

GENERAL SESSION III
"Long-term View on the Current Price Situation"

Dr. William Tierney, Chief Economist
AgResource Company

Dr. William I. Tierney, Jr. PhD, is the Chief Economist for AgResource Company (Chicago). He joined the firm in October 2011. He has over 35 years of experience as an agricultural economist primarily in the area of global crop market analysis. For 20 years Bill was a Professor in the Department of Ag Economics at Kansas State University. From 2003-2006, Bill served as the USDA's Principal Grains Economist. In that capacity, Bill was in charge of the USDA's monthly supply/demand projections and price forecasts for wheat and feed grains.

Other positions that Bill has held include: (1) Exec VP for Research for a national brokerage firm that served mostly US ethanol plants; (2) Head of North American Research for an international agribusiness consulting firm; (3) General Manager of Doane Advisory Services; and (4) Senior Ag Analyst for a Cargill commodity hedge fund. Just prior to joining AgResource, Bill served in Iraq for a year as a senior agricultural advisor for the US government. Bill is a graduate of Michigan State University and the University of Missouri.

Summary

Highlights to be discussed:

- (1) China demand;*
- (2) Increasing competition from other major exporters;*
- (3) Lack of significant growth in global biofuel consumption;*
- (4) Impact of strong US dollar on US ag export competitiveness;*
- (5) Lack of traditional ag policy mechanisms to mitigate falling prices.*

**A Long-Term View of Crop Prices:
The Landscape Has Changed for US Crop Ag**
(Risk & Profit Conference. Manhattan, KS. Aug 19, 2016)



Bill Tierney, Ph.D
Chief Economist
AgResource
Chicago, IL 60606

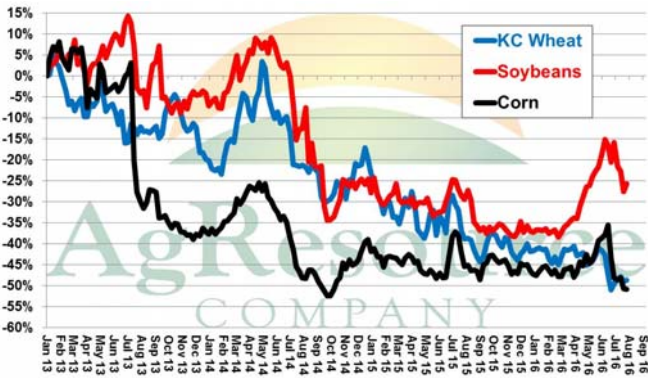
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THE HANGOVER



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Futures Prices: KC Wheat, Soybeans & Corn
(% Change Since Jan 2013)



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Weather Risk



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**“About 7%-8% of US Corn/Soy Production is
Within an Area Experiencing Drought”**



U.S. Corn Areas Experiencing Drought

Reflects August 9, 2016
U.S. Drought Monitor data

Approximately 7% of corn
production is within an area
experiencing drought.

USDA United States
Department of
Agriculture



Major and minor agricultural areas are defined from 1982 county-level crop production data from 2003 to 2010. Additional information on these agricultural areas can be found at: <http://www.nrc.usda.gov/>

Major agricultural areas combined account for 70% of the total national production.

Minor and minor agricultural areas combined account for 30% of the total national production.

Updated Weekly:

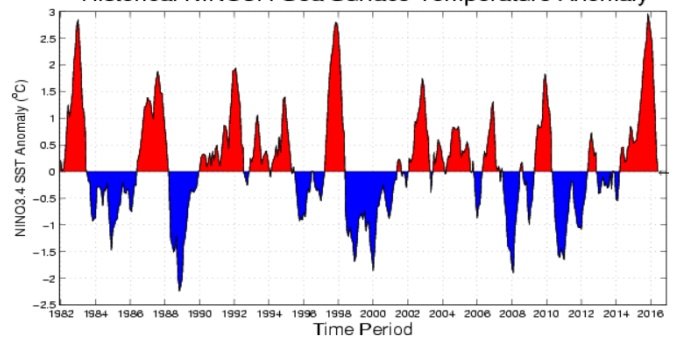
http://www.usda.gov/oce/weather/Drought/AgInDrought.pdf?utm_medium=email&utm_source=govdelivery

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**La Nina Has Arrived – But Too Late for
2016 Crop Yield Issues**

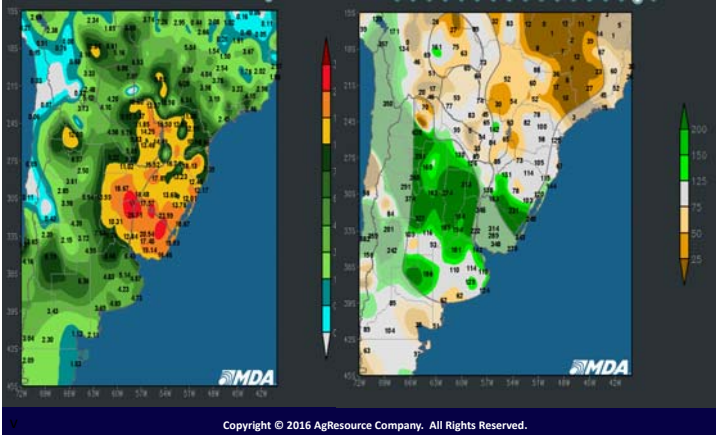


Historical NINO3.4 Sea Surface Temperature Anomaly



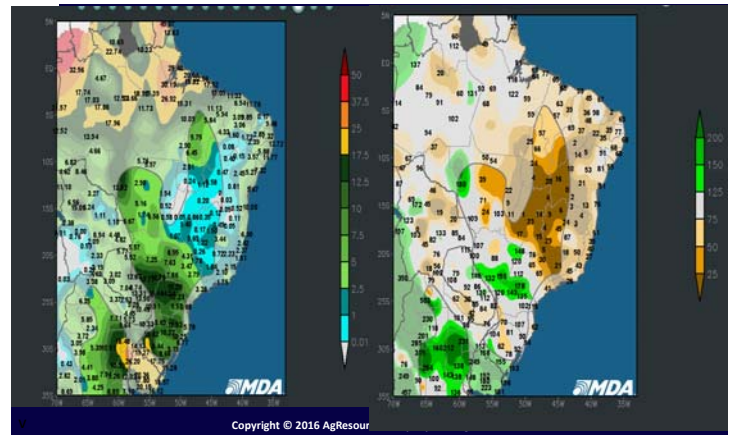
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Argentine April 1- 30th Rainfall 250-400% of normal – Loss of 220 Mil Bu Soy



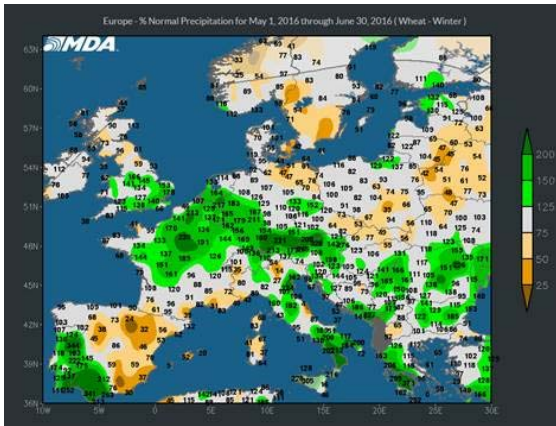
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Brazilian Drought Across the Winter Corn Areas – Loss of 17 MMTs or 668 Mil Bu!



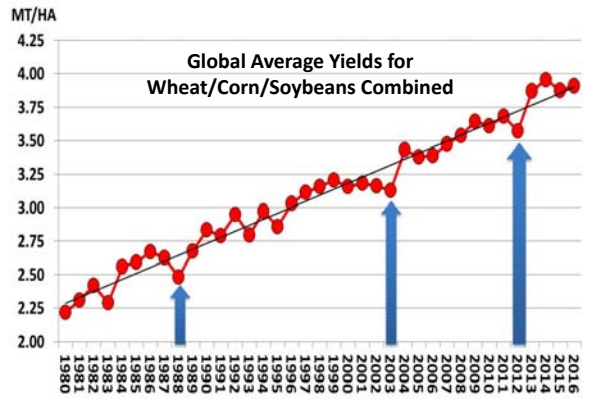
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EU Wheat Crop Deluged!



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Every 7-14 Years a Significant Weather Event Occurs to Rally World Markets



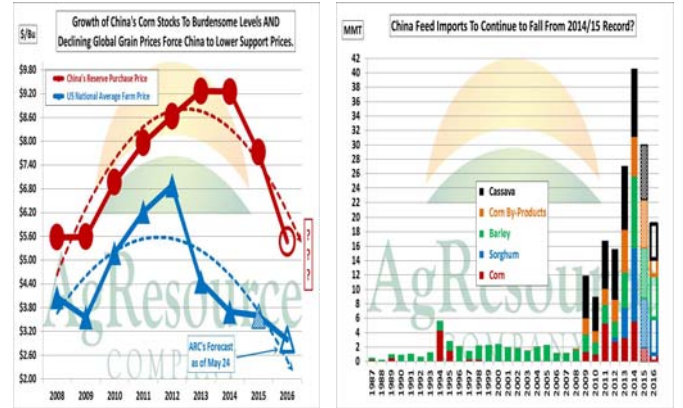
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Changes in Ag/Food/Energy/Macro Policy



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China Corn Policy Now in Reverse



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Geopolitical Events Have An Impact on Crop Prices



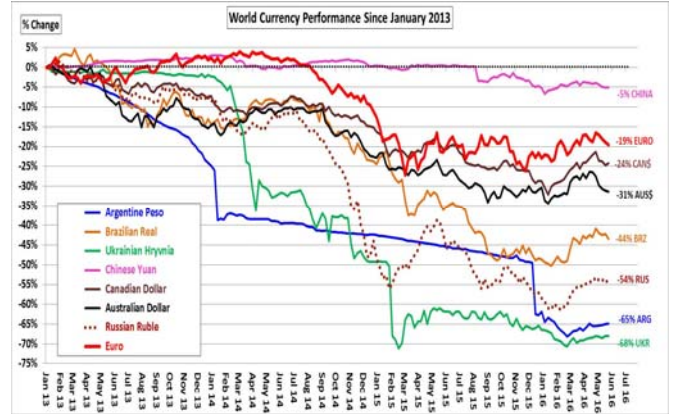
Russian 'invasion' of Crimea fuels fear of Ukraine conflict

Shaun Walker in Kiev, Harriet Salem in Sevastopol
The Guardian Friday 28 February 2014

Russia and the west are on a collision course over Crimea after Moscow was accused of orchestrating a "military invasion and occupation" of the peninsula, as groups of apparently pro-Russian armed men seized control of two airports.

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Exchange Rates Have Impact on Crop Prices Too



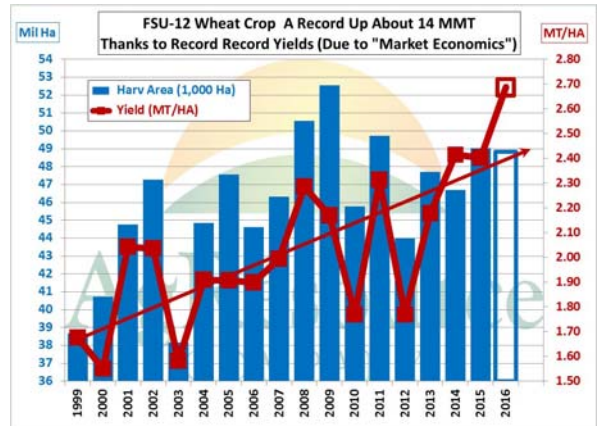
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Wheat : Black Sea S&D Sets Price



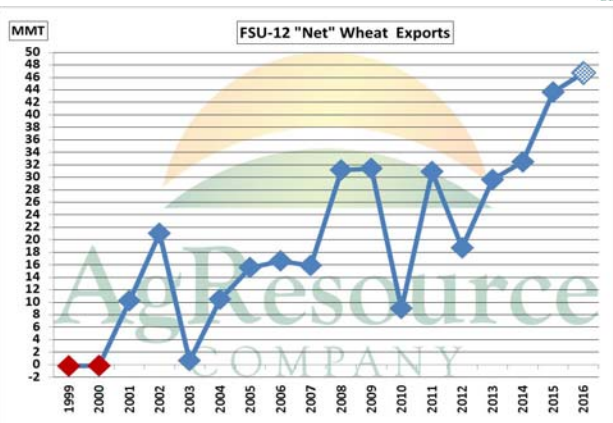
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Record Wheat Crop in Former Soviet Union (FSU)



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Record Crop – Record Exports from FSU Russia Alone Exports 30 MMT Vs US's 22 MMT



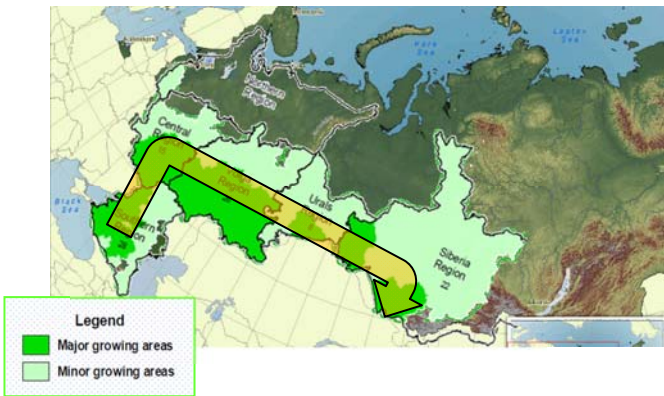
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"Wild Cards": Russian Weather & Policy



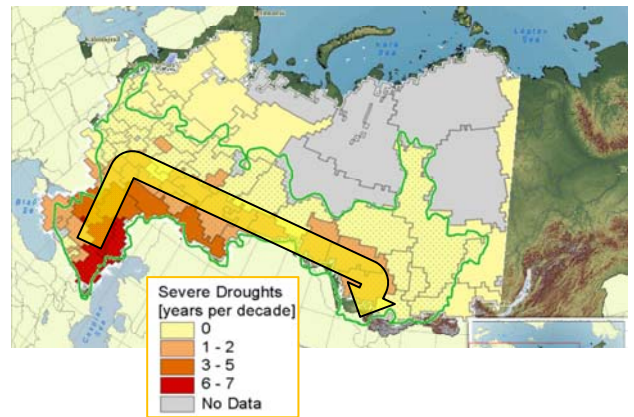
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Russian Wheat Production Area Susceptibility to Drought



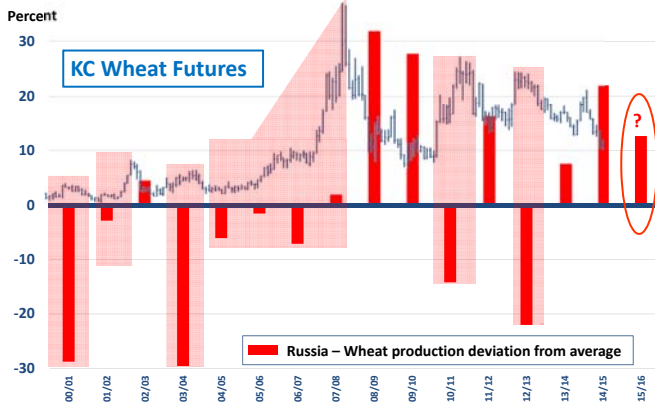
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Russian Wheat Production Area Susceptibility to Drought



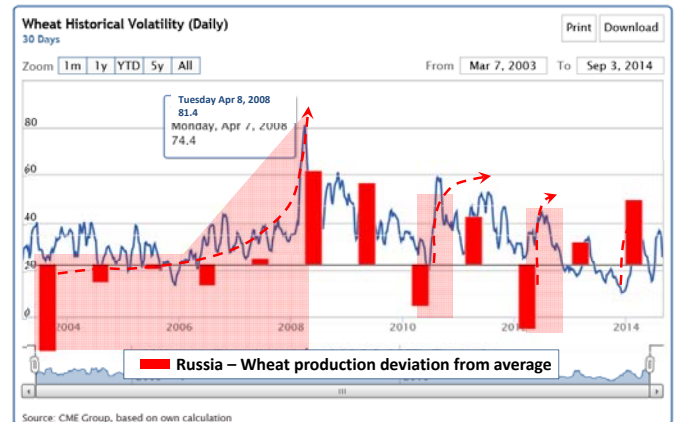
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Deviation from 16-Year Average Wheat Production Russia (48.4 MMT Average) in Percent Change



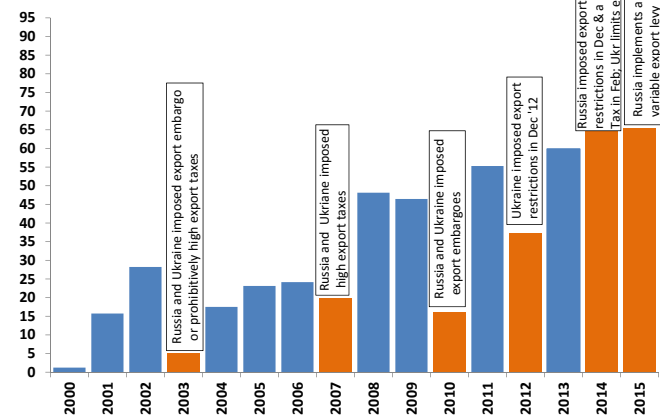
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CME Wheat Volatility



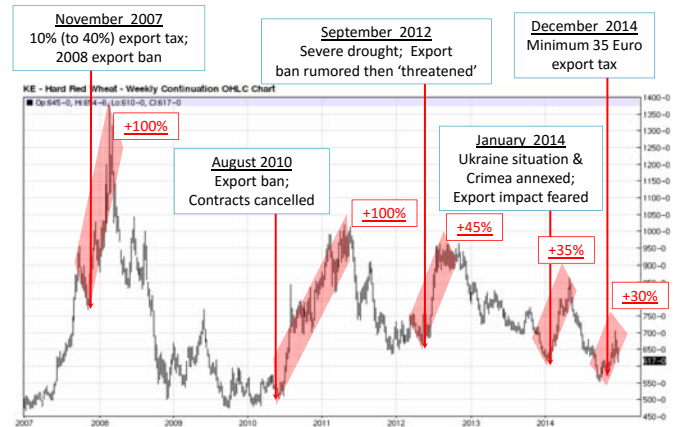
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FSU-12's All Grains "Net" Exports



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Russian Wheat Exports: State Intervention in Markets 2007 to 2015



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Weekly Kansas City Wheat Futures – 2007 to 2015



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Panic Buying of Agricultural Sector as Global Grain Inventories Hit Record Lows

Jan 07, 2008 - 03:10 AM GMT

By: [Joseph Dancy](#)

Russia, the world's fourth-biggest wheat exporter, **announced plans last month to cap exports**... The Russian government also said it would raise its wheat export tariff sharply, to 40 percent from 10 percent, to keep grain at home. The move should restrict the world's exportable supplies and could boost demand for U.S. wheat.

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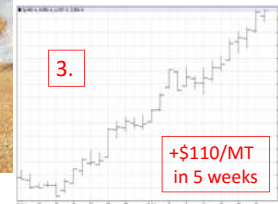
Wheat soars to limit on Russia export halt

By Rod Nickel

WINNIPEG, Manitoba Thu **Aug 5, 2010** 4:42pm EDT

Prime Minister Vladimir Putin signed an order **banning grain and flour exports** from August 15 to December 31, with a spokesman saying this would apply to contracts that had been already signed. "Putin's announcement has everyone in a panic."

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FT [Commodities](#)

Wheat soars after Russian crop failure

July 8, 2012 7:50 pm

By Javier Blas in London

Siberian farmers can barely remember when they saw a wheat harvest so small. The **last crop failure on this scale was in the early 1960s**, when Nikita Khrushchev led what was the Soviet Union....

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Russian 'invasion' of Crimea fuels fear of Ukraine conflict

[Shaun Walker](#) in Kiev, [Harriet Salem](#) in Sevastopol

The Guardian Friday **28 February 2014**

Russia and the west are on a collision course over Crimea after Moscow was accused of orchestrating a "military invasion and occupation" of the peninsula, as groups of apparently pro-Russian armed men seized control of two airports.

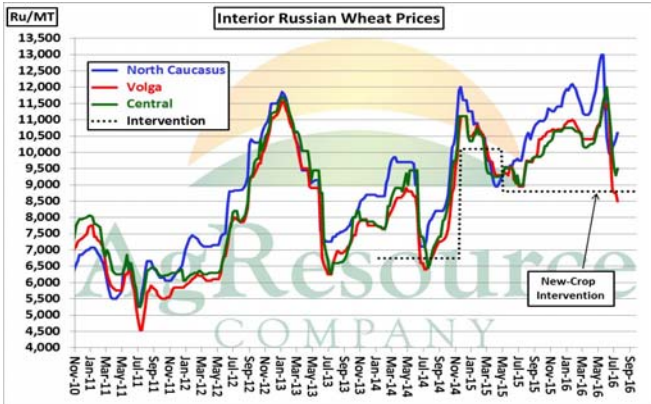
One Ukrainian official claimed late on Friday that 2,000 Russian troops had arrived in Crimea during the course of the day, in 13 Russian aircraft.

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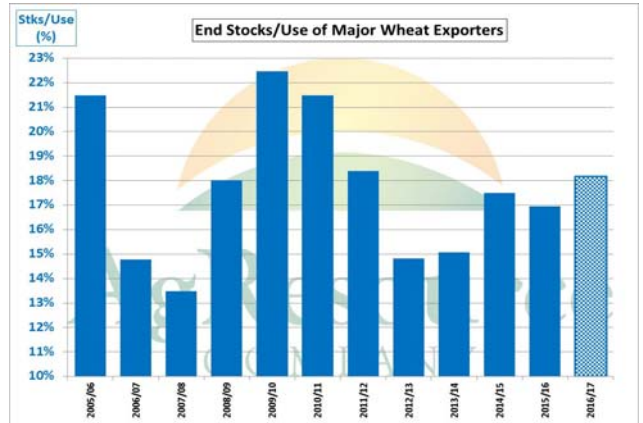
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Russia Has "State Reserves" But Not The Money To Buy Enough To Support Prices



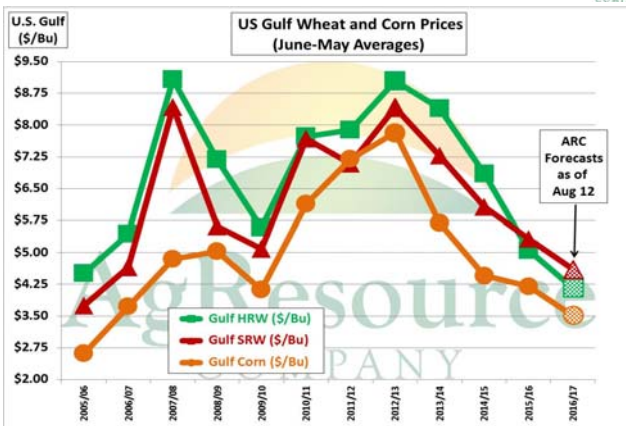
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Major Exporters Stocks/Use In The "Biofuel Era"



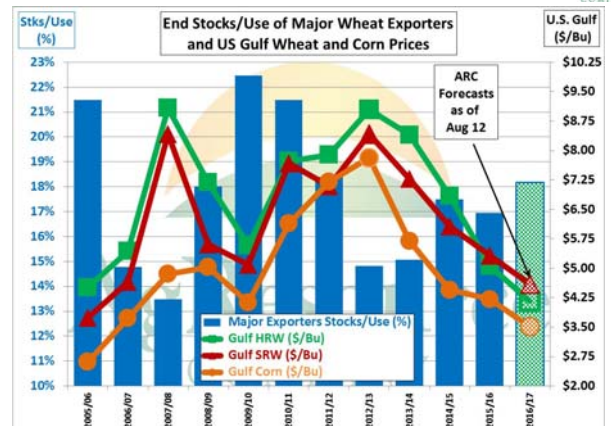
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US Gulf Wheat & Corn FOB Prices In The "Biofuel Era"



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Wheat Price = F(Exporters' Stocks/Use, Corn Price)



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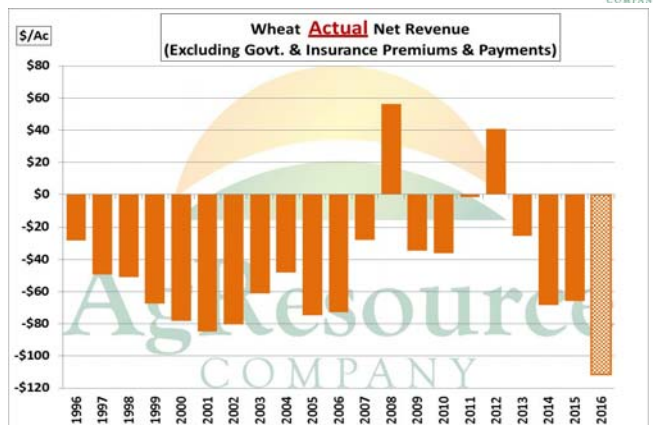
US Wheat Area Will Shrink But Prices Won't Recover



	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
WHEAT	ARC	ARC	ARC	ARC	ARC	ARC	ARC
Min Acres, Bushels	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.
1 Area Planted	54.6	50.8	49.0	48.5	48.5	48.0	47.5
3 Area Harvested	47.1	44.1	41.5	41.1	41.1	40.6	40.2
4 Yield	43.6	52.6	46.3	46.7	47.0	47.4	47.7
5 Production	2,052	2,321	1,925	1,919	1,932	1,927	1,917
6 Beginning Stocks	752	981	1,137	1,162	1,178	1,203	1,203
7 Imports	113	115	130	135	140	145	150
8 Supply, Total	2,917	3,417	3,191	3,215	3,250	3,275	3,270
9 Food	957	965	975	980	990	995	1,000
10 Seed	68	65	63	62	62	61	61
11 Feed and Residual	135	325	140	135	125	115	105
12 Domestic, Total	1,160	1,355	1,180	1,177	1,177	1,171	1,166
13 Exports	775	925	850	860	870	880	900
14 Use, Total	1,936	2,280	2,030	2,037	2,047	2,051	2,066
15 Ending Stocks	981	1,137	1,162	1,178	1,203	1,224	1,204
19 Ending Stocks/Use (%)	50.7%	49.9%	57.2%	57.8%	58.8%	59.7%	58.3%
20 HRW Crop Insrc Price (\$/Bu)	\$6.31	\$5.33	---	---	---	---	---
22 Avg. Farm Price (\$/Bu) 1/	\$4.89	\$3.50	\$3.40	\$3.35	\$3.30	\$3.15	\$3.15
23 Futs-Based Forecast (\$/Bu) 2/	---	\$3.95	\$4.50	\$4.90	---	---	---
24 Jun Low CBOT Futures (\$/Bu)	\$4.67	\$4.46	\$3.85	\$3.80	\$3.70	\$3.50	\$3.50
25 Price Ratio: Wheat/Corn (%)	136%	117%	115%	115%	118%	121%	122%

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Losses For Growing Wheat, But Not Much Else To Grow?



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Kansas City Wheat Futures Were \$3/Bu (\$110/MT) in 2003. That's 25% Lower Than Recent Low.

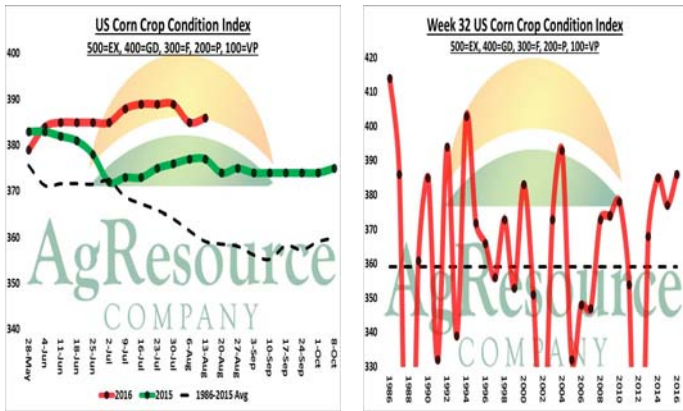


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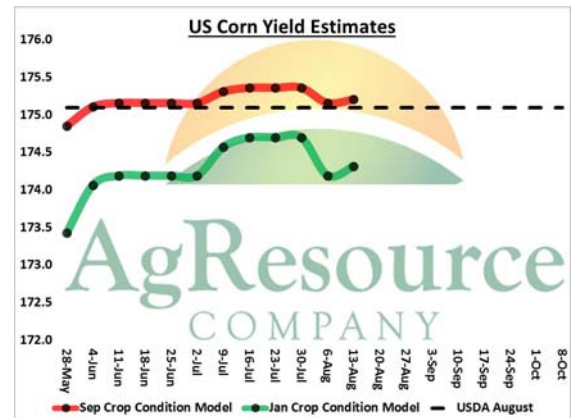
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Corn Crop Conditions 5th Best For This Time of Year



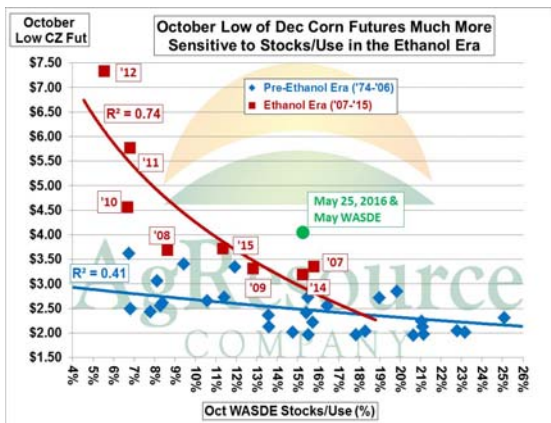
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Crop Condition Model Projects 175.2 Bu For September Crop Report (Plus/Minus 2.0 Bu)



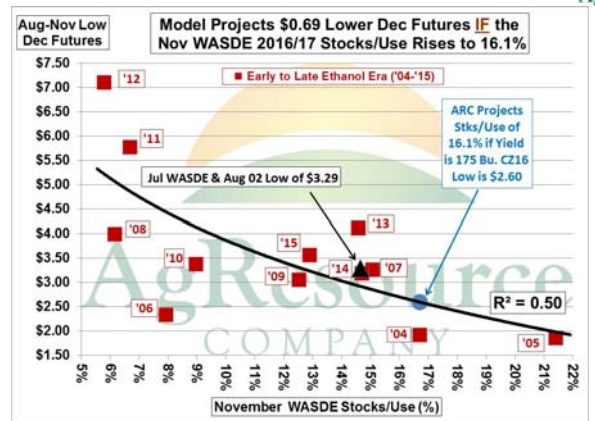
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Corn Price Response Skewed By Ethanol Mandate



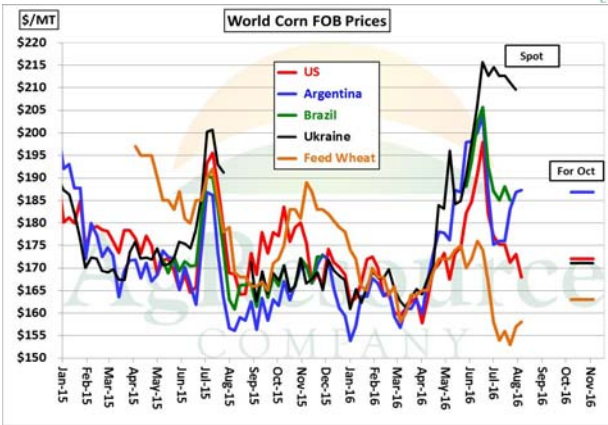
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Corn Futures Could Fall Below \$3.00 If Yield is 175



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US Cheapest Source of Corn; But Feed Wheat Cheaper



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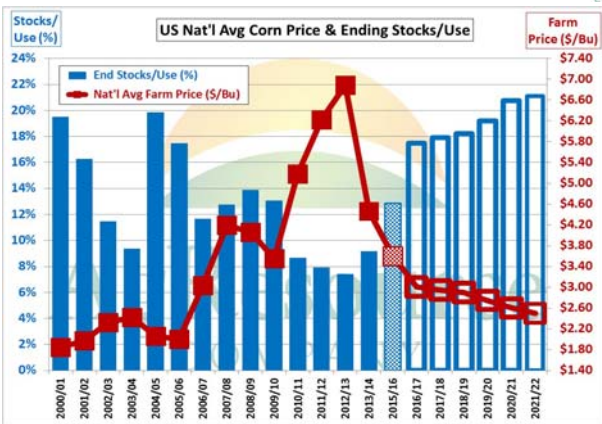
Lacking "Demand Driver", Corn Prices Fall Next 5 Years



	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
CORN	ARC	ARC	ARC	ARC	ARC	ARC	ARC
Min Acres, Bushels	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.
1 Area Planted	88.0	94.1	91.3	90.8	91.1	90.5	88.5
2 Abandonment	8.3%	8.0%	8.6%	8.6%	8.6%	8.6%	8.6%
3 Area Harvested	80.7	86.6	83.4	83.0	83.2	82.7	80.9
4 Yield	168.4	175.1	170.1	172.1	174.0	176.0	177.9
5 Production	13,601	15,153	14,187	14,275	14,475	14,552	14,384
6 Beginning Stocks	1,731	1,755	2,523	2,545	2,600	2,755	2,982
7 Imports	65	40	40	40	40	40	40
8 Supply, Total	15,397	16,948	16,750	16,860	17,115	17,347	17,406
9 Feed and Residual	5,150	5,575	5,500	5,600	5,700	5,800	5,875
10 Food, Seed, Industrial	6,567	6,650	6,705	6,660	6,660	6,565	6,520
11 Ethanol and by-products 1/	5,200	5,275	5,300	5,275	5,275	5,225	5,200
14 Domestic, Total	11,717	12,225	12,205	12,260	12,360	12,365	12,395
15 Exports	1,925	2,200	2,000	2,000	2,000	2,000	1,975
16 Use, Total	13,642	14,425	14,205	14,260	14,360	14,365	14,370
17 Ending Stocks/Use (%)	12.9%	17.5%	17.9%	18.2%	19.2%	20.8%	21.1%
22 Crop Insrc Initial Price (\$/Bu)	4.15	3.86	---	---	---	---	---
23 Avg. Farm Price (\$/Bu) 3/	3.60	3.00	2.95	2.90	2.75	2.60	2.50
24 Futs-Based Forecast (\$/Bu) 4/	3.70	3.20	3.60	3.75	3.75	---	---
25 Nov Low Dec Futures (\$/Bu)	3.56	3.10	3.00	2.90	2.80	2.70	2.60
26 Price Ratio: Corn/Soy (%)	40%	34%	38%	39%	38%	35%	34%

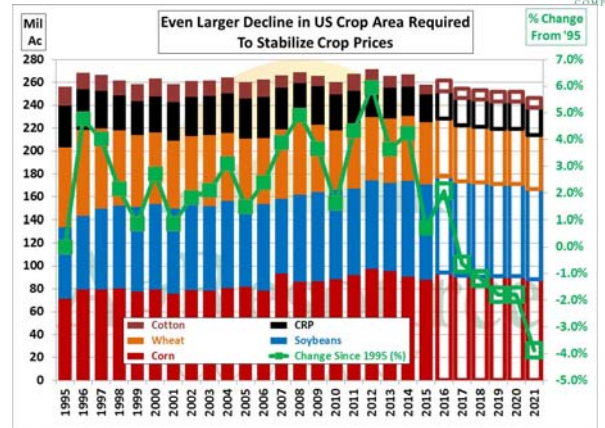
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Stocks/Use Rise to Levels Seen in 2005 BUT Prices Propped Up By "Inelastic" Ethanol Demand



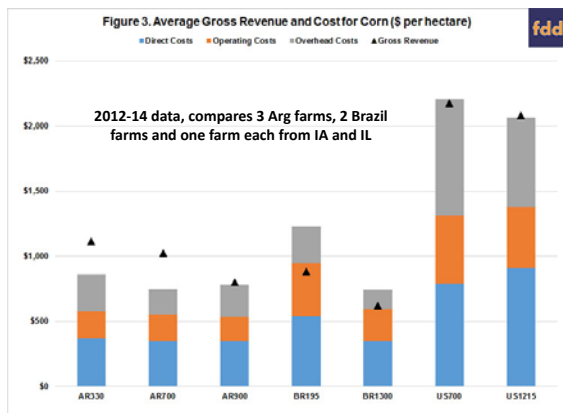
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Principal Crop Area Could Drop 15 Mil Ac In Next 5 Years



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US Is Not The World's Low-Cost Corn Producer



<http://farmdocdaily.illinois.edu/2015/11/international-benchmarks-for-corn-production.html>

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Rabobank Industry Note #558 - June 2016



Build It and They Will Come

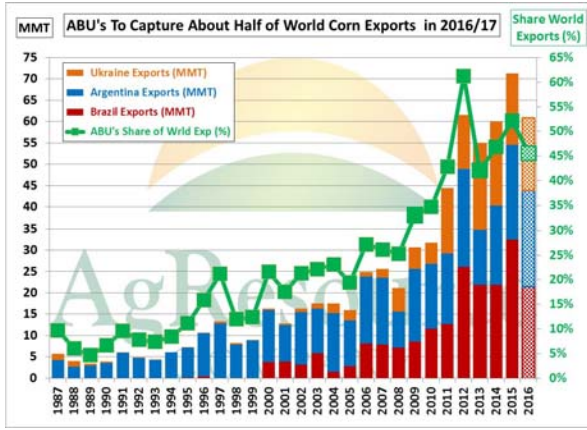
The Impact of Port Expansion on Brazilian Soybean Output

"Global grain & oilseed consumption is expected to increase throughout the next decade. As Brazil features over 75 Mil Ha (185 Mil Ac) of under-used pasturelands which could be turned into productive cropland, it is a natural candidate for responding to this demand by increasing supply, especially of soybeans-its main export grain commodity..." Rabobank.

<http://farmdocdaily.illinois.edu/2015/11/international-benchmarks-for-corn-production.html>

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US Has Lost "Dominance" of World Feed Grains Market



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China's Ag Policies Result in Rapid Growth in Corn Stocks. Now What?



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How Big Are China's Corn Stocks?

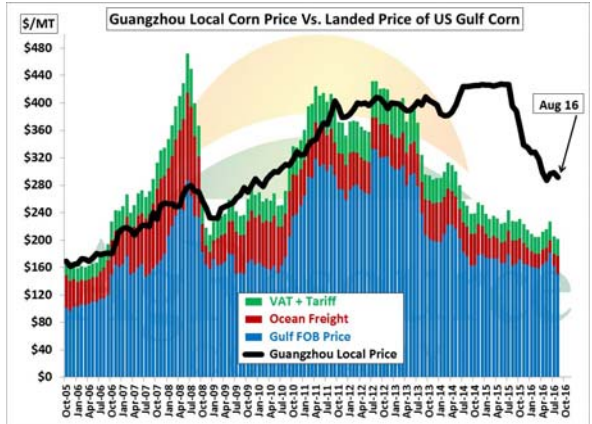


China Corn S&D Estimates From Three Sources

Row		JCI	USDA	CAOC	JCI	USDA	CAOC	JCI	USDA	CNGOIC	CAOC
1	Oct-Sep Mktg Yr	2014/15	2014/15	2014/15	2015/16	2015/16	2015/16	2016/17	2016/17	2016/17	2016/17
2	1,000 Hectares or MT	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
3	Planted	N/R	37,123	37,123	N/R	38,120	38,117	N/R	37,170	37,170	36,028
4	Harvested	N/R	37,123	37,123	N/R	38,120	38,117	N/R	36,000	37,170	36,028
5	Yield (MT/HA)	N/R	5.81	5.81	N/R	5.89	5.89	N/R	6.06	5.86	5.95
6	Production	218,950	215,646	215,700	226,356	224,580	224,580	207,193	218,000	218,000	214,270
7	Beginning Stocks	84,689	81,315	N/R	166,072	100,464	N/R	245,193	109,524	N/R	N/R
8	Imports	5,516	5,516	5,520	2,300	2,000	4,600	2,000	1,000	1,000	2,400
9	SUPPLY	309,155	302,477	N/R	394,728	327,044	N/R	454,386	328,524	219,000	N/R
10	USE										
11	Dom Consumption	143,070	202,000	183,390	149,470	217,500	193,250	187,000	227,000	206,745	206,980
12	Feed	N/R	140,000	112,560	N/R	153,500	120,610	N/R	160,000	126,500	131,990
13	Food, Seed & Indust	N/R	62,000	N/R	N/R	64,000	N/R	N/R	67,000	80,245	N/R
14	Food	N/R	7,520	7,520	N/R	7,650	7,650	N/R	7,720	18,160	7,720
15	Industrial	N/R	43,740	52,570	N/R	45,130	53,770	N/R	47,860	60,700	55,850
16	Seed	N/R	1,690	1,690	N/R	1,660	1,660	N/R	1,610	1,385	1,610
17	Loss & Other	N/R	9,050	9,050	N/R	9,560	9,560	N/R	9,810	N/R	9,810
18	Exports	13	13	10	65	20	30	3,300	20	30	200
19	Total Use	143,083	202,013	183,400	149,535	217,520	193,280	190,300	227,020	206,775	207,180
20	Change in Inventory	81,383	19,149	37,820	79,121	9,060	36,000	18,893	-8,020	12,225	9,490
21	ENDING STOCKS	166,072	100,464	N/R	245,193	109,524	N/R	264,086	101,504	N/R	N/R
22	Price (Yuan/MT)	N/R	N/R	2,268	N/R	N/R	1,880	N/R	N/R	1,880	1,650
23	In Major Prod Areas	N/R	N/R	1,643	N/R	N/R	1,610	N/R	N/R	N/R	1,750
24	Import (Including Tariff)	N/R	N/R	1,643	N/R	N/R	1,610	N/R	N/R	N/R	1,750

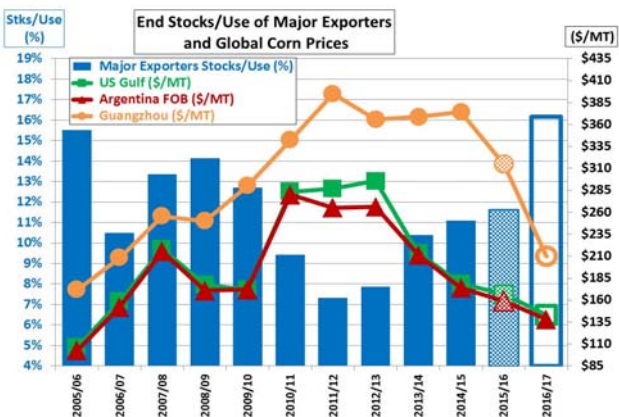
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\$90/MT (\$2.25/Bu) Corn Import Margin on Aug 16



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Major Exporters' End Stocks/Use To Rise



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CBOT Corn Futures Were <\$2/Bu (\$75/MT) in 2005. That's 42% Lower Than Recent Low.

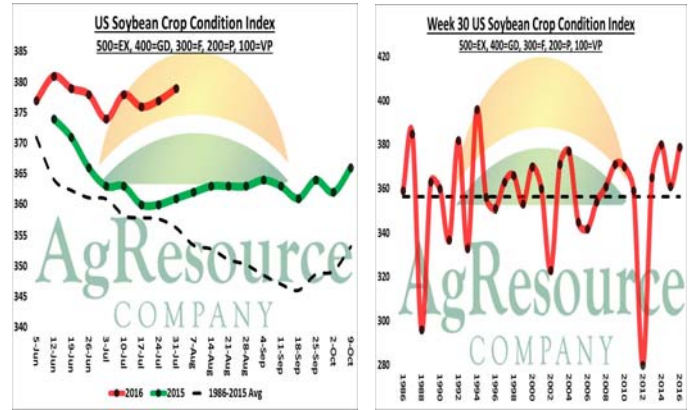


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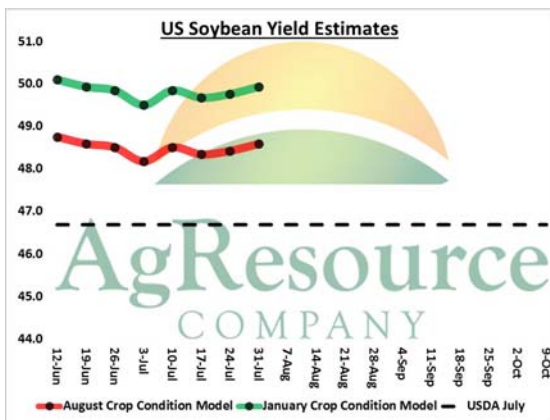
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Soy Crop Conditions 5th Best For This Time of Year



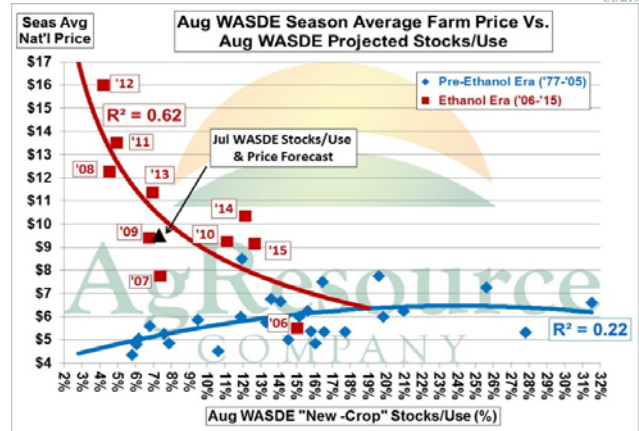
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Crop Condition Model Projects 48.6 Bu For August Crop Report (Plus/Minus 1.5 Bu)



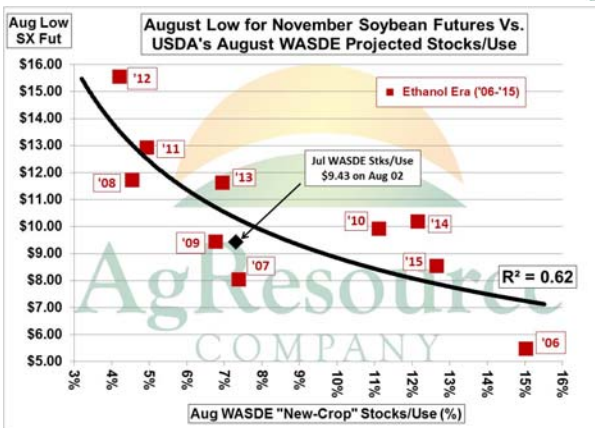
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Soybean Prices Skewed By Biofuels Mandate Too



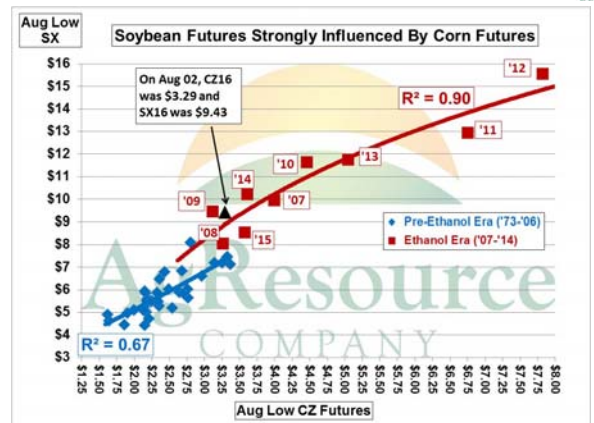
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Soy Futures Fall Below \$8.00 If Yield is >50 Bu



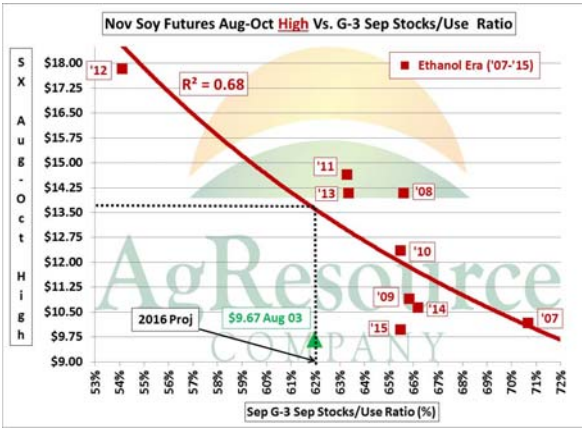
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Soy Prices Partially Determined By Corn Prices



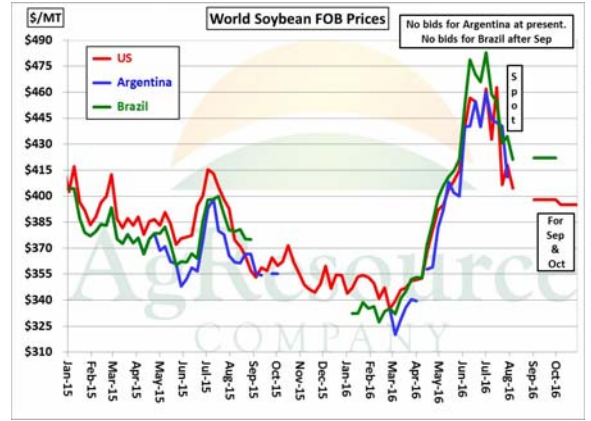
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Soy Prices Too Low Based on G-3 Price Model?



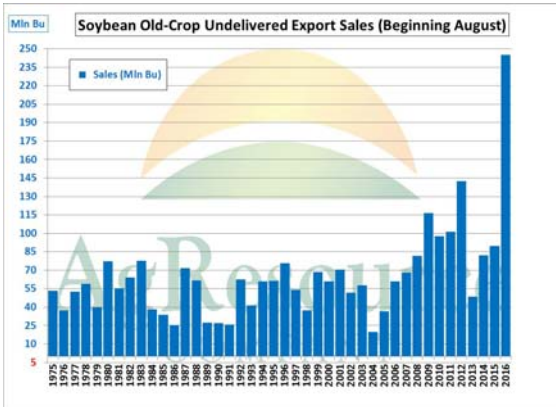
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US Cheapest Source of Soybeans



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How Much of Record Old-Crop Undelivered Export Sales Will Get Rolled-Over or Cancelled?



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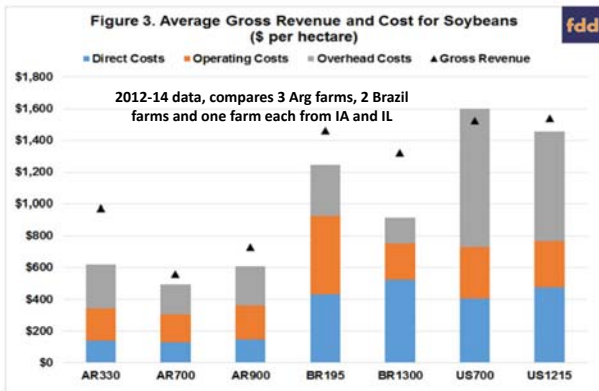
S. America Will Capture Growth in World Demand



	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
SOYBEANS	ARC	ARC	ARC	ARC	ARC	ARC
Min Acres, Bushels	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.
1 Area Planted	83.7	82.2	81.9	80.0	79.0	78.0
2 Area Harvested	83.0	81.4	81.1	79.2	78.2	77.2
4 Yield	48.9	47.2	47.7	48.2	48.6	49.1
5 Production	4,060	3,840	3,870	3,815	3,800	3,790
6 Beginning Stocks	255	345	390	490	515	505
7 Imports	30	30	30	30	30	30
8 Supply, Total	4,345	4,215	4,290	4,335	4,345	4,325
9 Crushings	1,925	1,875	1,895	1,915	1,935	1,950
10 Exports	1,950	1,825	1,780	1,780	1,780	1,795
11 Seed	95	95	92	91	90	90
12 Residual	30	30	33	34	35	35
13 Use, Total	4,000	3,825	3,800	3,820	3,840	3,870
14 Ending Stocks	345	390	490	515	505	455
18 Ending Stocks/Use	8.6%	10.2%	12.9%	13.5%	13.2%	11.8%
19 Crop Insurance Initial Price (\$/Bu)	8.85	---	---	---	---	---
20 Avg. Farm Price (\$/Bu) 1/	9.00	7.85	7.50	7.25	7.10	7.25
21 Futures-Based Forecast (\$/Bu) 2/	9.55	8.95	8.85	8.80	---	---
22 Nov Low Jan Futures (\$/Bu)	9.45	8.30	7.80	7.40	7.35	7.40
23 Price Ratio: Corn/Soy (%)	290%	266%	259%	264%	273%	290%

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US Is Not The World's Low-Cost Soybean Producer



<http://farmdocdaily.illinois.edu/2015/12/international-benchmarks-for-soybean-production.html>

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CBOT Soybean Were < \$5.50/Bu (\$215/MT) in 2006. Nearly 50% Lower Than Today's Price



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Thank You



QUESTIONS?

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