

FARMLAND MARKETS: PROFITABILITY AND FUTURE PERSPECTIVES



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TIAA-CREF

Center for
Farmland Research



ILLINOIS

FARMLAND MARKETS: PROFITABILITY AND FUTURE PERSPECTIVES



*Title: Rental Arrangements: How
Income Is Split*
Presenter: Gary Schnitkey
Affiliation: University of Illinois

Wednesday, November 13, 2013
9:00 – 3:30 p.m.
Hilton Garden Inn, Champaign, IL

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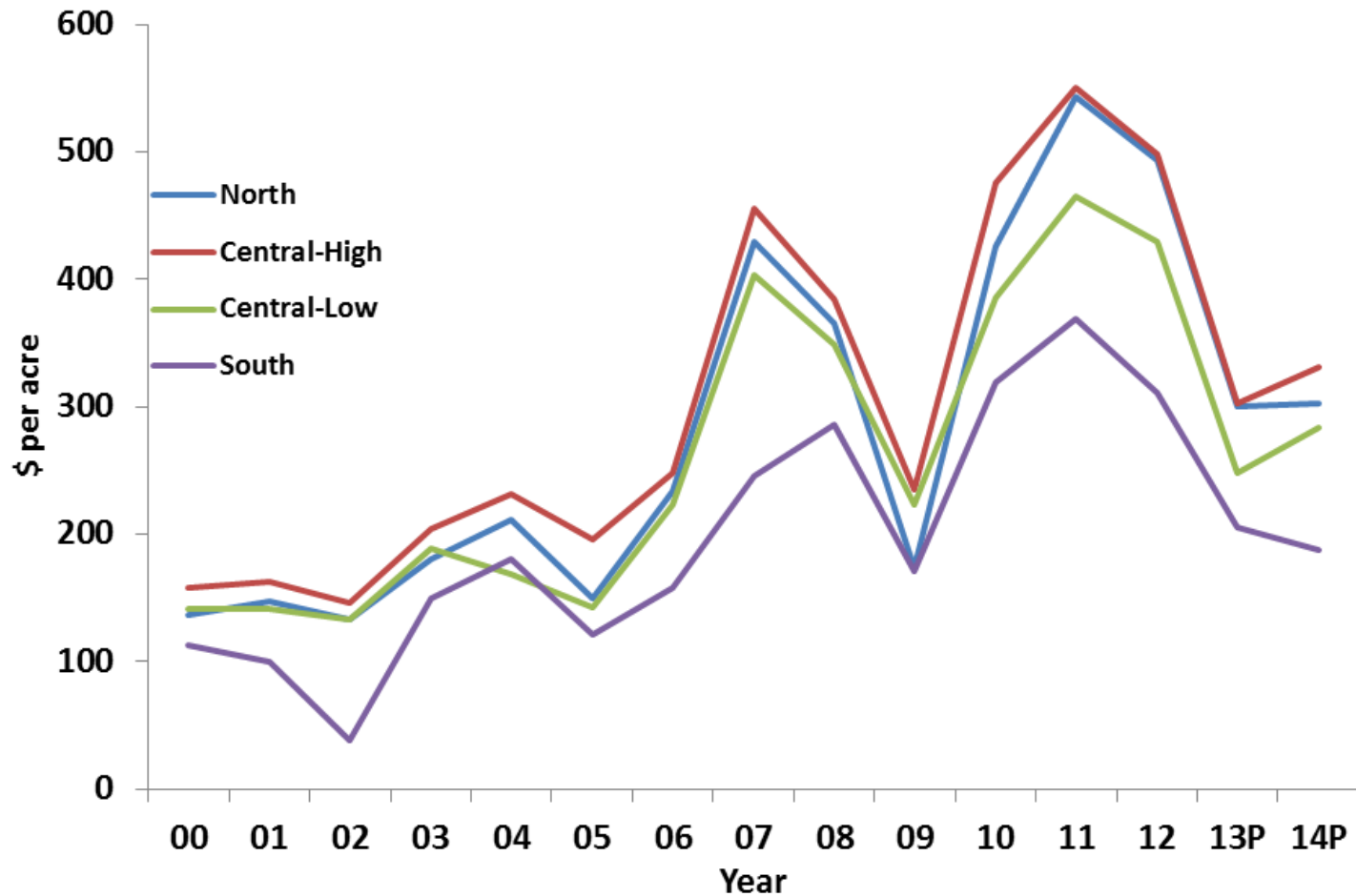
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Goal

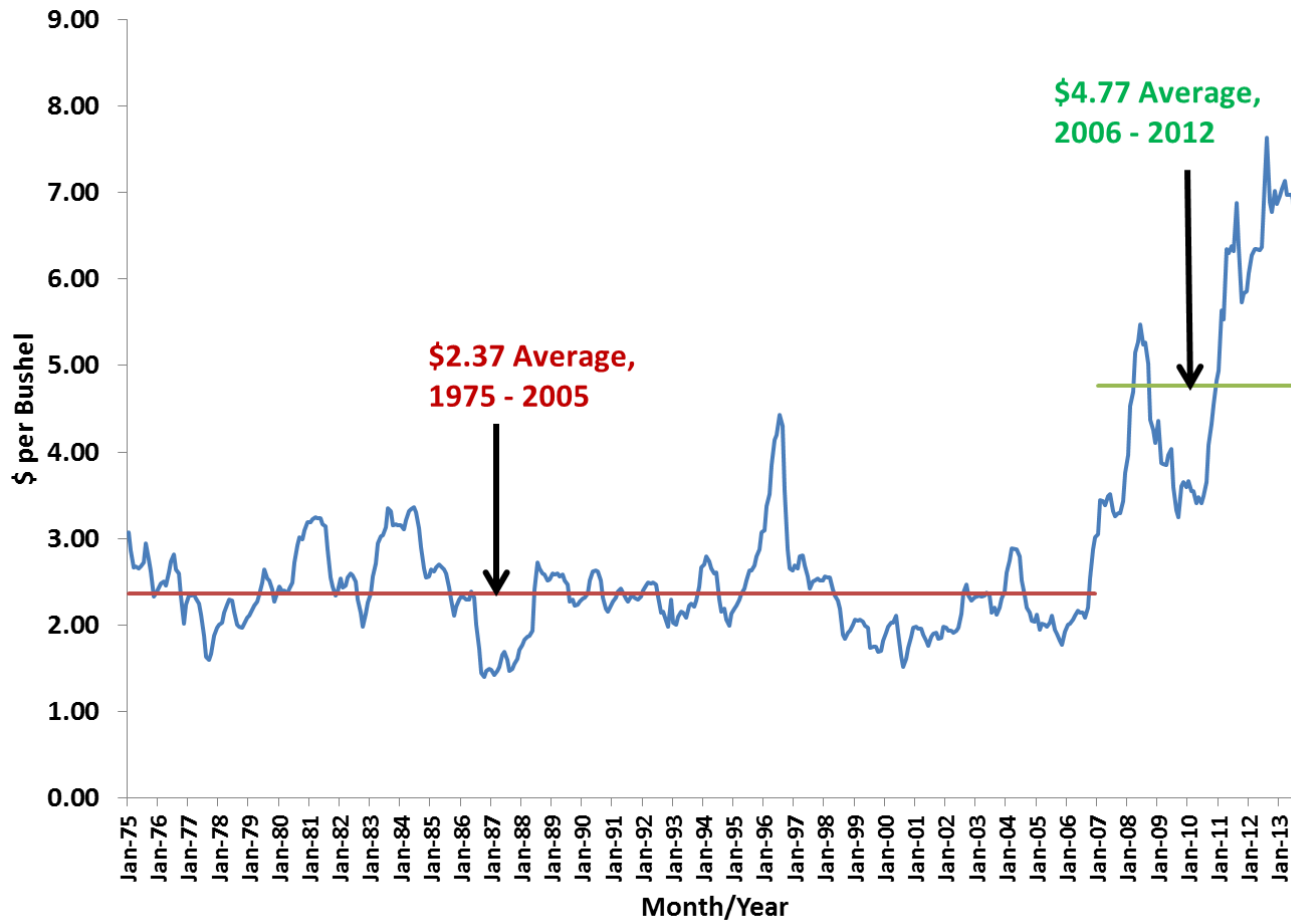
- Illustrate how different leases share returns

- Outline
 - Outlook
 - Cash rents
 - Variable rents
 - Share rents
 - Comparisons

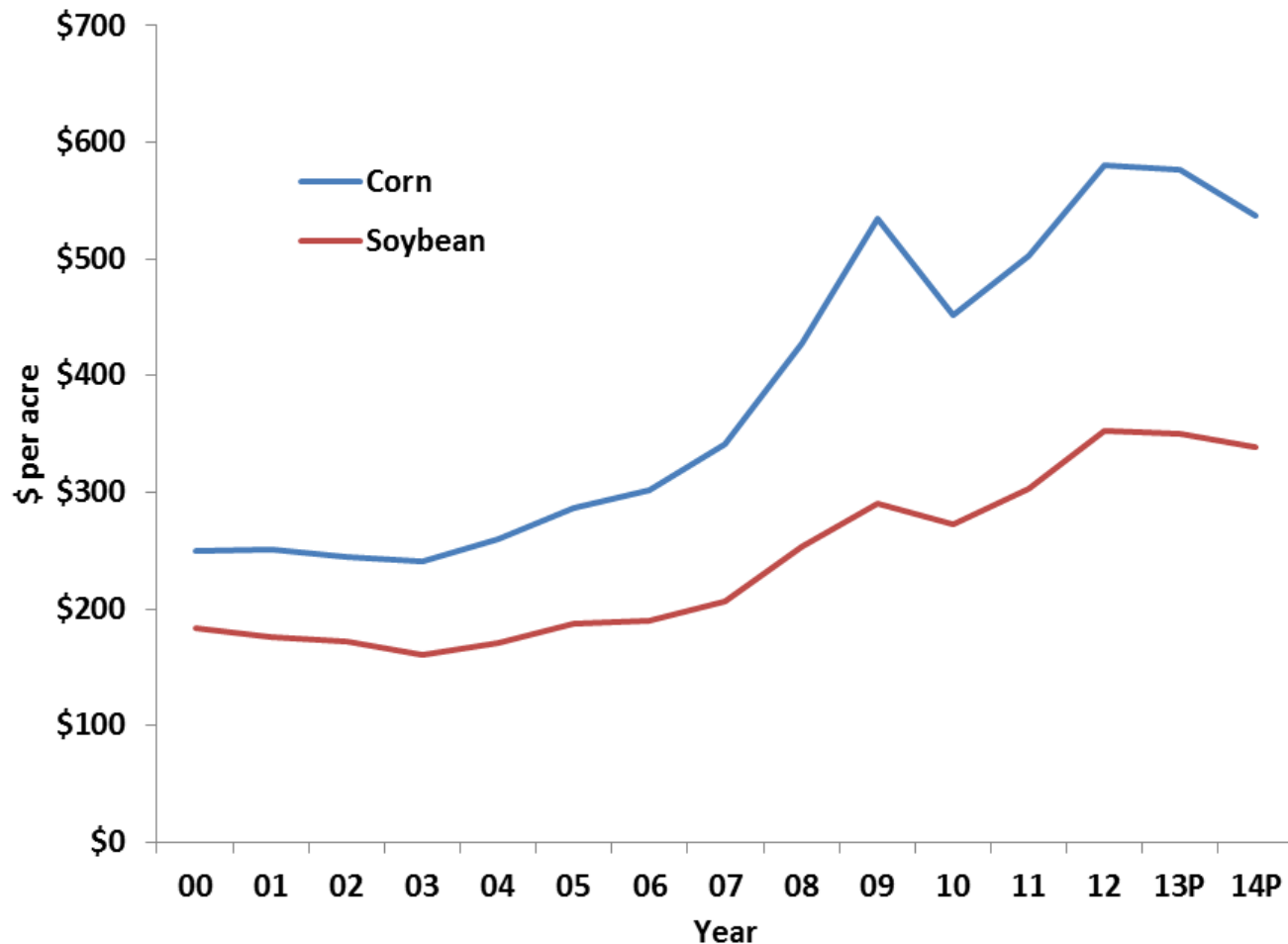
Operator and Farmland Returns



National Corn Price, January 1975 through October 2013



Corn and Soybean Non-land Costs, Central Illinois



Operator and Farmland Returns

Central -- High Illinois Farmland

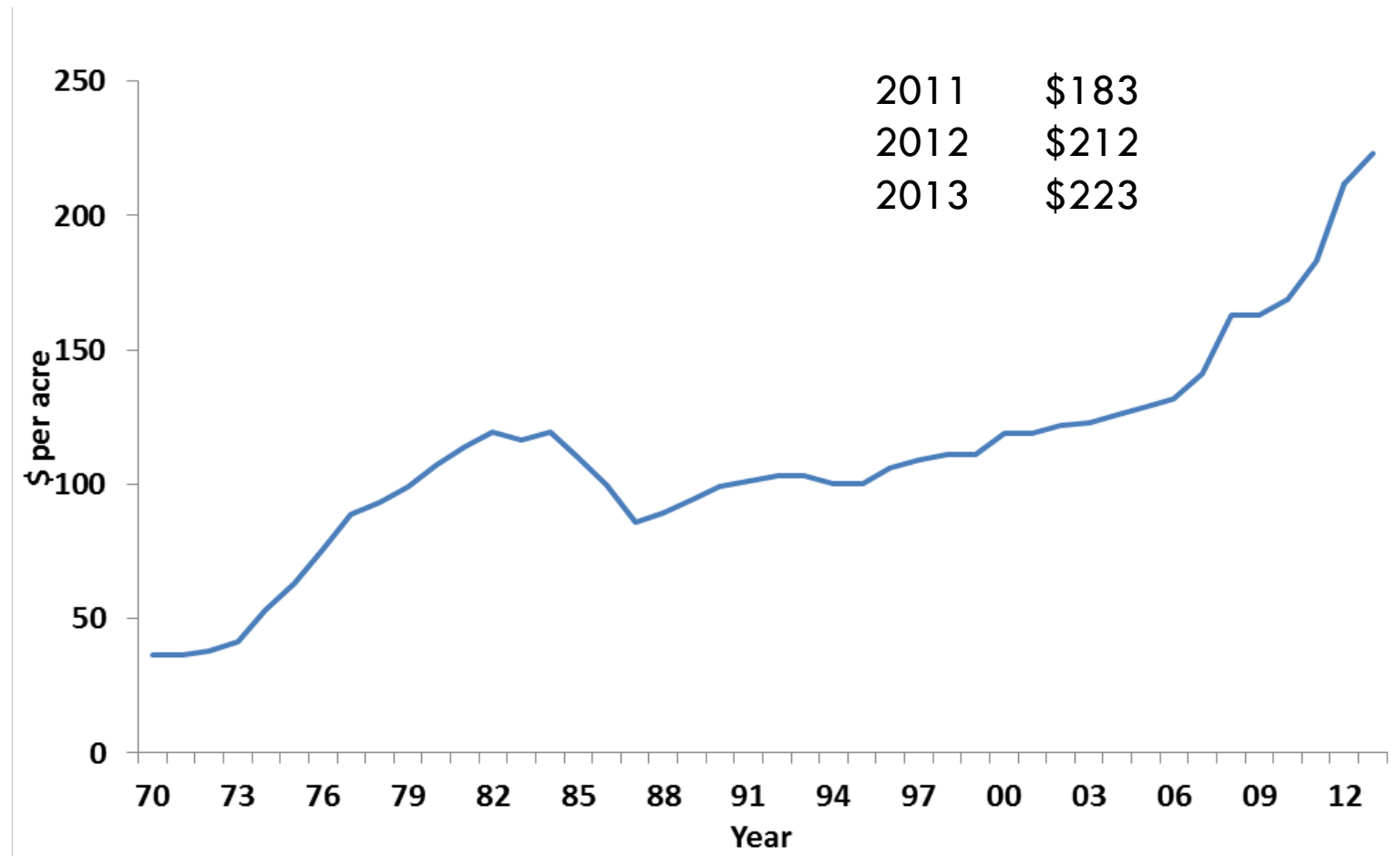
	2009	2010	2011	2012	2013P	2014P
Corn Yield	192	168	174	126	182	196
Corn Price	3.62	5.34	5.24	6.60	4.55	4.60
Bean Yield	55	60	56	50	52	57
Bean Price	10.03	11.47	12.71	14.20	12.80	11.00
Operator and Farmland Return						
Corn	198	501	630	570	274	365
Soybeans	289	444	444	407	338	288
Corn 66% Beans 33%	228	482	568	516	295	339

Cash Rent

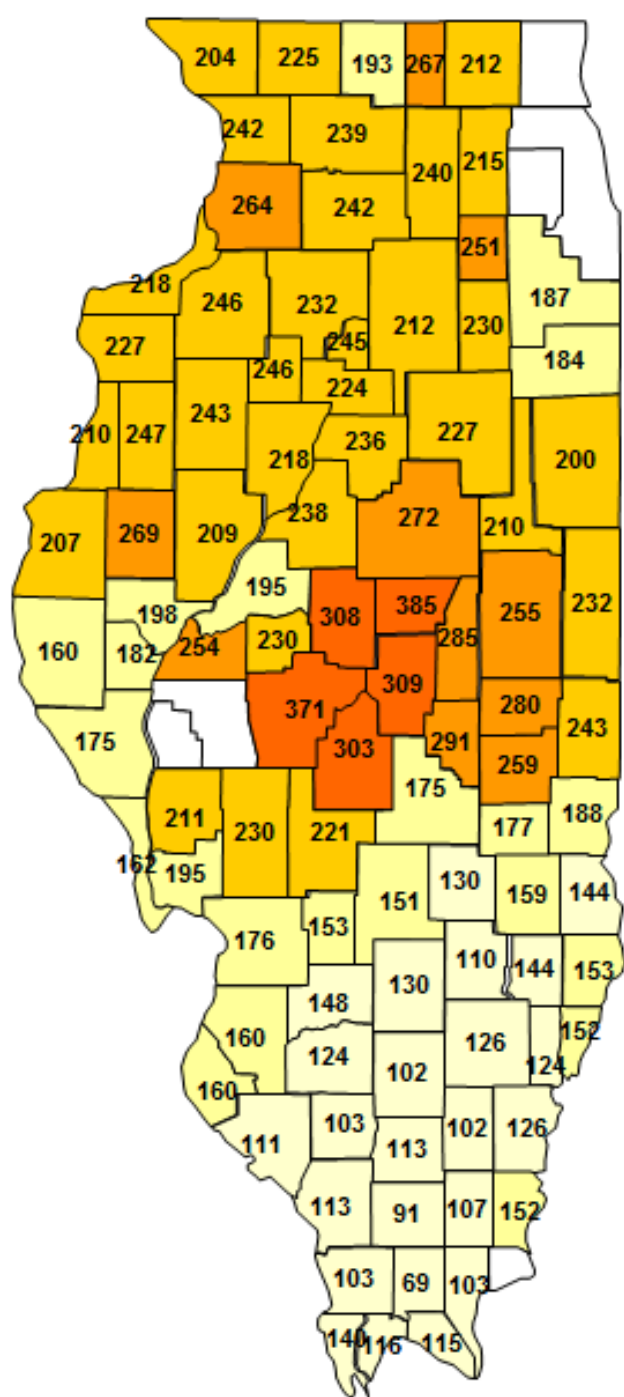
- **Fixed cash rent**
- **Usually paid in one or two installments, one in spring, one in fall**
- **Typically one year in length**
- **Difficulty in setting cash rent each year**
- **Concerns with fertilizer applications**
- **Concerns with yield documentation**

- **Note on land owner risk reductions: Income risk is reduced during a crop year but not across years**
- **Warning to land owners: Lose a great deal of information useful in understanding the investment (other sources, also professional farm management)**

Illinois Cash Rents, 1970 - 2013



Cash Rent by County, 2013

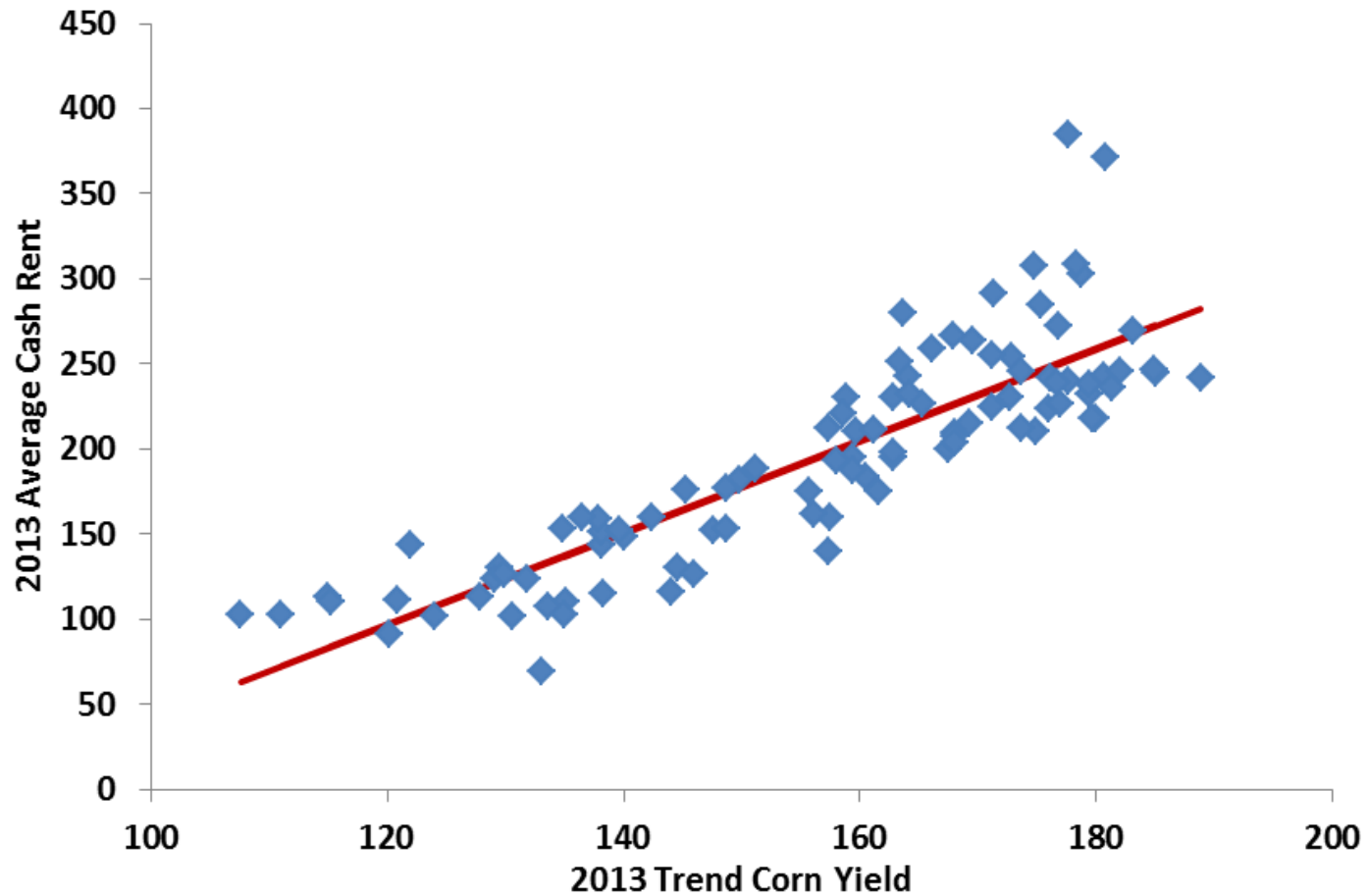


Released by USDA,
September 7, 2013

2013 cash rents

Average cash rents

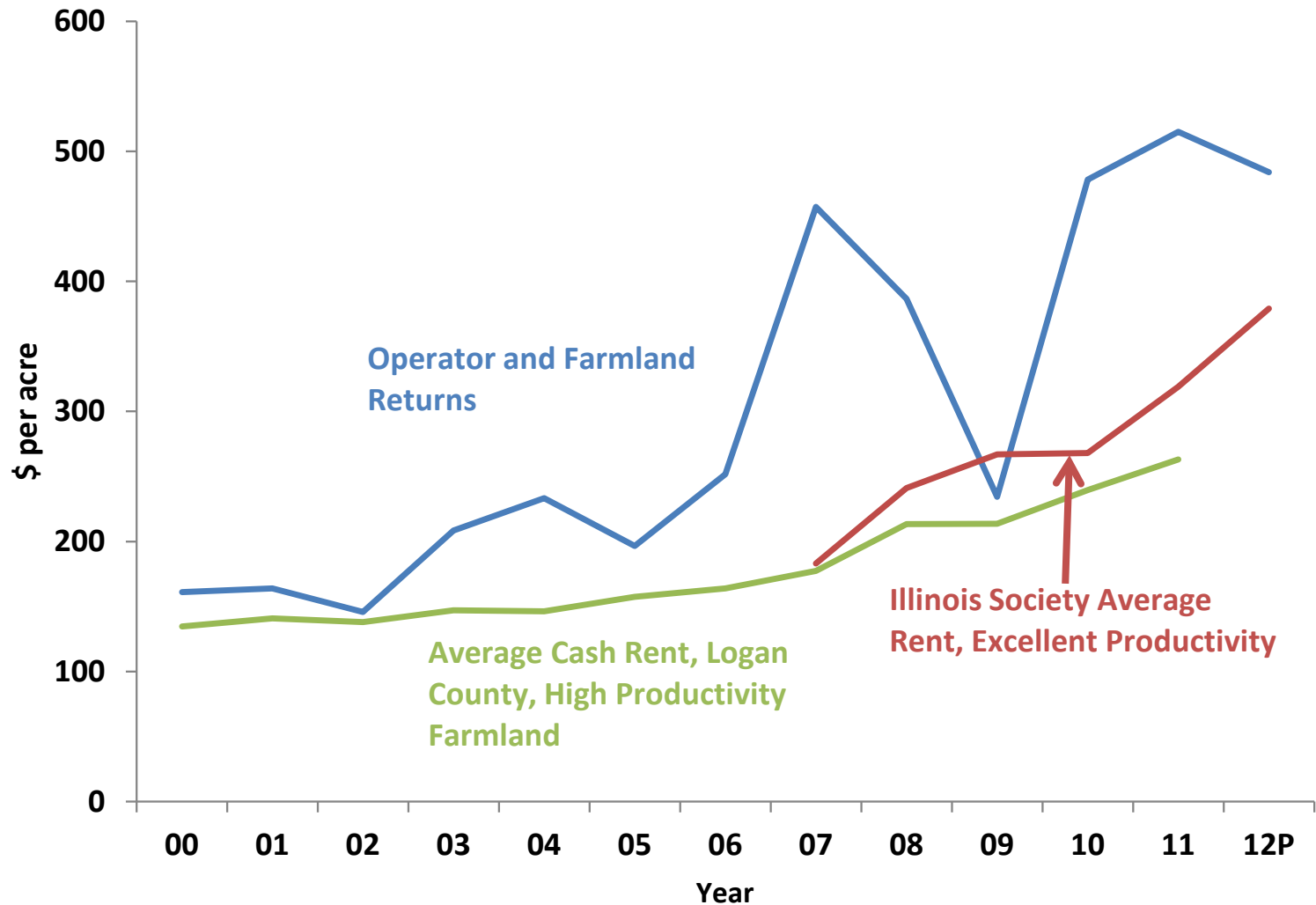
Average County Cash Rent Related to Trend Yield



Average Versus Professionally Managed, 2013

Productivity Class¹	Average NASS Rent²	Professionally Managed Rent³	Difference⁴
	\$/acre	\$/acre	\$/acre
Excellent	313	388	75
Good	259	332	73
Average	205	278	73
Fair	151	224	73

Returns and Rents



Variable Cash Rent

- Many different types, illustrate a base rent with bonus

- Base rent with bonus
 - Minimum cash rent
 - Bonus if gross revenue is above a specified level

- Issues with crop insurance payments in 2012
- No regret bonus (high minimum and then sharing)

Example of Terms

FAST Spreadsheet (Cash Rent with Bonus)

Panel A. Parameters of Cash Lease (agree on parameters before crop year begins)

A. Base cash rent ¹	<u>\$220</u>			
B. Maximum cash rent ²	<u>\$550</u>			
C. Crop	<u>Corn</u>	<u>Soybeans</u>	<u> </u>	<u> </u>
D. Crop revenue trigger ³	<u>\$700</u>	<u>\$500</u>	<u> </u>	<u> </u>
E. Landlord share above revenue trigger ⁴	<u>40%</u>	<u>45%</u>	<u> </u>	<u> </u>
F. Share of acres ⁵	<u>66%</u>	<u>34%</u>	<u> </u>	<u> </u>

Example of Payment

Panel B. Calculation of Bonus (after yield and price are known)

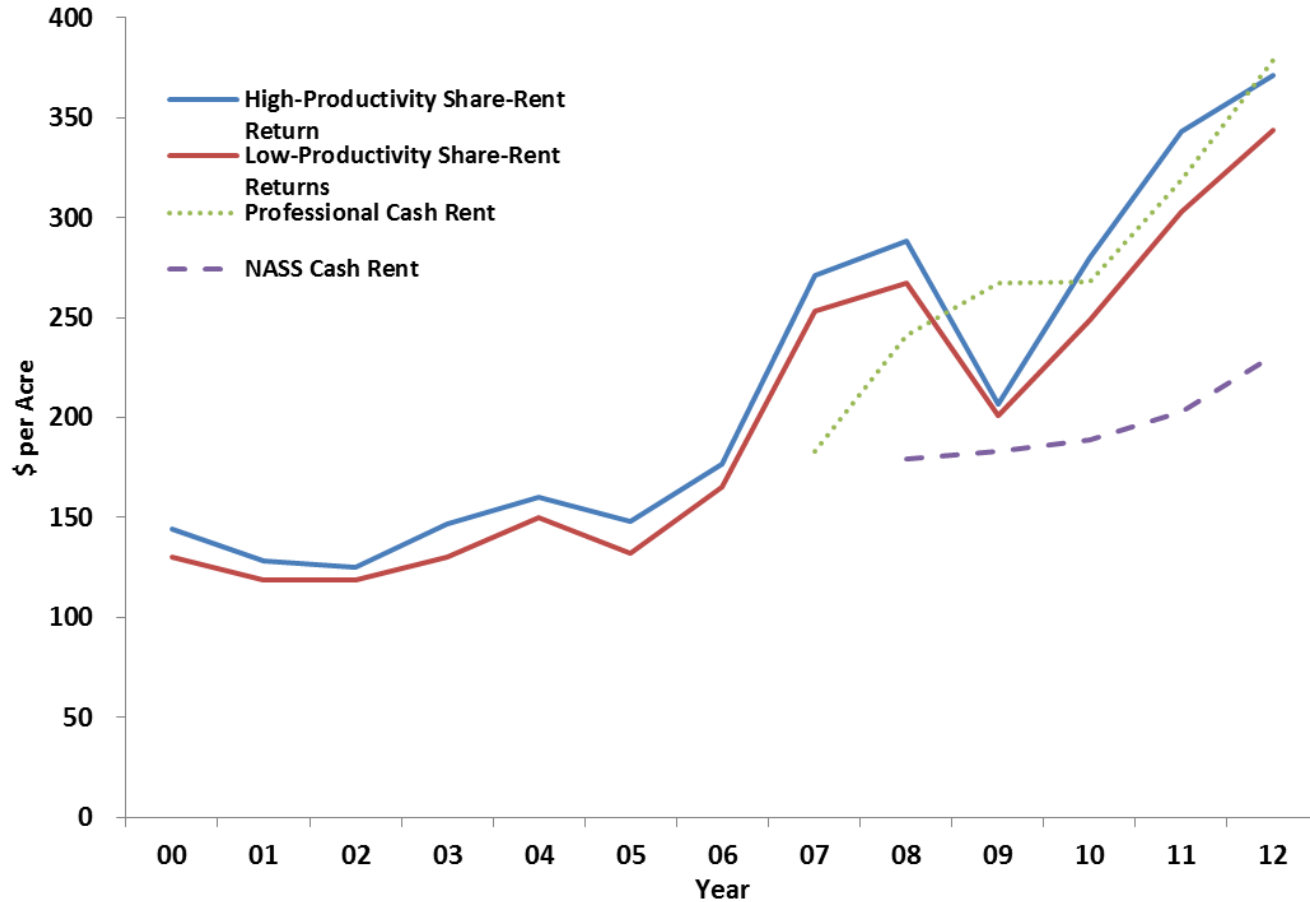
G. Actual yield ⁶	<u>220</u>	<u>60</u>	<u> </u>	<u> </u>
H. Price ⁷	<u>\$4.00</u>	<u>\$11.00</u>	<u> </u>	<u> </u>
I. Crop revenue (G x H)	<u>\$880</u>	<u>\$660</u>	<u> </u>	<u> </u>
J. Revenue above crop revenue trigger (I - D) (put \$0 if less than \$0)	<u>\$180</u>	<u>\$160</u>	<u> </u>	<u> </u>
K. Bonus per crop (E x J)	<u>\$72</u>	<u>\$72</u>	<u> </u>	<u> </u>
L. Acre weighted bonus (F x K)	<u>\$48</u>	<u>\$24</u>	<u> </u>	<u> </u>
M. Average bonus (sum of L)	<u>\$72</u>			

Typical Share Rent

Northern/Central Illinois

- Share the following items (typically 50/50): fertilizer, seed, chemicals, drying, storage, crop insurance
- Landlord provides land, pays taxes
- Farmer provides equipment and labor
- Often an additional rent of \$20 to \$35 per acre

Share Rent Versus Cash Rent Returns



Lease Comparisons for 2014

- Rental arrangements do not change size of operator and land return, change the distribution between land owner and farmer
- Operator and farmland return =
Land owner return + Farmer return

Land Rental Comparison Tool

- Rental Comparison tool on FAST (Microsoft Excel) – soon to be released (University of Illinois Farmland Center and farmdoc)
- Looks at risk/returns of alternatives

Budgets

	Corn	Soybeans
Yield	196	57
Price	\$4.60	\$11.00
Gross	\$902	\$627
Non-land Costs	\$547	\$339
Opr and land return	\$365	\$288
Direct costs	\$357	\$180

- Central Illinois, high-productivity
- 2/3 corn, 1/3 soybeans
- 80% RP policy, included land owner in share rent and variable cash

Three leases

- Share rent with a \$30 additional per acre cash rent

- Cash rent with a \$293 per acre rent

- Variable cash rent
 - \$220 minimum
 - Share in revenue
 - Above \$700 for corn (40%)
 - Above \$500 for soybeans (45%)

Return and Risk Comparisons, 2014

	Share Rent (\$30 rent)	Cash Rent (\$293)	Variable Cash Rent
Land owner			
Expected (average)	\$293	\$293	\$293
Chance of revenue below:			
\$275	44%	0%	40%
\$225	20%	0%	7%
\$200	0%	0%	0%
Farmer			
Expected (average)	\$48	\$48	\$48
Chance of revenue below:			
\$20	42%	54%	44%
\$0	34%	39%	39%
-\$20	0%	23%	7%

- Back to 2001 - 2005 level returns, with more risk to farmer
- What will the market do with cash rent and additional rent levels

Two additional leases

- Cash rent at \$350 per acre

- Variable cash rent
 - \$300 minimum
 - Share begins at:
 - \$1,000 of corn revenue
 - \$800 of soybean revenue

Additional Comparisons

	Share Rent (\$30 rent)	Cash Rent (\$293)	Cash Rent (\$350)	Variable Cash Rent	Variable No Regret
Land owner					
Expected (average)	\$293	\$293	\$350	\$293	\$310
Chance of revenue below:					
\$275	44%	0%	0%	40%	0%
\$225	20%	0%	0%	7%	0%
\$200	0%	0%	0%	0%	0%
Farmer					
Expected (average)	\$48	\$48	-\$9	\$48	\$31
Chance of revenue below:					
\$20	42%	54%	65%	44%	53%
\$0	34%	39%	56%	39%	39%
-\$20	0%	23%	39%	7%	36%

Summary

- **Knowledge is key, particularly for land owners, even if using cash rents**
- **Reasonable expectations are key**
- **Any of the major leasing types works**
- **Farmland has and, in my opinion, will continue to be a very good investment**