

Costs to Produce Milk in Illinois—2007

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Higher milk prices more than offset higher costs resulting in returns exceeding total economic costs for Illinois dairy producers in 2007, according to figures summarized by University of Illinois agricultural economists in cooperation with the Illinois Farm Business Farm Management Association. The average net price received per 100 pounds of milk was \$18.83, which was more than total costs of \$18.43. The price received for milk in 2007 was the highest ever. The average price received for milk in 2006 was \$12.88. On a per cow basis, total returns from milk were \$3,901 compared to the total cost to produce milk of \$3,809 per cow. Total returns per cow were the highest on record. The previous high returns per cow, \$3,189, were recorded in 2004. Total returns have exceeded total economic costs six out of the last ten years.

A detailed breakdown by herd size of 2007 milk production costs and returns for dairy farms is shown in Table 1. Farms included had no other livestock, with all costs accounted for either in crops or in the dairy enterprise. Total costs for the dairy enterprise were reduced by income from sales of dairy animals or from an inventory increase in pounds of beef produced during the year. The value of the added pounds was figured at the average price received for

all weights of dairy animals sold in the past five years. The residual costs—89 percent of the total enterprise costs—were the net cost of producing milk. The feed cost includes on-the-farm grains evaluated at average Illinois market prices for the year, with corn at \$3.42 per bushel and oats at \$2.40. Commercial feeds were listed at actual cost, hay and silage at farm values, and pasture at 40 cents per animal per pasture day.

Milk production per cow for all herds averaged 20,702 pounds. The average was 1,227 pounds more per cow than in 2006. This is the second highest on record. The highest level was in 2001 when milk production was 20,715 pounds per cow. Herds with more than 80 cows produced milk at a lower cost than herds with less than 80 animals. Total costs for each 100 pounds of milk produced were 49 cents lower for the larger herds. Feed costs were \$1.43 less, while non-feed costs were 94 cents more per 100 pounds produced for the larger herds. The trend in total costs and returns per cow for all herds is given from 2004 to 2007 (Table 2) and from 1998 to 2007 (Figure 1). When cash and noncash costs are figured, the profit margin (return above all cost) increased— from a negative \$763 in 2006 to \$92 per cow in 2007. The

last five year returns above all costs has averaged a negative \$118 per cow. During this period, returns above all costs per cow have varied from a negative \$763 in 2006 to \$209 in 2004. In figure 1, labor and interest charges are included in total costs only. Most dairy producers will incur some hired labor and cash interest expense and would include them as cash operating costs.

The 2007 returns were \$4.29 per 100 pounds produced higher than the 2006 returns due to higher milk prices and higher milk production per cow. The average net price received for milk was \$18.83 per 100 pounds. This is \$5.95 per 100 pounds or 46 percent higher than the average price received in 2006. Based on 20,700 pounds of milk produced per cow, this increase in price increased total returns per cow by \$1,232. The average net price received for milk for the last five-year period is \$15.21 per hundred pounds. Dairy assistance payments from the Farm Service Agency and patronage returns related to the dairy enterprise would add about 31 cents per 100 pounds of milk produced to returns.

While the price received per 100 pounds of milk increased, feed and nonfeed costs also increased per 100 pounds of milk produced. Feed costs in 2007 averaged \$9.04 per 100 pounds of milk produced as compared to \$7.66 in 2006. Feed costs were at their highest level ever. Feed costs have averaged \$7.62 the last five years. The 2007 feed costs were \$1.42 above the last five year average. Feed costs were 49 percent of the total cost to produce milk. Non-feed costs per 100 pounds of milk produced were \$9.39 in 2007 compared to \$9.11 in 2006. Total non-feed costs were the highest ever.

Along with producing milk, dairy enterprises also produce beef. The average pounds of beef produced per cow in 2007 was 615 pounds. The average price received

per 100 pounds sold was \$94.87. The last five-year average price received for beef has been \$109.71 per 100 pounds sold.

Costs will likely exceed milk prices in 2008 resulting in negative profit margins for dairy producers. Higher feed costs will be the reason for the decrease in returns. Milk prices are also expected to average slightly lower than in 2007. The average price received for milk in 2007 was 46 percent higher than the average in 2006. The average milk price for 2008 is projected to be about 3 percent less, or about 60 cents per hundredweight, than the average for 2007. Continued strong domestic and international demand for dairy products has helped keep milk prices strong even with increased supplies. United States milk production is expected to increase about 2.2 percent in 2008 due to an increase in the number of milk cows and increased milk production per cow.

While milk prices will remain fairly constant, feed costs are expected to increase significantly. Corn and soybean prices remained high most of the year. Feed costs per 100 pounds of milk produced would average about \$11.00 using prices of \$4.75 per bushel for corn, \$.21 a pound for protein and \$130 a ton for hay. This is based on annual feed consumption per cow, including replacement animals, of 123 bushels of corn, 4,362 pounds of protein, and 8.2 tons of hay or hay equivalents. If non-feed costs per 100 pounds of milk produced averaged \$9.50, total costs to produce 100 pounds of milk would be \$20.50. A 3 percent decrease in milk prices in 2008 for Illinois producers would result in an annual price of about \$18.25 per 100 pounds. If total economic costs averaged \$20.50 per 100 pounds of milk produced, the average Illinois producer would have total economic costs exceed returns by \$2.25 per 100 pounds of milk produced.

Table 1. Costs and Returns for Illinois Dairy Enterprises, by Herd Size, 2007

	40 to 80 Cows per herd	More than 80 cows per herd	All units
Number of farms	16	20	36
Average tillable acres per farm	214	515	381
Average number of cows per farm.....	55.8	221.9	148.1
Average milk per cow, pounds	19,081	21,999	20,702
Average beef produced per cow, pounds.....	612	618	615
Costs per cow, milk plus beef.....	\$4,037	\$4,459	\$4,271
Average returns from beef	471	455	462
Net costs for milk per cow	3,566	4,004	3,809
Return from milk per cow.....	3,568	4,167	3,901
Return above all cost.....	\$ 2	\$163	\$92
Cash costs per 100 pounds of Milk produced:			
Feed.....	\$9.83	\$8.40	\$9.04
Operating expenses:			
Maintenance and power	\$2.22 ^a	\$2.14 ^a	\$2.18 ^a
Livestock expense.....	2.03	2.53	2.31
Insurance, taxes, and overhead	<u>.26</u>	<u>.31</u>	<u>.29</u>
TOTAL operating expenses.....	\$4.51	\$4.98	\$4.78
Other costs per 100 pounds of Milk produced:			
Depreciation.....	\$.60	\$.75 ^b	\$.68 ^b
Labor.....	2.55	2.55	2.55
Interest charge on all capital	<u>1.20</u>	<u>1.52</u>	<u>1.38</u>
TOTAL other costs	\$4.35	\$4.82	\$4.61
Total non-feed costs per 100 pounds of milk produced	\$8.86	\$9.80	\$9.39
Total all costs per 100 pounds of milk produced	\$18.69	\$18.20	\$18.43
Net price received per 100 pounds of milk produced	\$18.70	\$18.94	\$18.83
Return above all costs per 100 pounds of milk produced	\$0.01	\$0.74	\$0.40

^a Includes utilities, machinery, equipment and building repairs, machines

^b Includes machinery, equipment, and building depreciation.

Table 2. Costs and Returns per Cow for Illinois Dairy Enterprises, 2004 to 2007

	2004	2005	2006	2007
Number of farms	67	61	46	36
Number of cows	106	116	107	148
Net cost for milk, per cow.....	\$2,980	\$3,015	\$3,271	\$3,809
Return from milk, per cow	3,189	3,161	2,508	3,901
Return above all costs, per cow	\$209	\$146	-\$763	\$92
Price received per 100 pounds of milk	\$16.37	\$15.46	\$12.88	\$18.83
Price received per 100 pounds of beef	\$102.37	\$119.64	\$137.91	\$94.87
Milk produced per cow, pounds.....	19,480	20,428	19,475	20,702

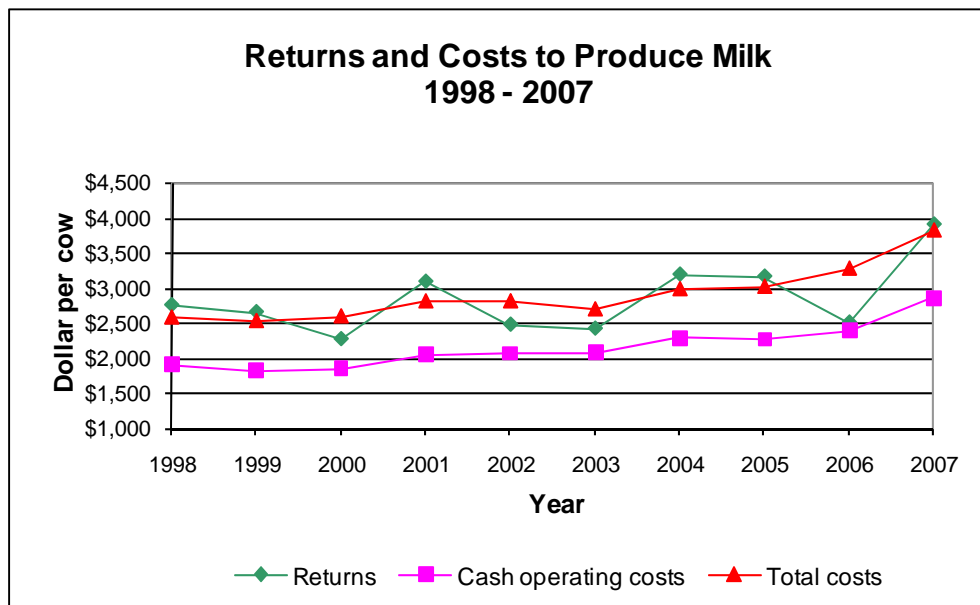


Figure 1. Returns and costs to produce milk, 1998 to 2007. Interest, depreciation, and labor charges included only in total costs.

The author would like to acknowledge that data used in this study comes from the local Farm Business Farm Management (FBFM) Associations across the State of Illinois. Without their cooperation, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,500 plus farmers and 60 professional field staff, is a not-for-profit organization available to all farm

operators in Illinois. FBFM field staff provide on-farm counsel with computerized recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact the State FBFM Office located at the University of Illinois Department of Agricultural and Consumer Economics at 217-333-5511 or visit the FBFM website at www.fbfm.org.