2020 Soybean Market Outlook

Atchison, Kansas

January 22, 2020

DANIEL O'BRIEN

EXTENSION AGRICULTURAL ECONOMIST



Department of Agricultural Economics



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Marysville, Kansas

January 22, 2020

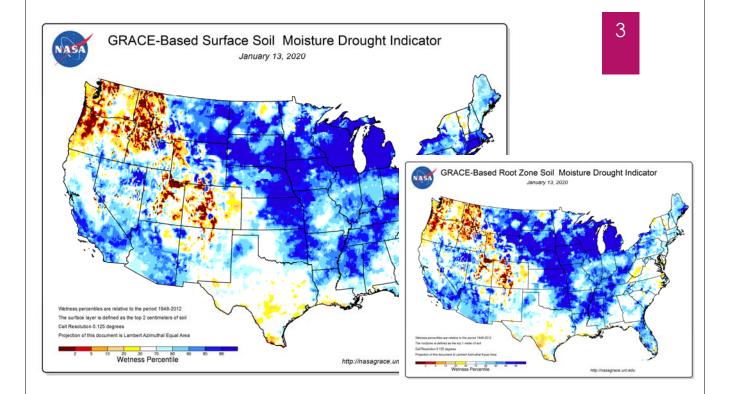
DANIEL O'BRIEN

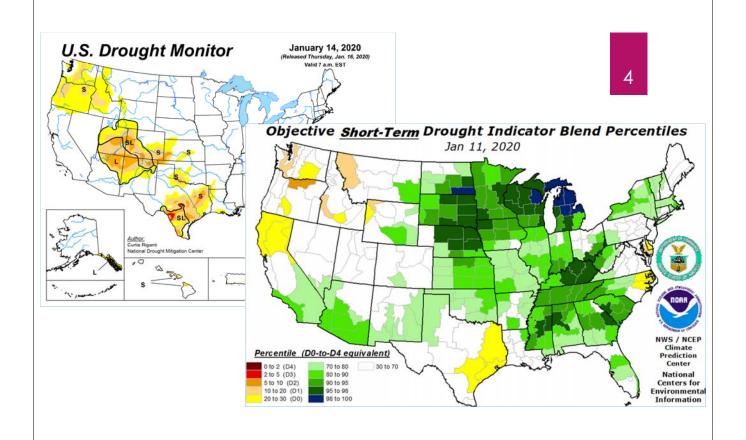
EXTENSION AGRICULTURAL ECONOMIST



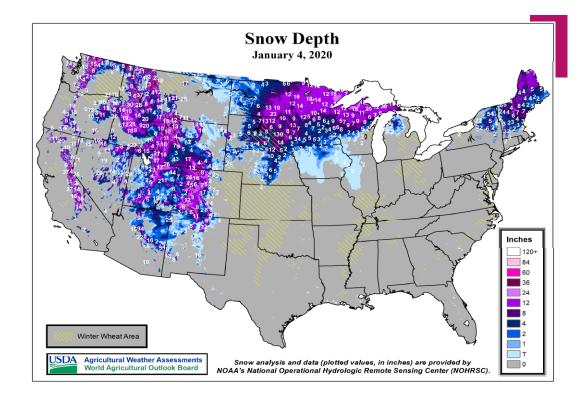
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2019 December APS Reinterview States

State	Crop(s)
Michigan	Corn, Soybeans
Minnesota	Corn
North Dakota	Corn, Soybeans
South Dakota	Corn
Wisconsin	Corn, Soybeans



AUSTRALIA – Highlight: Unfa INTERNATIONAL CROP AND WEATHER HIGHLIGHTS

AUSTRALIA - Highlight: Limited Drought Relief

- In the east, isolated showers brought little relief to drought-stressed cotton and sorghum.
- Slightly cooler weather filtered into the southeast late in the week, helping wildfire containment efforts.

SOUTH AMERICA - Highlight: Rain Brought Some Relief From Local Dryness

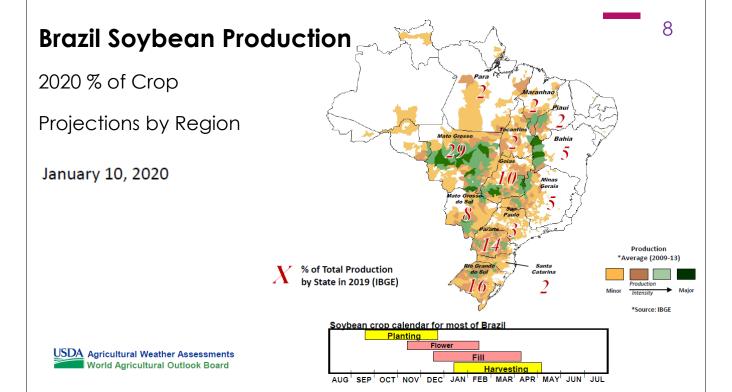
- Moderate to heavy rain brought much-needed relief from heat and dryness to reproductive <u>corn</u> and <u>soybeans</u> in **Rio Grande do Sul, Brazil**. Timely showers also covered **Brazil's northeastern** <u>soybean</u> areas.
- Locally heavy showers increased moisture for <u>com</u> and <u>soybeans</u> in **Argentina**, including previously dry southwestern farming areas.

EUROPE - Highlight: Showers In The North, Dry In The South

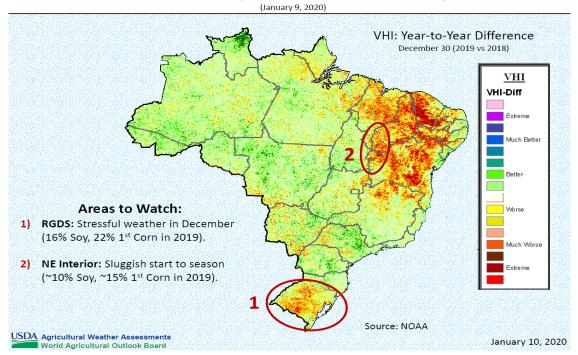
- Showers improved moisture reserves for dormant winter crops in Germany and Poland.
- Sunny skies in southern Europe benefited <u>winter grain</u> development in Spain and Italy but maintained drought in the lower Danube River Valley.

EAST ASIA - Highlight: Wet, Mild Weather In Eastern China

More rain, at times heavy, in eastern China maintained high moisture reserves for overwintering wheat
and rapeseed, although warmer-than-normal weather reduced cold hardiness.



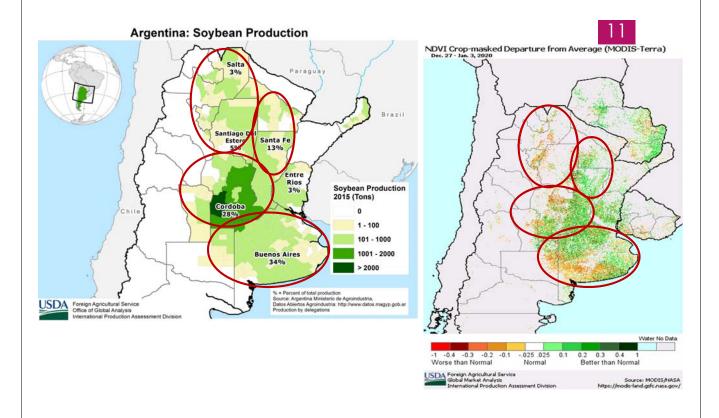
Brazil: Crop Weather Summary





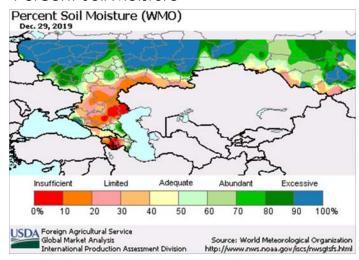
Brazil 2019/20 Soybean Summary

- No change in soybean area, yield or production
 - Planting progress behind national average pace but harvest started in January.
 - Trend yield because weather cooperated from Sept-Dec.
- Excellent crop conditions in Mato Grosso
 - Harvest starts in January (if planted on Sept. 16).
- December drought delayed planting in Northeast & Rio Grande do Sul
 - Planted area could be slightly less than intended.



Russia, Azerbaijan, Armenia & Georgia

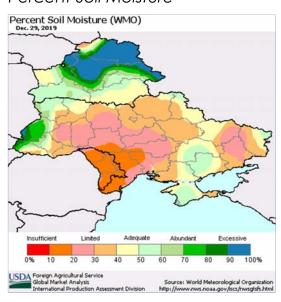
Percent Soil Moisture



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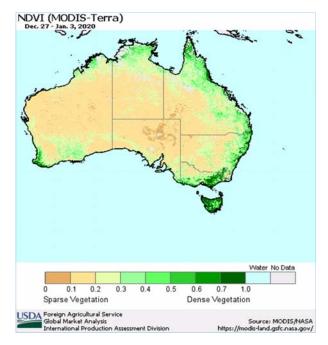
Ukraine, Moldova, & Belarus

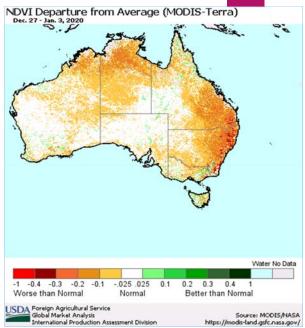
Percent Soil Moisture



Australia – Vegetation Measures in late Dec. / early Jan. 2020







Unpredictable Grain Markets in Year 2020 11

☐ The "Ups & Downs" of U.S. Trade Tensions

- U.S.-Japan Trade Agreement (+)
 - o Likely positive impact on U.S. grain exports vs TPP Countries
- USMCA Trade Agreement U.S.-Mexico-Canada ⇒ To be ratified (+)
 - o **Mexico** grain purchases from the U.S.
 - o Canada grain export competition vs U.S. (Wheat, Oilseeds)
- U.S. vs China (?)
 - o Soybeans, Sorghum, Beef (Working at resolution in "Phases")

Trade War Effects on Soybean Futures





AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE PEOPLE'S REPUBLIC OF CHINA

DECEMBER 13, 2019

The United States and China have reached an historic and enforceable agreement on a Phase One trade deal that requires structural reforms and other changes to China's economic and trade regime in the areas of intellectual property, technology transfer, agriculture, financial services, and currency and foreign exchange. The Phase One agreement also includes a commitment by China that it will make substantial additional purchases of U.S. goods and services in the coming years. Importantly, the agreement establishes a strong dispute resolution system that ensures prompt and effective implementation and enforcement. The United States has agreed to modify its Section 301 tariff actions in a significant way.

Intellectual Property: Technology Transfer: Agriculture: Financial Services: Currency: Expanding Trade: Dispute Resolution:

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Agriculture: The Agriculture Chapter addresses structural barriers to trade and will support a dramatic expansion of U.S. food, agriculture and seafood product exports, increasing American farm and fishery income, generating more rural economic activity, and promoting job growth. A multitude of non-tariff barriers to U.S. agriculture and seafood products are addressed, including for meat, poultry, seafood, rice, dairy, infant formula, horticultural products, animal feed and feed additives, pet food, and products of agriculture biotechnology.

Market "Realities" to be determined

"Final" 2019 U.S. Corn & Soybean harvest ("Sometime" 2020)

- o Corn²⁰¹⁹
- < 13.692 bln bu? End Stocks < 1.892 bb?
- Soybeans²⁰¹⁹
- < 3.558 bln bu? End Stocks < 475 mb?

More Grain Market Events to Anticipate

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□ 2020 Production of Export Competitors

- 2020 Soybeans So-Am \rightarrow Up 2.4% & Up 9.6% vs last 2 years
- **2020 Corn** So-Am + Ukraine → Up 22.6% vs 2015-2017 Average
- ARG-Brazil-Ukraine \supset Ag Export "Open Door" w. U.S.-China Trade Issue

□ U.S. Dollar Strength ⇒ Limiting U.S. grain exports

- USD\$ Index Trade Wghtd → DEC 2019 up 7.3% since low in FEB 2018
- **Brazil Reals** ÷ **USD**\$ ≈ 4.12 in **OCT-DEC** ²⁰¹⁹ (vs low of 1.56 in JUNE ²⁰¹¹)

More Grain Market Events to Anticipate

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- ☐ <u>U.S. Spring Plantings</u> (April-May ²⁰²⁰)
 - Corn²⁰²⁰

(Up 5-10%) $\rightarrow \hat{\Gamma} \approx U.S.$ Ethanol & Feed Demand

• Soybeans²⁰²⁰

Up 10-15%+? → ☆ ♥ ≈ U.S.-China Trade Status

☐ <u>"Bearish"</u> Positions of Grain Futures' Traders.....

BUT- "Strong" local **Basis** in Cash Markets & Demand Centers

- **Corn** → *Strong* basis @ US. Ethanol Plants
- **Soybeans** → *Moderate-to-weak basis* in many areas but improving
- **HRW Wheat** → *Strong basis* @ Elevators in the Central / Southern Plains



U.S. Soybean Market Prospects in Year 2020

A. <u>U.S.-China Trade Dispute</u>

 HAS affected U.S. Soybean export <u>shipments</u>, <u>forward</u> <u>purchases</u> & <u>prices</u>, with recent positive negotiation news

B. <u>U.S. Exports</u> forecast *down 17%+* vs 2-3 year ago <u>highs</u>

- Foreign buyer "switching" between U.S. & South America
- U.S. China Trade Dispute Resolution likely to be "positive"

C. Market Focus in Winter-Spring of Year 2020

• So. America crops & U.S. Acres, Planting Progress, etc.

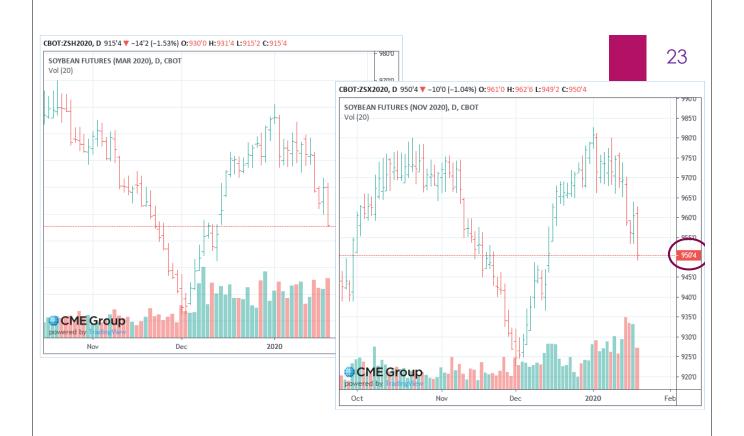
KANSAS STATE Consumment of Agricultural Economics

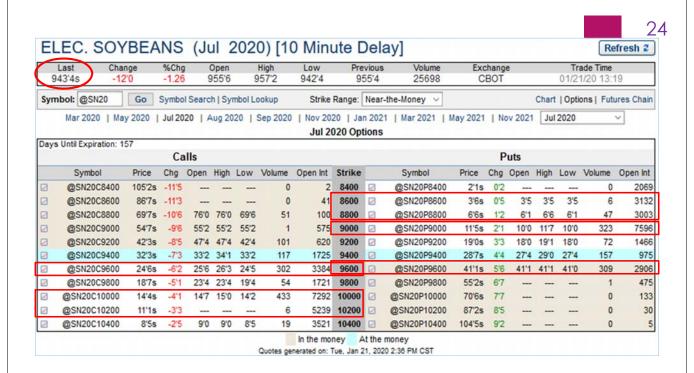
CME Soybean Futures

Weekly Chart: Fall 2015 through January 21, 2020

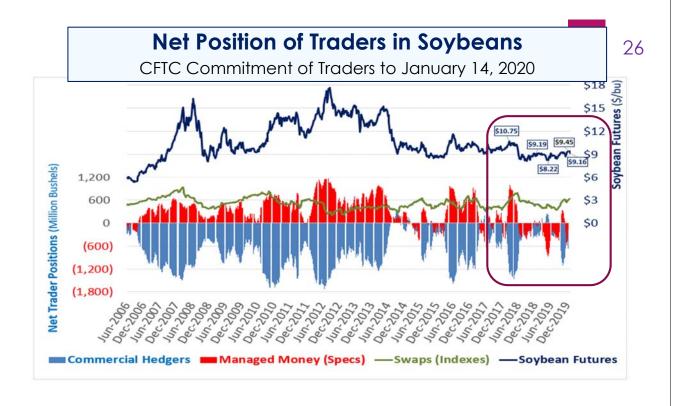






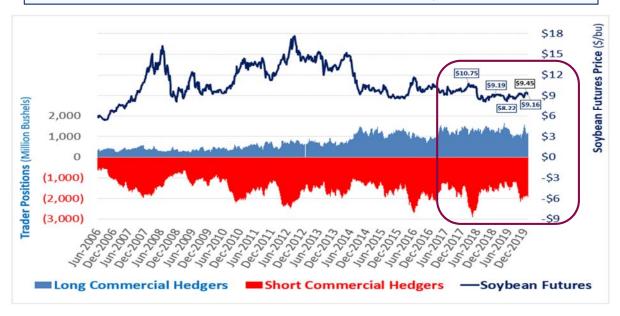


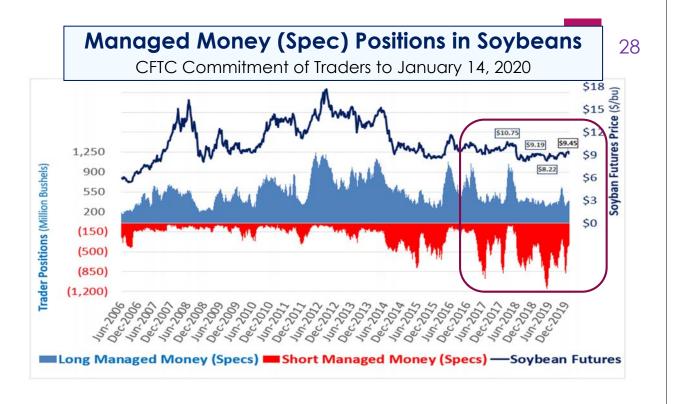
9		ange 9'2	%Chg -0.96		Open 961'0	1.83	High 962'6	949'2		evious 60'4	Volume 10326		hange BOT				te Time 20 13:19	
Syr	nbol: @SX20	Go	Symbol	Searc	ch Sy	mbol L	.ookup	Strike	Range:	All	~				Chart	Option	s Future	s Chain
	Mar 2020 N	lay 2020	Jul 202	20 1	Aug 20	20	Sep 2020		20 Ja		Mar 2021	May 2021	Nov	2021	Nov	2020	~	
Day	s Until Expiration:	276	Cal	ls									Pu	ts				
0	@SX20C800	152'5s					0	6	8000	2	@SX20P8000	2'3s	0'2				0	3945
2	@SX20C820	0 134'1s	-8'7				0	0	8200	2	@SX20P8200	3'7s	0'4				0	965
2	@SX20C840	116'4s	-8'5				0	5	8400	2	@SX20P8400	6'1s	0'5	62	6'2	6'1	40	1681
3	@SX20C860	0 100'0s	-8'3				0	0	8600	2	@SX20P8600	9'4s	0'7	9'4	9'4	9'4	71	1648
2	@SX20C880	0 85'0s	-8'0				0	7	8800	2	@SX20P8800	14'3s	12	142	14'3	142	291	1875
2	@SX20C900	71'5s	-7'4				43	3660	9000		@SX20P9000	20'6s	1'5	20'0	21'3	20'0	115	2291
3	@SX20C920	59'7s	-7'1				0	3584	9200		@SX20P9200	28'7s	2'0	29'0	29'4	29'0	6	1651
2	@SX20C940	0 49'7s	-6'5	49'3	49'3	49'3	1	2034	9400	2	@SX20P9400	38'6s	2'5	38'2	39'5	38'2	80	2004
2	@SX20C960	0 41'3s	-6'0	41'4	41'4	41'4	315	2537	9600	2	@SX20P9600	50'0s	3'1				244	1594
2	@SX20C980	34'2s	-5'2	38'0	38'0	34'2	11	3239	9800	2	@SX20P9800	62'6s	3'7	62'4	62'4	62'4	77	1111
Z	@SX20C1000	28'3s	-4'4	32'5	33'0	28'0	123	6696	10000	0	@SX20P10000	76'5s	4'5				0	113
4	@SX20C1020	23'4s	-3'7	25'1	25'1	23'0	1939	3868	10200		@SX20P10200	91'5s	5'2				0	3
2	@SX20C1040	0 19'3s	-3'4	22'6	22'6	19'4	125	3601	10400		@SX20P10400	107'3s	5'6				0	6
2	@SX20C1060	0 16'1s	-3'0	16'4	16'4	16'1	151	10111	10600	2	@SX20P10600	124'0s	62				0	0
2	@SX20C1080	13'3s	-2'5	15'0	15'0	13'6	14	3792	10800	0	@SX20P10800	141'1s	6'5				0	0
	@SX20C1100	11'2s	-22	11'5	11'5	11'1	33	3303	11000	2	@SX20P11000	158'6s	6'7				0	1



Commercial Traders (Hedge) Positions in Soybeans

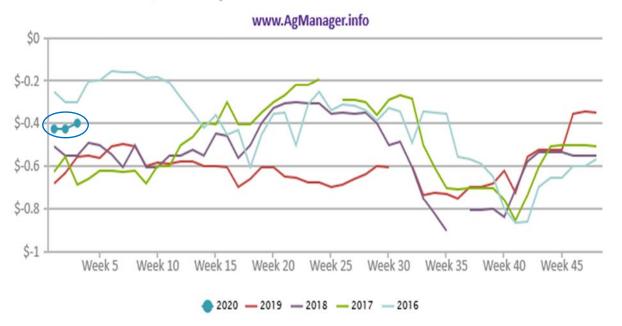
CFTC Commitment of Traders to January 14, 2020



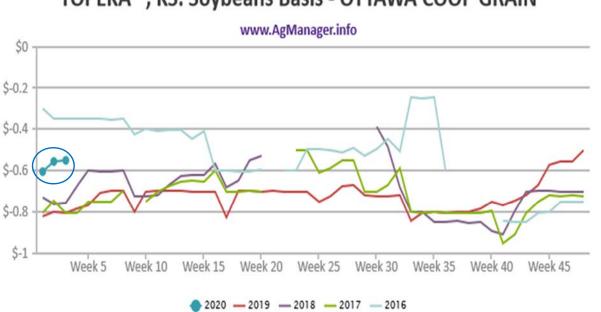


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ATCHISON, KS: Soybeans Basis - BARTLETT GRAIN CO. LP



TOPEKA , KS: Soybeans Basis - OTTAWA COOP GRAIN



Soybean Cash Bids – Near Atchison, KS

Tuesday, January 21, 2020 (Source: DTN Grains)

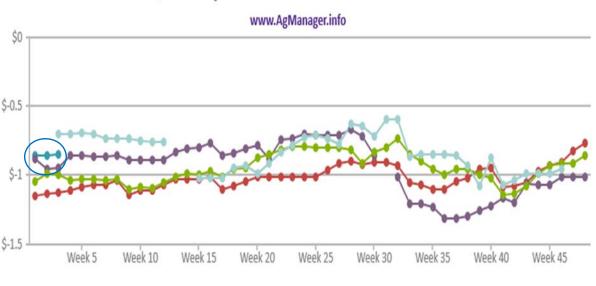
Elevator/Location	Jan 2020	Feb 2020	Oct 2020	Nov 2020
BARTLETT GRAIN CO LP ATCHISON, KS	8.79			
CARGILL CUMMINGS, KS	8.77		-	
JACKSON FARMERS LANCASTER, KS	8.54			
MIDWEST FERTILIZER NORTONVILLE, KS	8.62		8.59	
AG PARTNERS DENTON, KS	8.58			8.74
ADM KANSAS CITY KANSAS CITY, KS	9.04	9.00		9.14
AG PARTNERS HIAWATHA, KS	8.58			8.74
AG PARTNERS POWHATTAN, KS	8.58		-	8.74

2020 KSU Cost of Production **Budget Estimates**

> **Non-Irrigated Soybeans Northeast KS** @ \$45 bu/ac Yield

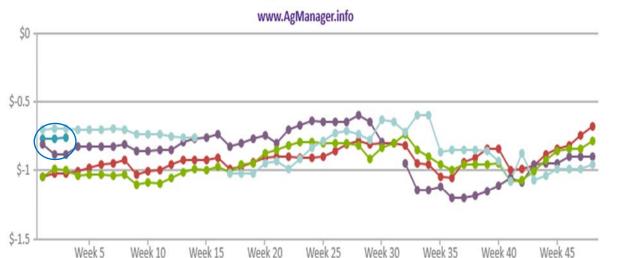
- Direct Cost (w/o Cash Rent) = \$6.01 /bu
- = \$8.21 /bu All Cost (With Cash Rent)

MARIETTA, KS: Soybeans Basis - BEATTIE COOP - MARIETTA



2020 \$\rightarrow\$ 2019 \$\rightarrow\$ 2018 \$\rightarrow\$ 2017 \$\rightarrow\$ 2016

FRANKFORT, KS: Soybeans Basis - BEATTIE COOP



2020 2019 2018 2017 2016

Soybean Cash Bids – Near Marysville, KS

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Tuesday, January 21, 2020 (Source: DTN Grains)

Elevator/Location	Jan 2020	Feb 2020	Oct 2020	Nov 2020
FARMERS COOP HERKIMER, KS	8.30	8.23	8.50	8.50
FARMERS COOP - MARIETTA MARIETTA, KS	8.34	8.27	8.54	8.54
FARMERS COOP BLUE RAPIDS, KS	8.34	8.27	8.60	8.60
FARMERS COOP WATERVILLE, KS	8.34	8.27	8.53	8.53
FARMERS COOP BEATTIE, KS	8.39	8.32	8.59	8.59
FARMERS COOP SHUTTLE FRANKFORT, KS	8.43	8.36	8.74	8.74
FARMERS COOP HANOVER, KS	8.39	8.32	8.63	8.63

2020 KSU Cost of Production **Budget Estimates**

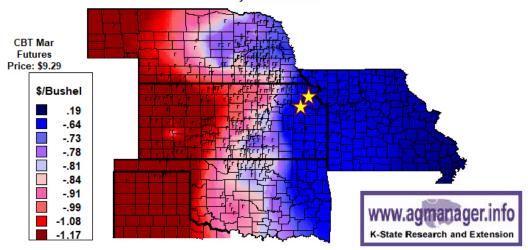
> **Non-Irrigated Soybeans** Northeast KS @ \$45 bu/ac Yield

- Direct Cost (w/o Cash Rent) = \$6.01 /bu
- All Cost (With Cash Rent) = \$8.21 /bu

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Soybean Basis, 01-15-2020

Basis = Cash Price - Nearby Futures Price



DC GR112

Dodge City, KS

Tue, Jan 21, 2020 USDA-KS Dept of Ag Market News

Central Kansas Terminal and Processor Daily Grain Report

		TERMINAL U	JS NO 2 SON	YBEANS	
	Bids	Change	(¢/bu)	Basis	Change
Atchison	8.73	DN	14	-43H	UNCH
Topeka	8.66	DN	14	-50H	UNCH
Salina	8.46	DN	14	-70H	UNCH
Newton	8.25	DN	14	-91H	UNCH
Hutchinson	8.23-8.46	DN	14	-93H to -70H	UNCH
Wichita	8.35	DN	14	-81H	UNCH
Wellington	8.31	DN	14	-85H	UNCH
Arkansas City	8.29	DN	14	-87Н	UNCH
		PROCESSOR	US NO 2 SO	DYBEANS	
	Bids	Change	(¢/bu)	Basis	Change
Emporia	8.96	DN	14	-20H	UNCH
Wichita	8.93	DN	14	-23Н	UNCH

U.S. Soybeans Supply and Demand

	2018/2019	2019/2020	Change from	Change from
ltem	estimate	forecast	December 10	2018/2019
Planted area (million acres)	89.2	76.1	-0.4	-13.1
Harvested area (million acres)	87.6	75.0	-0.6	-12.6
Yield (bushels per acre)	50.6	47.4	0.5	-3.1
	-	Million	n bushels	
Beginning stocks	438	909	-4	471
Production	4,428	3,558	8	-870
Imports	14	15	-5	1
Total supply	4,880	4,482	-1	-398
Crush	2,092	2,105		13
Seed and Residual	132	128	**	-4
Domestic use	2,224	2,233	**	9
Exports	1,748	1,775		27
Total use	3,971	4,008	**	37
Ending stocks	909	475	**	-435
		Pe	rcent	
Stocks to use ratio	22.9	11.8	**	-11.1
		Dollars	per bushel	
Average market price	8.48	9.00	0.15	0.52
N ** D				

⁻⁻ No change. ** Rounds to zero.

U.S. Soybean Stocks.....

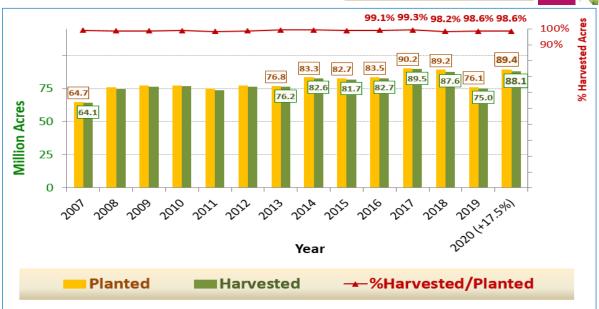
- Soybean: "Moderate-Large" Stocks & % S/U
 - o End Stocks ^{2019/20} \rightarrow 475 mln bu (vs 909 mb last yr)
 - \circ **Stocks/Use** ^{2019/20} \rightarrow 11.8% S/U (vs 23.0% last yr)
 - USDA WASDE January 10, 2020 Pre-Report Estimates

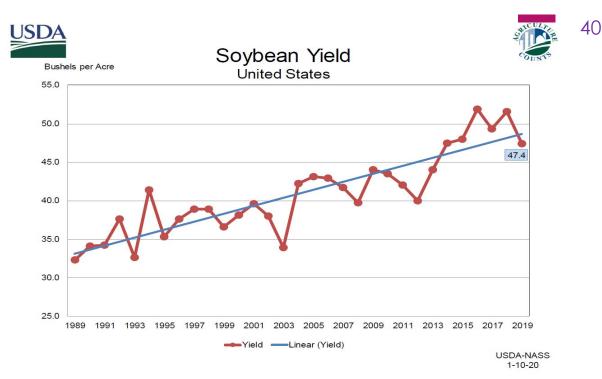
		Survey Results				
2019-20 Crop:	Avg	Avg Low High				
Soybeans	431	310	520	475		

U.S. Soybean Acreage

For 2020 ???
Increase of 10-15%+







U.S. Soybean Yields

 $USDA\ 2019 = 47.4\ bu/ac$

Final 2019???

Impact of Late Harvest???





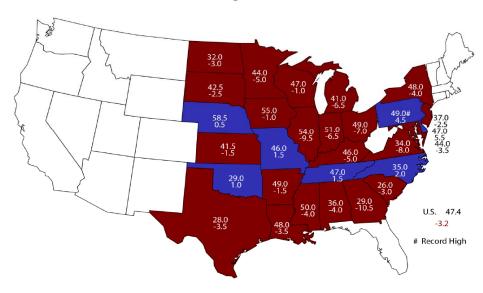


USDA

2019 Soybean Yield Bushels and Change From Previous Year

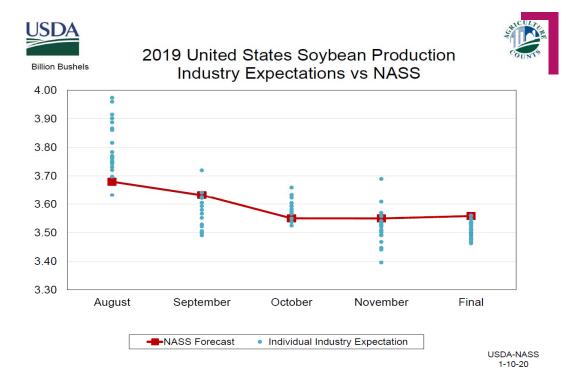


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USDA-NASS 1-10-20







Percent of Acres Remaining To Be Harvested



Crop	2009	2016	2017	2018	2019
Corn	9.9	0.5	1.1	2.5	8.0
Soybeans	3.0	0.2	0.5	3.4	2.0
Sorghum	7.0	0.4	0.3	4.0	0.9

KSU Estimate of Crops Not Yet <u>Harvested</u> ≈ 1,095 mb ≈ 71 mb ≈ 6 mb



Crop Progress

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Soybeans Harvested - Selected States

[These 18 States harvested 96% of the 2018 soybean acreage]

		2014 2019			
State	December 1, 2018	November 24, 2019	December 1, 2019	2014-2018 Average	
	(percent)	(percent)	(percent)	(percent)	
Arkansas	93	96	98	98	
Illinois	100	95	100	100	
Indiana	98	94	96	99	
lowa	100	97	98	100	
Kansas	95	95	97	98	
Kentucky	90	92	96	95	
Louisiana	99	100	100	100	
Michigan	92	80	85	97	
Michigan Minnesota	100	98	99	100	
Mississippi	98	98	99	99	
Missouri	98	91	96	96	
Nebraska	100	100	100	100	
North Carolina	71	67	75	77	
North Dakota	95	89	92	99	
Ohio	97	93	95	99	
South Dakota	100	99	100	100	
Tennessee	88	91	95	95	
Wisconsin	99	82	86	99	
18 States	97	94	96	99	

U.S. Soybean Production & Supplies

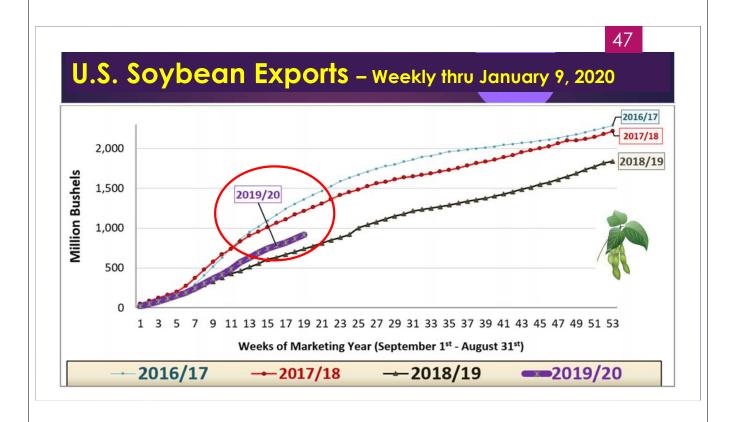
4



Production

■ Total Supply

Likely to have
Acres & Production
Increase in Yr 2020



U.S. Soybean

Export Sales & Shipments

As of January 9, 2020

In 1,000 metric tons

For "New Crop" MY 2019/20

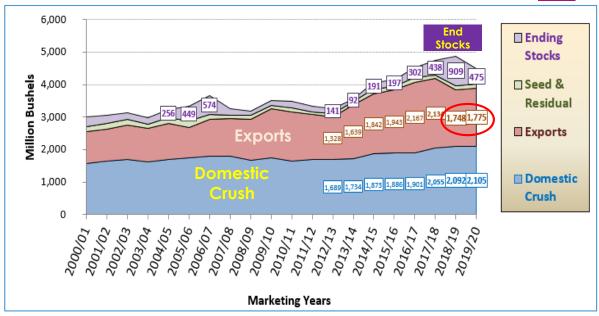
Sept. 1, 2019 thru August 31, 2020

	OUTSTANDI	ING SALES	ACCUMULATED	EXPORTS	Future SALI
DESTINATION	THIS WEEK:	YR AGO	THIS WEEK:	YR AGO	SECOND YR:
EUROPEAN UNION - 27	55.0	275.0	3,124.8	5,038.6	0.0
GERMANY	0.0	0.0	647.4	698.7	0.0
ITALY	*	60.0	149.0	543.6	0.0
NETHLDS	0.0	0.0	777.9	1,311.4	0.0
PORTUGL	0.0		328.6		
SPAIN	55.0	115.0	1,010.0	1,372.1	0.0
JAPAN	479.9	469.5	814.9	907.3	58.5
TAIWAN	366.2	308.5	977.0	775.2	0.0
CHINA	1,549.8	3,009.5	9,838.6	474.0	0.0
OTHER ASIA & OCEANIA:	957.6	1,263.9	4,721.1	4,881.8	0.0
BANGLADH	245.0	2.5	755.8	353.0	0.0
INDNSIA	244.0	377.5	756.0	785.8	0.0
KOR REP	43.6		416.9		
PAKISTN	0.0	262.0	935.2	749.3	0.0
THAILND	160.9	299.7	764.6	867.0	0.0
VIETNAM	70.3	53.6	457.8	429.2	0.0
AFRICA	203.0	202.0	1,406.7	1,315.4	0.0
EGYPT	173.0	172.0	1,185.9	1,054.8	0.0
TUNISIA	0.0	30.0	220.8	214.1	0.0
WESTERN HEMISPHERE	1,251.7	3,006.3	2,359.2	4,417.0	0.0
ARGENT	0.0	226.0	0.0	1,713.8	0.0
CANADA	6.7	151.9	29.3	494.1	0.0
COLOMB	19.0	28.8	219.8	217.8	0.0
MEXICO	1,138.1	2,383.6	1,827.6	1,716.3	0.0
TOTAL KNOWN & UNKNOWN	7,240.6	12,517.2	23,242.2	17,851.9	183.5

U.S. Soybean Use & End Stocks







U.S. Soybean Total Use Projections (USDA)

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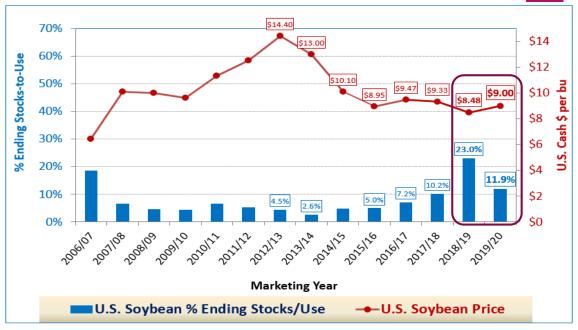
For "Old Crop" MY 2018/19 & "New Crop" MY 2019/20



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



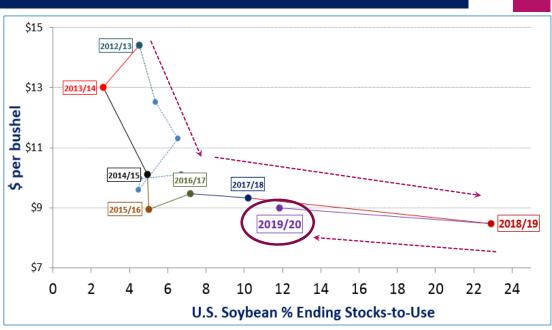




U.S. Soybean % Stocks/Use vs Price\$

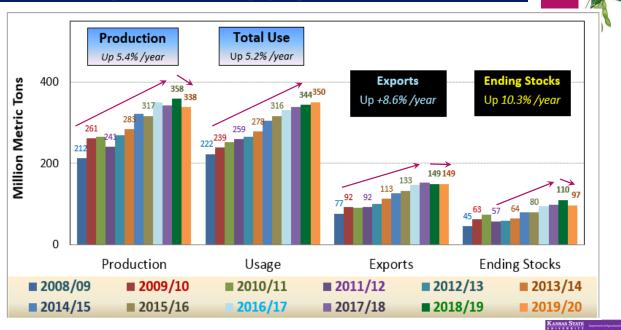
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World Soybean Supply, Use & Stocks





World Soybean Production



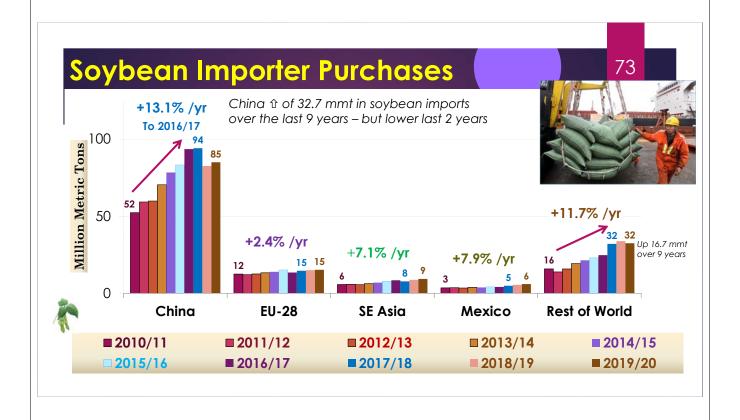
	2018/2019	2019/2020	Change from	Change from
Country or Region	estimate	forecast	December 10	2018/2019
		Mill	lion Tons	
World	358.3	337.7	0.2	-20.6
United States	120.5	96.8	0.2	-23.7
Foreign	237.8	240.9	**	3.1
Argentina	55.3	53.0		-2.3
Brazil	117.0	123.0		6.0
Paraguay	8.8	10.2		1.3
Canada	7.3	6.0		-1.3
India	10.9	9.0		-1.9
China	16.0	18.1		2.1

⁻⁻ No change. ** Rounds to zero.

World Soybean Supply and Use

	2018/2019	2019/2020	Change from	Change from			
Item	estimate	forecast	December 10	2018/2019			
	Million Tons						
Beginning stocks	98.9	110.3	0.5	11.4			
Production	358.3	337.7	0.2	-20.6			
Total Supply	457.2	448.0	0.7	-9.2			
Crush	298.3	303.6	0.8	5.2			
Total use	343.6	350.1	0.4	6.5			
Trade	149.2	149.1		-0.1			
Ending Stocks	110.3	96.7	0.3	(-13.6)			
Addendum							
Beginning stocks							
Argentina plus Brazil	56.5	59.2	0.5	2.7			
Imports*							
China	82.5	85.0		2.5			

January 10, 2020



U.S. Soybean\$ vs World %Stx/Use

MY 2007/08 through "New Crop" MY 2019/20



