excessive heat* in **northern Kazakhstan** & **central Russia** continued to rapidly lower prospects for spring grain establishment.
- *Additional much-needed rain* in **eastern-most spring grain areas** eased heat and drought locally.
- *Extreme heat & dryness* in **Uzbekistan & environs** heightened irrigation demands for vegetative cotton; water supplies were already limited by the region's cool-season drought.

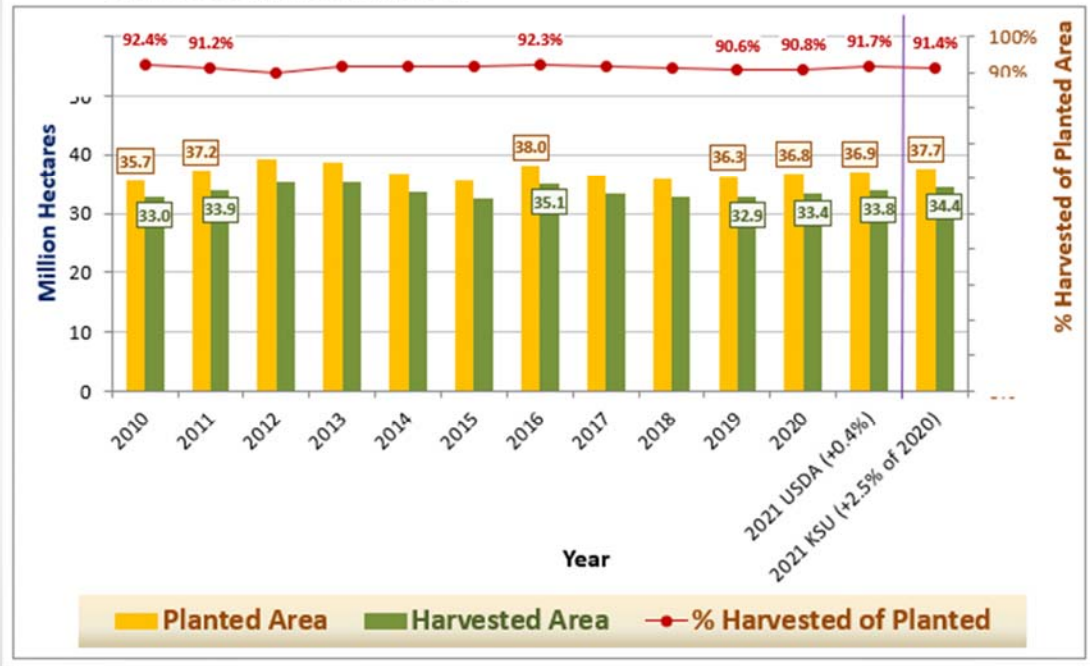
Kansas Corn Seasonal Price Index (MY 1999/00 – MY 2019/20) plus "Current Crop" MY 2020/21 as of Friday, June 4, 2021



Futures Based Projection for "Next Crop" MY 2021/22 = $5.02 /bu & $197.81 /mt

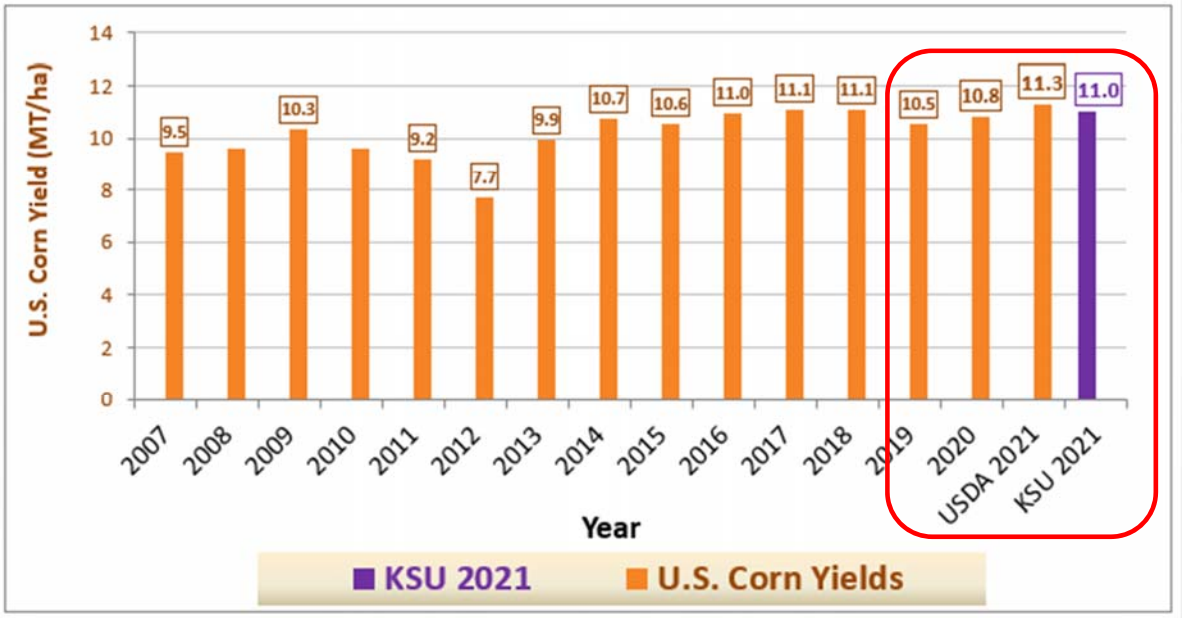
U.S. Corn Acreage for Years 2010 Through 2021 as of the May 12, 2021 USDA Report & March 30, 2021 USDA Prospective Planting Report

U.S. Corn Area for Years 2010 Through 2021 as of the May 12, 2021 USDA Report & March 30, 2021 USDA Prospective Planting Report

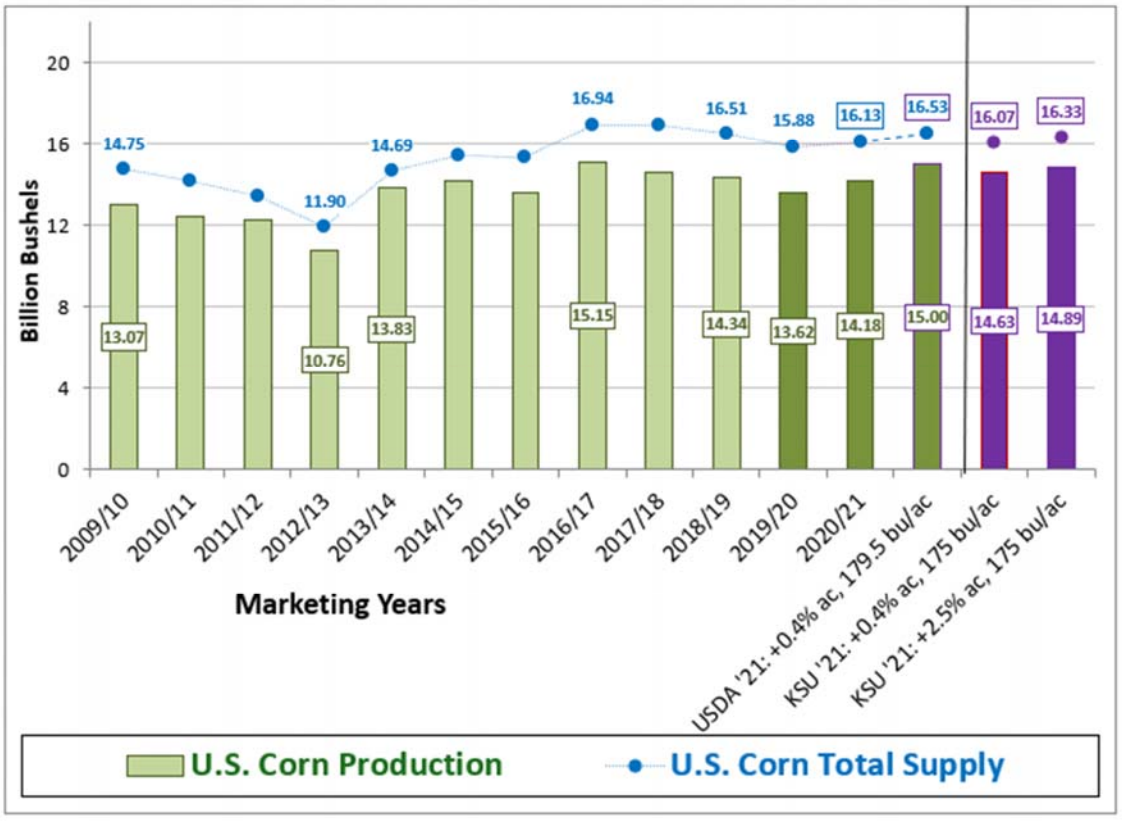


U.S. Corn Yield Trend for 2005-2021 as of the May 12, 2021 USDA Report with KSU Projection

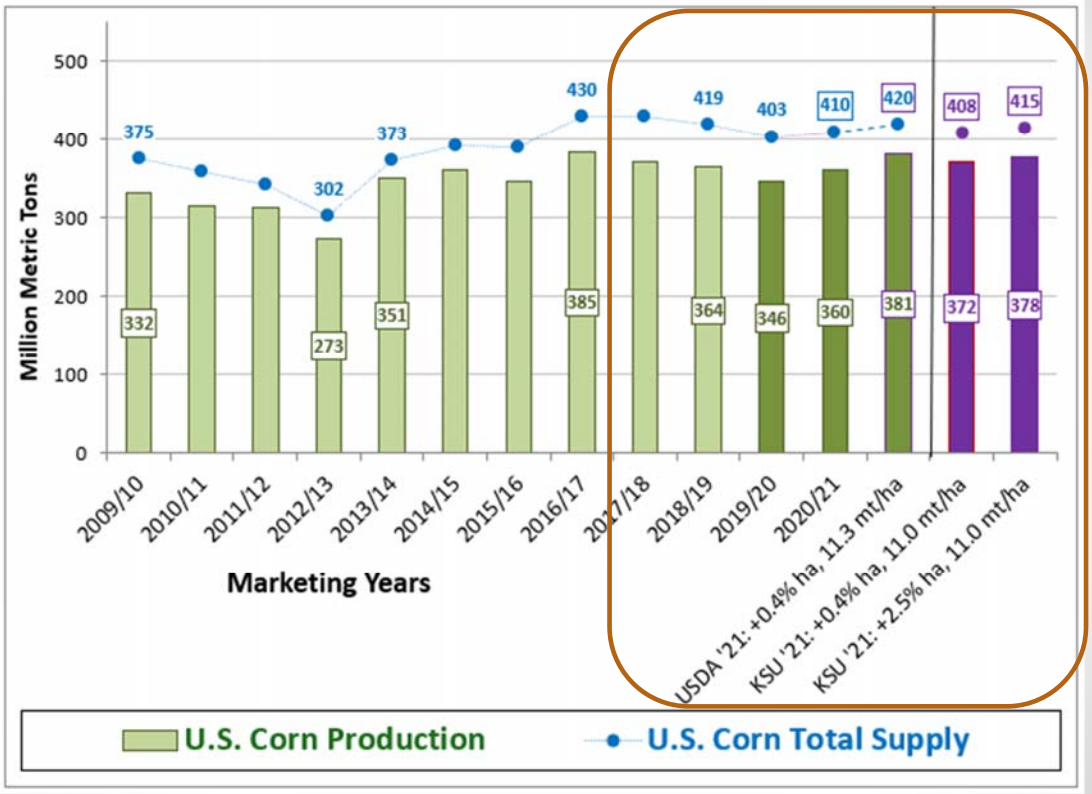
U.S. Corn Yield Trend for 2005-2021 as of the May 12, 2021 USDA Report with KSU Projection



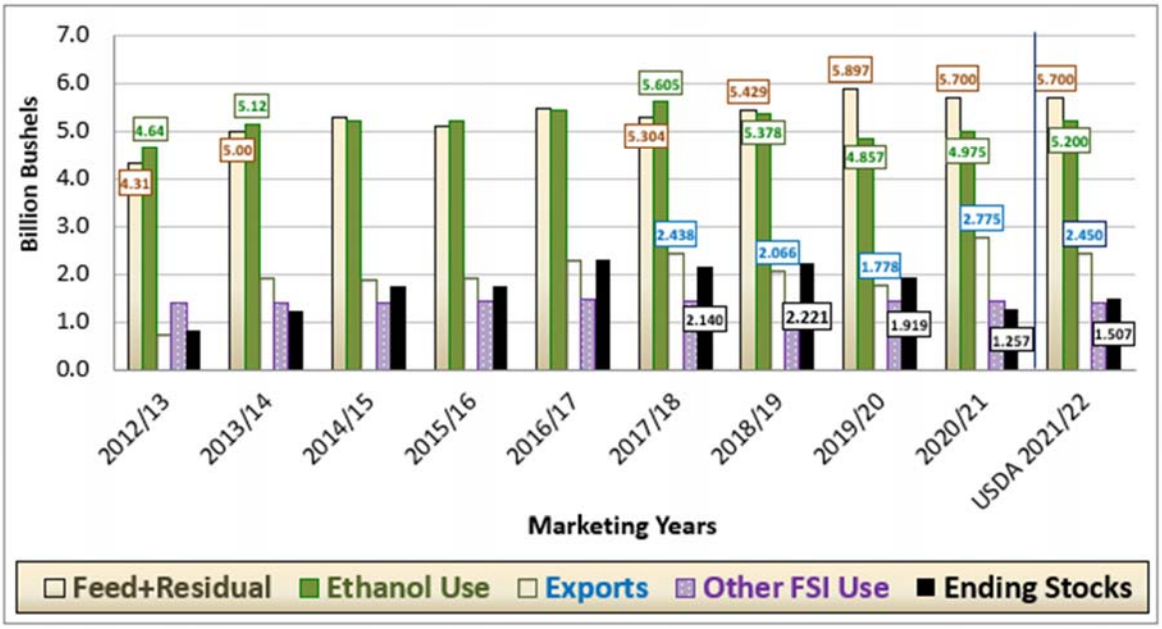
U.S. Corn Production & Total Supplies: MY 2009/10 - "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE, Outlook Conference, Prospective Plantings, & KSU #'s



U.S. Corn Production & Total Supplies: MY 2009/10 thru "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE, Outlook Conference, Prospective Plantings, & KSU #'s



U.S. Corn Use & Ending Stocks: MY 2012/13 through Projected "Next Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE report



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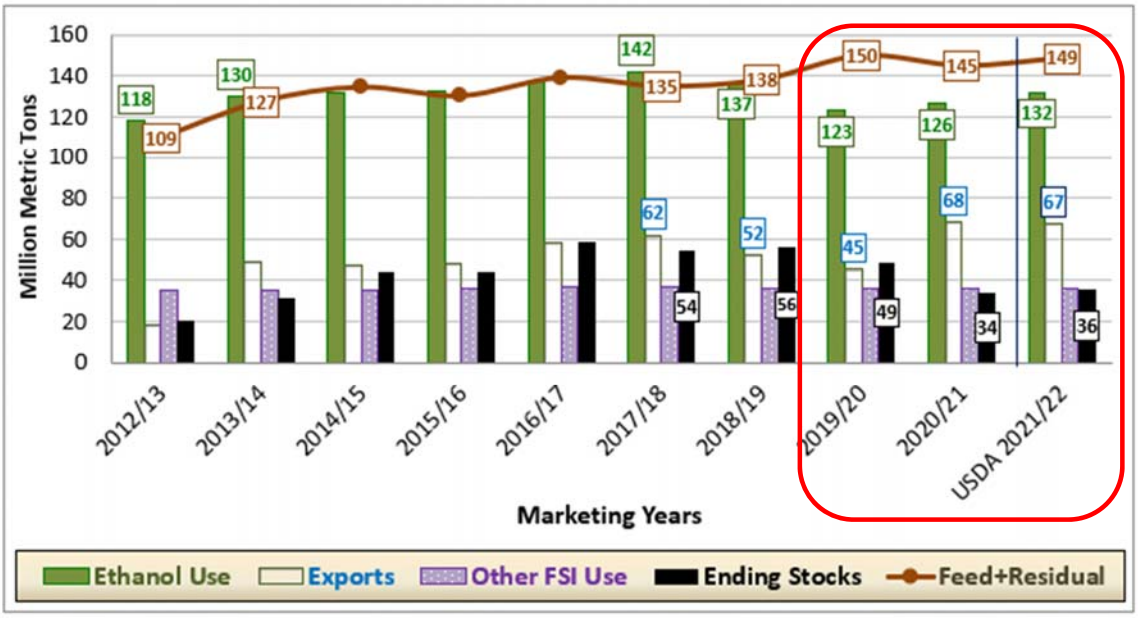
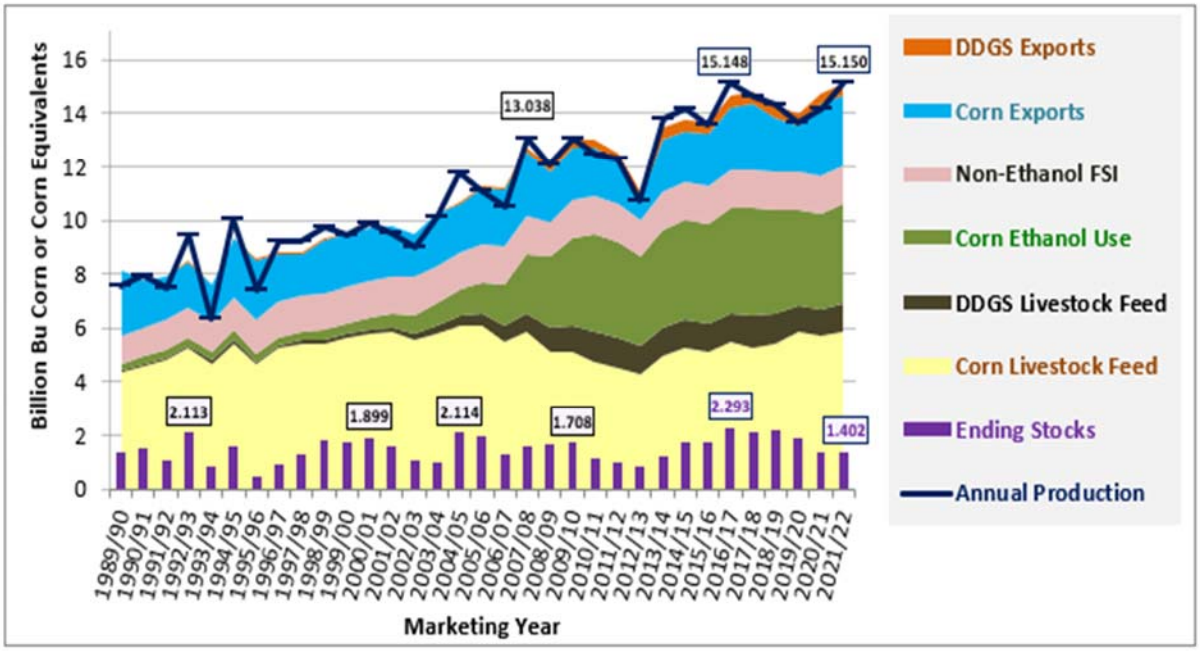


U.S. Corn Supply-Demand with DDGS Adjustments as of the May 12, 2021 USDA World Agricultural Supply and Demand Estimates (WASDE) report



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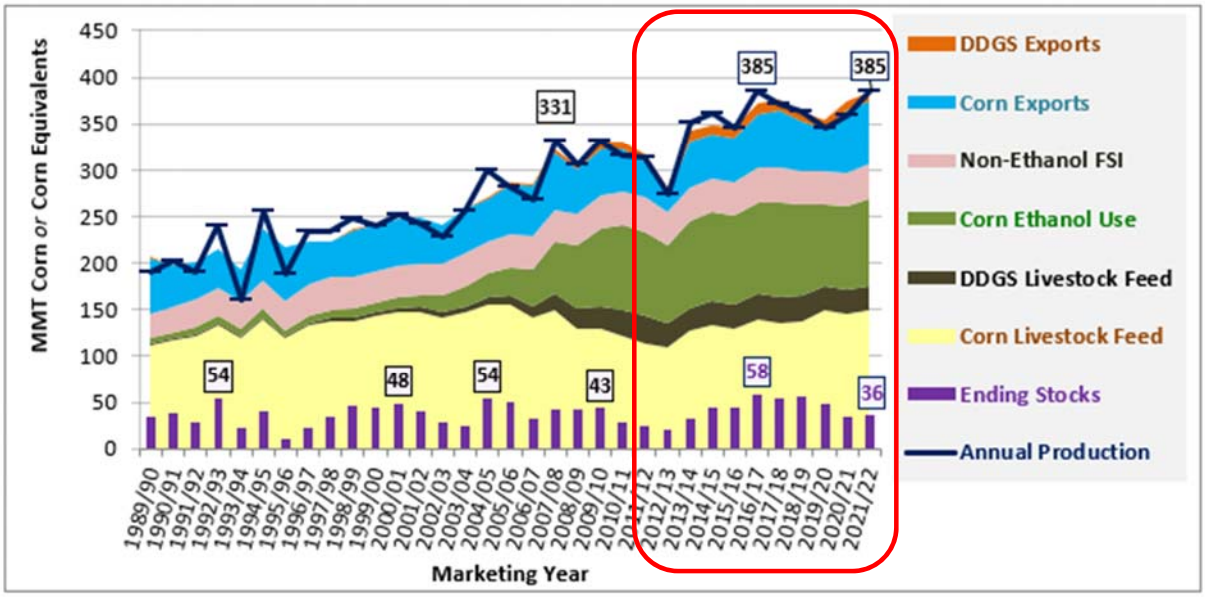
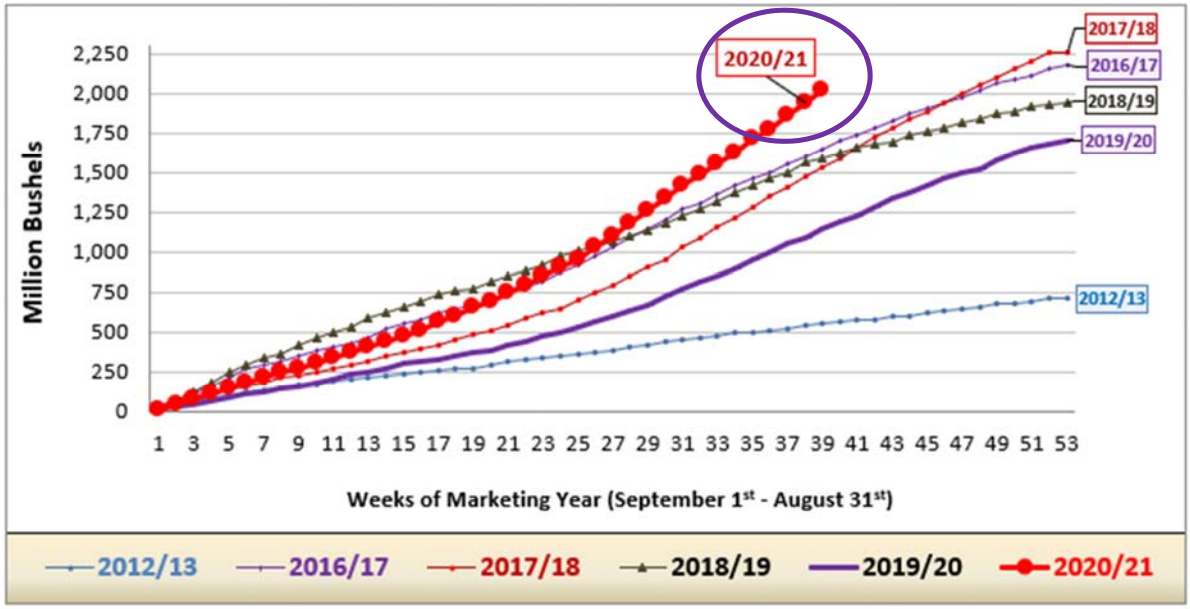
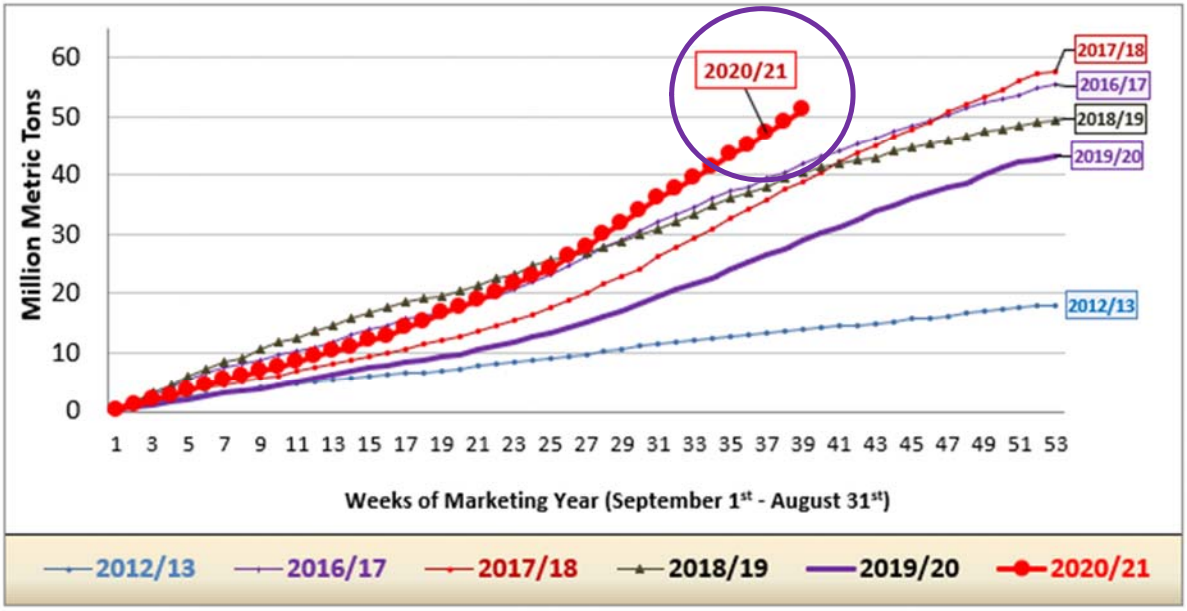


U.S. Corn Exports for MY 2012/13 & 2016/17 - "Current Crop" MY 2020/21

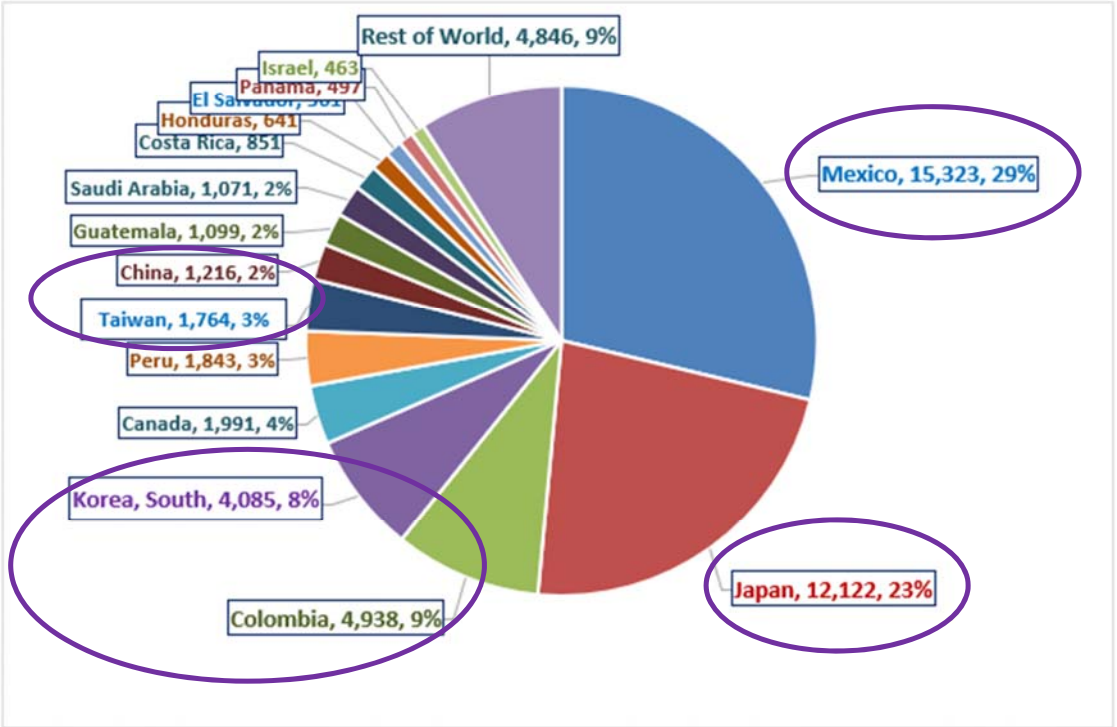
based on USDA FAS Weekly Export reports thru 5/27/2021 (EOMY on 8/31)



U.S. Corn Exports for MY 2012/13 & 2016/17 through "Current Crop" MY 2020/21 based on USDA FAS Weekly Export reports thru 5/7/2021 (EOMY on 8/31)

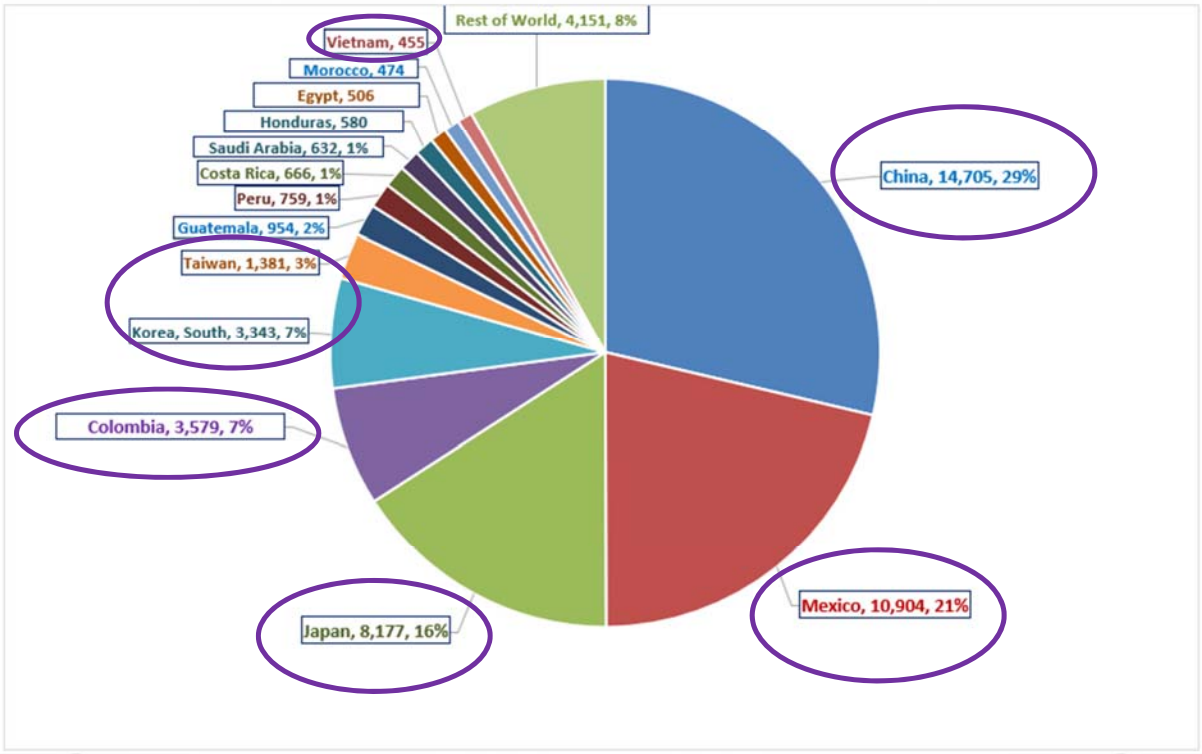


Top 15 U.S. Corn Export Buyers – Three Year Average: MY 2017/18 through "Old Crop" MY 2019/20: as of the February 9, 2021 USDA WASDE report (via USDA FAS PSD Online) (1,000 mt)



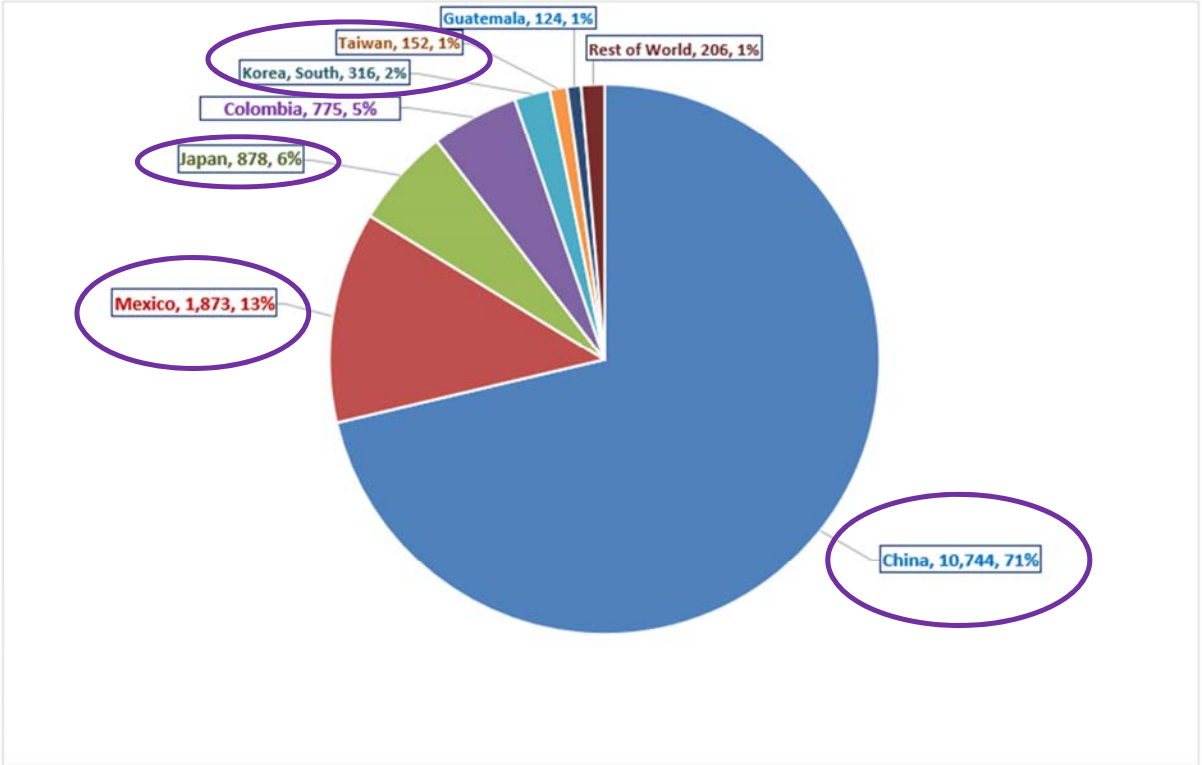
Top 15 U.S. Corn Export Buyers – "Current" MY 2020/21

as of the May 27, 2021 USDA U.S. Export Shipments (1,000 mt); September 1, 2020 through August 31, 2021.

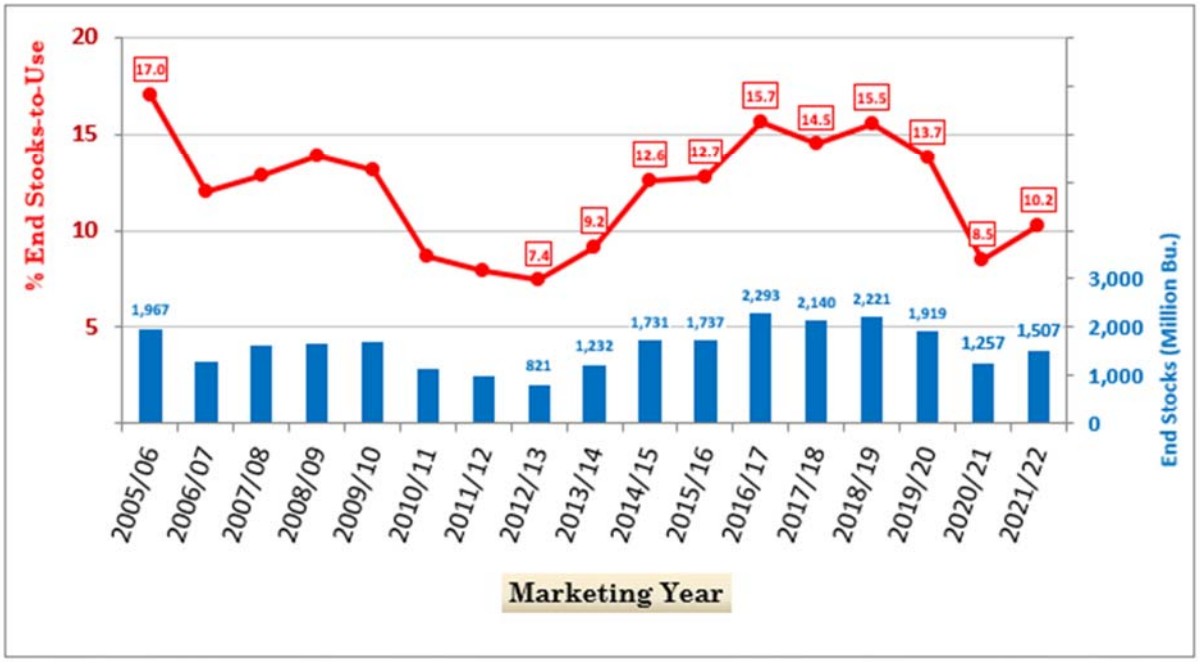


Top U.S. Corn Export Buyers – "New Crop" MY 2021/22

as of the May 27, 2021 USDA U.S. Export Forward Purchases (1,000 mt); 9/1/2021 through 8/31/2022.



U.S. Corn Ending Stocks & % Ending Stocks-to-Use for MY 2005/06 through "New Crop" MY 2020/21: as of the May 12, 2021 WASDE Report



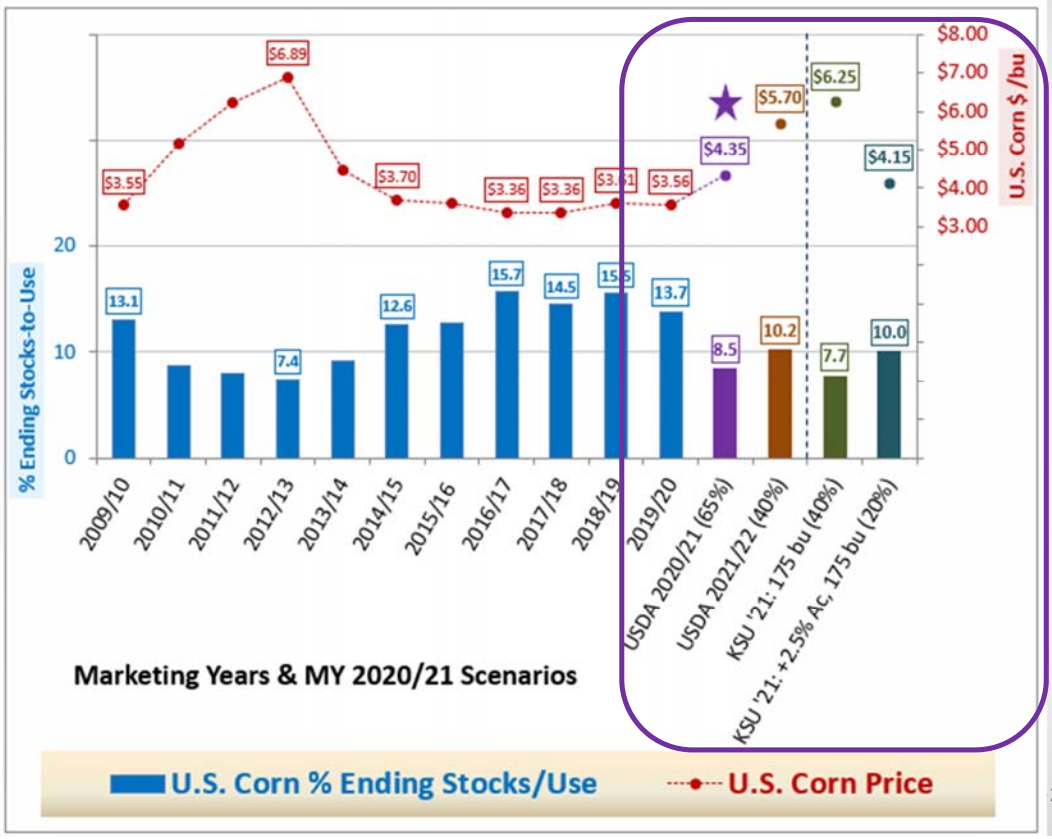
POLL-Trade estimates for USDA June U.S. grain end-stocks

PREDICTING USDA FOR 2020/21 (OLD CROP) and 2021/22 (NEW CROP):

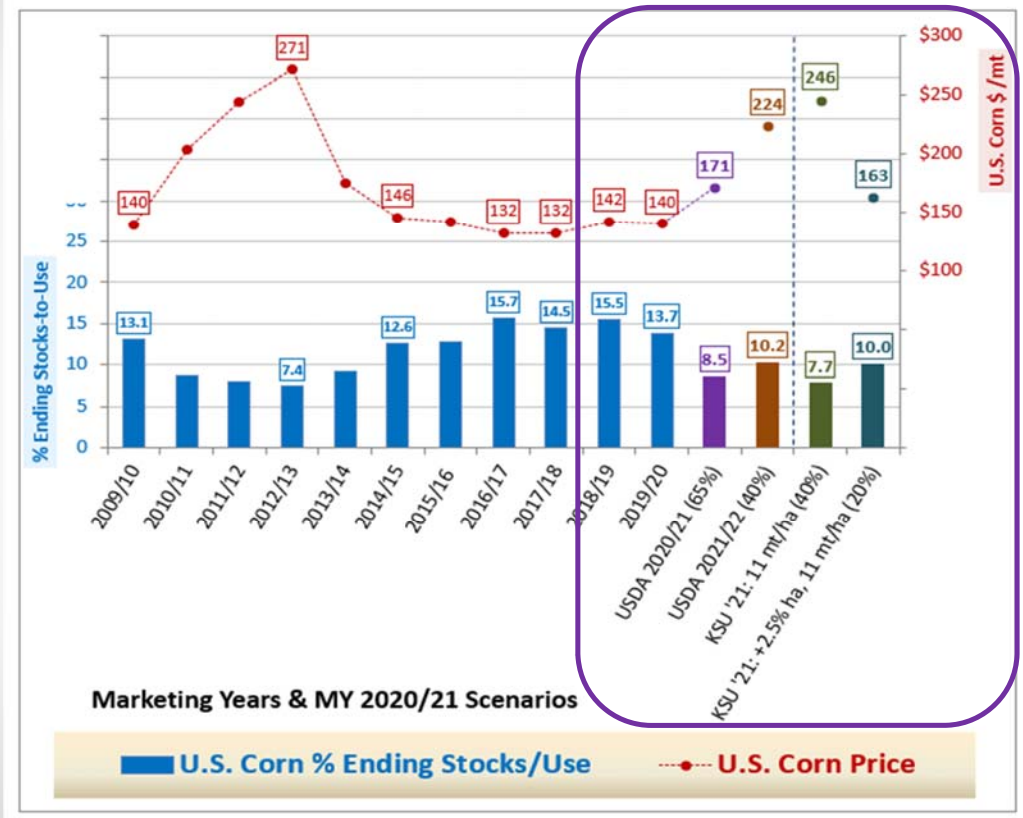
	2020/21			2021/22		
	Wheat	Corn	Soy	Wheat	Corn	Soy
Average trade estimate	0.869	1.207	0.122	0.783	1.423	0.146
Highest trade estimate	0.901	1.257	0.150	0.899	1.507	0.206
Lowest trade estimate	0.832	1.132	0.110	0.702	1.282	0.127
USDA May	0.872	1.257	0.120	0.774	1.507	0.140

U.S. Corn Ending Stocks & % Ending Stocks-to-Use for MY 2005/06 through "Current Crop" MY 2020/21: as of the May 12, 2021 USDA WASDE report

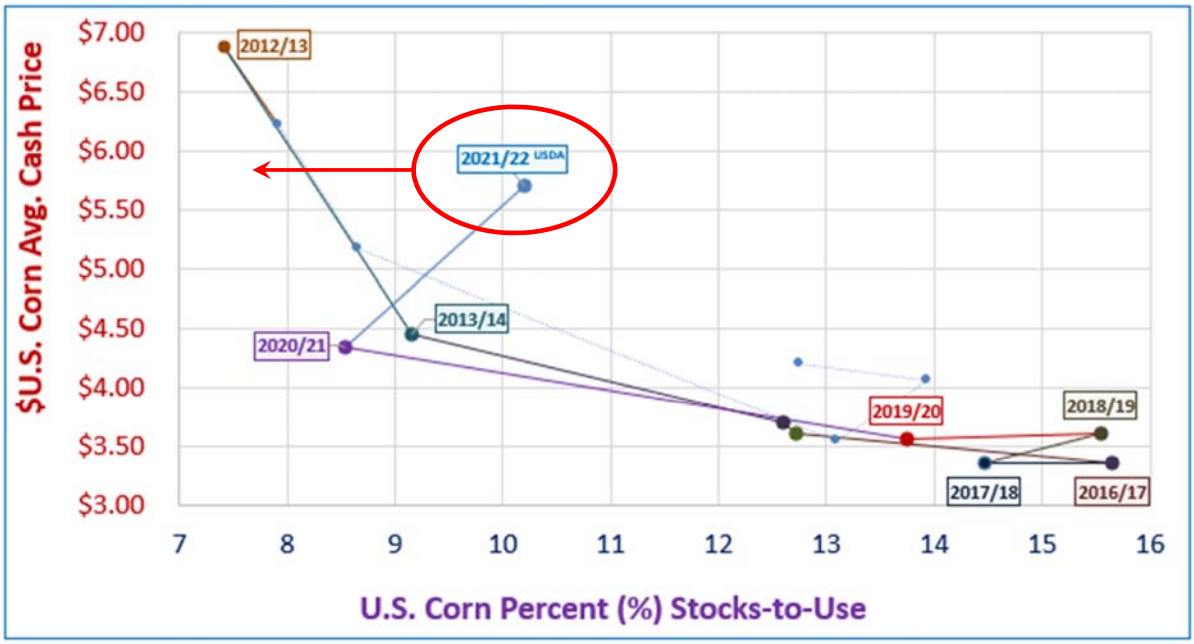
U.S. Corn %Ending Stocks vs U.S. Average Cash Corn Prices, MY 2009/10 – "New Crop" MY 2021/22: as of the May 12, 2021 USDA WASDE report, with KSU Market scenarios



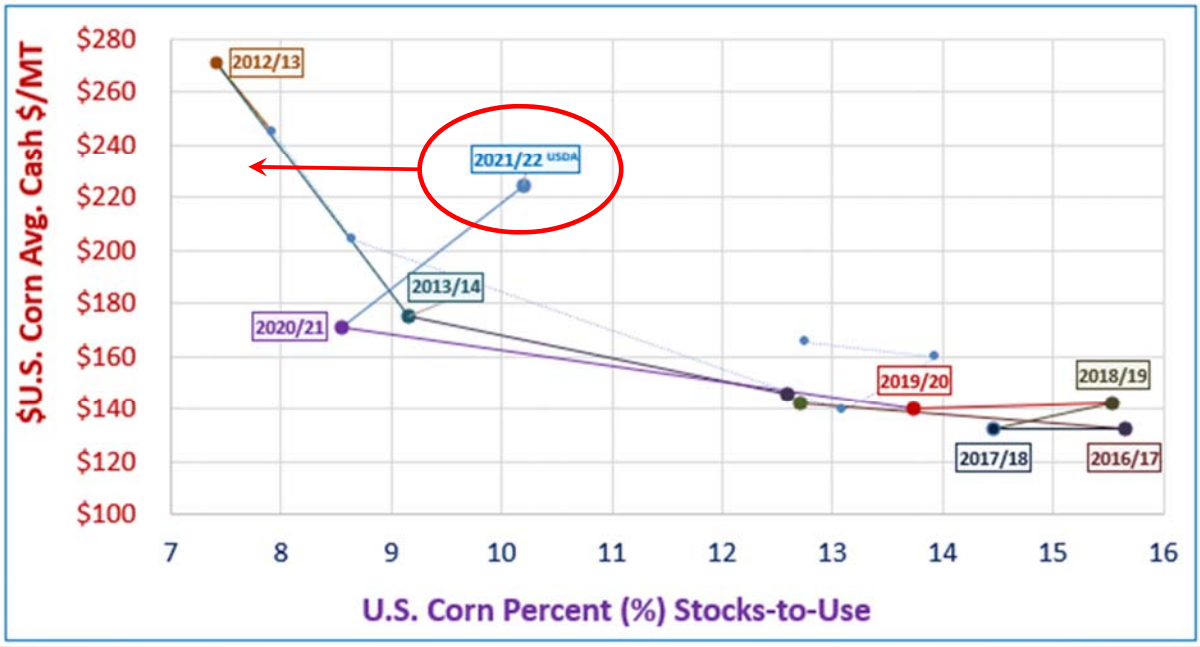
U.S. Corn % Ending Stocks vs U.S. Avg. Cash Corn Prices, MY 2009/10 – "New Crop" MY 2021/22: as of the May 12, 2021 USDA WASDE rpt, with KSU Market scenarios



U.S. Corn Price vs U.S. % Stocks-to-Use, MY 2007/08 thru "New Crop" MY 2021/22: as of the May 12, 2021 USDA WASDE report



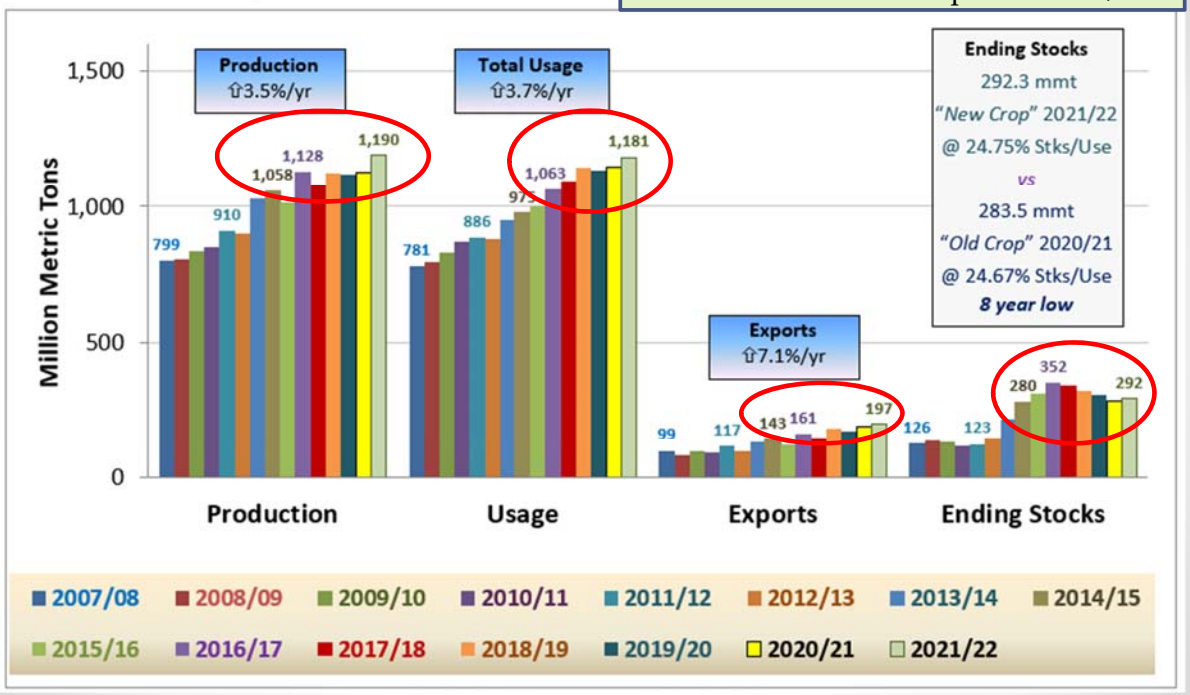
U.S. Corn Price vs U.S. % Stocks-to-Use, MY 2007/08 thru "New Crop" MY 2021/22: as of the May 12, 2021 USDA WASDE report



June 10th WASDE Exp. End Stocks
280.82 mmt in "current" MY 2020/21
292.30 mmt in "new crop" MY 2021/22

World Corn Supply-Demand, MY 2007/08 through "

USDA WASDE report.



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United States Department of Agriculture

World Corn Supply and Use

Item	2020/2021 Estimate	2020/2021 Change from April 9	2021/2022 Forecast	2021/2022 Change from 2020/2021
		Million Tons		
Beginning stocks	304.5	1.5	283.5	-20.9
Production	1,128.5	-8.6	1,189.9	61.4
Total Supply	1,432.9	-7.1	1,473.4	40.4
Feed use	730.3	-0.9	748.3	18.0
Total use	1,149.4	-6.8	1,181.1	31.7
Trade	186.8	-0.4	197.5	10.6
Ending Stocks	283.5	-0.3	292.3	8.8

POLL-Trade estimates for USDA June world crop ending stocks

PREDICTING USDA FOR 2020-21 (OLD CROP) AND 2021-22 (NEW CROP):

	2020-21			2021-22		
	Wheat	Corn	Soy	Wheat	Corn	Soy
Average trade estimate	294.41	280.82	87.14	294.49	289.20	91.22
Highest trade estimate	295.23	285.00	92.00	300.00	294.00	94.10
Lowest trade estimate	293.30	276.00	86.00	290.00	285.00	89.00
USDA May	294.67	283.53	86.55	294.96	292.30	91.10

Analysts Expectations of Final USDA Numbers

	2020-21			2021-22		
	Wheat	Corn	Soy	Wheat	Corn	Soy
Average trade estimate	294.52	278.72	86.06	294.43	284.42	91.05
Highest trade estimate	296.00	281.50	87.60	297.50	292.00	92.00
Lowest trade estimate	293.40	270.00	83.00	288.10	279.00	90.00
USDA May	294.67	283.53	86.55	294.96	292.30	91.10

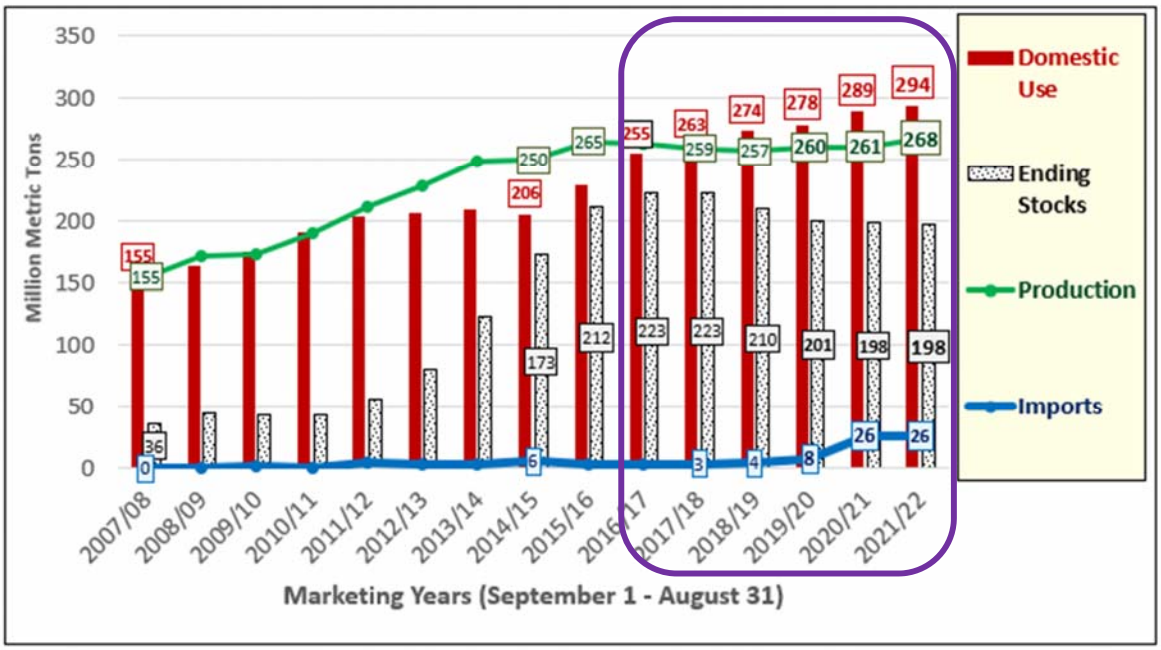
World Corn Production

Country or Region	2020/2021 Estimate	2020/2021 Change from April 9	2021/2022 Forecast	2021/2022 Change from 2020/2021
		Million Tons		
World	1,128.5	-8.6	1,189.9	61.4
United States	360.3	--	380.8	20.5
Foreign	768.2	-8.6	809.1	40.9
Argentina	47.0	--	51.0	4.0
Brazil	102.0	-7.0	118.0	16.0
Mexico	27.0	-0.8	28.0	1.0
Canada	13.6	--	13.3	-0.3
European Union	64.0	**	66.7	2.7
Serbia	8.0	--	7.3	-0.7
FSU-12	49.4	0.8	58.0	8.6
Ukraine	30.3	0.8	37.5	7.2
Russia	13.9	--	14.9	1.0
South Africa	17.0	--	17.0	--
China	260.7	--	268.0	7.3
India	30.2	--	29.5	-0.7

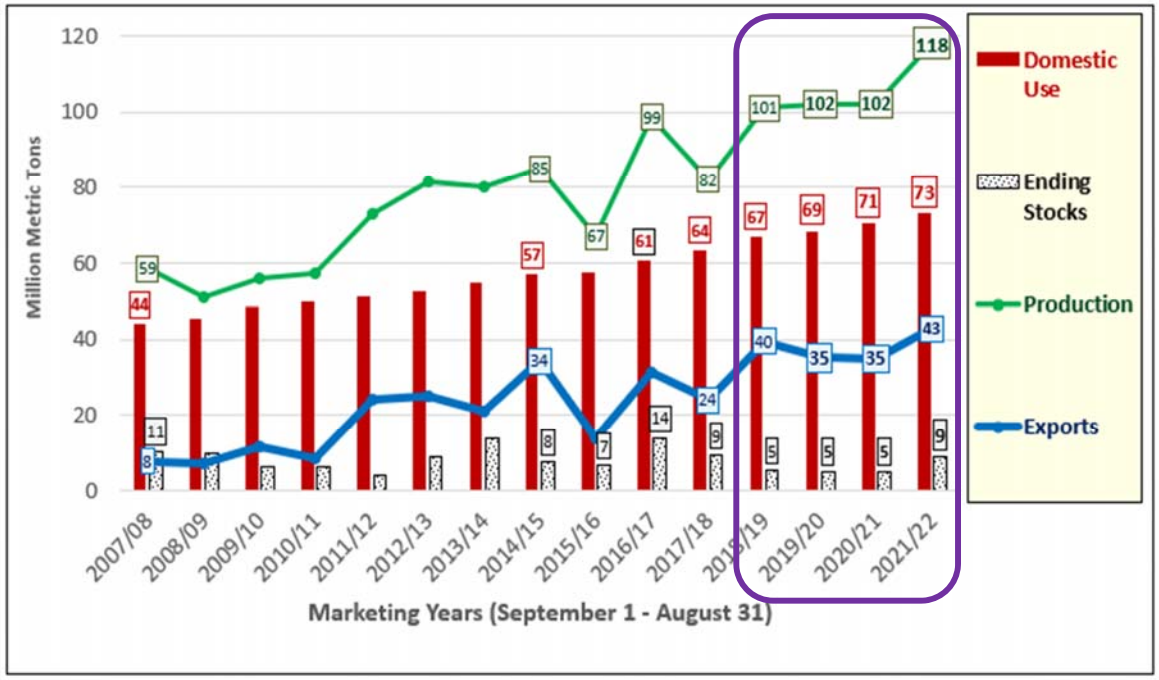
-- No change. **Rounds to zero.

May 12, 2021

China Corn Supply-Demand: MY 2006/07 – "Current" MY 2020/21 as of the May 12, 2021 USDA WASDE report



Brazil Corn Supply-Demand: MY 2006/07 – "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE report

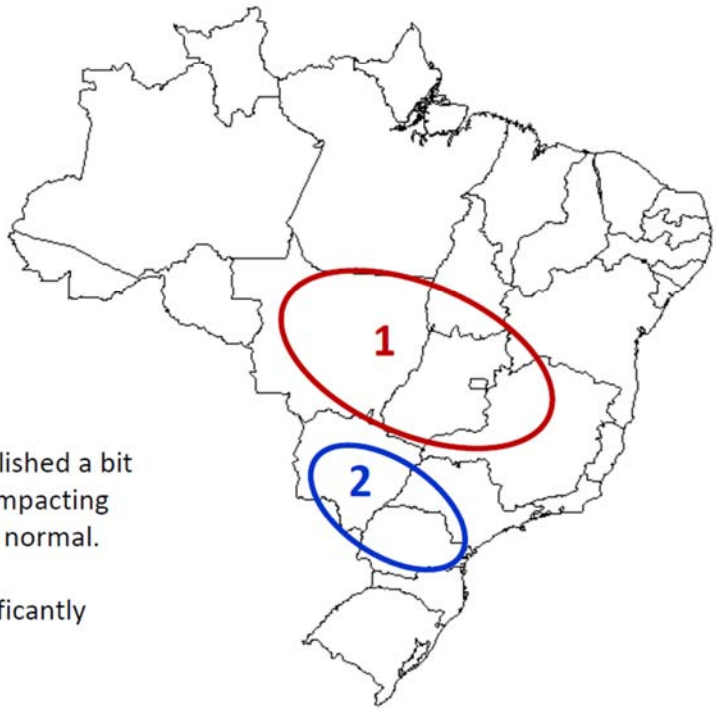


USDA Office of the Chief Economist
United States Department of Agriculture

Brazil

Corn

Weather Highlights Since Last Month:



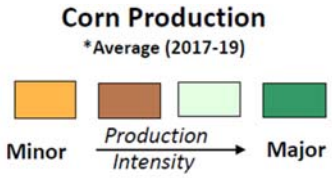
1) Seasonal dryness became established a bit earlier than normal, negatively impacting corn that was planted later than normal.

2) Unseasonable dryness has significantly impacted yield prospects.

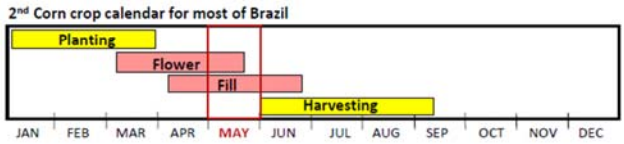
USDA Agricultural Weather Assessments
World Agricultural Outlook Board

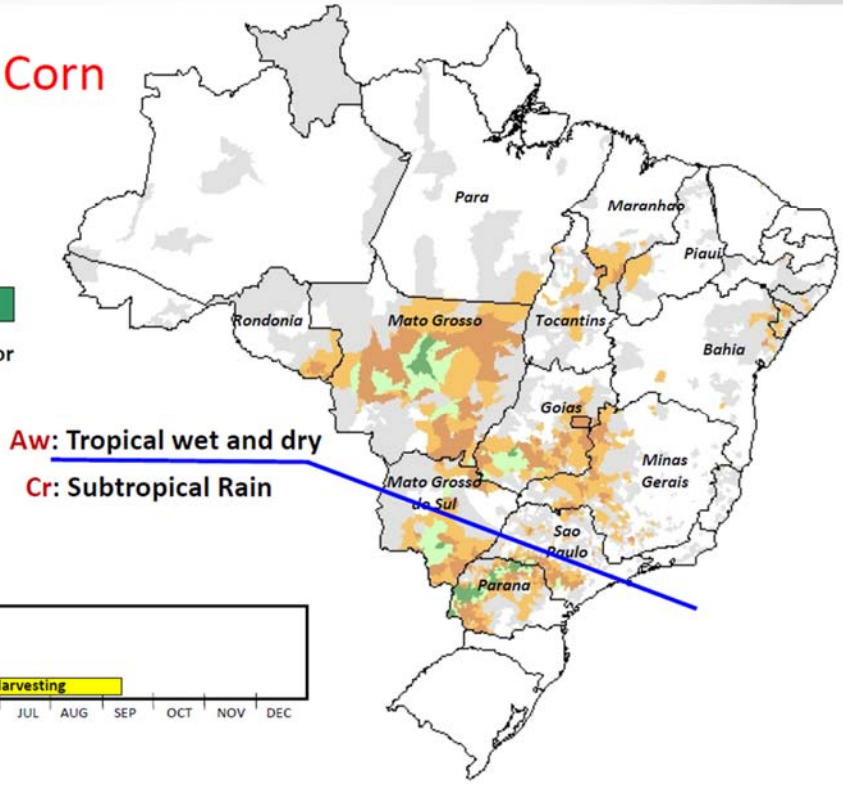
May 11, 2021

Brazil 2nd Crop Corn



*Source: IBGE

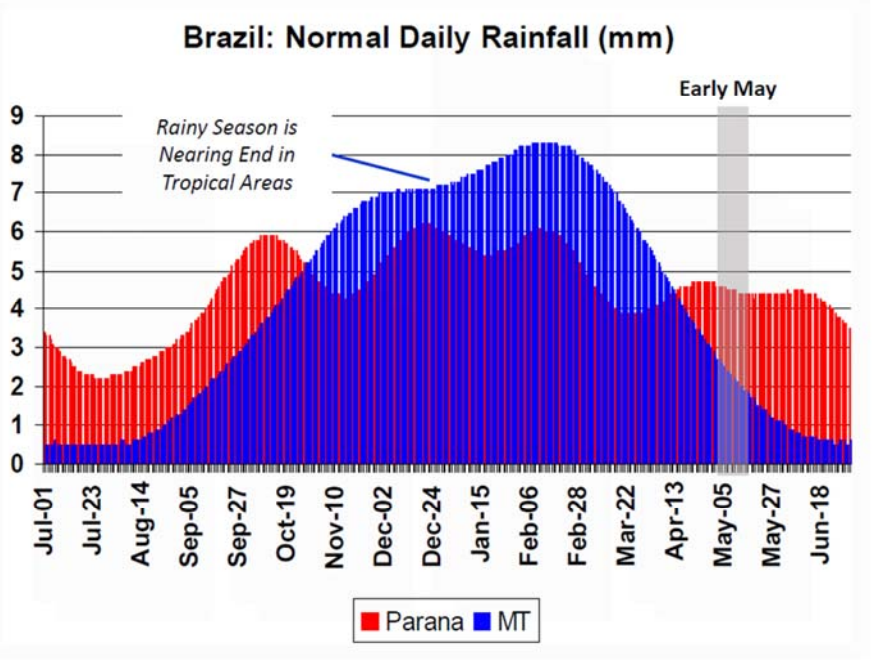


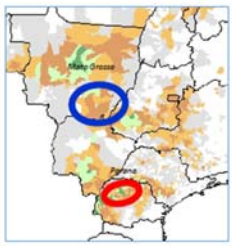


Aw: Tropical wet and dry

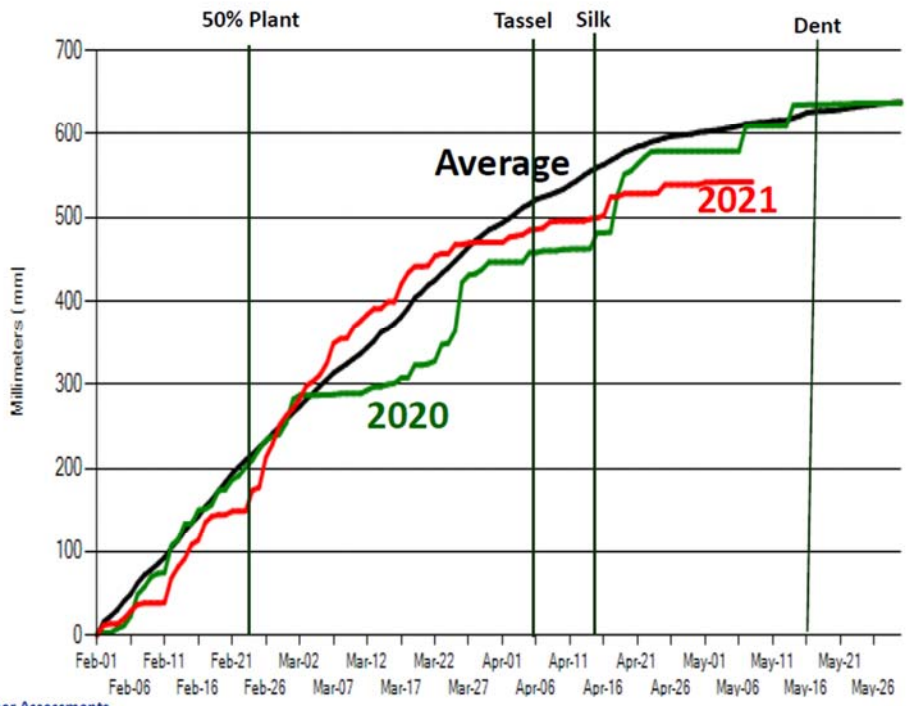
Cr: Subtropical Rain

Brazil: Normal Daily Rainfall (mm)





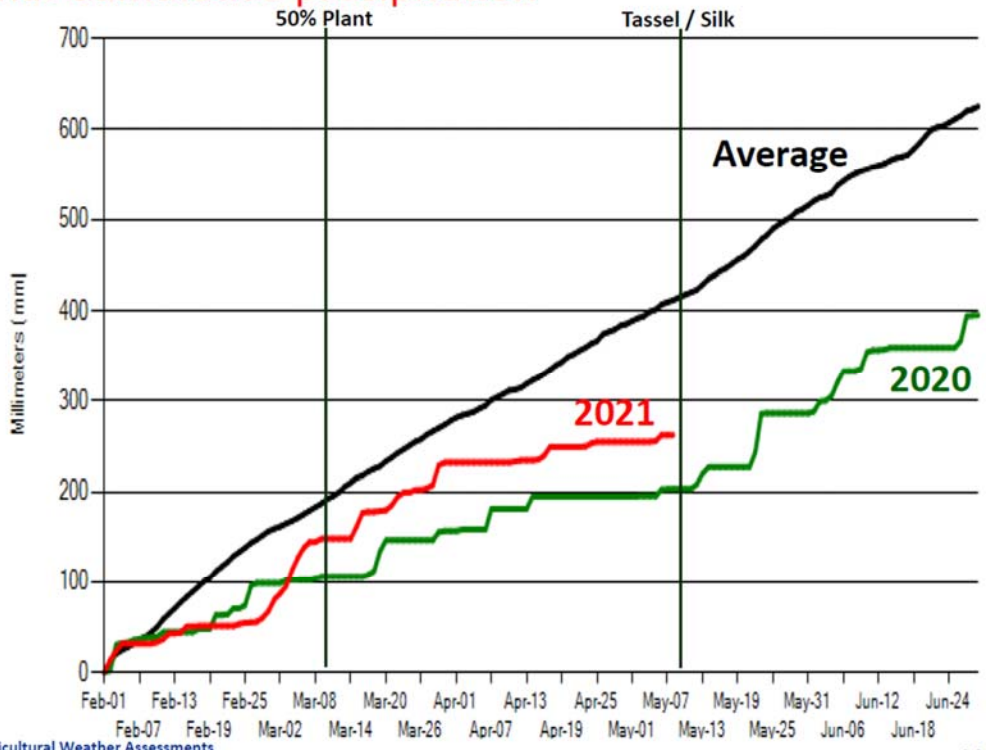
Mato Grosso: Cumulative precipitation



USDA Agricultural Weather Assessments
World Agricultural Outlook Board

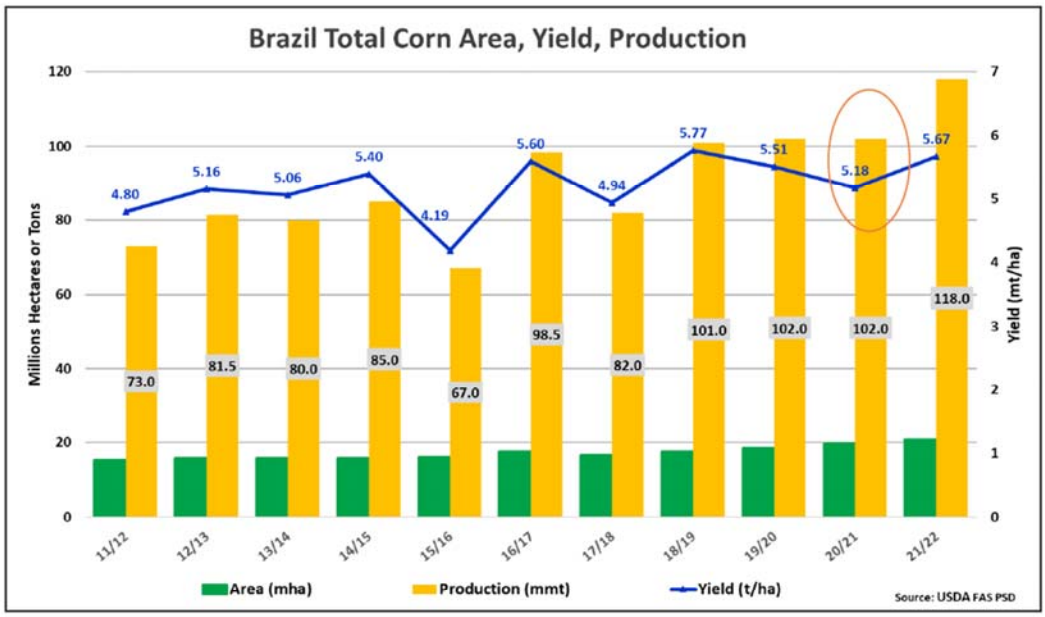
May 11, 2021

Parana: Cumulative precipitation



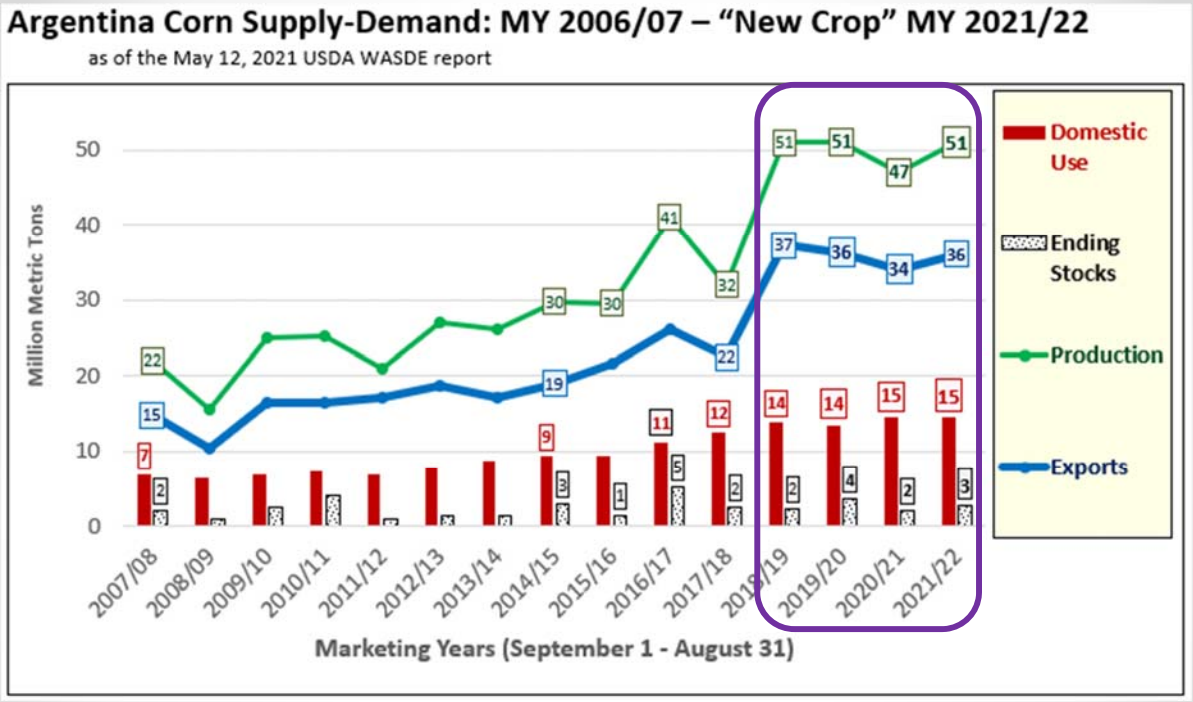
USDA Agricultural Weather Assessments
World Agricultural Outlook Board

May 11, 2021



Record area forecast for 2020/21
- AREA 19.7 mha (RECORD), unchanged
- YIELD 5.18 t/ha (below trend)
- PROD 102 mmt (tied with 19/20 RECORD), down 7 mmt (6%) from last month

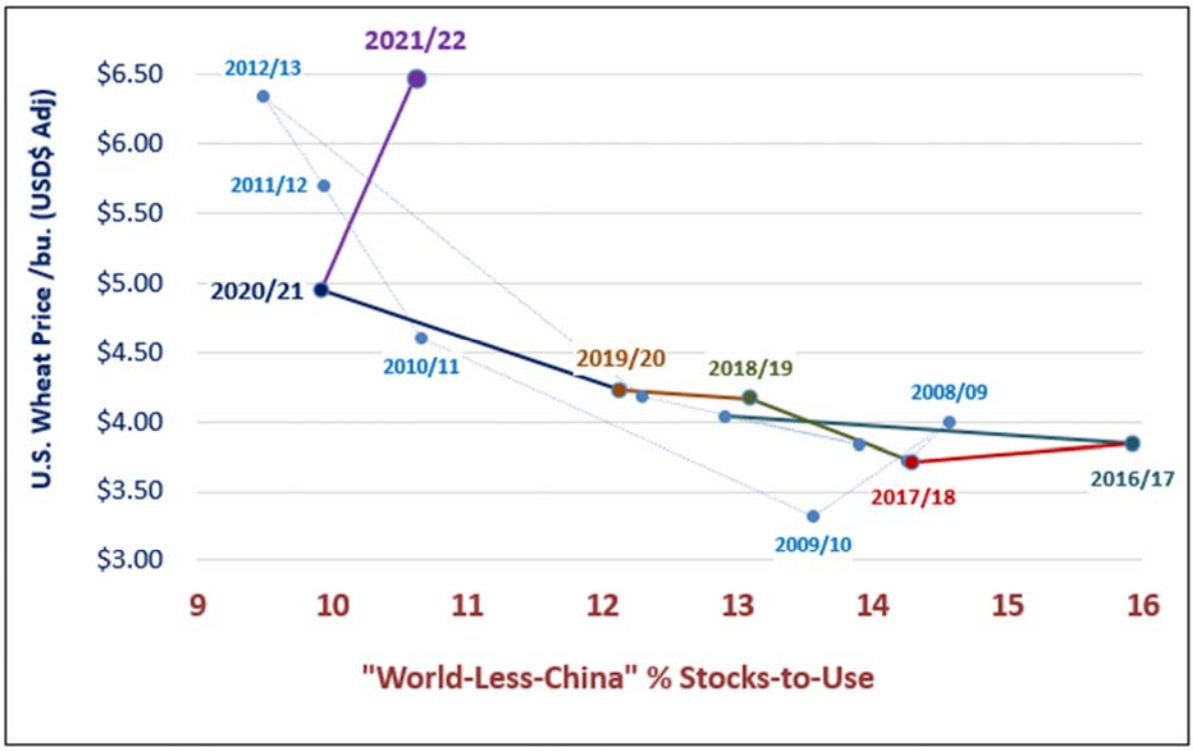
May 12, 2021



Ukraine Corn Supply-Demand: MY 2006/07 – "Current" MY 2020/21 as of the May 12, 2021 USDA WASDE report

U.S. Corn Price (USD$ Adj.) vs % "*World-Less-China*" Corn Stocks-to-Use:

MY 2007/08 through "New Crop" MY 2020/21, as of the May 12, 2021 USDA WASDE report.



U.S. Corn Price (USD$ Adj.) vs % "*World-Less-China*" Corn Stocks-to-Use:

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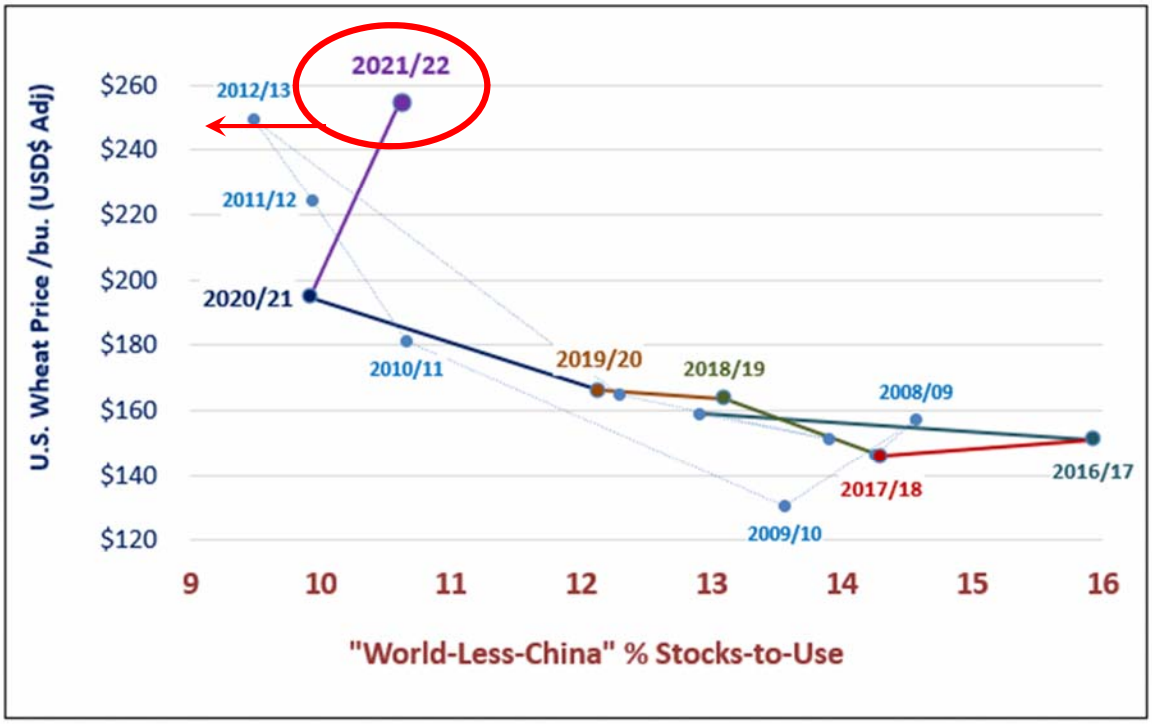


World vs "*World-Less-China*" % Corn Stocks-to-Use: MY 2007/08 through "New Crop" MY 2021/22, as of the May 12, 2021 USDA WASDE report.

World Soybean Supply and Use

Item	2020/2021 Estimate	Change from April 9	2021/2022 Forecast	Change from 2020/2021
		Million Tons		
Beginning stocks	96.5	0.1	86.5	-10.0
Production	362.9	-0.2	385.5	22.6
Total Supply	459.5	-0.1	472.1	12.6
Crush	322.4	-0.1	331.7	9.3
Total use	369.3	-0.2	380.8	11.4
Trade	171.4	0.4	172.9	1.5
Ending Stocks	86.5	-0.3	91.1	4.6
Addendum				
Beginning stocks				
Argentina plus Brazil	47.4	--	45.4	-2.1
Imports*				
China	100.0	--	103.0	3.0

*From all sources.

-- No change.

May 12, 2021

U.S. Soybeans Supply and Demand

Item	2020/2021 Estimate	Change from April 9	2021/2022 Forecast	Change from 2020/2021
Planted area (million acres)	83.1	--	87.6	4.5
Harvested area (million acres)	82.3	--	86.7	4.4
Yield (bushels per acre)	50.2	--	50.8	0.6
		Million bushels		
Beginning stocks	525	--	120	-405
Production	4,135	--	4,405	270
Imports	35	--	35	0
Total supply	4,695	--	4,560	-135
Crush	2,190	--	2,225	35
Seed and Residual	105	--	120	14
Domestic use	2,295	--	2,345	49
Exports	2,280	--	2,075	-205
Total use	4,575	--	4,420	-156
Ending stocks	120	--	140	20
		Percent		
Stocks to use ratio	2.6	--	3.2	0.6
		Dollars per bushel		
Average market price	11.25	--	13.85	2.60

-- No change.

May 12, 2021

U.S. Soybean Oil Supply and Demand

Item	2020/2021 Estimate	2020/2021 Change from April 9	2021/2022 Forecast	2021/2022 Change from 2020/2021
		Million pounds		
Beginning stocks	1,853	--	1,818	-35
Production	25,515	--	25,945	430
Imports	350	--	600	250
Total supply	27,718	--	28,363	645
Domestic disappearance	23,600	100	25,400	1,800
Biofuel	9,500	1600	12,000	2,500
Food, feed, other	14,100	-1500	13,400	-700
Exports	2,300	-200	1,450	-850
Total use	25,900	-100	26,850	950
Ending stocks	1,818	100	1,513	-305
		Cents per pound		
Average market price	55.00	10.00	65.00	10.00

-- No change.

May 12, 2021

World Soybean Production

Country or Region	2020/2021 Estimate	2020/2021 Change from April 9	2021/2022 Forecast	2021/2022 Change from 2020/2021
		Million Tons		
World	362.9	-0.2	385.5	22.6
United States	112.5	--	119.9	7.3
Foreign	250.4	-0.2	265.6	15.2
Argentina	47.0	-0.5	52.0	5.0
Brazil	136.0	--	144.0	8.0
Paraguay	9.9	0.2	10.5	0.6
Canada	6.4	--	6.4	**
India	10.5	-0.2	11.2	0.8
China	19.6	--	19.0	-0.6

-- No change. **Rounds to zero.

May 12, 2021

Grain Sorghum Markets

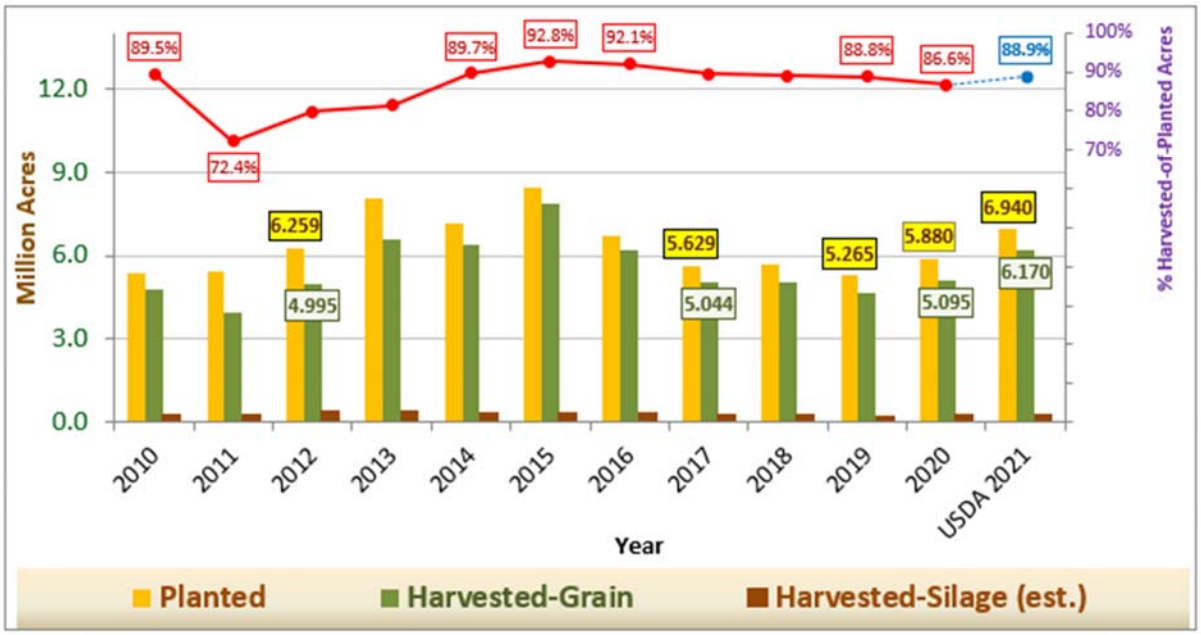
KANSAS STATE UNIVERSITY Department of Agricultural Economics

Kansas Grain Sorghum Seasonal Price Index (MY 1999/00 – MY 2019/20) plus "Current Crop" MY 2020/21 Estimates as of June 4, 2021 (KSU www.AgManager.info & USDA NASS https://quickstats.nass.usda.gov/

Futures Based Projection for "Next Crop" MY 2021/22 = $6.21 /bu & $244.51 /mt

U.S. Grain Sorghum Planted & Harvested Acreage (2010 – 2021)

as of the May 12, 2021 USDA WASDE report



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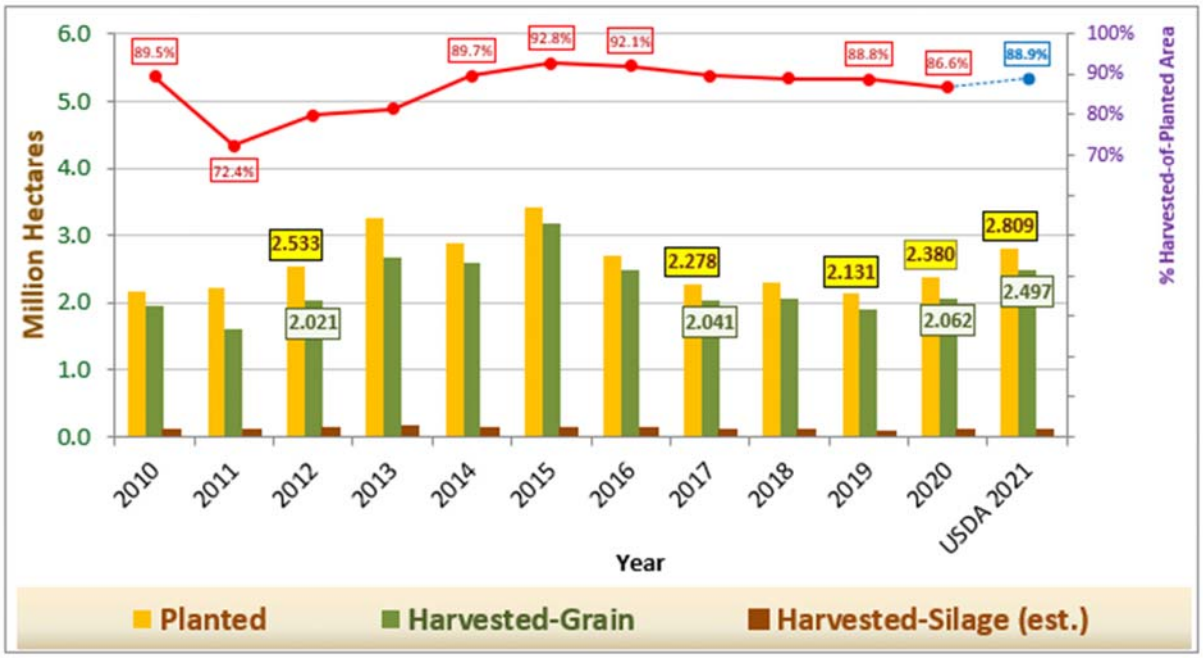
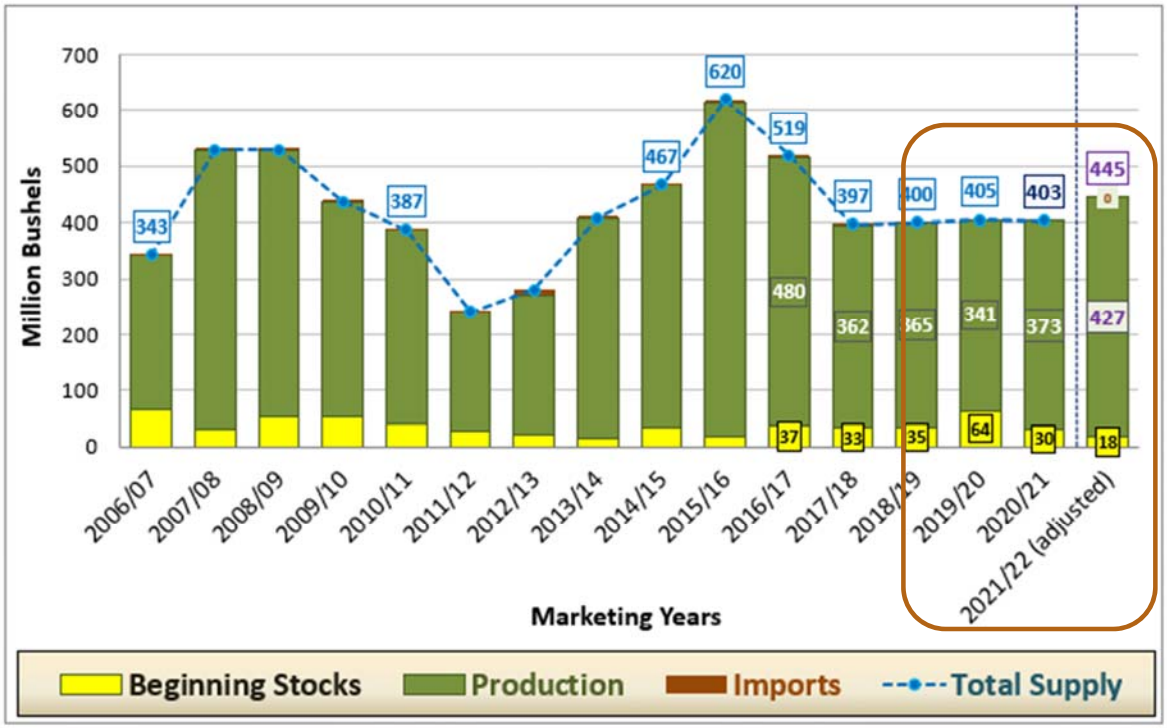


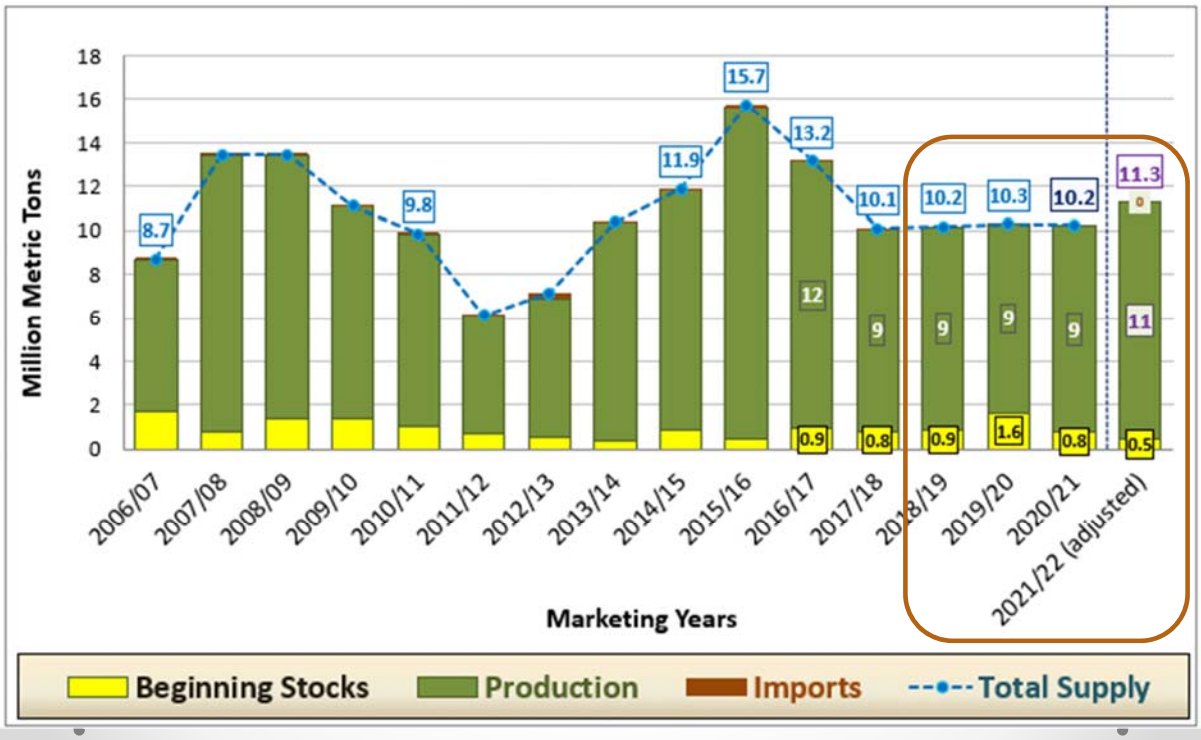
U.S. Grain Sorghum Yields for 2006-2021 as of the May 12, 2021 USDA WASDE report

U.S. Grain Sorghum Yields for 2006-2021 as of the May 12, 2021 USDA WASDE report

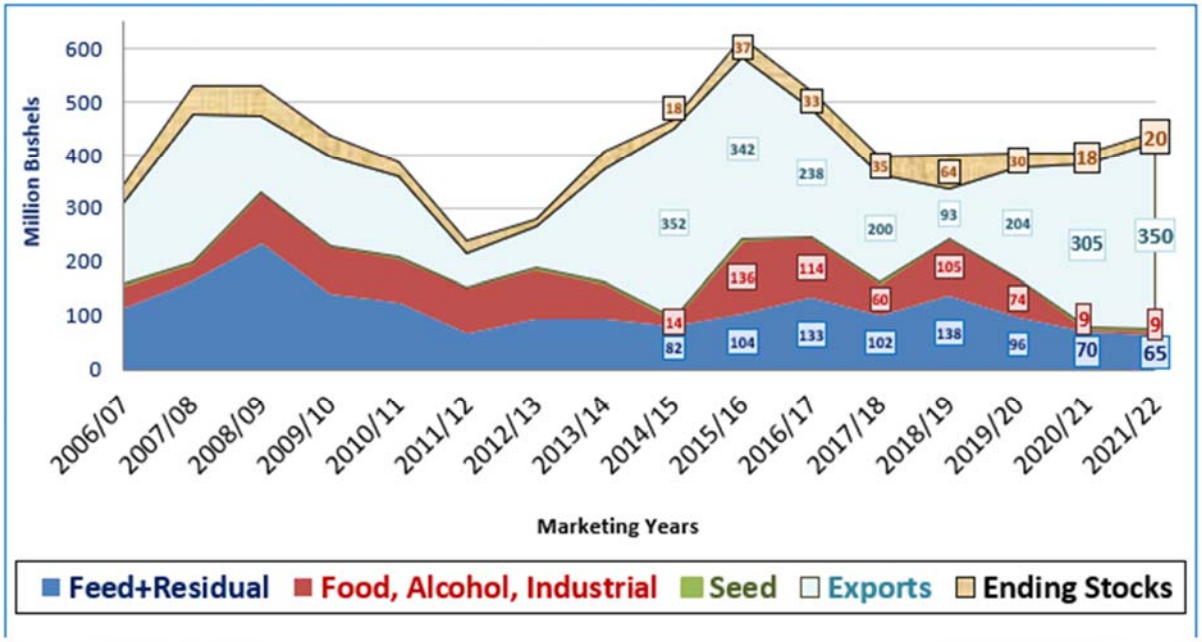
U.S. Grain Sorghum Total Supplies: MY 2006/07 - "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE report



U.S. Grain Sorghum Total Supplies: MY 2006/07 - "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE report



Trends in U.S. Grain Sorghum Use & Ending Stocks: MY 2006/07 - "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE report



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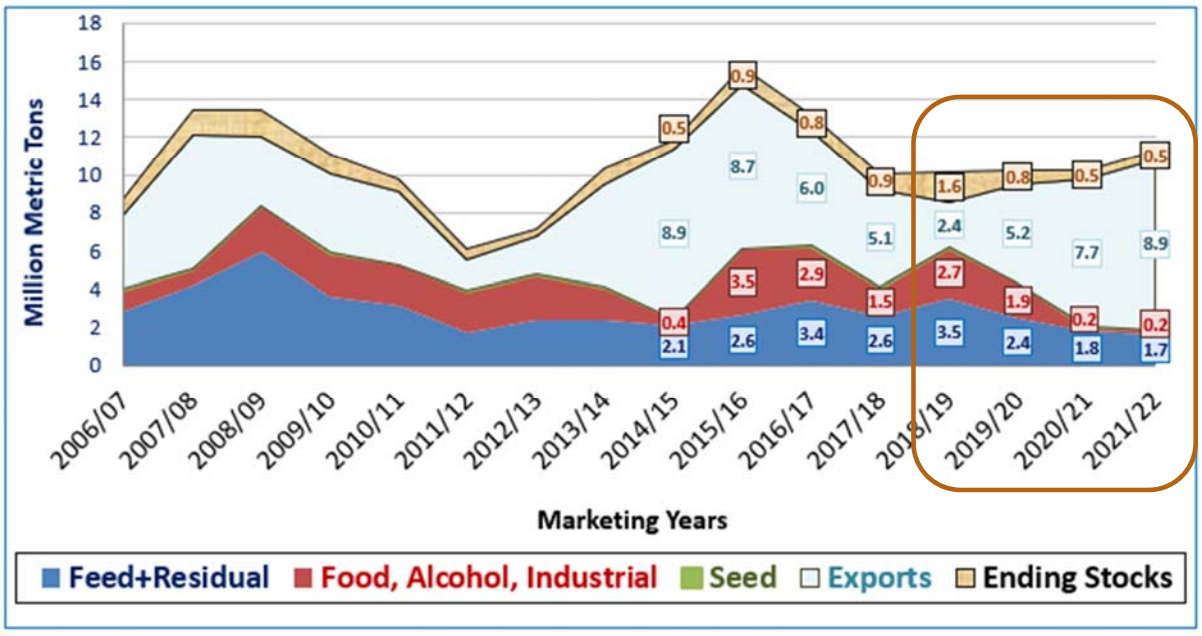
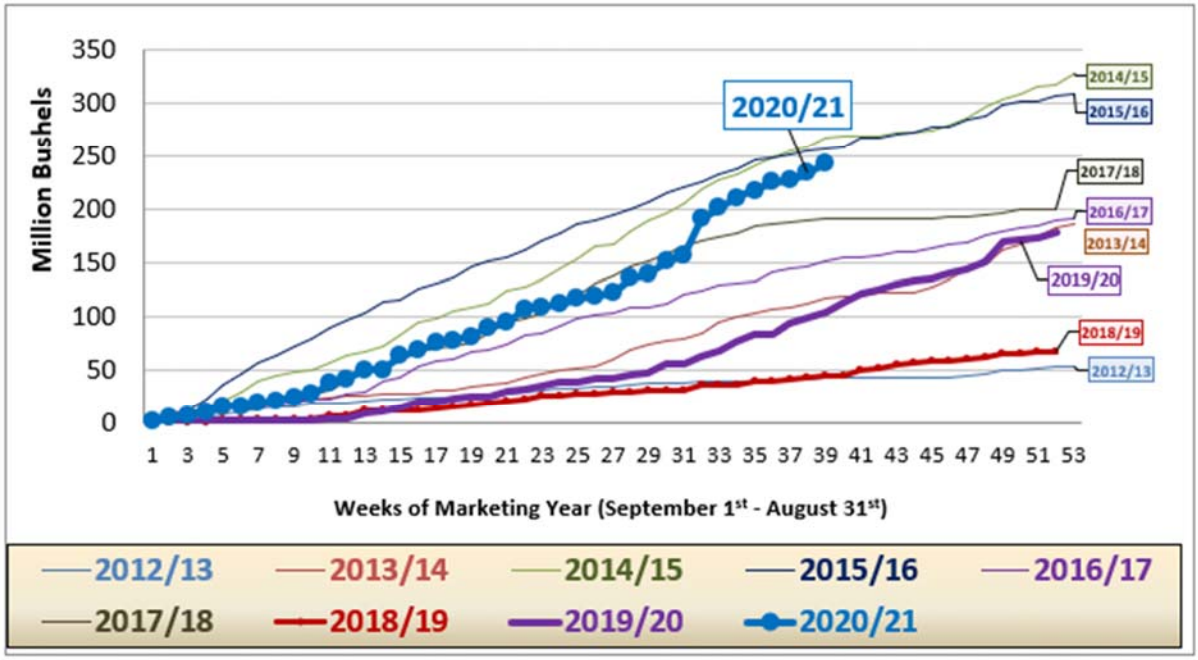


U.S. Grain Sorghum Exports for MY 2012/13 - "Current Crop" MY 2020/21 as of May 27, 2021 - via USDA FAS Weekly Export reports



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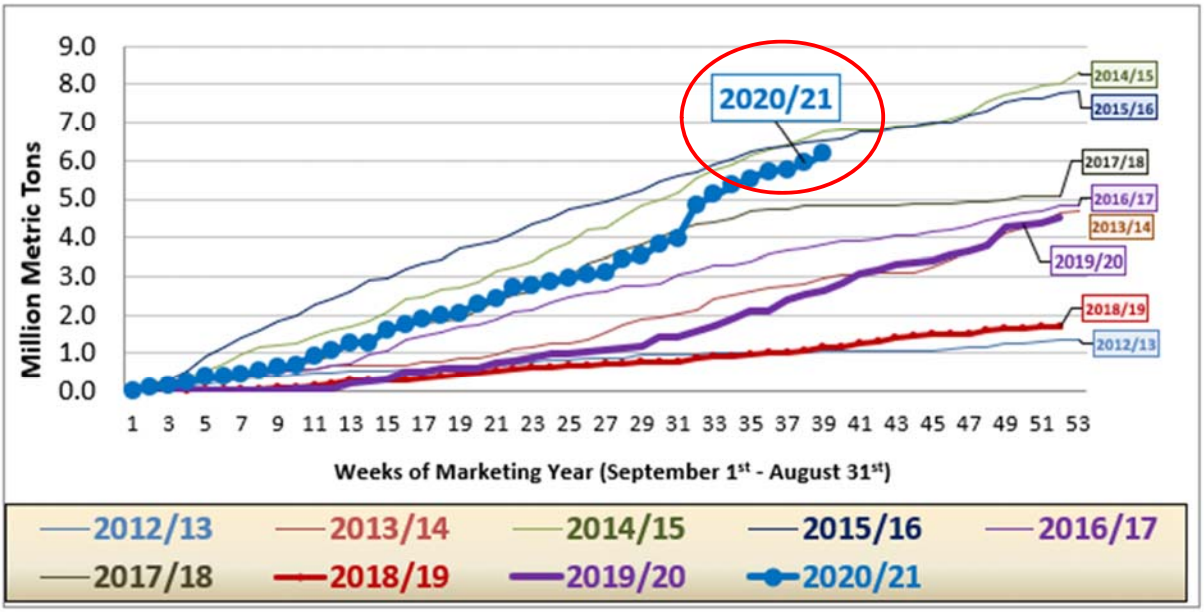
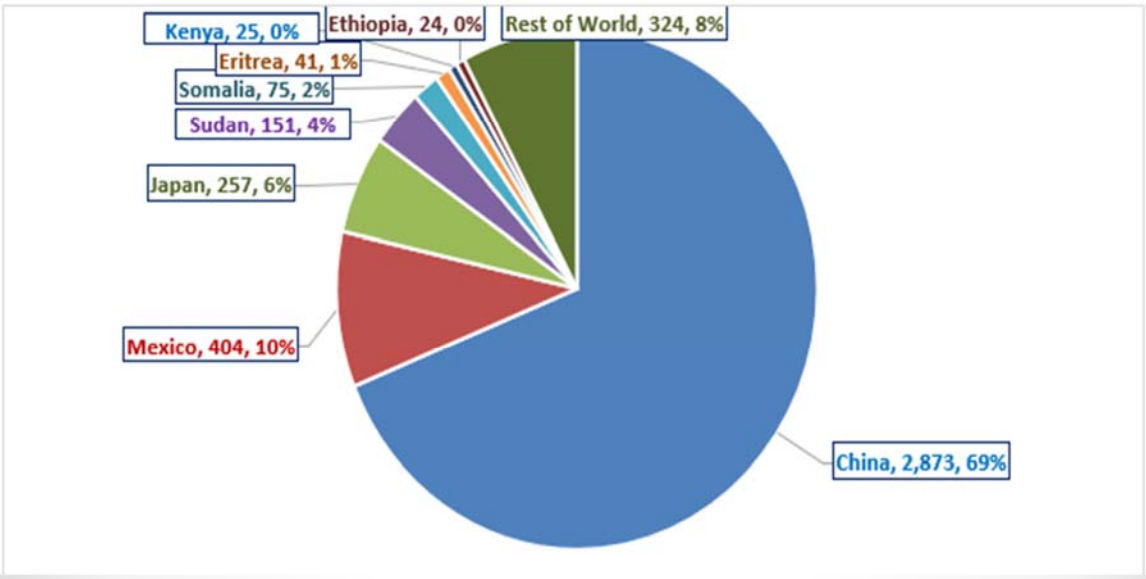
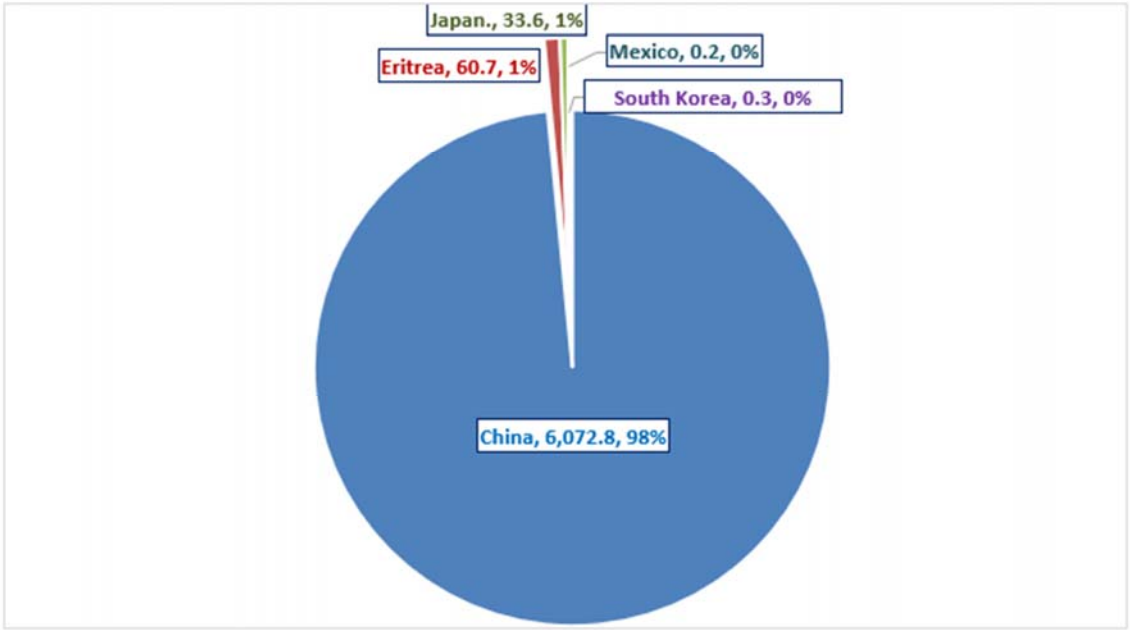


Top 10 U.S. Grain Sorghum Export Buyers – Three Year Average: MY 2017/18 thru "Old Crop" MY 2019/20 via USDA FAS PSD Online) (1,000 Metric Tons)



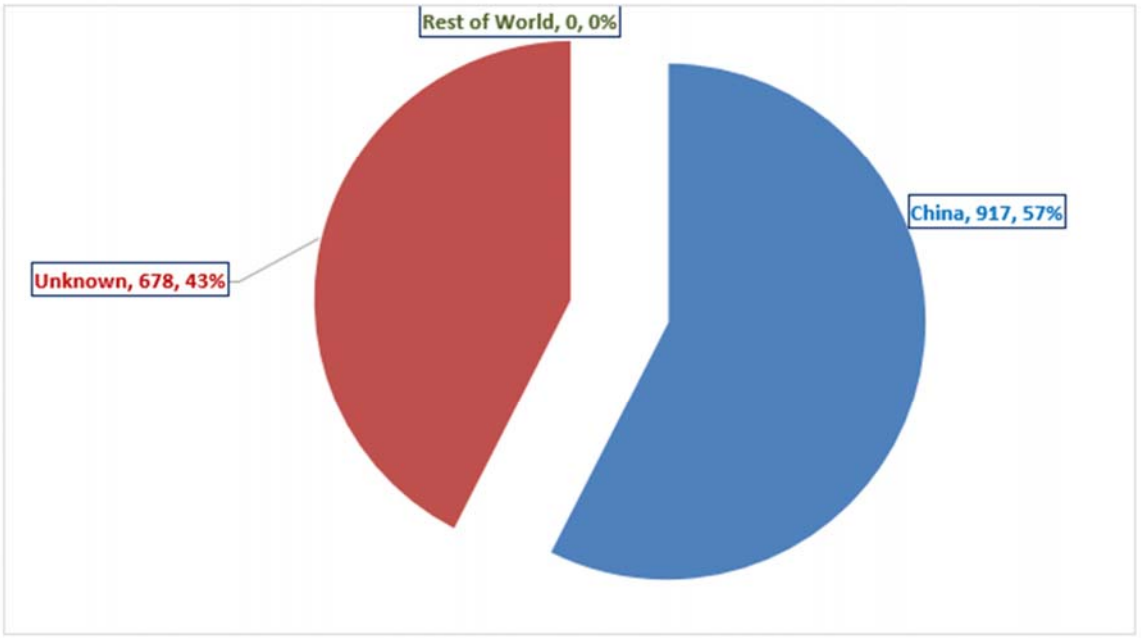
Top U.S. Grain Sorghum Export Buyers – "Current" MY 2020/21

as of the May 27, 2021 USDA U.S. Export Shipments (1,000 mt)



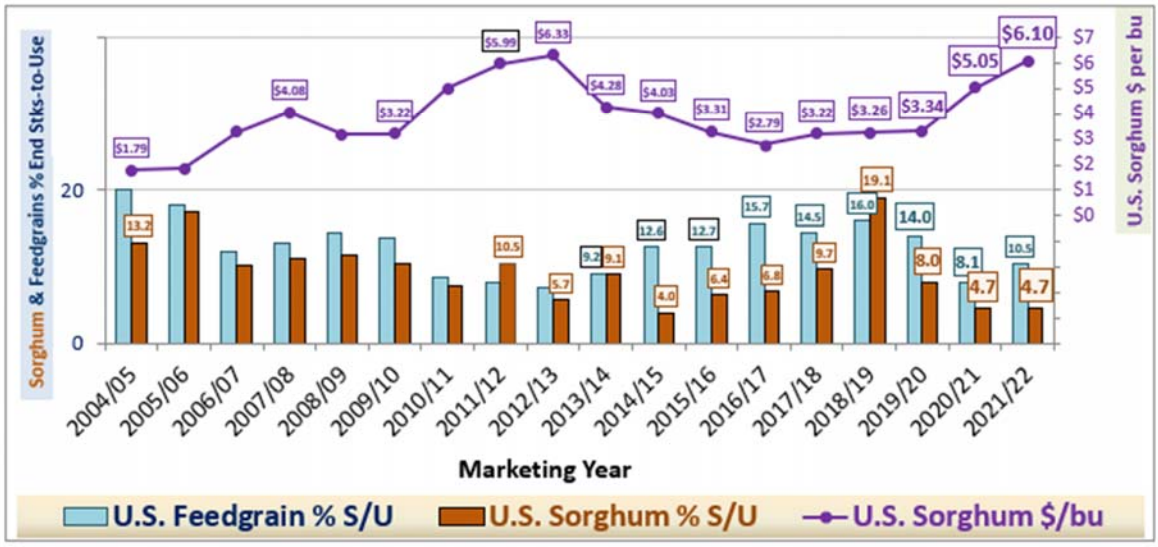
Top U.S. Grain Sorghum Export Buyers – "New Crop" MY 2021/22

as of the May 27, 2021 USDA U.S. Export Shipments (1,000 mt)



U.S. Sorghum Ending Stocks-to-Use vs U.S. Avg. Cash Prices:

MY 2004/05 - "New Crop" MY 2021/22 as of the May 12, 2021 USDA WASDE report



U.S. Sorghum Ending Stocks-to-Use vs U.S. Avg. Cash Prices:

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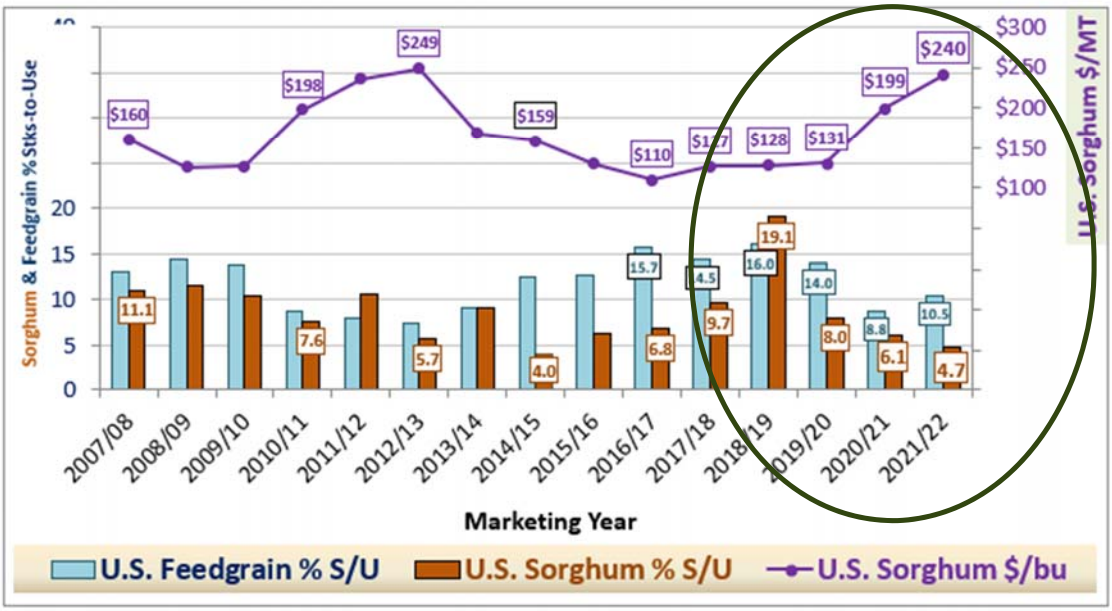
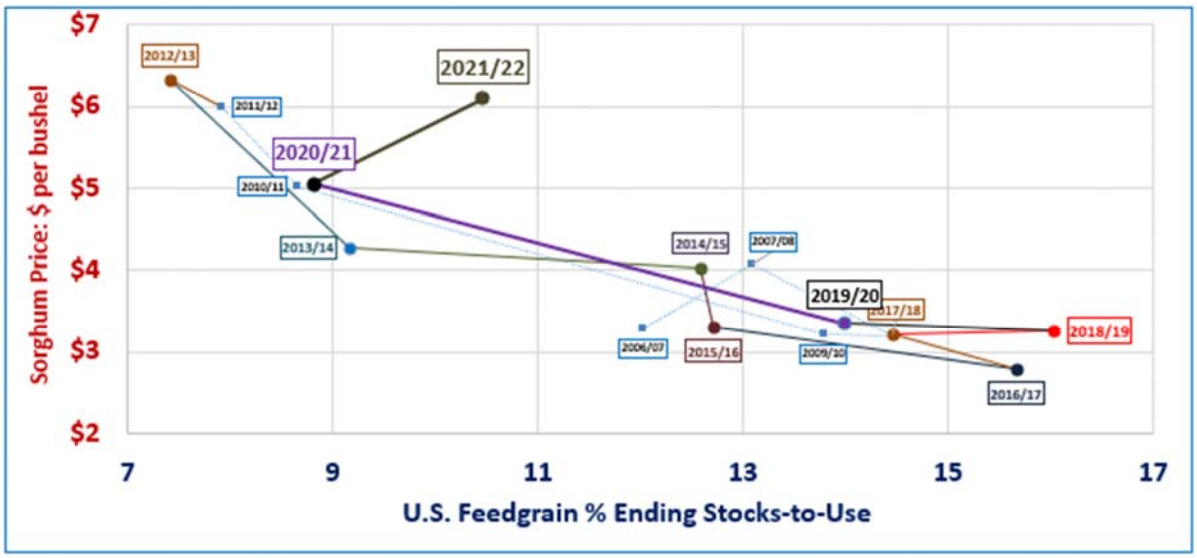


U.S. Sorghum Price vs % U.S. Feedgrain Stocks-to-Use:

Selected Marketing Years vs MY 1975/76 through "New Crop" MY 2020/21

as of the May 12, 2021 USDA WASDE report



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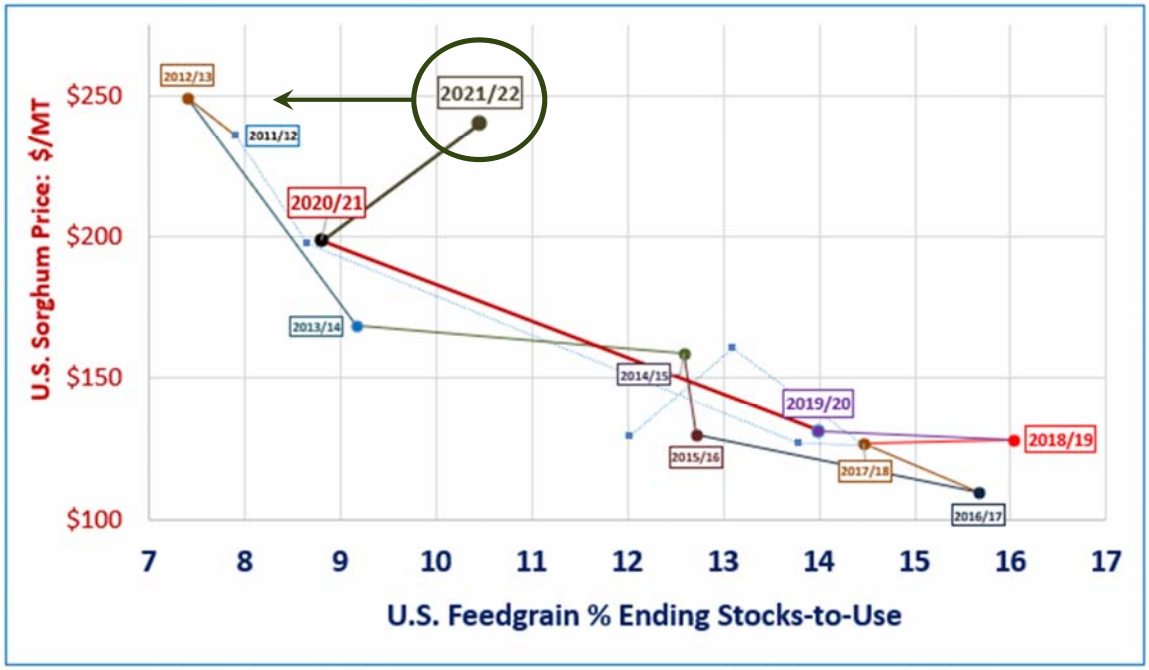
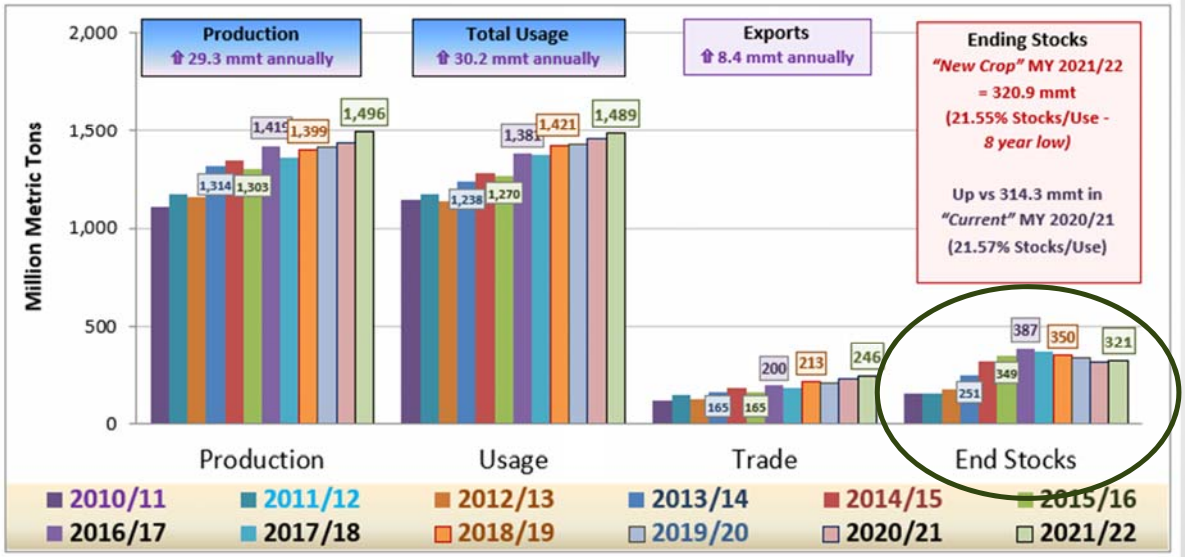
as of the May 12, 2021 USDA WASDE report



World Coarse Supply-Demand: MY 2007/08 thru "New Crop" 2020/21

as of the May 12, 2021 USDA WASDE report



Ethanol & DDGS Markets

Weekly Commodity Futures Price Chart

Ethanol (Globex) (CBOT)

TFC Commodity Charts

Ethanol & RBOB Futures

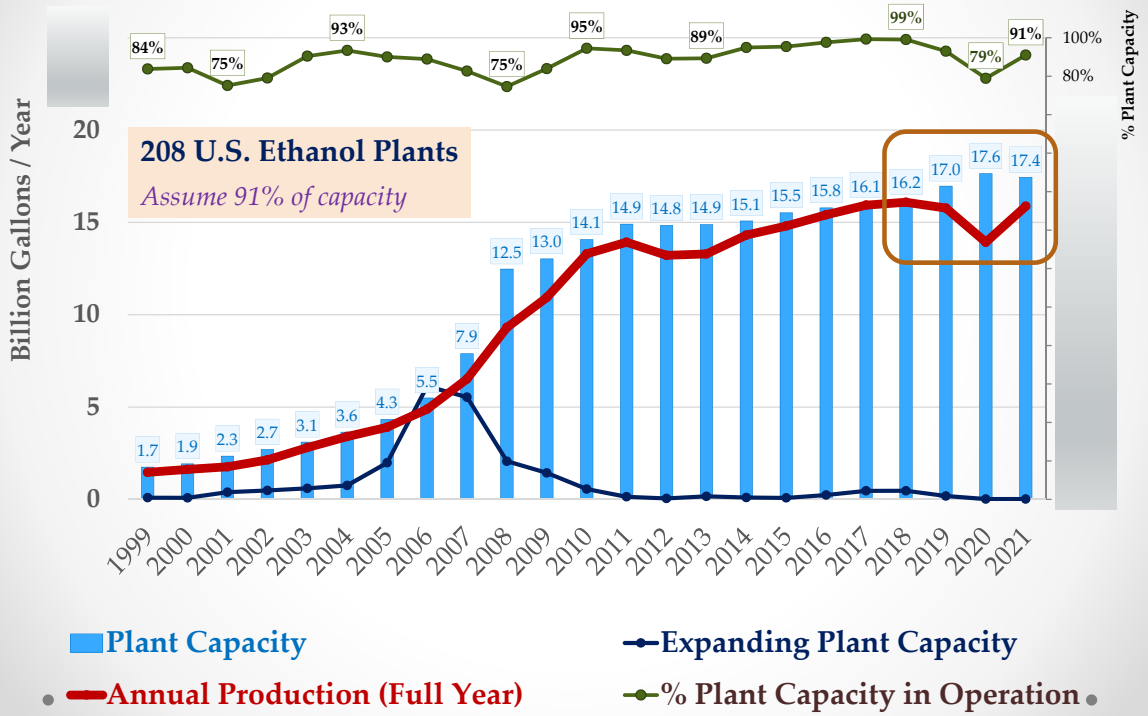
Weekly Charts: January 2016 – June 4, 2021

$Ethanol / $RBOB per gallon

3/2/2020	= 1.28 / 1.54 = 0.83
4/1/2020	= 0.84 / 0.55 = 1.52*
5/1/2020	= 1.00 / 0.77 = 1.30*
6/1/2020	= 1.15 / 1.07 = 1.07
7/1/2020	= 1.25 / 1.22 = 1.03
8/3/2020	= 1.11 / 1.21 = 0.92
9/1/2020	= 1.31 / 1.22 = 1.07
10/1/2020	= 1.36 / 1.15 = 1.18
11/2/2020	= 1.39 / 1.05 = 1.32
12/1/2020	= 1.49 / 1.22 = 1.22
1/4/2021	= 1.50 / 1.37 = 1.09
2/1/2021	= 1.71 / 1.59 = 1.08
3/1/2021	= 1.68 / 1.89 = 0.89
4/1/2021	= 1.85 / 2.00 = 0.93
5/3/2021	= 2.34 / 2.09 = 1.19
6/4/2021	= 2.46 / 2.20 = 1.11*

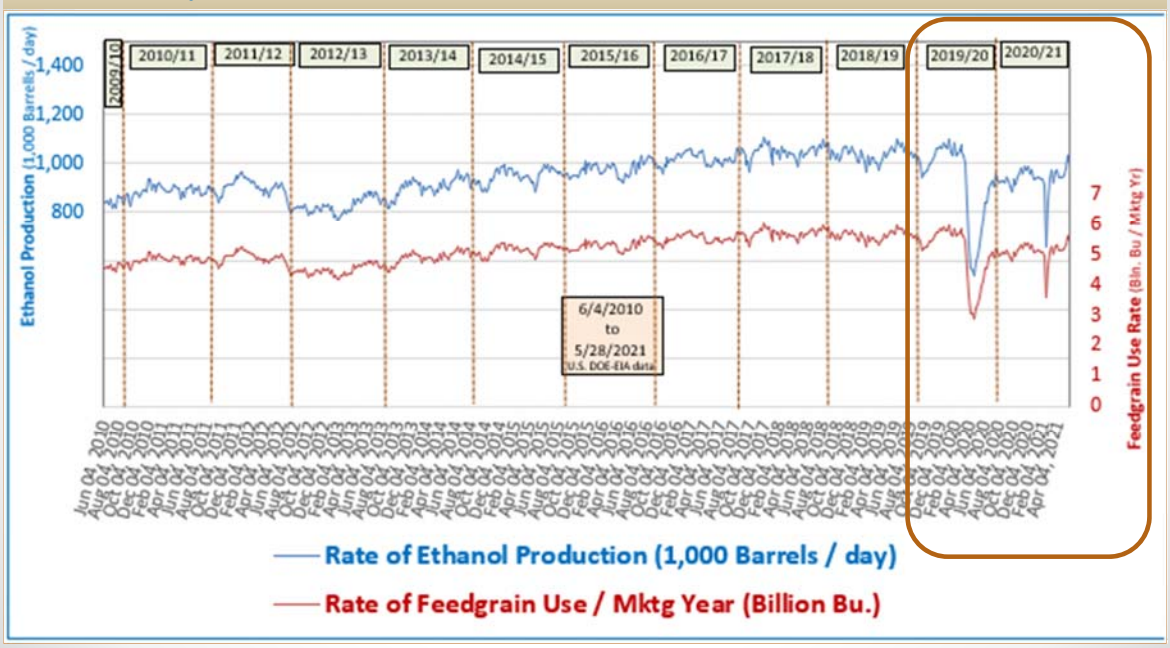
U.S. Ethanol Capacity & Production

Source: Renewable Fuels Association – As of June 4, 2021

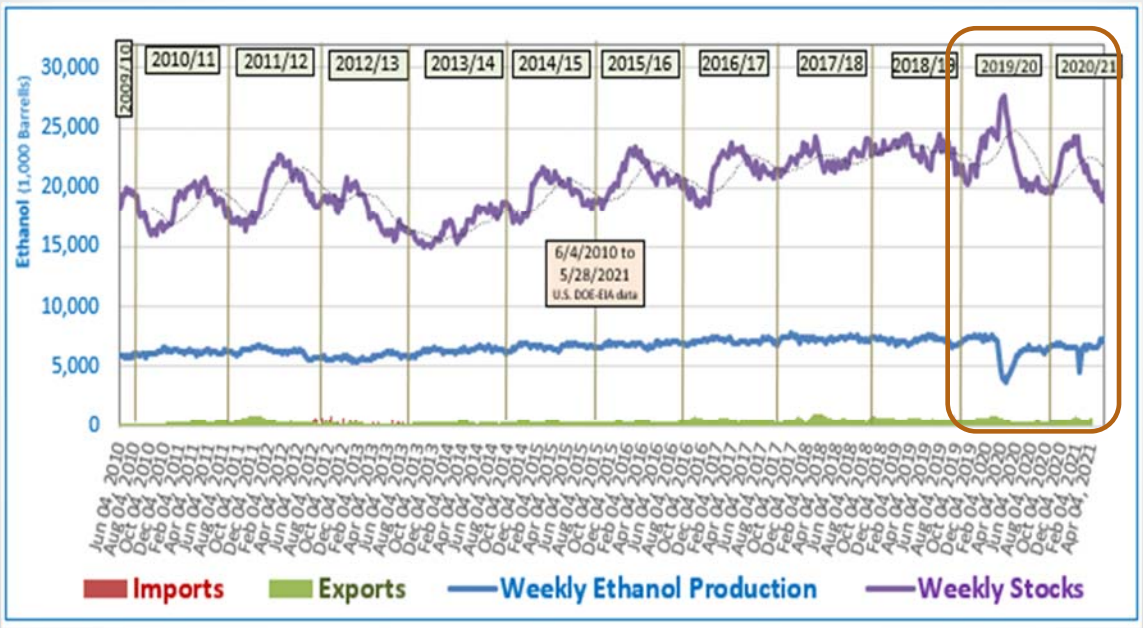


U.S. Ethanol Production & Corn Use

Weekly EIA ethanol data & KSU corn use est's. (6/4/2010 thru 5/28/2021)

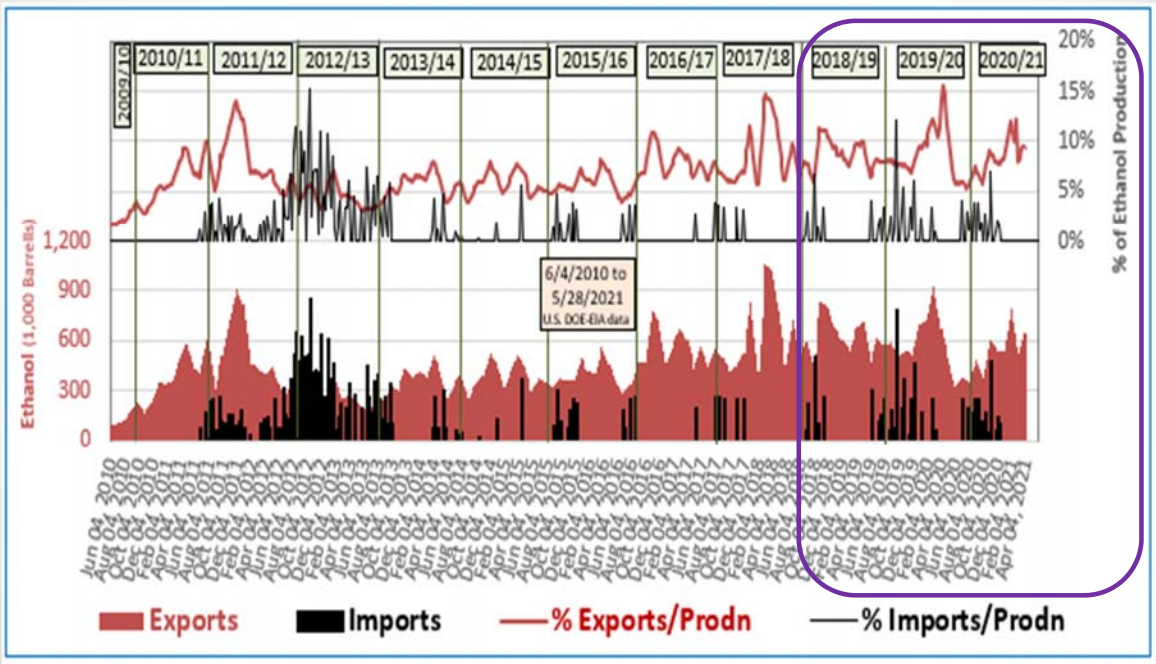


Weekly U.S. Ethanol Production, Imports, Exports & Stocks (thru 5/28/2021)



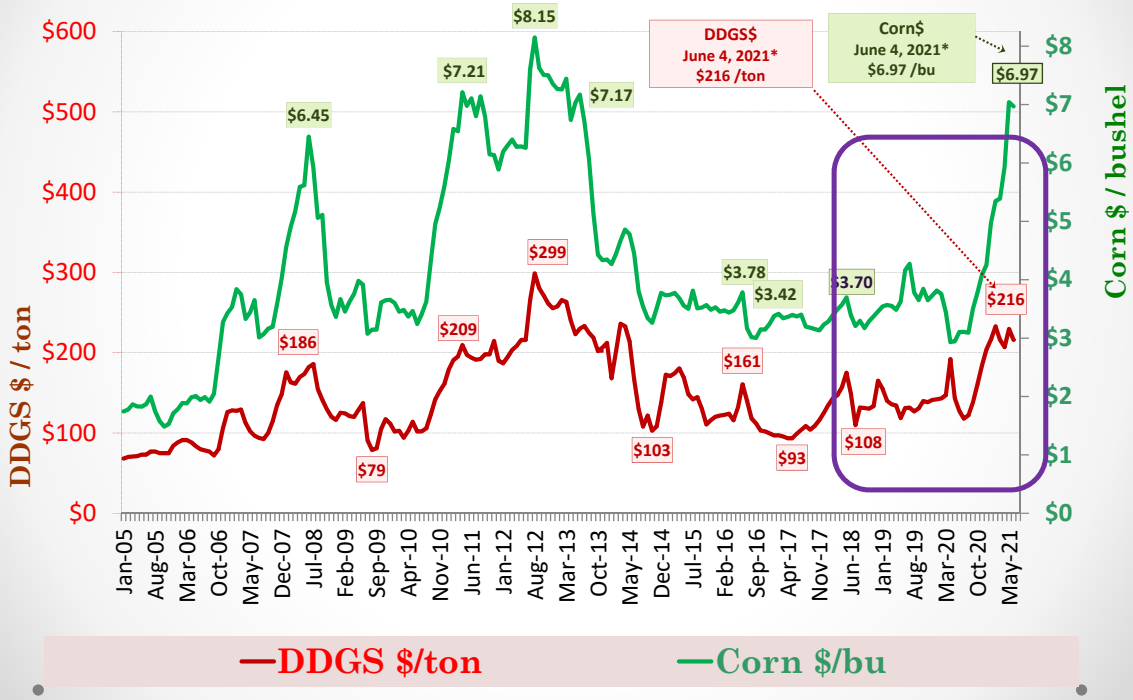
U.S. Ethanol

Weekly Imports, Monthly Exports & their %-of-Stocks (thru 5/28/2021)



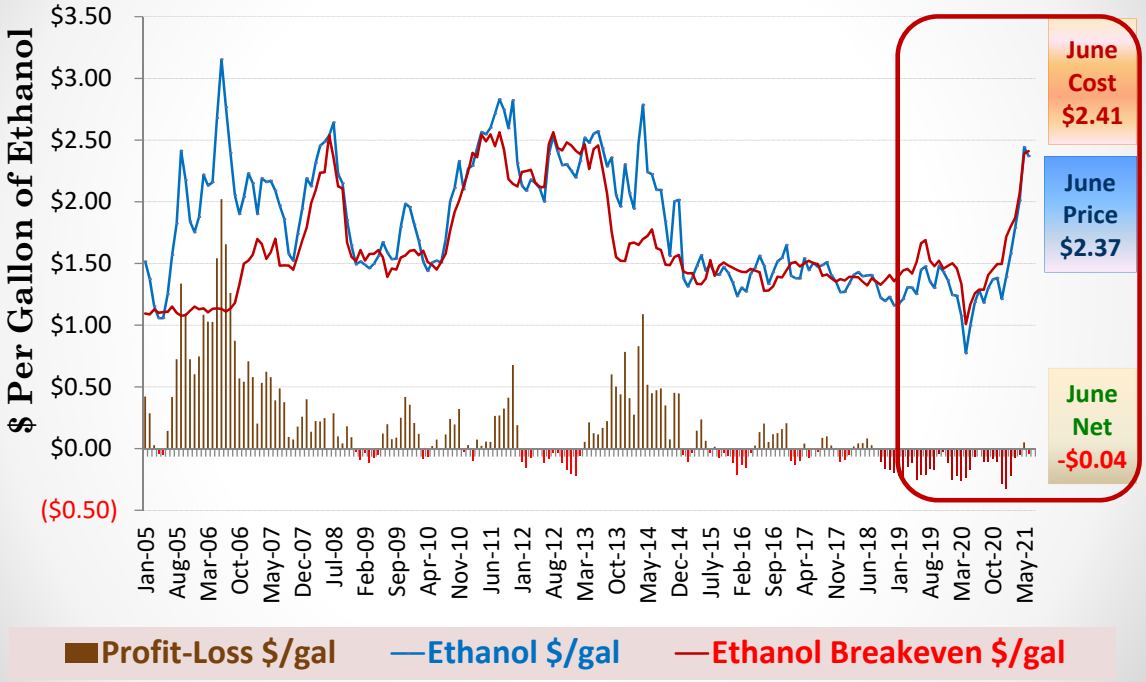
Ethanol DDGS & Corn Input Prices

ISU Ethanol Plant Model (January 2005 – May 28, 2021)



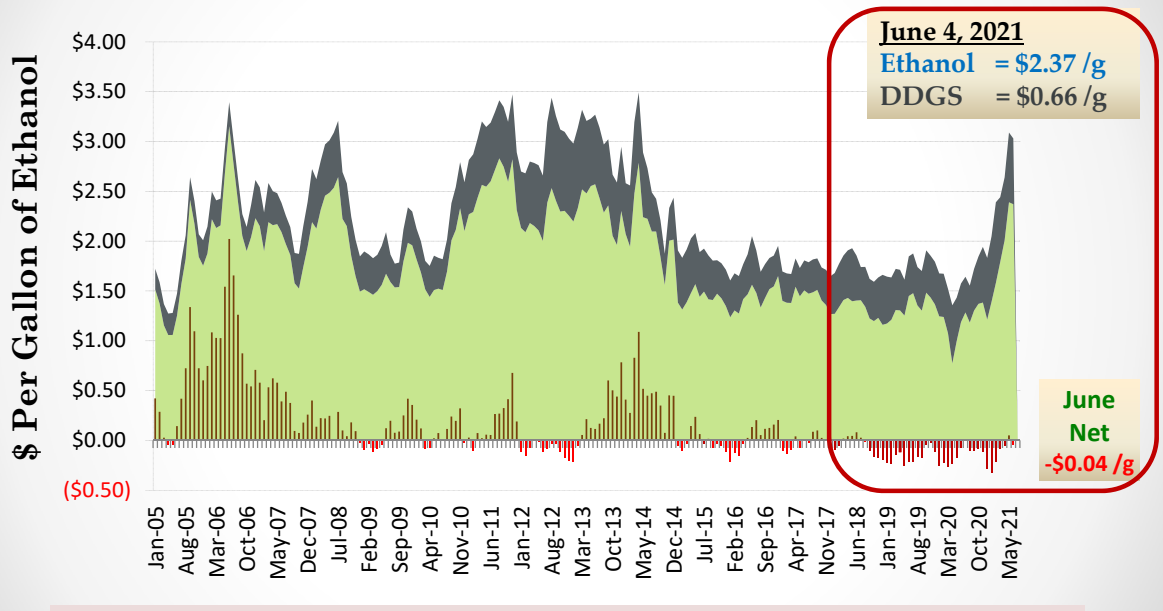
Ethanol Price, Cost & Profits

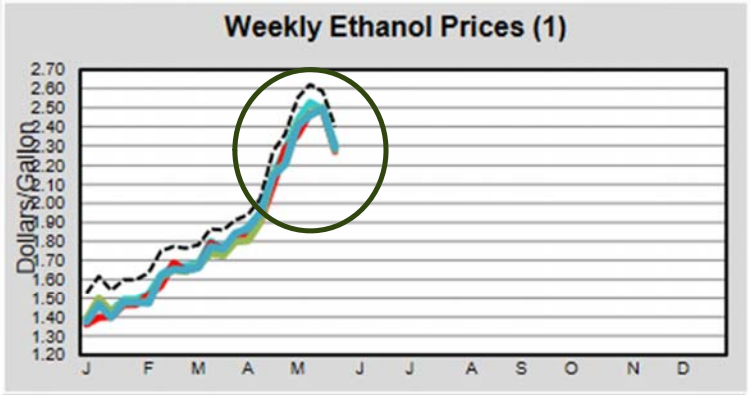
ISU Ethanol Plant Model (January 2005 – June 4, 2021)

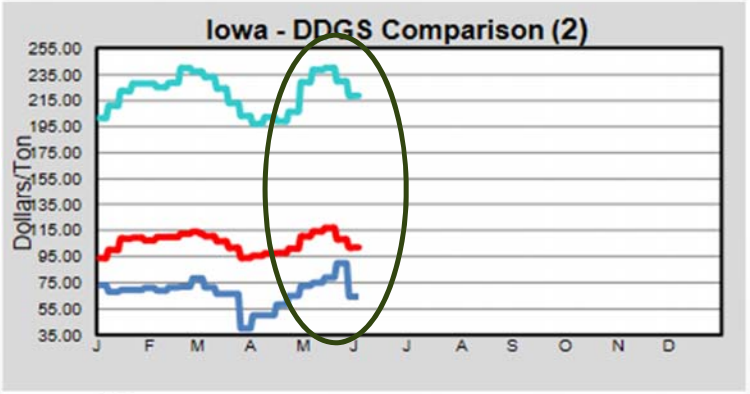


Ethanol Revenues & Net Returns

ISU Ethanol Plant Model (January 2005 – June 4, 2021)







(1) IA NE ECB SD KS
(2) Dried Modified Wet

Questions?

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