2018 Crop Input Market Outlook

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Presented by Daniel O'Brien - KSU

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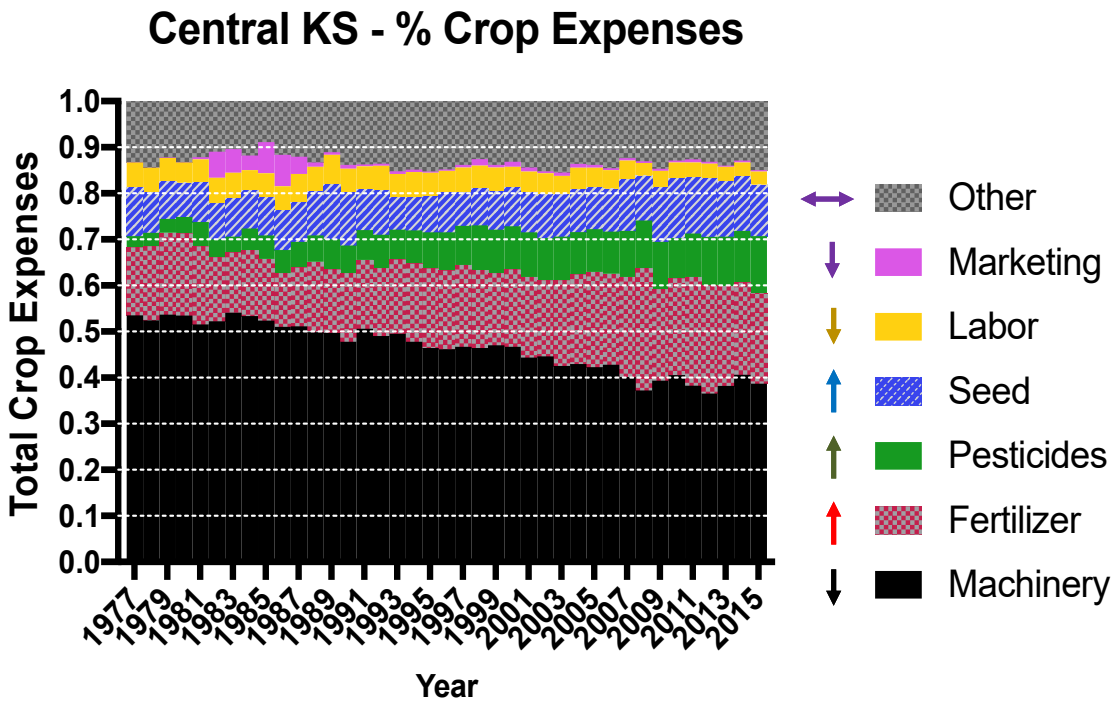

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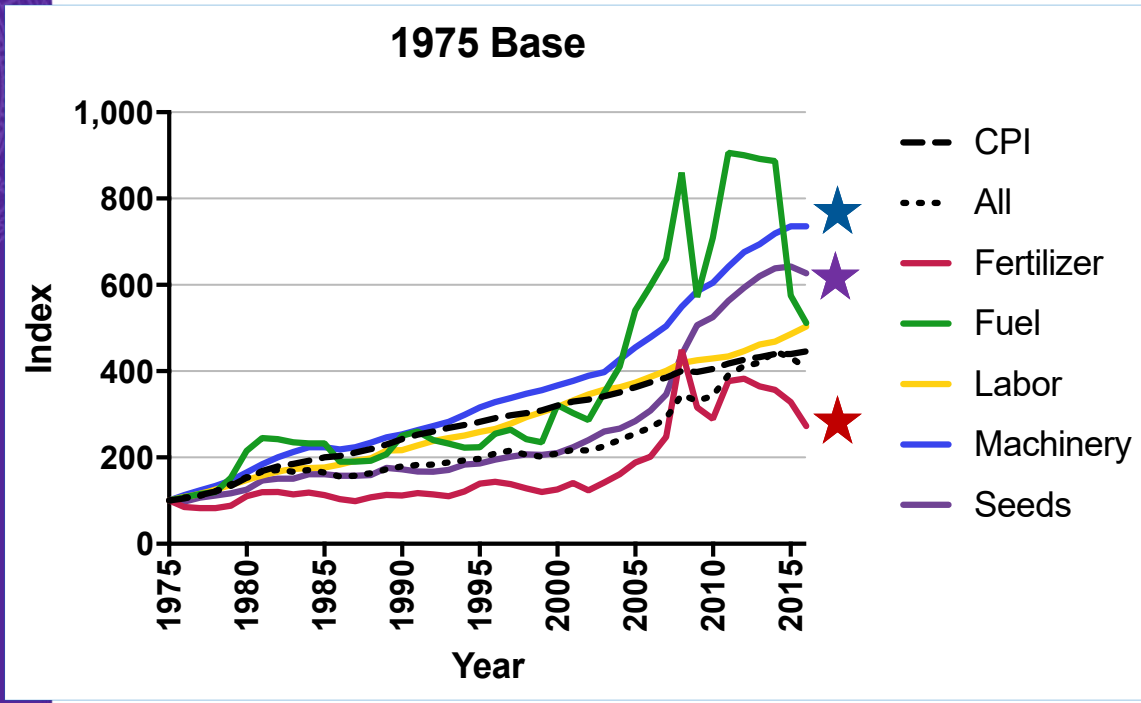
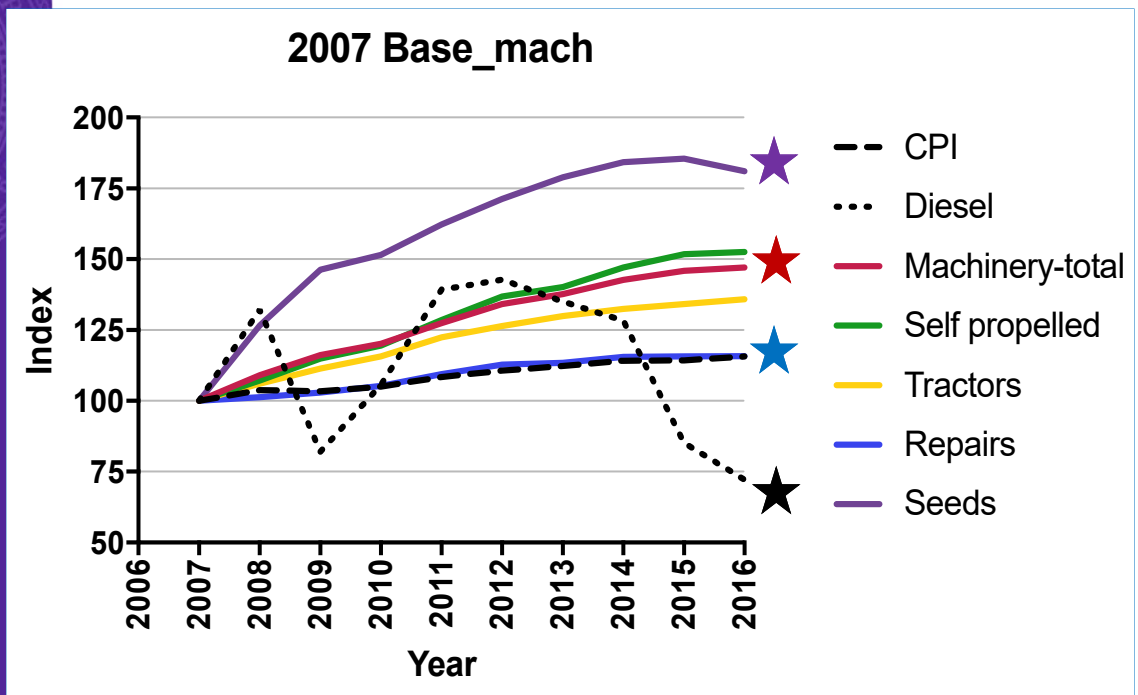
Price Indexes of Major Crop Expenses

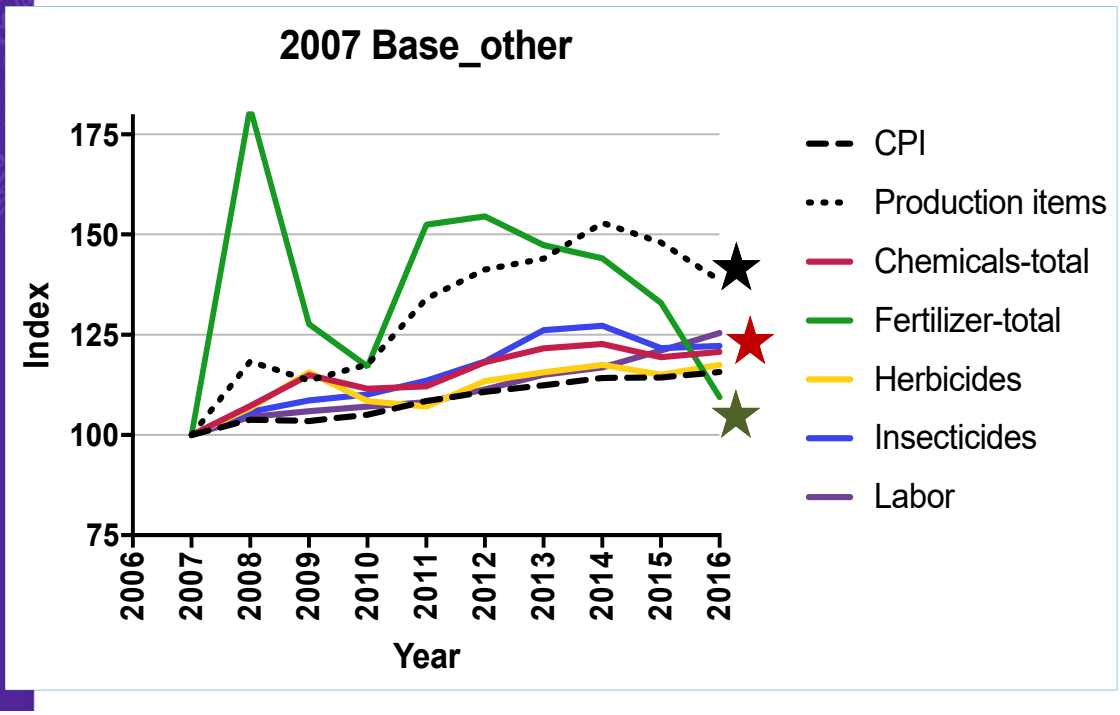
Categories Relative to 1975



Price Indexes of Major Crop Expense Categories



Price Indexes of Major Crop Expense Categories



Custom Rate Tool for 2018

	OPERATION	State	West	Central	East
A Tillage	Disk	12.00	12.00	11.00	13.00
	Offset disk	12.50	12.50	12.50	12.50
	Chisel 4-12 in	14.00	13.00	16.50	13.00
	Deep chisel (over 12in)	13.50	14.00	14.00	13.50
	Strip tillage	17.00	17.50	18.00	16.00
	Vertical tillage-high speed shallow	13.50	14.50	12.00	15.00
	Subsoiler/in-line ripper	18.00	16.00	18.00	20.00
	Spiketooth harrow	8.50	9.00	8.50	9.00
	Springtooth harrow	8.00	8.00	8.00	9.50
	Field cultivator	11.50	12.50	10.00	12.00
	V-blade	10.50	11.00	11.50	10.50
B Fertillizer application	Row crop cultivation with fertilizer	9.00	14.00	9.00	8.50
	Dry fertilizer	5.50	5.50	5.50	6.00
	Liquid fertilizer	6.00	6.00	5.50	6.00
	NH3 application	15.00	15.00	14.00	15.50
	Ground herbicide	6.00	5.50	5.50	6.00
	Aerial herbicide	7.50	7.00	7.50	7.50
	Ground insecticide	6.00	5.50	5.50	6.00
	Aerial insecticide	7.50	7.50	7.50	8.00
C Planting	Wheat, reg-till planting	14.50	13.50	15.00	15.50
	Milo, reg-till planting	17.00	17.50	16.50	15.50
	Corn, reg-till planting	17.00	17.00	17.00	17.00
	Soybeans, reg-till planting	16.50	19.00	17.00	14.50
	Grass seeding, reg-till	15.00	14.50	15.50	15.50
	Alfalfa seeding, reg-till	16.00	17.00	16.00	16.50
	Wheat, min-till planting	15.50	16.50	15.00	15.00
	Milo, minimum till	17.00	17.00	17.00	16.50
	Corn, minimum till	17.00	17.50	17.00	16.00
	Soybeans, minimum till	16.50	17.50	17.50	15.00

A

2018 Tillage Operation Custom Rates

	OPERATION	State	West	Central	East
Tillage	Disk	12.00	12.00	11.00	13.00
	Offset disk	12.50	12.50	12.50	12.50
	Chisel 4-12 in	14.00	13.00	16.50	13.00
	Deep chisel (over 12in)	13.50	14.00	14.00	13.50
→	Strip tillage	17.00	17.50	18.00	16.00
	Vertical tillage-high speed shallow	13.50	14.50	12.00	15.00
	Subsoiler/in-line ripper	18.00	16.00	18.00	20.00
	Spiketooth harrow	8.50	9.00	8.50	9.00
	Springtooth harrow	8.00	8.00	8.00	9.50
	Field cultivator	11.50	12.50	10.00	12.00
→	V-blade	10.50	11.00	11.50	10.50

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B

2018 Fertilizer Application Custom Rates

	OPERATION	State	West	Central	East
Fertillizer application	Row crop cultivation with fertilizer	9.00	14.00	9.00	8.50
	Dry fertilizer	5.50	5.50	5.50	6.00
→	Liquid fertilizer	6.00	6.00	5.50	6.00
	NH3 application ←	15.00	15.00	14.00	15.50
	Ground herbicide ←	6.00	5.50	5.50	6.00
	Aerial herbicide	7.50	7.00	7.50	7.50
	Ground insecticide	6.00	5.50	5.50	6.00
	Aerial insecticide	7.50	7.50	7.50	8.00

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C

2018 Planting Custom Rates

	OPERATION	State	West	Central	East
Planting	Wheat, reg-till planting	14.50	13.50	15.00	15.50
	Milo, reg-till planting	17.00	17.50	16.50	15.50
	Corn, reg-till planting	17.00	17.00	17.00	17.00
	Soybeans, reg-till planting	16.50	19.00	17.00	14.50
	Grass seeding, reg-till	15.00	14.50	15.50	15.50
	Alfalfa seeding, reg-till	16.00	17.00	16.00	16.50
→	Wheat, min-till planting	15.50	16.50	15.00	15.00
→	Milo, minimum till	17.00	17.00	17.00	16.50
→	Corn, minimum till	17.00	17.50	17.00	16.00
→	Soybeans, minimum till	16.50	17.50	17.50	15.00

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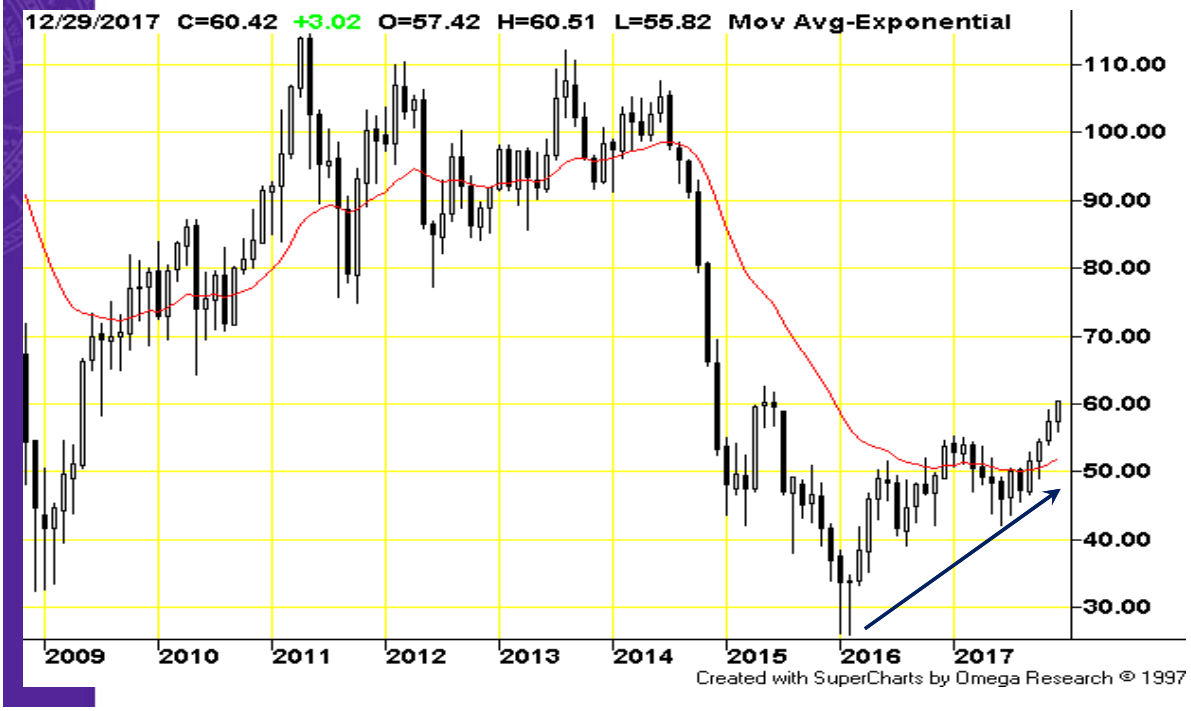
Light Crude Oil Futures

Monthly – Long Term (NYMEX, $/gallon)



Light Crude Oil Futures

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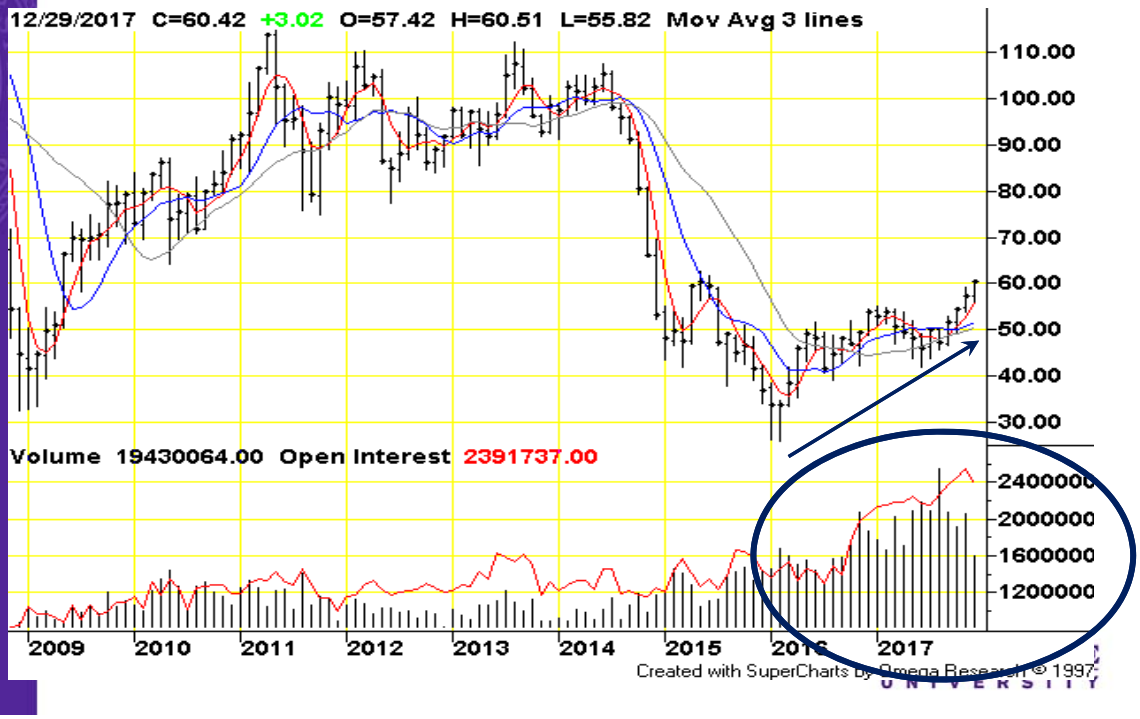
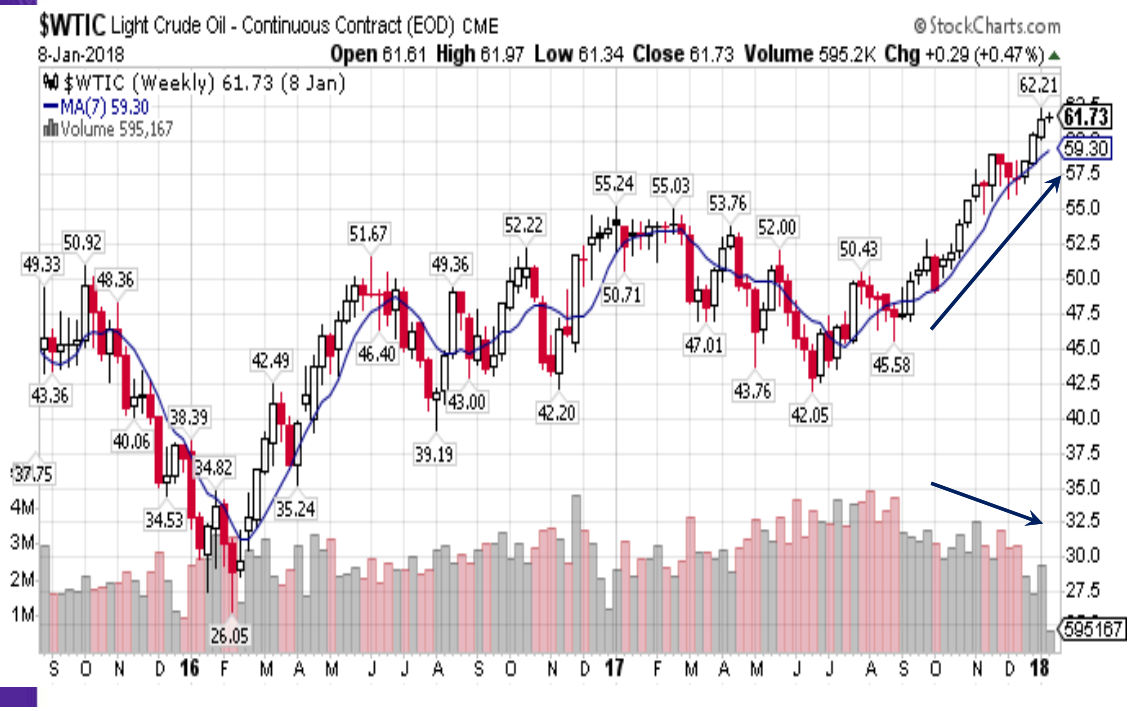


Light Crude Oil Futures

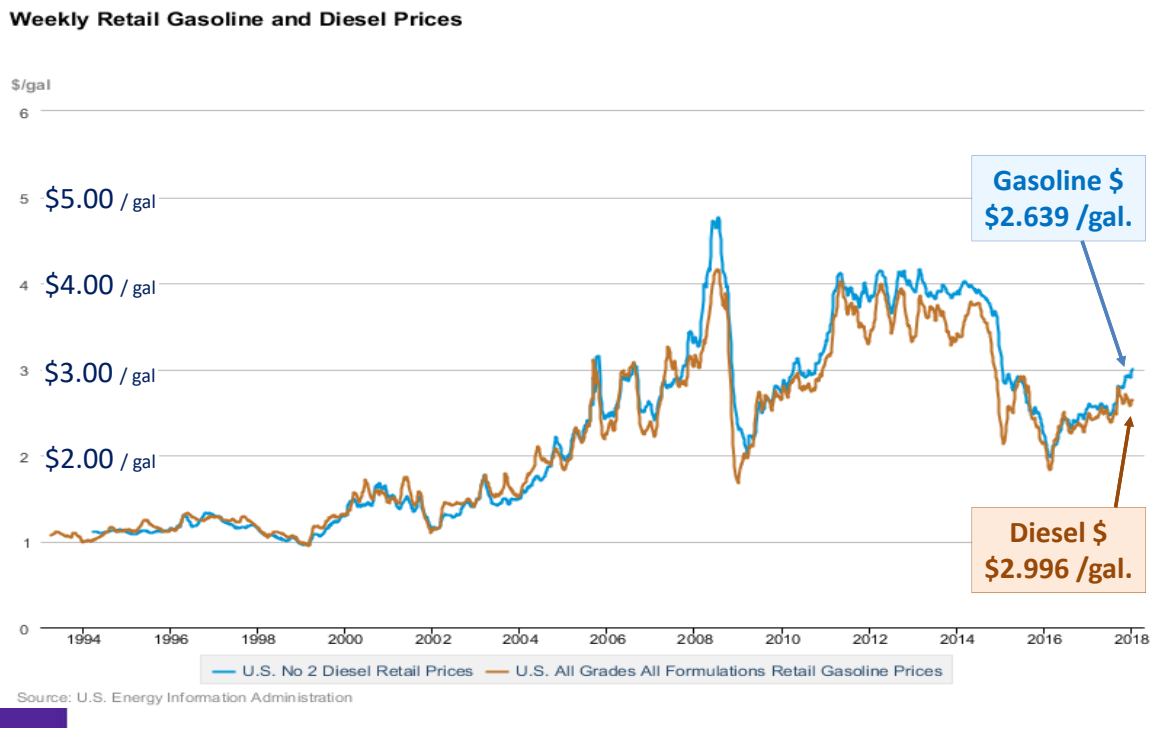
Weekly – Intermediate Term (CME, $/gallon)

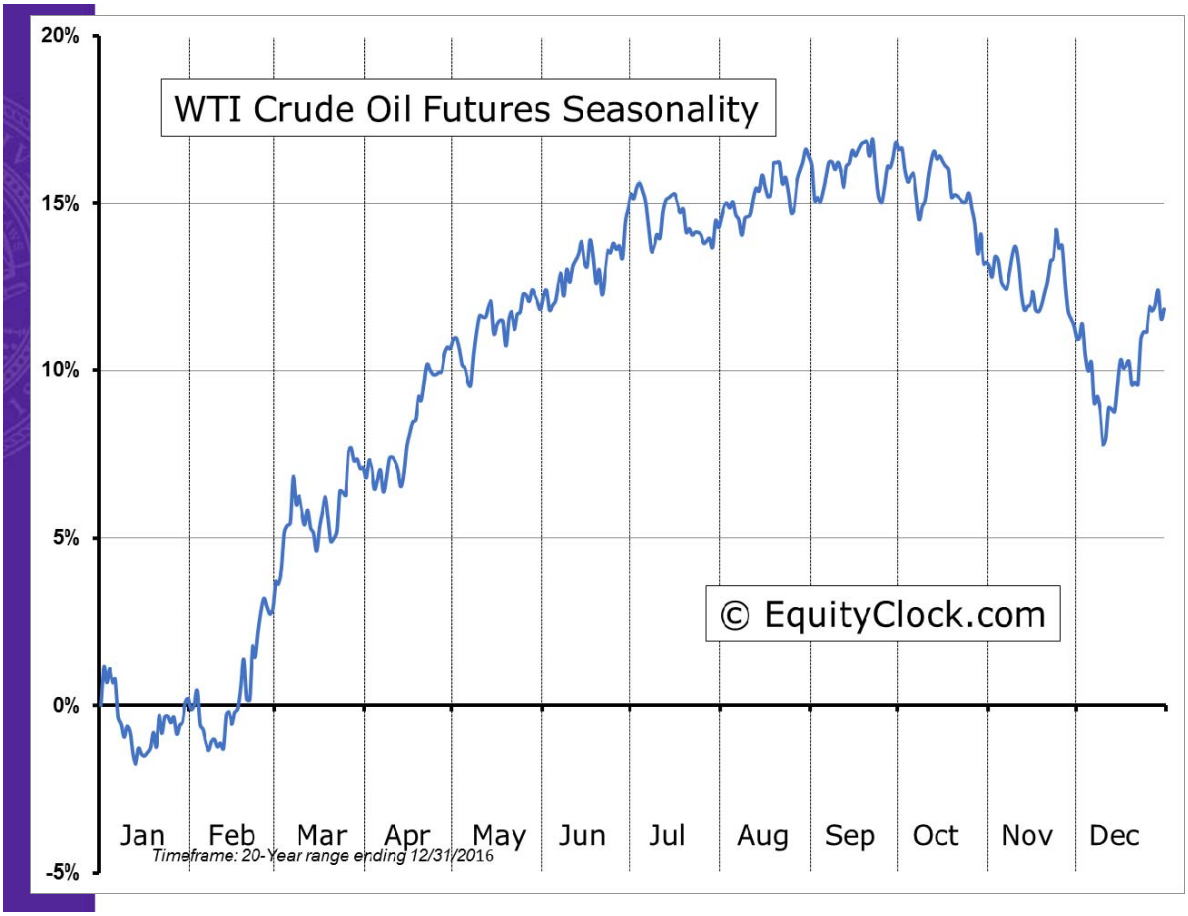


Unleaded Gasoline Futures

Weekly – Intermediate Term (CME, $/gallon)

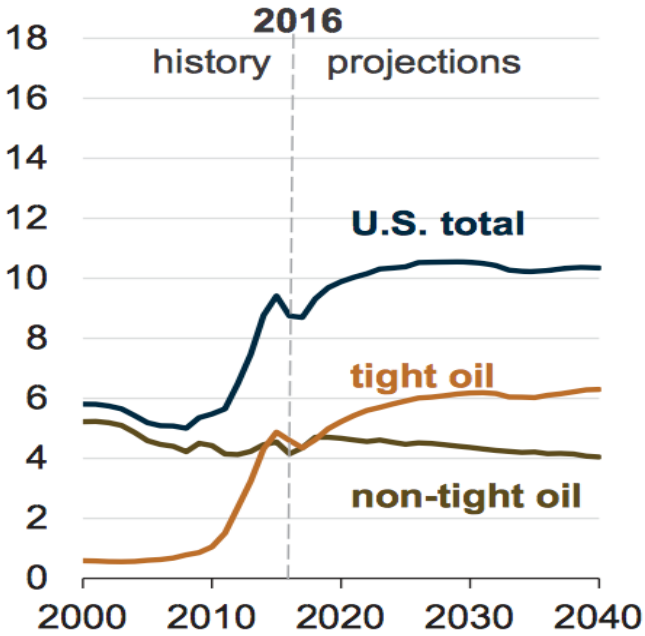
U.S. Weekly Retail Gasoline $ Diesel Prices





U.S. "Fracking" is the *Cure* for $100 Oil

Crude oil production
million barrels per day



⇧ Supplies ➲

⇩ Prices

All else being equal

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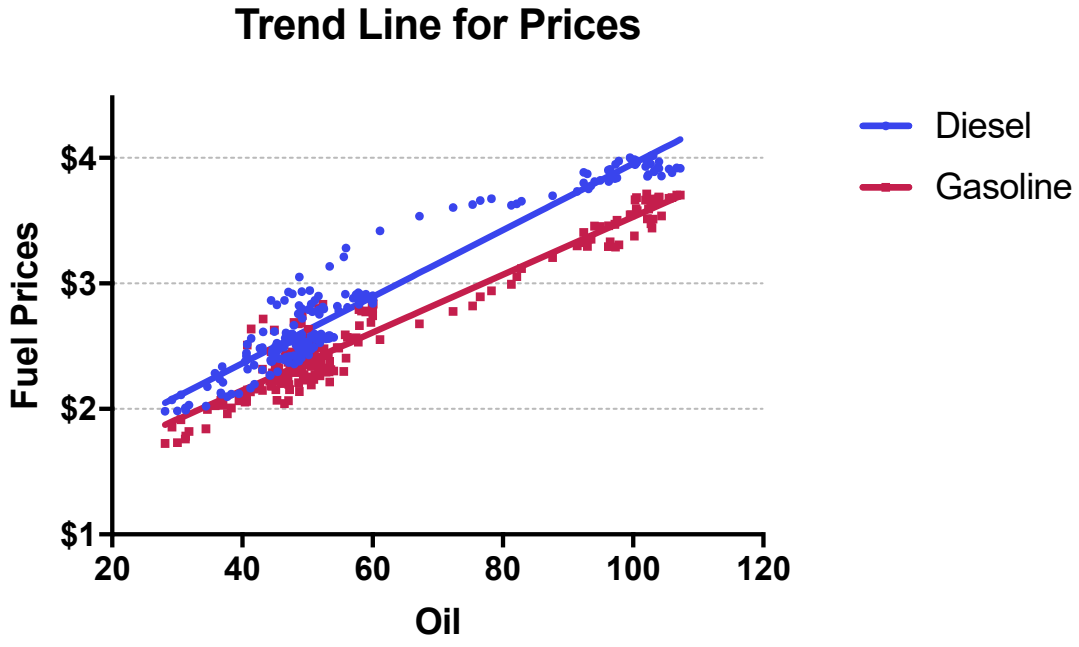
U.S. Diesel & Gasoline versus Oil Prices



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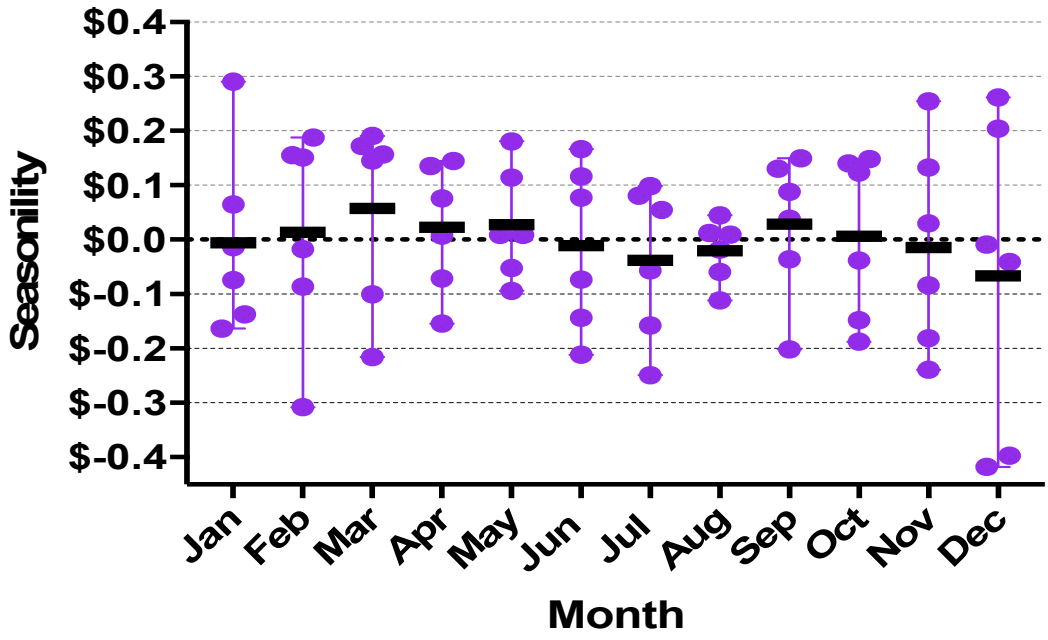
Seasonality of Diesel Prices



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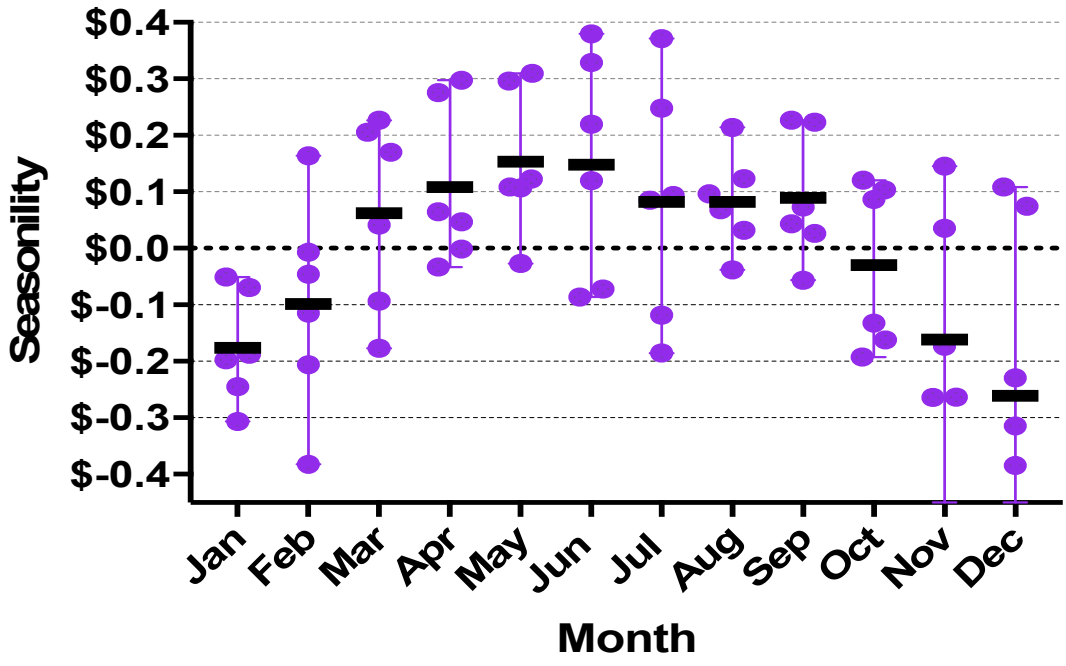
Seasonality of Gasoline Prices



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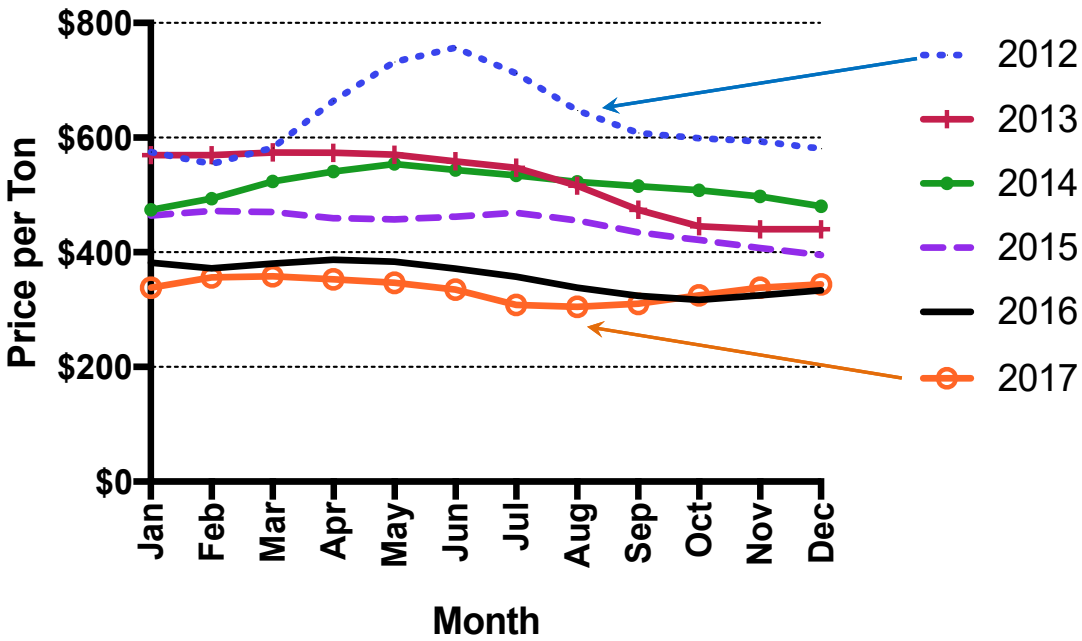
Fertilizer by year - Urea



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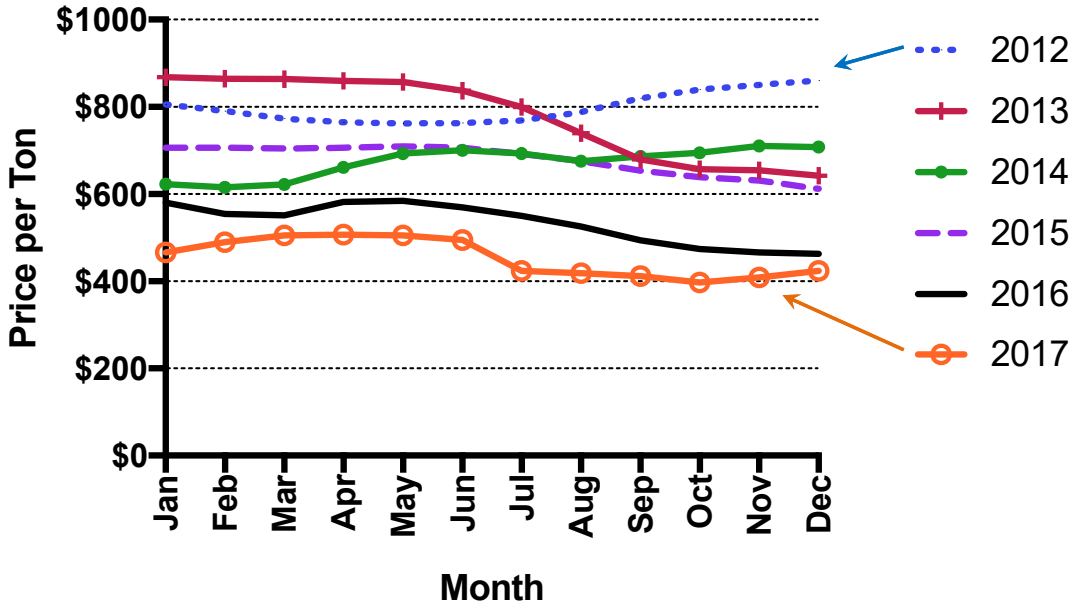
Fertilizer by year - AA



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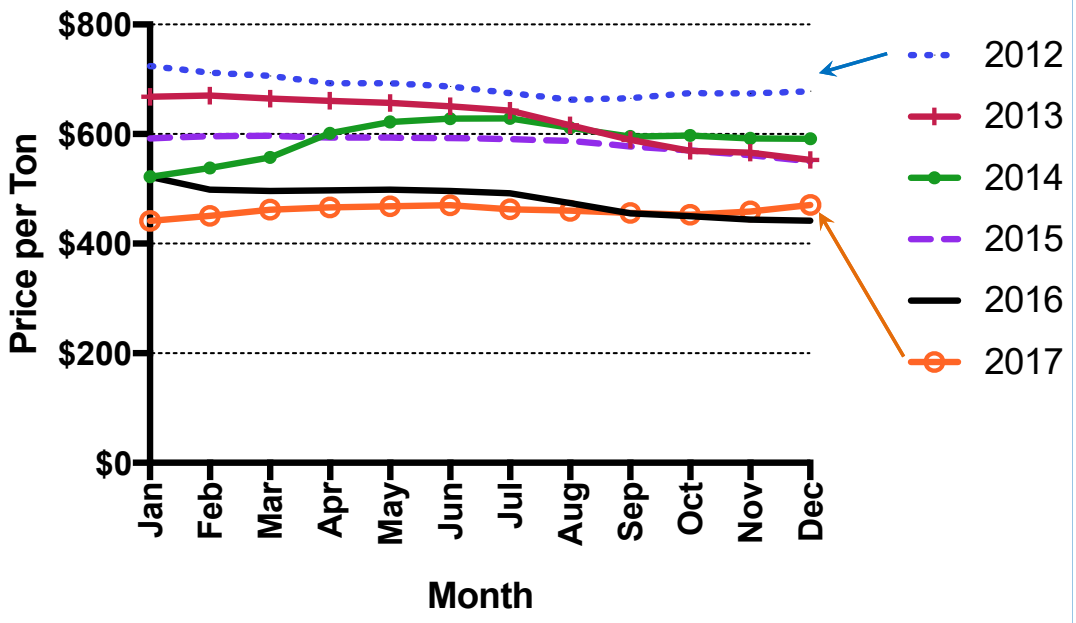
Fertilizer by year - MAP



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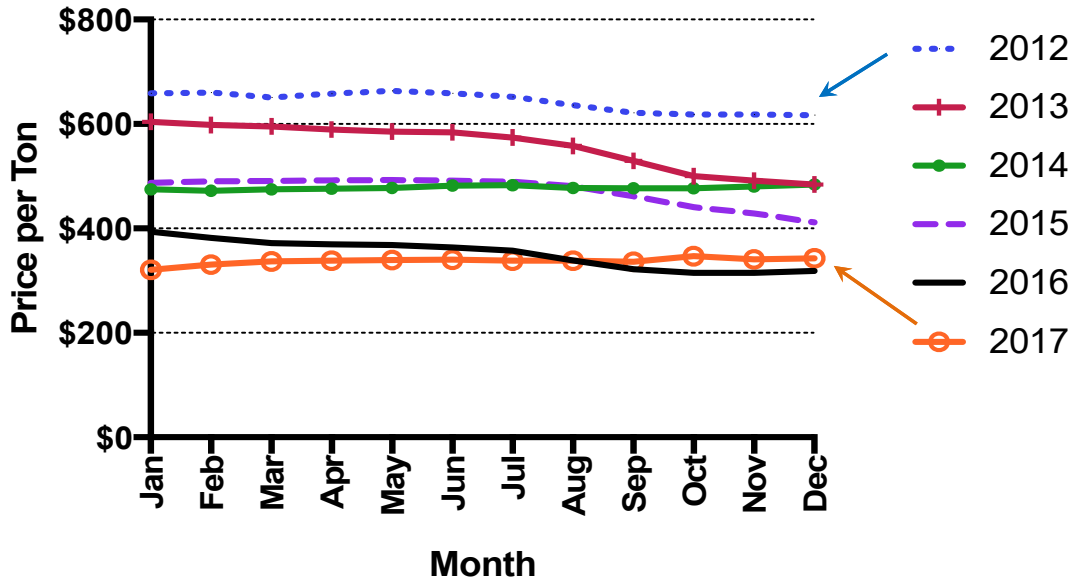
Fertilizer by year - Potash



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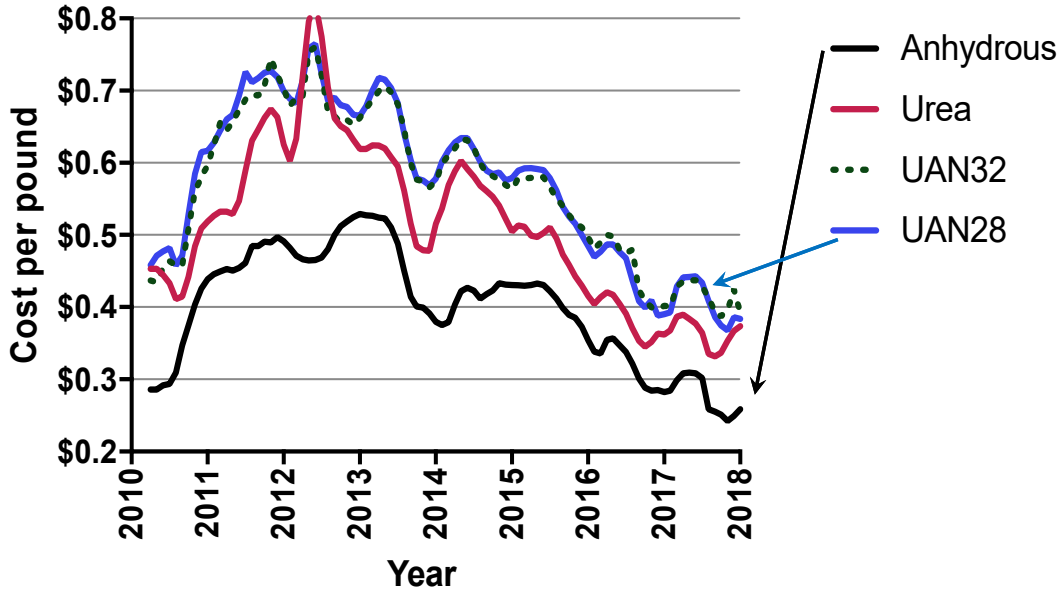
Price of N comparison



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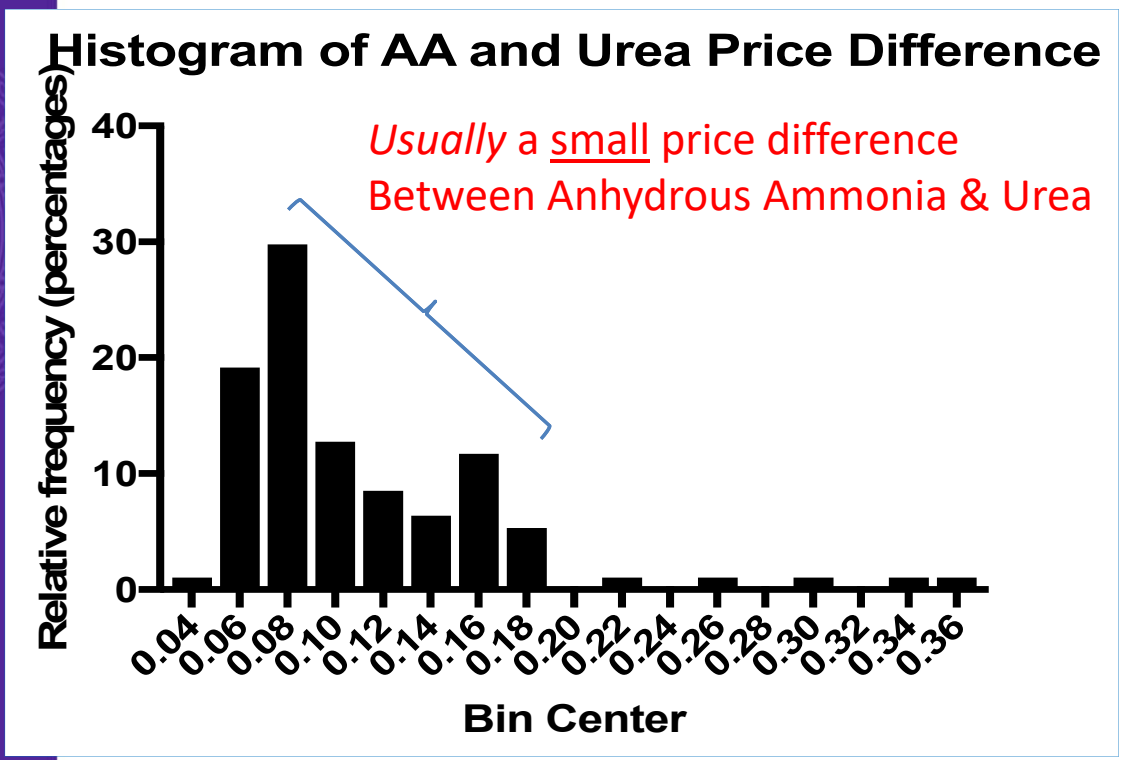
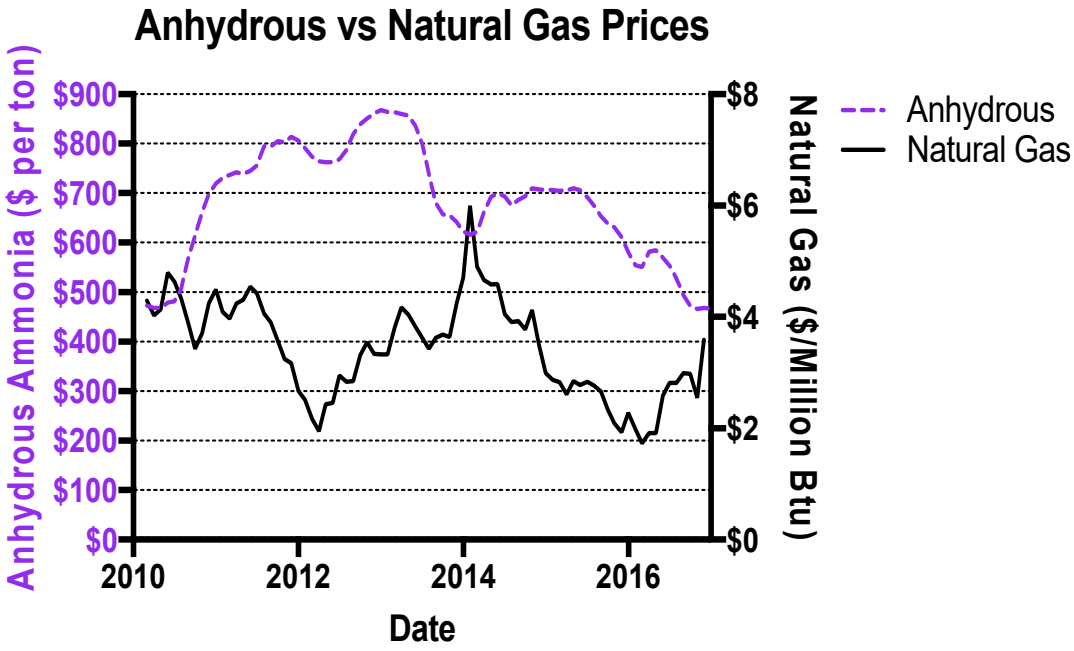
Correlation Between Fertilizer Prices

	Anhydrous	*Map*	*Urea*	*DAP*	*Potash*	*UAN28*	*UAN32*	*10-34-0*
Anhydrous	1							
Map	0.89	1						
Urea	0.83	0.83	1					
DAP	0.83	0.98	0.78	1				
Potash	0.82	0.92	0.88	0.88	1			
UAN28	0.93	0.93	0.93	0.89	0.90	1		
UAN32	0.93	0.92	0.93	0.86	0.89	0.99	1	
10-34-0	0.74	0.80	0.69	0.74	0.71	0.79	0.80	1





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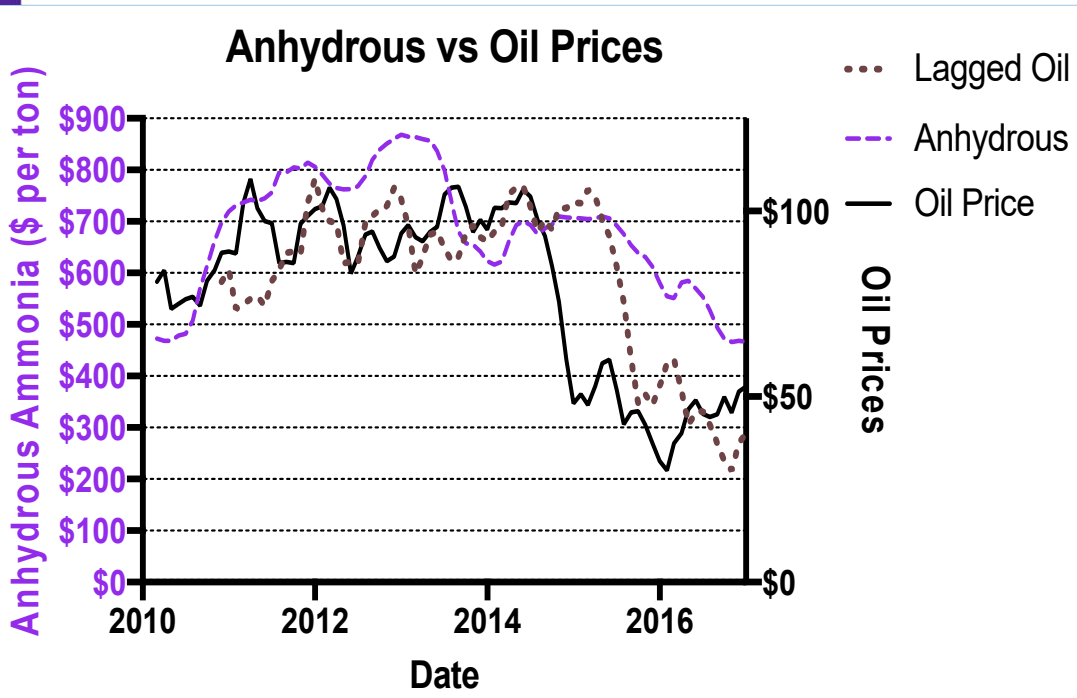

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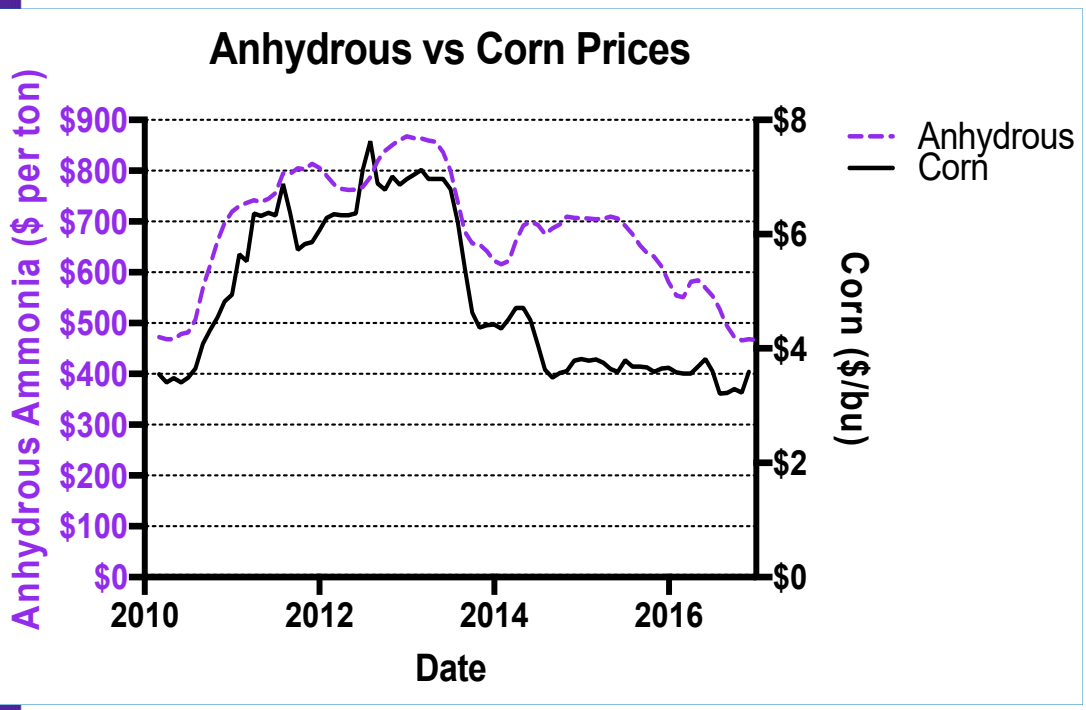

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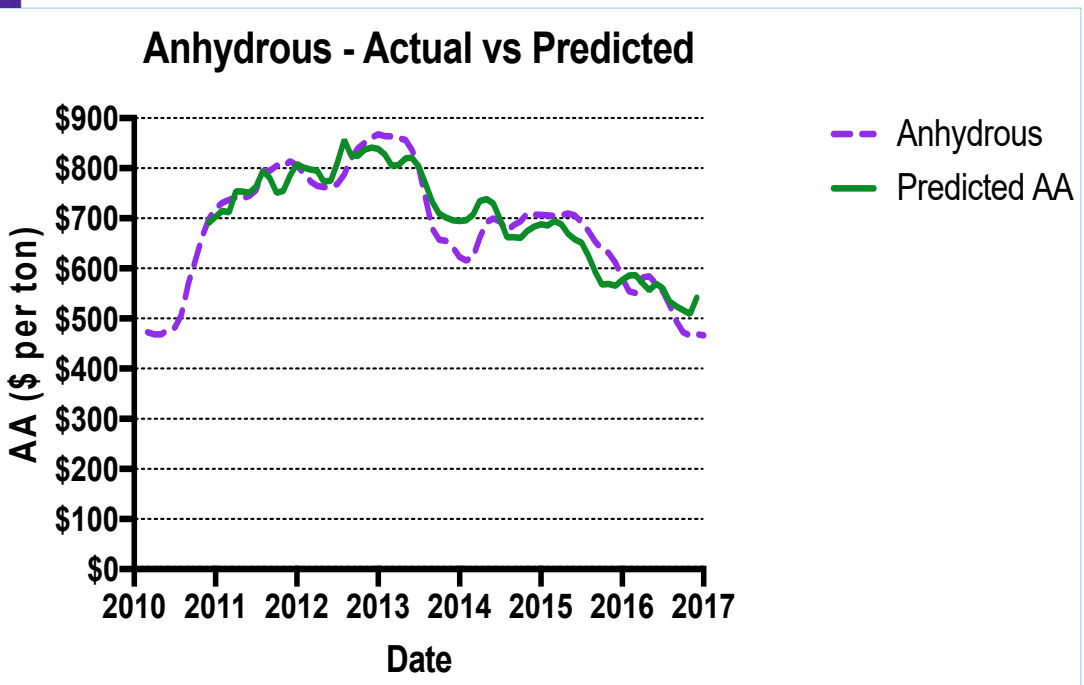

*Anhydrous ammonia ($/ton) = 293 + 47.38 * corn ($/bu) + 2.09 * oil_10 mo lag ($/ barrel)*

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Fertilizer Minimum Cost Tool

http://www.agmanager.info/ksu-fertilizer-tool

Fertilizer	Price per ton	Use or not	Minimum lbs	Maximum lbs
Anhydrous Ammonia	$ 482	☑		
Urea	$ 353	☑		
UAN28	$ 236	☑		
UAN32	$ 270	☑		
DAP	$ 430	☑		
MAP	$ 448	☑		
10-34-0	$ 439	☑		
Potash	$ 329	☑		
Ammonium nitrate	$ 250	☑		
AMS	$ 200	☑		
		☐		
		☐		
		☐		
		☐		

SOLVER MUST BE ENABLED IN ADD-INS

Fertilizer recommendations

	N	P	K
Required	200	100	100
Maximum			

Find Minimum Cost

Fertilizer Prices Need to Be Updated Before Using!

Solutions

Fertilizers to use	Pounds	Cost
DAP	217	$ 46.66
Anhydrous Ammonia	196	$ 47.24
Potash	167	$ 27.47
Total		$ 121.36

Nutrients Applied

	N	P	K
Lbs applied	200	100	100
Cost per unit	$ 0.294	$ 0.352	$ 0.274

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Summary Points

- Strong U.S. economy is likely to support oil prices
- Strong oil prices - in turn - will support Nitrogen higher fertilizer prices
  - ***Prediction***: *Steady-to-higher* 2018 N fertilizer prices
- HOWEVER the weak U.S. farm economy is keeping seed, pesticide, & machinery costs lower
  - BUT machinery purchase prices are *unlikely* to decline

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Discussion (cont)

- **Which crops to plant in 2018???**

Input	Corn	Soybeans	Sorghum	Wheat
Fertilizer	41	15	46	35
Herbicides	49	31	31	5
Seed	58	48	13	18
Machinery and fuel	116	75	121	76

- *Based on 2018 crop budgets for central KS*

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Questions

- Contact

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