

Milk Quality and Your Milk Markets

There has been a lot of recent press concerning Somatic Cell Counts and a new plan adopted by the European Union setting stricter guidelines for milk products they import. The vast majority of dairy producers in the Northeast have little to be worried about since they have made producing milk that exceeds these limits a standard practice on their dairies. Many have questioned the need to adhere to the EU regulations since the U.S. already has milk quality standards that insure safe and wholesome dairy products for consumers. Besides that, my milk isn't used for export, or is it?

The dairy business today is not limited to locally owned and operated dairy processors and we may be surprised to find out where components of our milk end up. Just as a simple example, even dairy processors who only process and sell fluid milk use a process of milk standardization. Simply put, the milk is divided into cream and skim and then re-blended to make the various milk products like skim milk, 1%, 2%, and whole milk giving consumers the choices they demand. This creates new products for dairy processors to market such as cream used in ice cream. Another common procedure found in the dairy processing business is drying milk into powder for use in many other food products. This is driven by the need to balance what we currently need to use for fluid and manufacturing demands and the total milk purchased from dairy farms. This powder is used in many other products at a variety of locations. These are just a few examples of how your locally produced milk may end up being consumed not so locally.

So, the EU wants milk products made from raw milk that not only meets their quality standard overall but they want all farms that contribute milk to those products to also meet their quality standards. This in reality could include just about all farms and would be most easily accomplished if all dairies had SCC at 400,000 or lower all the times. So, how might this be accomplished?

Outside of the market pressures causing us to lower SCC in our herds, there are reasons we would want lower SCC as a goal for our herds. Increased production per cow, lower mastitis treatment cost, and reduced risk for antibiotic residues are just a few and are more than enough incentive for lowered SCC. There are many tools available today for those wanting to get on board with their own plan to improve milk quality.

Large and small, dairies that use regular DHI testing successfully control SCC levels in the milk that they ship. They do so by tracking data especially looking for changing herd trends in SCC. On small to average sized dairies, one tool that can quickly point out cows that need intervention due to high SCC is some form of a report that indicates the individual cow contribution to the bulk tank SCC. We find this information in several formats and a new one being promoted this month from Dairy Records Management Systems (DRMS) at Raleigh is the DHI-421 Test Day Bulk Tank Report. Several important questions can be answered by using this report.

- Which cows are contributing the most to my bulk tank SCC?

 TEST DAY BULK TANK DHI-421	55-99-9999	Test Date: 03-13-2010
	SMITH DAIRY FARM	Processed: 03-14-2010
	HENRY SMITH	Page 1 of 1

- If I remove certain cows, how much will it impact my SCC?
- How much income am I losing due to high SCC?

Sum of Test Day Weights	14695
Bulk Tank Weight Reported	14500
Milk Price Reported	13.00
Value of Bulk Tank	1865

Number of Milking Cows	223
Milk Per Cow	67
SCC Average	169

Index	Milk	Cur. SCC	Prev. SCC	Value Adjusted by SCC	% of SCC in Tank	Without This Cow		Without This and Higher Cows	
						SCC	Income	SCC	Income
7628	100	7352	2425	11.51	29.7	118	1851.69	118	1851.69
8231	78	2263	400	8.92	7.1	157	1854.63	106	1841.59
6993	66	1056	2111	7.53	2.8	164	1856.21	102	1833.07
8239	42	1600	2986	4.83	2.7	164	1859.26	97	1866.96
7979	106	528	400	12.88	2.2	166	1851.02	94	1852.95

Clearly cow 7628 has a huge impact on the overall SCC of the milk in the bulk tank. She is producing nearly 30% of the total SCC and if she were removed from the milk supply the resulting SCC for the tank would decrease from 169,000 to 118,000. The value of milk overall does not go down much in this case from \$1,865 to \$1,851 due to the already overall low SCC to begin with and no further quality premium available at this level. For herds that want to test and not process their records, Dairy One offers this same information as a report out of DC305 software and has been doing so for years.

Larger herds may not find this report quite as useful because individual cows will have a smaller impact on what happens in the bulk tank calculation due to lower percentage milk contributed from each cow. There are other tools more useful for these herds.

Often in larger dairies a rising SCC happens to a particular part of the herd and not the whole herd. This may be a single pen where management has been challenged or a particular segment of the herd like the recently fresh cows. We can look at this data many ways. Herds using software certainly have the advantage in customizing reports that give hints as to where the problem lies. Herds without software may choose options like the DHI-404 Test Day Group Summary to see if there are performance differences across pens. This report summarizes milk and component results as well as reproduction and SCC data for each pen.

Grp/ Batch	# Cows	Test Day							Since Prev. Test			% SCC					Avg DIM	Avg Lct #	# Dry	Reproduction				
		Totals			Averages				Fresh	Entered	Left	0 - 3	4	5	6	7 - 9				# Bred	% Bred	# Preg	% Preg	# DNB
		Milk	Fat	Pro	Milk	% Fat	% Pro	305 ME Milk				<142K	142K- 283K	284K- 565K	566K- 1.13M	>1.13M								
0	14																2.0	14	14	100	14	100		
1	102	9211	394	255	94	4.3	2.8	25453	36	14	4	72	11	10	3	4	42	2.2		1	1			
2	174	15760	718	467	91	4.6	3.0	28468			6	52	11	13	9	14	197	3.1		147	90	103	63	11
3	165	13372	597	405	81	4.5	3.0	28242			4	65	12	7	6	10	200	1.3		146	91	104	65	4
4	114	6293	321	207	55	5.1	3.3	31533			7	60	17	11	8	4	351	2.3		97	99	100	102	16
11	12							27111										1.7	12	12	100	12	100	
12	40							30637										2.3	40	40	100	40	100	
15	7	206	7	7	52	3.4	3.3	18147	4	1	2					100	126	2.3		4	57	2	29	
628		44842	2037	1339	81	4.5	3.0	28796	40	15	23	61	13	10	7	9	202	2.2	66	461	77	375	63	31

Since we are talking about tools to manage SCC let's focus on the center portion dealing with SCC for the herd and for each pen. Of course our goal would be to have as high a percent as possible in Linear Score range of 0-3 indicating non-infected cows. We see a significant difference in pen 2 where nearly 20% less cows are non-infected compared to other pens. We also note on this report that pen 2 cows are older cows indicated by average lactation over 3. Are we possibly dealing with chronically infected cows in pen 2?

Regardless of your herd size, Dairy One can provide a number of tools to better understand SCC issues on your dairy. All that it takes is commitment to some kind of cow testing program and the willingness to improve your milk quality by using SCC data from your cows. It is better that we do it for increased production per cow, lower mastitis treatment costs, and reduced risk for antibiotic residues, than being dictated by standards that may change our milk marketing systems.

% SCC					Avg DIM	Avg Lct #
0 - 3	4	5	6	7 - 9		
<142K	142K- 283K	284K- 565K	566K- 1.13M	>1.13M		
						2.0
72	11	10	3	4	42	2.2
52	11	13	9	14	197	3.1
65	12	7	6	10	200	1.3
60	17	11	8	4	351	2.3
						1.7
						2.3
				100	126	2.3
61	13	10	7	9	202	2.2