

Impact of Changing Milk and Input Prices on 2009 Wisconsin Dairy Profit Margins

By Tom Kriegl¹
January 30, 2009

Summary: It appears that Net Farm Income from Operations (NFIFO) in 2009 could be 40-60% lower than in 2007 for all Wisconsin dairy systems but organic which shouldn't see a price reduction even though there are signs that the growth in demand for organic milk has declined from the past several years, probably due to general economic conditions. This is because the average milk price in Wisconsin in 2009 is expected to be much lower than in 2007 and 2008. The 2009 AVERAGE milk price is expected to decline to between \$14-\$15/Cwt.—a bigger decline than expected for input costs. The projected decline in NFIFO/cow from 2007 to 2009 shown on table one (based on actual farm data) **assumes all the projected price changes occur, but few other adjustments are made by farmers.** For whatever system in table one that is closest to yours, compare the 2007 NFIFO/cow to the projected 2009 NFIFO/cow for the annual average milk price level you expect. Especially if you don't like what you see, consider what adjustments you might want to make in your operation to improve margins.

Background: The dramatic increase in purchased feed prices from late 2006 through 2007 wasn't a major problem for most Wisconsin dairy farmers because their milk prices increased even more dramatically during the same time. Consequently, no fancy analysis was needed during that time for most Wisconsin dairy farmers to know that it was economically advantageous to continue striving for relatively high production even if they purchased a significant portion of the feed they use. **Milk prices remained unexpectedly strong in 2008, but by years' end began a sharp downward drop from about \$15.90 to between \$10.00 and \$11.00.**

A more careful examination of dairy farm profit margins is warranted now that milk prices have declined so dramatically. The cost of most inputs have peaked and declined, but not nearly as much as milk price.

Assumptions and Methods: Especially for those who use these projections to compare the dairy systems with each other, be aware that comparing very different farm types using NFIFO per cow has two main concerns.

First, NFIFO is return to unpaid labor and management and equity capital on small farms. But on large farms NFIFO is basically the return to just equity capital.

Second, the dollars available for the owner(s) and family: On small farms it is NFIFO per cow times a small number of cows plus a small amount paid to family members. (Example: \$700 per cow times 60 cows = \$42,000 plus \$5,000 paid to family members = \$47,000).

On large farms the dollars available for the owner(s) and family is NFIFO per cow times a large number of cows plus usually a large amount paid to family members. (Example: \$200 per cow times 500 cows = \$100,000 plus \$75,000 paid to family members = \$175,000 and that doesn't include the value of time off).

Also remember, when looking at these projections, farm managers should and do adjust their mix of purchased inputs to maintain margins, as relative prices change.

Since every farm is different and since prices and costs change often, all Wisconsin dairy farms are encouraged to project their own 2009 cost of production and profit margins soon. They should carefully examine all of their practices and make all of the appropriate adjustments in an attempt to maintain profit margins. Reduced profit margins eventually can encourage reduced production and reduced demand for inputs which can cause the breakeven point to constantly change. I expect Wisconsin dairy systems to weather the expected profit margin reductions as well or better

¹ Center for Dairy Profitability, College of Agricultural and Life Sciences and Cooperative Extension, University of Wisconsin – Madison. Please see the Center's website at <http://cdp.wisc.edu>.

than their counterparts in other states, because their feed costs (raised and purchased) tend to be competitive and equity levels are high.

Since very little 2008 dairy farm financial data is processed yet, the 2007 average cost of production and NFIFO per cow was used as a starting point to project the impact of declining milk prices and changing input costs for five Wisconsin dairy systems. The five Wisconsin dairy systems from the Agricultural Financial Advisor® (AgFA)® computer data base includes the 250 plus cow size group, the 51-75 cow size group, all confinement herd sizes combined, organic and grazing systems.

In projecting the change in NFIFO/cow from 2007 to 2009, the 2007 actual results were modified to reflect changes in prices of several inputs from 2007 to 2009. Prepaid expenses were also assumed away. Cost items such as custom machine work, gasoline fuel and oil, freight and trucking and utilities peaked in 2008 but probably won't decline much in 2009. Purchased feed prices increased about 23% from 2007 to 2008 and are expected to decrease by about 25% from 2008 to 2009. Seed prices are expected to be about 50% higher in 2009 than in 2007.

After adjusting input prices in this way, the cost of production and NFIFO/cow was calculated at the milk price levels of \$17.00, \$15.00, \$13.00 and \$11.00 for all groups but organic which was calculated at a milk price of \$26.50. Since the eligibility of organic herds for MILC payment is the same as it is for other systems and since the typical organic herd is unlikely to exceed the lbs of milk eligible for payment, their NFIFO per cow was calculated with and without MILC payments of \$1.25 per CWT sold.

A MILC payment of \$1.25 per CWT was assumed at the \$11/CWT and \$0.75 at the \$13/CWT price levels for the small confinement and grazing herds. Since the average confinement herd would qualify for MILC payments on only about 70% of their production, they were assumed to receive MILC payments of \$0.875 per CWT at the \$11/CWT and \$0.525 at the \$13/CWT price levels. Since the over 250 cow sized herds would qualify for MILC payments on only 20% of their production, they were assumed to receive a MILC payment of \$0.25 per CWT sold at the \$11/CWT and \$0.15 at the \$13/CWT price levels. To simplify the projection, it was assumed that MILC payments wouldn't occur if conventional milk prices were higher than \$13/CWT in Wisconsin.

Many Wisconsin dairy farms, especially the graziers, had greatly increased depreciation costs in 2007 and likely in 2008 because of greatly increased capital investments and increased use of Sec 179 deductions. New capital investment and depreciation could easily decline by \$100-200/cow in 2009 which could result in higher NFIFO/cow values than projected below for 2009.

Results: Therefore, what I projected below is the likely NFIFO/cow in 2009 if all the projected price changes occur, but few other adjustments are made by farmers.

Wisconsin Dairy System	Average Herd Size	2007 NFIFO/Cow	NFIFO/Cow if Milk Price is:				
			\$11.00	\$13.00	\$15.00	\$17.00	\$26.50
Confinement > 250 Cows	556	757	(\$803)	(\$353)	\$85	\$321	NA
Confinement, All Wisconsin	153	927	(\$712)	(\$347)	(\$21)	\$422	NA
Confinement 51-75 Cows	62	1198	(\$369)	(\$63)	\$192	\$600	NA
Grazing Herds	60	944	(\$443)	(\$203)	(\$3)	\$317	NA
Organic*	57	966	966	NA	NA	NA	\$1,125

With a MILC payment of \$1.25 per CWT, the NFIFO/cow for organic herds would be \$1307. The organic milk price would have to decline to \$18.76 with no MILC payment but all other variables held constant for the organic NFIFO to decline to zero in this projection.

The opportunity cost of unpaid labor, management and equity capital was not included in this analysis. On a per unit basis such as per cow, the opportunity cost of unpaid labor, management and equity capital tend to be higher for smaller operations than for larger operations.