Grain Market Outlook & Trends

2016 Crop Insurance Workshop

Kansas State University

Salina, Kansas - November 10, 2016

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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
   - **"Revenue Insurance Grain Price Perspective"** *on the prospects for crop revenue insurance Grain Prices in 2017*

Current Grain Market Situation

for U.S. & Kansas Farmers & Agribusinesses

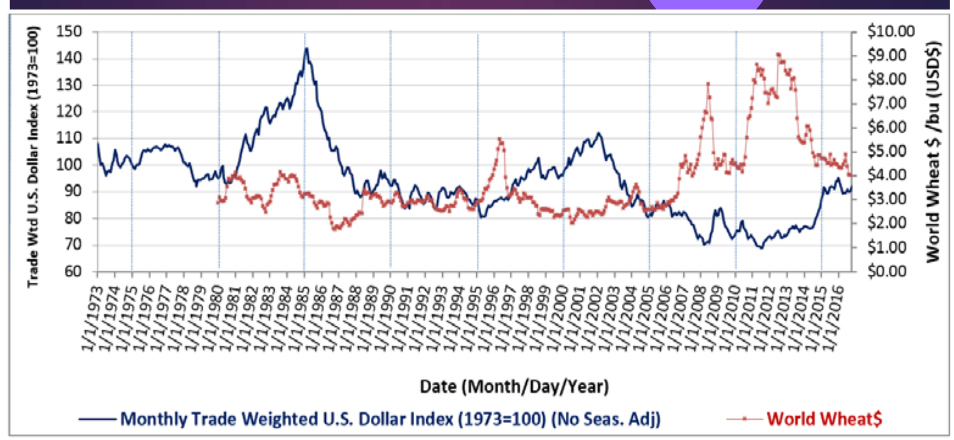
1) **Large grain supplies are limiting grain prices**

2) **Prices under Marketing Loan Rate for KS Wheat**

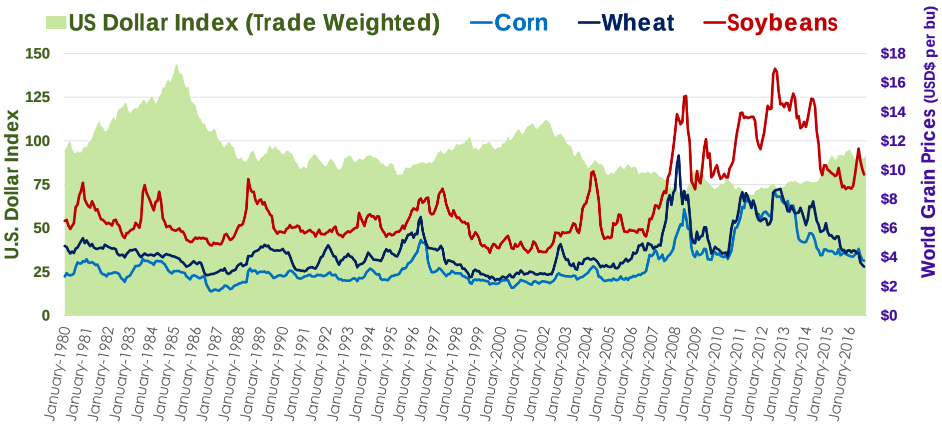
3) **Grain markets now focusing on Storing/Selling 2016 Crops**

4) **U.S. & World Crop production plans for 2017??**
   - ***More soybeans*** *in 2017 in South America & U.S.*
   - ***Lower U.S. World HRW wheat acres*** *with some World crop risk emerging*
   - ***2017 U.S. Corn acres unchanged to higher*** *– lower in Brazil & Argentina*

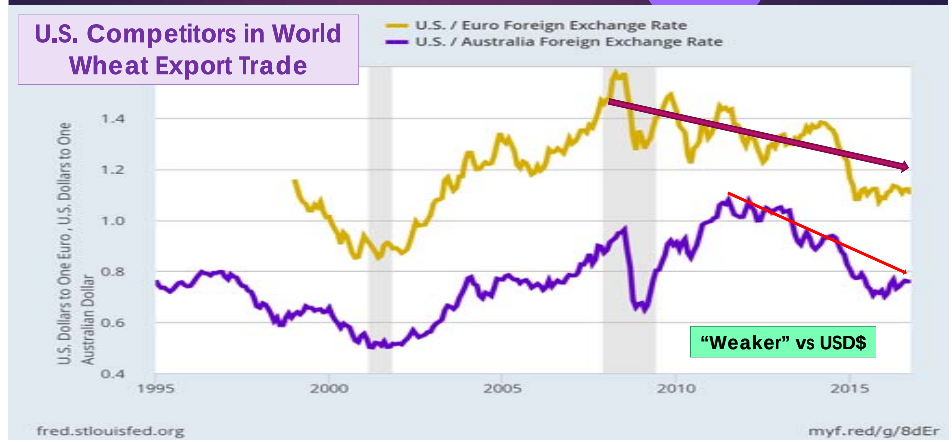
U.S. Dollar Index (Trade Weighted) 1973 – October 2016



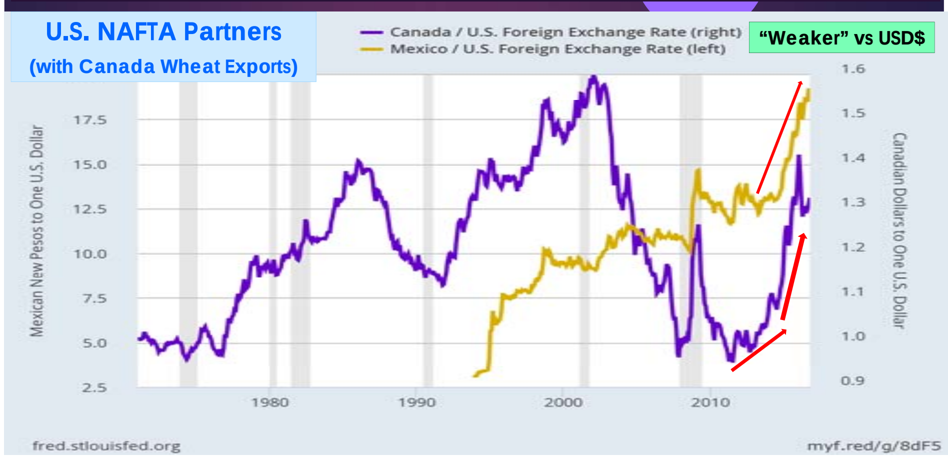
U.S. Dollar Index vs World Grain $'s 1980 – Oct. 2016



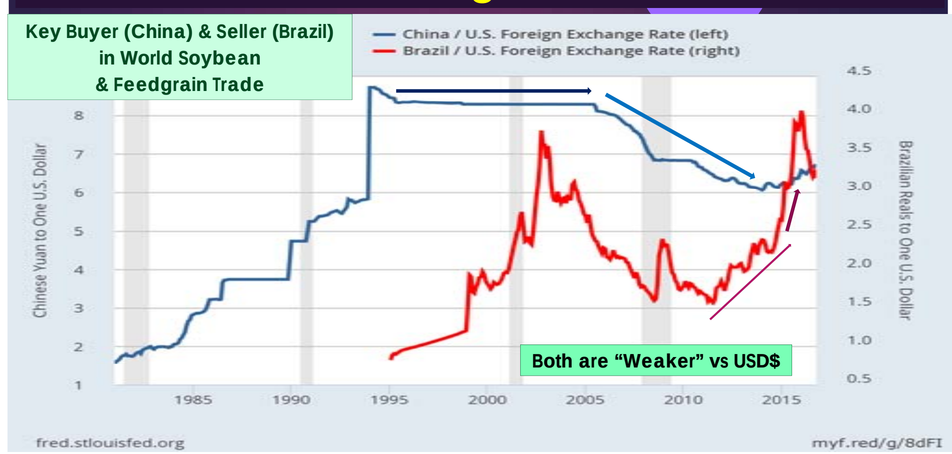
Euro & Australia Currency per U.S. Dollar



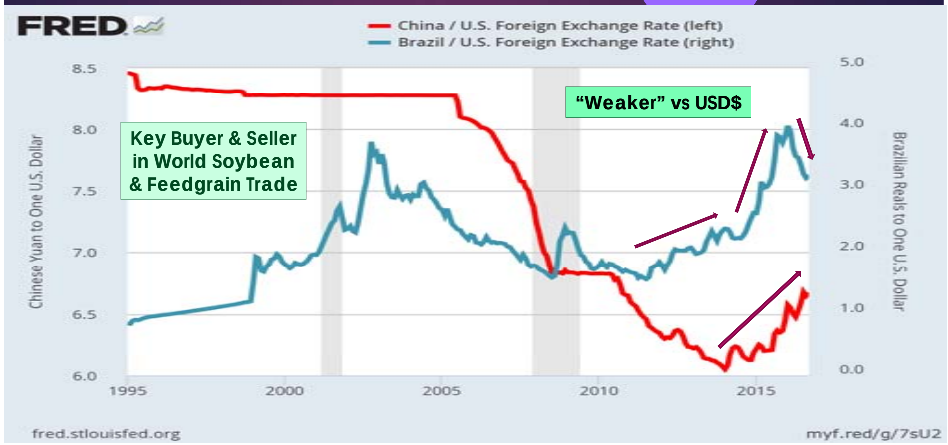
Canada & Mexico Exchange Rates - Monthly



China & Brazil Exchange Rates - Monthly



China & Brazil Exchange Rates - Monthly



Corn & Sorghum Markets

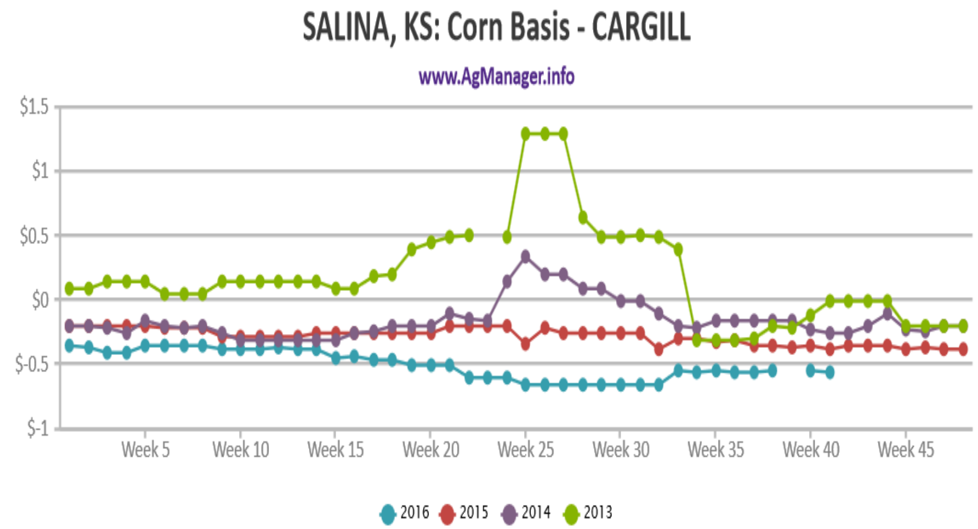
Kansas State University Department of Agricultural Economics

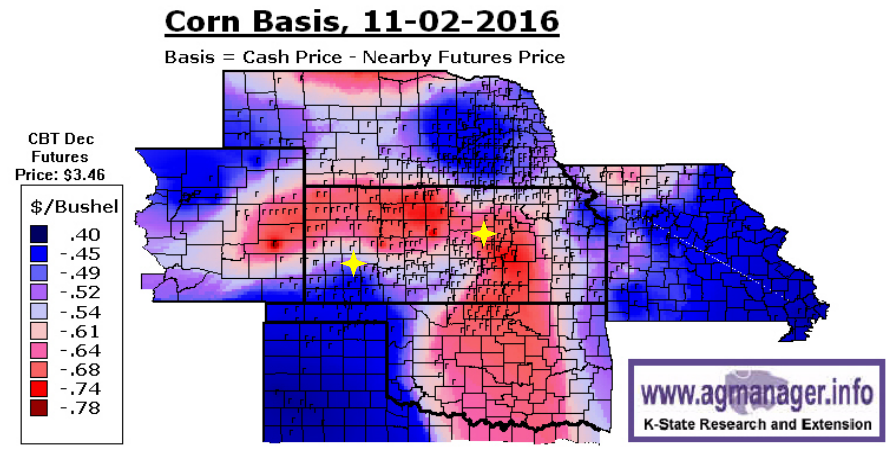
CME Corn Futures

Monthly Chart: Sept. 2007 – October 2016 + 11/7/2016 close

CME Corn Futures – Monthly 2008-2016***

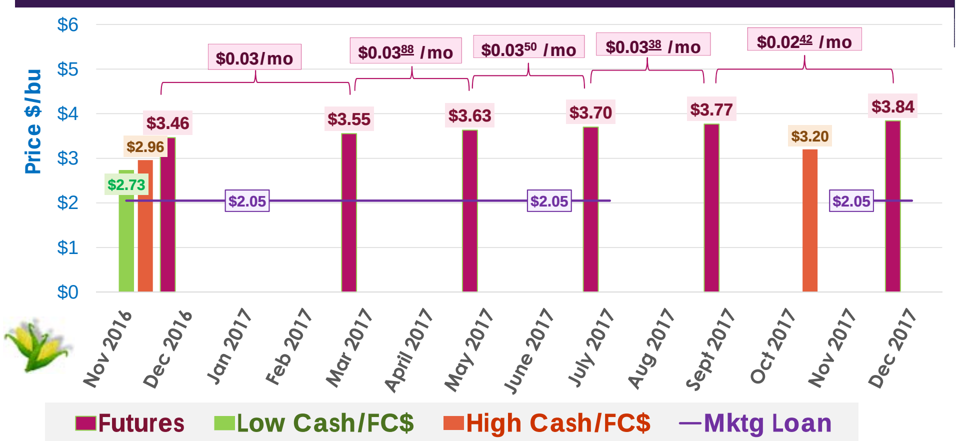
A "*Revenue Insurance*" Focus – February & November Prices$





Corn Cash & Futures Prices – Salina

Salina, Kansas Local Elevators – November 7, 2016



Corn Cash & Futures Prices – Salina

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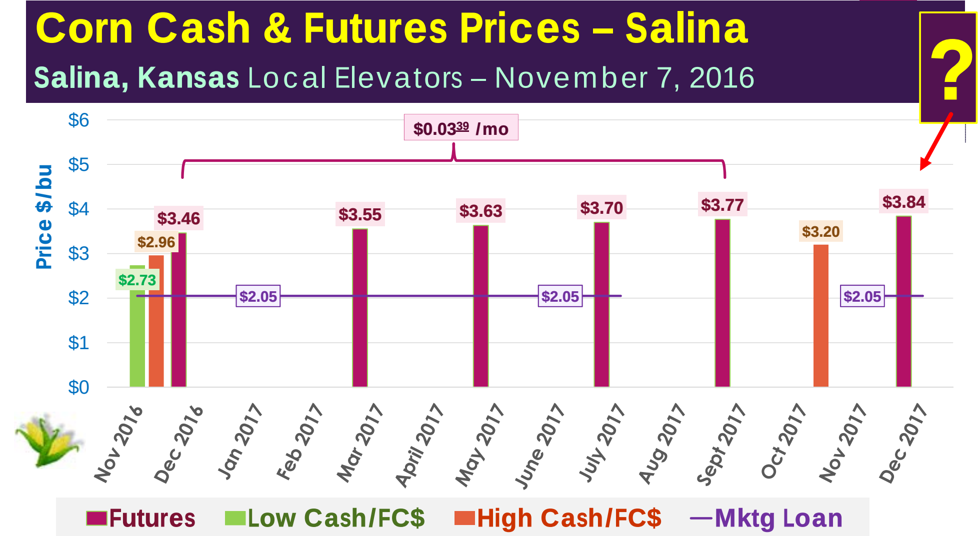
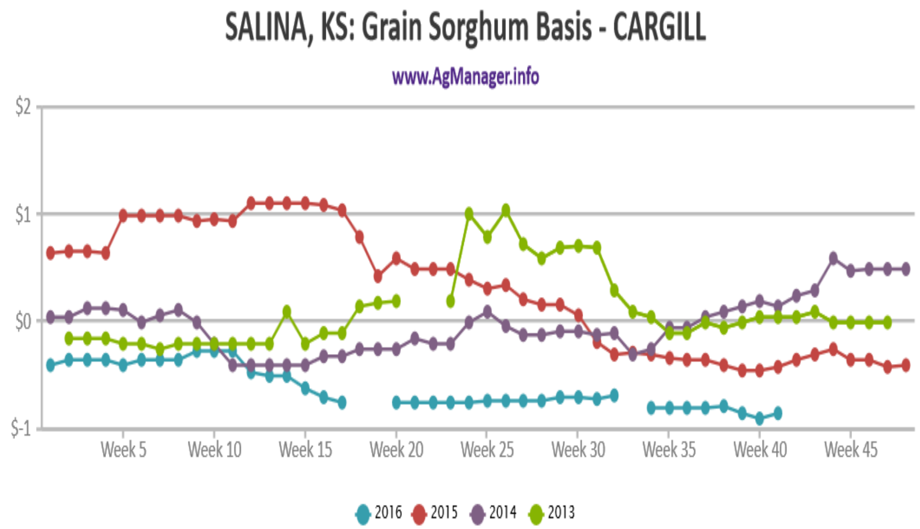
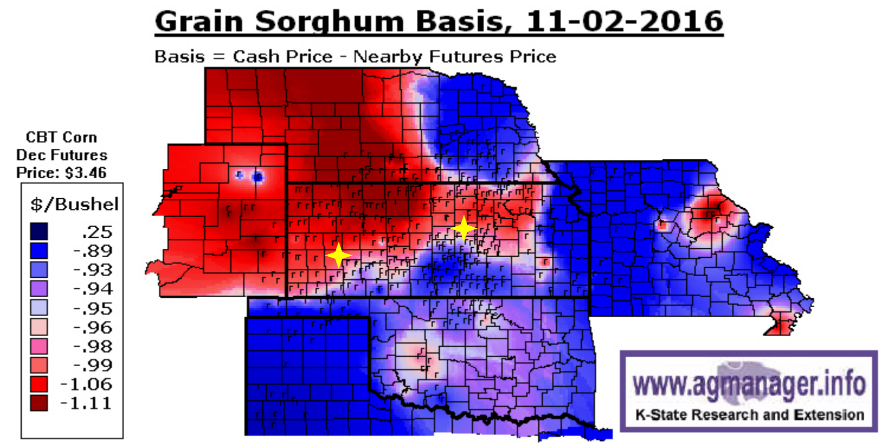
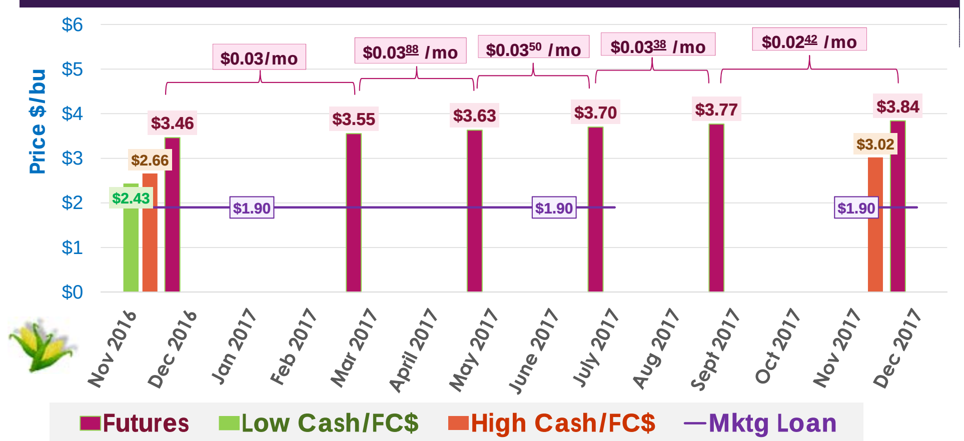






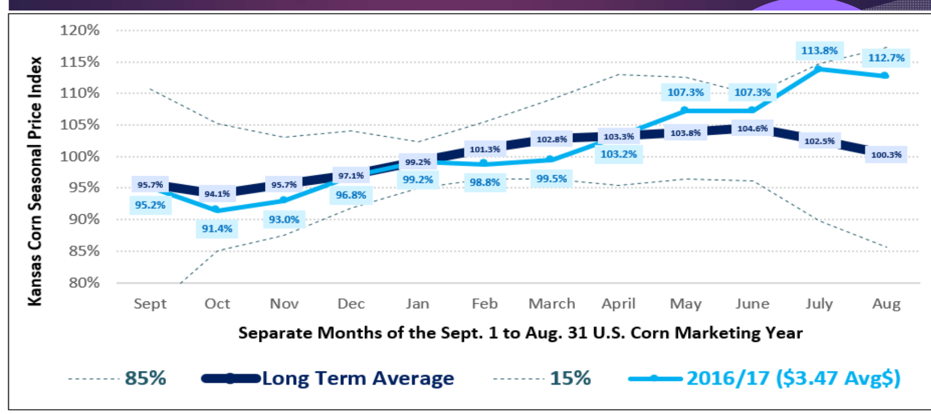
Sorghum Cash & Futures Prices – Salina

Salina, Kansas Local Elevators – November 7, 2016



Kansas Corn Seasonal Cash $ Index

Monthly Prices: 1999/2000 – 2015/16 + Forecast MY 2016/17

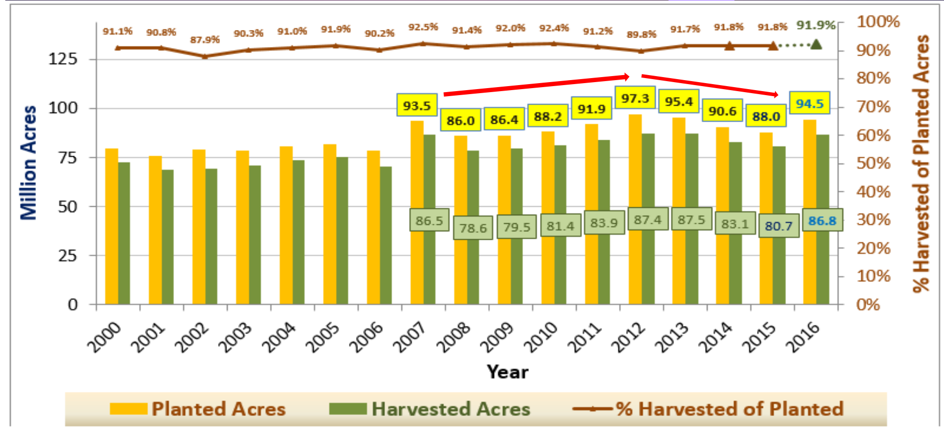


U.S. Feedgrain Market Prospects:

Low Prices “*helping*” Use, but Large Supplies are “*limiting*”

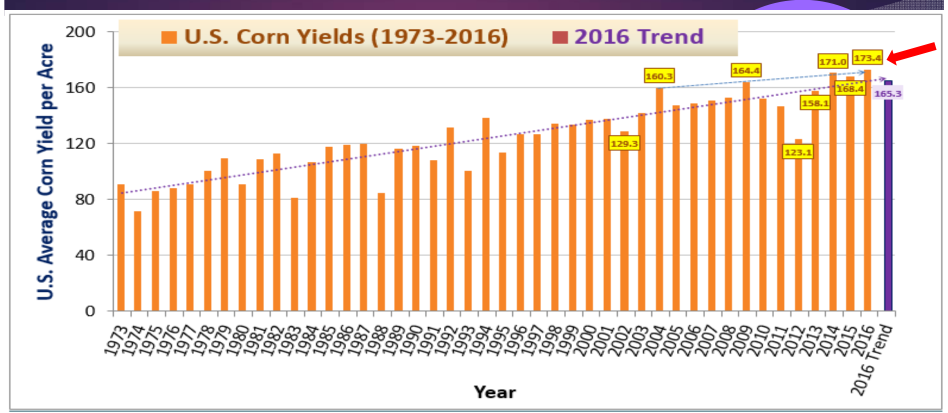
- **Record large World & U.S. feedgrain supplies**
- **Low Corn $’s have supported U.S. domestic use**
  - **Livestock Feed**$^{2016/17}$ = 5.650 bln bu *(9 year high – vs 5.858 bb in 2007/08)*
  - **Corn Ethanol**$^{2016/17}$ = 5.275 bln bu *(record high – vs 5.200 bb last 2 yrs)*
  - **Other FSI**$^{2016/17}$ = 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”**

U.S. Corn Acreage: 2000-2016



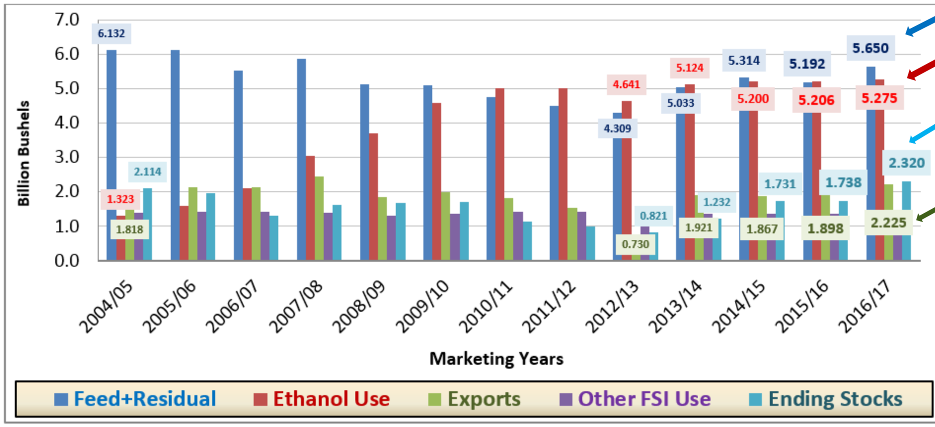
U.S. Corn Yields: 1973-2016

USDA 2016 USDA Forecast = 173.4

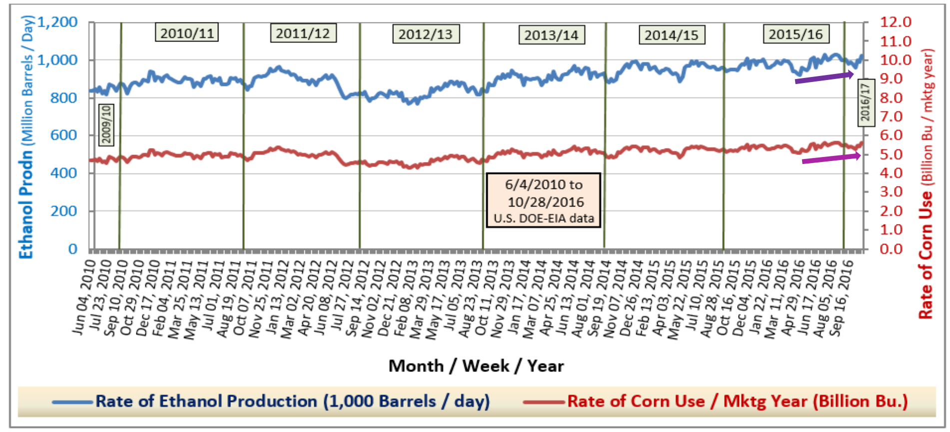


U.S. Corn Production & Supplies

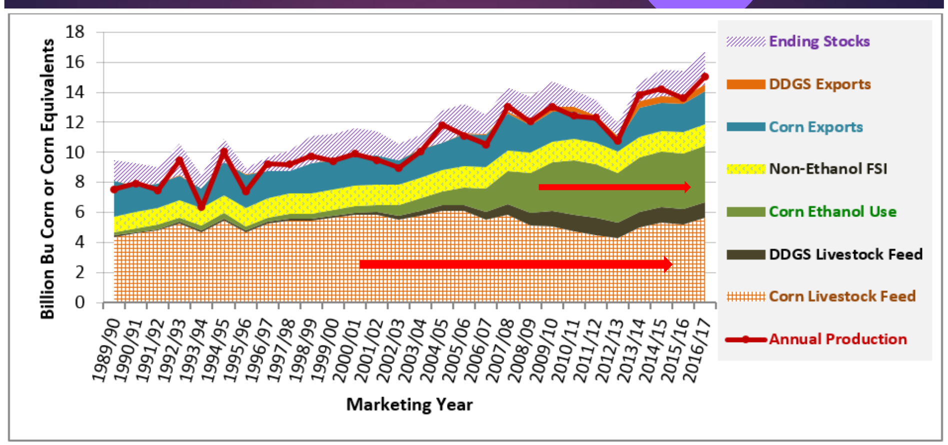
U.S. Corn Use – By Category



U.S. Ethanol Production & Corn Use

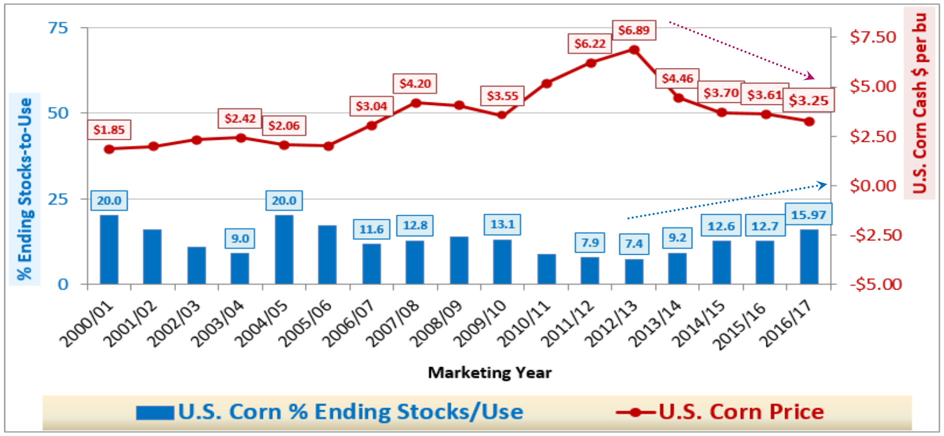


U.S. Corn Use - With DDGS #s (since 1989/90)



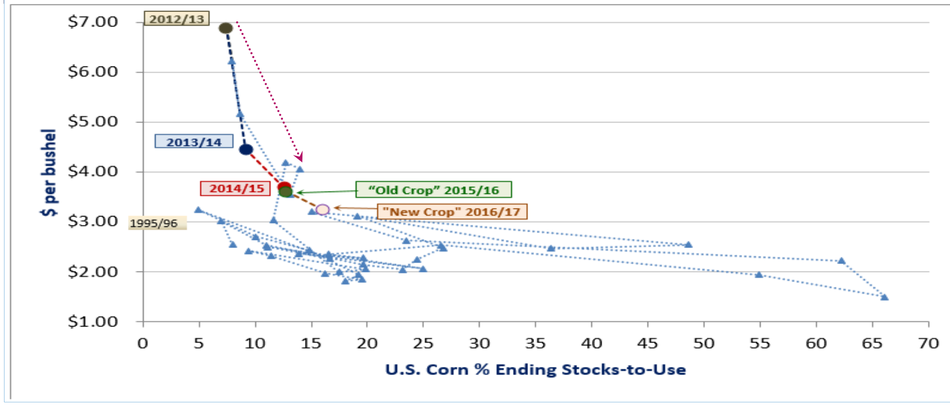
U.S. Corn Ending Stocks & % Stocks/Use

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

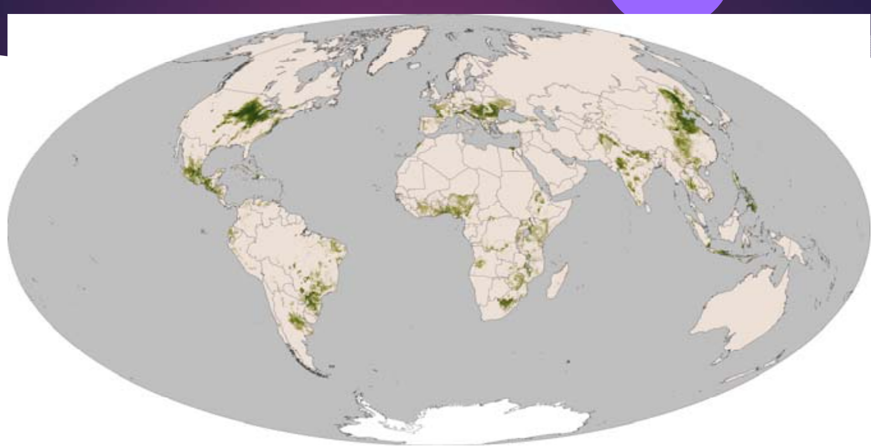


U.S. Corn Price$ vs U.S. % Stocks-to-Use

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



World Corn (Maize) Production Regions



Monthly Crop Calendar for Corn

9/12/2016

Plant · Silk · Harvest

	USDA Prod Est. 16/17	Change	Sep		Oct		Nov		Dec		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug	
EU	61.15	(0.95)	H	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	S	
Mexico *Summer*	24.50	0.00			H	H	H	H	H	H	H	H	H	H	H			P	P	P	P	P	P	P	P	P
Ukraine	26.00	0.00		H	H	H	H											P	P	P			S	S		
Russia	14.00	0.00			H	H	H	H											P	P			S	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	P	H	H
Philippines *Main*	8.00	0.00	H	H					P	P	P	P	P	P	H	H	H	H	P	P	P	P	P	P	H	H
Canada	12.35	0.35		H	H	H	H	H											P	P	P	P	S	S	S	S
India	24.50	0.00	P	P	H	H	H	H	H	H	H	H									P	P	P	P	P	P
Brazil *1st crop*	82.50	2.50	P	P	P	P	P	P	P	P	H	H	H	H	H	H	H	H	H	H						P
Argentina	36.50	0.00	P	P	P	P	P	P		S	S	S			H	H	H	H	H	H						
Philippines *2nd Crop*			P	P	P	P	P	P	H	H	H	H	H	H												
South Africa	13.00	0.00			P	P	P	P	P	P	P	S	S					H	H	H	H	H	H	H		
Mexico *Winter*											P	P	P	P	P	P		H	H	H	H	H	H	H		
Brazil *2nd crop*												P	P	P	P				H	H	H	H	H	H	H	H
Indonesia *Rainy Region*					H	H	H	H	H	H			P	P	P	P	P	P								
Nigeria	7.20	0.00	H	H											P	P	P	P	P	P	P	P	H	H	H	H

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

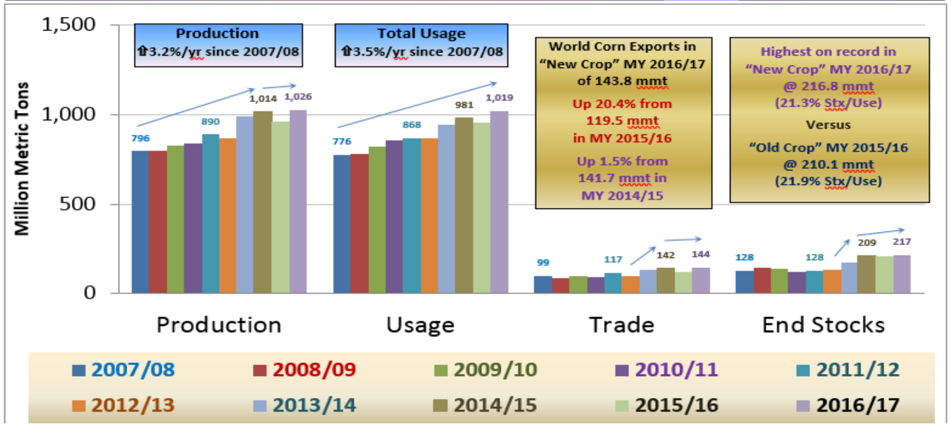
*Production estimates are in million metric tons and come from the FAS/USDA's most recent monthly World Agricultural Production report.

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

CHS Hedging Jenna Roe

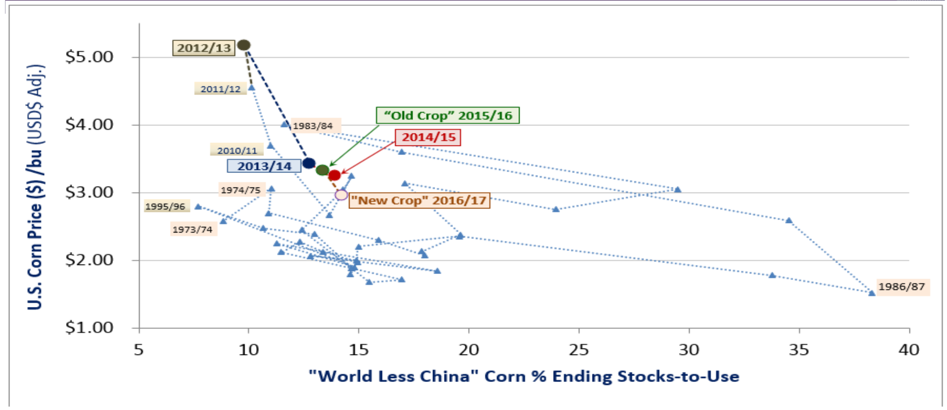
CHS Hedging

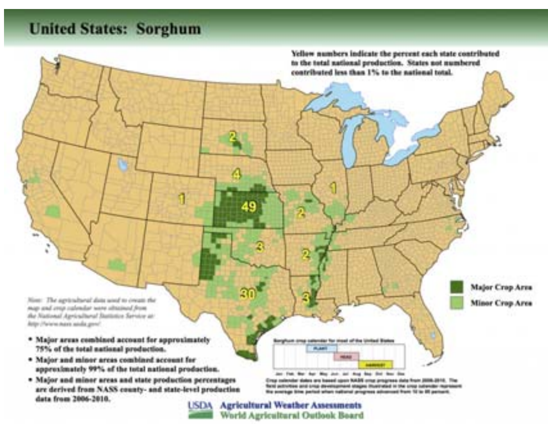
World Corn Supply, Use & Stocks



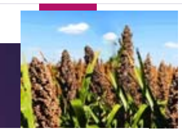
U.S. Corn $^{USD\ adj}$ vs World$^{Less\ China}$ % S/U

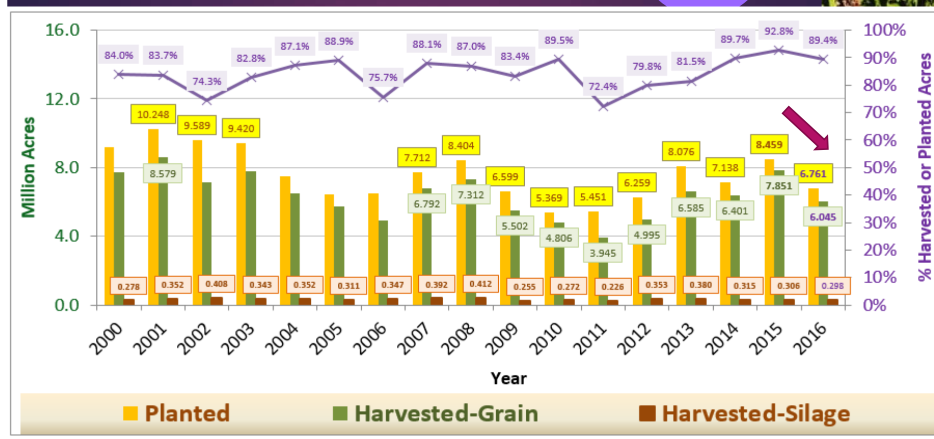
MY 1973/74 through "New Crop" MY 2016/17





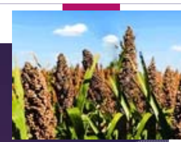
U.S. Sorghum Acreage: 2000-2016

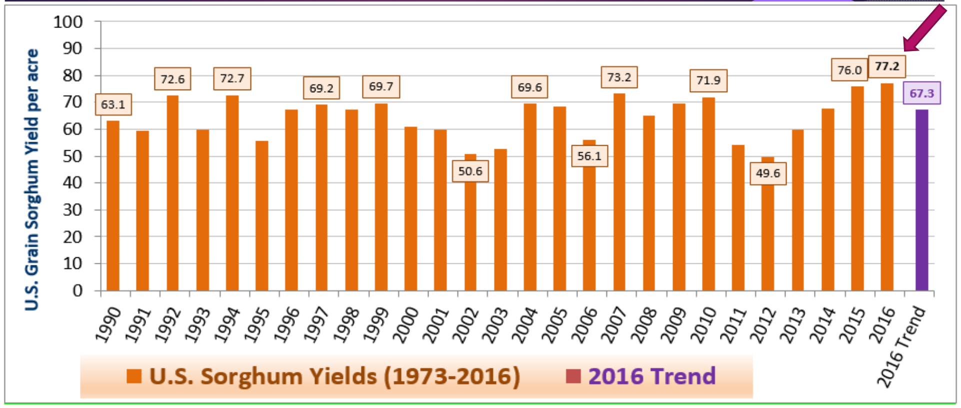




U.S. Sorghum Yields: 1990-2016

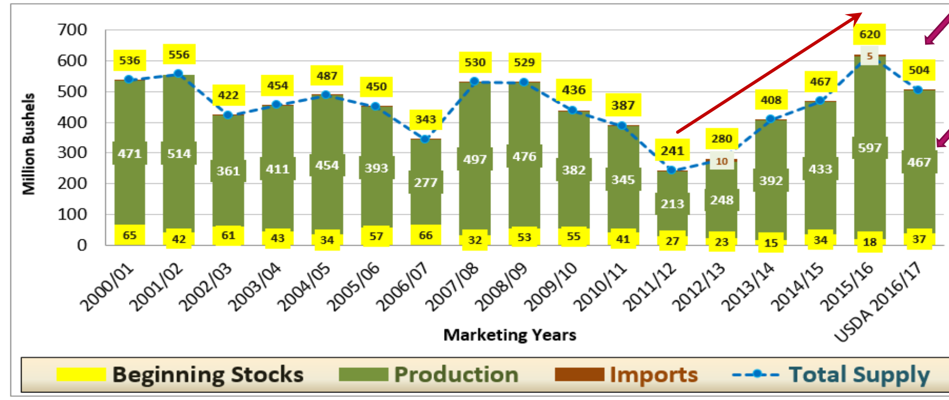
USDA 2016 USDA Forecast = 77.2





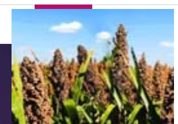
U.S. Sorghum Production & Supplies

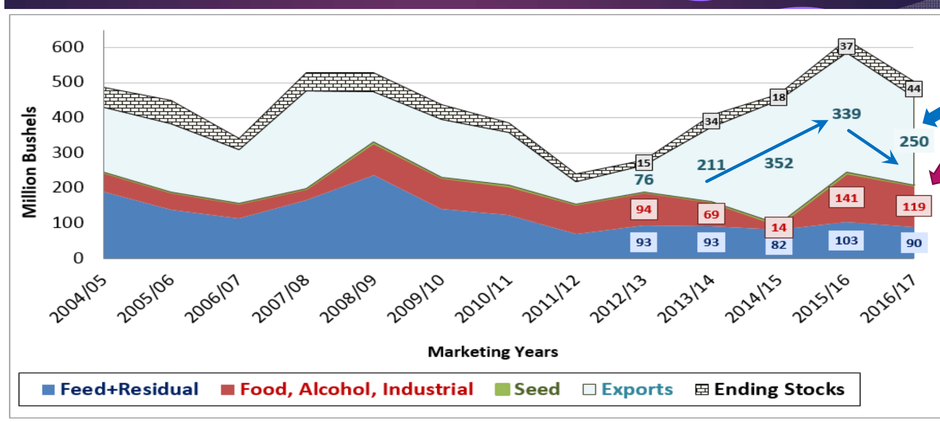
NY 2000/01 to “New Crop” MY 2016/17



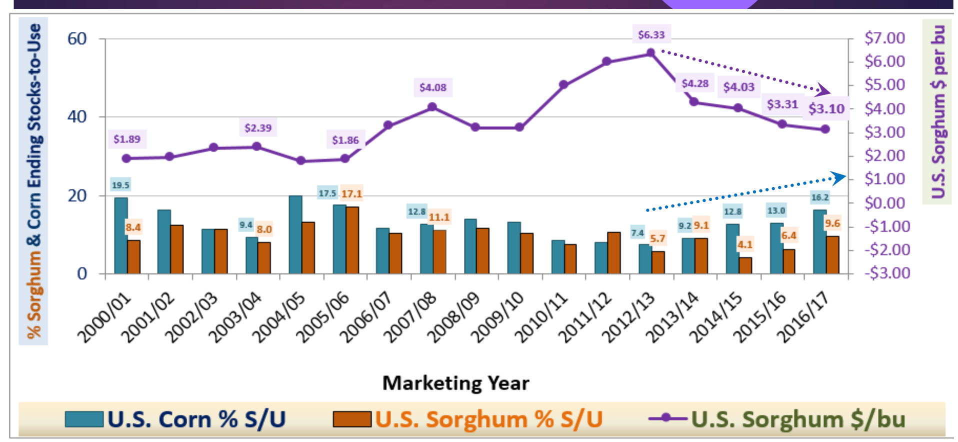
U.S. Sorghum Use & Ending Stocks

MY 2004/05 to “New Crop” MY 2016/17

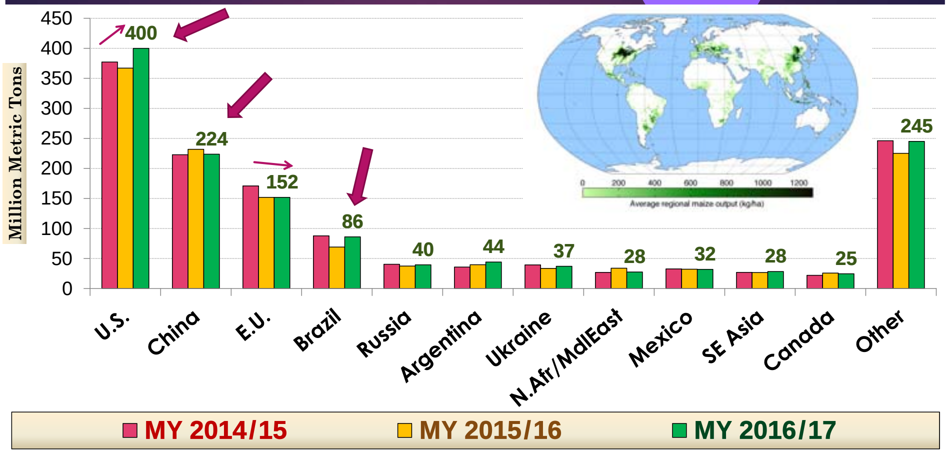




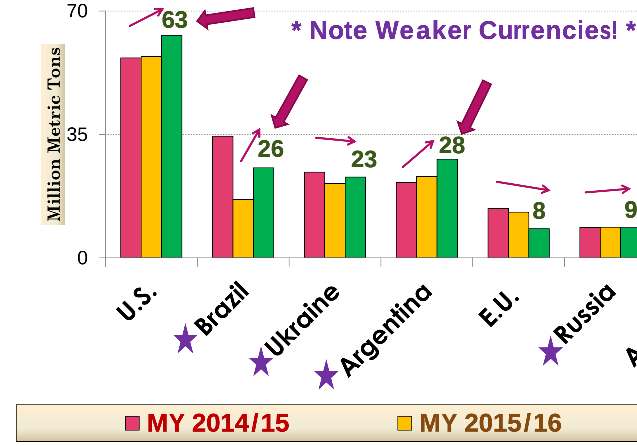
U.S. Sorghum & Corn %S/U vs U.S. Sorghum Price



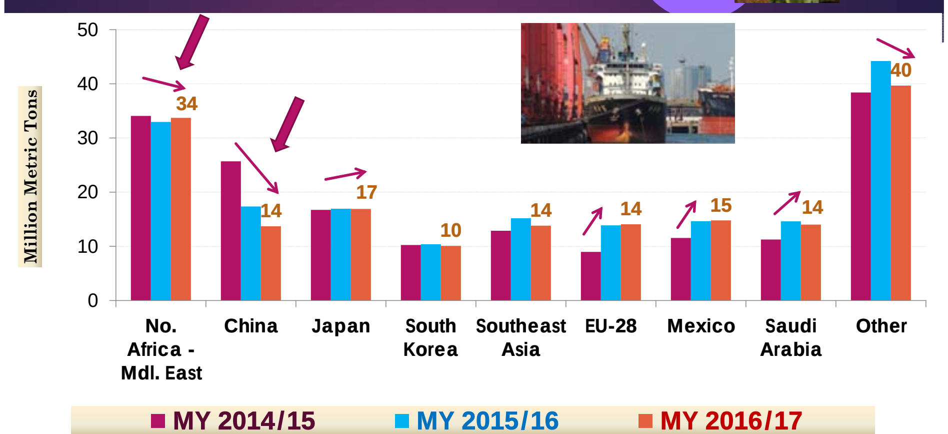
World Coarse Grain Producers



Coarse Grain Exporters



Coarse Grain Importers



Wheat Markets

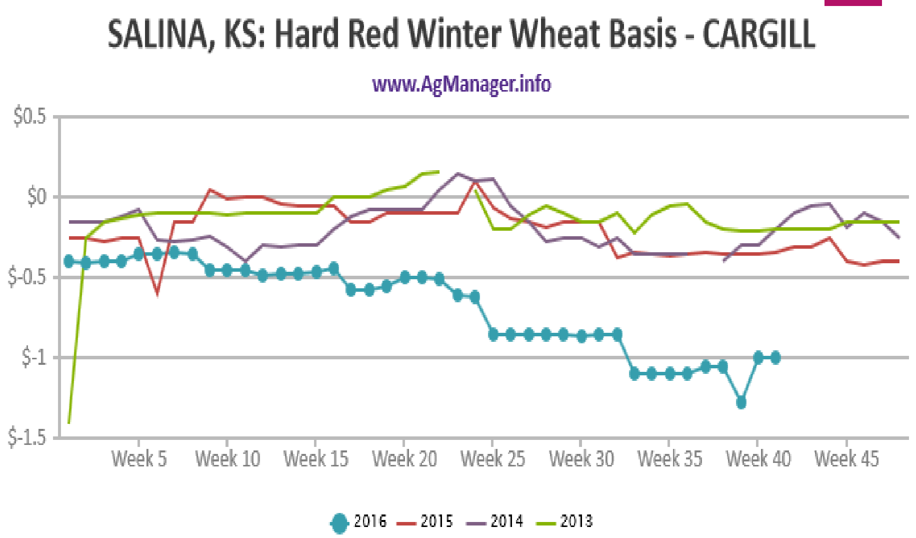
Kansas State University Department of Agricultural Economics

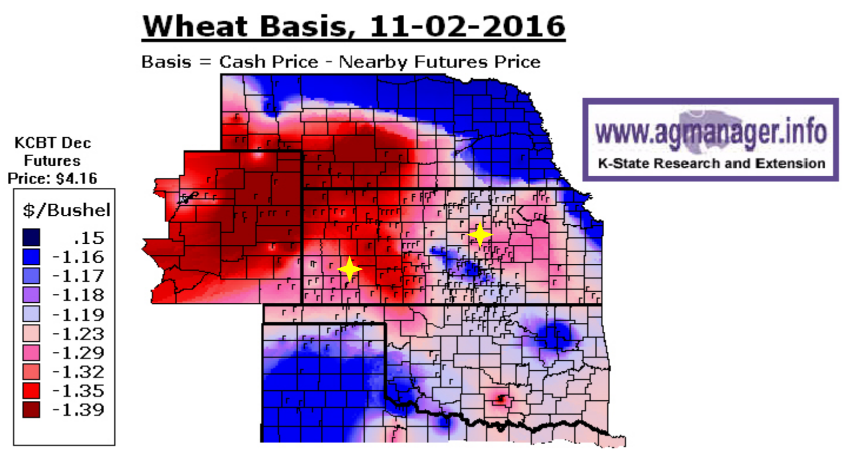
CME Kansas Hard Red Winter Wheat

Monthly Chart: Sept. 2007 – October 2016 + 11/7/2016 close

CME HRW Wheat Futures – 2007-2016***

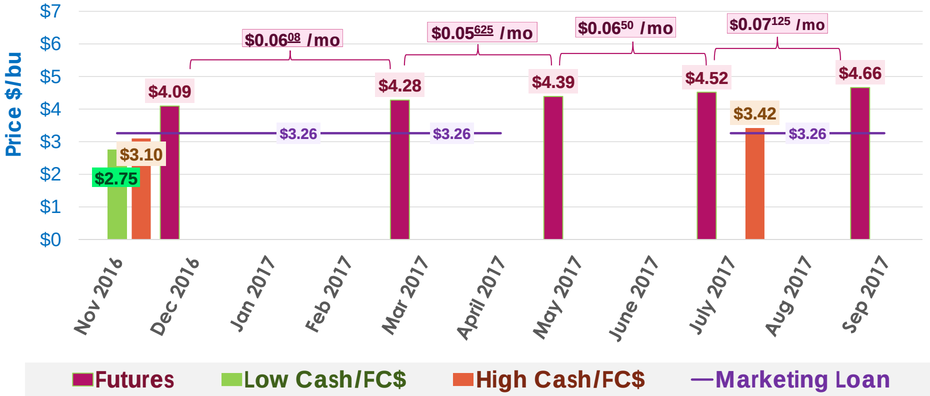
A "*Revenue Insurance*" Focus – October & June Prices$





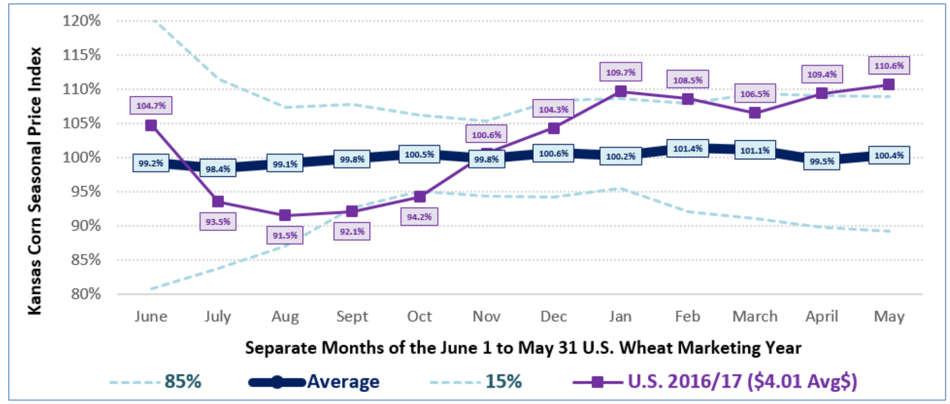
Wheat Cash & HRW Wheat Futures

Salina, Kansas Local Elevators - November 7, 2016



Kansas Wheat Seasonal Cash $ Index

Monthly Prices: 1999/00 – 2015/16 + "Current" MY 2016/17

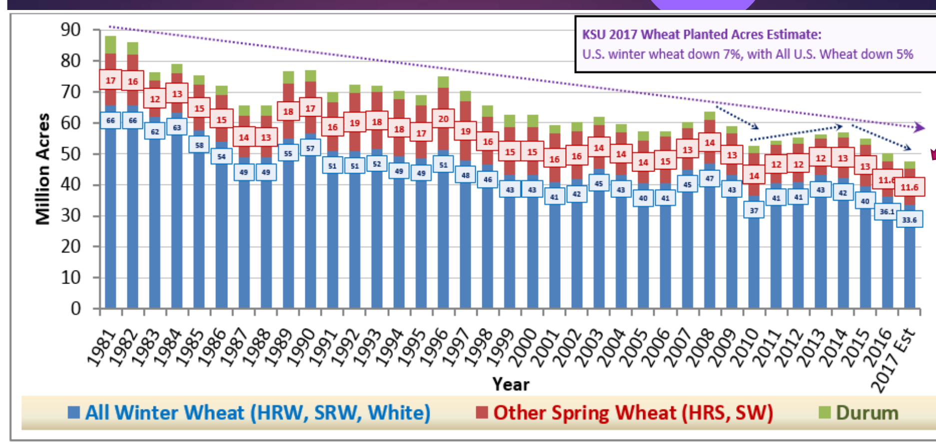


World Wheat Market Prospects:

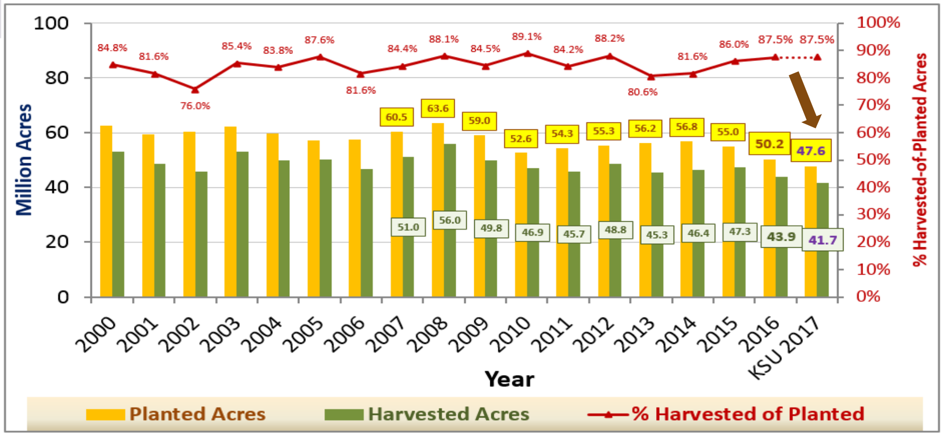
Large Supplies ⇨ A "*Buyer's* Market" (w. Quality concerns)

- **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???

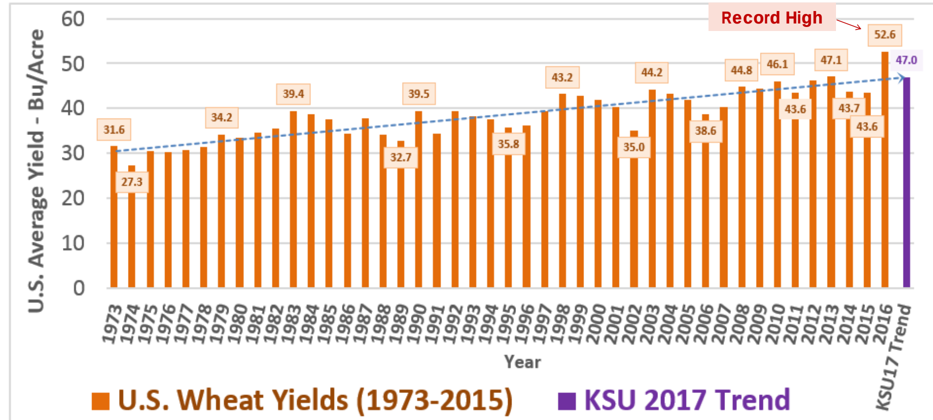
U.S. Wheat Seeded Acreage



U.S. Wheat Acreage: 2000-2017est

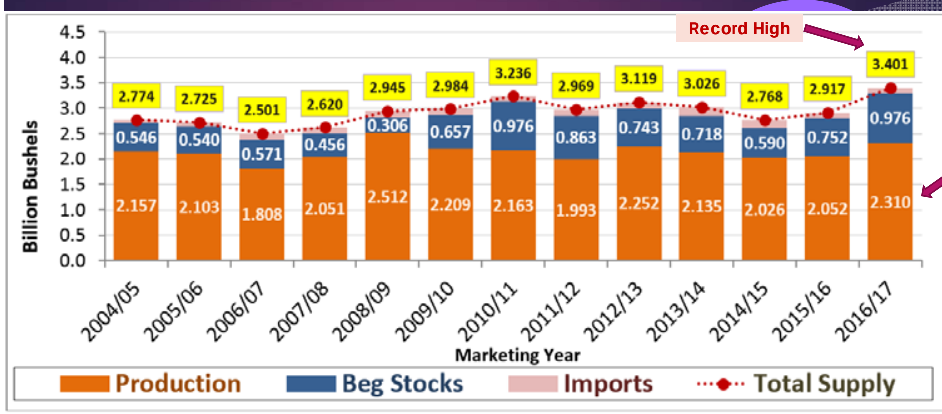


U.S. Wheat Yields: 1973-2017est



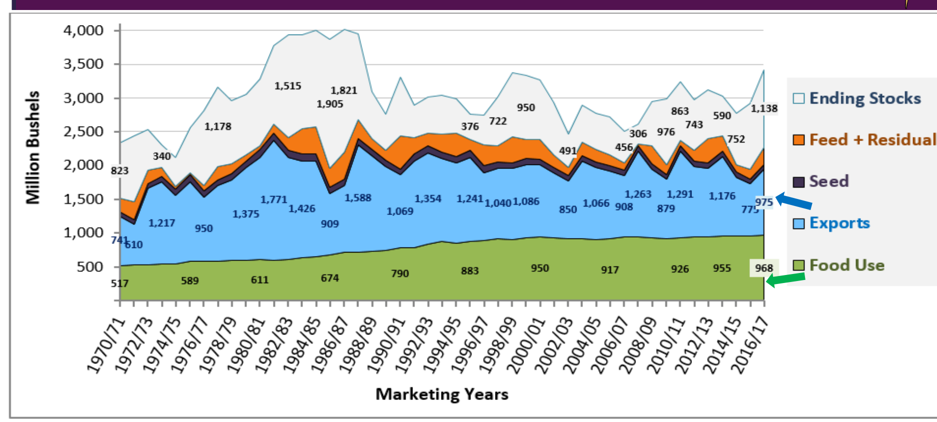
U.S. Wheat Production & Supplies

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



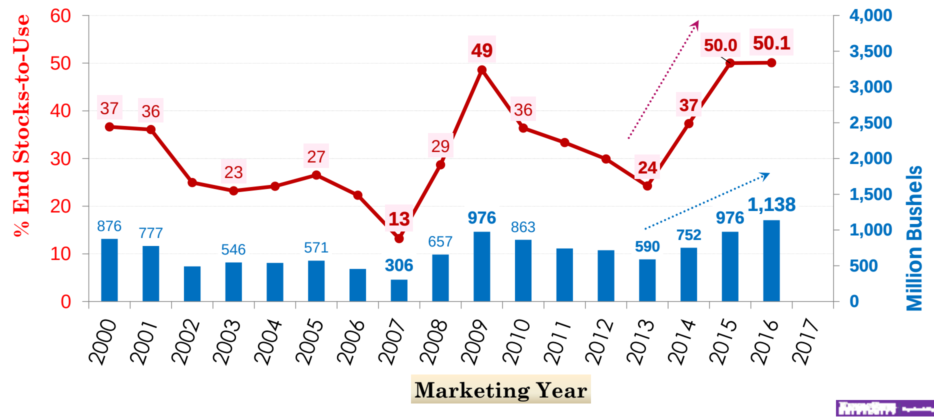
U.S. Wheat Use by Category & Stocks

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



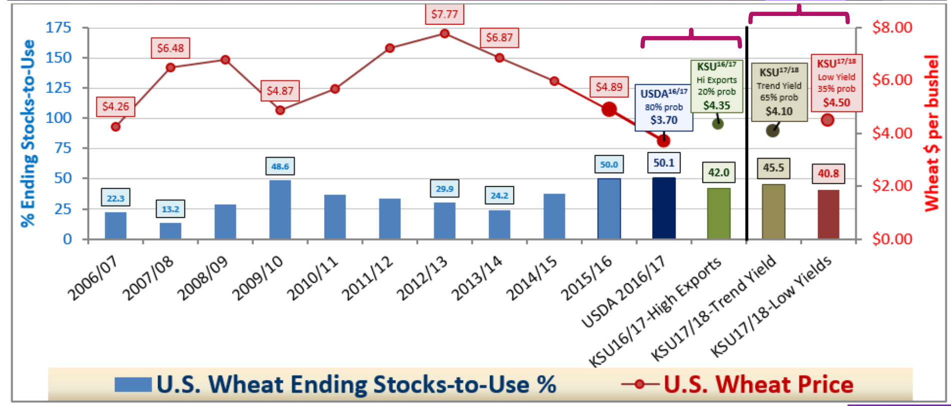
U.S. Wheat Ending Stocks & % Stocks/Use

MY 2000/01 – "Current Crop" MY 2016/17



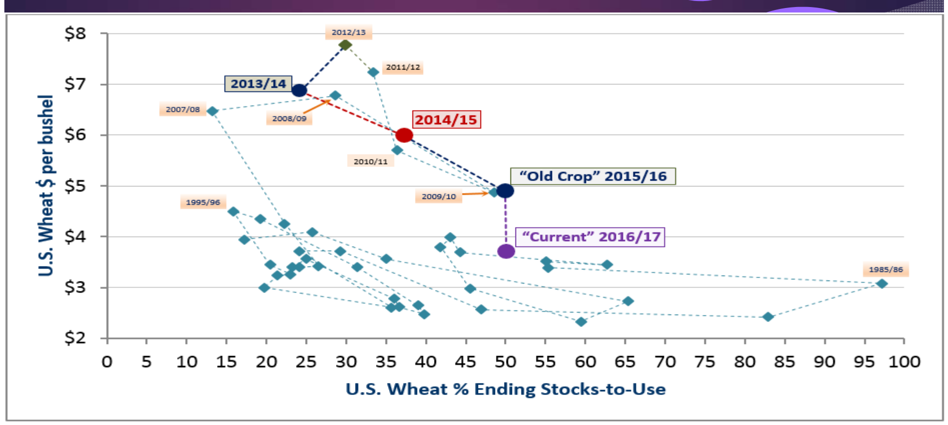
U.S. Wheat Ending Stocks & Prices

MY 2006/07 – Forecast "Next Crop" MY 2017/18[KSU]

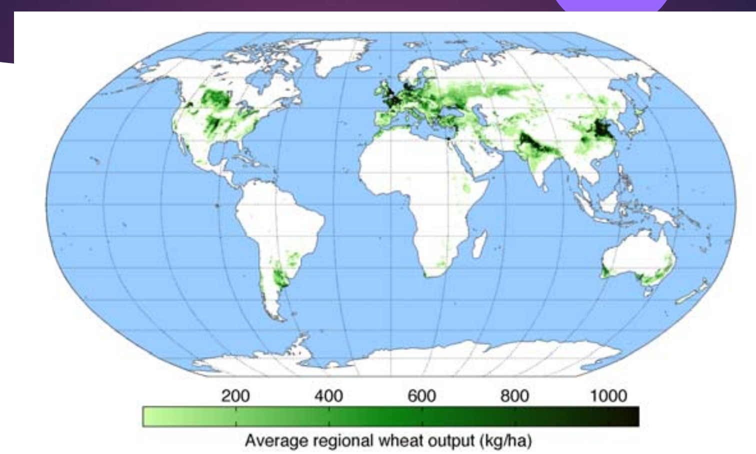


U.S. Wheat Price vs U.S. % Stocks-to-Use

MY 1973/74 – "Current Crop" MY 2016/17



World Wheat Production Regions



Monthly Crop Calendar for Wheat — 9/12/2016

USDA Prod Est. — Plant (P) / Headed (HE) / Harvest (H)

	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							P	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	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	P		
Russia Winter			P	P	P															HE	HE	HE	H	H	H	P
Ukraine Winter			P	P																HE	HE			H	H	P
EU Winter	145.27	(2.23)	P	P	P	P	P	P															H	H	H	H
Turkey	17.50	0.00	P	P	P	P	P	P													H	H	H	H	H	H
Egypt	8.10	0.00	P	P	P	P											H	H	H	H	H	H				
US Winter				P	P	P												HE	HE	HE	HE	H	H	H	H	
India	90.00	2.00			P	P	P	P	P	P							H	H	H	H						
China Winter					P	P	P	P											H	H	H	H				

CHS Hedging
Jenna Roe

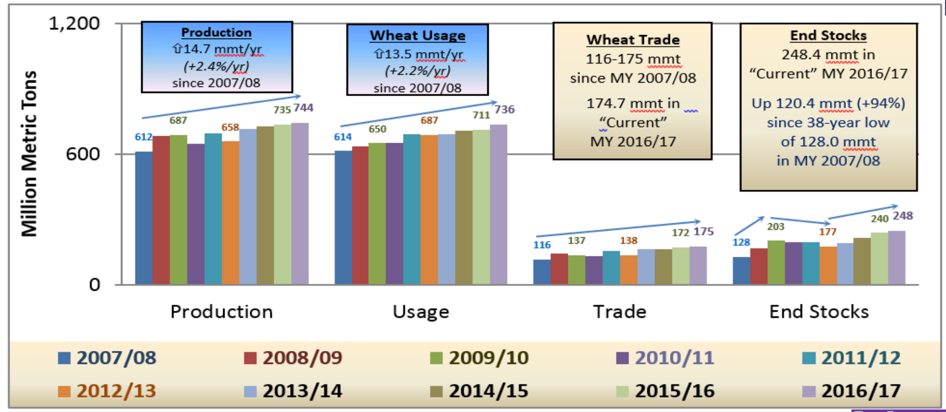
Sources: USDA and AMIS

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

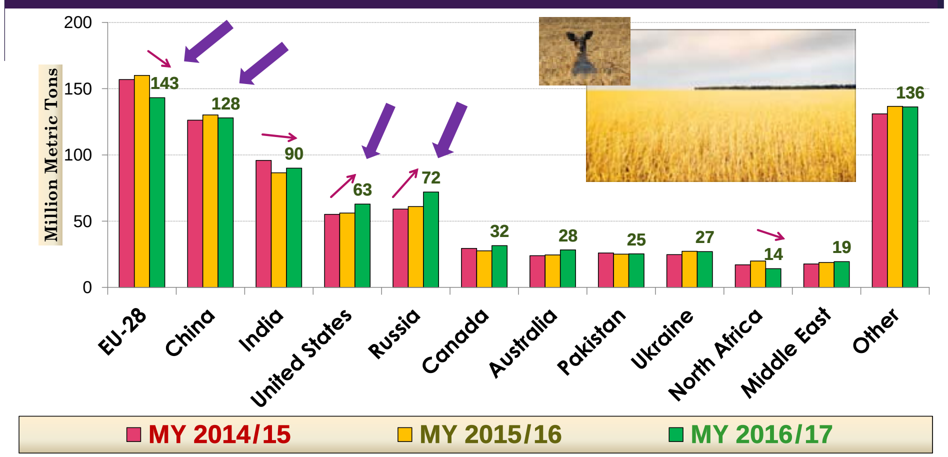
**Production estimates are for ALL WHEAT. Numbers will be listed next to the variety that comes first in the chart.

World Wheat Supply, Use & End Stocks

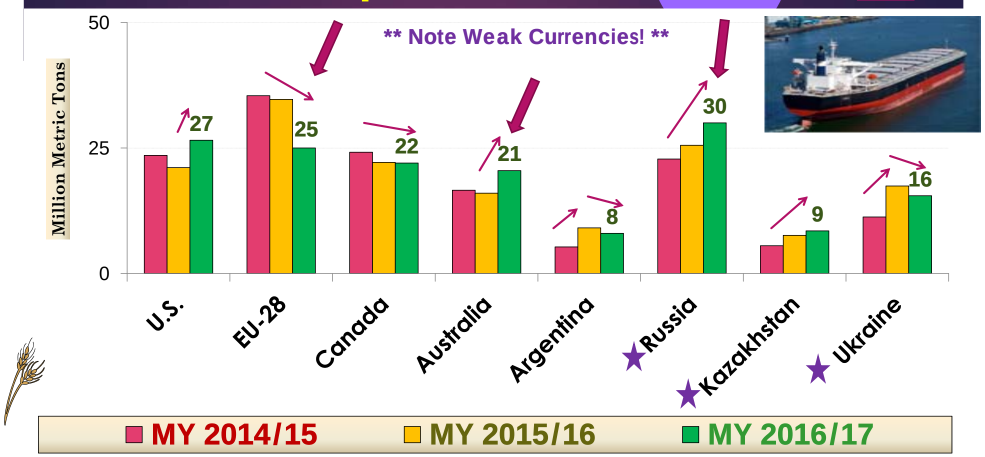
MY 2007/08 – MY 2016/17



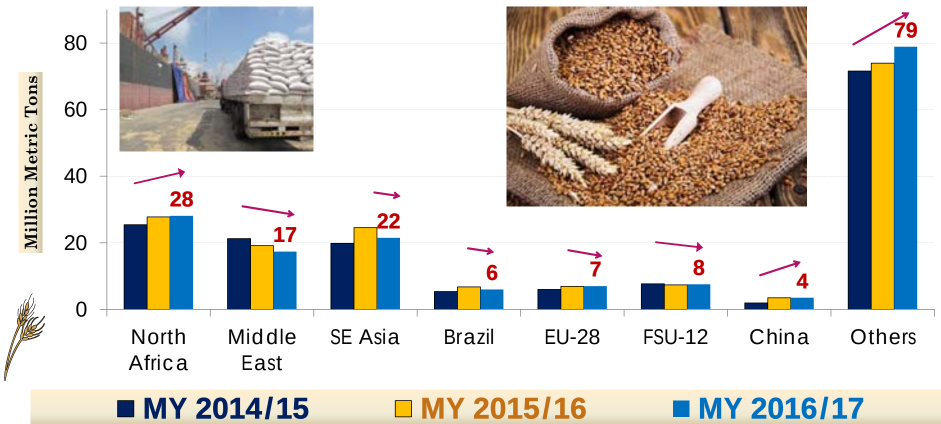
World Wheat Producers: MY 2014/15 – 2016/17



World Wheat Exporters



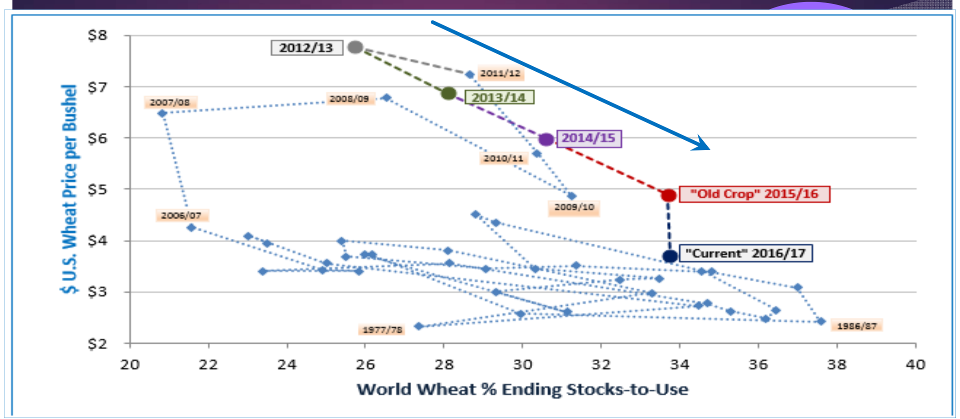
World Wheat Importers: MY 2014/15 – MY 2016/17



World Wheat Ending Stocks & % Stx/Use

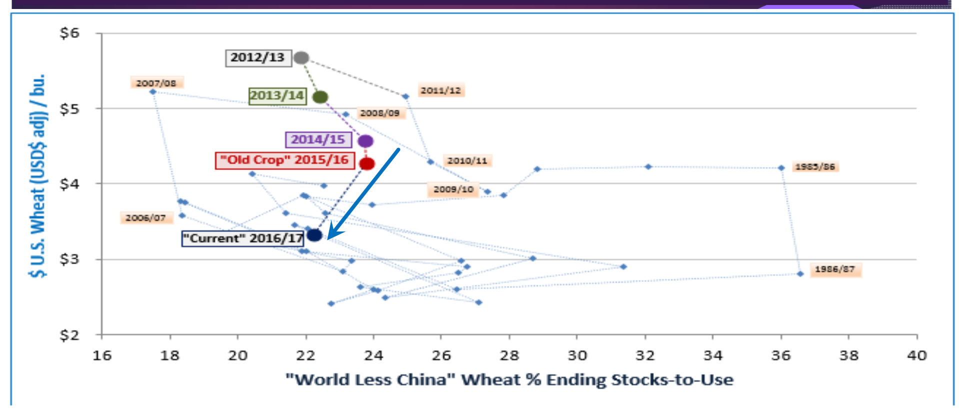
U.S. Wheat Price ($) vs World %Stx/Use

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 Wheat2016** ⇨ **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

Soybean Markets

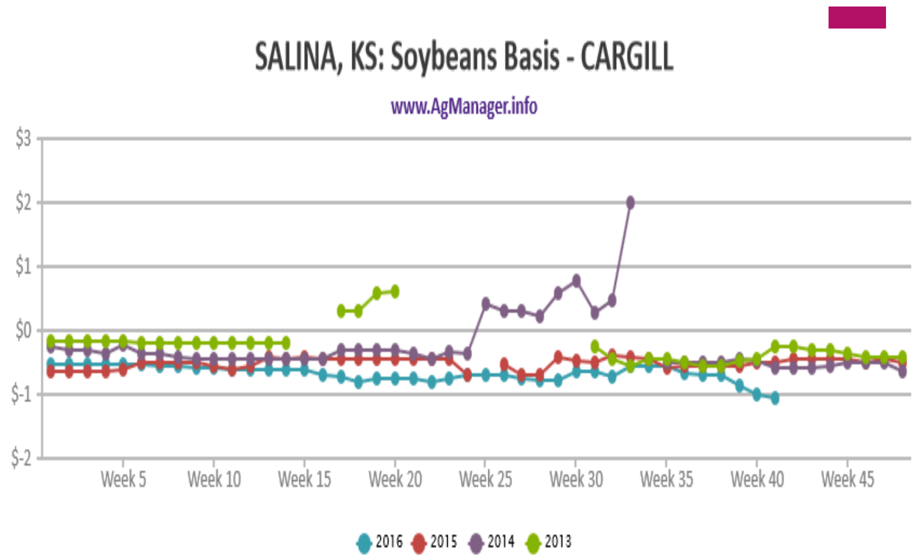
Kansas State University | Department of Agricultural Economics

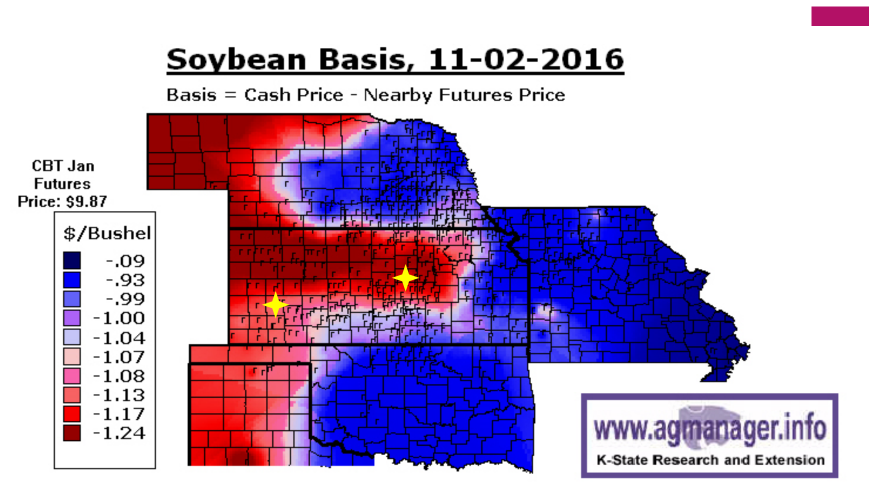
CME Soybean Futures

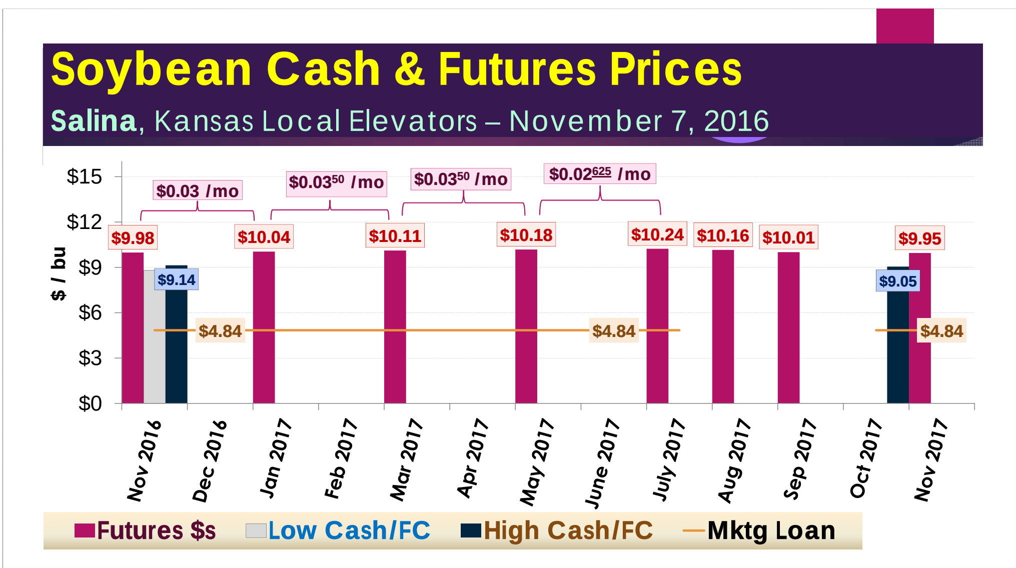
A "***Revenue Insurance***" Focus – February & November Prices$

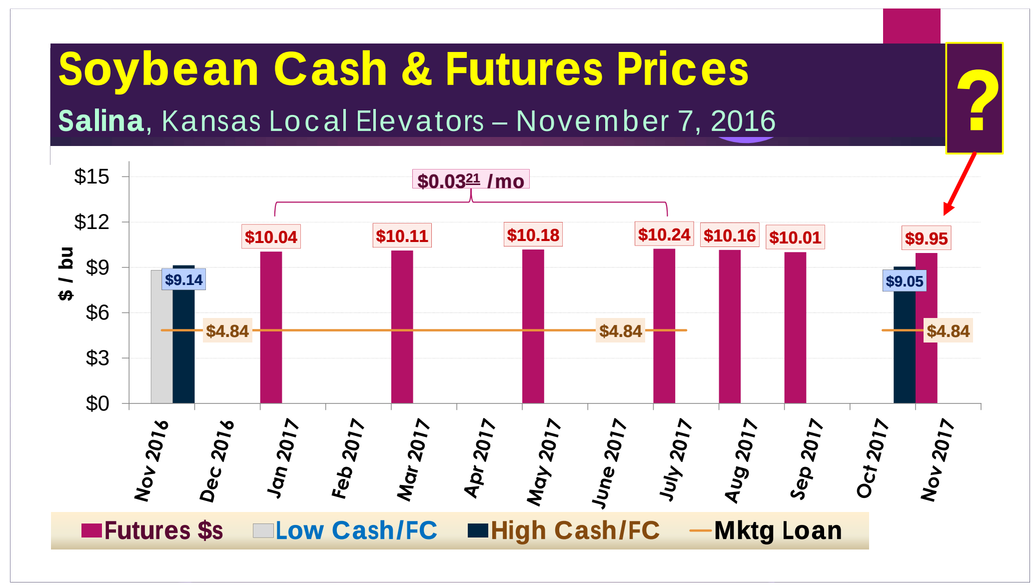
CME Soybean Futures – 2008-2016***

A "***Revenue Insurance***" Focus – February & October Prices$


SALINA, KS: Soybeans Basis - CARGILL
www.AgManager.info
$3
$2
$1
$0
$-1
$-2
Week 5
Week 10
Week 15
Week 20
Week 25
Week 30
Week 35
Week 40
Week 45
2016
2015
2014
2013

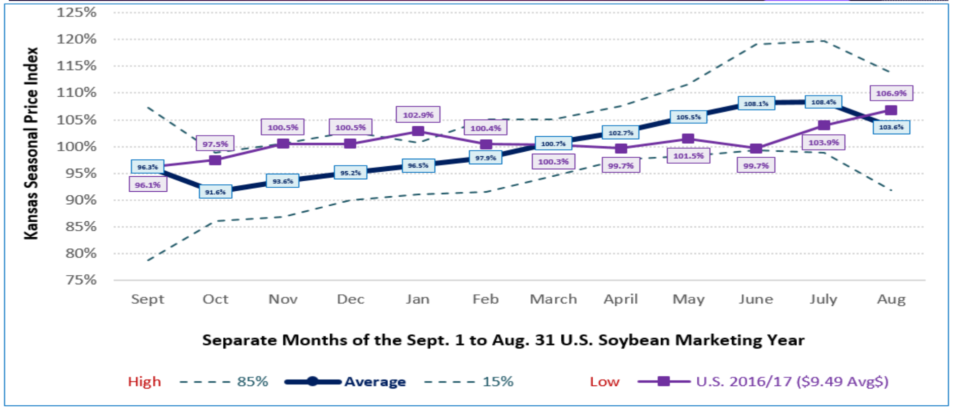

Soybean Basis, 11-02-2016
Basis = Cash Price - Nearby Futures Price
CBT Jan Futures Price: $9.87
$/Bushel
-.09
-.93
-.99
-1.00
-1.04
-1.07
-1.08
-1.13
-1.17
-1.24
www.agmanager.info
K-State Research and Extension


Soybean Cash & Futures Prices
Salina, Kansas Local Elevators – November 7, 2016
$0.03 /mo
$0.03⁵⁰ /mo
$0.03⁵⁰ /mo
$0.02⁶²⁵ /mo
$9.98
$10.04
$10.11
$10.18
$10.24
$10.16
$10.01
$9.95
$9.14
$9.05
$4.84
$4.84
$4.84
$15
$12
$9
$6
$3
$0
$ / bu
Nov 2016
Dec 2016
Jan 2017
Feb 2017
Mar 2017
Apr 2017
May 2017
June 2017
July 2017
Aug 2017
Sep 2017
Oct 2017
Nov 2017
Futures $s
Low Cash/FC
High Cash/FC
Mktg Loan


Soybean Cash & Futures Prices
Salina, Kansas Local Elevators – November 7, 2016
?
$0.03²¹ /mo
$10.04
$10.11
$10.18
$10.24
$10.16
$10.01
$9.95
$9.14
$9.05
$4.84
$4.84
$4.84
$15
$12
$9
$6
$3
$0
$ / bu
Nov 2016
Dec 2016
Jan 2017
Feb 2017
Mar 2017
Apr 2017
May 2017
June 2017
July 2017
Aug 2017
Sep 2017
Oct 2017
Nov 2017
Futures $s
Low Cash/FC
High Cash/FC
Mktg Loan

Kansas Soybean Seasonal Cash $ Index

Monthly Prices: 1999/00 – 2015/16 + "New Crop" MY 2016/27

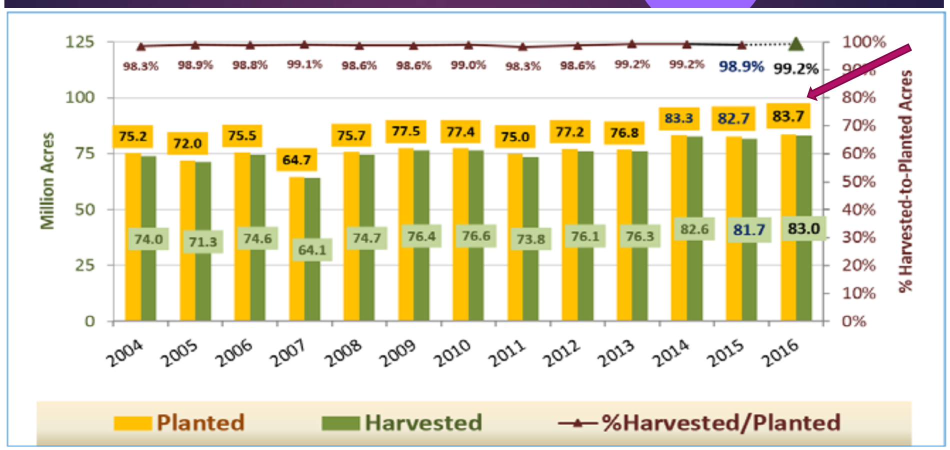


U.S. Soybean Market Prospects:

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

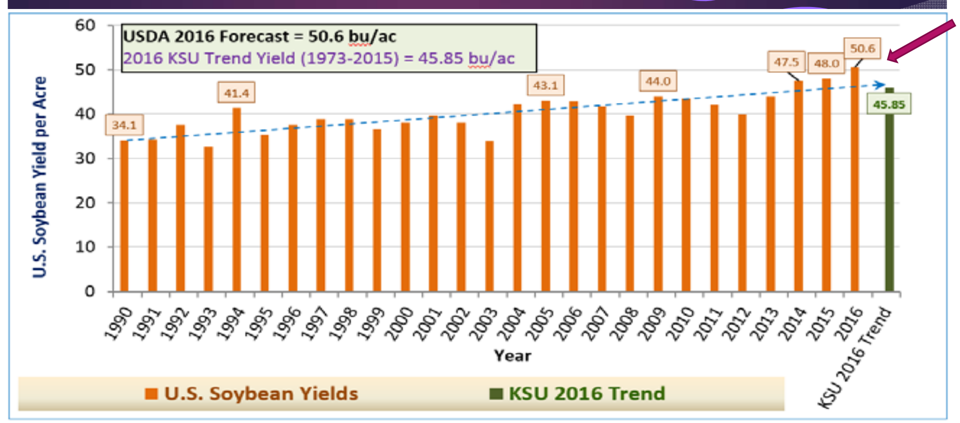
- **U.S. soybean exports in 2016/17 to remain historically large in spite of higher U.S. Dollar exchange rate**
  - Depends on China imports & 2017 South American crops
- **Low Prices have supported record high U.S. Soybean Use**
  - **Crush**$^{2016/17}$ = 1.950 bln bu *(record > 1.886 bb in MY 2015/16)*
  - **Exports**$^{2016/17}$ = 2.025 bln bu *(record > 1.936 bb vs MY 2015/16)*
- **Uncertainty re: 2017 South American soybean crop size**

U.S. Soybean Acreage: 2004-2016



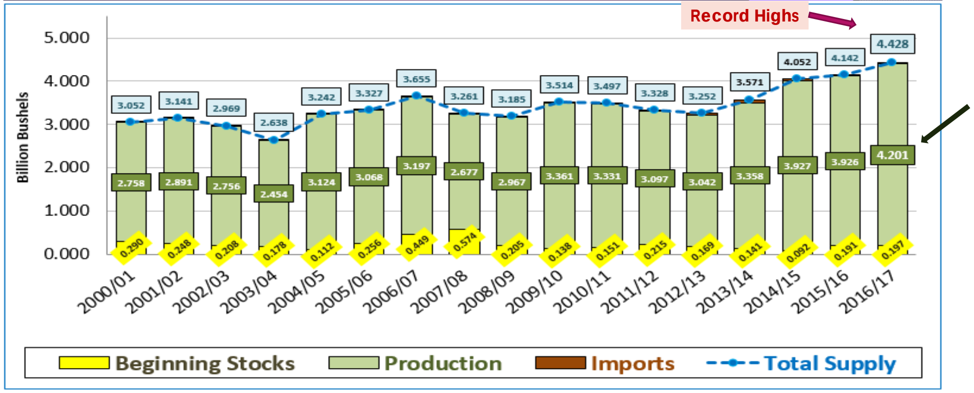
U.S. Soybean Yields: 1990-2016

USDA 2016 = 48.9 bu/ac; 2016 Trend$^{1973\text{-}2015}$ = 45.8



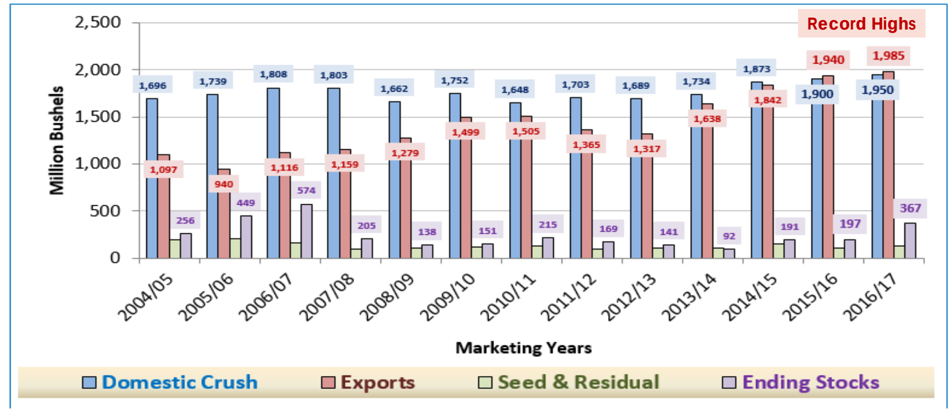
U.S. Soybean Production & Supplies

MY 2001/02 – "New Crop" MY 2016/17



U.S. Soybean Use & Ending Stocks

MY 2004/05 – "New Crop" MY 2016/17

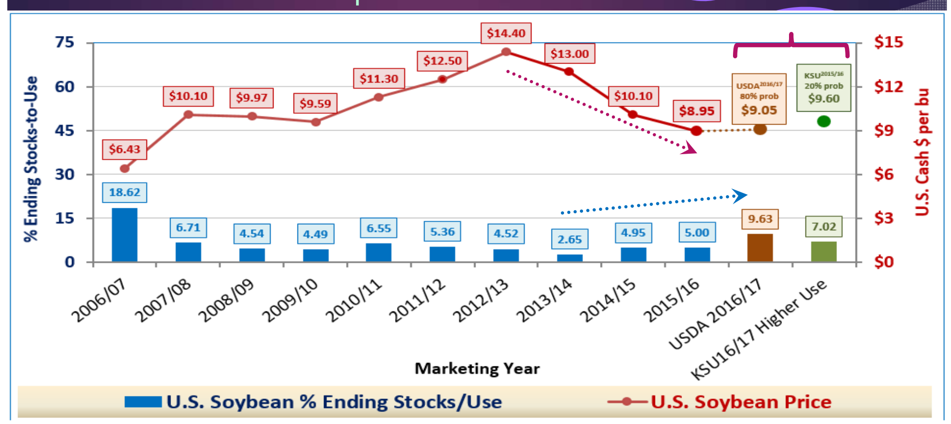


U.S. Soybean Ending Stocks & % Stx/Use

MY 2007/08 – "New Crop" MY 2016/17

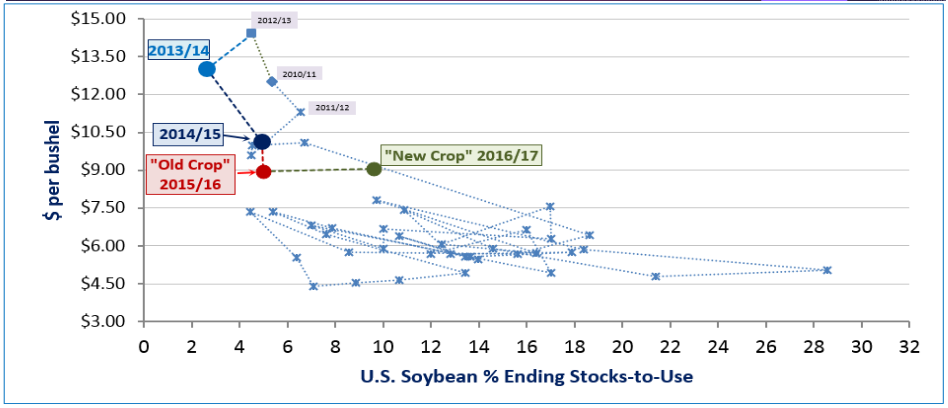
U.S. Soybean % Stocks/Use vs Price$

MY 2006/07 – "New Crop" MY 2016/17



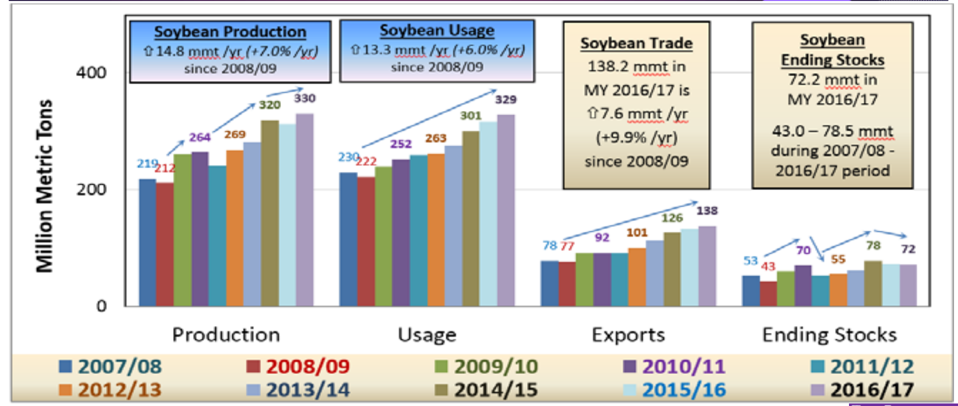
U.S. Soybean $ vs U.S. Stx-to-Use

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

Plant | Bloom | Harvest

	USDA Prod Est. 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	H	H	H	H	H	H	H	H	H	H						
Argentina	57.00	0.00					P	P	P	P	P		B	B			H	H	H	H	H	H				
South Africa	1.12	0.00						P	P	P			H	H	H	H										

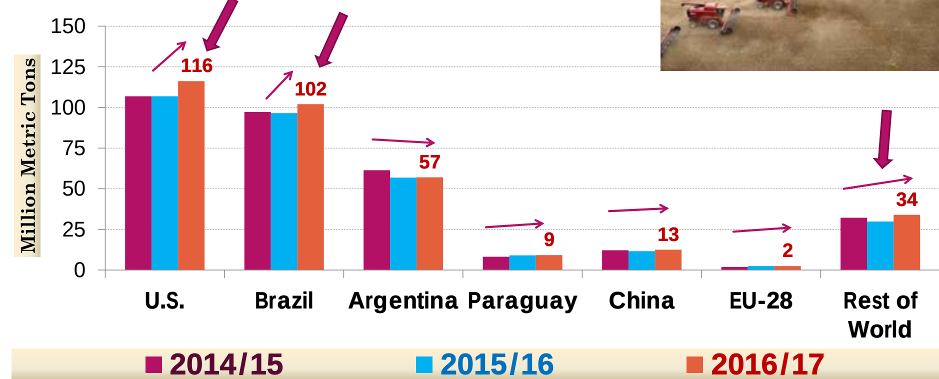
CHS Hedging Jenna Roe

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

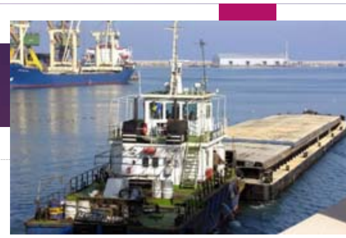
*Production estimates are in million metric tons and come from the FAS/USDA's most recent monthly World Agricultural Production report.

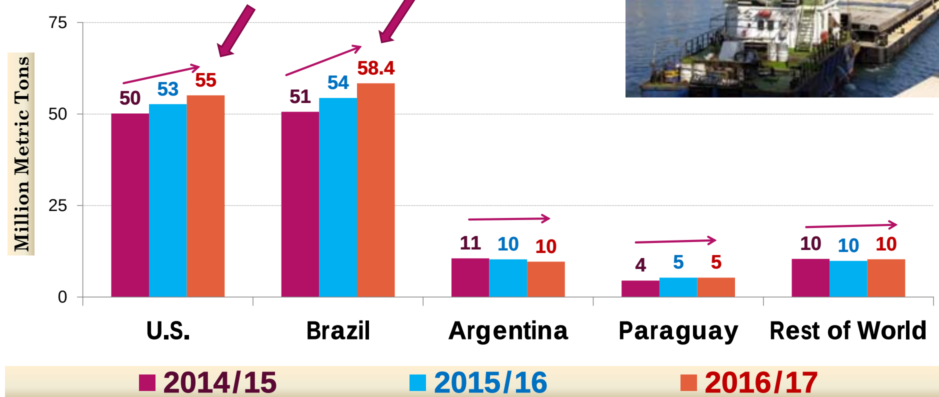
World Soybean Producers

MY 2014/15 – MY 2016/17

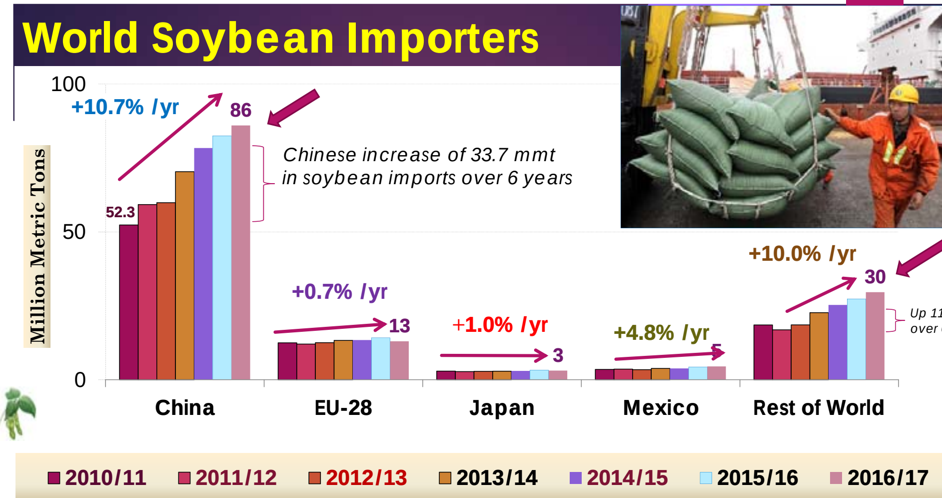


World Soybean Exporters



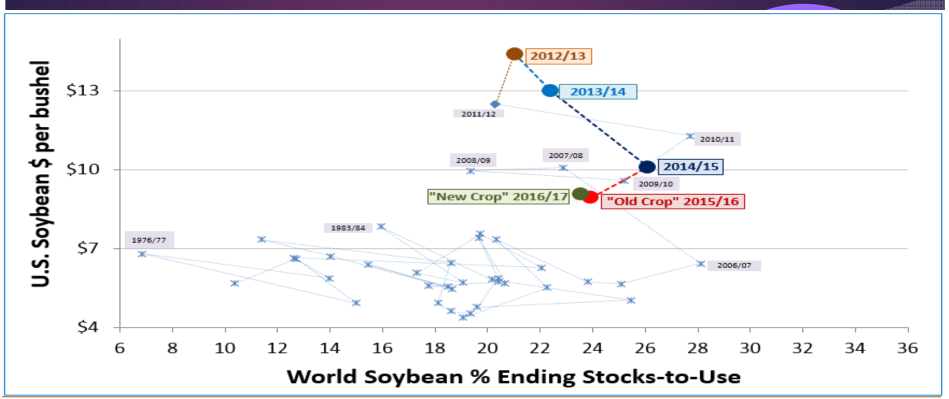


World Soybean Importers



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

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



Questions?

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