

Farmland Leases: A Reset Needed

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Discussion Points

- **Operator land ownership and leasing arrangements**
- **Trends in operator and farmland returns**
- **Determining a cash rental rate**
 - **Cash rent market approach, average cash rents in Illinois**
 - **Net return to operator and land**
 - **Landowner's adjusted net-share rent**
 - **Percent of gross returns**
- **Variable cash rent leases**
- **Summary**

Operator Control of Illinois Farmland

Percentage of land owned, crop shared and cash rented for Illinois farms.

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Northern Illinois Pure Grain Farms						
% owned	18	18	19	20	21	20
% crop shared	26	25	23	22	21	21
% cash rented	56	57	58	58	58	59
Central Illinois Pure Grain Farms (High SPR)						
% owned	14	14	14	14	14	15
% crop shared	53	51	49	49	47	46
% cash rented	33	35	37	37	39	39
Southern Illinois Pure Grain Farms						
% owned	20	20	21	21	24	22
% crop shared	42	40	41	42	37	37
% cash rented	38	40	38	37	39	41
State of Illinois (All Farms)						
% owned	23	23	23	24	24	23
% crop shared	37	36	36	35	34	34
% cash rented	40	41	41	41	42	43

Source: Illinois FBFM Association and the University of Illinois

Professional Farm Managers Leases - 2015

- **42% Crop share leases**
 - 25% Traditional
 - 11% Traditional with supplement cash rents
 - 6% Traditional with other adjustments
- **51% Cash rent leases**
 - 31% fixed
 - 20% variable
- **7% Other (custom farming arrangements)**

Operator and Farmland Returns

Per Acre Operator and Farmland Returns - Northern Illinois

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016F</u>	2016F - 2012 <u>change</u>
Gross Revenue	\$1,012	\$927	\$811	\$737	\$676	-\$336
Total direct costs	\$317	\$333	\$329	\$301	\$279	-\$38
Total power costs	\$124	\$142	\$151	\$134	\$140	\$16
Total overhead costs	\$69	\$74	\$75	\$76	\$77	\$8
Total non-land costs	\$510	\$549	\$555	\$511	\$496	-\$14
Operator and land return	\$502	\$378	\$256	\$226	\$180	-\$322

Source: University of Illinois

2016F - Forecast

Rotation: 60% C / 40% SB

Operator and Farmland Returns

Per Acre Operator and Farmland Returns - Central Illinois

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016F</u>	2016F - 2012 <u>change</u>
Gross Revenue	\$996	\$891	\$791	\$744	\$734	-\$262
Total direct costs	\$306	\$321	\$316	\$308	\$270	-\$36
Total power costs	\$109	\$119	\$125	\$115	\$113	\$4
Total overhead costs	\$57	\$56	\$61	\$62	\$64	\$7
Total non-land costs	\$472	\$496	\$502	\$485	\$447	-\$25
Operator and land return	\$524	\$395	\$289	\$259	\$287	-\$237

Source: University of Illinois

2016F - Forecast

Rotation: 52% C / 48% SB, High Productivity Farmland

Operator and Farmland Returns

Per Acre Operator and Farmland Returns - Southern Illinois

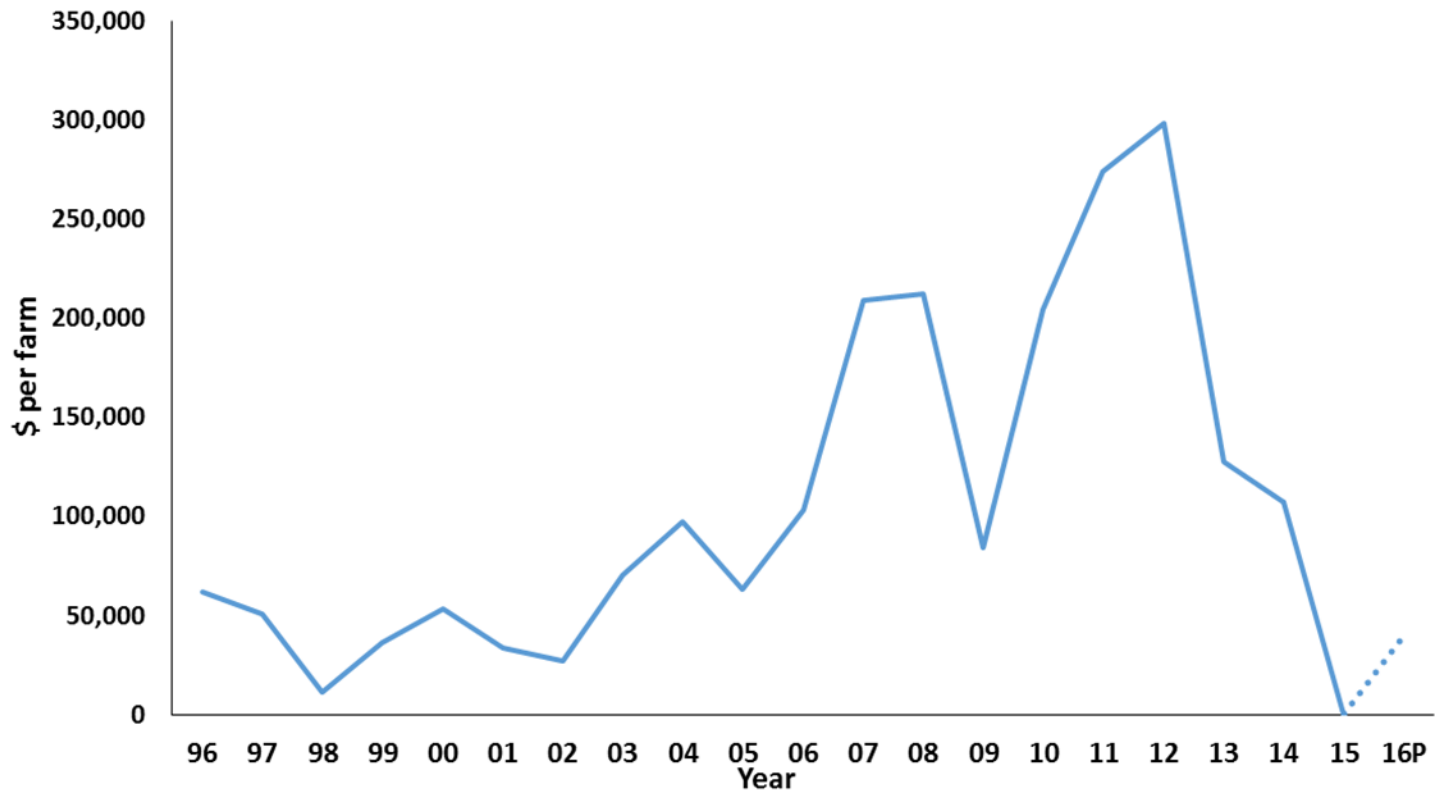
	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016F</u>	2016F - 2012 <u>change</u>
Gross Revenue	\$793	\$794	\$668	\$606	\$564	-\$229
Total direct costs	\$271	\$299	\$292	\$270	\$245	-\$26
Total power costs	\$128	\$142	\$138	\$140	\$134	\$6
Total overhead costs	\$72	\$77	\$81	\$85	\$85	\$13
Total non-land costs	\$471	\$518	\$511	\$495	\$464	-\$7
Operator and land return	\$322	\$276	\$157	\$111	\$100	-\$222

Source: University of Illinois

2016F - Forecast

Rotation: 45% C / 45% SB / 10% W / 4% DCSB

Net Farm Income on Grain Farms

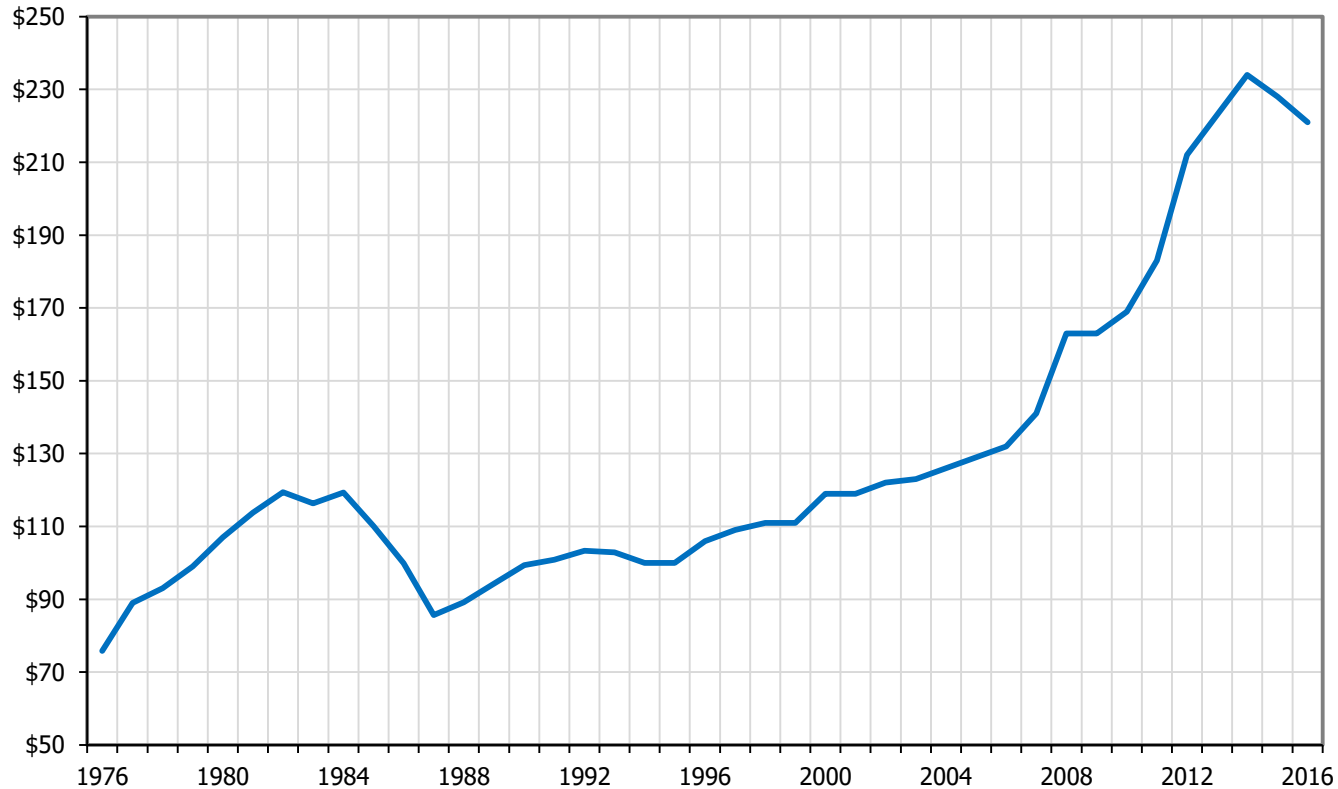


Determining a Cash Rental Rate

- **Cash rent market approach**
- **Net return to operator and land**
- **Landowner's adjusted net-share rent**
- **Percent of gross returns**
- **Landowner's ownership cost**
- **Percent of land value**
- **Dollars per bushel of production**
- **Fixed bushel rent**

Average Cash Rents in Illinois

Average Cash Rent in Illinois, 1976 to 2016



Source: USDA-NASS

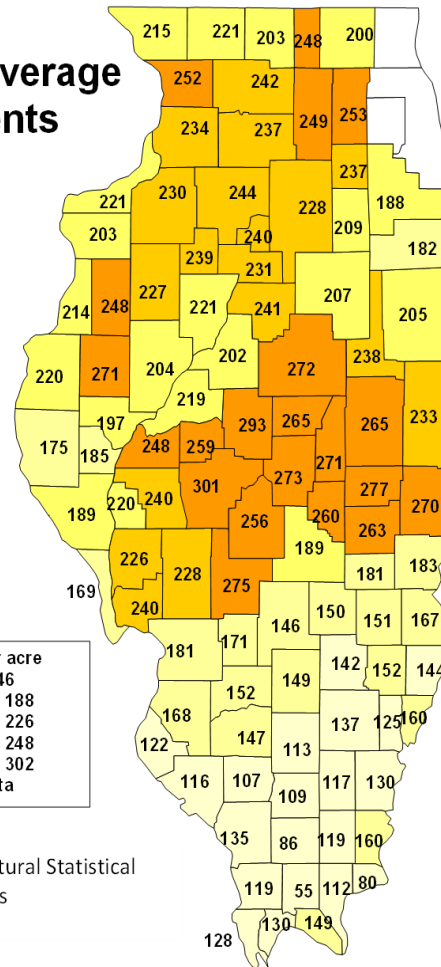
Average Cash Rents in Illinois

Year	Cash Rent Per Acre	Dollar Change	Percent Change
2007	\$141		
2008	\$163	\$22	15.6%
2009	\$163	\$0	0.0%
2010	\$169	\$6	3.7%
2011	\$183	\$14	8.3%
2012	\$212	\$29	15.8%
2013	\$223	\$11	5.2%
2014	\$234	\$11	4.9%
2015	\$228	-\$6	-2.6%
2016	\$221	-\$7	-3.1%

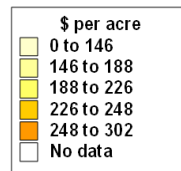
Source: USDA NASS

Average Illinois Cash Rents by County

Figure 1. 2016 Average County Cash Rents



See farmdocDAILY Sept., 13, 2016



Source: National Agricultural Statistical Service, USDA, QuickStats

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Average and Professionally Managed Farmland, Illinois

Land Productivity (Expected corn yield)	Averages ¹		Professionally Managed Farmland ²			
	2014	2016	2014	2015	2016	2017P
	\$/acre		\$/acre	\$/acre	\$/acre	\$/acre
State average	234	221				
Excellent (190+ bushels)	293	281	375	350	325	301
Good (170 - 190 bushels)	243	230	323	295	283	263
Average (150 -170 bushels)	191	178	277	250	247	224
Fair (Less than 150 bushels)			219	200	190	178

¹ Compiled from National Agricultural Statistical Service data.

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

Mid 1/3 Average – Excellent Farmland

Over 190 bushels per acre, professionally managed farmland

Year	Cash Rent Per Acre	Dollar Change	Percent Change
2007	\$183		
2008	\$241	\$58	31.7%
2009	\$267	\$26	10.8%
2010	\$268	\$1	0.4%
2011	\$319	\$51	19.0%
2012	\$379	\$60	18.8%
2013	\$396	\$17	4.5%
2014	\$375	-\$21	-5.3%
2015	\$350	-\$25	-6.7%
2016	\$325	-\$25	-7.1%

Source: Illinois Society of Professional Farm Managers Rural Appraisers

Mid 1/3 Average – Good Farmland

170 to 190 bushels per acre, professionally managed farmland

Year	Cash Rent Per Acre	Dollar Change	Percent Change
2007	\$164		
2008	\$207	\$43	26.2%
2009	\$221	\$14	6.8%
2010	\$231	\$10	4.5%
2011	\$271	\$40	17.3%
2012	\$331	\$60	22.1%
2013	\$339	\$8	2.4%
2014	\$323	-\$16	-4.7%
2015	\$295	-\$28	-8.7%
2016	\$283	-\$12	-4.1%

Source: Illinois Society of Professional Farm Managers Rural Appraisers

Mid 1/3 Average – Average Farmland

150 to 170 bushels per acre, professionally managed farmland

Year	Cash Rent Per Acre	Dollar Change	Percent Change
2007	\$144		
2008	\$172	\$28	19.4%
2009	\$187	\$15	8.7%
2010	\$189	\$2	1.1%
2011	\$220	\$31	16.4%
2012	\$270	\$50	22.7%
2013	\$285	\$15	5.6%
2014	\$277	-\$8	-2.8%
2015	\$250	-\$27	-9.7%
2016	\$247	-\$3	-1.2%

Source: Illinois Society of Professional Farm Managers Rural Appraisers

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Mid 1/3 Average – Fair Farmland

Less than 150 bushels per acre, professionally managed farmland

Year	Cash Rent Per Acre	Dollar Change	Percent Change
2007	\$120		
2008	\$138	\$18	15.0%
2009	\$155	\$17	12.3%
2010	\$156	\$1	0.6%
2011	\$183	\$27	17.3%
2012	\$218	\$35	19.1%
2013	\$235	\$17	7.8%
2014	\$219	-\$16	-6.8%
2015	\$200	-\$19	-8.7%
2016	\$190	-\$10	-5.0%

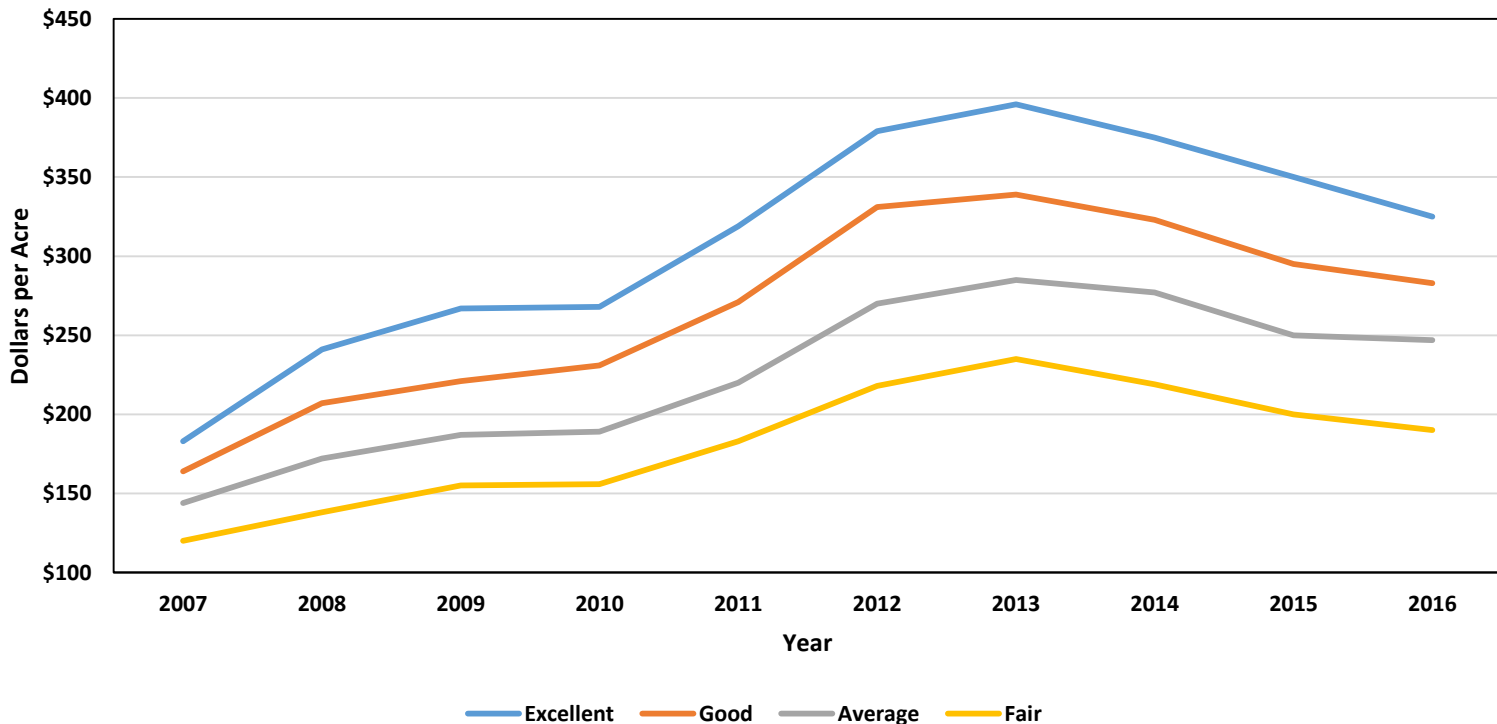
Source: Illinois Society of Professional Farm Managers Rural Appraisers

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Cash Rent by Land Productivity

Professionally Managed Farmland

Mid 1/3 Average Cash Rent by Quality of Farmland



Source: Illinois Society of Professional Farm Managers and Rural Appraisers

Determining a Cash Rental Rate

- **Cash rent market approach**
- **Net return to operator and land**
- **Landowner's adjusted net-share rent**
- **Percent of gross returns**

Net Return to Operator and Land

2017 Corn and Soybean Budgets Northern Illinois

	Corn after Soybeans	Soybeans after Corn
Yield per Acre	197	61
Price per Bushel	\$3.50	\$9.75
Crop Revenue	\$690	\$595
ARC - PLC	\$0	\$0
Crop Insurance	\$0	\$0
Gross Revenue	\$690	\$595
Total non-land costs	\$573	\$317
Operator and land return	\$117	\$278

Source: University of Illinois

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Net Return to Operator and Land

2017 Corn and Soybean Budgets Central Illinois - High Soil Productivity

	Corn after Soybeans	Soybeans after Corn
Yield per Acre	203	61
Price per Bushel	\$3.50	\$9.75
Crop Revenue	\$711	\$595
ARC - PLC	\$0	\$0
Crop Insurance	\$0	\$0
Gross Revenue	\$711	\$595
Total non-land costs	\$523	\$320
Operator and land return	\$188	\$275

Source: University of Illinois

Net Return to Operator and Land

2017 Corn and Soybean Budgets Central Illinois - Low Soil Productivity

	Corn after Soybeans	Soybeans after Corn
Yield per Acre	187	55
Price per Bushel	\$3.50	\$9.75
Crop Revenue	\$655	\$536
ARC - PLC	\$0	\$0
Crop Insurance	\$0	\$0
Gross Revenue	\$655	\$536
Total non-land costs	\$531	\$290
Operator and land return	\$124	\$246

Source: University of Illinois

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Net Return to Operator and Land

2017 Corn and Soybean Budgets Southern Illinois - Low Soil Productivity

	Corn after Soybeans	Soybeans after Corn
Yield per Acre	165	49
Price per Bushel	\$3.50	\$9.75
Crop Revenue	\$578	\$478
ARC - PLC	\$0	\$0
Crop Insurance	\$0	\$0
Gross Revenue	\$578	\$478
Total non-land costs	\$546	\$345
Operator and land return	\$32	\$133

Source: University of Illinois

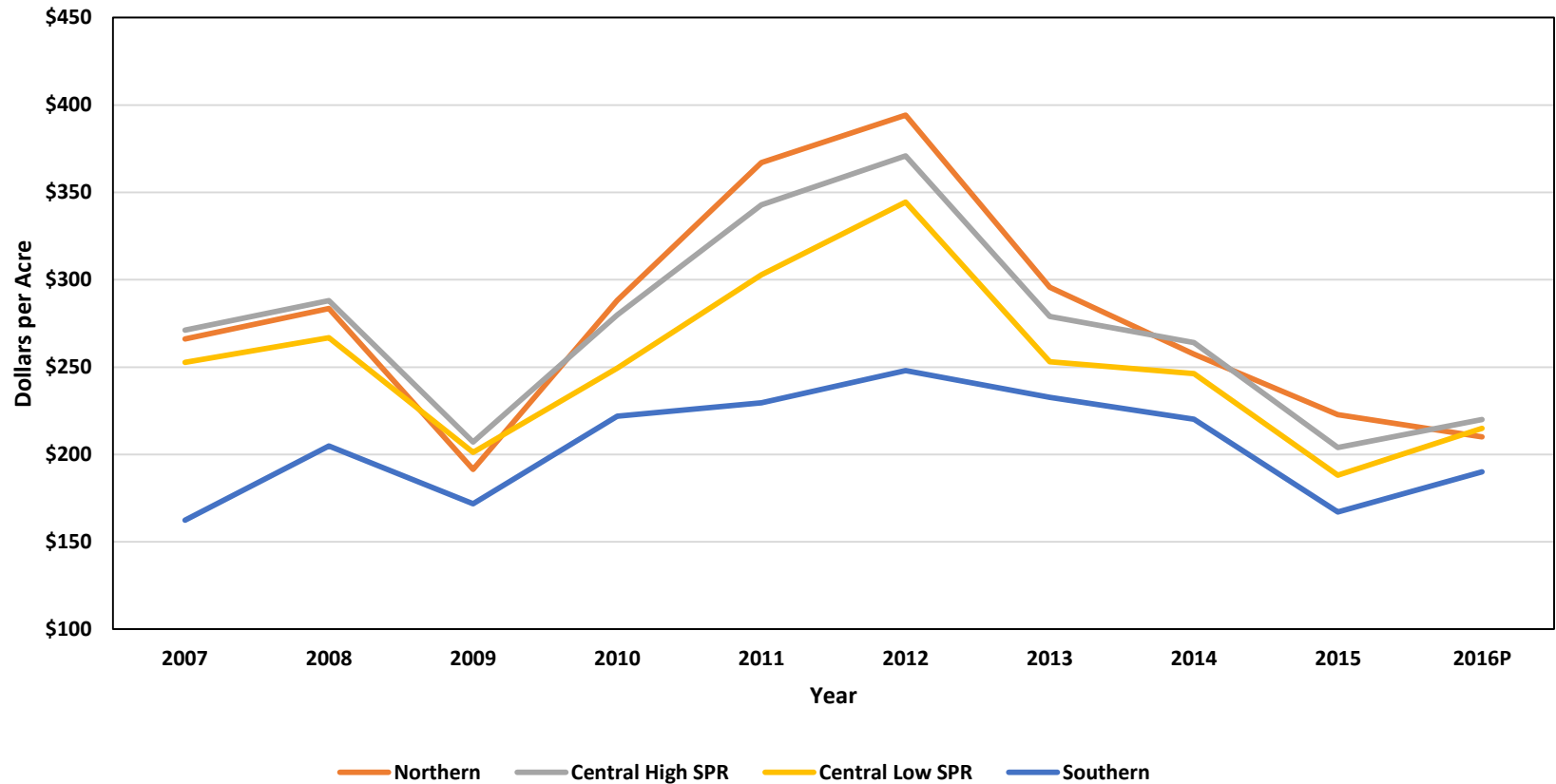
Determining a Cash Rental Rate

- **Cash rent market approach**
- **Net return to operator and land**
- **Landowner's adjusted net-share rent**
- **Percent of gross returns**

Landlord's Adjusted Net-Share Rent

Year	Northern	Central High SPR	Central Low SPR	Southern
2007	\$266	\$271	\$253	\$162
2008	\$283	\$288	\$267	\$205
2009	\$191	\$207	\$201	\$172
2010	\$288	\$280	\$249	\$222
2011	\$367	\$343	\$303	\$230
2012	\$394	\$371	\$344	\$248
2013	\$296	\$279	\$253	\$233
2014	\$257	\$264	\$246	\$220
2015	\$223	\$204	\$188	\$167
2016P	\$210	\$220	\$215	\$190
2007 - 2016P avg	\$278	\$273	\$252	\$205
2007 - 2016P high	\$394	\$371	\$344	\$248
2007 - 2016P low	\$191	\$204	\$188	\$162
2000 - 2006 avg	\$142	\$147	\$135	\$110
2000 - 2016P avg	\$222	\$221	\$204	\$166

Landlord's Adjusted Net-Share Rent



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Determining a Cash Rental Rate

- **Cash rent market approach**
- **Net return to operator and land**
- **Landowner's adjusted net-share rent**
- **Percent of gross returns**

Percent of Gross Returns

Northern

Year	Crop Returns	LLD's Adjusted Net-Share Rent	Net-Share Rent as % Crop Returns	Percent of Crop Returns		
				30%	35%	40%
2007	\$698	\$266	38.1	\$209	\$244	\$279
2008	\$793	\$283	35.7	\$238	\$278	\$317
2009	\$664	\$191	28.8	\$199	\$232	\$266
2010	\$811	\$288	35.5	\$243	\$284	\$324
2011	\$1,005	\$367	36.5	\$302	\$352	\$402
2012	\$1,102	\$394	35.8	\$331	\$386	\$441
2013	\$925	\$296	32.0	\$278	\$324	\$370
2014	\$837	\$257	30.8	\$251	\$293	\$335
2015	\$734	\$223	30.4	\$220	\$257	\$294
2016P	\$677	\$210	31.0	\$203	\$237	\$271
2007 - 2016P avg	\$825	\$278	33.5	\$247	\$289	\$330
2007 - 2016P high	\$1,102	\$394	38.1	\$331	\$386	\$441
2007 - 2016P low	\$664	\$191	28.8	\$199	\$232	\$266
2000 - 2006 avg	\$406	\$142	34.9	\$122	\$142	\$163
2000 - 2016P avg	\$652	\$222	34.0	\$196	\$228	\$261

Percent of Gross Returns

Central High SPR

Year	Crop Returns	LLD's Adjusted Net-Share Rent	Net-Share Rent as % Crop Returns	Percent of Crop Returns		
				30%	35%	40%
2007	\$703	\$271	38.6	\$211	\$246	\$281
2008	\$781	\$288	36.9	\$234	\$273	\$312
2009	\$702	\$207	29.5	\$211	\$246	\$281
2010	\$788	\$280	35.5	\$236	\$276	\$315
2011	\$941	\$343	36.4	\$282	\$329	\$376
2012	\$1,038	\$371	35.7	\$311	\$363	\$415
2013	\$864	\$279	32.3	\$259	\$302	\$346
2014	\$829	\$264	31.8	\$249	\$290	\$332
2015	\$695	\$204	29.3	\$209	\$243	\$278
2016P	\$734	\$220	30.0	\$220	\$257	\$294
2007 - 2016P avg	\$808	\$273	33.6	\$242	\$283	\$323
2007 - 2016P high	\$1,038	\$371	38.6	\$311	\$363	\$415
2007 - 2016P low	\$695	\$204	29.3	\$209	\$243	\$278
2000 - 2006 avg	\$413	\$147	35.6	\$124	\$145	\$165
2000 - 2016P avg	\$645	\$221	34.4	\$194	\$226	\$258

Percent of Gross Returns

Central Low SPR

Year	Crop Returns	LLD's Adjusted Net-Share Rent	Net-Share Rent as % Crop Returns	Percent of Crop Returns		
				30%	35%	40%
2007	\$661	\$253	38.2	\$198	\$231	\$264
2008	\$738	\$267	36.2	\$221	\$258	\$295
2009	\$667	\$201	30.2	\$200	\$233	\$267
2010	\$713	\$249	35.0	\$214	\$250	\$285
2011	\$853	\$303	35.5	\$256	\$299	\$341
2012	\$981	\$344	35.1	\$294	\$343	\$392
2013	\$805	\$253	31.4	\$242	\$282	\$322
2014	\$780	\$246	31.6	\$234	\$273	\$312
2015	\$657	\$188	28.6	\$197	\$230	\$263
2016P	\$683	\$215	31.5	\$205	\$239	\$273
2007 - 2016P avg	\$754	\$252	33.3	\$226	\$264	\$302
2007 - 2016P high	\$981	\$344	38.2	\$294	\$343	\$392
2007 - 2016P low	\$657	\$188	28.6	\$197	\$230	\$263
2000 - 2006 avg	\$386	\$135	35.0	\$116	\$135	\$154
2000 - 2016P avg	\$602	\$204	34.0	\$181	\$211	\$241

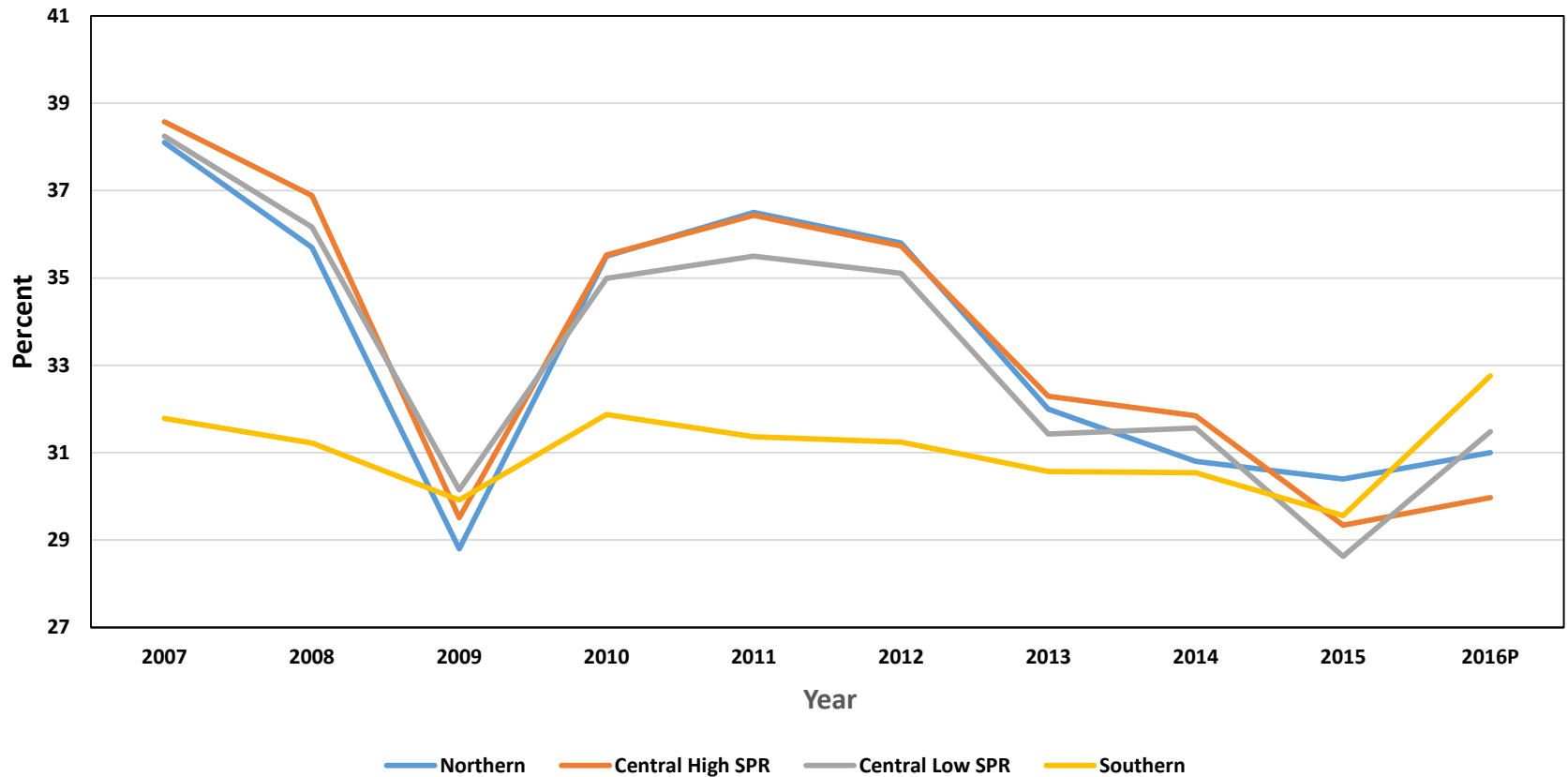
Percent of Gross Returns

Southern

Year	Crop Returns	LLD's Adjusted Net-Share Rent	Net-Share Rent as % Crop Returns	Percent of Crop Returns		
				30%	35%	40%
2007	\$511	\$162	31.8	\$153	\$179	\$204
2008	\$656	\$205	31.2	\$197	\$230	\$262
2009	\$574	\$172	29.9	\$172	\$201	\$230
2010	\$696	\$222	31.9	\$209	\$244	\$278
2011	\$732	\$230	31.4	\$220	\$256	\$293
2012	\$794	\$248	31.2	\$238	\$278	\$318
2013	\$761	\$233	30.6	\$228	\$266	\$304
2014	\$721	\$220	30.5	\$216	\$252	\$288
2015	\$565	\$167	29.6	\$170	\$198	\$226
2016P	\$580	\$190	32.8	\$174	\$203	\$232
2007 - 2016P avg	\$659	\$205	31.1	\$198	\$231	\$264
2007 - 2016P high	\$794	\$248	32.8	\$238	\$278	\$318
2007 - 2016P low	\$511	\$162	29.6	\$153	\$179	\$204
2000 - 2006 avg	\$352	\$110	31.1	\$106	\$123	\$141
2000 - 2016P avg	\$533	\$166	31.1	\$160	\$186	\$213

Percent of Gross Returns

Net-Share Rent as a % of Crop Returns



Variable Cash Rent Leases

- **Generally contains minimum or base rent amount, considered cash lease by FSA**
- **Rent tied to yields and/or prices – total revenue.**
- **Usually actual yields and local cash prices as negotiated. Can be crop insurance prices**
- **Reduces risk for the operator while providing additional income for landlord when returns are high**

Variable Cash Rent Leases

- **Disadvantages**

- **Can be more risk to the landowner**
- **Windfall profits to the operator in real good times are reduced**
- **More negotiation needed (base rent, what are factors in varying rent, price determination, yields must be verified)**
- **What's included in revenue (crop insurance and government payments?)**

Variable Cash Rent Lease Examples

- **35% of gross returns with \$200 per acre minimum. See previous slides. Actual yield times first of month price for April – November at local elevator.**

$$210 \text{ bpa} \times \$3.50 = \$735 \times .35 = \$257$$

$$65 \text{ bpa} \times \$9.75 = \$634 \times .35 = \$222$$

Variable Cash Rent Lease Examples

- **\$200 base rent plus 50% of revenue over nonland costs plus base rent. Nonland costs \$525 per acre for corn and \$325 per acre for soybeans.**
- **Revenue trigger \$725 (\$525 plus \$200) for corn and \$525 (\$325 plus \$200) for soybeans.**

Variable Cash Rent Lease Examples

$$210 \text{ bpa} \times \$3.50 = \$735$$

$$\text{Bonus } \$735 - \$725 \times .5 = \$5$$

$$65 \text{ bpa} \times \$9.75 = \$634$$

$$\text{Bonus } \$634 - \$525 \times .5 = \$54.50$$

Summary

- **Since 2012, operating in a lower return environment, more like pre 2007 times**
- **Rents that adjusted quickly to higher returns might not have adjusted as quickly to lower returns**
- **Rents that adjusted more moderately to higher returns probably need less adjustment downward**

Summary continued..

- **Flexible cash rent leases (or crop share) are an alternative in times of uncertain revenues**
- **Even flexible cash rent leases need to be reviewed, is base to high or % of gross to high?**
- **May be time to make hard decision and terminate some unprofitable leases**
- **As always, communication between the operator and landowner the key**

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Thanks



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