

Grain Market Outlook for 2017

2016 KSU Ag Lender's Conferences

Garden City & Manhattan, Kansas

October 4 – 5, 2016

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EXTENSION AGRICULTURAL ECONOMIST

KANSAS STATE
UNIVERSITY

Department of Agricultural Economics



Key Grain Market Decisions & Issues

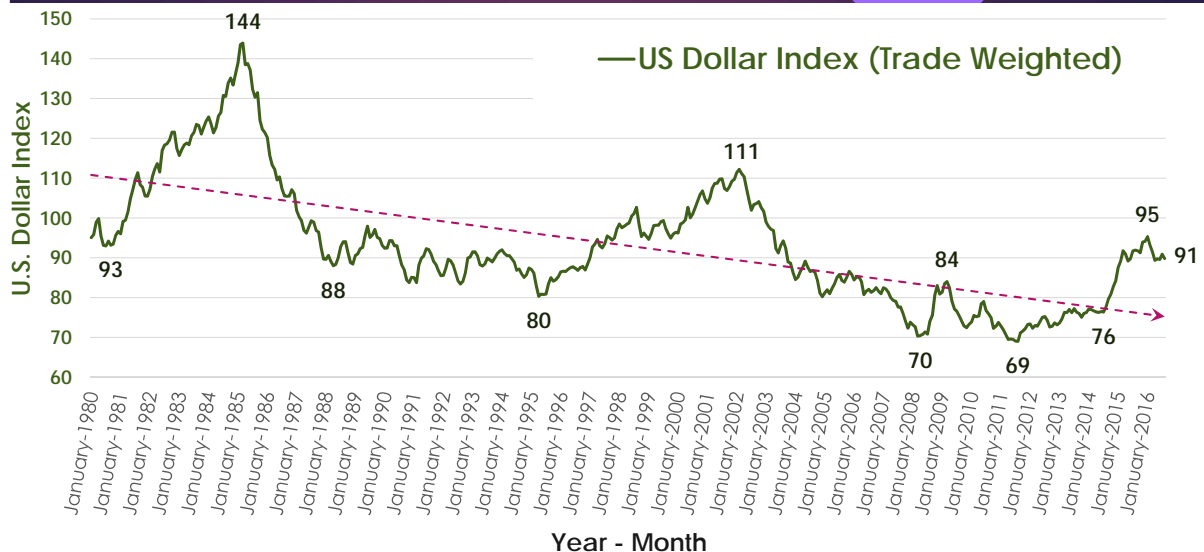
for Kansas Farmers & Agribusinesses

- 1) Marketing remaining 2016 Wheat & Other Crops
- 2) Marketing 2016 Fall Crops: *Harvest vs Post-harvest sales*
- 3) Storing & Handling of 2016 Crops into 2017
- 4) Crop production plans for 2017 – *Prices & profitability? Planted Acres? Crop inputs? Storage availability in 2017-18?*

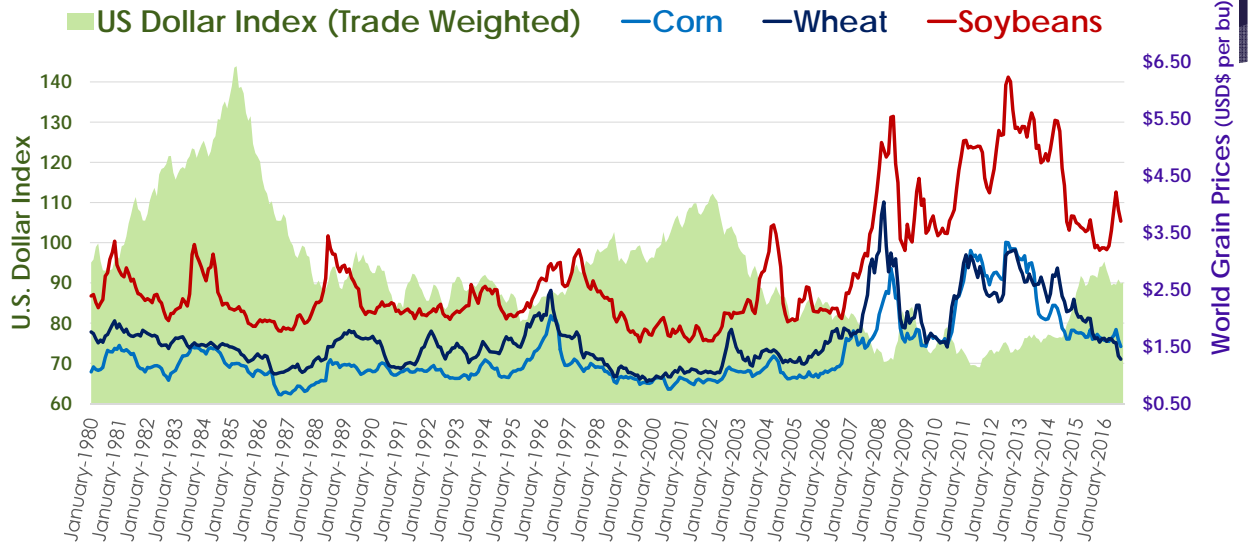
Topics to be discussed.....

- 1) **Overall Grain Market Situation** – in Kansas, U.S., & World
- 2) **Currency Exchange Rate** impacts on U.S. grain exports & World grain prices
- 3) **Market Outlook** for Corn, Sorghum, Wheat & Soybeans
- 4) **“Market Risks & Opportunities”** – *What is expected to happen in 2016-2017 & what could change (& when)*

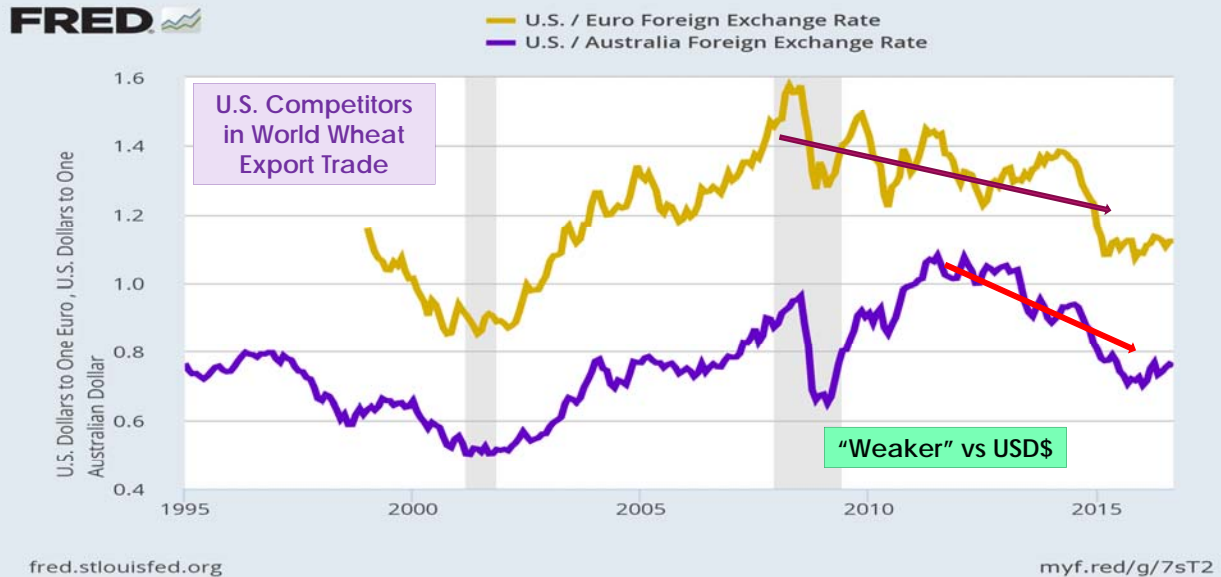
U.S. Dollar Index (Trade Weighted) 1980 – Sept. 2016



U.S. Dollar Index vs World Grain \$'s 1980 – Sept. 2016

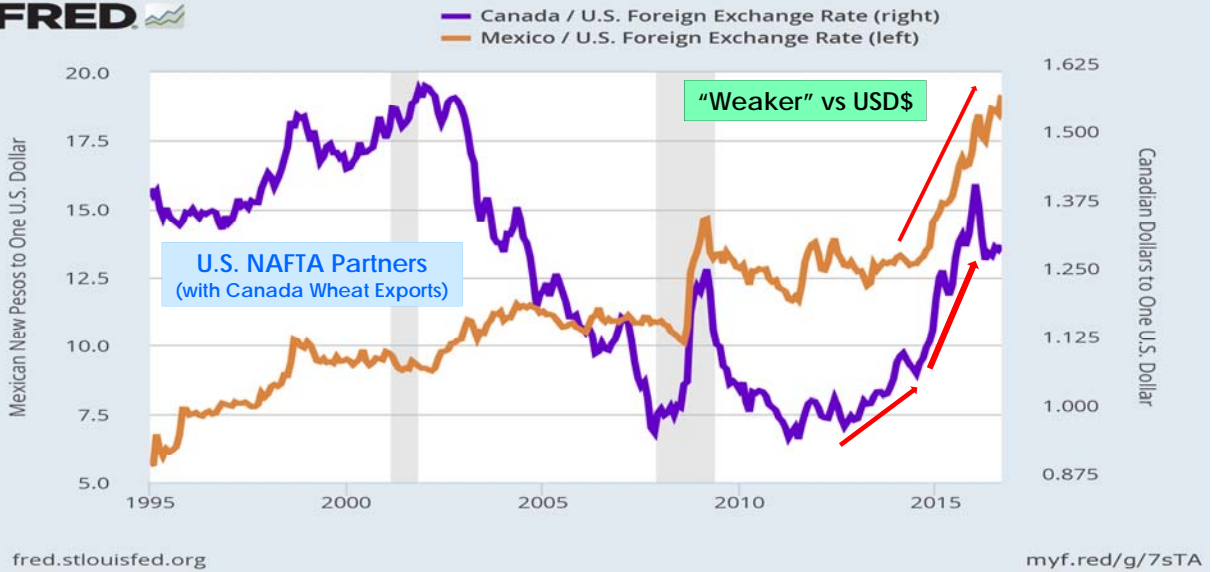


Euro & Australia Currency per U.S. Dollar



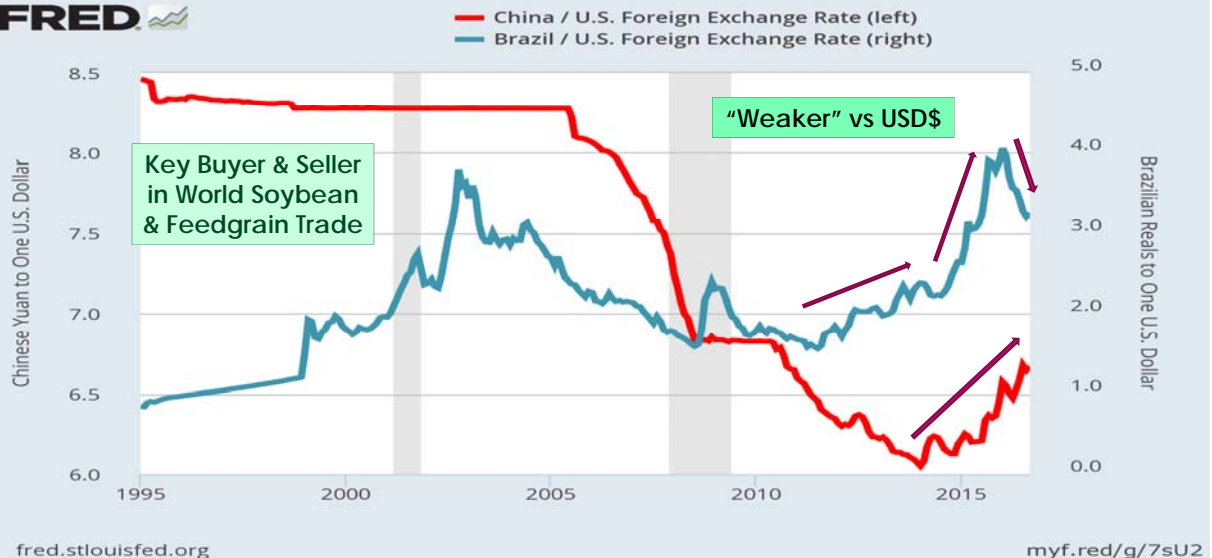
Canada & Mexico Exchange Rates - Monthly

FRED



China & Brazil Exchange Rates - Monthly

FRED



Corn & Sorghum Markets



KANSAS STATE UNIVERSITY

Department of Agricultural Economics

CME Corn Futures

Weekly Chart: August 2014 – Sept. 30, 2016 + 10/4/2016 close



CME Corn Futures

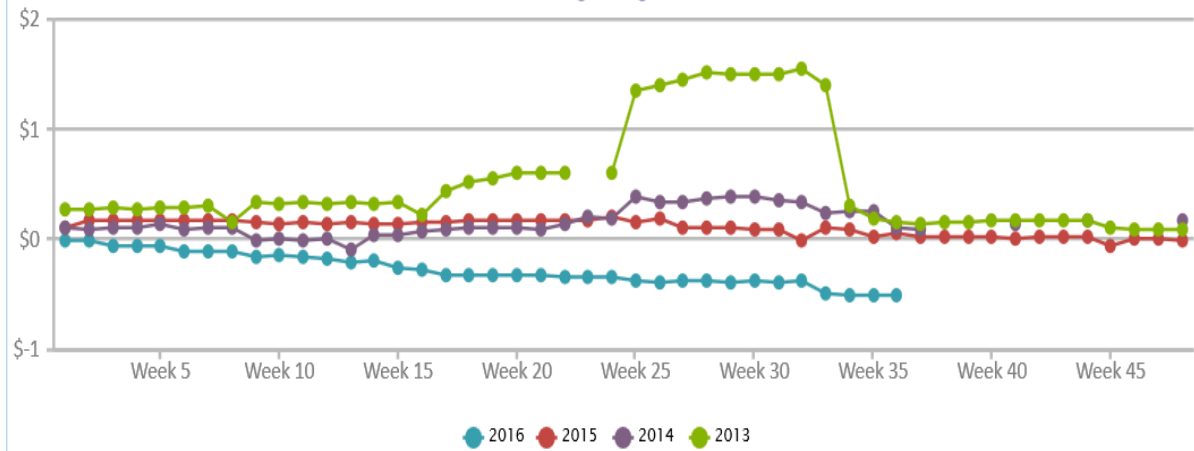


Monthly Chart: August 2007 – Sept. 2016 + 10/4/2016 close



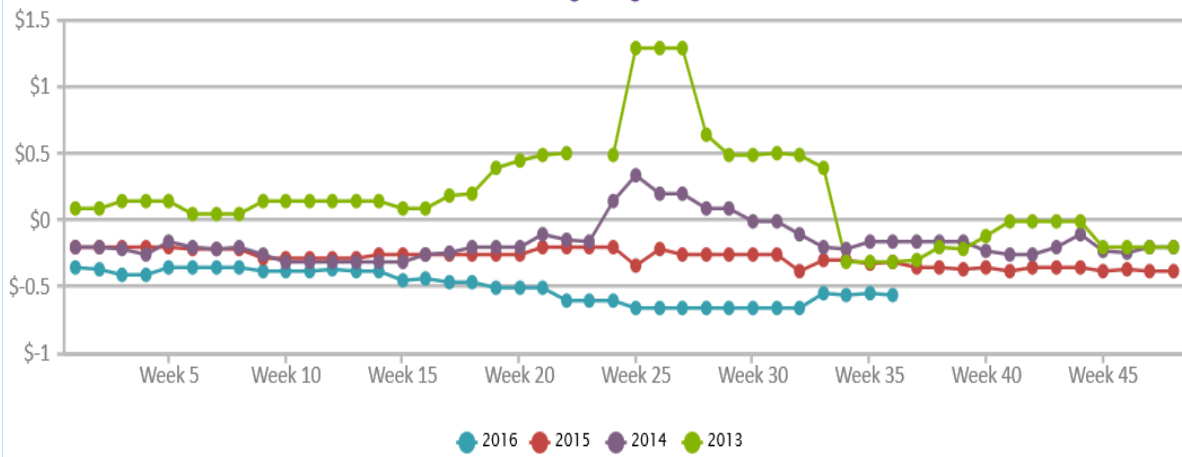
GARDEN CITY, KS: Corn Basis - GARDEN CITY COOP

www.AgManager.info



SALINA, KS: Corn Basis - CARGILL

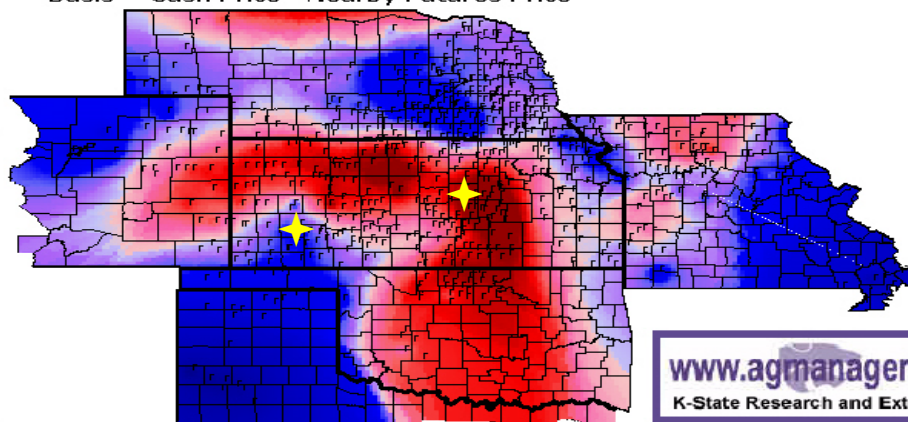
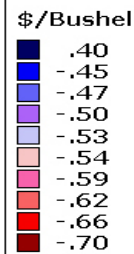
www.AgManager.info



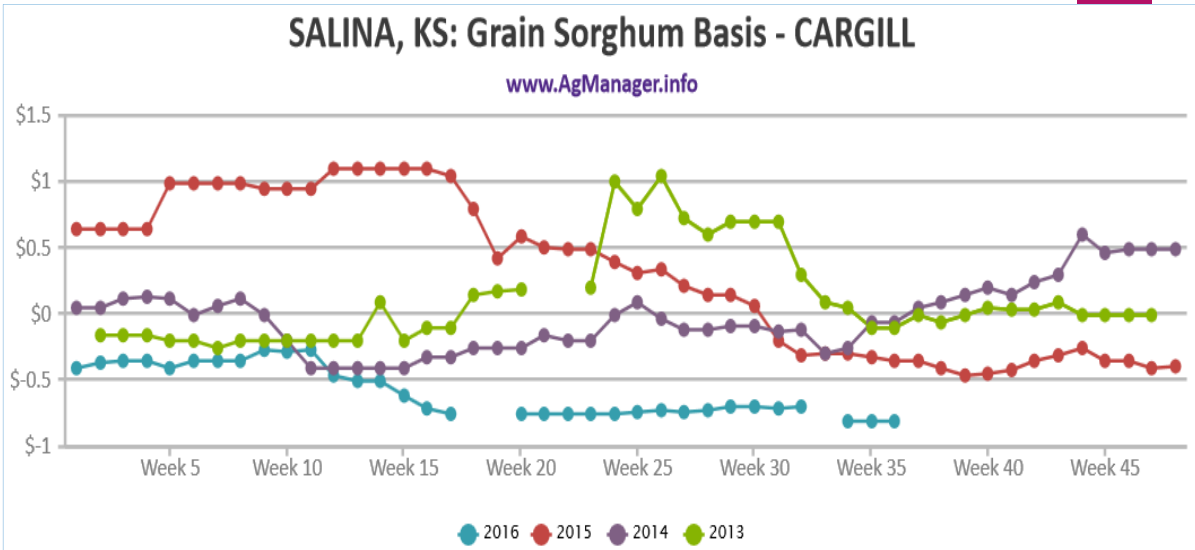
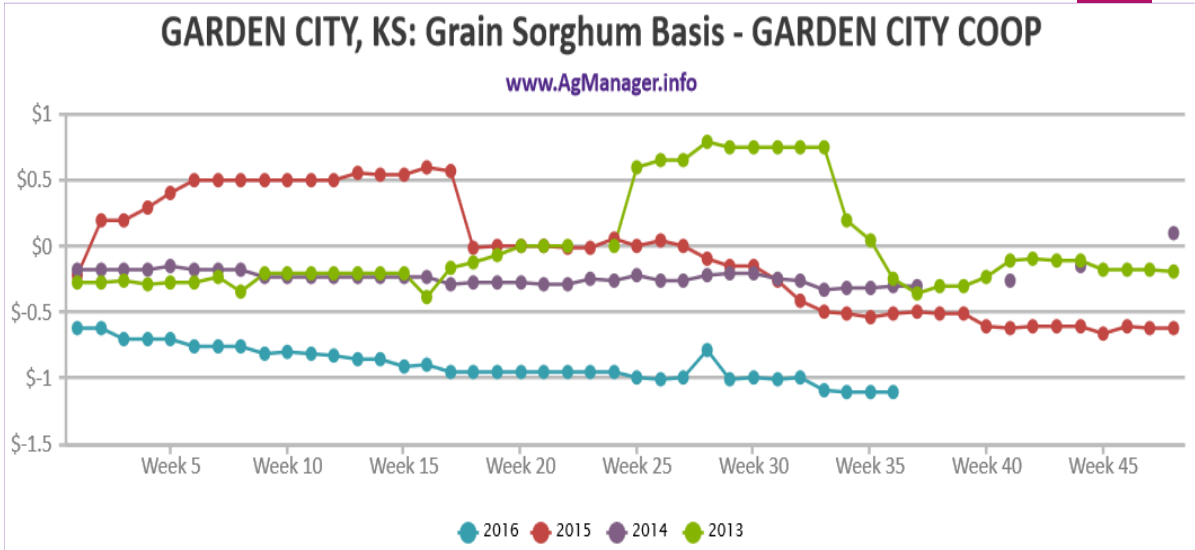
Corn Basis, 09-28-2016

Basis = Cash Price - Nearby Futures Price

CBT Dec
Futures
Price: \$3.29



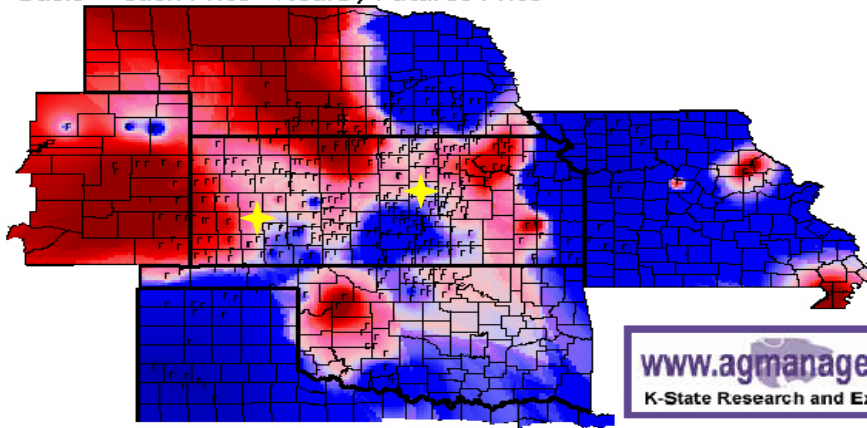
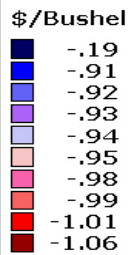
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Grain Sorghum Basis, 09-28-2016

Basis = Cash Price - Nearby Futures Price

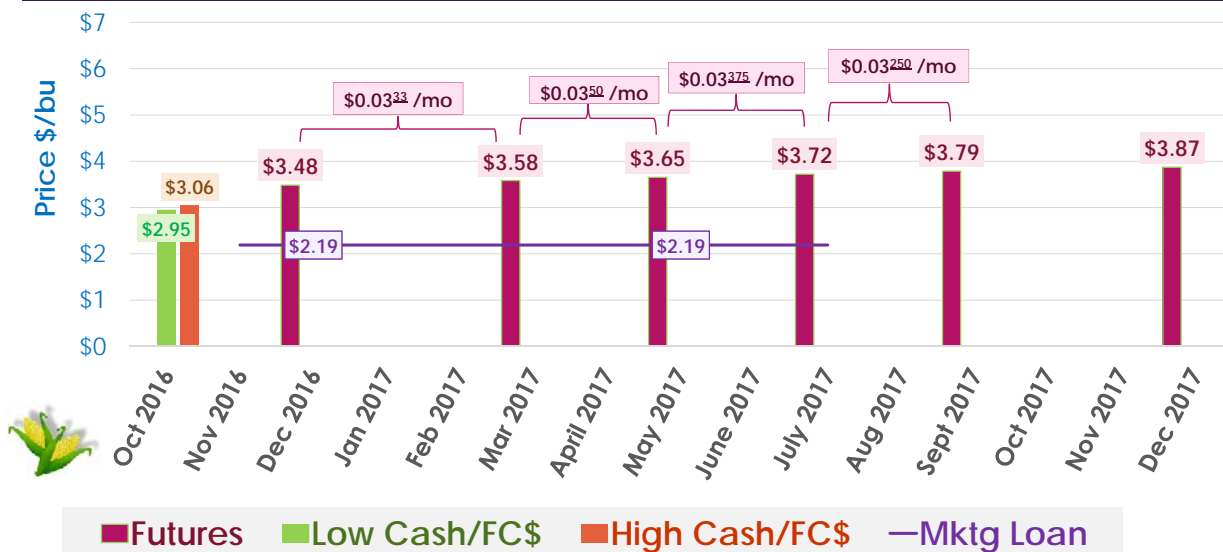
CBT Corn
Dec Futures
Price: \$3.29



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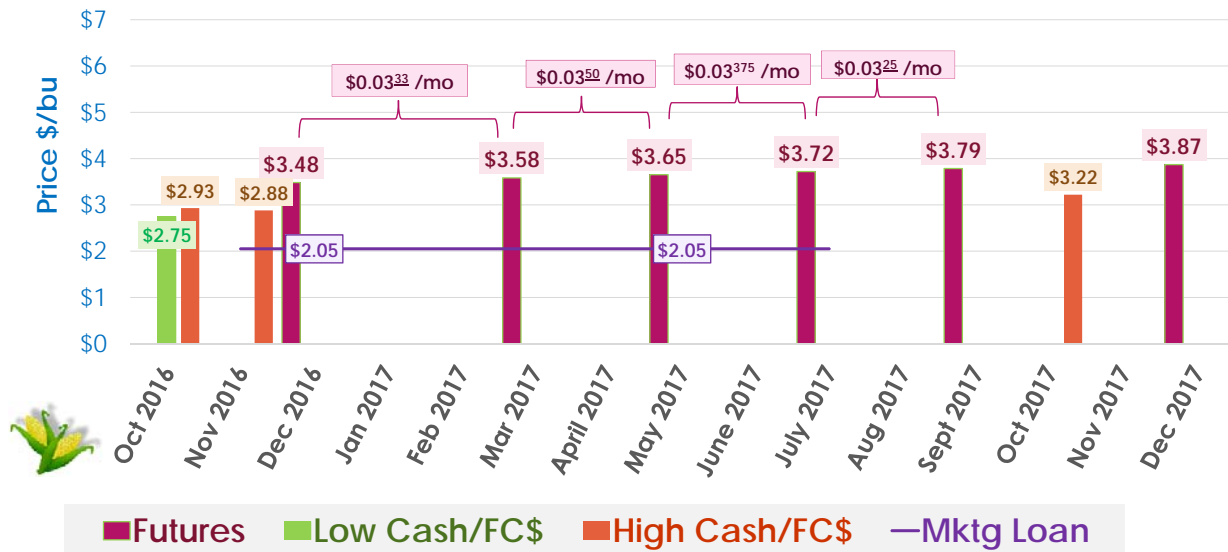
Corn Cash & Futures Prices – Garden City

Garden City, Kansas Local Elevators – October 4, 2016



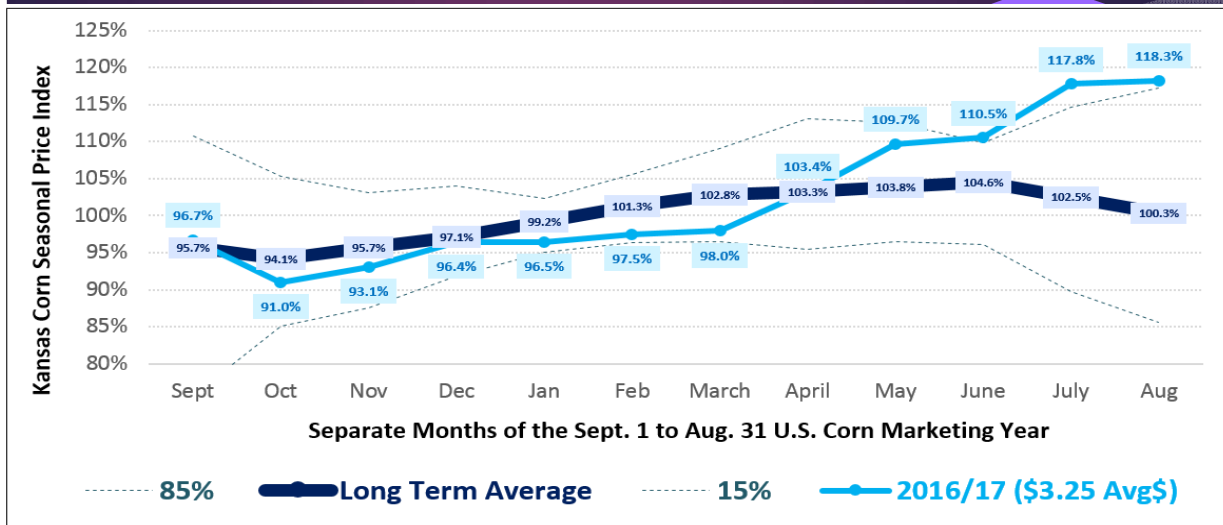
Corn Cash & Futures Prices – Salina

Salina, Kansas Local Elevators – October 4, 2016



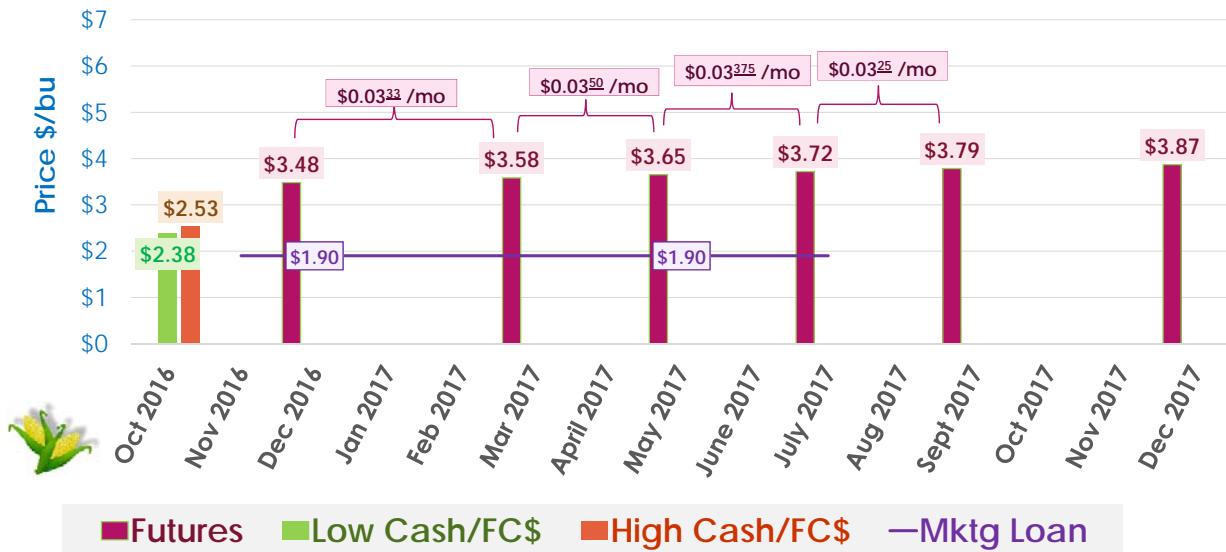
Kansas Corn Seasonal Cash \$ Index

Monthly Prices: 1999/2000 – 2014/15 + Forecast MY 2016/17



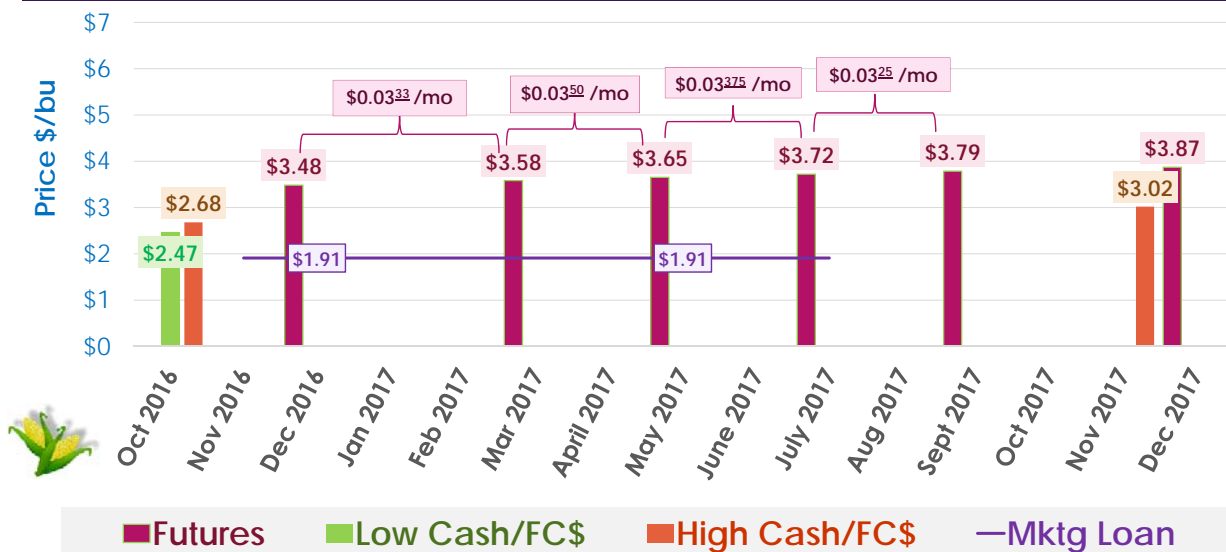
Sorghum Cash & Futures Prices – Garden City

Garden City, Kansas Local Elevators – October 4, 2016

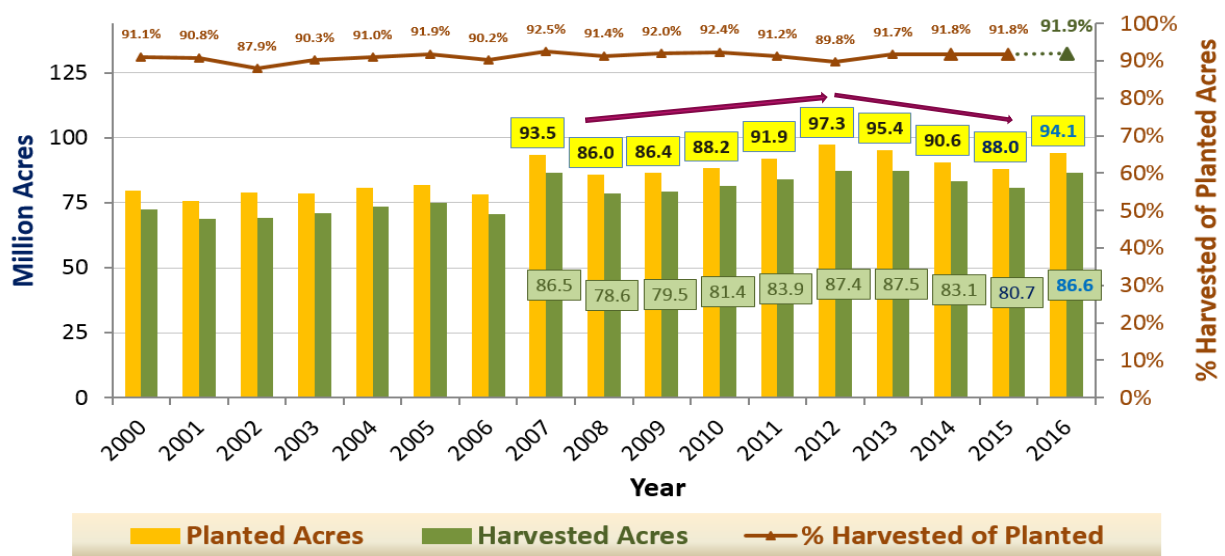


Sorghum Cash & Futures Prices – Salina

Salina, Kansas Local Elevators – October 4, 2016



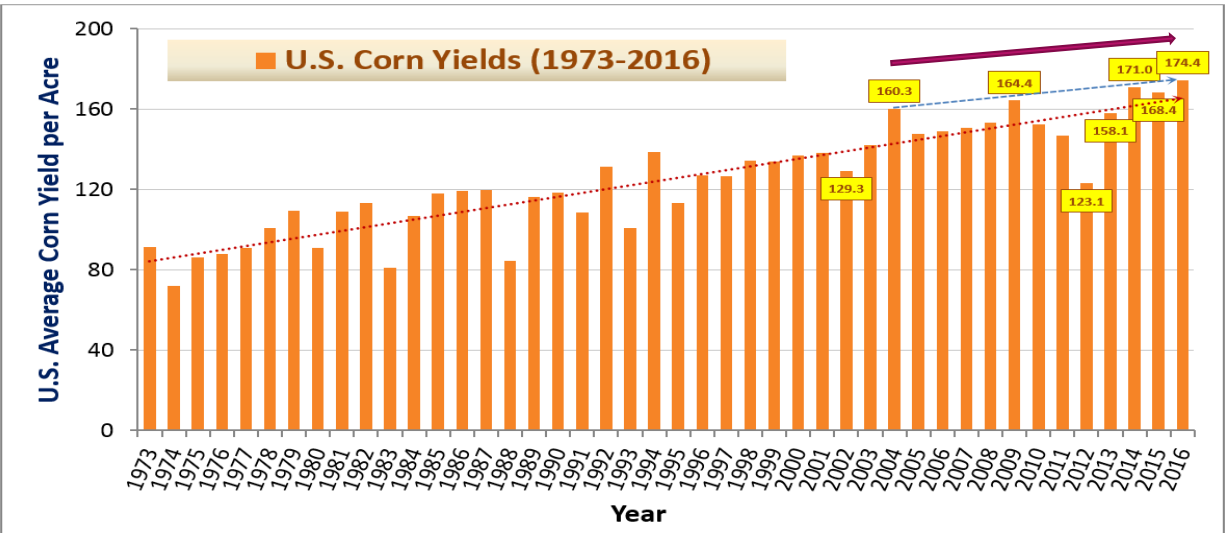
U.S. Corn Acreage: 2000-2016



U.S. Corn Yields: 1973-2016

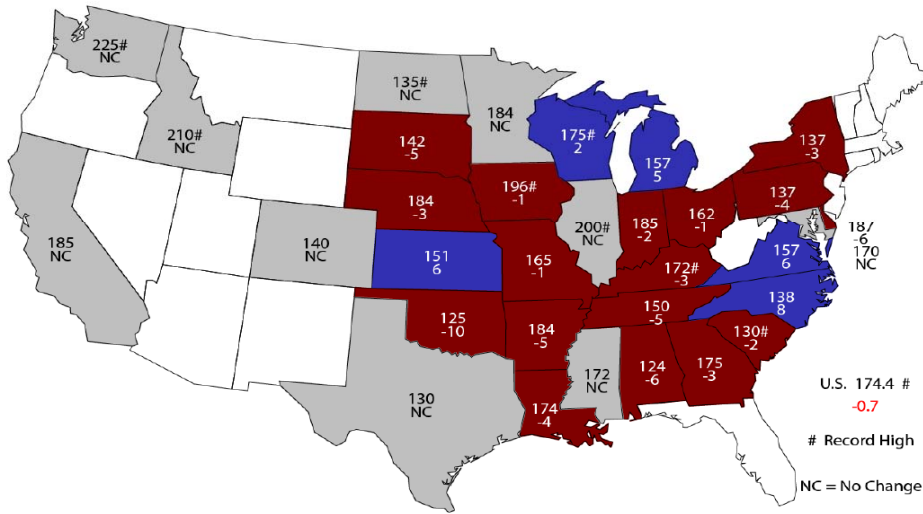


USDA 2016 USDA Forecast = 174.4





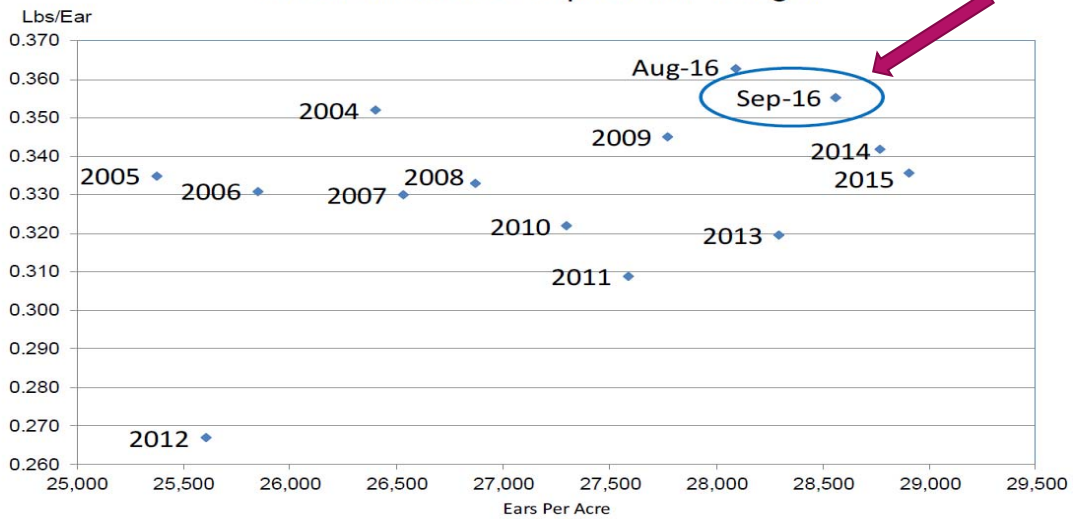
September 1, 2016 Corn Yield Bushels and Change From Previous Month



USDA-NASS
9-12-16



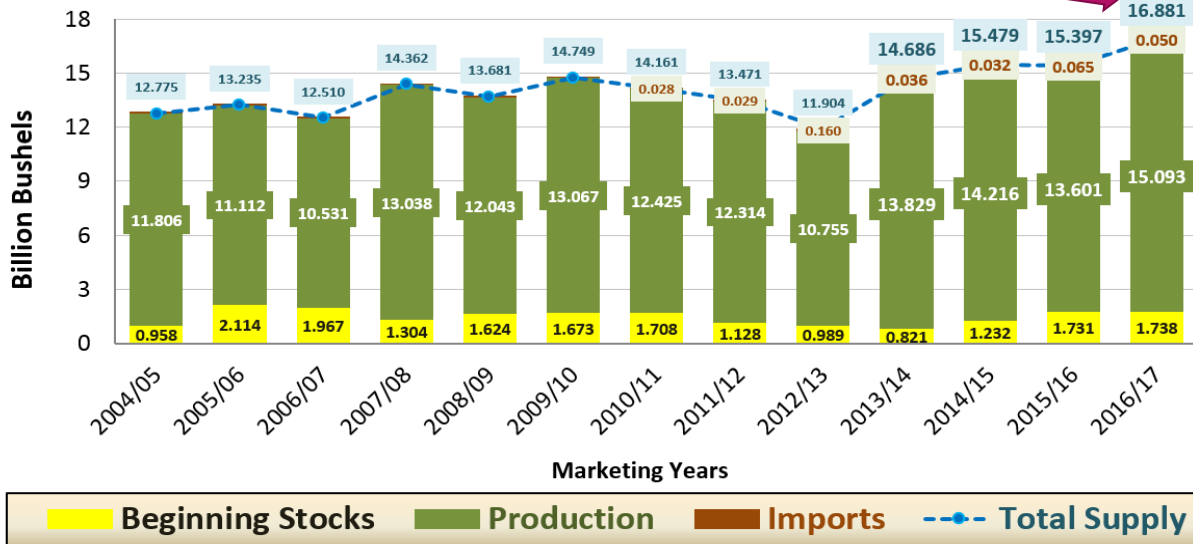
Corn Objective Yield Region Ears Per Acre vs. Implied Ear Weight



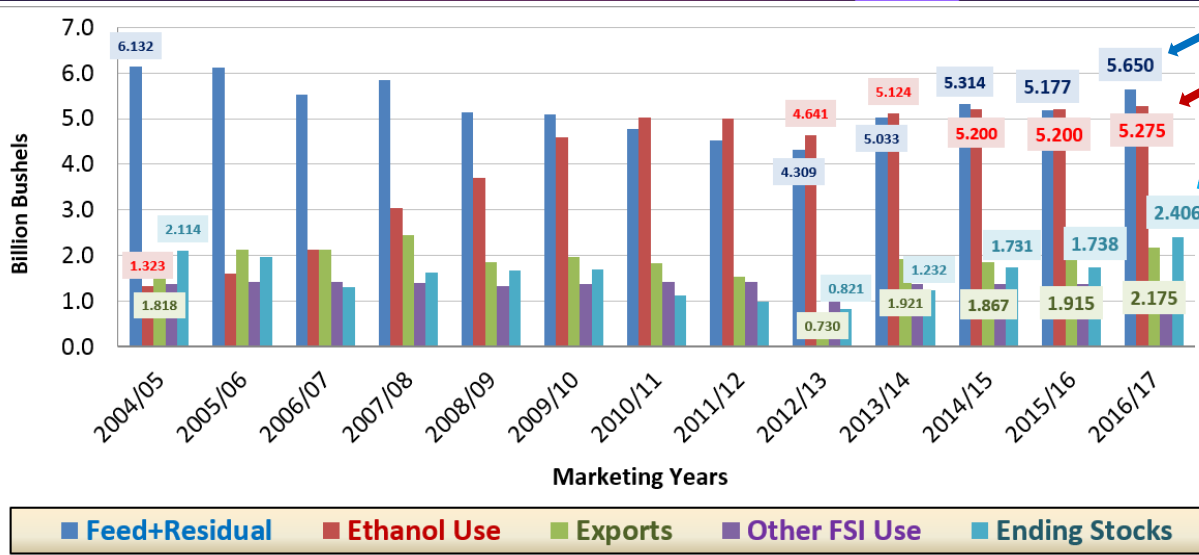
Implied Ear Weight = (Published Yield * 56) / Ears

USDA-NASS
9-12-16

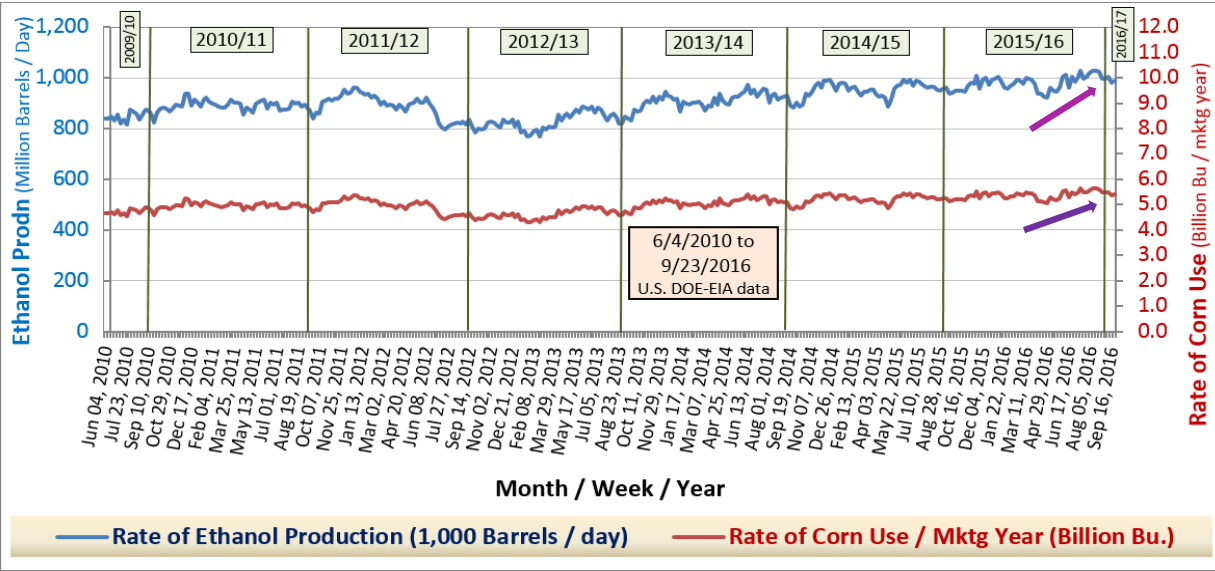
U.S. Corn Production & Supplies



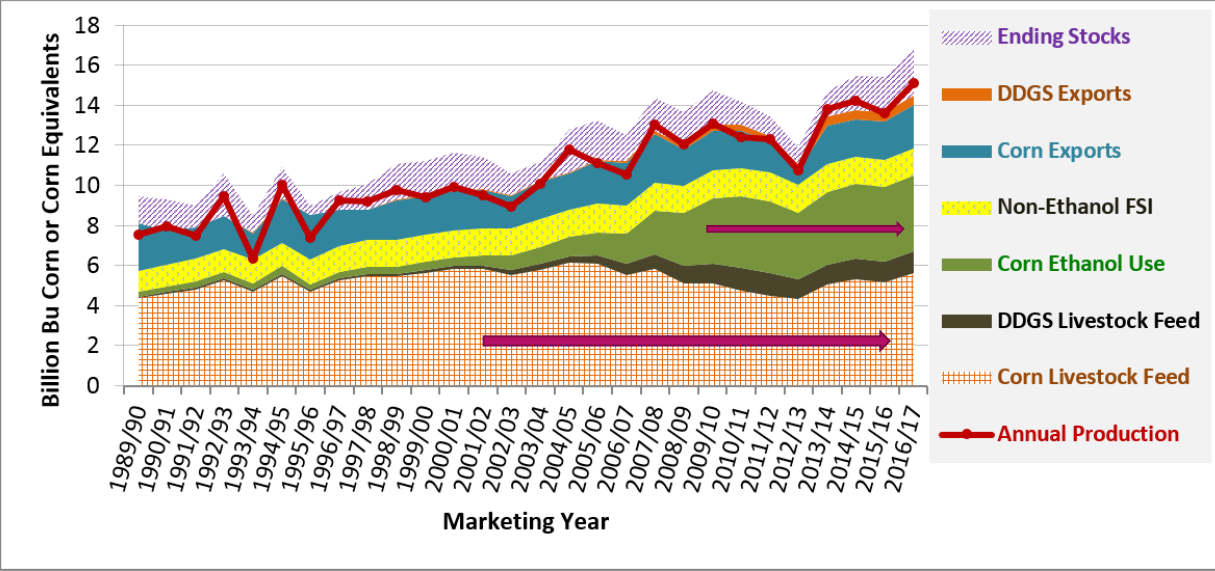
U.S. Corn Use - By Category



U.S. Ethanol Production & Corn Use



U.S. Corn Use - With DDGS #s (since 1989/90)

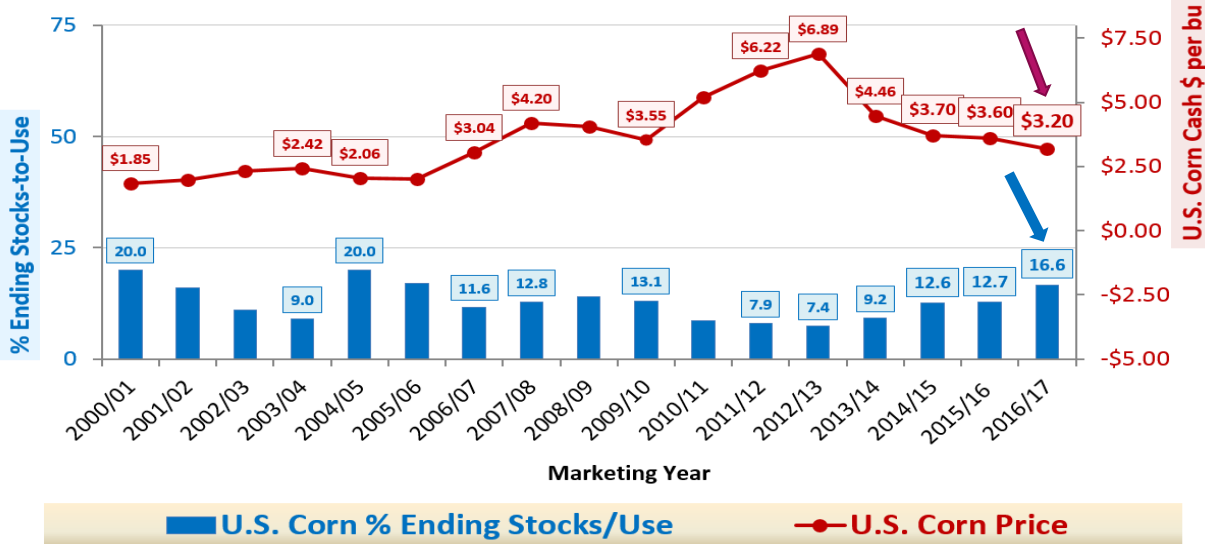


U.S. Corn Ending Stocks & % Stocks/Use



Ernst & Young

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

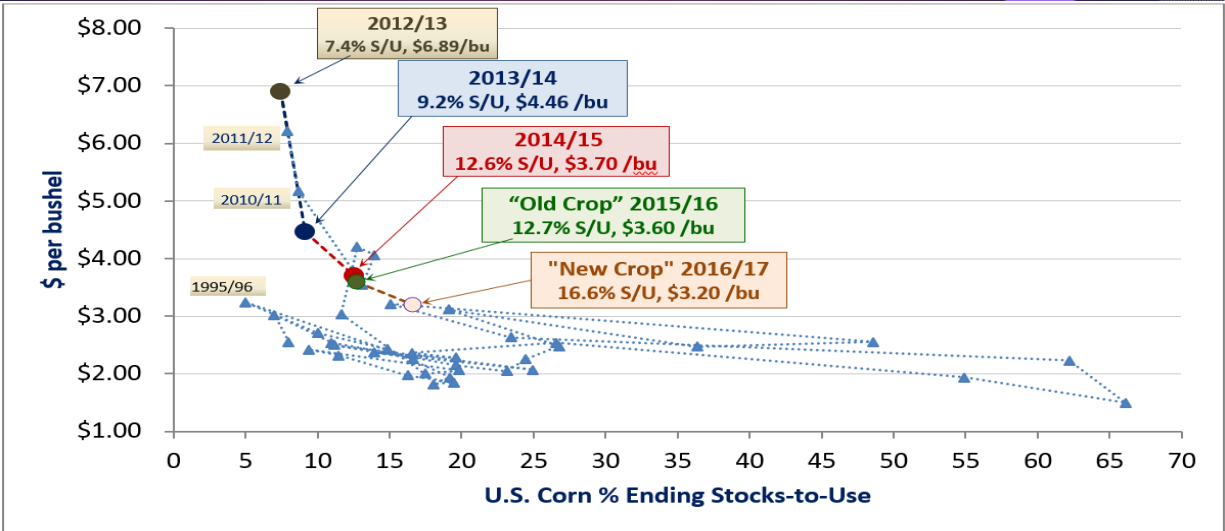


■ U.S. Corn % Ending Stocks/Use

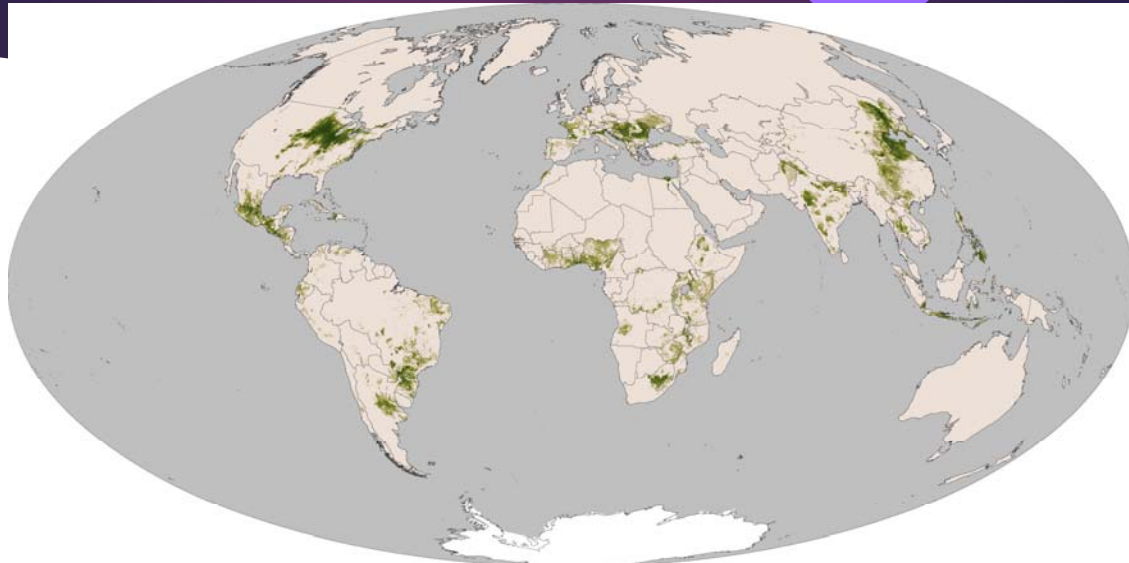
● U.S. Corn Price

U.S. Corn Price\$ vs U.S. % Stocks-to-Use

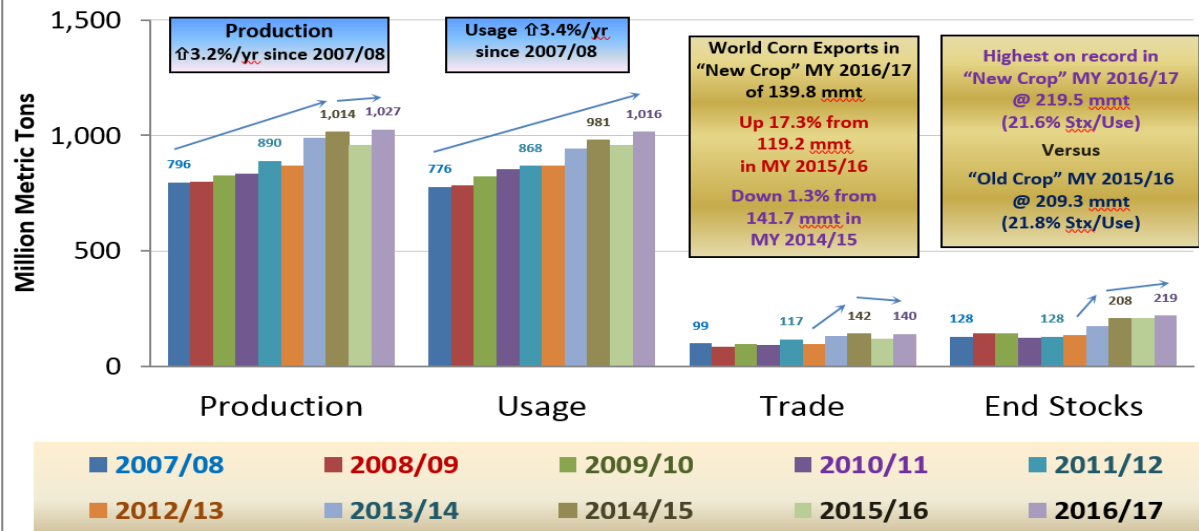
MY 1973/74 through "New Crop" MY 2016/17



World Corn (Maize) Production Regions

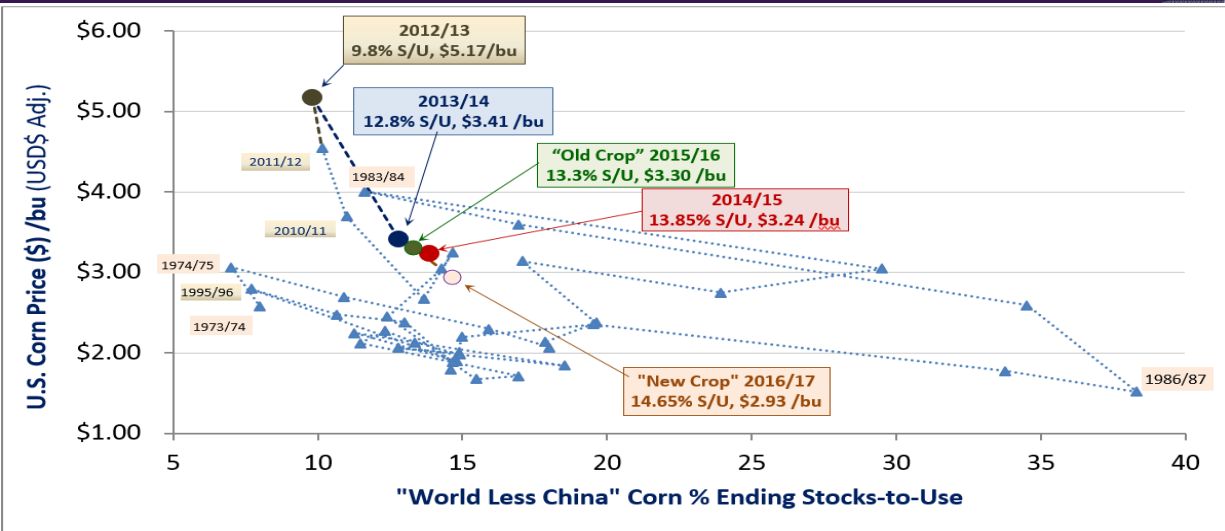


World Corn Supply, Use & Stocks

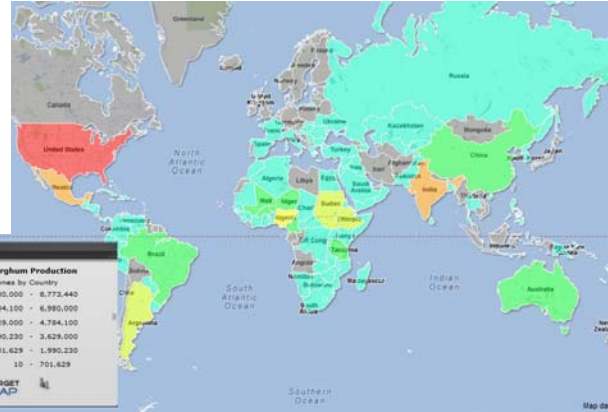
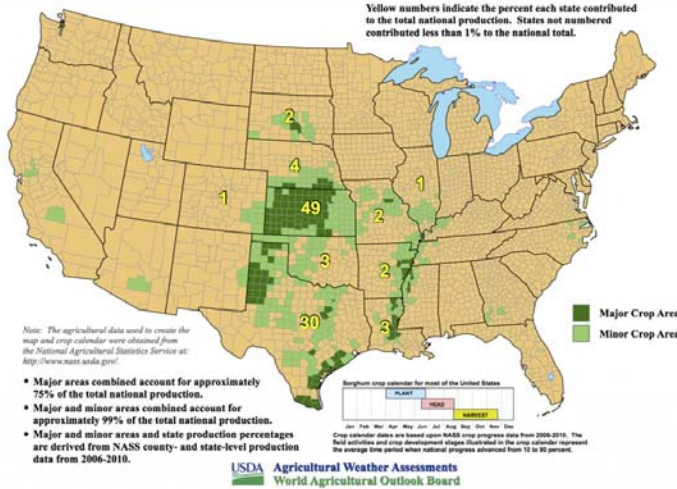


U.S. Corn \$^{USD adj} vs World^{Less China} % S/U

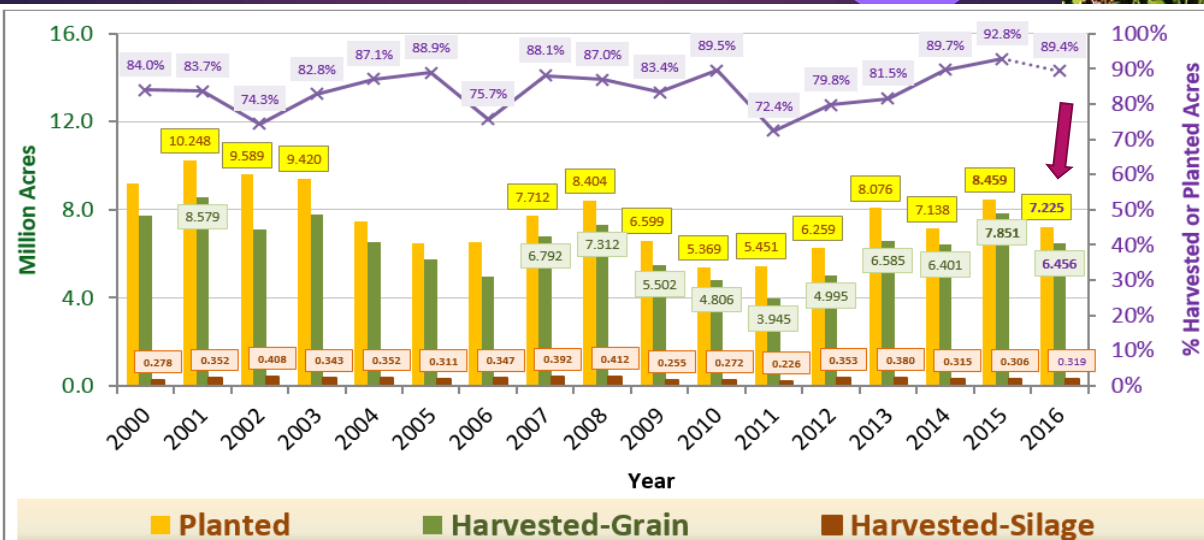
MY 1973/74 through "New Crop" MY 2016/17



United States: Sorghum

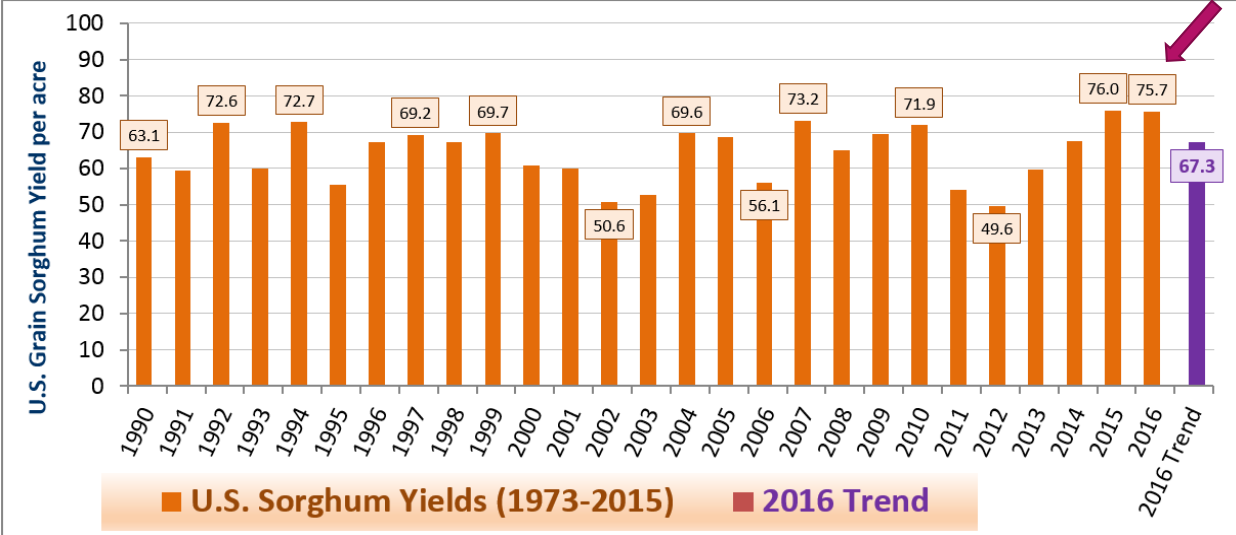


U.S. Sorghum Acreage: 2000-2016



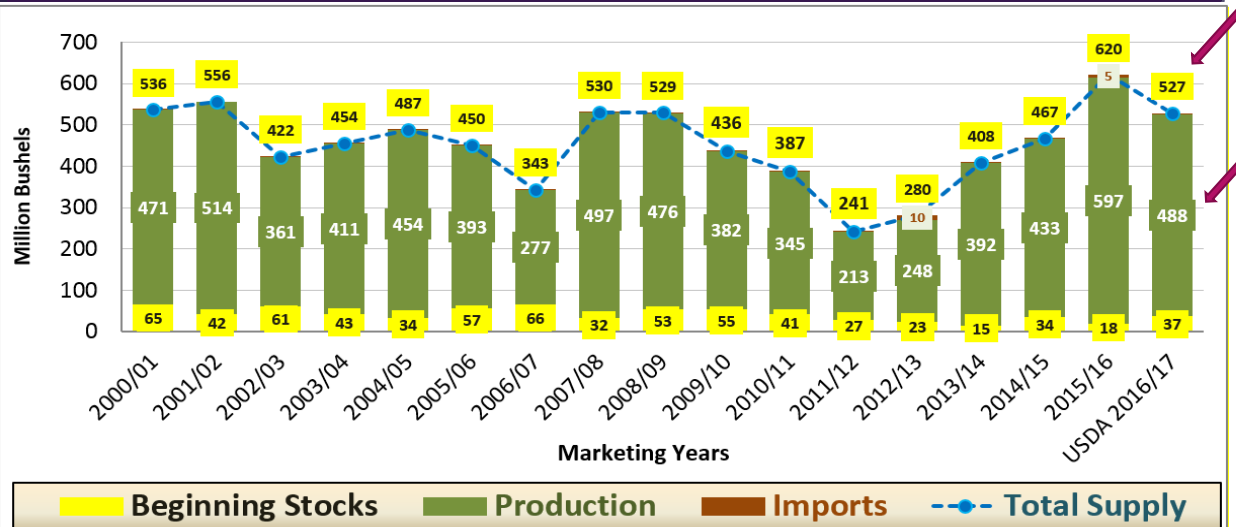
U.S. Sorghum Yields: 1990-2016

USDA 2016 USDA Forecast = 75.7



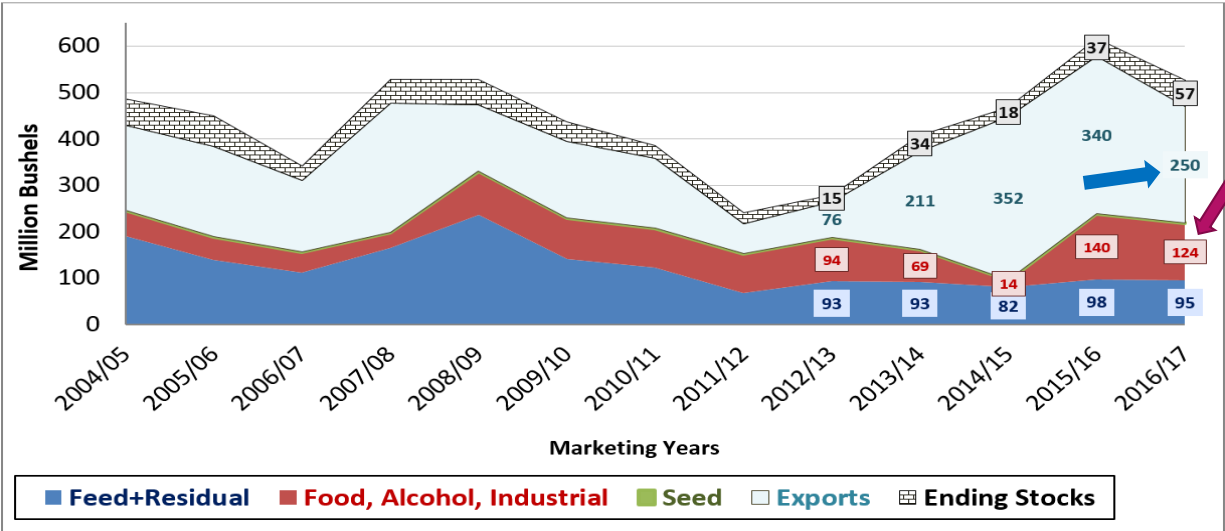
U.S. Sorghum Production & Supplies

NY 2000/01 to "New Crop" MY 2016/17



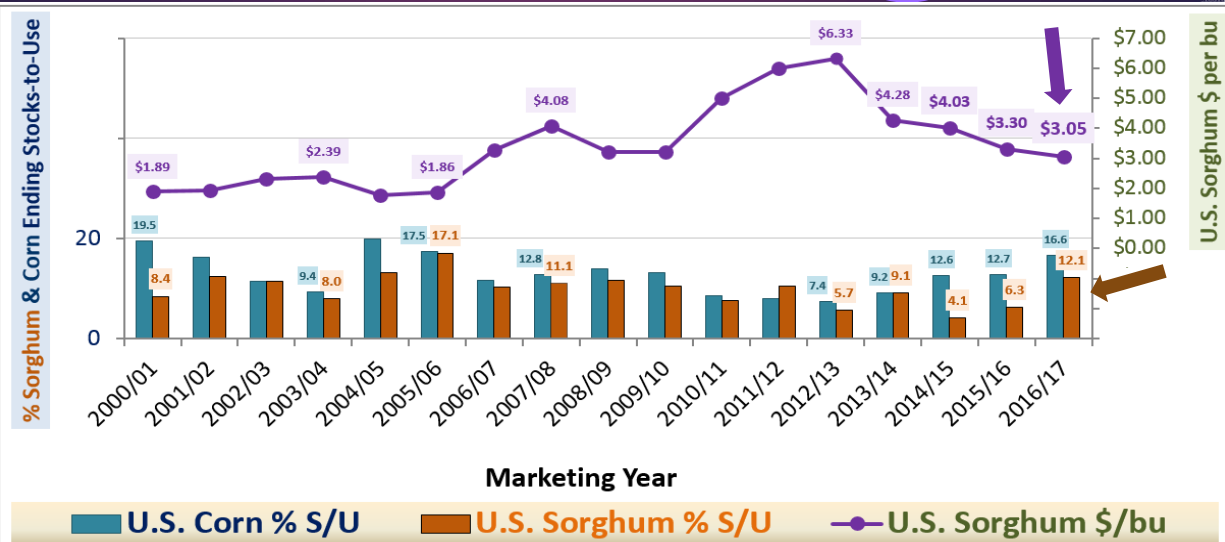
U.S. Sorghum Use & Ending Stocks

MY 2004/05 to "New Crop" MY 2016/17



U.S. Sorghum & Corn % Stks/Use vs Sorghum \$

MY 2000/01 to MY 2016/17



U.S. Feedgrain Market Prospects:

Low Prices "helping" Use, but Large Supplies are "limiting"

- Record large World & U.S. feedgrain supplies
- Low Corn \$'s have supported U.S. domestic use
 - Livestock Feed^{2016/17} = 5.650 bln bu (9 year high – vs 5.858 bb in 2007/08)
 - Corn Ethanol^{2016/17} = 5.275 bln bu (record high – vs 5.200 bb last 2 yrs)
 - Other FSI^{2016/17} = 1.370 bln bu (4 year high – vs 1.424 bb in 2011/12)
 - Exports^{2016/17} = 2.175 bln bu (9 year high – vs 2.437 bb in 2007/08)
- Sorghum exports declining from China "run"



Monthly Crop Calendar for Corn

9/12/2016

	USDA Prod Est.	Change	Plant		Silk		Harvest												
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug					
EU	61.15	(0.95)	H	H	H	H	H					P	P	P	P			H	H
US	383.38	(1.54)		H	H	H	H						P	P	P			S	S
Mexico Summer	24.50	0.00			H	H	H	H	H	H	H	H	H	H	H			P	P
Ukraine	26.00	0.00		H	H	H	H						P	P	P			S	S
Russia	14.00	0.00			H	H	H							P	P			S	S
China	216.00	(2.00)	H	H	H	H								P	P	P	P		
Indonesia Dry Region	9.60	0.00	H	H	H	H								P	P	P	P	P	H
Philippines Main	8.00	0.00	H	H				P	P	P	P	P	H	H	H	P	P	P	H
Canada	12.35	0.35		H	H	H	H							P	P	P	P	S	S
India	24.50	0.00	P	P	H	H	H	H	H	H						P	P	P	P
Brazil 1st crop	82.50	2.50	P	P	P	P	P	P	P	H	H	H	H	H	H				P
Argentina	36.50	0.00	P	P	P	P	P	S	S	S		H	H	H	H	H			
Philippines 2nd Crop			P	P	P	P	P	H	H	H	H	H	H						
South Africa	13.00	0.00			P	P	P	P	P	S	S			H	H	H	H	H	H
Mexico Winter								P	P	P	P	P	P	H	H	H	H	H	H
Brazil 2nd crop									P	P	P	P		H	H	H	H	H	H
Indonesia Rainy Region					H	H	H	H	H										
Nigeria	7.20	0.00	H	H								P	P	P	P	P	P	H	H

Sources: USDA, AMIS, and CHS, Inc. locations

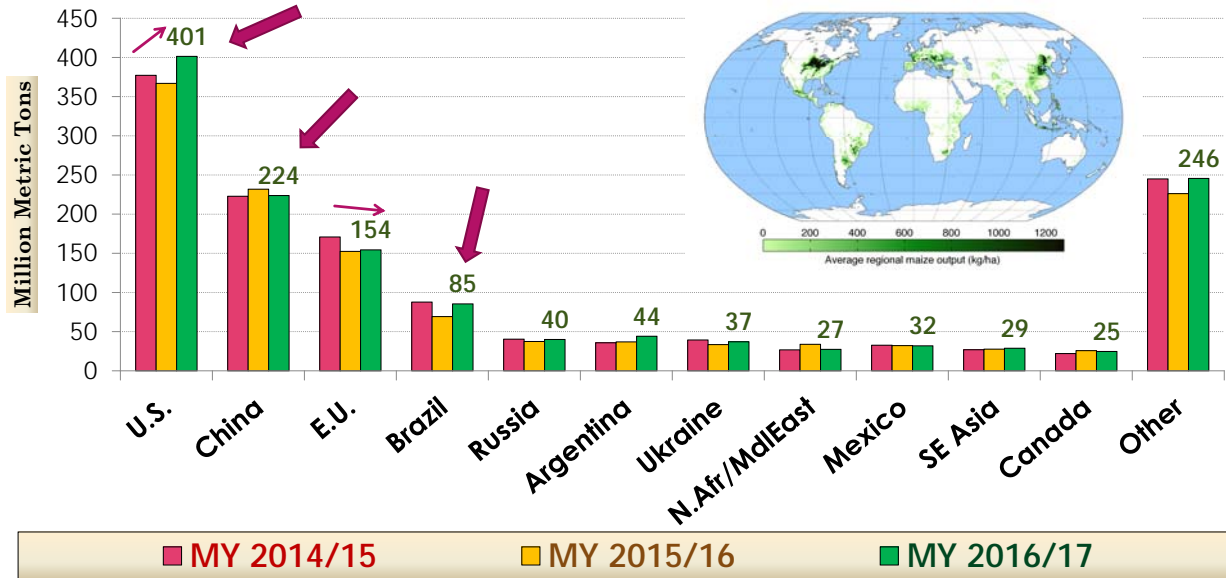
*Production estimates are in million metric tons and come from the FAS/USDA's most recent monthly World Agricultural Production report.

**Production estimates are for ALL CORN. Numbers will be listed next to the variety that comes first in the chart.

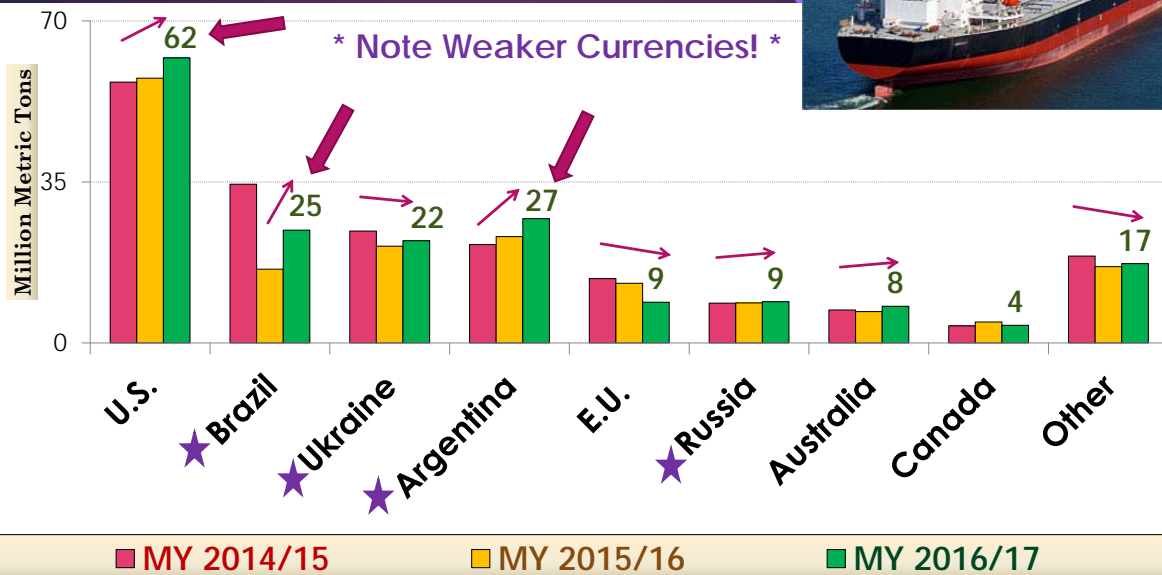
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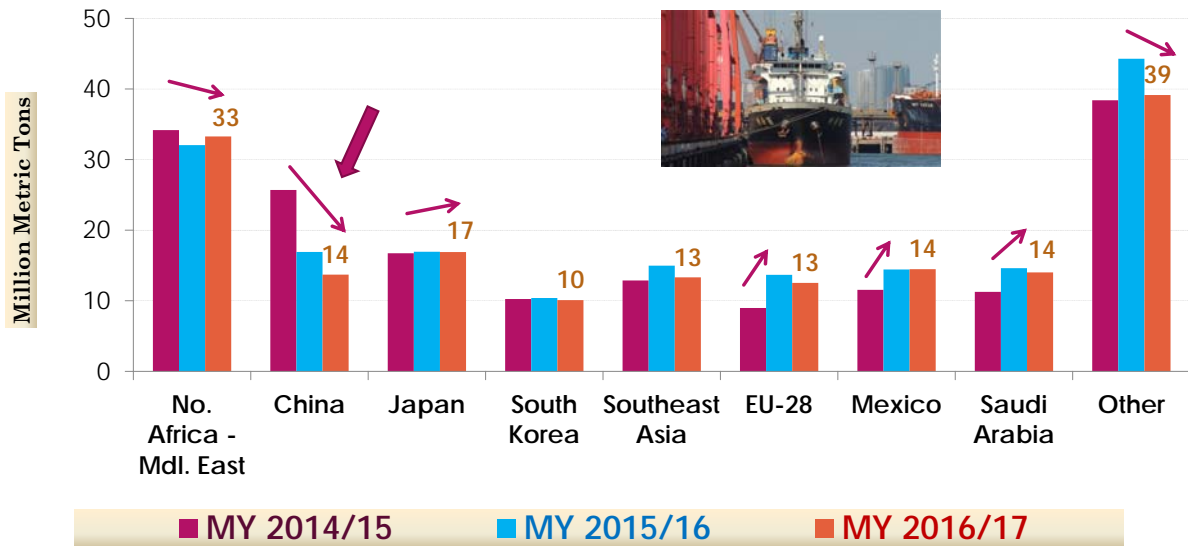
World Coarse Grain Producers



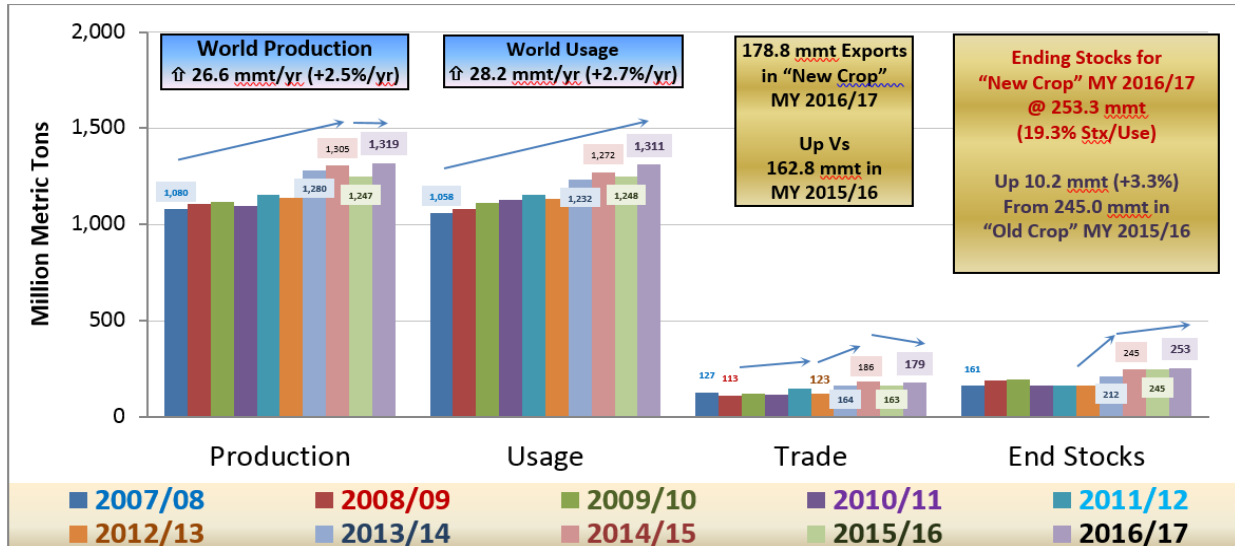
Coarse Grain Exporters



Coarse Grain Importers

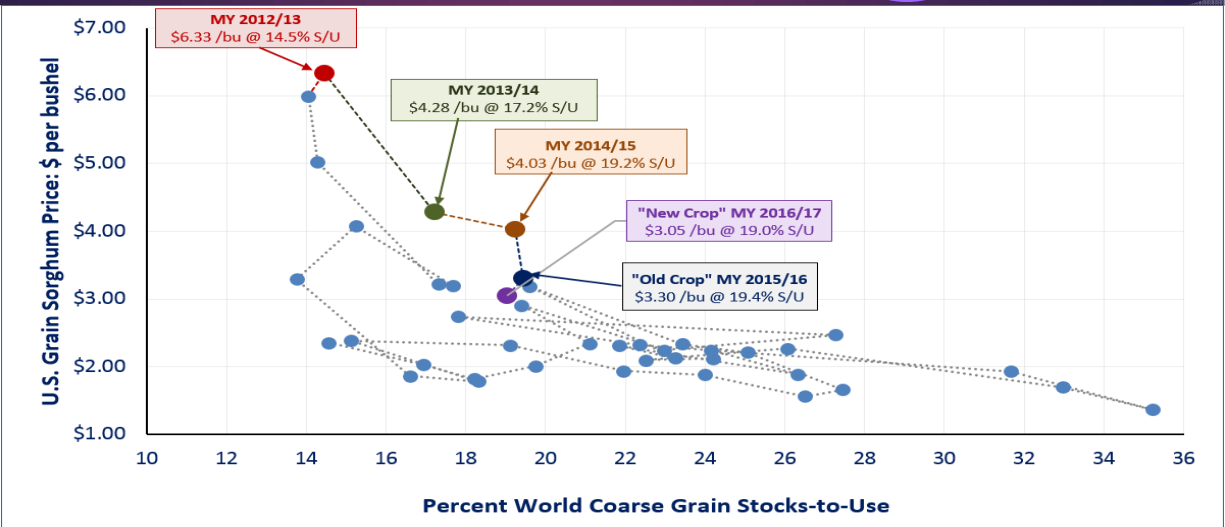


World Coarse Grain Supply, Use & Stocks



U.S. Sorghum Price\$ vs World Coarse Grain % S/U

MY 1975/76 through "New Crop" MY 2016/17



Wheat Markets



CME Kansas Hard Red Winter Wheat



Weekly Chart: August 2014 – September 30, 2016 + 10/4/2016 close



CME Kansas Hard Red Winter Wheat



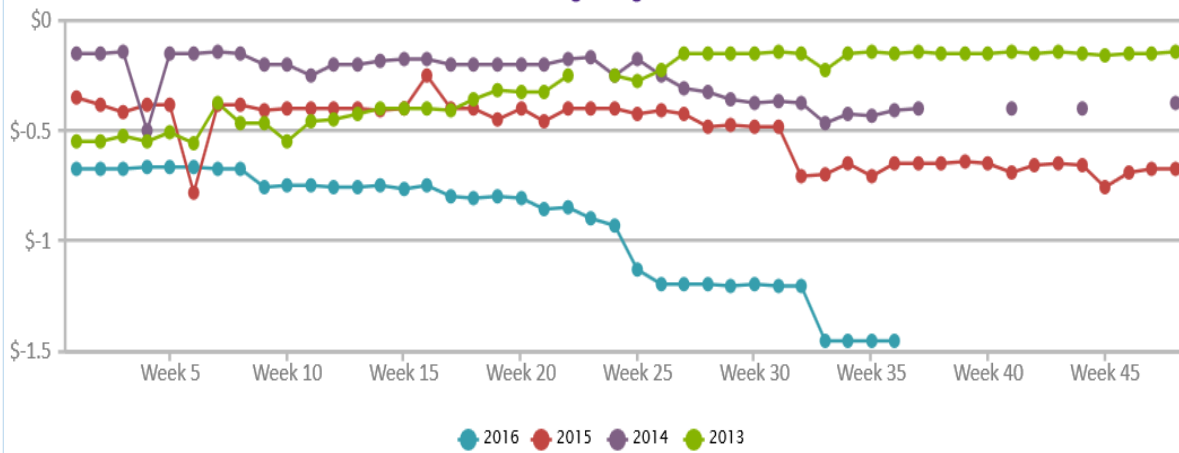
Monthly Chart: August 2007 – Sept. 2016 + 10/4/2016 close





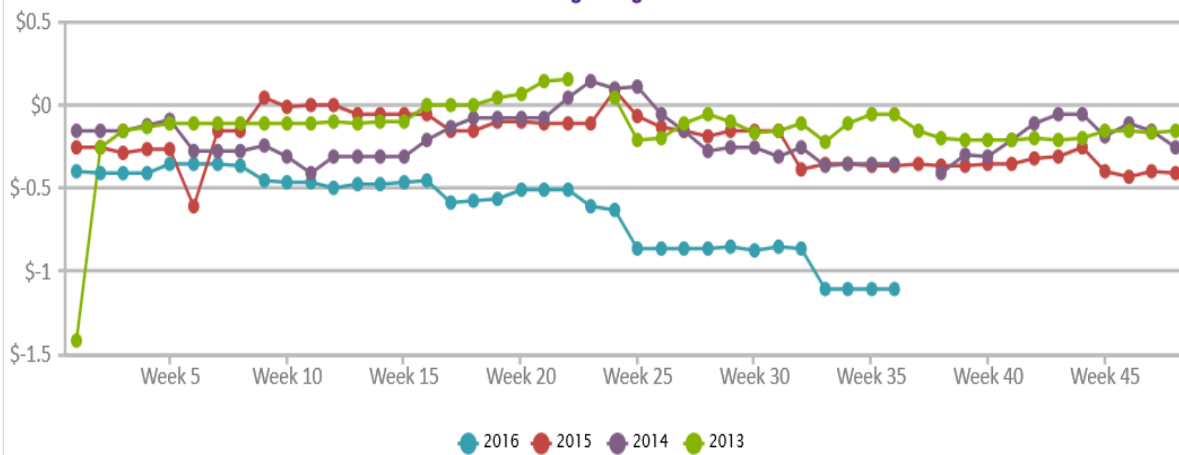
GARDEN CITY, KS: Hard Red Winter Wheat Basis - GARDEN CITY COOP

www.AgManager.info



SALINA, KS: Hard Red Winter Wheat Basis - CARGILL

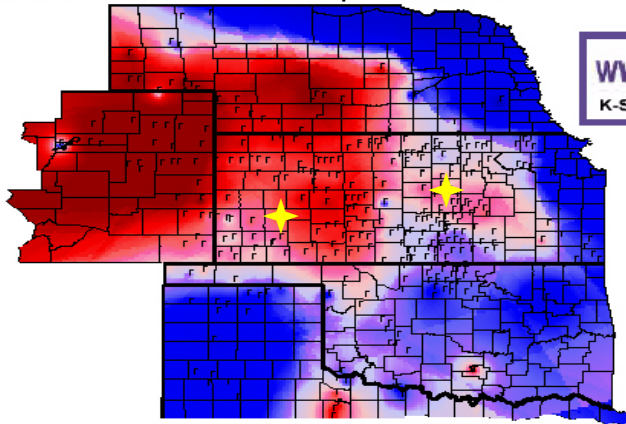
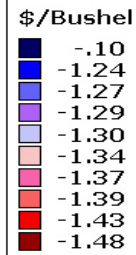
www.AgManager.info



Wheat Basis, 09-28-2016

Basis = Cash Price - Nearby Futures Price

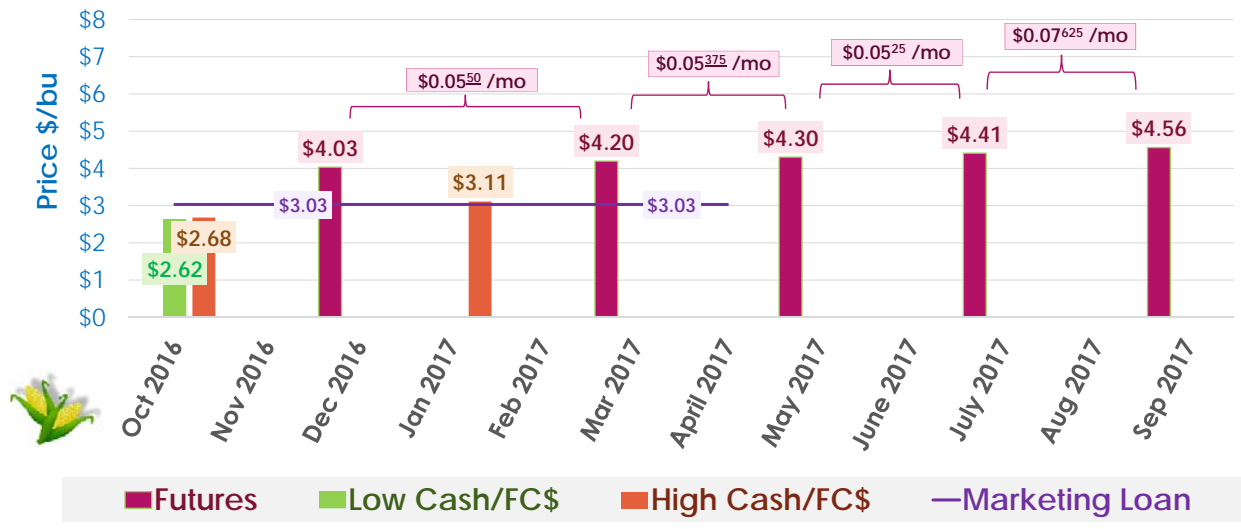
KCBT Dec
Futures
Price: \$4.21



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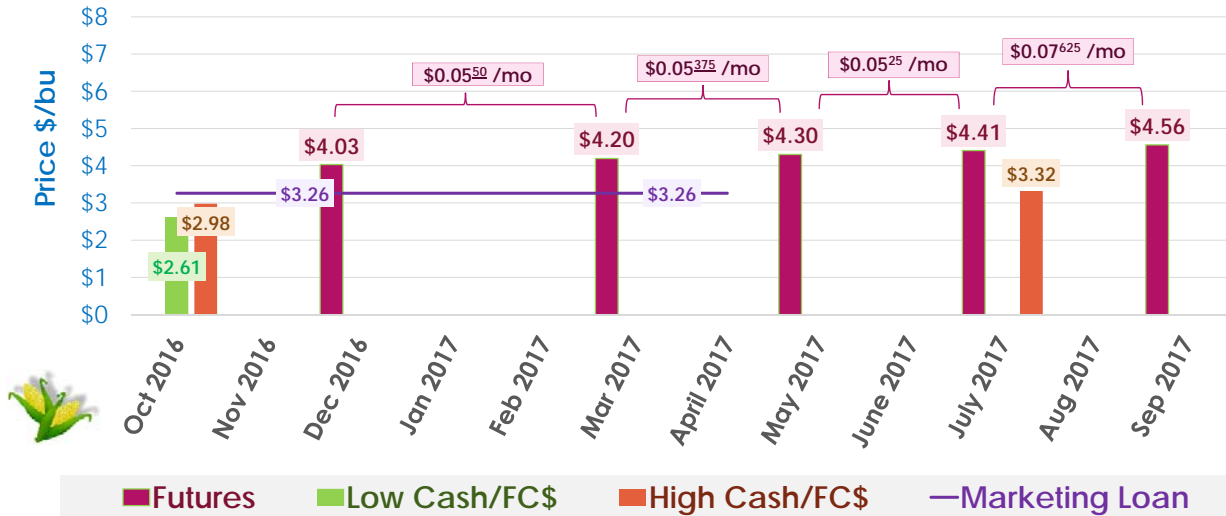
Wheat Cash & HRW Wheat Futures

Garden City, Kansas Local Elevators - October 4, 2016



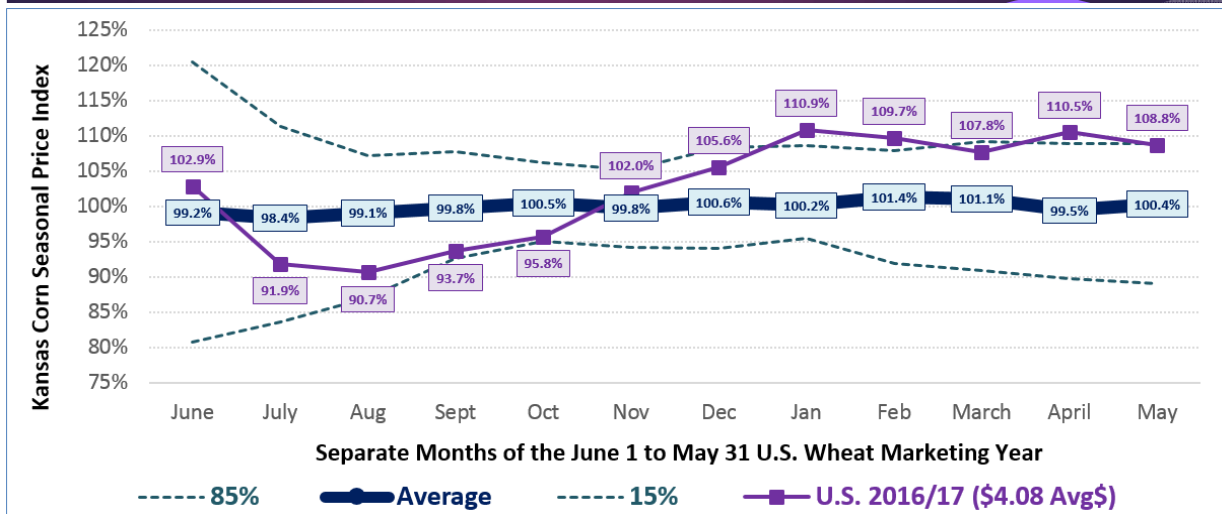
Wheat Cash & HRW Wheat Futures

Salina, Kansas Local Elevators - October 4, 2016

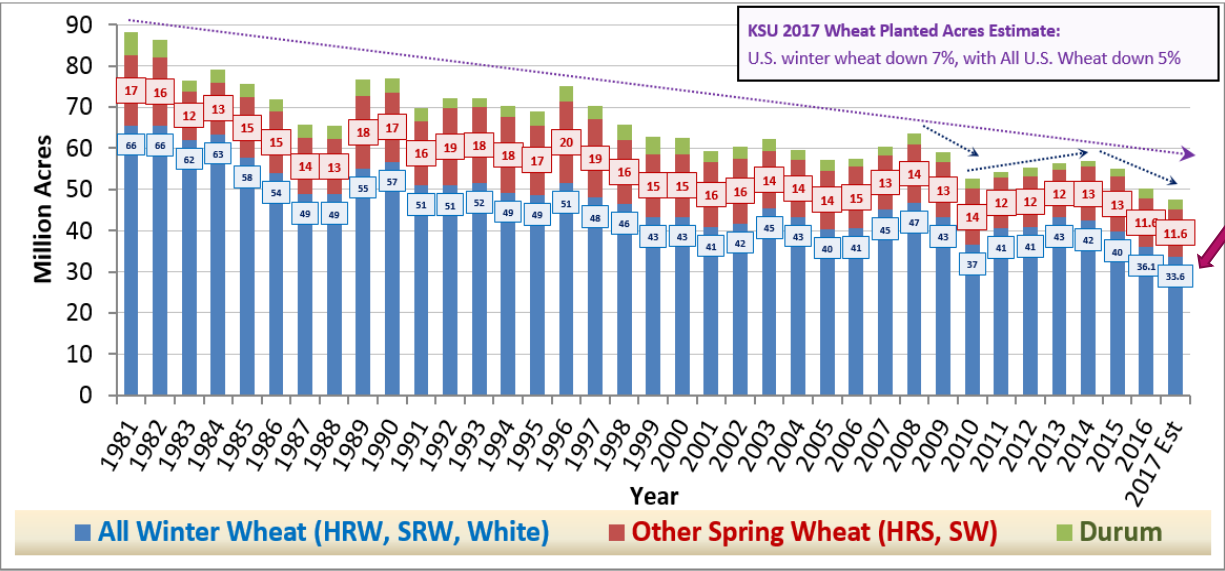


Kansas Wheat Seasonal Cash \$ Index

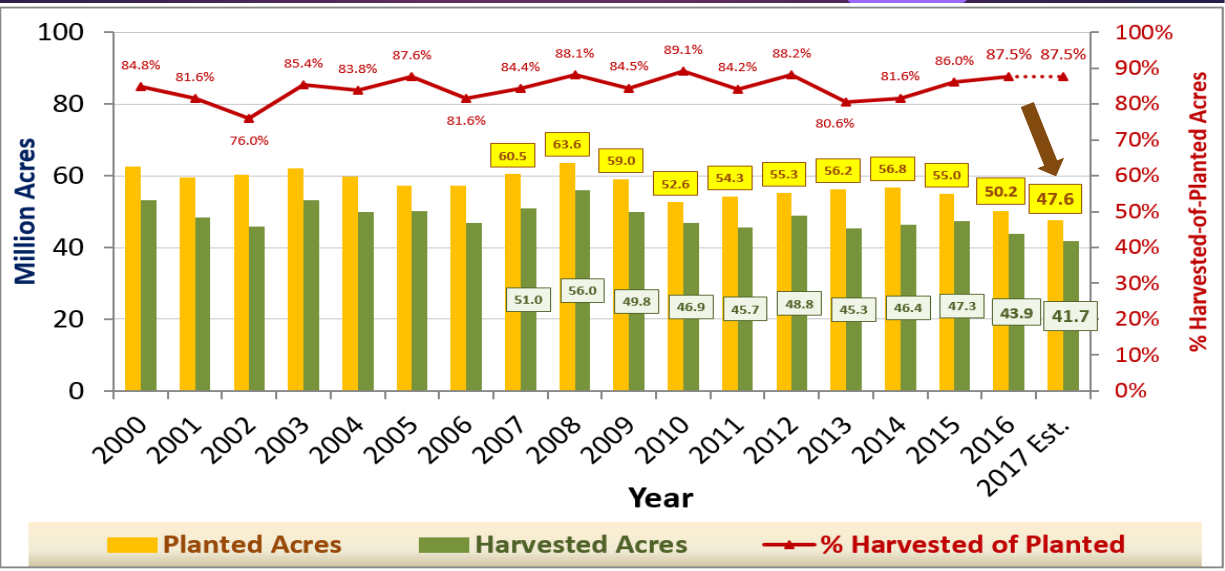
Monthly Prices: 1999/00 – 2014/15 + "Current" MY 2016/17



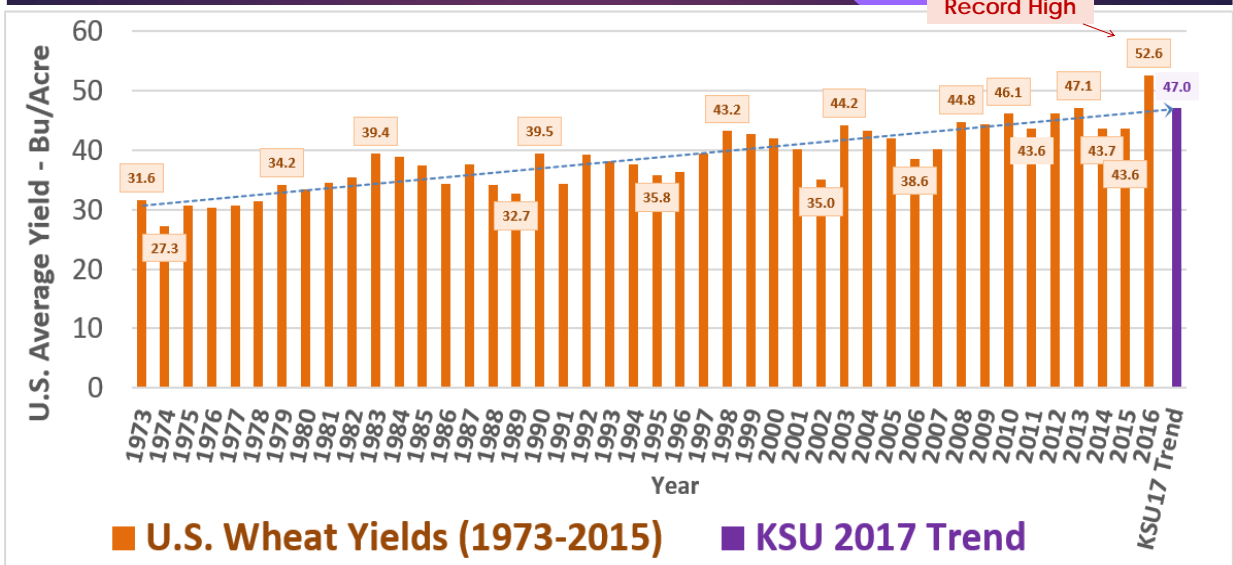
U.S. Wheat Seeded Acreage



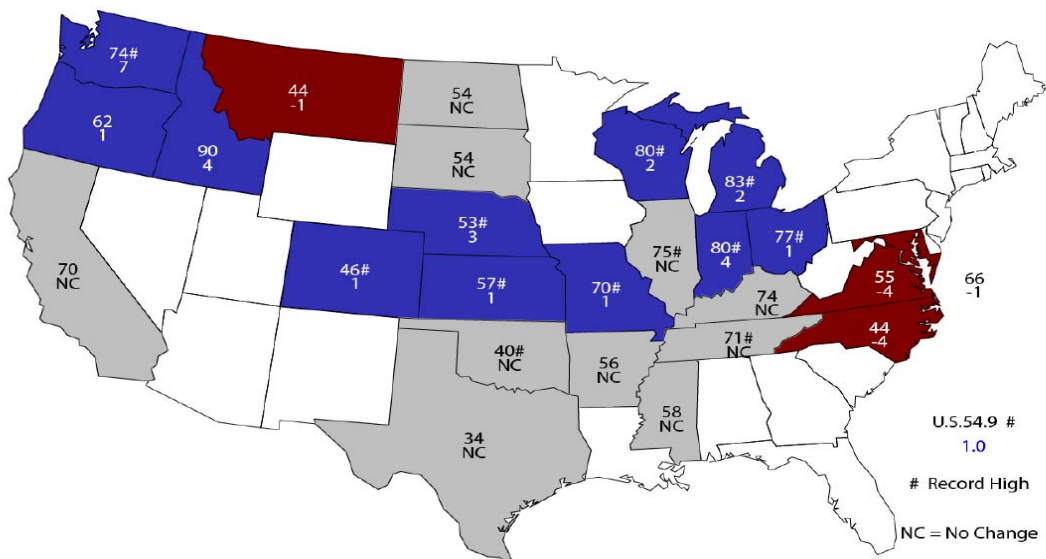
U.S. Wheat Acreage: 2000-2017est



U.S. Wheat Yields: 1973-2017^{est}

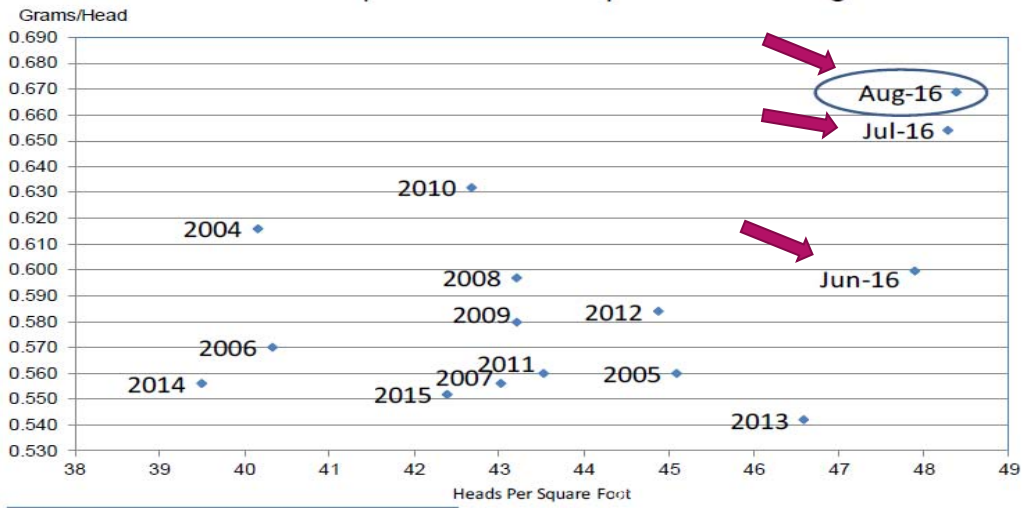


August 1, 2016 Winter Wheat Yield Bushels and Change From Previous Month





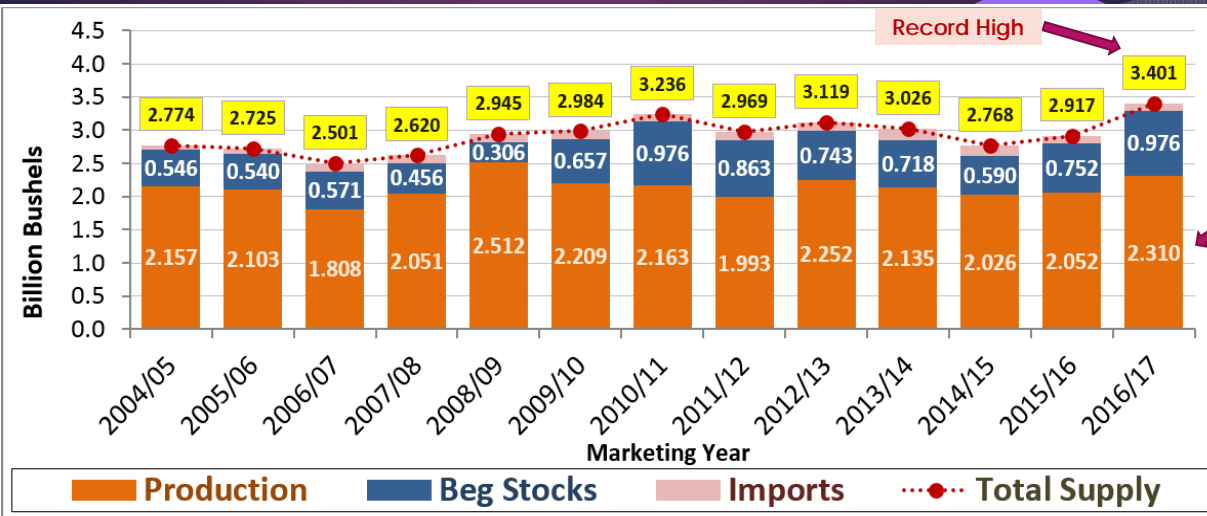
Wheat Objective Yield Region Heads Per Square Foot vs. Implied Head Weight



USDA-NASS
8-12-16

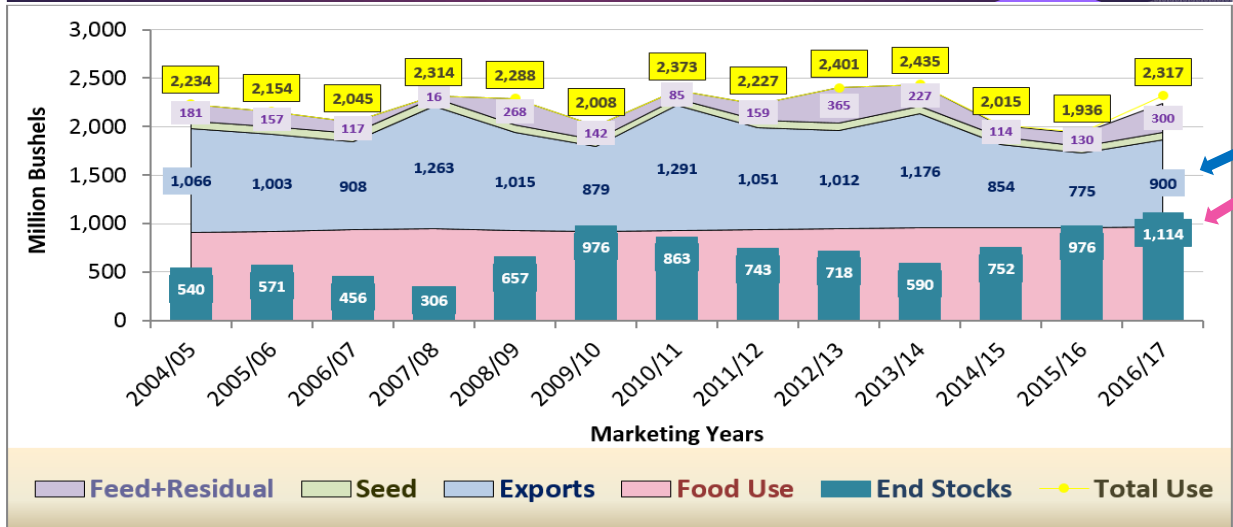
U.S. Wheat Production & Supplies

MY 2004/05 – "Current Crop" MY 2016/17



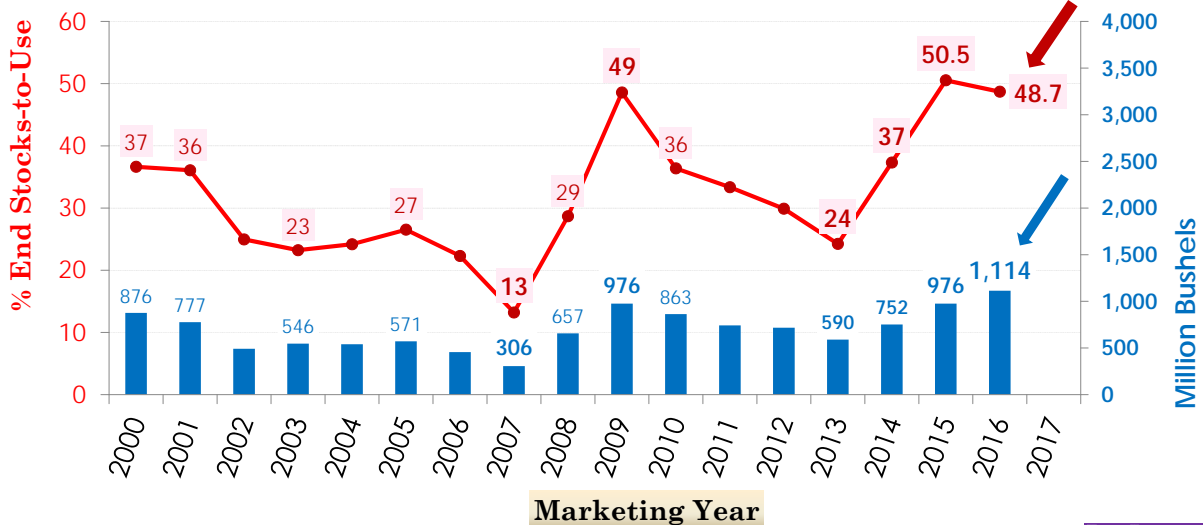
U.S. Wheat Use by Category

MY 2004/05 – “Current Crop” MY 2016/17



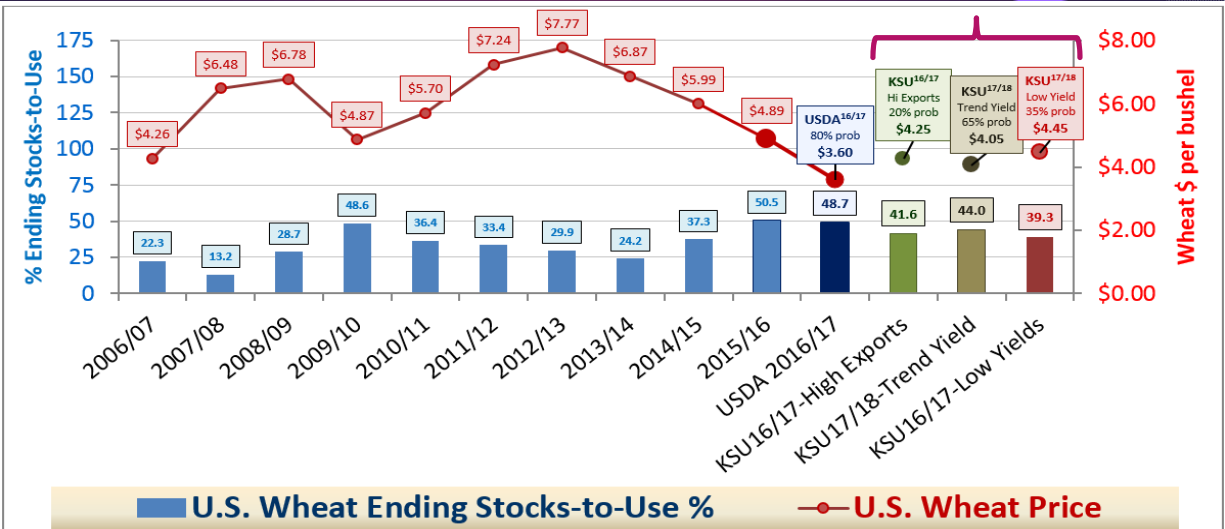
U.S. Wheat Ending Stocks & % Stocks/Use

MY 2000/01 – “Current Crop” MY 2016/17



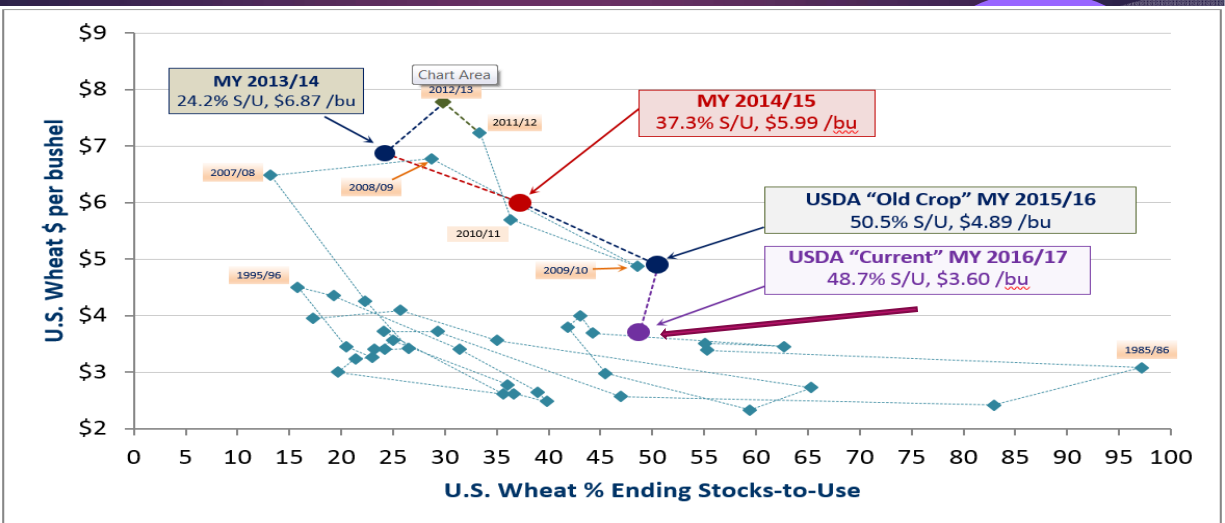
U.S. Wheat Ending Stocks & Prices

MY 2006/07 – Forecast “Next Crop” MY 2017/18^{KSU}

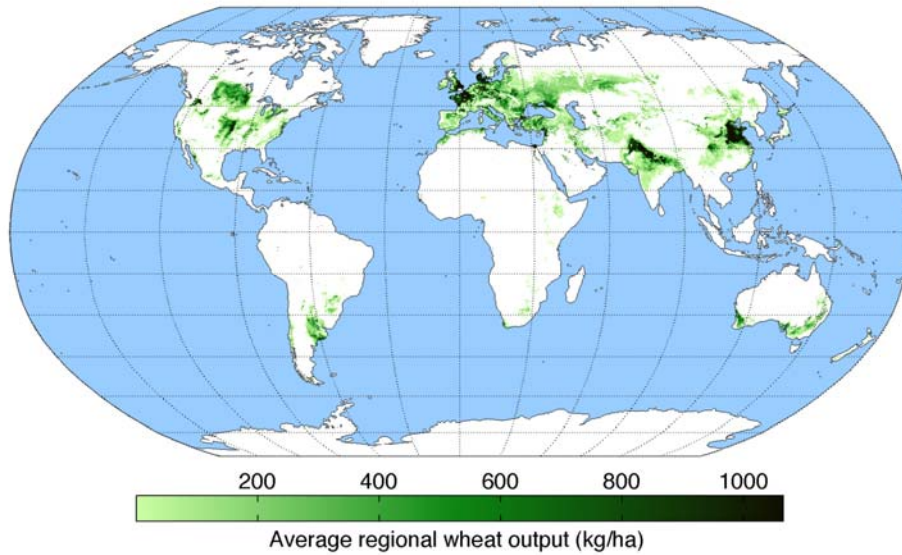


U.S. Wheat Price vs U.S. % Stocks-to-Use

MY 1973/74 – “Current Crop” MY 2016/17



World Wheat Production Regions



Monthly Crop Calendar for Wheat

9/12/2016

	USDA Prod Est.		Plant		Headed		Harvest											
	16/17	Change	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Brazil	6.00	0.70	H H	H H	H H	H H	H H				P	P	P	P	P	HE	HE	HE
Canada Spring	30.50	0.50	H H	H							P	P	P	P	HE	HE	HE	H
US Spring	63.16	0.00	H								P	P	P		HE	HE	HE	H H
Australia	27.50	1.00				H H	H H				P	P	P	P				
Russia Spring	72.00	0.00	H H								P	P	P	HE	HE	HE	H H	
Kazakhstan	16.50	1.50	H H								P	P					H H	
China Spring	128.00	(2.00)	H H								P	P	P	P			H H	
Ukraine Spring	27.00	0.00	H H								P	P	P	HE	HE	HE	H	
Argentina	14.40	0.00	HE	HE	HE	HE	H H	H H	H H		P	P	P	P		P		
Russia Winter			P	P	P							HE	HE	HE	H H	H H	H H	P
Ukraine Winter			P	P								HE	HE			H H	H H	P
EU Winter	145.27	(2.23)	P	P	P	P	P	P								H H	H H	H H
Turkey	17.50	0.00	P	P	P	P	P						H H	H H	H H	H H	H H	
Egypt	8.10	0.00	P	P	P	P					H H	H H	H H	H H				
US Winter				P	P	P					HE	HE	HE	HE	H H	H H	H H	
India	90.00	2.00			P	P	P	P	P		H H	H H	H H					
China Winter					P	P	P				H H	H H						

Sources: USDA and AMIS

*Production estimates are in million metric tons and come from the FAS/USDA's most recent monthly World Agricultural Production report.

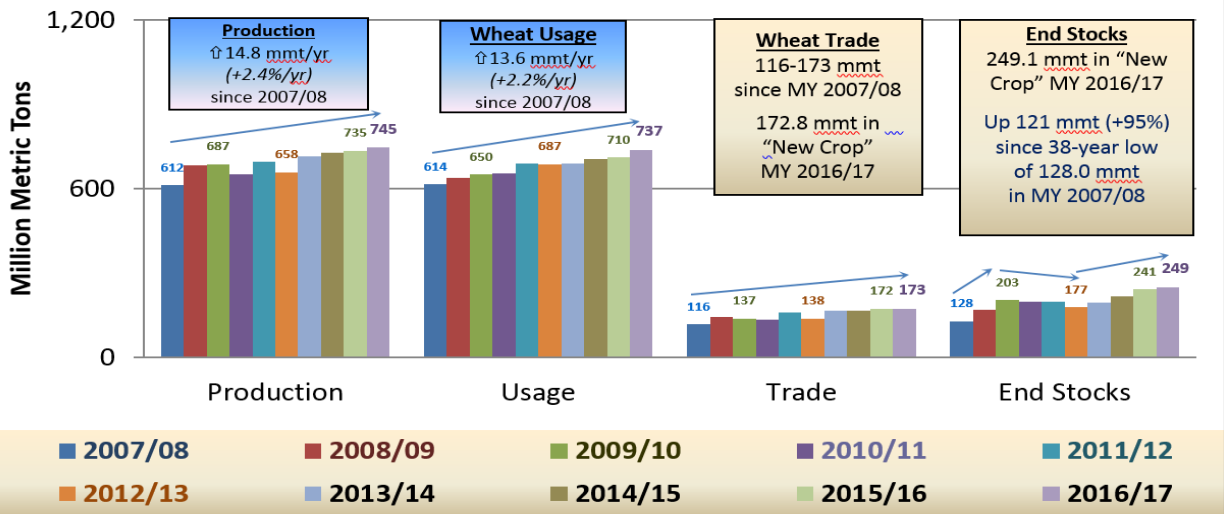
**Production estimates are for ALL WHEAT. Numbers will be listed next to the variety that comes first in the chart.

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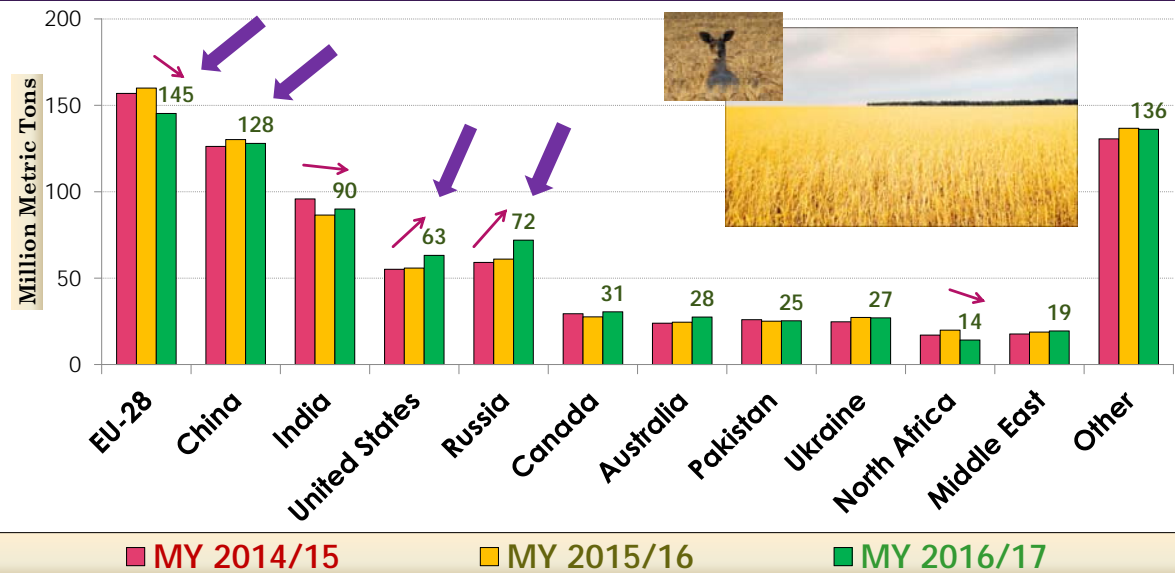


World Wheat Supply, Use & End Stocks

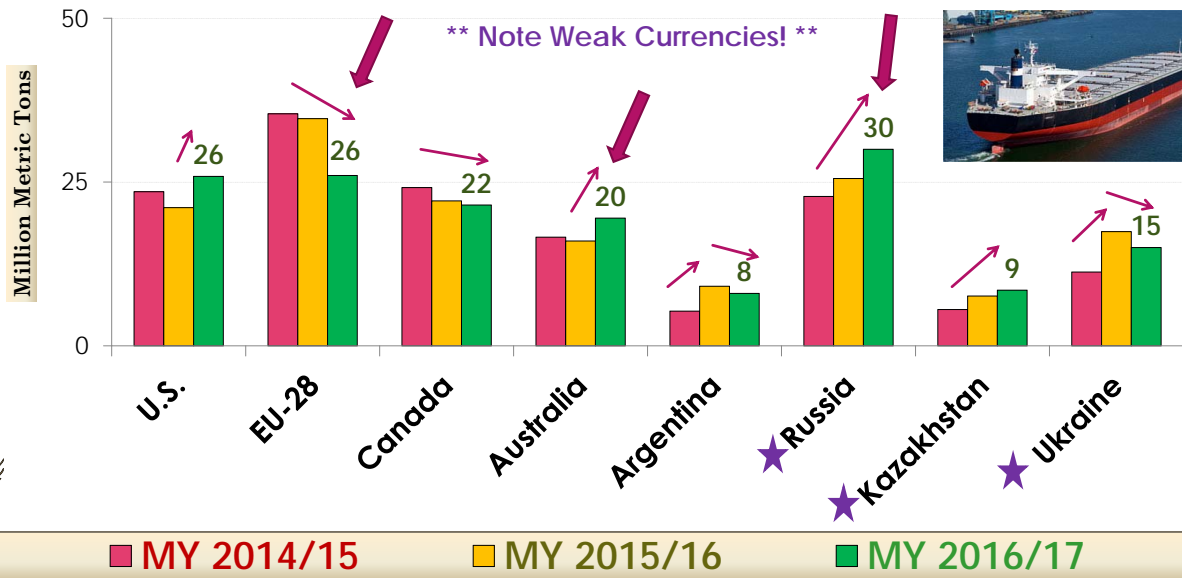
MY 2007/08 – MY 2016/17



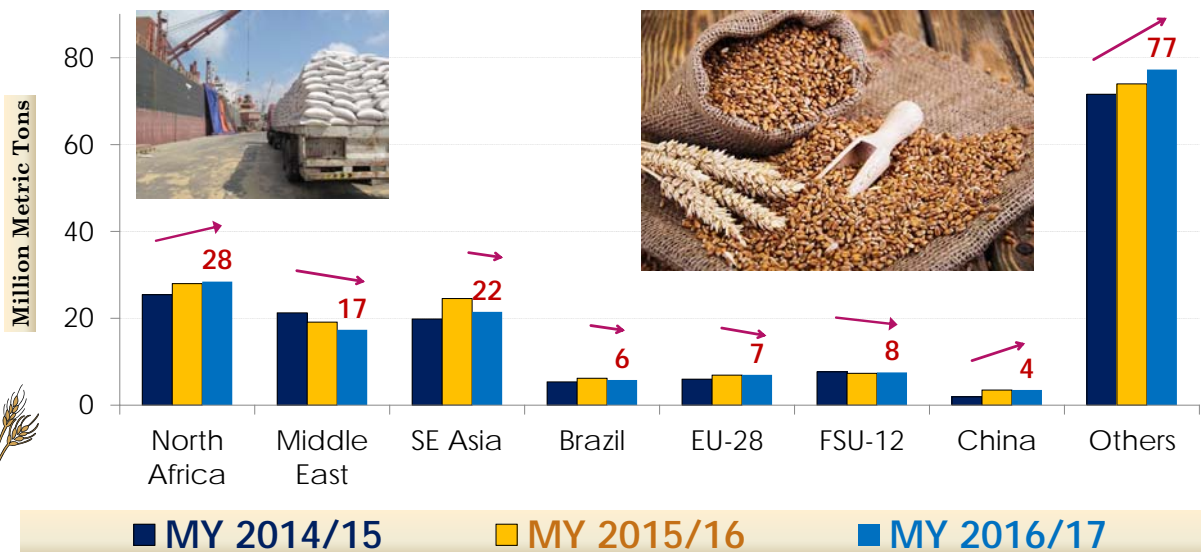
World Wheat Producers: MY 2014/15 – 2016/17



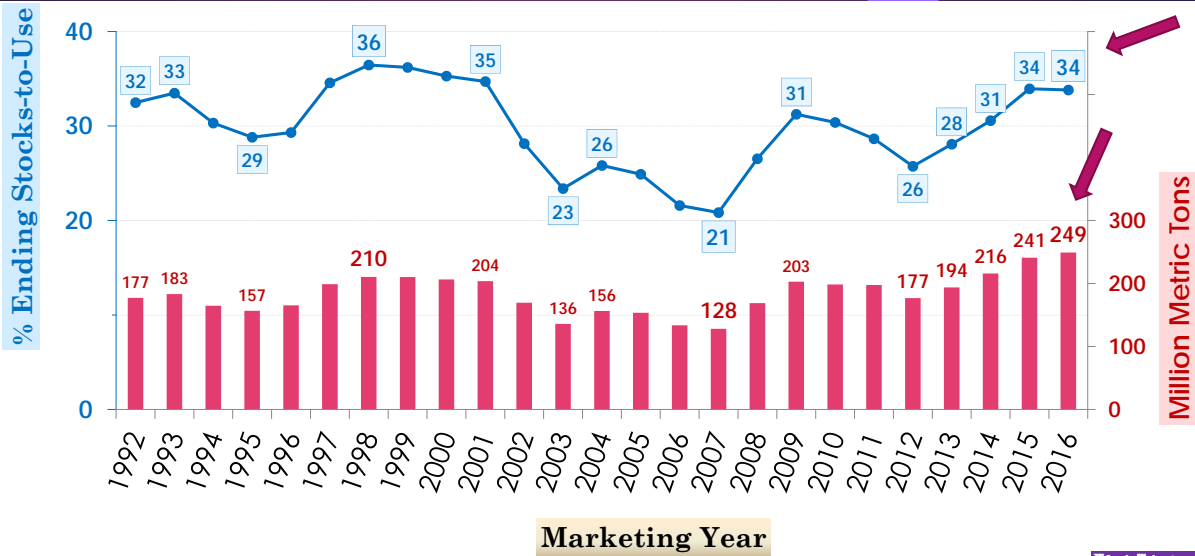
World Wheat Exporters



World Wheat Importers: MY 2014/15 – MY 2016/17

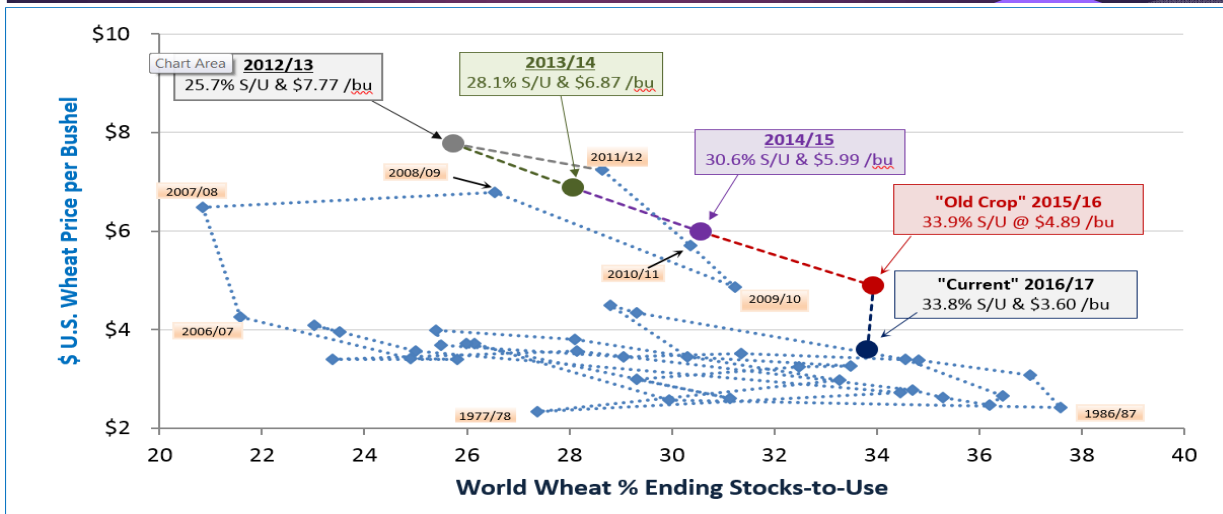


World Wheat Ending Stocks & % Stx/Use



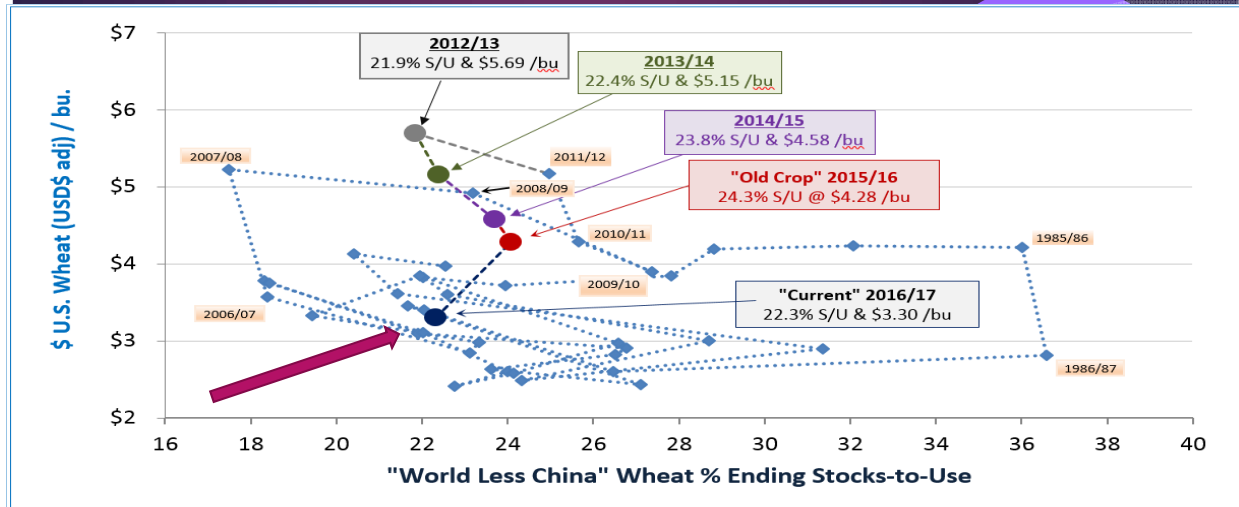
U.S. Wheat Price (\$) vs World %Stx/Use

MY 1973/74 – "Current" MY 2016/17



U.S. Wheat Price^{USD\$ adj} vs World Less China %Stx/Use

MY 1973/74 – "Current" MY 2016/17



U.S. Wheat Market Prospects:

Moderate U.S. Exports, Quality Issues, Large Stocks, & Low Prices

- U.S. wheat exports are finding support from a lack of milling quality wheat available in the World market
- U.S. HRW Wheat 2016 ⇒ 11.2% protein, 60.7 lb test, 1.2% defects
Vs 12.3% protein, 59.3 lb test wt, 1.7% defects in 2015
- U.S. Spring Wheat 2016 ⇒ 14.2% protein, 61.2 lb test, 0.9% defects
Vs 14.2% protein, 61.4 lb test wt, 1.0% defects in 2015
- U.S. SRW Wheat 2016 ⇒ 9.4% protein & 58.6 lb test, 1.4% defects
Vs 10.0% protein, 56.9 lb test wt, 4.3% defects in 2015

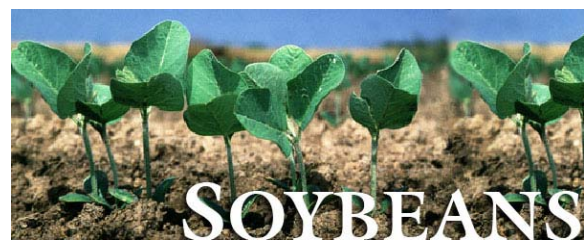
World Wheat Market Prospects:

Large Supplies ⇒ A “Buyer’s Market” (w. Quality concerns)



- Record World Supplies & Usage Forecast in 2016/17
 - 4th consecutive record high World wheat crop
- Varying 2016/17 Crop Prospects by Country
 - ↑ U.S., Australia*, Russia, Kazakhstan, Arg., Canada*, Pakistan, India
 - ↓ E.U., N. Africa (with little change in Ukraine & China)
- World wheat exports to remain a “buyer’s market” unless or until World supplies & stocks decline
 - “All World” vs “World Less China” perspective???

Soybean Markets



CME Soybean Futures

Weekly Chart: August 2014 - September 30, 2016 + 10/4/2016



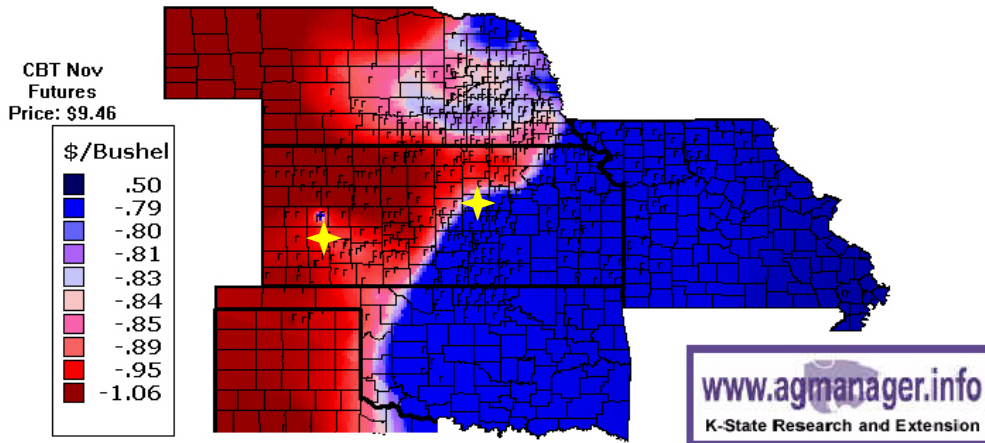
CME Soybean Futures

Monthly Chart: August 2007 thru September 2016 + 10/4/2016



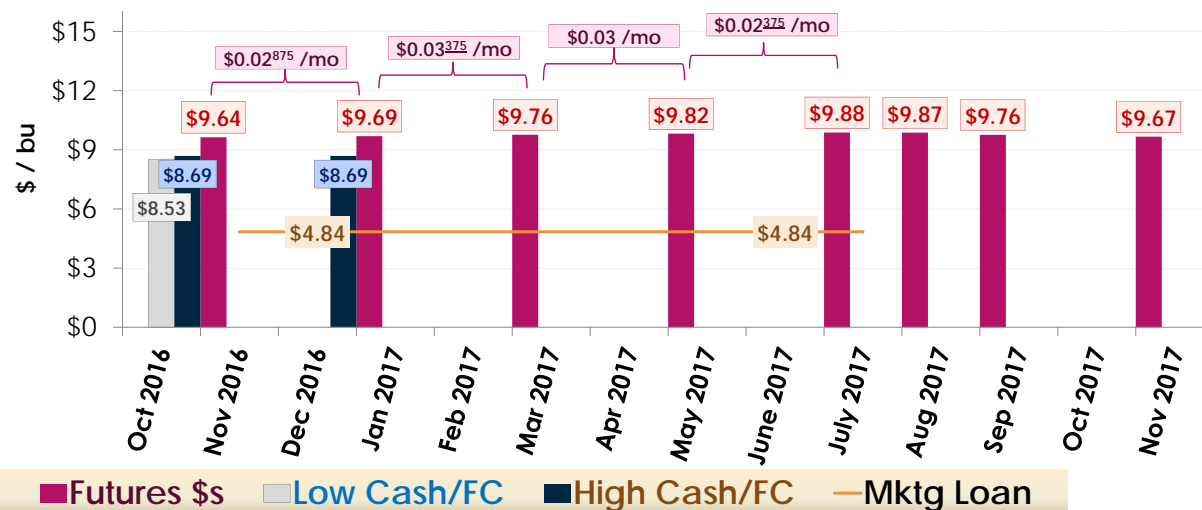
Soybean Basis, 09-28-2016

Basis = Cash Price - Nearby Futures Price



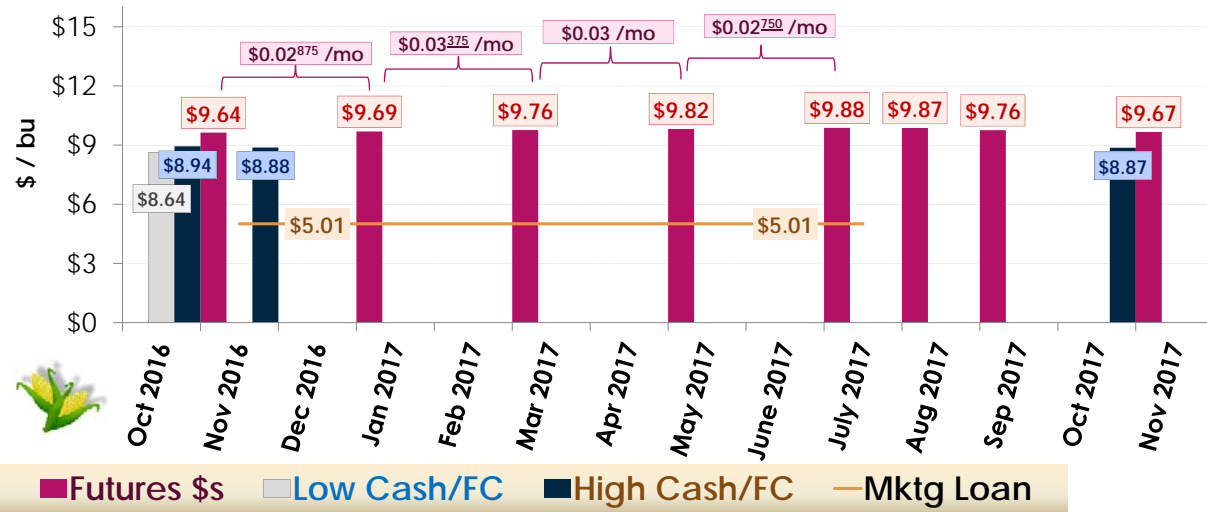
Soybean Cash & Futures Prices

Garden City, Kansas Local Elevators – October 4, 2016



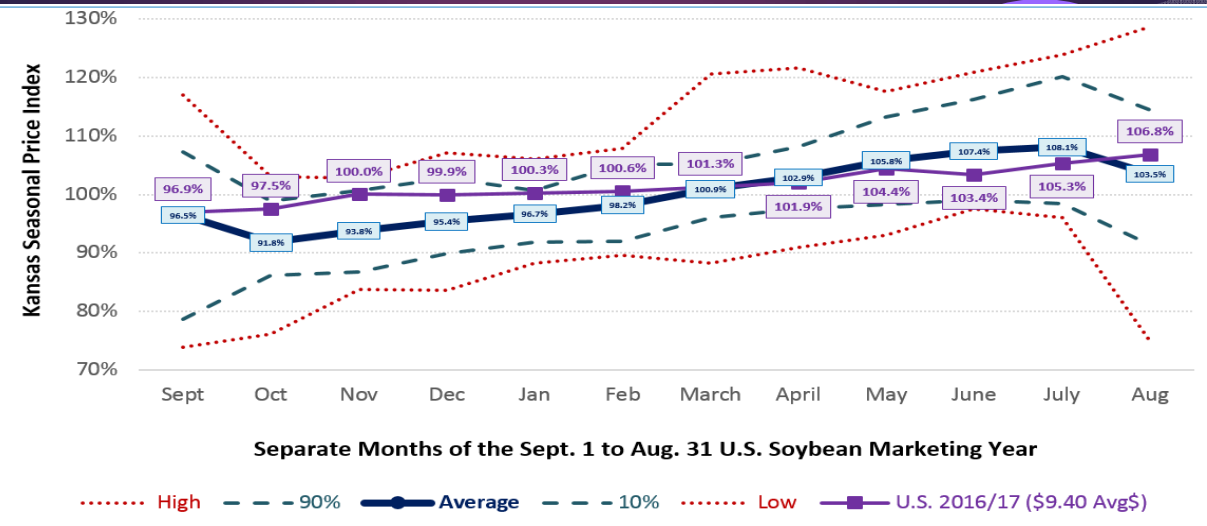
Soybean Cash & Futures Prices

Salina, Kansas Local Elevators – October 4, 2016

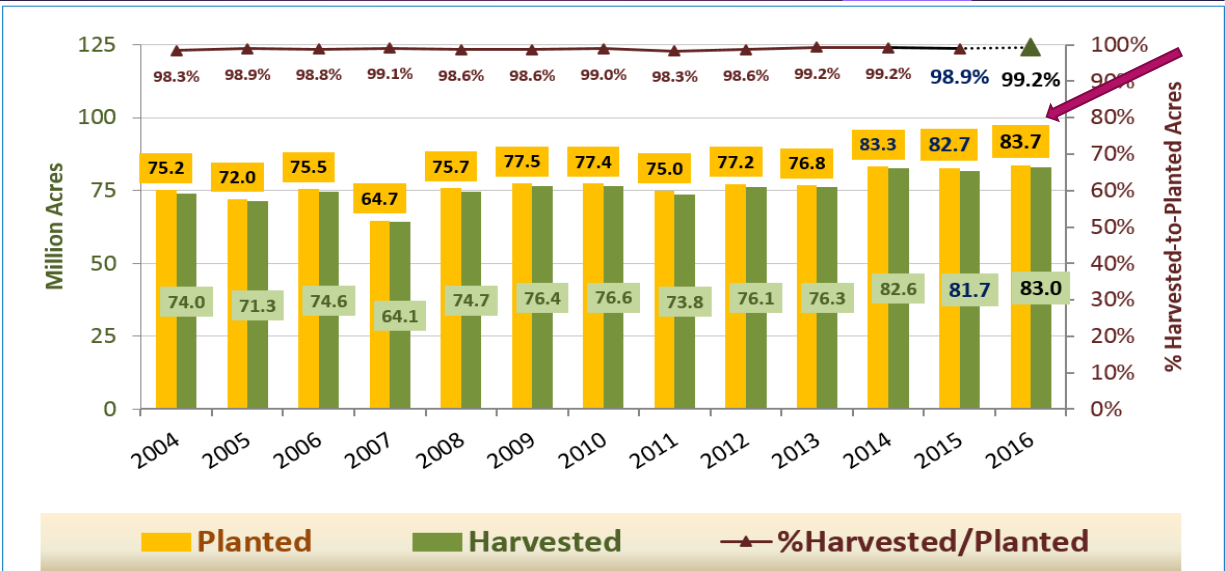


Kansas Soybean Seasonal Cash \$ Index

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



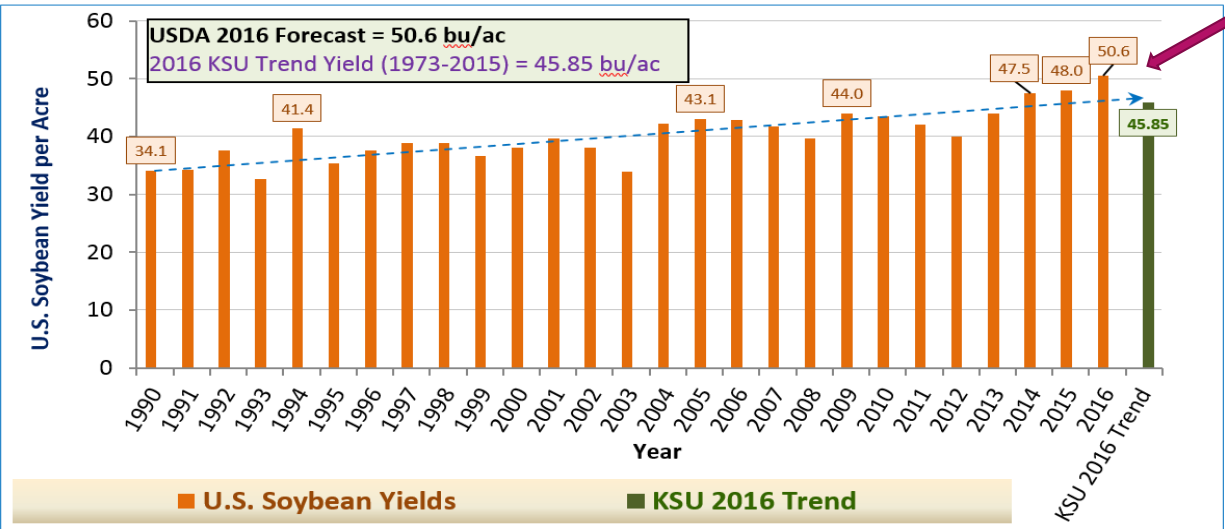
U.S. Soybean Acreage: 2004-2016



U.S. Soybean Yields: 1990-2016

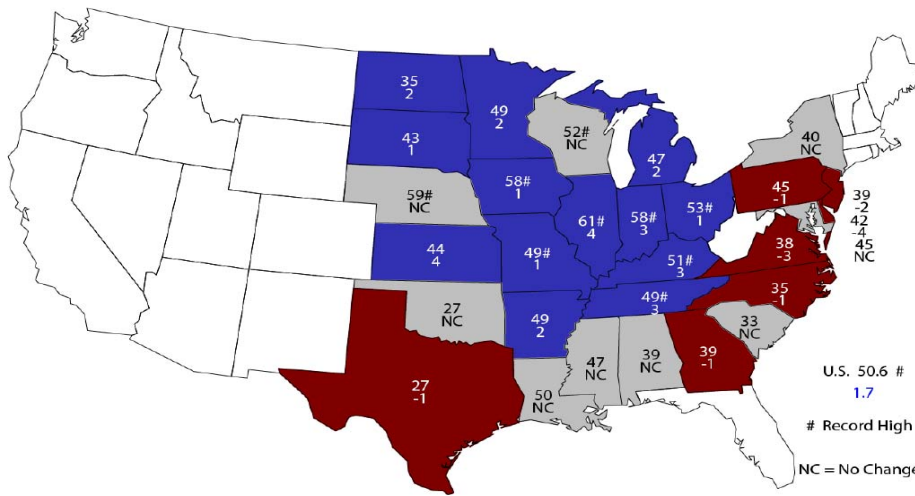


USDA 2016 = 48.9 bu/ac; 2016 Trend¹⁹⁷³⁻²⁰¹⁵ = 45.8





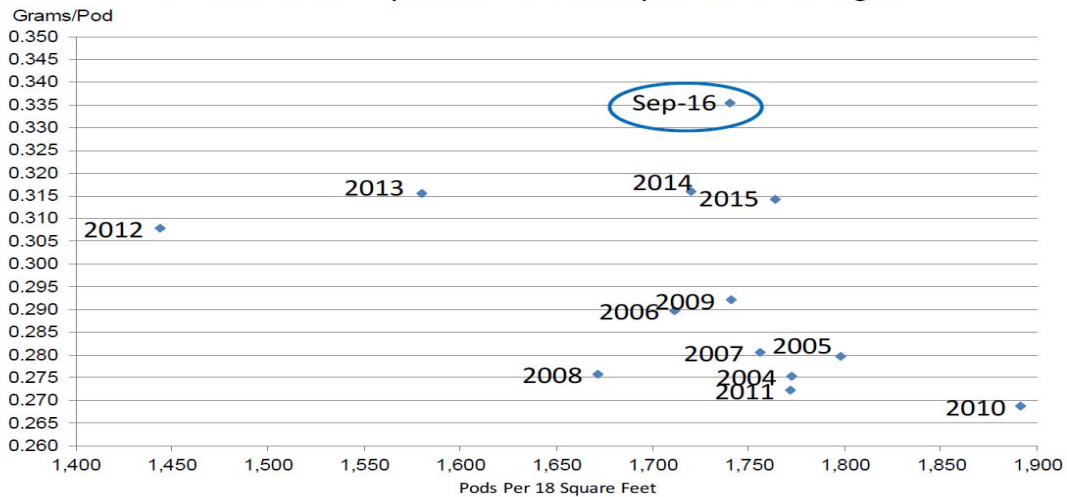
September 1, 2016 Soybean Yield Bushels and Change From Previous Month



USDA-NASS
9-12-16



Soybean Objective Yield Region Pods Per 18 Square Feet vs. Implied Pod Weight



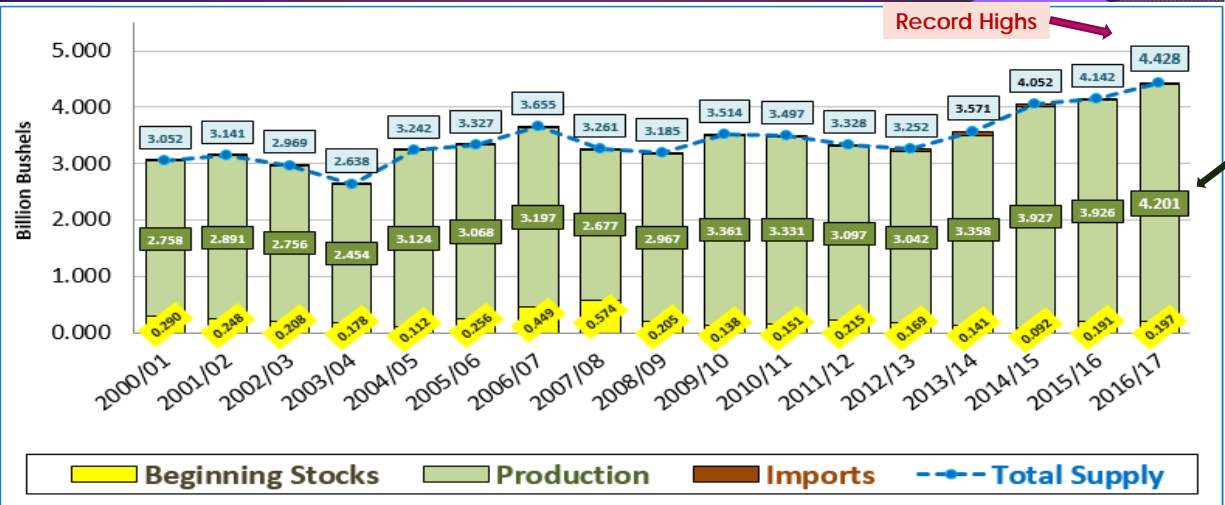
Implied Pod Weight = (Published Yield / Pods) / 0.0889

USDA-NASS
9-12-16

U.S. Soybean Production & Supplies



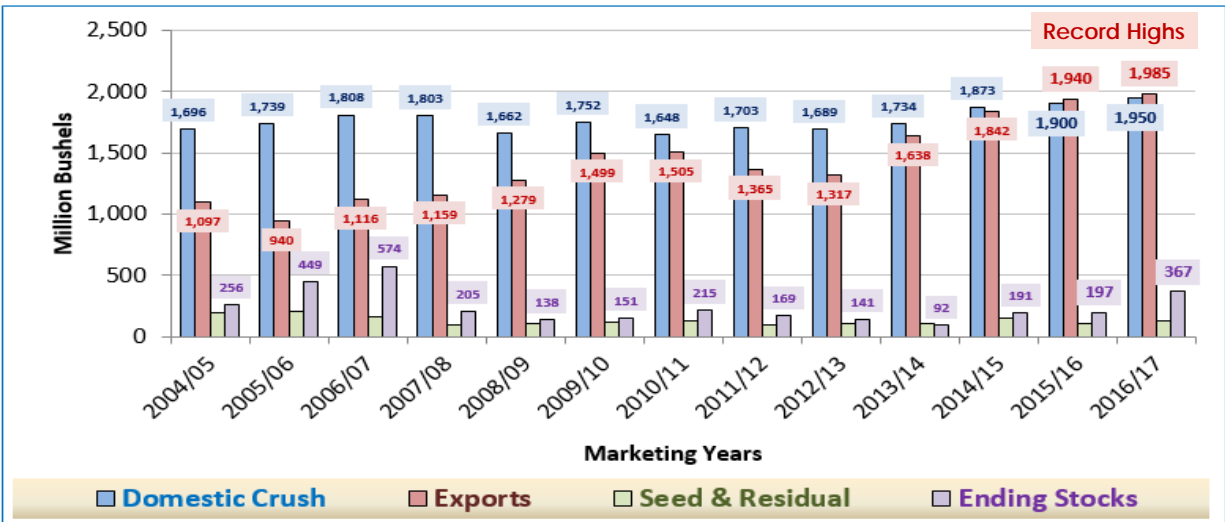
MY 2001/02 – “New Crop” MY 2016/17



U.S. Soybean Use & Ending Stocks

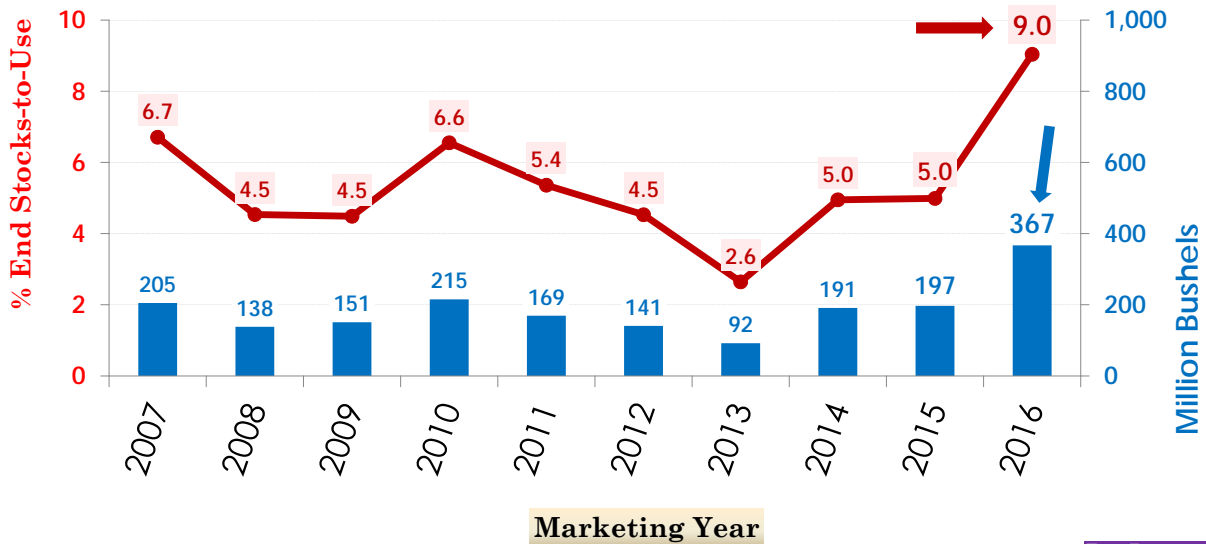


MY 2004/05 – “New Crop” MY 2016/17



U.S. Soybean Ending Stocks & % Stx/Use

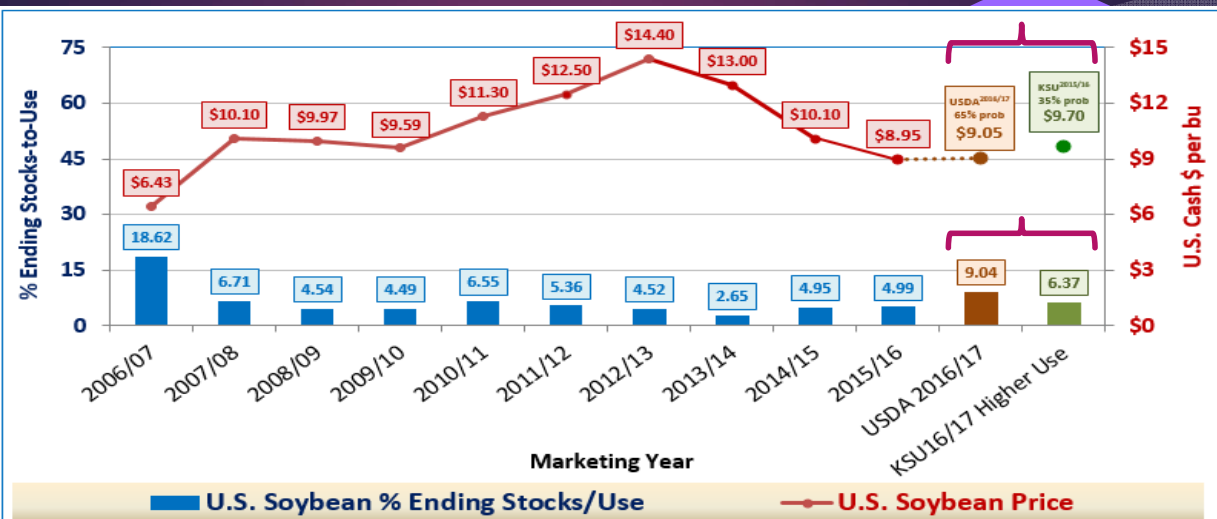
MY 2007/08 – “New Crop” MY 2016/17



Ernst & Young

U.S. Soybean % Stocks/Use vs Prices

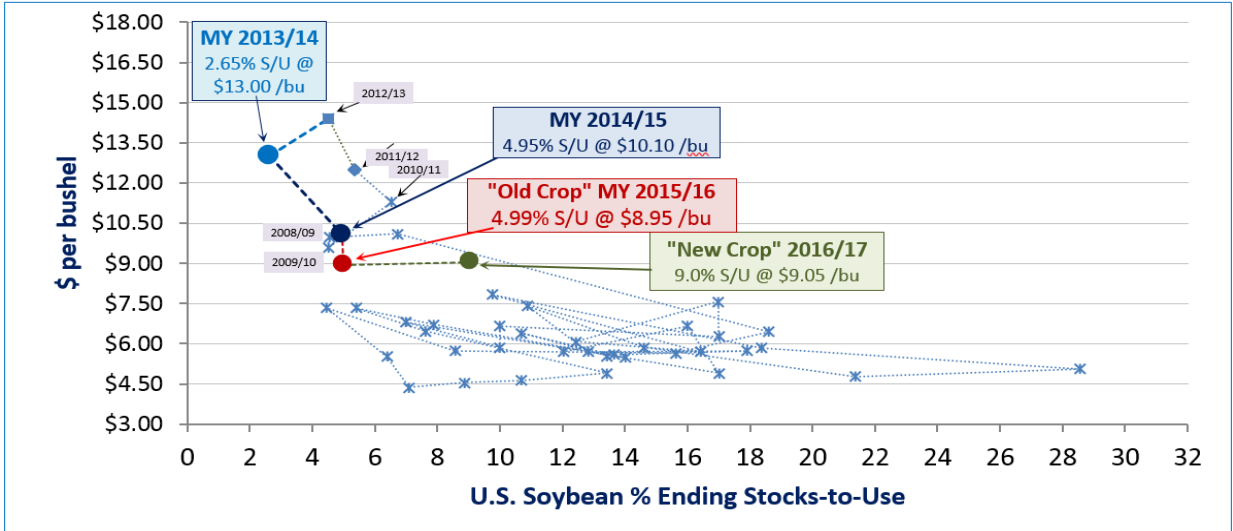
MY 2006/07 – “New Crop” MY 2016/17



U.S. Soybean \$ vs U.S. Stx-to-Use



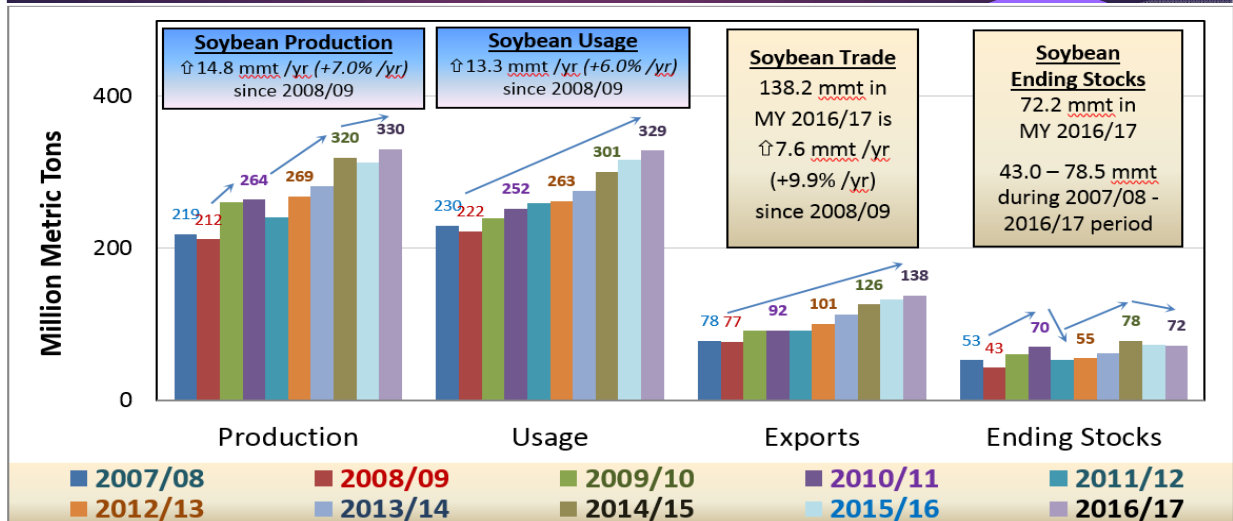
MY 1973/74 through "Next Crop" MY 2016/17



World Soybean Supply, Use & Stocks



MY 2007/08 – MY 2016/17



Monthly Crop Calendar for Soybeans

9/12/2016

	USDA Prod Est.		Plant		Bloom				Harvest							
	16/17	Change	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug		
Ukraine	4.00	0.00	H H							P P	P P			H H		
EU	2.44	0.00	H H	H H						P P	P P					
Russia	2.90	0.00	H H	H H	H H					P P	P P					
US	114.33	3.83		H H	H H						P P	P	B B	B		
China	12.50	0.30	H H	H H							P P	P P				
Canada	5.83	(0.42)		H H	H H						P P	P P	B B	B B		
Indonesia	0.60	0.00	H H	H H							P P	P P	P P	H H		
Mexico	0.37	0.00	P P	H H	H H	H H	H H	H H			P P	P P	P P	P P		
India	9.70	(1.70)			H H	H H						P P	P P	P P		
Paraguay	9.17	0.00		P P	P P	P P	H H	H H	H H	H H	H H	H H				
Brazil	101.00	(2.00)		P P	P P	P P	H H	H H	H H	H H	H H	H H				
Argentina	57.00	0.00			P P	P P	P P		B B		H H	H H	H H			
South Africa	1.12	0.00			P P	P P		H H	H H							



Sources: USDA, AMIS, and CHS, Inc. locations

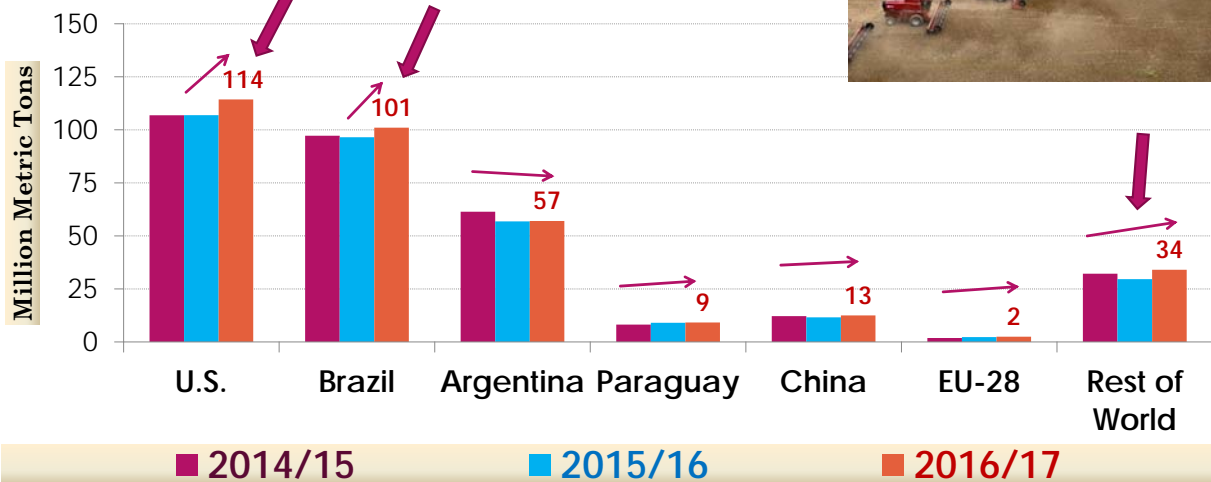
*Production estimates are in million metric tons and come from the FAS/USDA's most recent monthly World Agricultural Production report.

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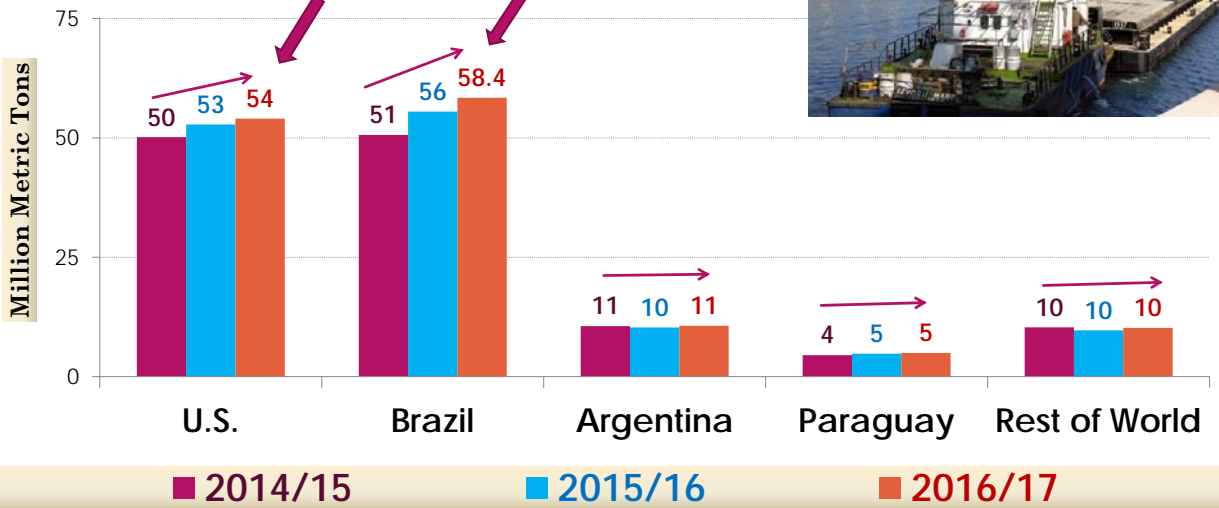


World Soybean Producers

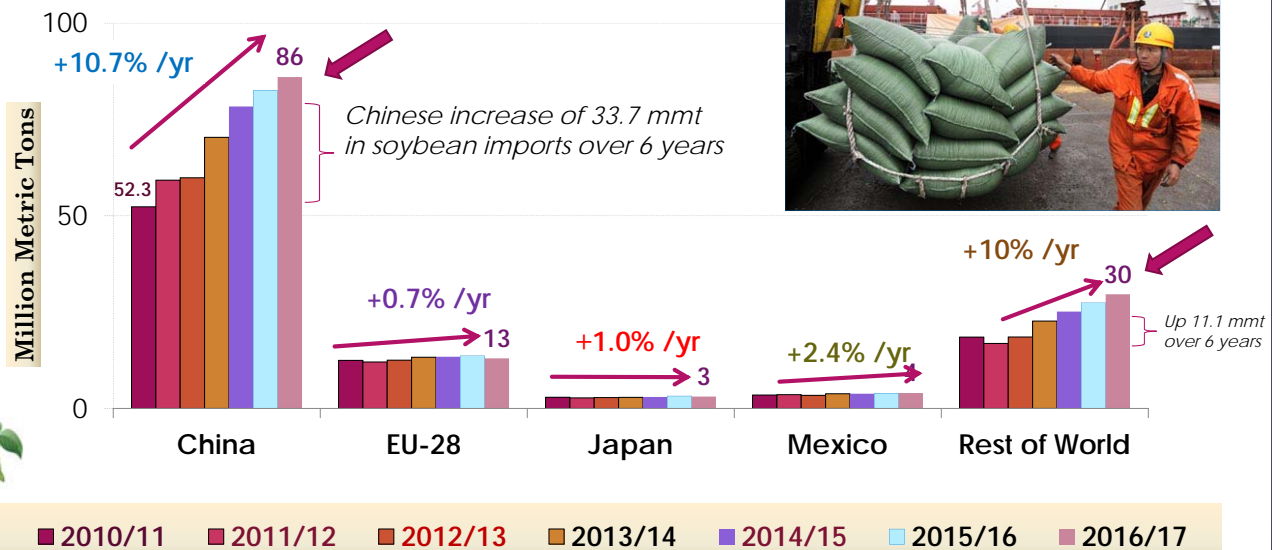
MY 2014/15 – MY 2016/17



World Soybean Exporters

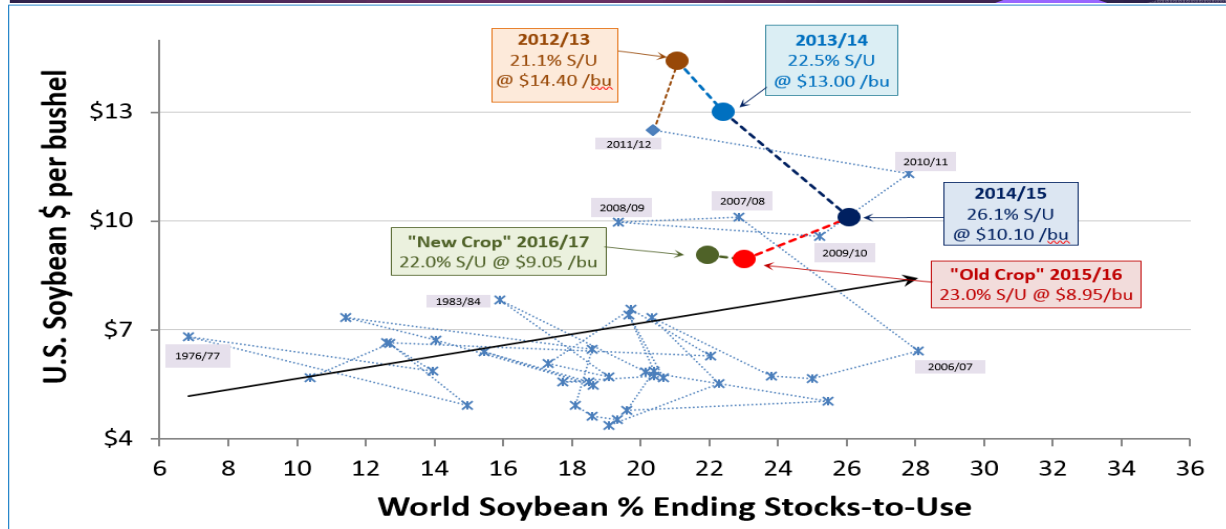


World Soybean Importers



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

MY 1973/74 - "New Crop" MY 2016/17



U.S. Soybean Market Prospects:

Strong Use & Exports – but with Large Stocks, & Weak Prices



- U.S. soybean exports in 2016/17 to remain historically large in spite of higher U.S. Dollar exchange rate
 - Depends on China imports & 2017 South American crops
- Low Prices have supported record high U.S. Soybean Use
 - **Crush**^{2016/17} = 1.950 bln bu (record > 1.900 bb in MY 2015/16)
 - **Exports**^{2016/17} = 1.985 bln bu (record > 1.940 bb vs MY 2015/16)
- Uncertainty re: 2017 South American soybean crop size

Questions?

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