

Grain Market Outlook for 2023

Cover Your Acres Conference

Oberlin, Kansas

January 17-18, 2023

DANIEL O'BRIEN

EXTENSION AGRICULTURAL ECONOMIST

KANSAS STATE
UNIVERSITY

Department of Agricultural Economics



Corn Markets

2



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CME Corn Futures			
Friday, January 13, 2023			
Month	Close	Change	Carry /mo
Mar^{Lead} 22	\$6.75	↑ \$0.04	---
May 23	\$6.73 ³ / ₄	↑ \$0.04 ¹ / ₄	<i>-\$0.00⁶²⁵</i>
July 23	\$6.63 ³ / ₄	↑ \$0.02 ¹ / ₄	<i>-\$0.05</i>
Sept 23	\$6.14 ¹ / ₄	↑ \$0.01 ¹ / ₄	<i>-\$0.24⁷⁵</i>
Dec^{Hvst} 23	\$5.98 ¹/₂	↑ \$0.02 ¹ / ₂	<i>-\$0.05²⁵</i>
Mar 24	\$6.05 ¹ / ₄	↑ \$0.02 ¹ / ₄	<i>+\$0.02²⁵</i>
May 24	\$6.08	↑ \$0.02 ¹ / ₂	<i>+\$0.01³⁷⁵</i>
July 24	\$6.05 ³ / ₄	↑ \$0.02	<i>-\$0.01¹²⁵</i>

CME Corn Futures *Continuous Weekly to 1/13/2023*



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

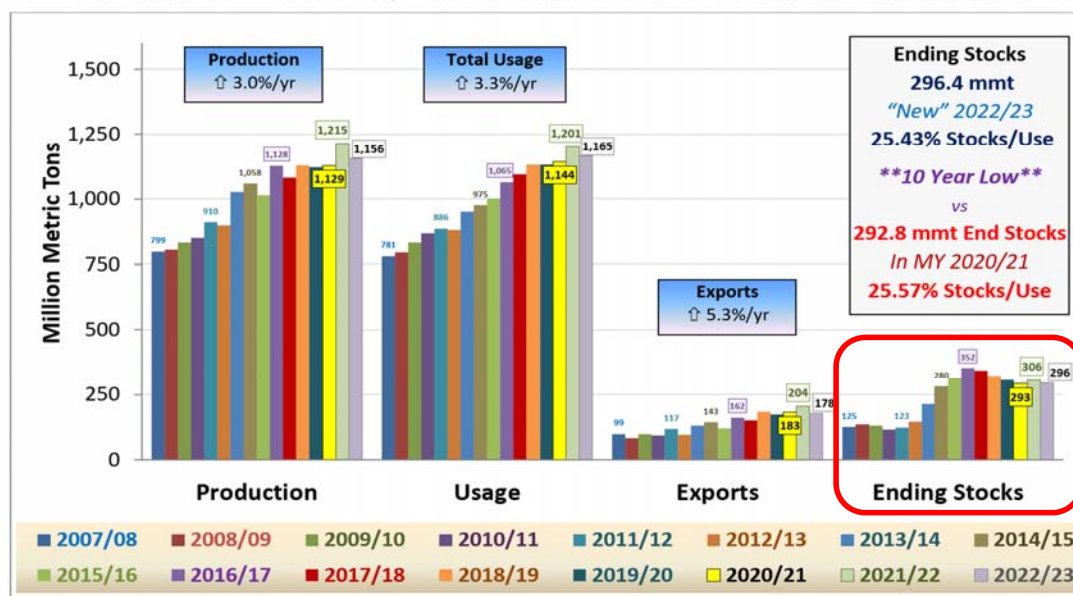
World Corn Supply and Use

Item	2021/2022		2022/2023		
	Estimate	Change from December 9	Forecast	Change from December 9	Change from 2021/2022
----- Million Tons -----					
Beginning stocks	292.5	--	306.0	-1.1	13.4
Production	1,214.9	-2.0	1,155.9	-5.9	-58.9
Total Supply	1,507.4	-2.0	1,461.9	-7.1	-45.5
Feed use	749.0	-2.3	733.0	-2.3	-16.1
Total use	1,201.5	-0.9	1,165.5	-5.1	-36.0
Trade	204.0	1.5	178.2	-3.5	-25.9
Ending Stocks	306.0	-1.1	296.4	-2.0	-9.5

-- No change.

World Corn Supply-Demand

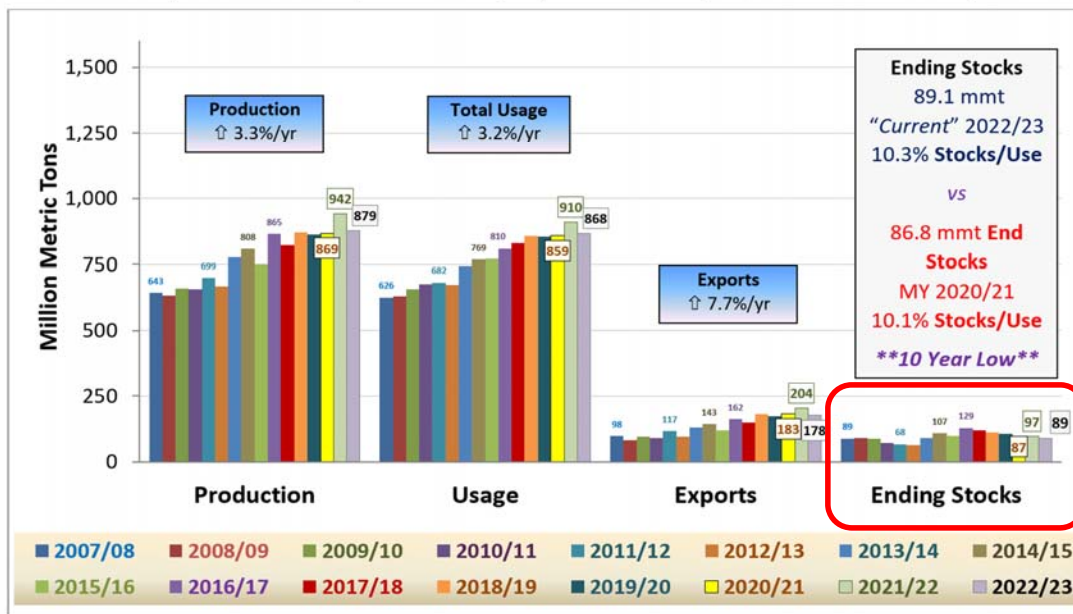
MY 2007/08 – “New Crop” MY 2022/23 as of the January 13, 2023 USDA WASDE Report



“World Less-China” Corn Supply-Demand

9

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



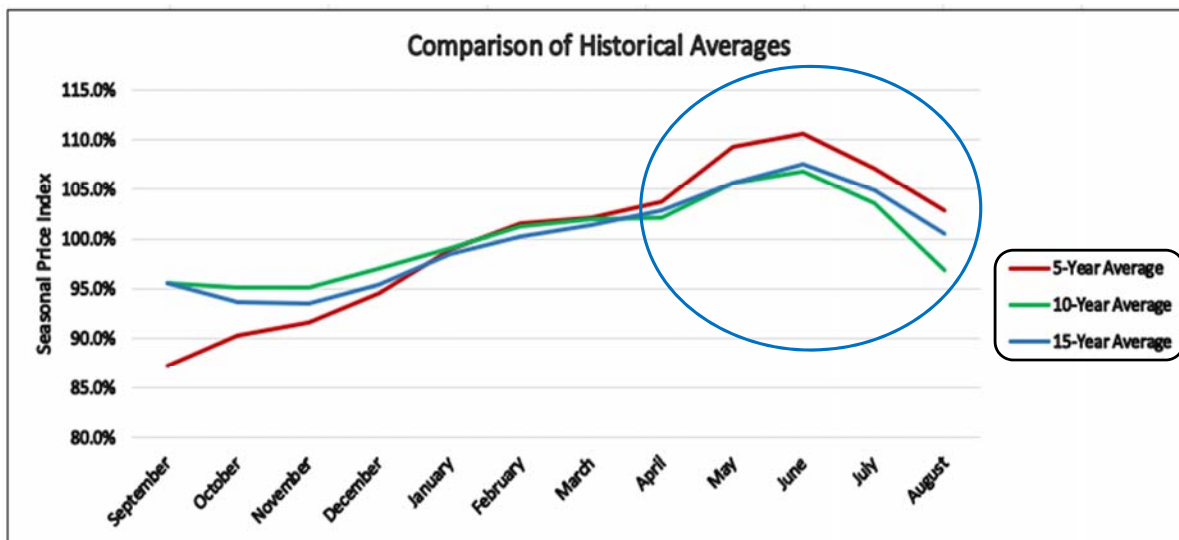
World vs “World-Less-China” Corn % Stocks-to-Use:

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



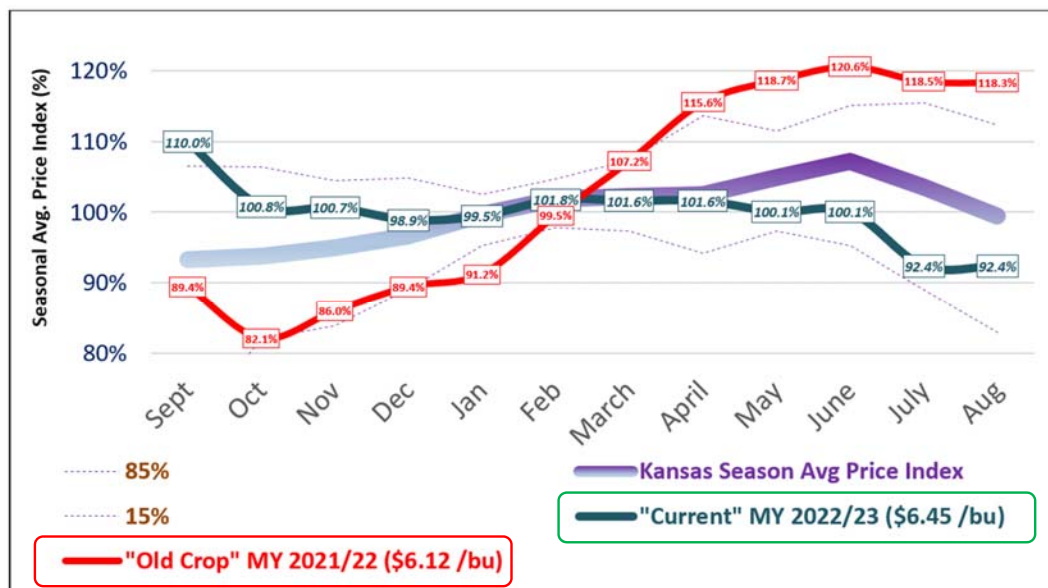
Corn: Seasonal Average Price Index

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 1/13/2023



USDA
Forecasts:

"Old Crop"
MY 2021/22
= \$6.00 /bu U.S.

"Current"
MY 2022/23
= \$6.70 /bu U.S.

Kansas Cash & Futures Prices

Date						
1/15/2023 (Late p.m.)						
Grain Futures Contracts	Closing \$					
MAR 2023 Corn ^(2023 Lead contract)	\$6.7500					
DEC 2023 Corn ^(2023 Harvest Contract)	\$5.9850					
1/15/2023 (Late p.m.)	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\$	\$7.50	\$7.50	\$7.28	\$8.05	\$7.65	\$7.71
Corn Spot Cash Basis	\$0.75	\$0.75	\$0.53	\$1.30	\$0.90	\$0.96
Corn Harvest FC\$: Fall ²⁰²³	\$5.74	\$5.79	\$5.58	\$6.39	\$5.99	\$5.66
Corn Harvest FC\$ Basis	(\$0.25)	(\$0.20)	(\$0.41)	\$0.40	\$0.00	(\$0.33)



National Daily Ethanol Report

Agricultural Marketing Service
Livestock, Poultry, and Grain Market News

January 13, 2023

Email us with accessibility issues with this report.

Report for 1/13/2023 – Final

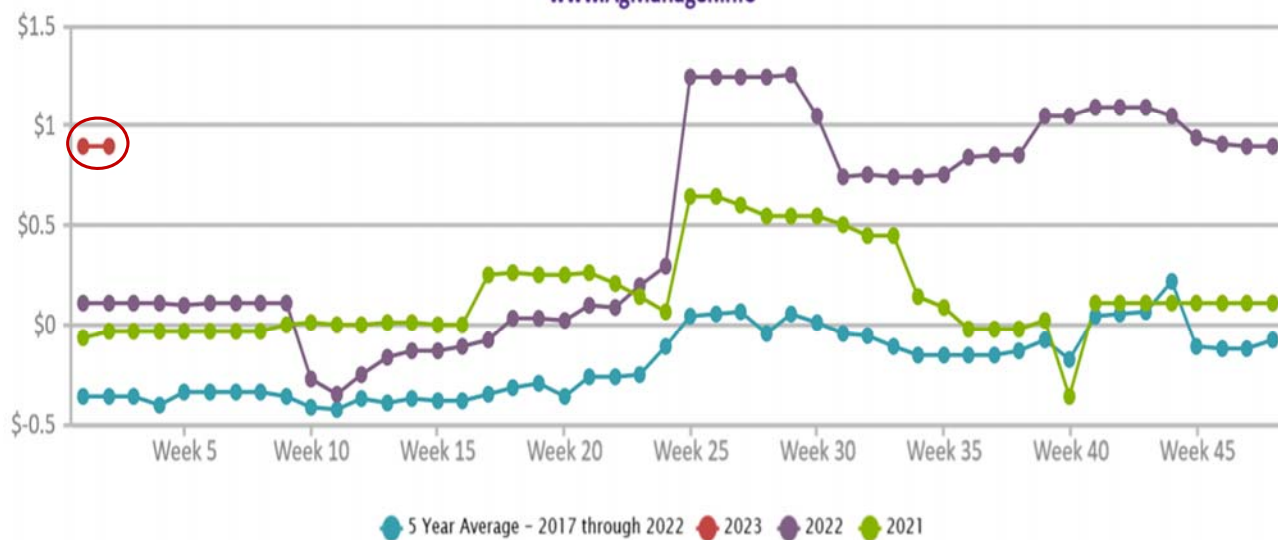
US #2 Yellow Corn -Bulk

Ethanol Plant

State/Province/Region	Sale Type	Basis (¢/bu)	Basis Change	Price (\$/Bu)	Price Change	Average
Illinois	Bid	-15.00H to 40.00H	UNCH	6.5600-7.1100	UP 0.1500	6.7717
Indiana	Bid	-15.00H to 20.00H	UNCH	6.5600-6.9100	UP 0.1500	6.7778
Iowa East	Bid	-15.00H to 15.00H	DN 7-UNCH	6.5600-6.8600	UP 0.0800-UP 0.1500	6.7175
Iowa West	Bid	6.00H to 55.00H	UNCH	6.7700-7.2600	UP 0.1500	7.0505
Kansas	Bid	50.00H to 115.00H	UNCH	7.2100-7.8600	UP 0.1500	7.5225
Michigan	Bid	-25.00H to -12.00H	UNCH	6.4600-6.5900	UP 0.1500	6.5300
Minnesota	Bid	-18.00H to 18.00H	UNCH	6.5300-6.8900	UP 0.1500	6.7700
Missouri	Bid	15.00H to 65.00H	UNCH	6.8600-7.3600	UP 0.1500	7.0150
Nebraska	Bid	25.00H to 85.00H	UNCH	6.9600-7.5600	UP 0.1500	7.1562
Ohio	Bid	-7.00H to 10.00H	UNCH	6.6400-6.8100	UP 0.1500	6.7417
South Dakota	Bid	-10.00H to 55.00H	UNCH	6.6100-7.2600	UP 0.1500	6.8923
Wisconsin	Bid	-38.00H to -15.00H	UNCH	6.3300-6.5600	UP 0.1500	6.4450

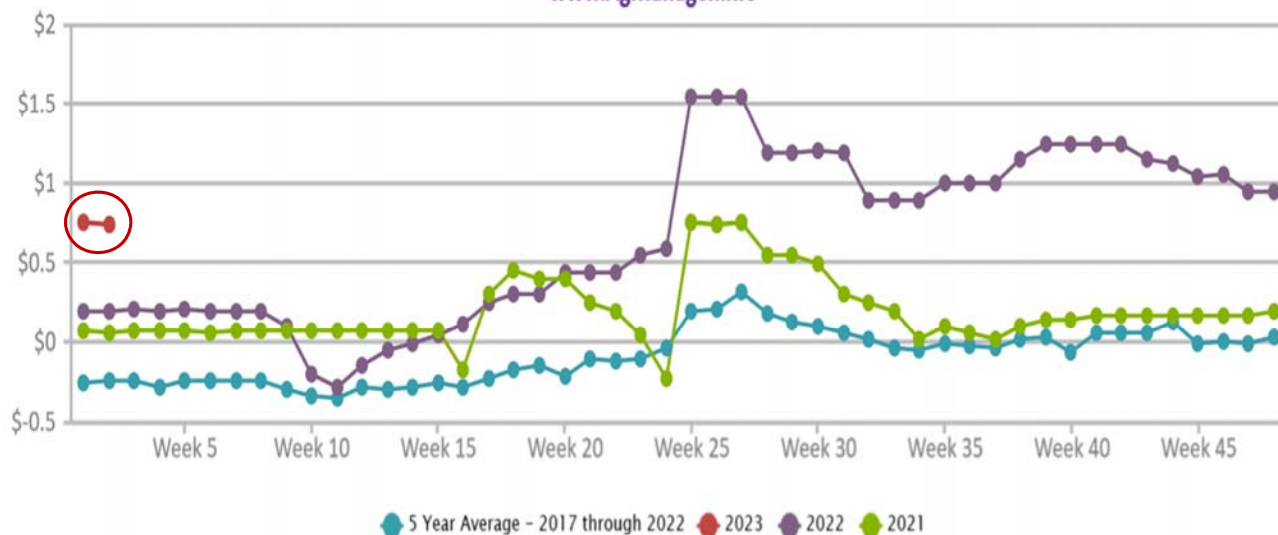
OBERLIN , KS: Corn Basis - DECATUR COOP

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COLBY, KS: Corn Basis - CORNERSTONE AG

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

-----Northwest Kansas (ave yields)

17

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 Costs Northwest KS *K-State ests.*

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

-----Average yields

18

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 Dryland Corn Costs Northwest KS

Yield = 89 bu /ac

Total Direct Expenses
= \$3.87 /bu

Total of ALL Expenses
= \$5.67 /bu

Sorghum Markets

19

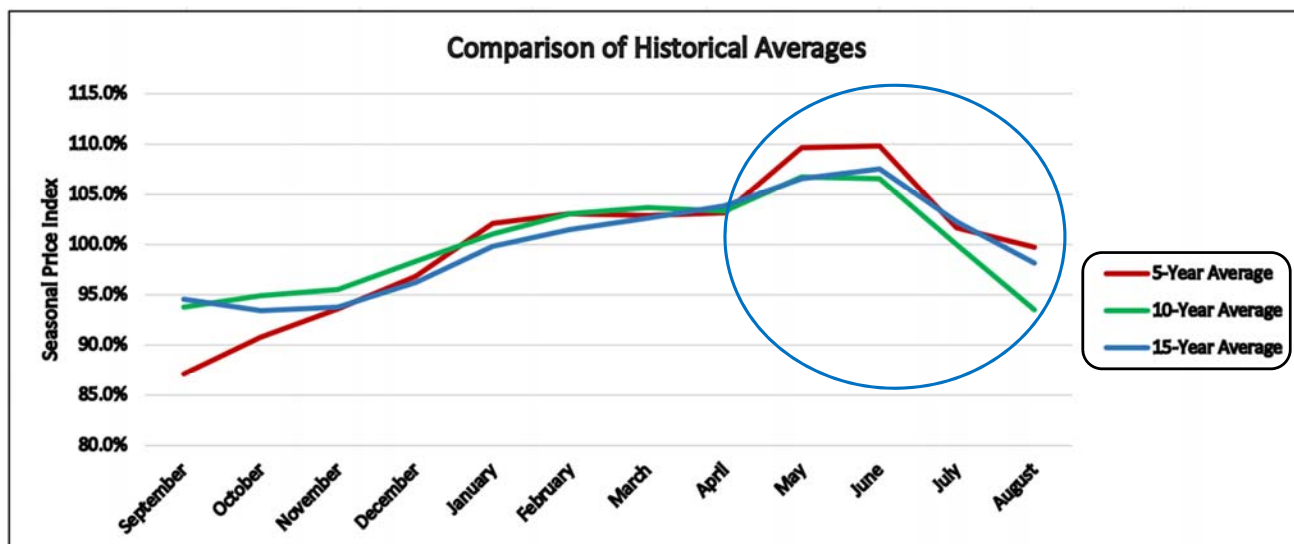


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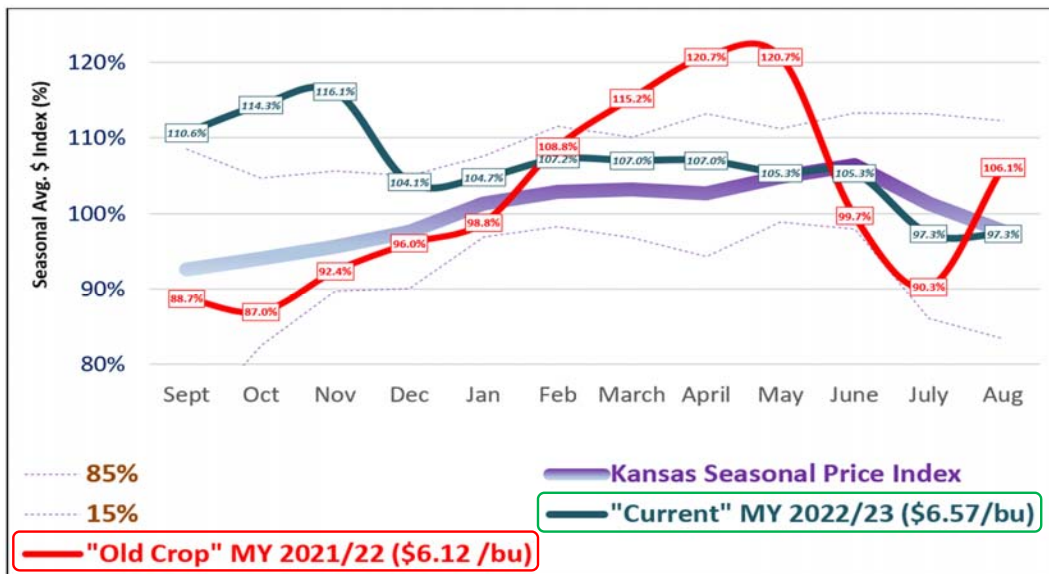
Grain Sorghum: Seasonal Average Price Index

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



Grain Sorghum Seasonal Prices Kansas-U.S.

Long Term Seasonal \$ Trends + MY 2021/22 & "Current" MY 2022/23 As of 1/13/2023



USDA Forecasts:

"Old Crop"
MY 2021/22
= \$5.94 /bu ^{U.S.}

"Current"
MY 2022/23
= \$6.85 /bu ^{U.S.}

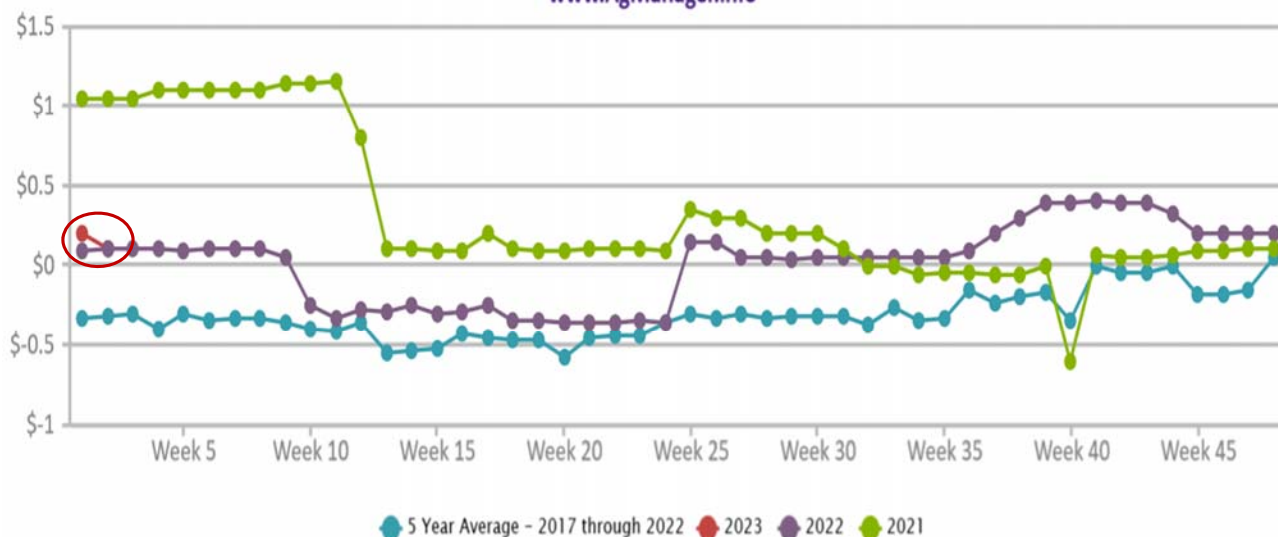
22

Kansas Cash & Futures Prices

Date						
1/15/2023 (Late p.m.)						
Grain Futures Contracts	Closing \$					
MAR 2023 Corn <small>(2023 Lead contract)</small>	\$6.7500					
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1/15/2023 (Late p.m.)	Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators					
	Representing the highest bids available at each location					
Cash Market Spot & FC Bids	Colby <small>Area</small>	Salina <small>Area</small>	Topeka <small>Area</small>	Garden City <small>Area</small>	Hutchinson <small>Area</small>	Columbus <small>Area</small>
	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
Grain Sorghum Spot Cash\$	\$7.05	\$7.10	\$7.15	\$7.15	\$7.65	\$6.89
Sorghum Spot Cash Basis	\$0.30	\$0.35	\$0.40	\$0.40	\$0.90	\$0.14
Grain Sorghum Harvest FC\$: Fall ²⁰²²	\$5.58	\$5.69	\$5.69	\$5.89	\$5.69	\$5.51
Sorghum Harvest FC\$ Basis	(\$0.41)	(\$0.30)	(\$0.30)	(\$0.10)	(\$0.30)	(\$0.48)

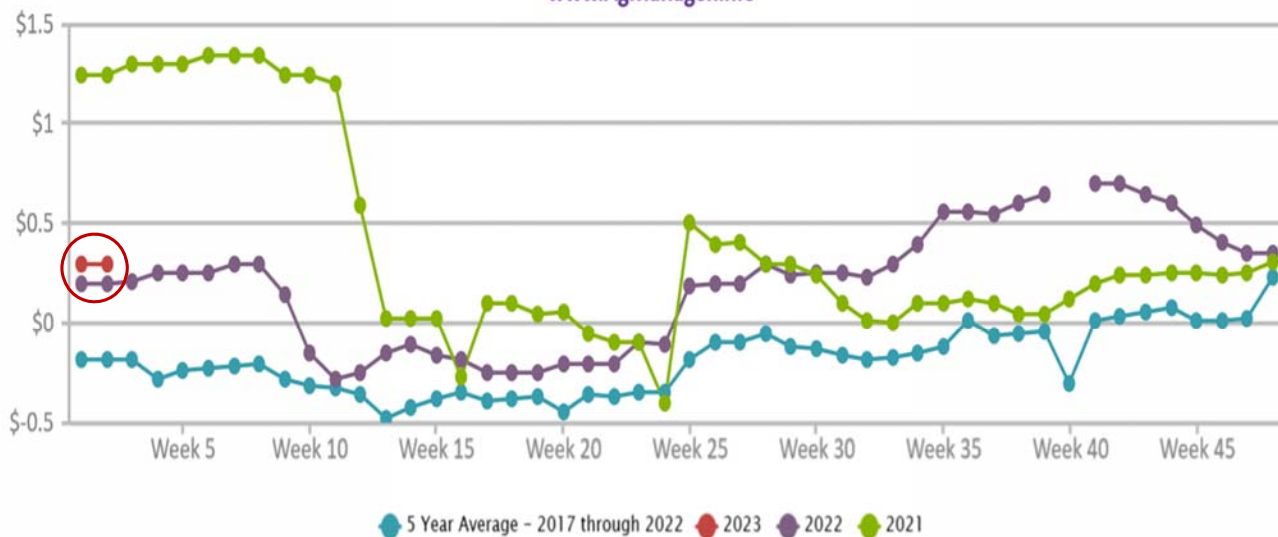
OBERLIN , KS: Grain Sorghum Basis - DECATUR COOP

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COLBY, KS: Grain Sorghum Basis - CORNERSTONE AG

www.AgManager.info



2023 Irrigated Grain Sorghum (center-pivot) Cost-Return Budget

-----Northwest KS - Average yields

25

item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Grain Sorghum - Northwest KS	bu	\$6.16	160.00	\$985.60	\$985.60
--TOTAL INCOME--					\$985.60
DIRECT EXPENSES					
Additional labor					\$0.56
Crop consulting					\$7.28
Crop insurance					\$26.50
Custom Operations					\$35.83
Diesel					\$15.31
Fertilizers					\$165.65
Herbicides					\$75.69
Irrigation energy (NG)					\$83.45
Irrigation labor					\$7.20
Miscellaneous					\$12.10
Operator labor					\$5.68
Repair & Maintenance					\$15.95
Seeds					\$14.99
Interest on operating capital		8% percent on direct expenses			\$18.65
--TOTAL DIRECT EXPENSES--					\$484.84
-----Total direct expenses per bu \$3.03					
FIXED EXPENSES					
Cash rent					\$218.00
Capital recovery (depreciation + interest)					\$281.08
--TOTAL FIXED EXPENSES--					\$499.08
-----Total expenses per bu \$6.15					
RETURNS ABOVE DIRECT EXPENSES					\$500.76
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$1.68

2023 Irrigated Milo Costs Northwest KS *K-State ests.*

Yield = 240 bu /ac

Total Direct Expenses
= \$3.03 /bu

Total of ALL Expenses
= \$6.15 /bu

12 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
8.56 Mcf of fuel used in total

2023 Grain Sorghum (W-S-F Rotation) Cost-Return Budget in Northwest

-----Average yields

26

Item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Grain Sorghum - Northwest KS	bu	\$6.16	85.00	\$523.60	\$523.60
--TOTAL INCOME--					\$523.60
DIRECT EXPENSES					
Additional labor					\$0.83
Crop insurance					\$26.09
Diesel					\$16.03
Fertilizers					\$85.16
Herbicides					\$110.05
Miscellaneous					\$6.65
Operator labor					\$5.85
Repair & Maintenance					\$13.05
Seeds					\$8.44
Interest on operating capital		8% percent on direct expenses			\$10.89
--TOTAL DIRECT EXPENSES--					\$283.05
-----Total direct expenses per bu \$3.33					
FIXED EXPENSES					
Cash rent					\$105.00
Capital recovery (depreciation + interest)					\$50.02
--TOTAL FIXED EXPENSES--					\$155.02
-----Total expenses per bu \$5.15					
RETURNS ABOVE DIRECT EXPENSES					\$240.55
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$85.53

2023 Dryland Milo Costs Northwest KS

Yield = 85 bu /ac

Total Direct Expenses
= \$3.33 /bu

Total of ALL Expenses
= \$5.15 /bu

Wheat Markets

27



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Kansas HRW Wheat Futures

Friday, January 13, 2023

Month	Close	Change	Carry /mo
Mar^{Lead} 23	\$8.43 ³/₄	⬆ \$0.08 ³/₄	---
May 23	\$8.40 ¹ / ₄	⬆ \$0.08 ³ / ₄	-\$0.01⁷⁵
July^{Hvst} 23	\$8.35	⬆ \$0.07 ¹/₂	-\$0.02⁶²⁵
Sept 23	\$8.37	⬆ \$0.07 ³ / ₄	+\$0.01
Dec 23	\$8.43 ¹/₄	⬆ \$0.08 ³/₄	+\$0.02⁰⁸³
Mar 24	\$8.37 ¹ / ₄	⬆ \$0.10	-\$0.02
May 24	\$8.27 ¹ / ₄	⬆ \$0.10	-\$0.05
July^{Hvst} 24	\$8.05 ³/₄	⬆ \$0.11 ³/₄	-\$0.10⁷⁵

28

CME KS HRW Wheat Futures *Continuous Weekly to 1/13/2023*

KE - Wheat (Kansas) (Electronic) - Weekly Chart

Change: 8.500

29

01/13/2023 O: 835.250 H: 847.000 L: 803.250 C: 843.750 Vol: 42486 OI: 163966



U.S. Wheat Supply and Demand

30

Item	2021/2022		2022/2023		
	Estimate	Change from December 9	Forecast	Change from December 9	Change from 2021/2022
Planted area (million acres)	46.7	--	45.7	--	-1.0
Harvested area (million acres)	37.1	--	35.5	--	-1.7
Yield (bushels per acre)	44.3	--	46.5	--	2.2
----- Million bushels -----					
Beginning stocks	845	--	698	29	-147
Production	1,646	--	1,650	--	4
Imports	95	--	120	--	25
Total supply	2,587	--	2,468	29	-118
Food use	972	--	977	--	5
Seed	58	--	69	3	11
Feed and residual	59	-29	80	30	21
Domestic use	1,088	-29	1,126	33	38
Exports	800	--	775	--	-25
Total use	1,888	-29	1,901	33	13
Ending stocks	698	29	567	-4	-131
----- Percent -----					
Stocks to use ratio	37.0	2.1	29.8	-0.7	-7.1
----- Dollars per bushel -----					
Average market price	7.63	--	9.10	--	1.47

-- No change.

January 12, 2023

World Wheat Production

31

Country or Region	2021/2022 estimate	2022/2023 forecast	Change from December 9	Change from 2021/2022
----- Million Tons -----				
World	779.3	781.3	0.7	2.0
United States	44.8	44.9	--	0.1
Foreign	734.5	736.4	0.7	1.9
Argentina	22.2	12.5	--	-9.6
Canada	22.3	33.8	--	11.5
Australia	36.3	36.6	--	0.3
European Union	138.2	134.7	0.4	-3.5
Turkey	16.0	17.2	--	1.2
Russia	75.2	91.0	--	15.8
Ukraine	33.0	21.0	0.5	-12.0
Kazakhstan	11.8	14.0	--	2.2
China	136.9	137.7	-0.3	0.8
India	109.6	103.0	--	-6.6
Northwest Africa	11.2	7.6	--	-3.6

January 12, 2023

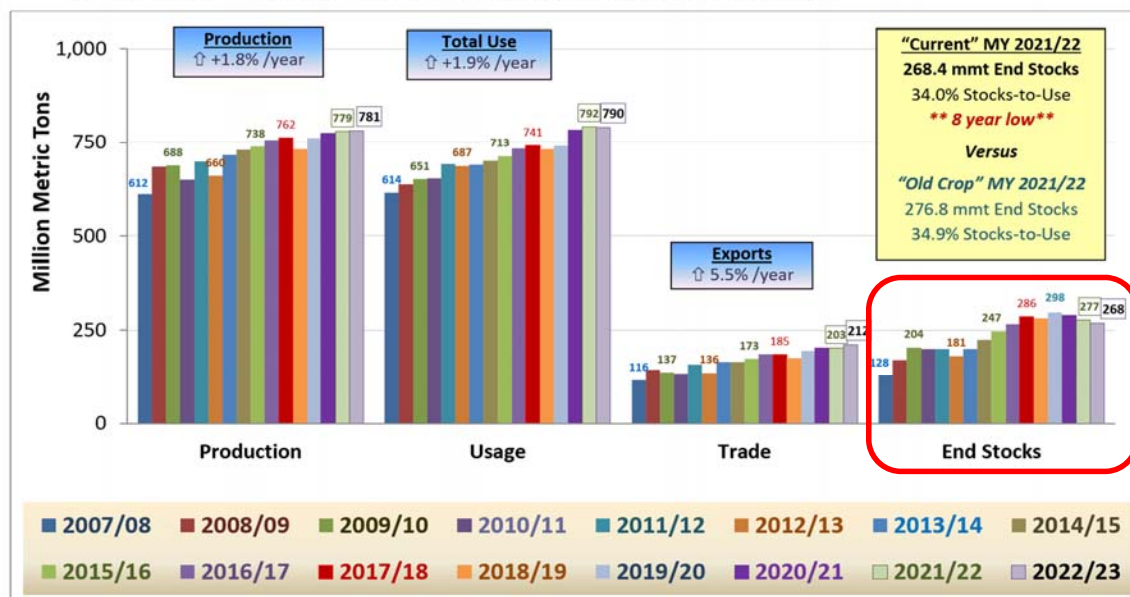
32

World Wheat Supply and Use

Item	2021/2022 estimate	2022/2023 forecast	Change from December 9	Change from 2021/2022
----- Million Tons -----				
Beginning stocks	290.0	276.8	0.5	-13.2
Production	779.3	781.3	0.7	2.0
Total Supply	1,069.3	1,058.1	1.3	-11.2
Feed use	160.2	155.3	0.4	-4.8
Total use	792.5	789.7	0.2	-2.7
Trade	202.6	211.6	0.8	9.1
Ending Stocks	276.8	268.4	1.1	-8.4

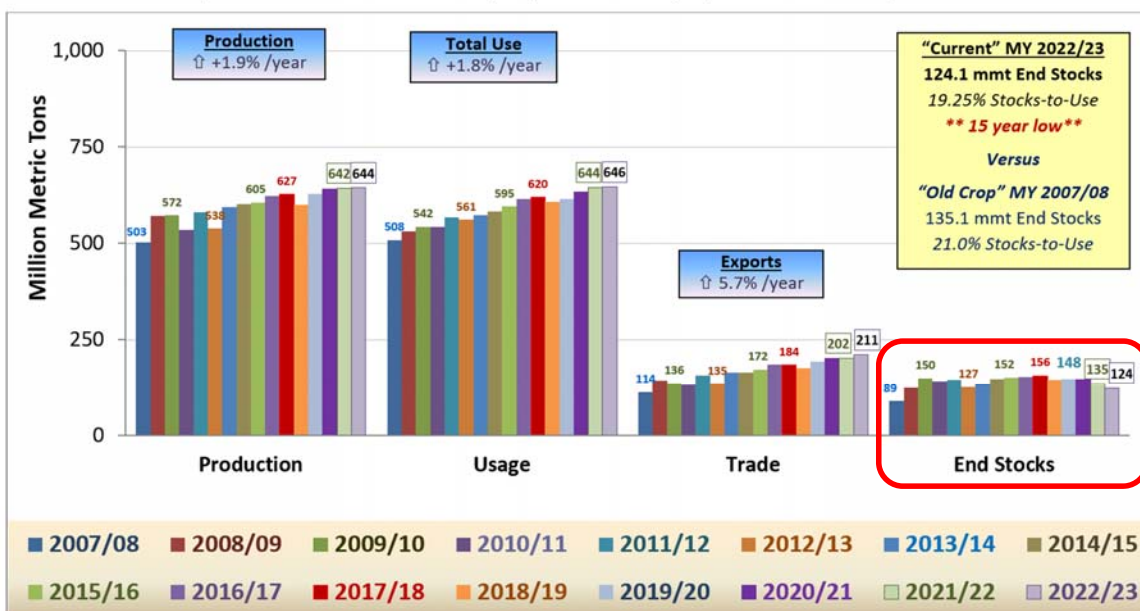
World Wheat Usage & Ending Stocks:

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



“World Less-China” Wheat Usage & Ending Stocks:

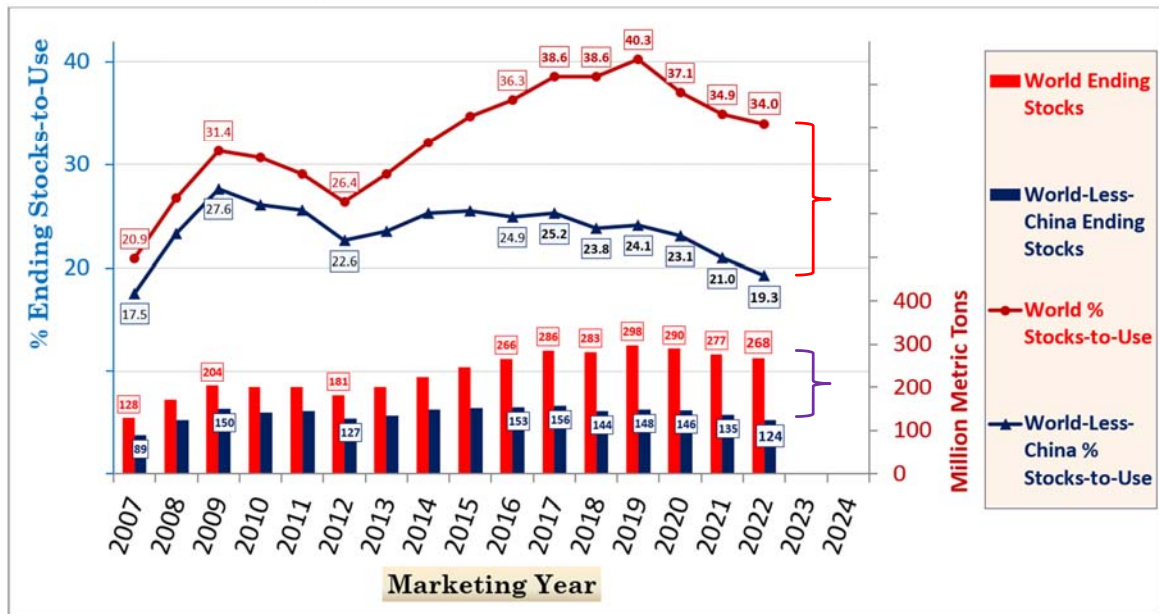
MY 2007/08 - “Current” MY 2022/23, as of the January 12, 2023 USDA WASDE Report



World vs "World Less-China" End Stocks & % Stocks-to-Use

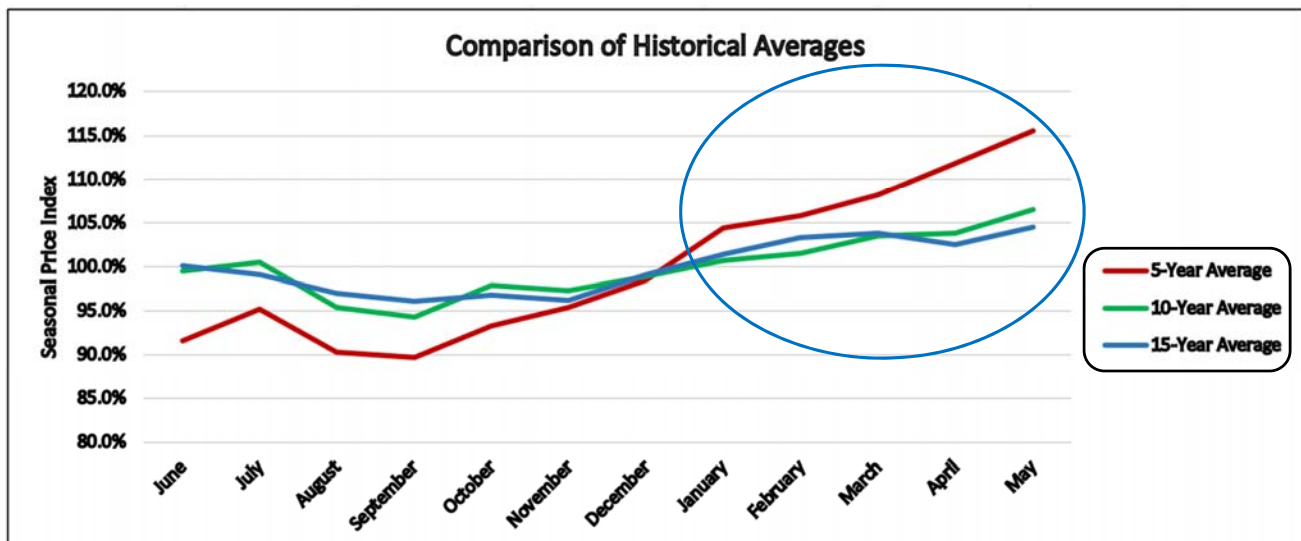
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MY 2007/08 through "Current" MY 2022/23 as of the January 12, 2023 USDA WASDE report



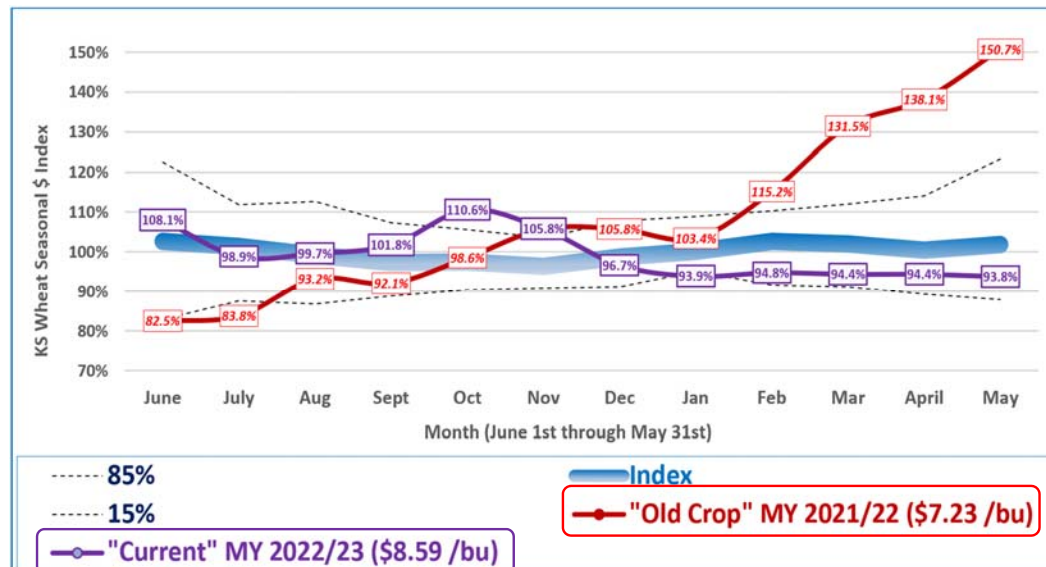
Wheat: Seasonal Average Price Index

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



KS HRW Wheat Seasonal Prices Kansas-U.S.

Long Term Seasonal \$ Trends + MY 2021/22 & "Current" MY 2022/23 As of 1/13/2023



U.S. Prices for
"All Wheat" USDA

"Old Crop"
MY 2021/22
= \$7.63 /bu U.S.

"Current"
MY 2022/23
= \$9.10 /bu U.S.

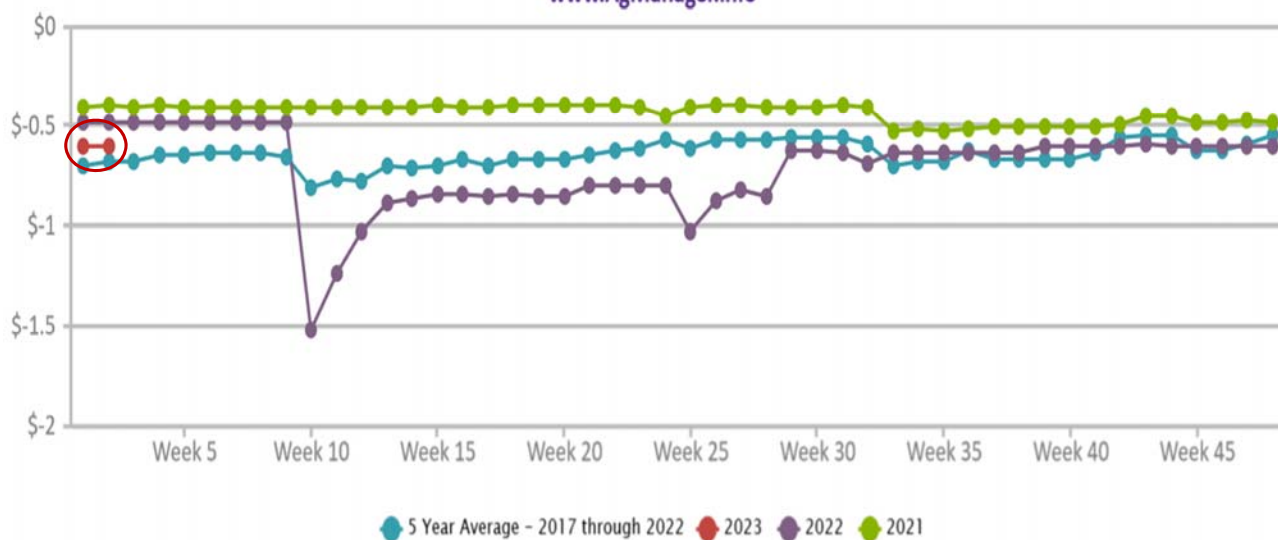
Kansas Cash & Futures Prices

Date	
1/15/2023 (Late p.m.)	
Grain Futures Contracts	Closing \$
MAR 2023 KC HRW Wheat <small>(2023 Lead Contract)</small>	\$8.4375
JULY 2023 KC HRW Wheat <small>(2023 Harvest Contract)</small>	\$8.3500

1/15/2023 (Late p.m.)	Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators					
	<i>Representing the highest bids available at each location</i>					
Cash Market Spot & FC Bids	Colby <small>Area</small>	Salina <small>Area</small>	Topeka <small>Area</small>	Garden City <small>Area</small>	Hutchinson <small>Area</small>	Columbus <small>Area</small>
	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
KC HRW Wheat Harvest Spot Cash\$	\$8.12	\$8.38	\$8.18	\$8.19	\$8.28	\$8.21
HRW Wheat Harvest Spot Cash Basis	(\$0.32)	(\$0.06)	(\$0.26)	(\$0.25)	(\$0.16)	(\$0.23)
KC HRW Wheat FC\$ - Harvest ²⁰²³	\$7.70	\$7.89	\$7.95	\$8.00	\$7.98	\$7.67
HRW Wheat Harvest FC\$ Basis	(\$0.65)	(\$0.46)	(\$0.40)	(\$0.35)	(\$0.37)	(\$0.68)

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

www.AgManager.info



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

www.AgManager.info



2023 Irrigated Wheat Cost-Return Budget in Western KS

41

-----Limited irrigation

item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Wheat - Western KS	bu	\$9.44	70.00	\$660.80	\$660.80
--TOTAL INCOME--					\$660.80
DIRECT EXPENSES					
Additional labor					\$1.00
Crop insurance					\$18.50
Custom Operations					\$19.32
Diesel					\$21.47
Fertilizers					\$109.18
Fungicides					\$5.59
Herbicides					\$55.13
Irrigation energy (NG)					\$34.77
Irrigation labor					\$3.00
Miscellaneous					\$12.10
Operator labor					\$7.96
Repair & Maintenance					\$15.58
Seeds					\$18.23
Interest on operating capital		8% percent on direct expenses			\$12.87
--TOTAL DIRECT EXPENSES--					\$334.68
-----Total direct expenses per bu \$4.78					
FIXED EXPENSES					
Cash rent					\$170.00
Capital recovery (depreciation + interest)					\$296.17
--TOTAL FIXED EXPENSES--					\$466.17
-----Total expenses per bu \$11.44					
RETURNS ABOVE DIRECT EXPENSES					\$326.12
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					-\$140.05

2023 Irrigated Wheat Cost Northwest KS *K-State ests.*

Yield = 70 bu /ac

Total Direct Expenses
= \$4.78 /bu

Total of ALL Expenses
= \$11.44 /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 Wheat (W-S_C-F Rotation) Cost-Return Budget in Northwest KS

42

-----Average yield

Item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Wheat - Northwest KS	bu	\$9.39	50.00	\$469.50	\$469.50
--TOTAL INCOME--					\$469.50
DIRECT EXPENSES					
Additional labor					\$1.42
Crop insurance					\$17.66
Diesel					\$19.45
Fertilizers					\$81.92
Fungicides					\$5.59
Herbicides					\$83.75
Miscellaneous					\$6.65
Operator labor					\$7.00
Repair & Maintenance					\$13.87
Seeds					\$18.23
Interest on operating capital		8% percent on direct expenses			\$10.22
--TOTAL DIRECT EXPENSES--					\$265.75
-----Total direct expenses per bu \$5.31					
FIXED EXPENSES					
Cash rent					\$105.00
Capital recovery (depreciation + interest)					\$56.25
--TOTAL FIXED EXPENSES--					\$161.25
-----Total expenses per bu \$8.54					
RETURNS ABOVE DIRECT EXPENSES					\$203.75
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$42.50

2023 Dryland Corn Costs Northwest KS

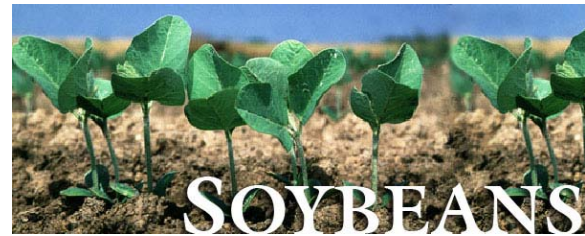
Yield = 50 bu /ac

Total Direct Expenses
= \$5.31 /bu

Total of ALL Expenses
= \$8.54 /bu

Soybean Markets

43



KANSAS STATE
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Department of Agricultural Economics

CME Soybean Futures

Friday, January 13, 2023

Month	Close	Change	Carry /mo
Jan^{Delvry} 23	\$15.38 ¼	↑ \$0.08 ¾	---
Mar^L 23	\$15.27 ¾	↑ \$0.09 ¼	-\$0.05²⁵
May 23	\$15.27 ¼	↑ \$0.08	-\$0.00²⁵
July 23	\$15.25	↑ \$0.06 ½	-\$0.01¹²⁵
Aug 23	\$14.89 ¾	↑ \$0.03	-\$0.35²⁵
Sep 23	\$14.25 ½	↓ \$0.00 ¼	-\$0.64²⁵
Nov^{Hvst} 23	\$13.93	↓ \$0.03 ¼	-\$0.16²⁵
Jan 24	\$13.94 ¾	↓ \$0.03	+\$0.00⁸⁷⁵

44

CME Soybean Futures *Continuous Weekly to 1/13/2023*

45



U.S. Soybeans Supply and Demand

46

Item	2021/2022 estimate	2022/2023 forecast	Change from December 9	Change from 2021/2022
Planted area (million acres)	87.2	87.5	**	0.3
Harvested area (million acres)	86.3	86.3	-0.3	0.0
Yield (bushels per acre)	51.7	49.5	-0.6	-2.2
----- Million bushels -----				
Beginning stocks	257	274	1	17
Production	4,465	4,276	-69	-189
Imports	16	15	--	-1
Total supply	4,738	4,566	-69	-173
Crush	2,204	2,245	--	41
Seed and Residual	102	120	-4	18
Domestic use	2,306	2,365	-4	59
Exports	2,158	1,990	-55	-168
Total use	4,464	4,355	-59	-109
Ending stocks	274	210	-10	-64
----- Percent -----				
Stocks to use ratio	6.1	4.8	-0.2	-1.3
----- Dollars per bushel -----				
Average market price	13.30	14.20	0.20	0.90

-- No change. ** Rounds to zero.

January 12, 2023

World Soybean 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	358.1	2.5	388.0	-3.2	29.9
United States	121.5	--	116.4	-1.9	-5.2
Foreign	236.6	2.5	271.6	-1.3	35.1
Argentina	43.9	--	45.5	-4.0	1.6
Brazil	129.5	2.5	153.0	1.0	23.5
Paraguay	4.2	--	10.0	--	5.8
Canada	6.3	--	6.5	--	0.3
India	11.9	--	12.0	--	0.1
China	16.4	**	20.3	1.9	3.9

January 12, 2023

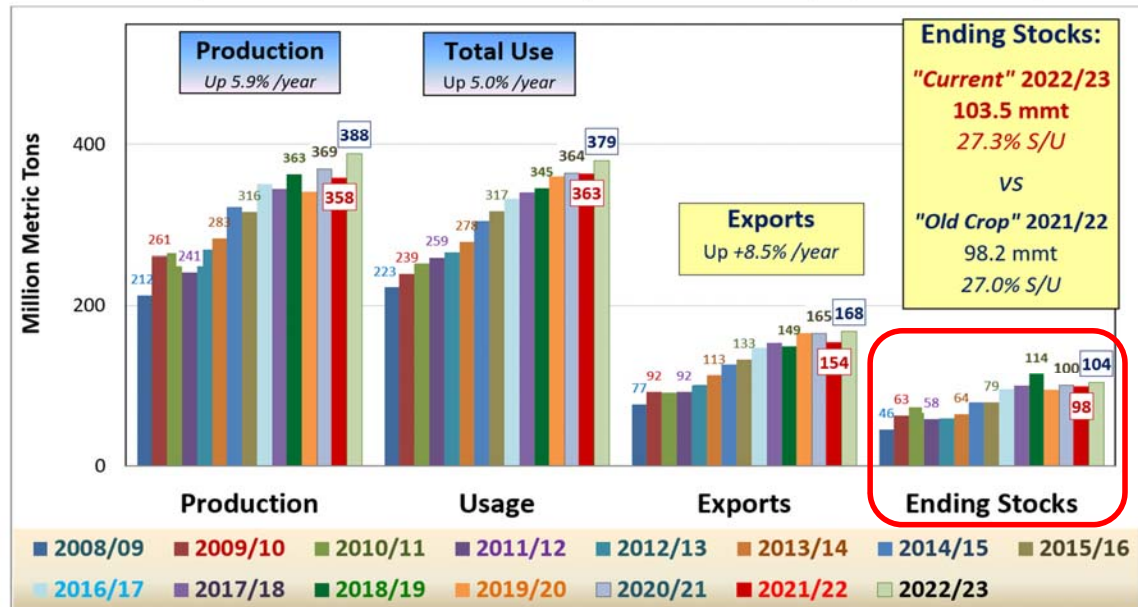
World Soybean Supply and Use

Item	2021/2022 estimate	2022/2023 forecast	Change from December 9	Change from 2021/2022
----- Million Tons -----				
Beginning stocks	100.0	98.2	2.6	-1.8
Production	358.1	388.0	-3.2	29.9
Total Supply	458.1	486.2	-0.5	28.1
Crush	314.2	327.3	-2.0	13.1
Total use	363.2	379.5	-1.4	16.3
Trade	153.9	167.5	-1.8	13.6
Ending Stocks	98.2	103.5	0.8	5.3
Addendum				
Beginning stocks				
Argentina plus Brazil	54.5	50.7	3.0	-3.8
Imports*				
China	91.6	96.0	-2.0	4.4

World Soybean Usage & Ending Stocks

49

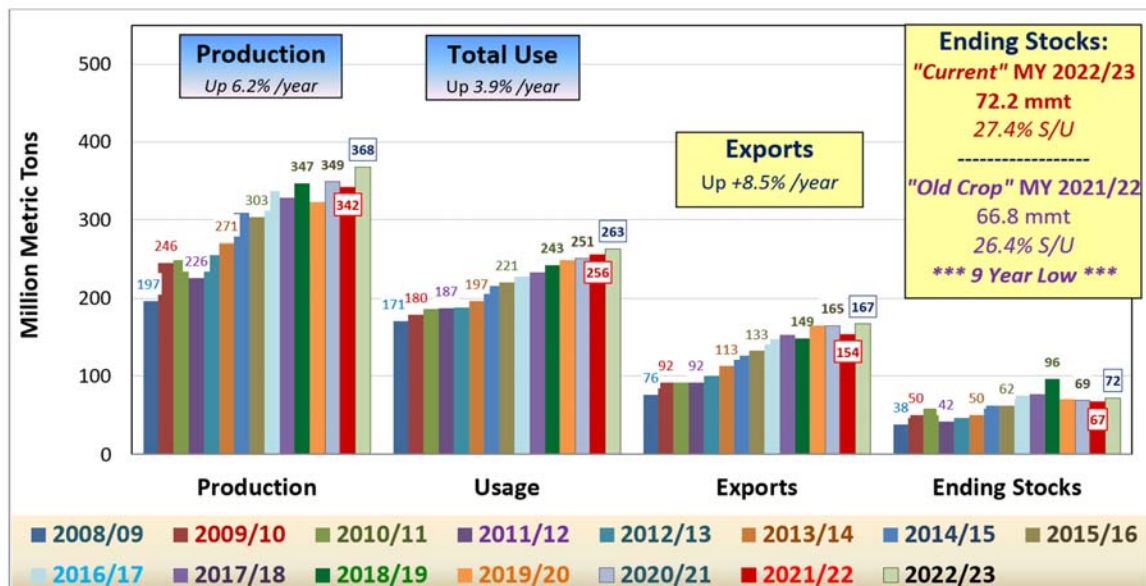
MY 2008/09 thru "Current" MY 2022/23 as of the January 12, 2023 WASDE Report



"World Less-China" Soybean Use & Ending Stocks

50

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



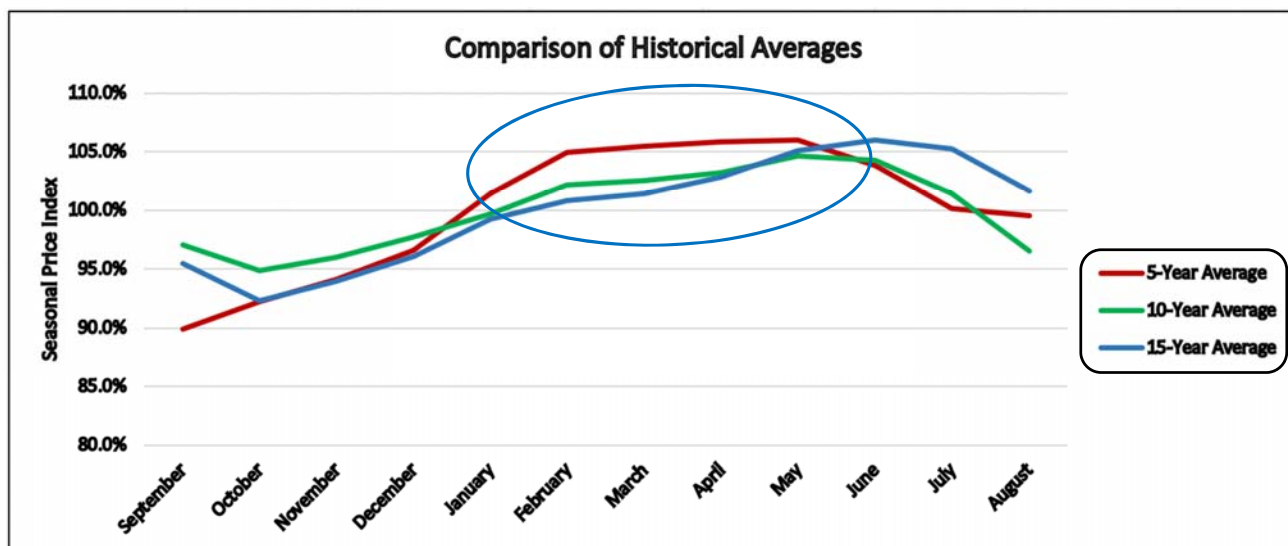
World vs % "World Less-China" Soybean Stocks-to-Use

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



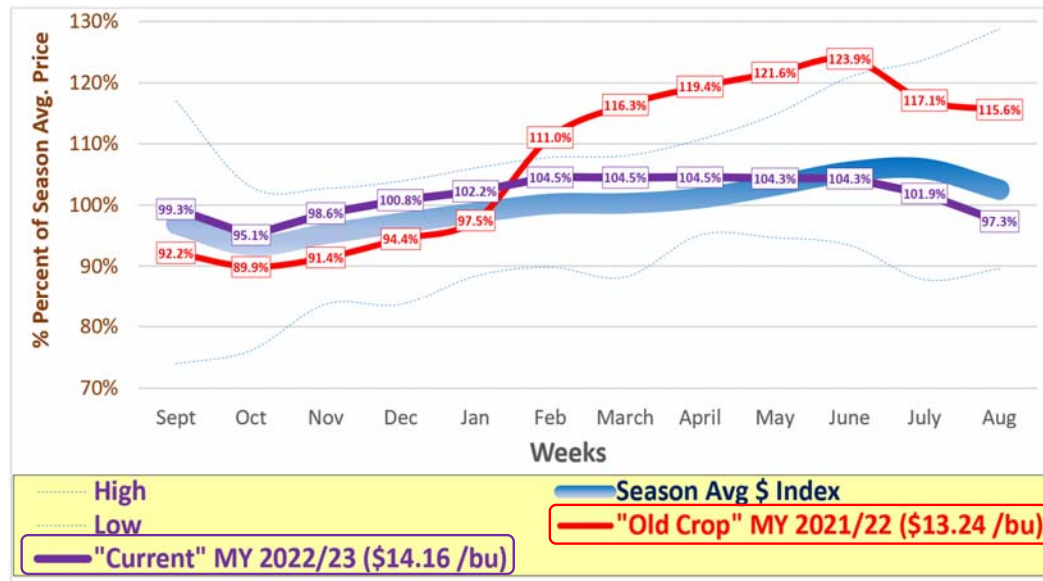
Soybeans: Seasonal Average Price Index

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



Soybean Seasonal Prices Kansas-U.S.

Long Term Seasonal \$ Trends + MY 2021/22 & "Current" MY 2022/23 As of 1/13/2023



U.S. Prices for
"All Wheat" USDA

"Old Crop"
MY 2021/22
= \$13.30 /bu U.S.

"Current"
MY 2022/23
= \$14.20 /bu U.S.

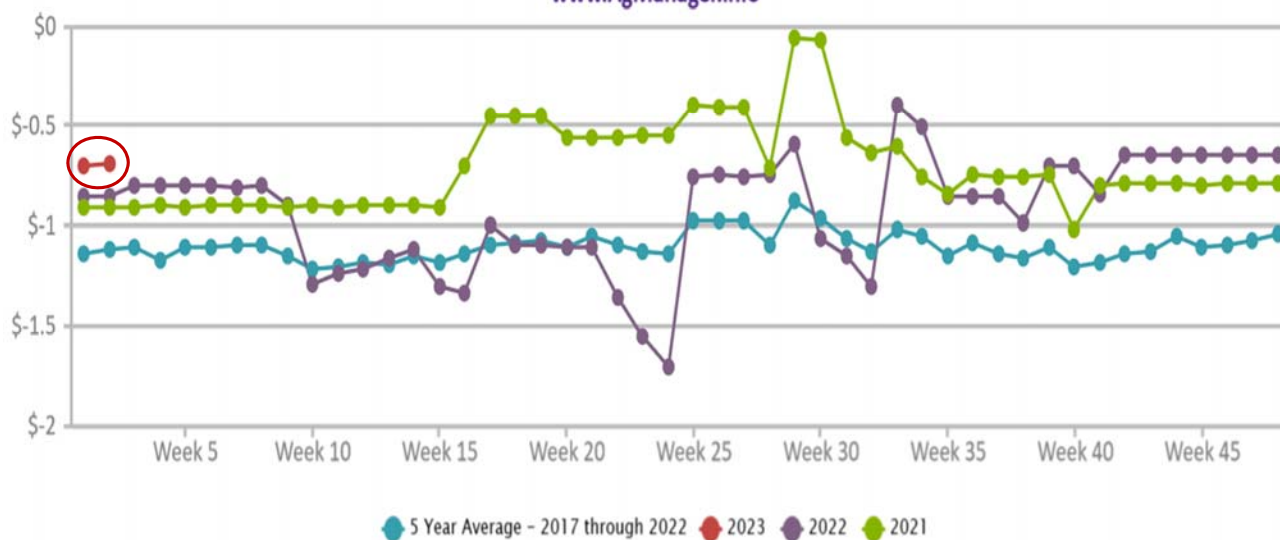
54

Kansas Cash & Futures Prices

Date						
1/15/2023 (Late p.m.)						
Grain Futures Contracts	Closing \$					
MAR 2023 Soybeans <small>(Lead Contract)</small>	\$15.2775					
NOV 2023 Soybeans <small>(2023 Harvest Contract)</small>	\$13.9300					
1/15/2023 (Late p.m.)	Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators					
	<i>Representing the highest bids available at each location</i>					
Cash Market Spot & FC Bids	Colby <small>Area</small>	Salina <small>Area</small>	Topeka <small>Area</small>	Garden City <small>Area</small>	Hutchinson <small>Area</small>	Columbus <small>Area</small>
	NW KS	NC KS	EC-NE KS	SW KS	SC KS	SE KS
Soybean Spot Cash\$	\$14.73	\$15.33	\$15.47	\$15.03	\$15.52	\$15.29
Soybean Spot Cash Basis	(\$0.55)	\$0.05	\$0.19	(\$0.25)	\$0.24	\$0.01
Soybean Harvest FC\$: Fall ²⁰²²	\$12.98	\$13.38	\$13.23	\$13.08	\$13.14	\$13.26
Soybean Harvest FC\$ Basis	(\$0.95)	(\$0.55)	(\$0.70)	(\$0.85)	(\$0.79)	(\$0.67)

OBERLIN , KS: Soybeans Basis - DECATUR COOP

www.AgManager.info



COLBY, KS: Soybeans Basis - CORNERSTONE AG

www.AgManager.info



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

57

-----Northwest Kansas - Average yields

item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Soybeans - Northwest KS	bu	\$12.87	75.00	\$965.25	\$965.25
--TOTAL INCOME--					\$965.25
DIRECT EXPENSES					
Additional labor					\$0.64
Crop consulting					\$7.28
Crop insurance					\$20.50
Diesel					\$15.01
Fertilizers					\$51.98
Herbicides					\$64.99
Irrigation energy (NG)					\$104.31
Irrigation labor					\$9.00
Miscellaneous					\$12.10
Operator labor					\$5.36
Repair & Maintenance					\$17.39
Seeds					\$68.85
Interest on operating capital		8% percent on direct expenses			\$15.10
--TOTAL DIRECT EXPENSES--					\$392.51
-----Total direct expenses per bu \$5.23					
FIXED EXPENSES					
Cash rent					\$218.00
Capital recovery (depreciation + interest)					\$281.61
--TOTAL FIXED EXPENSES--					\$499.61
-----Total expenses per bu \$11.89					
RETURNS ABOVE DIRECT EXPENSES					\$572.74
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$73.13

2023 Irrig. Soybean Cost Northwest KS *K-State ests.*

Yield = 70 bu /ac

Total Direct Expenses
= \$5.23 /bu

Total of ALL Expenses
= \$11.89 /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 Soybean Cost-Return Budget (W-SB-F Rotation) in Northwest

58

-----Average yields

Item	unit	price	quantity	amount	Sub-total
INCOME					
Product					
Soybeans - Northwest KS	bu	\$12.87	25.00	\$321.75	\$321.75
--TOTAL INCOME--					\$321.75
DIRECT EXPENSES					
Additional labor					\$0.64
Crop insurance					\$29.90
Diesel					\$13.35
Fertilizers					\$17.33
Herbicides					\$83.04
Miscellaneous					\$6.65
Operator labor					\$4.68
Repair & Maintenance					\$11.11
Seeds					\$55.08
Interest on operating capital		8% percent on direct expenses			\$8.87
--TOTAL DIRECT EXPENSES--					\$230.65
-----Total direct expenses per bu \$9.23					
FIXED EXPENSES					
Cash rent					\$70.00
Capital recovery (depreciation + interest)					\$42.38
--TOTAL FIXED EXPENSES--					\$112.38
-----Total expenses per bu \$13.72					
RETURNS ABOVE DIRECT EXPENSES					\$91.10
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					-\$21.28

Dryland Soybean Costs Northwest KS

Yield = 25 bu /ac

Total Direct Expenses
= \$9.23 /bu

Total of ALL Expenses
= \$13.72 /bu

Grain Market Perspective

59



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

60

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

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

2) Impact of the Corn Production damage in the Western-Central Plains during 2022

- *Western Kansas / OK / TX / NE → Corn Basis strength* ^{Historic++}

► Q? 2023 U.S. Corn Production?

→ Seasonal risk-Spring-Summer 2023 – dry subsoils

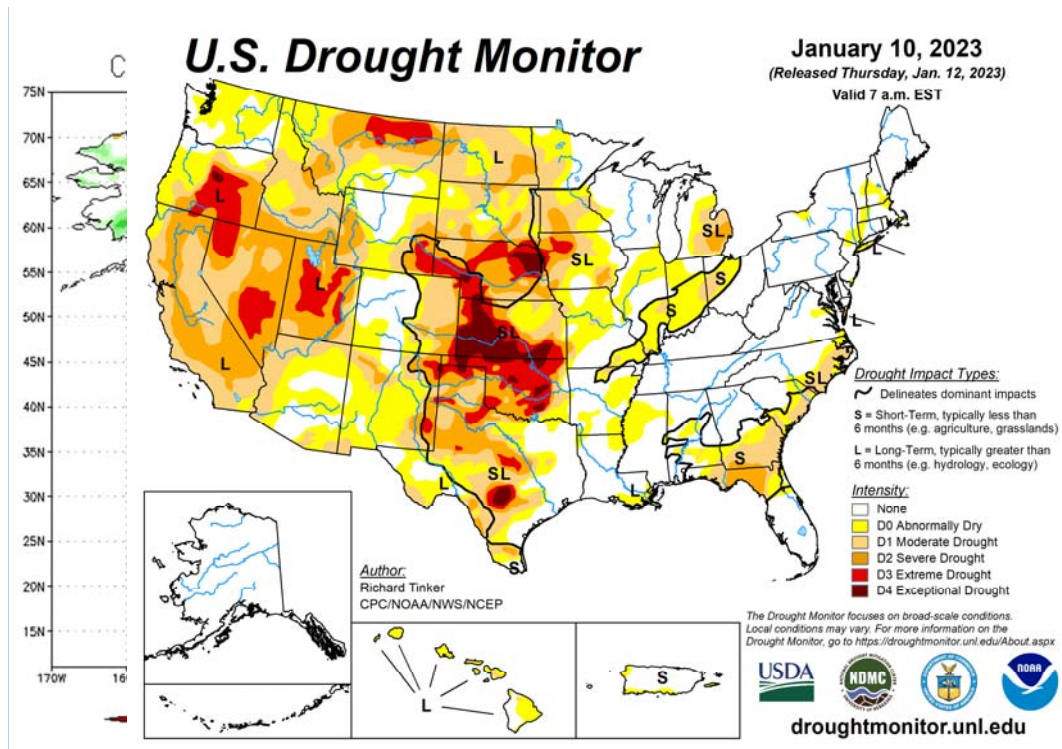
3) Continuance of dry La Nina Weather Pattern in 2023???

- “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.”

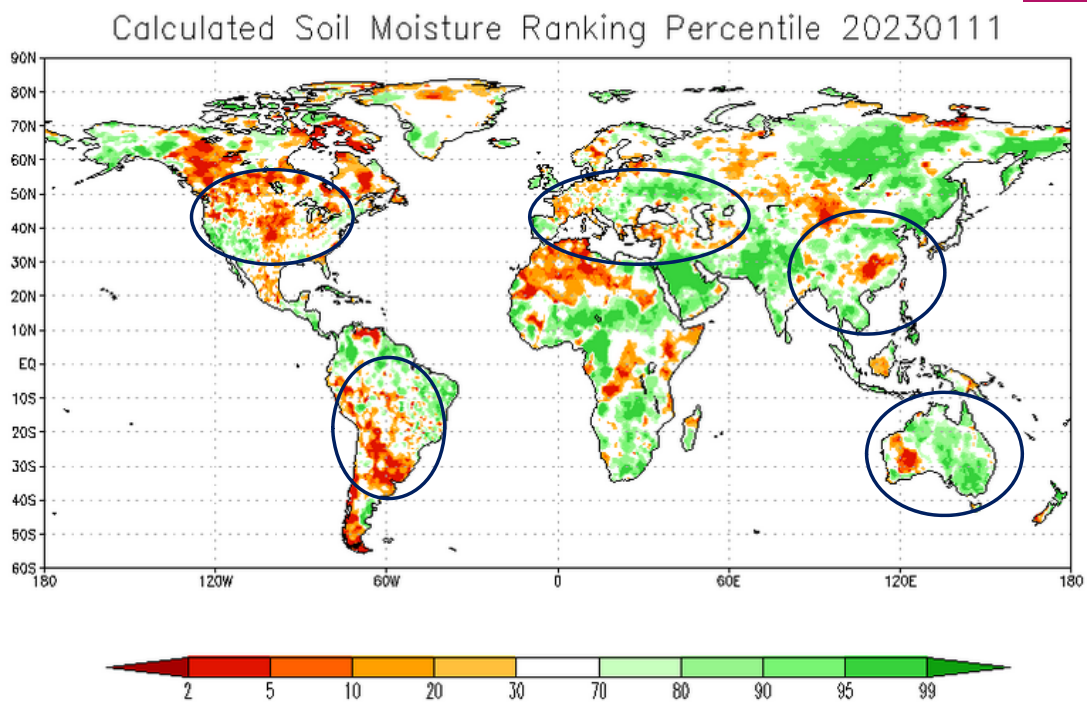
U.S. Climate Prediction Center / NCEP January 3, 2023

- “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



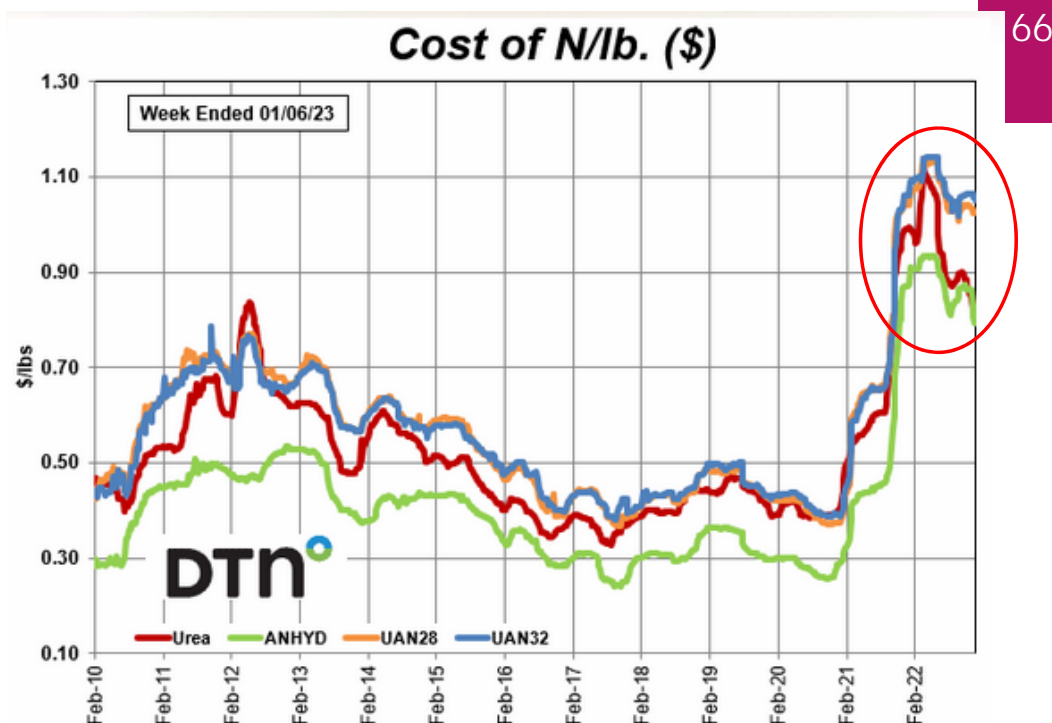
63

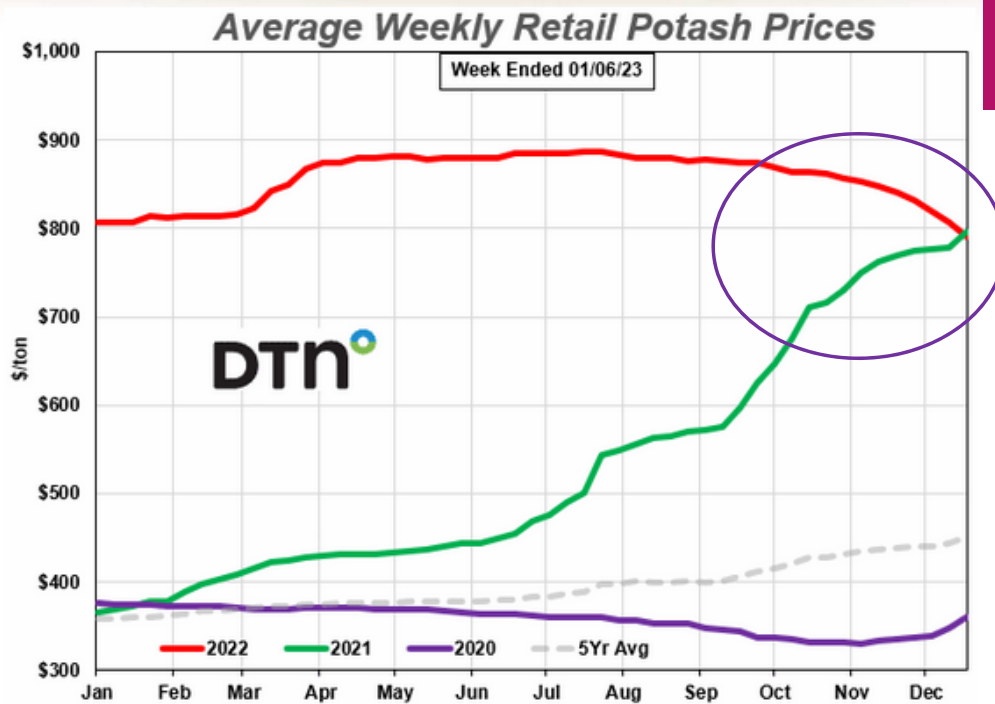
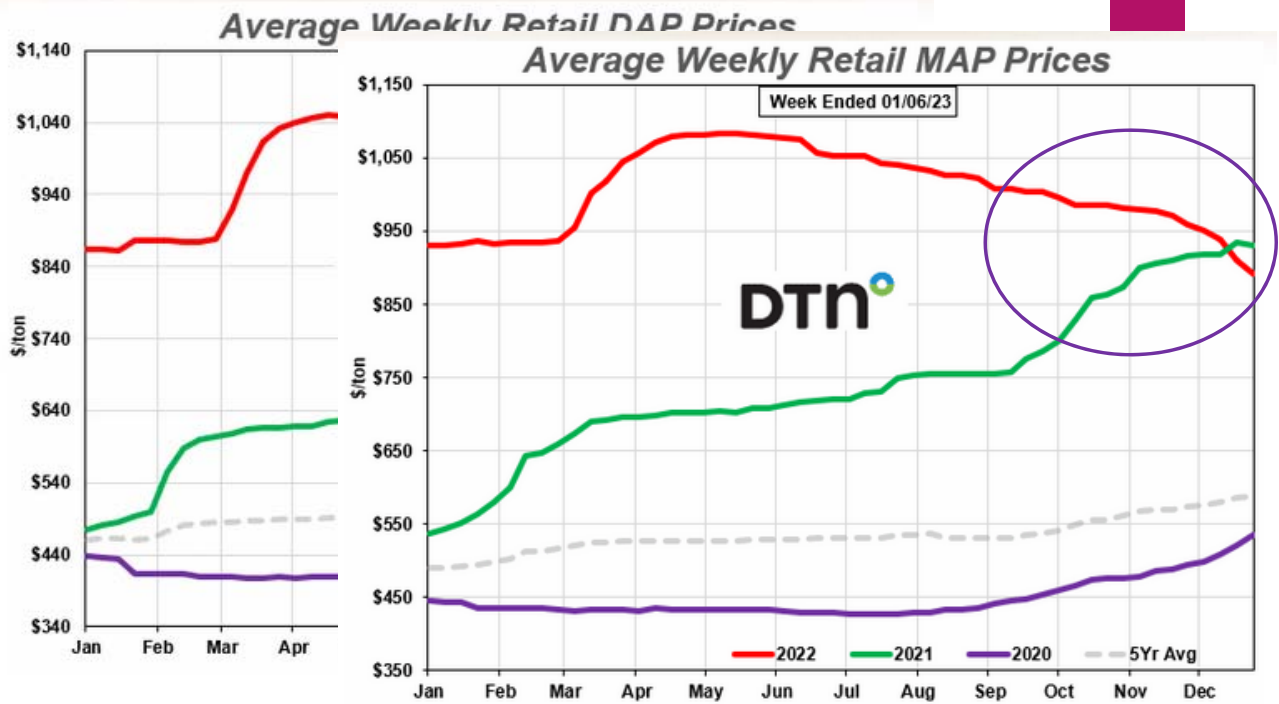


64

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

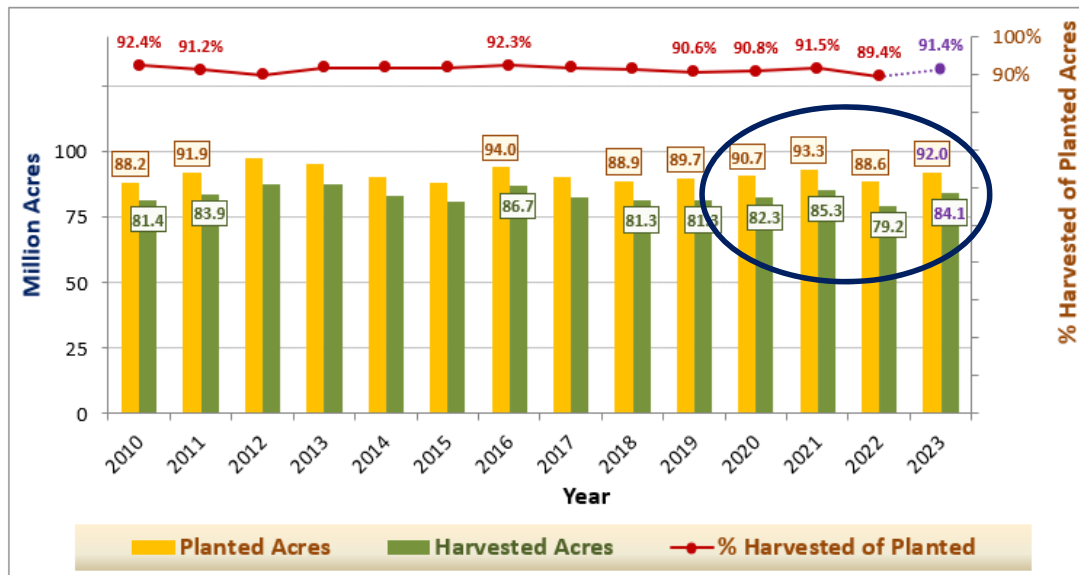
- Lower natural gas prices, w. *but continued supply-chain challenges*
- Lower fertilizer / crop input costs will encourage **2023 U.S. Corn Acres** – **≈ 92 million acres in 2023**
 - 88.6 million acres in 2022
 - 93.3 million acres in 2021
 - 90.7 million acres in 2020





U.S. Corn Acreage for Years 2010-2023

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



Grain Market Outlook 2022-2023

70

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** high fertilizer & other crop costs, **THEN** it limits Corn Acres & increases Soybeans in higher cost cropping systems²⁰²³
- **Rationing Grain Use:** Evidence of reductions in Ethanol, Exports....
- **Cropland Markets & Cash Rents:** High crop prices being reflected

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*

6) Overall Prospects for 2023 Crop Markets???

- U.S. Crop Prices supported @ Moderate-to-High Levels – *until* grain markets are confident of larger crops & rebuilding of stocks
 - “2023/24 ‘New Crop’ Forward Bids” are vulnerable to decline in late Spring – Summer²⁰²³ on into 2023 Fall harvest
- Ukraine-Russia War Effect: *Smaller* Ukraine corn exports
- South America Crop Impact: **Brazil & Argentina** crop prospects will effect U.S. prices through August 2023

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 in Year 2023 (1st of 3)

□ 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 @ \$13.93 /bu ^{1/13/2023}
 - DEC²⁰²³ Corn futures @ \$5.98 ½ /bu ^{1/13/2023}
 - 2023 “New Crop” Soy/Corn \$ Ratio = $\$13.93 \div \$5.98 \frac{1}{2} = 2.33$ (Neutral)
- Strong “new crop” price competition likely for 2023 planted acres between Feedgrains & Oilseeds ⇒ Likely in February-May 2023

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

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 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 become *"OK-to-Good"*, THEN grain prices *"slide" lower* into Fall 2023 (by traders with no immediate incentive to "buy corn")

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
- Prospects for "Active" Demand-Pull for Corn in Western KS
 - User's securing available "new crop" supplies (i.e. "scrambling!")
 - Possibility of "Inverted" futures & *strong basis* during Sep-Nov²⁰²³ Quarter *IF* a short crop happens in 2023 ⇒ What are the odds?

2023 Preharvest Marketing Plan

77



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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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Questions?

Daniel O'Brien – Extension Ag Economist

Blog: www.ksugrains.wordpress.com

KSUGrains on Twitter

www.AgManager.info



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