A look at farmland rental decisions

An analysis of cash versus share contracts

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This is the second in a series of three articles on this topic

Farmland rental contracts have moved from share arrangements to fixed cash rental agreements in which the tenant pays a portion of the rent in the spring and the remainder at fall harvest.

We recently found that over 80 per cent of Ontario's farmland is rented on a cash basis. Why the change? Would landlords have been better off with a share arrangement?

The benefits of share contracts arise from the sharing of risk between the landlord and tenant. These contracts tend to dominate in a developing country context due to poor, tenant farmers being very risk averse relative to the landowner who are generally significantly wealthier than the farmer renting the land.

In Ontario, farmers are entrepreneurs and are often both more willing and able to take on risk compared to landowners.

The owners of rented farmland typically do not want to face the wrath of commodity markets and are happy to receive a cash payment for the use of their asset.

The other reason that both the tenant and landowners generally prefer cash rental arrangements is the measurement costs of at least the output from the rented land, and possibly the inputs if it is profits that are shared.

The larger the operator, the greater the hassle of measuring yields for each individual property. Our recent study on farmland rental markets found that farmers renting land dealt with an average of three landlords.

Similarly, the landlord may not have the interest nor the ability to market the crop received from the tenant.

The net result is that cash rents have become the primary farmland rental arrangement in Ontario. However, would landlords have been better off with a share arrangement? Could tenants use this information to obtain land in a competitive farmland rental market?

The returns to cash rent versus share rental arrangements are given in Table 3 for different crop revenue conditions.

Revenue of $750 per acre can arise from a yield of 150 (120) bushels per acre and a corn price of $5 ($6.25) per bushel. If selling price is at the current 2013 expected price of $5.50 per bushel, yield of 227 bushels per acres would result in a crop revenue to $1,250 per acre.

This revenue could also result from a price of $6.50 per bushel and a yield of 192 bushels per acre. Thus, revenues greater than $1250 are associated with very favourable conditions for both price and yield.

Cash rent options give the landowner a fixed amount per acre regardless of the revenue scenario. The tenant farmer bears the risk of revenue variability.

From the revenue generated on the farmland, the farmer must deduct the nonland variable expenses of $540 and the rental payment.

For example, the farmer has $210 per acre available to pay for rent after production costs if the revenue is $750 per acre. Thus, the farmer loses $40 per acre if the cash rent is $250 per acre and the loss increases with every dollar increase in rent paid.

Variable costs are $540 per acre and do not include principal and interest on long-term debt.

The tenant pays these non-land costs except in the 50 per cent profit share arrangement in which both revenues and costs are split equally between the tenant farmer and landlord.

Increases in crop revenue go to the tenant under fixed cash rental arrangements. If crop revenue increases $500 from $750 per acre to $1,250 per acre, the farmer goes losing $40 to receiving $460 for a cash rent of $250 per acre.

If the revenue per acre was $1,040 ($1,140), then the farmer and landlord would have received the same amount if the cash rent was $250 ($300).

Beyond that revenue level, the landlord would have generated more income through a share arrangement.

The equal split of profit between the tenant and landowner means that the transacting parties share the downside and upside of the markets.

In the worst-case scenario in Table 3 with a revenue of $750 per acre, the net revenue of $210 is split between the two parties.

Table 3. Net Returns to Tenant and Landowner under Alternative Cash and Share Crop Arrangements for Different Crop Revenue Conditions ($ per acre)

		REVENUE PER ACRE ($/ACRE)			
CASH RENT	CROP RENTAL ARRANGEMENT	750	1000	1250	1500
$250	Tenant	-40	210	460	710
	Landowner	250	250	250	250
$300	Tenant	-90	160	410	660
	Landowner	300	300	300	300
$350	Tenant	-140	110	360	610
	Landowner	350	350	350	350
Share Rent 50% Profit	Tenant	105	230	355	480
	Landowner	105	230	355	480
33% Output	Tenant	250	333	416	500
	Landowner	-40	127	293	460

Variable costs are $540 per acre and do not include principal and interest on long-term debt. The tenant pays these non-land costs except in the 50% profit share arrangement in which both revenues and costs are split equally between the tenant farmer and landlord.

In the case of the tenant, the resulting returns of $105 are higher than any of the cash rental options. In the case of the landlord, this return is significantly less than the fixed cash rental payment.

In contrast, high revenues of $1250 per acre or higher result in lower returns to the farmer than the cash rental option whereas the returns are higher for the landlord.

An alternative to the splitting of revenue and costs is an arrangement in which the landlord receives one-third of the output. This option offers greater downside protection to the farmer as compared to the 50 per cent profit share without curtailing returns as crop revenue increases. However, it is less attractive to the landlord than the other share arrangement.

The main point to come away with from Table 3 is that the tenants have benefited from crop revenues higher than that expected at the time when cash rents were established. The opposite could have happened. While farmers reap the benefits from upside risk, they also bear the costs of any downside risk. The potential for falling prices should be accounted for in the rental contracts.

Using the comparison of share and cash rent for the landlord under high revenue scenarios may be a way to mitigate that risk for tenants.