

# Feedgrain Markets – Basis Issues

## 2022 Limited Irrigation Corn Management Field Day

Colby, Kansas

September 13, 2022

DANIEL O'BRIEN

EXTENSION AGRICULTURAL ECONOMIST

**KANSAS STATE**  
UNIVERSITY

Department of Agricultural Economics



## Market Perspective

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## Grain Market Outlook <sup>2022-2023</sup> in Kansas, the U.S. & Globally

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### 1) “Tight!!!!” Global Grain & Oilseed Stocks in 2022-2023

- *The importance of South America’s 2023 soybean & corn crops*
- “*Little – No*” margin for 2023 shortfalls among global wheat producers

### 2) Corn Production damage in the Western-Central Plains in 2022

- *Western Kansas / OK / TX / NE – Corn Basis strength* <sup>Historic++</sup>
- Damaged **2022 U.S. Corn Production** –  $\geq 13.944$  billion bu???

## Grain Market Outlook <sup>2022-2023</sup> .....

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### 3) Continuance of dry La Nina Weather Pattern in 2022-2023???

- “*Chances for La Nina are expected to gradually decrease from 86% to 60% during Dec-Feb 2022-2023*” *Reuters August 11, 2022*
- “A rare 3-peat La Nina is expected this winter.” *Weather Science 8/12/2022*

### 4) Continued high 2023 Fertilizer & other Crop Input Costs?

- *High natural gas & logistics costs, w. supply-chain challenges*
- May continue to limit **2023 U.S. Corn Acres** –  $\approx 89 - 90$  million???

### 5) U.S. HRW Winter Wheat Seedings <sup>Fall 2022</sup> for Harvest <sup>2023</sup>

- **Key:** Soil Moisture prospects in the Central-Southern Plains <sup>Sep-Oct 2022</sup>
- **Likely:** Strong Crop Revenue Insurance Planning Prices, + other factors

### 6) Impact of Ongoing & Possible Geopolitical Conflicts 2022-2023

- *Ukraine-Russia War????: Prospects for de-escalation & grain trade?*
- **China-Taiwan???** - If happens, would impact global economy & U.S. grain trade (*U.S. soybeans, grain sorghum, likely all ag commodities*)

### 7) U.S./Foreign Ag response in 2023 to current grain prices?

- **Crop Acres?** Normally, ↑ prices → ↑ crop acres, BUT ALL \$'s are ↑
- **Crop Costs?** IF *high* fertilizer & other crop costs, limits Corn Acres<sup>Global</sup>
- **Rationing Grain Use:** Evidence of this in the September WASDE #s

### 8) Reasons for High Grain Prices in Spring 2022?

- *#1: Ukraine-Russia War;*
- *#2: Delayed plantings in the Northern Plains*

### 7) Overall Prospects for 2023 Grain Markets???

- Grain Prices supported @ High Levels – *until* grain markets are confident of larger crops & likely rebuilding of stocks
  - Both “2022/23 Old Crop Cash \$’s” & “2023/24 New Crop Forward Bids” vulnerable to declines in late Spring – Summer<sup>2023</sup> into 2023 Fall harvest
- Ukraine-Russia War: Continued impact on World grain markets ?????
- Impact of South America Crop Development: Brazil & Argentina crop prospects to drive U.S. price volatility during Jan-August 2023

## What to anticipate: Fall 2022 – Year 2023

### □ South America Planting Influences ⇒ “*Bid for Acres*”

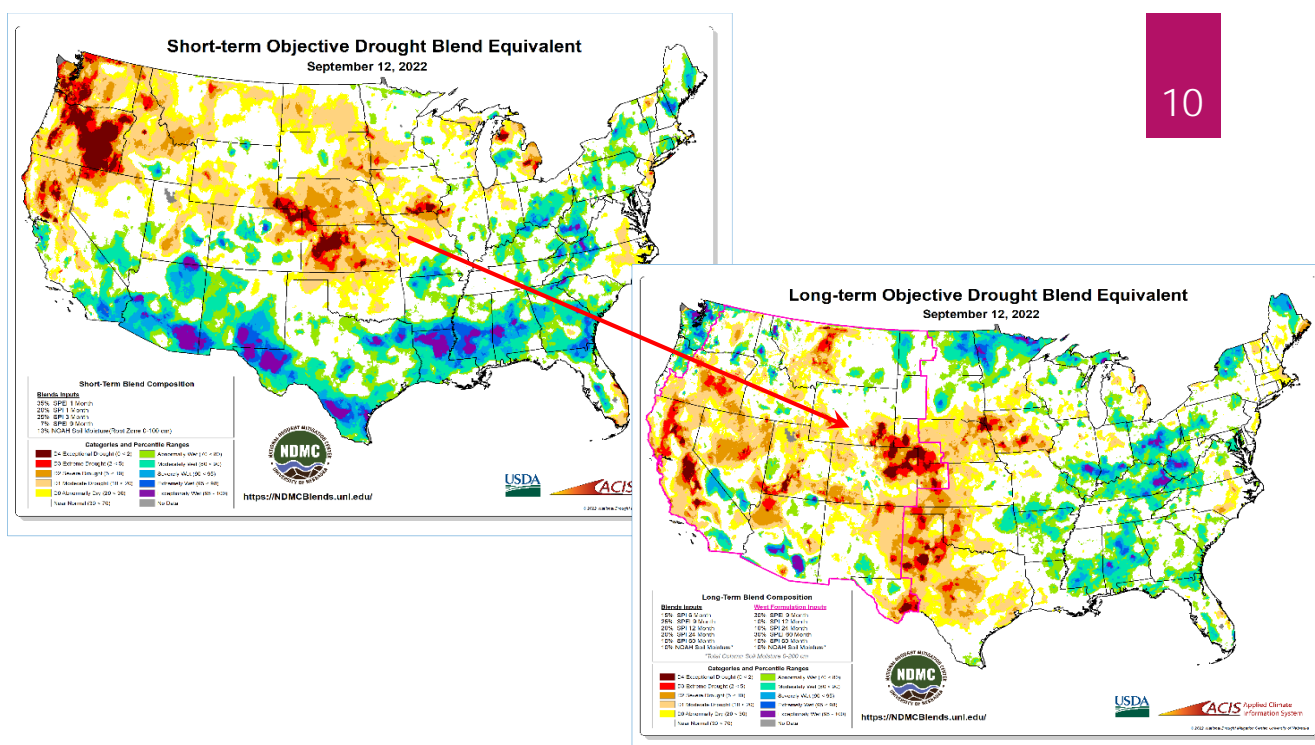
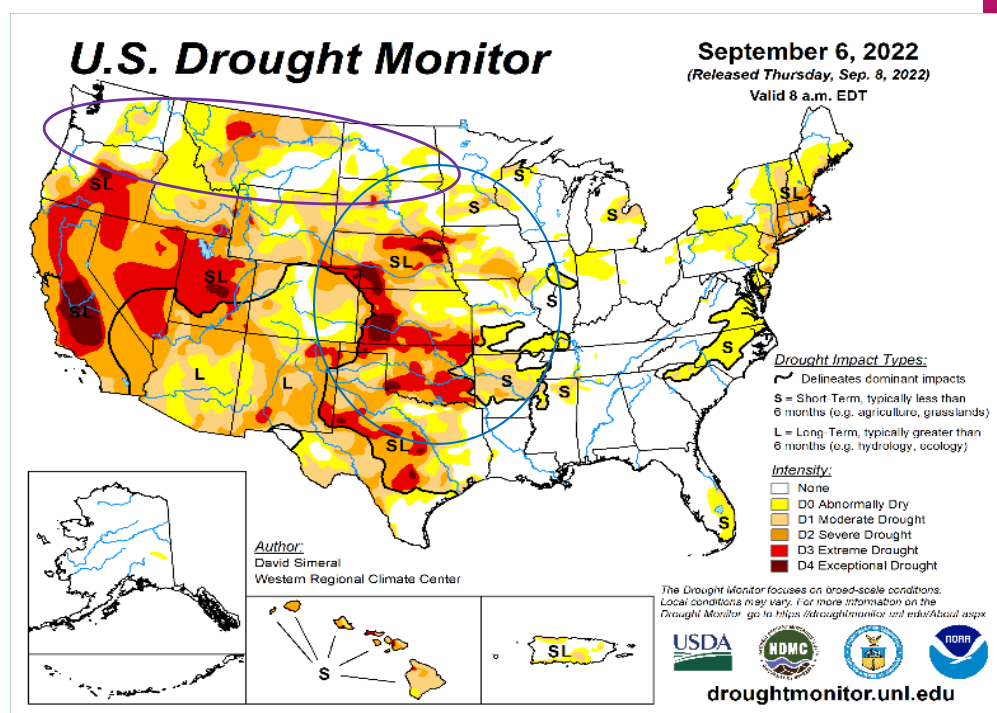
#### • Brazil & Argentina Corn & Soybean Crop Calendar

##### ○ Brazil

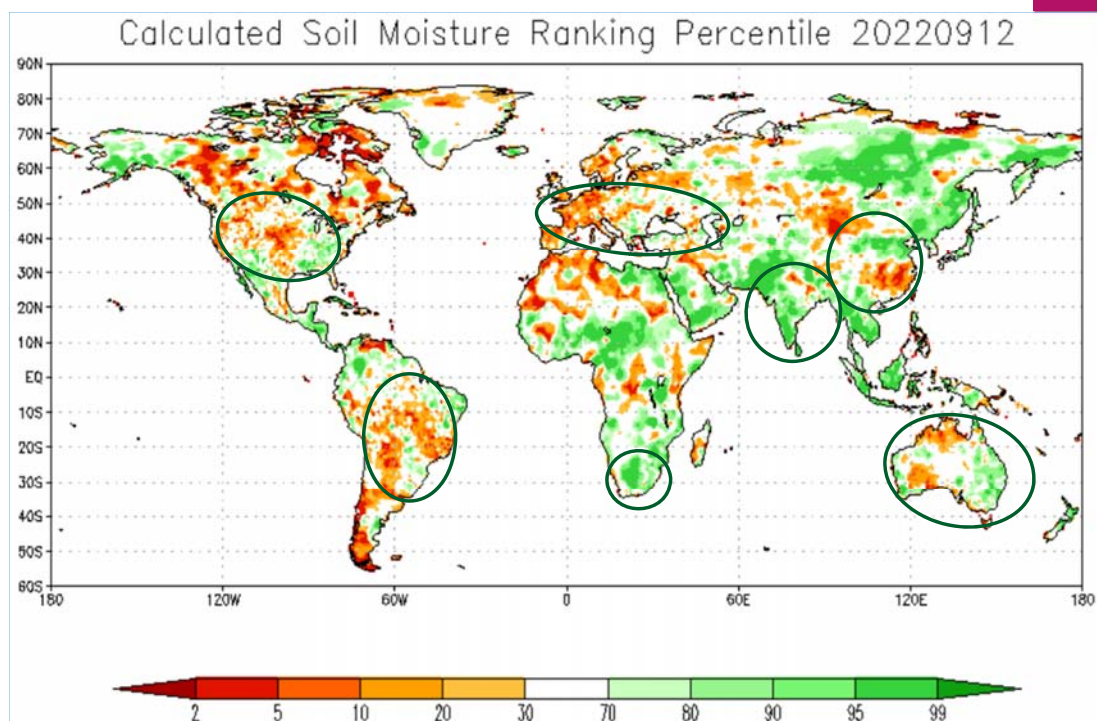
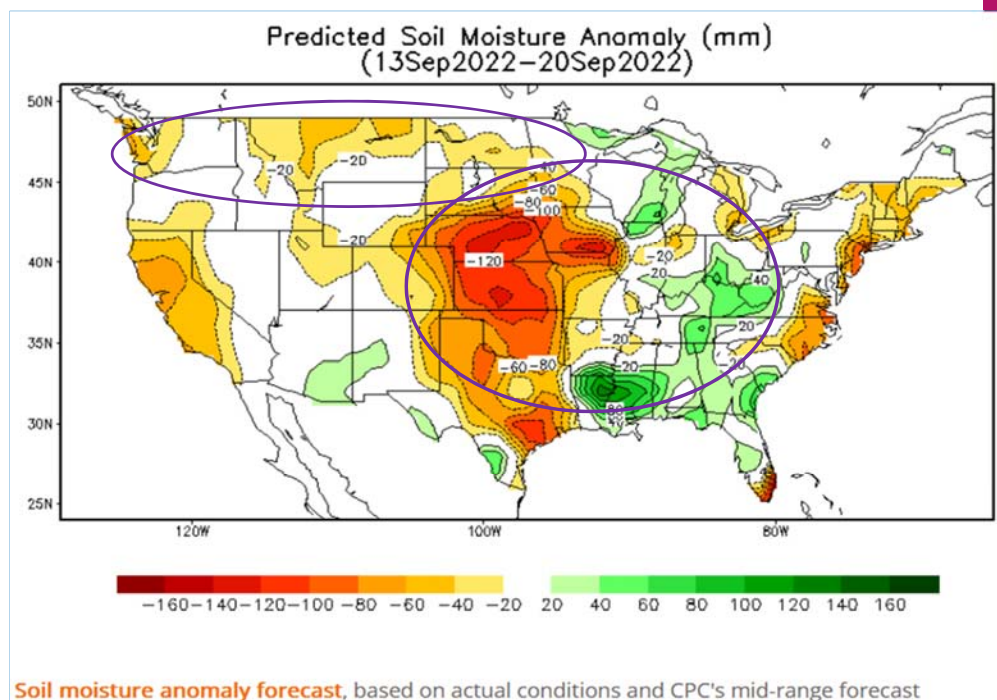
- |   |                                  |
|---|----------------------------------|
| ▪ <u>Corn</u> : 1 <sup>st</sup> crop <i>Planting</i> – October-December | ⇒ <u>Harvest</u> : February-June |
| ▪ <u>Soybeans</u> : <i>Planting</i> – October-December                  | ⇒ <u>Harvest</u> : March-June    |
| ▪ <u>Corn</u> : 2 <sup>nd</sup> crop <i>Planting</i> – January-February | ⇒ <u>Harvest</u> : March-June    |

##### ○ Argentina

- |  |   |
|--|---|
| ▪ <u>Corn</u> : <i>Planting</i> – mid September-December                       | ⇒ <u>Harvest</u> : mid March-early June |
| ▪ <u>Soybeans</u> : 1 <sup>st</sup> crop <i>Planting</i> – November-December   | ⇒ <u>Harvest</u> : Late March-early May |
| ▪ <u>Soybeans</u> : 2 <sup>nd</sup> crop <i>Planting</i> – December-early Jan. | ⇒ <u>Harvest</u> : mid April – mid June |







# Corn Markets

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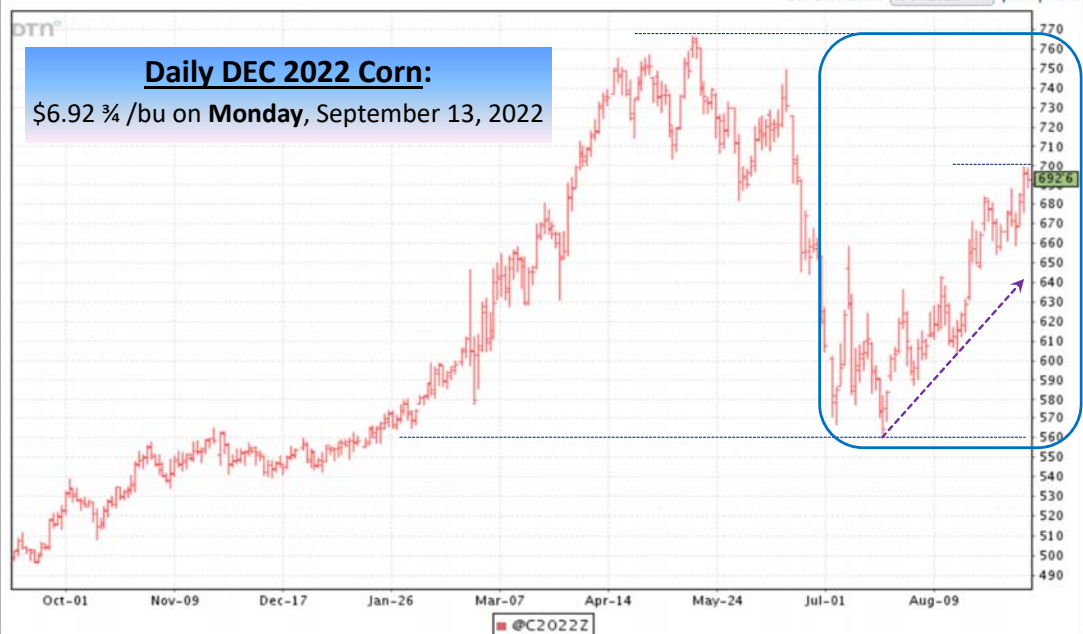
Department of Agricultural Economics

ELEC. CORN (@C2022Z)

Symbol Search | Symbol Lookup

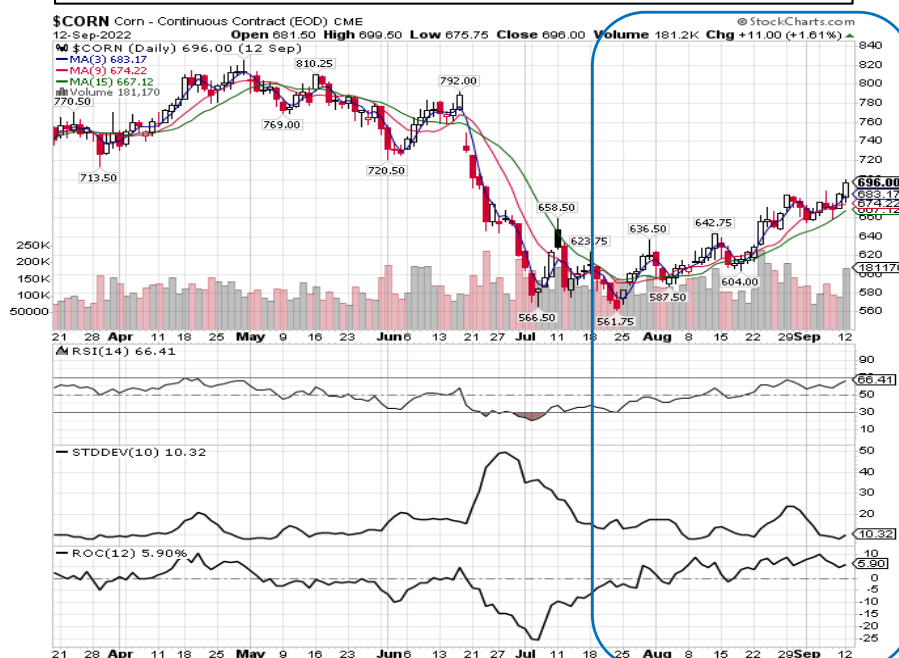
Historical Chart | Chart | Options | Futures Chain | Spread Matrix

Current Month: Dec 2022 prev next



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## Daily Continuous CME Corn Futures



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## Kansas Cash & Futures Prices

Date						
9/13/2022 (Closing Mkts)						
Grain Futures Contracts	Closing \$					
DEC 2022 Corn <sup>(2022 Harvest contract)</sup>	\$6.9275					
DEC 2023 Corn <sup>(2023 Harvest Contract)</sup>	\$6.3300					
9/13/2022 (Closing Mkts)	Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators					
	Representing the highest bids available at each location					
Cash Market Spot & FC Bids	Colby	Salina	Topeka	Garden City	Hutchinson	Columbus <sup>Area</sup>
	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
Corn Spot Cash\$	\$7.83	\$7.83	\$7.38	\$8.18	\$7.93	\$7.73
Corn Spot Cash Basis	\$0.90	\$0.90	\$0.45	\$1.25	\$1.00	\$0.80
Corn Harvest FC\$: Fall <sup>2023</sup>	\$6.08		\$6.03	\$6.08	\$6.43	\$6.03
Corn Harvest FC\$ Basis	(\$0.25)		(\$0.30)	(\$0.25)	\$0.10	(\$0.30)

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## Corn Cash Bids

near Hereford, Texas

on  
Tuesday, Sept. 13, 2022

### My DTN Cash Bids for Postal Code 79045, Radius 300 miles

Currency/Units: USD/BU

[Recalculate](#)

[View Cash Bids Overview](#)

Elevator/Location	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Oct 2023
ATTEBURY GRAIN-BLACK FRIONA, TX	8.28	8.28	---	---	---
NORAG FLAGG, TX	7.13	---	---	---	---
SKYLAND GRAIN BUSHLAND, TX	---	8.38	---	8.38	---
NORAG HART, TX	7.13	---	---	---	---
ATTEBURY GRAIN AMARILLO, TX	7.28	8.28	---	---	---
ATTEBURY GRAIN TULIA, TX	8.23	8.23	---	---	---
SKYLAND GRAIN OLTON, TX	---	8.38	---	8.38	---
ATTEBURY GRAIN LLC EDMONSON, TX	8.28	8.28	---	---	---
SKYLAND GRAIN HARTLEY, TX	---	8.38	---	8.38	---
SKYLAND GRAIN PANHANDLE, TX	---	8.38	---	8.38	---
DUMAS COOP DUMAS, TX	8.18	8.18	---	---	---
DUMAS COOP-MWELL DUMAS, TX	8.28	8.28	---	---	---

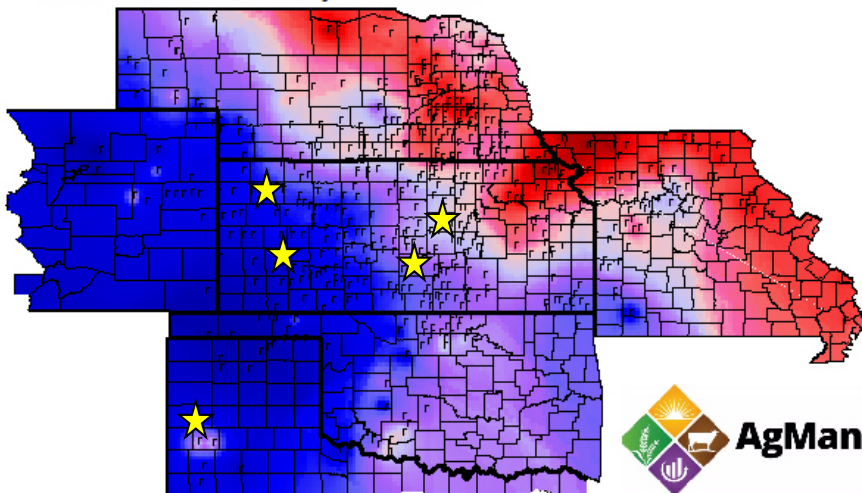
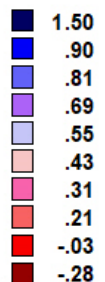
17

## Corn Basis, 09-07-2022

Basis = Cash Price - Nearby Futures Price

CBT Dec  
Futures  
Price: \$6.71

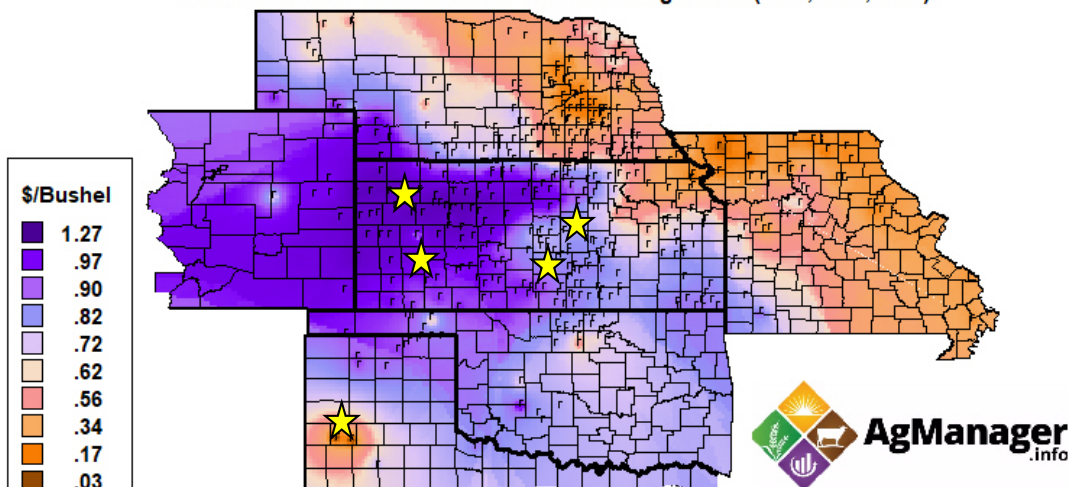
\$/Bushel



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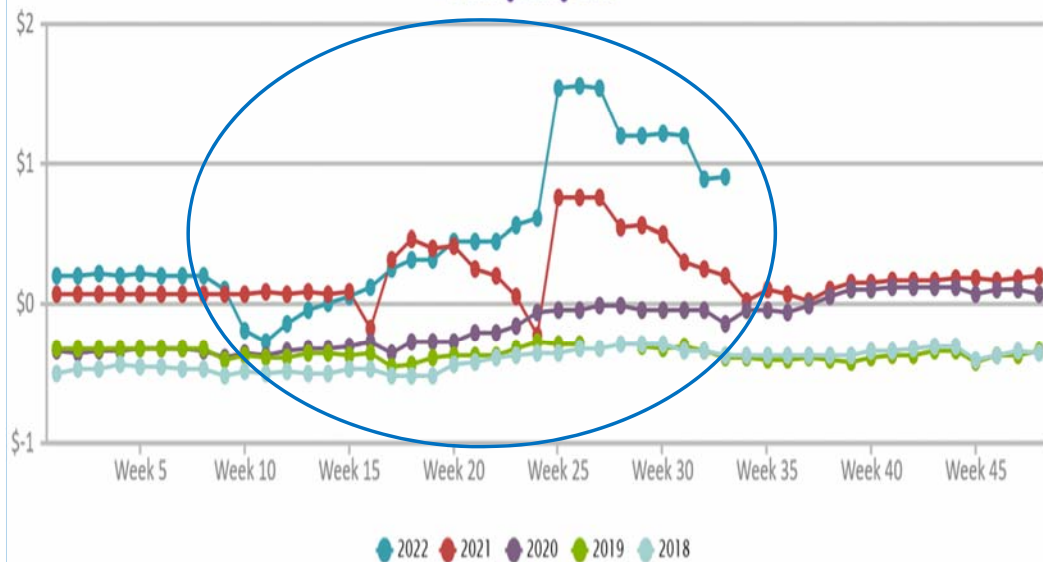
## Corn Basis Deviation, 09-07-2022

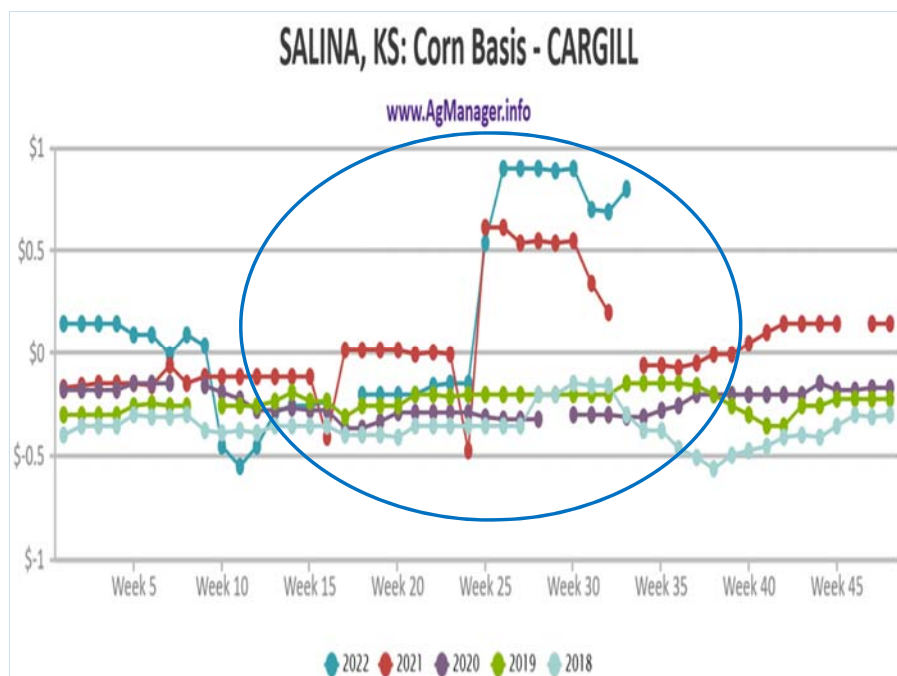
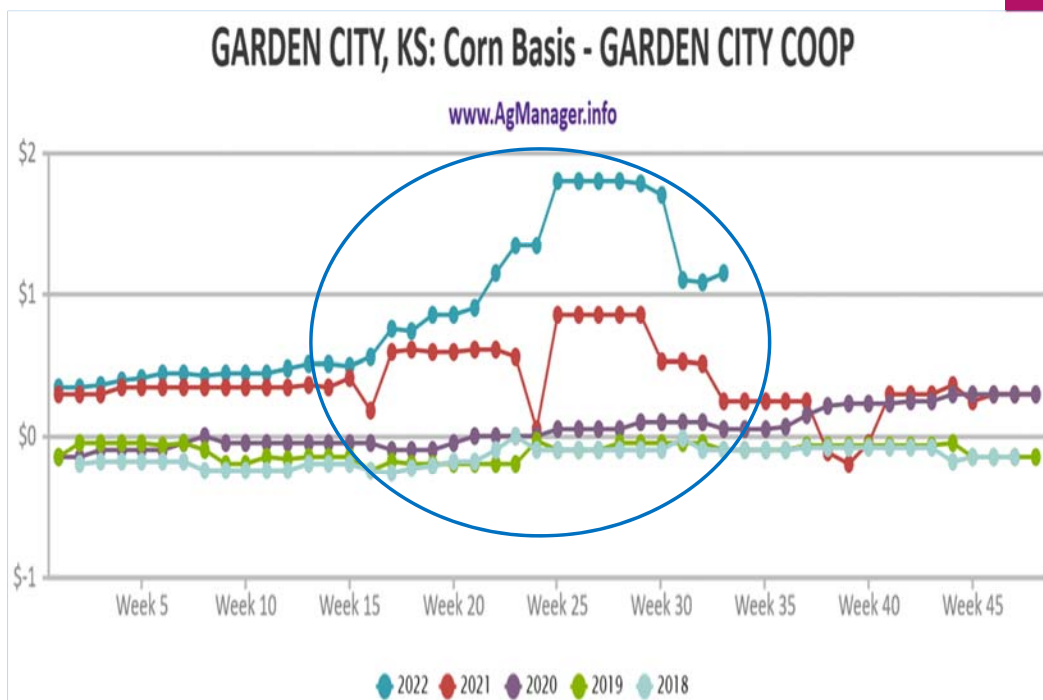
Basis Deviation = Current Basis - 3 Year Average Basis (2019, 2020, 2021)

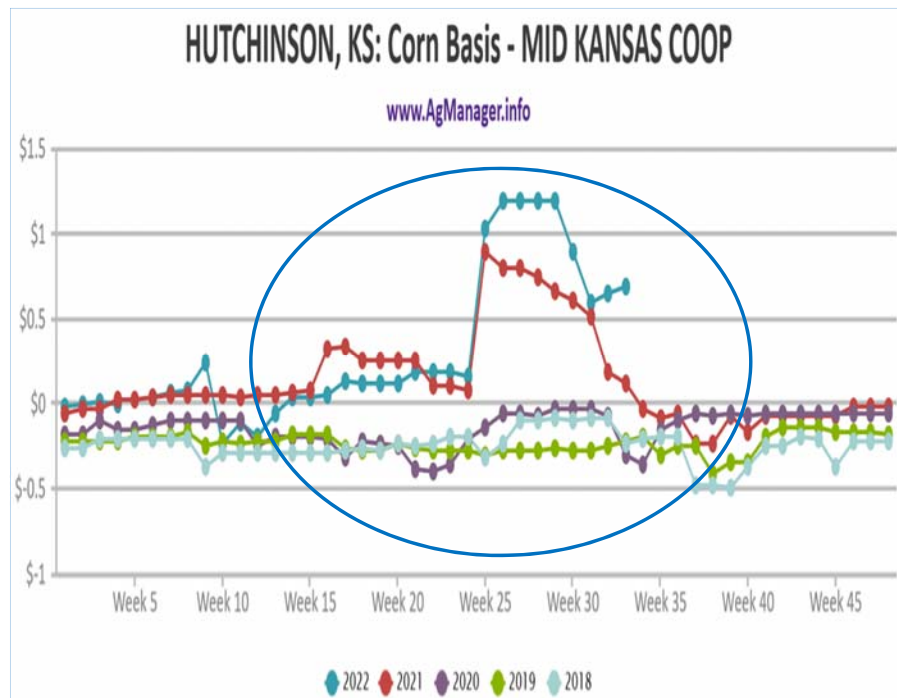


## COLBY, KS: Corn Basis - CORNERSTONE AG

[www.AgManager.info](http://www.AgManager.info)







## U.S. Corn Supply and Demand

Item	2021/2022		2022/2023		
	Estimate	Change from August 12	Forecast	Change from August 12	Change from 2021/2022
Planted area (million acres)	93.4	--	88.6	-1.2	-4.7
Harvested area (million acres)	85.4	--	80.8	-1.0	-4.5
Yield (bushels per acre)	177.0	--	172.5	-3.0	-4.5
----- Million bushels -----					
Beginning stocks	1,235	--	1,525	-5	290
Production	15,115	--	13,944	-415	-1,171
Imports	25	--	25	--	--
Total supply	16,375	--	15,494	-420	-881
Feed and residual	5,600	--	5,225	-100	-375
Food, seed, and industrial	6,775	-20	6,775	-50	--
Ethanol	5,330	-20	5,325	-50	-5
Domestic use	12,375	-20	12,000	-150	-375
Exports	2,475	25	2,275	-100	-200
Total use	14,850	5	14,275	-250	-575
Ending stocks	1,525	-5	1,219	-170	-306
----- Percent -----					
Stocks to use ratio	10.3	**	8.5	-1.0	-1.7
----- Dollars per bushel -----					
Average market price	5.95	--	6.75	0.10	0.80

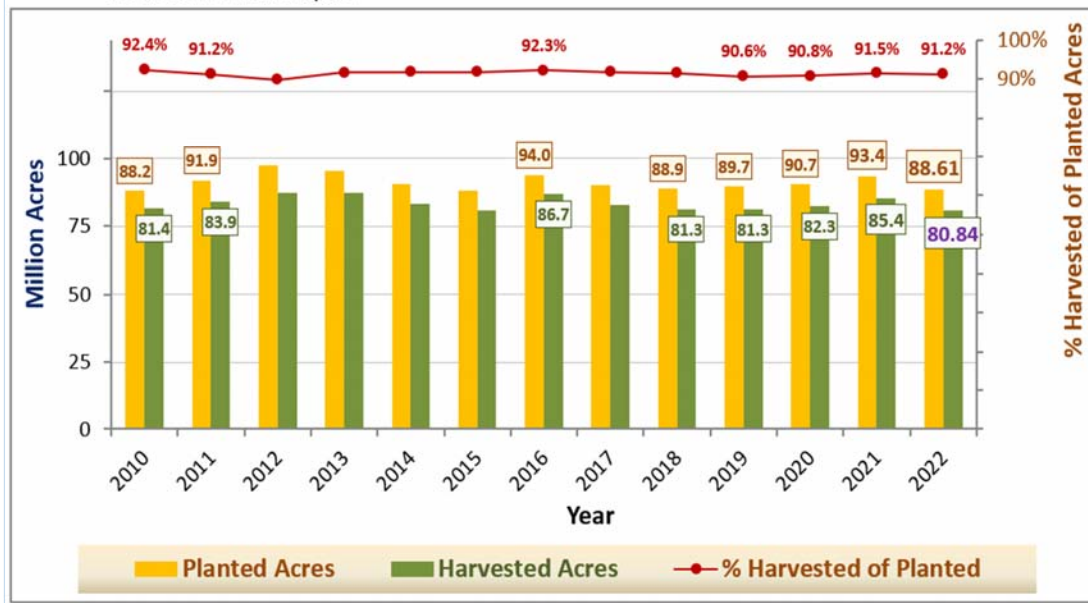
-- No change. \*\* Rounds to zero.

September 12, 2022



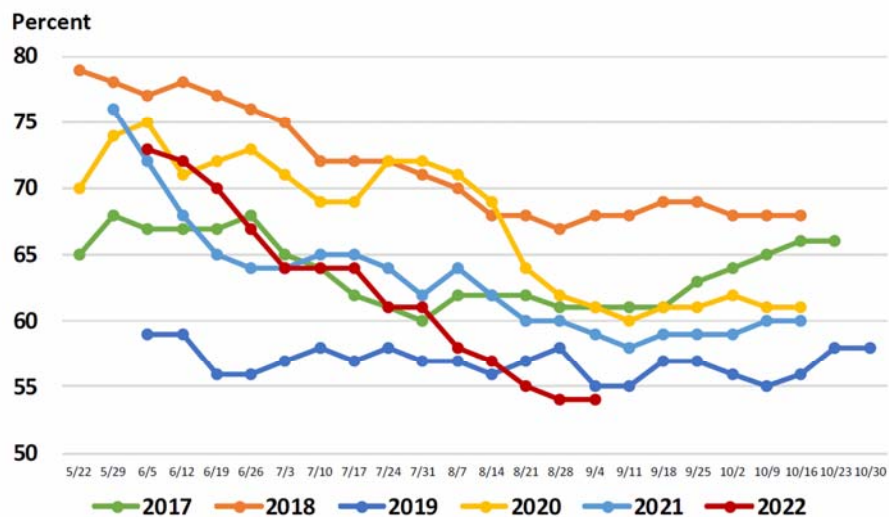
## U.S. Corn Acreage for Years 2010-2022 as of the September 12,

2022 USDA WASDE Report



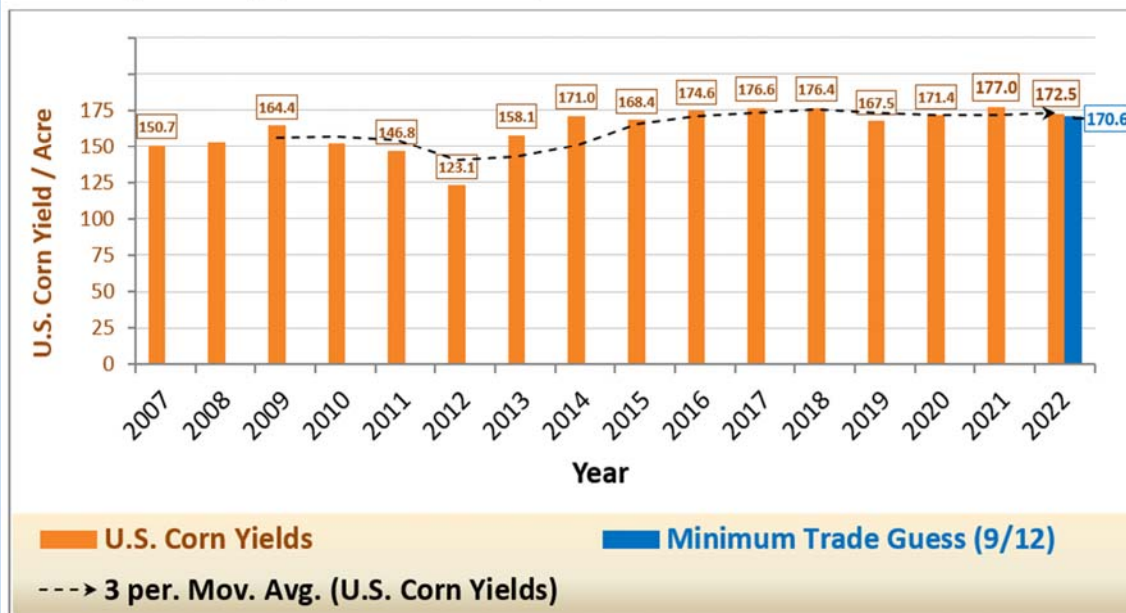
## United States Corn Condition

### Percent Rated Good to Excellent



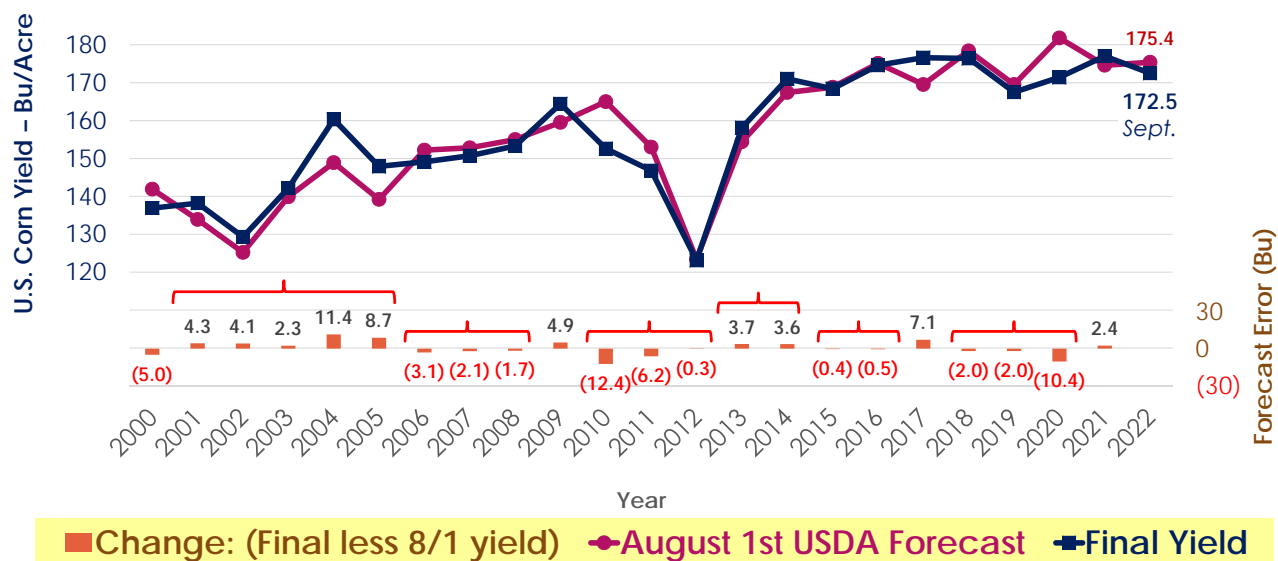
## U.S. Corn Yields for 2007-2022 as of the September 12, 2022 USDA World

Agricultural Supply and Demand Estimates Report



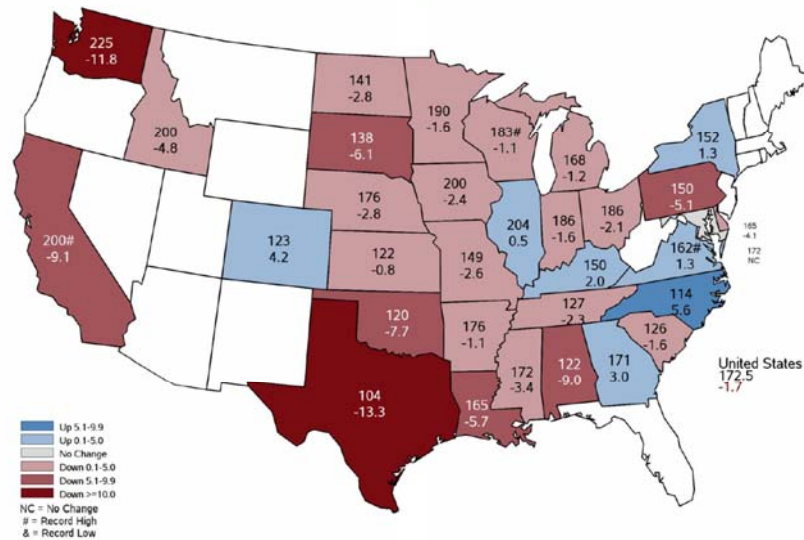
## U.S. Corn Yields: 2000-2022

Final\*\* Accuracy of August 1<sup>st</sup> USDA Forecasts



## September 2022 Corn Yield

Bushels and Percent Change from Previous Month

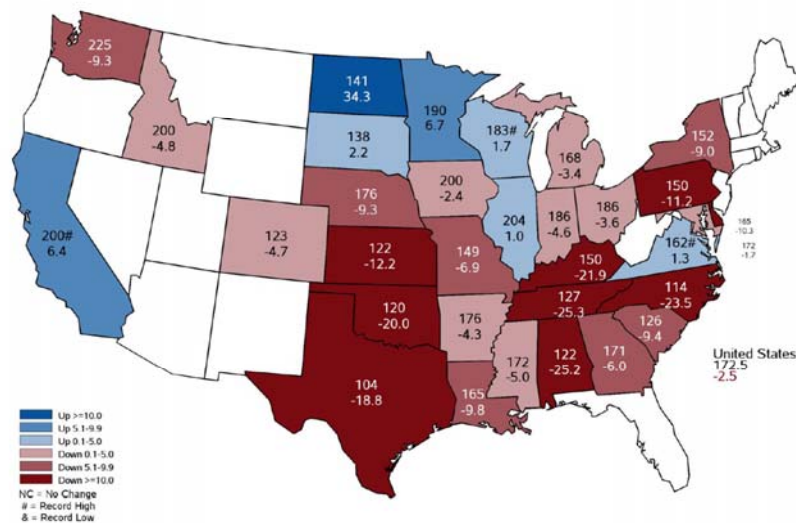


**United States Department of Agriculture**  
**National Agricultural Statistics Service**

September 12, 2022

## September 2022 Corn Yield

Bushels and Percent Change from Previous Year



United States Department of Agriculture  
National Agricultural Statistics Service

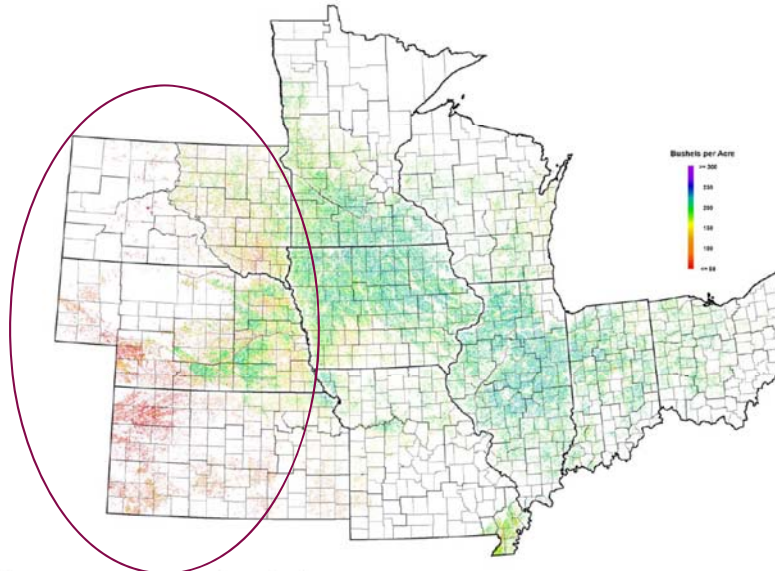
September 12, 2022



## September 2022 Corn NASA Terra MODIS Modeled Yield



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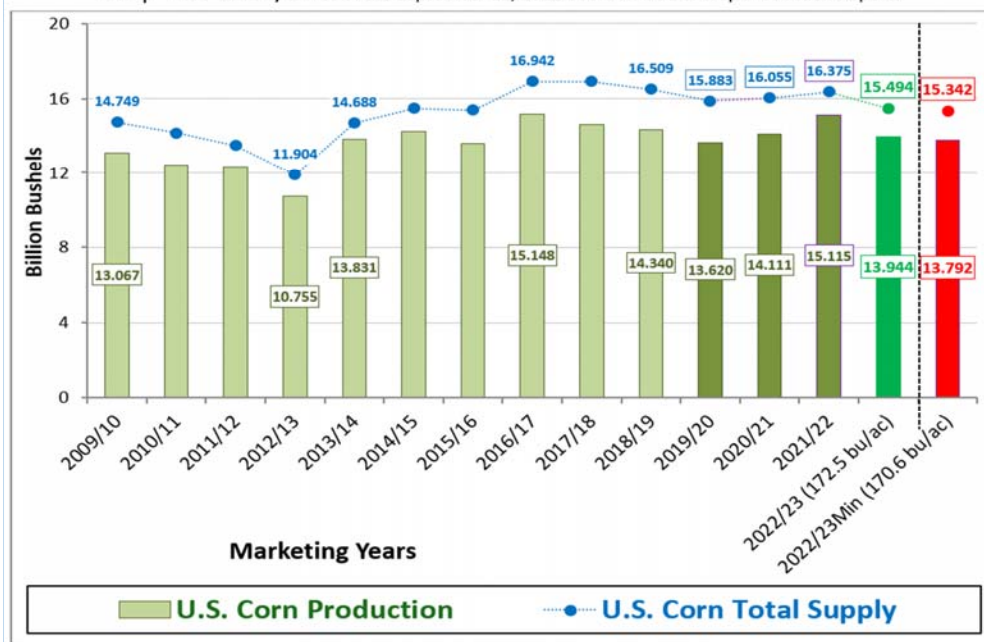


United States Department of Agriculture  
National Agricultural Statistics Service

September 12, 2022

## U.S. Corn Production & Total Supplies: MY 2009/10 - "New Crop" MY 2022/23 as of the September 12, 2022 USDA WASDE & Crop Production Reports

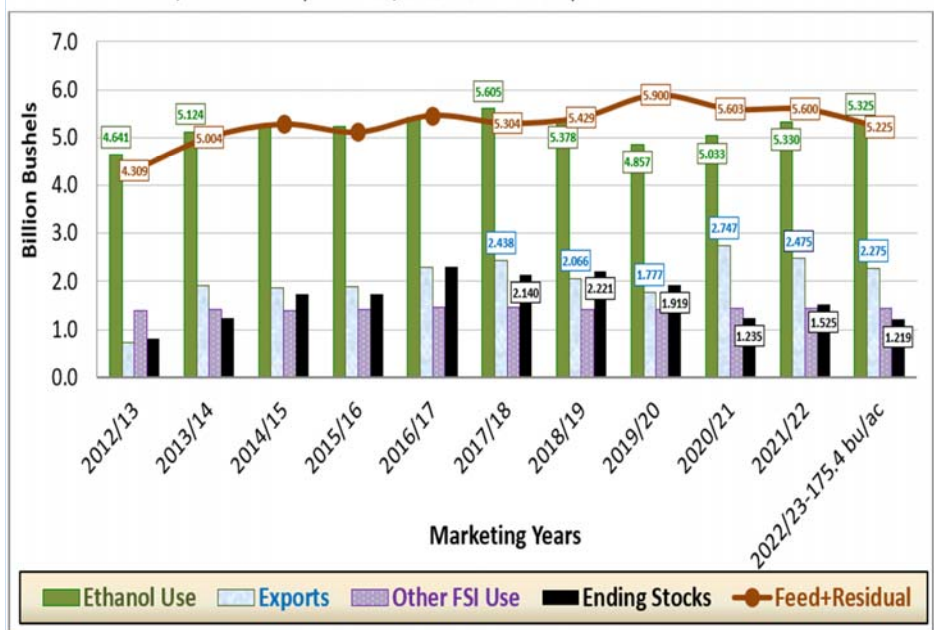
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## U.S. Corn Use & Ending Stocks: MY 2012/13 through Projected "New Crop"

MY 2022/23 as of the September 12, 2022 USDA WASDE report



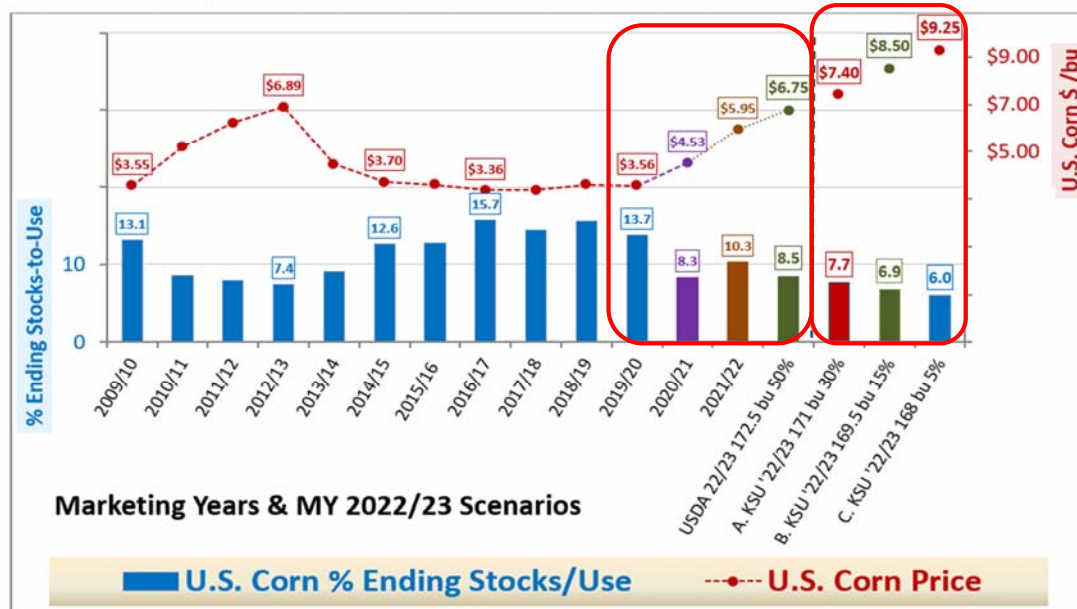
## U.S. Corn Supply-Demand Balance Sheet: Projected "New Crop" MY 2022/23 as of the

September 12, 2022 USDA WASDE report, with Alternative KSU "New Crop" 2022/23 Marketing Year Scenarios

Item	USDA 2022/23 9/12/2022 WASDE 172.5 bu/ac 13.994 bb crop	A. KSU "New Crop" MY 2022/23 Scenario #1 "Lower Yields" = 171.0 bu/ac 13.824 bb crop	B. KSU "New Crop" MY 2022/23 Scenario #2 "Much Lower Yields" = 169.5 bu/ac 13.703 bb crop	C. KSU "New Crop" MY 2022/23 Scenario #3 "Major Drought Yields" = 168.0 bu/ac 13.582 bb crop
% Probability of Occurring (KSU)	50% <sup>KSUest</sup>	30% <sup>KSUest</sup>	15% <sup>KSUest</sup>	5% <sup>KSUest</sup>
Planted Area (million acres)	88.608	88.608	88.608	88.608
Harvested Area (million acres)	80.844	80.844	80.844	80.844
% Harvested/Planted Area	91.24%	91.24%	91.24%	91.24%
Yield / harvested acre (bu/ac)	172.5	171.0	169.5	168.0
Million Bushels				
Beginning Stocks (million bushels)	1,525	1,525	1,525	1,525
Production (million bu.)	13,944	13,824	13,703	13,582
Imports (million bu.)	25.0	25	25	25
Total Supply (million bu.)	15,494	15,374	15,253	15,135
Ethanol for fuel Use (million bu.)	5,325	5,325	5,375	5,375
Food & Industrial Use (mln bu.)	1,419.4	1,419.4	1,419.4	1,419.4
Seed Use (million bu.)	30.6	30.6	30.6	30.6
Exports (million bu.)	2,275	2,275	2,275	2,275
Feed & Residual Use (million bu.)	5,225	5,225	5,225	5,225
Total Use (million bu.)	14,275	14,275	14,275	14,275
Ending Stocks (million bu.)	1,219	1,099	978	860
% Ending Stocks-to-Use	8.54%	7.70%	6.85%	6.02%
Days of Supply (% S/U x 365 days)	31.2 days	28.1 days	25.0 days	22.0 days
U.S. Corn Average Farm Price (\$/bushel)	\$6.75 <sup>USDA</sup> vs \$7.14 <sup>KSU Futures</sup>	\$7.40 /bu vs \$7.14 <sup>KSU Futures</sup>	\$8.50 /bu vs \$7.14 <sup>KSU Futures</sup>	\$9.25 /bu vs \$7.14 <sup>KSU Futures</sup>

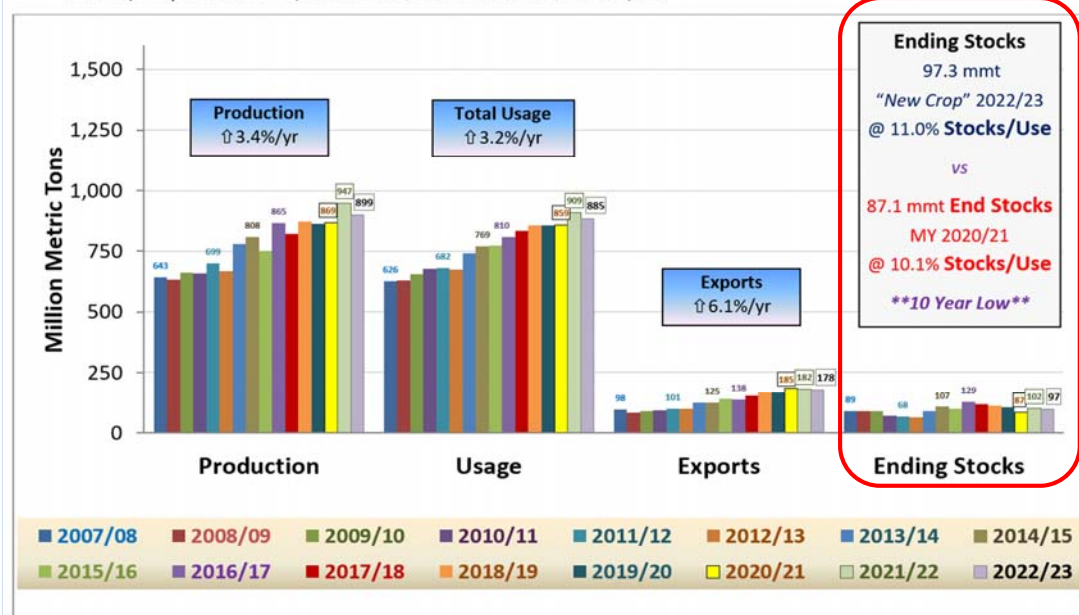
## U.S. Corn % End Stocks vs U.S. Corn \$'s: MY 2009/10 – “New Crop” MY 2022/23 as of the September 12, 2022 USDA WASDE report + KSU Scenarios

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## “World Less-China” Corn Supply-Demand: MY 2007/08 – “New Crop” MY 2022/23, as of the September 12, 2022 USDA WASDE Report

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## World vs "World-Less-China" % Corn Stocks-to-Use:

MY 2007/08 through "New" MY 2022/23, as of the September 12, 2022 USDA WASDE report.



## Sorghum Markets

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Kansas Cash & Futures Prices						
Date						
9/13/2022 (Closing Mkts)						
Grain Futures Contracts		Closing \$				
DEC 2022 Corn (2022 Harvest contract)		\$6.9275				
DEC 2023 Corn (2023 Harvest Contract)		\$6.3300				
9/13/2022 (Closing Mkts) Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators						
Representing the highest bids available at each location						
Cash Market Spot & FC Bids	Colby	Salina	Topeka	Garden City	Hutchinson	Columbus <sup>Area</sup>
	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
Grain Sorghum Spot Cash\$	\$7.33	\$7.18	\$7.03	\$7.33	\$7.19	\$6.53
Sorghum Spot Cash Basis	\$0.40	\$0.25	\$0.10	\$0.40	\$0.26	(\$0.40)
Grain Sorghum Harvest FC\$ Fall <sup>2022</sup>	\$5.93		\$5.88	\$5.93		
Sorghum Harvest FC\$ Basis	(\$0.40)		(\$0.45)	(\$0.40)		

## Sorghum Cash Bids

near Hereford, Texas

on

Tuesday, Sept. 13, 2022

### My DTN Cash Bids for Postal Code 79045, Radius 300 miles

Currency/Units: USD/BU

[Recalculate](#)

[View Cash Bids Overview](#)

Elevator/Location	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Oct 2023
NORAG HEREFORD, TX	7.18	7.23	---	---	---
SKYLAND GRAIN BUSHLAND, TX	---	7.33	---	7.33	---
ATTEBURY GRAIN TULIA, TX	7.28	7.33	---	---	---
SKYLAND GRAIN OLTON, TX	---	7.38	---	7.38	---
ATTEBURY GRAIN LLC EDMONSON, TX	7.33	7.38	---	---	---
SKYLAND GRAIN HARTLEY, TX	---	7.33	---	7.33	---
SKYLAND GRAIN PANHANDLE, TX	---	7.33	---	7.33	---
SKYLAND GRAIN- CONWAY PANHANDLE, TX	---	7.33	---	7.33	---
SKYLAND GRAIN-ABELL PANHANDLE, TX	---	7.33	---	7.33	---
FARMERS CO OP ELEVATOR LITTLEFIELD, TX	6.98	---	---	---	---
SKYLAND GRAIN- ARROYO DALHART, TX	---	7.33	---	7.33	---
SKYLAND GRAIN PANHANDLE, KS	---	7.33	---	7.33	---



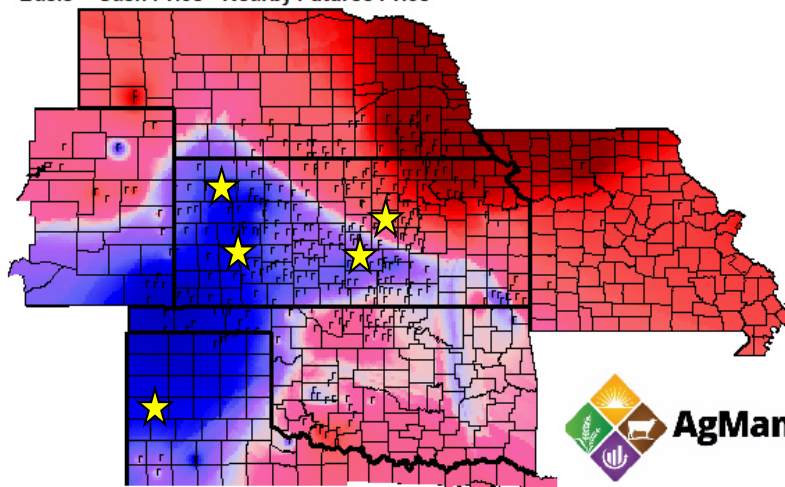
## Grain Sorghum Basis, 09-07-2022

Basis = Cash Price - Nearby Futures Price

CBT Corn  
Dec Futures  
Price: \$6.71

\$/Bushel

■	.53
■	.27
■	.20
■	.11
■	.06
■	.03
■	.01
■	-.16
■	-.34
■	-.54

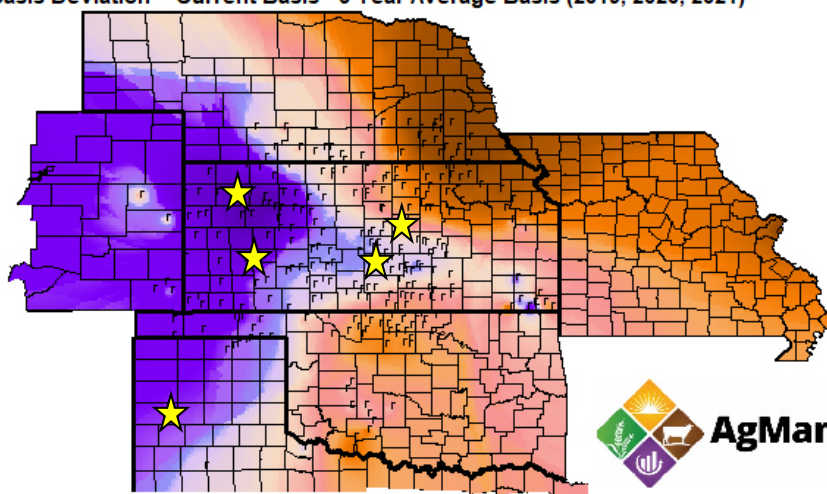


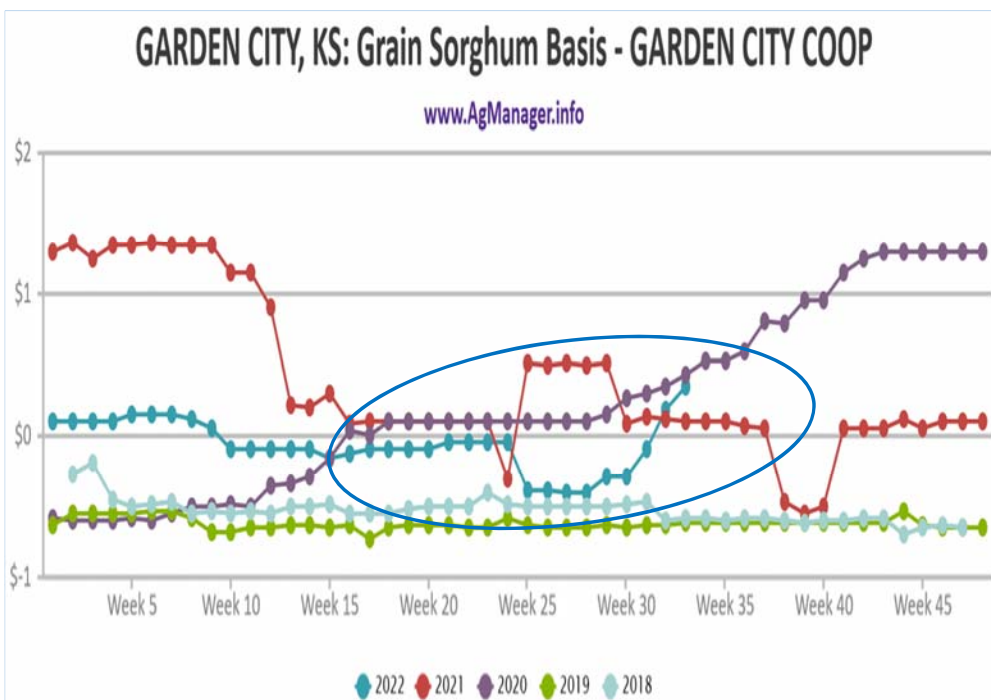
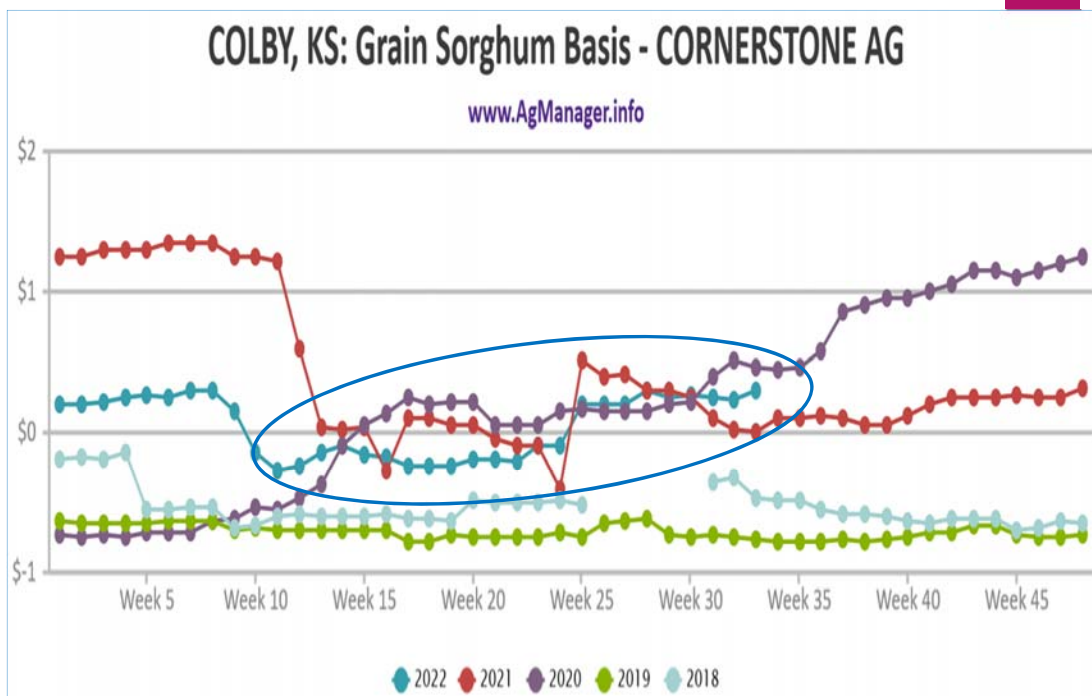
## Grain Sorghum Basis Deviation, 09-07-2022

Basis Deviation = Current Basis - 3 Year Average Basis (2019, 2020, 2021)

\$/Bushel

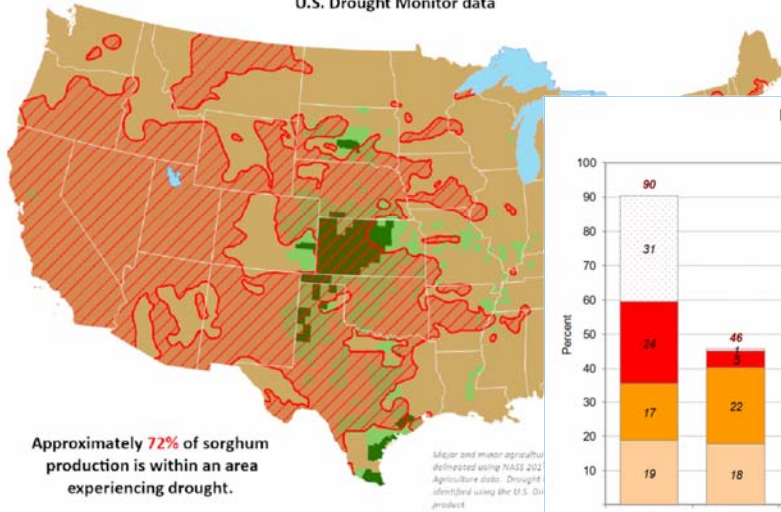
■	.56
■	.30
■	.29
■	.24
■	.23
■	.13
■	.02
■	-.05
■	-.13
■	-.50



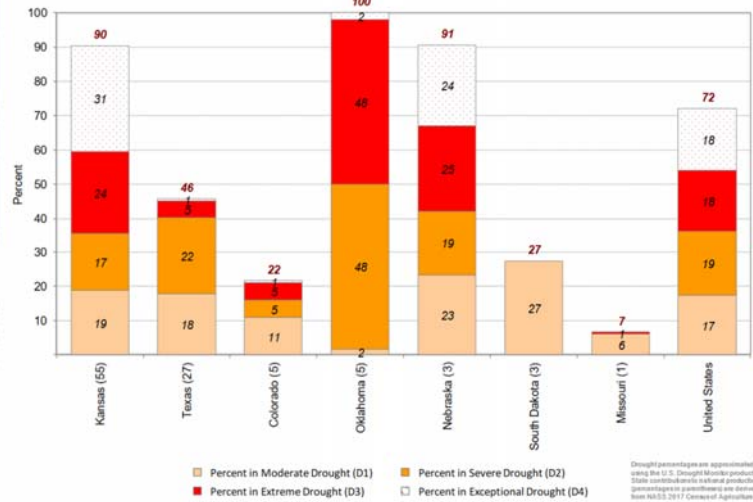


## Sorghum Areas in Drought

Reflects September 6, 2022  
U.S. Drought Monitor data



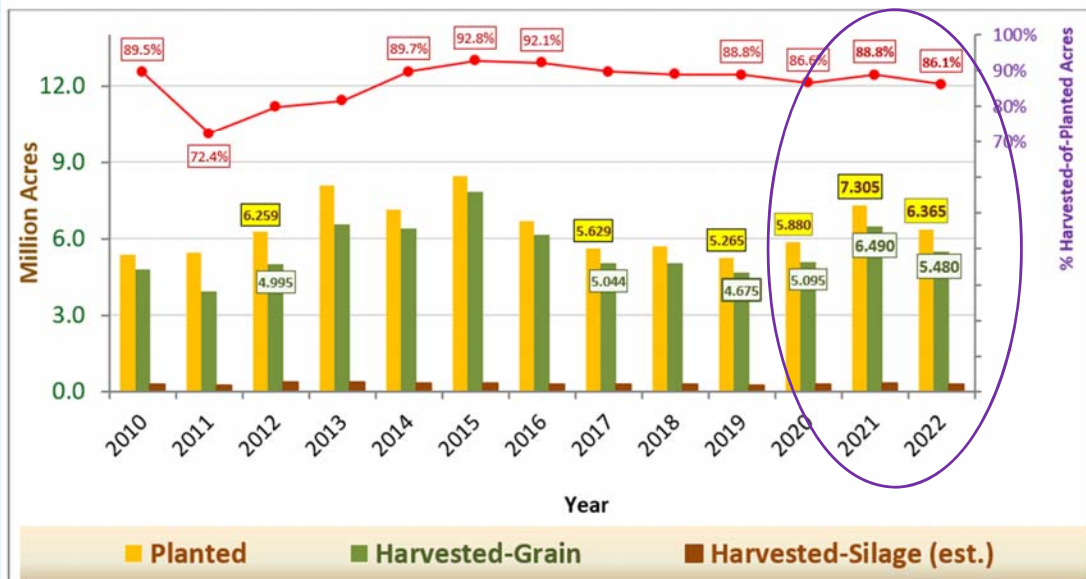
Percent of Sorghum Located in Drought  
September 6, 2022



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## U.S. Grain Sorghum Planted & Harvested Acreage

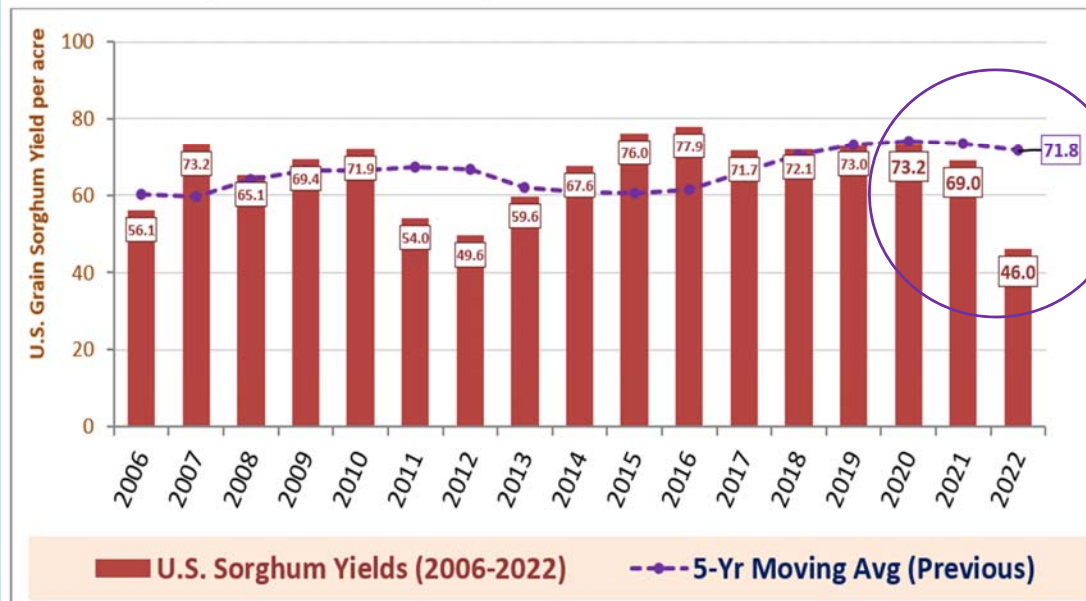
(2010 – 2022) as of the September 12, 2022 USDA WASDE report



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## U.S. Grain Sorghum Yields for 2006-2022 as of the September 12, 2022

USDA Crop Production & WASDE reports



## U.S. Grain Sorghum Total Supplies: MY 2006/07 - "New Crop"

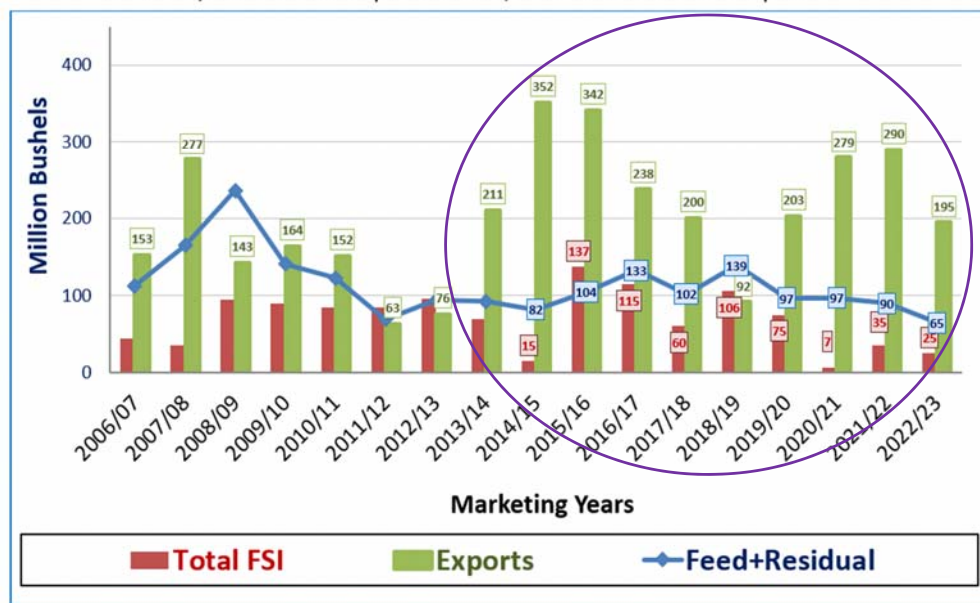
MY 2021/22 as of the September 12, 2022 USDA WASDE report





## Trends in U.S. Grain Sorghum Use: MY 2006/07 - "New Crop"

MY 2022/23 as of the September 12, 2022 USDA WASDE report



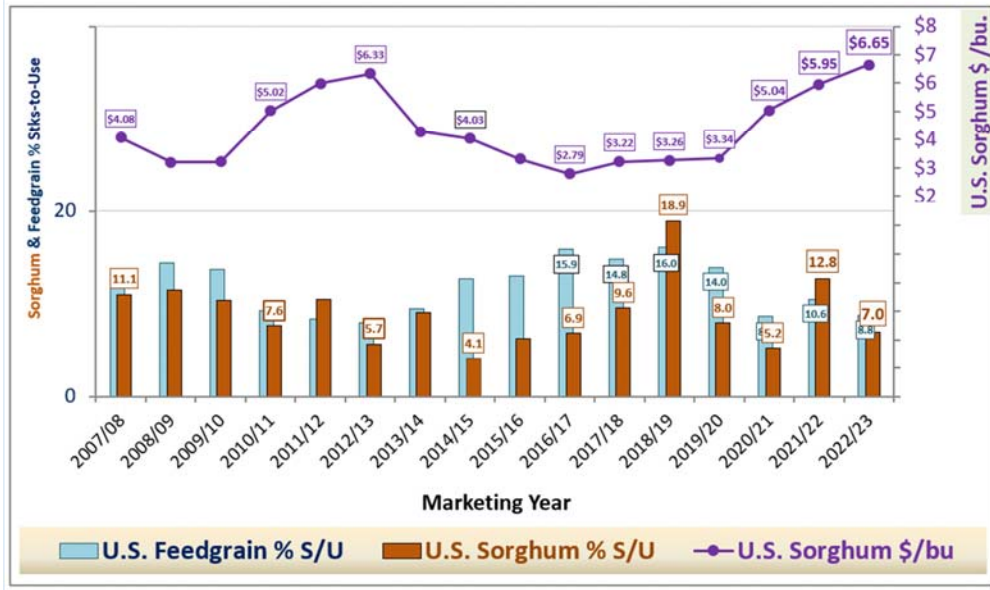
## Projected U.S. Grain Sorghum Supply-Demand for MY 2022/23

"New Crop" MY 2022/23 as of the September 12, 2022 USDA WASDE report, with Alternative KSU "New Crop" 2021/22 Marketing Year Scenarios

Item	A. USDA "New Crop" MY 2022/23 August 12, 2022 WASDE	B. KSU Adjusted USDA "New Crop" MY 2022/23 + 20 mb Exports to 215 mb
% Probability of Occurring (KSU)	65% <sup>KSUest</sup>	35% <sup>KSUest</sup>
Planted Area (million acres)	6.365	6.365
Harvested Area (million acres)	5.480	5.480
% Harvested/Planted Area	86.1%	86.1%
Yield / harvested acre (bu/ac)	46.0	46.0
Million Bushels		
Beginning Stocks (million bushels)	53	53
Production (million bu.)	252	252
Imports (million bu.)	0.05	0.05
<b>Total Supply (million bu.)</b>	<b>305</b>	<b>305</b>
Food & Industrial Use (mln bu.)	24.14	24.14
Seed Use (million bu.)	0.86	0.86
Exports (million bu.)	195	215
Feed & Residual Use (million bu.)	65	55
<b>Total Use (million bu.)</b>	<b>285</b>	<b>295</b>
Ending Stocks	20	10
% Ending Stocks-to-Use	7.02%	3.39%
Days of Supply (% S/U x 365 days)	25.6 days	12.4 days
U.S. Grain Sorghum Avg. Farm Price (\$ / bushel)	\$6.65 USDA	\$7.50 KSU

## U.S. Sorghum % End Stocks/Use vs U.S. Avg. Cash \$:

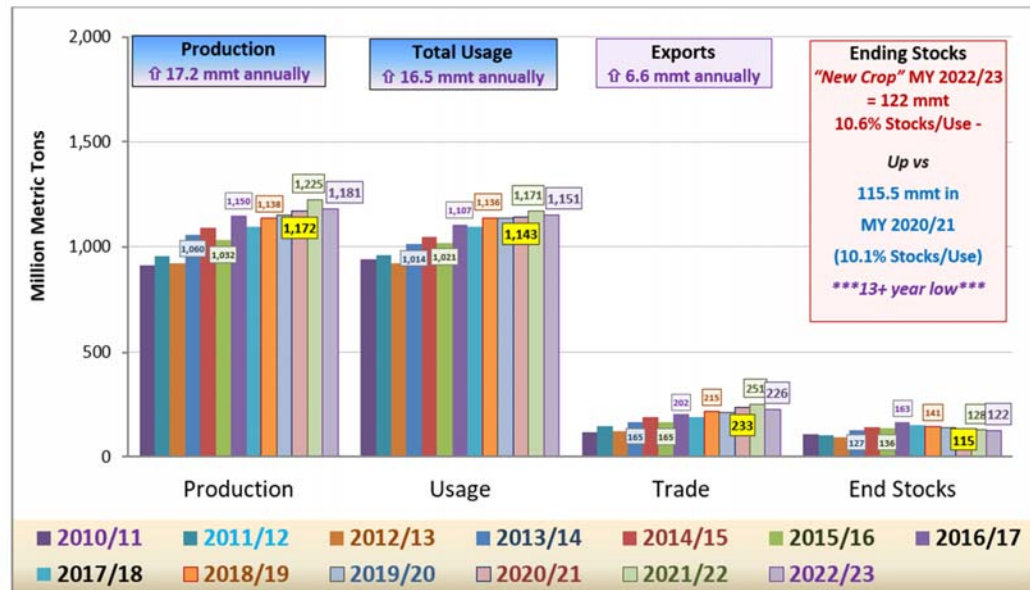
MY 2004/05 - "New Crop" MY 2021/22 as of the August 12, 2022 USDA WASDE



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## "World Less-China" Coarse Grain Supply-Demand:

MY 2007/08 thru "New Crop" 2022/23 as of the September 12, 2022 USDA WASDE



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# Closing Perspective

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## What to anticipate: Fall 2022 – Year 2023

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### □ USDA Reports ⇒ *Bringing grain market volatility*

- Release dates: Oct. 12<sup>th</sup>, Nov. 9<sup>th</sup>, Dec. 9<sup>th</sup> & January 2023
  - Risk of further 2022 crop production declines for U.S. corn, soybean & HRS wheat from the northern states – yields or abandoned acres
  - Would be *supportive-to-bullish* to grains – depending on degree of crop declines

### □ **“Active” Domestic & Foreign grain purchases @ harvest**

- User's looking to secure available “new crop” supplies
- *“Inverted” futures* & strong basis possible during Sep-Nov<sup>2022</sup> Quarter

## What to anticipate: Fall 2022 – Year 2023

### □ Fall Seeding<sup>2022</sup> of Hard Red Winter Wheat in Kansas

- Support from strong “new crop” HRW Wheat futures  
& Prospects for high 2023 crop Revenue Insurance Planning prices
  - JULY<sup>2023</sup> KC HRW Wheat futures @ \$9.23 /bu <sup>9/13/2022</sup>
- Strong price competition for acres from other Kansas crops in 2023 (Feedgrains & oilseeds)
- Soil moisture prospects in Fall 2022 will likely be the key factor
  - La Nina weather pattern continuation could cause dry conditions in fall-winter 2022

## What to anticipate: Fall 2022 – Year 2023

### □ 2023 Spring Planting of Feedgrains & Oilseeds

- With tight stocks across crops – any threats to successfully planting 2023 U.S. corn or soybeans could cause **STRONG** market price volatility
  - NOV<sup>2023</sup> Soybean futures @ \$13.92 ¾ /bu <sup>9/13/2022</sup>
  - DEC<sup>2023</sup> Corn futures @ \$6.33 /bu <sup>9/13/2022</sup>
    - Fall 2023 “New Crop” Soy/Corn \$ Ratio =  $\$13.92 \frac{3}{4} \div \$6.33 = 2.20$  (Corn advantage)
- Strong “new crop” price competition likely for 2023 planted acres between Feedgrains & Oilseeds ⇒ beginning *soon* after the 2022 fall harvest



## What to anticipate: Fall 2022 – Year 2023

**Q?** Are Corn, Soybeans & Wheat futures *at risk* to fall sharply in the last ½ of year 2023?

- With "tight" beginning stocks across these crops – less risk of declines until at least late spring – early summer
  - THEN the *risk* to grain sellers is that crop markets will discount the risk of *"short crops"* in 2023
- ⇒ IF in Summer <sup>2023</sup> U.S. & Foreign crop prospects become *"OK-to-Good"*, THEN grain prices will likely *"slide"* into Fall 2023 (*by traders with no motive to "buy the market"*)



## Questions?

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