

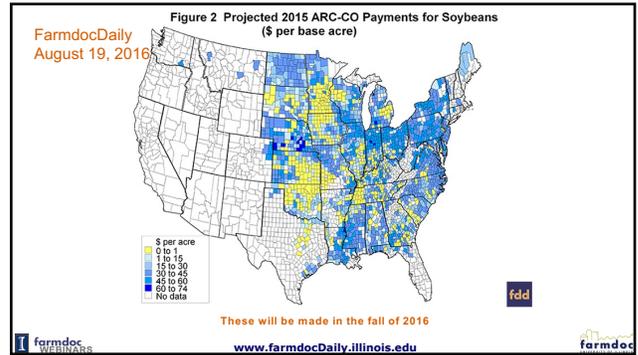
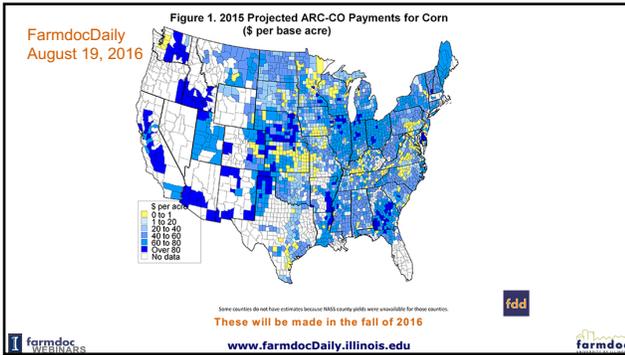
**Market Year Average Prices and Forecasts**

	Period				
	75-05	06-13	14	15	16P
Corn (\$/bu.)	2.33	4.70	3.70	3.70	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  
\$9.30 for soybeans

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Input	County	MYA	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark	ARC	ARC	ARC	
Year	Yield	Price <sup>1</sup>	Yield <sup>2</sup>	Price <sup>3</sup>	Guarantee <sup>4</sup>	Payment <sup>5</sup>	Payment <sup>6</sup>
2009	186	3.55					
2010	170	5.18					
2011	160	6.22					
2012	125	6.89					
2013	189	4.46					
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
<b>Five-Year Average</b>						<b>24.16</b>	<b>17</b>

National loan rate equals: 3.95      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.<sup>1</sup>**

	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 govt payments	24	24	24	24	22	0	0	0
Crop insurance proceeds	5	32	23	295	61	10	31	10
<b>Gross revenue</b>	<b>\$732</b>	<b>\$908</b>	<b>\$1,133</b>	<b>\$1,192</b>	<b>\$973</b>	<b>\$883</b>	<b>\$842</b>	<b>\$774</b>

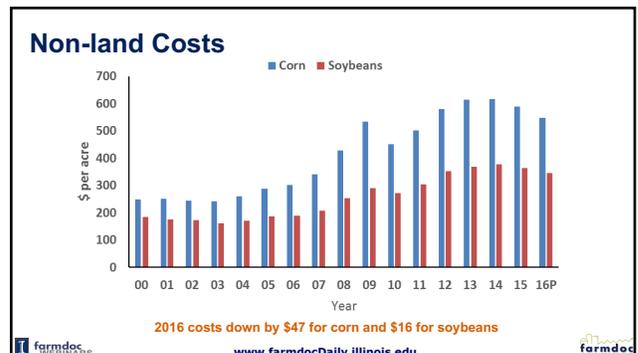
Revenue down in 2016  
 High yields and low price

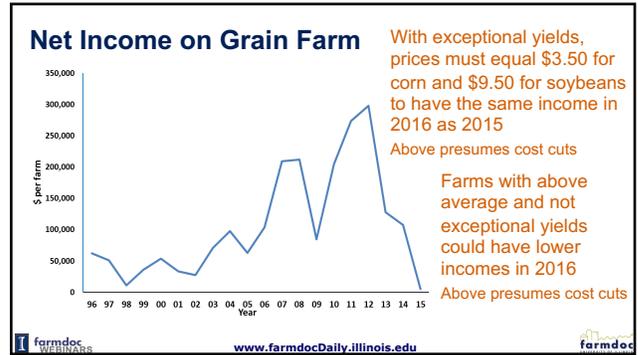
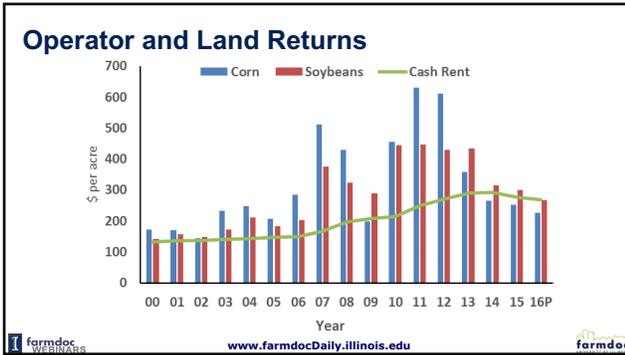
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**Table 4. Soybean Revenues and Costs, Central Illinois – High Productivity Farmland, Actual for 2009 through 2015, Projected for 2016.<sup>1</sup>**

	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 govt payments	24	24	24	24	22	0	0	0
Crop insurance proceeds	3	5	11	26	6	5	7	0
<b>Gross revenue</b>	<b>\$579</b>	<b>\$717</b>	<b>\$749</b>	<b>\$783</b>	<b>\$802</b>	<b>\$692</b>	<b>\$663</b>	<b>\$613</b>

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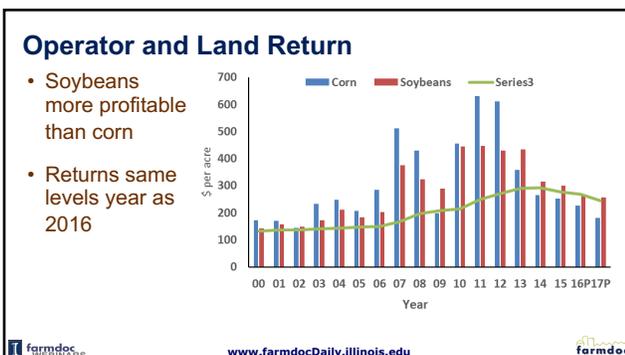


### 2017 Projections

- 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

### 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



### 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)

**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
<b>Gross revenue</b>	<b>\$800</b>	<b>\$608</b>	<b>\$704</b>
Direct costs	340	160	250
Power costs	115	98	107
Overhead costs	65	60	63
<b>Non-land costs</b>	<b>\$520</b>	<b>\$318</b>	<b>\$420</b>
<b>Operator and land returns</b>	<b>\$280</b>	<b>\$290</b>	<b>\$284</b>
Cash rent	245	245	245
<b>Farmer return</b>	<b>\$35</b>	<b>\$45</b>	<b>\$39</b>

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**Long-run Price**

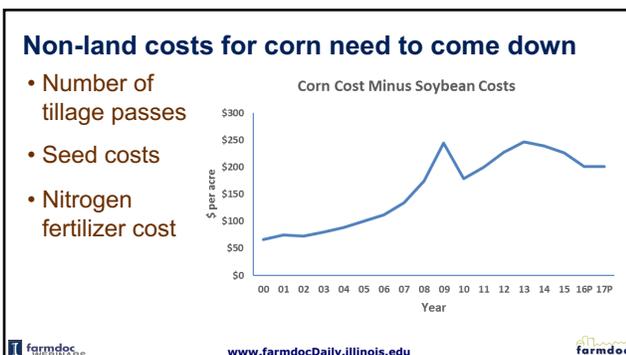
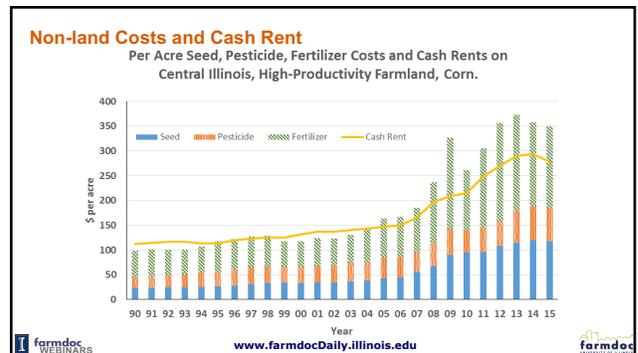
	Corn	Soybeans	Average
Yield	200	64	
Price	\$4.30	\$10.30	
Crop revenue	\$860	\$659	\$760
ARC/PLC	0	0	0
<b>Gross revenue</b>	<b>\$860</b>	<b>\$659</b>	<b>\$760</b>
Direct costs	340	160	250
Power costs	115	98	107
Overhead costs	65	60	63
<b>Non-land costs</b>	<b>\$520</b>	<b>\$318</b>	<b>\$420</b>
<b>Operator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

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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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**Break-even Corn Prices**

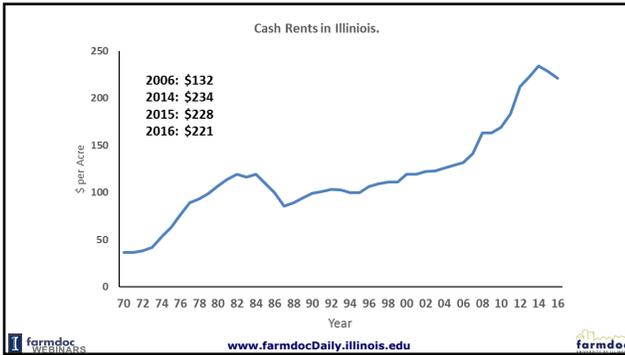
Same Return Corn and Soybeans

Soybean Price	Break-even Corn Price	Soybean Price	Break-even Corn Price
9.00	3.88	9.00	4.00
9.50	4.04	9.50	4.16
10.00	4.2	10.00	4.32
10.50	4.36	10.50	4.49
11.00	4.52	11.00	4.65
11.50	4.68	11.50	4.81

Cost diff = \$200 per acre  
Corn yield = 200 bu/acre  
Soybean yield = 64 bu/acre

Cost diff = \$200 per acre  
Corn yield = 185 bu/acre  
Soybean yield = 60 bu/acre

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### 2017 Break-Even Rents

Expected Corn Yield	2015 Rent	2017 Break-Even
Bu/acre	\$/acre	\$/acre
200	\$268	\$200
185	230	\$185
163	159	\$100

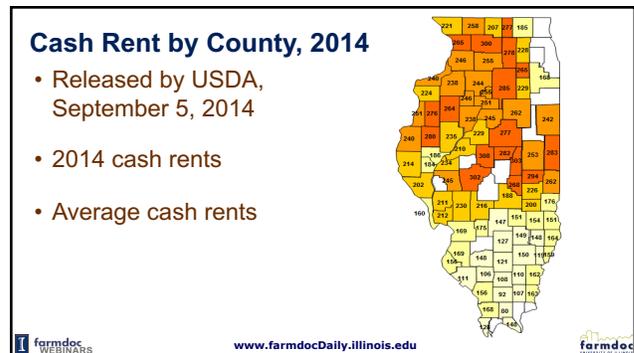
Given \$3.50 corn and \$9.00 soybean price

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### Average and Professionally Managed Rents

Land Productivity (Expected corn yield)	Averages	Professionally Managed Farmland <sup>2</sup>			
	2014	2014	2015	2016	2017P
State average	\$/acre 234	\$/acre	\$/acre	\$/acre	\$/acre
Excellent (190+ bushels)	293	374	350	325	301
Good (170 - 190 bushels)	243	322	295	283	263
Average (150 - 170 bushels)	159	285	250	247	224
Fair (Less than 150 bushels)		214	200	190	178

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### Land Prices

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

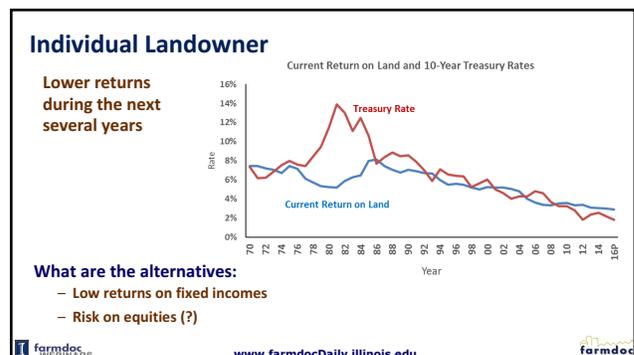
Major factors:

- Farmland returns
- Returns on alternative investments

Other factors

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

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**Land Prices**

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

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**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

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**CROP BUDGETS,  
ILLINOIS, 2016**



Department of Agricultural and Consumer Economics  
University of Illinois  
June 2016

## **Introduction**

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Department of Agricultural and Consumer Economics  
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June 2016

This publication presents crop budgets for three regions in Illinois: northern, central, and southern Illinois. Central Illinois is further divided into categories for high-productivity farmland and low-productivity farmland.

Budgets are prepared to include all revenue and all financial non-land costs. Revenue includes crop revenue and government commodity payments. Costs include all cash costs associated with producing the crop as well as depreciation. These costs are divided into three categories: 1) direct costs – costs that can be directly attributable to the production of the crop, 2) power costs – costs related to machinery operations, and 3) overhead – costs associated with general operation of the farm.

Subtracting non-land costs from revenue yields “operator and land return”. This is the return remaining to pay for farmland and provide a return to the operator. In a cash rent situation, the payment for farmland is cash rent. If the operator and land return is \$170 per acre and cash rent is \$150 then the operator will have \$20 of return.

**Acknowledgments:** Much of the data used in these budgets comes from the local Farm Business Farm Management (FBFM) Associations across the State of Illinois. Without their cooperation, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,500 plus farmers and over 60 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provides on-farm counsel with computerized recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact the State FBFM Office located at the University of Illinois Department of Agricultural and Consumer Economics at 217-333-5511 or visit the FBFM website at [www.fbfm.org](http://www.fbfm.org).

**Table 1. 2016 Crop Budgets, Northern Illinois.**

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat
Yield per acre	196	186	60	62	75
Price per bu	\$3.85	\$3.85	\$10.60	\$10.60	\$4.20
Crop revenue	\$755	\$716	\$636	\$657	\$315
ARC/PLC	30	30	30	30	30
Crop insurance proceeds	0	0	0	0	0
<b>Gross revenue</b>	<b>\$785</b>	<b>\$746</b>	<b>\$666</b>	<b>\$687</b>	<b>\$345</b>
Fertilizers	\$130	\$140	\$30	\$30	\$76
Pesticides	60	66	30	30	27
Seed	123	123	76	76	50
Drying	28	27	0	0	1
Storage	5	5	3	3	1
Crop insurance	24	24	13	13	9
<b>Total direct costs</b>	<b>\$370</b>	<b>\$385</b>	<b>\$152</b>	<b>\$152</b>	<b>\$164</b>
Machine hire/lease	\$18	\$18	\$16	\$16	\$18
Utilities	6	6	5	5	7
Machine repair	26	26	22	22	33
Fuel and oil	18	18	17	17	20
Light vehicle	2	2	2	2	2
Mach. depreciation	70	70	61	61	49
<b>Total power costs</b>	<b>\$140</b>	<b>\$140</b>	<b>\$123</b>	<b>\$123</b>	<b>\$129</b>
Hired labor	\$19	\$19	\$17	\$17	\$15
Building repair and rent	8	8	4	4	3
Building depreciation	18	18	9	9	8
Insurance	11	11	11	7	5
Misc	9	9	9	9	9
Interest (non-land)	19	19	16	16	14
<b>Total overhead costs</b>	<b>\$84</b>	<b>\$84</b>	<b>\$66</b>	<b>\$62</b>	<b>\$54</b>
<b>Total non-land costs</b>	<b>\$594</b>	<b>\$609</b>	<b>\$341</b>	<b>\$337</b>	<b>\$347</b>
<b>Operator and land return</b>	<b>\$191</b>	<b>\$137</b>	<b>\$325</b>	<b>\$350</b>	<b>-\$2</b>

Prepared by: Gary Schnitkey, University of Illinois, schnitke@illinois.edu, 217 244-9595.

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**Table 2. 2016 Crop Budgets, Central Illinois -- High Productivity Farmland.**

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat	Double- Crop Soybeans
Yield per acre	201	191	58	60	75	32
Price per bu	\$3.85	\$3.85	\$10.60	\$10.60	\$4.20	\$10.60
Crop revenue	\$774	\$735	\$615	\$636	\$315	\$339
ARC/PLC	30	30	30	30	30	0
Crop insurance proceeds	0	0	0	0	0	0
<b>Gross revenue</b>	<b>\$804</b>	<b>\$765</b>	<b>\$645</b>	<b>\$666</b>	<b>\$345</b>	<b>\$339</b>
Fertilizers	\$125	\$135	\$32	\$32	\$76	\$24
Pesticides	66	72	40	40	27	36
Seed	116	116	76	76	50	45
Drying	15	14	1	1	1	0
Storage	14	14	8	8	1	1
Crop insurance	24	24	16	16	9	4
<b>Total direct costs</b>	<b>\$360</b>	<b>\$375</b>	<b>\$173</b>	<b>\$173</b>	<b>\$164</b>	<b>\$110</b>
Machine hire/lease	\$12	\$12	\$11	\$11	\$18	\$11
Utilities	5	5	4	4	7	5
Machine repair	22	22	20	20	33	27
Fuel and oil	17	17	17	17	20	21
Light vehicle	1	1	1	1	2	2
Mach. depreciation	64	64	59	59	49	30
<b>Total power costs</b>	<b>\$121</b>	<b>\$121</b>	<b>\$112</b>	<b>\$112</b>	<b>\$129</b>	<b>\$96</b>
Hired labor	\$17	\$17	\$16	\$16	\$15	\$13
Building repair and rent	5	5	4	4	3	6
Building depreciation	12	12	11	11	8	5
Insurance	10	10	10	10	5	0
Misc	8	8	8	8	9	0
Interest (non-land)	14	14	12	12	14	7
<b>Total overhead costs</b>	<b>\$66</b>	<b>\$66</b>	<b>\$61</b>	<b>\$61</b>	<b>\$54</b>	<b>\$31</b>
<b>Total non-land costs</b>	<b>\$547</b>	<b>\$562</b>	<b>\$346</b>	<b>\$346</b>	<b>\$347</b>	<b>\$237</b>
<b>Operator and land return</b>	<b>\$257</b>	<b>\$203</b>	<b>\$299</b>	<b>\$320</b>	<b>-\$2</b>	<b>\$102</b>

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**Table 3. 2016 Crop Budgets, Central Illinois -- Low Productivity Farmland.**

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat	Double- Crop Soybeans
Yield per acre	186	176	53	55	71	32
Price per bu	\$3.85	\$3.85	\$10.60	\$10.60	\$4.20	\$10.60
Crop revenue	\$716	\$678	\$562	\$583	\$298	\$339
ARC/PLC	30	30	30	30	30	0
Crop insurance proceeds	0	0	0	0	0	0
<b>Gross revenue</b>	<b>\$746</b>	<b>\$708</b>	<b>\$592</b>	<b>\$613</b>	<b>\$328</b>	<b>\$339</b>
Fertilizers	\$125	\$135	\$32	\$32	\$22	\$74
Pesticides	68	74	35	35	28	37
Seed	121	121	77	77	41	50
Drying	13	13	1	1	1	0
Storage	13	13	4	4	1	1
Crop insurance	22	22	16	16	8	5
<b>Total direct costs</b>	<b>\$362</b>	<b>\$378</b>	<b>\$165</b>	<b>\$165</b>	<b>\$101</b>	<b>\$167</b>
Machine hire/lease	\$13	\$13	\$11	\$11	\$13	\$10
Utilities	6	6	4	4	4	4
Machine repair	24	24	20	20	18	18
Fuel and oil	18	18	16	16	15	15
Light vehicle	1	1	1	1	1	1
Mach. depreciation	64	64	58	58	48	38
<b>Total power costs</b>	<b>\$126</b>	<b>\$126</b>	<b>\$110</b>	<b>\$110</b>	<b>\$99</b>	<b>\$86</b>
Hired labor	\$16	\$16	\$16	\$16	\$13	\$13
Building repair and rent	6	6	4	4	2	6
Building depreciation	13	13	11	11	9	9
Insurance	10	10	10	10	8	0
Misc	8	8	8	8	7	0
Interest (non-land)	14	14	12	12	14	7
<b>Total overhead costs</b>	<b>\$67</b>	<b>\$67</b>	<b>\$61</b>	<b>\$61</b>	<b>\$53</b>	<b>\$35</b>
<b>Total non-land costs</b>	<b>\$555</b>	<b>\$571</b>	<b>\$336</b>	<b>\$336</b>	<b>\$253</b>	<b>\$288</b>
<b>Operator and land return</b>	<b>\$191</b>	<b>\$137</b>	<b>\$256</b>	<b>\$277</b>	<b>\$75</b>	<b>\$51</b>

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**Table 4. 2016 Crop Budgets, Southern Illinois.**

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat	Double- Crop Soybeans
Yield per acre	164	154	48	48	68	32
Price per bu	\$3.85	\$3.85	\$10.60	\$10.60	\$4.20	\$10.60
Crop revenue	\$631	\$593	\$509	\$509	\$286	\$339
ARC/PLC	25	25	25	25	25	0
Crop insurance proceeds	0	0	0	0	0	0
<b>Gross revenue</b>	<b>\$656</b>	<b>\$618</b>	<b>\$534</b>	<b>\$534</b>	<b>\$311</b>	<b>\$339</b>
Fertilizers	\$120	\$130	\$38	\$38	\$80	\$24
Pesticides	66	72	30	30	28	36
Seed	119	119	76	76	41	45
Drying	8	8	0	0	1	0
Storage	6	6	4	4	1	1
Crop insurance	19	19	13	13	8	4
<b>Total direct costs</b>	<b>\$338</b>	<b>\$354</b>	<b>\$161</b>	<b>\$161</b>	<b>\$159</b>	<b>\$110</b>
Machine hire/lease	\$12	\$12	\$12	\$12	\$14	\$11
Utilities	7	7	6	6	7	5
Machine repair	28	28	27	27	33	22
Fuel and oil	18	18	16	16	16	14
Light vehicle	1	1	1	1	2	2
Mach. depreciation	69	69	59	59	49	30
<b>Total power costs</b>	<b>\$135</b>	<b>\$135</b>	<b>\$121</b>	<b>\$121</b>	<b>\$121</b>	<b>\$84</b>
Hired labor	\$30	\$30	\$25	\$25	\$13	\$13
Building repair and rent	7	7	4	4	8	6
Building depreciation	19	19	11	11	11	5
Insurance	13	13	13	13	9	0
Misc	10	10	10	10	7	0
Interest (non-land)	15	15	15	15	17	7
<b>Total overhead costs</b>	<b>\$94</b>	<b>\$94</b>	<b>\$78</b>	<b>\$78</b>	<b>\$65</b>	<b>\$31</b>
<b>Total non-land costs</b>	<b>\$567</b>	<b>\$583</b>	<b>\$360</b>	<b>\$360</b>	<b>\$345</b>	<b>\$225</b>
<b>Operator and land return</b>	<b>\$89</b>	<b>\$35</b>	<b>\$174</b>	<b>\$174</b>	<b>-\$34</b>	<b>\$114</b>

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