The Cash/Share Combination in Farmland Leasing

By Peter J. Barry

Abstract

The recently published Agricultural Economics and Land Ownership Survey for 1999, by NASS/USDA reveals a substantial increase in the use of combined cash/share leases in Midwestern U.S. agriculture, based on the landlord portion of the survey. These changes, occurring nation-wide but varying among states, indicate potentially significant changes in leasing arrangements, perhaps reflecting the need for additional flexibility in the pricing of farmland leasing contracts.

The recently published Agricultural Economics and Land Ownership Survey for 1999 reveals important insight about changes over the past decade in share versus cash leasing arrangements for farmland. Monitoring and understanding these changes is important because about 45percent of farmland nationwide is operated under lease contracts. In particular, the 1999 results show substantial increases since the 1988 survey in combinations of cash/share leases in Midwestern U.S. agriculture. The gains in cash/share leases are especially strong in Indiana and Illinois where share leases have traditionally predominated. These changes are indicative of increasing reliance on cash payments to gain additional flexibility in the pricing of farmland leasing contracts. The remainder of this article describes the survey, further develops the time comparisons, and considers their implications.

The Survey

The Agricultural Economics and Land Ownership Survey was conducted in 2000 for the 1999 year by the National Agricultural Statistics Service (NASS) of the U.S. Department of Agriculture as a part of the 1997 Census of Agriculture (www.USDA.gov/NASS). Similar census-related surveys focusing on land ownership and farm finance occurred in 1988, 1979, and 1970 (Bureau of the Census). The data generation approach by NASS has been to first conduct a survey of farm operators and, in the process, to request that the farmers provide names and addresses of the owners of their leased acreage. A second stratified random sample survey is then sent to landowners (excluding public land owners), using the identification information provided by the farmers. The useable survey responses from land owners totaled 34,158 reports for 1999. Data from the operator and land owner surveys then are extrapolated to population levels and integrated by NASS into a consistent set of tabular results reported over time.

The questions about leasing arrangements posed to farm operators and landlords differ importantly in their degree of detail. Operators are asked to report acreages leased from others under share, cash, and rent free arrangements. In contrast, land owners (including some farmers who lease out part of their owned acres) are asked to report information about cash, share, cash/share, and other leasing arrangements. The cash/share category is

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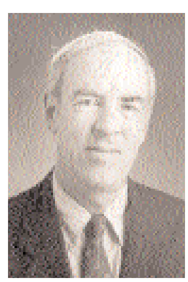

described as leases in which tenants pay part of the rent in cash and part in product shares. This category, thus, includes cash payments made by operators to land owners as supplemental or privilege rents, perhaps based on the land owner's real estate tax obligations, in addition to the product shares. An additional question to the land owners, that is included in the cash lease category, addresses cash leases that contain adjustments of rental payments due to exceptional or unusual conditions. Thus, under this survey process, only land owners were provided the opportunity to explicitly identify the combined cash/share arrangements.

Cash/Share Lease Increases

Table 1 reports ratios of the cash/share leases to total leasing from the 1999 and 1988 surveys in terms of both numbers of leases and leased acreage for the U.S., for four production regions, and for selected Midwestern states.[1] At the national level, the cash/share lease category increased from 2.9percent and 3.2percent in 1988 to 10.7percent and 10.8percent for lease numbers and acreages, respectively. Among regions, the incidence of use of cash/share leases is highest in the Midwest region (13.9percent and 14.8percent), which also shows the greatest regional increase between the two time periods.

For the individual states, the cash/share leases comprised 26.5percent and 26.0percent of lease numbers and acreages in Indiana for 1999, up from 1.8percent and 2.1percent in 1988. Similar magnitudes of increase occurred in Illinois – from 2.3percent and 3.6percent in 1988 to 24.4percent and 26.9percent in 1999. Increases to the 13percent to 16percent range occurred in Ohio, Kansas, and Nebraska. Iowa, Missouri, and the Dakotas experienced increases to the 9percent to 12percent range.

Expanded data for Illinois in Table 2 report estimated values for average tract size, values of leased acreage, rental rates per acre, and percentage shares for the cash, share, cash/share, and other lease categories. Between 1988 and 1999, the number of farm

Table 1. Ratios of Cash/Share Leases to Total Leasing, Selected Regions, 1988 and 1999

	1999		1988	
	No. of Leases	Leased Acreage	No. of Leases	Leased Acreage
	% of total			
U.S.	10.7	10.8	2.9	3.2
Region				
Northeast	1.7	3.4	1.2	0.8
Midwest	13.9	14.8	2.8	3.3
South	8.3	7.5	3.2	3.3
West	6.3	7.5	3.3	2.8
Mid US States				
Illinois	24.4	26.9	2.3	3.6
Indiana	26.5	26.0	1.8	2.1
Iowa	11.8	12.4	3.3	4.9
Missouri	10.2	8.9	6.3	5.0
Ohio	13.7	14.4	1.2	0.6
Michigan	6.8	8.9	1.3	1.1
Minnesota	8.4	9.3	1.9	1.5
Wisconsin	1.2	1.7	1.8	1.5
Kansas	14.4	15.9	4.6	5.1
Nebraska	15.1	13.7	3.8	3.3
N. Dakota	9.6	11.0	1.1	0.6
S. Dakota	11.2	15.1	5.0	5.6

Source: Agricultural Economics and Land Ownership Survey, 1999 and 1988, NASS, USDA

Table 2. Farmland Rental Arrangements, Illinois 1988 and 1999

	1999						1988					
	Owners	No. of Leases	Acres (1,000)	Acres Lease	Value Acre	Rent Acre	Owners	No. of Leases	Acres (1,000)	Acres Lease	Value/ Acres	Rent/ Acres
Numbers												
All Leases	124,761	179,738	20,429	113.7	2,506	100.50	118,775	147,996	18,286	123.6	1,390	79.19
Cash[a]	42,404	62,386	5,570	89.3	2,618	100.61	43,815	51,806	6,155	118.8	1,465	68.96
Share	48,749	68,205	9,071	133.0	2,389	104.63	71,611	89,188	11,210	125.7	1,350	83.93
Cash/Share	41,939	43,912	5,500	125.2	2,572	98.54	3,149	3,461	667	192.7	1,338	99.16
Other	5,069	5,235	288	55.0	2,756	5.54	2,093	3,541	254	71.7	1,494	65.75
Percentages												
All Leases		100.00	100.00					100.00	100.00			
Cash		34.7	27.3					35.0	33.7			
Share		37.9	44.4					60.3	61.3			
Cash/Share		24.4	26.9					2.3	3.6			
Other		2.9	1.4					2.4	1.4			

[a] Includes adjustable cash leases totaling 4,333 leases and 487,000 acres in 1999, and 4,844 leases and 725,000 acres in 1988

Source: Agricultural Economics and Land Ownership Survey, 1999 and 1988, NASS, USDA leases in Illinois increased by nearly 32,000. Contributing to this increase were expansions in cash leases and cash/share leases, while the number of share leases declined. In proportional terms, the cash/share category increased substantially, cash leases changed relatively little (although average sizes of cash leases declined), and share leases declined. Combining cash and cash/share leases, nearly 60percent of all Illinois farm leases contained cash payments during 1999.

Per acre values of leased acreage under the various leasing arrangements are very similar, as are the average rental payments per acre. The average size of share leases is considerably larger than those of cash (especially) and cash/share leases, consistent with the greater proportion of acreage under share leases versus the number of share leases. In general, the growth in the cash/share category does not appear to be associated with unusual or major differences in land value and rent relationships. The differences in geographic growth rates for cash/share leases likely reflects more rapid expansions in states such as Illinois and Indiana where share leasing has traditionally predominated.

Implications

Prior studies have documented that increasing reliance on cash leasing has represented a means of resolving concerns about the equitability for the leasing parties of rigid reliance on 1/2 - 1/2 , 2/3 - 1/3, and other traditional sharing levels (Barry, Moss, and Sotomayor). Cash leases have been shown to reflect shorter lengths of relationships between farmers and landlords, smaller tracts of leased acreage, greater income variability, and lower soil productivity (Sotomayor, Barry, and Ellinger). In addition, Barry et al. have shown how to develop lease pricing menus that combine shares and cash payments in order to equitably compensate the leasing parties for their respective resource contributions.

The NASS survey results for 1999 clearly suggest that the recent growth in cash leasing is largely attributable to combinations of cash payments and rental shares. This pattern is advantageous for the leasing parties because it adds flexibility to the lease pricing arrangements, and it expands the range of contract choices. The combined approach also retains the risk sharing and liquidity benefits of share leasing, and it promotes mutual incentives for the leasing parties. However, the cash/share combination is more demanding in terms of negotiations and equitable pricing between the land owner and operator. More work is needed through surveys and experimental procedures to understand the bases for the combined pricing arrangements, the effects of operator and land owner characteristics, and the relationships of these leasing practices to other mechanisms of risk management.

Endnotes

1. The four production regions contain the following 10 USDA production regions:

Northeast – Northeast

Midwest – Cornbelt, Lake, Northern Plains

South – Appalachian, Southeast, Delta, Southern Plains

West – Mountain, Pacific

References

Barry, P.J., L.M. Moss, N.L. Sotomayor, and C. Escalante. "Lease Pricing for Farm Real Estate." *Review of Agricultural Economics,* 22(Spring/Summer): 2-16.

Barry, P.J., N.L. Sotomayor, and L.M. Moss. "Professional Farm Managers Views on Leasing Contracts and Land Control: An Illinois Perspective." *Journal of the ASFMRA,* 62(1998 - 99): 15-19.

Bureau of the Census. Agricultural Economics and Land Ownership Survey (1988). 1987 Census of Agriculture, Volume 3, Part 2, U.S. Department of Commerce. July 1990.

National Agriculture Statistics Service. Agricultural Economics and Land Ownership Survey, 1999. 1997 Census of Agriculture, U.S. Department of Agriculture, 2001.

Sotomayor, N.L., P.N. Ellinger, and P.J. Barry. "Choice Among Leasing Contracts in Farm Real Estate." *Agricultural Finance Review*, 60(2000): 71-84.