



Returns to farmland ownership

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Below are estimates of the average returns from owning farmland since 1970. Annual returns are in two forms: cash returns and change in market value. Total return is the sum of these two. The source of data for cash rents and land values is the Economic Research Service (USDA) data series for whole farm rents and value, not data from ISU Extension, which refers to rental rates for corn/soybean land only.

Cash returns

Cash rental rates are used as estimates of the cash returns to farmland. The rate of cash return (percent) each year is computed by dividing the cash rental rate by the market value of land in the same year.

Cash rental rates are a gross return, not a net return, because property taxes and other ownership expenses have not been

Table 1. Returns to farmland ownership per year (per acre).

Period	Year	Whole farm cash rent	Market land value	Cash rent as percent of land value	Percentage change in land value	Total percentage return
Ethanol Boom	2009	\$167	\$3,850	4.3%	-2.5%	1.8%
	2008	152	3,950	3.8	17.2	21.1
	2007	136	3,370	4.0	15.8	19.8
	2006	122	2,910	4.2	10.2	14.4
	2005	124	2,640	4.7	20.0	24.7
	2004	118	2,200	5.4	9.5	14.8
Recovery	2003	114	2,010	5.7	4.7	10.4
	2002	112	1,920	5.8	3.8	9.6
	2001	108	1,850	5.8	2.8	8.6
	2000	105	1,800	5.8	1.7	7.5
	1999	102	1,770	5.7	4.1	9.9
	1998	109	1,700	6.4	6.3	12.7
	1997	106	1,600	6.6	10.3	17.0
	1996	107	1,450	7.4	7.4	14.8
	1995	102	1,350	7.6	5.5	13.0
	1994	100	1,280	7.8	5.6	13.4
	1993	102	1,212	8.4	5.1	13.5
	1992	101	1,153	8.8	1.2	10.0
	1991	97	1,139	8.5	4.5	13.0
1990	96	1,090	8.8	-0.5	8.4	
1989	91	1,095	8.3	15.6	24.0	
1988	82	947	8.7	20.5	29.2	
Farm Crisis	1987	76	786	9.6	-10.0	-0.3
	1986	83	873	9.5	-20.0	-10.5
	1985	98	1,091	9.0	-28.1	-19.1
	1984	109	1,518	7.2	-3.2	4.0
	1983	106	1,568	6.7	-13.0	-6.3
	1982	106	1,802	5.9	-7.2	-1.3
Farm Boom	1981	102	1,941	5.2	7.2	12.4
	1980	96	1,811	5.3	16.8	22.1
	1979	89	1,550	5.7	16.5	22.2
	1978	82	1,331	6.2	5.7	11.9
	1977	79	1,259	6.3	36.8	43.1
	1976	69	920	7.5	28.0	35.5
	1975	60	719	8.3	20.4	28.8
	1974	53	597	8.9	28.1	37.0
	1973	39	466	8.4	12.6	20.9
	1972	35	414	8.5	5.6	14.1
1971	34	392	8.7	0.0	8.7	
1970	33	392	8.4	2.6	11.0	

Source: USDA Annual Survey of Agricultural Land Values and Cash Rents.
Cash rental rates for 1995 through 2009 are averages of cropland and pasture rents.

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deducted. These will probably reduce the total return by one to two percentage points. Also, cash returns have not been adjusted for inflation over this period.

Increase (decrease) in value

Another form of return is the annual increase or decrease in the market value of farmland. This increase or decrease is computed as a percentage change in value from one year to the next.

Both the estimated cash rent rate and the land value are based on USDA surveys. They differ slightly from Iowa State University surveys.

Results over the entire period

Cash returns – As shown in Table 1, the rate of gross cash return has been up and down since 1970. The return was only 3.8 percent in 2008 because land values were rising faster than rental rates. Conversely, the rate was 9.6 percent in 1987 because land values declined faster than rental rates during the crisis of the 1980s. The average over the period from 1970 to 2009 was 7.0 percent.

Land value change – The return due to changes in land values was much more volatile, ranging from a high of 36.8 percent in 1977 to a low of negative 28.1 percent in 1985. Over the entire period, land values increased by an average of 6.7 percent per year.

Total returns – The total return (annual cash return plus change in land value) averaged 13.6 percent per year and ranged from a low of a negative 19.1 percent in 1985 to a high of 43.1 percent in 1977.

Results by financial period

Rates of return have varied greatly during specific time periods over the past thirty-nine years. The rates of return during the farm boom period, farm crisis period and the current period are shown in Table 2.

Farm boom period – During the farmland boom period of 1970 through 1981, land values increased rapidly (15.0 percent

on average) providing a total return of 22.3 percent. It should be noted that cash rental rates and land values for the decade before 1970 were very stable. Farmland values and rental rates started their rapid rise in 1973/74 when grain shortages pushed prices to extremely high levels.

Farm crisis period – During the farm financial crisis years of 1982 through 1987, land values declined rapidly – an average of 13.6 percent per year. Cash returns as a percent of land values actually increased during this period because land values dropped faster than rental rates. However, the land value declines more than offset cash returns and the average total return was a negative 5.6 percent.

Recovery period – From 1988 to 2003 land values and rental rates resumed their upward trend, although at a slower rate than during the boom period. The average rate of return during this period has been similar to the average rate of return over the entire period. In the past few years land values have increased faster than cash rents.

Ethanol boom period – From the beginning of the ethanol boom period of 2004 to the present time (2009), farmland values and rental rates have increased rapidly. Farmland values increased an average of 11.7 per year over this period. Because land values increased faster than rental rates, cash rent as a percent of land value dropped to an average of 4.4 percent. Total return averaged 16.1 percent.

Entire period – From 1970 to the present time, farmland has returned an average of 13.6 percent, of which land value increases accounted for 6.7 percent of the increase, and rent as a percent of land value accounted for the remaining 7 percent.

Table 2. Returns to farmland by time period.

Time period	Cash rent as percent of value	Percentage change in land value	Total percentage return
Boom period -- 1970-81	7.3%	15.0%	22.3%
Farm crisis -- 1982-87	8.0	-13.6	-5.6
Recovery period -- 1988-03	7.3	6.2	13.4
Ethanol boom -- 2004-09	4.4	11.7	16.1
Entire period -- 1970-09	7.0	6.7	13.6

Table 3. Returns to farmland ownership by purchase date

Ownership period	Purchase price	2009 Price	Percent increase in price	Average annual rent as percent of purchase price*
Beginning of boom period to present (1970 - 2009)	\$392	\$3,850	882%	24%
End of boom period to present (1981 - 2009)	1,941	3,850	98	6
End of crisis period to present (1987- 2009)	786	3,850	390	14
Beginning of ethanol boom to present (2004 - 2009)	2,200	3,850	75	6

* The cash return per year is computed by dividing the cash rental rate for each year during the time period by the farmland purchase price. An average cash return is then computed for the time period.

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Results by farmland purchase date

Rates of return on farmland investments vary greatly depending on when farmland is purchased. In Table 3, farmland is assumed to be purchased at three different time-periods; the beginning of the boom period (1970), the end of the boom period (1981) and the end of the crisis period (1987). The rates of return for each of these three investment periods are shown in Table 3.

Beginning of boom period (1970) - A typical Iowa farmland purchase in 1970 would have been \$392 per acre. The value of the farmland 39 years later in 2009 was \$3,850, for an increase of 882 percent or 23 percent per year. The average gross cash return over the period was 24 percent. This was computed by dividing the cash rental rate for each year by the 1970 original purchase price of \$392. The return ranged from 8 percent in the year of purchase in 1970 to 43 percent in 2009.

End of boom period (1981) - A farmland purchase in 1981 would have been for \$1,941 per acre. The value 28 years later in 2009 was double the 1981 value, for an average increase of 4 percent per year. The average gross cash return over the period was 6 percent. The gross cash return was 8.6 percent in 2009 when cash rents were \$167 per acre.

End of the crisis period (1987) - In 1987 the average Iowa farmland value was \$786 per acre. The value in 2009, 22 years later, was \$3,850 for an increase of 390 percent or 18 percent per year. The average gross cash return over the period was 14 percent. The gross cash return in 2009 was 21 percent.

Beginning of ethanol boom period (2004) - The rapid expansion of the corn ethanol industry since 2004 has pushed land values and rental rates upward. The value of a farmland purchase in 2004 would have been \$2,200. The value in 2009, five years later was \$3,850 for an increase of 75 percent or 15 percent per year. The average gross cash return over the period was 6 percent.

Summary

Over the years farmland investments have yielded a very competitive rate of return. However, about half of the return comes from appreciation in land value, which can be highly unpredictable. Moreover, it does not provide any cash for making mortgage payments or paying other ownership costs.

Updates, continued from page 1

Internet Updates

The following updates have been added on www.extension.iastate.edu/agdm.

How Often Can Cattle Feeders Hedge a Profit with Futures? -- B2-54 (4 pages)

Iowa Farmland Legal Descriptions -- C2-85 (3 pages)

Computing the Corn Suitability Rating on Your Farm -- C2-87

Conducting Market Research -- C5-30 (3 pages)

Evaluating Marketing Outlets Using Whole-Farm Records -- C5-32 (4 pages)

Marketing on the Internet -- C5-34 (3 page)

Catering - Events and Festivals -- C5-36 (2 pages)

Community Supported Agriculture -- C5-37 (2 pages)

Using Partial Budgets to Make Decisions -- C6-10 (5 pages)

Decision Tools and Current Profitability

The following tools have been added or updated on www.extension.iastate.edu/agdm.

ACRE Payment Estimator -- A1-45

2010 Average Crop Revenue Election (ACRE) -- Voiced Media

Season Average Price Calculator -- A2-15

Corn Profitability -- A1-85

Soybean Profitability -- A1-86

Ethanol Profitability -- D1-10

Biodiesel Profitability -- D1-15

Returns for Farrow-to-Finish -- B1-30

Returns for Weaned Pigs -- B1-33

Returns for Steer Calves -- B1-35

Returns for Yearling Steers -- B1-35

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