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The Importance of Quality Milk To The Processor

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John Candela, the chairman of the Grande Cheese Company has stated to both the buyers of his cheese and to the dairy producers that provide the milk, "*Never before has your business depended more on the quality of the product you serve*". In today's consumer driven, ultra quality, food safety conscious market, this statement is more true than ever. Consumers are demanding high quality products that can only be manufactured using the highest quality ingredients.

Milk quality is a worldwide issue. In today's value added, quality driven market, consumers associate quality products with their brand. As a consumer considers a purchase of an automobile, Cadillac, Chevrolet, and Yugo each represent different quality and price points creating value in the consumer's mind. The relationship of quality to price; known as value, whether based on fact or purely upon perception, drives the consumer's purchase decision.

Dairy products compete in a market place for the consumers' dollars against other dairy products, substitute products such as soy-based alternatives, snack foods, and carbonated sodas. To capture the consumer's dollars, dairy products must compete on a quality basis. If five years ago, I would have told you that people would pay \$2 to \$3 a bottle for water, you would have thought I was crazy. Today, bottled water is one of the biggest sellers in convenience stores. The only thing I was wrong on was people would actually pay more than \$3 a bottle.

Dairy processors distinguish their products in the market either by price for commodity products or by quality for brand name products. Because of the perishable nature of dairy products there is the need for consumers to purchase them on an ongoing basis. The market for products distinguished by quality can be a significant portion of the entire market. As with any perishable product, building a market for a specific brand requires not just making an initial sale, but providing the consumer with a consistent, high quality product to create value and insure future sales. Once a brand name has been established and is associated with quality, protecting the brand name is of paramount importance.

Some customers are so loyal to their branded products that they will choose to wait rather than buy an alternative if their brand is not available. One dairy consumer was committed to providing their customers with the best pizza possible that when they ran out of their branded cheese, they chose to close the doors early rather than to make pizza with an inferior product. They do not want to take the risk of providing their customers with something they are not confident with.

The processors need to look beyond the first sale to a distributor or wholesaler, and to the final customer if they want to successfully build a brand name, even if the final customer does not know the brand. If they can provide a quality product that is consistent over and over again, they will keep the loyalty of their customers.

The main ingredient in dairy products is raw milk. Indeed, in the manufacture of fluid milk, it is the only ingredient other than fortifying vitamins. A product can never be better than its raw ingredients. Low quality raw milk cannot be made better through a manufacturing process.

To assure the highest quality products, the processor must start with quality milk. To assure they have a quality milk supply, they must be able to accurately measure the quality of the milk. Many tests are used to measure quality including: Somatic Cell Count, several different types of bacteria counts (SPC, LPC, Coliforms), tests for inhibitors and other foreign materials, temperature, and odor.

These tests open many doors for veterinarians to get involved with their clients. When dairy farms have problems, it would be great if the farmer knew their first choice of people to call was their veterinarians. They need to understand that a veterinarian's role in quality milk production is not treating sick mastitis cows but to help them produce the best quality product possible for their processors.

The laboratories of the processors have determined to manufacture a consistent product with the best flavor and performance qualities, they must start with the highest quality milk. Many plants are now tailoring their procurement efforts and the marketing to attract a milk supply to fit their special needs by using measurable quality parameters.

The research from some of these processors has shown two of the most directly measurable, highly correlated traits to value are Somatic Cell Count and the Standard Plate Count. Acid Degree Value along with careful monitoring of milk temperatures also have a direct effect on raw milk quality.

Low Somatic Cell Count, low Bacteria Count milk that is properly cooled and handled from the point of production to manufacturing, allows processors to produce consistent product with the flavor and performance characteristics the consumer demand. This process helps protect a "branded" product reputation.

The dairy industry must continue to improve the quality of milk it produces so the consumer will continue to have confidence in the products they buy. As Dr. Rick Bennet from the University of California stated, "*The dairy industry will either have to keep up with the changing definition of quality or get stomped by the stampede of public opinion.*" I think he has hit the nail on the head with this statement.

At this time, the US dairy industry has quality standards which are some of the worst in the world. The current standard of 750,000 SCC is far higher than that of most countries.

Here are some of the SCC averages for other countries:

Switzerland	112,000
Norway	125,000
Great Britain	160,000
New Zealand	180,000
West Germany	195,000
Ireland	300,000
Japan	300,000
USA	350,000

In order for the US to compete on the world market, our standards must be lowered. There is a lot of action being done to lower the US standards to 400,000 in the near future. The scary truth that must be faced is many of the dairy farms in the US cannot meet this standard. In Minnesota DHIA herds, over 40% of them could not ship milk if the US standard would be lowered to 400,000. The average SCC of Minnesota herds is 381,000 which is too close to 400,000. It is time for change. The veterinarians can take the lead on milk quality issues and help farmers improve their quality. One thing for certain, if the veterinarians don't take an interest, someone else will provide the services to the dairy farmers.

There are currently milk plants that are setting strict standards for their own milk supply. Grande Cheese, a company that I consult for, has set the upper limit for SCC at 350,000. If a dairy farm has a SCC over 350,000, they are given 30 to 60 days to drop it below 350,000 or find a new market. Another problem facing these farmers is to actually find a market that wants their poor quality milk. This problem will get larger as the demand for quality continues to grow. At Grande Cheese, 96% of their milk supply has met their quality standards for this year, while 90 to 97% has met their quality standards for the past 24 months. In 1992, only 60% met these tough standards.

Grande decided to put their efforts towards acquiring a better raw milk supply. Grande wanted to be the preferred market for innovative producers striving to be among the most competitive dairies in the nation, and thereby ensure a quality, producer based, milk supply to meet their needs. Grande's efforts focus on attracting milk from the best managed, quality conscious dairies in the nation and providing the education and tools these businesses deem necessary to continue to produce quality milk.

There is a huge opportunity for veterinarians to contract their services to milk processors to assist their producers to produce quality milk. As the demand for a quality milk supply increases, the milk processor will look for professional assistance to help their clients. Veterinarians who have gotten the proper training and have the ability to look at the complete picture will have great opportunities.

Veterinarians will have an important role in not only helping dairy farmers lower their SCC but also as a source of education. Milk quality needs consistent monitoring and assistance by a professional. Every dairy has a constant turn over of help so the need for your services never runs out.

The veterinarian needs to be involved in milking routines and understand the need to milk a clean, dry, and properly stimulated teat. Spending more time working with the milkers and fine tuning their milking routines will yield higher quality milk for the processors. Having regular bulk tank cultures done as well as culturing clinical cases and fresh cows will also help monitor the milk quality status of the herd. The milking routine has a huge impact on milk quality.

Another key area that affects the quality of the milk to the processor is the environment. Since records have been kept, SCC go up in May and tend to stay elevated until September. The warm weather and outside environment are key factors. As the dairies improve their facilities, the peaks are lower, but the trend remains. Veterinarians must spend time looking at the cows and understanding the relationship of dirty cows to poor quality milk. Dirty cows contribute to higher SCC as well as higher SPC and Coliform counts in the raw milk.

Another piece of the puzzle is having the veterinarian understand milking equipment function and have the tools to evaluate it. Poor functioning milking equipment can lead to poor quality milk and poor milking performance. Veterinarians have the opportunity to provide the dairy farmer with independent advice.

The final and maybe the most important role the veterinarian can play are setting up treatment and drug storage protocols. Processors are severely punished when Federal surveys are done on their dairy clients if drugs are improperly stored or labeled. Milk processors can be degraded from Grade A to Grade B for 30 days if their dairy farmers do not average a score of 90 or greater. One of the major causes of milk plants to fail Federal Survey is from improper drug labeling and storage. The veterinarian is the real cause of the problem even though the punishment goes directly to the milk plant. Don't be surprised if the milk plant presents a bill to the veterinarian's responsible for improper labeled drugs that caused them to fail the survey. The economic loss for the processor can be in the hundred of thousands of dollars. Be sure that you are not the cause of the problem because you failed to do your job correctly.

Many of the processors are providing quality information on every bulk tank of milked shipped to them and are getting that data back to the dairies over the Internet or by fax. When the farmers are provided with more information, they can manage their milk quality better.

When farmers provide quality milk to the processors, there are significant economic benefits for the dairy processors. The processors get milk that has longer shelf life, they get products with less risk of antibiotic residues, and they get more cheese yields from the milk. Quality milk adds many extra dollars to the processors bottom line.

Many of the processors have realized the benefits of receiving quality milk and have decided to pass some of their additional economic benefits back to the farmers. Milk quality premiums should be a key part of every milk processors pay program if they plan to meet the needs of the consumer.

Premiums run from 10 to 20 cents a hundred weight to over \$2.50 per hundred weight depending on the milk processor. The milk plants that are committed to producing higher quality products are paying the higher dollars for quality milk. When you do the math, these quality premiums are too big to ignore. In the past year when milk prices were low, the milk quality premiums were the largest percentage of the total milk check ever. For the first time in many years, farms could actually afford to sell or remove the highest SCC cows from the bulk tank and make more money.

As farmers learn of the higher milk quality premiums available, many are trying to get their milk to these markets. As this happens, the poor quality milk producers will lose their market places or be forced to take less money for their milk. The processors are quickly learning that the new and larger dairies are the ones that are producing the better quality milk, not the smaller and longer established farms. Not only are the larger farmers producing better quality milk, but there are fewer costs to the processor to service the larger farms too. There is no doubt in my mind that farms of any size that are able to produce quality milk will always have a market for their products.

In the short term, most processors can provide a market for many of the low quality raw milk producers. In the long term, there will be a much more limited milk market available for dairy farmers to use and I doubt if there will be any market at all for poor quality milk.

The consumer does and will continue to demand a quality product. Processors will have to deliver quality products that meet this demand or the consumer will find someone who will deliver the quality product they want or choose alternative products.