

## “400 Beat It”: A Plan for SCC Improvement

by George Cudoc

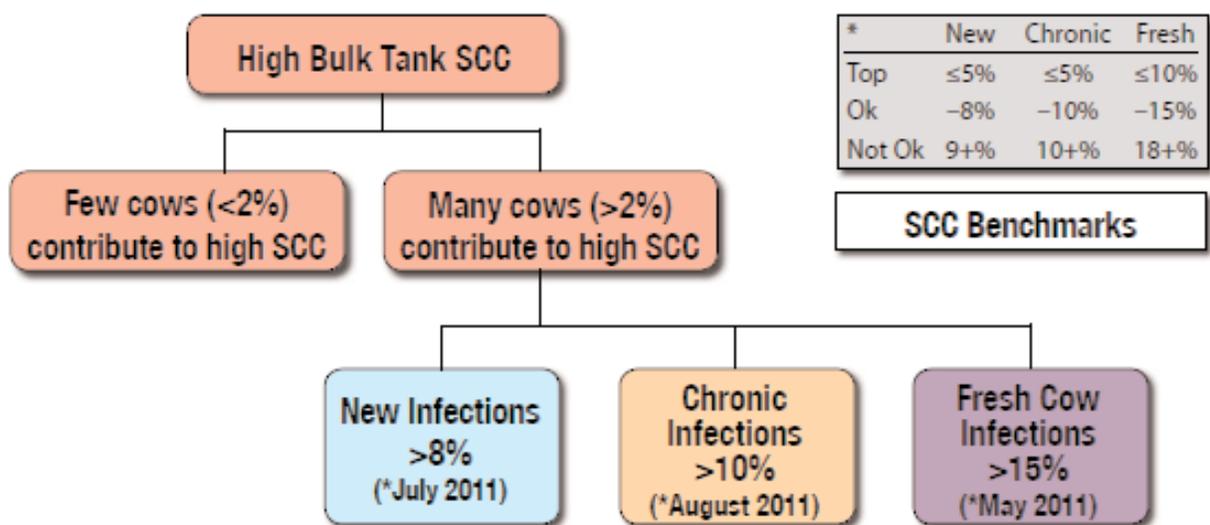
Somatic Cell Counts (SCC) have been the subject of many conversations during the past year. Dairy processors are moving ahead with a plan to limit SCC levels to 400,000 or less, even though legal limits were voted to remain at 750,000 for now. Sources indicate that farms must meet that level by May 1st and will be calculated on a 3-month geometric mean. February, March, and April milk will go into that calculation.

Determining which individual cows are infected and ranking them with respect to their contribution to the milk sold has the potential to most quickly improve profits through greater milk quality premiums, yet by itself is typically short-lived. Further analysis of dry and fresh cow performance as it applies to udder health and milk quality will have a greater chance of long-term success, but the results are not seen as quickly. Proper milking management and the correct cow environment will have a positive effect on limiting the number of new infections occurring once cows have entered the milking string. If we are successful at reducing the fresh and new infections, then managing the chronic cases will be a much more manageable. Chronic cases needn't be such a big issue if we identify the cow, the quarter, and the pathogen, and then proceed with the best management practices for each.

Teamwork is an effective way to fight battles against elevated SCC and mastitis. A group of interested parties both on and off the farm can provide the expertise and moral support needed to win these battles. During the past 5 to 6 months, much interaction, planning, implementing, and analyzing took place on several farms in a pilot project called “400 Beat It”, aimed at lowering SCC on dairies. This pilot, and now program, is a partnership of Dairy One, Quality Milk Production Services (QMPS), and Dairy Marketing Services (DMS). An important thing I learned from this is that a consultant working with a farm can best serve the farm by asking the right questions.

The process improve SCC performance starts with a farm survey interview that will help introduce farm management practices and deficiencies to the total team. We next use monthly testing and analyze the results using the flow chart of risk. Then, we plan to make appropriate changes to that part of the management.

### ANALYZE HIGH SOMATIC CELL COUNT (SCC)



\*2011 Case Study Herd: In a four-part series, QMPS analyzes SCC in a dairy herd, starting with individual cows (March 2011), and then looking deeper into each component of the herd with >2% of all cows with high SCC. Each group of cows falls out of the “Top” benchmark level. More than 15% of fresh cows (May 2011) exhibited infections; more than 8% of new cows brought into the herd exhibited infections (July 2011); and more than 10% of the herd had chronic infections (August 2011). The full series will be archived at [www.dairyone.com](http://www.dairyone.com) and [www.qmps.vet.cornell.edu](http://www.qmps.vet.cornell.edu).

Case Study Farm 1

BNAME	DIM	LACT	RPRO	LS1	PLS3	PLS	LS	PSCC	SCC	%Tank
207S	70	2	FRESH	4.4	4.4	3.9	8.1	187	3430	19.3
331	244	3	PREG	7.4	8.4	7.7	8.2	3599	3876	16.2
ANNA945	383	2	BRED	2.2	4.3	6.3	7.4	305	3111	11.2
110	258	2	PREG	0.3	0.1	6.4	6.5	1434	1714	7.4
PEARL	386	6	BRED	5.3	6.4	8.4	7.3	4324	1473	7.4
12	230	1	PREG	3.8	6.8	5.8	6.3	396	382	6.2
410S	216	2	BRED	1.4	3.1	4.9	5.7	374	650	5.2
800	312	5	PREG	4.8	6.7	6.3	6.4	499	1386	3.6
328	115	3	BRED	0.1	2.4	8.0	4.4	3000	393	2.7
104	97	1	BRED	5.3	5.2	5.9	4.9	746	373	2.0
11	309	1	PREG	0.1	7.7	5.4	5.2	566	460	1.9
103	131	4	BRED	0	5.3	3.1	4.5	107	303	1.7
1	35	4	FRESH	3.8	0	3.8	3.7	183	162	1.6
101YLW	35	1	FRESH	4.4	0	0	4.4	0	283	1.6
341	425	2	PREG	2.1	2.4	3.1	4.3	107	246	1.5
15	216	2	PREG	0.2	1.4	0.1	3.4	13	141	1.0
MAGGIE	328	2	PREG	1.4	2.0	3.7	3.6	162	152	1.0
103HFR	70	1	BRED	2.8	2.8	4.3	2.8	246	87	0.7
ZERO	257	1	PREG	0.1	2.9	2.4	3.4	71	141	0.6
339	404	2	PREG	5.3	4.4	4.4	3.4	283	32	0.6
MARBLE	382	2	BRED	1.6	1.4	1.8	2.8	44	87	0.6
107	105	1	BRED	3.1	3.2	2.3	2.8	62	87	0.6
21YLW	310	1	PREG	2.8	4.4	2.6	3.4	76	132	0.5
13	333	2	PREG	2.4	7.1	5.5	2.4	606	66	0.4
336	483	2	BRED	1.9	1.4	2.7	3.2	81	115	0.4
26	61	2	FRESH	3.6	0	3.6	1.9	152	47	0.4
6HFR	28	2	FRESH	1.8	0	0	1.8	0	44	0.4
344	413	2	PREG	4.3	2.9	2.0	2.2	50	57	0.3
110HFR	49	1	FRESH	2.4	0	2.4	1.9	66	47	0.3
SUMMER	334	1	PREG	0.2	0.1	1.6	1.8	38	44	0.3

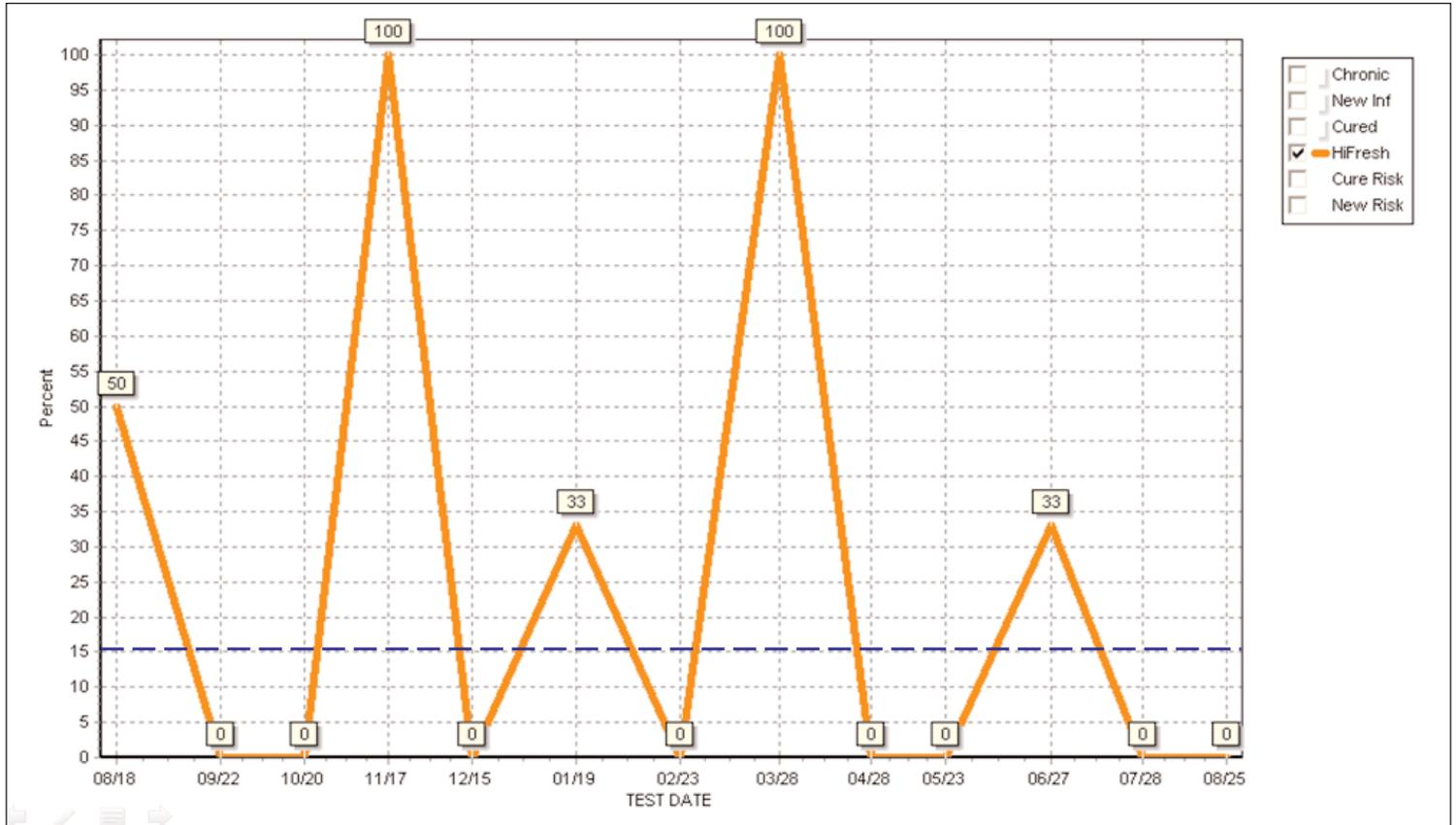
We look at the individual contribution list for this farm. It is a small herd therefore the impact of high individual cows can be relatively large. 55% of the bulk tank SCC is coming from the 4 cows or 8% of the herd. Of them one is a new infection this month, and 2 of the 4 were fresh cow infections when they began this lactation. Significant numbers of cows are starting lactations in an infected state, and we have reviewed dry off protocols as well as dry cow housing and management. Chronic infections are on the increase currently. Plans are to sample new chronic infections each test day and culture, with the priority being 1st and 2nd lactation animals in early lactation. Once the infected quarter is identified, we discard the milk for that quarter.

When we look at new infections trends over time, we can do so most easily with this graph. Awareness of the impact that new infections have on the overall SCC performance, as well as addressing some milking procedure deficiencies, have had an impact to date. During a month where heat and summertime stresses adversely affect SCC, we are observing a lowering of the

new infection rate and risk. If we be able to maintain this level, we will reach our goal of 7% new infection rate or better. Discussions with the team included keeping cows clean and dry, increasing bedding maintenance, and improving milking procedures, especially concerning unit removal timing.

One of the initial challenges encountered when working with this herd was the level of fresh cow infections. At the beginning, we saw a yearly 31% infection rate for fresh cows having gone through a dry period. That number came down over the past few months to 23% and currently only 1 new high fresh cow having gone through a dry period was infected in the past 5 test periods. Part of the team recommendations are to increase bedding frequency, use an internal teat sealant at dry off, and prevent overcrowding.





Summary: By looking separately at individual cow contribution, fresh cow performance, new infections, and chronically infected cows we begin to see longer-lasting results. Looking only at the high cows list usually has limited and short-lived success. Teams that focus on a particular area of dairy management reduce the tendency to focus on the problem of the day and search more broadly to develop permanent solutions. Often, asking the right question is the first step in developing a long-term strategy for success.