

CASH RENT FOR LAND

by J. H. Atkinson, Professor, Agricultural Economics

Cash renting of farm land in Indiana has been increasing for a decade or more. Recent increases in prices of land, farm products and production inputs have prompted many questions about land rental rates.

Cash Renting Can Improve Management

Well-financed tenants who are good managers may increase profits by taking over all the management decisions. They may increase production on a particular tract, often by using more inputs like fertilizer, herbicides and better seed. More importantly, they may increase net returns to the entire business when it consists of several tracts of land owned by different people. If these tracts are share-rented, the tenant is under pressure from all landowners to maximize returns on each tract. But in a cash rent situation, the tenant has the flexibility to make decisions which will maximize returns to the entire business.

Disagreements about how the land ought to be managed can be avoided by cash leasing. In some situations, the land owner wants to be relieved of the management responsibility and risk which goes with share leasing and may thus find cash leasing an attractive alternative.

Determining Rental Rates

Rental rates for a given tract of land can be estimated by looking at the going rate for similar land or by using a rule of thumb percentage of land value. This article will present survey information on rental rates.

Estimates of the landowner's return under a share lease are also useful in reaching a decision on whether to cash rent or not, or in establishing a cash rent figure.

As a rule, the landowner should not expect to earn as high a net return under a cash as under a share lease. This is true for several reasons: (1) part of the cash rent is usually paid in advance; (2) the landowner does not have to furnish capital for operating expenses; (3) there is less management for the owner; and (4) the landowner assumes no production or price risk. However, there are cases in which cash rent may provide as much net return

as an existing share leasing arrangement. The operator may simply be willing to pay more in order to manage more efficiently, or a change from a poor share tenant to a good cash tenant may mean a higher return from cash rent.

But unless these special situations exist, the landowner can calculate a "cash rent equivalent" from expected share lease returns as follows:

Landowner's share of crops	\$ _____
Less costs except interest, tax and upkeep on land	\$ _____
Gross rent	\$ _____

To convert to a cash rent equivalent, the gross rent expected from a share lease should be reduced to reflect lower risk, advance payments and less management associated with cash rent. For example, if the gross rent expected under a share lease is \$120 per acre, the landowner might be just as content to receive a cash rent of \$96, in which case he would have discounted the share rent by 20 percent.

Estimates of Rental Rates

The USDA reported average cropland rental rates and rent as a percent of cropland values as follows:

Year	Rent	Percent of value
1972	\$35	7.2
1973	38	6.9
1974	48	7.1
1975	63	7.6

Note that rent as a percent of value has increased in each of the past 3 years, in spite of big increases in land values. This probably is due to the fact that land values reflect income expectations for the long run, while rent represents payment for the right to receive income in the short run, often only one year. In view of the outlook for the year ahead, rent as a percent of land values may increase again in 1976, perhaps to around 8 percent.

average land

Table 1 presents data obtained in a land values survey conducted in mid-1975. The average of all areas for rent of average quality land was, somewhat surprisingly, exactly the same as the USDA estimate—\$63 per acre or 7.3 percent of the estimated value of land.

The averages presented in Table 1 are useful as rough guides to cash rental rates. They probably tend to be on the low side of newly-negotiated rent figures for 1975 for two reasons. First, rates on existing rental contracts, even when rent is renegotiated annually, tend to move up more slowly than rates on agreements between new tenants and landowners. Some landowners are not aware of the size of general increases in rent, while others are well satisfied with their tenant and are thinking in terms of an average rent over several years. Second, some of the rental rates reported may have been set a year or more earlier under a contract that specified the rent for a certain number of years.

In addition to being on the low side, there was considerable variation in rent reported for land of the same value or productive capacity. For example, in several instances, land of the same value was reported by one person to rent for double what another person reported.

But in spite of these limitations, the figures are useful beginning points for deciding what a given tract of land might rent for. (Remember too, good

1975 crops in many areas of the state plus favorable grain prices may push cash rents higher in 1976 than in 1975.)

Table 1 indicates that bare land rents for top quality land averaged about \$100 per acre in the Central and West Central areas, \$85 in the North and Northeast and about \$73 in the two Southern areas. The corn yield capacity of the land accounted for some, but not all of these differences. Again looking at the state as three regions, rent per bushel of estimated corn yield on top and average quality land was about 55¢, 65¢ and 70¢ for the South, North and Central areas. The Central area had the highest yields per acre, tending to reduce machinery costs per bushel and allow higher rents per bushel to be paid, but average yields on top land in the North and South were about the same.

The percent which cash rent was of estimated land value averaged from 7.0 to 7.7 percent in a majority of the categories in Table 1—fairly close to the 7.6 percent figure reported by the USDA as a state-wide average. In using a percentage of value to estimate cash rent, remember that value estimates vary considerably for land of similar quality. Obviously, land near town valued at \$2000 per acre will not bring double the rent of similar quality land 15 miles away which sells for \$1000 per acre.

Bare land for rent not for land value
Table 1. Cash rent and related data by area and land class, Indiana Land Values Survey, June, 1975.

Area* and land class	Rent	Corn yield bu.	Rent/ bushel cts.	1975 Rent as land value		Bare land for rent not for land value percent	
				land value	pct. of value	land value	pct.
West Central							
Top	\$100	140	71	\$1396	1298	7.2	7.7
Average	76	108	70	1069	1004	7.1	7.6
Poor	51	81	63	730	698	7.0	7.3
Central							
Top	97	140	69	1260	1132	7.7	8.6
Average	75	107	70	1001	904	7.5	8.3
Poor	57	82	70	764	692	7.5	8.2
S.W.							
Top	72	134	54	1039	1035	6.9	7.0
Average	53	100	53	753	743	7.0	7.1
Poor	35	77	45	504	500	6.9	7.0
S.E.							
Top	74	126	59	895	829	8.3	8.9
Average	51	94	54	672	622	7.6	8.2
Poor	33	70	47	435	402	7.6	8.2
North							
Top	88	120	68	1138	981	7.7	9.0
Average	64	101	63	843	709	7.6	9.0
Poor	43	75	57	585	493	7.4	8.7
N.E.							
Top	82	134	61	1129	941	7.3	8.7
Average	60	100	60	864	759	6.9	7.9
Poor	40	76	53	654	562	6.1	7.1

*See Aug. 1975 PFMR for counties in each area.

Cash rent may appeal to well-financed tenants who are good managers, especially if they are renting several different tracts. Landowners who want a more certain income without involvement in financing and managing crop production may also find cash rental attractive.

In view of the prevalence of share renting, both operators and landowners may want to estimate costs and returns under typical share arrangements. By making allowance for differences in risk, management and operating capital between cash and share leases, a cash rent can be estimated which would give returns roughly equal to net share rent returns. This figure might serve as a maximum rent the operator would pay, or the minimum the landowner would accept.

Information on the cash rental market should be obtained locally. Rough rules of thumb are: (1) cash rent averages around 7½ to 8 percent of cropland value and (2) cash rent per bushel of corn yield capacity averages 65¢ to 70¢ in the northern and central parts of the state, around 55¢ in the south.

Final determination of the cash rental rate should also take into account the details of the agreement with regard to cropping programs, buildings, mowing fence rows, etc.

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LAND VALUES MAY STABILIZE

by J. H. Atkinson, Professor, Agricultural Economics

More than 150 Indiana farm managers, lenders, appraisers and brokers recently responded to a questionnaire on land values. Each reply represents a number of land sales observed by the respondent. Thus, the opinion on land values which were reported were based on numerous sales.

General Level of Land Values

Respondents reported estimates of per acre values of top, average and poor farm land and for land moving into non-farm uses (transitional land). They also gave their estimates of average corn yields for the 3 classes of farm land. Replies came from 6 geographic areas (Figure 1).

Top land values in West Central Indiana this past spring were reported to average about \$1400 per acre, \$1267 in the Central region, over \$1100 in the North and Northeast, over \$1000 in the Southwest and \$900 in the Southeast (Table 1). Similar regional differences held for average and poor land. Corn yields accounted for some of these differences. Average yields of 140 bushels on top quality land were reported in the Central and Central West—6 to 14 bushels more than in the other areas.

The value of average land in the spring of 1975 was in the general range of \$800 to \$1000 in all areas except the Southeast (\$672) and Southwest (\$753). This average land was estimated to produce 93 to 108 bushels of corn per acre.

This year, for the first time, estimates were obtained on building values and bare land values were calculated (Table 2). Building values were highest in the North, Northeast and Central areas with the averages ranging from \$70 to \$170. The range in averages in the Southeast and West Central areas was \$30 to \$100. Practically no building values were included in estimates from the Southwest.

The highest top bare land value was in the West Central area—nearly \$1300 per acre. Averages for top land were around \$1000 per acre in both Northern areas and the Southwest. The Central area figure was \$1132 and for the Southeast it was \$829.

Estimates from the survey, especially on top quality land, appear to be somewhat lower than value estimates which might be obtained in informal discussions with farmers. For example, land sales of over \$2000 per acre have been reported in West Central Indiana, yet the average reported in this survey for top land was about \$1400. There seems to be a kind of "trend psychology" which causes the casual observer to notice and talk about the land sales which emphasize current or expected trends. At any point in time, rather wide differences can be found in the price per acre of land of equal quality. Trend psychology causes us to tend to remember sales on the high side of the range if the trend is sharply upward, as it has been for over two years. If a down-trend is expected, the lower end of the range may be observed as evidence of declining prices.



Table 3. Percentage change in estimated land values per acre by geographic area and land class, selected time periods, Purdue Land Value Survey, Indiana, 1975.

Area	Land class	Bu. per acre*	Percent change		
			Fall 74- Spr. 75	Fall 74- Fall 75	Spr. 75 -Fall 75
North	Top	135	8.8	5.5	-3.0
	Avg.	101	8.4	2.7	-5.2
	Poor	75	8.5	3.3	-4.8
	Trans.	---	9.8	12.4	2.3
Northeast	Top	135	7.9	8.6	0.6
	Avg.	99	8.2	8.1	0.0
	Poor	76	15.7	13.7	-1.7
	Trans.	---	6.2	10.6	4.2
West Central	Top	140	3.2	1.0	-2.1
	Avg.	108	4.3	2.2	-2.0
	Poor	81	4.1	4.1	0.0
	Trans.	---	2.9	2.2	-0.7
Central	Top	140	6.6	7.4	0.7
	Avg.	107	9.0	9.9	0.9
	Poor	82	10.2	11.0	0.8
	Trans.	---	2.3	7.8	5.4
Southwest	Top	134	6.2	4.8	-1.3
	Avg.	100	5.3	4.8	-0.5
	Poor	77	1.4	0.4	-1.0
	Trans.	---	6.6	7.6	1.0
Northeast	Top	126	3.9	5.7	1.7
	Avg.	93	5.5	6.6	1.0
	Poor	70	7.4	10.9	3.2
	Trans.	---	7.8	11.4	3.3

*Corn yield estimated by survey respondents.

In dollar terms, top quality land was reported to have gone up from around \$75 to \$150 per acre from last fall to spring. Figures for average land were on the order of \$50 to \$75 increases per acre.

Transitional land also increased in values over the six months ending last spring—from 2-10 percent. Small increases of 2-3 percent were reported in the Central and West Central areas.

Trends in Land Values

The 3-9 percent half-year increases reported in this survey are sharply lower than the 20-30 percent figures reported for the same period last year. This indicates considerable "winding down" of the land price boom which started in late 1972.

Indications of further slowing down of price increases is seen in replies to the questions of

where land prices will be this fall. In 3 of the 6 areas, the average respondent expected a decline of up to 5 percent from spring to fall of this year in land prices. In the other three areas no change to slight increases were expected, generally, 1 percent or less.

Over half of the respondents expected land prices to remain unchanged from spring to fall, 1975. The remainder were about equally divided between those who expected increases and those who thought prices would decline.

Thus there is a strong indication from this group of people who are close to the land market that we are in a period of stable land values—at least in the short run. This is similar to the position they took last year but the report on the survey warned, "They might not be right. The 'right' set of circumstances could not only result in higher fall prices and incomes than had been expected but also brighten the outlook for 1975". This is exactly what happened and we had another substantial increase in land values (15 percent for the year ending July 1, according to Federal Reserve Estimates).

There is again uncertainty regarding crop conditions (as of early August), exports and the influence of these factors on farm income. But increased costs of production in 1975 will mean less net income than 1974 even if corn and bean prices are as high this fall as last. There may have been enough improvement in grain prices since the survey was made to suggest that short term land price expectations might be changed from "stable" to "stable to slight increase."

Looking further into the future, 54 percent of the respondents said they expected land prices to be higher in December, 1976 than in June, 1975—by an average of 8.5 percent. On the other hand, 30 percent thought there would be no change and 16 percent expected lower land prices. This indicates more optimism than was expressed a year ago when only 42 percent predicted an increase and 29 percent a decrease.

More optimism was expressed with regard to average on-farm corn prices for the period 1975-80. The figure this year was \$2.49, up 13 percent from the \$2.19 estimate of last year. While a five-year average of \$2.49 may be reasonable (a good many ag economists would put it lower), we must remember that weather conditions caused grain price increases in both 1974 and 1975. In a year with weather as good as it was in 1972, on-farm corn prices very likely will be as low as \$2.00.

Implications

For those whose plans call for selling land in the next few years, this period of high and likely stable land prices may be a good time to sell. Land that is being rented on a crop share basis likely will earn a rate of return less than the farm mortgage interest rate with corn prices around \$2.00—a figure which is likely in a year of average to good cornbelt weather. When that occurs, there could also be weakness in land prices. If land has to be sold in a year or so, this is the risk taken by not selling in the next 6 to 9 months.

Other persons are considering buying land. The investor buyer who plans to rent out the land needs to budget carefully both average returns and cash flow. Returns likely will not average much more than the farm mortgage interest rate; therefore the decision to purchase land may hinge

on one's expectations of long run increases in land values. If 70-80 percent of the purchase price is borrowed, there will be years when the landlord's cash returns from the farm will not meet the payments.

Farm operators need also to budget carefully their expected returns and cash flow. As has been true for two decades or more, land for enlargement or as a base of operations often earns good returns. But for operators who have to borrow the maximum, this may be a good time to consider cash renting for a year or two to avoid the risk of cash flow problems. Others who are in a better financial condition or who have off-farm income are in a better position to weather a year of reduced farm income. If their longer run expectations are for gradually increasing land values, they probably should go ahead and purchase land of the type and location that fits their needs.

**Average Estimated Bare Land Values and Cash Rent Per Acre,
West Central Indiana, 1975-1990, Purdue Land Values and Cash
Rent Survey. Compiled by J.H. Atkinson**

LAND QUALITY ^{a]}						
<u>Year</u>	<u>Top (143 bu)</u>		<u>Average (119 bu)</u>		<u>Poor (93 bu)</u>	
	<u>Value</u>	<u>Rent</u>	<u>Value</u>	<u>Rent</u>	<u>Value</u>	<u>Rent</u>
1975	\$1298	\$ 100	\$1004	\$ 76	\$ 698	\$ 51
1976	1847	113	1377	89	986	63
1977	2862	126 ^{b]}	2062	102 ^{b]}	1373	75 ^{b]}
1978	2703	125	2110	102	1520	76
1979	2710	126	2116	105	1544	81
1980	2723	139	2153	114	1602	86
1981	2938	158	2396	127	1815	96
1982	2384	142	1921	115	1342	87
1983	2258	138	1813	116	1347	89
1984	2059	139	1654	115	1217	88
1985	1728	133	1380	110	974	83
1986	1394	119	1087	98	775	72
1987	1271	106	1008	85	727	64
1988	1428	114	1159	93	851	70
1989	1568	120	1255	100	913	76
1990	1642	125	1337	105	953	80
1991	1797	128	1399	104	1020	81

^{a]}Per acre corn yields in parenthesis are long term estimates made by survey respondents in 1990.

^{b]}Estimated, based on percent change in state average rents.

**Cropland Rented for Cash: Gross Cash Rent
Per Acre and Ratio of Rent to Value, Indiana**

<u>Year</u>	<u>Cash Rent/A</u>	<u>Implied Value</u>	<u>Ratio</u>	<u>Rent-Value Multiple</u>
1960	20.36 ^{a1}	287	7.1 ^{b1}	14.1
1961	20.59 ^{a1}	278	7.4 ^{b1}	13.5
1962	21.38 ^{a1}	274	7.8 ^{b1}	12.8
1963	22.50 ^{a1}	296	7.6 ^{b1}	13.2
1964	24.19 ^{a1}	331	7.3 ^{b1}	13.7
1965	25.54 ^{a1}	345	7.4 ^{b1}	13.5
1966	28.12 ^{a1}	391	7.2 ^{b1}	13.9
1967	30.10	430	7.0	14.3
1968	33.10	473	7.0	14.3
1969	32.60	479	6.8	14.7
1970	33.50	465	7.2	13.9
1971	33.15	448	7.4	13.5
1972	35.45	492	7.2	13.9
1973	37.80	548	6.9	14.5
1974	47.90 <i>Purdue rent</i>	675 <i>Purdue const value</i>	7.1 <i>Multiple</i>	14.1 <i>Ave 14</i>
1975	63.00 63	829 791 -8.0	7.6 12.5	13.2
1976	72.00 77	1,075 1148 67	6.7 14.9	14.9
1977	87.00 90	1,450 1585 5.7	6.0 17.5	16.7
1978	86.00 88	1,536 1741 5.1	5.6	17.9
1979	91.70 92	1,730 1898 5.3	5.3	18.9
1980	101.90 97	2,038 1888 4.6	5.0 21.7	20.0
1981	108.30 106	2,124 2100 5.0	5.1	19.6
1982	104.90 98	1,979 1714	5.3	18.9
1983	100.20 97	1,670 1577	6.0	16.7
1984	103.13 95	1,637 1451	6.3	15.9
1985	95.70 89	1,311 1195	7.3	13.7
1986	85.60 99	1,141 976	7.5	13.3
1987	77.00 72	1,027 913	7.5	13.3
1988	77.00 77	1,069 1034	7.2	13.9
1989	83.10 84	1,154 1154	7.2	13.9
1990	86.60 87	1,255 1223	6.9	14.5
1991	86.10 88	1,266 1245	6.8	14.7

Source: "Farm Real Estate Market Developments," and "Agricultural Land Values and Markets," ERS, USDA. Compiled by J.H. Atkinson, Department of Agricultural Economics, Purdue University.

^{a1} Estimated by multiplying rent for "farms rented for cash" by 1.125, which is the 1967-1970 average of cropland rents divided by farm rents.

^{b1} Estimated by multiplying ratios for "farms rented for cash" by 1.055, which is the 1967-70 average of cropland rent ratios divided by farm ratios.