

Milk Quality Report Cards II: Milk Handler Quality Reports

In the second chapter in this series, we will discuss the milk quality report received by most Colorado dairymen from their processor or handler. The first measure listed on the report, and one that may be the most commonly reported from other processors, is the somatic cell count or SCC. This is a measure of the number of white blood cells per milliliter of milk. Increases in SCC are associated with reduced cheese yields and reduced shelf life of dairy products. With excellent management and proper milking practices, a dairy's bulk tank SCC can be kept below 200,000. In general, the only reason for significant elevations in SCC is mastitis. As the SCC exceeds 200,000 an increasing percentage of cows in the herd have intramammary infections. Bulk tank and individual cow milk samples must be cultured to determine the organisms responsible for the infections. Premilking teat disinfection, milking practices, teat dipping, and corral management must be evaluated and improved.

Two different bacteria counts are listed. The Standard Plate Count, or SPC, is the number of bacteria of all types per ml of raw milk; and the Preliminary Incubation count, or PI count, measures the number of bacteria per ml of milk incubated at 25° C for 18 hours. Increases in milk bacteria can affect taste, odor, and shelf life of processed dairy foods. Elevations in the SPC above 2-3,000 are generally due to contamination of the milk after it leaves the udder or incubation of the milk due to faulty refrigeration. One exception to this rule is that high SPC can be caused by the presence of a high number of intramammary infections due to *Streptococcus agalactiae*, a common contagious mastitis pathogen. More commonly, high SPC is due to the practice of milking wet or dirty teats. Inadequate cleaning of equipment or tanks due to insufficient hot water or improper soap selection can also cause the SPC to climb; but the bacteria that proliferate in unclean equipment will cause the PI count to rise to a greater extent. If the PI count is consistently higher than the SPC, have a specialist evaluate your system's cleanliness.

The last 2 items on the milk quality report are inhibitors and sediment. Sediment is measured using fine filter paper, and evaluates the amount of particulate material in milk due to improper cleaning of teats. Inhibitors are generally synonymous with antibiotics. All milk intended for interstate shipment must now be tested for penicillin-type antibiotics. Consumers are concerned about the potential for antibiotic residues in milk. The Milk and Dairy Beef Residue Avoidance Program will help you prevent residues in your milk; if you haven't reviewed your residue avoidance program recently, be sure to contact your veterinarian.