

Costs to Produce Milk in Illinois—2008

Bradley L. Zwilling

Extension Specialist, Farm Business Analyst

Department of Agricultural and Consumer Economics

University of Illinois at Urbana-Champaign

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Higher milk prices were not enough to offset higher costs resulting in total economic costs exceeding returns for Illinois dairy producers in 2008, 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 \$19.21, which was less than total costs of \$19.79. The price received for milk in 2008 was the highest ever. The average price received for milk in 2007 was \$18.83. On a per cow basis, total returns from milk were \$3,900 compared to the total cost to produce milk of \$4,021 per cow. Total returns from milk per cow were the second highest on record. The highest returns per cow, \$3,901, were recorded in 2007. Total returns have exceeded total economic costs five out of the last ten years.

A detailed breakdown by herd size of 2008 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 \$4.70 per bushel and oats at \$3.30. 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 20,297 pounds. The average was 405 pounds less per cow than in 2007. The highest level was in 2001 when milk production was 20,715 pounds per cow. Herds with less than 80 cows produced milk at a lower cost than herds with more than 80 animals. Total costs for each 100 pounds of milk produced were 21 cents lower for the smaller herds. Feed costs were \$0.37 more, while non-feed costs were 58 cents less per 100 pounds produced for the smaller herds. The trend in total costs and returns per cow for all herds is given from 2005 to 2008 (Table 2) and from 1999 to 2008 (Figure 1). When cash and noncash costs are figured, the profit margin (return above all cost) decreased— from \$92 in 2007 to a negative \$121 per cow in 2008. The last five year

returns above all costs has averaged a negative \$87 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 2008 returns were \$0.98 per 100 pounds produced lower than the 2007 returns due to higher feed prices and lower milk production per cow. The average net price received for milk was \$19.21 per 100 pounds. This is \$0.38 per 100 pounds or 2 percent higher than the average price received in 2007. Based on 20,297 pounds of milk produced per cow, this increase in price increased total returns per cow by \$77. The average net price received for milk for the last five-year period is \$16.55 per hundred pounds. Dairy assistance payments from the Farm Service Agency and patronage returns related to the dairy enterprise would add about 15 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 2008 averaged \$10.20 per 100 pounds of milk produced as compared to \$9.04 in 2007. Feed costs were at their highest level ever. Feed costs have averaged \$8.27 the last five years. The 2008 feed costs were \$1.93 above the last five year average. Feed costs were 52 percent of the total cost to produce milk. Non-feed costs per 100 pounds of milk produced were \$9.59 in 2008 compared to \$9.39 in 2007. 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 2008

was 586 pounds. The average price received per 100 pounds sold was \$69.91. The last five-year average price received for beef has been \$104.94 per 100 pounds sold.

Costs will likely exceed milk prices in 2009 resulting in negative profit margins for dairy producers. Lower milk prices will be the main reason for the decrease in returns. The average price received for milk in 2008 was 2 percent higher than the average in 2007. The average milk price for 2009 is projected to be about 32 percent less, or about \$6.21 cents per hundredweight, than the average for 2008. Increased supplies and weaker global demand due to the economic downturn in 2009 has led to lower prices. United States milk production is expected to decrease about .6 percent in 2009 due to an decrease in the number of milk cows and increased milk production per cow.

While milk prices will decrease significantly, feed costs are expected to decrease slightly. Corn and soybean prices remained lower than 2008 most of the year. Feed costs per 100 pounds of milk produced would average about \$9.30 using prices of \$3.80 per bushel for corn, \$.17 a pound for protein and \$115 a ton for hay. This is based on annual feed consumption per cow, including replacement animals, of 105 bushels of corn, 4,159 pounds of protein, and 8.5 tons of hay or hay equivalents. If non-feed costs per 100 pounds of milk produced averaged \$9.65, total costs to produce 100 pounds of milk would be \$18.95. A 32 percent decrease in milk prices in 2009 for Illinois producers would result in an annual price of about \$13.00 per 100 pounds. If total economic costs averaged \$18.95 per 100 pounds of milk produced, the average Illinois producer would have total economic costs exceed returns by \$5.95 per 100 pounds of milk produced.

Table 1. Costs and Returns for Illinois Dairy Enterprises, by Herd Size, 2008

	40 to 80 Cows per herd	More than 80 cows per herd	All units
Number of farms	13	24	37
Average tillable acres per farm	207	368	311
Average number of cows per farm.....	56.9	180.6	137.1
Average milk per cow, pounds	18,579	21,227	20,297
Average beef produced per cow, pounds	567	596	586
Costs per cow, milk plus beef	\$4,024	\$4,664	\$4,439
Average returns from beef	371	444	418
Net costs for milk per cow	3,653	4,220	4,021
Return from milk per cow	3,558	4,086	3,900
Return above all cost.....	\$- 95	\$-134	\$-121
Cash costs per 100 pounds of			
Milk produced:			
Feed.....	\$10.44	\$10.07	\$10.20
Operating expenses:			
Maintenance and power	\$2.36 ^a	\$2.42 ^a	\$2.40 ^a
Livestock expense	2.24	2.44	2.37
Insurance, taxes, and overhead	<u>.39</u>	<u>.32</u>	<u>.34</u>
TOTAL operating expenses	\$4.99	\$5.18	\$5.11
Other costs per 100 pounds of			
Milk produced:			
Depreciation	\$.65 ^b	\$.81 ^b	\$.75 ^b
Labor	2.63	2.70	2.68
Interest charge on all capital	<u>.95</u>	<u>1.11</u>	<u>1.05</u>
TOTAL other costs	\$4.23	\$4.62	\$4.48
Total non-feed costs per 100 pounds of milk produced	\$9.22	\$9.80	\$9.59
Total all costs per 100 pounds of milk produced	\$19.66	\$19.87	\$19.79
Net price received per 100 pounds of milk produced	\$19.15	\$19.25	\$19.21
Return above all costs per 100 pounds of milk produced	\$-0.51	\$-0.62	\$-0.58

^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, 2005 to 2008

	2005	2006	2007	2008
Number of farms.....	61	46	36	37
Number of cows.....	116	107	148	137
Net cost for milk, per cow.....	\$3,015	\$3,271	\$3,809	\$4,021
Return from milk, per cow.....	3,161	2,508	3,901	3,900
Return above all costs, per cow	\$146	-\$763	\$92	-\$121
Price received per 100 pounds of milk	\$15.46	\$12.88	\$18.83	\$19.21
Price received per 100 pounds of beef	\$119.64	\$137.91	\$94.87	\$69.91
Milk produced per cow, pounds.....	20,428	19,475	20,702	20,297

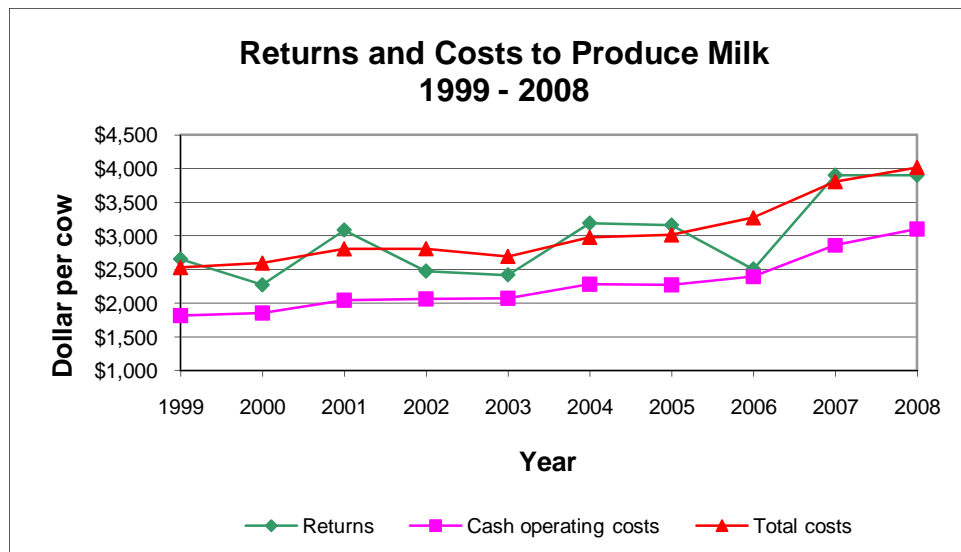


Figure 1. Returns and costs to produce milk, 1999 to 2008. Interest, depreciation, and labor charges included only in total costs.

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.