

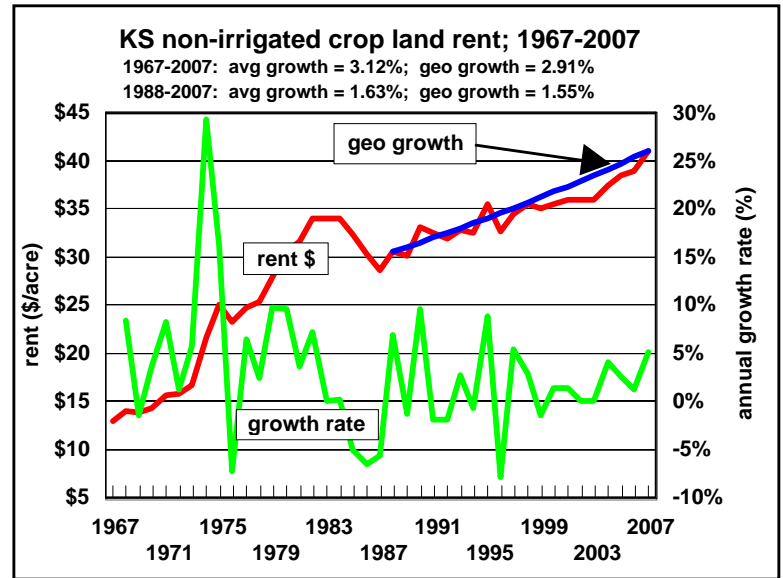
# Higher Land Rents? (Part 2 of 2)

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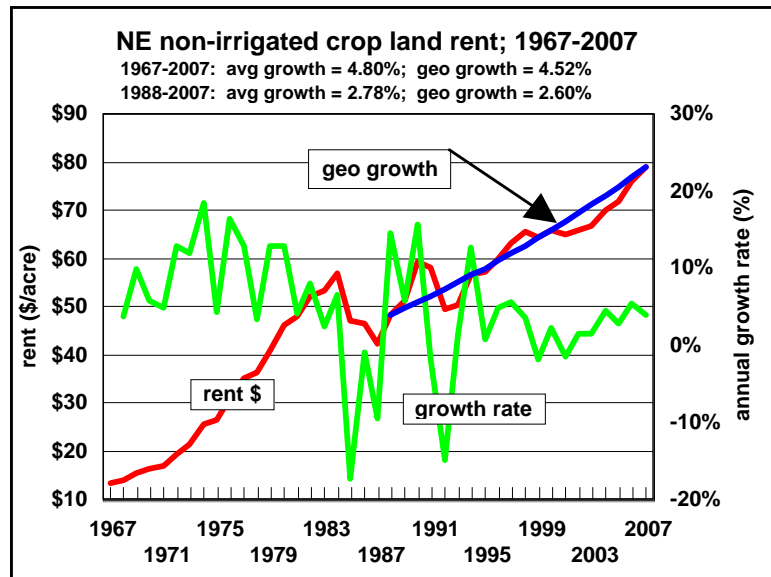
Department of Agricultural Economics  
 Kansas State University



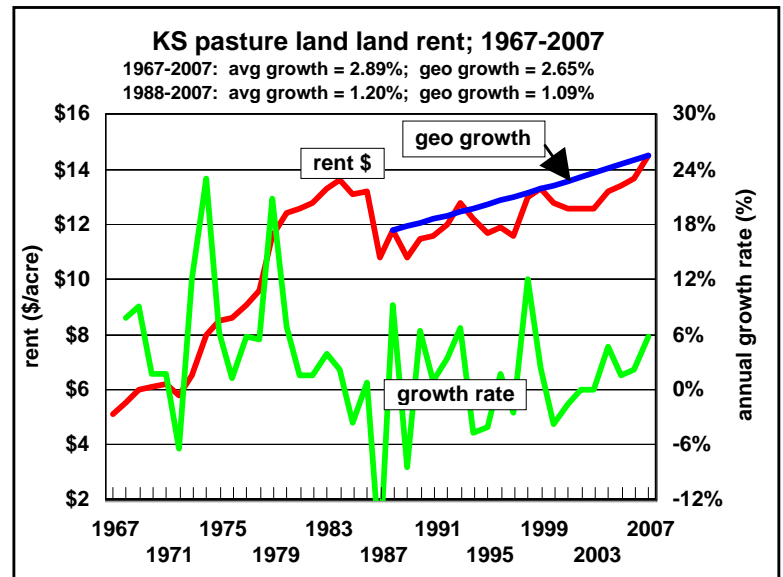
Presented at:  
 2007 Risk & Profit Conference  
 Manhattan, KS. August 16-17, 2007



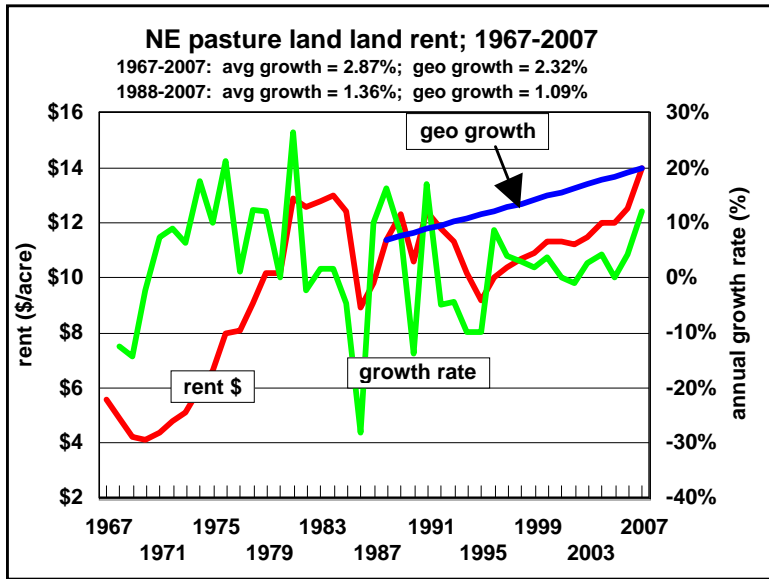
Suggested expected ag growth rate = 2.75% (but if ethanol continues . . . ?)



Suggested expected ag growth rate = 4.30% (but if ethanol continues . . . ?)



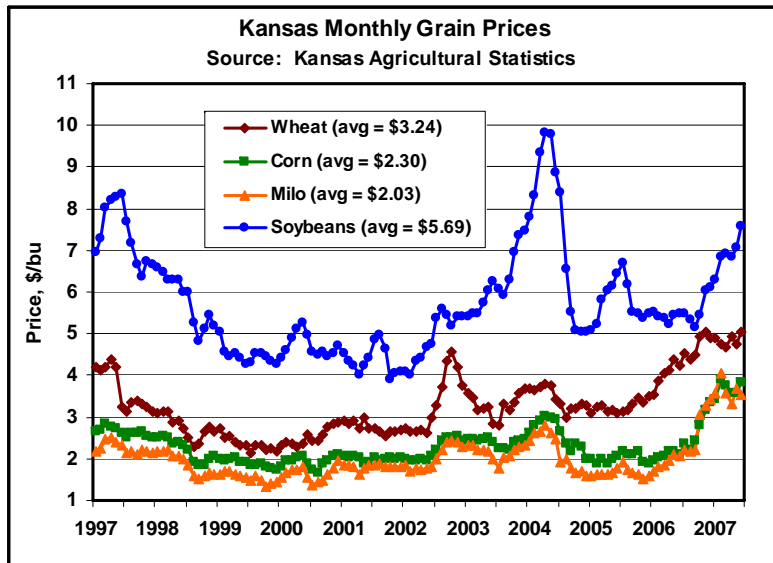
Suggested expected ag growth rate = 2.50% (but if ethanol continues . . . ?)



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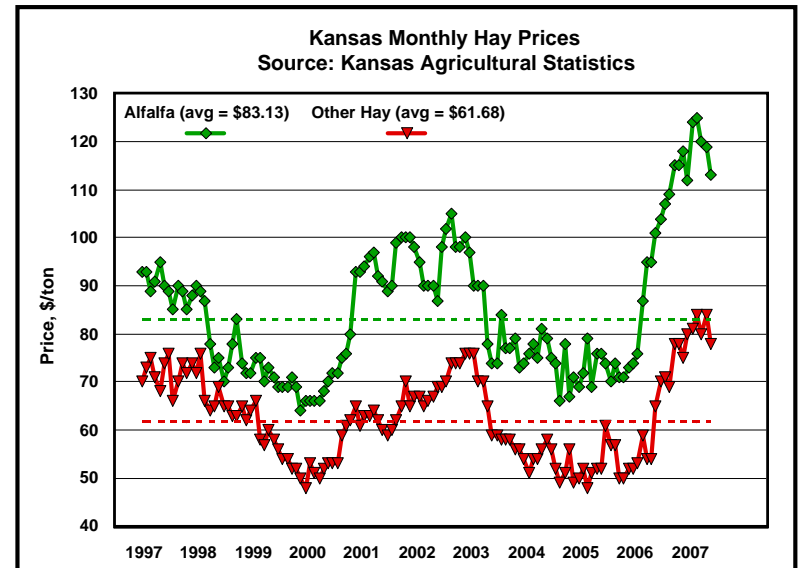
**Impact of high commodity prices on rental rates**

**Crop prices are strong by historical standards...**



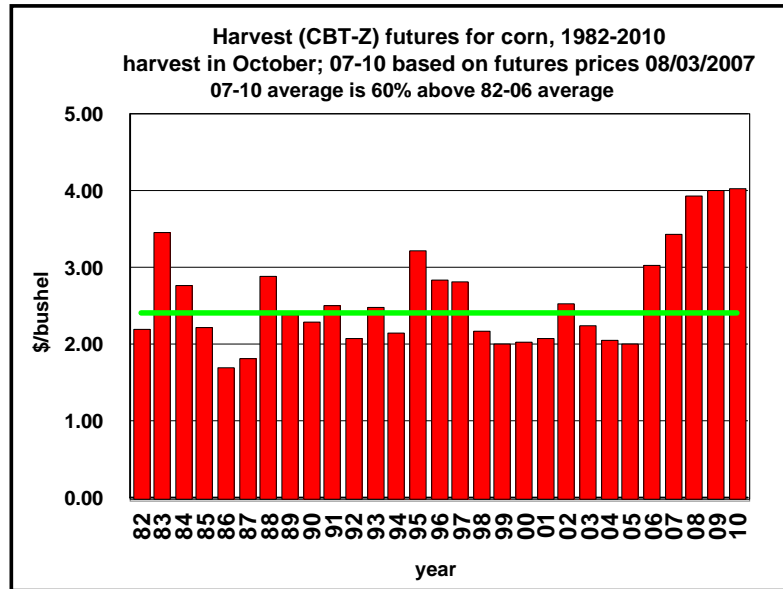
**It's not just corn!**

**Strength in crop markets impacts hay prices...**



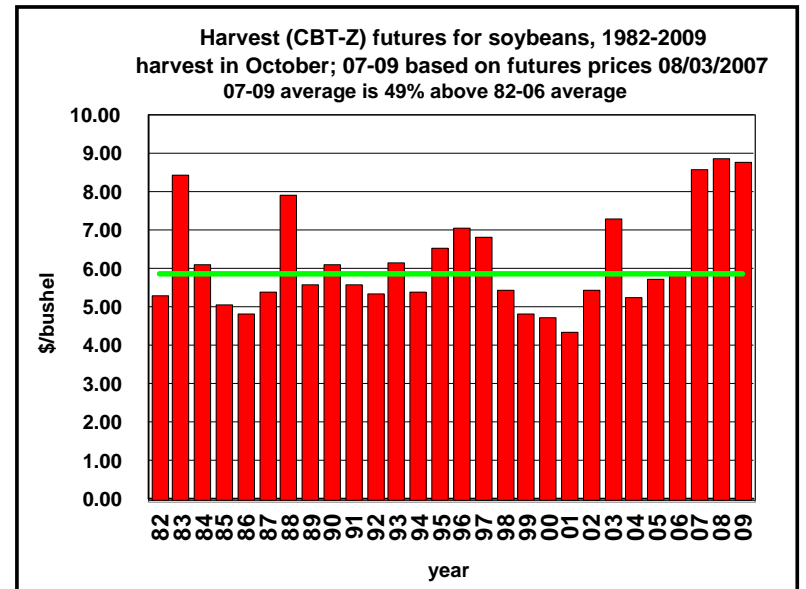
**It's not just grains!**

### How long will strong prices stick around?



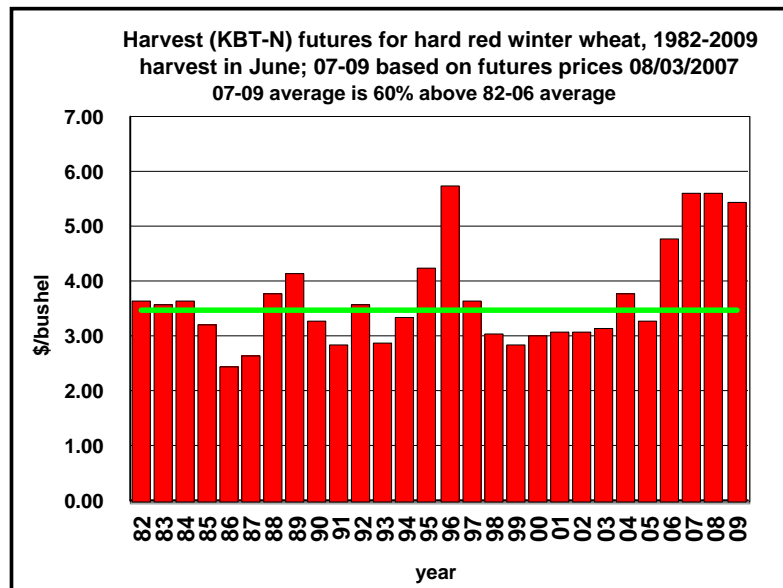
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### How long will strong prices stick around?



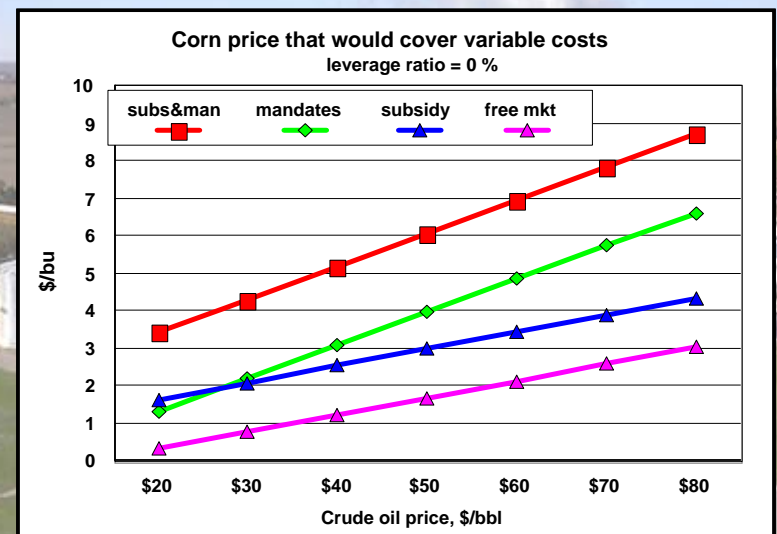
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### How long will strong prices stick around?



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### Ethanol Profitability...



If mothballing costs are high, effective breakeven prices are higher

## Impact of high costs and prices on leases ...

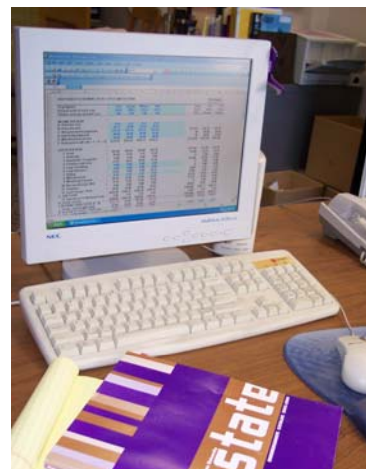
**KSU-Lease.xls** is a tool that can be used to analyze the impact current costs and prices have on equitable crop share leases as well as their cash-rent equivalents

How leases are impacted by current conditions depends on how producers change (or not change) production practices in response to these high prices and costs

→ producers should “run their own numbers”

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## Using “*KSU-Lease.xls*” to determine equitable crop share and cash leases ...



### Information/data required:

1. Crop rotation/mix
2. Income information
3. Production inputs
4. Machinery costs
5. Land value
6. Irrigation equipment
- 
7. Contributor of input
8. Risk adjustment

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## Methods of establishing cash rent values ...

- **Crop share equivalent (adjusted for risk)**
  - Converts equitable crop share rent to an expected dollar amount per acre
- **Landowner's cost**
  - Based on the premise of landowner's continuing to receive comparable returns to what has been received in the past
- **Amount tenant can afford to pay**
  - Residual approach – after tenant pays all expenses, whatever income is left represents cash rent

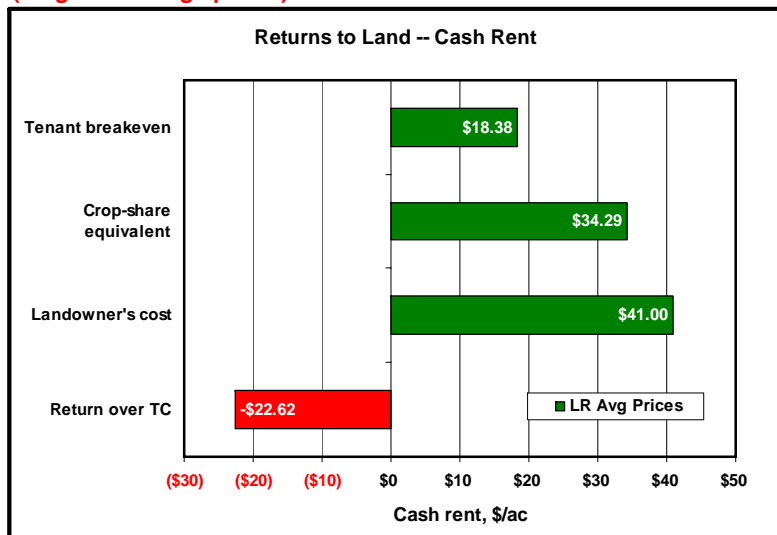
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## Level of complexity ...

- **KSU-Lease** is extremely flexible and can be used to generate leases with terms that are quite simple to extremely complex
- For example equitable percentages for ...
  - net share lease (i.e., no inputs shared)
  - fertilizer shared equitably (i.e., same % as income)
  - fertilizer shared equitably, herbicides shared in some other proportion
  - different inputs shared differently for each crop
  - combination of crop share and cash rent

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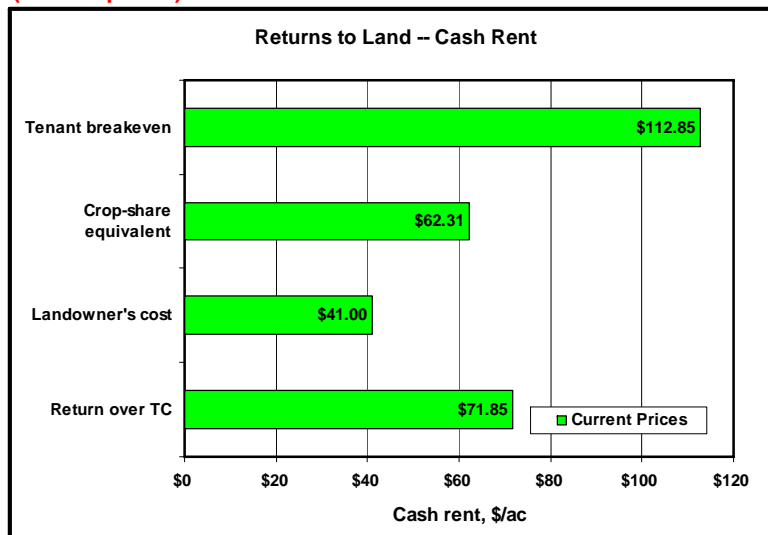
### Estimated cash rents for Central Kansas (long run average prices)



Based on KSU Farm Management Guides (October 2006) and KSU-Lease.xls (available at [www.agmanager.info](http://www.agmanager.info))

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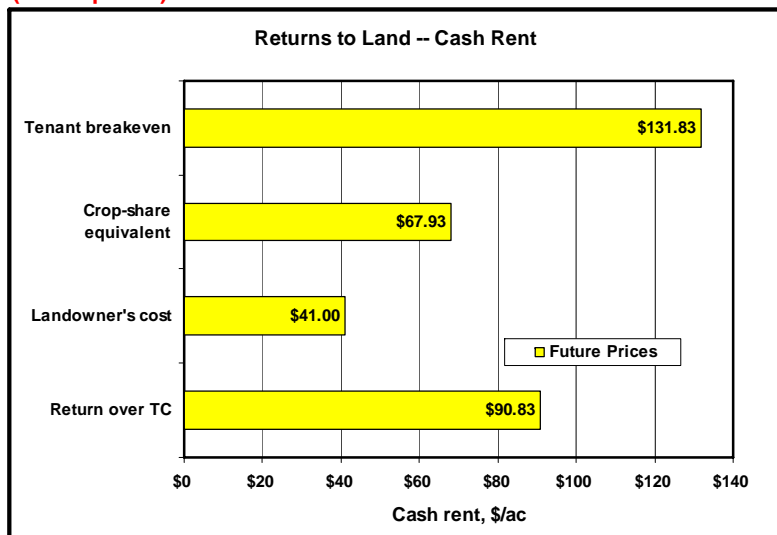
### Estimated cash rents for Central Kansas (current prices)



Based on KSU Farm Management Guides (October 2006) and KSU-Lease.xls (available at [www.agmanager.info](http://www.agmanager.info))

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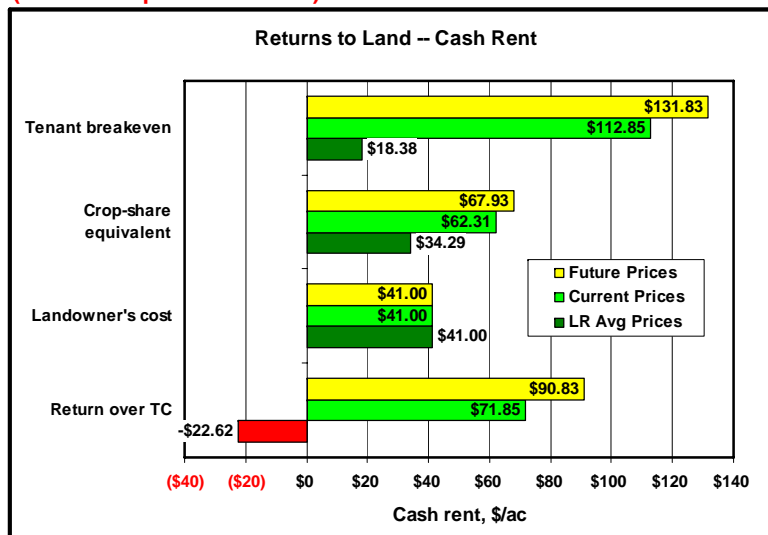
### Estimated cash rents for Central Kansas (future prices)



Based on KSU Farm Management Guides (October 2006) and KSU-Lease.xls (available at [www.agmanager.info](http://www.agmanager.info))

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### Estimated cash rents for Central Kansas (alternative price scenarios)



Based on KSU Farm Management Guides (October 2006) and KSU-Lease.xls (available at [www.agmanager.info](http://www.agmanager.info))

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## KAS surveyed market rates (released this week) ...

### AGRICULTURAL LAND VALUES

**KANSAS AGRICULTURAL STATISTICS SERVICE**  
 Part of the Kansas Department of Agriculture  
 U.S. Department of Agriculture  
 P.O. Box 1034  
 Topeka, Kansas 66607-0354  
 (785) 232-2222

Released August 17, 2005

#### Kansas Farmland Values and Rents, 2005

Kansas' average value of all farmland and buildings for 2005 is estimated to be \$200 per acre. This compares with \$171 in 2004 and \$185 in 2003. Kansas' average value of all farmland and buildings increased by 11.9 percent from 2004 to 2005. The increase of \$29 per acre is the largest since a 17.2 percent increase from 1979 to 1980, when the average value increased by \$48 per acre. Irrigated cropland values rose 8 percent, non-irrigated was up 14 percent, and pasture land values increased 16 percent.

Rental rates for both types of cropland increased \$1.00 per acre, while pasture rents rose 5.50 per acre.

Year	Cropland Value Per Acre			Rent Per Acre		Pasture and Range Land Value Per Acre		All Farmland and Buildings <sup>1/</sup> Total Value	
	Irrigated	Non-irrigated	All Cropland	Irrigated	Non-irrigated	Value	Rent	Value	Total Value
1984	873	546	597	60.20	32.60	341	12.20	550	21,543
1985	920	595	623	2	35.50	343	11.70	535	25,466
1986	948	607	638	46.30	32.70	381	11.90	553	26,268
1987	990	615	643	65.00	34.50	365	11.60	565	26,838
1988	1,010	620	655	67.00	35.50	387	13.00	577	27,408
1989	1,020	625	660	68.00	35.00	370	13.30	600	28,900
2000	1,040	630	666	67.00	35.50	380	12.80	625	29,888
2001	1,060	635	673	72.00	36.00	390	12.60	645	30,900
2002	1,080	640	679	70.00	36.00	400	12.80	665	31,455
2003	1,080	645	684	68.00	36.00	410	12.80	685	32,252
2004	1,110	665	705	72.00	37.50	430	13.20	715	33,748
2005	1,200	760	800	73.00	38.50	500	13.40	800	37,760

<sup>1/</sup> Values per acre are for land and buildings. Rental rates are for land only. <sup>2/</sup> Insufficient data to publish.

**The Land Values Survey—Background**

The Agricultural Land Values Survey was conducted during March/April 2005. Survey respondents were asked to provide information on the value of the land they operate and the rental rates for any land they need. Additional land value and rent data were collected in the June Agricultural Survey.

The Census provides the official base for estimates of all farmland values. However, the Census occurs once every five years and only estimates the value of all agricultural land and buildings. The Land Values Survey and Agricultural Survey provide data to make annual estimates of both market values and rental rates for different categories of farmland.

The average values in this report encompass a wide range of soil types and pastures. These data are more appropriate for studying overall trends and should not be used to establish rental rates or market values.

	2006	2007	% chg
Non-irrigated	39.00	41.00	5.1
Irrigated	74.00	82.00	10.8
Pasture	13.70	14.50	5.8

## In recent years, the majority of leasing questions received pertain to:

- Impact of adopting new technologies
- Cash renting
- “Non-traditional” leases
  - Net share rent
  - Flexible cash rent
  - Bushel rent
  - Combination cash/cropshare

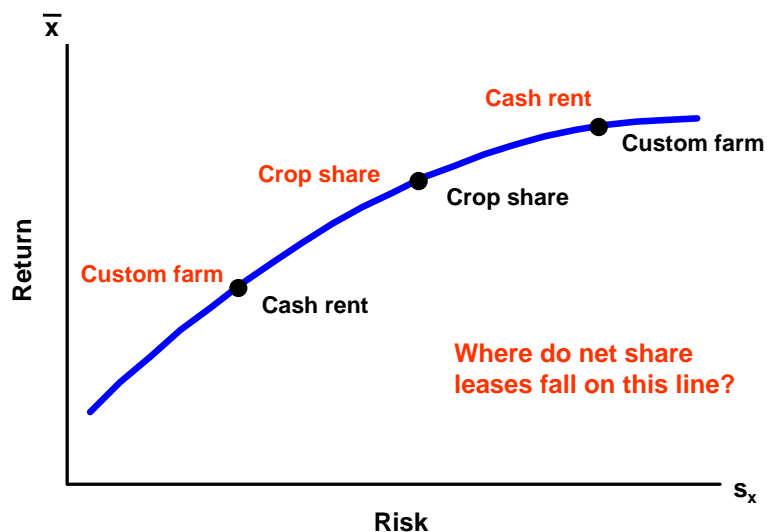
... while current “hot topic” is slightly different, method of addressing questions has not changed.

KAS report

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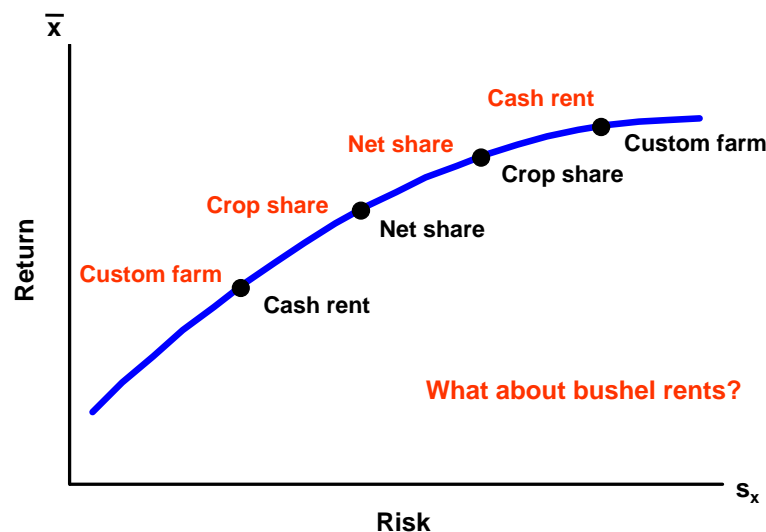
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## Landowner/producer risk-return tradeoff



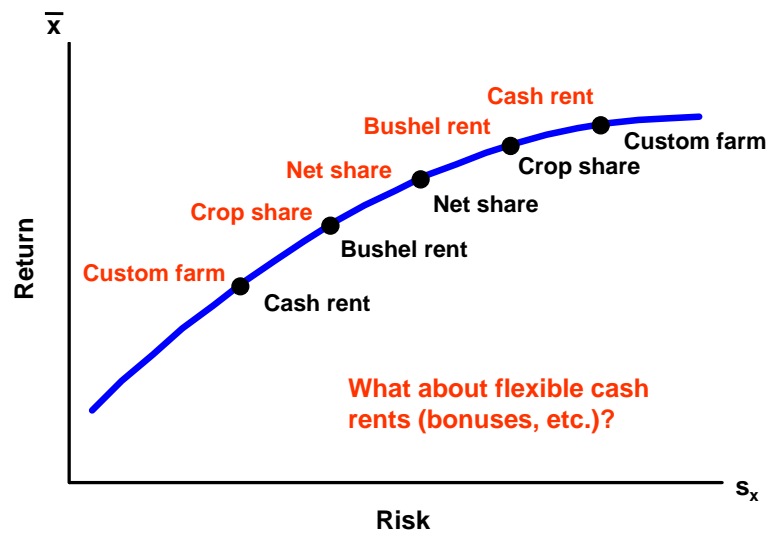
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## Landowner/producer risk-return tradeoff



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## Landowner/producer risk-return tradeoff



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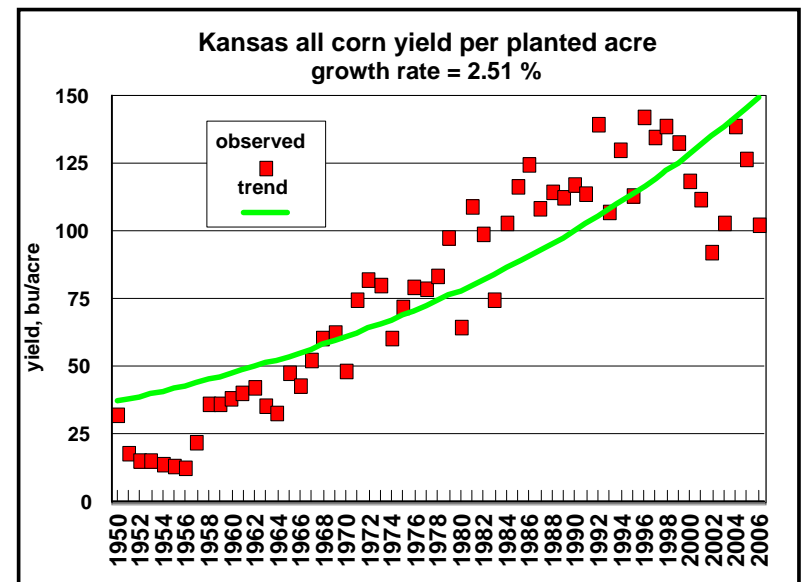
Looking at the ethanol impact on rents and land values in a slightly different fashion

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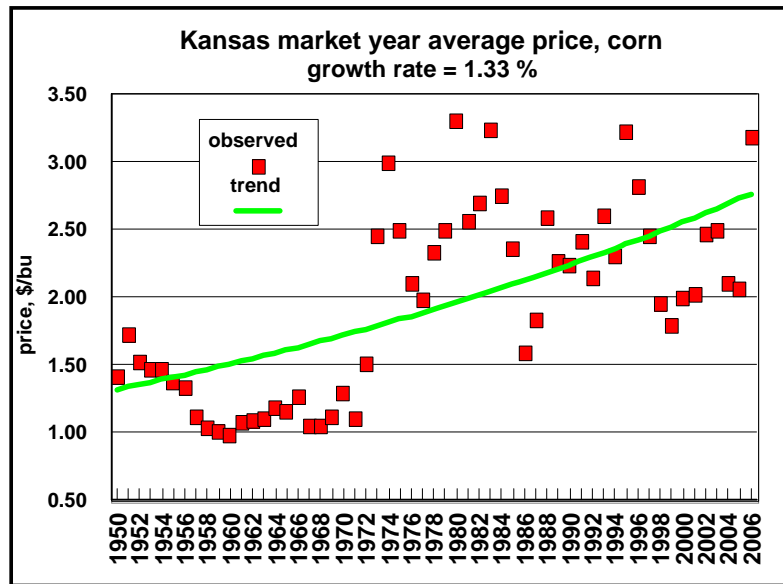
## Relationship between yields and crop prices and rents and land values (1950-2006)

	Rent (% change)	Value (% change)
Yield (1% change)	0.70	0.77
Price (1% change)	0.71	0.99

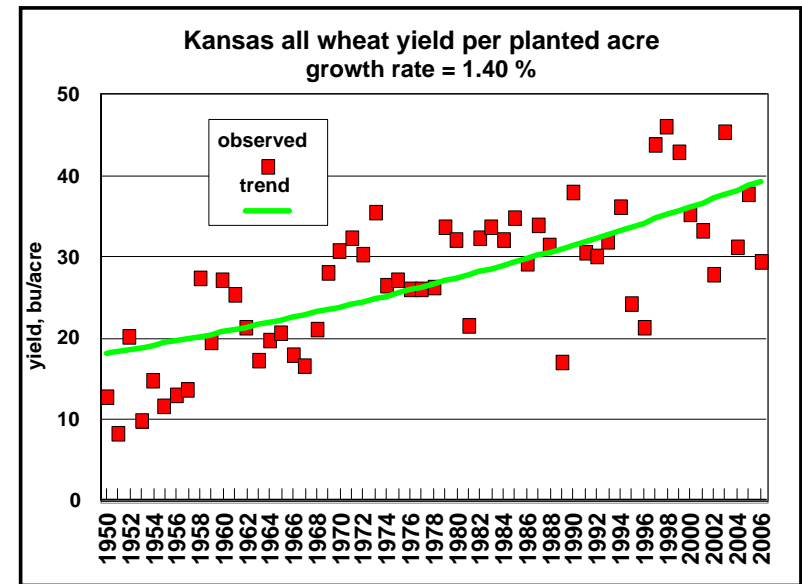
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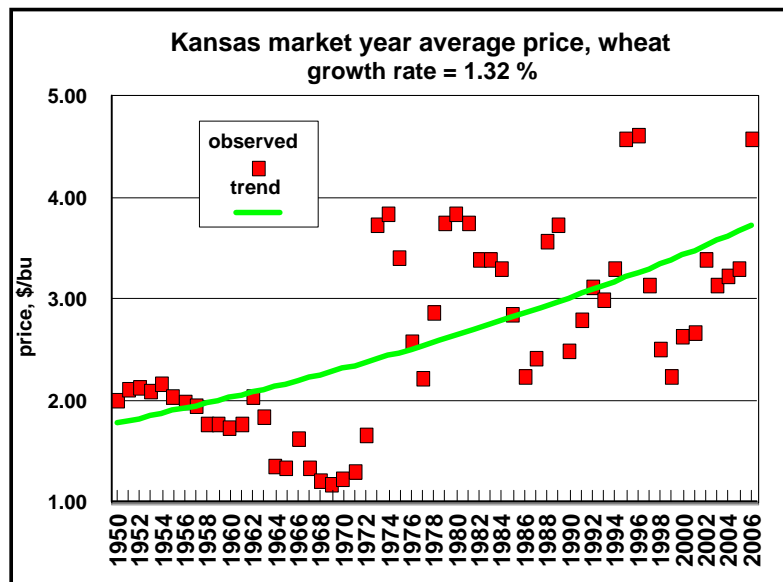
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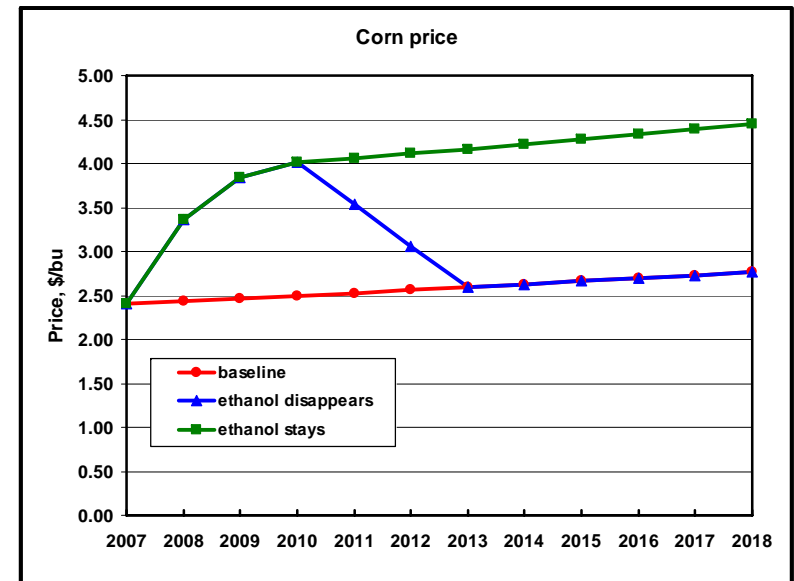
### Baseline (no ethanol) assumptions...

- \$980/ac land growing at 4% per year
- \$41/ac rent growing at 2.75% per year
- Corn price (\$2.40/bu) growing at 1.3% per year
- Corn yield growing at 2.5% per year
- Real estate taxes at 0.4% of market value
- 50% leverage
- 7% interest
- 30-year land ownership horizon

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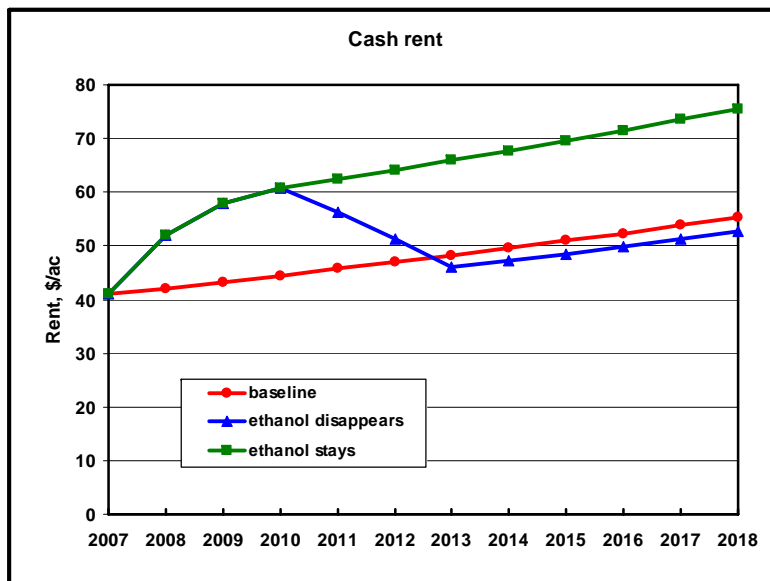
## Alternative scenarios considered ...

- Scenario 1 – Baseline
- Scenario 2 – Ethanol comes and disappears
- Scenario 3 – Ethanol comes and stays

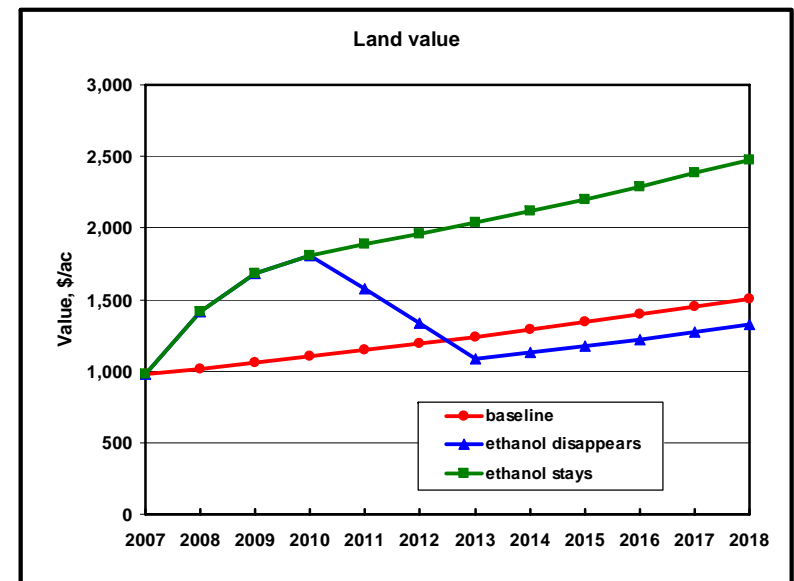


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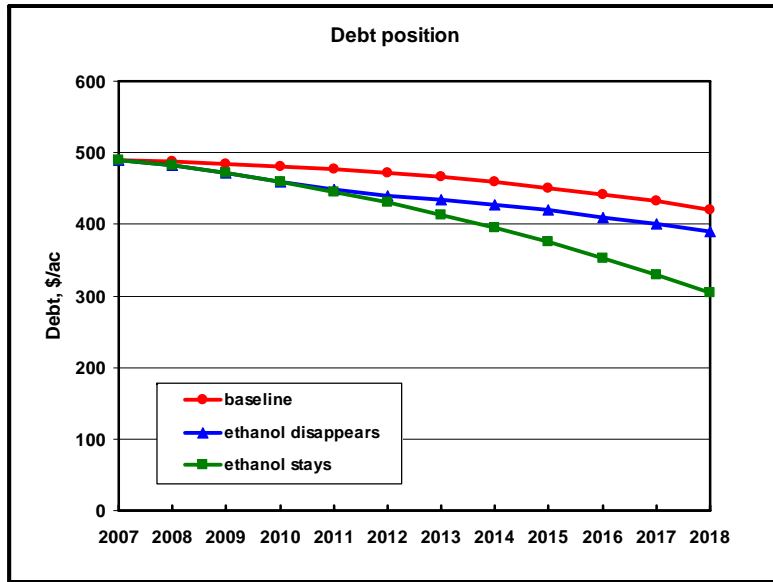
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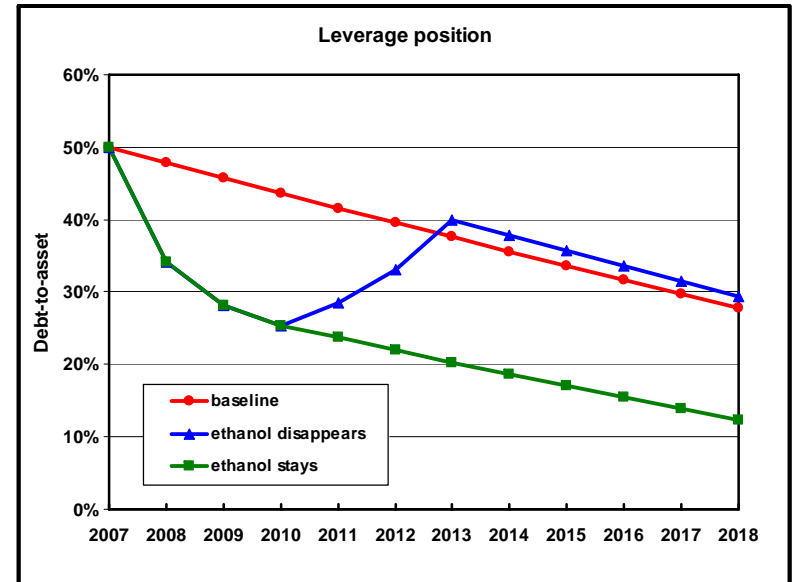
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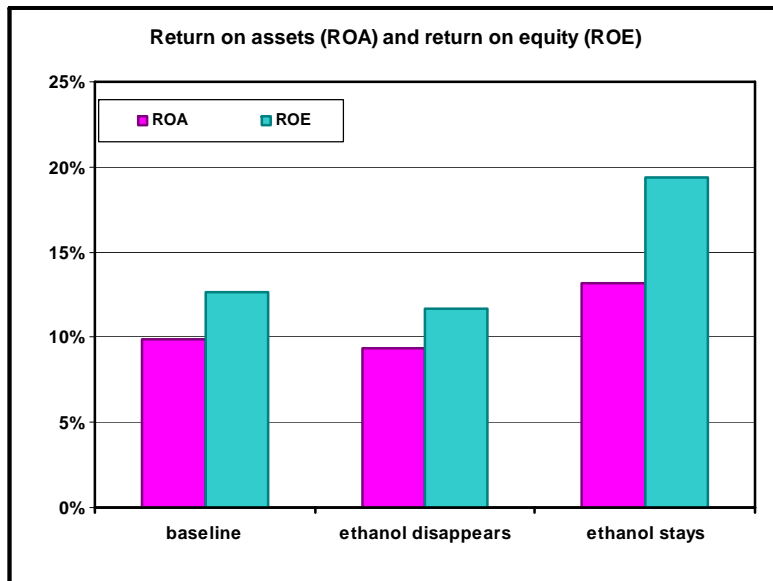
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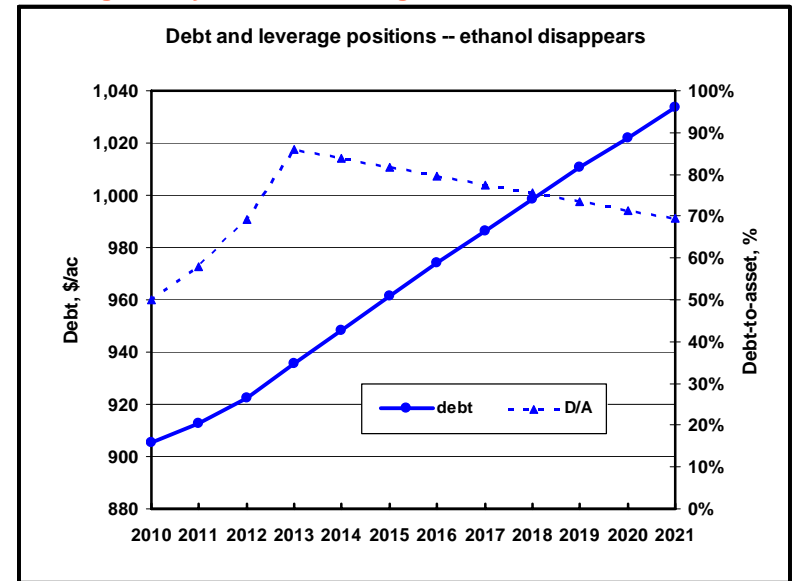


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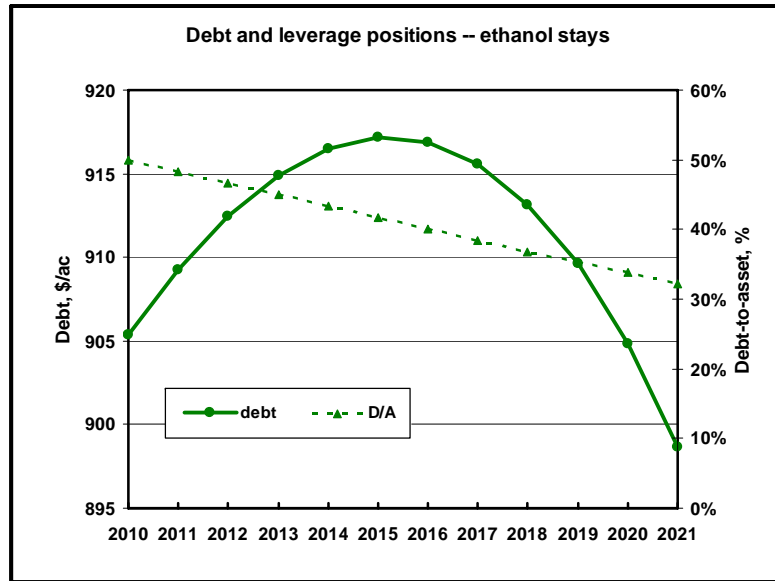
Coming three years late to the game...



ROA = 5.42% and ROE = 3.84% (compared to 9.35% and 11.70%)

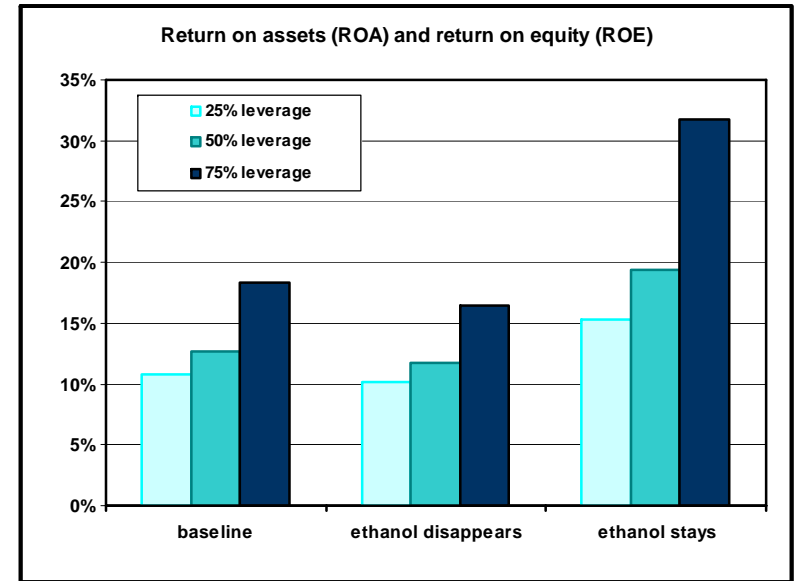
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## Coming three years late to the game...



ROA = 9.15% and ROE = 11.29% (compared to 13.19% and 19.39%)

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## Part 2 Closing Thoughts

- Ethanol is inducing higher crop prices and it looks like they'll be around for awhile
- Higher crop prices have the potential to substantially increase rental rates
- There is considerable interest in non-traditional rental arrangements
  - RUN THE NUMBERS!
- If ethanol goes away in a few years it's not the end of the world
  - ... unless you're late to the game
  - ... AND you're highly leveraged

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**Questions?**