

# Corn Market Outlook & Strategies for 2018

Kansas Corn School

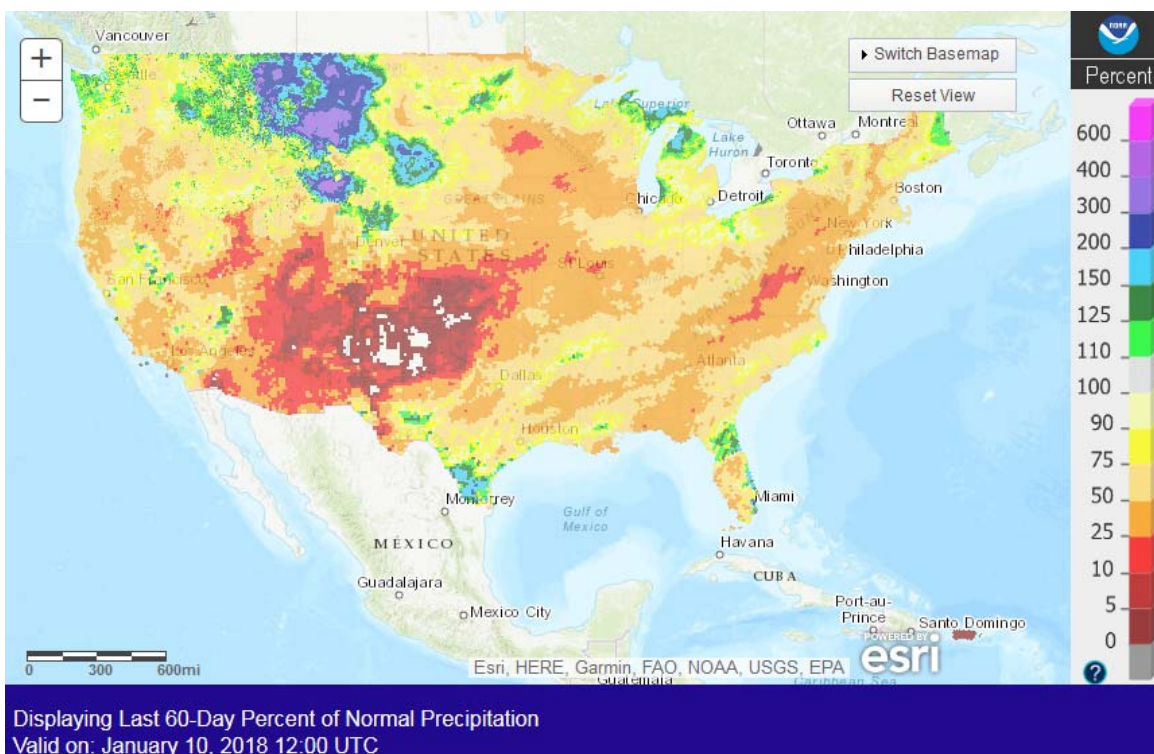
Leavenworth, Kansas

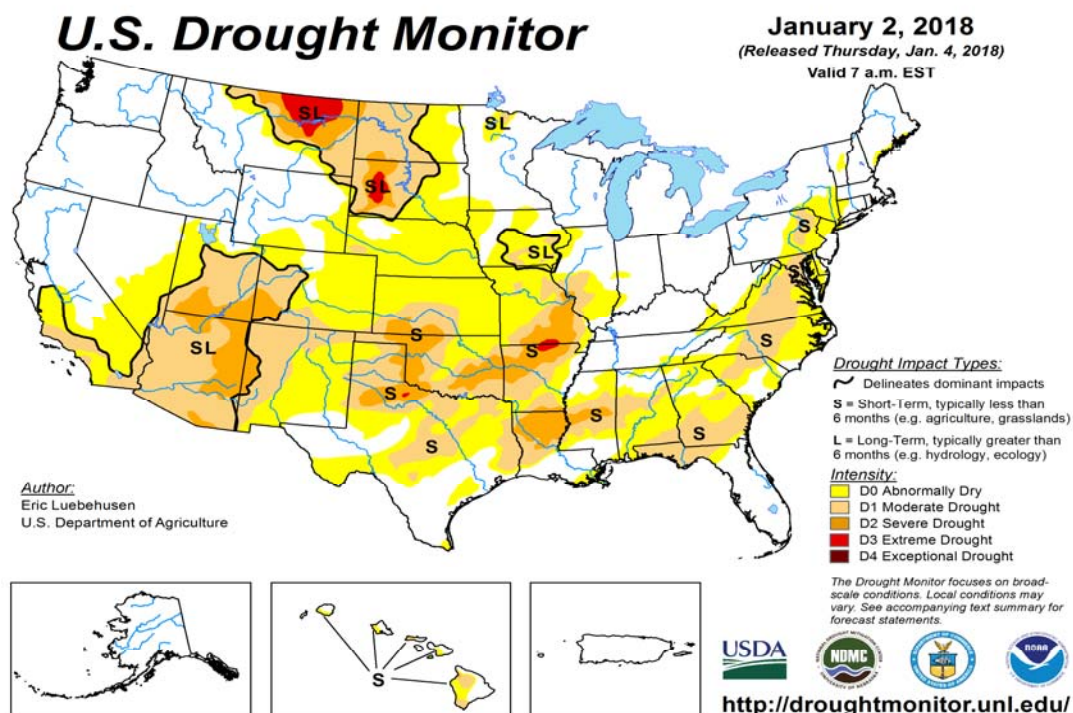
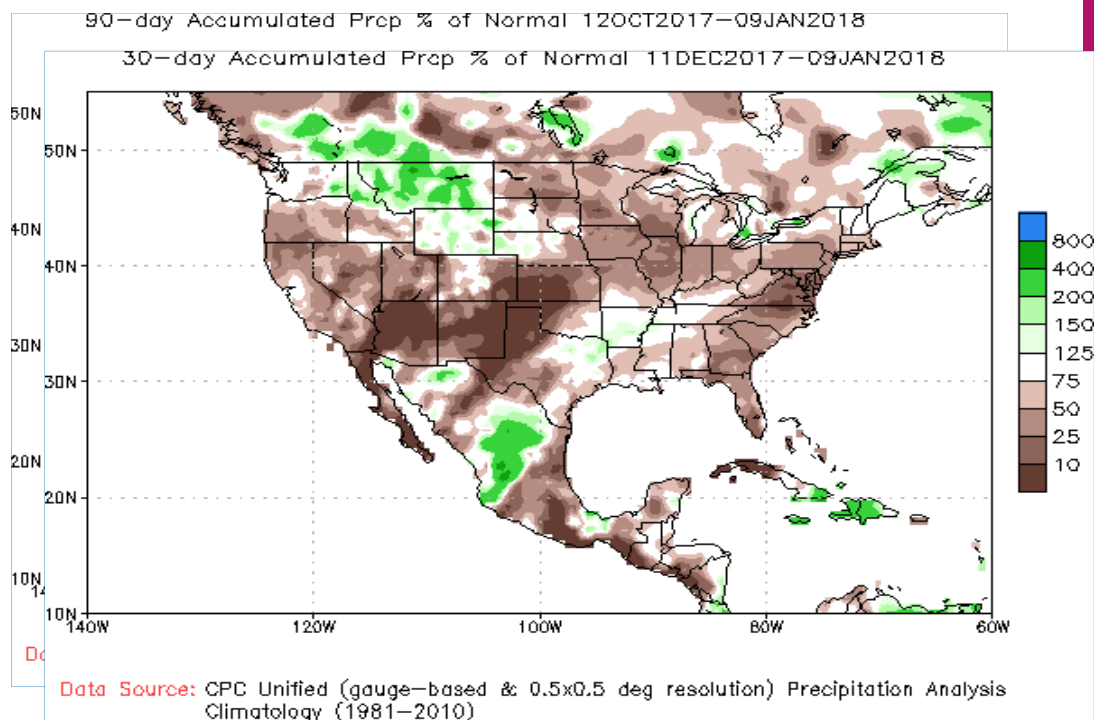
DANIEL O'BRIEN

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**KANSAS STATE**  
UNIVERSITY

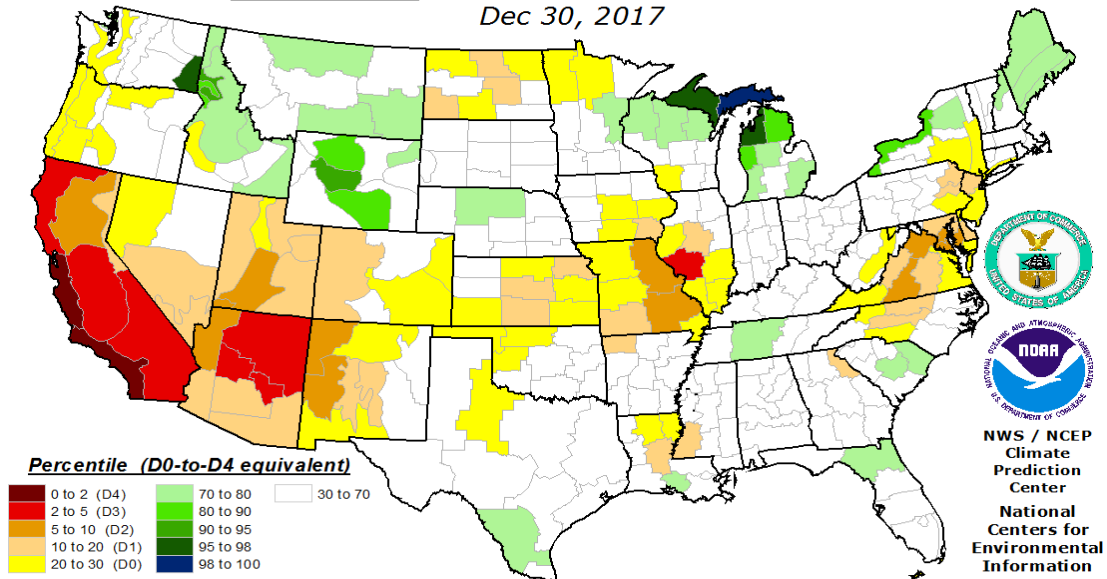
Department of Agricultural Economics





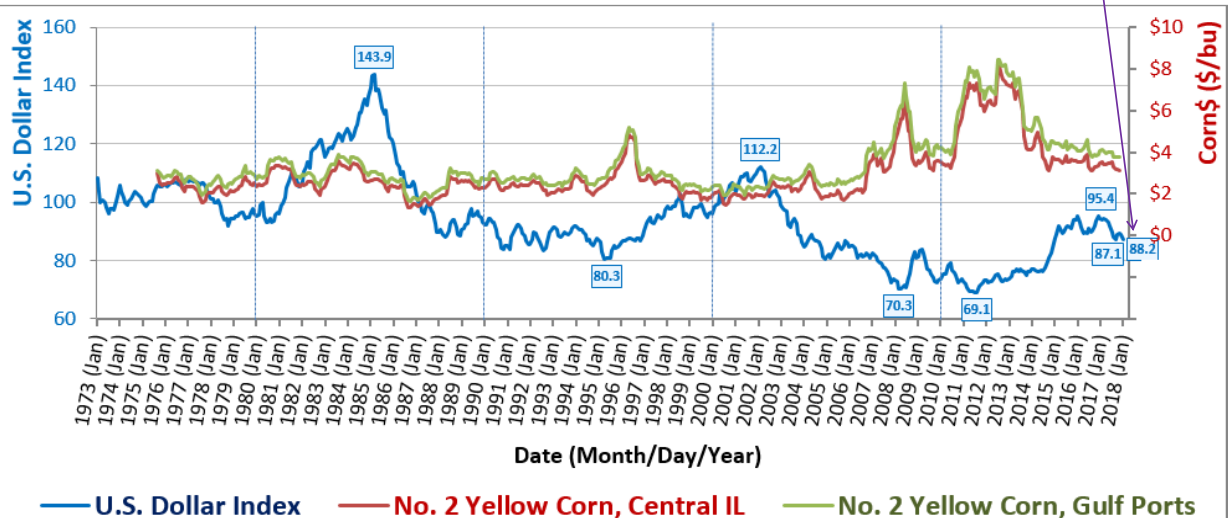
## Objective Short-Term Drought Indicator Blend Percentiles

Dec 30, 2017



## U.S. Dollar Index & Cash Corn Prices

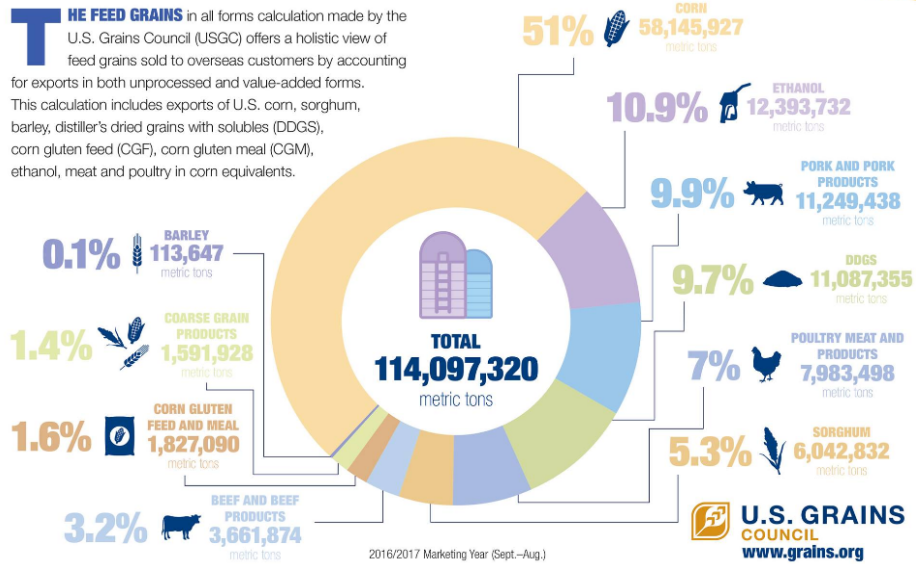
Monthly Chart: January 1973 through January 5, 2018





## 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.



## Corn Markets



**KANSAS STATE UNIVERSITY**

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

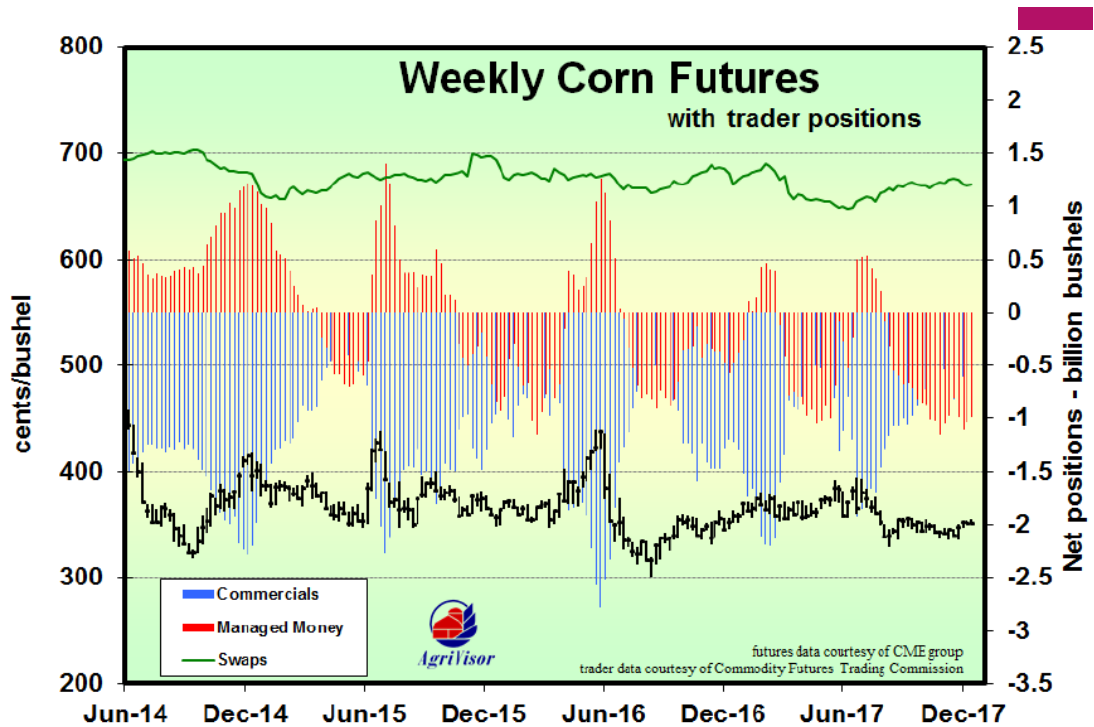
Weekly Chart: November 2008 – December 2017 + 1/10/2018



# CME Corn Futures

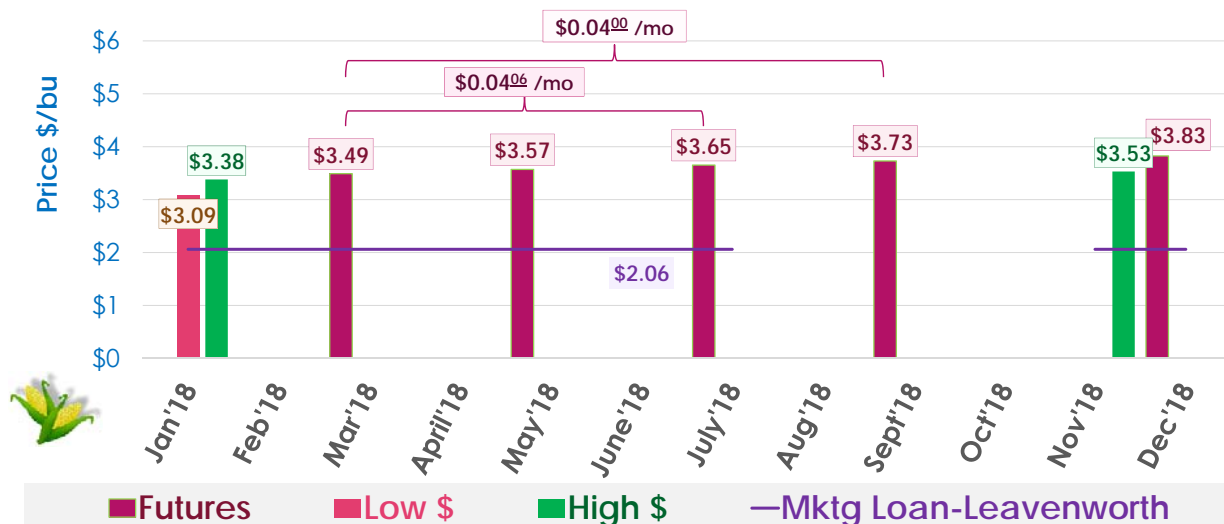
Weekly Chart: November 2008 – December 2017 + 1/10/2018





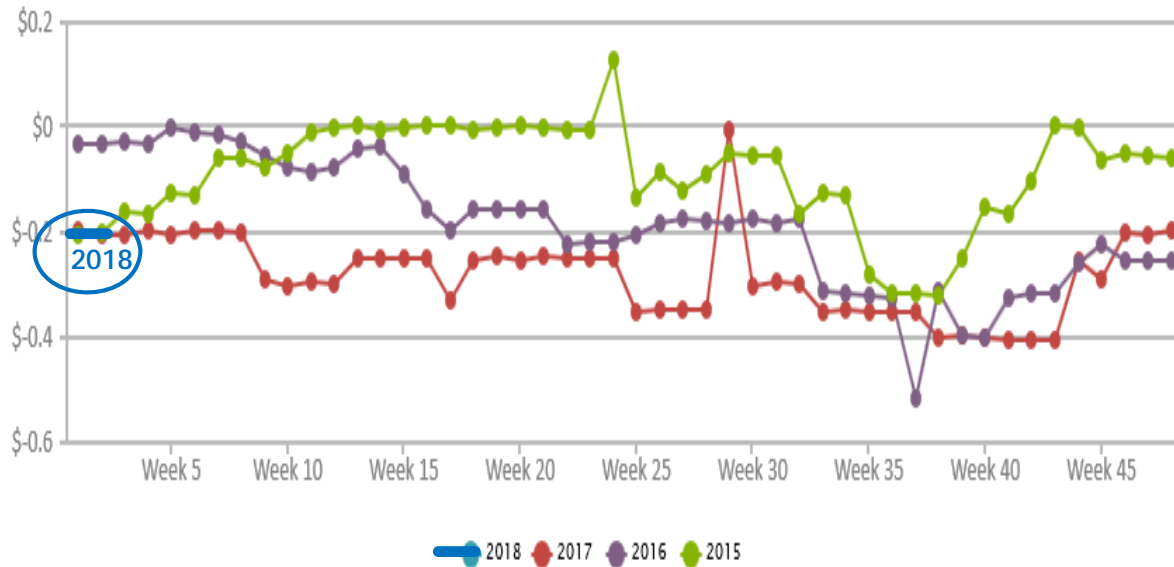
## Corn Cash & Futures Prices (\$/bu)

Leavenworth, KS Local Elevators – January 10, 2018



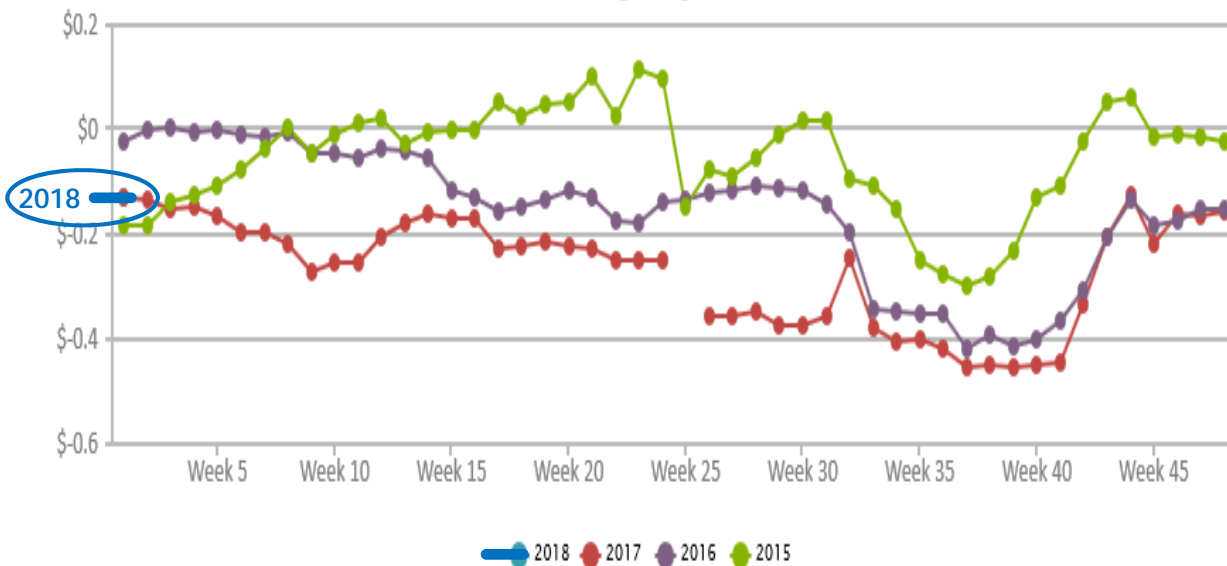
## ATCHISON, KS: Corn Basis - MGP INGREDIENTS INC.

www.AgManager.info



## ATCHISON, KS: Corn Basis - BARTLETT GRAIN CO. LP

www.AgManager.info



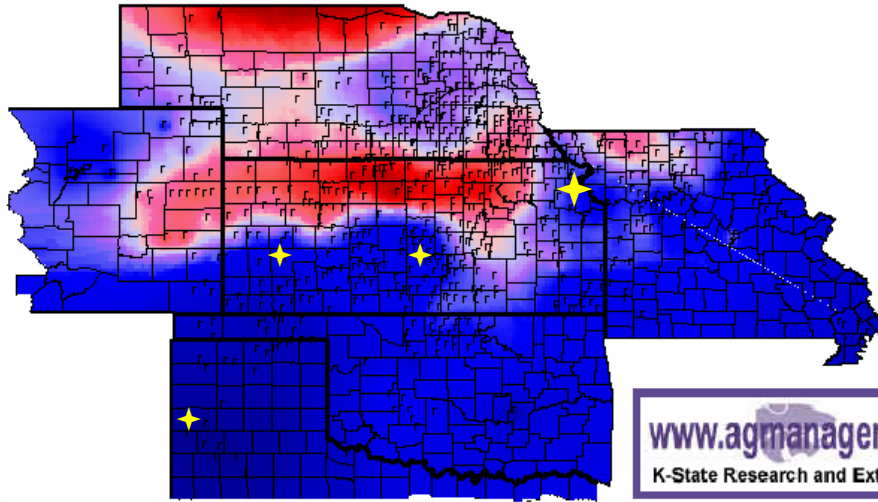
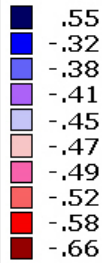


## Corn Basis, 01-03-2018

Basis = Cash Price - Nearby Futures Price

CBT Mar  
Futures  
Price: \$3.53

\$/Bushel

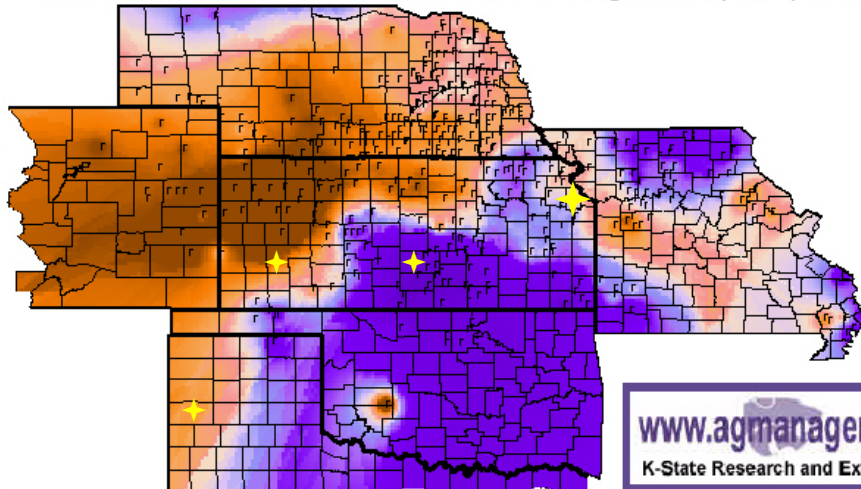
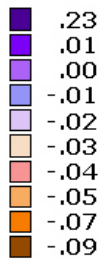


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## Corn Basis Deviation, 01-03-2018

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

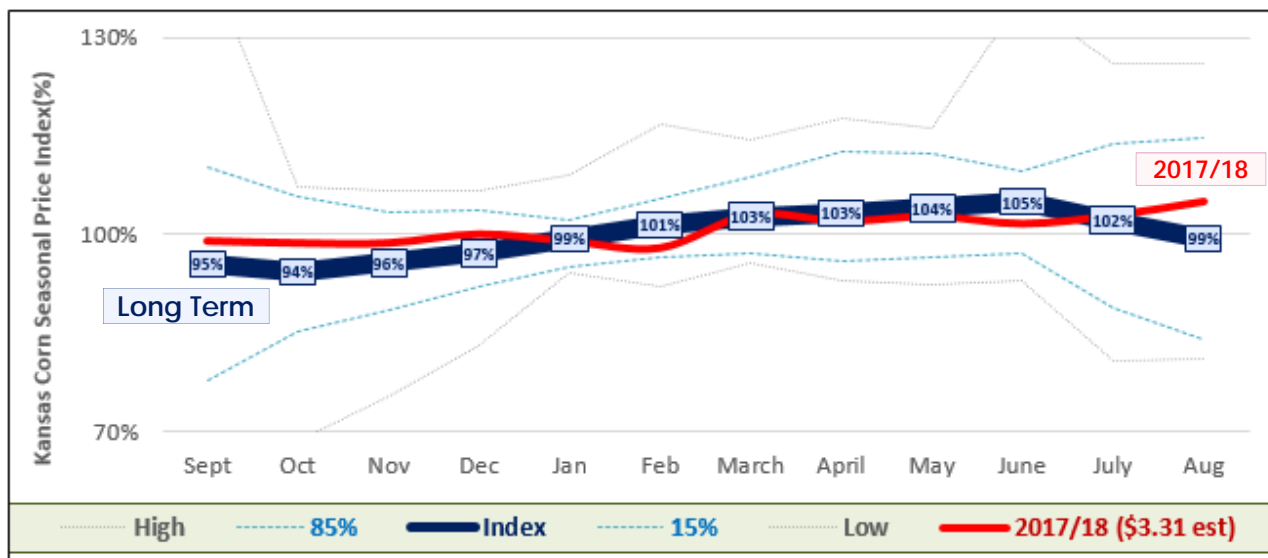
\$/Bushel



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# Kansas Corn Seasonal Cash \$ Index

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

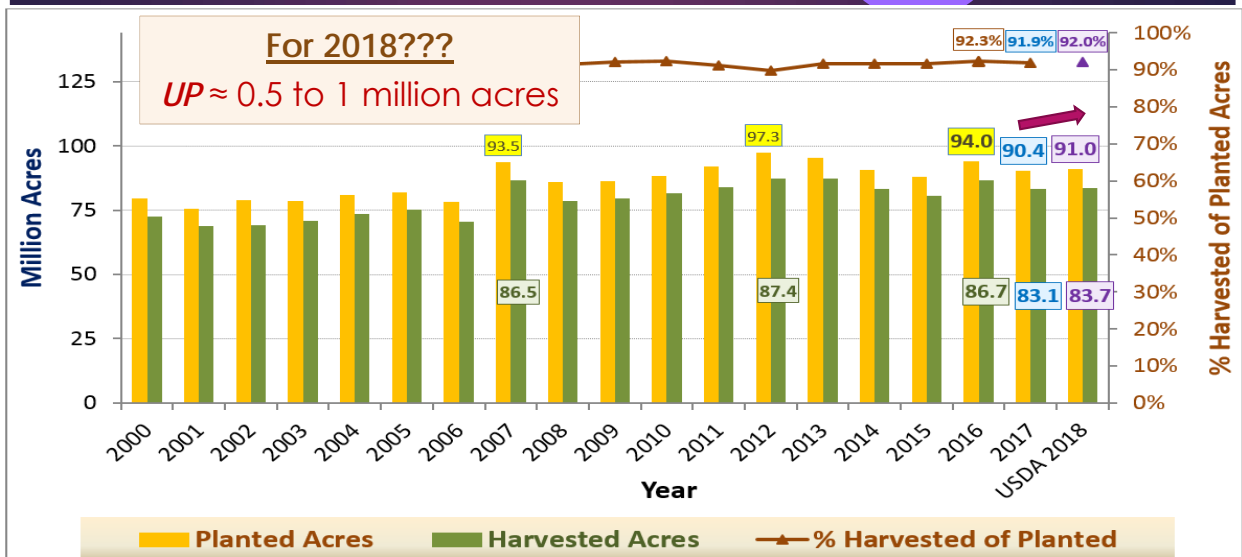


## U.S. Corn Supply and Demand

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



# U.S. Corn Acreage



# U.S. Corn Yields

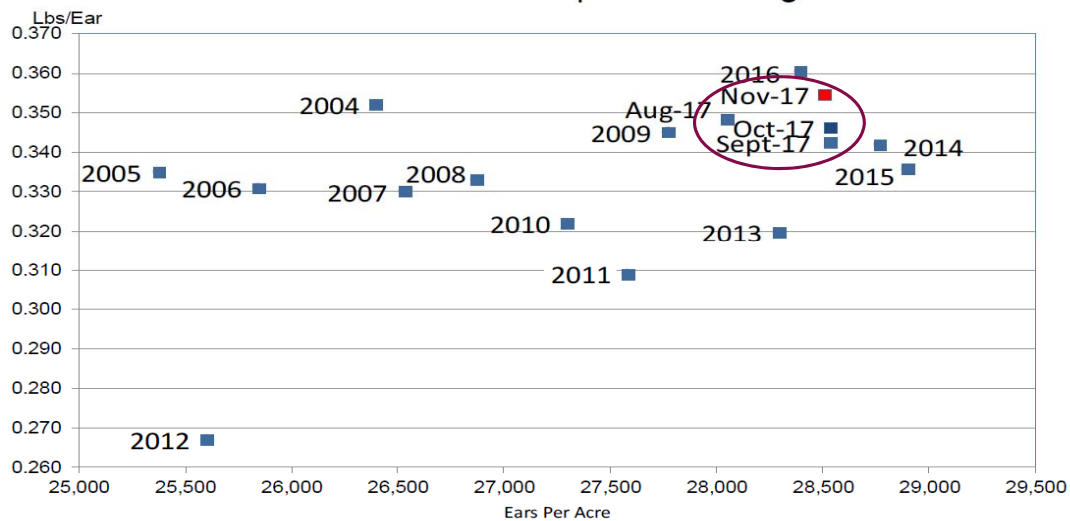
USDA 2017 USDA Forecast = 175.4 bu/ac

Final 2017???

Q? Is >175 bu/ac possible?



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

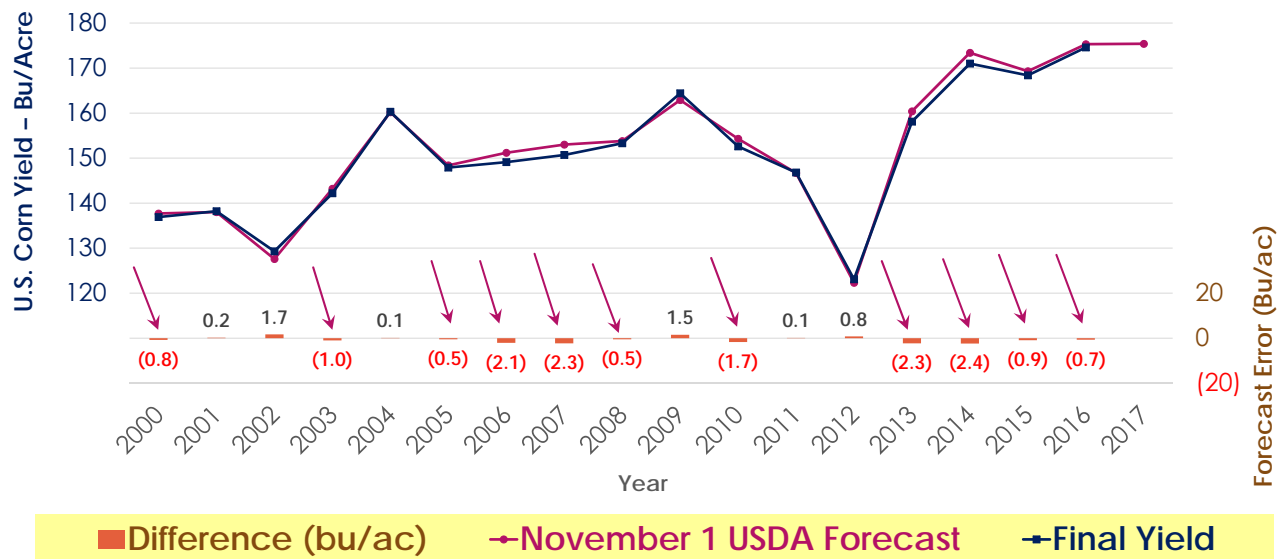


Implied Ear Weight = (Published Yield \* 56) / Ears

USDA-NASS  
11-9-17

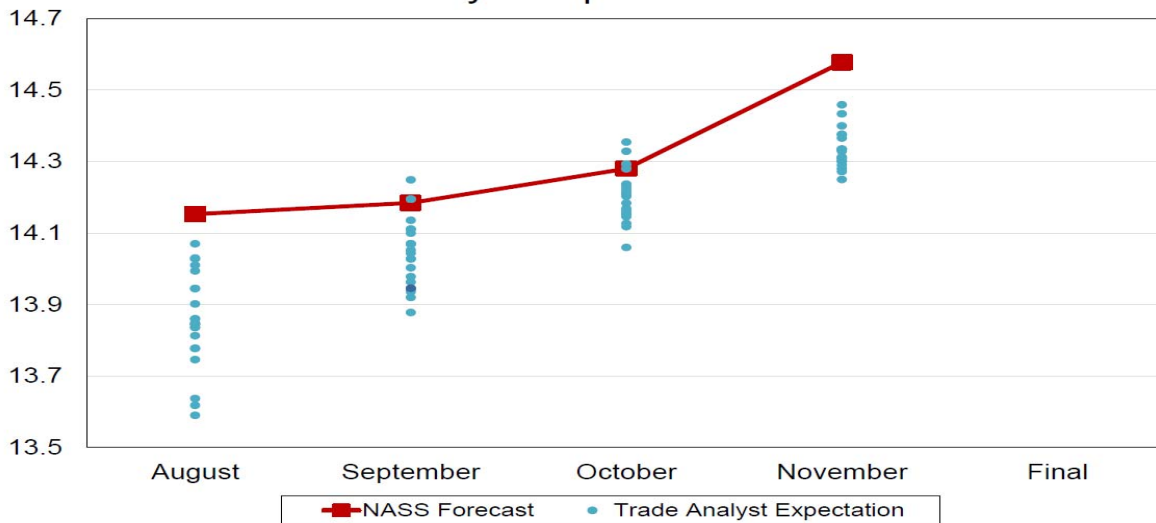
# U.S. Corn Yields: 2000-2017

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



Billion Bushels

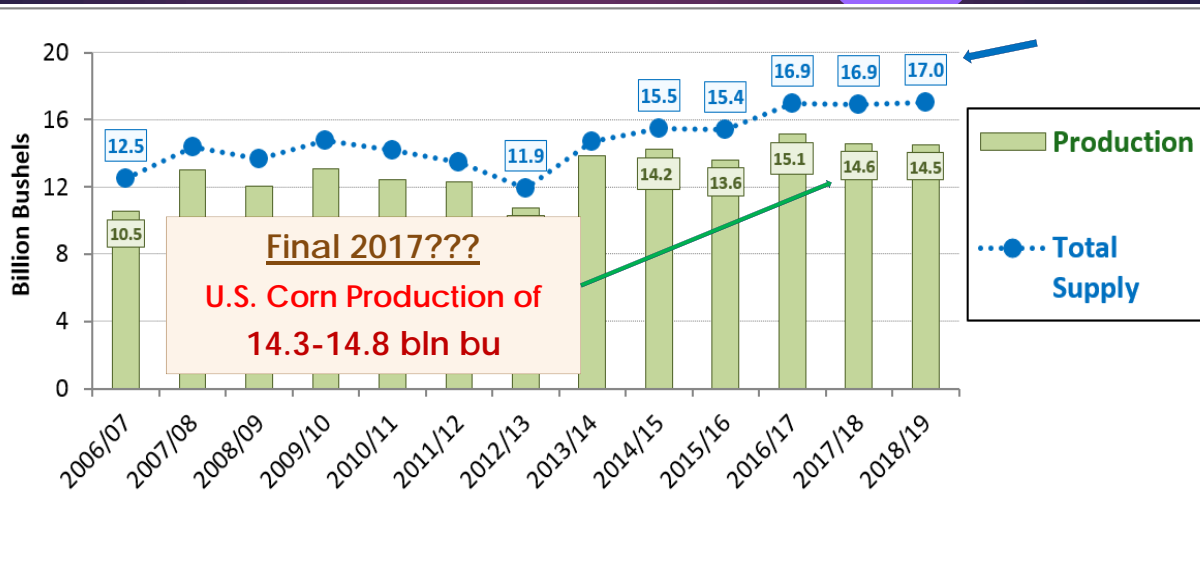
## 2017 United States Corn Production Trade Analyst Expectations vs NASS



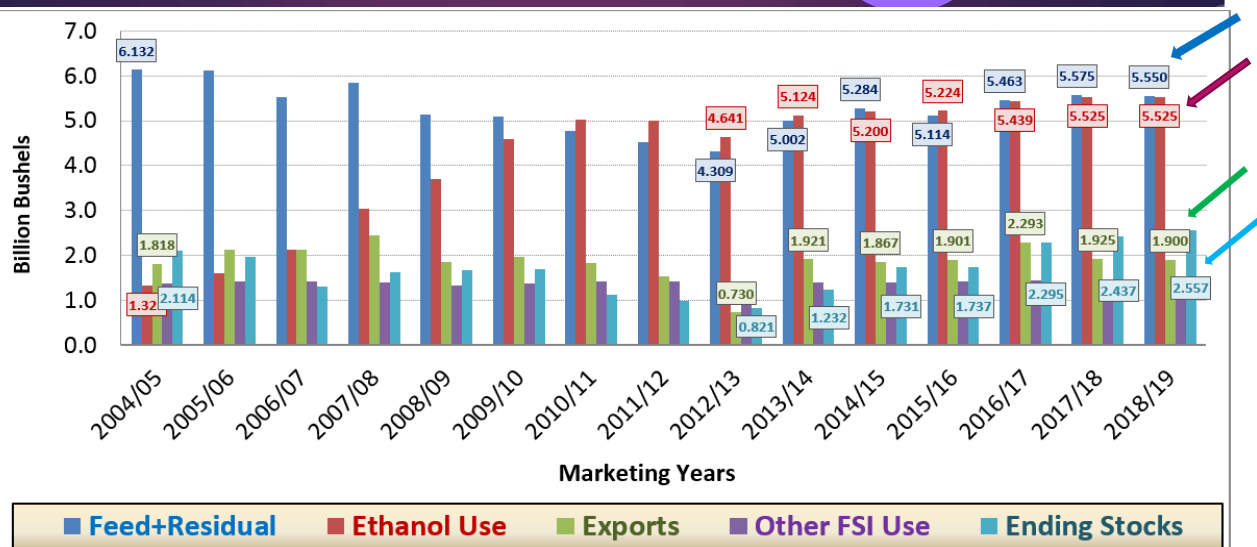
USDA-NASS  
11-9-17



# U.S. Corn Production & Supplies

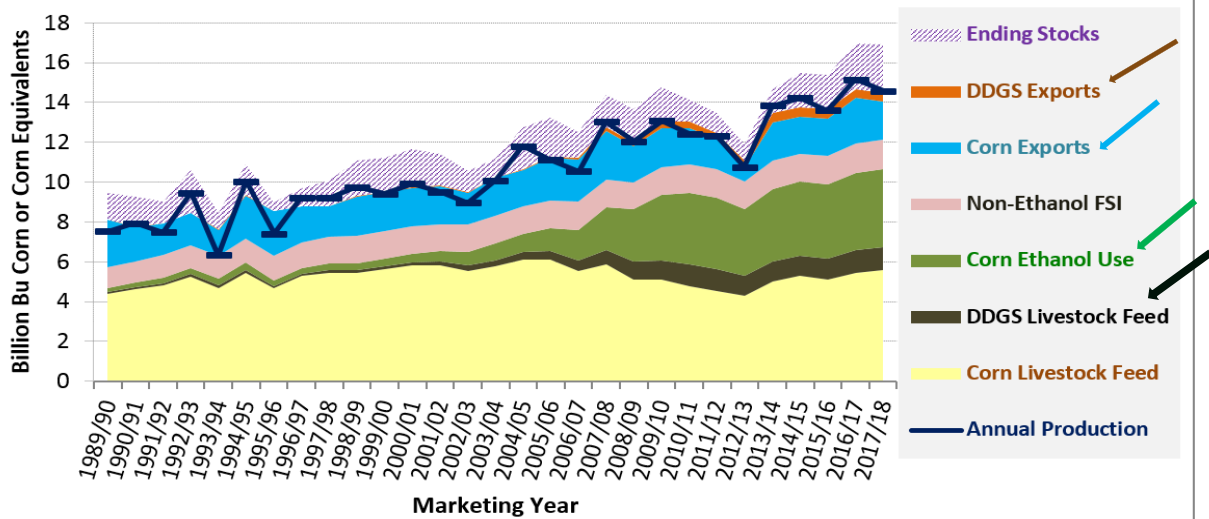


# U.S. Corn Use – By Category





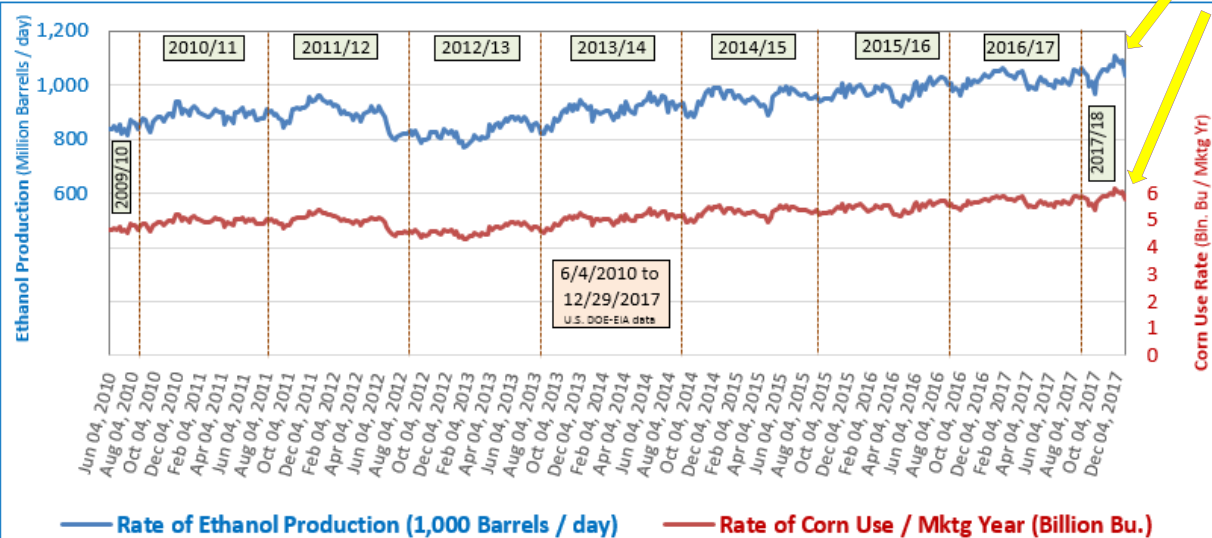
## U.S. Corn Use – By Category



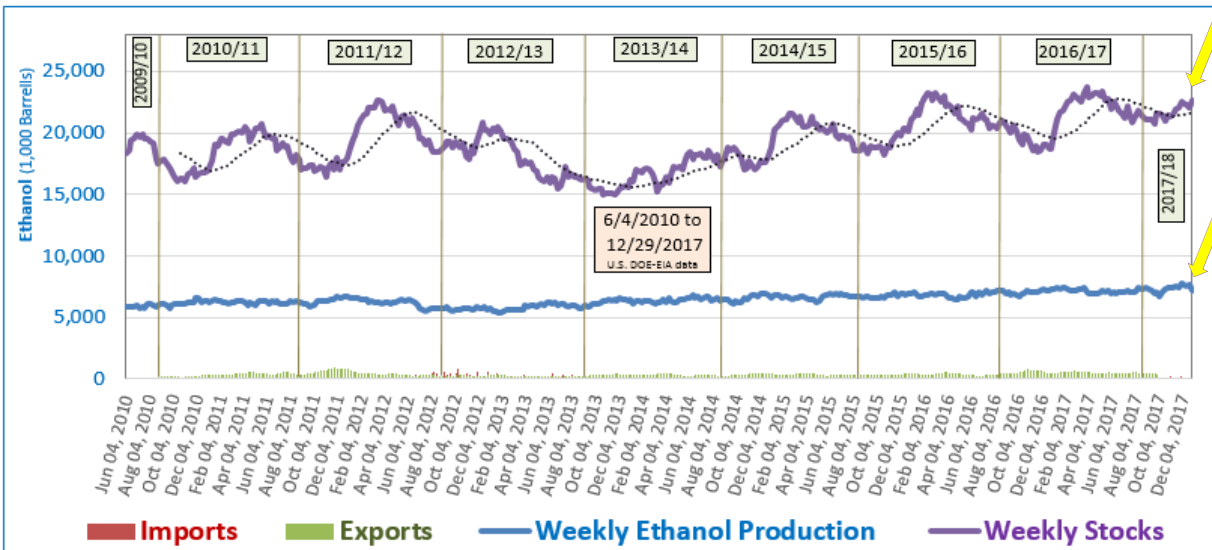
# U.S. Meat Production and Prices

	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%
Total meat	100.16	103.57	-0.04	3.42	+3.4%
<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	
Turkey	95.7	96.3	-3.0	0.5	

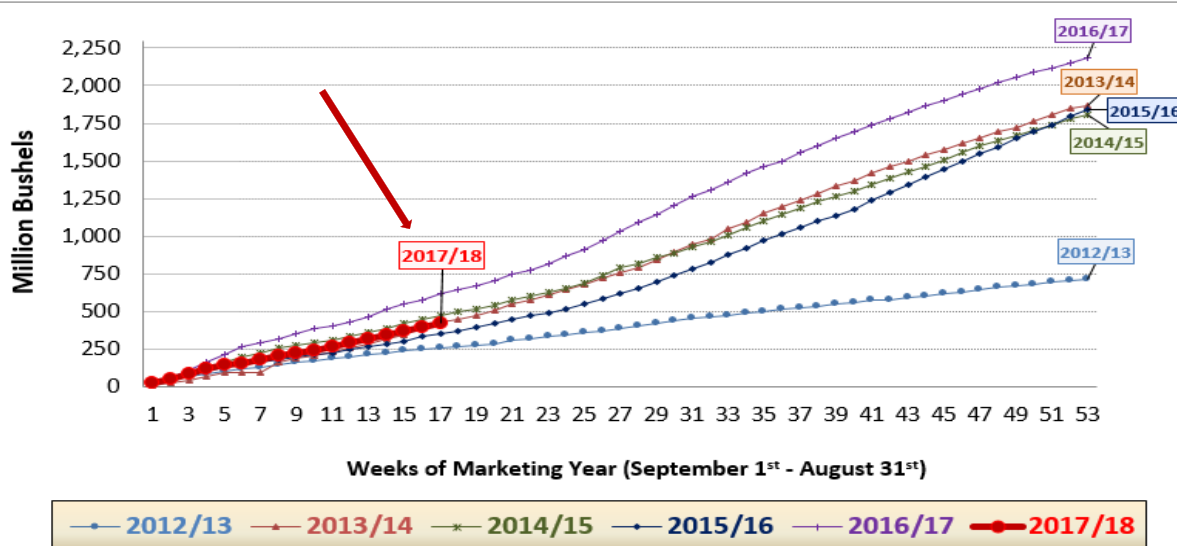
## U.S. Corn Ethanol Use - Weekly thru Dec. 29, 2017



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



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





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

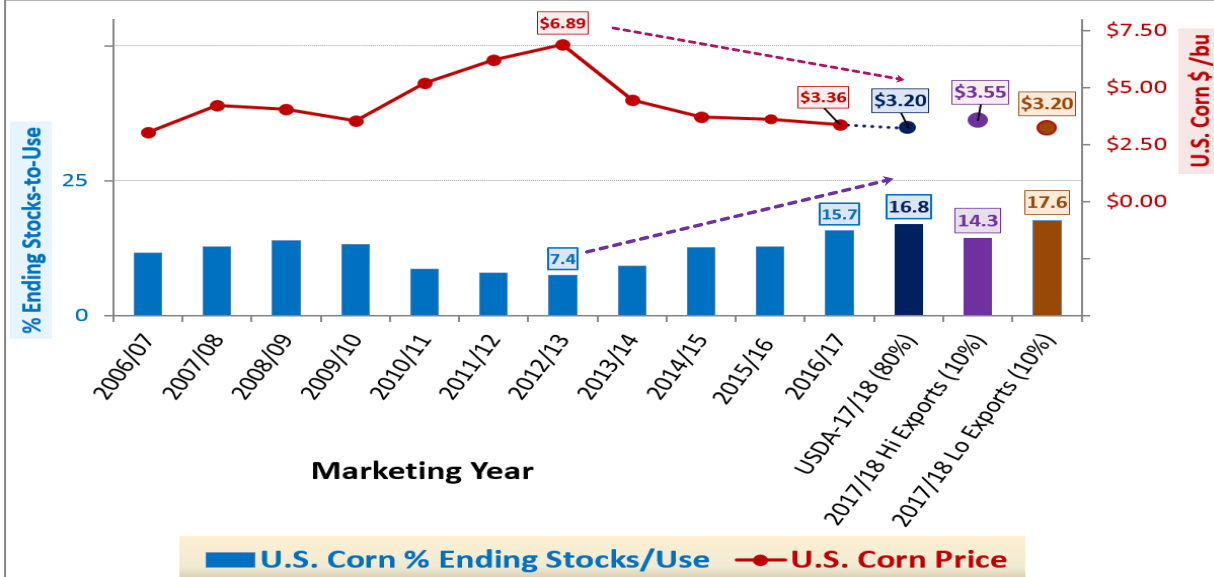


U.S. Corn Ending Stocks & % Stx/Use

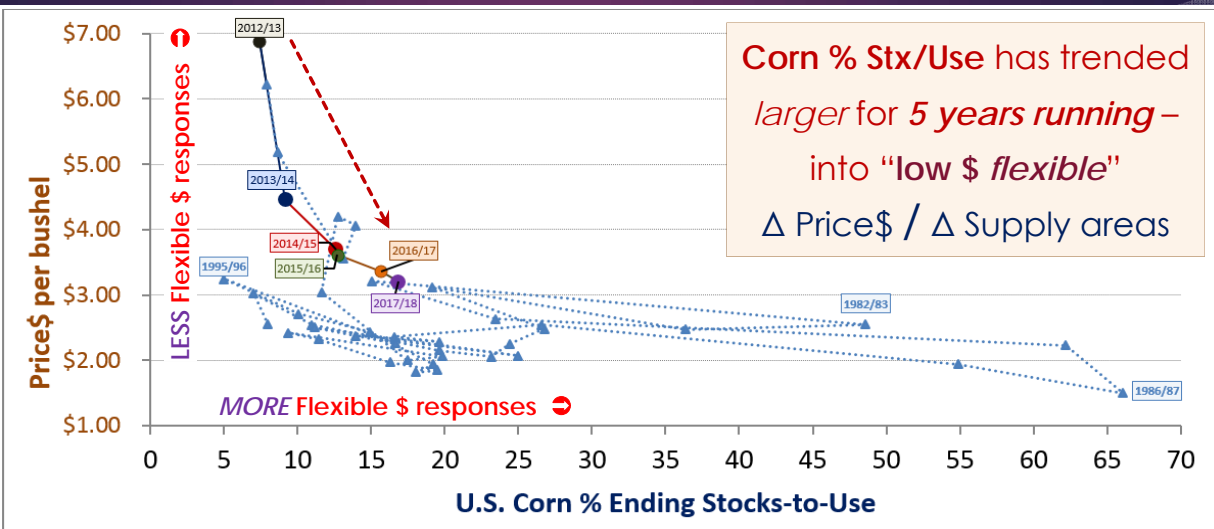




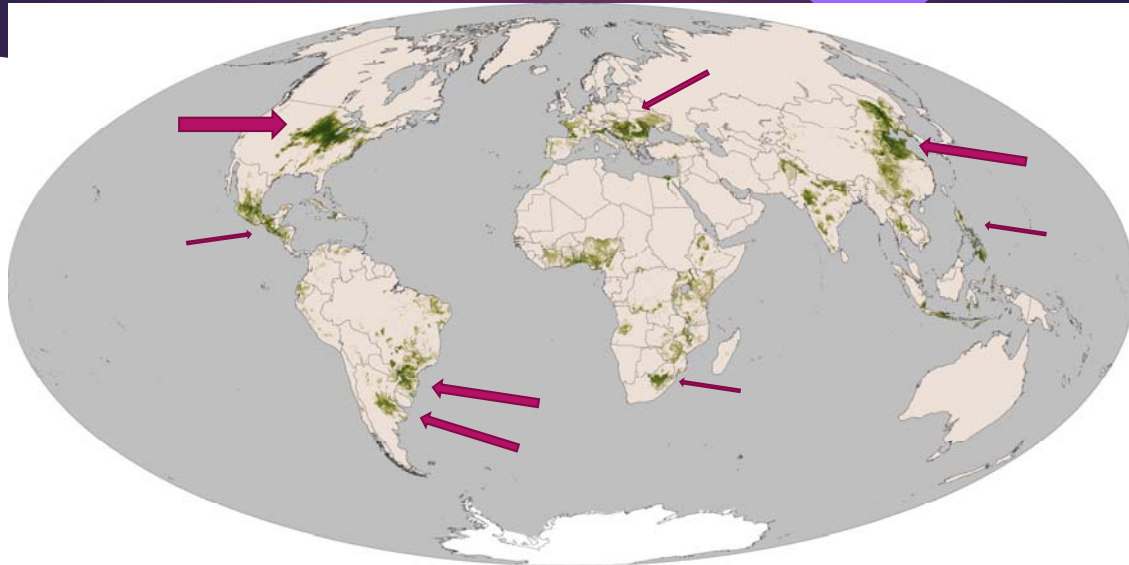
# U.S. Corn % Stocks/Use vs Price\$



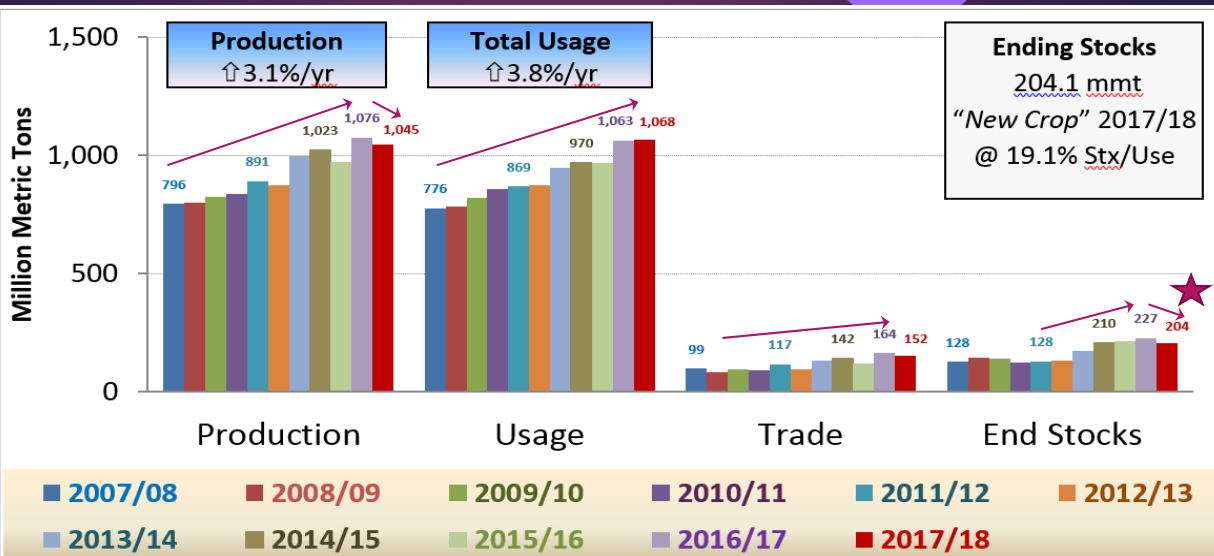
# U.S. Corn % Stocks/Use vs Price\$



# World Corn (Maize) Production Regions



# World Corn Supply, Use & Stocks

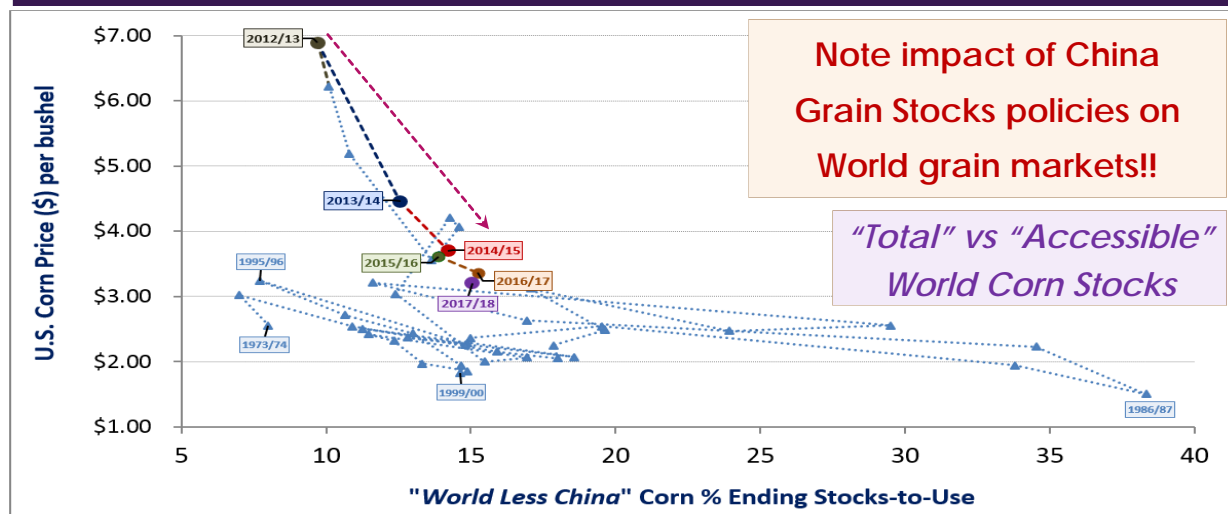


# World Corn Production

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>	
Argentina	41.0	42.0	--	1.0	
Brazil	98.5	95.0	--	-3.5	↓ China
Mexico	27.6	26.2	--	-1.4	↓ EU
Canada	13.2	14.1	--	0.9	↓ Brazil
European Union	61.5	60.1	0.51	-1.4	↓ FSU-12
Serbia	7.6	4.0	--	-3.6	↓ So. Africa
FSU-12	47.3	43.2	-1.00	-4.0	↓ Mexico
Ukraine	28.0	25.0	--	-3.0	↑ Argentina
Russia	15.3	14.0	-1.00	-1.3	↑ Canada
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??

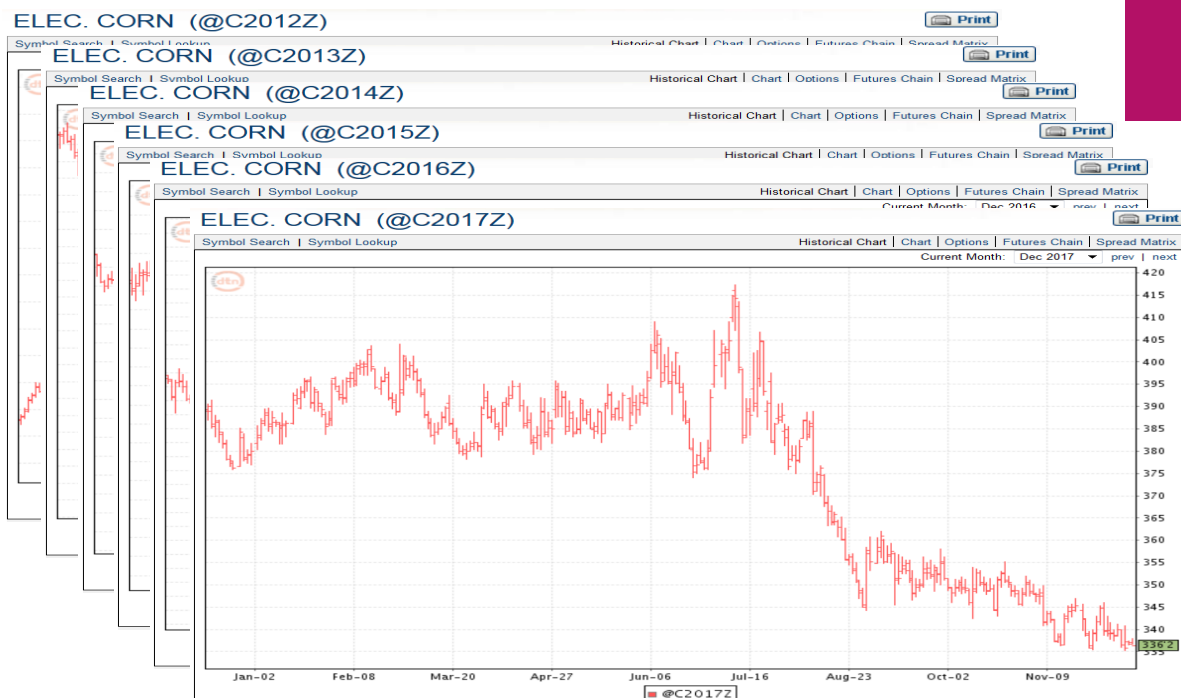
### ○ Trends through Spring-Summer (June-July)?

⇒ 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

Last	Change	%Chg	Open	High	Low	Previous	Volume	Exchange	Trade Time
365'2	0'2	0.07	365'2	365'4	365'0	365'0	37994	CBOT	01/10/18 23:21

Symbol: @CN18  [Symbol Search](#) | [Symbol Lookup](#) Strike Range:  [Chart](#) | [Options](#) | [Futures Chain](#)

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

## Jul 2018 Options

Days Until Expiration: 163

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	45'4s	-0'4	---	---	---	0	116	3200	<input checked="" type="checkbox"/> @CN18P3200	0'5s	0'0	---	---	---	0	2246	
<input checked="" type="checkbox"/> @CN18C3300	36'2s	-0'3	---	---	---	0	200	3300	<input checked="" type="checkbox"/> @CN18P3300	1'3s	0'0	1'3	1'3	1'3	15	4772	
<input checked="" type="checkbox"/> @CN18C3400	28'0s	-0'3	---	---	---	0	112	3400	<input checked="" type="checkbox"/> @CN18P3400	3'1s	0'1	3'1	3'1	3'0	171	4489	
<input checked="" type="checkbox"/> @CN18C3500	21'2s	-0'3	21'7	22'0	21'6	302	656	3500	<input checked="" type="checkbox"/> @CN18P3500	6'3s	0'1	6'4	6'4	6'1	223	10633	
<input checked="" type="checkbox"/> @CN18C3600	16'2s	-0'2	16'4	17'0	16'2	76	2992	3600	<input checked="" type="checkbox"/> @CN18P3600	11'4	0'2	11'4	11'4	11'4	100	8890	
<input checked="" type="checkbox"/> @CN18C3700	12'5	0'1	12'5	12'5	12'5	300	13566	3700	<input checked="" type="checkbox"/> @CN18P3700	17'4s	0'2	17'1	17'4	17'0	108	7286	
<input checked="" type="checkbox"/> @CN18C3800	9'5s	-0'1	10'0	10'1	9'4	273	14074	3800	<input checked="" type="checkbox"/> @CN18P3800	24'4s	0'3	24'1	24'1	24'1	36	7162	
<input checked="" type="checkbox"/> @CN18C3900	7'2s	-0'1	7'5	7'5	7'1	42	7230	3900	<input checked="" type="checkbox"/> @CN18P3900	32'1s	0'3	31'2	31'2	31'2	50	2961	
<input checked="" type="checkbox"/> @CN18C4000	5'4s	-0'1	5'7	5'7	5'4	73	13206	4000	<input checked="" type="checkbox"/> @CN18P4000	40'3s	0'3	---	---	---	0	2760	
<input checked="" type="checkbox"/> @CN18C4100	4'2s	-0'1	4'4	4'4	4'3	115	6231	4100	<input checked="" type="checkbox"/> @CN18P4100	49'0s	0'3	---	---	---	0	1723	
<input checked="" type="checkbox"/> @CN18C4200	3'2s	-0'1	3'4	3'4	3'3	13	7228	4200	<input checked="" type="checkbox"/> @CN18P4200	58'0s	0'3	---	---	---	0	853	

☒ In the money ☐ At the money

Quotes generated on: Wed, Jan 10, 2018 11:32 PM CST

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

Refresh

Last	Change	%Chg	Open	High	Low	Previous	Volume	Exchange	Trade Time
382'4	-0'2	-0.07	382'4	382'6	382'4	382'6	14362	CBOT	01/10/18 22:32

Symbol: @CZ18  [Symbol Search](#) | [Symbol Lookup](#) Strike Range:  [Chart](#) | [Options](#) | [Futures Chain](#)

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

## Dec 2018 Options

Days Until Expiration: 317

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	54'5s	0'1	---	---	---	0	20	3300	<input checked="" type="checkbox"/> @CZ18P3300	2'3s	-0'1	2'4	2'4	2'3	18	2829	
<input checked="" type="checkbox"/> @CZ18C3400	46'3s	0'0	---	---	---	0	5	3400	<input checked="" type="checkbox"/> @CZ18P3400	4'1s	-0'1	4'3	4'3	4'2	261	3636	
<input checked="" type="checkbox"/> @CZ18C3500	39'2s	0'0	---	---	---	0	730	3500	<input checked="" type="checkbox"/> @CZ18P3500	6'6s	-0'2	7'2	7'2	6'7	133	14035	
<input checked="" type="checkbox"/> @CZ18C3600	33'2s	0'0	---	---	---	3	413	3600	<input checked="" type="checkbox"/> @CZ18P3600	10'6s	-0'1	10'6	10'7	10'5	320	14251	
<input checked="" type="checkbox"/> @CZ18C3700	28'3s	0'1	28'0	28'0	28'0	10	843	3700	<input checked="" type="checkbox"/> @CZ18P3700	15'6	0'0	16'0	16'0	15'6	489	8502	
<input checked="" type="checkbox"/> @CZ18C3800	24'1s	0'0	24'4	24'4	24'2	8	1988	3800	<input checked="" type="checkbox"/> @CZ18P3800	21'3s	-0'2	21'7	21'7	21'2	241	6345	
<input checked="" type="checkbox"/> @CZ18C3900	20'5s	0'1	20'4	21'0	20'4	175	6695	3900	<input checked="" type="checkbox"/> @CZ18P3900	27'6	0'0	27'6	27'6	27'6	12	8509	
<input checked="" type="checkbox"/> @CZ18C4000	17'4	0'0	17'4	17'4	17'4	220	12954	4000	<input checked="" type="checkbox"/> @CZ18P4000	34'5s	-0'2	---	---	---	0	5317	
<input checked="" type="checkbox"/> @CZ18C4100	14'7s	-0'1	15'2	15'2	15'0	61	3619	4100	<input checked="" type="checkbox"/> @CZ18P4100	41'7s	-0'3	---	---	---	1000	2949	
<input checked="" type="checkbox"/> @CZ18C4200	13'0	0'2	12'5	13'0	12'5	173	12822	4200	<input checked="" type="checkbox"/> @CZ18P4200	49'5s	-0'3	---	---	---	0	1026	
<input checked="" type="checkbox"/> @CZ18C4300	10'7s	-0'2	10'6	11'1	10'6	129	7736	4300	<input checked="" type="checkbox"/> @CZ18P4300	57'5s	-0'4	---	---	---	0	1622	

☒ In the money ☐ At the money

Quotes generated on: Wed, Jan 10, 2018 11:34 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\$
- **Fwd 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)

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