

Dynamic 2022 Grain Markets

Situation & Strategies

Monday, April 11, 2022

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Department of Agricultural Economics



Our Focus.....

1) Key Grain Market Factors & Situations in 2022-2023

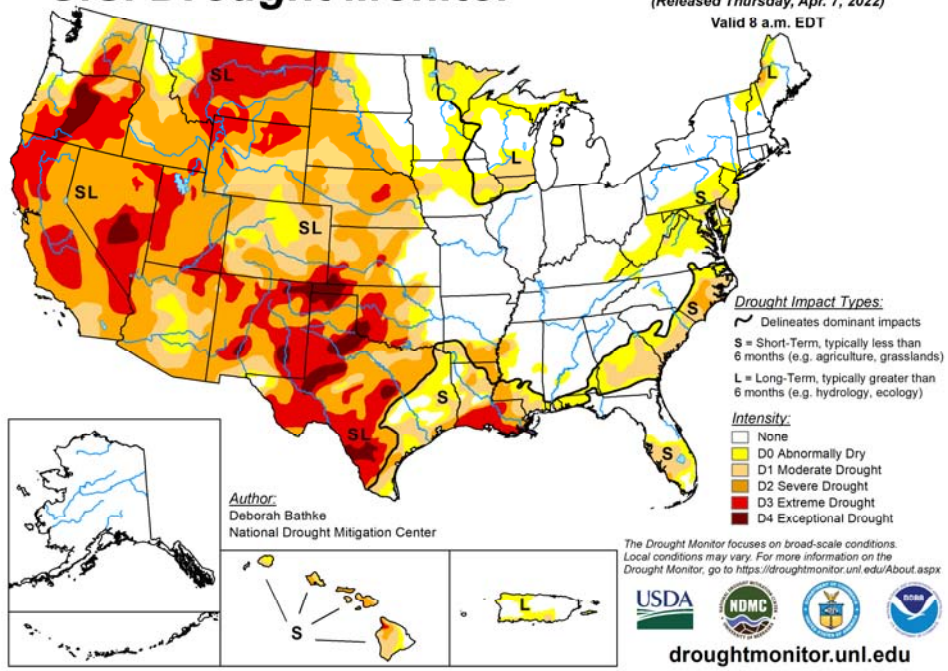
- Supply-Demand Issues ^{U.S.-World} ⇔ "tight" Stocks/Use - "high" Price\$

2) Grain Market Analysis & Outlook

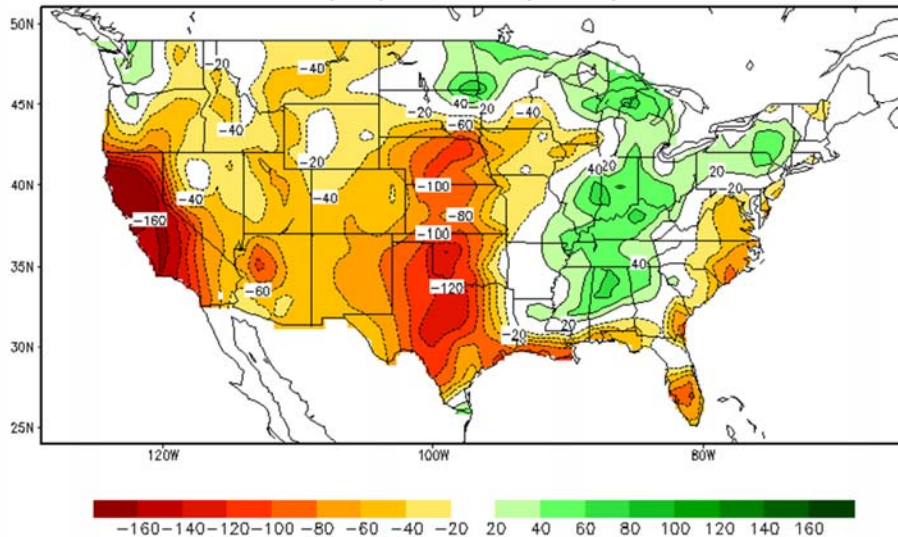
- Corn
 - Sorghum
 - Wheat
 - Soybeans

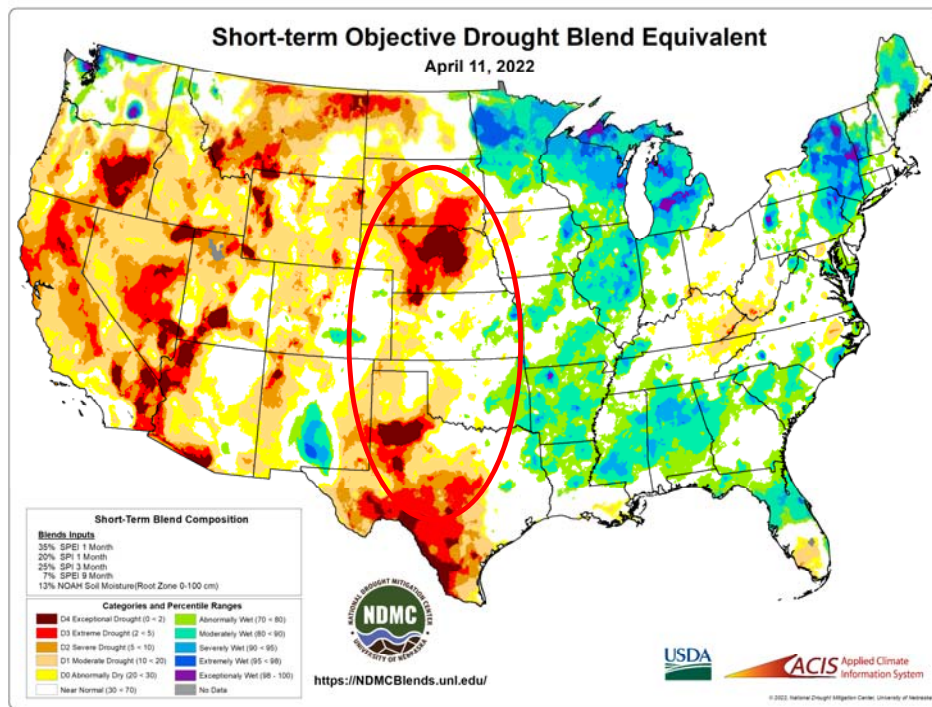
U.S. Drought Monitor

April 5, 2022
(Released Thursday, Apr. 7, 2022)
Valid 8 a.m. EDT

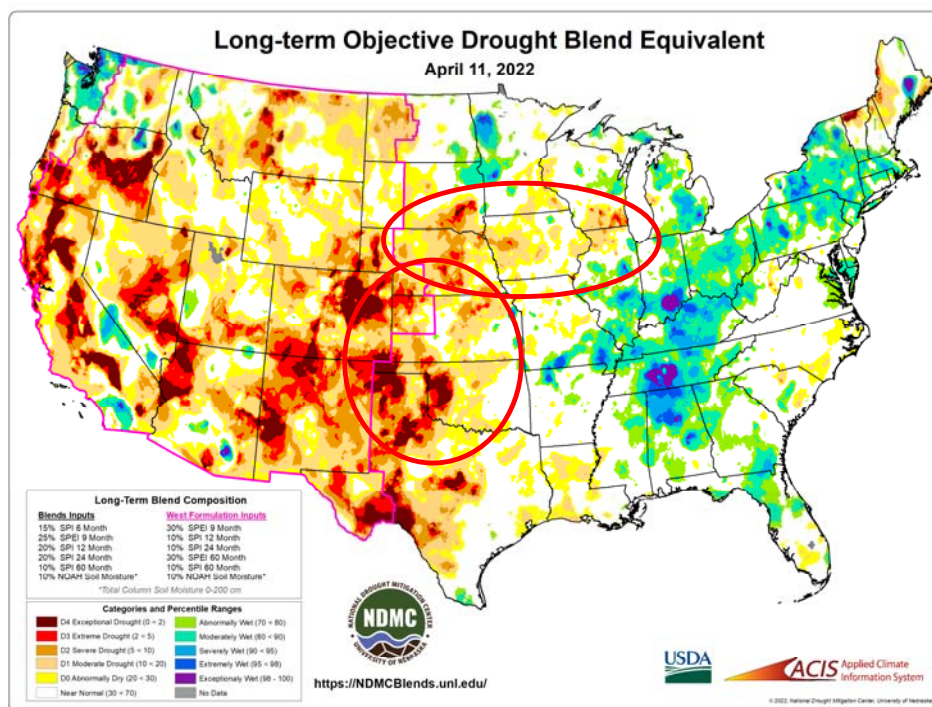


Predicted Soil Moisture Anomaly (mm) (10Apr2022–17Apr2022)



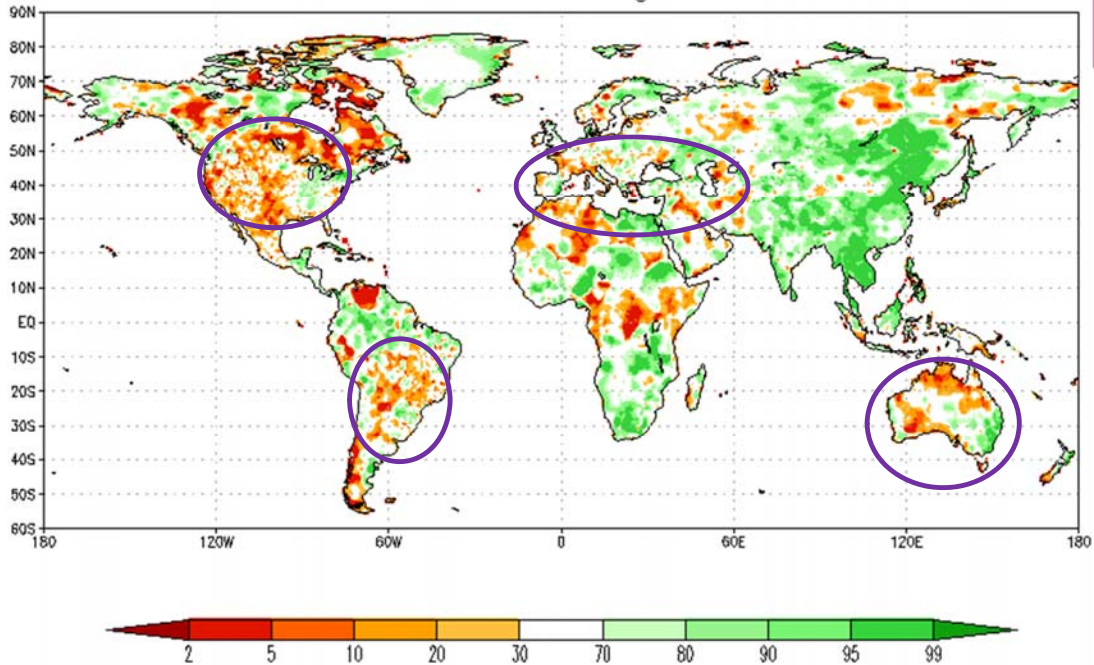


5



6

Calculated Soil Moisture Ranking Percentile 20220409



Anticipating 2022 U.S. Crop Acres

8

U.S. Crop Plantings for 2022

- **Wheat** ²⁰²²⁻²³ **47.4 mln ac** ➔ Up 1.3% vs 46.7 ma²⁰²¹
- **Soybeans** ²⁰²² **91.0 mln ac** ➔ Up 4.3% vs 87.2 ma²⁰²¹
- **Corn** ²⁰²² **89.5 mln ac** ➔ Down 4.1% vs 93.4 ma²⁰²¹
- **Sorghum** ²⁰²² **6.2 mln ac** ➔ Down 15.1% vs 7.3 ma²⁰²¹
- **Cotton** ²⁰²² **12.2 mln ac** ➔ Up 9.0% vs 11.2 ma²⁰²¹

Q?: Will recent corn price strength change farmer's planting intentions?

Corn & Sorghum Markets

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U.S. Corn Acreage for Years 2010-2022 as of the March 31, 2022 USDA Prospective Plantings Report

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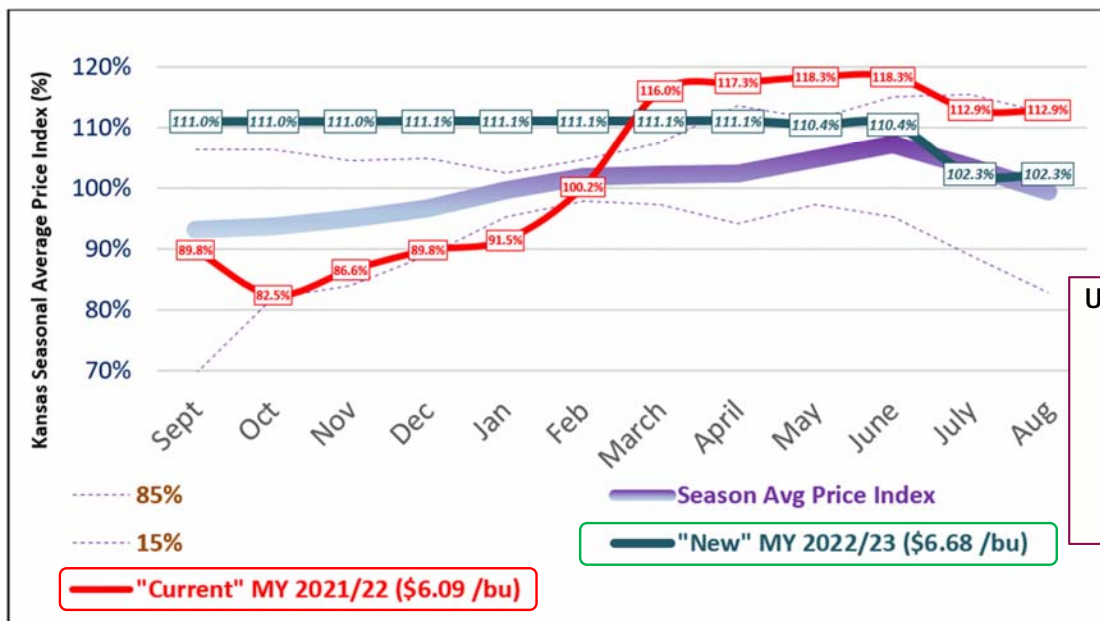
U.S. Corn S/D & Stocks Since USDA Outlook Conf, Feb 2022

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- **Corn: "Tightening" Stocks & % S/U** KSU Forecasts, 4/11/2022
 - **U.S. Corn Yield** ²⁰²² ⇒ **177 bu/ac** (vs 181 by USDA)
 - **Production** ²⁰²² ⇒ **14.468 bln bu** (vs 14.795 bb @ 181 bu/ac)
 - **Ending Stocks** ^{2022/23} ⇒ **1.093 bln bu** (vs 1.410 bb @ 181 bu/ac)
 - **% Stocks/Use** ^{2022/23} ⇒ **7.37% S/U** (↑ vs 9.5% S/U @ 181 bu/ac)
 - **U.S. Farm \$** ^{2022/23} ⇒ **\$7.00+ /bu** (vs \$6.00 @ 181 bu/ac)

Kansas Corn Seasonal Prices: MY 1999/00 – MY 2019/20 plus "Current Crop" MY 2021/22 & "New Crop" MY 2022/23 as of April 8, 2022

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USDA Forecasts:

- "Current" MY 2021/22 = \$5.80 /bu U.S.
- "New Crop" MY 2022/23 = \$5.00 /bu U.S.

ELEC. CORN (@C2022K)

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ELEC. CORN (@C2022Z)

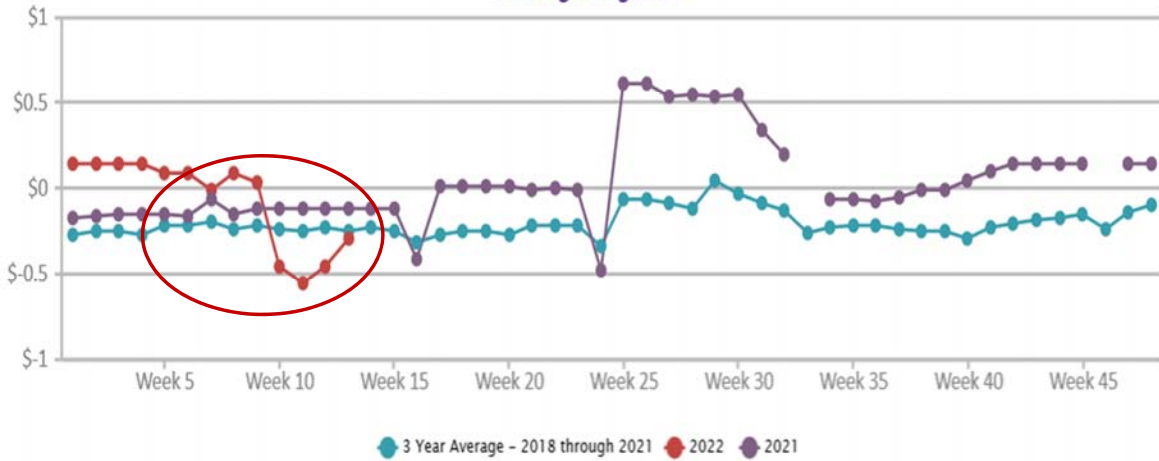
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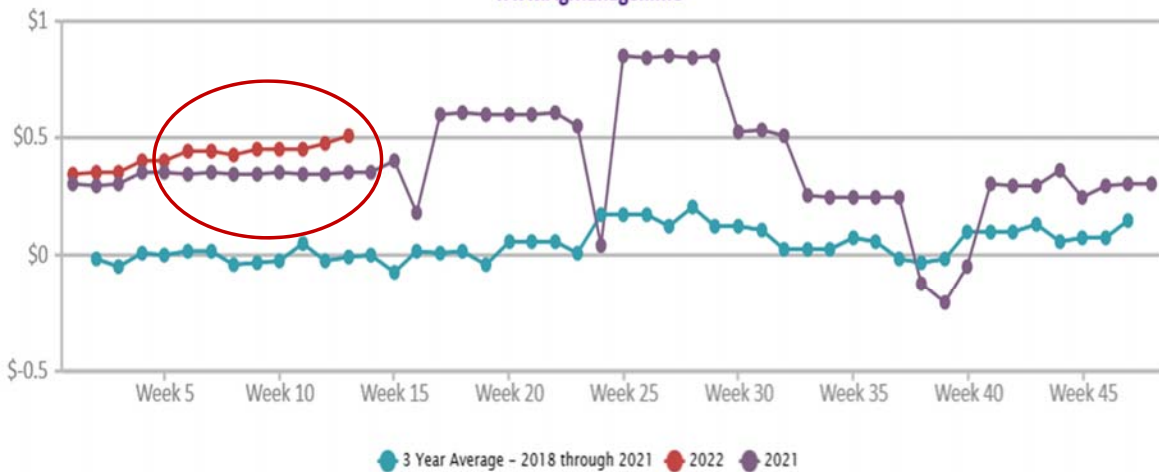
SALINA, KS: Corn Basis - CARGILL

www.AgManager.info



GARDEN CITY, KS: Corn Basis - GARDEN CITY COOP

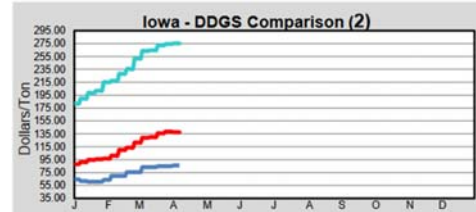
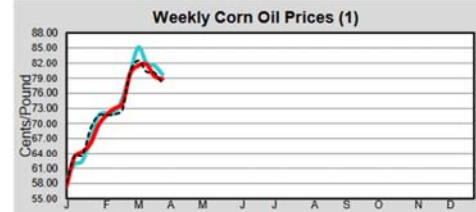
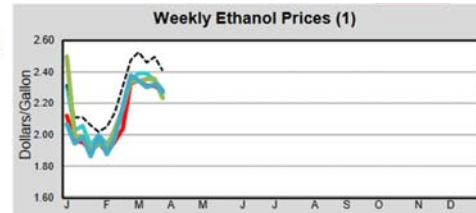
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US #2 Yellow Corn - dollars/bushel

	Cash Bids	Chg	Basis	Avg:
Iowa-Eastern:	7.1775 - 7.6025	↑	-40K to 10N	-9.42
Iowa-Western:	7.3025 - 7.6325	↑	-20N to 13N	-3.68
Illinois:	7.3975 - 7.9525	↑	-18K to 45N	5.40
Indiana:	7.3425 - 7.7025	↑	-16N to 20N	-0.78
Ohio:	7.2525 - 7.5025	↑	-25N to OptN	-11.33
Michigan:	7.2025 - 7.2525	↑	-30N to -25N	-28.75
Kansas:	7.7275 - 7.8525	↑	15K to 35N	26.67
Minnesota:	7.1525 - 7.5025	↑	-35N to OptN	-13.57
Nebraska:	7.3025 - 7.7025	↑	-20N to 20N	-1.20
Wisconsin:	7.0275 - 7.4025	↑	-55K to -10N	-28.60
South Dakota:	7.1875 - 7.5725	↑	-39K to 7N	-6.58
Missouri:	7.3275 - 7.8025	↑	-25K to 30N	4.25



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

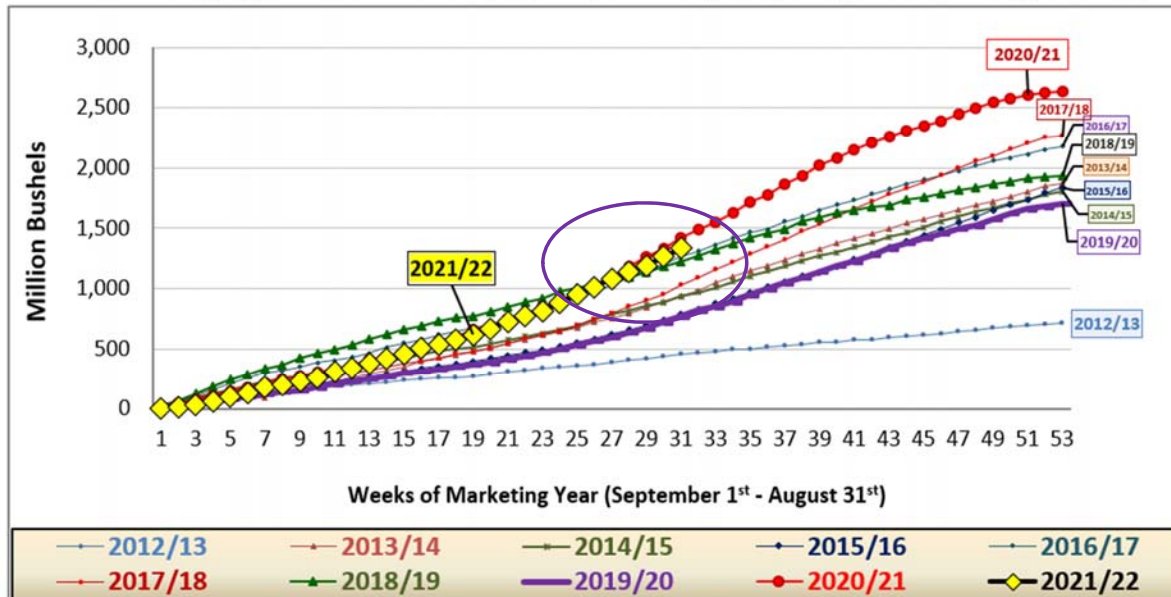
U.S. Corn Exports: "Bullish" short-term corn shipments with "Bullish" long-term "New Crop" MY 2021/22 total sales

- Weekly Export Shipments week of 3/31/2022 = 64.3 mb (Bullish)
vs 53.1 mb/wk needed to meet USDA's March 9th projn of 2.500 bb exports
- Total shipments through 3/31/2022 for "Current" MY 2021/22 = 1.331,2 mb
i.e., 53.2% of 2.500 bb USDA projn with 57.7% of MY complete (30/52 weeks)
- Total sales through 3/31/2022 for "Current" MY 2021/22 = 2.143,1 bb (Bullish)
i.e., 85.7% of 2.500 bb USDA projn w. 57.7% of MY complete (30/52 weeks)
- Total sales through 3/31/2022 for "New Crop" MY 2022/23 = 101.2 mb
i.e., 4.3% of 2.350 bb USDA projn w. 0% of MY complete (0/52 weeks)

U.S. Corn Exports: MY 2012/13 through "New Crop" MY 2021/22 based on

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USDA Foreign Agricultural Service Weekly Export reports through 3/31/2022 (Start of marketing year on 9/1)



U.S. Corn Supply-Demand Balance Sheet: Projected "Old Crop" MY 2021/22 & Preliminary

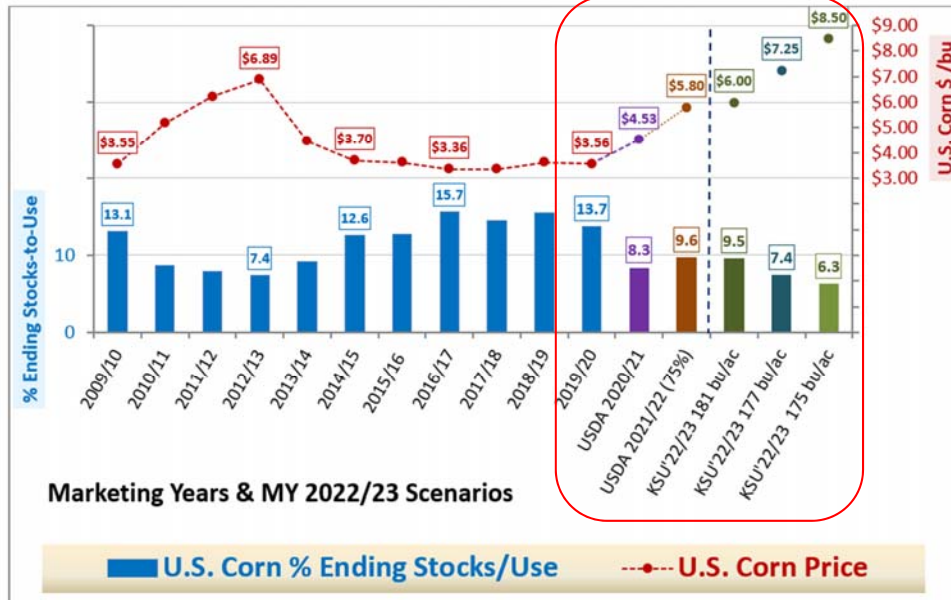
20

"New Crop" MY 2022/23 as of the April 8, 2022 USDA WASDE report, with Alternative KSU "New Crop" 2022/23 Marketing Year Scenarios

Item	USDA 2021/22 4/9/2022 WASDE	A. KSU "New Crop" MY 2022/23 Scenario #1 3/31/2022 USDA NASS Prospective Plantings + USDA Yield 2022 (181 bu/ac)	B. KSU "New Crop" MY 2022/23 Scenario #2 3/31/2022 USDA NASS Prospective Plantings + USDA Yield = 2021 (177 bu/ac)	C. KSU "New Crop" MY 2022/23 Scenario #3 3/31/2022 USDA NASS Prospective Plantings + KSU Yield 2022 (175 bu/ac)
<i>% Probability of Occurring (KSU)</i>	75% ^{KSUbest}	20% ^{KSUbest}	55% ^{KSUbest}	25% ^{KSUbest}
Planted Area (million acres)	93.357	89.492	89.490	89.490
Harvested Area (million acres)	85.388	81.742	81.742	81.742
% Harvested/Planted Area	91.5%	91.34%	91.34%	91.34%
Yield / harvested acre (bu/ac)	177.0	181.0	177.0	175.0
Million Bushels				
Beginning Stocks (million bushels)	1,235	1,440	1,440	1,440
Production (million bu.)	15,115	14,795	14,468	14,305
Imports (million bu.)	25.0	25	25	25.0
Total Supply (million bu.)	16,375	16,250	15,933	15,770
Ethanol for fuel Use (million bu.)	5,375	5,400	5,400	5,400
Food & Industrial Use (mln bu.)	1,404	1,409	1,409	1,409
Seed Use (million bu.)	30.6	31	31	31
Exports (million bu.)	2,500	2,350	2,350	2,350
Feed & Residual Use (million bu.)	5,625	5,650	5,650	5,650
Total Use (million bu.)	14,935	14,840	14,840	14,840
Ending Stocks (million bu.)	1,440	1,410	1,093	930
% Ending Stocks-to-Use	9.64%	9.50%	7.37%	6.27%
Days of Supply (% S/U x 365 days)	35.2 days	34.7 days	26.9 days	22.9 days
U.S. Corn Average Farm Price (\$/bushel)	\$5.80 /bu vs \$6.09 KSU Futures	\$6.00 /bu vs \$6.68 KSU Futures	\$7.25 /bu vs \$6.68 KSU Futures	\$8.50 /bu vs \$6.68 KSU Futures

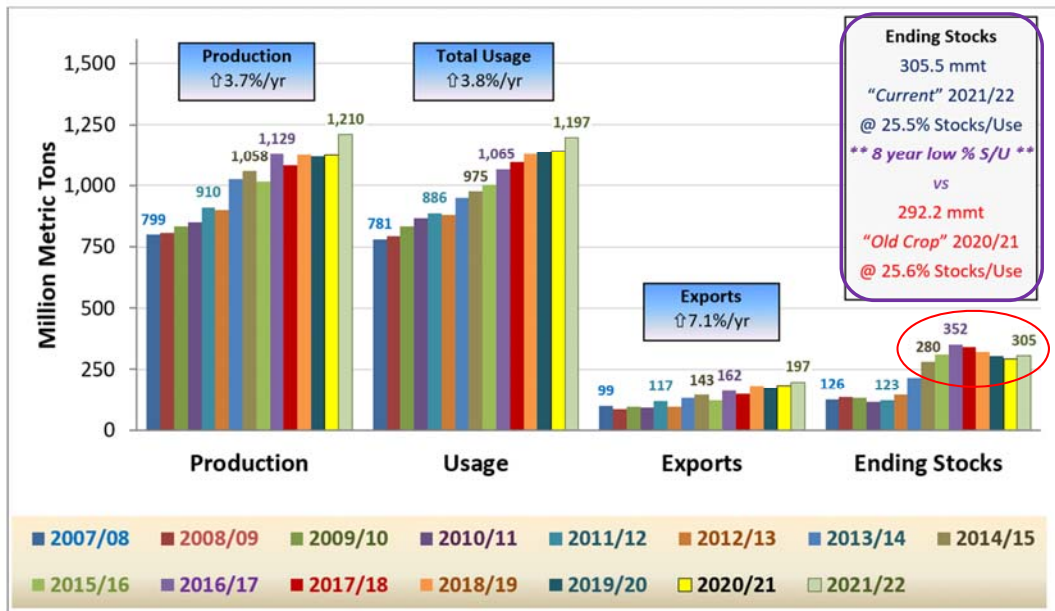
U.S. Corn % End Stocks vs U.S. Corn \$'s: MY 2009/10 –

MY 2021/22 as of the 4/8/2022 USDA WASDE report + KSU "New Crop" MY 2022/23 scenarios



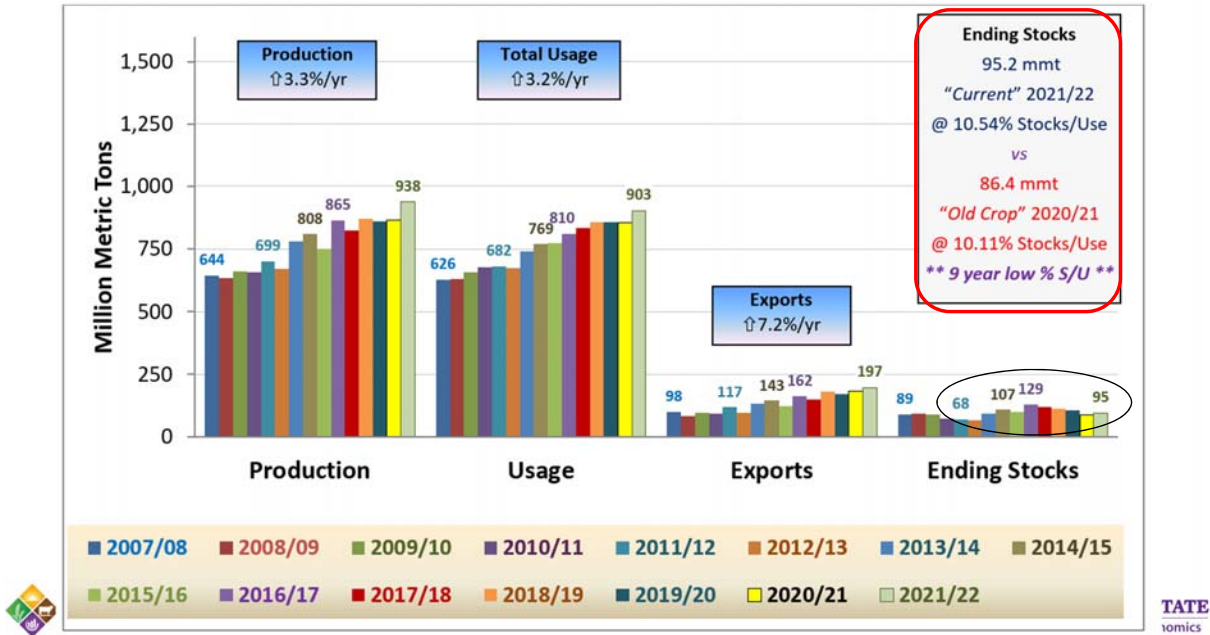
World Corn Supply-Demand: MY 2007/08 – "Current" MY 2021/22, as of the

April 8, 2022 USDA WASDE Report



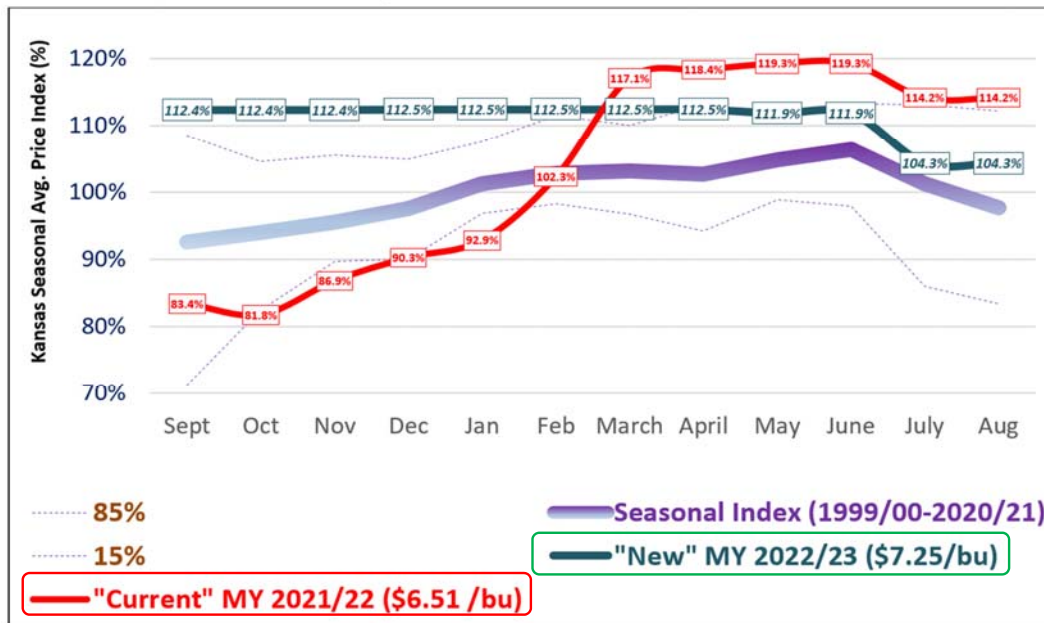
"World Less-China" Corn Supply-Demand: MY 2007/08 – "Current" MY 2021/22,

as of the April 8, 2022 USDA WASDE Report



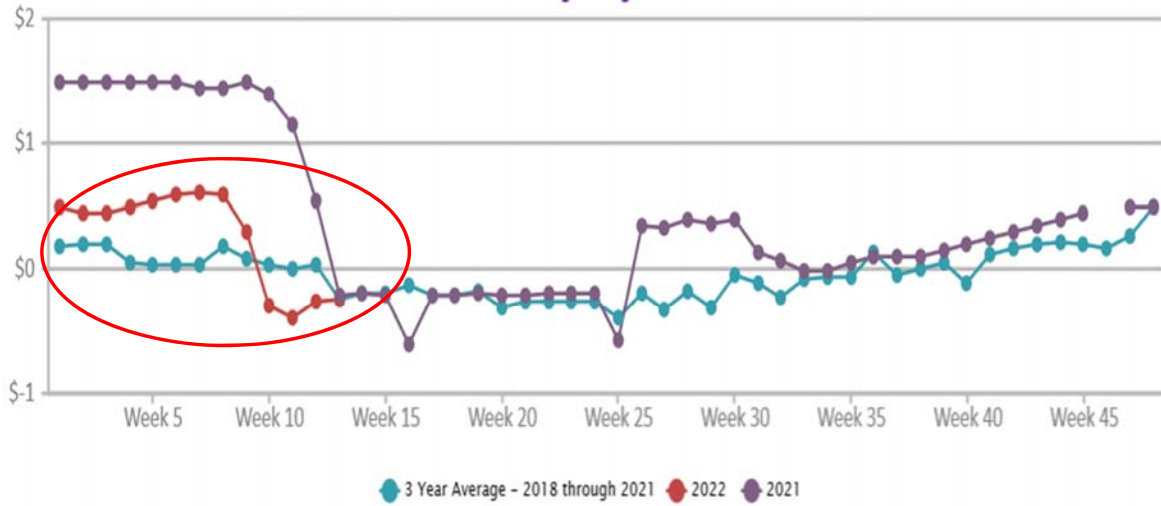
Kansas Grain Sorghum Seasonal Prices

MY 1999/00 – MY 2020/21 plus "Current" MY 2021/22 & "New" MY 2022/23 as of April 8, 2022



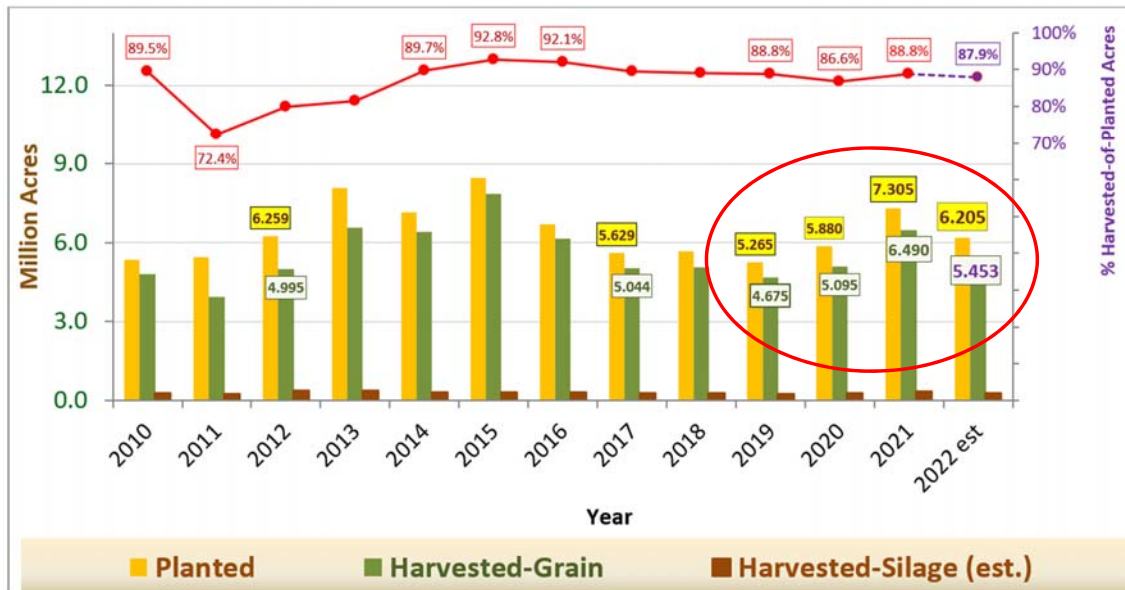
SALINA, KS: Grain Sorghum Basis - CARGILL

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U.S. Grain Sorghum Planted & Harvested Acreage (2010 – 2022)

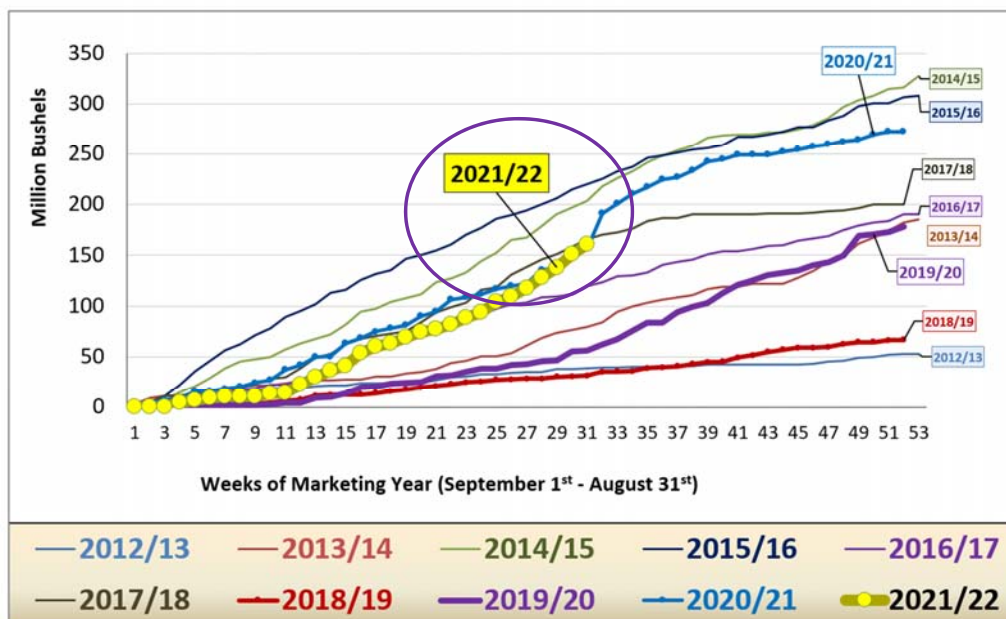
as of the March 31, 2022 USDA Prospective Plantings report



U.S. Grain Sorghum Exports: “Bullish” short-term shipments & “Bullish” sales in “New Crop” MY 2021/22

- Weekly Export Shipments week of 3/31/2022 for MY 2021/22 = 9.322 mb (Bullish) vs 6.795 mb/wk needed to meet USDA’s March 9th projn of 310 mb exports
- Total shipments through 3/31/2022 for “Current” MY 2021/22 = 160.5 mb i.e., 51.8% of 310 mb USDA projn with 57.7% of MY complete (30/52 weeks)
- Total sales through 3/31/2022 for “Current” MY 2021/22 = 265.7 mb (Bullish) i.e., 85.7% of 310 mb USDA projn w. 57.7% of MY complete (30/52 weeks)
- Total sales through 3/31/2022 for “New Crop” MY 2022/23 = 0 mb i.e., 0% of 300 mb USDA projn w. 0% of MY complete (0/52 weeks)

U.S. Grain Sorghum Exports: for MY 2012/13 - “Current” MY 2021/22 as of March 31, 2022 - via USDA FAS Weekly Export reports



Wheat Markets

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U.S. All Wheat Planted & Harvested Acreage (MY 2010/11 – MY 2022/23) as of the USDA March 31, 2022 USDA Prospective Plantings Report

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U.S. Wheat S/D & Stocks Since USDA Outlook Conf, Feb 2022

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□ Wheat: "OK" Stocks & % S/U

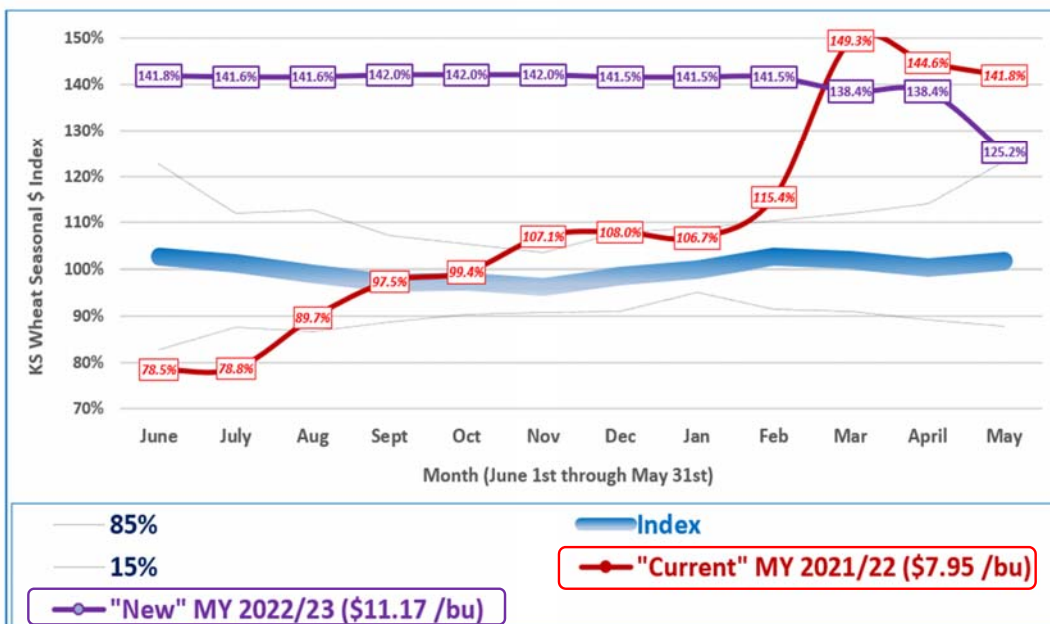
- U.S. Wheat Yield ²⁰²² ⇨ **49.1 bu/ac** (vs 44.3 in 2021)
- Production ²⁰²² ⇨ **1.902 bln bu** (vs 1.646 bb in 2021)
- Ending Stocks ^{2022/23} ⇨ **698 mln bu** (vs 678 mb in 2021/22)
- % Stocks/Use ^{2022/23} ⇨ **35.3% S/U** (≈ 35.5% S/U in 2021/22)
- U.S. Farm \$ ^{2022/23, KSU} ⇨ **\$7.65 /bu** (\$7.60 & \$5.05 last 2 years)

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Seasonal Prices for Kansas Hard Red Winter Wheat:

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MY 1999/00 – 2019/20 + "Current" MY 2021/22 & "New" MY 2022/23 Ests. thru April 8, 2022



USDA Forecasts:

"Current" MY 2021/22 = \$7.60 /bu U.S.

"New Crop" MY 2022/23 = \$6.80 /bu U.S.

ELEC. HRW WHEAT (@KW2022K)

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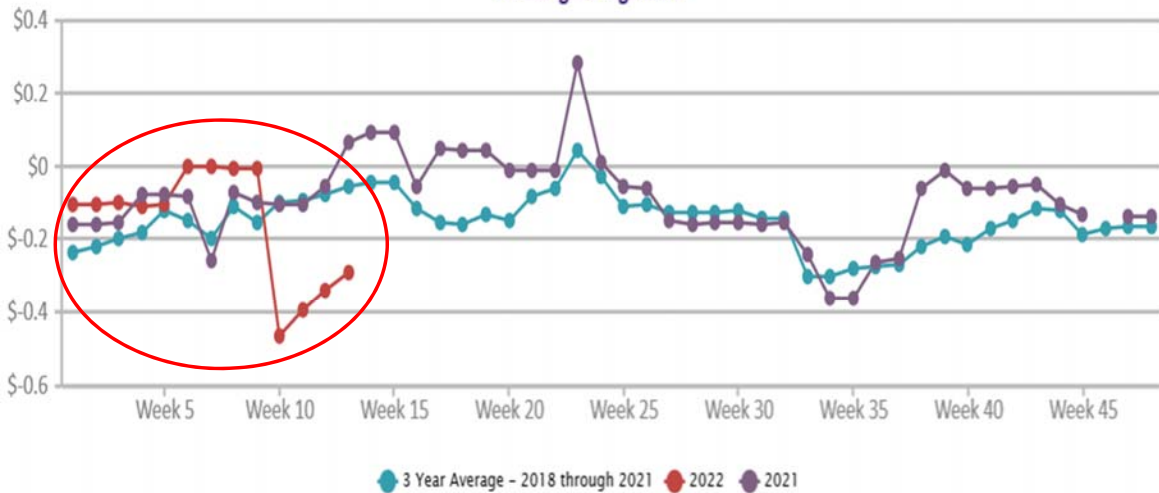


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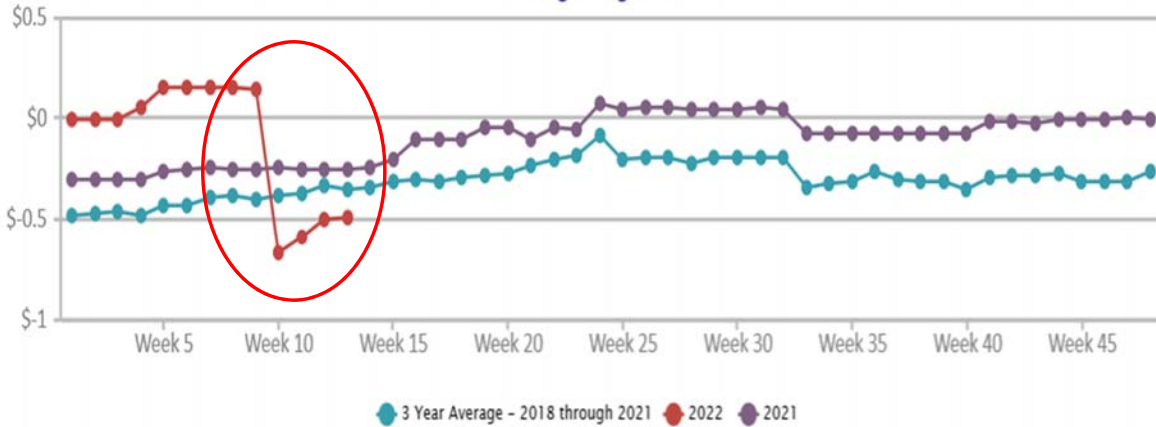
SALINA, KS: Hard Red Winter Wheat Basis - CARGILL

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HUGOTON, KS: Hard Red Winter Wheat Basis - PERRYTON EQUITY EXCHANGE - PRAIRIEOLA

www.AgManager.info



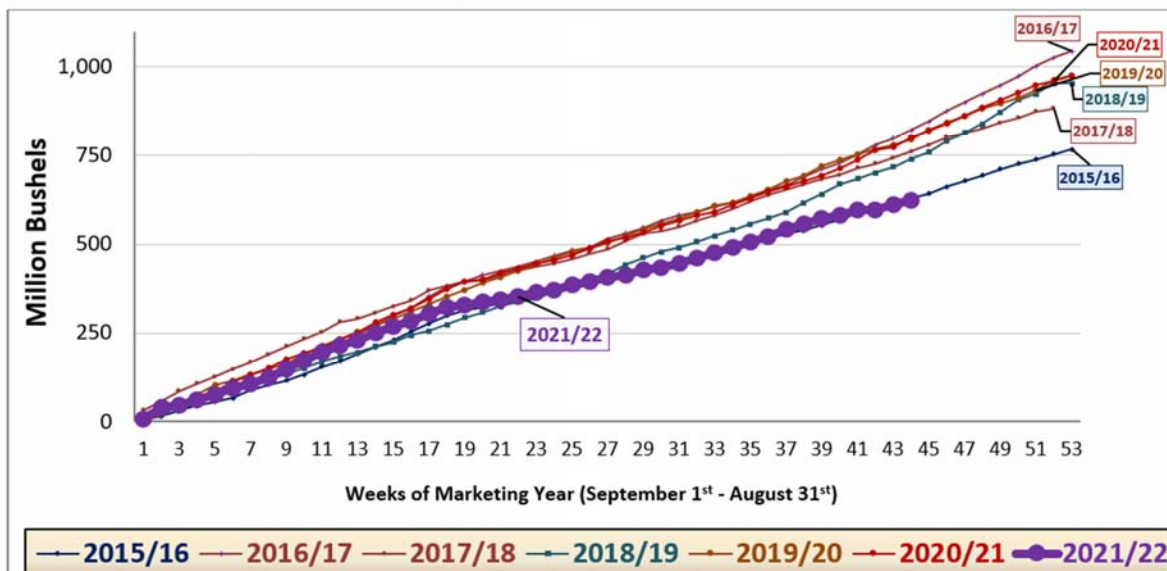
U.S. All Wheat Exports: "Bearish" short-term Export Shipments with "Neutral" longer term export prospects for "Current" MY 2021/22

- Weekly Export Shipments wk of 3/31/2022 for "Current" MY 2021/22 = 11.383 mb (Bearish)
vs 27.4 mb /wk needed to meet USDA's March 9th projn of 800 mb exports
- Total shipments through 3/31/2022 for "Current" MY 2021/22 = 580.8 mb
i.e., 72.6% of 800 mb USDA projn with 84.6% of MY complete (44/52 weeks)
- Total shipments + new sales thru 3/31/2022 for "Current" MY 2021/22 = 703.35 mb
i.e., 87.9% of 800 mb USDA #'s with 84.6% of MY complete (44/52 weeks) (Neutral)
- Total new sales thru 3/31/2022 for "New Crop" MY 2022/23 = 61.6 mb (0/52 weeks)
i.e., 7.25% of 850 mb USDA #'s with 0% of MY complete (0/52 weeks)

U.S. Hard Red Winter (HRW) Wheat Exports: "Bearish" short-term Shipments with "Neutral" long-term prospects for "Current" MY 2021/22 total sales

- Weekly Export Shipments wk of 3/31/2022 for "New Crop" MY 2021/22 = 1.60 mb (Bearish)
vs 12.00 mb /wk needed to meet USDA's March 9th projn of 320 mb HRW wheat exports
- Total shipments through 3/31/2022 for "Current" MY 2021/22 = 224.0 mb
i.e., 70.0% of 320 mb USDA HRW-W exports with 84.6% of MY complete (44/52 weeks)
- Total shipments + new sales thru 3/31/2022 for "Current" MY 2021/22 = 277.3 mb
i.e., 86.7% of 320 mb USDA HRW-W exports w. 84.6% of MY complete (44/52 weeks) (Neutral)

U.S. All Wheat Exports: MY 2015/16 thru "New Crop" MY 2021/22 as of USDA FAS Weekly Export reports through March 31, 2022



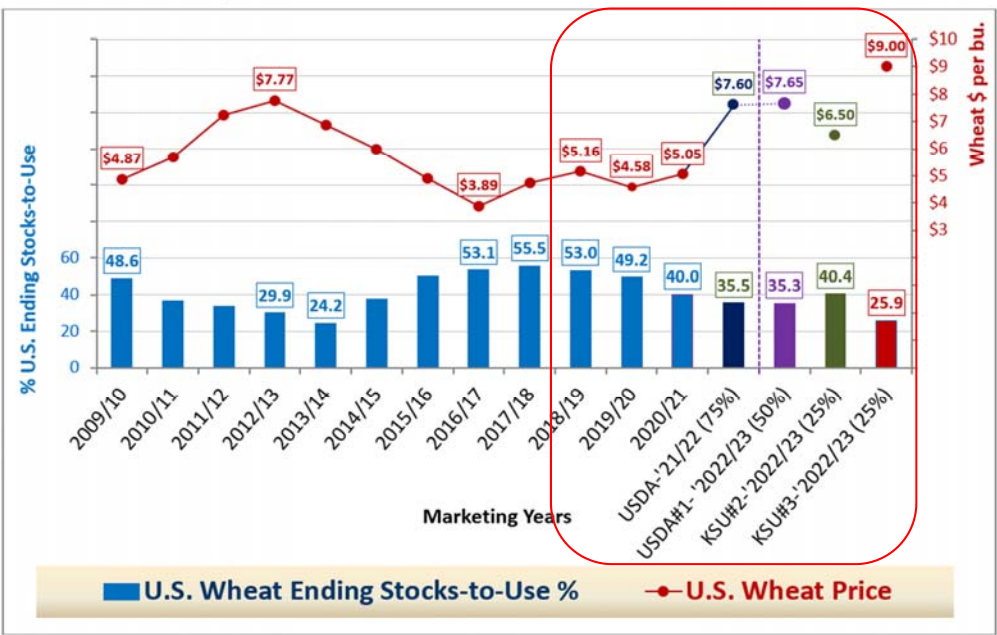
U.S. Wheat Supply-Demand Balance Sheet: "Current" MY

2021/22 & "New" MY 2022/23 as of the 4/8/2022 USDA WASDE & Feb. 23-24 USDA Outlook Conf + KSU scenarios

Item	USDA "Old Crop" MY 2021/22 4/8/2022 USDA WASDE Report	USDA Scenario #1 "New Crop" 2022/23 Adj. USDA Feb. 2022 Ag Outlook Conf. Frst	KSU Scenario #2 "New Crop" 2022/23 Higher 2022 U.S. Yield (+ 2019 U.S. Yield)	KSU Scenario #3 "New Crop" 2022/23 Lower 2022 U.S. Yield (- 2021 U.S. Yield)
% Probability of Happening ^{KSU est.}	75% prob	50% prob	25% prob.	25% prob.
Planted Area (million acres)	46.703	47.351	46.703	46.703
Harvested Area (million acres)	37.163	38.728	37.163	37.163
% Harvested/Planted Area	79.57%	81.79%	79.57%	79.57%
Yield / harvested acre (bu/ac)	44.3	49.1	51.7	44.3
Million Bushels				
Beginning Stocks	845	678	678	678
Production	1,646	1,902	2,002	1,716
Imports	95	**95	**95	**95
Total Supply (million bushels)	2,586	2,675	2,775	2,489
Food Use	959	963	963	963
Seed Use	64	64	64	64
Exports	785	850	850	850
Feed & Residual Use	100	100	100	100
Total Use (million bushels)	1,908	1,977	1,977	1,977
Ending Stocks (million bushels)	678	698	798	512
% Ending Stocks-to-Use	35.53%	35.31%	40.36%	25.90%
Days of Supply (% S/U x 365 days)	130 days	129 days	147 days	95 days
U.S. Wheat Avg. Farm Price (\$/bushel)	\$7.60 Vs \$7.95 /bu KSU Futures-based frst.	\$7.65 Vs \$11.17 /bu KSU Futures-based frst.	\$6.50 Vs \$11.17 /bu KSU Futures-based frst.	\$9.00 Vs \$11.17 /bu KSU Futures-based frst.

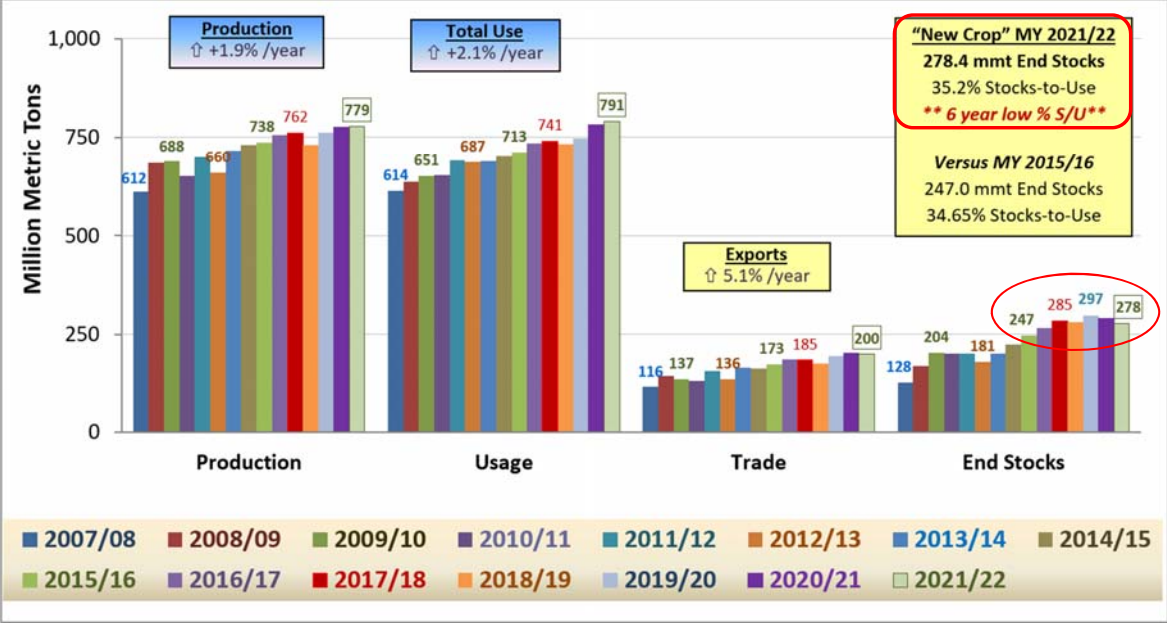
U.S. Wheat Ending Stocks vs U.S. Cash Prices: MY 2009/10

thru "New Crop" MY 2022/23 – April 8, 2022 USDA WASDE with KSU Projections



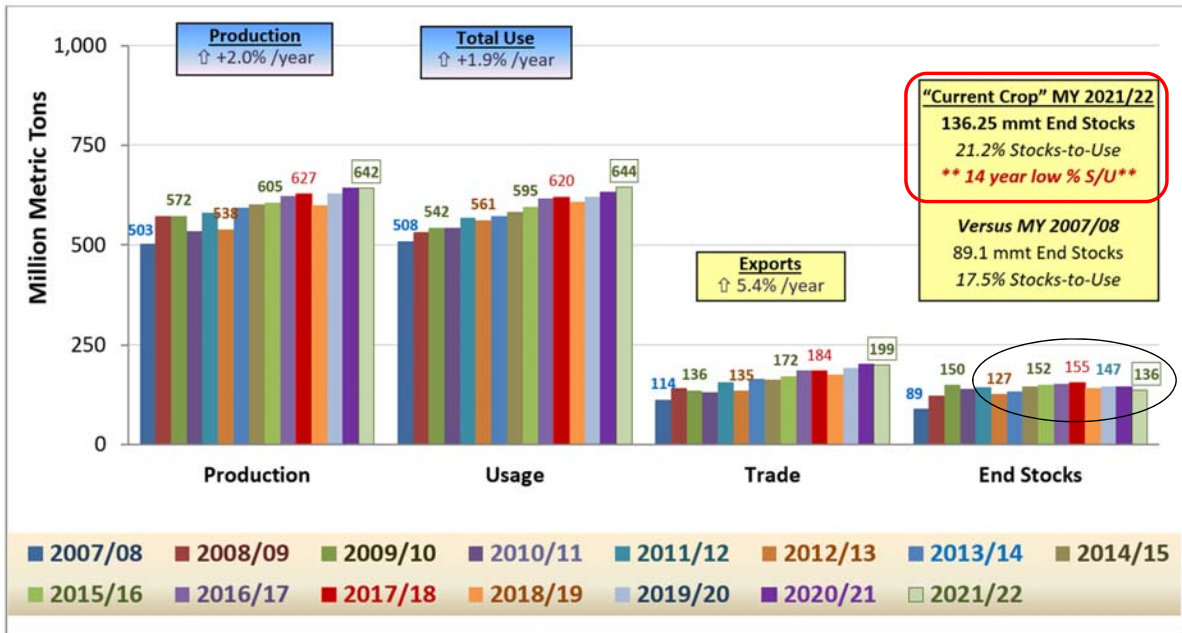
World Wheat Usage & Ending Stocks: MY 2007/08 - "New Crop" MY 2021/22, as of the April 8,

2022 USDA WASDE Report



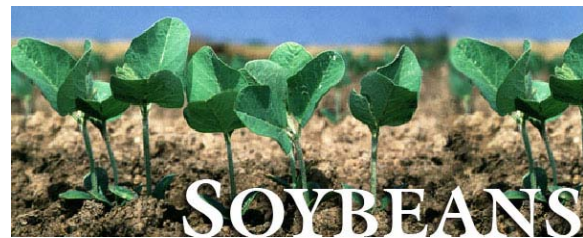
"World Less-China" Wheat Usage & Ending Stocks: MY 2007/08 - "Current" MY 2021/22,

as of the April 8, 2022 USDA WASDE Report



Soybean Markets

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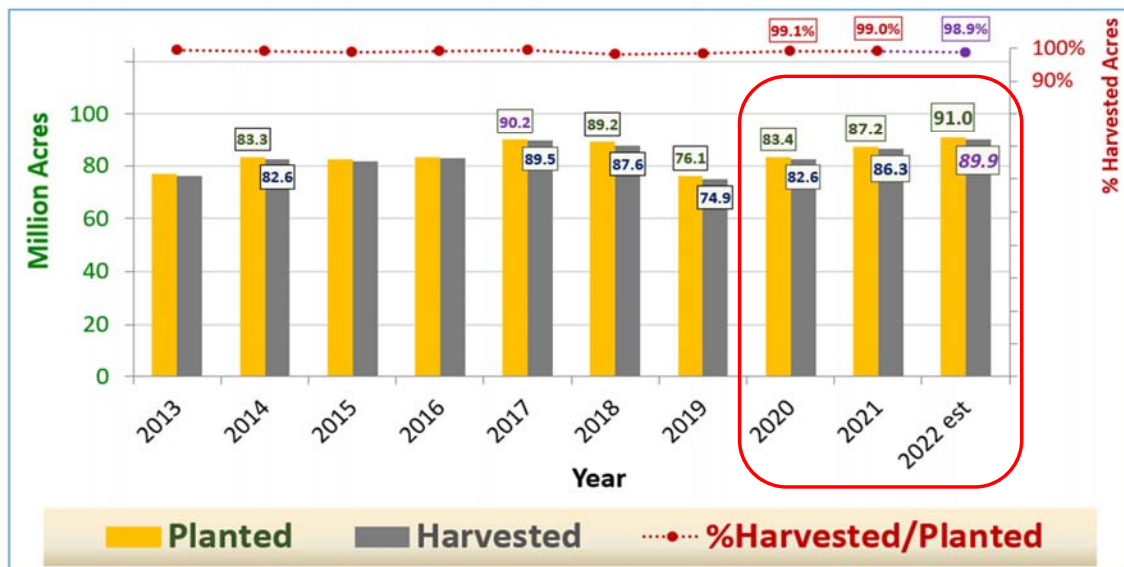


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U.S. Soybean Planted & Harvested Acreage: Years 2013-2022

as of the March 31, 2022 USDA NASS Prospective Plantings Report

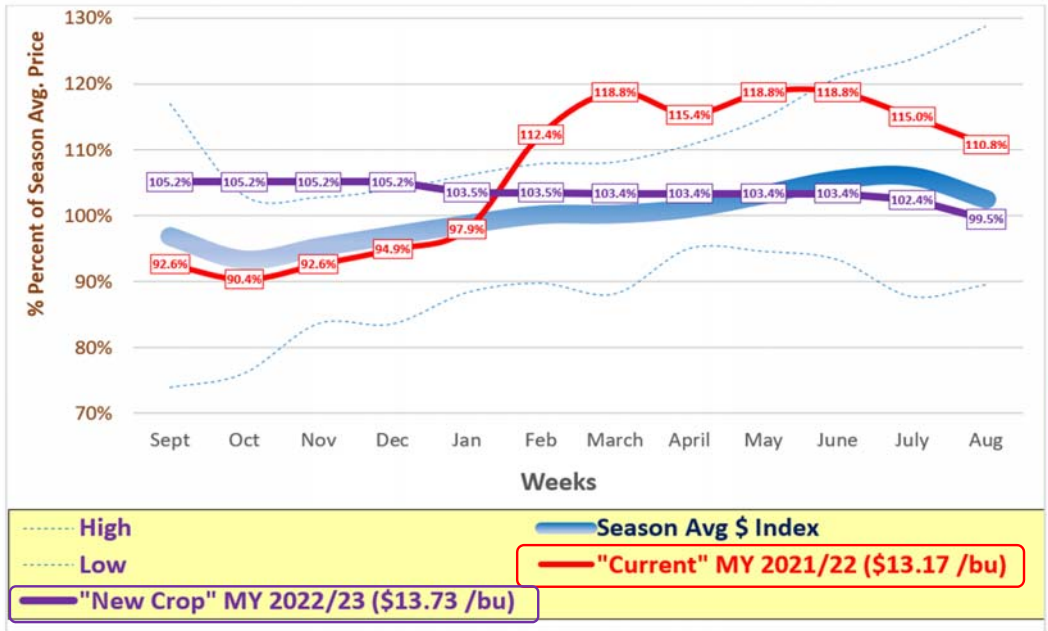


U.S. Soybean S/D & Stocks Since USDA Outlook Conf, Feb. 2022

□ Soybean: "Tight - Growing" Stocks & % S/U

- Yield ²⁰²² ⇒ 51.5 bu/ac (vs 51.4 bu/ac in 2021)
- Production ²⁰²² ⇒ 4.631 bln bu (vs 4.435 bb in 2021)
- Ending Stocks ^{2022/23} ⇒ 381 mln bu (vs 260 mb in 2021/22)
- % Stocks/Use ^{2022/23} ⇒ 8.42% S/U (↑ vs 5.85% S/U in 2021/22)
- U.S. Farm \$ ^{2022/23} ⇒ \$11.25 /bu (\$10.80 & \$13.25 last 2 yrs)

Kansas Soybean Seasonal Prices: MY 1999/00 – MY 2020/21 + “Old Crop” MY 2021/22 & “New Crop” MY 2022/23 Estimates, April 8, 2022



USDA Forecasts:
 "Current" MY 2021/22 = \$13.25 /bu U.S.
 "New Crop" MY 2022/23 = \$12.75 /bu U.S.

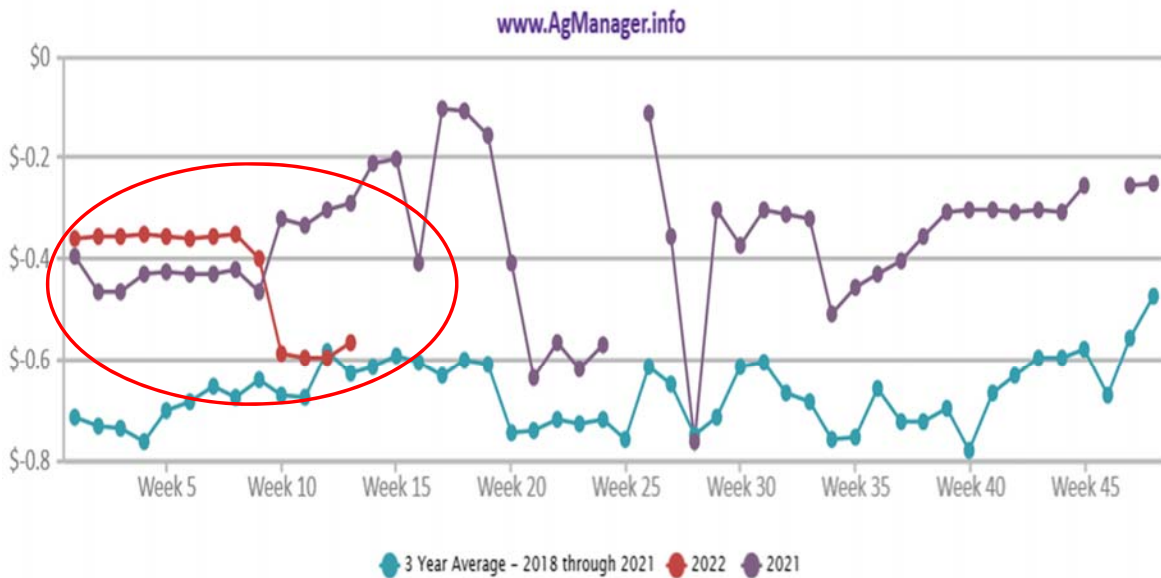
ELEC. SOYBEANS (@S2022K)



ELEC. SOYBEANS (@S2022X)



SALINA, KS: Soybeans Basis - CARGILL

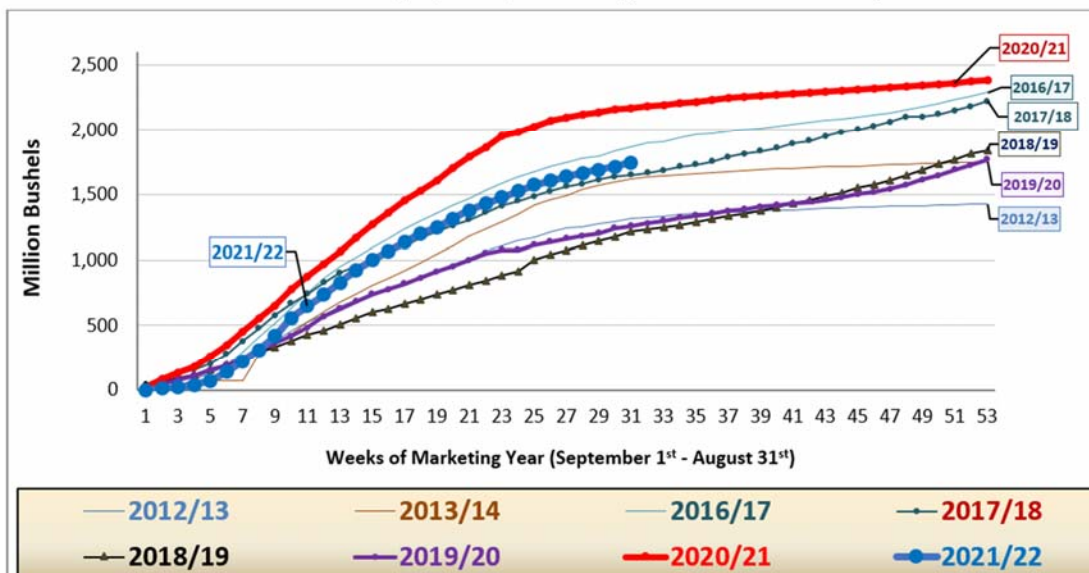


❖ **U.S. Soybean Exports: “Bullish” short-term export shipments and “Bullish” for “Current” MY 2021/22 sales**

- Weekly Export Shipments week of 3/31/2022 for “Current” MY 2021/22 = 30.60 mb (Bullish) vs 20.88 mb /wk needed to meet USDA’s March 9th projn of 2.090 bb exports
- Total shipments through 3/31/2022 for “Current” MY 2021/22 = 1.630,6 bb i.e., 78.0% of 2.090 bb USDA projn with 57.7% of MY complete (30/52 weeks)
- Total sales through 3/31/2022 for “Current” MY 2021/22 = 2.063 mb (Bullish) i.e., 98.7% of 2.090 bb USDA^{KSU} projn w. 57.7% of MY complete (30/52 weeks)
- Total sales through 3/31/2022 for “New Crop” MY 2022/23 = 311.0 mb i.e., 14.5% of 2.150 bb USDA^{KSU} projn w. 0% of MY complete (0/52 weeks)

U.S. Soybean Exports: MY 2012/13 & MY 2016/17 - “New Crop” MY 2021/22

as of recent USDA FAS Weekly Export reports through the week of March 31, 2022



❖ **U.S. Soybean Meal Exports: “Negative” short-term export shipments in “New Crop” MY 2021/22, with “Positive” “Current” MY 2021/22 sales**

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- Export Shipments for week of 3/31/2022 for “Current” MY 2021/22 = 237,800 mt (Negative) vs 259,765 mt/wk needed to meet USDA’s March 9th projn of 13,060 mmt exports
- Total shipments through 3/31/2022 for “Current” MY 2021/22 = 6.306,1 mmt i.e., 48.3% of 13.060 mmt USDA projn with 50.0% of MY complete (26/52 weeks)
- Total shipments & new sales (3/31/2022) for “Current” MY 2021/22 = 9.221,7 mmt i.e., 70.6% of 13.060 mmt USDA projn with 50.0% of MY complete (26/52 wks) (Positive)

❖ **U.S. Soybean Oil Exports: “Bullish” short-term export shipments in “current” MY 2020/21 and “Bullish” intermediate-term “current” MY total sales**

- Export Shipments for week of 3/31/2022 for “Current” MY 2021/22 = 50,200 mt (Bullish) vs 5,865 mt/wk needed to meet USDA’s March 9th projn of 650,000 mt exports
- Total shipments through 3/31/2022 for “Current” MY 2021/22 = 497,500 mt i.e., 76.5% of 650,000 mt USDA projn with 50.0% of MY complete (26/52 weeks)
- Total shipments & new sales (3/31/2022) for “Current” MY 2021/22 = 639,500 mt i.e., 98.4% of 650,000 mt USDA projn with 50.0% of MY complete (26/52 wks) (Bullish)

U.S. Soybean Supply-Demand Balance Sheet: “Old Crop” MY 2021/22 as of the April 8,

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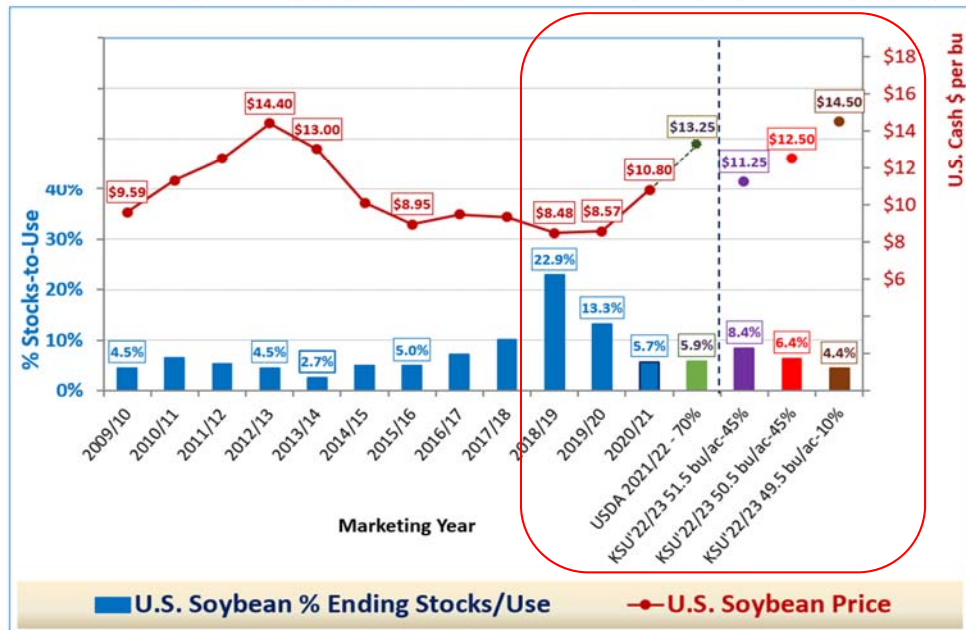
2022 USDA WASDE report with KSU Adjustments & Scenarios for “New Crop” MY 2022/23

Item	A. USDA WASDE “Old Crop” MY 2021/22 April 8, 2022	B. KSU “New Crop” MY 2022/23 Scenario #1 3/31/2022 USDA NASS Prospective Plantings + USDA Yield 2022 (51.5 bu/ac)	C. KSU “New Crop” MY 2022/23 Scenario #2 3/31/2022 USDA NASS Prospective Plantings + KSUYield 2022 (50.5 bu/ac)	D. KSU “New Crop” MY 2022/23 Scenario #3 3/31/2022 USDA NASS Prospective Plantings + KSU Yield 2022 (49.5 bu/ac)
<i>% Probability of Occurring (KSU)</i>	70% ^{KSUest}	45% ^{KSUest}	45% ^{KSUest}	10% ^{KSUest}
Planted Area (million acres)	87.195	90.955	90.955	90.955
Harvested Area (million acres)	86.332	89.928	89.928	89.928
% Harvested/Planted Area	99.01%	98.87%	98.87%	98.87%
Yield / harvested acre (bu/ac)	51.4	51.5	50.0	48.5
Beginning Stocks (million bushels)	257	260	260	260
Production (million bu.)	4,435	4,631	4,541	4,451
Imports (million bu.)	15	15	15	15
Total Supply (million bu.)	4,707	4,906	4,816	4,726
Domestic Crushings	2,215	2,250	2,250	2,250
Exports	2,115	2,150	2,150	2,150
Seed	106	106	106	106
Residual	12	19	19	19
Total Use	4,447	4,525	4,525	4,525
Ending Stocks	260	381	291	201
% Ending Stocks-to-Use	5.85%	8.42%	6.43%	4.44%
Days of Supply (% S/U x 365 days)	21.3 days	30.7 days	23.5 days	16.2 days
U.S. Avg. Farm Price (\$/bu)	\$13.25 ^{USDA} Vs \$13.17 /bu KSU Futures & Basis-based forecast 4/6/2022	\$11.25 Vs \$13.79 /bu KSU Futures & Basis-based forecast 4/6/2022	\$12.50 Vs \$13.79 /bu KSU Futures & Basis-based forecast 4/6/2022	\$14.50 Vs \$13.79 /bu KSU Futures & Basis-based forecast 4/6/2022

U.S. Soybean % Stocks/Use vs U.S. Cash Prices: MY 2009/10

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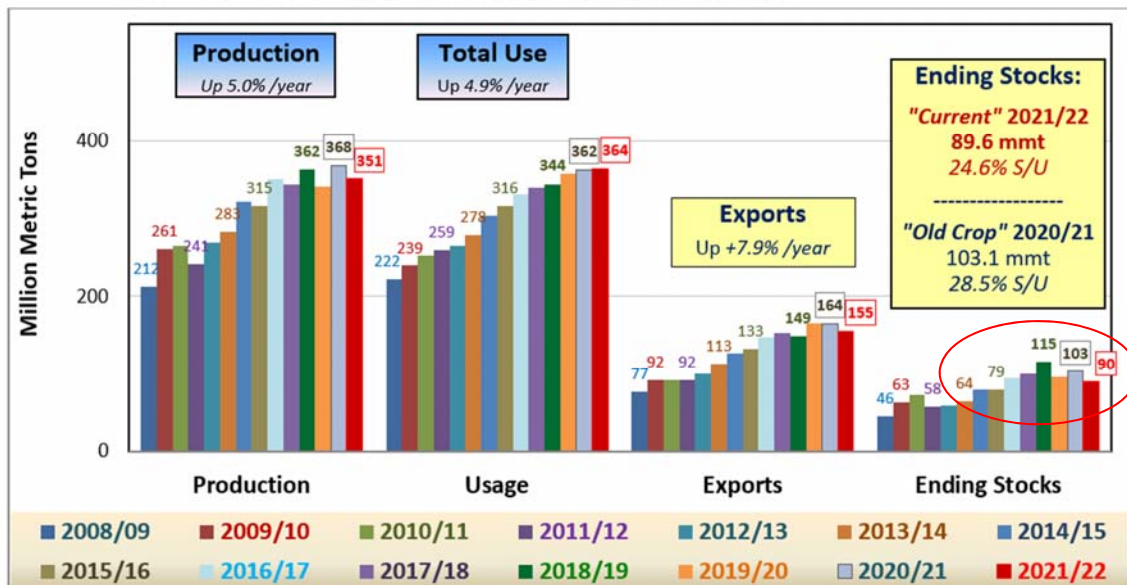
– “New Crop” MY 2022/23 as of the April 8, 2022 USDA WASDE, with KSU forecast scenarios



World Soybean Usage & Ending Stocks: MY 2008/09 through

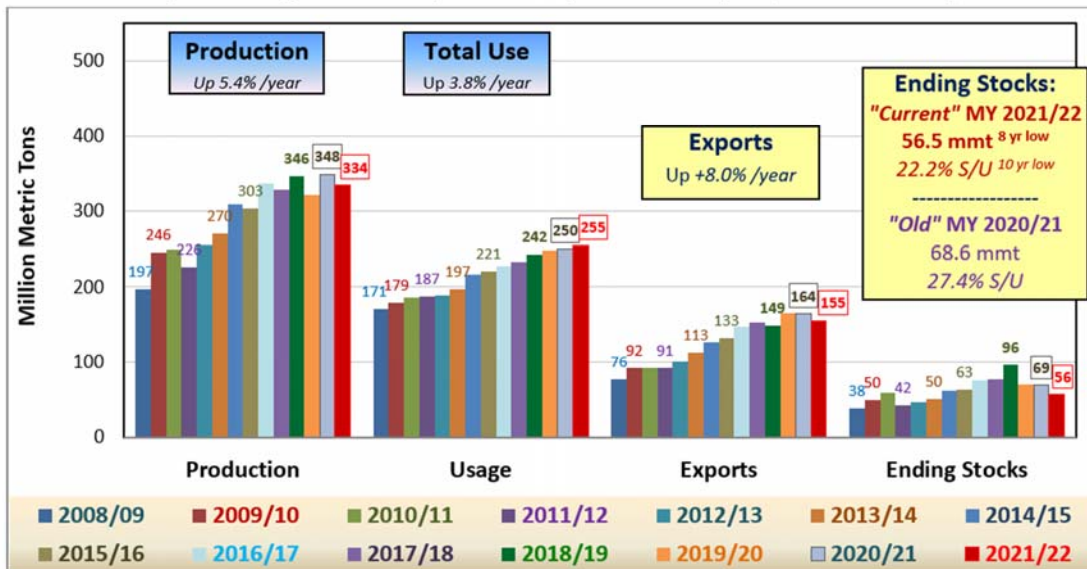
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“New Crop” MY 2021/22 as of the April 8, 2022 WASDE Report



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

MY 2008/09 through “New Crop” MY 2021/22 as of the April 8, 2022 WASDE Report



Questions?

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