

Economics of Organic Dairy Production in the Northeast

Lisa McCrory, Bob Parsons and Rick Kersbergen

The organic dairy industry, still very much in its infancy, has been growing steadily in the Northeast since 1994. Vermont had 3 certified dairy farms in 1994 and today there are 137 certified farms with another 67 to complete their transition by June of this year. Organic milk, sold from the farm gate, is in its 13th year of existence in Vermont, and most of the farms shipping organic milk today have been doing so for less than 5 years. Understanding the costs of production on an organic dairy farm has been a challenge because many of the farms shipping organic milk are still making investments in the infrastructure of their farm while others are still working out the kinks and getting used to a new style of management. Nonetheless, collecting information on the costs of producing organic milk is needed. This information can assist those producers considering the transition to organic, will help the loan officers decide if they are going to support a farmer's interest in transitioning, and will help maintain a sustainable pay price for organic milk.

In 2004, a 2-year study was initiated to determine the profitability of organic dairy farms. University of Vermont Extension, University of Maine Extension, NOFA-VT and the Maine Organic Milk Producers (MOMP) have been working together to collect the numbers and survey information. To supplement the economic findings, technical articles will be written covering subjects on organic dairy transition costs, growing high quality forages, growing small grains, successful farm management systems and more.

The Findings

To date, two years of economic data have been collected (2004 & 2005) and additional funds have been raised to collect two more years of economic information (2006 & 2007).

There were 30 farms participating in the 2004 production numbers; 13 from Vermont and 17 from Maine. Results showed that the 'average' organic dairy farm milked 48 cows, sold 689,000 pounds of milk and received an average of \$22.97/hundredweight for milk sold. Premiums for components and quality provided a \$7.16/cwt spread between the lowest (\$19.88) and highest (\$27.04) pay price. The farms averaged a net farm income of \$21,898 after taking depreciation and accrual adjustments into account.

The 2nd year of the study (2005) has found that profitability is up 18.8% from 2004. There were 44 farms participating in year 2; 26 from Vermont and 18 from Maine. The farms for 2005 averaged 56 cows, sold 740,098 lbs of milk, were paid an average of \$24.94 per cwt. As compared to the 1st year of the study for 2004, the farms averaged 8 more cows, sold more milk per farm, and received an additional \$1.97 per cwt. In contrast to the first year of the study, milk production per cow was down by nearly 1500 lbs. This was attributed to the wider number of variation of the farms in the study for this year. The farms averaged a net farm income of \$33,409 per farm after taking depreciation and accrual adjustments into account.

Both years of the study have shown that feed, labor, and supplies/repairs are the leading cost categories. Feed expense was actually down a bit, from \$1003 per cow in 2004 to \$936 per cow in 2005. Supplies and repairs, labor and depreciation were up slightly.

The difference in pay price from one year to the next was due to a dramatic increase in pay price to the producers during the third quarter of the 2005 year. Preliminary results of the 2004 numbers came out a few months earlier. Producers now had reputable study results available to prove that the pay price of \$21.50/cwt was stale and they needed more money for their organic milk. After 5 years at a fairly constant price, processors needed to raise milk prices to encourage additional organic milk production.

Looking at some of these figures from another perspective, the total production cost per cwt was \$24.58 and net return per cow was \$579. Overall, the net income per cow was down a bit from 2004 and was nearly \$250 lower than a similar study in 1999. Since then we have seen a rise in organic milk prices but a greater rise in farm expenses.

When looking at the difference in Maine and Vermont organic dairy farms, there was no statistical difference between the farms in the two states. Vermont farms were a bit more profitable but tended to have lower depreciation costs. Therefore the study is not slanted by a difference between the two states.

Can 'Return On Equity' (ROE) be positive?

Finding that organic dairy farming in the Northeast did not generate a positive return on equity in 2005, we looked at what it would take to achieve a 5 percent ROE and projected profitability for 2006.

To do that in 2005 would have required a milk price of \$28.43 per hundredweight. This would cover all costs including depreciation, provide \$35,000 for unpaid family labor, and provide the owner with a 5 percent return on equity of \$483,595. Although well over the \$24.94 received for 2005, many organic dairy farms are now receiving more than \$28 with quality and component bonuses.

Organic feed concentrate costs have risen between 5 to 10 percent since 2004. They make up 90 percent of the purchased feed bill and amount to \$49,696 for our average organic farm. Second, fuel prices continued to rise in 2006, although stabilizing and declining in the later part of the year.

So how would farms do with an additional 10 percent increase in fuel price and a 7.5 percent rise in concentrated feed cost? The ROE would drop to -1.23 percent, and the average milk price would have to be \$25.74 per hundredweight for farmers to break even. To generate a positive return on assets of 5 percent, milk prices would need to be \$29.02 per hundredweight.

Despite the fact that many of the farms are not making an economic profit that will enable them to remain competitive, 85 percent of farmers in the study indicated they were "very satisfied" with their switch to organic. None were unsatisfied.

In conclusion, profitability was up 18.8% from 2004, primarily from higher organic milk prices. But the organic dairy sector is not as profitable as it was in 1999 due to faster rising production costs. There is a great variability between farms indicating that management is still the key ingredient for farm profitability.

What does the future offer? Organic dairy can be expected to be more profitable in 2006 as preliminary figures predict milk prices rose above \$27 per cwt with quality premiums. Producers with higher components were paid nearly \$30 per cwt. On the conventional side, we can expect 2006 milk to average closer to \$14 per cwt, nearly \$2 lower than 2005, feed prices up considerably as corn doubled, and fertilizer prices soaring. This explains why more than 80 farms are currently transitioning to organic dairy production this year.

NOFA-VT staff, UVM Extension staff, and UMaine Extension staff are collecting 2006 income and expense information now; if you are interested in participating in this study, please let us know. More information will be forthcoming in the near future as we examine various aspects of the study.

For more info, contact Bob Parsons, University of Vermont, 802-656-2109, bob.parsons@uvm.edu

Recognition goes to the following individuals for making this econ study possible: Glenn Rogers, Dennis Kauppila, and Qingbin Wang from the University of Vermont Rick Kersbergen, Timothy J. Dalton, and Lisa Bragg, from the University of Maine Maine Organic Milk Producers (MOMP) Nat Bacon and Willie Gibson, Northeast Organic Farming Association of Vermont