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STUD BOOK

Logix Melk/Milk

Kudde Gesondheids Verslag / Herd Health Report

UNIVERSITEIT VAN PRETORIA

MILK UNIT

UP EXPERIMENTAL FARM

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Test-day: 2024-10-07

Holstein Cows

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HERD HEALTH SUMMARY REPORT

UNIVERSITEIT VAN PRETORIA - Holstein Cows

Table 1: Summary for Test-day 2024-10-07 (Number of Samples Tested: 69)

Analysis	Results	Norms*	% Cows outside norms*
Milk Production (kg)	Avg.: 35.8 Median: 35.1		
Butterfat (%)	Avg.: 4.76 Median: 4.62	3.5 % - 6.0 %	Too Low: 0 % Too High: 1 %
Protein (%)	Avg.: 3.45 Median: 3.44	3.0 % - 4.5 %	Too Low: 4 % Too High: 0 %
Lactose (%)	Avg.: 4.82 Median: 4.83	> 4.7 %	Too Low: 12 %
MUN (mg/dl)	Avg.: 18.12 Median: 18.10	8 - 16 mg/dl	Too Low: 0 % Too High: 83 %
SCC (x1000/ml)	Avg.: 168 Median: 49 % < 100 : 75.4 % % < 200 : 82.6 % % < 500 : 94.2 % % > 750 : 2.9 % % > 1 000 : 2.9 % % > 1 500 : 1.4 %	< 200 > 64 % > 75 % > 92 % < 4.8 % < 1 % NONE	Too High: 0 % Too High: 0 % Too High: 0 % Too High: 0 % Too High: 1.9 % Too High: 1.4 %
Butterfat Protein ratio	Average: 1.4	> 1.0	Too High: 0.0 %

Table 2: Quantification of Specific Cases (% of herd) and Loss in Production on 2024-10-07

Loss in Production due to:		Avg/Median SCC (Number (n)):	
SSC (kg per day):	98.8 (4.0 %)	1st Lact Cows:	200/52 (29)
DIM (kg per day):	90.6 (3.7 %)	2nd Lact Cows:	87/35 (20)
No. of Cows Under Pressure:	1 (1.4 %)	3rd Lact Cows:	135/59 (13)
No. Cows with SCC > 200k:	12 (17.4 %)	4th Lact Cows:	87/45 (5)
No. Cows with SCC > 750k:	2 (2.9 %)	5th Lact Cows:	0/ (0)
No. New Infections:	4 (5.8 %)	6+ Lact Cows:	926/926 (2)
No. Recurring Infections:	4 (5.8 %)	Avg. SCC for SCC > 750k (n):	2524 (2)
Cure Rate for SCC > 200k:	20.0 % (2)	Avg. Days In Milk (DIM) for Herd:	179
Cure Rate for SCC > 750k:	40.0 % (2)	Median of DIM for Herd:	165
No. Chronic Infections (SCC > 200k):	4 (5.8 %)	Avg. DIM for SCC < 200k (n):	177 (57)
No. Chronic Infections (SCC > 750k):	1 (1.4 %)	Avg. DIM for SCC > 200k and < 750k (n):	205 (10)
No. of Possible Ketosis Cases:	13	Avg. DIM for SCC > 750k (n):	128 (2)
No. of Possible Acidosis Cases:	0	Avg. Parity for Herd:	2
Avg. Age at First Calf (Months):	26	Avg. Parity for SCC < 200k:	2
Avg. Inter-Calf Period (Days):	421	Avg. Parity for SCC > 200k and < 750k:	3
No. Flushings:	NA	Avg. Parity for SCC > 750k:	4
No. Embrios:	NA		

Table 3: Benchmark: Herd with the Top 25%, Average and Bottom 25% for different traits tested the last month of for Holstein Cows

	Milk Production (kg)	Butterfat (%)	Protein (%)	Lactose (%)	SCC (x1000/ml)	MUN (mg/dl)
Herd	35.8	4.76	3.45	4.82	168	18.12
Top 25%	39.3	5.33	7.00	4.86	33	12.00
Breed Avg	31.9	4.64	4.47	4.26	223	8.68
Bottom 25%	23.8	3.96	3.31	3.00	119	4.00

*** PLEASE CONSULT YOUR VETERINARIAN, PROFESSIONAL ANIMAL SCIENTIST or LogixMilk TECHNICAL ADVISOR for the interpretation of these results and professional advisory services.**

Table 4: Summary of Somatic Cell Counts per Lactation Group in the herd for 69 Holstein Cows

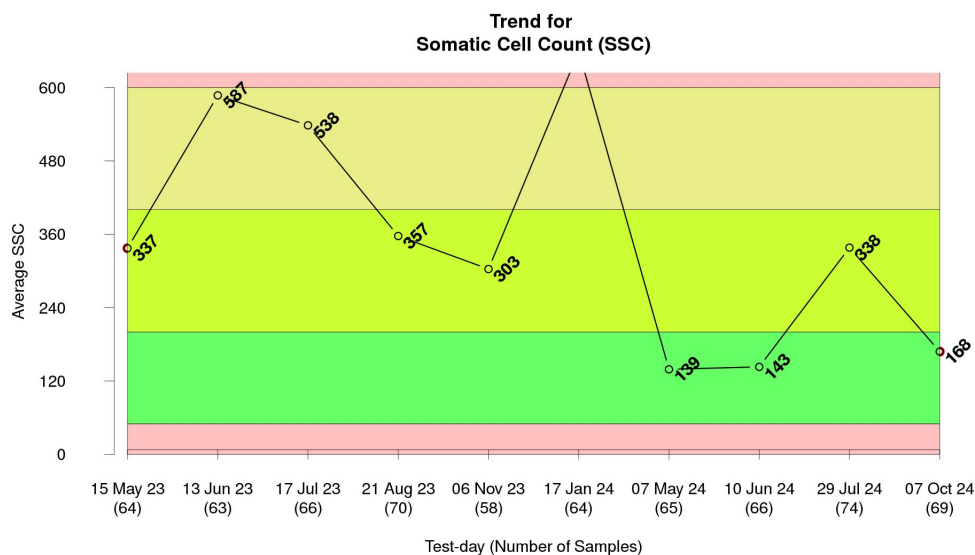
Lactation Group	% of Herd	Early Lactation	Mid Lactation	Late Lactation	% SCC > 200k	% SCC > 750k
1	42.0% (29)	10.1% (7)	17.4% (12)	14.5% (10)	4.3% (3)	1.4% (1)
2	29.0% (20)	8.7% (6)	7.2% (5)	13.0% (9)	2.9% (2)	0.0% (0)
3	18.8% (13)	4.3% (3)	5.8% (4)	8.7% (6)	5.8% (4)	0.0% (0)
4	7.2% (5)	2.9% (2)	2.9% (2)	1.4% (1)	1.4% (1)	0.0% (0)
5	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
6+	2.9% (2)	0.0% (0)	1.4% (1)	1.4% (1)	2.9% (2)	1.4% (1)
Herd	99.9% (69)	26% (18)	34.7% (24)	39% (27)	17.3% (12)	2.8% (2)

Table 5: Somatic Cell Count (SCC) Analysis: Percentage (Number) of Cows within Stage of Lactation and Lactation Group for SCC > 200k and SCC > 750k for 69 Holstein Cows

Lactation Group	Early Lactation		Mid Lactation		Late Lactation	
	% SCC > 200k	% SCC > 750k	% SCC > 200k	% SCC > 750k	% SCC > 200k	% SCC > 750k
1	28.6% (2)	14.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)
2	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	22.2% (2)	0.0% (0)
3	0.0% (0)	0.0% (0)	50.0% (2)	0.0% (0)	33.3% (2)	0.0% (0)
4	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)
5	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
6+	0% (0)	0% (0)	100.0% (1)	100.0% (1)	100.0% (1)	0.0% (0)

Table 6: Bulk Tank Results for 2024-10-07 (Number of Samples Tested: 2)

Tank No	Butterfat (%)	Protein (%)	Lactose (%)	SCC (x1000/ml)	MUN (mg/dl)	pH
Calculated Tank	4.75	3.43	4.82	154	18	
11 POOLED	2	1.53	6	304	12	
70 Tank	4.05	3.41	4.83	147	15.8	

**Figure 1:** Somatic Cell Count (SCC) Trend

The average Somatic Cell Count (SCC) and the trend over time is shown in the graph. The ideal is a herd with an average count of less than 200 000. A higher SCC results in lower milk production and possible udder infection. If animals with high SCC can be identified early, they can be treated in time, thereby preventing production loss and permanent udder damage resulting in lower herd life.

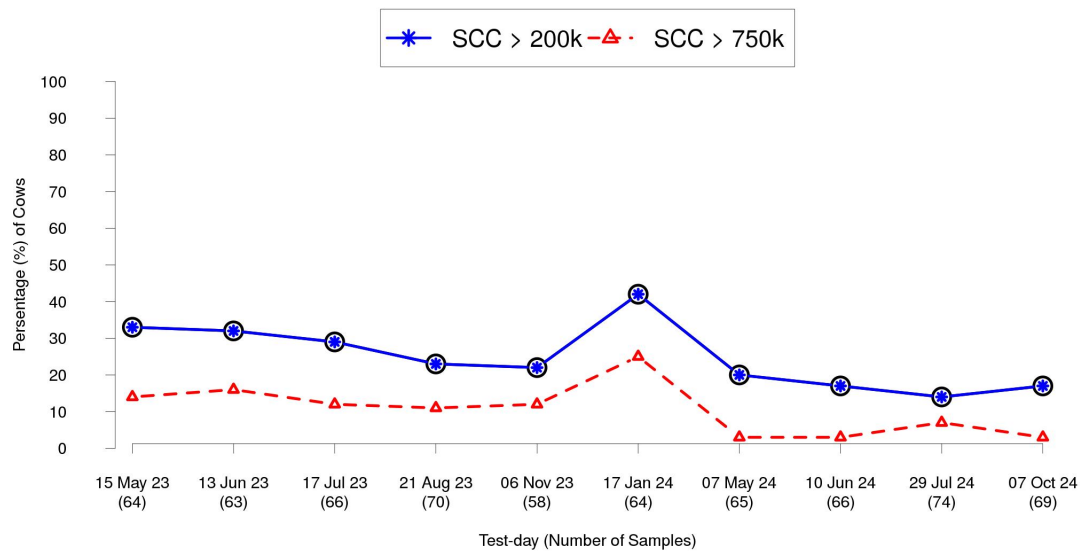


Figure 2: Percentage (%) of Cows with Somatic Cell Counts (SCC) more than 200k and 750k, respectively, per Test-day

The graph presents the trend of the % of cows with Somatic Cell Counts (SCC) more then 200k and 500k, respectively. The ideal is to have as few cows as possible with a SCC of more than 200K and none with a SCC of more than 750k.

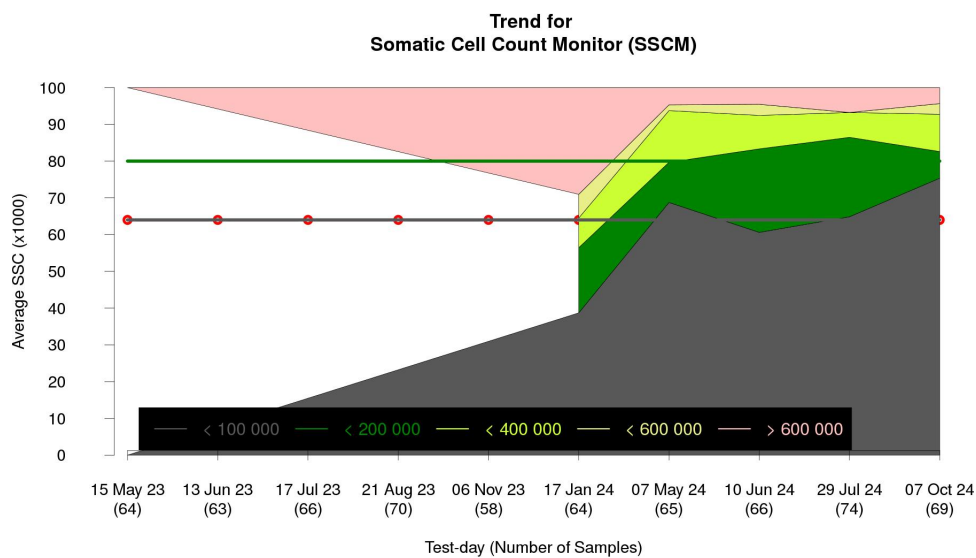


Figure 3: Somatic Cell Count (SCC) Monitor Trend

The graph shows the percentage of cows within certain Somatic Cell Count (SCC) levels. Ideally, at least 64% of the cows of a herd should have a SCC of less than 100 000 and 80% a SCC of less than 250 000. The danger zone is indicated in red, where ideally no cows should be indicated.

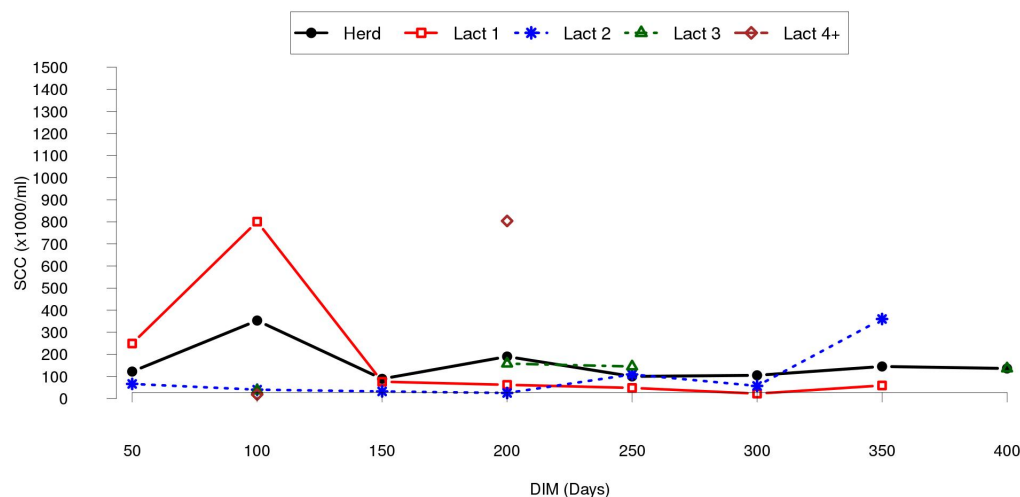


Figure 4: Average Somatic Cell Counts (SCC, x1000/ml) per Day In Milk (DIM)

This graph indicates the average Somatic Cell Counts (SCC, x1000/ml) per day in milk (DIM) for the complete herd, as well as for Lactation 1, 2, 3 and 4+ cows, separately.

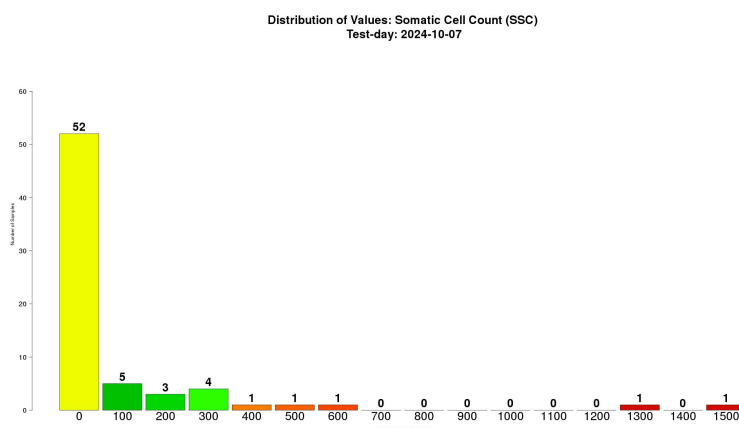


Figure 5: Somatic Cell Count (SCC) Distribution for Test-day (2024-10-07)

The graph depicts the number of animals within certain levels of Somatic Cell Counts (SCC). If the cows with SCCs higher than 600 000 can be identified early, they can be treated or even culled from the herd, preventing economic losses due to penalties paid for high SCCs in the milk.

Table 7: Somatic Cell Count (SSC) distribution and Milk Loss Monitor 2024-10-07

SSC Levels	< 100k	100k - 200k	200k - 500k	500k - 800k	800k - 1 500k	> 1 500k
Number Cows	52	5	8	2	1	1
% Cows	75.4 %	7.2 %	11.6 %	2.9 %	1.4 %	1.4 %
Milk Quality	Excellent	Very Good	Needs Improvement	Poor	Serious	BAD
% Milk Loss	< 2 %	2 - 4 %	4 - 8 %	8 - 10 %	10 - 35 %	> 35 %
% Quarters Infected	< 1 %	1 - 6 %	6 - 16 %	16 - 26 %	26 - 48 %	> 48 %

The average Somatic Cell Count (SCC) on 2024-10-07 for the herd, was 168 000. This figure places the herd in the "Light Green" SCC Zone and the milk quality is Very Good. Milk loss due to SCC is between 2 and 4 %.

Udder Health: You do not have a major mastitis problem but there may be problems with individual cows. Assess your mastitis control procedures.

Table 8: Cows Under Pressure (SCC > 500k and Lactose % < 4.6)

Cow ID	Name	SCC	Lactose %	DIM	Parity	Production
22015	22015	3741	4.48	91	1	25

Table 9: Cows with Somatic Cell Counts > 200k (Status: N=New -, C=Chronic -, R=Recurring - and CR=Chronic and Recurring Infections)

Cow ID	Name	SCC 2024-10-07	SCC 2024-07-29	SCC 2024-06-10	Production	DIM	Parity	Status
22015	22015	3741	52	-	25	91	1	N
1604	1604	1306	1267	1352	46.6	165	6	C
20023	20023	685	243	53	28.2	332	2	R
1621	1621	546	280	268	36	265	6	C
22024	22024LUNAR	446	-	-	33	17	1	N
1936	1936 MEGAMAN	382	389	501	34.6	163	3	C
1917	1917 INTACT	347	96	699	41.2	239	3	R
20002	20002	327	55	-	39.1	108	3	N
1835	1835	303	809	921	38.9	192	4	C
22017	22017 BRANTLEY	291	61	-	37.6	101	1	N
1829	1829	236	155	109	27.5	410	3	R
21003	21003	235	115	151	36.6	227	2	R

Table 10: Possible Ketosis Cases; Cows under 100 days in milk (Prot. Fat Ratio < 0.68 for Jerseys and < 0.74 for other Breeds)

Cow ID	Name	Production	DIM	Parity	Prot % to Fat %	Breed
1947	1947 DUNHILL	47.6	85	3	0.56	HST
20019	20019	45.5	38	3	0.57	HST
1905	1905 IKEA	45.8	77	4	0.57	HST
21019	21019INTACT	47.5	91	2	0.59	HST
21008	21008 MOVER	43.5	25	2	0.62	HST
22015	22015	25	91	1	0.62	HST
22022	22022 LUNAR	37.6	93	1	0.70	HST
22028	22028VEKOMA	21.6	9	1	0.70	HST
20010	20010	46.9	64	3	0.71	HST
22024	22024LUNAR	33	17	1	0.71	HST
22027	22027VEKOMA	36.2	72	1	0.72	HST
1908	1908 INTACT	53	71	4	0.73	HST
21026	21026	45.4	29	2	0.73	HST

Table 11: Possible Acidosis Cases (Protein % > Butterfat %)

Cow ID	Name	Production	DIM	Parity	Prot % to Fat %
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Table 12: Dry Cows with a Dry Period more than 55 Days

Cow ID	Name	Breed	Last ICP	Avg. ICP	No. ICPs	Days Since Last Calf	Days Open
1745	1745	HST	-	-	-	1763	1470
ZNDP210006	21006	HST	-	-	-	606	304
ZNDP200029	20029	HST	-	-	-	688	204

Table 13: Cows with an active Inter-Calving Period (ICP) > 400 days

Cow ID	Name	Breed	Last ICP	Avg. ICP	No. ICPs	Days Since Last Calf	Production
1745	1745	HST	-	-	-	1763	-
1519	1519	HST	500	401	5	735	-
ZNDP200029	20029	HST	-	-	-	688	-
ZNDP210006	21006	HST	-	-	-	606	-
21008	21008 MOVER	HST	-	-	-	496	43.5
-	21023	HST	-	-	-	465	-
1828	1828	HST	481	418	2	459	-
ZNDP200010	20010	HST	386	386	1	447	46.9
-	21007 INTACT	HST	-	-	-	430	42.7
21026	21026	HST	-	-	-	428	45.4
ZNDP190032	1932 DUNHILL	HST	350	350	1	427	29
1829	1829	HST	389	416	2	416	27.5
21024	21024	HST	-	-	-	411	-