

### **13. Ethanol and Biodiesel Market and Profitability Prospects**

**Dan O'Brien**

**<dobrien@ksu.edu>**

*Daniel O'Brien was raised on a grain and livestock farm in south central Nebraska. He received bachelors and masters degrees in Agricultural Economics from the University of Nebraska-Lincoln. After completing his Ph.D. at Iowa State, he worked as the Extension Agricultural Economist at the Northwest Research and Extension Center in Colby and was Northwest Area Extension Administrative Director starting in 2003 before returning to his Extension Agricultural Economist position in January 2007. His ongoing extension and applied research interests and efforts are in the areas of a) grain market supply-demand analysis, bioenergy impacts and risk management strategies, b) grain industry market structure, conduct and performance – focusing on grain handling and transportation issues, and c) economic analysis of irrigated and dryland cropping systems, and associated cropland leasing arrangements.*

#### **Abstract/Summary**

*Ethanol and biodiesel plants have shown periods of profitability during 2017 – following from low input costs for feedgrains, and soybean oil, and moderate strength in selling prices for ethanol and biodiesel. From a Kansas agricultural perspective, this session will particularly focus on how feedgrain usage on one hand, and distillers' grain availability on the other have affected state's livestock feed markets. Future prospects for the Renewable Fuels Standard (RFS), transition from E-10 to E-15 fuel blends, and the performance and prospects for ethanol and DDGS imports and exports will be examined. The session will conclude with a discussion of U.S. energy policy directions and their likely impacts on the ethanol industry and U.S. feedgrain use in the future.*

# U.S. Ethanol & Biodiesel Market Situation

2017 K-State Risk & Profit Conference

August 17-18, 2017



Daniel O'Brien, Ph.D.  
Extension Agricultural Economist  
Kansas State University

## Agenda

- Trends in the Ethanol Market
- The Ethanol Industry Situation
- Tracking the Renewable Fuels Standard (RFS)
- Ethanol Profitability "Ups & Downs"
- Biodiesel Market Prices
- Biodiesel Profitability "Variations"



### US #2 Yellow Corn - dollars/bushel

	Cash Bids	Chg	Basis	Avg:
Iowa-Eastern:	3.2075 - 3.4975	↓	-49U to -20U	-34.50
Iowa-Western:	3.1675 - 3.4275	↓	-53U to -27U	-40.00
Illinois:	3.4575 - 3.6975	↓	-24U to OptU	-12.00
Indiana:	3.5975 - 3.8275	↓	-10U to 13U	1.50
Ohio:	3.7575 - 3.8675	↓	6U to 17U	11.50
Michigan:	3.4575 - 3.6575	↓	-24U to -4U	-14.00
<b>Kansas:</b>	<b>3.3975 - 4.0475</b>	<b>↓</b>	<b>-30U to 35U</b>	<b>2.50</b>
Minnesota:	3.0075 - 3.2875	↓	-69U to -41U	-55.00
Nebraska:	3.2375 - 3.5975	↓	-46U to -10U	-28.00
Wisconsin:	3.2275 - 3.4275	↓	-47U to -27U	-37.00
South Dakota:	2.9975 - 3.2975	↓	-70U to -40U	-55.00
Missouri:	3.3575 - 3.4975	↓	-34U to -20U	-27.00

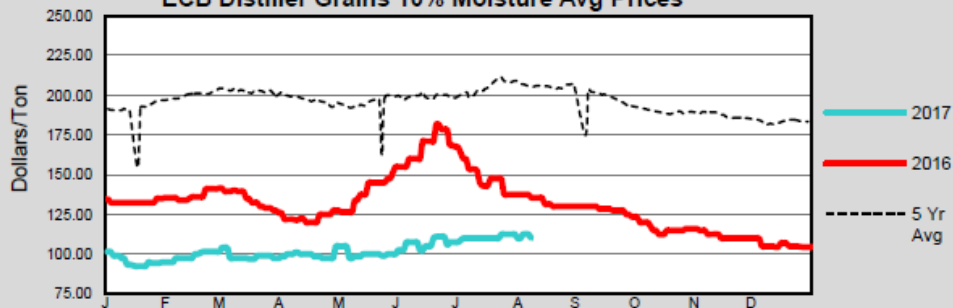
### Sorghum - dollars/bushel

	Cash Bids	Chg	Basis	Avg:
<b>Kansas:</b>	<b>3.2975 - 3.6975</b>	<b>↓</b>	<b>-40U to OptU</b>	<b>-20.00</b>
Missouri:	NA	NA	NA	NA

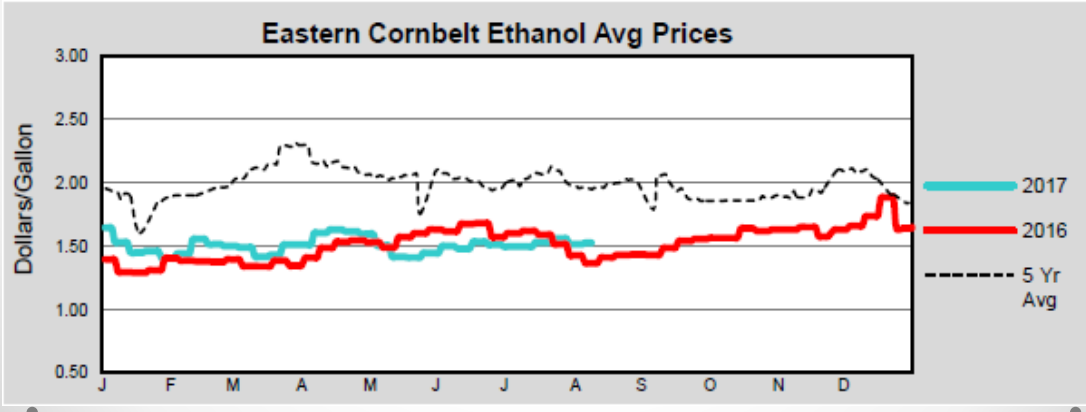
### Distillers Grain - dollars/ton

	Dried 10%	Chg	Avg:	Modified 50-55%	Chg	Avg:	Wet 65-70%	Chg	Avg:
Iowa-Eastern:	110.00 - 113.00	—	111.50	40.00 - 48.00	—	44.00	NA	NA	NA
Iowa-Western:	100.00 - 112.00	—	106.00	45.00 - 55.00	—	50.00	26.00 - 45.00	—	35.50
Illinois:	95.00 - 122.00	—	108.50	NA	NA	NA	30.00	—	30.00
Indiana:	110.00 - 125.00	—	117.50	55.00	—	55.00	NA	NA	NA
Ohio:	107.00 - 115.00	—	111.00	NA	NA	NA	NA	NA	NA
Michigan:	105.00 - 110.00	—	107.50	39.00 - 45.00	—	42.00	NA	NA	NA
<b>Kansas:</b>	<b>113.00 - 130.00</b>	<b>↓</b>	<b>121.50</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>45.00 - 55.00</b>	<b>—</b>	<b>50.00</b>
Minnesota:	100.00 - 110.00	—	105.00	52.00	—	52.00	25.00 - 40.00	—	32.50
Nebraska:	100.00 - 120.00	—	110.00	42.00 - 59.00	—		30.00 - 48.00	—	39.00
Wisconsin:	110.00 - 115.00	—	112.50	48.00 - 60.00	—	54.00	NA	NA	NA
South Dakota:	97.00 - 111.00	—	104.00	43.00 - 57.00	—	50.00	28.00	—	28.00
Missouri:	114.00 - 127.00	↑	120.50	60.00	—	60.00	33.00 - 36.00	↑	34.50

### ECB Distiller Grains 10% Moisture Avg Prices

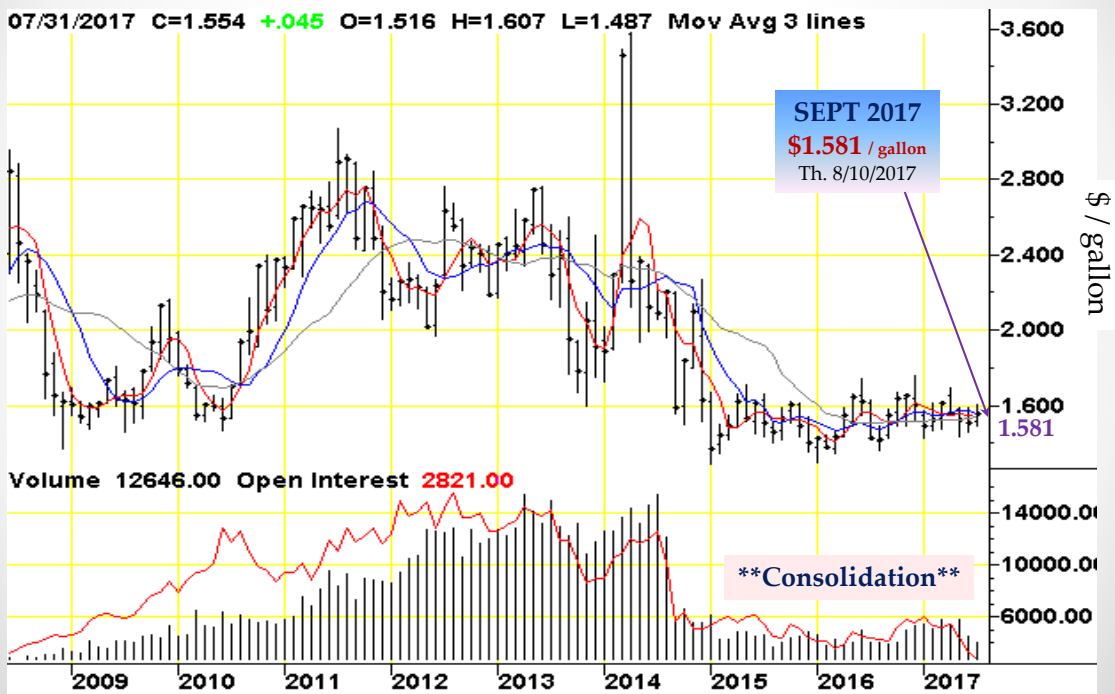


Ethanol - dollars/gallon			
W/E 08/04/17	Range	Chg:	Avg:
Iowa:	1.43 - 1.50	↑	1.47
Eastern Cornbelt	1.50 - 1.55	↑	1.53
→ Kansas:	1.43 - 1.49	↑	1.46
Minnesota:	1.50 - 1.62	↑	1.56
Nebraska:	1.43 - 1.49	↓	1.46
Wisconsin:	NA	NA	NA
South Dakota:	1.52 - 1.62	↑	1.57



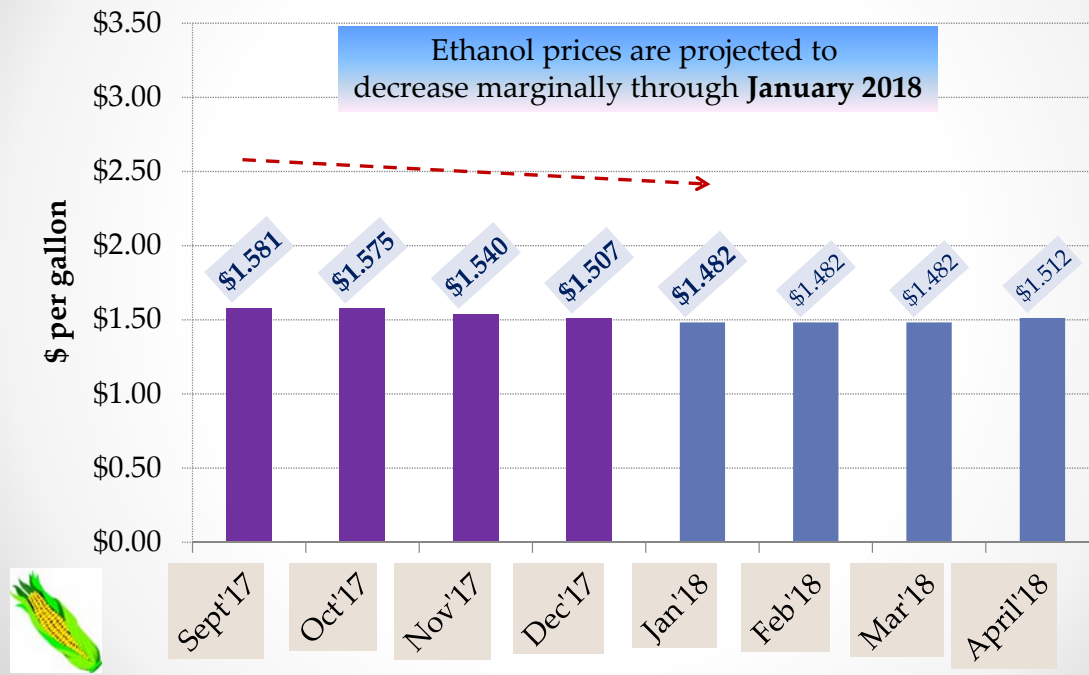
# CBOT Ethanol Futures

Monthly Continuous Chart: June 2008 thru July 2017 + 8/10/2017 a.m.



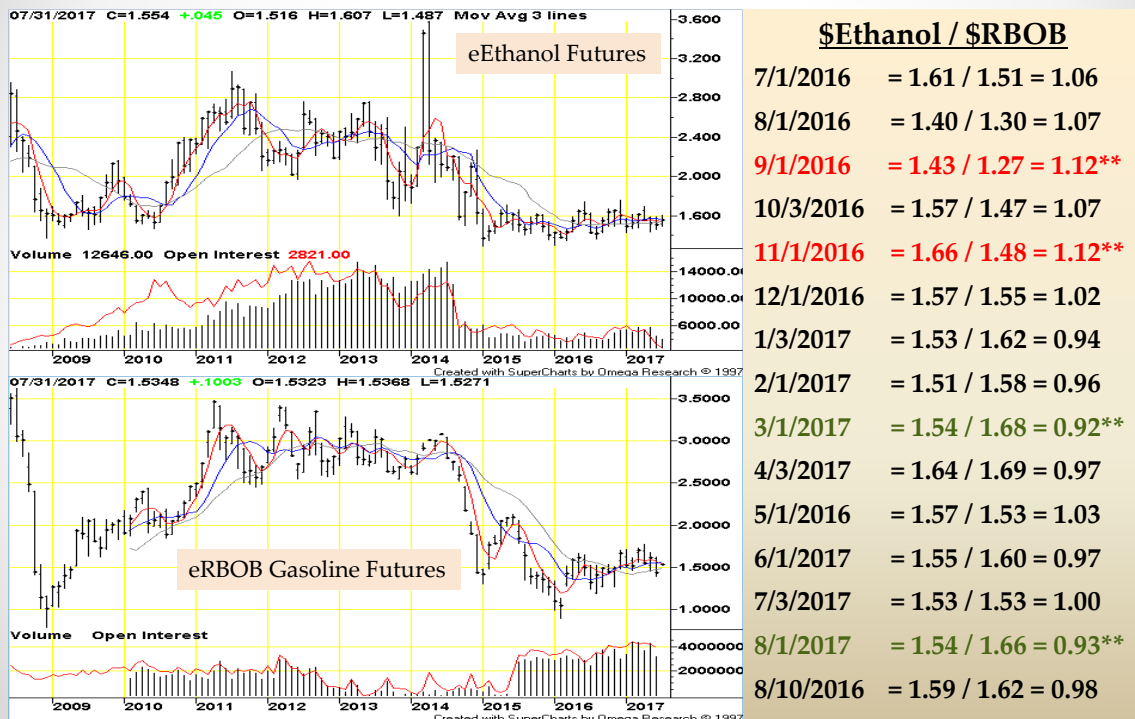
# eCBOT Ethanol Futures

Futures on Thursday, August 10, 2017 a.m.



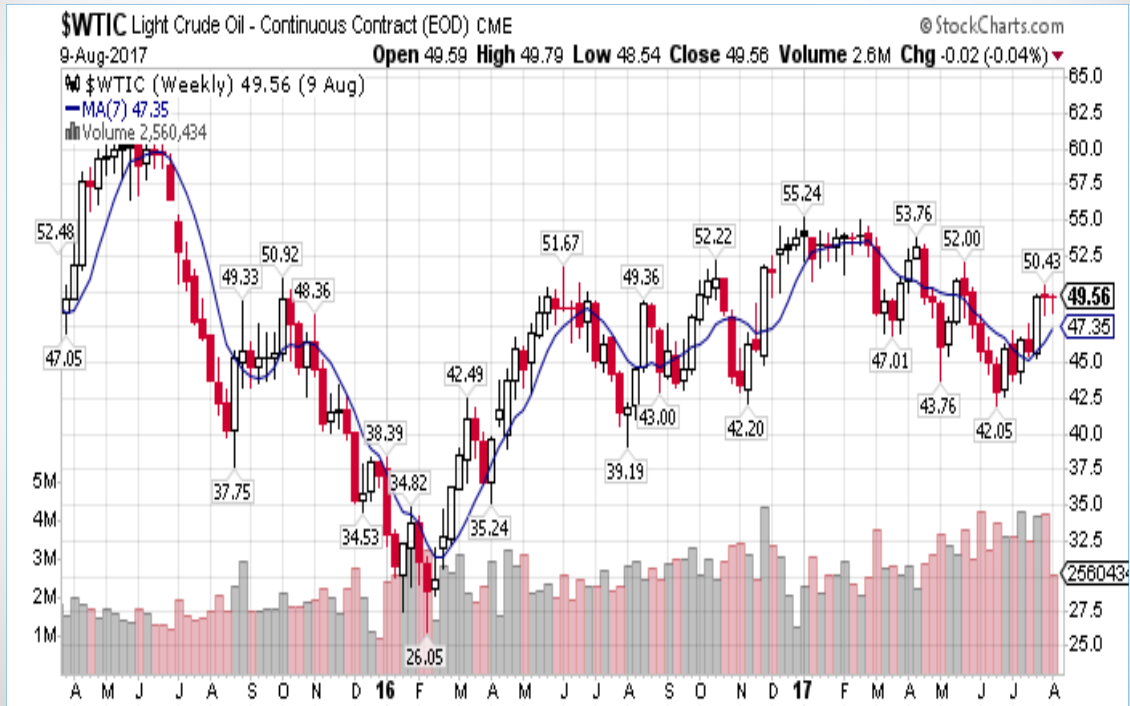
# Ethanol & RBOB Futures

Monthly Charts: June 2008 – July 2017 + August 1<sup>st</sup> & 10<sup>th</sup>



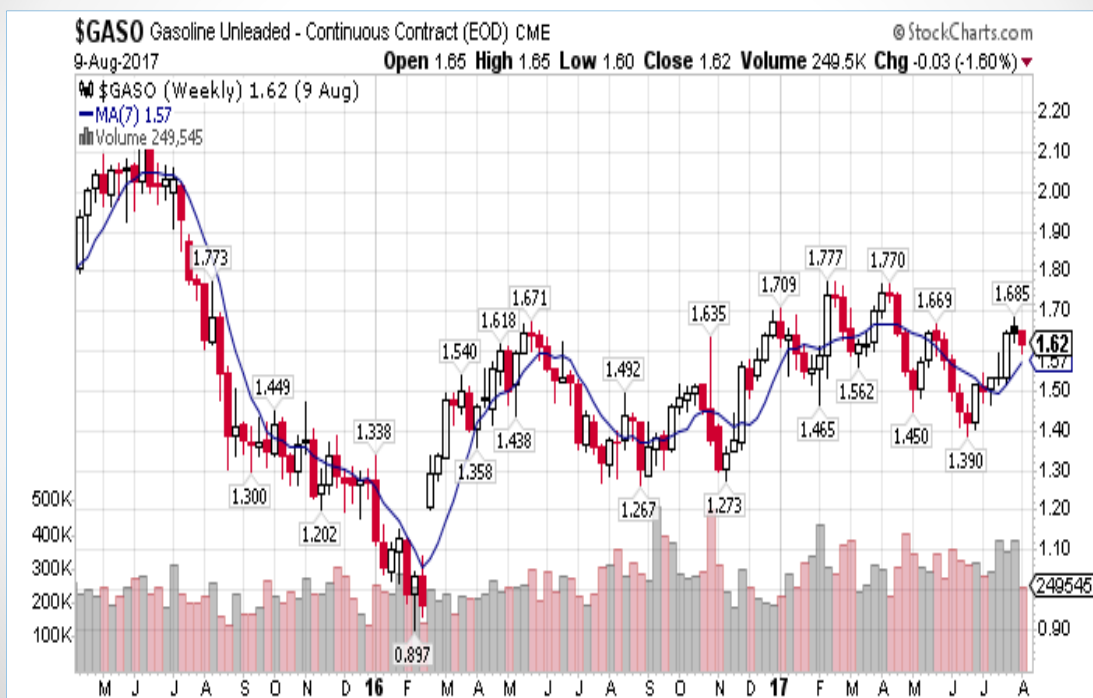
# CME Light Crude Oil Spot Price

Weekly High-Low-Close, March 2015 – August 9, 2017



# CME Gasoline Unleaded Spot Price

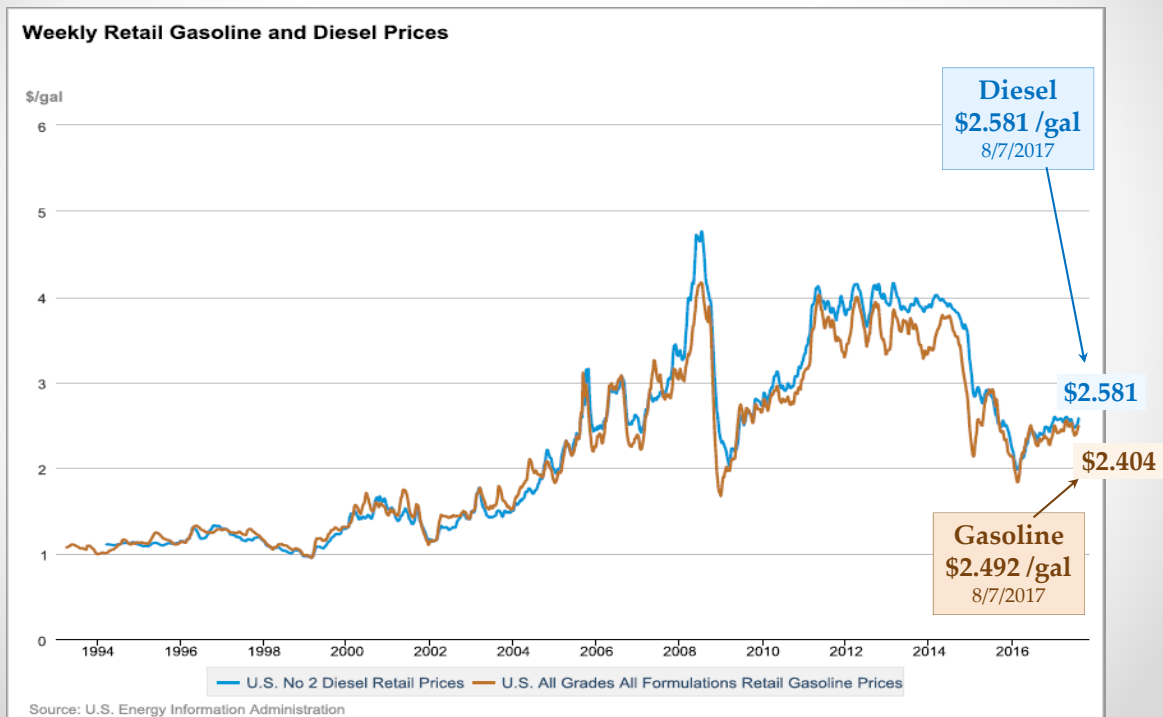
Weekly High-Low-Close, March 2015 – August 9, 2017





# Retail Diesel & Gasoline Prices

Weekly Continuous Chart: April 5, 1993 through August 7, 2017



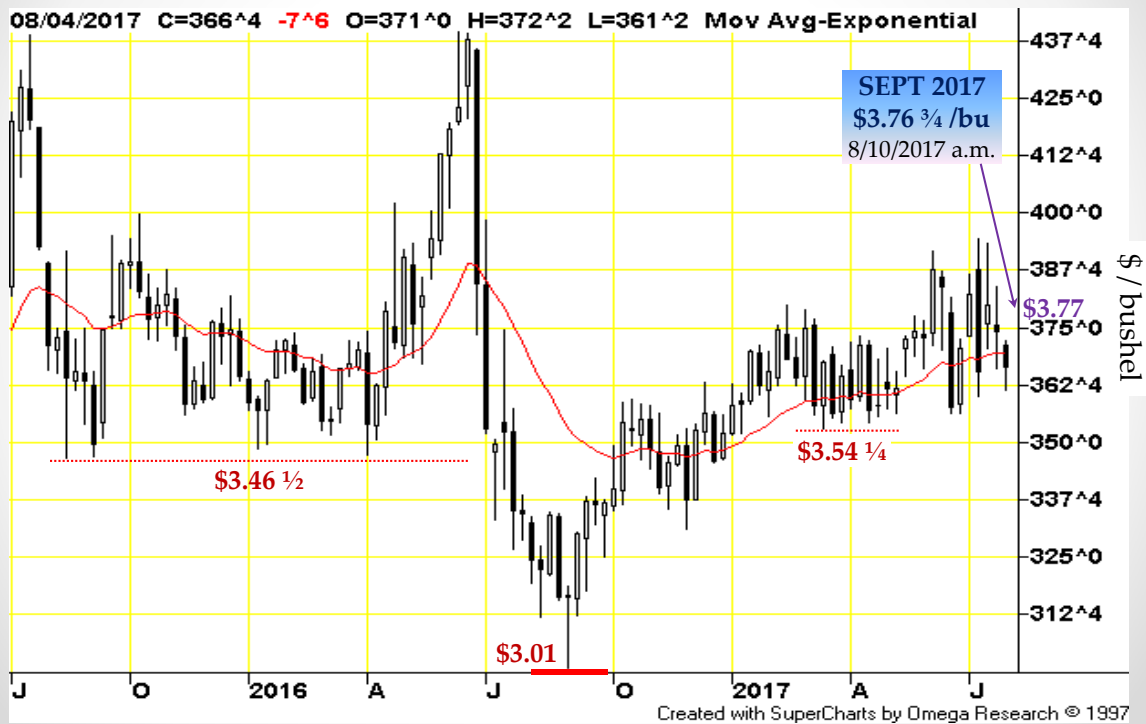
# ICE U.S. Dollar Index – Cash Settle

Weekly High-Low-Close, March 2015 – August 9, 2017



# CBOT Corn Futures

Weekly Continuous Chart: JULY 2015 – 8/4/2017 + 8/10/2017 a.m.



# CBOT Corn Futures

Monthly Continuous Chart: March 2008 – April 2017 + 6/27/2017 a.m.





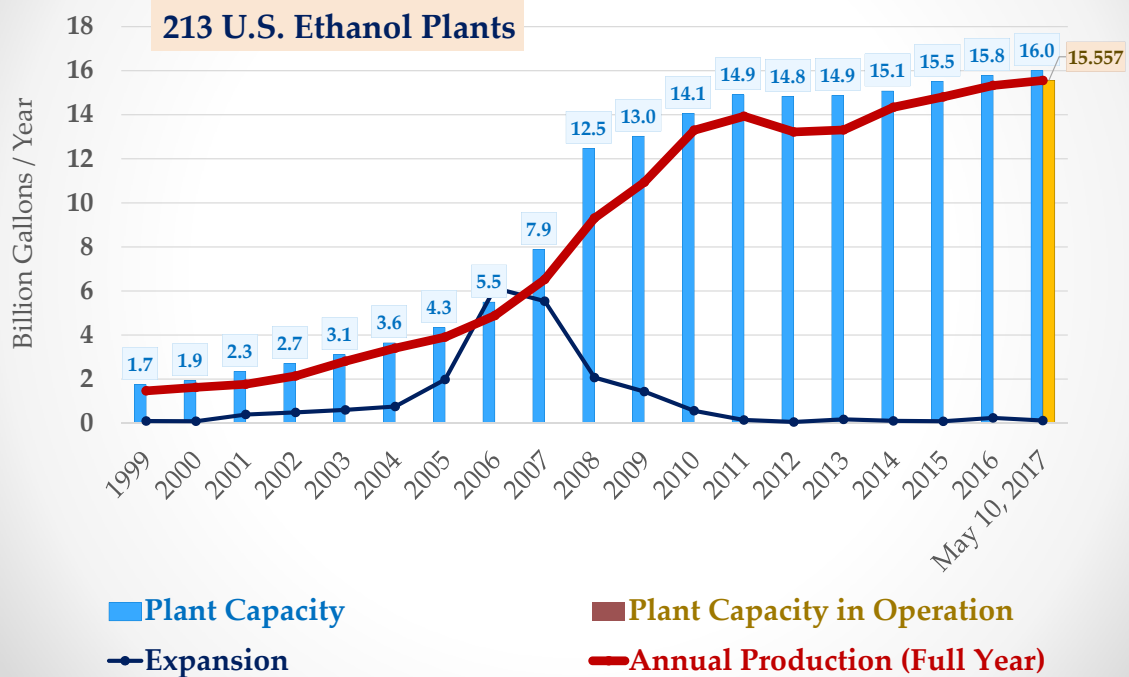
# CBOT Corn Futures

Monthly Continuous Chart: June 2008 – July 2017 + 8/10/2017 a.m.



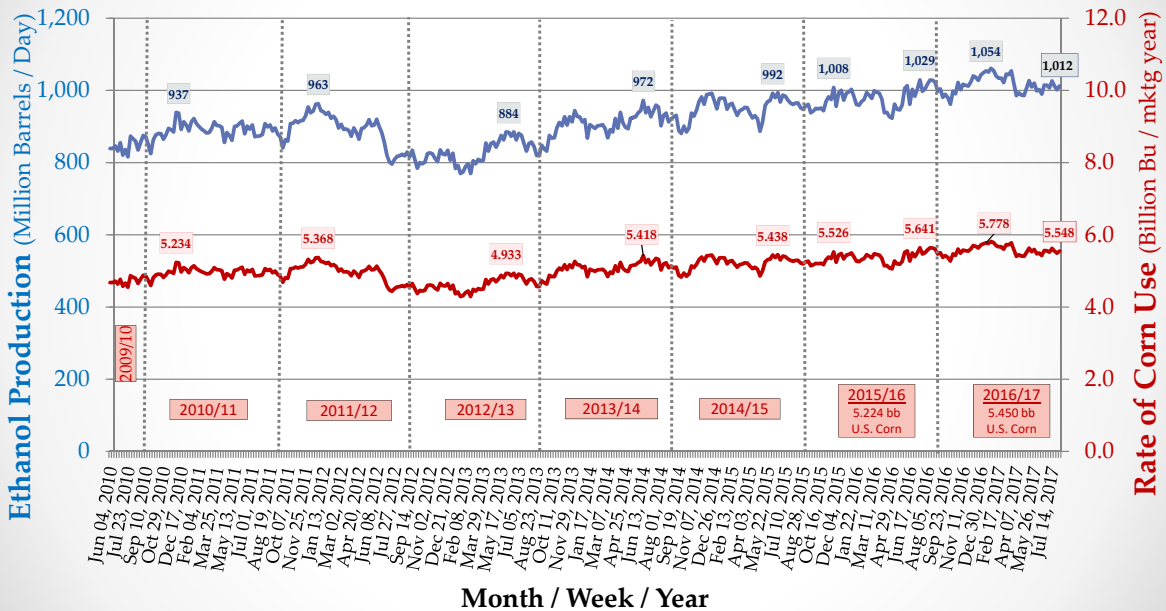
# U.S. Ethanol Capacity & Production

Source: Renewable Fuels Association as of May 10, 2017 (most recent)



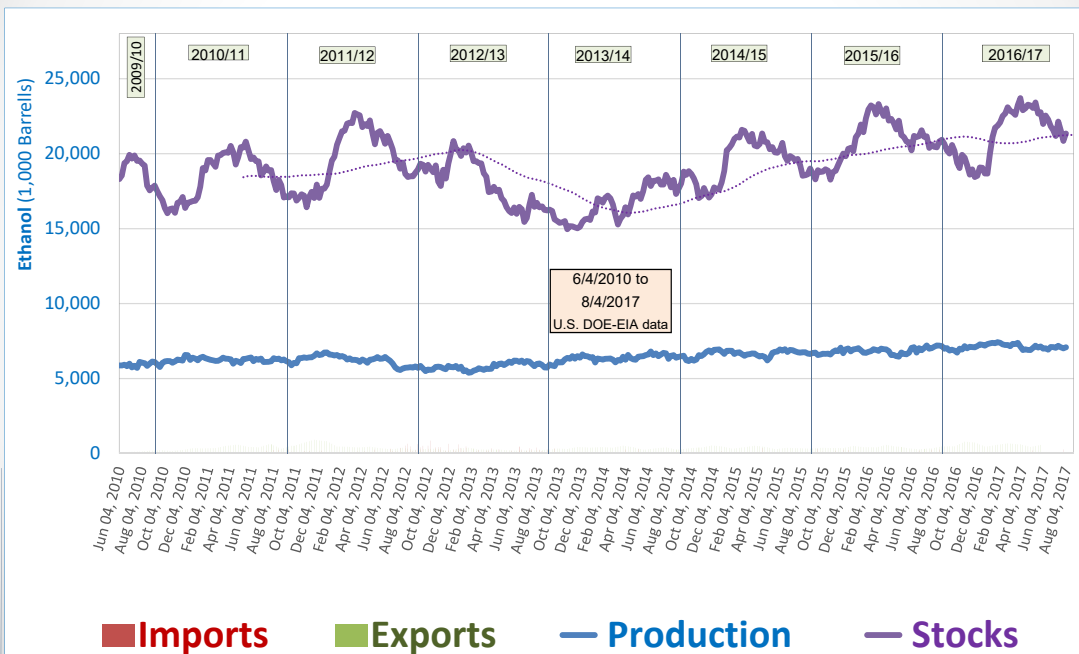
# U.S. Ethanol Production & Corn Use

Weekly EIA ethanol data & KSU corn use est's. (6/4/2010 thru 8/4/2017)

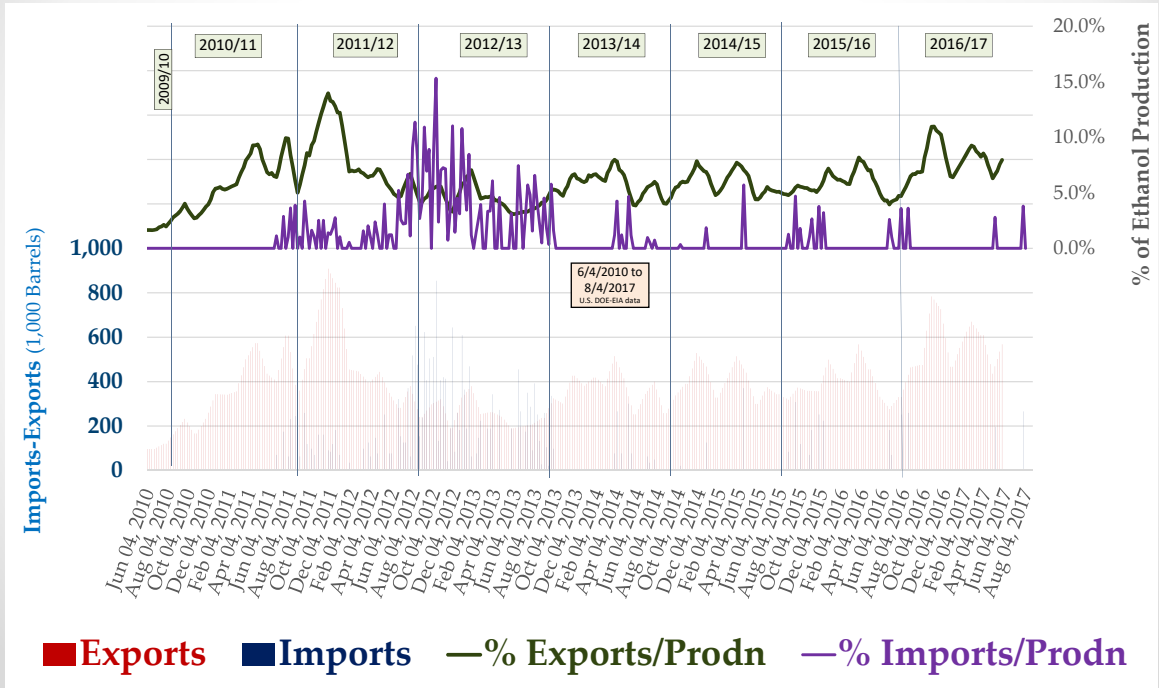


—Rate of Ethanol Production (1,000 Barrels / day) —Rate of Corn Use / Mktg Year (Billion Bu.)

# Weekly U.S. Ethanol Production, Imports, Exports & Stocks

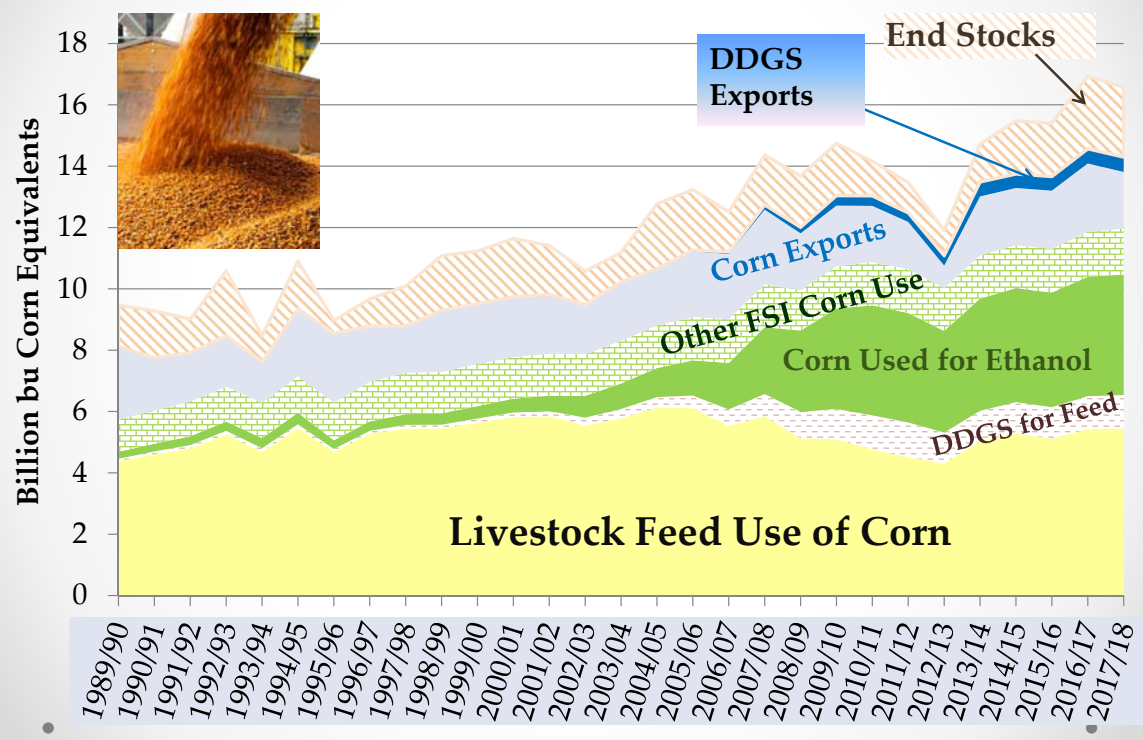


# Weekly U.S. Ethanol Imports, Exports & %-of-Stocks



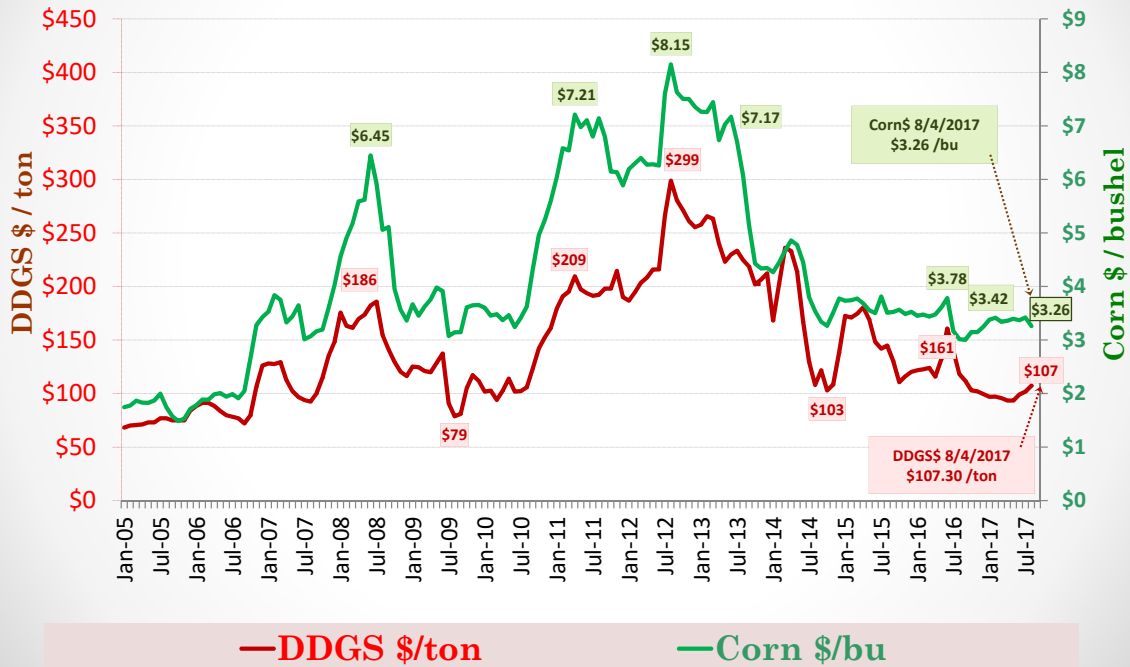
# U.S. Corn Use - With est. DDGS #s

August 2017 WASDE & KSU Estimates



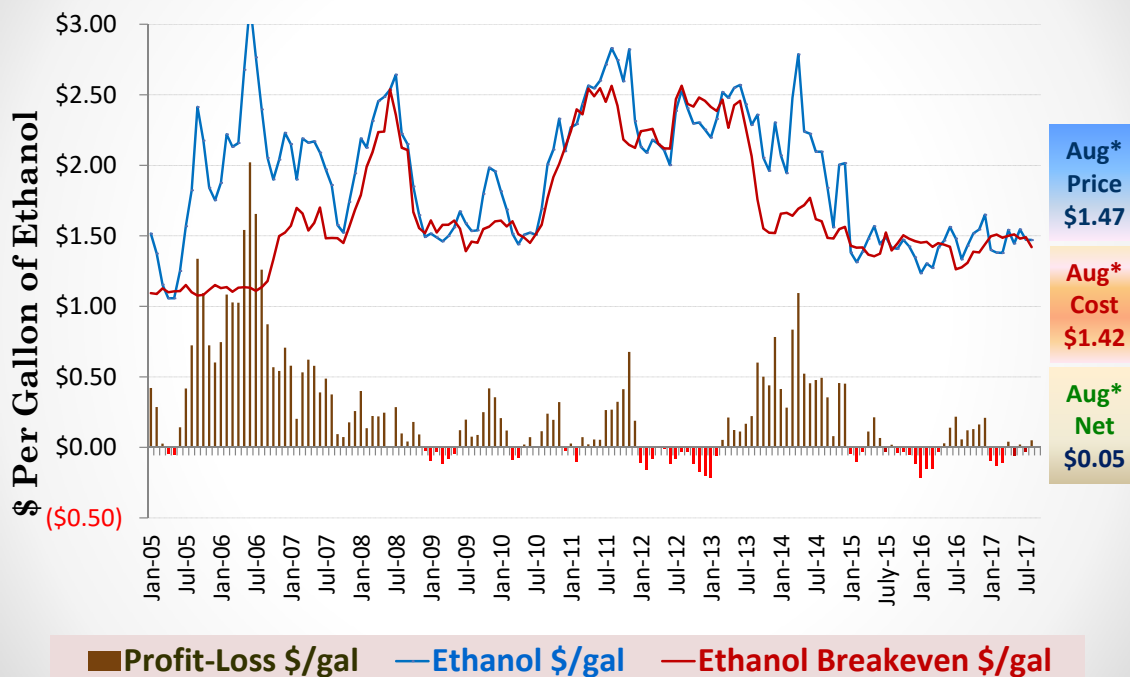
# Ethanol DDGS & Corn Input Prices

ISU Ethanol Plant Model (January 2005 – August 4, 2017)



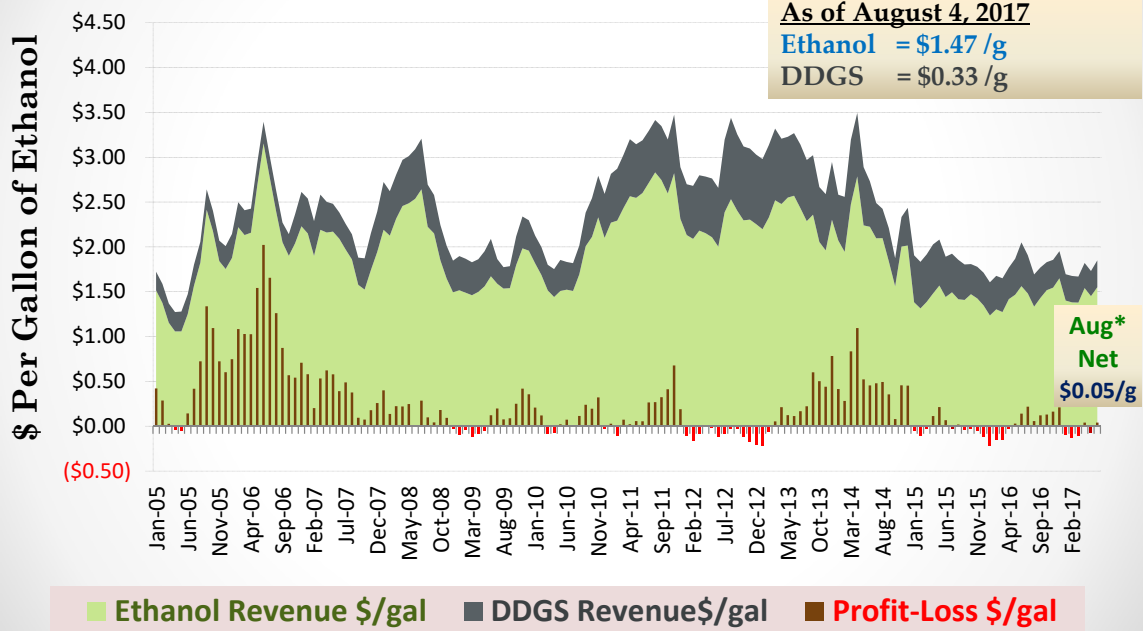
# Ethanol Price, Cost & Profits

ISU Ethanol Plant Model (January 2005 – August 4, 2017\*)



# Ethanol Revenues & Net Returns

ISU Ethanol Plant Model (January 2005 – August 4, 2017\*\*\*)



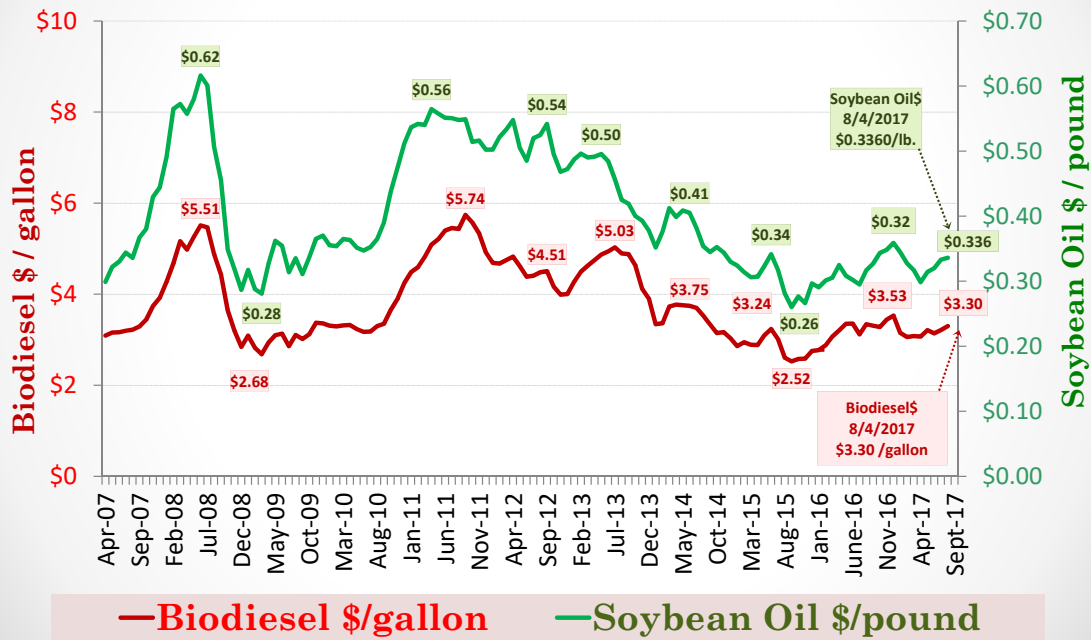
# CBOT Soybean Oil Futures

Monthly Continuous Chart: June 2008 through July 2017 + 8/10/2017



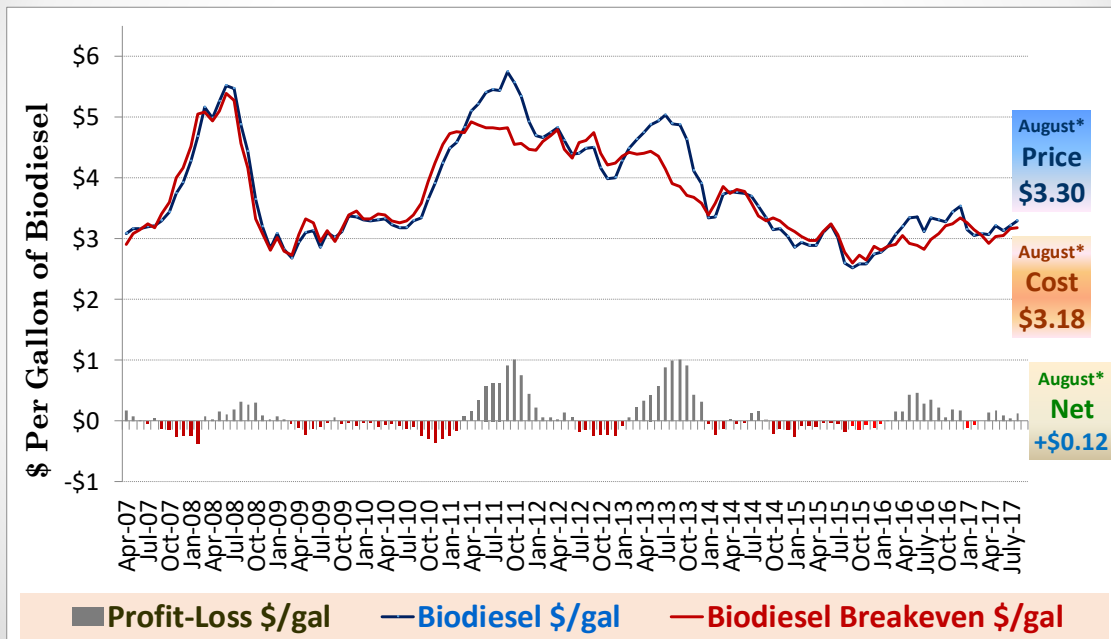
# Biodiesel & Soybean Oil Prices

ISU Biodiesel Plant Model (April 2007 – August 4, 2017\*\*\*)



# Biodiesel Price, Cost & Profits

ISU Biodiesel Plant Model (April 2007 – August 4, 2017\*\*)





# Questions?



Daniel O'Brien – Extension Agricultural Economist

Kansas State University

[dobrien@ksu.edu](mailto:dobrien@ksu.edu)

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Department of Agricultural Economics