

# Improving Milk Quality When Milk Prices are Low

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Producing quality milk makes sense during all economic conditions; however, the economic advantages are magnified when milk prices are low. When milk prices are high, dairy producers may be more forgiving of losing a few pennies here or a quarter there because margins are high enough to make up for some business inefficiencies. On the other hand, when milk prices are low, dairy producers are forced to re-examine lost efficiencies because margins are slimmer.

While milk quality bonus levels vary by milk marketing agency, receiving or missing out on these bonuses may be the difference between surviving and failing during tight times. These bonuses essentially increase the price paid for milk produced. A \$0.50 per cwt. increase in milk price sounds pretty good when pre-bonus milk prices approach \$12.00 per cwt. In fact, with \$12.00 per cwt. milk, this represents 4% of the total price paid to a milk producer receiving this bonus. By comparison, with pre-bonus milk prices at \$20.00 per cwt., just 2.4% of the total price paid comes from quality bonuses. Thus, the relative importance of milk quality bonuses is magnified at lower milk prices. Let's take a look at how these bonuses can impact annual gross farm income using an example of a 100 cow herd milking 365 days a year. If average production is 70 pounds per cow per day and quality bonuses of \$0.50 per cwt. are paid throughout the year, total gross income from quality bonuses will be \$12,775. Even in a more conservative example using a production level of 50 pounds per cow per day with quality bonuses of \$0.25 per cwt., total gross income from quality bonuses will be \$4,563. Obviously, this total increases as bonus levels, herd size, and milk yield increase. Take a look at Figure 1 to see how gross income changes as bonus levels and milk yields change.

Although it is not obvious, the largest losses from milk quality problems caused by mastitis are actually from milk that is not produced because cows do not perform to their full potential. A first lactation cow with a SCC of 400,000 cells/ml produces 600 pounds less during her lactation than she would have with a SCC of 50,000 cells/ml, while a second lactation cow produces 1200 pounds less using the same comparison (Table 1). Consequently, efforts to control mastitis will help increase milk yield in addition to attaining milk quality bonuses. While this increased milk yield does require an increase in feed intake, other costs, such as facilities, equipment, and cow maintenance costs, do not increase; so the marginal value of this increased milk production is high.

Milk that is discarded from cows treated for mastitis with antibiotics also represents a major loss to the dairy producer, because the costs of producing that milk are the same as the costs for milk that is actually sold. Other costs that can be reduced with improved milk quality are the costs of treatments, veterinary services, labor, premature culling, and other diseases that may occur as a result of the cow having a suppressed immune system. Lastly, in the broader scheme, producing low quality milk ultimately influences the demand for milk. Milk does not magically improve after it leaves the farm. Each individual producer plays a role in increasing demand, which influences market prices for milk, through the production of high quality milk.

Strategically, every dairy producer should do everything in their power to ensure that they receive all milk quality bonuses available to them, particularly during low milk prices. While preventative measures may require small investments, the economic benefits of these strategies far outweigh any costs. When dealing with milk quality or mastitis problems, dairy managers should examine their milking procedures, cow environments, dry cow programs, equipment maintenance plans, and clinical and subclinical (DHIA SCC) data. Additionally, dairy producers should strive to minimize stress and maximize immunity through good cow comfort and proper nutrition. If you are interested in making management changes to improve milk quality, work with your extension agent, veterinarian, or industry consultant to revise your mastitis treatment plan.

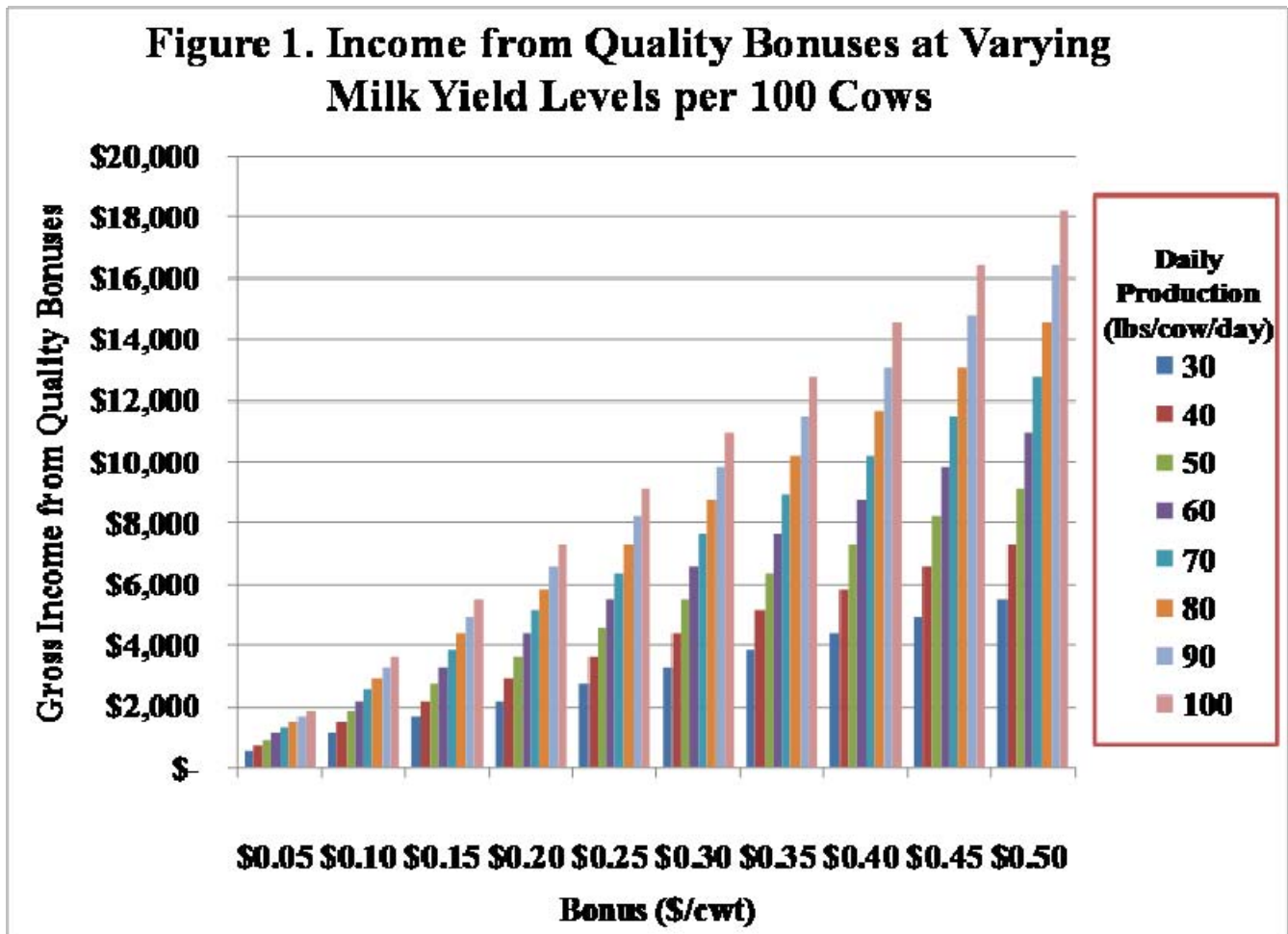


Table 1. Use of DHIA somatic cell count (SCC) score to estimate production loss due to mastitis.

Estimated change in lactation milk yield associated with an increase in DHIA somatic cell score			
Lactation average SCC score	Lactation average SCC (cells/ml)	Difference in milk yield (lbs/305/days)*	
		Lactation 1	Lactation 2 or greater
0	12,500		
1	25,000		
2	50,000		
3	100,000	200	400
4	200,000	400	800
5	400,000	600	1,200
6	800,000	800	1,600
7	1,600,000	1,000	2,000

\* Comparisons are with lactation yields at SCC scores of 2.

Source: *Current Concepts of Bovine Mastitis*, NMC, 1987