



**GLENN'S  
UDDERINGS**

By  
**Glenn A. Shirk**

Lancaster Extension  
Dairy Agent

**What Can Herd SCC Trends Tell You?**

Many producers know what their herd average SCC levels have been because it is reported to them by their milk plant and they read it on their monthly DHIA reports. It affects their eligibility for milk quality premium payments, it is an indication of the herd's general udder health status, it indicates how much production they may have lost as a result of damage done to udder tissue.

Better indicators of the herd's udder health status, infection patterns and the effectiveness of mastitis prevention and control measures are the herd's SCC trends - lactation trends and seasonal trends. These can be found on Penna. DHIA's SCC Management Report and Herd Summary Report II, and on Raleigh's DHIA Herd Summary Report. They are also illustrated in Tables 1 and 2.

(Table 1)

**Table 1. Lactation Trends**

STAGE OF LACTATION PROFILE		STAGE OF LACTATION (DAYS)				
		1-40	41-100	101-199	200-305	306 +
NUMBER	1ST LACT	2	4	4	4	3
	2ND & LATER	4	7	8	8	4
% OF MILKING HERD	1ST LACT	4	8	8	8	6
	2ND & LATER	8	14	16	16	8
AV. DAILY MILK PRODUCTION	1ST LACT.	54	59	56	47	40
	2ND & LATER	75	76	66	49	37
AV. SCC SCORE	1ST LACT.	3.2	2.1	2.2	1.2	2.9
	2ND & LATER	3.6	3.5	4.3	3.6	4.4

Table 1 shows SCC trends by stage of lactation and by lactation number. In this example, 1st lactation heifers, as well as the older cows, have scores in excess of 3.0 within 40 days of calving. These averages, apply only to the 2 heifers and to the 4 older cows that were less than 41 days in milk as of the last test day. Similarly, the 41-100 day average applies only to the 4 heifers and 7 older cows that were in that stage of lactation as of the last test day.

Why might the heifers and cows in this herd have elevated cell counts within 40 days of calving? A number of things could be responsible, some of which are:

1. Heifers being suckled.
2. Heifers becoming infected during their rearing period, perhaps because of unsanitary conditions, flies feeding on their teat ends, etc.
3. The producers could have purchased infected replacements.
4. Unsanitary maternity area.
5. Weakened immune system caused by inadequate nutrition, calving-related stresses, other infections, etc.
6. Ineffective dry treatment, or no dry treatment.

The cell counts of other heifers later in lactation are lower. This could indicate that:

1. Measures taken to control or reduce early lactation infections were successful.
2. Problem heifers were quickly culled.
3. Heifers later in lactation were not exposed to the same high-risk situations as those which calved more recently.
4. The low counts in heifers throughout the latter stages of lactation indicate that good milking procedures must have been followed to prevent spread of infections from older cows to the newer replacements.
5. In our example, some heifers could have gotten infected late in lactation.

As cows approach the end of their normal lactation and as they extend over into a longer lactation cell counts normally increase, not necessarily due to infection but due to normal sluffing off of cells in the udder. In late lactation there is less milk to dilute the cells, so the counts in milk are generally higher. Older cows generally have higher counts than younger heifers. Don't accept this as being normal. It isn't! Strive to maintain low counts in older cows as well. The reason older cows have higher counts is they have been exposed to more opportunities for infection, and we haven't been completely successful in preventing and controlling their infections.

In our example herd, the older cows also came fresh with elevated counts and the counts remained rather high throughout lactation. Why?

1. Did the cows get infected in their previous lactation, soon after being dried off, or at calving time?
2. Were the cows dry-treated? Was it successful?

**Table 2. YEARLY PRODUCTION AND MASTITIS SUMMARY**

DATE OF TEST	DAYS IN TEST PERIOD	NUMBER COWS IN HERD ON TEST DAY	TEST (M)	ROLLING YEARLY HERD AVERAGE		SOMATIC CELL COUNT SUMMARY						
				FAT	PROT	% COWS SCC SCORE						AVERAGE SCC SCORE
						0, 1, 2, 3	4	5	6	7, 8, 9		
MONTH DROPPED	31	124	156	763	622	60	23	10	4	3	3.3	
8-14-89	26	129	129	762	620	79	13	3	5	1	2.6	
9-17-89	34	127	129	770	626	72	17	7	3	1	2.5	
10-13-89	26	131	127	777	632	79	13	2	3	3	2.3	
11-12-89	30	133	137	783	637	75	10	9	3	3	2.4	
12-10-89	28	128	150	788	641	85	10	3	2	1	2.1	
1-12-90	33	127	163	734	647	83	9	3	3	2	2.2	
2-11-90	30	123	175	683	648	82	10	3	5	1	2.2	
3-19-90	36	123	194	673	647	73	15	9	2	1	2.4	
4-13-90	25	125	205	613	649	78	12	7	3	1	2.1	
5-19-90	36	124	204	623	650	70	20	10	1	1	2.4	
6-14-90	26	122	192	57.8	646	82	15	2	1	4	2.1	
7-17-90	33	122	180	58.6	659	76	11	8	1	1	2.5	
<b>AVERAGES</b>	<b>30</b>	<b>126</b>	<b>165</b>	<b>66.8</b>	<b>65</b>	<b>78</b>	<b>12</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>2.3</b>	

Table 2 looks at seasonal SCC trends. In addition to herd average, look at the infection pattern from month to month. What percent of the herd is not infected (codes 1-3), "lightly" infected (code 4), and severely infected (codes 5-9)?

Looking at Table 2, we observe that the average count did not change much from month to month, but we can spot some months when more than 10% of the herd fell in the code 5-9 range. The months were July 1989 (the month dropped), September, November, March, April, May and July. What happens in these high months, and in the days preceding that preceded them, to cause an increase in the number of cows severely infected? Was it due to —

1. Hot, mucky days and sloppy conditions?
2. Cows having access to stagnant water and swampy areas?
3. Illnesses or conditions that jeopardized the cows' immune systems?
4. Changes in milking techniques or milkers (people or machines)?
5. Failure to maintain the milking system, change inflations, clean the regulator filters, repair faulty pulsators, etc.?
6. Malfunctioning milking equipment?
7. The purchase of some infected replacements?

We've just raised some questions about the high months. Now let's focus on the low months, and ask what caused a drop in severe infections in these months?

1. Did you reduce the severity of infections with effective treatments?
2. Did you identify and correct the cause of the problem? Or, did you just treat the symptom?
3. Did you cull the problem cows (symptoms)? And, if there was no attempt to correct the cause of the problem, do other cows continue to get severely infected within a few months?

As I have illustrated, these trends can reveal a lot about infection patterns and herd management practices. But, we have to take the time to see the patterns and trends that make up the herd's average SCC, and we have to dare to ask ourselves some probing questions as to why these patterns and trends exist.

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## Top 50 Protein Herds, Lancaster DHIA For April

The top 50 protein producing herds for April in Lancaster DHIA are listed as follows:

NAME	BRD	RHA MILK	RHA FAT	RHA PRO	NO. COWS
BOB+KAREN GOCHENAU	H	25255	853	802	54
STEPHEN L HERSHEY	H	24873	903	769	63
JOHN E COLEMAN JR	H	23543	873	767	61
ROBERT KAUFFMAN JR	H	22729	878	758	95
SPRING BELLE FARM	H	23469	891	748	47
HENRY D ZIMMERMAN	H	23318	785	742	53
ABRAHAM SHELLY JR	H	22161	817	741	33
WALNUT RUN FARM	H	24127	862	740	237
VERNON R UMBLE + SON	H	23051	871	733	87
SHELMAR ACRES	H	22741	824	730	89
JOHN H HOWARD	H	22744	862	728	46
JEFFREY L AUNGST	H	23516	808	725	50
WARREN Z GOOD	H	22540	826	723	47
ROBERT L & LINDA SENSENIG	H	22521	786	717	74
NATE+TRISH STOLTZFUS	H	22405	783	717	48
DAVID R STOLTZFUS	H	22953	791	715	35
NEVIN S HORNING	H	23662	861	715	47
ROBERT L SHELLY	H	21802	840	714	51
AMOS E STOLTZFUS	H	22122	793	714	64
MELVIN ZOOK	H	22283	846	712	78
EARL ANNA MAE REIFF	H	22515	838	711	40
WEAVER HOMSTEAD FARM	H	22948	868	711	87

CURTIS E AKERS	H	21995	842	709	54
KENNETH E ZURIN	H	23076	801	709	274
1332 COLEBROOK RD	H	23071	854	709	66
EMANUEL S ESH	H	22901	799	708	45
KEN + LISA WIKER	H	22350	813	707	78
THOMAS C LAPP	H	21990	792	706	63
WEA-LAND FARM	H	22204	784	705	68
DARYL + SAM MARTIN	H	22243	806	704	88
NELSON + JANE STONER	H	23364	773	702	114
MARVIN R STOLTZFUS	H	22755	801	702	44
CLAIR R LANDIS	H	22366	694	702	66
J RAY RANCK	H	21669	799	702	59
LENEWOOD FARM	H	21923	790	701	72
DENNIS E TICE	H	21610	783	700	46
DONALD B TRIMBLE	H	21577	830	699	33
ELMER M HIGH	H	22492	788	699	54
WARREN E BURKHOLDER	H	22460	861	698	35
JOHN S ZIMMERMAN	H	22871	875	697	65
RICK + MIM BRENNEMAN	H	21227	828	696	42
HARRY L TROOP	H	22040	793	695	61
STAR POINT DAIRY	H	21322	742	695	19
CALVIN L ZIMMERMAN	H	21698	779	693	63
PARKE H RANCK JR	H	22402	859	692	52
KARL W HERR	H	21303	785	692	48
SAMUEL E BEILER	H	22220	749	691	42
SIX CORNER FARM	H	21769	836	691	40
PAUL M FAHNESTOCK	H	22126	773	690	77
CLAY FARM	H	22084	810	689	56



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