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# Extension Extra

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COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

## Percent Contribution to the Bulk Tank -- A DHIA Tool to Aid in the Control of Somatic Cell Count

by E. Kim Cassel, Extension dairy specialist,  
SDSU Dairy Science Department

Heart of America DHIA lab services now provides a "hot list" of the 20 highest somatic cell count cows, noting not only the somatic cell count, but milk production, percent contribution to the bulk tank, and bulk tank count estimates with the cows removed consecutively from the tank. This valuable new tool from DHIA can be most useful to producers trying to manage bulk tank counts while addressing mastitis control issues in their herd.

An example of the hot list is on page 2. Let's examine what this information means:

- Line 1:** This herd submitted samples from 73 cows. Average milk production was 61.7 lbs/cow/day of 3.5% fat, 3.3% protein. The linear somatic cell count is 3.7. Average days in milk for all 73 cows, 214 days.
- Line 2:** List of the highest 20 somatic cell count cows. The weighted average bulk tank count is 618,000 cell/ml.
- Line 3:** Index and Barn name are the same in this case. Cow 66 tested 81.1 pounds milk of 3.2% fat and 2.7% protein. Linear score somatic cell count is 9.3. The actual somatic cell count is 9,880,000 cells/ml. Cow 66 is 98 days in milk for her fifth lactation. She's contributing 22.9% of the somatic cells to the bulk tank. If her milk was withheld from the tank, the weighted average would drop from 618,000 to 485,000.
- Line 4:** The cow information reads the same as line 3 except, if the milk from cow 66 and cow 14 were withheld from the tank, the weighted average would drop from 618,000 to 394,000.

This is where it is important to note two cows, 66 and 14, both with the same somatic cell count, 7,880,000 cells/ml contribute a different number of cells to the tank, 22.9% and 15.3% respectively. Thus, simply withholding the highest count cows may not change the bulk tank average. You need to consider both milk production and the cell count.

### Important Questions

- Q. Do you have to belong to DHIA to use this program?**  
**A.** No
- Q. If I am not a member of DHIA what will this cost?**  
**A.** The cost is \$0.30/milk sample and \$0.04/cow meter fee. To have percent contribution to the bulk tank data, milk weights are needed, thus the need to meter. As well, use of the meter will allow for more accurate sampling of the milk for all components.
- Q. How soon will I get the results?**  
**A.** Within 2-3 days of mailing the samples.
- Q. How often can I do this?**  
**A.** As often as you wish.
- Q. If I am interested in this program, whom should I call?**  
**A.** E. Kim Cassel, Extension Dairy Specialist  
605/688-5488  
Jason Richie, SD/ND District Manager HADHIA  
605-492-3424

This program along with bacteriological culturing are key steps to tackling and controlling high somatic cell counts. However, we would recommend enrolling in the DHIA program to get all the reports including the somatic cell count report. Having a somatic cell history on the cows is essential for making key management and culling decisions as part of your mastitis control program.

**Example 'Hot List' of 20 Highest Somatic Cell Count Cows**

	94	94	77.7	3.2	3.0	3.4	132	80	1			
	95	95	90.1	3.0	2.8	6.6	1213	58	6			
	96	96	62.6	4.1	3.6	6.0	800	251	2			
	97	97	51.8	4.4	4.2	3.1	107	473	5			
Avg 73 cows			61.7	3.5	3.3	3.7		214				Line 1
Highest 20 SCC Cows												Line 2
												Weighted Average SCC: 618
Index	Barn	Milk	Fat	Pro	SCC	Count	DIM	Lac	CAR	W/O	%Cells	
66	66	81.1	3.2	2.7	9.3	7880	98	5		485	22.9	Line 3
14	14	54.1	3.1	3.5	9.3	7880	196	5		394	15.3	Line 4
87	87	67.6	4.1	3.4	7.8	2786	441	5		356	6.8	
24	24	75.1	3.4	3.0	7.6	2425	59	4		319	6.5	
37	37	57.6	5.3	2.9	7.8	2786	59	3		285	5.8	
95	95	90.1	3.0	2.8	6.6	1213	58	6		264	3.9	
3	3	69.8	4.1	3.3	6.8	1393	211	4		245	3.5	
77	77	48.2	4.4	4.1	7.3	1970	535	1		224	3.4	
41	41	66.6	3.1	3.5	6.7	1300	168	1		205	3.1	
53	53	60.1	3.8	3.4	6.8	1393	73	1		186	3.0	
65	65	63.4	3.3	2.9	6.7	1300	106	1		168	2.9	
58	58	62.8	2.9	3.3	6.6	1213	227	4		150	2.7	
96	96	62.6	4.1	3.6	6.0	800	251	2		139	1.8	
49	49	48.2	3.3	4.0	6.0	800	418	2		130	1.4	
2	2	86.5	4.1	3.1	5.1	429	63	5		123	1.3	
22	22	78.8	3.0	3.1	5.2	460	177	3		115	1.3	
67	67	67.2	3.4	3.0	5.1	429	69	1		109	1.0	
8	8	59.2	4.4	3.4	5.0	400	235	3		103	0.8	
55	55	69.2	5.4	2.6	4.6	303	24	3		99	0.8	
12	12	60.3	3.2	3.3	4.6	303	203	1		95	0.7	



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