

2023 Corn Markets & Cost-Returns

'Winning-The-Game' Grain Marketing Workshop

Atwood, Kansas

Wednesday, February 8, 2023

DANIEL O'BRIEN

EXTENSION AGRICULTURAL ECONOMIST

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Department of Agricultural Economics



Corn Market Perspective

2



KANSAS STATE
UNIVERSITY

Department of Agricultural Economics

Corn Market Outlook ²⁰²³ in Kansas, the U.S. & Globally

3

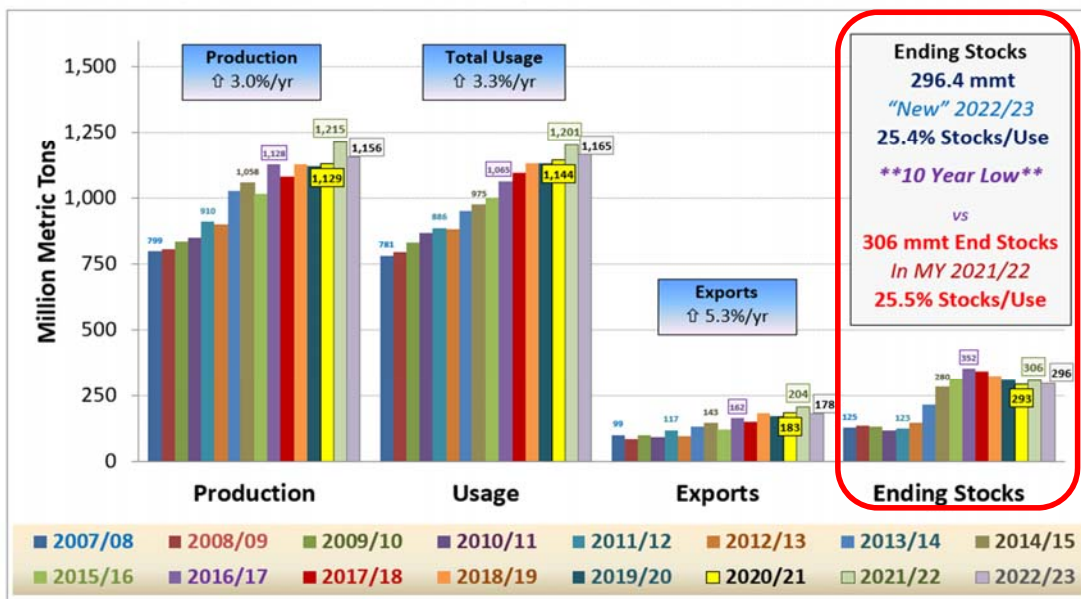
1) “Tight!” 2023 Global Corn, Oilseed & Wheat Stocks

- *The importance of South America’s 2023 corn & soybean crops!!*
- Occurring &/or Anticipated in 2023:
 - Drought in Argentina
 - Smaller Crops & Exports from Ukraine

World Corn Supply-Demand

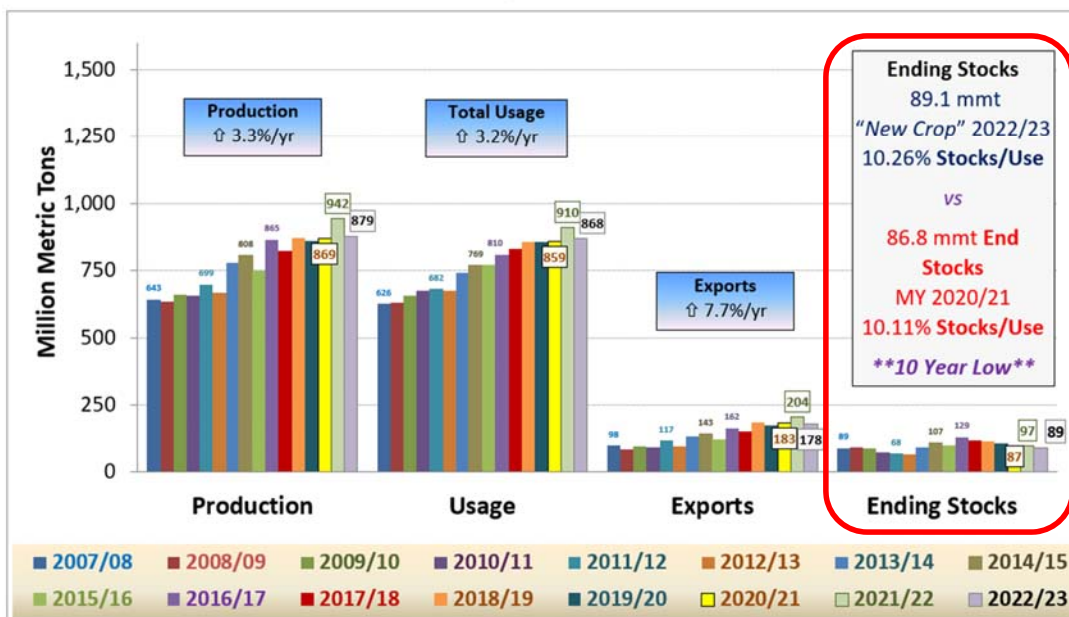
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MY 2007/08 – “Current” MY 2022/23 as of the January 12, 2023 USDA WASDE Report



“World Less-China” Corn Supply-Demand

MY 2007/08 – “Current” MY 2022/23, as of the January 12, 2023 USDA WASDE Report



World vs “World-Less-China” Corn % Stocks-to-Use:

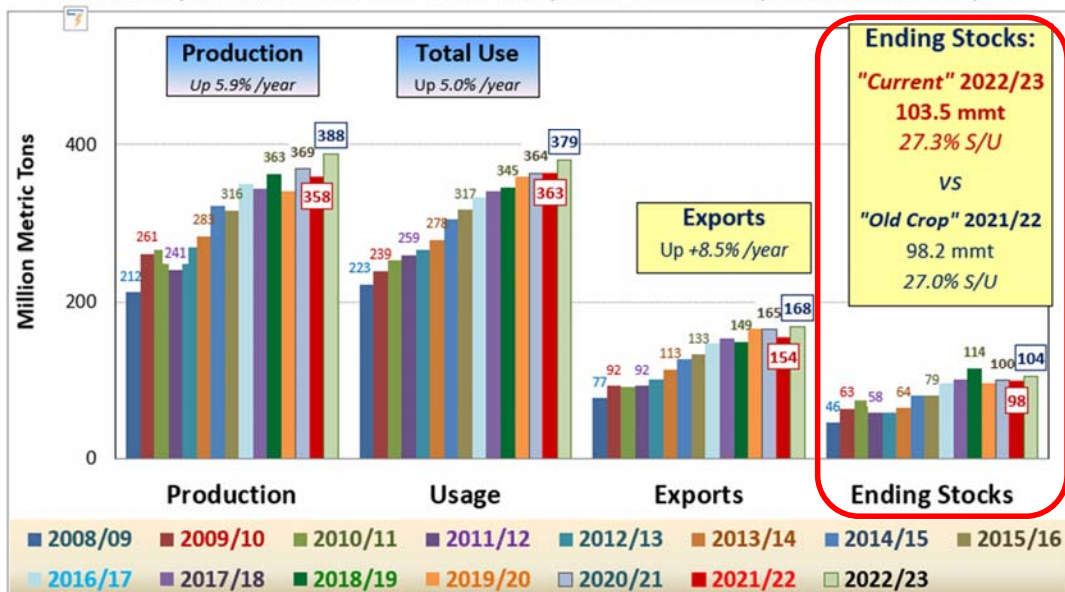
MY 2007/08 through “New” MY 2022/23, as of the January 12, 2023 USDA WASDE report.



World Soybean Usage & Ending Stocks

7

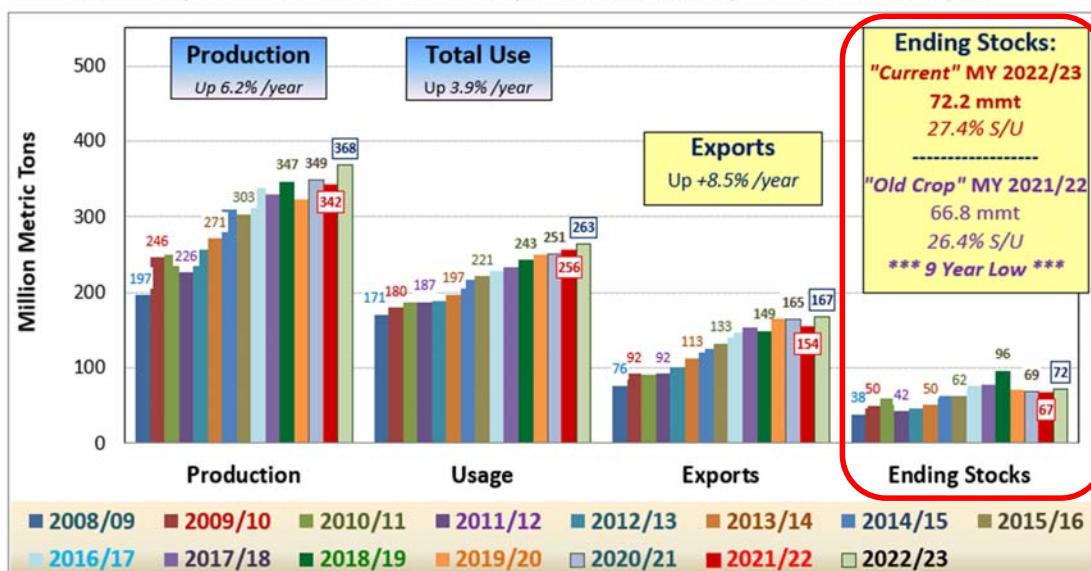
MY 2008/09 thru "Current" MY 2022/23 as of the January 12, 2023 WASDE Report



"World Less-China" Soybean Use & Ending Stocks

8

MY 2008/09 - "Current" MY 2022/23 as of the January 12, 2023 WASDE Report



World vs % "World Less-China" Soybean Stocks-to-Use

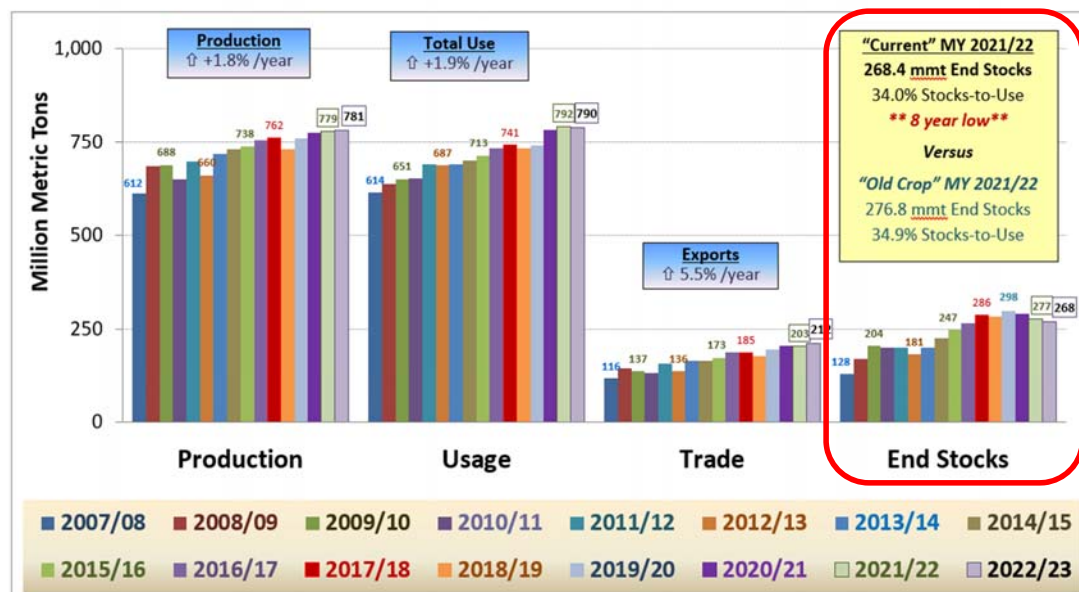
MY 2007/08 through "Current" MY 2022/23, as of the January 12, 2023 USDA WASDE report



9

World Wheat Usage & Ending Stocks

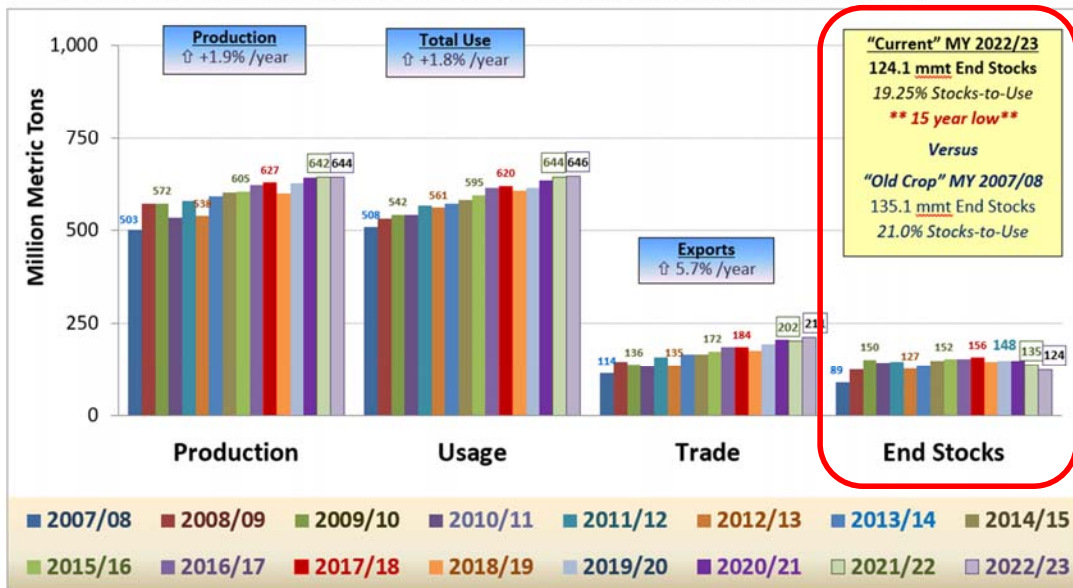
MY 2007/08 - "Current" 2022/23 as of the January 12, 2023 USDA WASDE Report



10

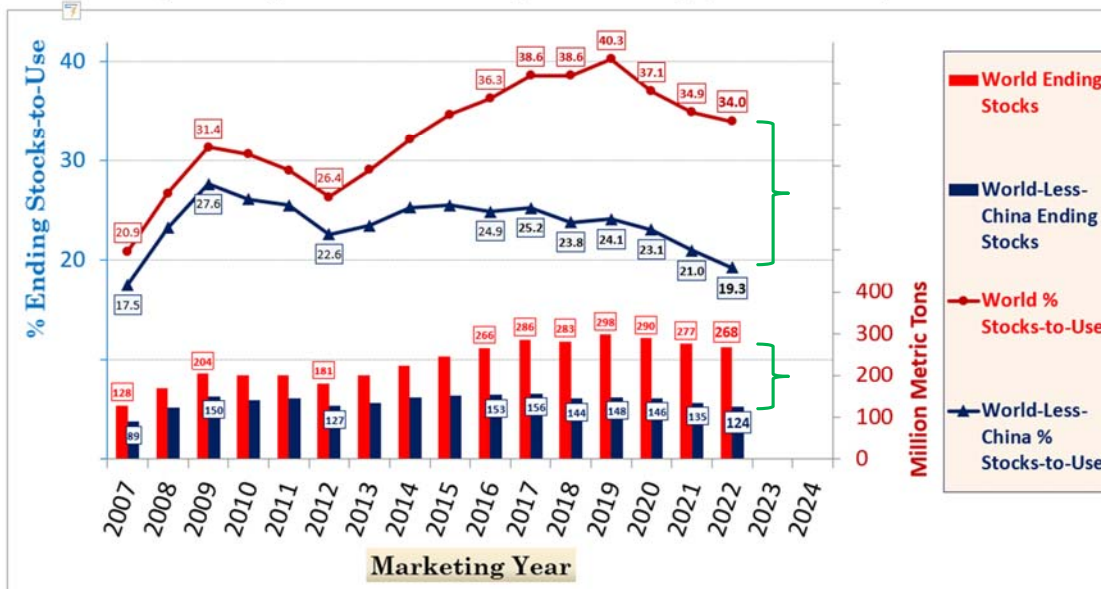
“World Less-China” Wheat Usage & Ending Stocks

MY 2007/08 through “Current” MY 2022/23, as of the January 12, 2023 USDA WASDE Report



World vs “World Less-China” End Stocks & % Stocks-to-Use

MY 2007/08 through “Current” MY 2022/23 as of the January 12, 2023 USDA WASDE report



2) Carryover impact of the Crop Production damage in the Western-Central Plains during 2022-2023

- *Western Kansas / OK / TX / NE*

→ Stronger Corn & Soybean **BASIS** throughout the U.S. Corn Belt

► Q? 2023 U.S. Corn, Soybean & Wheat Production?

→ *Seasonal risk in Spring-Summer ²⁰²³ – Dry subsoils in many areas*

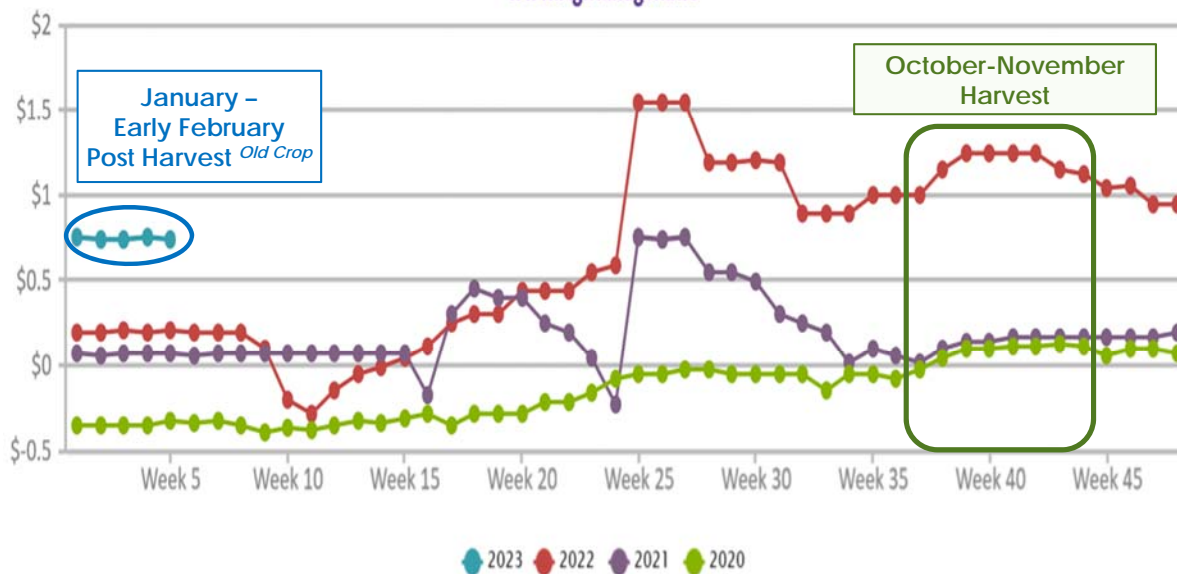


Kansas Cash & Futures Prices

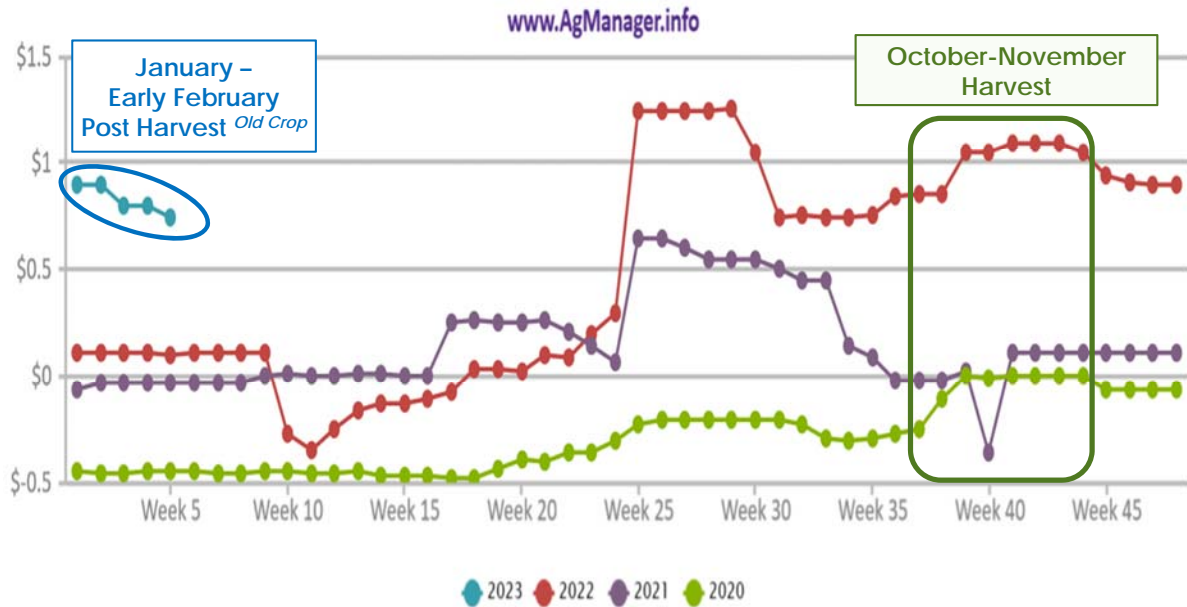
Date						
2/7/2023 (closes)						
Grain Futures Contracts	Closing \$					
MAR 2023 Corn <small>(2023 Lead contract)</small>	\$6.7400					
DEC 2023 Corn <small>(2023 Harvest Contract)</small>	\$5.9350					
2/7/2023 (closes)	Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators					
	Representing 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\$	\$7.49	\$7.39	\$7.14	\$8.04	\$7.84	\$7.69
Corn Spot Cash Basis	\$0.75	\$0.65	\$0.40	\$1.30	\$1.10	\$0.95
Corn Harvest FC\$: Fall ²⁰²³	\$5.68	\$5.73	\$5.53	\$6.48	\$5.93	\$5.63
Corn Harvest FC\$ Basis	(\$0.26)	(\$0.20)	(\$0.40)	\$0.55	(\$0.00)	(\$0.31)

COLBY, KS: Corn Basis - CORNERSTONE AG

www.AgManager.info



OBERLIN , KS: Corn Basis - DECATUR COOP

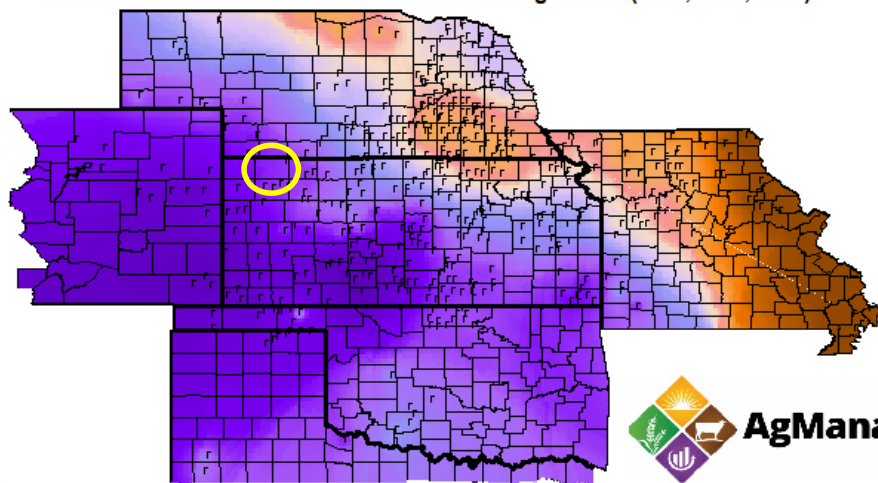
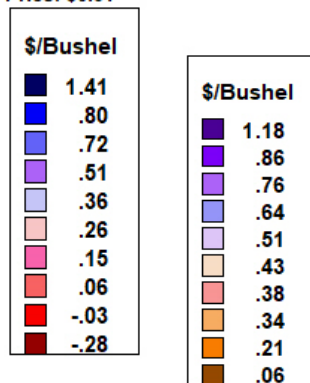


Corn Basis, 02-01-2023

Corn Basis Deviation, 02-01-2023

Basis Deviation = Current Basis - 3 Year Average Basis (2020, 2021, 2022)

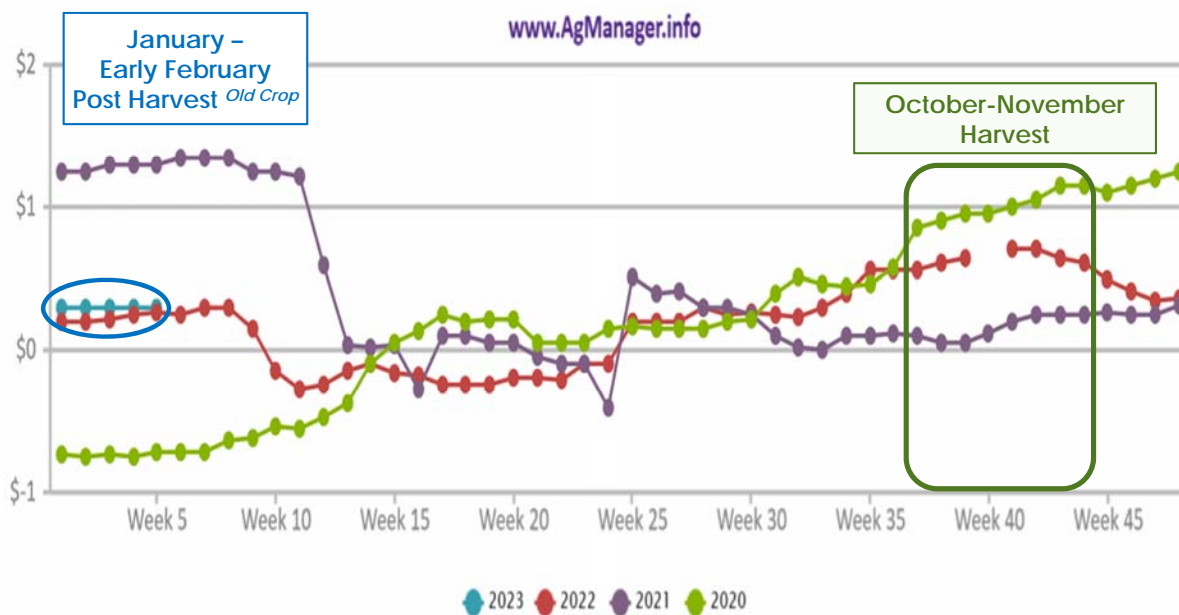
CBT Mar
Futures
Price: \$6.81



Kansas Cash & Futures Prices

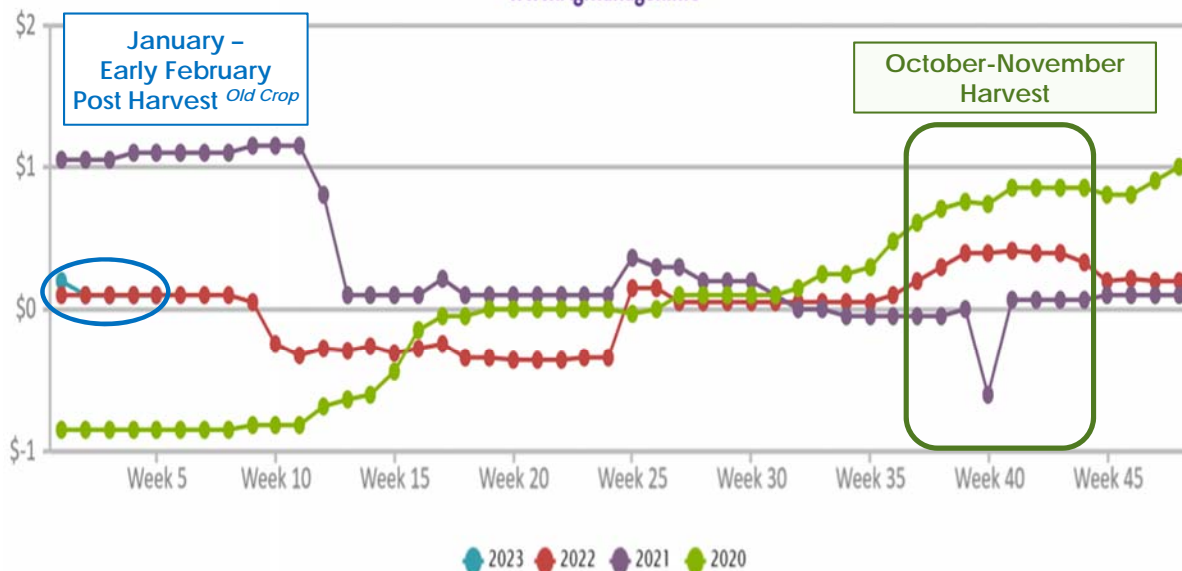
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	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
Grain Sorghum Spot Cash\$	\$7.04	\$7.09	\$7.14	\$7.14	\$7.28	\$6.92
Sorghum Spot Cash Basis	\$0.30	\$0.35	\$0.40	\$0.40	\$0.54	\$0.18
Grain Sorghum Harvest FC\$: Fall ²⁰²²	\$5.53	\$5.63	\$5.63	\$5.83	\$5.63	\$5.48
Sorghum Harvest FC\$ Basis	(\$0.40)	(\$0.31)	(\$0.31)	(\$0.11)	(\$0.31)	(\$0.45)

COLBY, KS: Grain Sorghum Basis - CORNERSTONE AG



OBERLIN , KS: Grain Sorghum Basis - DECATUR COOP

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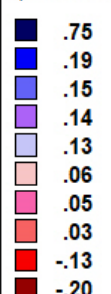
Grain Sorghum Basis, 02-01-2023

Grain Sorghum Basis Deviation, 02-01-2023

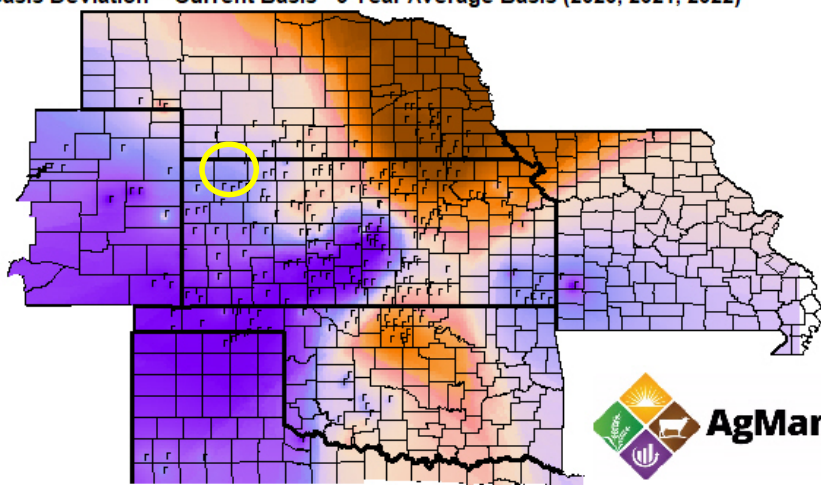
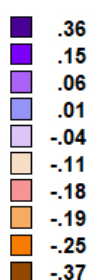
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CBT Corn
Mar Futures
Price: \$6.81

\$/Bushel



\$/Bushel



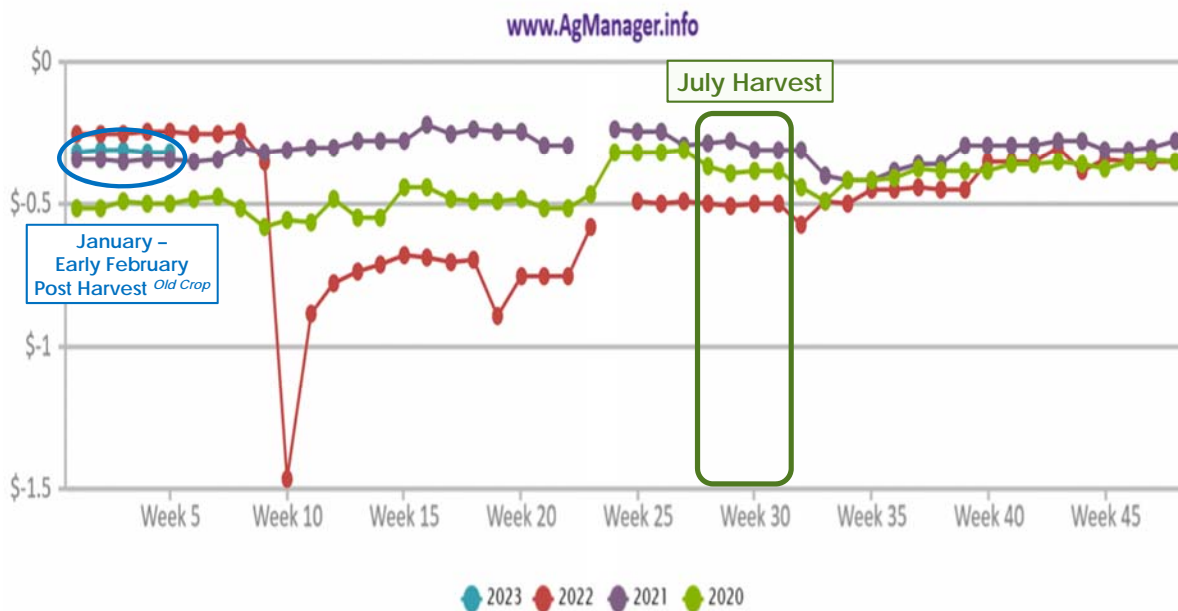
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Kansas Cash & Futures Prices

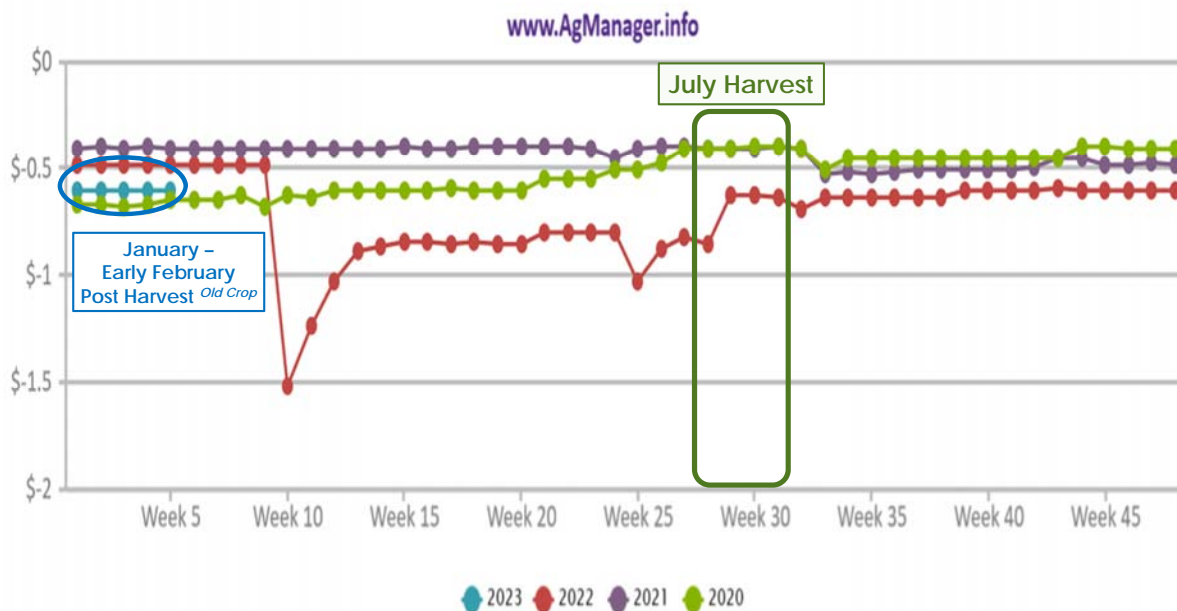
Date	
2/7/2023 (closes)	
Grain Futures Contracts	Closing \$
MAR 2023 KC HRW Wheat (2023 Lead Contract)	\$8.8575
SEPT 2023 KC HRW Wheat (2023 Harvest Contract)	\$8.6175

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	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
KC HRW Wheat Harvest Spot Cash\$	\$8.54	\$8.80	\$8.60	\$8.61	\$8.71	\$8.31
HRW Wheat Harvest Spot Cash Basis	(\$0.32)	(\$0.06)	(\$0.26)	(\$0.25)	(\$0.15)	(\$0.55)
KC HRW Wheat FC\$ - Harvest ²⁰²³	\$8.08	\$8.21	\$8.28	\$8.28	\$8.26	\$8.05
HRW Wheat Harvest FC\$ Basis	(\$0.54)	(\$0.41)	(\$0.34)	(\$0.34)	(\$0.36)	(\$0.57)

COLBY, KS: Hard Red Winter Wheat Basis - CORNERSTONE AG



OBERLIN , KS: Hard Red Winter Wheat Basis - DECATUR COOP

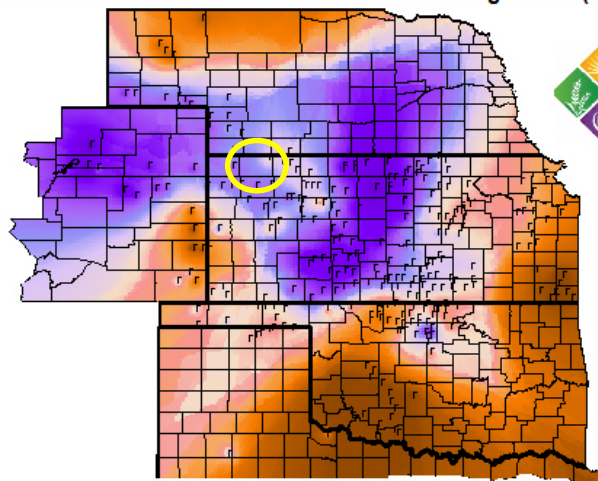
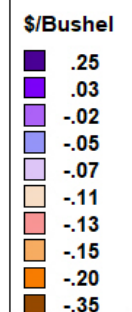
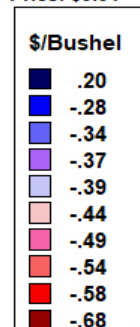


Wheat Basis, 02-01-2023

Wheat Basis Deviation, 02-01-2023

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KCBT Mar
Futures
Price: \$8.84



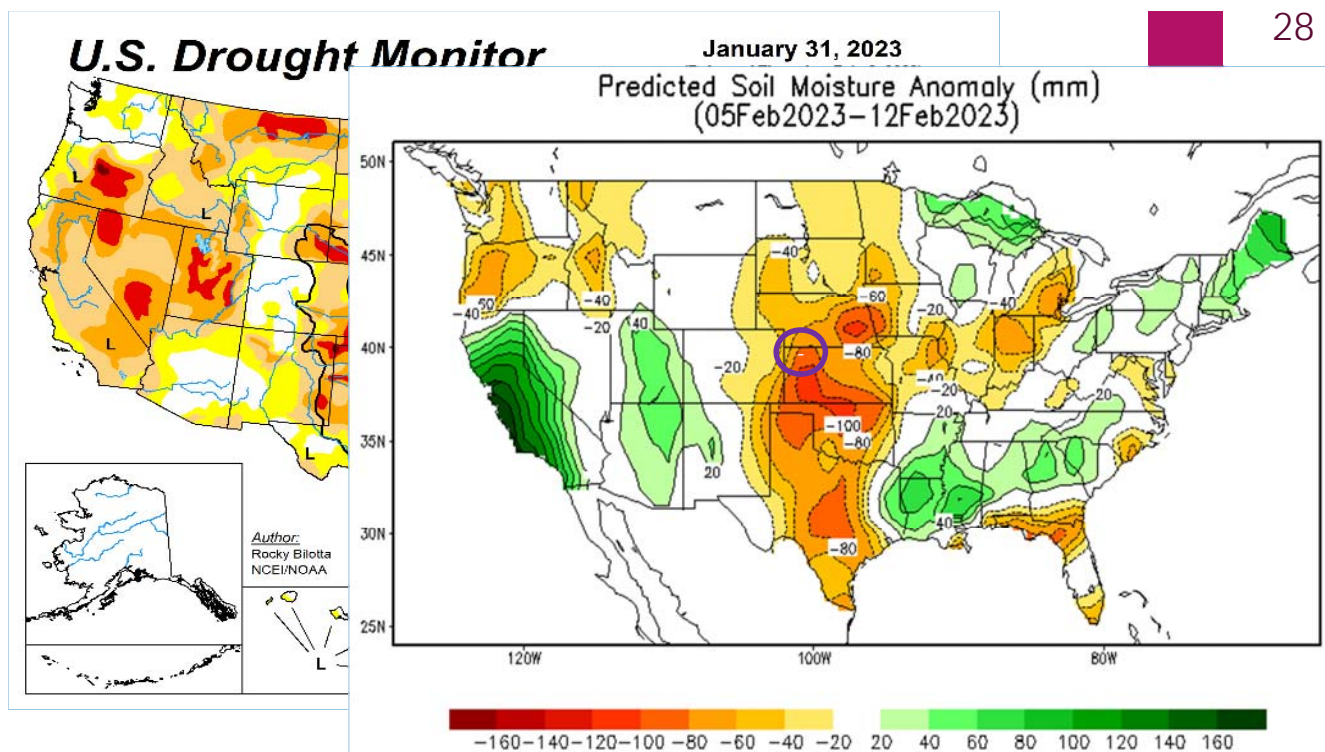
3) Continuance of dry La Nina Weather Pattern in 2023???

- “La Nina is expected to continue into winter, with equal chances of La Nina & ENSO-neutral during January-March 2023. In February-April 2023, there is a 71% Chance of ENSO-neutral.”

U.S. Climate Prediction Center / NCEP January 3, 2023

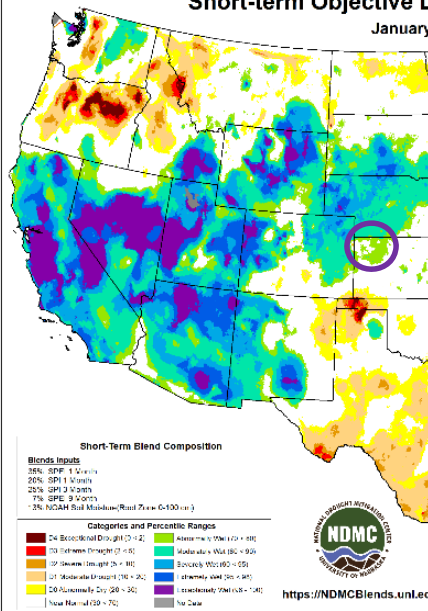
- “La Nina is breaking down, and an El Nino is forecast to emerge in 2023. Returning after several years, an El Nino can completely change the weather patterns for the weather seasons of 2023 & 2024.”

Severe Weather Europe, Andrej Flis January 11, 2023



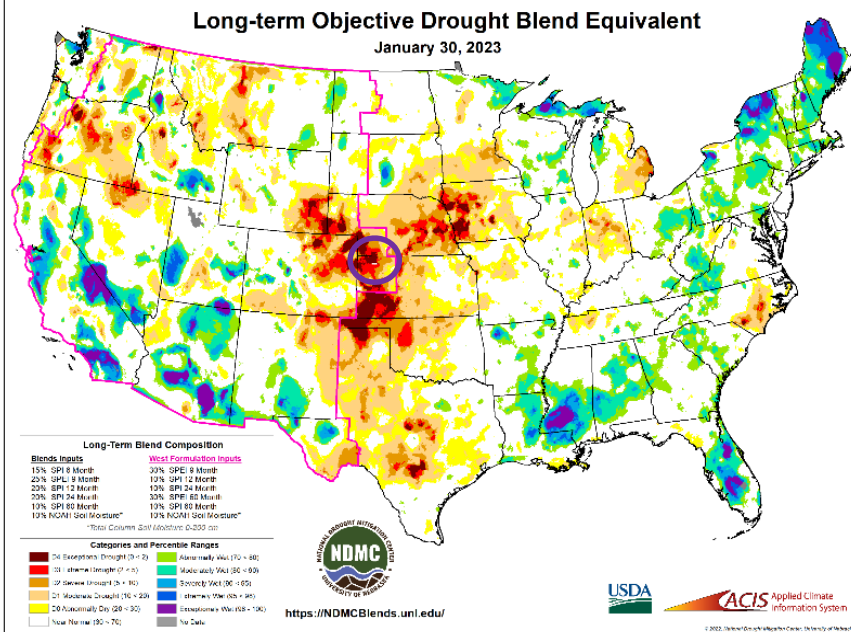
Short-term Objective Drought Blend Equivalent

January

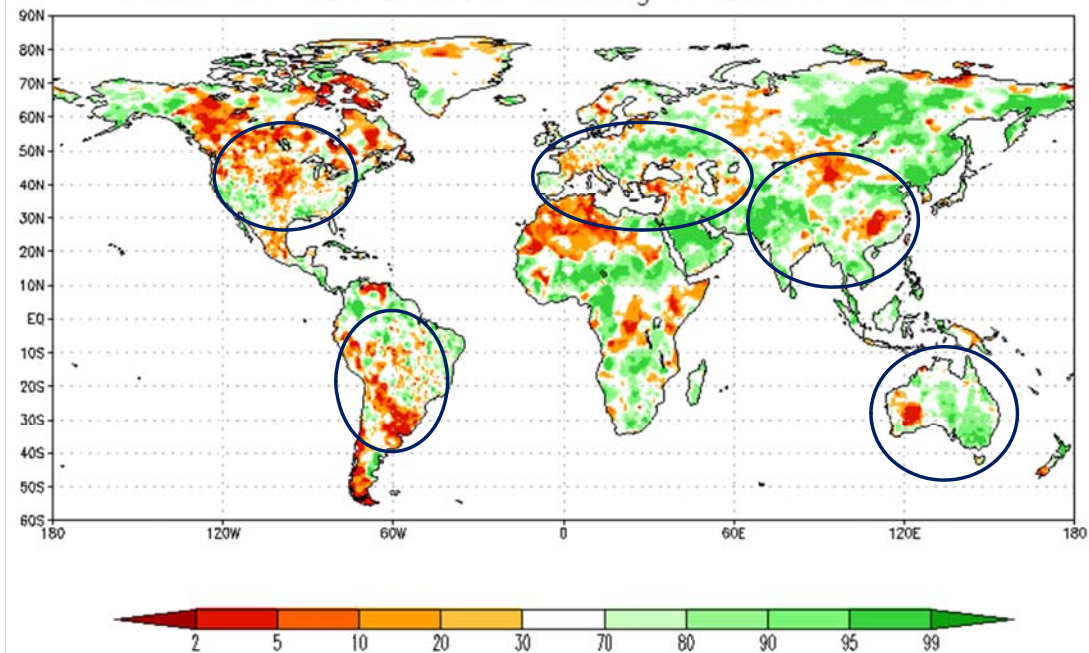


Long-term Objective Drought Blend Equivalent

January 30, 2023



Calculated Soil Moisture Ranking Percentile 20230204



4) Moderating prices for Fertilizer & other Crop Inputs – (but still historically high!)

- Lower natural gas prices, w. but continued supply-chain challenges
- Lower fertilizer / crop input costs will encourage **2023 U.S. Corn Acres** – **≈ 92 million acres in 2023**
 - 88.6 million acres in 2022
 - 93.3 million acres in 2021
 - 90.7 million acres in 2020



**Fertilizer¹**

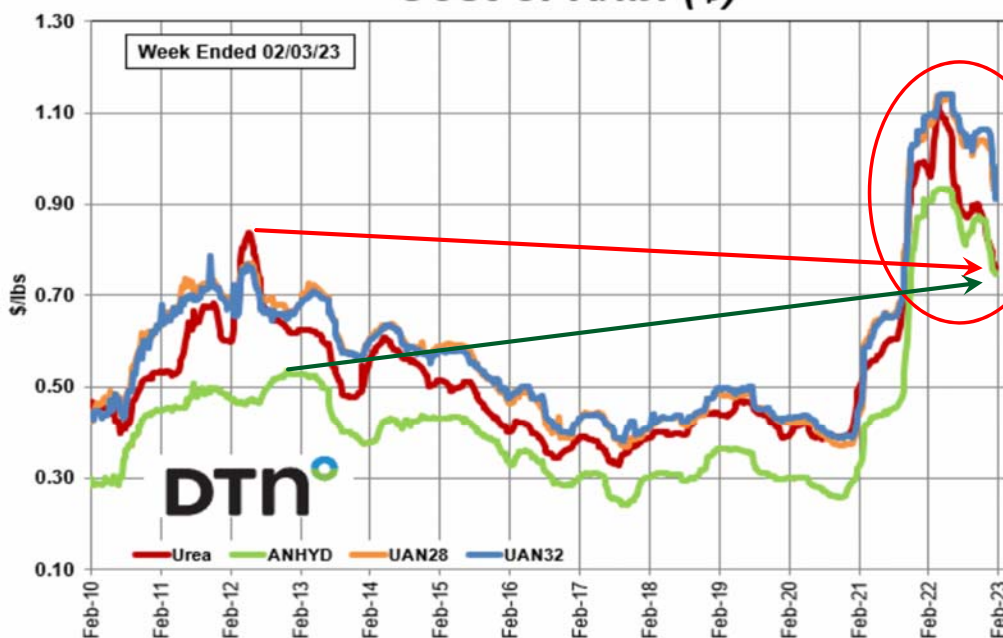
Distributor (Dollars Per Ton)

Product	Sale Type	Price Range	Average	Change
Anhydrous Ammonia	Ask - FOB	1190.00-1490.00	1301.11	DN 7.22
Urea 46-0-0	Ask - FOB	670.00-700.00	686.67	DN 23.33
Liquid Nitrogen 28-0-0	Ask - DELV(Applied)	550.00-710.00	605.17	DN 9.33
DAP (Diammonium Phosphate 18%N 46%P)	Ask - FOB	800.00-850.00	822.50	DN 9.17
MAP (Monoammonium Phosphate 11%N 52%P)	Ask - FOB	790.00-925.00	870.00	UP 18.00
Potash (Potassium)	Ask - FOB	625.00-850.00	696.67	DN 17.46

Fuel

Distributor(Dollars Per Gallon)

Farm Diesel < 1000 gallons	Ask - FOB	3.76-4.34	4.03	UP 0.49
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Cost of N/lb. (\$)

5) U.S. & Foreign Ag response in 2023 to current crop prices?

- Crop Acres? Usually, \uparrow Prices \rightarrow \uparrow Crop Acres, **BUT ALL** crop \$'s are high (especially soybeans)
- Crop Costs? **IF** lower fertilizer & other crop costs, **THEN** it supports Corn acres & decreases Soybean acres in the U.S. Corn Belt 2023
- Rationing Grain Use: Evidence of reduced corn & soybean use....
- Cropland Markets & Cash Rents: High crop prices being reflected

What to anticipate in Year 2023 (1st of 3)

38

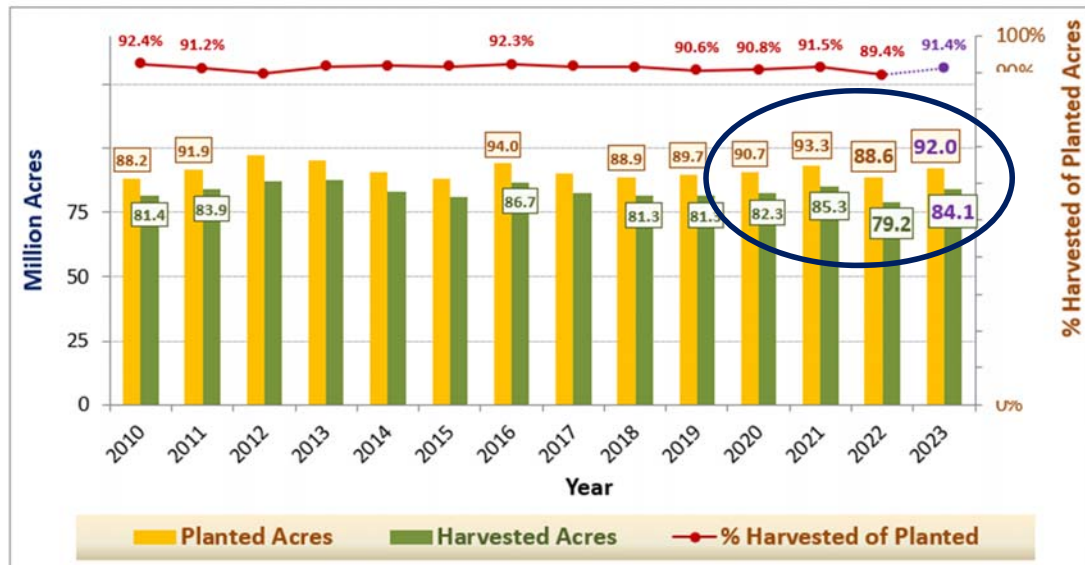
□ 2023 Spring Planting of Feedgrains & Oilseeds

- With tight stocks across crops – any threats to planting 2023 U.S. corn or soybeans could cause **STRONG** price volatility
 - NOV²⁰²³ Soybean futures @ \$13.70 ½ /bu ^{2/7/2023 close}
 - DEC²⁰²³ Corn futures @ \$5.93 ½ /bu ^{2/7/2023 close}
 - 2023 “New Crop” Soy/Corn \$ Ratio = $\$13.70 \frac{1}{2} \div \$5.93 \frac{1}{2} = 2.31$ (vs 2.52 Avg)
- Strong “new crop” price competition likely for 2023 planted acres between Feedgrains & Oilseeds \Rightarrow Likely in March-May 2023

++ Corn

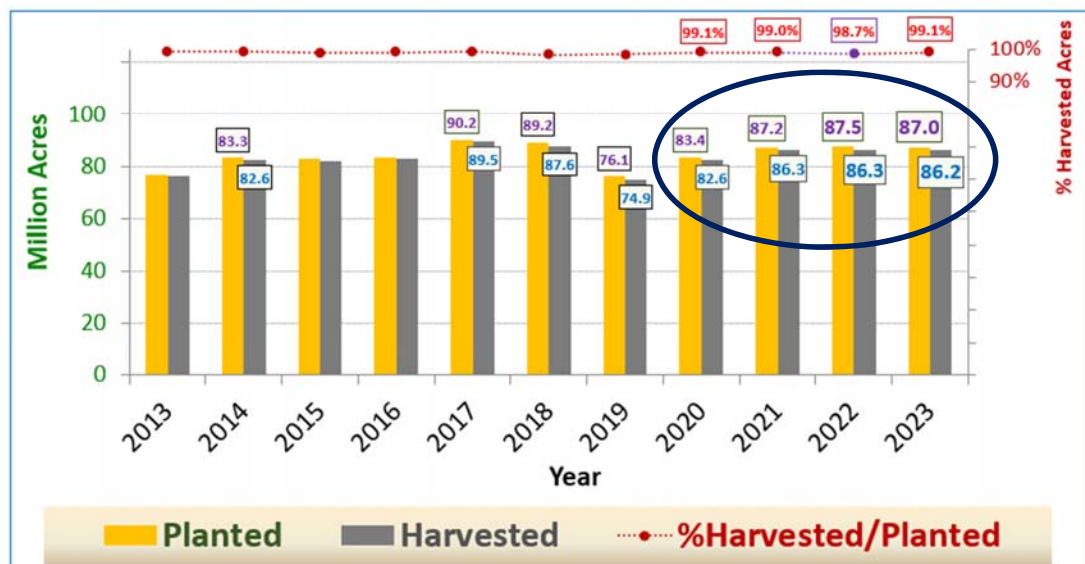
U.S. Corn Acreage for 2010-2023

As of the January 12, 2023 USDA NASS & WASDE Reports



U.S. Soybean Acreage for 2013-2023

Years 2013-2023 as of the January 12, 2023 USDA WASDE & NASS Reports



6) Impact of Ongoing & Possible Geopolitical Conflicts?? *In 2023*

- *Ukraine-Russia War???: Prospects for de-escalation & grain trade?*
- *China-Taiwan???* - *IF* this occurs, it would impact the global economy along with U.S. grain trade
 - *Impacting U.S. soybeans, grain sorghum, likely all U.S. agricultural commodities – including U.S. corn*

7) Overall Prospects for 2023 Crop Markets???

- U.S. Crop Prices supported @ Moderate-to-High Levels – *until* someday grain markets are confident of larger crops & rebuilding of stocks
 - “2023/24 ‘New Crop’ Forward Bids” are vulnerable to moderate declines in late Spring – Summer²⁰²³ & on into Fall harvest²⁰²³
- Ukraine-Russia War Effect: *Smaller* Ukraine corn, wheat crops+exports
- South America Impact: **Brazil** *(Positive++)* & **Argentina** *(Negative -)* crop prospects will effect U.S. prices through at least August²⁰²³

South America Corn-Soybean Calendar

□ 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

What to anticipate: Year 2023 (2nd of 3)

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

⇒ IF in Summer 2023 U.S. & Foreign crop prospects are “OK-to-Good”, THEN grain markets likely “slide” lower into Fall 2023

What to anticipate: Year 2023 *(3rd of 3)*

- ❑ 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: Prospective Plantings – May 31, Acreage – June 30
- ❑ “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 in 2023 ⇒ What are the odds?

Corn Market Prices



CME Corn Futures <i>2/7/2023 Closes</i>			
Month	Close	Change	Carry /mo
Mar^{Lead} 23	\$6.74	↓ \$0.05	---
May 23	\$6.73	↓ \$0.04 ³ / ₄	-\$0.00 ⁵⁰
July 23	\$6.62 ¹ / ₂	↓ \$0.05 ¹ / ₂	-\$0.05 ²⁵
Sept 23	\$6.08	↓ \$0.05	-\$0.27 ²⁵
Dec^{Hvst} 23	\$5.93 ¹/₂	↓ \$0.04 ¹/₄	-\$0.04⁸³³
Mar 24	\$6.00 ¹ / ₂	↓ \$0.04	+\$0.02 ³³³
May 24	\$6.03 ³ / ₄	↓ \$0.03 ³ / ₄	+\$0.01 ⁶²⁵
July 24	\$6.02 ³ / ₄	↓ \$0.04	-\$0.00 ⁵⁰

CME Corn Futures

"Old Crop"
MARCH 2023
OHLCs

\$6.74 /bu
 Market Close
 Tuesday,
 2/7/2023



CME Corn Futures

"New Crop"
DEC 2023
OHLCs

\$5.93 1/2 /bu

Market Close
Tuesday,
2/7/2023



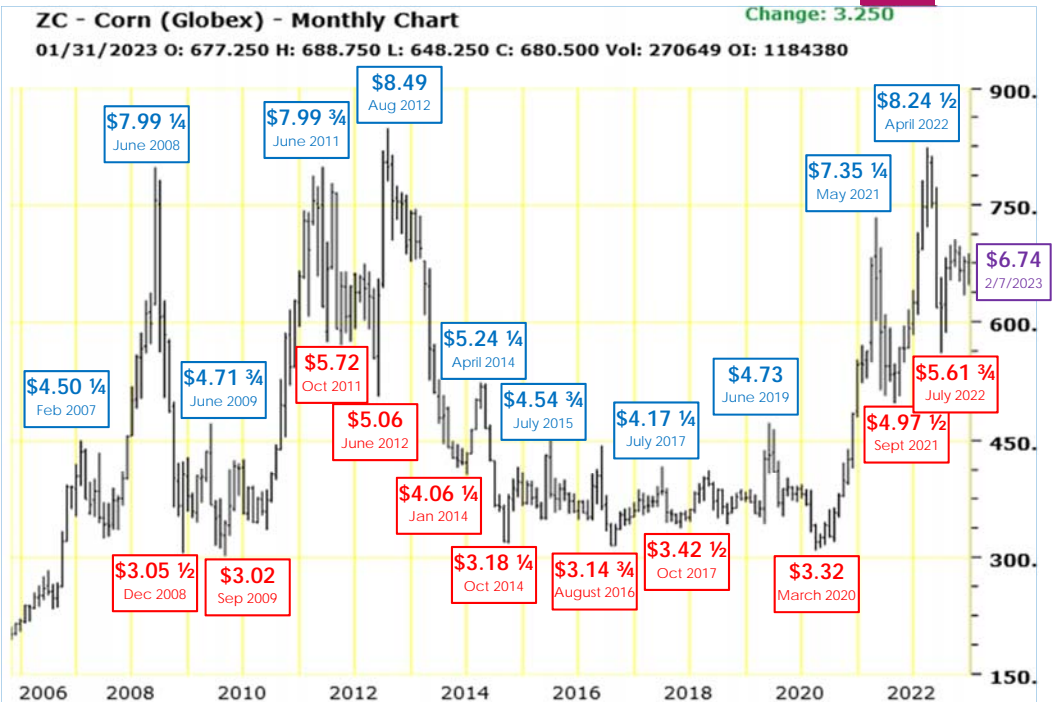
CME Corn Futures Continuous Weekly to 2/7/2023



CME Corn Futures

Monthly
"Continuous"
OHLCs

Dec²⁰⁰⁵
to
Jan²⁰²³



Corn Futures Seasonal \$'s & Volatility since 2014

CORN CVOL HISTORY (CVL)

Zoom 1M 3M 6M 1Y 2Y 3Y 5Y YTD ALL

Oct 1, 2013 → Feb 8, 2023



52

U.S. Corn Supply and Demand

Item	2021/2022 estimate	2022/2023 forecast	Change from December 9	Change from 2021/2022
Planted area (million acres)	93.3	88.6	**	-4.7
Harvested area (million acres)	85.3	79.2	-1.6	-6.1
Yield (bushels per acre)	176.7	173.3	1.0	-3.3
----- Million bushels -----				
Beginning stocks	1,235	1,377	**	142
Production	15,074	13,730	-200	-1,344
Imports	24	50	--	26
Total supply	16,333	15,157	-200	-1,176
Feed and residual	5,718	5,275	-25	-443
Food, seed, and industrial	6,766	6,715	-10	-51
Ethanol	5,326	5,275	--	-51
Domestic use	12,484	11,990	-35	-494
Exports	2,471	1,925	-150	-546
Total use	14,956	13,915	-185	-1,041
Ending stocks	1,377	1,242	-15	-135
----- Percent -----				
Stocks to use ratio	9.2	8.9	**	-0.3
----- Dollars per bushel -----				
Average market price	6.00	6.70	--	0.70

-- No change. ** Rounds to zero.

January 12, 2023

World Corn Production

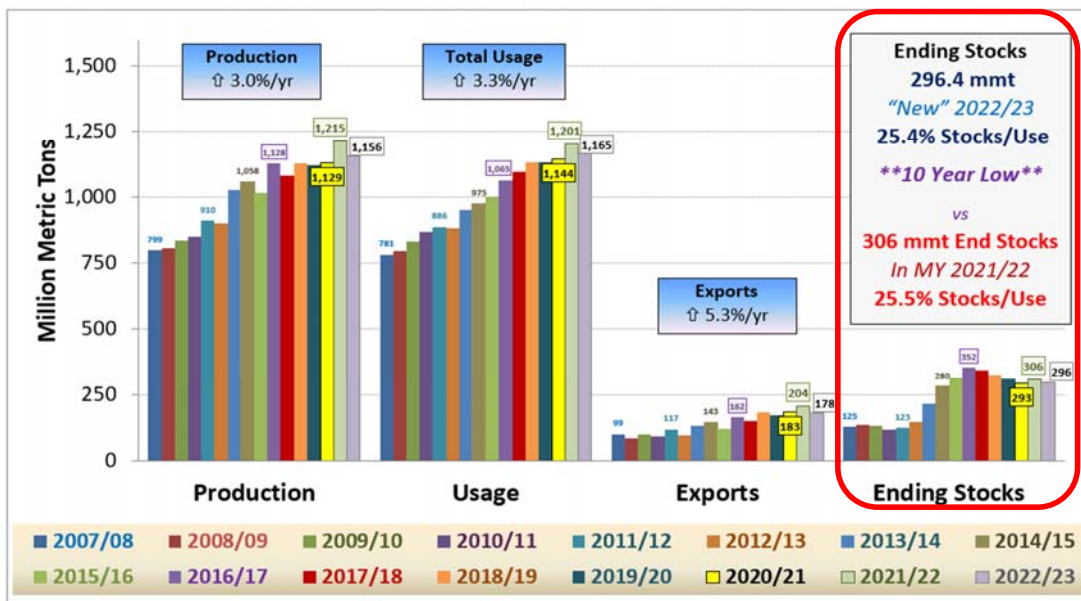
Country or Region	2021/2022		2022/2023		
	Estimate	Change from December 9	Forecast	Change from December 9	Change from 2021/2022
----- Million Tons -----					
World	1,214.9	-2.0	1,155.9	-5.9	-58.9
United States	382.9	--	348.8	-5.1	-34.1
Foreign	832.0	-2.0	807.2	-0.8	-24.8
Argentina	49.5	-2.0	52.0	-3.0	2.5
Brazil	116.0	--	125.0	-1.0	9.0
Mexico	26.8	--	27.6	--	0.8
Canada	14.0	--	14.5	--	0.6
European Union	71.0	--	54.2	--	-16.8
Serbia	6.0	--	5.4	--	-0.6
FSU-12	63.7	--	46.3	--	-17.4
Ukraine	42.1	--	27.0	--	-15.1
Russia	15.2	--	14.0	--	-1.2
South Africa	16.1	--	16.7	--	0.6
China	272.6	--	277.2	3.2	4.6
India	33.6	--	32.0	--	-1.6

-- No change.

January 12, 2023

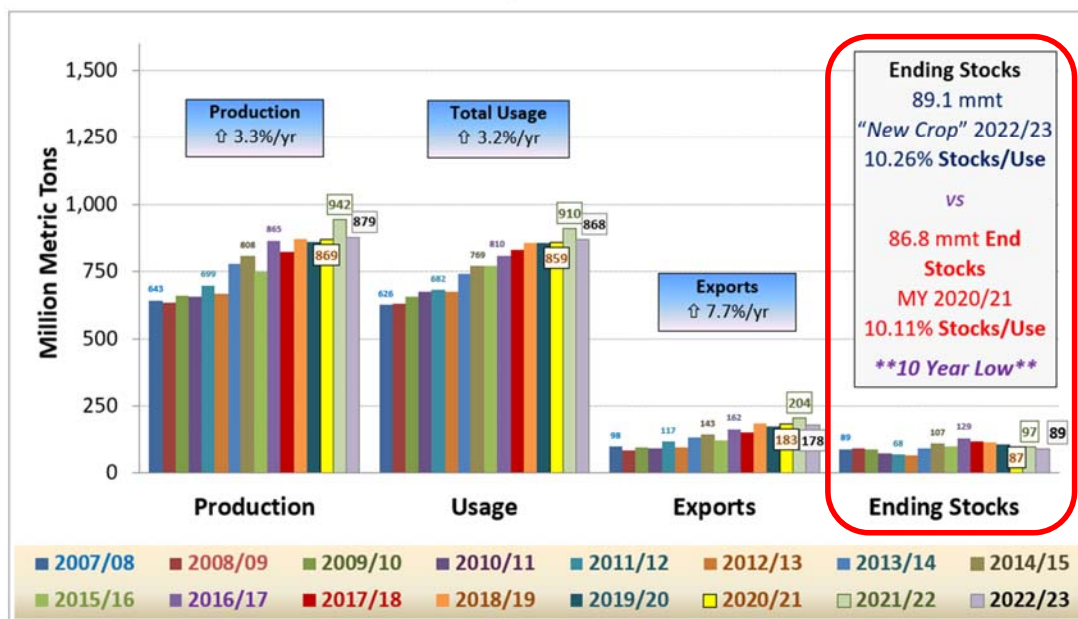
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“World Less-China” Corn Supply-Demand

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

57

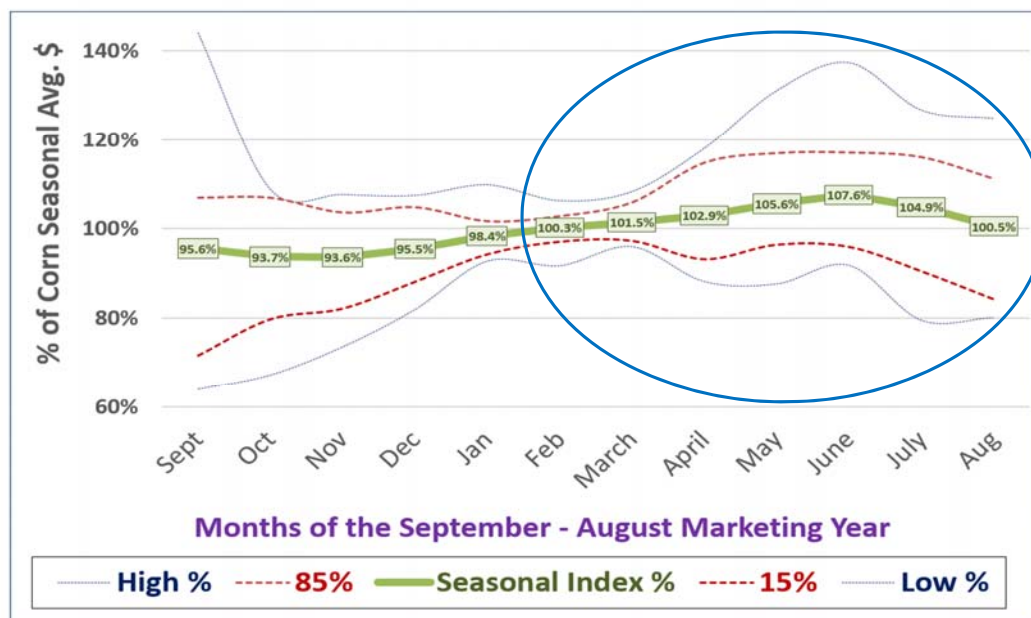
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Corn Seasonal Price Index Northwest KS

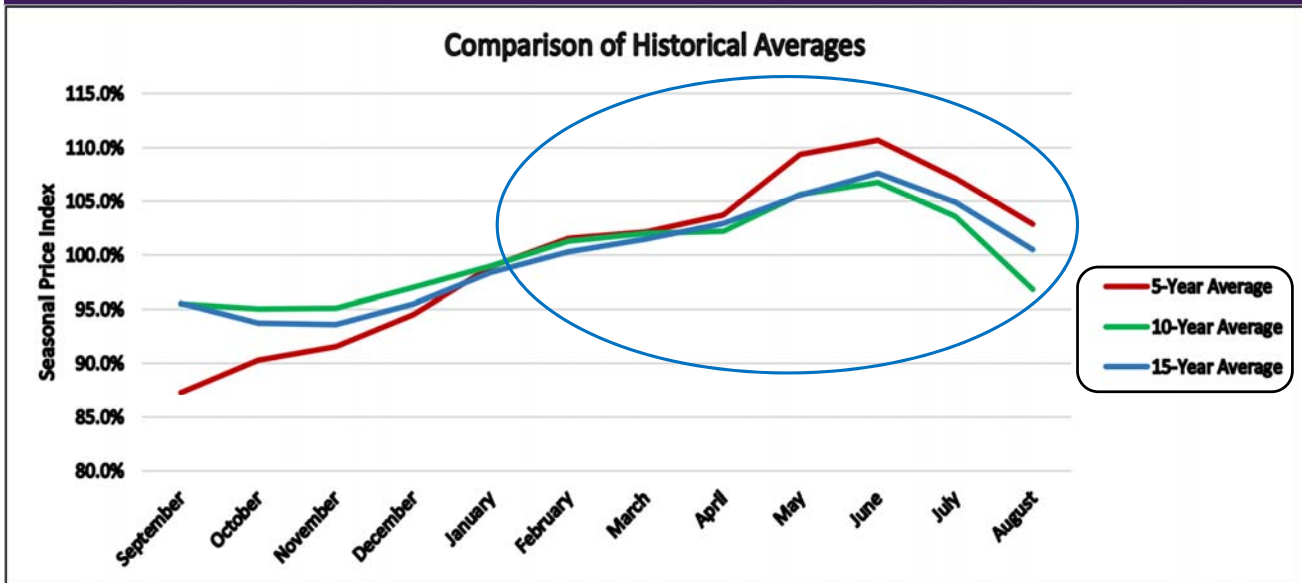
58

Last 23 Marketing Years: 1999/2000 through 2021/2022



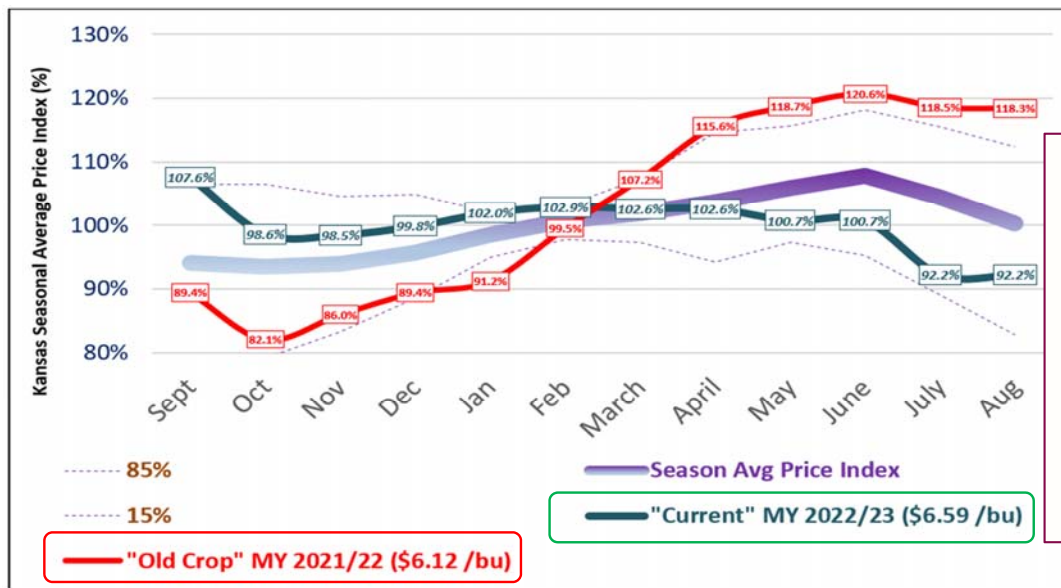
Corn: Seasonal Average Price Index

For the last 5, 10, & 15 Years in Northwest Kansas



Corn Seasonal Prices *Kansas-U.S.*

Long Term Seasonal \$ Trends + MY 2021/22 & "Current" MY 2022/23 As of 2/7/2023



USDA Corn \$ Forecasts:

"Old Crop"

MY 2021/22

= \$6.00 /bu U.S.

"Current"

MY 2022/23

= \$6.70 /bu U.S.

My DTN Cash Bids

My DTN Cash Bids for Postal Code 64473, Radius 300 miles

61

Elevator/Location	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023	Oct 2023	Nov 2023
DECATUR COOP ASSOCIATION HERNDON, KS	7.44	---	---	---	---	---	---	5.70
HI PLAINS COOP GEM, KS	7.49	---	---	---	---	---	---	---
FRONTIER AG INC- REXFORD, KS	---	---	---	---	---	---	5.68	---
HI PLAINS COOP REXFORD, KS	7.46	---	---	---	---	---	---	---
FRONTIER AG INC COLBY, KS	---	---	---	---	---	---	5.68	---
DECATUR COOP ASSOCIATION OBERLIN, KS	7.51	---	---	---	---	---	---	5.73
CHS OBERLIN, KS	7.56	7.56	---	---	---	---	---	5.78
CORNERSTONE AG COLBY, KS	7.51	---	---	---	---	---	---	---
HI PLAINS COOP LEVANT, KS	7.49	Wednesday, February 8, 2023 As of 10:30 a.m.					---	---
HI PLAINS COOP COLBY, KS	7.49						---	---
FRONTIER AG INC BIRD CITY, KS	---	---	---	---	---	---	5.68	---

Elevator FC Basis:

\$0.15 to \$0.25 under DEC²³



National Daily Ethanol Report

Agricultural Marketing Service
Livestock, Poultry, and Grain Market News

February 7, 2023

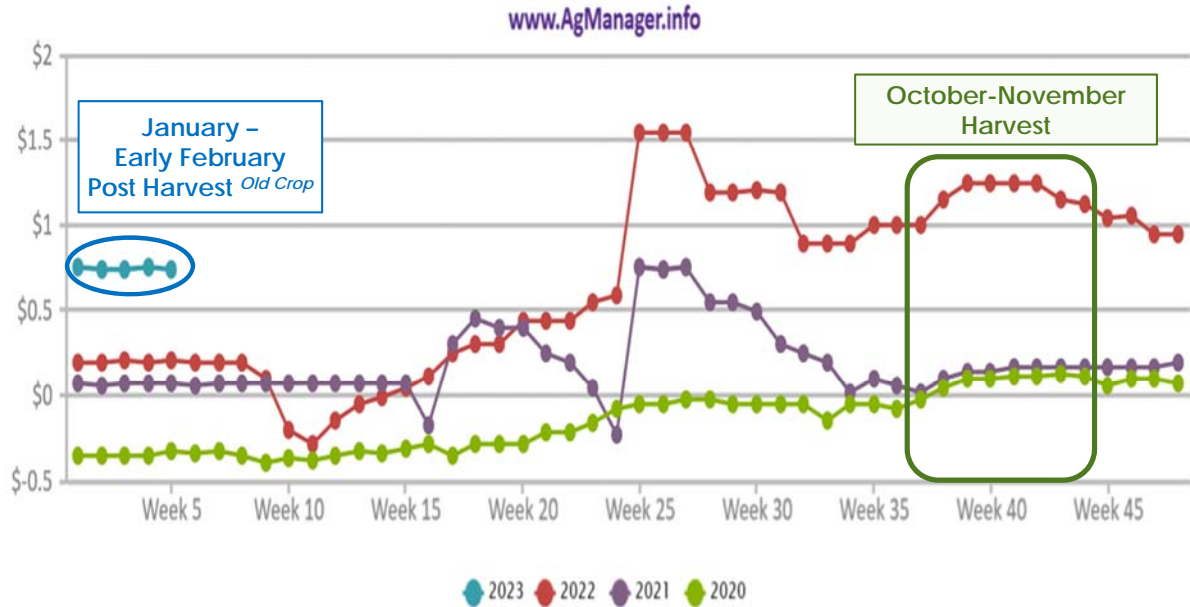
62

US #2 Yellow Corn -Bulk

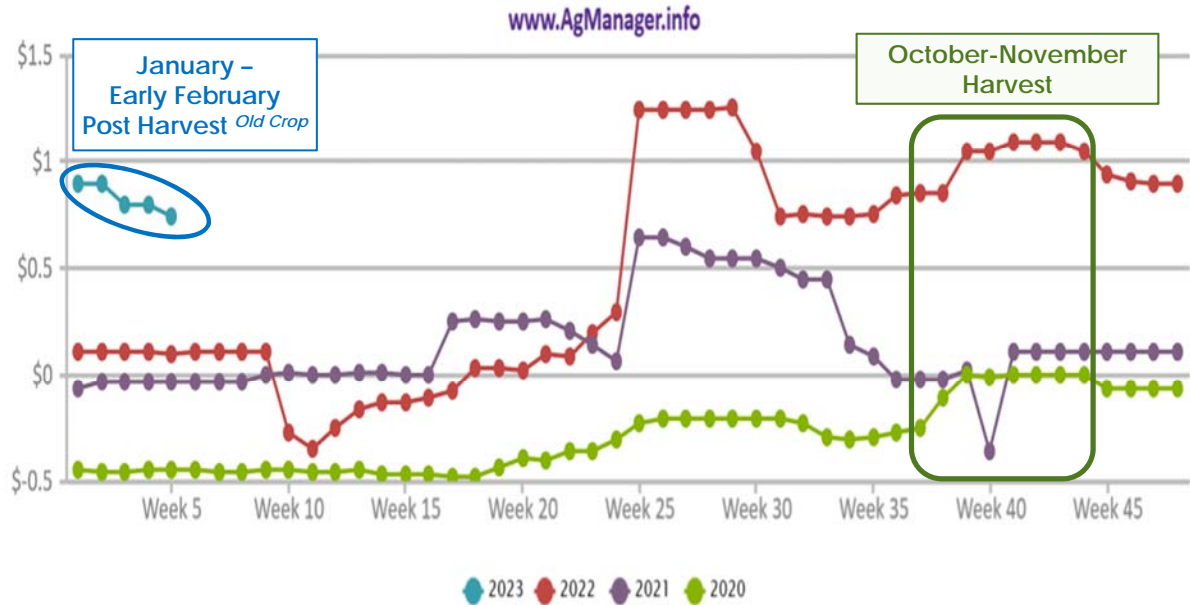
Ethanol Plant

State/Province/Region	Sale Type	Basis (¢/bu)	Basis Change	Price (\$/Bu)	Price Change	Average
Illinois	Bid	-13.00H to 40.00H	UNCH-DN 2	6.6600-7.1900	UP 0.0150-DN 0.0050	6.9014
Indiana	Bid	-15.00H to 18.00H	UNCH-DN 7	6.6400-6.9700	UP 0.0150-DN 0.0550	6.8633
Iowa East	Bid	-15.00H to 10.00H	DN 5-UNCH	6.6400-6.8900	DN 0.0350-UP 0.0150	6.7718
Iowa West	Bid	5.00H to 48.00H	UNCH-UP 1	6.8400-7.2700	UP 0.0150-UP 0.0250	7.1067
Kansas	Bid	45.00H to 90.00H	UNCH	7.2400-7.6900	UP 0.0150	7.4900
Michigan	Bid	-30.00H to -17.00H	UNCH	6.4900-6.6200	UP 0.0150	6.5475
Minnesota	Bid	-25.00H to 31.00H	UNCH	6.5400-7.1000	UP 0.0150	6.8717
Missouri	Bid	5.00H to 50.00H	UNCH	6.8400-7.2900	UP 0.0150	7.0000
Nebraska	Bid	20.00H to 90.00H	UNCH	6.9900-7.6900	UP 0.0150	7.1950
Ohio	Bid	-10.00H to 12.00H	UNCH	6.6900-6.9100	UP 0.0150	6.8133
South Dakota	Bid	-10.00H to 50.00H	UP 8-UNCH	6.6900-7.2900	UP 0.0950-UP 0.0150	6.9492
Wisconsin	Bid	-45.00H to -21.00H	UNCH	6.3400-6.5800	UP 0.0150	6.4600

COLBY, KS: Corn Basis - CORNERSTONE AG



OBERLIN, KS: Corn Basis - DECATUR COOP



U.S. Corn Supply-Demand Balance Sheet

"Current" MY 2022/23 & Proj. "New Crop" MY 2023/24 as of the 1/13/2023 USDA WASDE + KSU Ests.

Item	USDA 2022/23 1/12/2023 WASDE 172.3 bu/ac 13,730 bb crop	A. USDA "New Crop" MY 2023/24 Scenario #1 "High Yields" = 181.5 bu/ac 15,265 bb crop	B. USDA "New Crop" MY 2023/24 Scenario #1 "Average Yields" = 176.0 bu/ac 14,802 bb crop
% Probability of Occurring (KSU)	75% ^{KSUest}	35% ^{KSUest}	65% ^{KSUest}
Planted Area (million acres)	88,579	92,000	92,000
Harvested Area (million acres)	79,207	84,100	84,100
% Harvested/Planted Area	89.42%	91.41%	91.41%
Yield / harvested acre (bu/ac)	172.3	181.5	176.0
Million Bushels			
Beginning Stocks (million bushels)	1,377	1,242	1,242
Production (million bu.)	13,730	15,265	14,802
Imports (million bu.)	50.0	25.0	25.0
Total Supply (million bu.)	15,157	16,531	16,094
Ethanol for fuel Use (million bu.)	5,275	5,325	5,325
Food & Industrial Use (m/bn bu.)	1,419.4	1,419.4	1,419.4
Seed Use (million bu.)	30.6	30.6	30.6
Exports (million bu.)	1,925	2,275	2,275
Feed & Residual Use (million bu.)	5,275	5,700	5,700
Total Use (million bu.)	13,915	14,750	14,750
Ending Stocks (million bu.)	1,242	1,781	1,344
% Ending Stocks-to-Use	8.93%	12.07%	8.94%
Days of Supply (% S/U x 365 days)	32.6 days	44.1 days	32.6 days
U.S. Corn Average Farm Price (\$/bushel)	\$6.70 ^{USDA} \$6.46 ^{KSU}	\$5.70 ^{USDA}	\$6.45 ^{KSU}

65

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

MY 2012/13 thru "New Crop" MY 2023/24^{Est} as of the January 12, 2023 USDA Reports

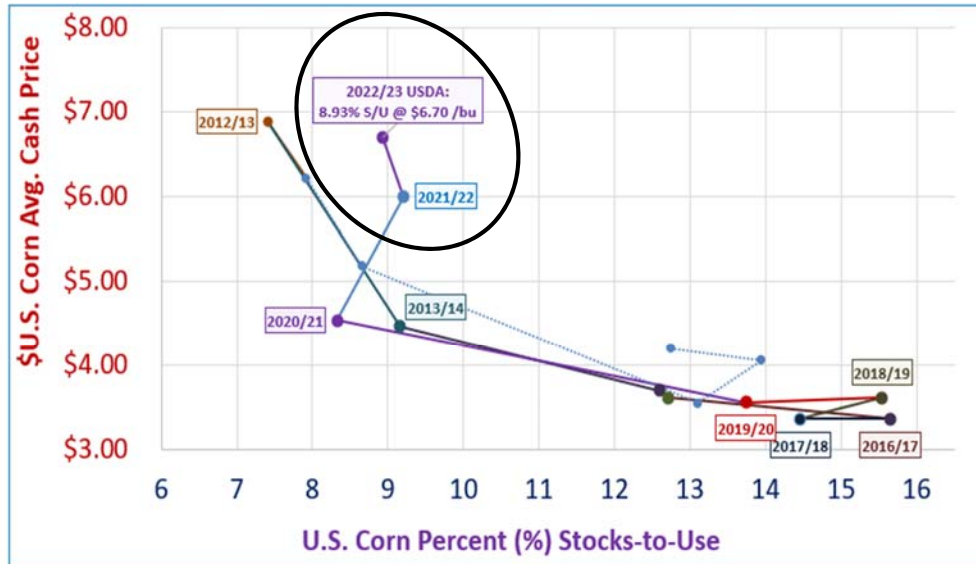


66

U.S. Corn Price vs U.S. % Stocks-to-Use

67

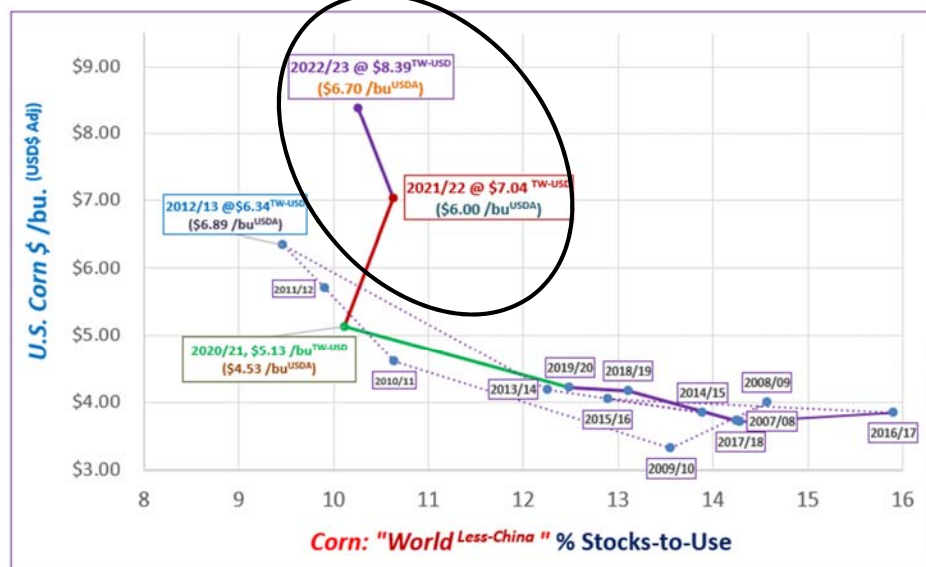
MY 2007/08 - "Current" MY 2022/23 as of the January 12, 2023 USDA Reports



U.S. Corn \$USD\$ Adj. vs "World Less-China" % S/U

68

MY 2007/08 - "Current" MY 2022/23 as of the January 12, 2023 USDA WASDE Report



2023 Corn Cost-Return Budget (W-C-F Rotation) in Northwest Kansas

69

Item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Corn - Northwest KS	bu	\$6.10	89.00	\$542.90	\$542.90
--TOTAL INCOME--					\$542.90
DIRECT EXPENSES					
Additional labor					\$0.83
Crop insurance					\$34.24
Diesel					\$16.77
Fertilizers					\$87.64
Herbicides					\$113.90
Miscellaneous					\$6.65
Operator labor					\$5.85
Repair & Maintenance					\$15.46
Seeds					\$49.87
Interest on operating capital	8% percent on direct expenses				\$13.25
--TOTAL DIRECT EXPENSES--					\$344.47
-----Total direct expenses per bu					\$3.87
FIXED EXPENSES					
Cash rent					\$105.00
Capital recovery (depreciation + interest)					\$55.16
--TOTAL FIXED EXPENSES--					\$160.16
-----Total expenses per bu					\$5.67
RETURNS ABOVE DIRECT EXPENSES					\$198.43
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$38.28

2023 Corn Costs Northwest KS

Yield = 89 bu /ac

Total Direct Expenses
= \$3.87 /bu

Total of ALL Expenses
= \$5.67 /bu

2023 Irrigated Corn (center-pivot) Cost-Return Budget

70

Item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Corn - Northwest KS	bu	\$6.10	240.00	\$1,464.00	\$1,464.00
--TOTAL INCOME--					\$1,464.00
DIRECT EXPENSES					
Additional labor					\$0.66
Crop consulting					\$7.57
Crop insurance					\$32.98
Diesel					\$21.77
Fertilizers					\$234.47
Fungicides					\$9.13
Herbicides					\$103.25
Insecticides					\$12.20
Irrigation energy (NG)					\$104.31
Irrigation labor					\$9.00
Miscellaneous					\$12.10
Operator labor					\$7.92
Repair & Maintenance					\$22.21
Seeds					\$141.89
Interest on operating capital	8% percent on direct expenses				\$28.78
--TOTAL DIRECT EXPENSES--					\$748.22
-----Total direct expenses per bu					\$3.12
FIXED EXPENSES					
Cash rent					\$218.00
Capital recovery (depreciation + interest)					\$298.37
--TOTAL FIXED EXPENSES--					\$516.37
-----Total expenses per bu					\$5.27
RETURNS ABOVE DIRECT EXPENSES					\$715.78
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$199.41

2023 Irrigated Corn Northwest KS

Yield = 240 bu /ac

Total Direct Expenses
= \$3.12 /bu

Total of ALL Expenses
= \$5.27 /bu

15 acre-inches of water applied
300 foot well depth
\$ 6.95 fuel cost per acre-inch of water applied
.71 Mcf of natural gas per acre-inch of water applied
\$ 9.75 per Mcf for cost of natural gas
10.7 Mcf of fuel used in total

2023 Preharvest Marketing Plan

71



**KANSAS STATE
UNIVERSITY**

Department of Agricultural Economics

Preharvest Marketing Plan

WINNING THE GAME

Objective: Buy crop insurance to protect my production risk and price ____% of my anticipated crop (based on APH yield) or _____ bushels.

Price ____ bushels at \$____ cash price (\$____ - ____ futures)
(contract month) using ____

Price ____ bushels at \$____ f/ ____ c, or by ____, 2023, using ____

Price ____ bushels at \$____ f/ ____ c, or by ____, 2023, using ____

Price ____ bushels at \$____ f/ ____ c, or by ____, 2023, using ____

Price ____ bushels at \$____ f/ ____ c, or by ____, 2023, using ____

Price ____ bushels at \$____ f/ ____ c, or by ____, 2023, using ____

Price ____ bushels at \$____ f/ ____ c, or by ____, 2023, using ____

Plan starts on ____ **Completed by** ____.

**Ignore decision dates and make no sale if prices are lower than \$____
____ (month/commodity) futures / \$____ local cash price.**

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Sample Pre-Harvest Marketing Plan

Objective: Buy crop insurance to protect production risk and price 75% of our 67,000-bushel APH (**50,000 bu.**).

Using five, Increments

Price 10,000 bushels at \$4.30 December futures/\$4.15 cash
or by April 15

Price 10,000 bushels at \$4.50 fut./4.35 cash, or by May 15

Price 10,000 bushels at \$4.60 fut./4.45 cash, or by Jun 15

Price 10,000 bushels at \$4.75 fut./4.60 cash, or by Jul 15

Price 10,000 bushels at \$5.00 fut./4.85 cash, or by Aug 15

Plan starts on January 1, 2023.

Ignore decision dates and **make no sale if prices are lower than \$4.00 local cash price.**

Exit all options positions by October 1



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What Would YOU Change?

**50% is
Plenty!**

Objective: Buy crop insurance to protect production risk and price 75% of our 67,000-bushel APH (50,000 bu.).

Using five increments

Price 10,000 bushels at \$4.30 December futures/\$4.15 cash
or by April 15

Price 10,000 bushels at \$4.50 fut./4.35 cash, or by May 15

Price 10,000 bushels at \$4.60 fut./4.45 cash, or by Jun 15

Price 10,000 bushels at \$4.75 fut./4.60 cash, or by Jul 15

Price 10,000 bushels at \$5.00 fut./4.85 cash, or by Aug 15

Plan starts on January 1, 2022.

Ignore decision dates and make no sale if prices are lower than \$4.00 local cash price.

Exit all options positions by October 1

**Different prices,
increments, dates?**

**What's Your
Price Outlook?**



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✓ What's a Realistic Max Price Target?

Let's start with the seasonals

Preharvest: On average, 25% of KS corn is harvested by the last week of September; and 25% of KS milo by mid-October.

Fifteen Years: CME December Corn Futures				
2008/22	Jan 1 Price	Preharvest Max Price	Change	Percent Change
2008	\$4.80	\$7.88	\$3.08	64%
2009	\$4.56	\$4.73	\$0.17	4%
2010	\$4.45	\$5.22	\$0.77	17%
2011	\$5.53	\$7.75	\$2.23	40%
2012	\$5.90	\$8.39	\$2.49	42%
2013	\$5.92	\$5.94	\$0.01	0%
2014	\$4.48	\$5.13	\$0.65	14%
2015	\$4.20	\$4.52	\$0.32	8%
2016	\$3.77	\$4.49	\$0.72	19%
2017	\$3.84	\$4.15	\$0.31	8%
2018	\$3.87	\$4.27	\$0.40	10%
2019	\$3.98	\$4.69	\$0.70	18%
2020	\$4.05	\$4.05	\$0.00	0%
2021	\$4.35	\$6.37	\$2.02	46%
2022	\$5.48	\$7.66	\$2.18	40%

WINNING THE GAME

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2023	\$6.07	\$6.07	\$0.00	0%
------	--------	--------	--------	----

Let's put'em in order of "Change"

33% of the time; prices rise \$2.00 or more (>40%)

67% of the time; prices rise \$0.40 or more (>10%)

87% of the time; prices rise \$0.17 or MORE

13% of the time; there was no change

Fifteen Years: CME December Corn Futures				
2008/22	Jan 1 Price	Preharvest Max Price	Change	Percent Change
2008	\$4.80	\$7.88	\$3.08	64%
2012	\$5.90	\$8.39	\$2.49	42%
2011	\$5.53	\$7.75	\$2.23	40%
2022	\$5.48	\$7.66	\$2.18	40%
2021	\$4.35	\$6.37	\$2.02	46%
2010	\$4.45	\$5.22	\$0.77	17%
2016	\$3.77	\$4.49	\$0.72	19%
2019	\$3.98	\$4.69	\$0.70	18%
2014	\$4.48	\$5.13	\$0.65	14%
2018	\$3.87	\$4.27	\$0.40	10%
2015	\$4.20	\$4.52	\$0.32	8%
2017	\$3.84	\$4.15	\$0.31	8%
2009	\$4.56	\$4.73	\$0.17	4%
2013	\$5.92	\$5.94	\$0.01	0%
2020	\$4.05	\$4.05	\$0.00	0%

WINNING THE GAME

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Preharvest Marketing Plan



Objective: Buy crop insurance to protect my production risk and price 50 % of my anticipated crop (based on APH yield) or 60,000 bushels.

Price 5,000 bushels at \$ \$5.90 cash price (\$ - DEC 2023 futures) (contract month) using FC, Hedge, Basis Contract

Price 5,000 bushels at \$ \$6.15 f/ \$6.10 c, or by 3/15/23, 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$6.40 f/ \$6.35 c, or by 4/15/23, 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$6.65 f/ \$6.60 c, or by 5/15/23, 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$6.90 f/ \$6.85 c, or by 6/1/23, 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$7.15 f/ \$7.10 c, or by 6/15/23, 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$7.40 f/ \$7.35 c, or by 7/15/23, 2023, using FC, Hedge, Basis Contract

Plan starts on February 8, 2023. Completed by July 15, 2023.

Ignore decision dates and make no sale if prices are lower than \$ \$5.00 Cost of Prodn. \$??? (month/commodity) futures / \$ \$??? local cash price.

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Sample Pre-Harvest Corn Marketing Plan



Objective: Buy up crop insurance coverage to 80% to protect production risk; and preharvest price 80% of APH.

Using five increments

Price 20% at \$6.10 December futures, or by March 15

Price 20% at \$6.30 December futures, or by April 15

Price 20% at \$6.90 December futures, or by May 15

Price 30% at \$7.50 December futures, or by June 15

Price 10% at \$8.25 December futures, or by July 15

Ignore decision dates and make no sale if prices are lower than **\$5.50 local cash price.**

Exit all options positions prior to Harvest



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Preharvest Marketing Plan



Objective: Buy crop insurance to protect my production risk and price 50 % of my anticipated crop (based on APH yield) or 60,000 bushels.

Price 5,000 bushels at \$ \$5.90 cash price (\$ _____ - DEC 2023 futures) (contract month) using FC, Hedge, Basis Contract

Price 5,000 bushels at \$ \$6.15 f/ \$6.10 c, or by 3/15/23 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$6.40 f/ \$6.35 c, or by 4/15/23 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$6.65 f/ \$6.60 c, or by 5/15/23 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$6.90 f/ \$6.85 c, or by 6/1/23 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$7.15 f/ \$7.10 c, or by 6/15/23 2023, using FC, Hedge, Basis Contract

Price 10,000 bushels at \$ \$7.40 f/ \$7.35 c, or by 7/15/23 2023, using FC, Hedge, Basis Contract

Plan starts on February 8, 2023 . Completed by July 15, 2023 .

Ignore decision dates and make no sale if prices are lower than \$ \$5.00 Cost of Prodn. \$??? (month/commodity) futures / \$ \$??? local cash price.

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Questions?

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