

2017 Risk and Profit Conference General Session Speakers



GENERAL SESSION IV Grain Market Situation and Outlook

Dan O'Brien, Kansas State University

Daniel O'Brien was raised on a grain and livestock farm in south central Nebraska. He received bachelors and masters degrees in Agricultural Economics from the University of Nebraska-Lincoln. After completing his Ph.D. at Iowa State, he worked as the Extension Agricultural Economist at the Northwest Research and Extension Center in Colby and was Northwest Area Extension Administrative Director starting in 2003 before returning to his Extension Agricultural Economist position in January 2007. His ongoing extension and applied research interests and efforts are in the areas of a) grain market supply-demand analysis, bioenergy impacts and risk management strategies, b) grain industry market structure, conduct and performance — focusing on grain handling and transportation issues, and c) economic analysis of irrigated and dryland cropping systems, and associated cropland leasing arrangements.

Abstract/Summary

"Grain price volatility in response to production uncertainty" was the rule in July 2018 as serious drought conditions developed in the U.S. Northern Plains states and expanded into Iowa late in the month. As a result, 2017 U.S. and Canadian Hard Red Spring wheat production prospects declined significantly from a year earlier, as did prospects for corn and soybean production in these drought-affected areas.

Throughout June-July and into early August, U.S. grain markets had reflected this production uncertainty via volatile futures trade. From June 1st through July 28th, CME DEC 2017 corn futures traded in the range from \$3.74 per bushel (on 6/23) to \$4.17 ¼ (on 7/11), closing at \$3.88 on 7/28. During the same period, CME NOV 2017 soybean futures traded in the range from \$9.11 (on 6/23) to \$10.47 (on 7/11), closing at \$10.13 on 7/28. Also since June 1st, CME DEC 2017 Kansas HRW wheat futures traded in the range from \$4.67 ¾ (on 6/1) to \$6.02 (on 7/5), closing down to \$5.08 ¼ on 7/28. Spot cash grain basis levels in Kansas for corn, grain sorghum, wheat and soybeans all continue to be "weaker" or "wider" than in previous years through late July – reflecting large carryover stocks resulting from several consecutive years of large, successful production in Kansas and the U.S..

The final "destination" of grain market prices in September-November 2017 is primarily dependent on the crop production-related results of the August 10th, September 12th, October 12th, and November 9th USDA Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. Through the July 12th USDA reports the USDA has maintained it's "large crops, and low prices" projections for corn, grain sorghum and soybeans. However, as actual USDA farmer and in-the-field crop surveys come available in the August 10th reports, there is much more likelihood of "supply shocks" occurring from either higher or lower than expected 2017 production estimates. These USDA reports could cause feedgrain, wheat and oilseed markets to be extremely volatile – in either or both directions! The Kansas wheat market continues to be plagued with large local carryover stocks and moderate-at-best protein levels. But 2017 U.S. and Canadian HRS wheat production problems have dramatically raised premiums for HRW wheat offered by processors in Wichita for available moderate-to-high protein supplies (i.e., from Ordinary to 11%, 12%, and 13% protein).

From the perspective of grain market information available in early August 2017, it would not be surprising to see at least moderately if not sharply **lower** U.S. corn production prospects from August 17-18th (i.e., the dates of the 2017 K-State Risk and Profit Conference) through September-November 2017. If this were to happen, then prices for all major U.S. grains and oilseeds would likely move at least sideways to somewhat higher from early August levels. For this **NOT** to happen, a major positive change in 2017 U.S. crop production prospects will have to occur from August 1st through 18th. While possible, the likelihood of lower U.S. grain prices in fall 2017 than a year earlier is considerably less than it was one year ago.



Topics to be discussed.....

- 1) Financial Needs that will drive Kansas Grain Markets
- 2) Grain Market Analysis & Outlook
 - Corn & Grain Sorghum
 - Wheat
 - Soybeans & Cotton
- 3) Economic "forces at work" in the grain markets & where they are taking us...

Financial Needs

that will "Drive"

A farm level

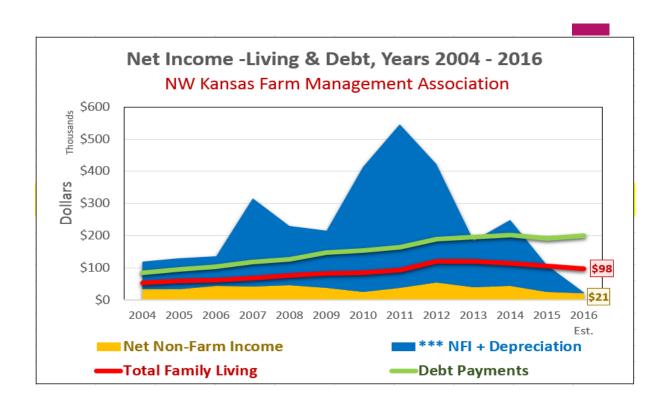
"Cash Flow" CRISIS

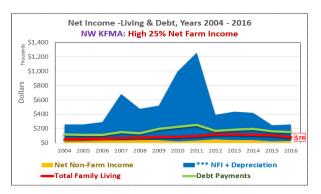
that may FORCE

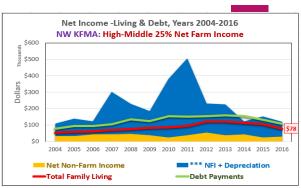
early grain marketings
in Fall-Winter 2017**

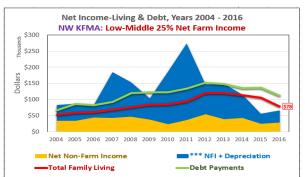
Kansas Farmer's

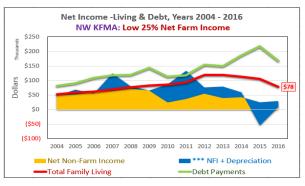
Grain Marketings

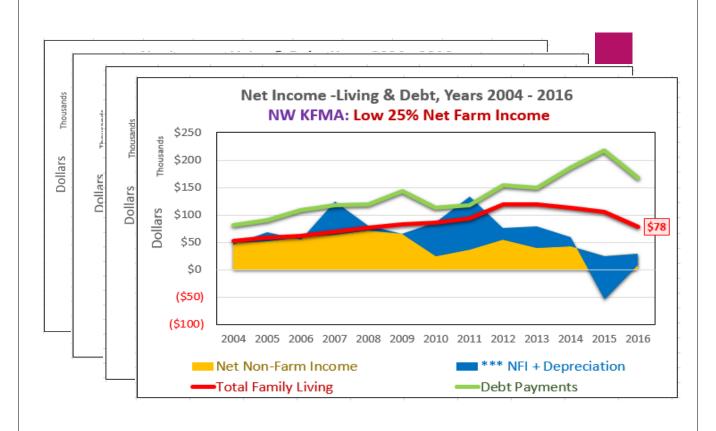


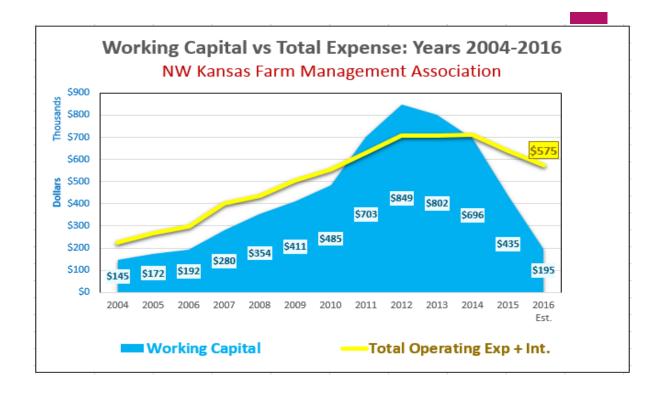


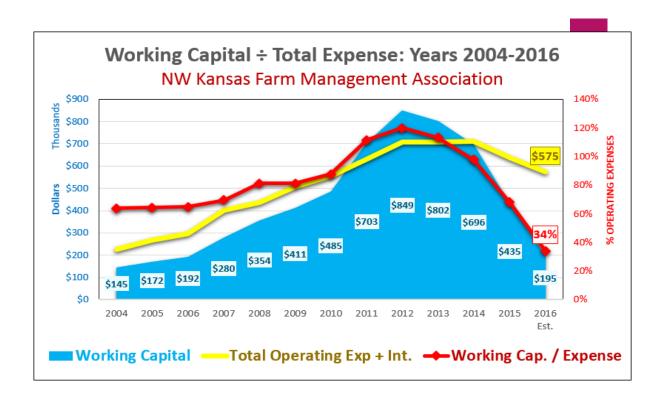


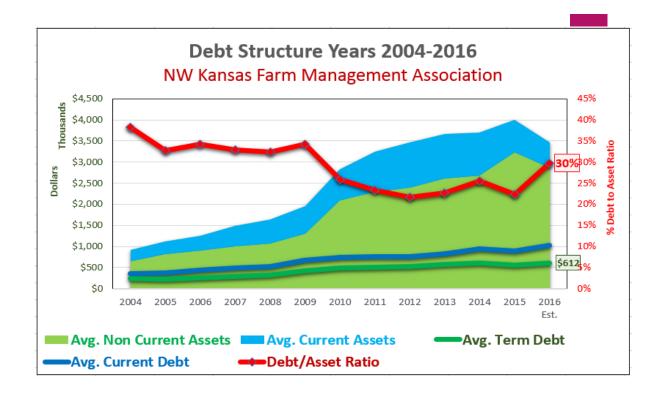


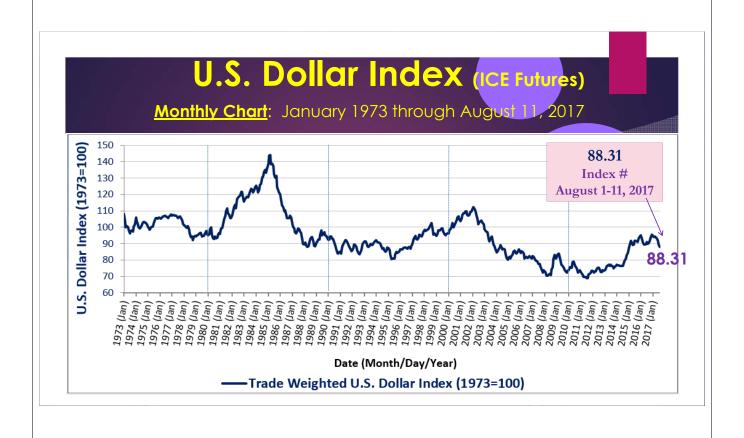














U.S. Corn & Sorghum Supply-Use

- Corn "issues" in the August USDA Crop Production Report
- Large Corn Stocks are limiting Feedgrain Price\$'s
- Low Price\$'s supporting "New Crop" MY 2017/18 Corn Use
 - o Livestock Feed $^{2017/18} = 5.450$ bln bu (10 year high vs 5.858 bb in 2007/08)
 - o **Ethanol** $^{2017/18}$ = 5.500 bln bu (*Record high vs* 5.425 bb last year)
 - o Other FSI $^{2017/18}$ = 1.500 bln bu (4 year high vs 1.424 bb in 2011/12)
 - \circ **Exports** $^{2017/18}$ = 1.850 bln bu (vs 2.225 bb in '16/17 & 1.901 in '15/16)

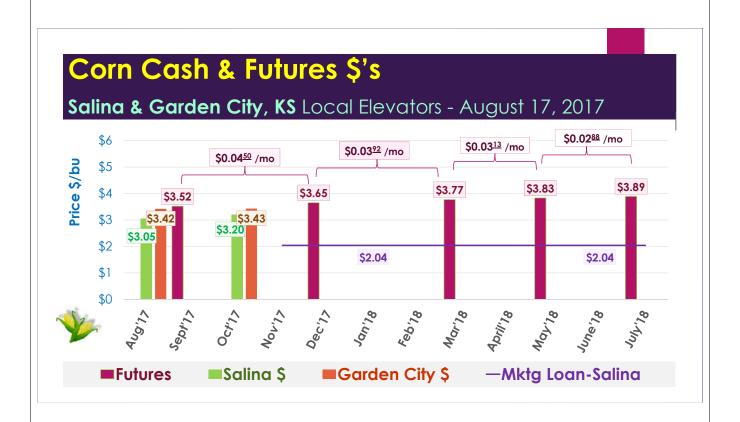
KANDAS SEATS | Particular Statements

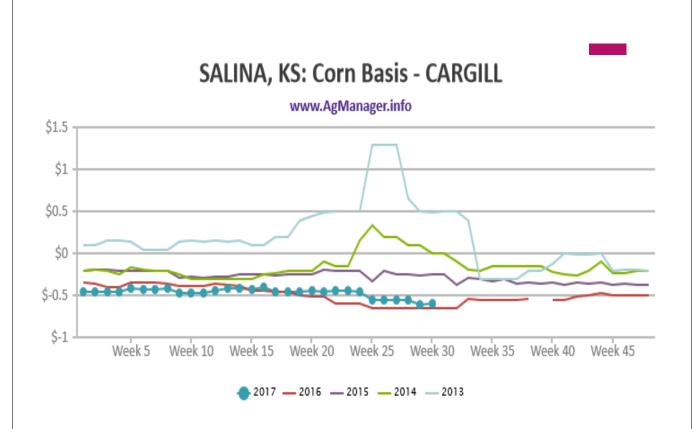
U.S. Corn & Sorghum Stocks.....

- Corn: "Large" Stocks & % \$/U
 - End Stocks $^{2017/18}$ \Rightarrow 2.273 bln bu (2nd highest since 1987/88)
 - o **% Stocks/Use** ^{2017/18} ⇒ 15.9% S/U (2nd highest since 2005/06)
- Grain Sorghum: "Low" Price\$'s (following low Corn Price\$'s)
 - o End Stocks $^{2017/18}$ \Rightarrow 52 Mln bu (2nd highest since 2008/09)
 - o **% Stocks/Use** ^{2017/18} ⇒ 14.1% S/U (Highest since 2005/06)

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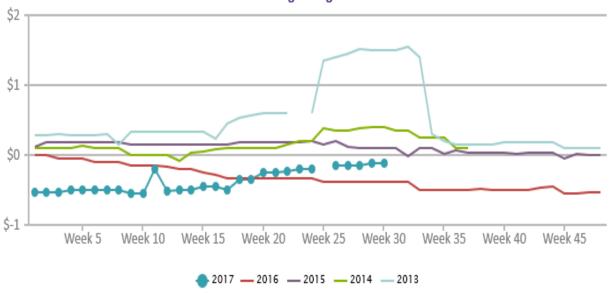




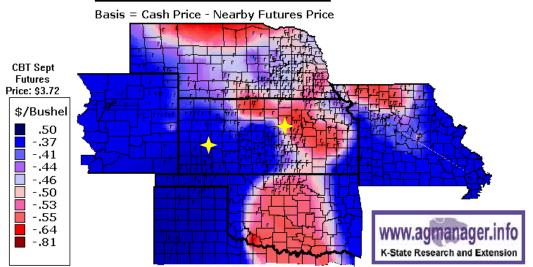


GARDEN CITY, KS: Corn Basis - GARDEN CITY COOP

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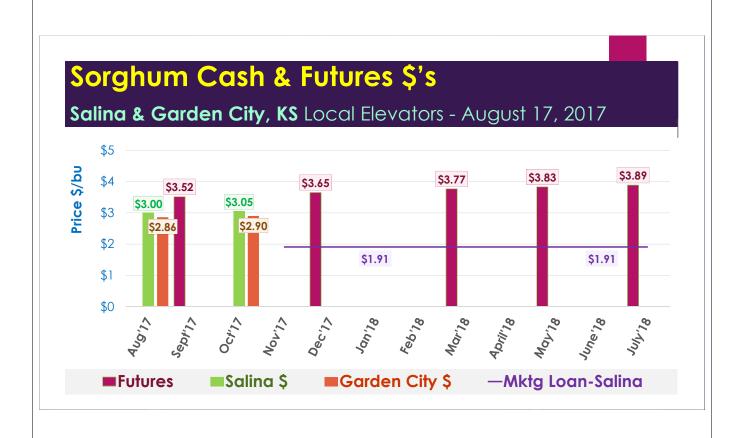
Corn Basis, 08-09-2017



Kansas Corn Seasonal Cash \$ Index

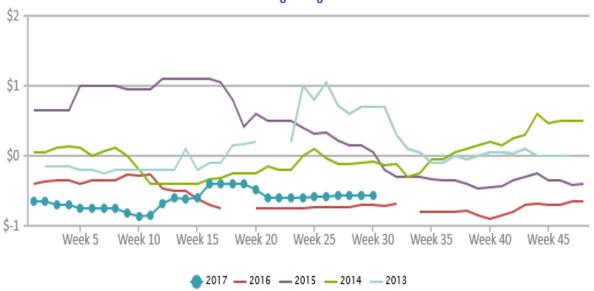
Monthly: 17 yr Avg thru 2015/16 + MY 2016/17 & MY2017/18



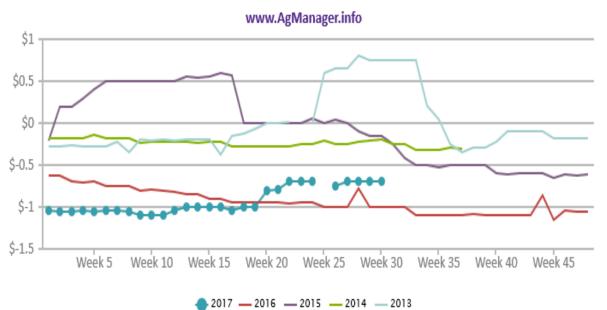


SALINA, KS: Grain Sorghum Basis - CARGILL

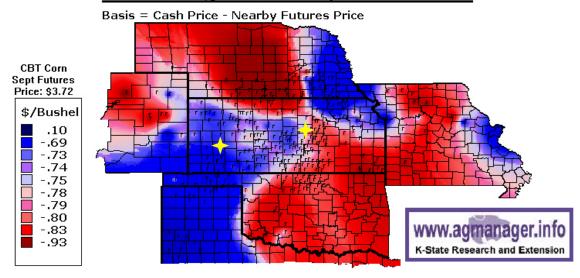
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GARDEN CITY, KS: Grain Sorghum Basis - GARDEN CITY COOP

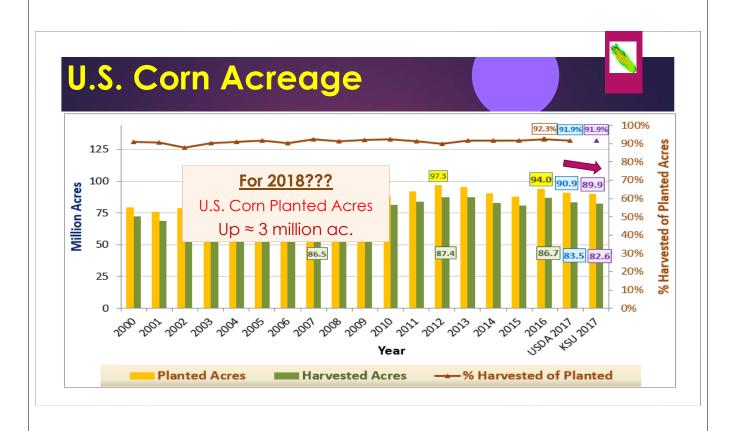


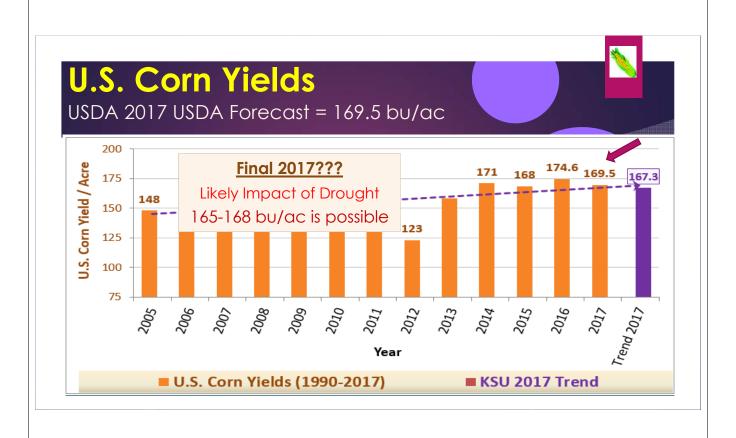
Grain Sorghum Basis, 08-09-2017

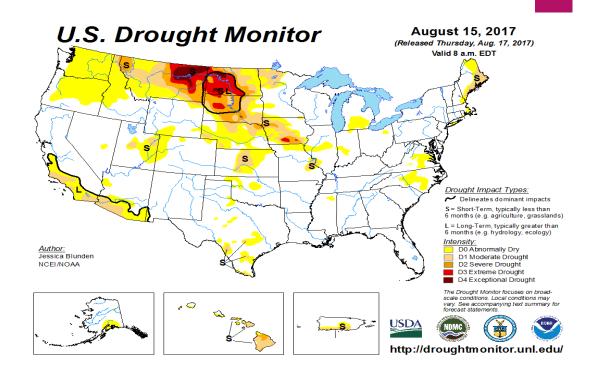


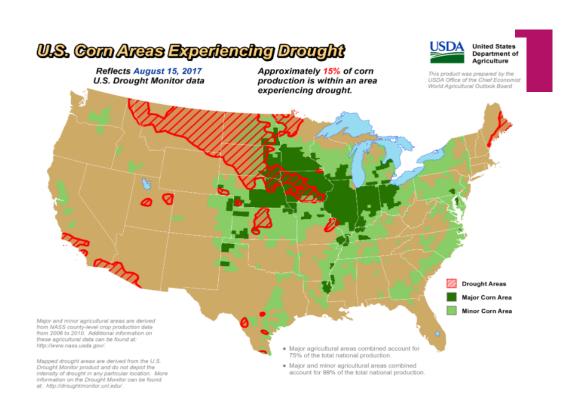
U.S. Corn Supply and Demand

	1 1			
	2016/17	2017/18	Change from	Change from
	estimate	forecast	July 12	2016/17
Planted area (million acres)	94.0	90.9		-3.1
Harvested area (million acres)	86.7	83.5		-3.3
Yield (bushels per acre)	174.6	169.5	-1.2	-5.1
•		Millio	on bushels	
Beginning stocks	1,737	2,370		633
Production	15,148	14,153	-102	-995
Imports	55	50		-5
Total supply	16,940	16,573	-102	-367
Feed and residual	5,425	5,450	-25	25
Food, seed, and industrial	6,920	7,000		80
Ethanol	5,450	5,500		50
Domestic use	12,345	12,450	-25	105
Exports	2,225	1,850	-25	-375
Total use	14,570	14,300	-50	-270
Ending stocks	2,370	2,273	-52	-97
_		P	ercent	
Stocks to use ratio	16.3	15.9	-0.3	-0.4
		Dollars	per bushel	
Average market price	3.30/3.40	2.90/3.70		-0.05

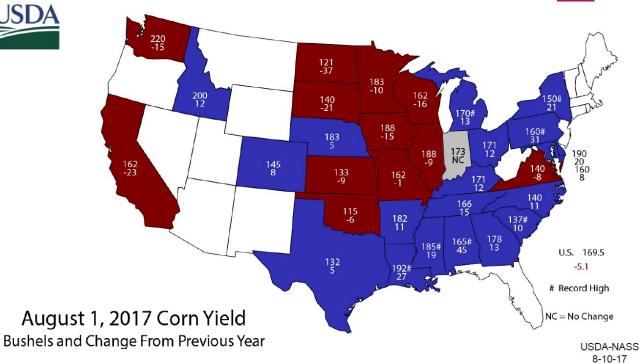








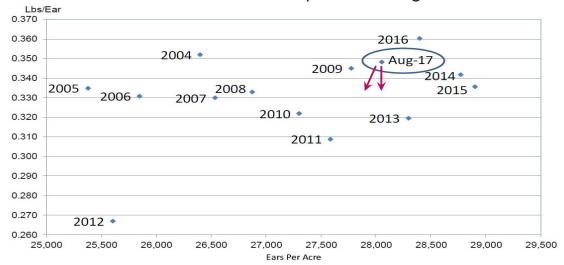








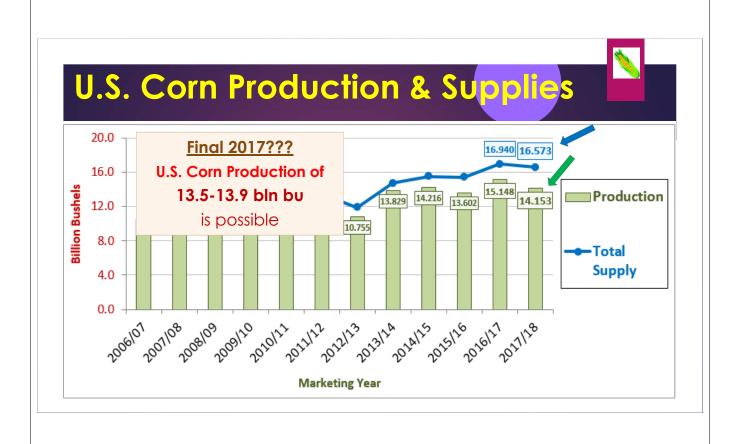
Corn Objective Yield Region Ears Per Acre vs. Implied Ear Weight

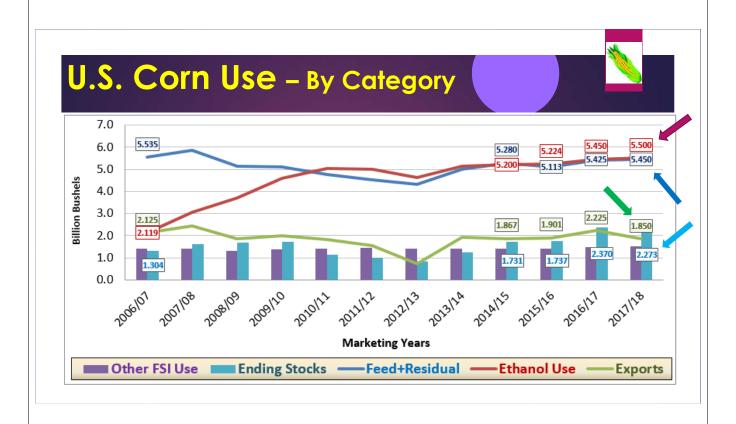


Implied Ear Weight = (Published Yield * 56) / Ears

USDA-NASS 8-10-17

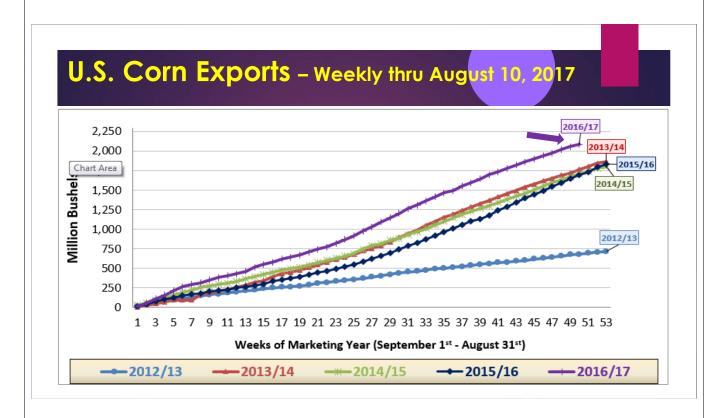
U.S. Corn Yields: 2000-2017 Accuracy of August 1st USDA Forecasts U.S. Corn Yield - Bu/Acre 170 160 150 140 Forecast Error (Bu) 130 120 (12.4) (6.2) (0.3) (3.1) (2.1) (1.7) (0.4) (0.5) (5.0) ■Difference (bu/ac) → August 1 USDA Forecast → Final Yield





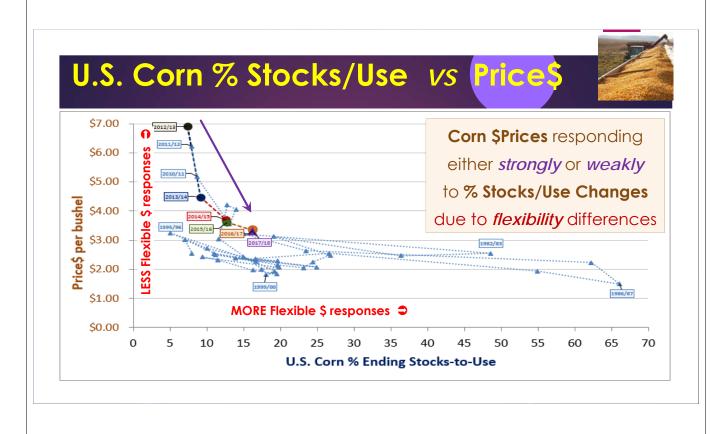
U.S. Meat Production and Prices

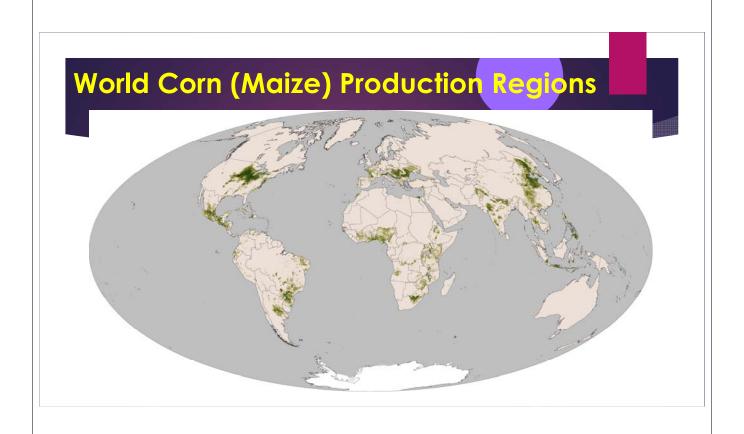
	2017 forecast	2017 change from July 12	2018 forecast	2018 change from July 12	Change from 2017
Production		•	Billion pour	ıds	
Beef	26.70	0.20	27.36	0.29	0.66
Pork	25.81	-0.03	26.74		0.93
Broilers	41.49	0.01	42.28		0.79
Turkey	5.98	-0.08	6.18		0.20
Total meat	100.74	0.10	103.32	0.30	2.58
Prices			Dollars/cw	rt .	
Steers	120.93	-2.00	116.25	-1.75	-4.68
Hogs	51.11	2.00	48.25	0.75	-2.86
			Cents/lb		
Broilers	94.3	1.0	88.5		-5.8
Turkey	100.4	-2.5	104.5	-2.0	4.1

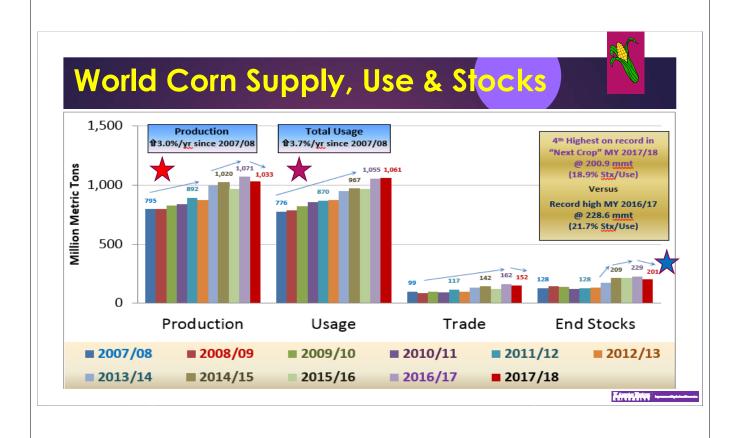












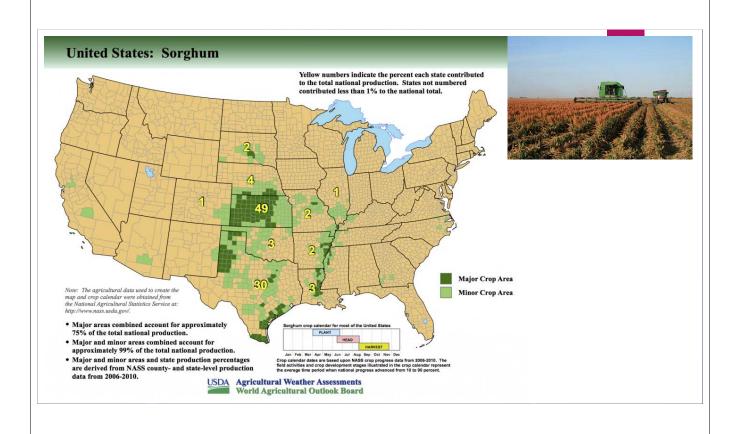
World Corn Production

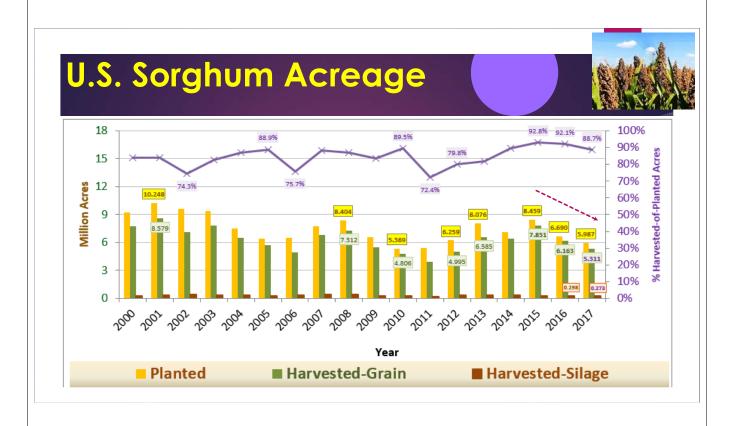
Country or	2016/17	2016/17 change	2017/18	2017/18 change	Change from
Region	estimate	from July 12	forecast	from July 12	2016/17
			Million Tons	_	
World	1,070.5	1.72	1,033.5	-3.43	-37.0
United States	384.8		359.5	-2.59	-25.3
Foreign	685.7	1.72	674.0	-0.83	-11.8
Argentina	41.0		40.0		-1.0
Brazil	98.5	1.50	95.0		-3.5
Mexico	27.4		25.0		-2.4
Canada	13.2		13.9	-0.50	0.7
European Union	61.1	0.43	60.0	-1.59	-1.1
Serbia	7.6		6.6	-0.40	-1.0
FSU-12	47.4		49.3	0.50	1.9
Ukraine	28.0		28.5		0.5
Russia	15.3		16.5	0.50	1.2
South Africa	16.7	0.30	12.5		-4.2
China	219.6		215.0		-4.6
India	26.0		25.0		-1.0

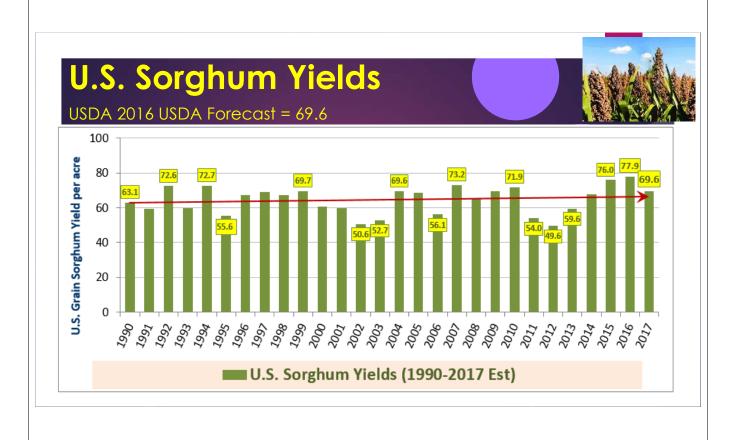
World Corn Supply and Use

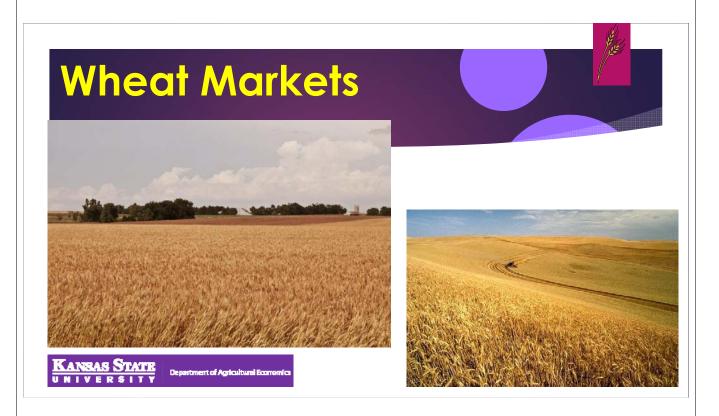
	2016/17	2017/18	Change from	Change from		
	estimate	forecast	July 12	2016/17		
		Million Tons				
Beginning stocks	213.5	228.6	1.10	15.1		
Production	1,070.5	1,033.5	-3.43	-37.0		
Total Supply	1,284.0	1,262.1	-2.32	-21.9		
Feed use	630.8	651.3	-0.84	20.5		
Total use	1,055.4	1,061.2	-2.38	5.8		
Trade	162.4	152.0	-0.44	-10.4		
Ending Stocks	228.6	200.9	0.06	-27.7		











U.S. Wheat Supply-Use

- Wheat "<u>issues</u>" in the August USDA Crop Production Report
- Large <u>U.S. & World Stocks</u> continue to limit Wheat <u>Price\$'s</u> **
- "Moderate" Exports limiting 2017/18 Wheat <u>Disappearance</u>

• Exports $^{2017/18}$ = 975 mln bu (778 mb - 1.291 bb range since 2008/09)

o **Food Use** $^{2017/18}$ = 950 mln bu (*Level Use since MY 2012/13*)

o **Feed Use+** $^{2017/18}$ = 150 mln bu (*Down from 228-365 mb in 2012 - 2013*)

o **HRW Exports** $^{2017/18}$ = 410 mln bu (*Down from 455 mb in MY 2016/17*)

KARAS STATE Product Addition to

U.S. Wheat Stocks.....

- All U.S. Wheat: "Large" Stocks (but declining)
 - End Stocks $^{2017/18}$ \Rightarrow 933 mln bu (1.184 bb last year)
 - o **% Stocks/Use** ^{2017/18} ⇒ 43.6% S/U (53.4% S/U last year)
- <u>U.S. HRW Wheat</u>: "Large" Carryovers (but <u>also</u> declining)
 - o **End Stocks** $^{2017/18}$ \Rightarrow 453 mln bu (593 mb last year)
 - o **% Stocks/Use** ^{2017/18} ⇒ 50.1% S/U (63.2% S/U last year)

KANSAS SEATE Decembration Country

U.S. Wheat Quality & Grade



- <u>U.S. HRW Wheat ²⁰¹⁷</u> ⇒ **11.4% protein**, 60.4 lb test, 1.2% defects • *Versus 11.2% protein*, 60.7 lb test wt, 1.2% defects in 2016
- <u>U.S. SRW Wheat ²⁰¹⁷</u> ⇒ **9.5% protein,** 58.8 lb test, 1.7% defects of *Versus 9.4% protein, 58.6 lb test wt, 1.4% defects in 2016*
- U.S. Soft White ²⁰¹⁷ ⇒ 9.6% protein, 61.1 lb test, 0.6% defects
 Versus 10.1% protein, 60.8 lb test wt, 0.6% defects in 2016
- <u>U.S. Spring Wheat ²⁰¹⁷</u> ⇒ ____% protein, ___ lb test, ___% defects
 Versus 14.2% protein, 61.3 lb test wt, 0.9% defects in 2016

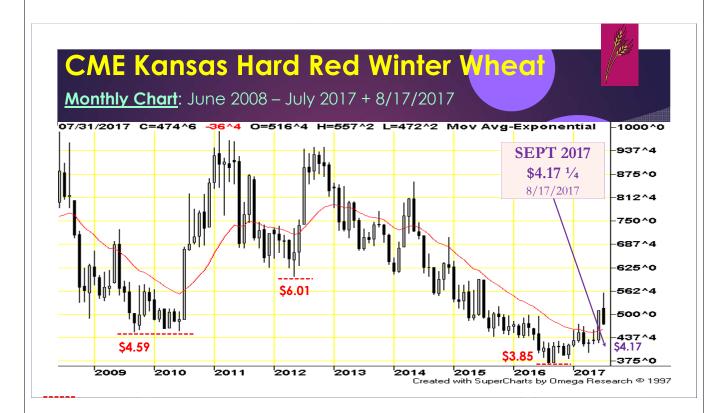
KANDAS SEMES Product Spinishers

World Wheat Market Prospects:

Large Supplies ⇒ A "Buyer's Market"

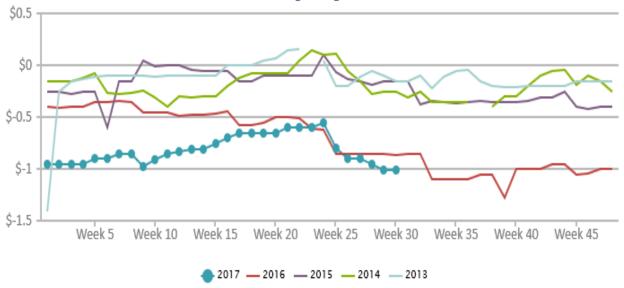
- Record Supplies & Large Usage Forecast for 2017/18
 - 4 consecutive record high World wheat crops
- Varying 2017/18 Crop Prospects by Country
- Still a "buyer's market" for World Wheat Trade....but....
 - Uncertainty about U.S. & World Crops in 2017-2018?
 - BUT a tight "World-Less-China" supply situation has emerged***

KANSAS SEME



SALINA, KS: Hard Red Winter Wheat Basis - CARGILL



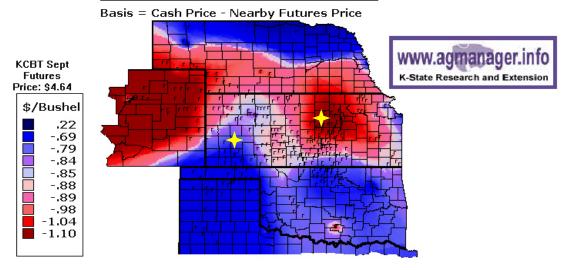


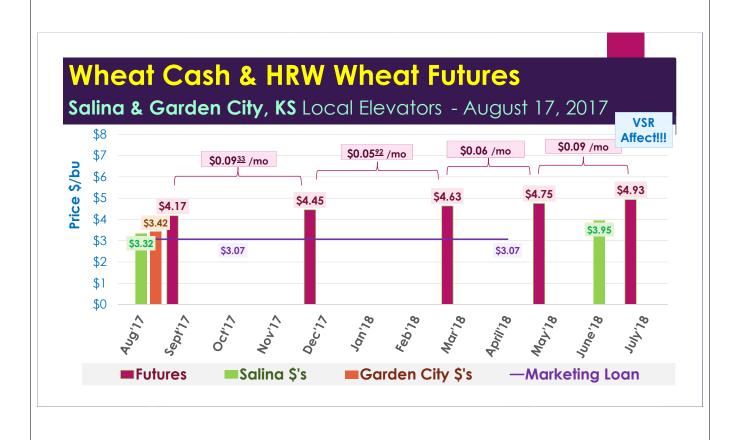
GARDEN CITY, KS: Hard Red Winter Wheat Basis - GARDEN CITY COOP

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Wheat Basis, 08-09-2017

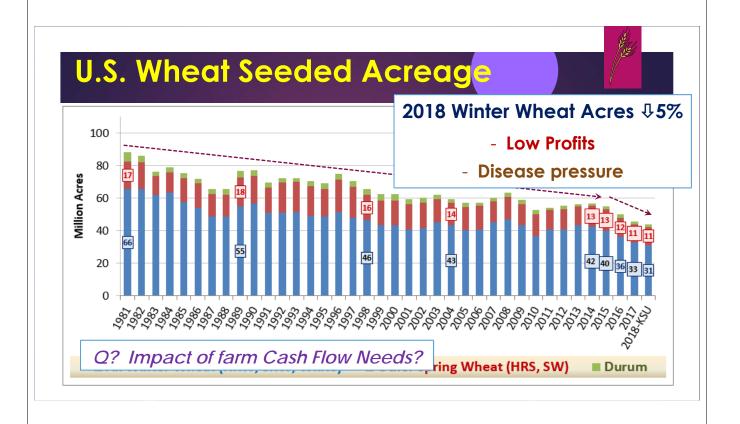


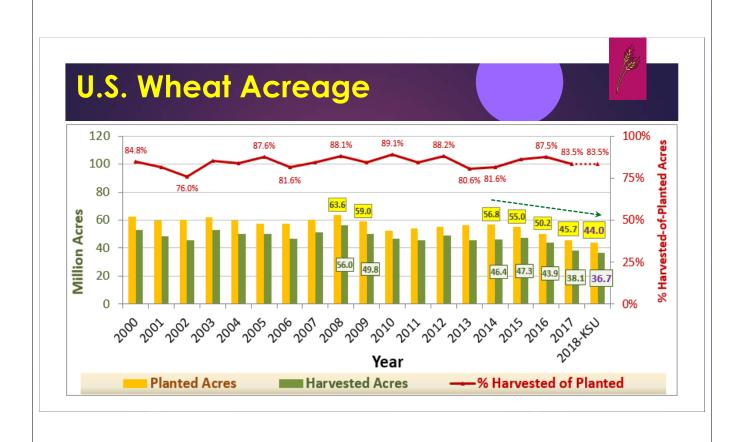


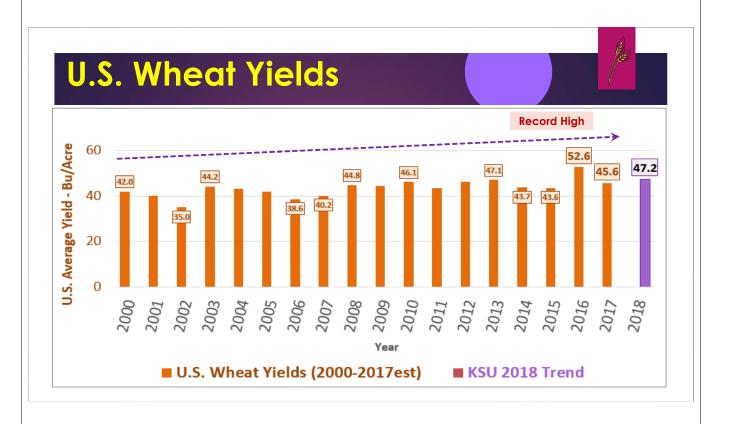
Kansas Wheat Seasonal Cash Sindex Monthly: 17 yr Avg thru 2015/16 + MY 2016/17 & MY2017/18 125% 120% Kansas Corn Seasonal Price Index(%) 2017/18 115% 110% 105% 101% 100% 95% 90% 2016/17 85% 80% 75% April July Aug Feb June Sept Oct Nov Dec Jan March May 2016/17 (\$3.91) ____2017/18 (\$4.51) ■Index

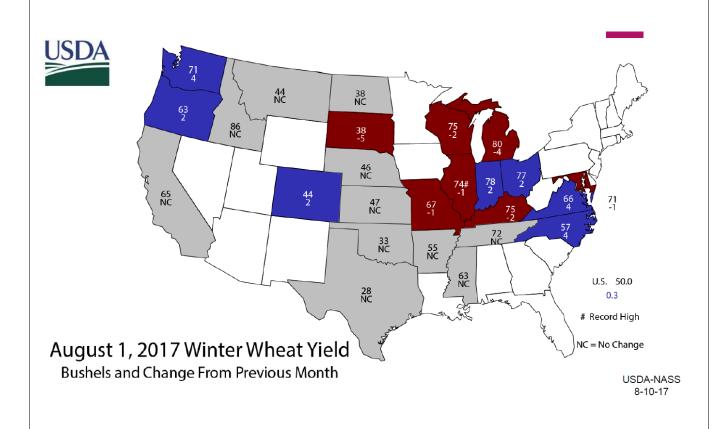
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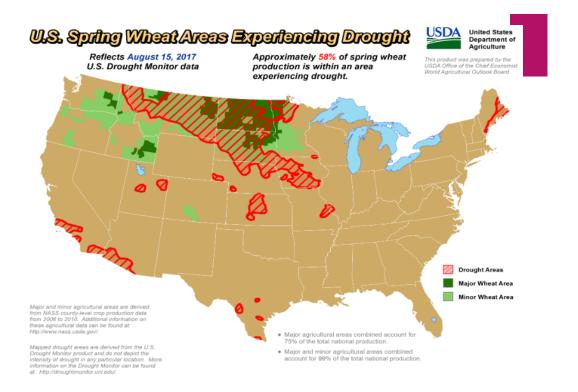
		2		
	2016/17	2017/18	Change from	Change from
	estimate	forecast	July 12	2016/17
Planted area (million acres)	50.2	45.7		-4.5
Harvested area (million acres)	43.9	38.1		-5.8
Yield (bushels per acre)	52.6	45.6	-0.5	-7.0
		Millio	on bushels	
Beginning stocks	976	1,184		209
Production	2,310	1,739	-21	-570
Imports	118	150	10	32
Total supply	3,403	3,074	-11	-330
Food use	949	950	-5	1
Seed	61	66		5
Feed and residual	154	150		-4
Domestic use	1,164	1,166	-5	2
Exports	1,055	975		-80
Total use	2,219	2,141	-5	-78
Ending stocks	1,184	933	-6	-252
		P	Percent	
Stocks to use ratio	53.4	43.6	-0.2	-9.8
		Dollar :	s per bushel	
Average market price	3.89	4.40/5.20	•	0.91















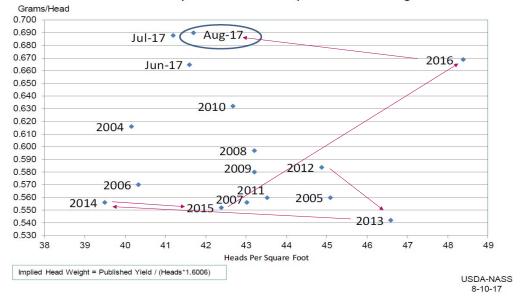
August 1, 2017 Other Spring Wheat Yield Bushels and Change From Previous Month

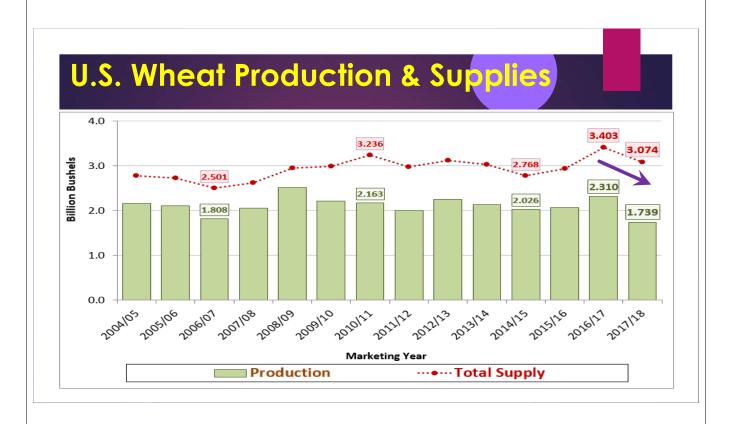


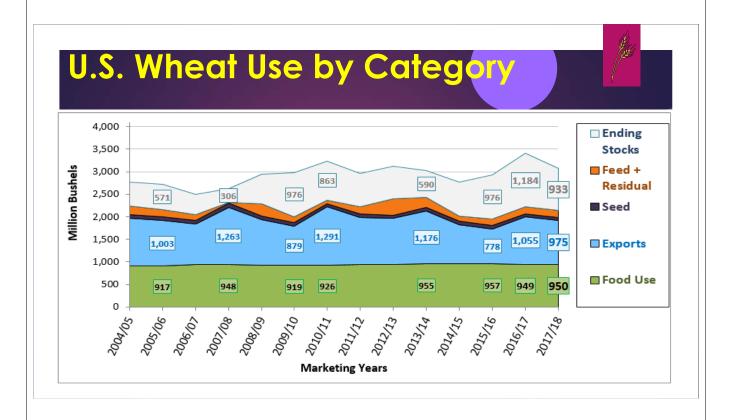


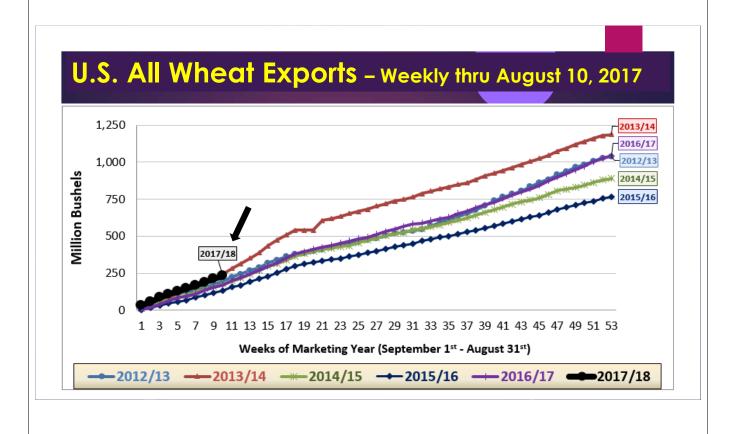


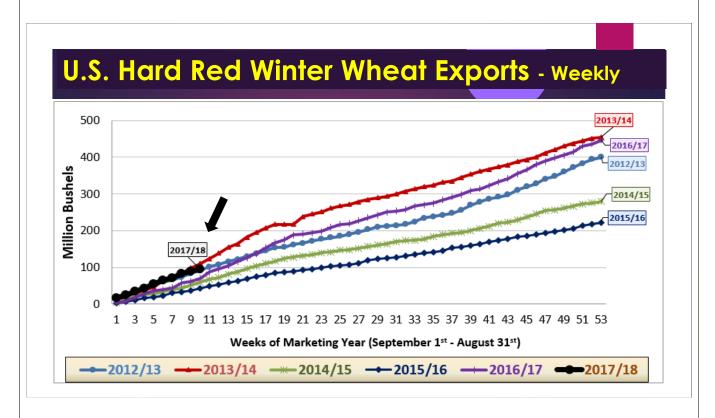
Wheat Objective Yield Region Heads Per Square Foot vs. Implied Head Weight



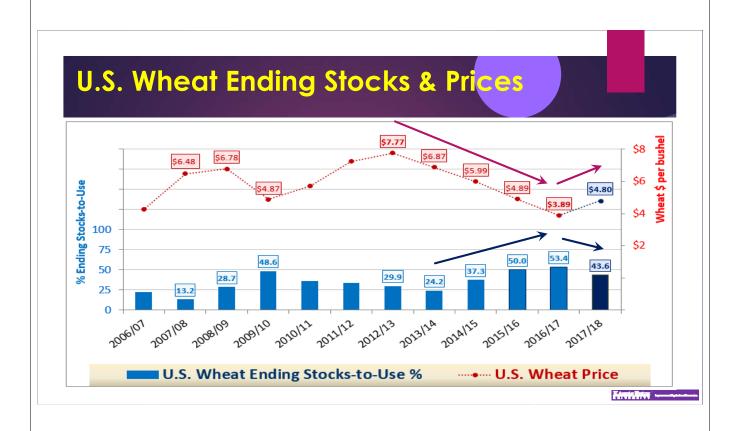


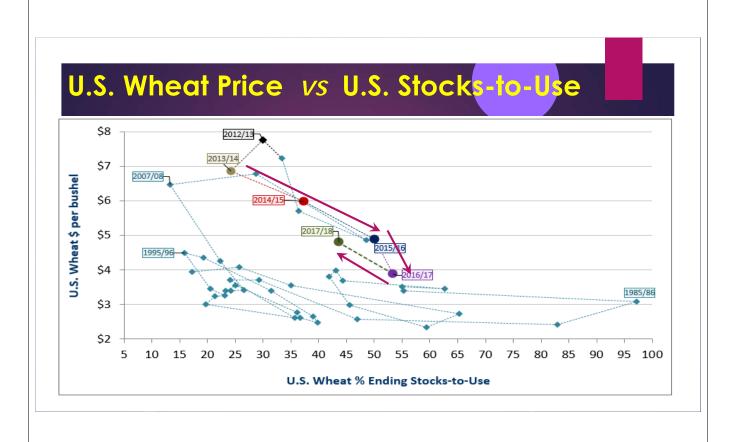


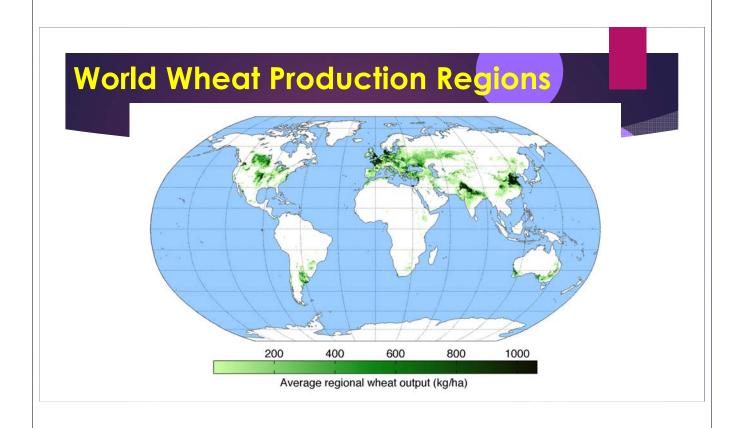


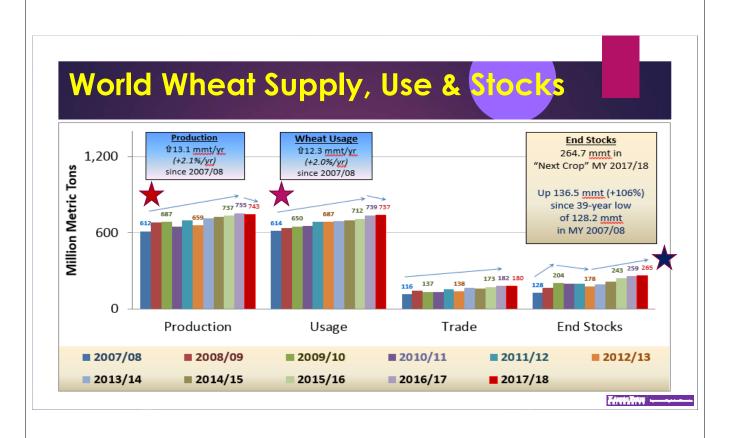












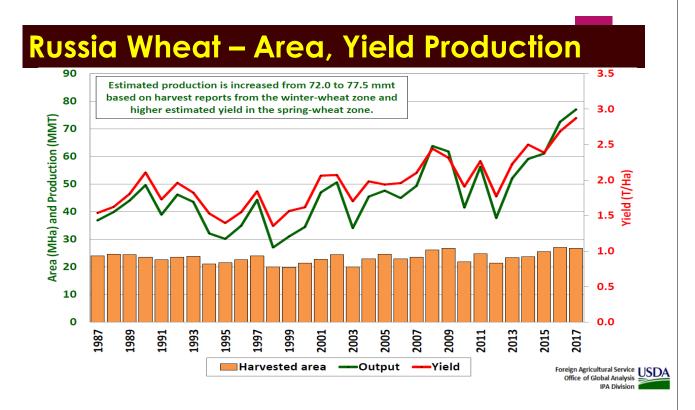
World Wheat Production

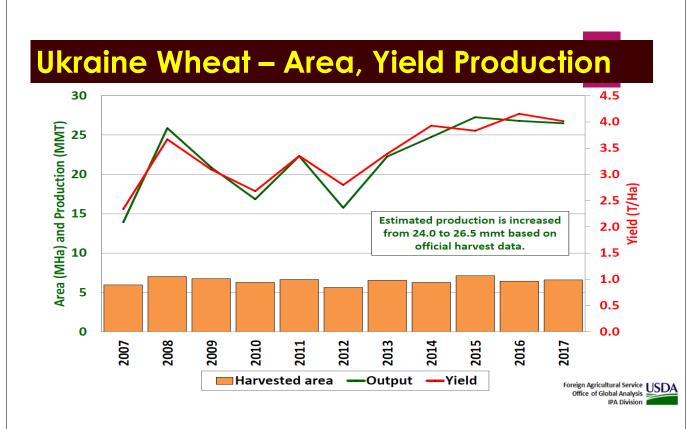
	2016/17	2017/18	Change from	Change from	
Country or Region	estimate	forecast	July 12	2016/17	
	Million Tons				
World	755.0	743.2	5.4	-11.8	
United States	62.9	47.3	-0.6	-15.5	
Foreign	692.1	695.9	5.9	3.7	
Argentina	17.5	17.5		0.0	
Canada	31.7	26.5	-1.9	-5.2	
Australia	35.1	23.5	-	-11.6	
European Union	145.7	149.6	-0.4	→ 3.9	
Turkey	17.3	19.5		2.3	
Russia	72.5	77.5	5.5	5.0	
Ukraine	26.8	26.5	2.5	-0.3	
Kazakhstan	15.0	14.0	1.0	-1.0	
China	128.9	130.0		1.2	
India	87.0	96.0		9.0	

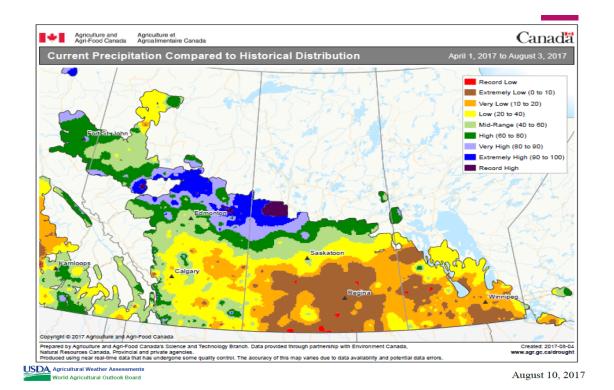
August 10, 2017

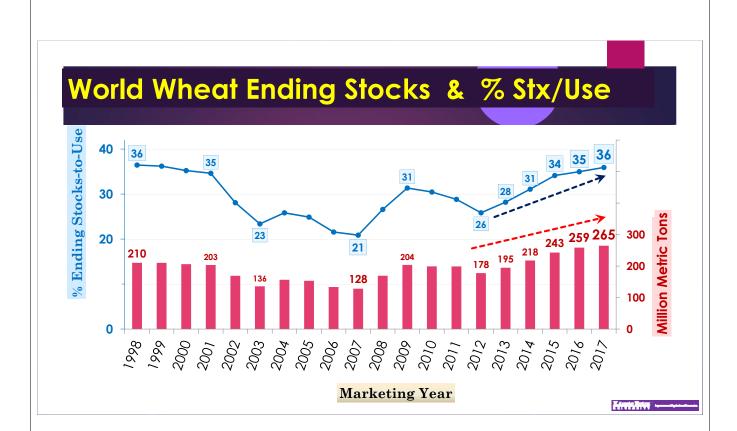
World Wheat Supply and Use

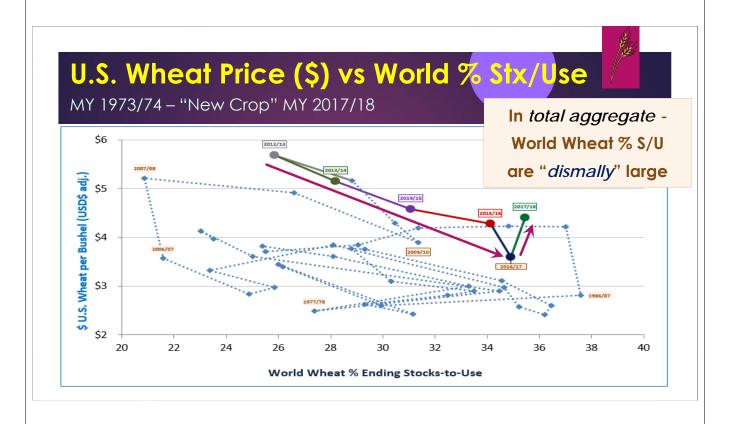
	2016/17	2017/18	Change from	Change from		
	estimate	forecast	July 12	2016/17		
		Million Tons				
Beginning stocks	242.9	258.6	0.5	15.7		
Production	755.0	743.2	5.4	-11.8		
Total Supply	997.9	1,001.8	5.9	3.9		
Feed use	146.9	140.6	1.3	-6.2		
Total use	739.3	737.1	1.8	-2.2		
Trade	182.3	179.9	1.5	-2.3		
Ending Stocks	258.6	264.7	4.1	6.1		

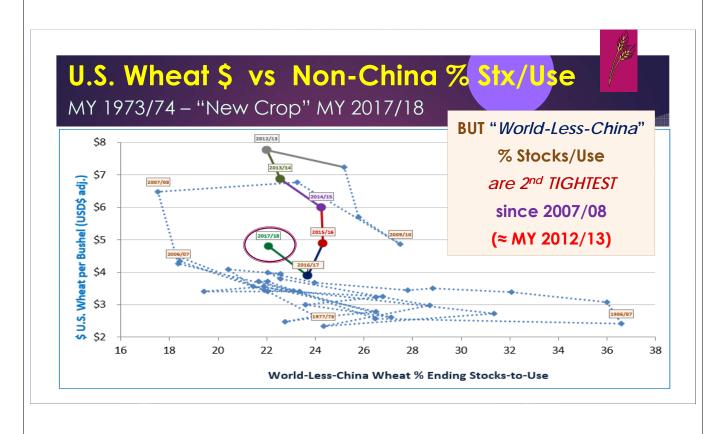




















Department of Agricultural Economics

U.S. Soybean Market Prospects

- Strong Use & Exports, Large Stocks, & Weaker Prices
 - <u>U.S. soybean exports in 2017/18</u> to remain *historically large* in spite of large South American Production
 - Depends on <u>continued growth in import demand</u> from
 China, EU, Southeast Asia, Mexico, elsewhere
 - Questions & concerns to emerge in fall-winter 2017-2018 re: 2018 South American soybean crop size



U.S. Soybean Supply-Use

- Soybean "issues" in the August Crop Production Report
- Large Soybean Stocks in U.S.-So. America limit Price\$'s
- Low Price\$'s to support "New Crop" MY 2017/18 Use ***

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o Soy Crush ^{2017/18} = 1.940 bln bu (Record – vs 1.890 bb last year)
```

- o **Exports** $^{2017/18}$ = 2.225 bln bu (*Record vs* 2.150 bb last year)
- o **Total Use** $^{2017/18}$ = 4.301 bln bu (*Record vs 4.158 bb last year*)
- o SBM Use $^{2017/18}$ = 22.750 bln lbs (vs 22.0 bb in 2016/17 & 22.4 bb in 2015/16)

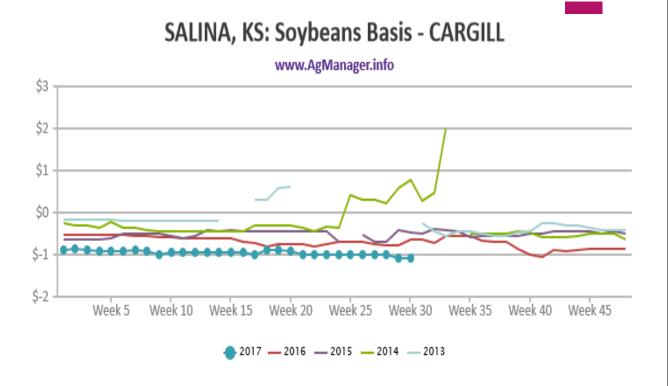
KANSAS SPANS

U.S. Soybean & Cotton Stocks.....

- Soybean: "Large" Stocks & % S/U
 - o **End Stocks** ^{2017/18} ⇒ 475 mln bu (*High vs 574 mb in 2006/07*)
 - o **% Stocks/Use** ^{2017/18} ⇒ 11.0% S/U (High vs 18.6% in 2006/07)
- Cotton: "Large" 2017 Crop & "Growing" Stocks
 - o **Production** ^{2017/18} ⇒ 20.6 mln bales (12.9 & 17.2 mb last 2 years)
 - o End Stocks $^{2017/18}$ \Rightarrow 5.8 mln bales (3.8 & 2.8 mb last 2 years)
 - o **% Stocks/Use** ^{2017/18} ⇒ 33.0% S/U (30.2% & 15.4% last 2 years)

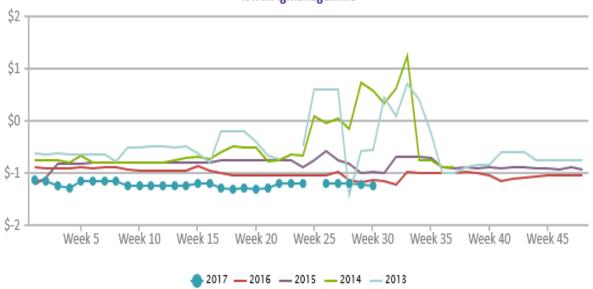






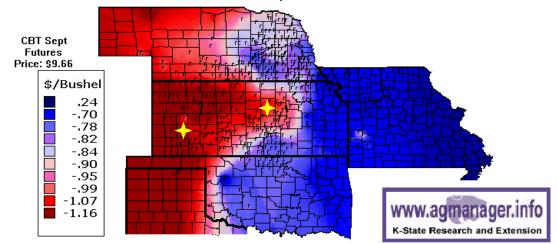
GARDEN CITY, KS: Soybeans Basis - GARDEN CITY COOP





Soybean Basis, 08-09-2017

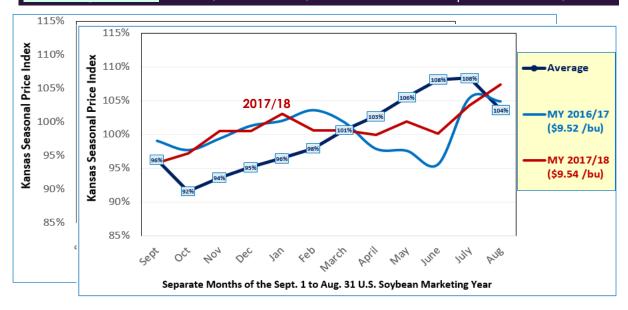
Basis = Cash Price - Nearby Futures Price





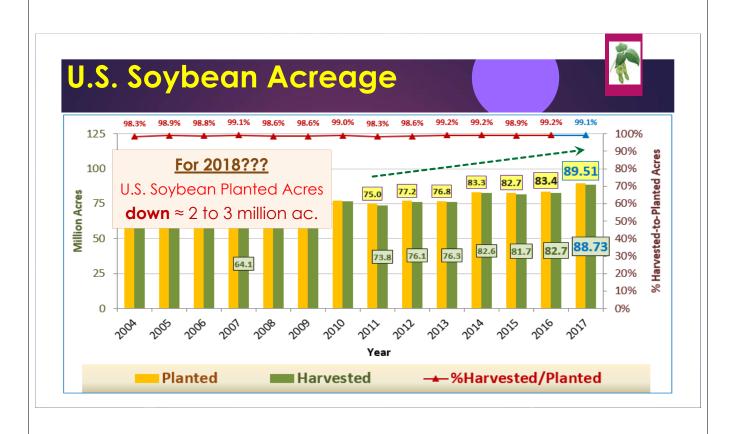
Kansas Soybean Seasonal Cash \$ Index

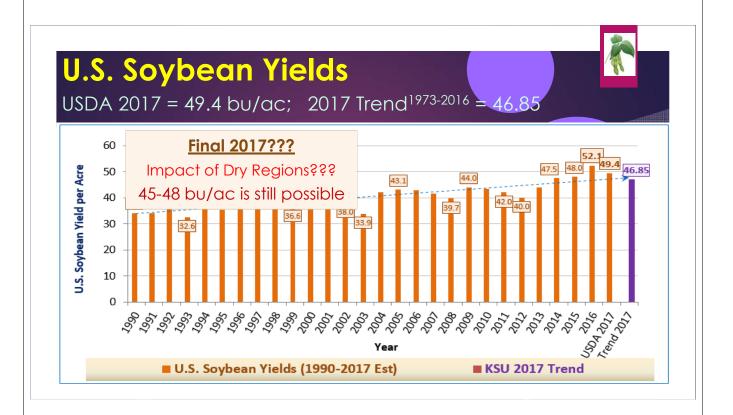
Monthly Prices: 1999/00 - 2014/15 + "New Crop" MY 2016/27

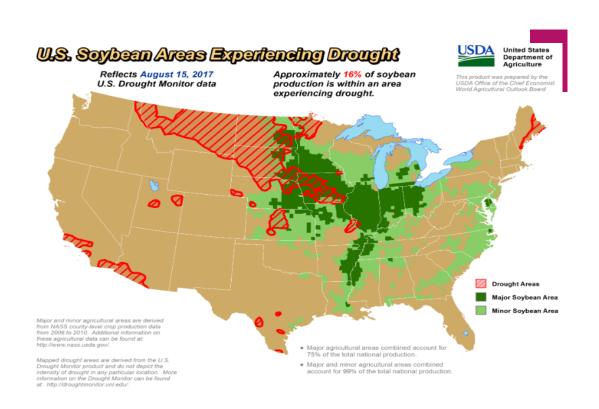


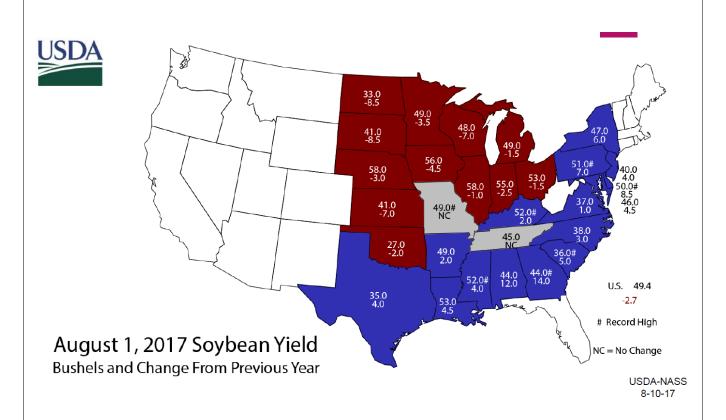
U.S. Soybean Supply and Demand

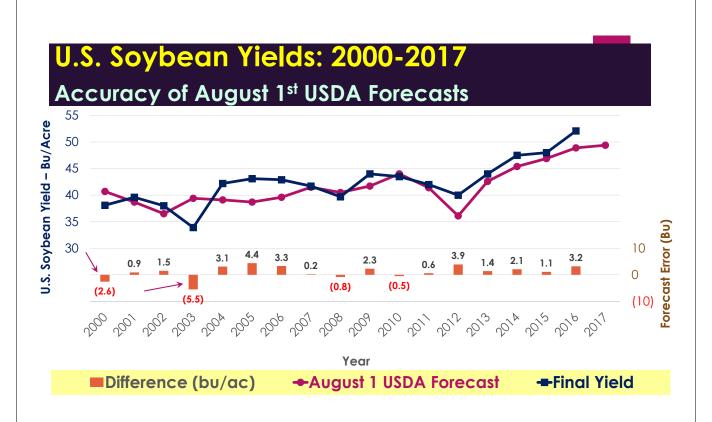
	2016/17 estimate	2016/17 change from July 12	2017/18 forecast	2017/18 change from July 12	Change from 2016/17
				-	
Planted area (million acres)	83.4		89.5		6.1
Harvested area (million acres)	82.7		88.7		6.0
Yield (bushels per acre)	52.1		49.4	1.4	-2.7
			Million bushels		
Beginning stocks	197		370	-40	174
Production	4,307		4,381	121	74
Imports	25		25		0
Total supply	4,528		4,777	81	248
Crush	1,890	-10	1,940	-10	50
Seed and residual	118		136	1	18
Domestic use	2,008	-10	2,076	-9	68
Exports	2,150	50	2,225	75	75
Total use	4,158	40	4,301	66	143
Ending stocks	370	-40	475	15	105
	_		Percent		
Stocks to use ratio	8.9	-1.1	11.1	0.2	2.1
			Dollars per bushe	·l	
Average market price	9.50		8.45/10.15	-0.10	-0.20

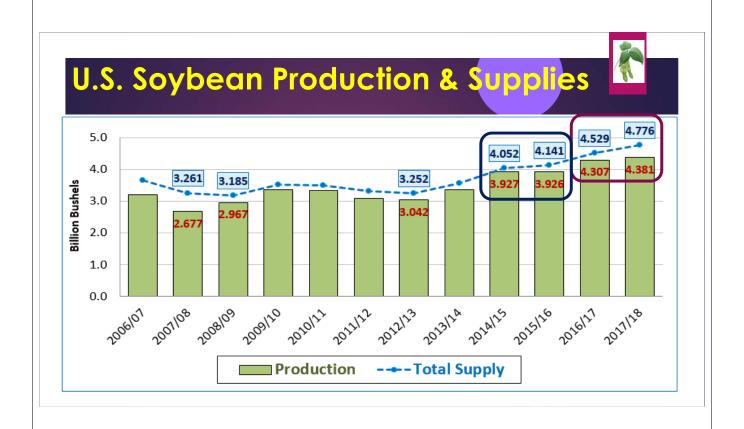


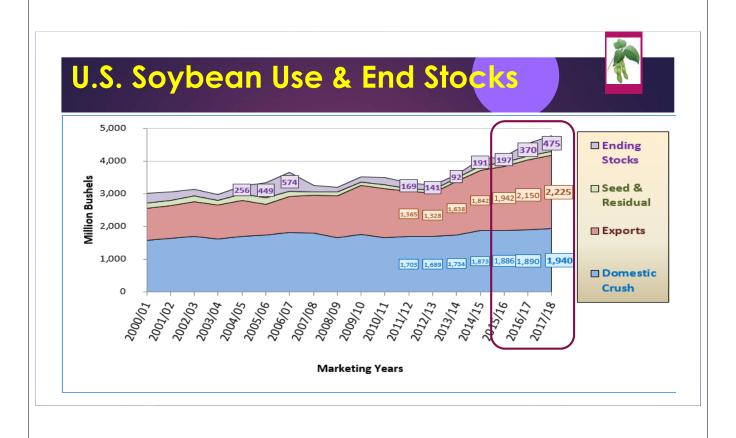


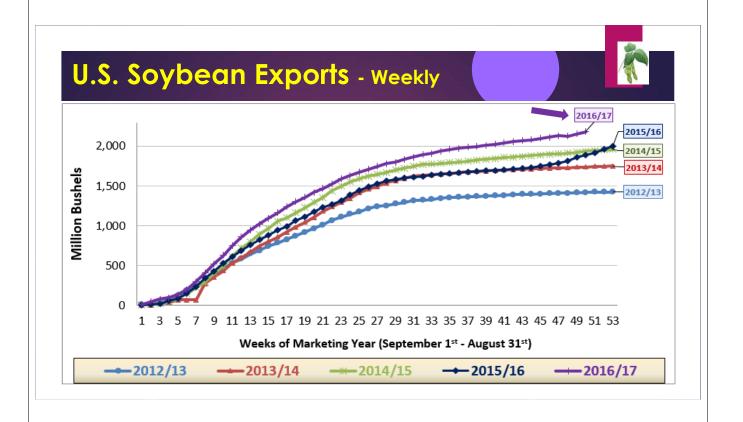


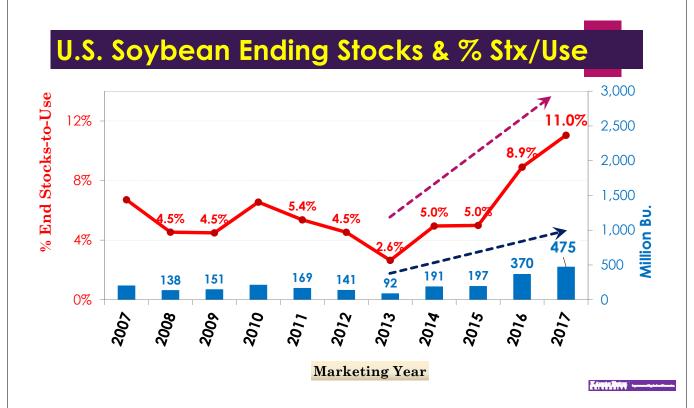


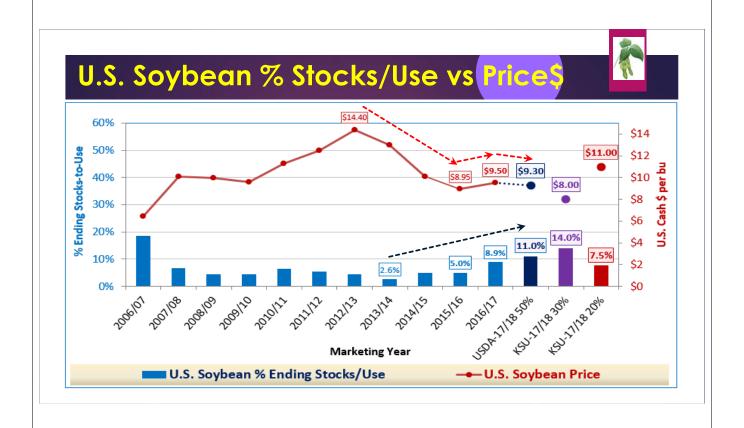


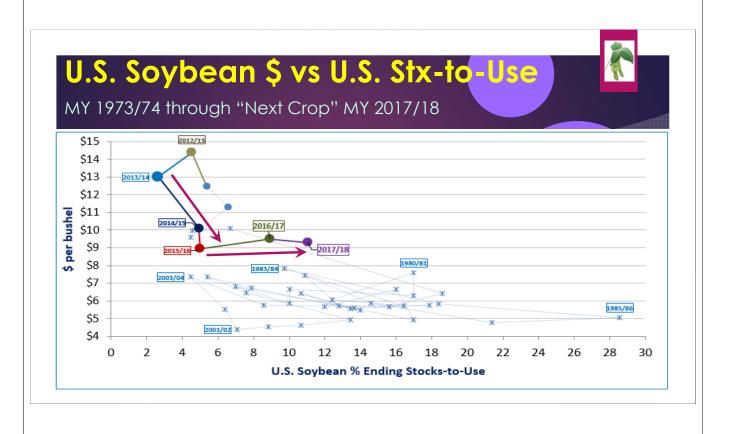


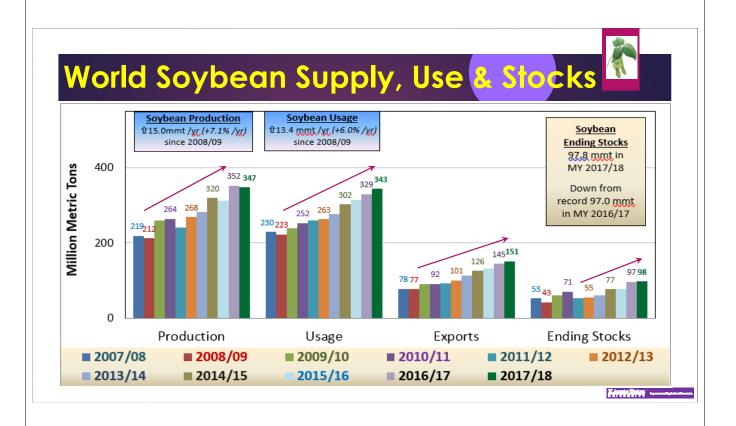






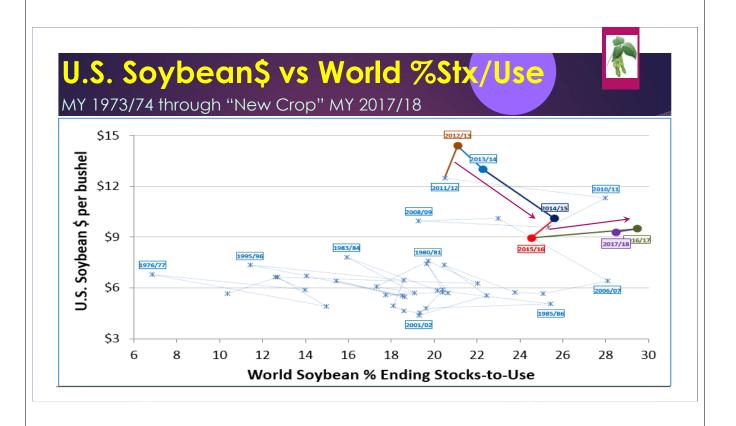


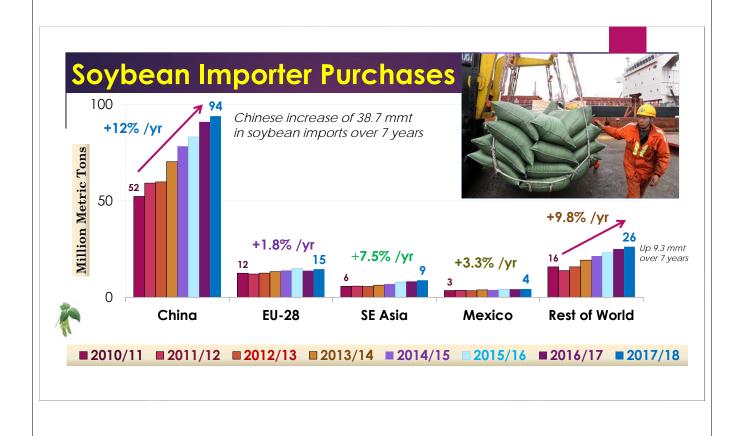


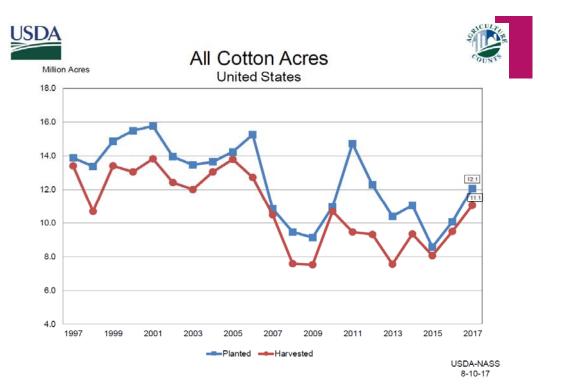


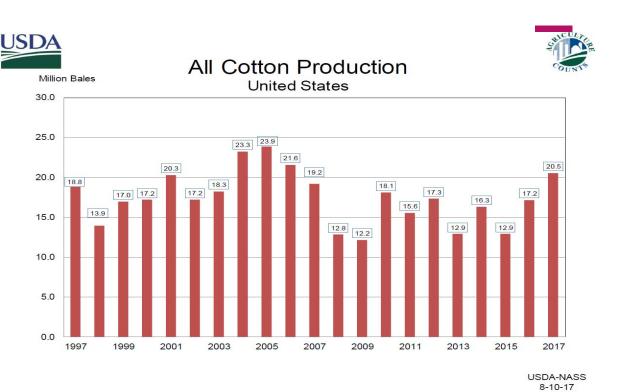
World Soybean Production

Country or	2016/17	2017/18	Change from	Change from		
Region	estimate	forecast	July 12	2016/17		
		Million Tons				
World	351.7	347.4	2.3	-4.4		
United States	117.2	119.2	3.3	2.0		
Foreign	234.5	228.1	-1.0	-6.4		
Argentina	57.8	57.0		-0.8		
Brazil	114.0	107.0		-7.0		
Paraguay	10.7	9.4		-1.3		
Canada	6.6	8.2	-0.2	→ 1.7		
India	11.5	10.0	-1.5	-1.5		
China	12.9	14.0		1.1		





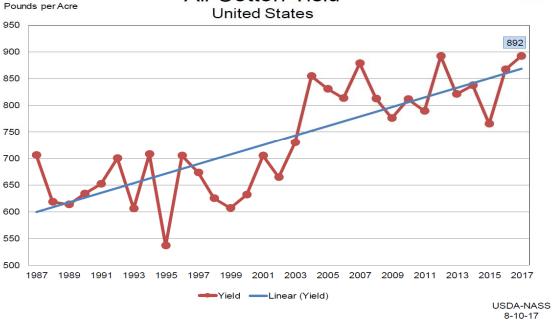








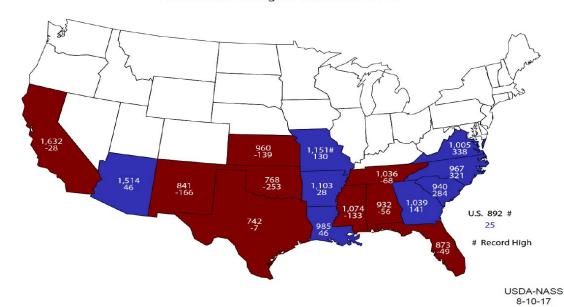
All Cotton Yield





August 1, 2017 All Cotton Yield Pounds and Change From Previous Year





U.S. Cotton Supply and Demand

	2016/17 estimate	2017/18 forecast	Change from July 12	Change from 2016/17		
Planted area (million acres)	10.07	12.06		1.98		
Harvested area (million acres)	9.51	11.05	-0.13	1.55		
Yield (pounds per acre)	867	892	76	25		
N .		Mill	ion bales			
Beginning stocks	3.80	2.80	-0.40	-1.00		
Imports	0.01	0.01		0.00		
Production	17.17	20.55	1.55	3.38		
Total supply	20.98	23.36	1.15	2.38		
Mill use	3.25	3.35	-0.05	0.10		
Exports	14.92	14.20	0.70	-0.72		
Total use	18.17	17.55	0.65	-0.62		
Unaccounted	0.01	0.01	-0.01	_		
Ending stocks	2.80	5.80	0.50	3.00		
		Percent		_		
Stocks/use	15.4	33.0	1.7	17.6		
		Cents	Cents per pound			
Average market price	68.00	55.0/67.0		-7.00		

