

# **COSTS TO PRODUCE MILK IN ILLINOIS—2000**

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## **TAKE HOME MESSAGES**

- Know your cost of producing milk.
- Lower milk prices in 2000 resulted in total economic costs exceeding total returns.
- Profit margins for dairy producers in 2001 should improve compared to 2000 profit margins.

Significantly lower milk prices resulted in total economic costs exceeding returns for Illinois dairy producers in 2000, according to figures summarized by University of Illinois agricultural economists in cooperation with the Illinois Farm Business Farm Management Association. Individual records tabulated were from farmers enrolled in the FBFM record-keeping and business analysis program. The average net price received per 100 pounds of milk was \$11.85 which was less than total costs of \$13.56. The average price received for milk in 1999 was \$14.58. On a per cow basis, total returns from milk were \$2,265 compared to the total cost to produce milk of \$2,589 per cow. This is the first year since 1997 total costs exceeded total returns. Total returns have exceeded total economic costs four out of the last ten years.

A detailed breakdown by herd size of 2000 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—91 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 \$1.89 per bushel and oats at \$1.38. 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 19,108 pounds. The average was 905 pounds more per cow than in 1999 and at its highest level ever. The previous high was in 1999 when milk production was 18,203 pounds per cow. Milk production per cow has increased 12 percent since 1996. Herds with more than 80 cows produced milk at a slightly lower cost than herds with less than 80 animals. Total costs for each 100 pounds of milk produced were 36 cents lower for the larger herds. Feed costs were 12 cents more, while non-feed costs were 24 cents more per 100 pounds produced for the smaller herds. The trend in total costs and returns per cow for all herds is given from 1997 to 2000 (Table 2) and from 1991 to 2000 (Figure 1). When cash and noncash costs are figured, the profit margin (return above all cost) decreased—from \$125 in 1999 to a negative \$324 per cow in 2000. The 2000 returns per cow were the lowest

since 1980 when returns were a negative \$320 per cow. The last five year returns above all costs has averaged a negative \$61 per cow. During this period, returns above all costs per cow have varied from a negative \$324 in 2000 to \$174 in 1998. 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 2000 returns were \$2.39 per 100 pounds produced lower than the 1999 returns due to lower milk prices. The average net price received for milk was \$11.85 per 100 pounds. This is \$2.73 per 100 pounds or 19 percent lower than the average price received in 1999. Based on 19,100 pounds of milk produced per cow, this decrease in price decreased total returns per cow by \$521. The average net price received for milk for the last five-year period is \$13.90 per hundred pounds.

While the price received per 100 pounds of milk decreased, feed costs also decreased and non-feed costs remained about the same per 100 pounds of milk produced. Feed costs in 2000 averaged \$6.23 per 100 pounds of milk produced as compared to \$6.56 in 1999. Feed costs have decreased 28 percent since 1996. Feed costs of \$8.66 per 100 pounds of milk produced in 1996 were the highest on record. Feed costs were 46 percent of the total cost to produce milk. Non-feed costs per 100 pounds of milk produced were \$7.33 in 2000 compared to \$7.34 in 1999.

Along with producing milk, dairy enterprises also produce beef. The average pounds of beef produced per cow in 2000 was 577 pounds. The average priced received per 100 pounds sold was \$94.62, which is the highest since this study began. The last five-year average price received for beef has been \$68.89 per 100 pounds sold.

Profit margins for dairy producers in 2001 will increase compared to 2000 profit levels due to higher milk prices. Total returns are expected to exceed total economic costs due to a substantial increase in milk prices. While the average price received for milk in 2000 was 19 percent lower than the average in 1999, the average milk price for 2001 is projected to be about 24 percent above the average for 2000. The number of milk cows in the United States in 2001 is expected to be slightly lower than in 2000. With a slight decrease in milk production per cow, total milk production is projected to be about 1 percent lower in 2001 compared to 2000. This will result in higher milk prices.

While milk prices have increased, feed costs may also increase somewhat but are expected to remain at relatively low levels in 2001. Continued abundant grain supplies have kept grain prices low. Feed costs per 100 pounds of milk produced would average about \$6.45 using prices of \$1.90 per bushel for corn, \$.1275 a pound for protein and \$80 a ton for hay. This is based on annual feed consumption per cow, including replacement animals, of 125 bushels of corn, 4,050 pounds of protein, and 7.5 tons of hay or hay equivalents. If non-feed costs per 100 pounds of milk produced averaged \$7.25, total costs to produce 100 pounds of milk would be \$13.70. A 24 percent increase in milk prices in 2001 for Illinois producers would result in an annual price of about \$14.70 per 100 pounds. If total economic costs averaged \$13.70 per 100 pounds of milk produced, the average Illinois producer would have total returns exceed total economic costs by \$1.00 per 100 pounds of milk produced.

**Table 1.** Costs and Returns for Illinois Dairy Enterprises, by Herd Size, 2000

	<b>40 to 80 cows per herd</b>	<b>More than 80 cows per herd</b>	<b>All units</b>
Number of farms .....	40	41	81
Average tillable acres per farm .....	282	397	340
Average number of cows per farm.....	55.7	127.3	91.9
Average milk per cow, pounds.....	18,102	20,090	19,108
Average beef produced per cow, pounds .....	621	535	577
Costs per cow, milk plus beef .....	\$2,809	\$2,908	\$2,859
Average returns from beef.....	322	220	270
Net costs for milk per cow .....	2,487	2,688	2,589
Return from milk per cow .....	2,134	2,393	2,265
Return above all cost.....	\$-353	\$-295	\$-324
Cash costs per 100 pounds of milk produced:			
Feed .....	\$6.29	\$6.17	\$6.23
Operating expenses:			
Maintenance and power .....	\$1.56 <sup>a</sup>	\$1.54 <sup>a</sup>	\$1.55 <sup>a</sup>
Livestock expense .....	1.42	1.68	1.55
Insurance, taxes, and overhead.....	<u>.33</u>	<u>.34</u>	<u>.34</u>
TOTAL operating expenses .....	\$3.31	\$3.56	\$3.44
Other costs per 100 pounds of milk produced:			
Depreciation .....	\$.74 <sup>b</sup>	\$.71 <sup>b</sup>	\$.72 <sup>b</sup>
Labor .....	2.33	1.80	2.06
Interest charge on all capital.....	<u>1.07</u>	<u>1.14</u>	<u>1.11</u>
TOTAL other costs.....	\$4.14	\$3.65	\$3.89
Total non-feed costs per 100 pounds of milk produced.....	\$7.45	\$7.21	\$7.33
Total all costs per 100 pounds of milk produced.....	\$13.74	\$13.38	\$13.56
Net price received per 100 pounds of milk produced.....	\$11.79	\$11.91	\$11.85
Return above all costs per 100 pounds of milk produced.....	\$-1.95	\$-1.47	\$-1.71

<sup>a</sup> Includes utilities, machinery, equipment and building repairs, machines hired, and fuel.

<sup>b</sup> Includes machinery, equipment, and building depreciation.

**Table 2.** Costs and Returns per Cow for Illinois Dairy Enterprises, 1997 to 2000

	1997	1998	1999	2000
Number of farms .....	93	85	81	81
Number of cows .....	87	89	91	92
Net cost for milk, per cow.....	\$2,563	\$2,581	\$2,531	\$2,589
Return from milk, per cow .....	2,408	2,755	2,656	2,265
Return above all costs, per cow.....	-\$155	\$174	\$125	-\$324
Price received per 100 pounds of milk.....	\$13.33	\$15.14	\$14.58	\$11.85
Price received per 100 pounds of beef .....	\$56.91	\$64.20	\$79.70	\$94.62
Milk produced per cow, pounds.....	18,063	18,191	18,203	19,108

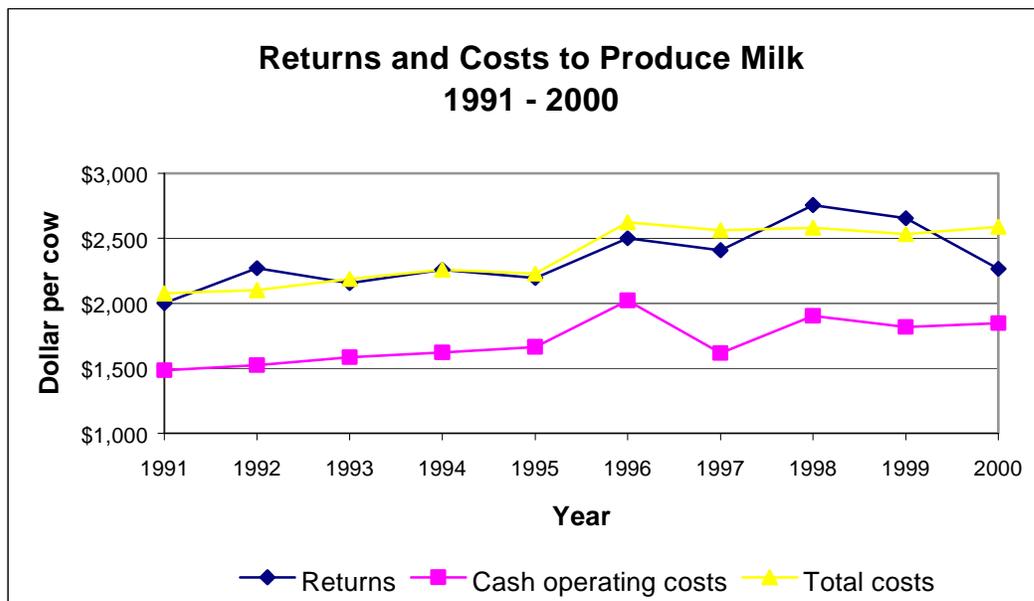


Figure 1. Returns and costs to produce milk, 1991 to 2000. Interest, depreciation, and labor charges included only in total costs.