

Do land values match productivity?

Land values and rental rates keep rising, but do those values show up in the combine?



Editor's note: Kent Vickre and Dwight Raab write a tax and finance column for each issue of Pioneer GrowingPoint® magazine. Vickre is state coordinator of the Iowa Farm Business Association. Raab is state coordinator of Illinois Farm Business Farm Management. They address issues that influence agribusiness success.

It's hard to move forward while looking in the rear-view mirror. However, maintaining a historical perspective can prevent you from making the same mistakes others made in the past. Two of our colleagues, Gary Schnitkey and Brad Zwilling of the University of Illinois, recently offered some comments on land values and cash rental rates. Keep their comments in mind when you consider strategies and options for expanding the land base of your farm.

There are three basic ways to add to the acreage base of a farm:

1. Purchase land.
2. Rent via a cash-rent lease.
3. Rent via a crop-share lease.

Ownership of land is obviously the most capital-intensive route to acquiring land. Those acres must be available in your area or within a reasonable distance. But buying land ensures those acres will be available as long as you own the farm.

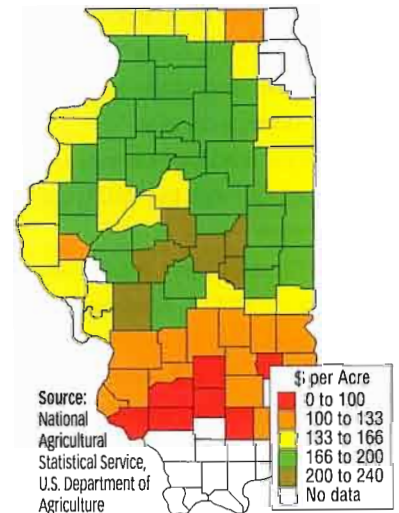
Rental arrangements require less capital commitment, but you must negotiate rental arrangements at regular intervals. A tenant is never completely assured of being able to rent land very far into the future. The frequent negotiation of cash-rent lease contracts increases the risk of a possible loss of those acres.

Illinois as an example

The National Agricultural Statistics Service (NASS), a USDA agency, provides estimates of farm real estate values and cash rental rates by state. They develop these estimates from surveys of farmers in selected geographical areas. The estimates provide insight on changes in farm real estate value over time.

Let's look at one state. The average farm real estate values for Illinois, 1970 to 2009, appear in the table on page 15. The average value for an acre of Illinois farm real estate in 2009 was \$4,530, the second highest on record. Land values, as reported by USDA, include the value of any improvements

Figure 1
Illinois average cash rents by county, 2008



Pioneer gp Get more information about land values by using key code 9604. See page 17.



to the land such as buildings, bins and drainage tile.

The 2009 value was 0.4 percent lower than the record value of \$4,550 per acre set in 2008. The 2009 decrease was the first annual decrease reported since 1987. Illinois farm real estate values have increased 100 percent since 2000.

The state's farm real estate values have declined compared to the previous year only six times since 1970. On four occasions, farm real estate values increased more than 20 percent (1974, 1976, 1977 and 2005). The largest increase occurred in 1977. Values rose 37.3 percent.

If you aggregate the annual data into five-year periods, for 1995-1999 average farm real estate values increased in the range from 4.2 percent to 9 percent annually. From 2000-2004 farm real estate values increased in the range from 1.3 percent to 5.3 percent. From 2005 to the current period, the increase in farmland values has averaged 12.4 percent.

Obviously, land values have been rising relatively quickly. No shock to those of you trying to rent or buy land.

Rental rates rise

NASS also conducts a survey of cash rents for counties with enough responses to form good estimates of average cash rental rates. These estimates come from surveys of farmers and provide insight on changes in farm real estate value over time.

Average county rents in Illinois range from a low of \$74.50 per acre in Perry County to a high of \$224 per acre in Sangamon County (see Figure 1). The highest average cash rents are in central Illinois. Six counties in the middle of Illinois report rents in excess of \$200: Sangamon (\$224), Moultrie (\$213), Macon (\$211), Logan (\$210), Piatt (\$205) and Macoupin (\$204) counties.


Except those on the state border, most counties in the northern and central parts of Illinois have rents in the \$166-to-\$200 per acre range. Most counties on the northern border, western border (above Madison County) and eastern border (above Crawford County) have rents between \$133 and 166 per acre. Counties in southern Illinois have rents below \$133 per acre. Seven counties in southern Illinois have rents below \$100 per acre: Richland County (\$99 per acre), Hamilton (\$96), Washington (\$95), Marion (\$93), Randolph (\$90), Jefferson (\$82) and Perry (\$75).

Relate it to productivity

Much of the variability in cash rents is related to land productivity. For example, consider how five-year average corn yields from 2003 through 2007 relate to average county rents. In general, cash rents increase as the average county yield increases.

A statistical relationship exists between cash rents and average corn yields. This relationship implies a \$69-per-acre cash rent for an average corn yield of 100 bushels per acre, a \$90-per-acre cash rent for a 120-bushel yield, a \$118-per-acre cash rent for a 140-bushel yield, a \$153-per-acre cash rent for a 160-bushel yield, and a \$194-per-acre cash rent for a 180-bushel yield.

This statistical relationship encompasses several years of agricultural returns above historical averages, leading to rising cash rents. The relationship between yields and rents will change as economic conditions change.

The bottom line: Land values are rising along with cash rents. However, it's important to take into account the relative productivity of land when deciding whether land prices offer a good value — whether you're buying, renting or leasing. 

**Table 1:
Illinois land values
keep rising**

Illinois farm real estate values, 1970-2009

Year	Value Per acre	Percent change
1970	\$490	—
1971	\$491	0.2
1972	\$527	7.3
1973	\$590	12.0
1974	\$788	33.6
1975	\$845	7.4
1976	\$1,062	25.5
1977	\$1,458	37.3
1978	\$1,625	11.5
1979	\$1,858	14.3
1980	\$2,041	9.8
1981	\$2,188	7.2
1982	\$2,023	-7.5
1983	\$1,837	-9.2
1984	\$1,845	0.4
1985	\$1,381	-25.1
1986	\$1,232	-10.8
1987	\$1,149	-6.7
1988	\$1,262	9.8
1989	\$1,391	10.2
1990	\$1,405	1.0
1991	\$1,459	3.8
1992	\$1,536	5.3
1993	\$1,548	0.8
1994	\$1,670	7.9
1995	\$1,820	9.0
1996	\$1,900	4.4
1997	\$1,980	4.2
1998	\$2,130	7.6
1999	\$2,220	4.2
2000	\$2,260	1.8
2001	\$2,290	1.3
2002	\$2,350	2.6
2003	\$2,430	3.4
2004	\$2,560	5.3
2005	\$3,210	25.4
2006	\$3,590	11.8
2007	\$4,020	12.0
2008	\$4,550	13.2
2009	\$4,530	-0.4

Source: USDA Agricultural Land Values and Cash Rents Statistical Bulletin

