2016 and 2017 Outlook and Cash Rents

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FARM BUSINESS MANAGEMENT

CROP BUDGETS
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CROP BUDGETS, ILLINOIS, 2016

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Budgets in management section of farmdoc

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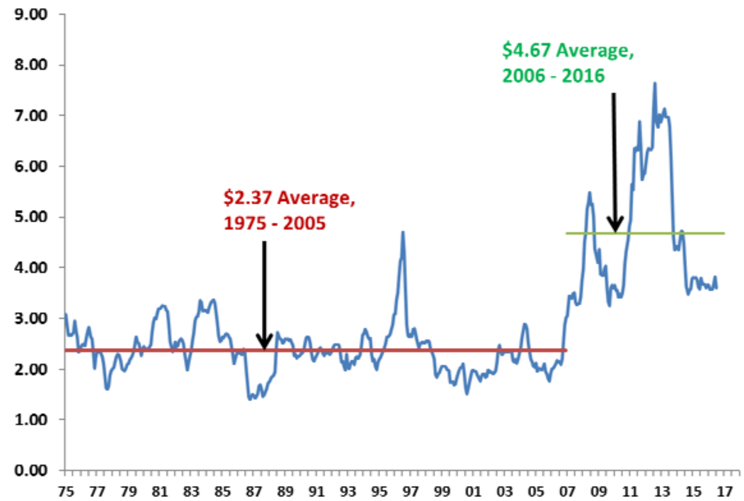
Monthly Corn Prices, U.S.



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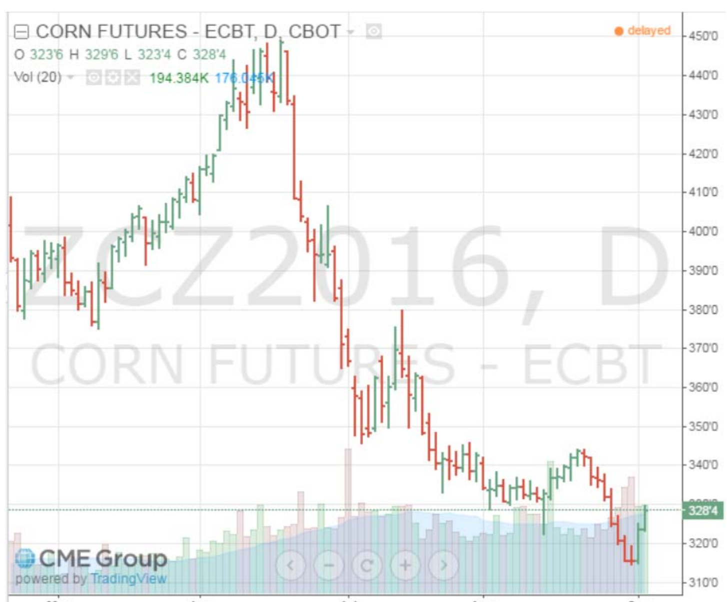
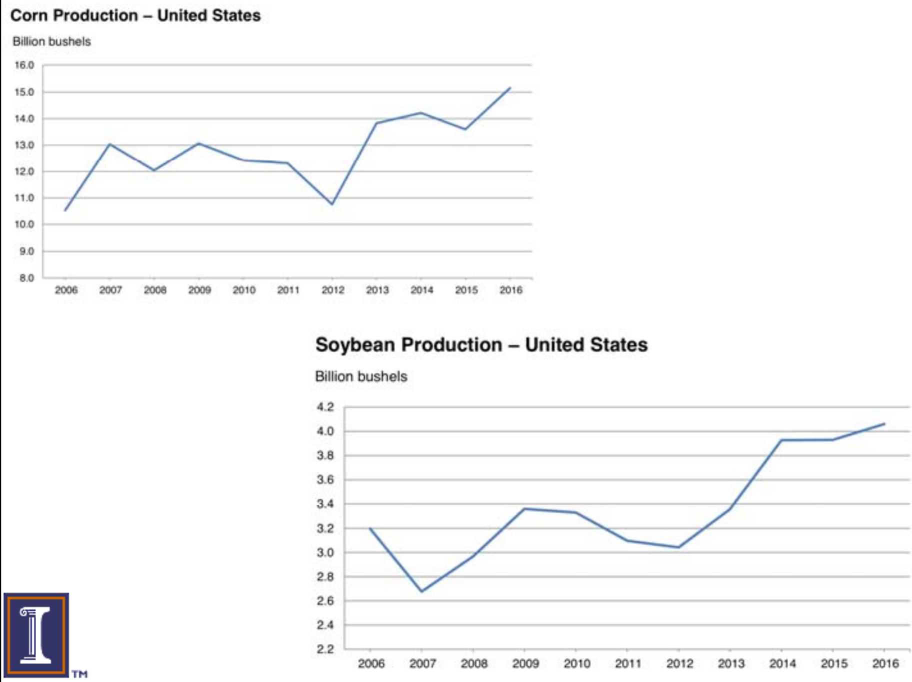
Dec 2016 Futures Contract





Market Year Average Prices and Forecasts

	----------------------- Period ---------------------				
	75-05	06-13	14	15	16P
Corn ($/bu.)	2.33	4.70	3.70	3.60	3.10
Soybeans ($/bu.)	5.95	10.91	10.10	9.05	9.10

Forecasts from USDA, WASDE, August 2016 estimates

Fall Delivery Bids (9/2/2016):
$3.20 for corn
$9.50 for soybeans

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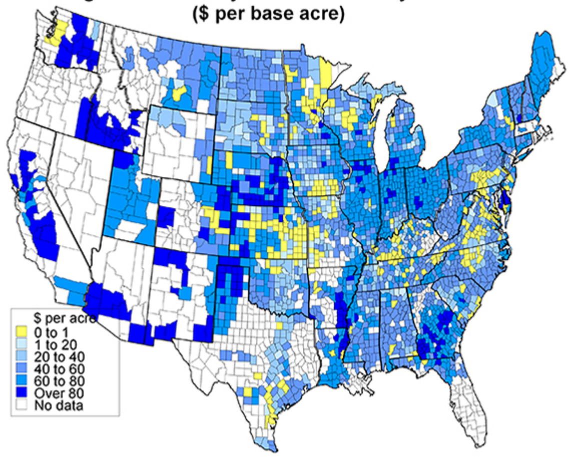
FarmdocDaily
August 19, 2015

Figure 1. 2015 Projected ARC-CO Payments for Corn ($ per base acre)



Some counties do not have estimates because NASS county yields were unavailable for those counties.

These will be made in the fall of 2016

Input			Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
	County	MYA	Benchmark		ARC	ARC	
Year	Yield	Price[1]	Yield[2]	Price[3]	Guarantee[4]	Payment[5]	Payment[6]
2009	186	3.55					
2010	170	5.18					
2011	160	6.22					
2012	125	6.89					
2013	189	4.46				$/acre	$/acre
2014	218	3.70	172	5.29	783	0.00	0
2015 *	199	3.60	173	5.29	787	60.05	12
2016	218	3.20	183	4.79	754	47.81	58
2017	189	3.55	202	3.95	686	12.95	17
2018	191	3.75	202	3.70	643	0.00	0
				Five-Year Average		**24.16**	**17**
National loan rate equals: 1.95			Reference price equals: 3.70				

ARC payments
2015 production in fall of 2016
2016 production in fall of 2017
2017 production in fall of 2018

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Table 3. Corn Revenues and Costs, Central Illinois -- High Productivity Farmland, Actual for 2009 through 2015, Projected for 2016.[1]

	Year							
	2009	2010	2011	2012	2013	2014	2015	2016P
Yield per acre	192	168	174	126	197	231	200	231
Price per bu	$3.62	$5.07	$6.24	$6.93	$4.52	$3.76	$3.77	$3.20
Crop revenue	$695	$852	$1,086	$873	$890	$869	$754	$739
ARC/PLC or ACRE	8	0	0	0	0	4	57	25
Other gov't payments	24	24	24	24	22	0	0	0
Crop insurance proceeds	5	32	23	295	61	10	31	10
Gross revenue	**$732**	**$908**	**$1,133**	**$1,192**	**$973**	**$883**	**$842**	**$774**

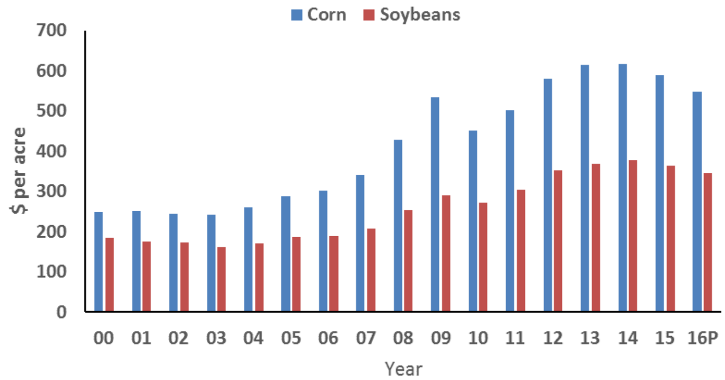
Revenue down in 2016

High yields and low price

Table 4. Soybean Revenues and Costs, Central Illinois -- High Productivity Farmland, Actual for 2009 through 2015, Projected for 2016.[1]

	Year							
	2009	2010	2011	2012	2013	2014	2015	2016P
Yield per acre	55	60	56	50	58	64	66	65
Price per bu	$10.03	$11.47	$12.75	$14.66	$13.35	$10.67	$9.08	$9.05
Crop revenue	$552	$688	$714	$733	$774	$683	$599	$588
ARC/PLC or ACRE	0	0	0	0	0	4	57	25
Other gov't payments	24	24	24	24	22	0	0	0
Crop insurance proceeds	3	5	11	26	6	5	7	0
Gross revenue	**$579**	**$717**	**$749**	**$783**	**$802**	**$692**	**$663**	**$613**

Non-land Costs



2016 costs down by $47 for corn
$16 for soybeans

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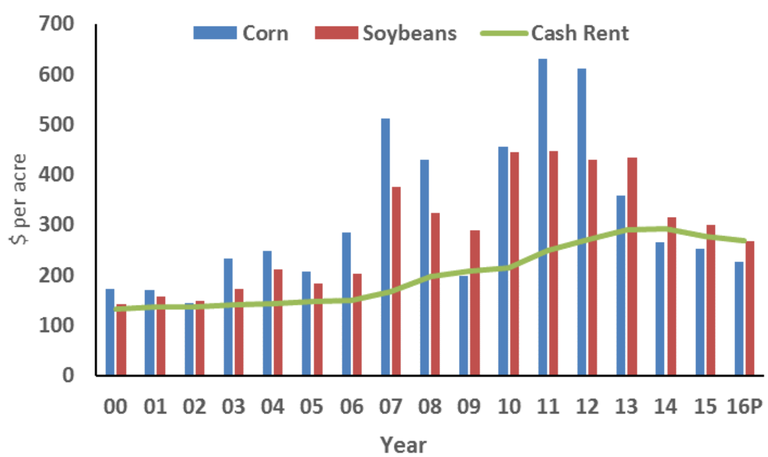
Operator and Land Returns



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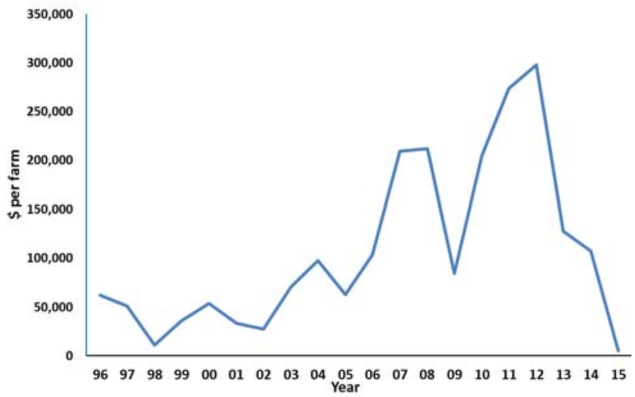
Net Income on Grain Farms



With exceptional yields, prices must equal $3.50 for corn and $9.50 for soybeans to have the same income in 2016 as 2015

Farms with above average and not exceptional yields could have lower incomes in 2016

Above presumes cost cuts

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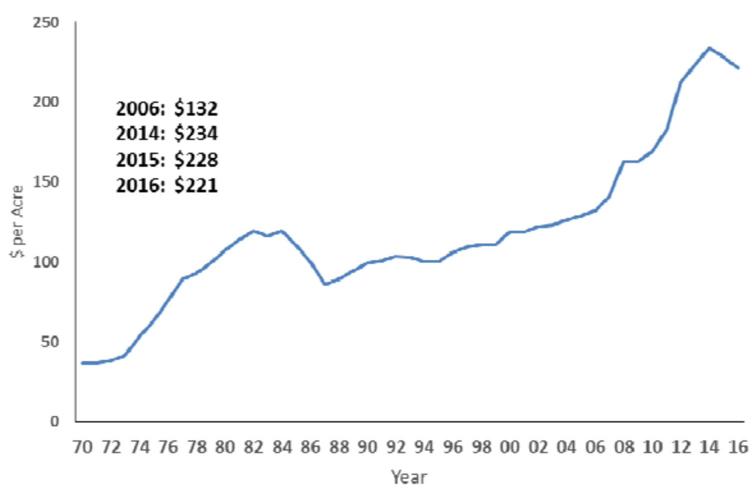
Illinois Cash Rents, State



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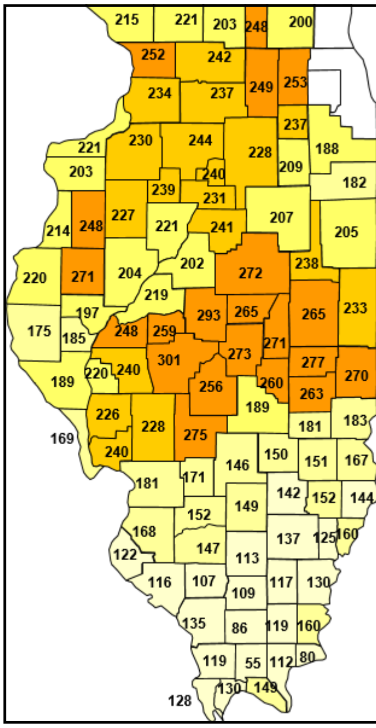
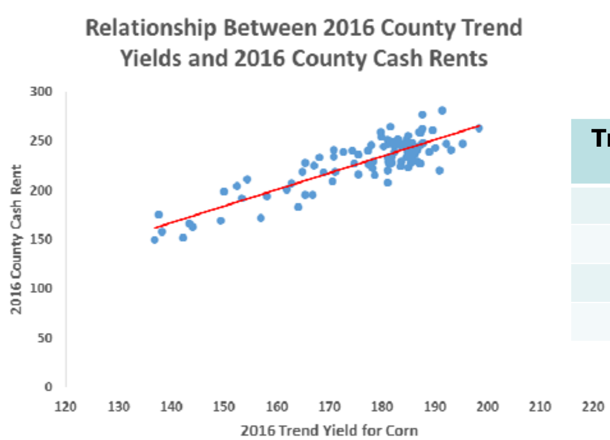


Cash Rent by County, 2016

- Released by USDA, September 9, 2016
- 2016 cash rents
- Average cash rents for each county

Average Rents and Corn Yields, Illinois



Trend Corn Yield	Average Cash Rent
140	$167
160	$178
180	$230
200	$281

Average and Professionally Managed Farmland, Illinois

Land Productivity (Expected corn yield)	Averages 2014	2016	Professionally Managed Farmland[2] 2014	2015	2016	2017P
	$/acre		$/acre	$/acre	$/acre	$/acre
State average	234	221				
Excellent (190+ bushels)	293	281	374	350	325	301
Good (170 - 190 bushels)	243	230	322	295	283	263
Average (150 -170 bushels)	191	178	285	250	247	224
Fair (Less than 150 bushels)			214	200	190	178

[1] Complied from National Agricultural Statistical Service data.

[2] From surveys conducted by the Illinois Society of Professional Farm Managers and Rural Appraisers.

2017 Projections

- Trend-line yield
- $3.50 corn price, $9.00 soybean price
- Non-land costs decrease $27 per acre for corn, similar amount for soybeans
- Cash rents aggressively come down $23 per acre

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2017 Crop Budgets for High-Productivity Farmland in Central Illinois.

	Corn	Soybeans	Average
Yield	200	64	
Price	$3.50	$9.00	
Crop revenue	$700	$576	$638
ARC/PLC	0	0	0
Gross revenue	**$700**	**$576**	**$638**
Direct costs	340	160	250
Power costs	115	98	107
Overhead costs	65	60	63
Non-land costs	**$520**	**$318**	**$420**
Operator and land returns	**$180**	**$258**	**$218**
Cash rent	245	245	245
Farmer return	**-$65**	**$13**	**-$27**

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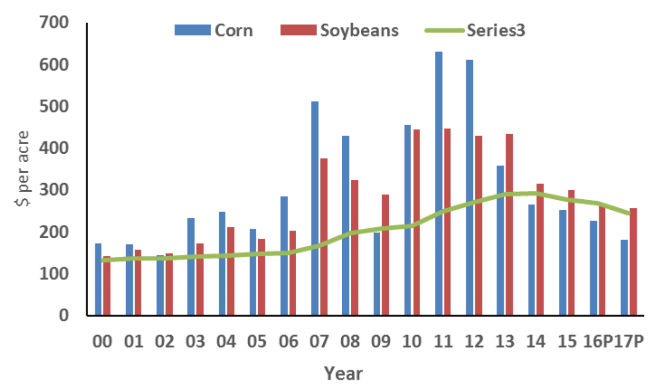
Operator and Land Return



- **Soybeans more profitable than corn**
- **Returns same levels year as 2016**

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Central Question

How long will prices be low?

Likely answer: Till a short crop occurs in the world.

When will a short crop happen?
Unpredictable (Could be next year, year after, or several year's down the road)

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2017 Crop Budgets for High-Productivity Farmland in Central Illinois.

	Corn	Soybeans	Average
Yield	200	64	
Price	$4.00	$9.50	
Crop revenue	$800	$608	$704
ARC/PLC	0	0	0
Gross revenue	**$800**	**$608**	**$704**
Direct costs	340	160	250
Power costs	115	98	107
Overhead costs	65	60	63
Non-land costs	**$520**	**$318**	**$420**
Operator and land returns	**$280**	**$290**	**$284**
Cash rent	245	245	245
Farmer return	**$35**	**$45**	**$39**

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Long-run Price

	Corn	Soybeans	Average
Yield	200	64	
Price	$4.30	$10.30	
Crop revenue	$860	$659	$760
ARC/PLC	0	0	0
Gross revenue	**$860**	**$659**	**$760**
Direct costs	340	160	250
Power costs	115	98	107
	65	60	63
Non-land costs	**$520**	**$318**	**$420**
Operator and land returns	**$340**	**$341**	**$340**
Cash rent	245	245	245
Farmer return	**$95**	**$96**	**$95**

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Cash Rent Decisions

- **Know the cash rent won't work at $3.50 corn / $9.00 soybean prices**
- **Will it work at $4.30 corn / $10.30 soybean price?**
- **How long can you stand $3.50 corn prices?**

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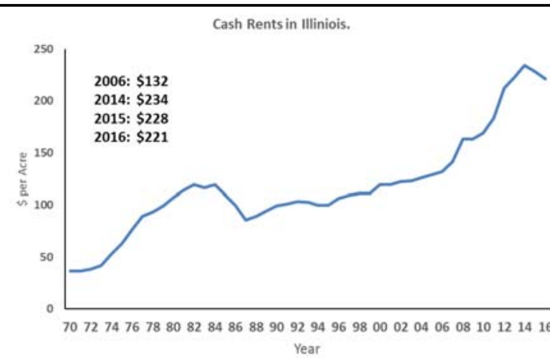
2017 Break-Even Rents

Expected Corn Yield	2016 Rent	2017 Break-Even
Bu/acre	$/acre	$/acre
200	$281	$218
185	242	$180
163	186	$100

Given $3.50 corn and $9.00 soybean price

Land Prices



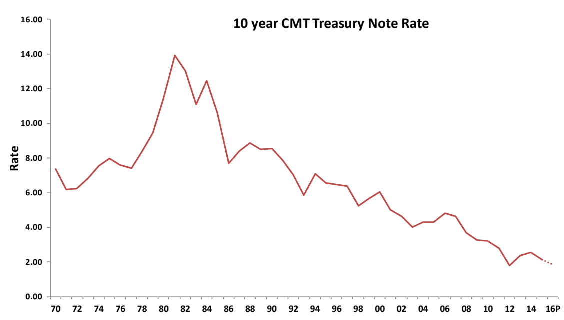
Capitalized Value = $\frac{\text{Cash rent}}{\text{10−Year Treasury}}$

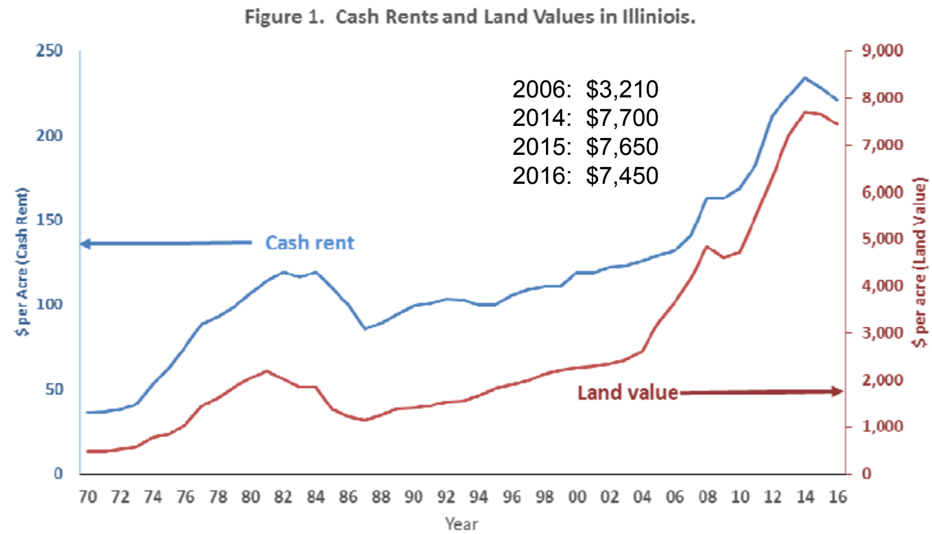
Major factors:

1. **Farmland returns**
2. **Returns on alternative investments**

Other factors

- **Diversification**
- **Non-financial assets (Gold with a return)**





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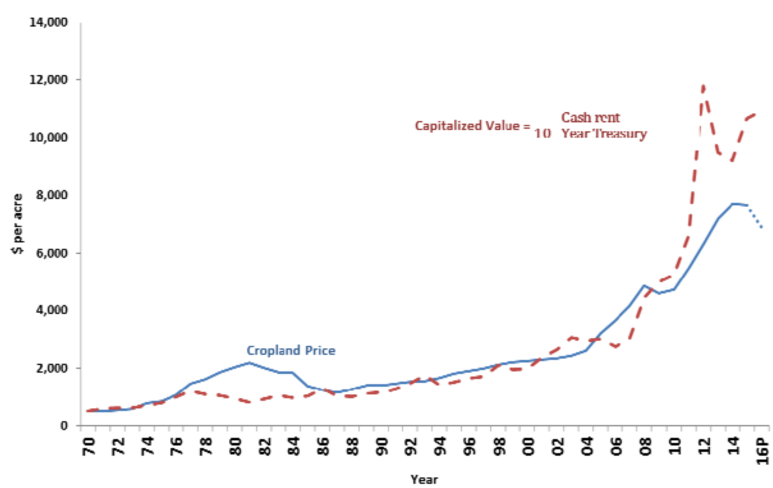
Illinois Prices and Capitalized Values



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Individual Landowner

Lower returns during the next several years

What are the alternatives:
- Low returns on fixed incomes
- Risk on equities (?)

Land Prices

- Very low interest rates
- Land price declines matching percent decreases on rental decreases

Summary

Continued low incomes in 2016

Potential for continued low returns in 2017, put downward pressure on cash rents.

Non-land costs and cash rents must continue to decline.

Look at:

- **Planting more soybeans**
- **Lowering all costs**
- **Lowering cash rents**