

# Corn Market Outlook & Strategies for 2018

Kansas Corn School

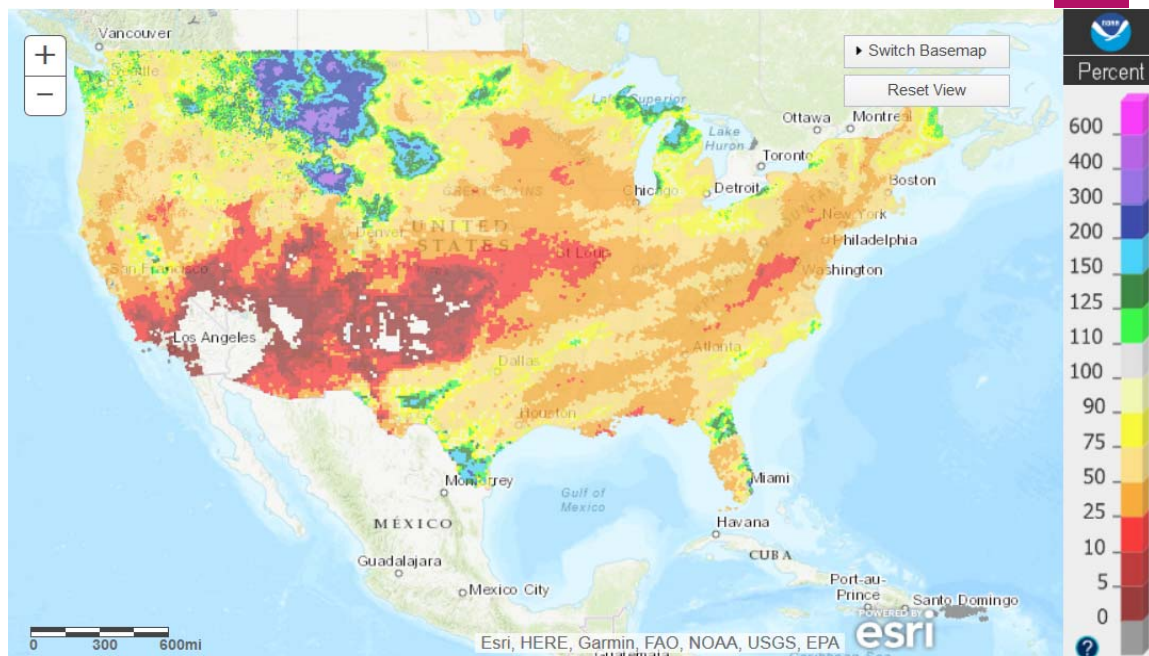
Hesston, Kansas

DANIEL O'BRIEN

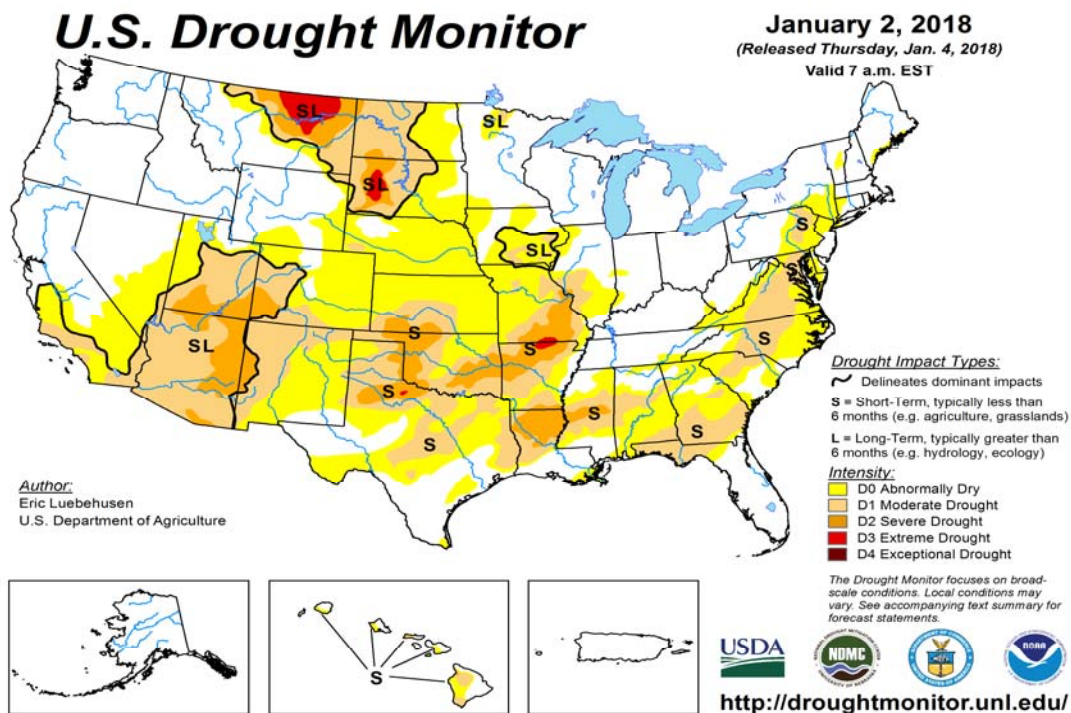
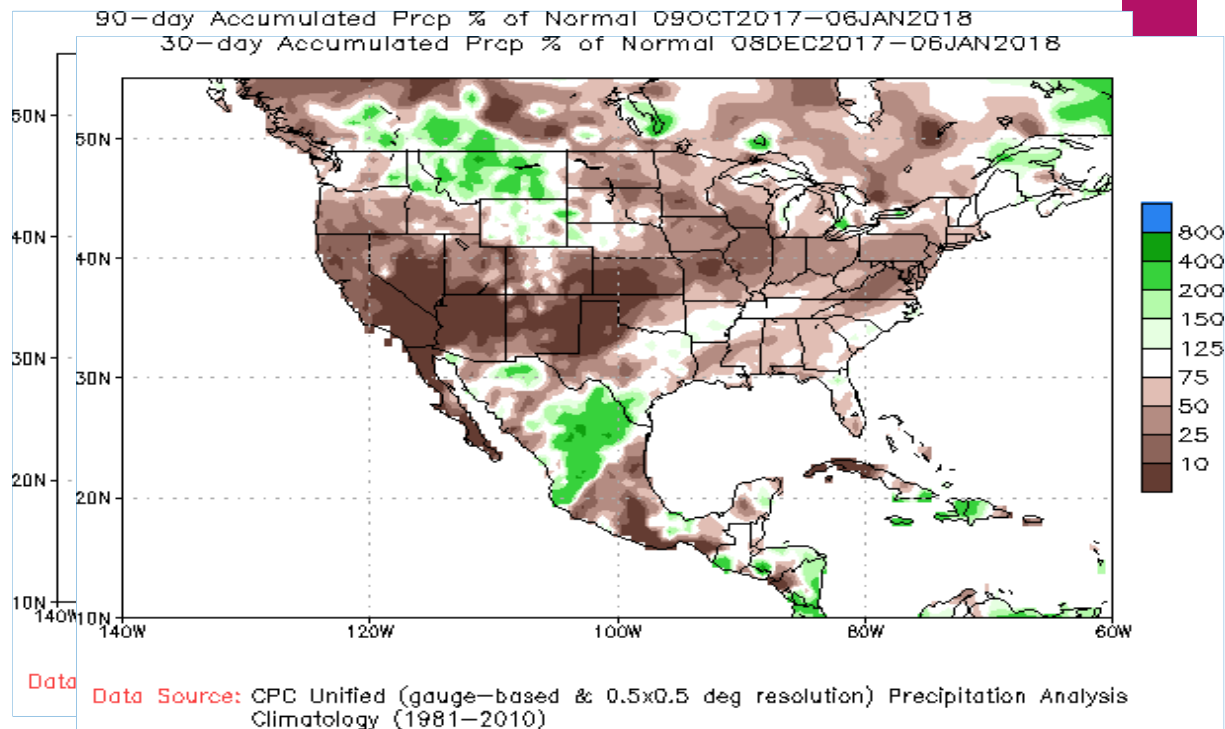
EXTENSION AGRICULTURAL ECONOMIST

**KANSAS STATE**  
UNIVERSITY

Department of Agricultural Economics

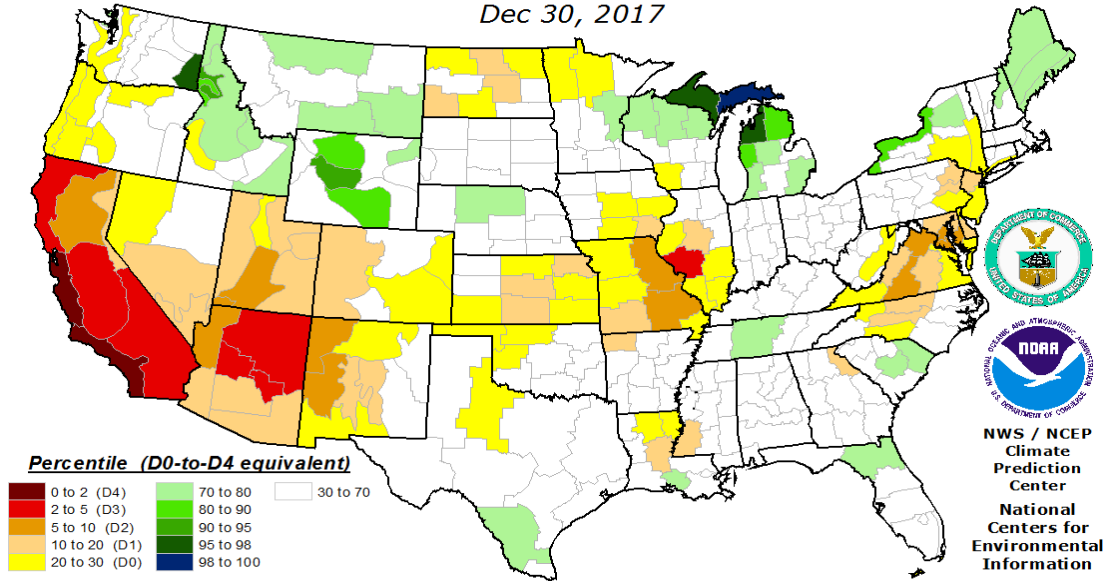


Displaying Last 60-Day Percent of Normal Precipitation  
Valid on: January 07, 2018 12:00 UTC



## Objective *Short-Term* Drought Indicator Blend Percentiles

Dec 30, 2017



This map approximates impacts that respond to precipitation over several days to a few months, such as agriculture, topsoil moisture, unregulated streamflows, and most aspects of wildfire danger. The relationship between indicators and impacts can vary significantly with location and season. Do not interpret this map too literally.

This map is based on preliminary climate division data. Local conditions and/or final data may differ. See the detailed product suite description for more details.

# Corn Markets



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Department of Agricultural Economics

## U.S. Corn Supply-Use

- Prospects ➔ "**LARGE**" 14.6 billion bu 2017 U.S. Corn Crop
- Large Supplies & Stocks are limiting Feedgrain Price\$'s
- Low Price\$'s are supporting Corn Use
  - Livestock Feed <sup>2017/18</sup> = 5.575 bln bu (*10 year high* – vs 5.858 bb in 2007/08)
  - Ethanol <sup>2017/18</sup> = 5.525 bln bu (*Record high* – vs 5.439 bb last year)
  - Other FSI <sup>2017/18</sup> = 1.460 bln bu (*Record high* – vs 1.452 bb in 2016/17)
  - Exports <sup>2017/18</sup> = 1.925 bln bu (*vs 2.293 bb in '16/17 & 1.901 in '15/16*)

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

- Corn: "**Large**" Stocks & % Stx/Use
  - End Stocks <sup>2017/18</sup> ⇒ 2.437 bln bu (*2<sup>nd</sup> highest since 1987/88*)
  - % Stocks/Use <sup>2017/18</sup> ⇒ 16.8% S/U (*Highest since 2005/06*)



# CME Corn Futures



Weekly Chart: November 2008 – December 2017 + 1/5/2018

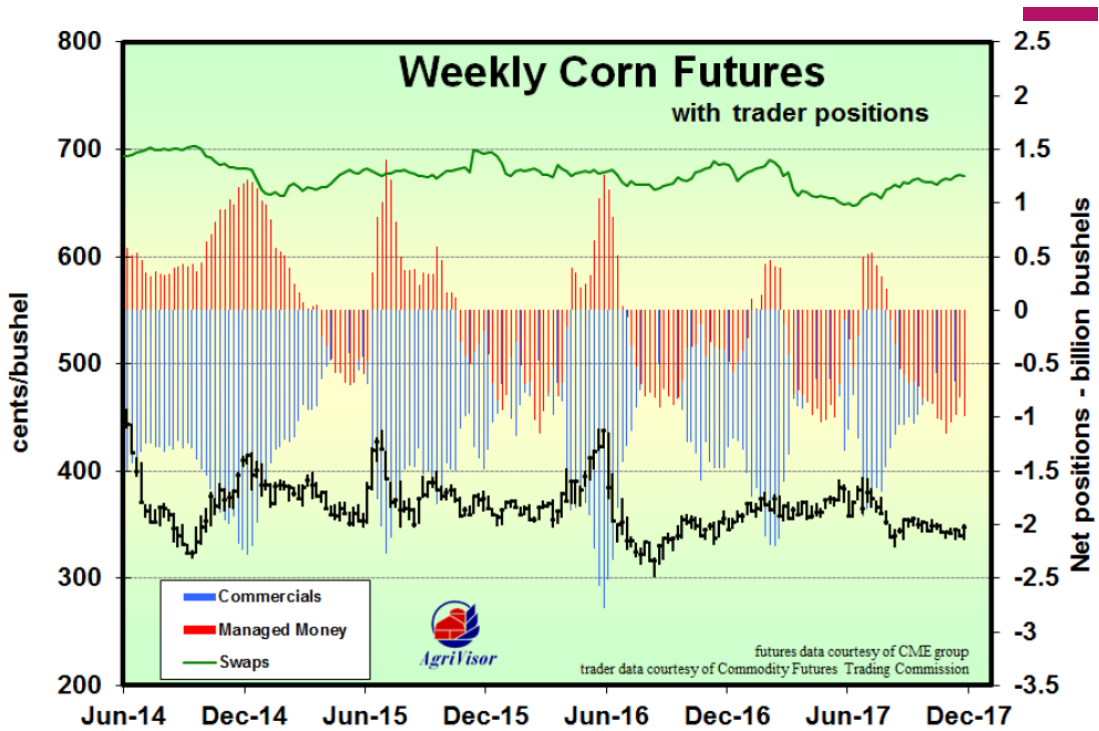


# CME Corn Futures



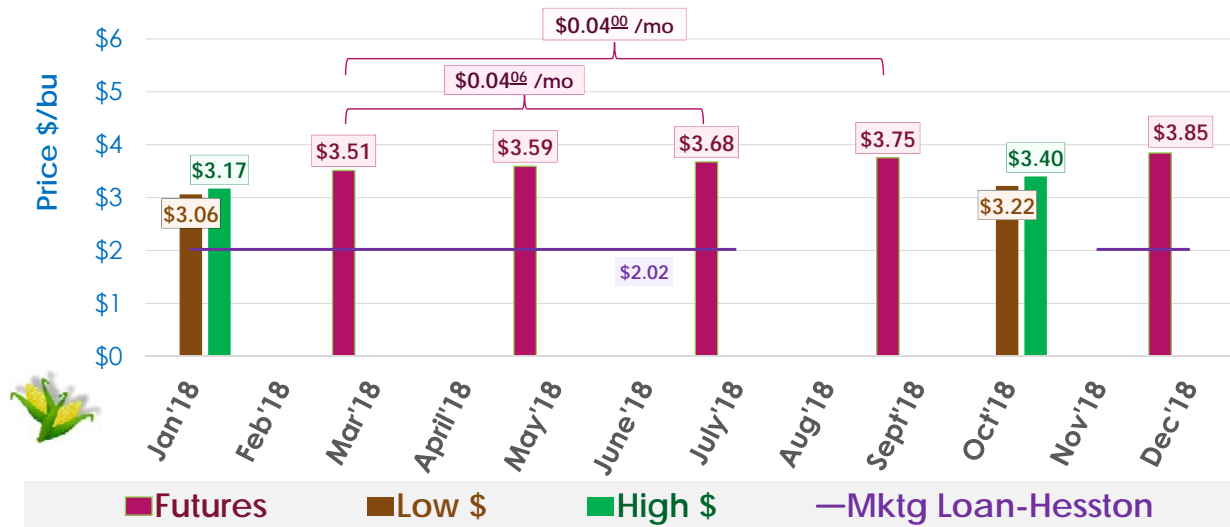
Weekly Chart: November 2008 – December 2017 + 1/5/2018





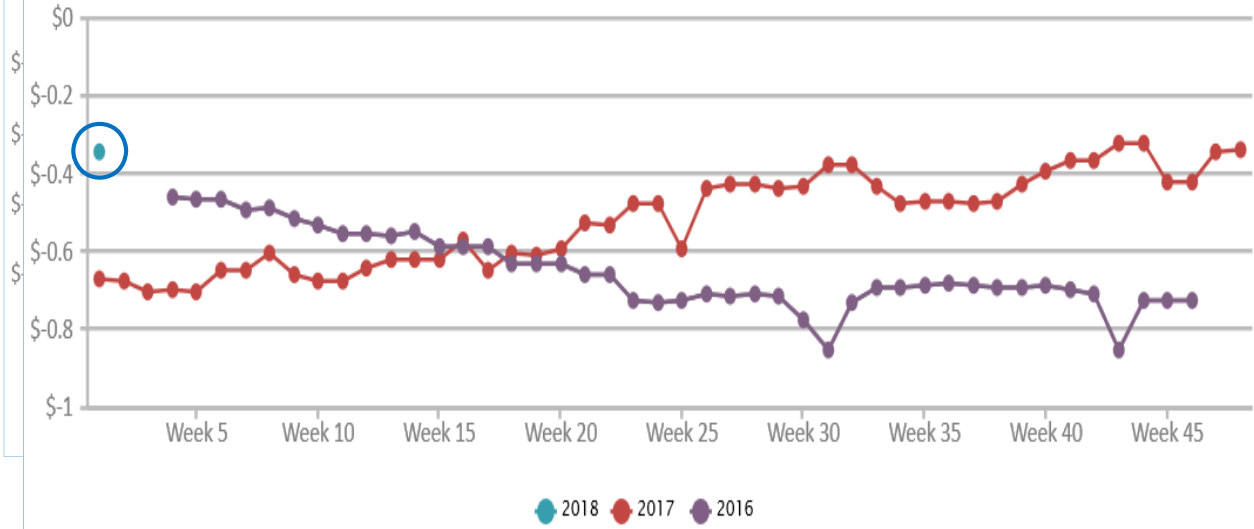
## Corn Cash & Futures Prices (\$/bu)

Hesston, KS Local Elevators – January 5, 2018



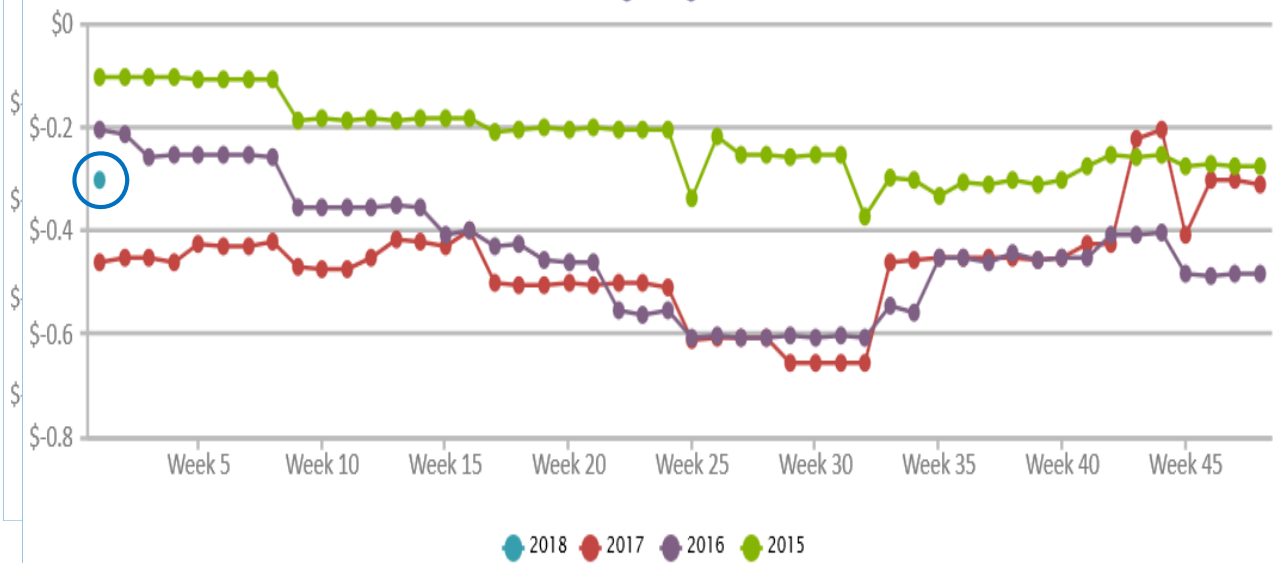
# MOUNDRIDGE, KS: Corn Basis - TMA GRAIN

www.AgManager.info



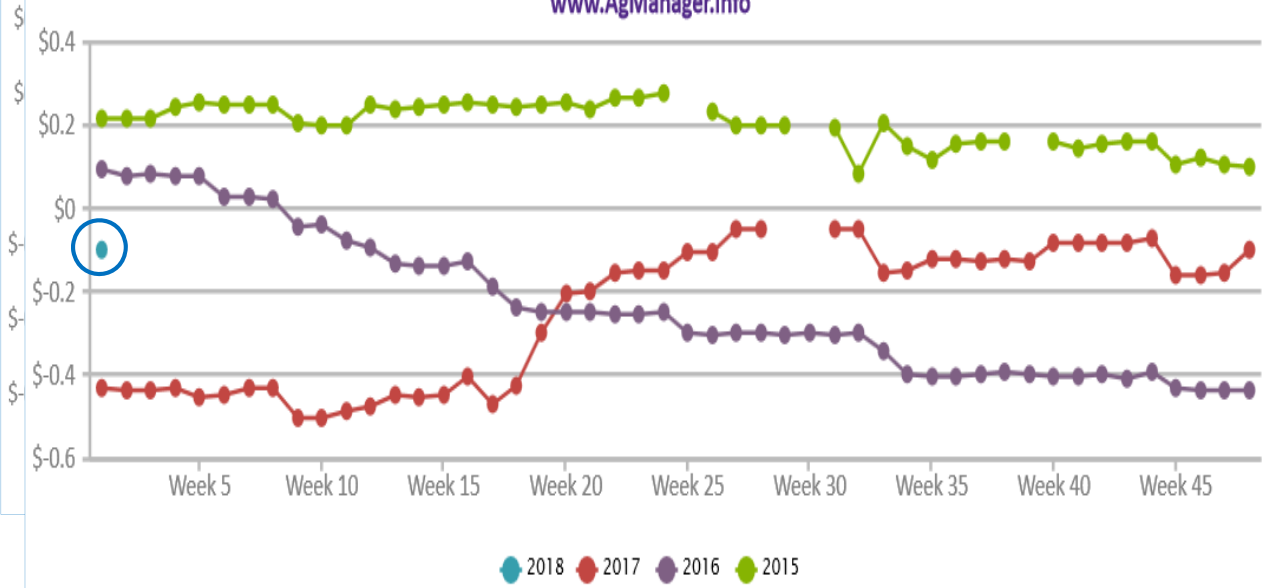
# HUTCHINSON, KS: Corn Basis - CARGILL

www.AgManager.info



## PLAINS, KS: Corn Basis - ADM GRAIN

www.AgManager.info

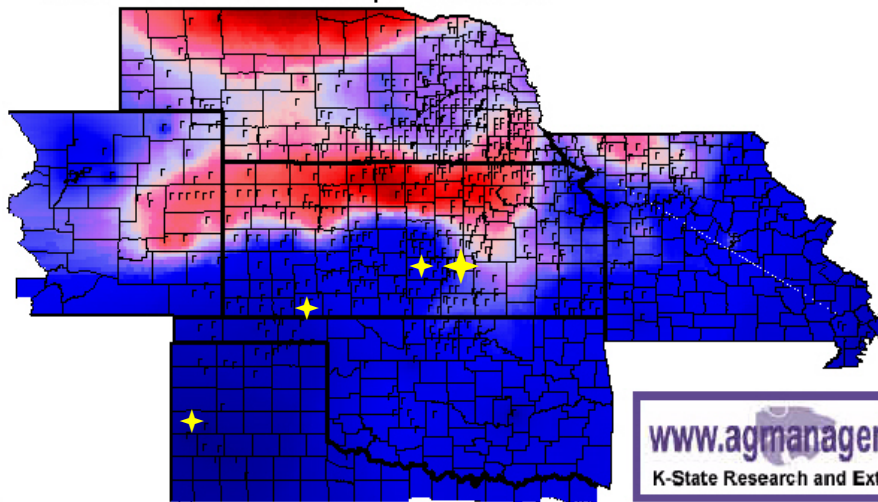


## Corn Basis, 01-03-2018

Basis = Cash Price - Nearby Futures Price

CBT Mar  
Futures  
Price: \$3.53

\$/Bushel

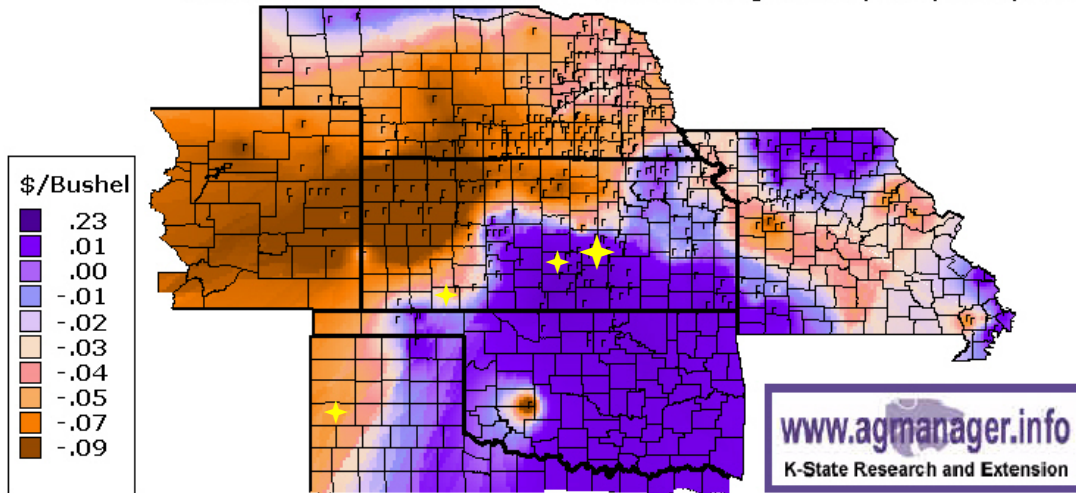


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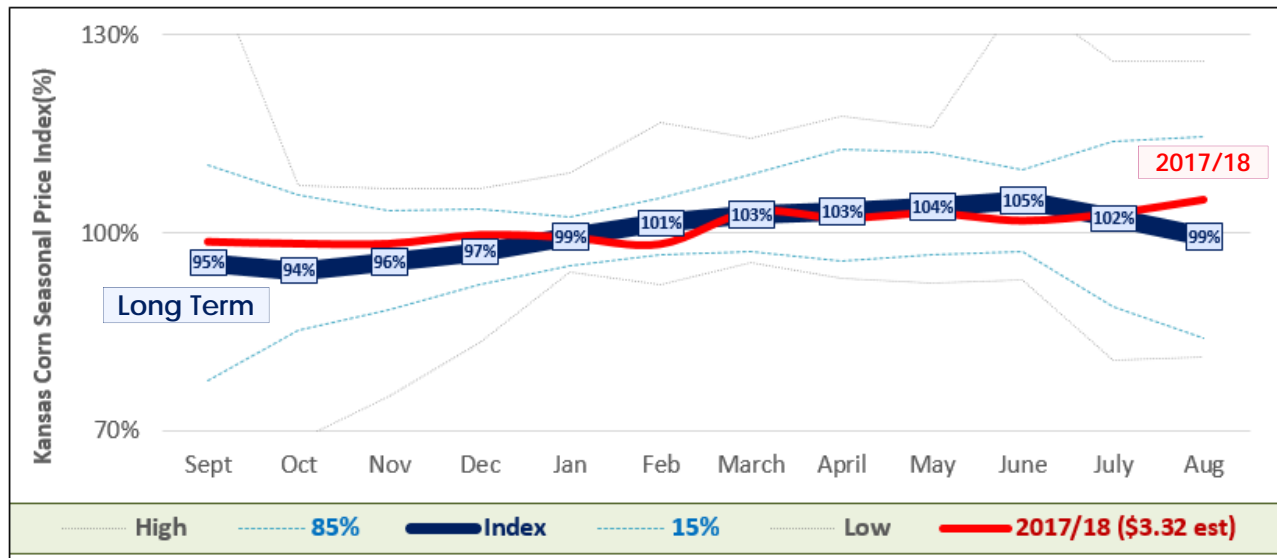
## Corn Basis Deviation, 01-03-2018

Basis Deviation = Current Basis - 3 Year Average Basis (2015, 2016, 2017)



## Kansas Corn Seasonal Cash \$ Index

Monthly: Long Term Average & "New Crop" MY 2017/18 Forecast

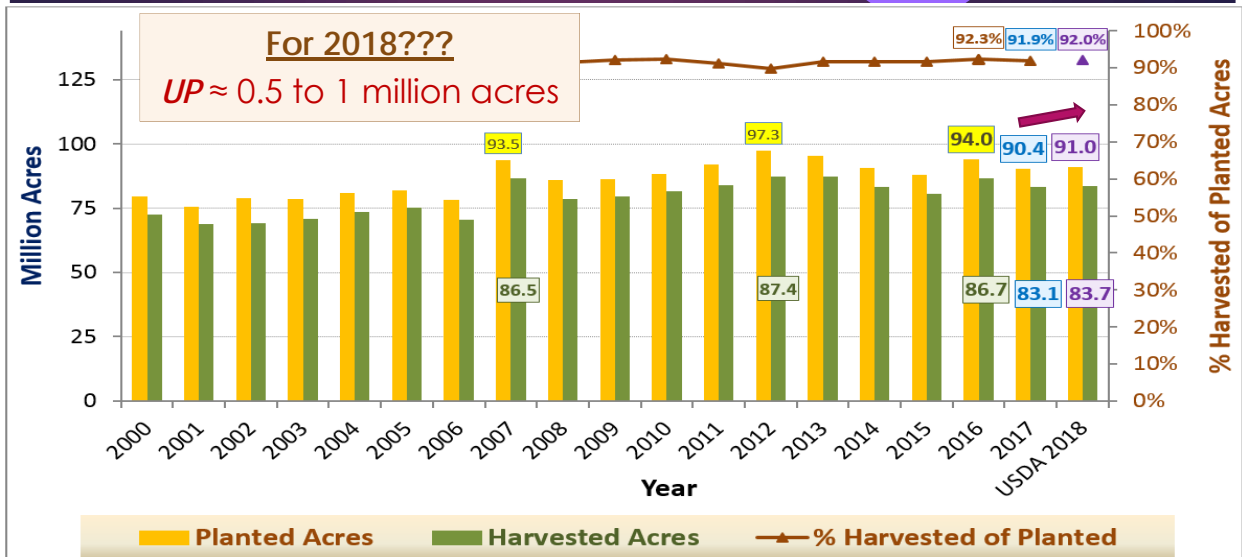


# U.S. Corn Supply and Demand

	2016/17 estimate	2017/18 forecast	Change from November 9	Change from 2016/17	
Planted area (million acres)	94.0	90.4	--	-3.6	↓ Crop
Harvested area (million acres)	86.7	83.1	--	-3.6	
Yield (bushels per acre)	174.6	175.4	--	0.8	
<i>Million bushels</i>					
Beginning stocks	1,737	2,295	--	558	BUT still
Production	15,148	14,578	--	-571	
Imports	57	50	--	-7	Large Supply
Total supply	16,942	16,922	--	-20	
Feed and residual	5,463	5,575	--	112	
Food, seed, and industrial	6,891	6,985	50	94	↑ Domestic Use &
Ethanol	5,439	5,525	50	86	
Domestic use	12,354	12,560	50	206	↓ Exports
Exports	2,293	1,925	--	-368	
Total use	14,647	14,485	50	-162	↑ % Stocks/Use &
Ending stocks	2,295	2,437	-50	143	
<i>Percent</i>					
Stocks to use ratio	15.7	16.8	-0.4	1.2	↓ Prices
<i>Dollars per bushel</i>					
Average market price	3.36	2.85/3.55	--	-0.16	



# U.S. Corn Acreage



# U.S. Corn Yields

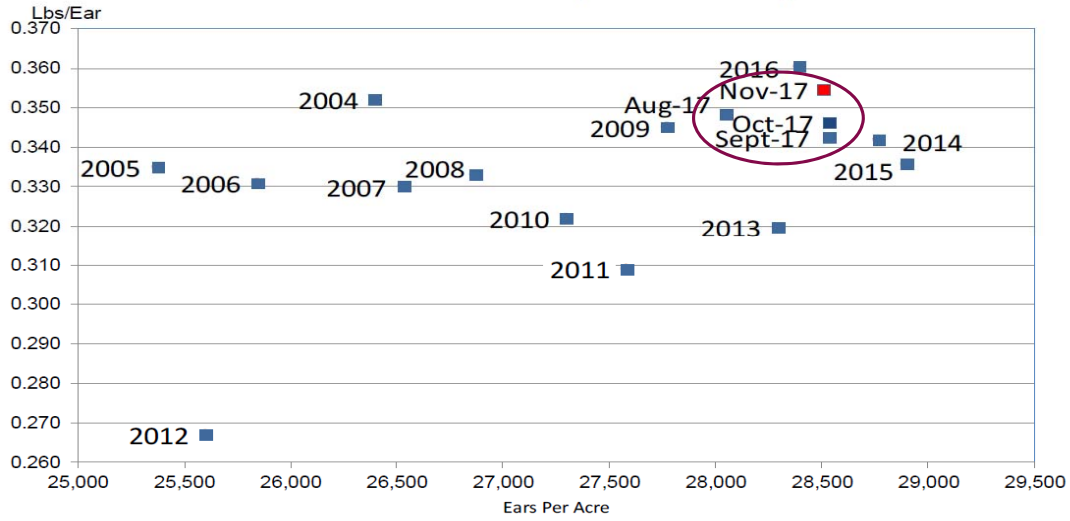
USDA 2017 USDA Forecast = 175.4 bu/ac

**Final 2017???**  
*Q? Is >175 bu/ac possible?*





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

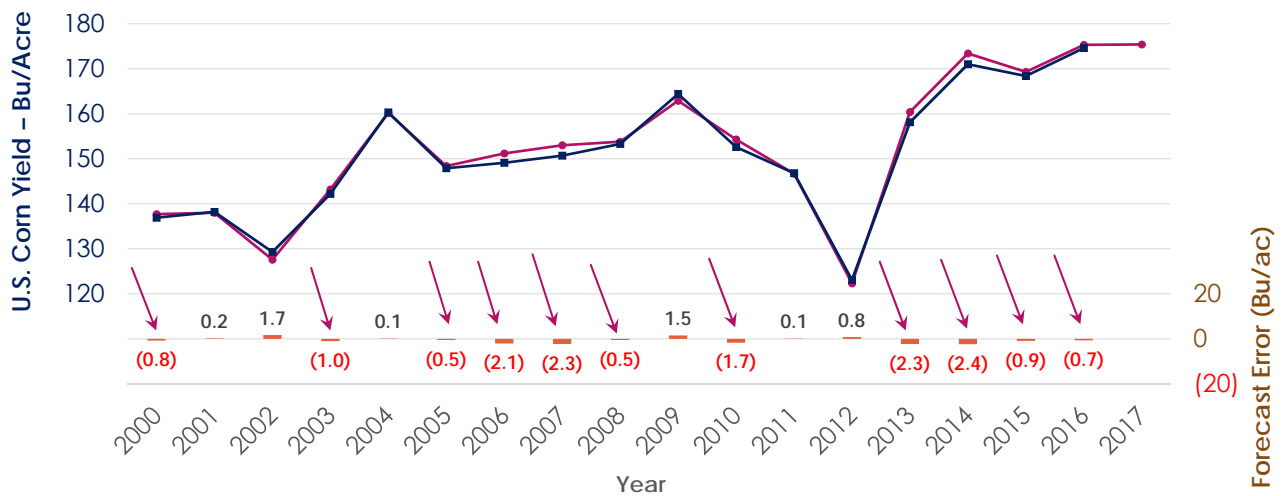


Implied Ear Weight = (Published Yield \* 56) / Ears

USDA-NASS  
11-9-17

## U.S. Corn Yields: 2000-2017

### Accuracy of November 1<sup>st</sup> USDA Forecasts

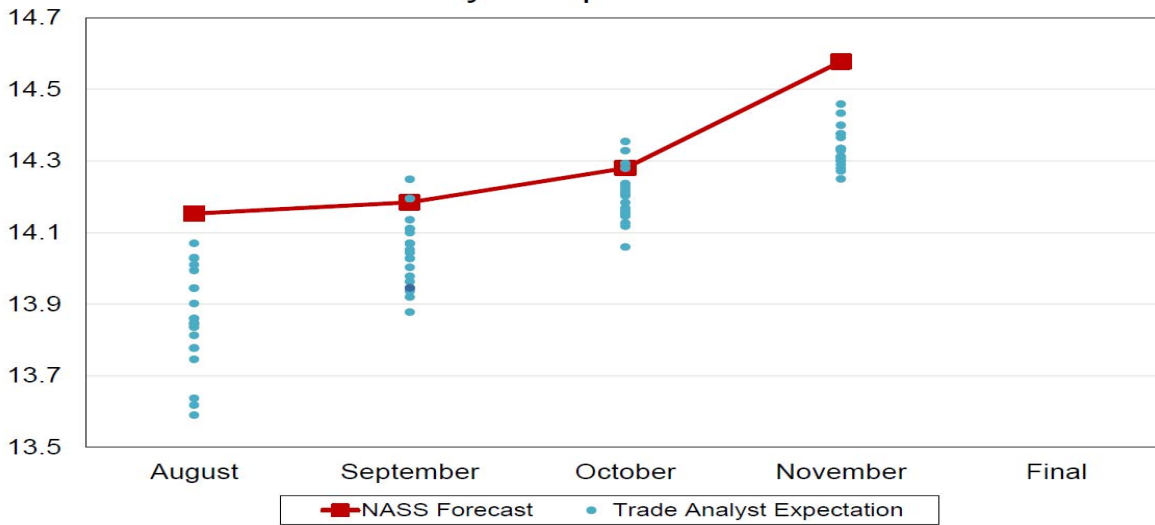


■ Difference (bu/ac)    
 ↘ November 1 USDA Forecast    
 → Final Yield



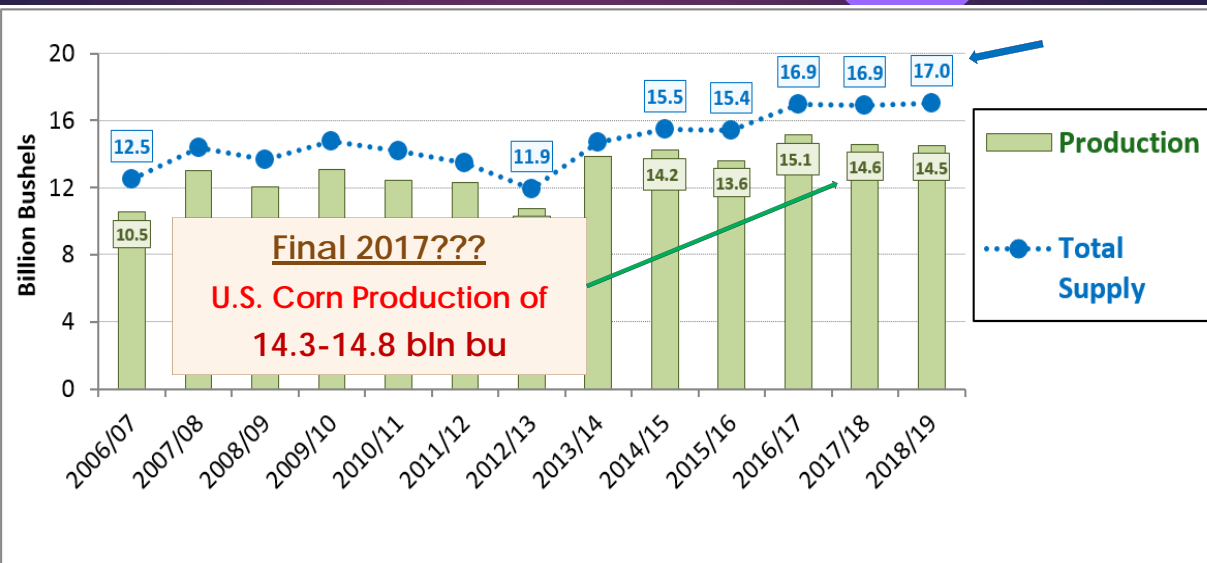
## 2017 United States Corn Production Trade Analyst Expectations vs NASS

Billion Bushels



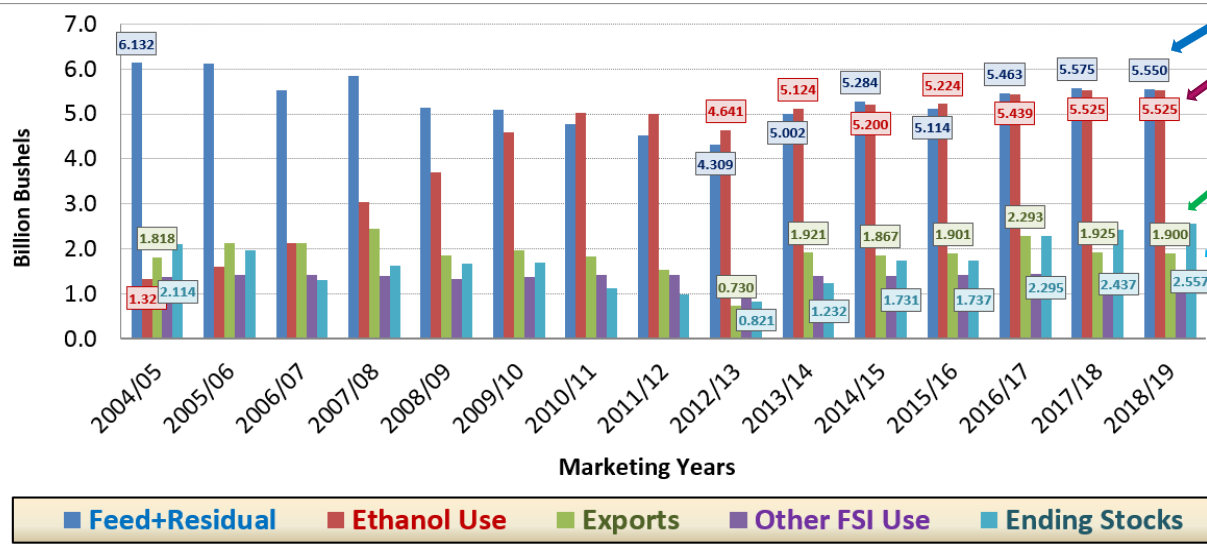
USDA-NASS  
11-9-17

## U.S. Corn Production & Supplies

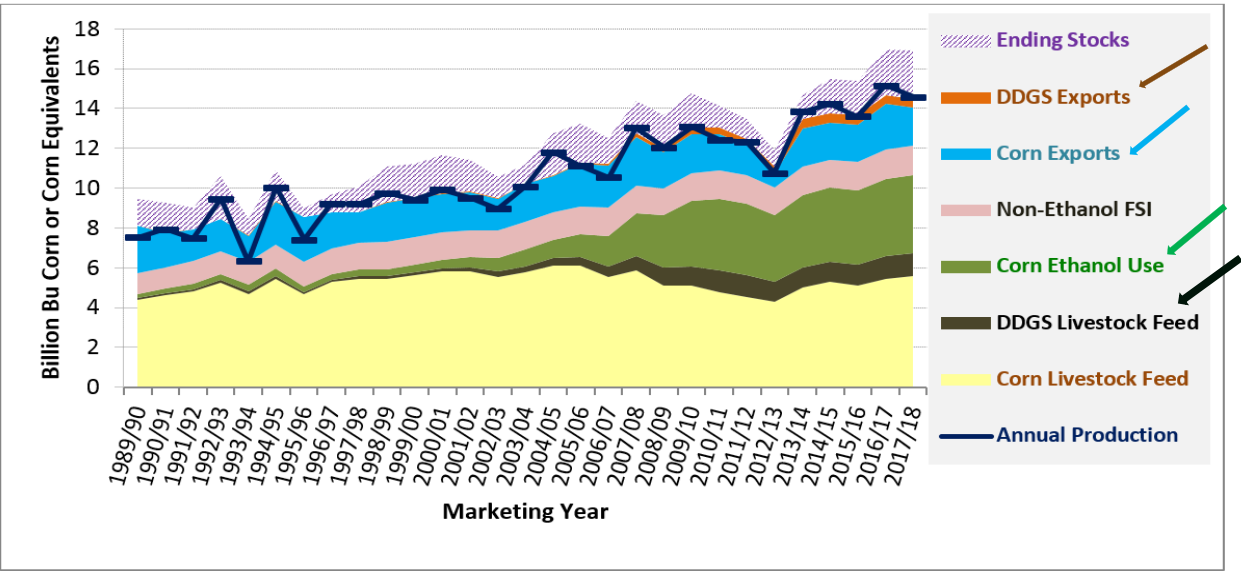




# U.S. Corn Use – By Category



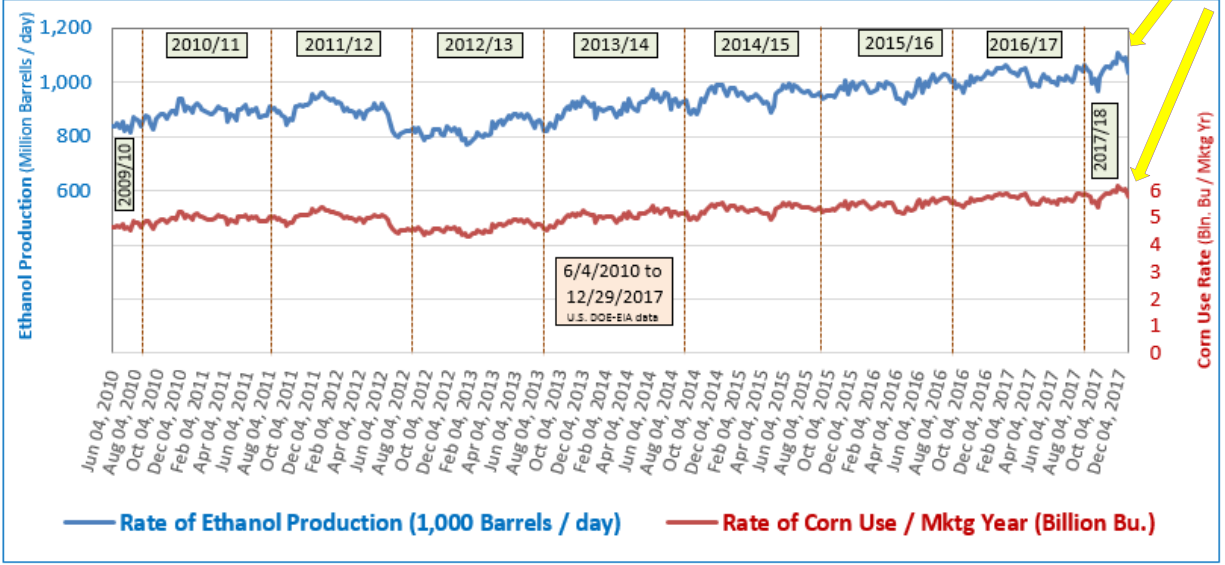
# U.S. Corn Use – By Category



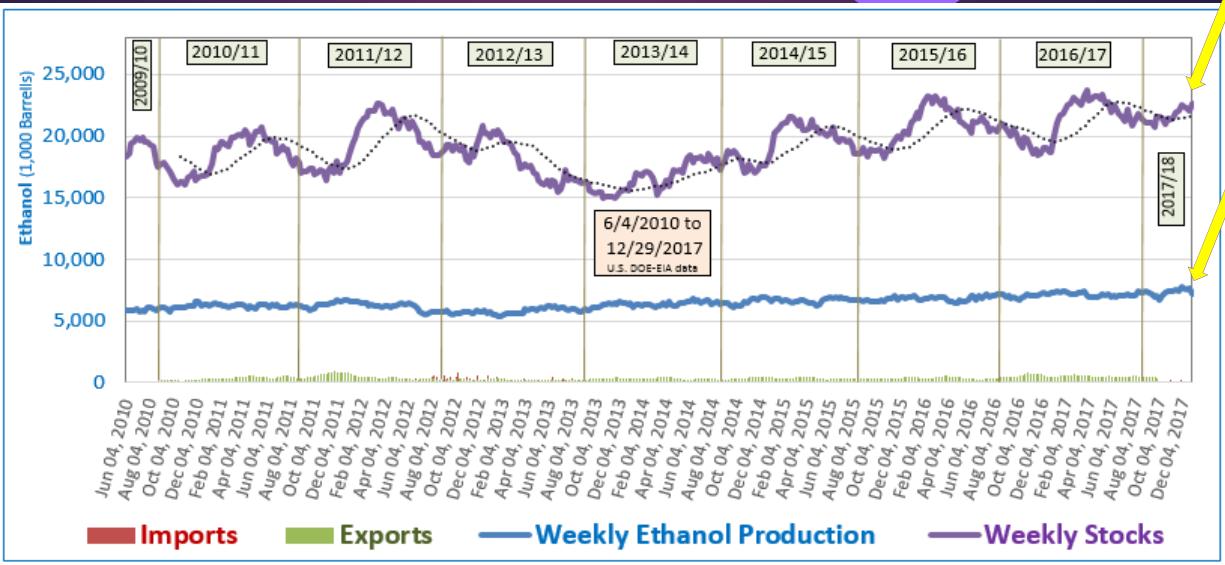
# U.S. Meat Production and Prices

	2017 forecast	2018 forecast	2018 Change from November 9	Change from 2017	
<b>Production</b>					
	<i>Billion pounds</i>				
Beef	26.30	27.59	-0.03	1.29	+4.9%
Pork	25.56	26.92	-0.01	1.36	+5.3%
Broilers	41.54	42.28	--	0.73	+1.8%
Turkey	6.00	6.03	--	0.03	+0.5%
<b>Total meat</b>	<b>100.16</b>	<b>103.57</b>	<b>-0.04</b>	<b>3.42</b>	<b>+3.4%</b>
<b>Prices</b>					
	<i>Dollars/cwt</i>				
Steers	121.42	117.25	--	-4.17	} Prices to decline
Hogs	50.38	47.50	2.50	-2.88	
	<i>Cents/lb</i>				
Broilers	93.4	88.5	--	-4.9	} Prices to decline
Turkey	95.7	96.3	-3.0	0.5	

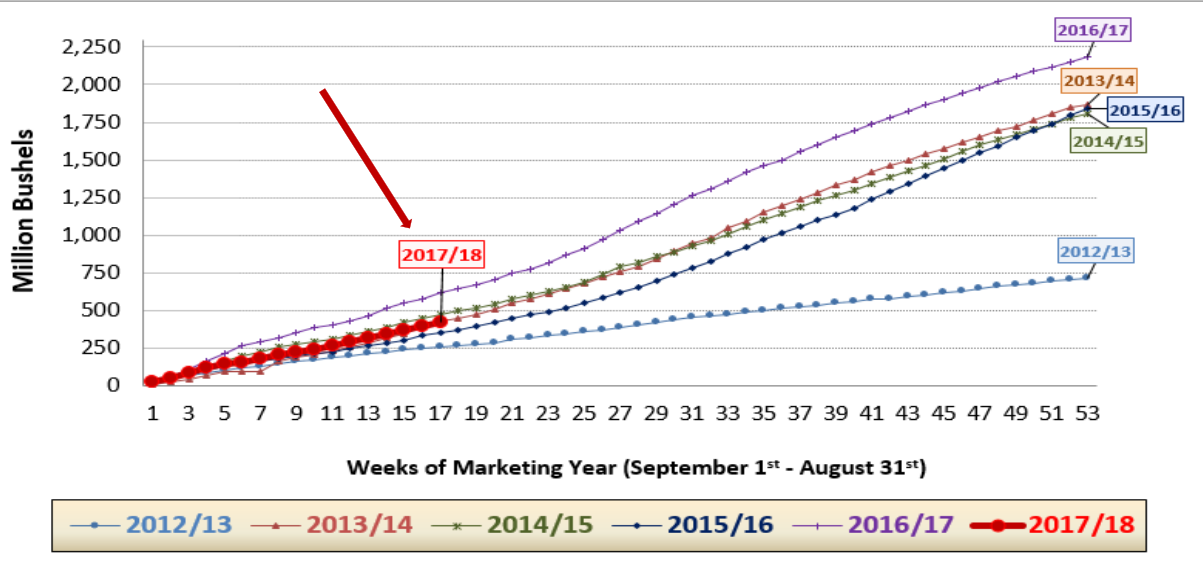
# U.S. Corn Ethanol Use - Weekly thru Dec. 29, 2017



# U.S. Ethanol Prodn, Stocks, & Trade - Thru 12/29/17

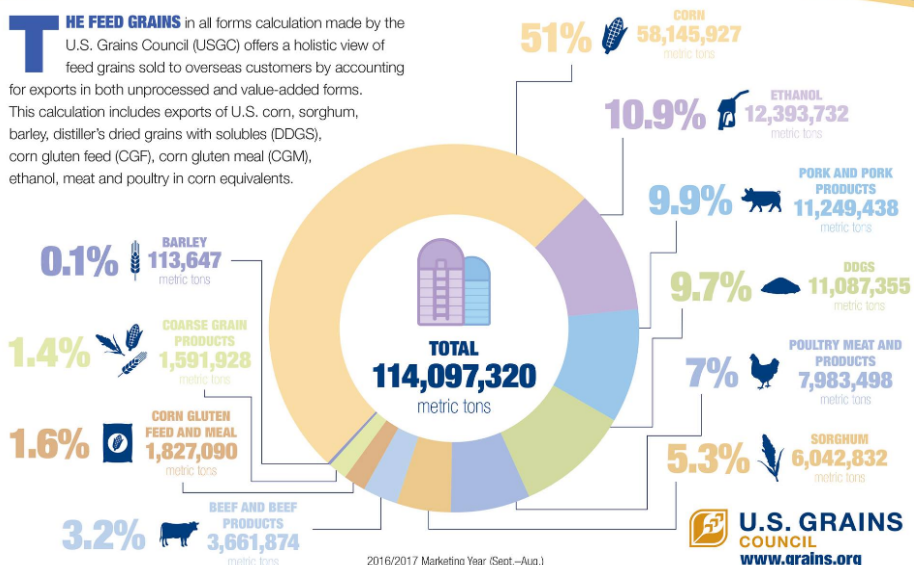


# U.S. Corn Exports – Weekly thru December 28, 2017



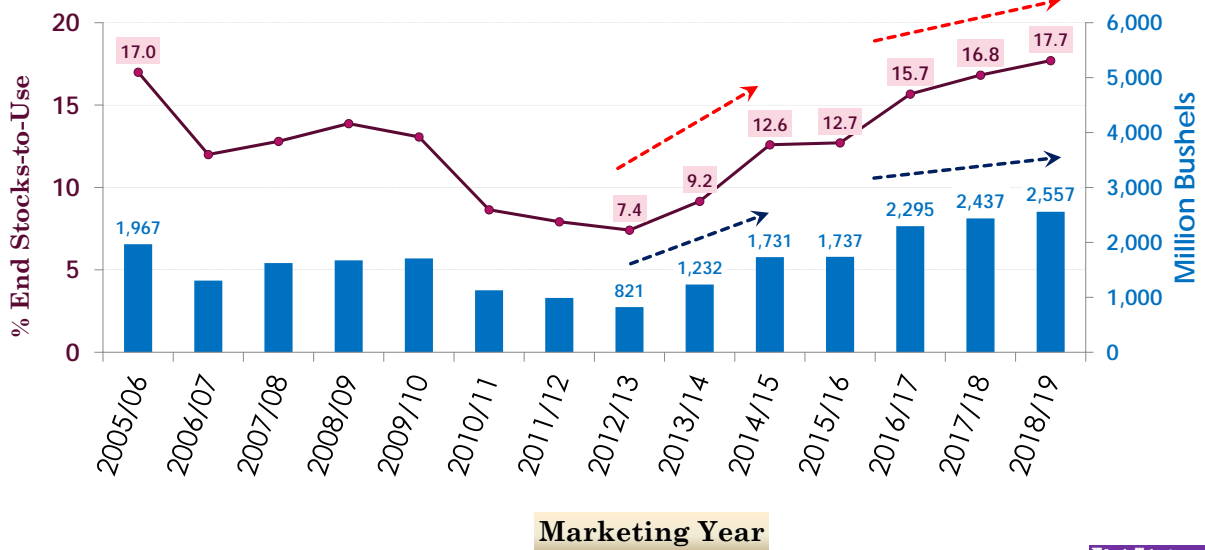
## How US Grain Was Exported in 2016/2017

**T**HE FEED GRAINS in all forms calculation made by the U.S. Grains Council (USGC) offers a holistic view of feed grains sold to overseas customers by accounting for exports in both unprocessed and value-added forms. This calculation includes exports of U.S. corn, sorghum, barley, distiller's dried grains with solubles (DDGS), corn gluten feed (CGF), corn gluten meal (CGM), ethanol, meat and poultry in corn equivalents.



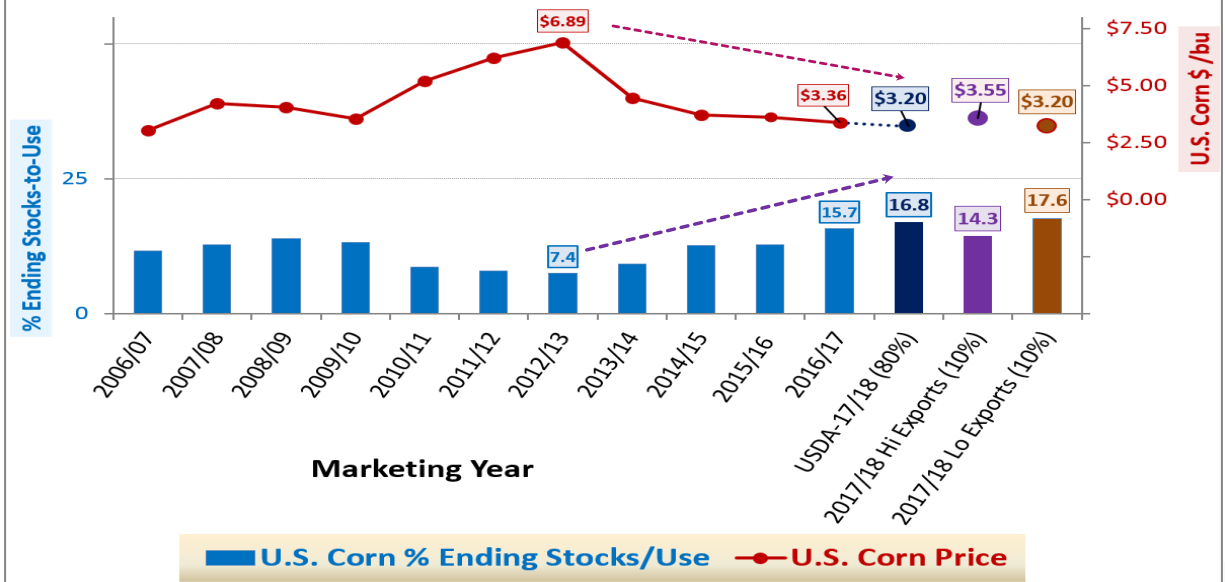


# U.S. Corn Ending Stocks & % Stx/Use

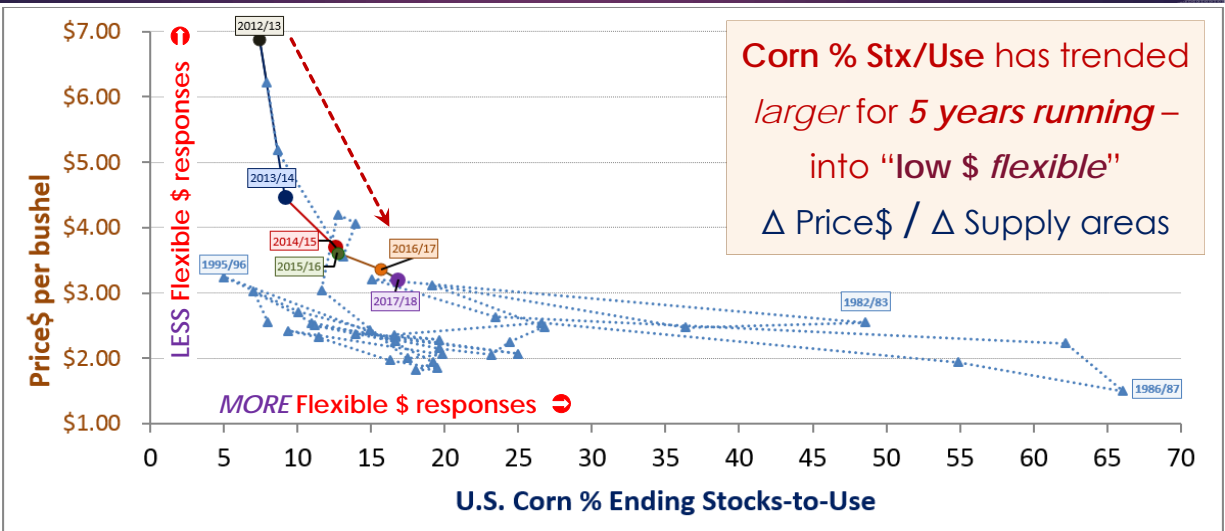




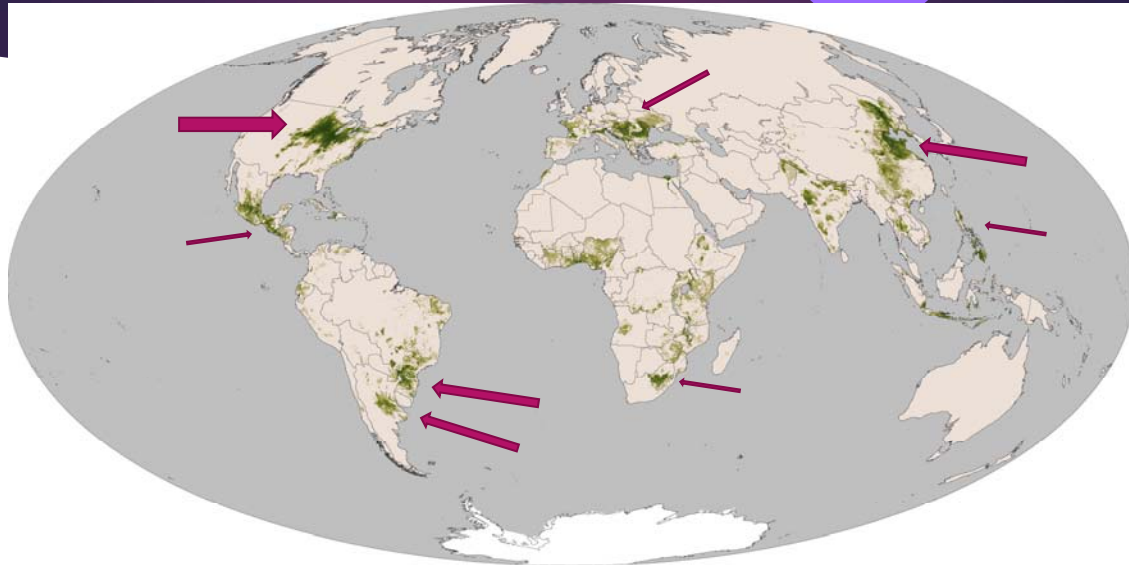
# U.S. Corn % Stocks/Use vs Price\$



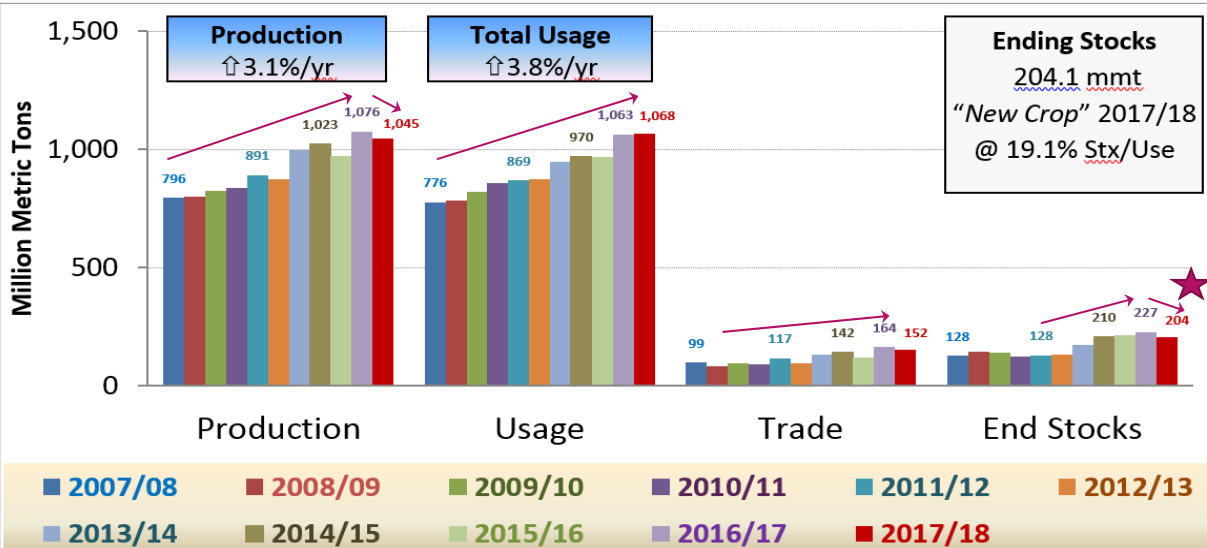
# U.S. Corn % Stocks/Use vs Price\$



# World Corn (Maize) Production Regions



# World Corn Supply, Use & Stocks

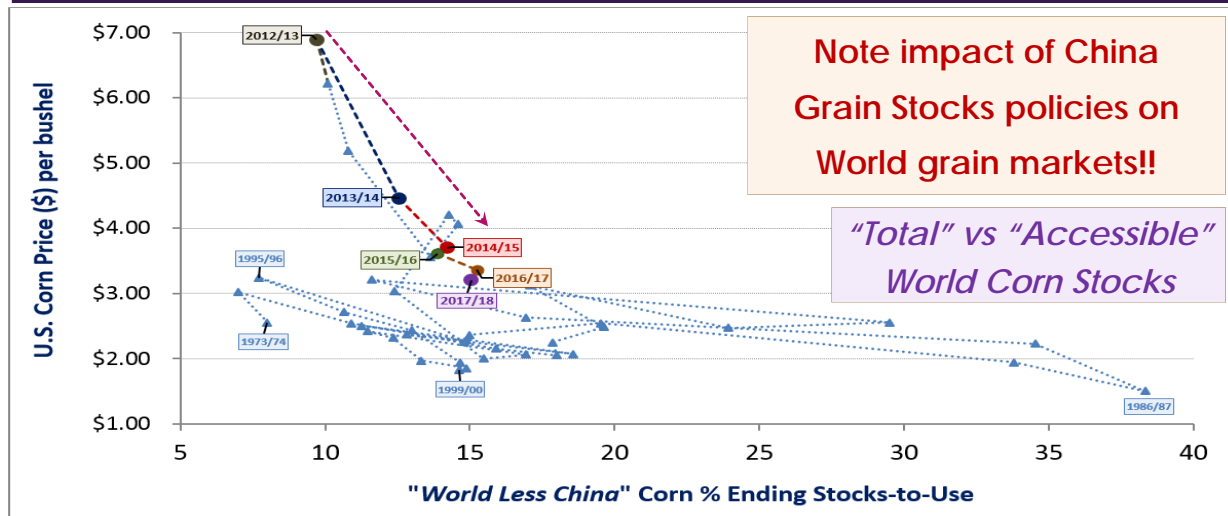


# World Corn Production

Country or Region	2016/17 estimate	2017/18 forecast	Change from November 9	Change from 2016/17	
<i>Million Tons</i>					
<b>World</b>	<b>1,075.5</b>	<b>1,044.7</b>	<b>0.85</b>	<b>-30.8</b>	} ↓ World Crop BUT still Large Supply
<b>United States</b>	<b>384.8</b>	<b>370.3</b>	<b>--</b>	<b>-14.5</b>	
<b>Foreign</b>	<b>690.8</b>	<b>674.5</b>	<b>0.85</b>	<b>-16.3</b>	} ↓ China ↓ EU ↓ Brazil ↓ FSU-12 ↓ So. Africa ↓ Mexico ↑ Argentina ↑ Canada
Argentina	41.0	42.0	--	1.0	
Brazil	98.5	95.0	--	-3.5	
Mexico	27.6	26.2	--	-1.4	
Canada	13.2	14.1	--	0.9	
European Union	61.5	60.1	0.51	-1.4	
Serbia	7.6	4.0	--	-3.6	
FSU-12	47.3	43.2	-1.00	-4.0	
Ukraine	28.0	25.0	--	-3.0	
Russia	15.3	14.0	-1.00	-1.3	
South Africa	17.5	12.5	--	-5.0	
China	219.6	215.9	0.89	-3.7	
India	26.3	25.0	--	-1.3	

## U.S. Corn Price\$ vs "World-China" % S/U

MY 1973/74 through "New Crop" MY 2017/18

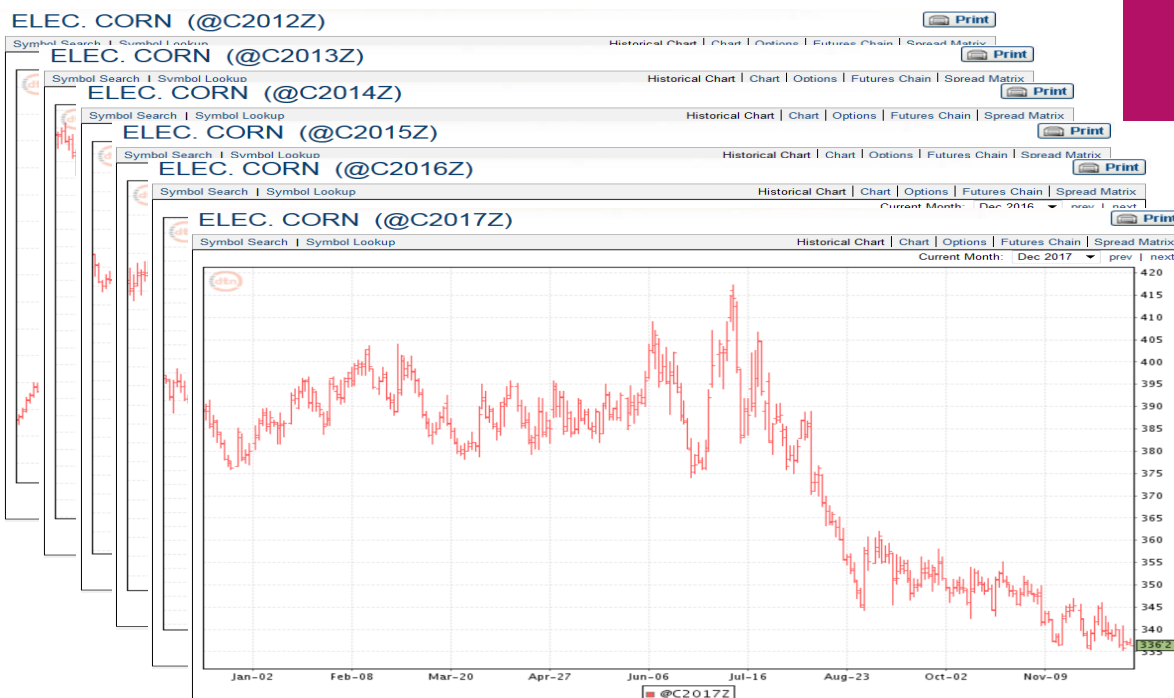


# Probability of Corn Futures Trends

Examining 1990-2017 (Last 28 years)

## ► Likelihood of Level-Higher DEC Corn Futures??

- Trends through Spring-Summer (June-July)?
  - ⇒ Spring-Summer Price ↑ occurred 28/28 Years (100%)
- Which direction did prices move by Fall (Nov-Dec)??
  - ⇒ Price moving sideways / higher = 9/28 Years (32%)
  - ⇒ Price moving lower = 19/28 Years (68%)



# ELEC. CORN (Jul 2018) [10 Minute Delay]

Refresh 2

Last	Change	%Chg	Open	High	Low	Previous	Volume	Exchange	Trade Time
367'4	0'0	0	367'0	367'4	366'6	367'4	18710	CBOT	01/07/18 19:55

Symbol: @CN18  Symbol Search | Symbol Lookup Strike Range: Near-the-Money

Mar 2018 | May 2018 | Jul 2018 | Sep 2018 | Dec 2018 | Mar 2019 | May 2019 | Jul 2019 | Dec 2019 | Dec 2020 Jul 2018

## Jul 2018 Options

Days Until Expiration: 166

Calls									Puts							
Symbol	Price	Chg	Open	High	Low	Volume	Open Int	Strike	Symbol	Price	Chg	Open	High	Low	Volume	Open Int
<input checked="" type="checkbox"/> @CN18C3200	48'0s	-0'1	---	---	---	0	116	3200	<input checked="" type="checkbox"/> @CN18P3200	0'5s	0'0	---	---	---	94	2088
<input checked="" type="checkbox"/> @CN18C3300	38'6	0'1	38'6	38'6	38'6	0	195	3300	<input checked="" type="checkbox"/> @CN18P3300	1'3s	0'0	1'3	1'3	1'3	1012	3882
<input checked="" type="checkbox"/> @CN18C3400	30'3s	-0'2	---	---	---	0	112	3400	<input checked="" type="checkbox"/> @CN18P3400	3'0s	0'0	3'1	3'1	3'1	76	4446
<input checked="" type="checkbox"/> @CN18C3500	23'4s	-0'2	23'4	23'4	23'4	20	530	3500	<input checked="" type="checkbox"/> @CN18P3500	6'0s	-0'1	5'5	6'0	5'5	148	10350
<input checked="" type="checkbox"/> @CN18C3600	18'1s	-0'1	18'0	18'0	17'7	11	2522	3600	<input checked="" type="checkbox"/> @CN18P3600	10'5s	0'1	10'6	10'7	10'0	490	8764
<input checked="" type="checkbox"/> @CN18C3700	14'0s	-0'1	14'2	14'2	13'7	804	12490	3700	<input checked="" type="checkbox"/> @CN18P3700	16'4s	0'2	16'4	16'4	16'2	722	6520
<input checked="" type="checkbox"/> @CN18C3800	10'7	0'0	10'7	10'7	10'7	180	13784	3800	<input checked="" type="checkbox"/> @CN18P3800	23'2s	0'1	23'3	23'3	22'7	369	6978
<input checked="" type="checkbox"/> @CN18C3900	8'3s	-0'1	8'5	8'6	8'1	361	6882	3900	<input checked="" type="checkbox"/> @CN18P3900	30'6s	0'1	30'5	30'5	30'3	213	3004
<input checked="" type="checkbox"/> @CN18C4000	6'4	0'0	6'4	6'4	6'4	513	12540	4000	<input checked="" type="checkbox"/> @CN18P4000	38'6s	0'1	37'2	38'6	36'6	440	2760
<input checked="" type="checkbox"/> @CN18C4100	5'0s	0'0	5'3	5'3	4'7	57	6009	4100	<input checked="" type="checkbox"/> @CN18P4100	47'2s	0'2	---	---	---	2	1723
<input checked="" type="checkbox"/> @CN18C4200	4'0s	0'1	3'7	3'7	3'7	1182	7131	4200	<input checked="" type="checkbox"/> @CN18P4200	56'2s	0'3	---	---	---	0	853

In the money  At the money

Quotes generated on: Sun, Jan 7, 2018 8:15 PM CST

# ELEC. CORN (Dec 2018) [10 Minute Delay]

Refresh 2

Last	Change	%Chg	Open	High	Low	Previous	Volume	Exchange	Trade Time
384'2	-0'2	-0.07	383'6	384'4	383'6	384'4	7982	CBOT	01/07/18 19:54

Symbol: @CZ18  Symbol Search | Symbol Lookup Strike Range: Near-the-Money

Mar 2018 | May 2018 | Jul 2018 | Sep 2018 | Dec 2018 | Mar 2019 | May 2019 | Jul 2019 | Dec 2019 | Dec 2020 Dec 2018

## Dec 2018 Options

Days Until Expiration: 320

Calls									Puts							
Symbol	Price	Chg	Open	High	Low	Volume	Open Int	Strike	Symbol	Price	Chg	Open	High	Low	Volume	Open Int
<input checked="" type="checkbox"/> @CZ18C3300	56'3s	0'0	---	---	---	0	20	3300	<input checked="" type="checkbox"/> @CZ18P3300	2'3s	0'0	---	---	---	0	2812
<input checked="" type="checkbox"/> @CZ18C3400	48'0s	0'0	---	---	---	0	5	3400	<input checked="" type="checkbox"/> @CZ18P3400	4'0s	0'0	4'1	4'1	4'1	118	3090
<input checked="" type="checkbox"/> @CZ18C3500	40'6s	0'0	---	---	---	0	772	3500	<input checked="" type="checkbox"/> @CZ18P3500	6'5s	0'0	6'5	6'5	6'5	43	13911
<input checked="" type="checkbox"/> @CZ18C3600	34'6s	0'0	34'4	34'4	34'4	10	413	3600	<input checked="" type="checkbox"/> @CZ18P3600	10'4s	0'0	---	---	---	145	13828
<input checked="" type="checkbox"/> @CZ18C3700	29'4s	0'0	---	---	---	0	816	3700	<input checked="" type="checkbox"/> @CZ18P3700	15'1s	0'0	15'1	15'3	15'1	101	8089
<input checked="" type="checkbox"/> @CZ18C3800	25'3s	0'0	25'2	25'4	25'2	115	1934	3800	<input checked="" type="checkbox"/> @CZ18P3800	20'7s	0'0	21'0	21'0	20'4	71	5999
<input checked="" type="checkbox"/> @CZ18C3900	21'6s	0'0	20'7	22'0	20'7	140	6550	3900	<input checked="" type="checkbox"/> @CZ18P3900	27'2s	0'0	27'4	27'4	27'2	45	8497
<input checked="" type="checkbox"/> @CZ18C4000	18'4s	0'0	18'5	18'7	18'1	77	12772	4000	<input checked="" type="checkbox"/> @CZ18P4000	33'7s	0'0	33'4	33'4	33'4	2	5317
<input checked="" type="checkbox"/> @CZ18C4100	15'7s	0'0	16'0	16'0	15'5	152	3389	4100	<input checked="" type="checkbox"/> @CZ18P4100	41'1s	0'0	---	---	---	0	2020
<input checked="" type="checkbox"/> @CZ18C4200	13'2	-0'3	13'2	13'2	13'2	259	11554	4200	<input checked="" type="checkbox"/> @CZ18P4200	48'6s	0'0	---	---	---	0	1026
<input checked="" type="checkbox"/> @CZ18C4300	11'5s	0'0	12'0	12'0	11'4	54	7519	4300	<input checked="" type="checkbox"/> @CZ18P4300	56'5s	0'0	---	---	---	0	1622

In the money  At the money

Quotes generated on: Sun, Jan 7, 2018 8:16 PM CST



## What “Old Crop” Corn Marketing Strategies are Likely to Work Best in 2018?

### ► For “Old Crop” 2017 Feedgrains

- **On-Farm Storage** ⇒ Yes, but not until spring-summer 2018
- **Off-Farm Storage** ⇒ Maybe, but will need larger 2018 rallies
- **Storage Hedge / Fwd Contract** ⇒ Maybe ⇒ futures have “carry”!
- **Buy Puts or Marketing Loan** ⇒ No Mktg Loans (Watch ↓ put costs)
- **Sell Cash & Buy Call Options** ⇒ Watch narrower Basis (Yes post sales\*)

## What “New Crop” Corn Marketing Strategies are Likely to Work Best in 2018?

### ► For “New Crop” 2018 Feedgrains

- **Futures Hedge (HTA)** ⇒ Yes, but not until spring-summer 2017
- **Forward Contract** ⇒ Maybe, but watch for better basis bids
- **Buy Puts** ⇒ Maybe @ spring/summer rallies
- **Marketing Loans** ⇒ Be aware of Mktg Loan\$ vs Net Put\$
- **Fwrd Contract + Buy Calls** ⇒ No if wide Basis (+ rally protection)



# Questions?

Daniel O'Brien – Extension Ag Economist

Blog: [www.ksugrains.wordpress.com](http://www.ksugrains.wordpress.com)

**KSUGrains** on Twitter & Facebook

[www.AgManager.info](http://www.AgManager.info)



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Department of Agricultural Economics