



## Parameters for a 2016 Cash Rent with Bonus

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Cash rents need to be lowered to avoid farmer losses in 2016 (*farmdoc daily*, [September 1, 2015](#)). For obvious reasons, landowners are reluctant to lower cash rents, particularly given uncertainty about 2016 revenue. Switching from a fixed cash rent lease to a variable cash lease allows a lower base rent to be established while simultaneously allowing landowners to share in higher crop revenues if they occur. Suggestions for 2016 parameters of a variable cash rent lease are given in this article for high-productivity central Illinois farmland. Adjustments for lower productivity farmland are suggested.

### Why Have a Variable Cash Rent Lease?

Expected prices and costs associated with 2016 corn and soybean production suggest that most cash rents need to be reduced. If cash rents are not reduced, farmers could face large losses (*farmdoc daily*, [September 1, 2015](#)). Of course, prices and yields will play a large role in determining 2016 returns. Moreover, actual yields and prices can vary tremendously from current expectations. A variable cash lease allows cash rent to increase if actual prices and yields result in higher than expected revenue.

The particular form of a variable cash rent discussed in this article is a "cash rent with bonus" arrangement (see *farmdoc daily*, [September 27, 2011](#)). This lease has a base rent that will be paid by the farmer to the landowner regardless of crop revenue. A bonus occurs when crop revenue exceeds a revenue trigger. To implement a cash rent with bonus, a farmer and landowner have to agree on:

1. A base cash rent,
2. Crop revenue triggers, and
3. Landowner shares of revenue above the revenue trigger.

Items (2) and (3) above typically vary by crop.

### Cash Rent with Bonus Parameters for 2016

Panel A of Table 1 show cash rent with bonus parameters that are appropriate for high-productivity farmland in central Illinois. This table is from a FAST spreadsheet called "Cash Rent with Bonus" available for download from the [FAST section of farmdoc](#). Suggested parameters are:

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1. Base rent of \$200 per acre – This is the amount paid by the farmer and landowner regardless of crop revenue.
2. Crop revenue triggers of \$750 per acre for corn and \$550 per acre for soybeans. The trigger revenues are set based on conservative estimates of non-land costs (\$550 per acre for corn and \$350 for soybeans), plus the base rent. When calculated this way, revenue covers the farmer's costs before revenue sharing occurs between the farmer and landowner.
3. Landowner share above revenue trigger of 50%.

**Table 1. Worksheet for Calculating Cash Rent with Bonus.**

<b>Panel A. Parameters of Cash Lease (agree on parameters before crop year begins)</b>				
A. Base cash rent <sup>1</sup>	<u>\$200</u>			
B. Maximum cash rent <sup>2</sup>	<u>\$550</u>			
C. Crop	<u>Corn</u>	<u>Soybeans</u>		
D. Crop revenue trigger <sup>3</sup>	<u>\$750</u>	<u>\$550</u>		
E. Landowner share above revenue trigger <sup>4</sup>	<u>50%</u>	<u>50%</u>		
F. Share of acres <sup>5</sup>	<u>50%</u>	<u>50%</u>		
<b>Panel B. Calculation of Bonus (after yield and price are known)</b>				
G. Actual yield <sup>6</sup>	<u>195</u>	<u>55</u>		
H. Price <sup>7</sup>	<u>\$3.65</u>	<u>\$9.15</u>		
I. Crop revenue (G x H)	<u>\$712</u>	<u>\$503</u>		
J. Crop insurance payments	<u>0</u>	<u>0</u>		
K. Revenue above crop revenue trigger (I+J-D) (put \$0 if less than \$0)	<u>\$0</u>	<u>\$0</u>		
L. Bonus per crop (E x K)	<u>\$0</u>	<u>\$0</u>		
M. Acre weighted bonus (F x L)	<u>\$0</u>	<u>\$0</u>		
N. Average bonus (sum of M)	<u>\$0</u>			
<b>Panel C. Calculation of Cash Rent</b>				
O. Minimum plus bonus (A + N)	<u>\$200</u>			
P. Cash rent (Lower of B or O)	<u>\$200</u>			

<sup>1</sup> The base cash rent is the minimum rent. The bonus will be added to the base rent.

<sup>2</sup> The base rent plus bonus can not exceed the maximum.

<sup>3</sup> The landowner receives a share of revenue above this amount.

<sup>4</sup> This is the share of revenue above the crop revenue trigger that will be received by the landowner.

<sup>5</sup> Indicate the share for each acres that each crop is of total acres. The sum should equal 100 percent.

<sup>6</sup> Yield from the farm.

<sup>7</sup> Price used for calculating revenue.

At the current time, reasonable expectations of 2016 prices are \$3.65 per bushel for corn and \$9.15 per bushel for soybeans. No bonus will result if yields are near average (see Panel B of Table 1). At the yields shown in Panel B, bonuses would begin at a \$3.85 per bushel for corn and \$10.00 per bushel for soybeans.

The \$200 per acre base rent is set assuming that 2016 ARC payments will be near \$35 per base acre when averaged across corn and soybean base acres (*farmdoc daily*, August 18, 2015). If ARC payments occur, the farmer would have losses at the prices and yields shown in panel B of Table 1. ARC payments are not included in the calculation of bonus because they will not be known for certain until the second half of 2017.

Many fixed cash rents for this productivity currently are in the high \$200 per acre range. Hence, a \$200 base rent results in a substantial reduction in landowner returns. Setting the “landowner share of above revenue trigger” at 50% provides landowners with upside potential if revenues are above expectations. Often the share percentage is set in the 40 to 45% range.

Changes in these parameters likely will be needed in 2017. ARC payments likely will be lower in 2017 than in 2016. Lower ARC payments suggest that base rents and trigger revenues should be lowered as well. Changes in non-land costs between 2017 also could cause the need to changes rental parameters.

Landowners and farmers could use different parameters than those suggested in this article. Increases in “landowner share above revenue trigger” should be associated with lower “base rents” and lower “crop revenue triggers”.

### Historic Performance of these Parameters

Table 2 shows the cash rents that would have resulted had the above lease been in place from 2006 through 2014. Prices, yields, and crop insurance payments used to generate these cash rents come from averages for central Illinois with high-productivity for farmland (see [here](#)). The average cash rent would be appropriate for 50% corn – 50% soybeans rotations. Cash rent with bonus levels would have been \$200 per acre in 2006, \$227 in 2007, \$228 in 2008, \$200 in 2009, \$257 in 2010, \$336 in 2011, \$360 in 2012, \$297 in 2013, and \$252 in 2014. These yearly cash rents average \$262 per acre, which is higher than the \$226 per acre average for cash rents in central Illinois for high-productivity farmland.

**Table 2. Cash Rent with Bonus Rents given Historical Prices, Yields, and Crop Insurance Payments for Central Illinois High-Productivity Farmland**

Year	Cash Rent with Bonus <sup>1</sup>			Average
	Corn	Soybeans	Average <sup>2</sup>	Cash Rent <sup>3</sup>
	\$ per acre	\$ per acre	\$ per acre	\$ per acre
2006	200	200	200	150
2007	235	218	227	166
2008	237	219	228	197
2009	200	200	200	209
2010	260	254	257	215
2011	361	311	336	248
2012	388	331	360	270
2013	302	291	297	290
2014	257	246	252	293
Average	271	252	262	226

<sup>1</sup> Based on a \$200 base cash rent, trigger revenues of \$750 per acre for corn and \$550 for soybean, and 50% sharing above trigger revenue. Yield, prices, and crop insurance proceeds for high-productivity farmland in central Illinois.

<sup>2</sup> Average of corn and soybeans cash rents. Appropriate for 1 50% corn - 50% soybeans rotation.

<sup>3</sup> Average cash rent for this productivity farmland.

## Lower Productivity Level

The above example presumes farmland is expected to yield 195 bushels per acre. Lowering the base rent and trigger revenues would be appropriate for lower farmland productivities. At 180 bushels per acre, a \$150 base rent would be roughly equivalent to the above \$200 base rent for 195 bushels per acre. Revenue triggers for 180 bushels per acre farmland than are \$700 per acre for corn (\$550 non-land costs + \$150 cash rent) and \$500 for soybeans (\$350 non-land costs + \$150 cash rent).

## Summary

This article suggests 2016 cash rent with bonus parameters. A FAST spreadsheet called "Cash Rent with Bonus" is available [here](#) for download for examining the impacts of alternative lease parameters.

## References

*farmdoc*. Fast Tools: [Cash Rent with Bonus Worksheet](#). Released September 9, 2015. Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 18, 2015.

Schnitkey, G. "[Cutting \\$100 per Acre in Costs for Corn and Soybeans](#)." *farmdoc daily* (5):160, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 1, 2015.

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Schnitkey, G. "[2016 ARC-CO Payment Estimates for 2016 Cash Rent Bids](#)." *farmdoc daily* (5):150, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 18, 2015.