

The Long and the Short of SCC

by George Cudoc

The business of producing milk is being influenced globally and locally by more stringent quality demands and it appears that Somatic Cell Count standards are going to change. Some localized milk processors have already imposed lower SCC standards for the milk they are willing to buy. The European Union is negotiating for higher quality milk with lower SCC levels for all farms where milk may end up in that export market. The regulatory body that sets the US milk quality standards will be meeting this spring with the hot topic being the possible change to SCC levels from a regulatory standpoint.

Dairy Herd Improvement programs have included tools to measure and manage SCC in dairy herds for a very long time now. Short term solutions to improved SCC in bulk tank milk being shipped would include the screening process of taking a sample from every cow being milked, analyzing for SCC, identifying the cows contributing the greatest amount of cells to the bulk tank and then taking action. Dairy One produces a report through Dairy Comp 305 that helps in this process, called the "Bulk Tank Contribution Report". This report contains basic information such as total milk produced today, components, and most importantly the SCC level and value of that milk. Cows that contribute the greatest number of cells to the total are then listed showing each cow's percent contribution to the tank as well as what happens if that cow or multiple cows are removed from the milk being sold.

Analyzing 118 cows on Test Date 12/16/10

-- Bulk Tank Today --				----- Current Settings -----			
Total Milk	8040	Milk price	18.00	Fat Base	3.5	Diff	0.07
Average Milk	68	Ptn Base	3.2	Diff	0.12	SCC Premiums enabled	
Bulk PctF	4.00						
Bulk PctP	3.20						

without any cows removed :				Bulk Tank SCC	144	Pay Price	19.10	Daily Income	1535.64
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ID	MILK	Value	SCC	%Tank	Bulk Tank after removing only this cow from tank Price @SCC	Income	Bulk Tank after removing cow and all cows above it Price @SCC	Income
1848	69	12.49	4526	26.8	19.11	107 1523.42	19.11	107 1523.42
1760	71	12.86	1838	11.2	19.07	129 1519.85	19.32	91 1526.44
1691	77	14.11	492	3.3	19.09	141 1520.38	19.32	87 1511.01
1663	101	18.75	348	3.0	19.11	142 1517.30	19.31	84 1490.96
1800	81	14.83	400	2.8	19.10	142 1520.17	19.31	80 1475.32
1727	107	20.12	283	2.6	19.10	143 1515.04	19.29	77 1453.61
1723	83	15.39	348	2.5	19.10	142 1519.79	19.29	74 1437.60
1810	93	17.48	283	2.3	19.12	143 1519.39	19.30	72 1420.17
1721	89	16.73	230	1.8	19.10	143 1518.64	19.30	70 1402.99

Removing the top cow from the list, although capturing more money for higher quality milk is extremely valuable, would just be a short term solution to improved milk quality.

We also have tools that help with longer term solutions to improved milk quality. A "High Cow by SCC" is available that includes some historic information about a cow's milk quality as well as her overall udder health. This high cow list also includes her last test SCC and her lactation average SCC represented by Linear Score to look at her udder health. We can use this report to determine whether udder health problems are new to a cow or a more persistent problem.

ID	BNAME	PEN	LACT	DIM	MILK	PCTF	PCTP	NOTE	SCC	LS	PLS	AVLS
1848	1848	1	2	21	69	3.8	3.0		4526	8.4	0	8.4
1760	TINKER	1	2	192	71	9.0	3.7		1838	7.2	1.2	2.0
1691	HEATHER	10	3	131	77	5.2	3.6		492	5.3	5.5	4.4
1793	GRET	4	2	305	41	4.6	3.6		400	5.0	4.4	3.9
1800	BUBBLES	2	2	95	81	4.2	3.7		400	5.0	4.9	6.3
1792	JOY	4	2	303	25	4.5	4.4		373	4.9	4.3	2.1
1663	DIANE	1	3	87	101	4.4	3.0		348	4.8	3.6	4.8
1680	MELISSA	4	3	325	33	3.7	3.5		348	4.8	3.8	1.9
1723	MAJOR	2	2	270	83	3.6	3.2		348	4.8	4.0	4.9

Total: 9

ID	Cow ID number
BNAME	Barn Name, 7 Characters
PEN	Pen or String number
LACT	Lactation number
DIM	Days in Milk
MILK	Last test day milk weight
PCTF	Last test date % fat
PCTP	Last test date %prot
NOTE	8 character note
SCC	Last test raw somatic cell coun
LS	Log Linear SCC @ Last Test
PLS	Log Linear SCC @ Next2Last Test
AVLS	Average linear score

Part of the long term solution for improved udder health and milk quality is a routine culturing program that aids in the treatment decision process. It is important to know when infections first occur as well as the persistency of the infection. For this reason we produce a "Cows to Culture" report that lists all cows that are infected this test as well as last test. We also include the LS of the first test day and the LS when they went dry to aid in evaluating our dry cow and transition management. Selecting cows to culture from this list can help determine if we are dealing with contagious and sometimes non-treatable mastitis as compared to more manageable types.

ID	BNAME	DIM	LACT	DRYLS	LS1	AVLS	MAXLS	PLS3	NOTE	PLS	LS	NMAST
1691	HEATHER	131	3	4.5	2.9	4.4	5.5	5.4		5.5	5.3	0
1800	BUBBLES	95	2	4.5	9.6	6.3	9.6	5.7		4.9	5.0	0

Total: 2

ID Cow ID number
 BNAME Barn Name, 7 Characters
 DIM Days in Milk
 LACT Lactation number
 DRYLS Log Linear SCC @ Last Dry-off
 LS1 Log Linear SCC @ 1st Test Fresh
 AVLS Average linear score
 MAXLS Maximum Log LS of Lactation
 PLS3 LS 3 tests back
 NOTE 8 character note
 PLS Log Linear SCC @ Next2Last Test
 LS Log Linear SCC @ Last Test
 NMAST Number of Mastitis Events

As much as we hate to be beat by mastitis, occasionally we must make the tough decision to cull an infected cow as a means to manage milk quality. Mastitis that has no effective cure or worse yet, contagious, may drive this decision. If contagious pathogens are identified by culture then we can either choose to segregate that cow and milk last or remove her from the herd. A "Cows to Cull" report is available to identify those cows. This list includes cows that have averaged LS>6 and have had sufficient time to be cured and also have been affected by poor udder health making them less valuable producers than the average cow in the herd. We calculate a relative value for cows in DC305 and cows on this list are below 90 which means they are producing more than 10 percent below the average cow in the herd on a mature equivalent basis.

ID	BNAME	DIM	L	MILK	RPRO	LS	SCC	MAXLS	NOTE	AVLS	RELV	NMAST
10556	518	383	6	48	BRED	7.1	1715	9.6		6.9	67	0
782	782	200	3	50	PREG	5.1	429	8.3		6.1	88	0

Total: 2

ID Cow ID number
 BNAME Barn Name, 7 Characters
 DIM Days in Milk
 LACT Lactation number
 MILK Last test day milk weight
 RPRO Repro code (FRESH,BRED,DRY etc)
 LS Log Linear SCC @ Last Test
 SCC Last test raw somatic cell coun
 MAXLS Maximum Log LS of Lactation
 NOTE 8 character note
 AVLS Average linear score
 RELV Last test relative value
 NMAST Number of Mastitis Events

Somatic Cell Counts remain a major milk quality indicator for the processor, handler, and at the farm. Pressure may come from local processors, the European Union, or from regulatory agencies to lower the current allowable limits for SCC. Cows with lower SCC produce more milk with less specialized care making the business of milking cows more enjoyable. Tools are already in place to help with SCC challenges that may arise. We can manage by making short term changes to improve SCC or we can dig deeper to develop preventative strategies to control SCC. The "long and short of it" is that SCC is important to our industry as well as to each farm, and managing for herd health is far more enjoyable than managing to meet regulations.

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