



Farmer Returns for Cash Rent, Share Rent, and Owned Farmland

Gary Schnitkey

Department of Agricultural and Consumer Economics
University of Illinois

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Returns farmers receive from rental arrangement vary across years. In some years, share rent arrangements have higher farmer returns than cash rental arrangements. In other years, cash rent arrangements have higher returns. Given that cash rents are near or above average, cash rent arrangements will have lower returns than share rent arrangements this year. As a result, farmers who control proportionally more of their farmland with cash rent arrangements will have lower net incomes. As have been indicated previous articles, farms that rent the vast majority of farmland at high rents are the most at risk when revenues decline (*farmdoc daily*, October 29, 2013). This is the year when this risk may be realized. Farmers who own farmland have a significant buffer against lower revenue.

Differences in Returns for Cash Rent, Share Rent, and Owned Farmland

Differences in farmer returns for cash rent, share rent, and owned farmland are illustrated for a central Illinois situation. In the article yesterday (*farmdoc daily*, October 28, 2014), operator and farmland return were projected for central Illinois farmland having high productivity. Panel A of Table 1 shows these return projections. For farms with 50% corn and 50% soybeans, projected operator and land return is \$269 per acre. This \$269 per acre will be split between farmers and landowners differently depending on how farmland is controlled.

Panel B shows farmer return under a cash rent arrangement with the cash rent equal to \$300 per acre. In this case, farmer return is -\$31 per acre (\$269 operator and land return - \$300 cash rent).

Panel C shows farmer return given a share rent. The share rent has the landowner receiving 50% of the gross revenue and paying 50% of the direct costs (fertilizer, seed, pesticides, drying, storage, and crop insurance). In addition, the farmer pays the landowner an additional \$30 per acre in cash rent.

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Table 1. Farmer Returns for Cash Rent, Share Rent and Owned Land in Central Illinois on High-Productivity Farmland, 2014.

	Corn	Soybeans	Average
Panel A. Operator and Land Return			
Yield per acre	220	65	
Price per bushel	\$3.40	\$10.00	
	\$/acre	\$/acre	\$/acre
Crop revenue	748	650	699
ARC/PLC	<u>50</u>	<u>50</u>	<u>50</u>
Gross revenue	\$798	\$700	\$749
Direct costs	397	198	298
Other costs	<u>191</u>	<u>174</u>	<u>183</u>
Total costs	\$588	\$372	\$480
Operator and land return	\$210	\$328	\$269
Panel B. Farmer Return Under Cash Rent			
Cash rent	300	300	300
Farmer Return	-\$90	\$28	-\$31
Panel C. Farmer Return Under Share Rent			
Equivalent cash rent ³	231	281	256
Farmer return	-\$21	\$47	\$13
Panel D. Farmer Return Under Owned Land			
Cash ownership costs	190	190	190
Farmer Return	\$20	\$138	\$79

¹ Costs are based on 2014 Illinois Crop Budgets.

² Based on 50% of farmland in corn and 50% in soybeans.

³ Equals 50% of gross revenue - 50% of direct costs + \$30 supplemental rent.

⁴ Based on \$30 property tax and \$160 interest costs

Panel C lists equivalent cash rent that equals 50% of gross revenue minus 50% of direct costs plus \$30 in supplemental rent. The equivalent cash rent is \$256 per acre and equals the amount the land owner receives in this share rent arrangement. A cash rent of \$256 would have resulted in the same return as this 50-50 share rent arrangement.

Under the share rent arrangement, the farmer return is \$13 per acre (\$269 operator and land return - \$256 equivalent cash rent). Farmer return is \$44 higher than the cash rent arrangement in Panel B with a \$300 cash rent. If the farmer receives \$44 per acre more in returns under this share rent arrangement compared to a \$300 cash rent, then the landowner must receive \$44 less return.

Many farmers also own land. Financial costs for owning land include property tax and interest costs on borrowed capital. For the owned situation shown in Panel D, cash ownership costs are \$190 per acre and include \$30 of property tax and \$160 of interest. The \$160 of interest represents \$4,000 of debt outstanding at a 4% interest rate. These costs appear on the income statement of a farmer. These costs do not include an opportunity charge for equity capital invested in farmland. Also, there is no return (loss) for capital gains (losses) on farmland price changes.

Given \$190 in cash ownership costs, the farmer return is \$79 per acre, a higher farmer return than for cash rent and share rent arrangements. If debt levels are at manageable levels, owned farmland provides a buffer against falling revenue.

Net Income and Land Control

Rough estimates of net farm income can be gained by multiplying the farmer returns in Table 1 by cash rent, share rent, and owned acres. Take a farm having 2,000 tillable acre with 900 acres cash rented, 900 acres share rented, and 200 acres owned. This farm has projected net income of -\$400 (-\$31 return for cash rent x 900 cash rent acres + \$13 return for share rent x 900 cash rent acres + \$79 return for owned land x 200 acres owned).

Net income will decrease when higher proportions of farmland are cash rented. Take a 2,000 acre farm with only cash rent and owned farmland. Net income will be

-\$62,000 when 2,000 acres are cash rented, 0 acres owned,
-\$7,000 when 1,500 acres are cash rented, 500 acres owned,
\$48,000 when 1,000 acres are cash rented, 1,000 acres owned,
\$103,000 when 500 acres are cash rented, 1,500 acres owned, and
\$158,000 when 0 acres are cash rented, 2,000 acres owned.

The above illustration is for a cash rent level near average. As the cash rent level increases, net incomes will become more negative. At a \$350 cash rent level, for example, net income would be -\$162,000 if all 2,000 acres are cash rented.

Summary

Farmer returns for cash rental situations will be lower this year than share rent arrangements given that cash rents are near average levels. Those farms with higher proportion of acres cash rented will have lower returns than farmers with lower proportions.

In previous years, farmer returns were higher for cash rent arrangements than for share rent arrangements. Now with lower prices, the reverse is true. As has been noted previously, those farms most at risk of negative incomes are farms with high proportions of their farmland cash rent, particularly if the cash rent is at high levels.

References

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Schnitkey, G. "[Proportion of Farms with High Cash Rent Percentages and Levels.](#)" *farmdoc daily* (3):206, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 29, 2013.