

Grain Market Outlook for 2023-24

“Winning-the-Game” Grain Marketing Webinar

Kansas State University

April 17, 2023

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Department of Agricultural Economics



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I. Grain Futures Closes, Changes & Market Carry as of Sunday, April 16, 2023

CME Corn Futures <small>4/17/2023 at 1:32 a.m.</small>				CME Soybean Futures <small>4/17/2023 @ 1:40 a.m.</small>				CME Kansas HRW Wheat <small>4/17/2023 6:30 a.m.</small>			
Month	Close	Change	Carry /mo	Month	Close	Change	Carry /mo	Month	Close	Change	Carry /mo
May ^{Lead} 23	\$6.64	⬇️ \$0.02 ¼	---	May ^{Lead} 23	\$15.03 ¼	⬆️ \$0.02 ¼	---	May ^{Lead} 23	\$8.71 ½	⬇️ \$0.07 ¼	---
July 23	\$6.33	⬇️ \$0.02 ¼	-\$0.15 ⁵⁰	July 23	\$14.71 ½	⬆️ \$0.04 ¼	-\$0.15 ⁸⁷⁵	July ^{Hvst} 23	\$8.58	⬇️ \$0.05 ¼	-\$0.07
Sept 23	\$5.67 ¼	⬇️ \$0.00 ½	-\$0.32 ⁸⁷⁵	Aug 23	\$14.19 ¼	⬆️ \$0.03 ¼	-\$0.52 ²⁵	Sept 23	\$8.53 ¼	⬇️ \$0.04	-\$0.01 ⁸⁷⁵
Dec ^{Hvst} 23	\$5.59 ¾	⬇️ \$0.00 ¼	-\$0.02 ⁵⁰	Sep 23	\$13.37 ¼	⬆️ \$0.02 ¼	-\$0.79 ²⁵	Dec 23	\$8.53 ¼	⬇️ \$0.03 ¼	+\$0.01 ⁸⁷⁵
Mar 24	\$5.68	⬇️ \$0.00 ¼	+\$0.02 ⁹¹⁷	Nov ^{Hvst} 23	\$13.04	⬆️ \$0.02 ½	-\$0.16	Mar 24	\$8.51 ¼	⬇️ \$0.04	-\$0.00 ⁶⁶⁷
May 24	\$5.73 ¼	⬇️ \$0.00 ¼	+\$0.02 ⁶²⁵	Jan 24	\$13.09 ¼	⬆️ \$0.02	+\$0.03 ¹²⁵	May 24	\$8.36	⬇️ \$0.10 ¼	-\$0.04 ⁸⁷⁵
July 24	\$5.73 ½	⬇️ \$0.01 ½	+\$0.00 ¹²⁵	Mar 24	\$13.04 ½	⬆️ \$0.01 ¼	-\$0.02 ⁷⁵	July ^{Hvst} 24	\$8.03 ¼	⬇️ \$0.08 ¼	-\$0.20
Sept 24	na	na	na	May 24	\$13.07 ¼	⬆️ \$0.03	+\$0.00 ⁸⁷⁵	Sept 24	na	na	na

April 14, 2023

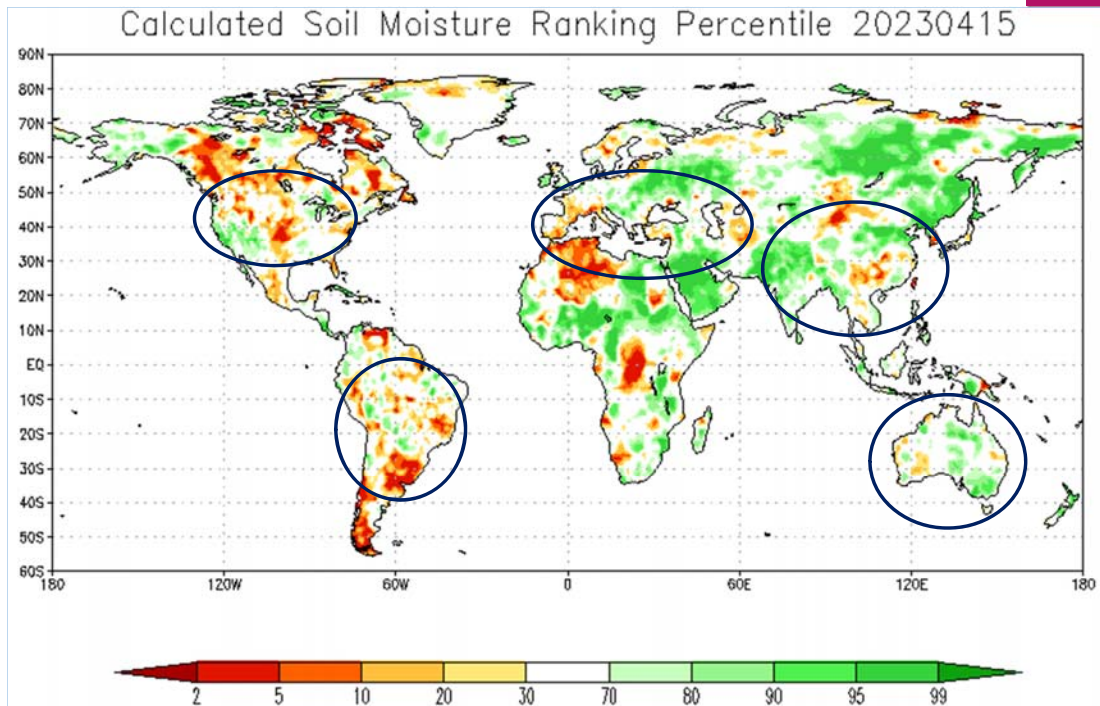
US #2 Yellow Corn -Bulk

Ethanol Plant

State/Province/Region	Sale Type	Basis (¢/bu)	Basis Change	Price (\$/Bu)	Price Change	Average
Illinois	Bid	-4.00K to 72.00N	UNCH	6.4825-6.9750	DN 0.0375-DN 0.0225	6.6750
Indiana	Bid	-10.00N to 65.00N	DN 10-UNCH	6.1550-6.9050	DN 0.1225-DN 0.0225	6.5936
Iowa East	Bid	27.00N to 50.00K	UNCH	6.5250-7.0225	DN 0.0225-DN 0.0375	6.7077
Iowa West	Bid	42.00N to 87.00N		6.6750-7.1250	DN 0.0225-DN 0.0150	6.8755
Kansas	Bid	38.00K to 65.00K	UNCH	6.9025-7.1725	DN 0.0375	7.0375
Michigan	Bid	-15.00N to 7.00N		6.1050-6.3250	DN 0.0225-DN 0.0650	6.2219
Minnesota	Bid	12.00N to 65.00N		6.3750-6.9050	DN 0.0225-DN 0.1250	6.6117
Missouri	Bid	0.00K to 35.00K	UNCH	6.5225-6.8725	DN 0.0375	6.7150
Nebraska	Bid	55.00N to 80.00K	UNCH	6.8050-7.3225	DN 0.0225-DN 0.0375	6.9520
Ohio	Bid	20.00N to 40.00N		6.4550-6.6550	UP 0.1775-DN 0.0050	6.5554
South Dakota	Bid	15.00N to 75.00N	UNCH	6.4050-7.0050	DN 0.0225	6.7317
Wisconsin	Bid	-10.00N to -6.00K	UNCH	6.1550-6.4625	DN 0.0225-DN 0.0375	6.3295

4/17/2023 (Morning Trade)	Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators					
	Representing the highest bids available at each location					
Cash Market Spot & FC Bids	Colby ^{Area}	Salina ^{Area}	Topeka ^{Area}	Garden City ^{Area}	Hutchinson ^{Area}	Columbus ^{Area}
	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
Corn Spot Cash\$	\$7.15	\$7.10	\$6.96	\$7.91	\$7.44	\$7.31
<i>Corn Spot Cash Basis</i>	\$0.58	\$0.53	\$0.39	\$1.34	\$0.87	\$0.74
Corn Harvest FC\$ Fall²⁰²³	\$5.52	\$5.47	\$5.33	\$6.28	\$5.63	\$5.38
<i>Corn Harvest FC\$ Basis</i>	(\$0.10)	(\$0.15)	(\$0.29)	\$0.66	\$0.01	(\$0.24)
Grain Sorghum Spot Cash\$	\$6.80	\$7.00	\$7.05	\$7.06	\$7.04	\$6.72
<i>Sorghum Spot Cash Basis</i>	\$0.23	\$0.43	\$0.48	\$0.49	\$0.47	\$0.15
Grain Sorghum Harvest FC\$ Fall²⁰²²	\$5.22	\$5.47	\$5.28	\$5.53	\$5.38	\$5.18
<i>Sorghum Harvest FC\$ Basis</i>	(\$0.40)	(\$0.15)	(\$0.34)	(\$0.09)	(\$0.24)	(\$0.44)
Soybean Spot Cash\$	\$14.38	\$14.74	\$14.86	\$14.82	\$14.99	\$14.93
<i>Soybean Spot Cash Basis</i>	(\$0.70)	(\$0.34)	(\$0.22)	(\$0.26)	(\$0.09)	(\$0.15)
Soybean Harvest FC\$ Fall²⁰²²	\$12.11	\$12.57	\$12.51	\$12.16	\$12.55	\$12.35
<i>Soybean Harvest FC\$ Basis</i>	(\$0.95)	(\$0.48)	(\$0.55)	(\$0.90)	(\$0.50)	(\$0.71)
KC HRW Wheat Harvest Spot Cash\$	\$8.32	\$8.51	\$8.48	\$8.41	\$8.56	\$8.12
<i>HRW Wheat Harvest Spot Cash Basis</i>	(\$0.40)	(\$0.21)	(\$0.23)	(\$0.31)	(\$0.15)	(\$0.60)
KC HRW Wheat FC\$ - Harvest²⁰²³	\$8.16	\$8.14	\$8.23	\$8.23	\$8.21	\$7.99
<i>HRW Wheat Harvest FC\$ Basis</i>	(\$0.38)	(\$0.40)	(\$0.31)	(\$0.31)	(\$0.33)	(\$0.55)





Grain Market Perspective

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Grain Market Outlook ^{2023/24} in Kansas, the U.S. & Globally

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- **“Tight!” 2023 Global Corn, Other Grain & Oilseed Stocks**
 - *On going importance of South America’s 2023 corn, soybean wheat*
 - Occurring &/or Anticipated in 2023:
 - *Drought has continued in Argentina*
 - *Smaller Crops & Exports in the future from Ukraine*

South America Corn-Soybean Calendar

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- **South America Planting Influences** ⇒ *“Bid for Acres”*
 - **Brazil & Argentina Corn & Soybean Crop Calendar**
 - **Brazil**
 - Corn: 1st crop *Planting* – October-December ⇒ Harvest: February-June
 - Soybeans: *Planting* – October-December ⇒ Harvest: March-June
 - Corn: 2nd crop *Planting* – January-February ⇒ Harvest: March-June
 - **Argentina**
 - Corn: *Planting* – mid September-December ⇒ Harvest: mid March-early June
 - Soybeans: 1st crop *Planting* – November-December ⇒ Harvest: Late March-early May
 - Soybeans: 2nd crop *Planting* – December-early Jan. ⇒ Harvest: mid April – mid June

□ Impact of Ongoing & Possible Geopolitical Conflicts?? In 2023

- *Ukraine-Russia War?: (-) Prospects for ending & grain trade*
- *China-Taiwan??? - IF this occurs, it would impact the global economy along with U.S. grain trade* Note recent China-Taiwan tensions***
 - *Would impact U.S. soybeans, grain sorghum, likely all U.S. agricultural commodities – including U.S. corn (\$↑↓??)D. OBrien*

What to anticipate in Year 2023

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□ 2023 Spring Planting of Feedgrains & Oilseeds

- *With tight stocks across crops – any threats to planting 2023 U.S. corn or soybeans could cause **STRONG** price volatility*
 - NOV²⁰²³ Soybean futures @ \$13.09 /bu 4/17/2023 a.m.
 - DEC²⁰²³ Corn futures @ \$5.62 ¼ /bu 4/17/2023 a.m.
 - **2023 “New Crop” Soy/Corn \$ Ratio** = $\$13.09 \div \$5.62 \frac{1}{4} = 2.33$ (vs 2.3 Neutral)
- *“New crop” price competition likely for 2023 planted acres between Feedgrains & Oilseeds ⇒ mid-April through May 2023*

Soybeans ≈ Corn

What to anticipate: Year 2023

- **USDA Reports** ⇒ *Often a “driver” of grain market volatility*
 - **WASDE**: Jan. 12, 2/8, 3/8, 4/8, **5/12****, 6/9, 7/12, 8/11, 9/12.....
 - **Planted Area**: USDA Acreage Report – June 30th
- **“Strong” Demand-Pull for Feedgrains in the Western Corn Belt**
 - Summer demand for “New Crop” supplies (i.e. “users scrambling!”)
 - *Possibility of “Inverted” futures & strong basis during Sep-Nov²⁰²³*
Quarter *IF a short crop happens again in 2023* ⇒ What are the odds?

What to anticipate: The rest of Year 2023

Q? Are grain markets *at risk* to fall sharply in the last ½ of 2023?

- **With “tight” beginning stocks across these crops** – less risk of major declines until at least late spring – early summer
- **THEN** the *risk* to grain sellers is that crop markets will discount the possibility of “*short crops*” in **2023** *Late May-June???*
 - ⇒ *IF* in Summer ²⁰²³ U.S. & Foreign crop prospects are “*OK-to-Good*”, **THEN** grain markets likely “*slide*” *lower* into Fall 2023

Feedgrain Markets

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CME Corn Futures *Continuous Weekly to 4/14/2023*

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Daily CME MAY 2023 Corn Futures

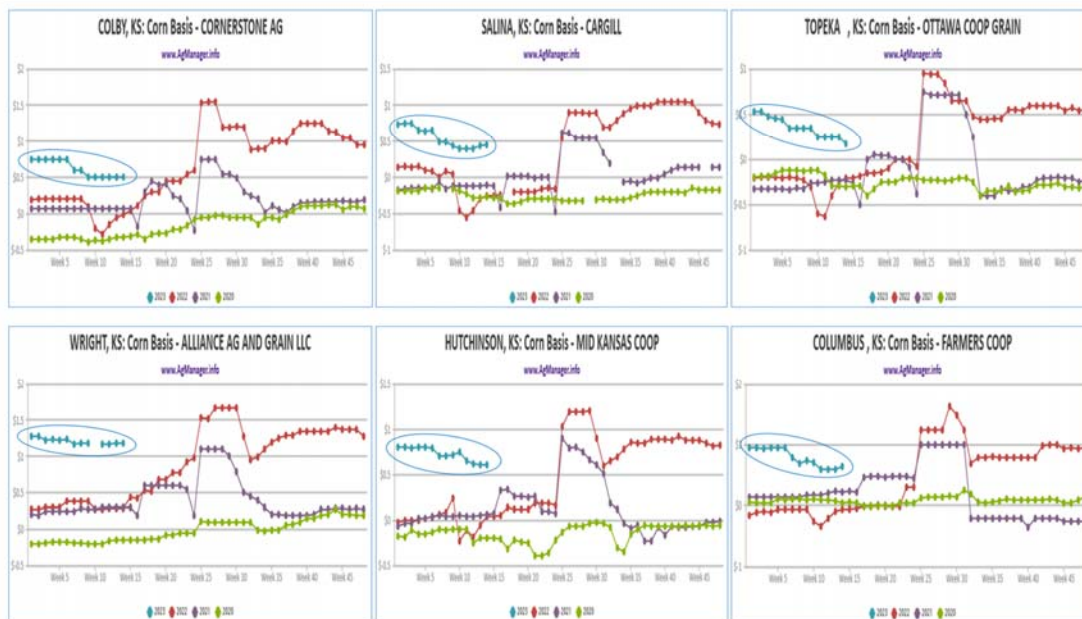
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Corn Basis in Kansas

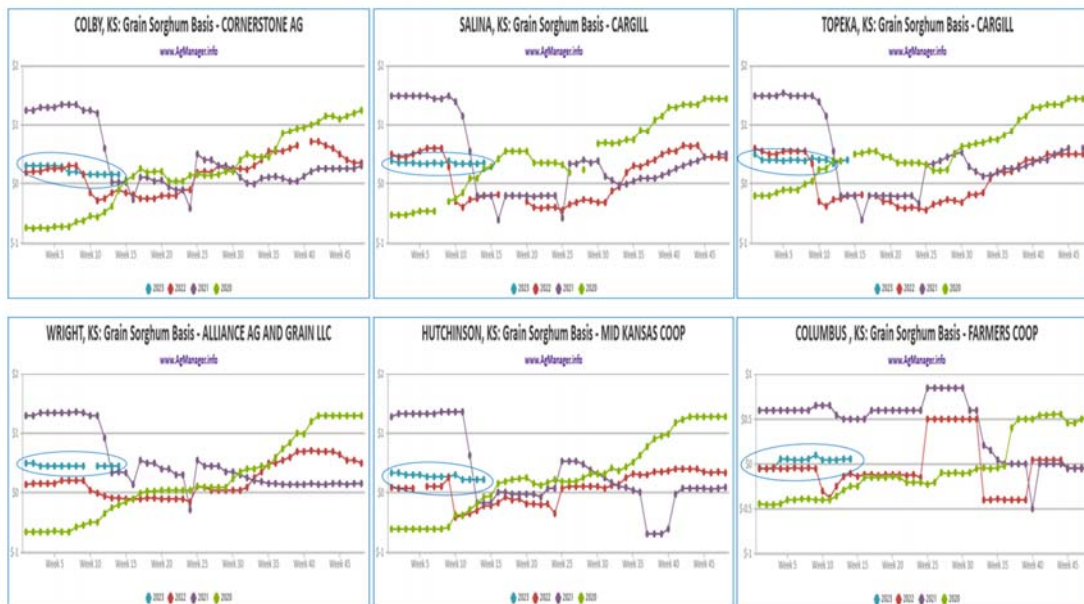
Representative Basis Charts Across the State – Calendar Years 2019 to the Present (4/12/2023)

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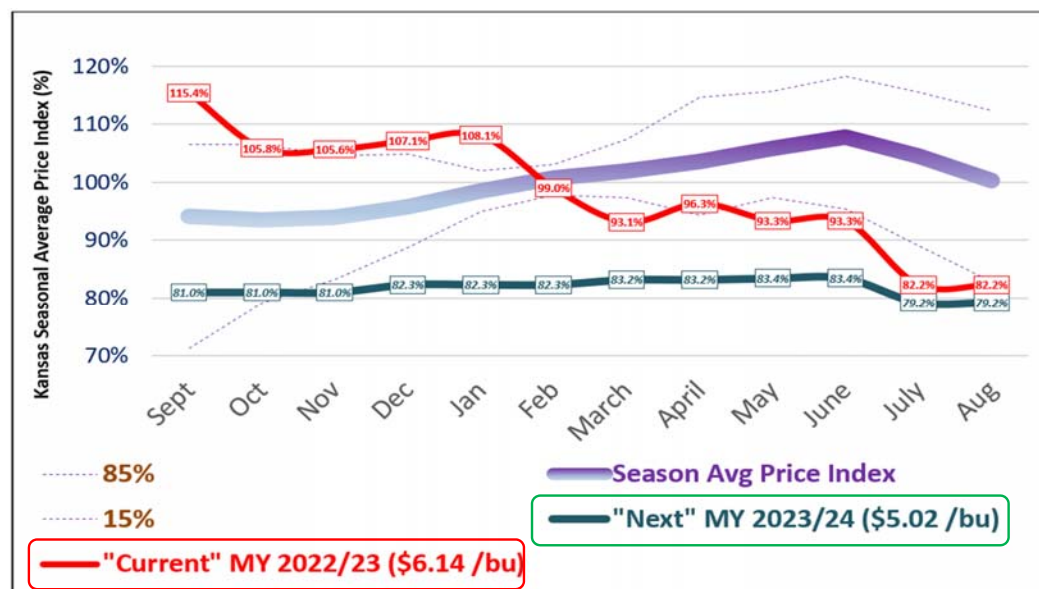
Grain Sorghum Basis in Kansas

Representative Basis Charts Across the State – Calendar Years 2019 to the Present (4/12/2023)



Corn Seasonal Prices *Kansas-U.S.*

Long Term Seasonal \$ Trends + MY 2022/23 & "Next" MY 2023/24 As of 4/14/2023



USDA Corn \$ Forecasts:

"Current"

MY 2022/23

= \$6.60 /bu U.S.

"Next"

MY 2023/24

= \$5.70 /bu U.S.

U.S. Corn Supply-Demand Balance Sheet

"Current" MY 2022/23 & Proj. "New Crop" MY 2023/24 as of the 4/11/2023 USDA WASDE + KSU Ests.

Item	USDA 2022/23 4/11/2023 WASDE 172.3 bu/ac 13.730 bb crop	A. USDA "New Crop" MY 2023/24 Scenario #1 "High Yields" ~ 181.5 bu/ac 15.263 bb crop	B. USDA "New Crop" MY 2023/24 Scenario #1 "Average Yields" ~ 177.0 bu/ac 14.886 bb crop
% Probability of Occurring (KSU)	75% ^{KSUest}	35% ^{KSUest}	65% ^{KSUest}
Planted Area (million acres)	88.579	91.996	91.996
Harvested Area (million acres)	79.207	84.096	84.096
% Harvested/Planted Area	89.42%	91.41%	91.41%
Yield / harvested acre (bu/ac)	173.3	181.5	177.0
Million Bushels			
Beginning Stocks (million bushels)	1,377	1,342	1,342
Production (million bu.)	13,730	15,263	14,885
Imports (million bu.)	40	25.0	25.0
Total Supply (million bu.)	15,147	16,630	16,252
Ethanol for fuel Use (million bu.)	5,250	5,325	5,325
Food & Industrial Use (mln bu.)	1,399	1,419	1,419
Seed Use (million bu.)	31	31	31
Exports (million bu.)	1,850	2,275	2,275
Feed & Residual Use (million bu.)	5,275	5,700	5,700
Total Use (million bu.)	13,805	14,750	14,750
Ending Stocks (million bu.)	1,342	1,880	1,502
% Ending Stocks-to-Use	9.72%	12.75%	10.18%
Days of Supply (% S/U x 365 days)	35.5 days	46.5 days	37.2 days
U.S. Corn Average Farm Price (\$/bushel)	\$6.60 ^{USDA} \$6.14 ^{KSU-Futures 4/14/2023}	\$5.60 ^{USDA} \$5.02 ^{KSU-Futures 4/14/2023}	\$6.00 - \$6.25 ^{KSU Estimate}

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U.S. Corn Stocks & % Stocks-to-Use

MY 2012/13 thru "New Crop" MY 2023/24^{KSU Est} as of the April 11, 2023 USDA Reports

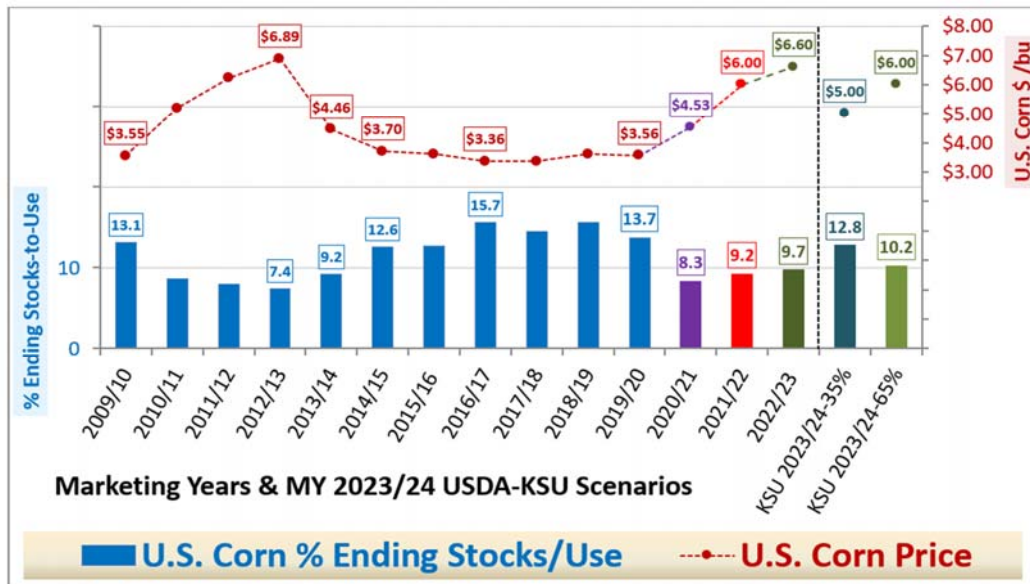


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U.S. Corn % Stocks/Use vs Corn \$

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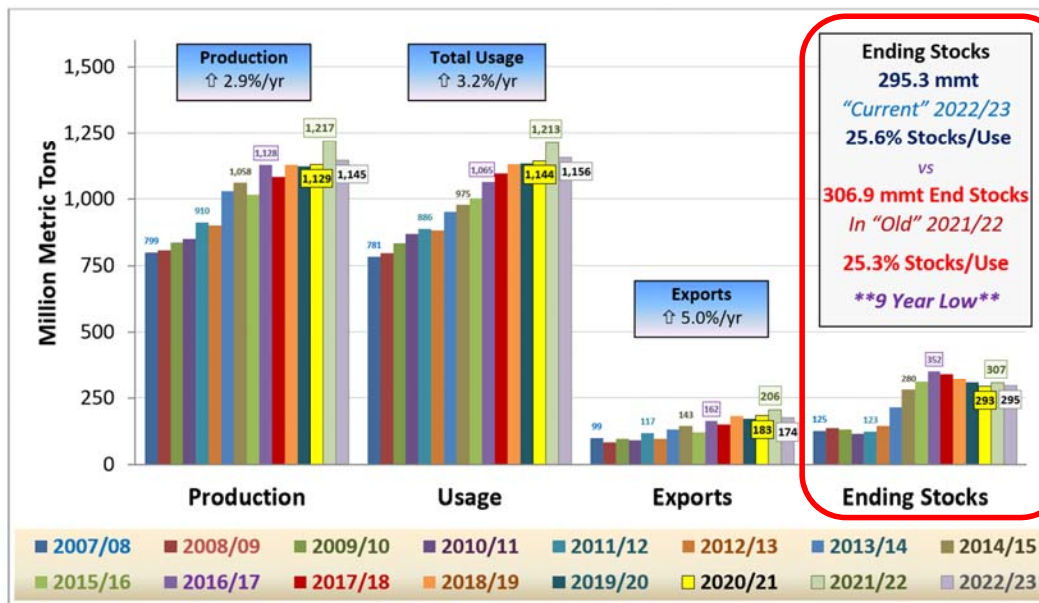
MY 2009/10 – “New Crop” MY 2023/24 as of the 4/11/2023 USDA WASDE + KSU Ests.



World Corn Supply-Demand

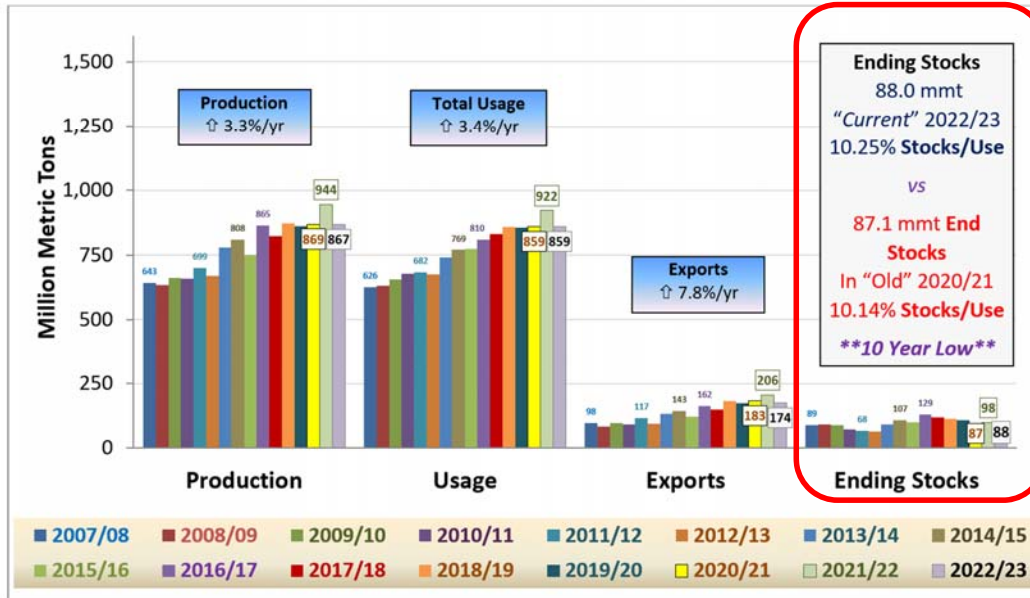
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MY 2007/08 – “Current” MY 2022/23 as of the April 11, 2023 USDA WASDE Report



"World Less-China" Corn Supply-Demand

MY 2007/08 – "Current" MY 2022/23 as of the April 11, 2023 USDA WASDE Report



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World vs World Less-China Corn % Stocks-to-Use

MY 2007/08 through "Current" MY 2022/23, as of the April 11, 2023 USDA WASDE report.

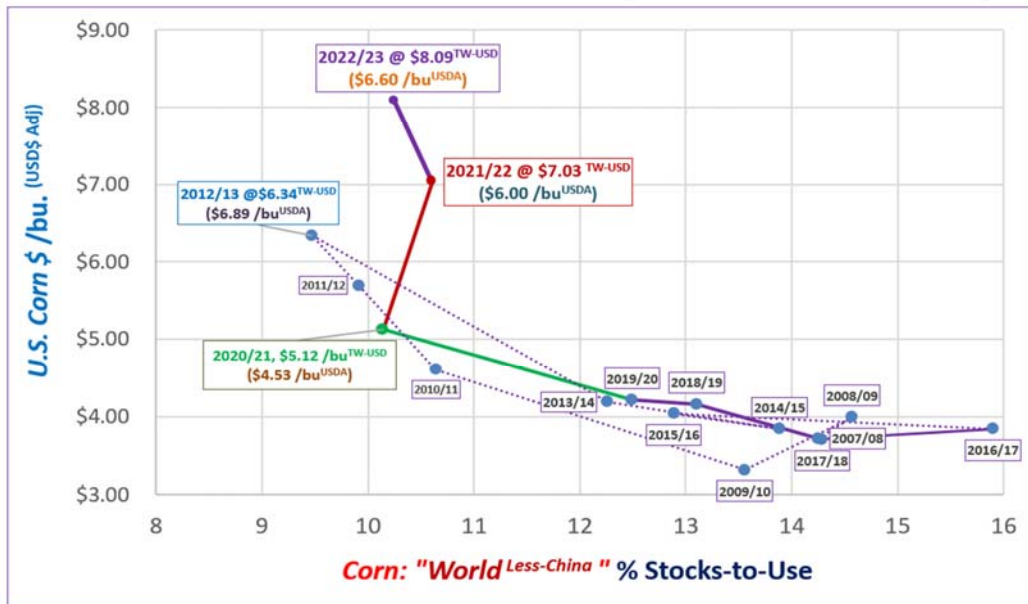


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U.S. Corn \$^{USD\$ Adj.} vs *World Less-China* % S/U

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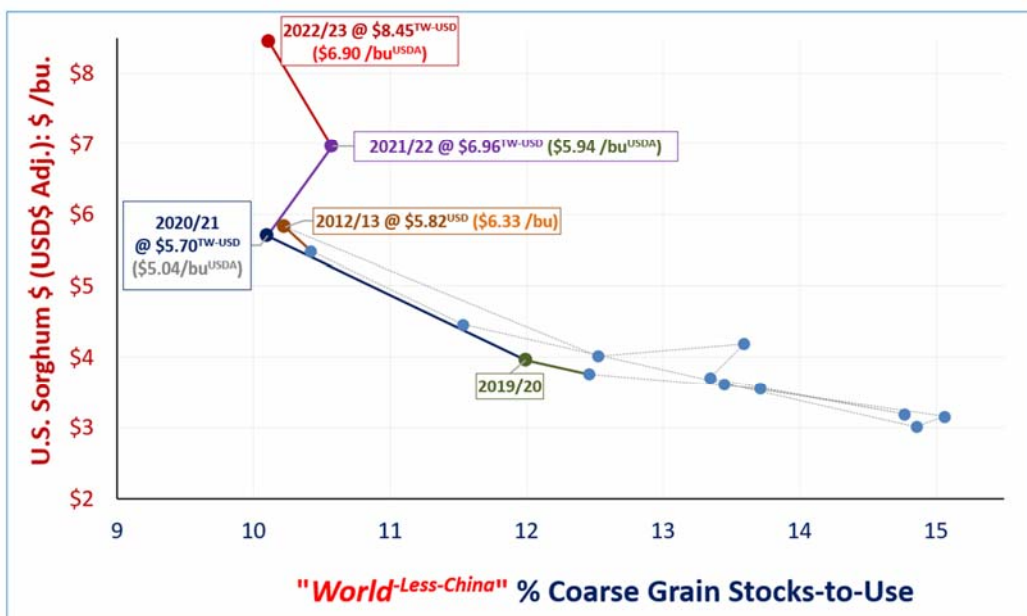
MY 2007/08 – “Current” MY 2022/23 as of the April 11, 2023 USDA WASDE Report



U.S. Sorghum \$'s ^{USD\$ Adj.} vs *World Coarse Grain Less-China* % S/U

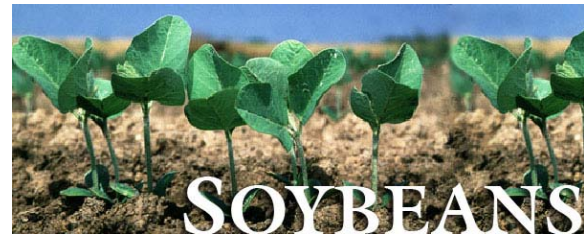
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MY 1975/76 thru “New Crop” MY 2022/23 as of the April 11, 2023 USDA WASDE



Soybean Markets

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CME Soybean Futures *Continuous Weekly to 4/14/2023*

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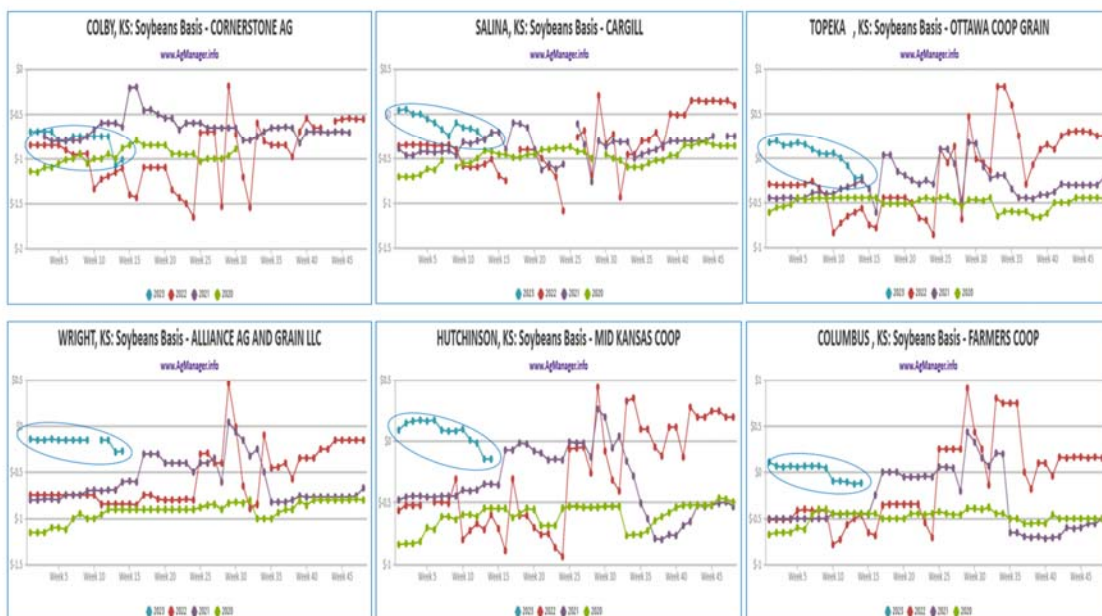
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ELEC. SOYBEANS (@S2023K)



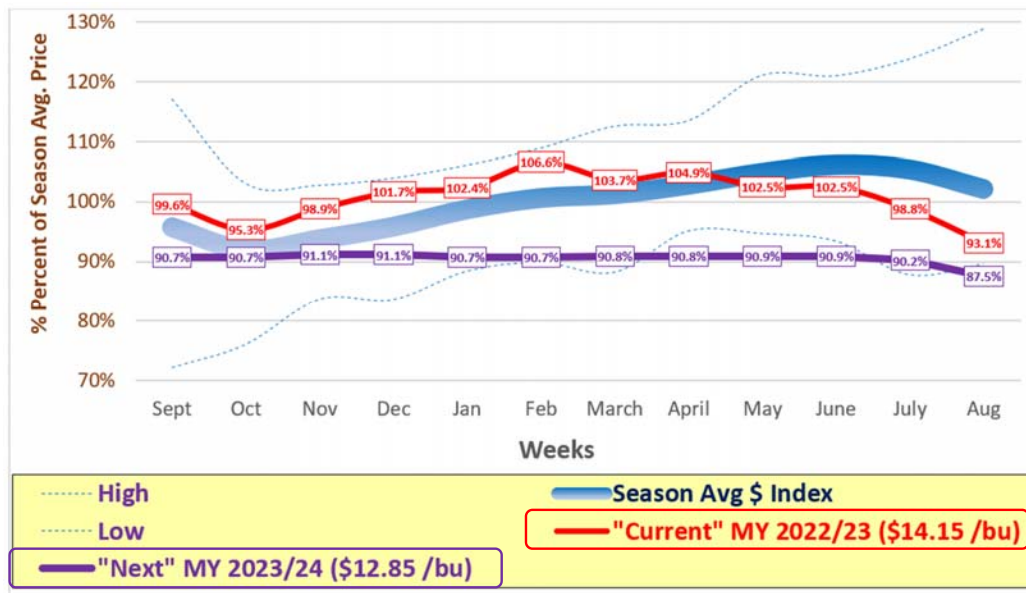
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Representative Basis Charts Across the State – Calendar Years 2019 to the Present (4/12/2023)



Soybean Seasonal Prices *Kansas-U.S.*

Long Term Seasonal \$ Trends + MY 2022/23 & "Next" MY 2023/24 As of 4/14/2023



U.S. Prices for Soybeans *USDA*

"Current"
MY 2022/23
= \$14.30 /bu *U.S.*

"Next"
MY 2023/24
= \$12.90 /bu *U.S.*

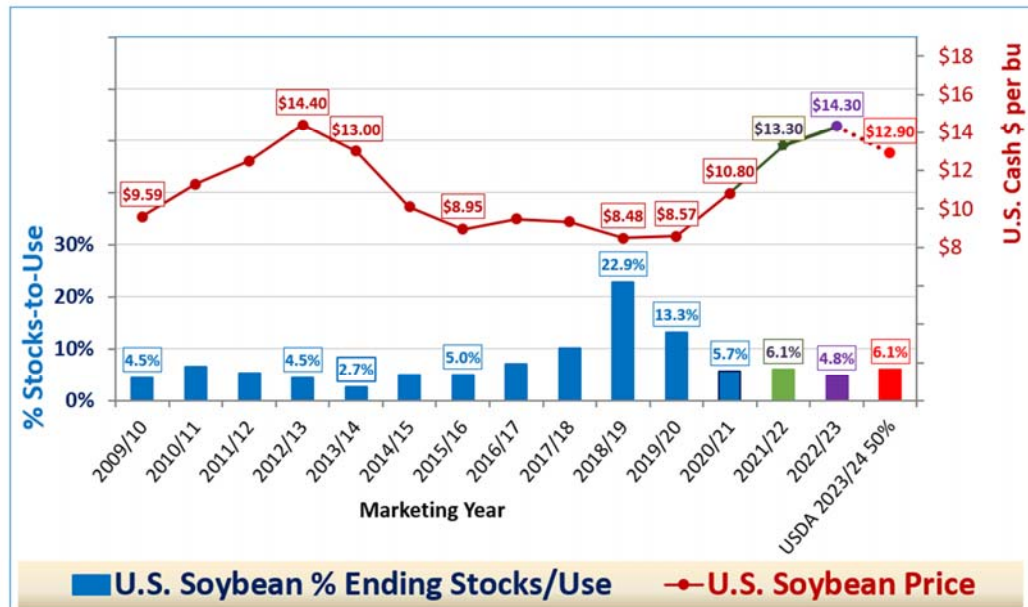
U.S. Soybean Supply-Demand Balance Sheet

"New Crop" MY 2023/24 as of the April 11, 2023 USDA WASDE with KSU Scenarios

Item	A. USDA ^{WASDE - KSU Adj.} "New Crop" 2023/24 April 11, 2023	B. KSU Scenario #1 "New Crop" 2023/24 Less Yield: 50.5 bu/ac + Rationed Use	C. KSU Scenario #2 "New Crop" 2022/23 Lower Yield: 49.0 bu/ac + More Rationed Use
% Probability of Occurring (KSU)	50% ^{KSUest}	35% ^{KSUest}	15% ^{KSUest}
Planted Area (million acres)	87.505	87.505	87.505
Harvested Area (million acres)	86.705	86.705	86.705
% Harvested/Planted Area	99.09%	99.08%	99.06%
Yield / harvested acre (bu/ac)	52.0	50.5	49.0
Beginning Stocks (million bushels)	210	210	210
Production (million bu.)	4,509	4,379	4,249
Imports (million bu.)	15	15	15
Total Supply (million bu.)	4,734	4,604	4,474
Domestic Crushings	2,310	2,295	2,270
Exports	2,025	2,010	1,085
Seed	102	102	102
Residual	24	22	17
Total Use	4,461	4,429	4,374
Ending Stocks	273	175	100
% Ending Stocks-to-Use	6.12%	3.95%	2.29%
Days of Supply (% S/U x 365 days)	22.3 days	14.4 days	8.3 days
U.S. Avg. Farm Price (\$/bu)	\$12.70 ^{USDA}	\$15.50 ^{KSU}	\$17.25 ^{KSU}

U.S. Soybean % Stocks/Use vs U.S. \$'s

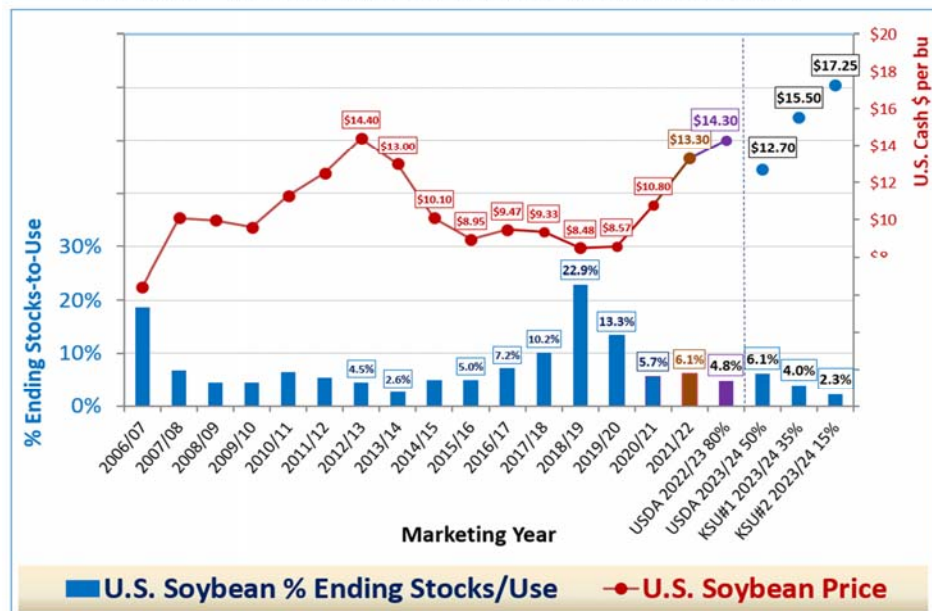
MY 2009/10 – “Next Crop” 2023/24 as of April 11, 2023 USDA Reports



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U.S. Soybean % Stocks/Use vs U.S. Cash \$

MY 2006/07 – “New Crop” MY 2023/24 as of the April 11, 2023 USDA Reports

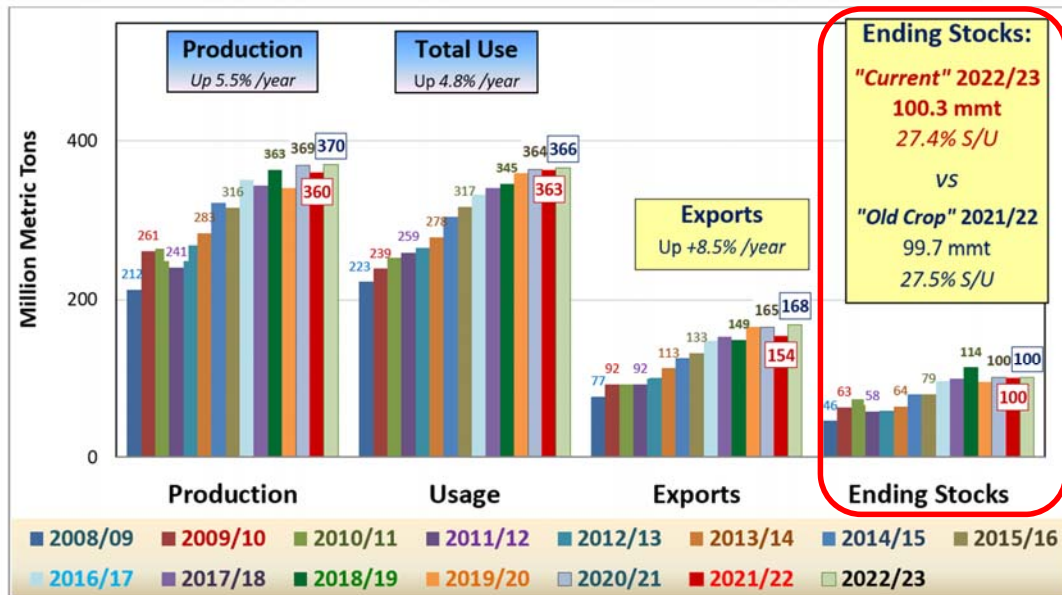


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World Soybean Usage & End Stocks

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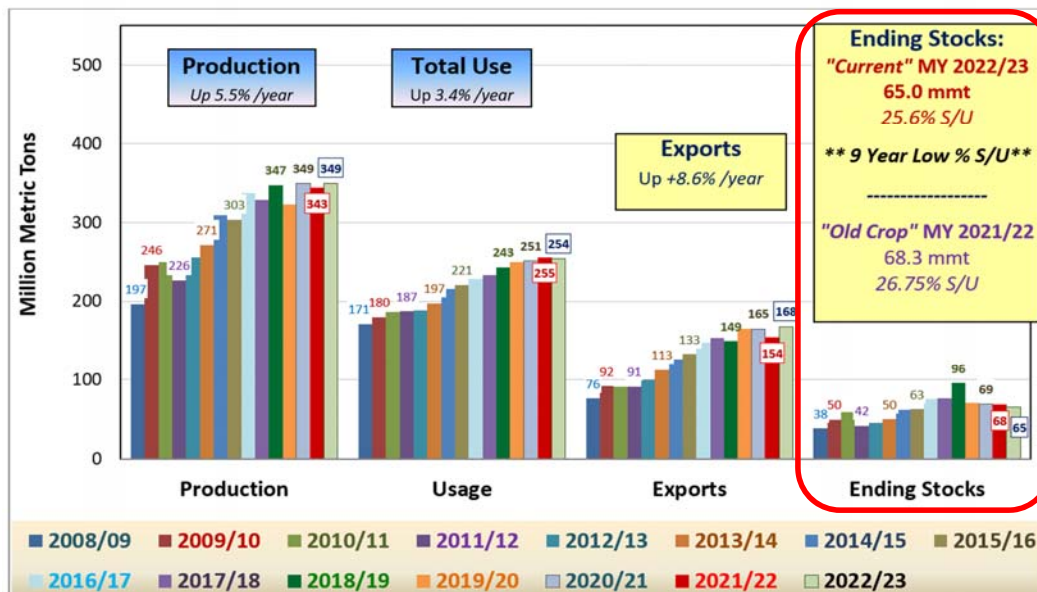
MY 2008/09 thru "Current" MY 2022/23 as of the April 11, 2023 WASDE



World Less-China Soybean Use & End Stocks

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MY 2008/09 - "Current" MY 2022/23 as of the April 11, 2023 WASDE



World vs **"World Less-China"** Soybean % Stocks/Use

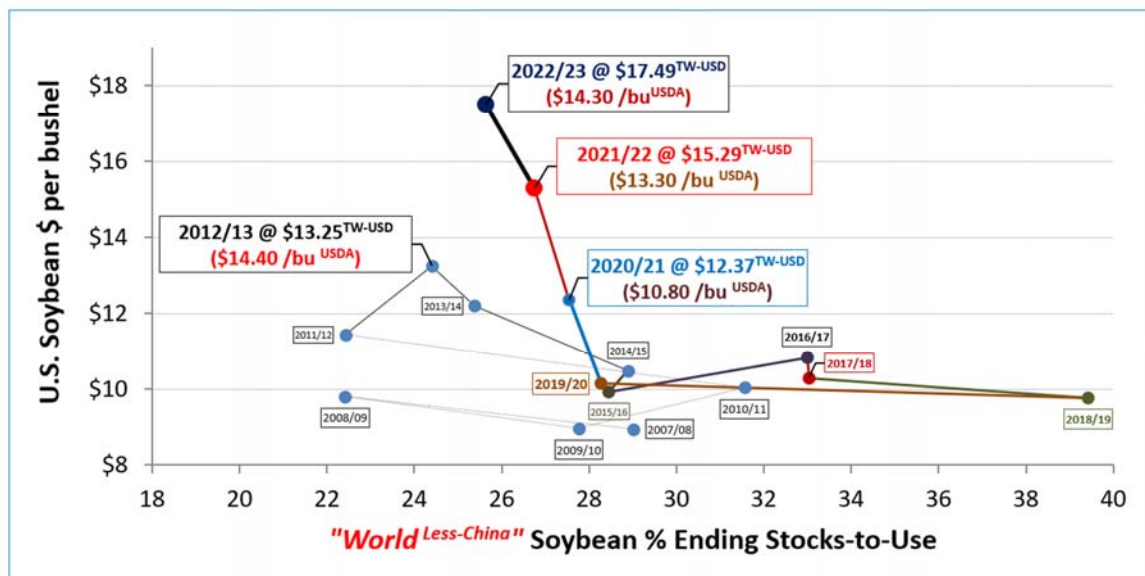
MY 2007/08 through "Current" MY 2022/23, as of the April 11, 2023 USDA WASDE report



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U.S. Soybean \$^{USD} Adj vs **"World Less-China"** % S/U

MY 2007/08 thru "Current" MY 2022/23 as of the April 11, 2023 WASDE Report



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Wheat Markets

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CME Soybean Futures *Continuous Weekly to 4/17/2023*

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Daily MAY 2023 KS HRW Wheat

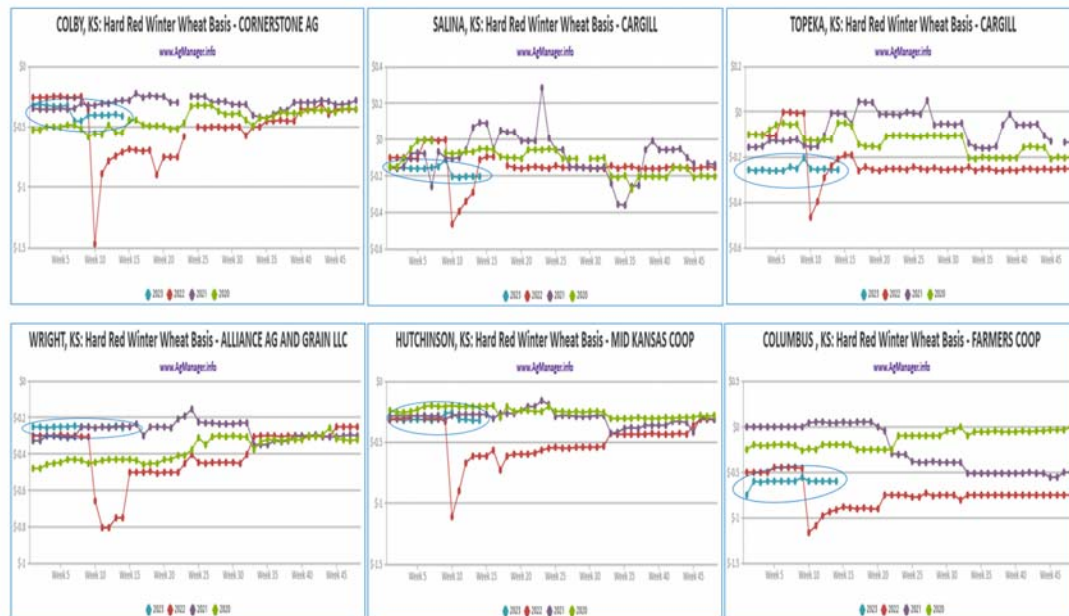
ELEC. HRW WHEAT (@KW2023K)



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Hard Red Winter Wheat Basis in Kansas

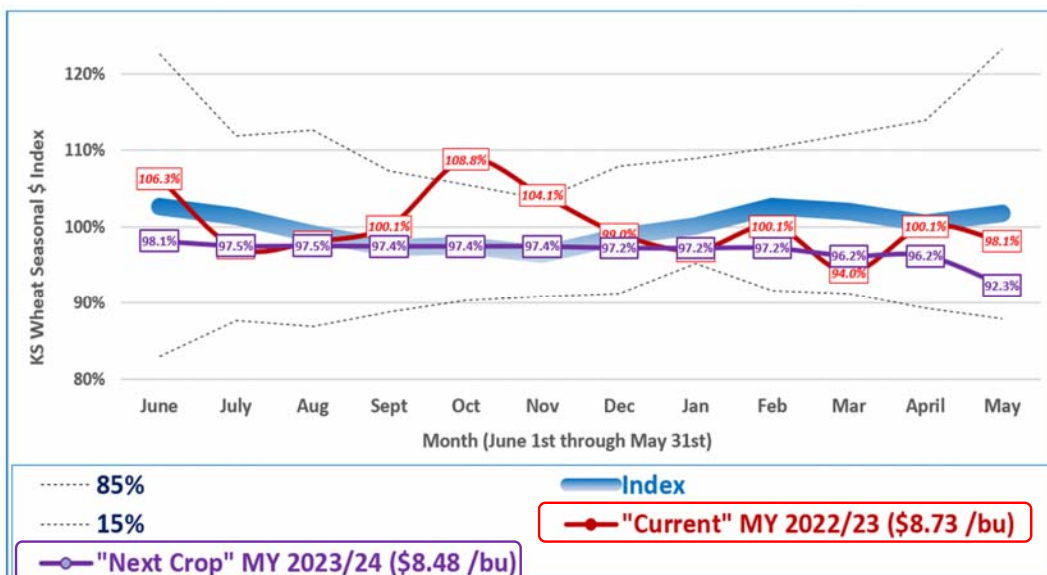
Representative Basis Charts Across the State – Calendar Years 2019 to the Present (4/12/2023)



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HRW Wheat Seasonal Prices *Kansas-U.S.*

Long Term Seasonal \$ Trends + MY 2022/23 & "Next" MY 2023/24 As of 4/14/2023



**U.S. Prices for
Wheat** *USDA*

"Current"
MY 2022/23
= \$8.90 /bu *U.S.*

"Next"
MY 2023/24
= \$8.50 /bu *U.S.*

U.S. Wheat Market Outcomes for MY 2023/24^{KSU}

USDA & KSU Projections based on the April 11, 2023 USDA WASDE Report + KSU Scenarios

Item	USDA "Current" 2022/23 <small>Feb. 8, 2023 WASDE</small>	KSU Scenario #1 "New" 2023/24 <small>USDA: 49.2 bu/ac 33.25% Stocks/Use</small>	KSU Scenario #2 "New" 2023/24 <small>KSU: 46.0 bu/ac 29.15% Stocks/Use</small>	KSU Scenario #2 "New" 2023/24 <small>KSU: 42.0 bu/ac 25.15% Stocks/Use</small>
<small>% Probability of Happening</small> <i>KSU est.</i>	80% prob	45% prob.	45% prob	10% prob.
Planted Area (million acres)	45.738	49.855	49.855	49.855
Harvested Area (million acres)	35.480	38.675	38.675	38.675
% Harvested/Planted Area	77.57%	77.57%	77.57%	77.57%
Yield / harvested acre (bu/ac)	46.5	49.2	46.0	42.0
Million				
Beginning Stocks	698	598	598	598
Production	1,650	1,903	1,779	1,624
Imports	125	120	120	120
Total Supply (million bushels)	2,473	2,621	2,497	2,342
Food Use	975	975	975	975
Seed Use	70	70	70	70
Exports	775	825	775	700
Feed & Residual Use	55	100	75	47
Total Use (million bushels)	1,875	1,967	1,892	1,792
Ending Stocks (million bushels)	598	654	605	550
% Ending Stocks-to-Use	31.89%	33.25%	31.97%	30.69%
<small>Days of Supply (% S/U x 365 days)</small>	116 days	129 days	117 days	112 days
U.S. Wheat Avg. Farm Price (\$/bushel)	\$8.90 <small>Vs \$8.81 /bu KSU-HRW Futures</small>	\$8.50 <small>Vs \$8.81 /bu. KSU-HRW Futures Fcst</small>	\$8.85 <small>Vs \$8.81 /bu. KSU-HRW Futures Fcst</small>	\$9.50 <small>Vs \$8.81 /bu. KSU-HRW Futures Fcst</small>

U.S. Wheat Ending Stocks & % S/U

47

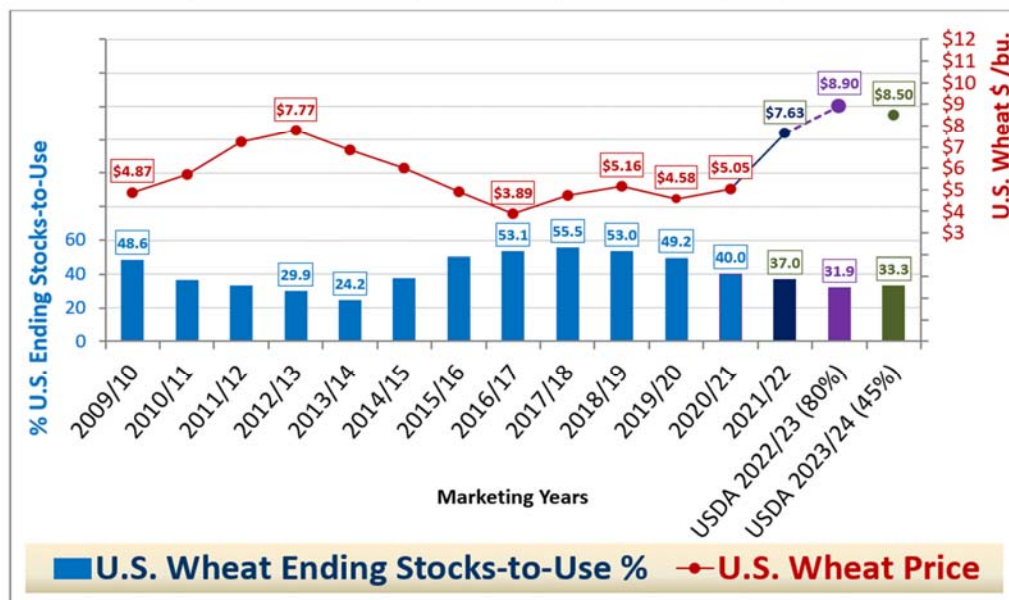
MY 2006/07 thru "Next Crop" MY 2023/24 – April 11, 2023 USDA WASDE



U.S. Wheat % Stocks/Use vs Cash \$'s

48

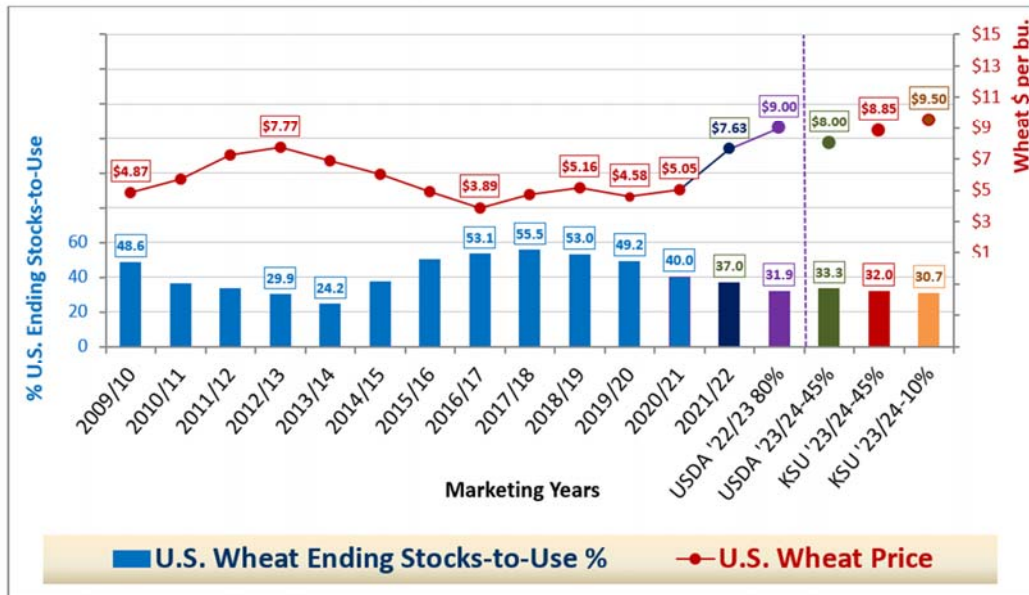
MY 2009/10 thru "New Crop" MY 2023/24 – As of the April 11, 2023 USDA WASDE



U.S. Wheat % Stocks/Use vs U.S. Cash \$'s

49

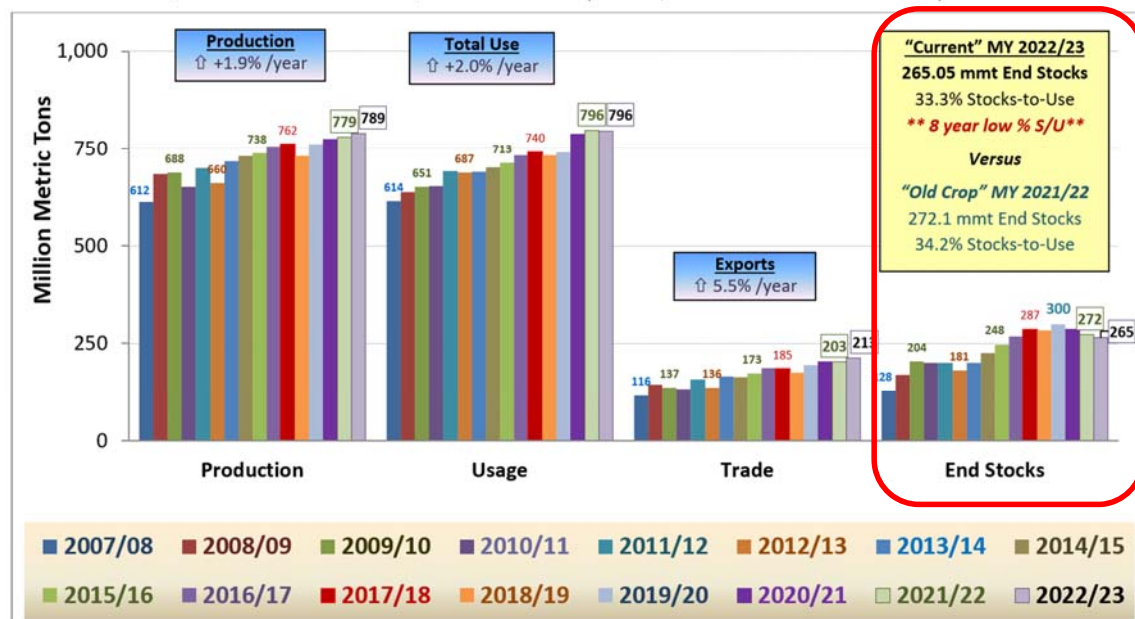
MY 2009/10 thru "New Crop" 2023/24 – As of the April 11, 2023 WASDE + KSU Ests.



World Wheat Usage & Ending Stocks

50

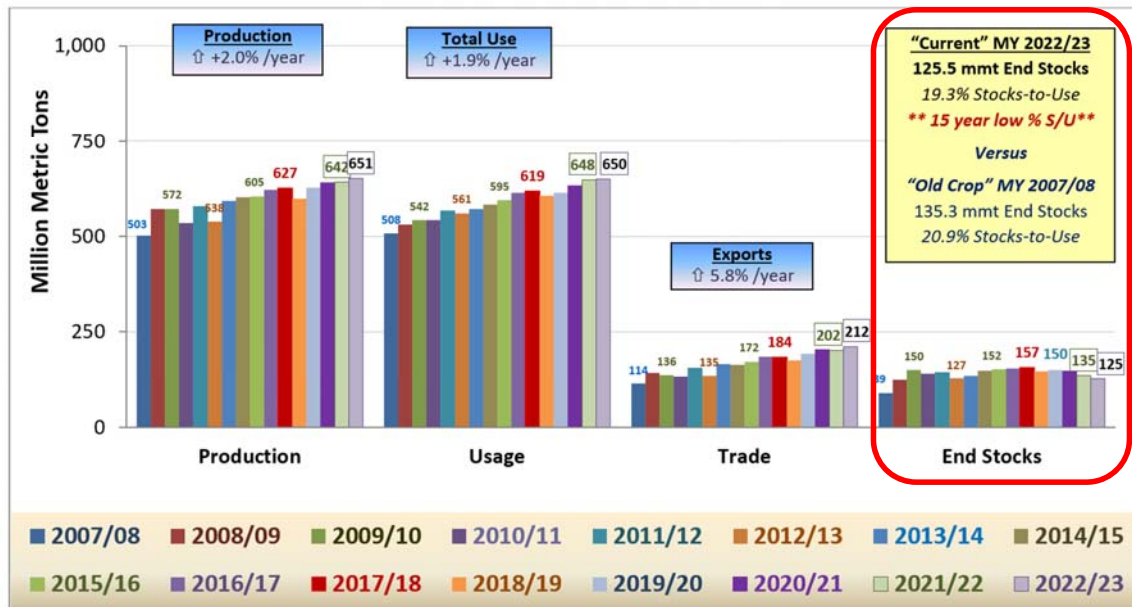
MY 2007/08 - "Current" 2022/23 as of the April 11, 2023 USDA WASDE Report



"World Less-China" Wheat Usage & Ending Stocks

51

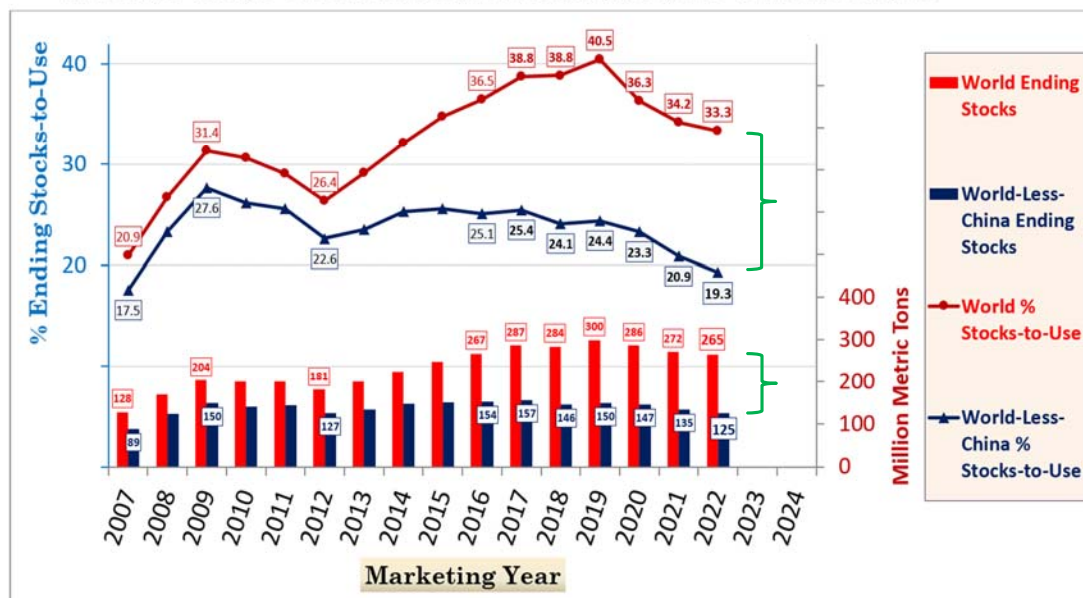
MY 2007/08 - "Current" MY 2022/23 as of the April 11, 2023 USDA WASDE Report



World vs "World Less-China" Wheat Stocks & % S/U

52

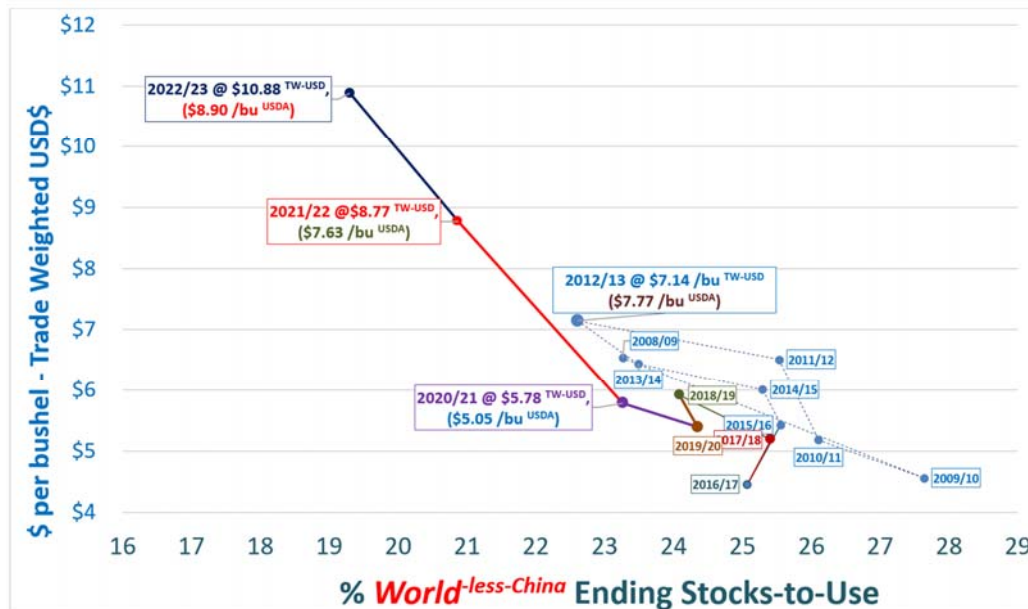
MY 2007/08 through "Current" MY 2022/23 as of the April 11, 2023 USDA WASDE report



U.S. Wheat \$ Trade-Wtd USD\$ vs World Less-China % S/U

53

MY 2008/09 through "Current" 2022/23 as of the April 11, 2023 USDA WASDE



Questions?

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