Grain Market Review KSU Ag Economics

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For the 2020 Kansas-Missouri State Line Outlook Conference, Wednesday, December 2, 2020

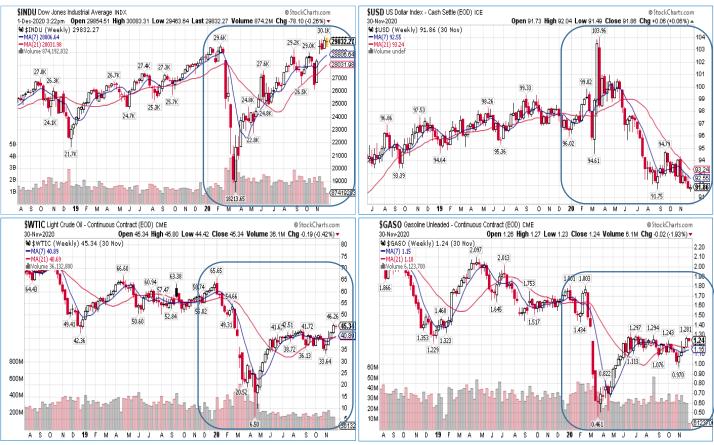
I. Grain Futures Closes, Changes & Carry on Tuesday, December 1, 2020

Corn Futures				Soybean Futures			Kansas HRW Wheat Futures				
Month	Close	Change	Carry /mo	Month	Close	Change	Carry /mo	Month	Close	Change	Carry /mo
Dec ^H 20	\$4.14 ³ ⁄ ₄	₽ \$0.05		Jan ^L 21	\$11.62	₽ \$0.0650		Dec ^L 20	\$5.37 ¹ / ₂	\$0.0825	
Mar 21	\$4.20 3⁄4	₽ \$0.0525	\$0.02	Mar 21	\$11.63	₽ \$0.0650	\$0.050	Mar 21	\$5.39	\$0.08	\$0.0050
May 21	\$4.24	₽ \$0.05	\$0.01625	May 21	\$11.61	₽ \$0.0675	No Carry	May 21	\$5.45	\$0.08	\$0.03
July 21	\$4.24 3⁄4	₽ \$0.05	\$0.00375	July 21	\$11.58 1/2	₽ \$0.0625	No Carry	July ^H 21	\$ 5.48 ³ ⁄ ₄	↓ \$0.0775	\$0.01875
Sept 21	\$4.08	₽ \$0.03	No Carry	Aug 21	\$11.38 3 ⁄4	\$0.0625	No Carry	Sept 21	\$5.54 ½	₽ \$0.0775	\$0.02875
Dec ^H 21	\$4.07	₽ \$0.01	No Carry	Sept 21	\$10.82 1/2	\$ \$0.0575	No Carry	Dec 21	\$5.63	₽ \$0.0775	\$0.02833
Mar 22	\$4.12 1/2	₽ \$0.0150	\$0.01 ⁹¹⁷	Nov ^H 21	\$10.36 ¹ / ₂	₽ \$0.0525	No Carry	Mar 22	\$5.69	₽ \$0.0775	\$0.02
May 22	\$4.13 ¼	₽ \$0.0225	\$0.00375	Jan 22	\$10.35 ³ ⁄ ₄	₽ \$0.0450	No Carry	May 22	\$5.63 ¼	₽ \$0.0775	No Carry

Futures & Cash Price Ratios on December 1, 2020:

"Current Crop^{2020/21}" ⇔ \$MAR²⁰²⁰ Soybeans ÷ \$MAR²⁰²⁰ Corn = \$ "Next Crop^{2021/22}" ⇒ \$NOV²⁰²¹ Soybeans ÷ \$DEC²⁰²¹ Corn = \$ Wheat^{HRW-Garden City, KS} ÷ Corn^{Garden City, KS} "HRW Wheat/Corn^{12/1/2020}" ⇔ = \$ "Sorghum/Corn^{12/1/2020}" Sorghum^{Garden City, KS} ÷ Corn^{Garden City, KS} = \$

511.63	÷ \$4.20 ¾	= 2.76
510.36 ¹ / ₂	÷\$4.07	= 2.55
5.11	÷\$4.51	= 1.13 ***
5.51	÷\$4.51	= 1.22 ***



1.60

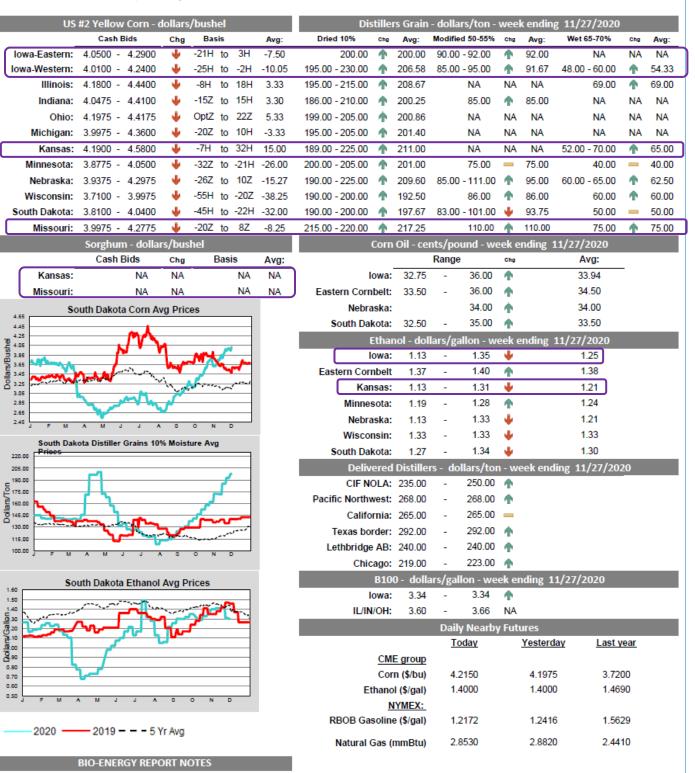
1.40

0.80

0.70 0.60

0.50

USDA Daily Ethanol Report Agricultural Marketing Service Livestock, Poultry & Grain Market News



Yellow corn : US #2 daily spot bids at ethanol plants reported as \$/per bushel

Ethanol: Weekly spot bids FOB the ethanol plant reported as \$/gallon.

Distiller grains: Weekly spot bids FOB the ethanol plant reported as \$/per ton. Protein content 28-30% for most distiller grains on a dry matter basis.

Distiller com oil: Weekly Spot bids FOB the ethanol plant reported as ¢1b. Distiller com oil is intended for animal feed or biofuel and is not Generally Regarded As Safe (GRAS) for human consumption. It may also be referred to as inedible crude corn oil or crude corn oil. B100: Weekly spot bids FOB the plant reported as \$/gallon. RIN value not included in price Delivered Distillers: Weekly spot bids FOB the export point reported in \$/ton, except for Texas Border expressed in \$/metric ton

Chicago Board of Trade month symbols: F January, G February, H March, J April, K May, M June, N July, Q August, U September, V October, X November, Z December

Ag Energy Reporter St Joseph, MO (816) 676-7000

Prepared: 01-Dec-20 9:03 AM Central Time

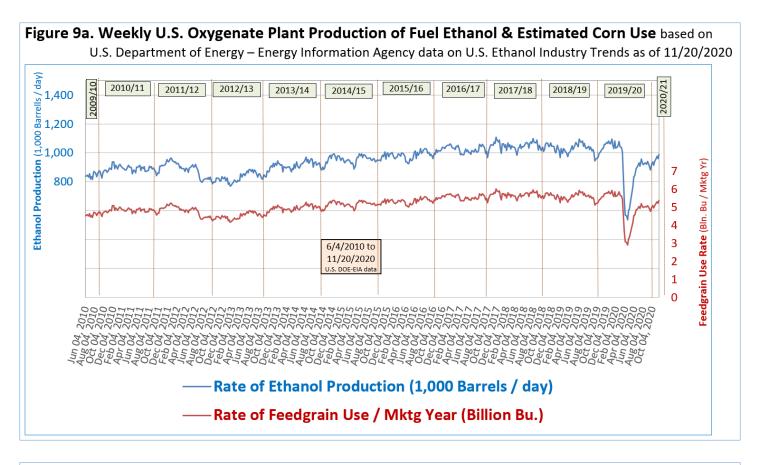
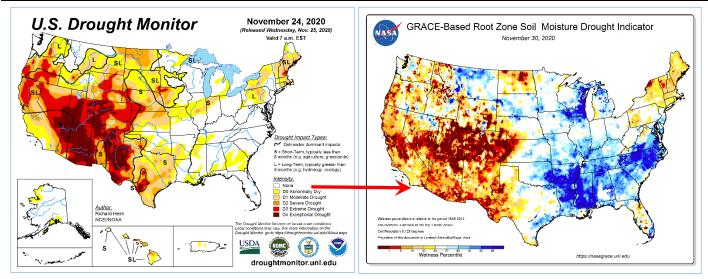
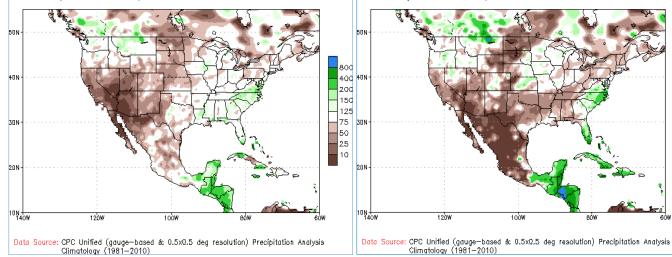


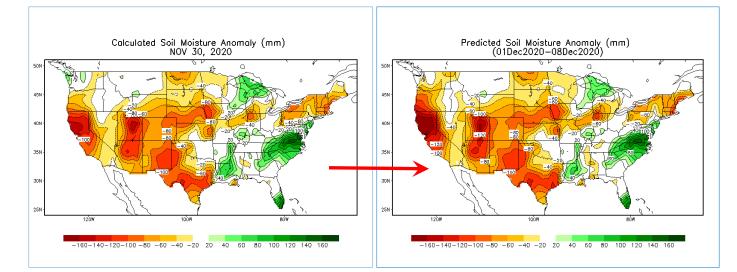
Figure 9b. Weekly U.S. Ethanol Production, Use, Imports, Exports & Stocks based on U.S. Department of Energy – Energy Information Agency data on U.S. Ethanol Industry Trends as of 11/20/2020 30,000 2020/21 2009/10 2010/11 2011/12 2019/20 2012/13 2013/14 2014/15 2015/16 2016/17 2017/18 2018/19 Ethanol (1,000 Barrells) 25,000 20,000 15,000 6/4/2010 to 11/20/2020 U.S. DOE-EIA data 10,000 5,000 0 ~~~~~~~~~~ Jan Strates and St -Weekly Ethanol Production –Weekly Stocks Imports Exports

II. Key U.S. Weather Patterns Affecting U.S. Agriculture



90-day Accumulated Prop % of Normal 02SEP2020-30NOV2020





% of Normal 01N0V2020-30N0V2020 30-day Accumulated Prop

100W

800

400

200

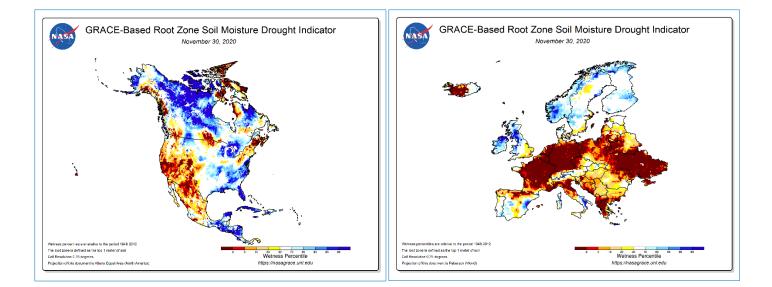
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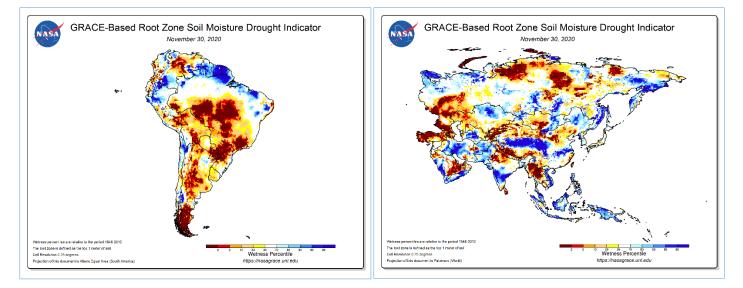
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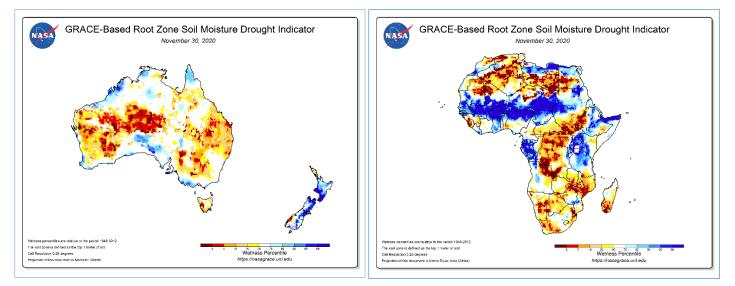
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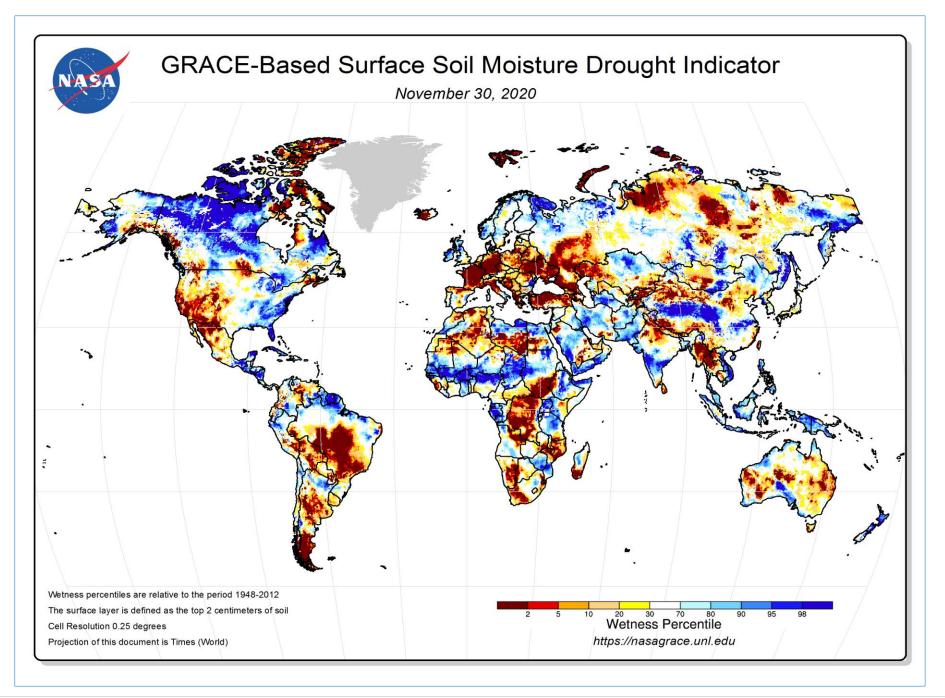
50 25

10









INTERNATIONAL CROP AND WEATHER HIGHLIGHTS USDA/WAOB Joint Agricultural Weather Facility

December 1, 2020

EUROPE - Highlight: Dry And Colder, But Showers On Continent's Perimeter

- Dry, colder weather eased winter crops toward or into dormancy from France into eastern Europe.
- Locally heavy showers on the continent's perimeter boosted moisture supplies for <u>winter grains</u> in Spain but hampered late-season fieldwork in northern England, Scandinavia, and the Baltic States.

MIDDLE EAST – <u>Highlight</u>: Heavy Rain In Iran, But Dry In Central Turkey

- Heavy rain in western and northern Iran as well as central Iraq boosted moisture reserves for <u>winter</u> wheat and barley but likely caused localized flooding.
- Rain again bypassed central Turkey, leaving soils too dry for <u>winter grains</u> on the Anatolian Plateau.

NORTHWESTERNAFRICA - Highlight: Much-Needed Rain In Morocco

- Much-needed rain in Morocco and western Algeria eased severe long-term drought and improved soil
 moisture for <u>winter wheat</u> and <u>barley planting</u>.
- Additional moderate to heavy rain in eastern Algeria and northern Tunisia maintained good moisture supplies for <u>winter grain</u> planting and establishment.

SOUTH ASIA - Highlight: Tropical Cyclone Nivar

 Tropical Cyclone Nivar made landfall in southeastern India, producing heavy showers and localized flooding, but no widespread crop impacts were expected.

EAST ASIA - Highlight: Good Moisture For Rapeseed; Dormancy For Wheat

 In eastern China, showery weather maintained favorable soil moisture for <u>rapeseed</u>, while colder-thannormal weather ushered <u>wheat</u> into dormancy.

SOUTHEAST ASIA - Highlight: Wet Weather

- A wave a tropical moisture produced a deluge in the northern Philippines, exacerbating excessively wet conditions for some <u>winter crops</u>.
- Seasonably wet weather in Indonesia and Malaysia benefited rice and oil palm.

AUSTRALIA - Highlight: Showers In The Southeast, Hot And Dry Elsewhere

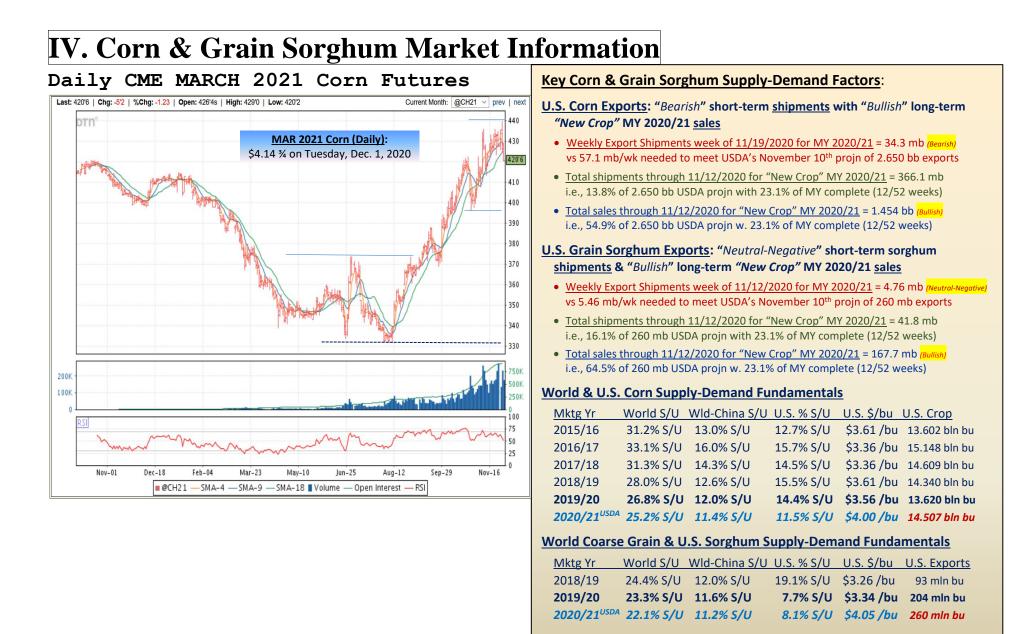
- Rain in southern New South Wales and eastern Victoria slowed winter crop drydown and harvesting.
- Elsewhere, hot, mostly dry weather favored uninterrupted wheat, barley, and canola harvesting.
- Increasingly hot, mostly dry weather in the northeast likely stressed some dryland summer crops.

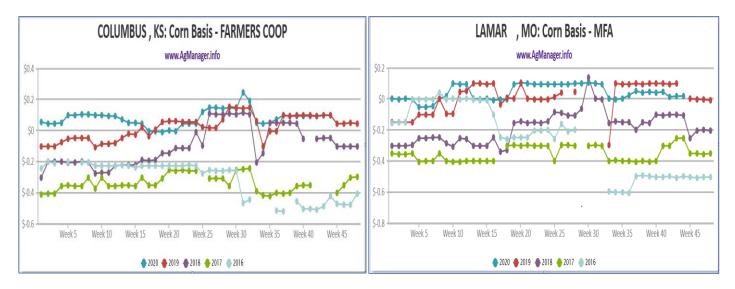
SOUTH AMERICA - Highlight: Rain Returned To Argentina's Southern Farming Areas

- Widespread showers increased moisture for <u>summer grain</u> and <u>oilseed</u> establishment in high-yielding production areas of central Argentina and maintained favorable prospects of <u>winter grains</u> in southern Buenos Aires.
- Unseasonable dryness overspread large sections of Brazil, further reducing moisture for vegetative to reproductive <u>soybeans</u> and <u>first-crop corn</u>.

SOUTH AFRICA - Highlight: Conditions Remained Overall Favorable For Corn

 Mild, showery weather increased moisture for development of rain-fed <u>summer crops</u> in central sections of the corn belt, as sunny weather promoted crop development farther east.





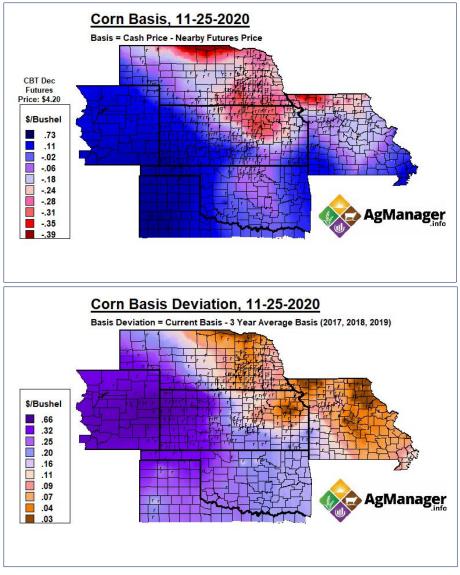
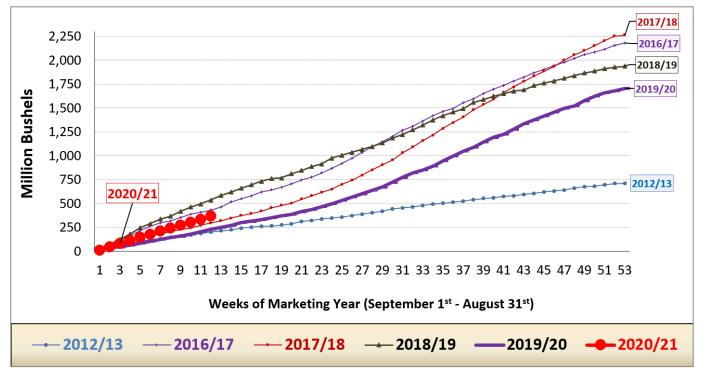


Figure 11b. U.S. Corn Exports for MY 2012/13 & 2016/17 through "New Crop" MY 2020/21 based on

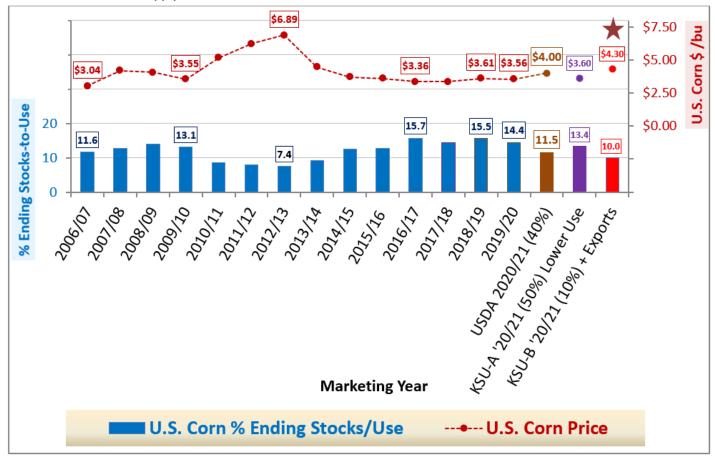


USDA Foreign Agricultural Service Weekly Export reports through 11/19/2020 (End of marketing year on 8/31)

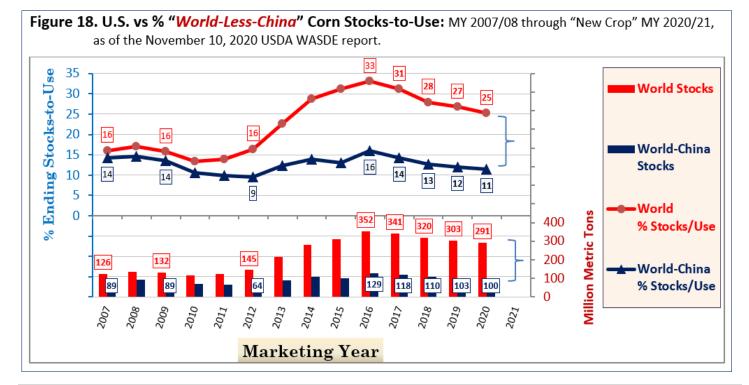
Figure 12a. U.S. Corn Ending Stocks & % Ending Stocks-to-Use for MY 2005/06 through "New Crop" MY 2020/21 as of the November 10, 2020 USDA WASDE report

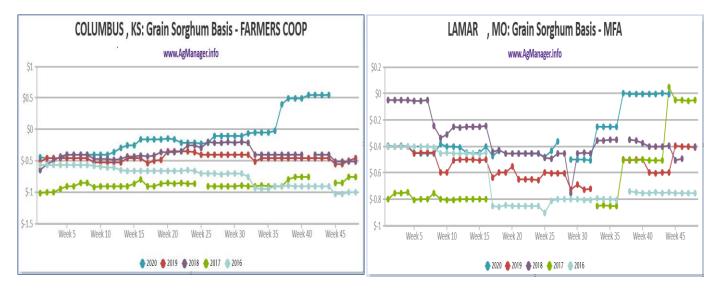


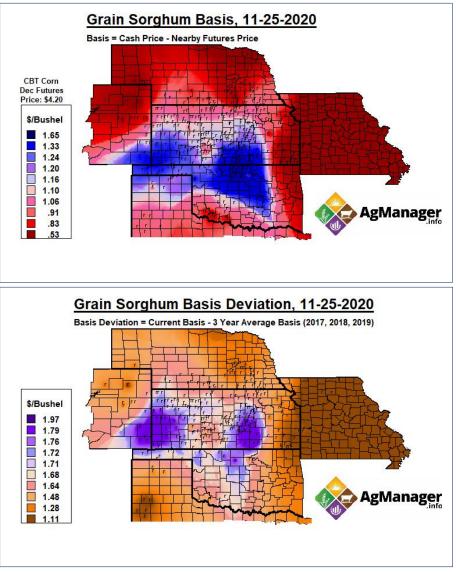
Figure 13b. U.S. Corn Percent Ending Stocks vs U.S. Average Cash Corn Prices, MY 2006/07 – projected "New Crop" MY 2020/21; as of the November 10, 2020 USDA WASDE report plus KSU

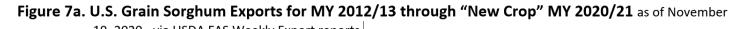


alternative Supply-Demand & Price scenarios









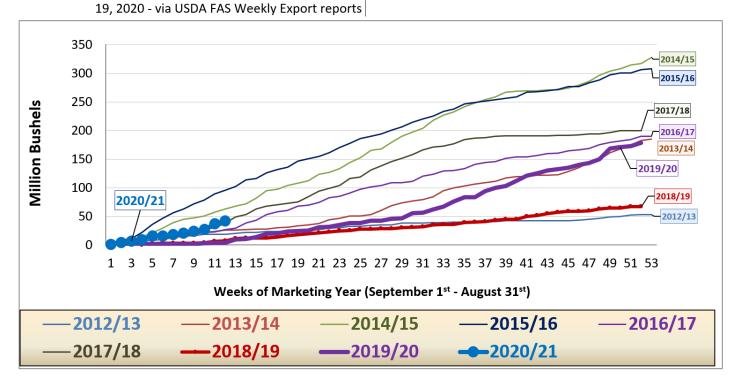
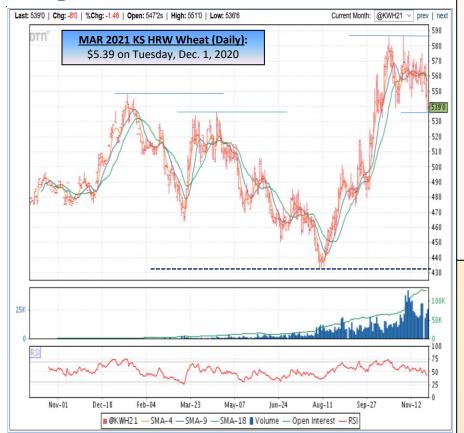


Figure 8a. U.S. Grain Sorghum Ending Stocks-to-Use vs U.S. Average Cash Prices: MY 2004/05 - "New Crop" MY 2020/21 as of the November 10, 2020 WASDE Report



V. Wheat Market Outlook

Daily MARCH 2021 KS HRW Wheat



Wheat Export Situation:

U.S. All Wheat Exports: "Bearish" short-term Export Shipments with "Neutral-Positive" prospects for "New Crop" MY 2020/21

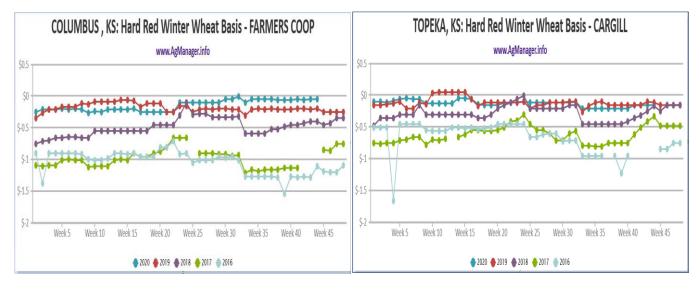
- Weekly Export Shipments wk of 11/19/2020 for "New Crop" MY 2020/21 = 12.6 mb (Bearish) vs 19.9 mb /wk needed to meet USDA's November 10th projn of 975 mb exports
- <u>Total shipments through 11/19/2020 for "New Crop" MY 2020/21</u> = 438.0 mb
 i.e., 44.9% of 975 mb USDA projn with 48.1% of MY complete (25/52 weeks)
- <u>Total shipments + new sales thru 11/19/2020 for "New Crop" MY 2020/21</u> = 663.1 mb
 i.e., 68.0% of 975 mb USDA #'s with 48.1% of MY complete (25/52 weeks) (Neutral-Positive)

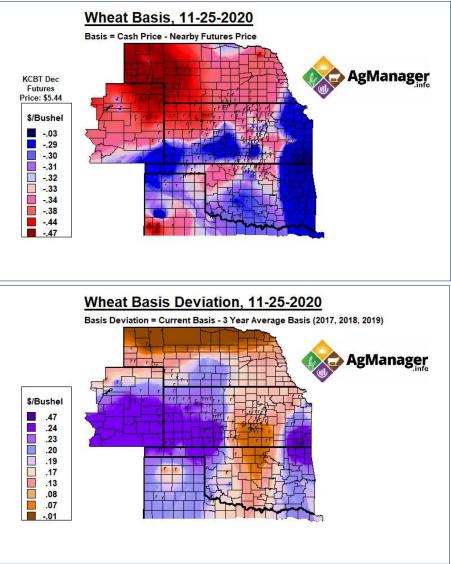
U.S. HRW Wheat Exports: "Bearish" short-term Shipments with "Neutral" long-term prospects for "New Crop" MY 2020/21 total sales

- Weekly Export Shipments wk of 11/19/2020 for "New Crop" MY 2020/21 = 7.0 mb (Bearish)
 vs 8.42 mb /wk needed to meet USDA's November 10th projn of 405 mb HRW wheat exports
- Total shipments through 11/19/2020 for "New Crop" MY 2020/21 = 177.7 mb
 i.e., 43.9% of 405 mb USDA HRW-W exports with 48.1% of MY complete (25/52 weeks)
- <u>Total shipments + new sales thru 11/19/2020 for "New Crop" MY 2020/21</u> = 234.0 mb
 i.e., 57.7% of 405 mb USDA HRW-W exports with 48.1% of MY complete (25/52 weeks) (Neutral)

World & U.S. Wheat S/D Fundamentals

<u>Mktg Yr</u>	World % S/U	Wld-China S/U	U.S. % S/U	U.S. \$/bu	U.S. Exports
2008/09	26.7% S/U	23.3% S/U	28.7% S/U	\$7.24 /bu	1,051 mln bu
2009/10	31.5% S/U	27.6% S/U	48.6% S/U	\$4.87 /bu	879 mln bu
2010/11	30.7% S/U	26.1% S/U	36.4% S/U	\$5.70 /bu	1,291 mln bu
2011/12	29.2% S/U	25.5% S/U	33.4% S/U	\$7.24 /bu	1,051 mln bu
2012/13	26.6% S/U	22.7% S/U	29.9% S/U	\$7.77 /bu	1,012 mln bu
2013/14	29.2% S/U	23.5% S/U	24.2% S/U	\$6.87 /bu	1,176 mln bu
2014/15	32.4% S/U	25.3% S/U	37.3% S/U	\$5.99 /bu	864 mln bu
2015/16	34.9% S/U	25.5% S/U	50.0% S/U	\$4.89 /bu	778 mln bu
2016/17	36.4% S/U	24.7% S/U	53.1% S/U	\$3.89 /bu	1,051 mln bu
2017/18	38.9% S/U	25.3% S/U	55.5% S/U	\$4.72 /bu	906 mln bu
2018/19	38.7% S/U	23.7% S/U	53.0% S/U	\$5.16 /bu	937 mln bu
2019/20	40.2% S/U	24.0% S/U	49.2% S/U	\$4.58 /bu	965 mln bu
2020/21 ^U	SDA 42.6% S/U	25.2% S/U	41.7% S/U	\$4.70 /bu	975 mln bu





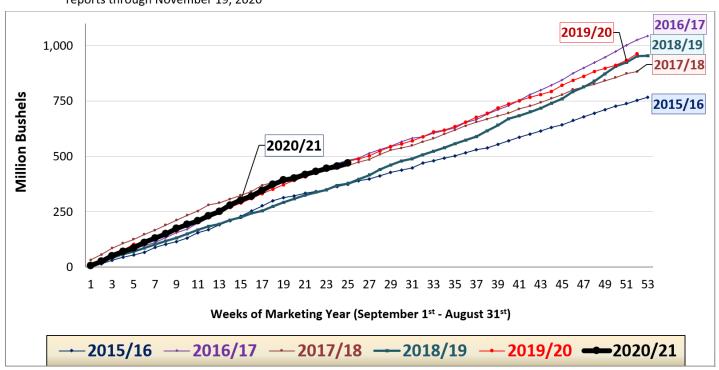


Figure 10a. U.S. All Wheat Exports for MY 2015/16 thru "New Crop" MY 2020/21 as of USDA FAS Weekly Export reports through November 19, 2020

Figure 10b. U.S. Hard Red Winter Wheat Exports for MY 2015/16 thru "Current Crop" MY 2019/20 as of USDA FAS Weekly Export reports through November 19, 2020

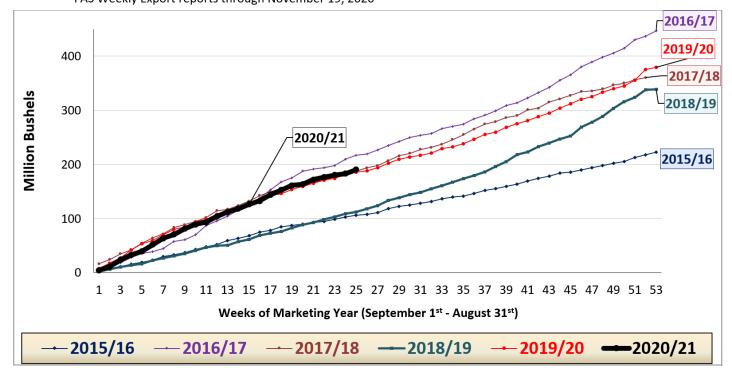


Figure 10c. U.S. Hard Red Spring Wheat Exports for MY 2015/16 thru "New Crop" MY 2020/21 as of USDA FAS

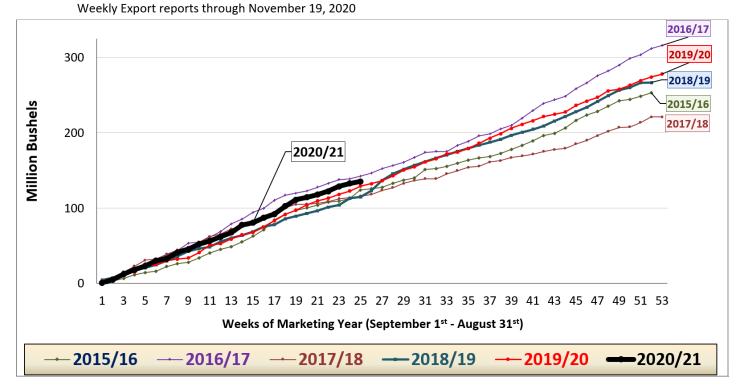


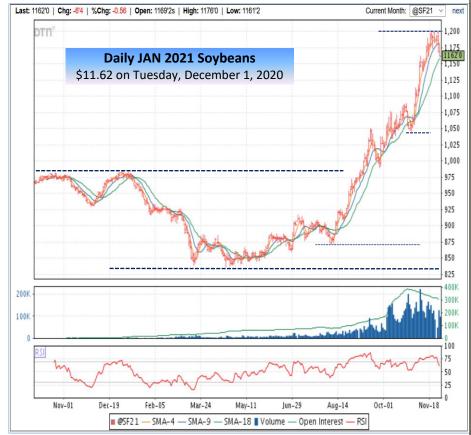
Figure 11a. U.S. Wheat Ending Stocks vs U.S. Cash Prices: MY 2009/10 thru "New Crop" MY 2020/21 as of the



November 10, 2020 USDA Crop Production & WASDE Reports

VI. Soybean Market Outlook

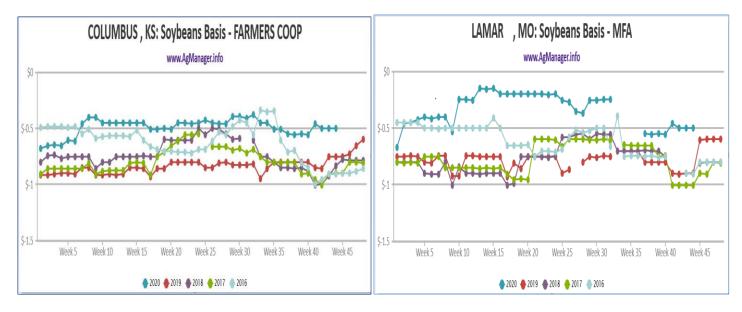
Daily JANUARY 2021 Soybean Futures

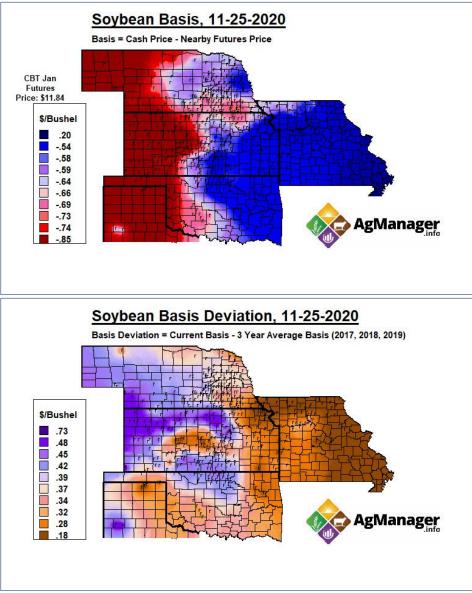


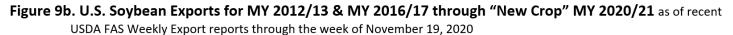
Key Soybean Supply-Demand Issues:

- U.S. Soybean Exports: "Very Bullish" short-term export shipments and "Extremely Bullish" long-term "New Crop" MY 2020/21 total sales
 - Weekly Export Shipments week of 11/19/2020 for "New" MY 2020/21 = 88.6 mb (Very Bullish) vs 32.4 mb/wk needed to meet USDA's November 10th projn of 2.200 bb exports
 - <u>Total shipments through 11/19/2020 for "New Crop" MY 2020/21</u> = 905.1 mb i.e., 41.1% of 2.200 bb USDA projn with 23.1% of MY complete (12/52 weeks)
 - <u>Total sales through 11/19/2020 for "New Crop" MY 2020/21</u> = 1.908 bb (Extremely Bullish) i.e., 86.7% of 2.200 bb USDA projn w. 23.1% of MY complete (12/52 weeks)
- U.S. Soybean Meal Exports: "Bearish" short-term export shipments in "New Crop" MY 2020/21 and "Positive-Bullish" intermediate-term "New Crop" total sales
 - Export Shipments for week of 11/19/2020 for "New Crop" MY 2020/21 = 263,200 mt (Bullish) vs 246,345 mt/wk needed to meet USDA's November 10th projn of 12.520 mmt exports
 - <u>Total shipments through 11/19/2020 for "New Crop" MY 2020/21</u> = 1,680,800 mt i.e., 13.4% of 12,520,000 mt USDA projn with 15.4% of MY complete (8/52 weeks)
 - <u>Total shipments & new sales (11/19/2020) for "New Crop" MY 2020/21</u> = 4,937,400 mt i.e., 39.4% of 12,520,000 mt USDA projn with 15.4% of MY complete (8/52 wks) (*Positive Bullish*)
- **World & U.S. Soybean Supply-Demand Fundamentals**

Mktg Yr	World % S/U	Wrld-China S/U	U.S. % S/U	U.S. \$/bu	U.S. Exports
2011/12	22.2% S/U	22.1% S/U	5.4% S/U	\$12.50 /bu	1.366 bln bu
2012/13	21.9% S/U	24.2% S/U	4.5% S/U	\$14.40 /bu	1.328 bln bu
2013/14	22.8% S/U	25.1% S/U	2.7% S/U	\$13.00 /bu	1.639 bln bu
2014/15	25.7% S/U	28.3% S/U	5.0% S/U	\$10.10 /bu	1.842 bln bu
2015/16	24.8% S/U	28.0% S/U	5.0% S/U	\$8.95 /bu	1.943 bln bu
2016/17	28.3% S/U	32.3% S/U	7.2% S/U	\$9.47 /bu	2.166 bln bu
2017/18	29.2% S/U	32.6% S/U	10.2% S/U	\$9.33 /bu	2.134 bln bu
2018/19	32.9% S/U	38.7% S/U	22.9% S/U	\$8.48 /bu	1.752 bln bu
2019/20	26.9% S/U	28.0% S/U	13.2% S/U	\$8.57 /bu	1.676 bln bu
2020/21 ^{USD/}	^A 23.5% S/U	23.7% S/U	4.2% S/U	\$10.40 /bu	2.200 bln bu







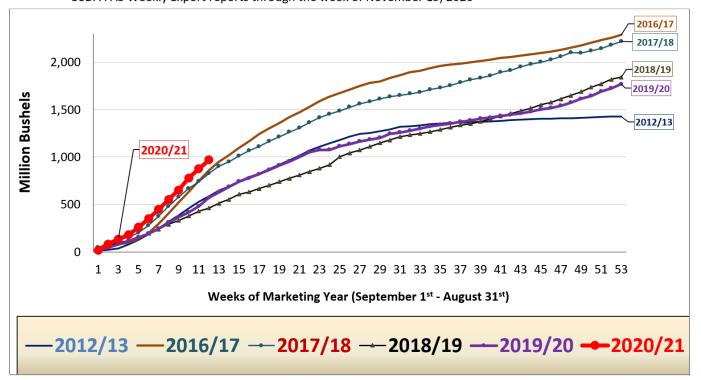


Figure 12a. U.S. Soybean Ending Stocks vs U.S. Avg. Cash Prices: MY 2006/07 – "New Crop" MY 2020/21 as of the November 10, 2020 USDA WASDE Report

