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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: 2024-11-25

Holstein Cows

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HERD HEALTH SUMMARY REPORT

UNIVERSITEIT VAN PRETORIA - Holstein Cows

Table 1: Summary for Test-day 2024-11-25 (Number of Samples Tested: 68)

Analysis	Results	Norms*	% Cows outside norms*
Milk Production (kg)	Avg.: 30.6 Median: 31.4		
Butterfat (%)	Avg.: 4.62 Median: 4.57	3.5 % - 6.0 %	Too Low: 1 % Too High: 3 %
Protein (%)	Avg.: 3.40 Median: 3.35	3.0 % - 4.5 %	Too Low: 6 % Too High: 1 %
Lactose (%)	Avg.: 4.79 Median: 4.81	> 4.7 %	Too Low: 21 %
MUN (mg/dl)	Avg.: 15.77 Median: 15.60	8 - 16 mg/dl	Too Low: 0 % Too High: 41 %
SCC (x1000/ml)	Avg.: 545 Median: 68 % < 100 : 58.8 % % < 200 : 75.0 % % < 500 : 82.4 % % > 750 : 14.7 % % > 1 000 : 8.8 % % > 1 500 : 4.4 %	< 200 > 64 % > 75 % > 92 % < 4.8 % < 1 % NONE	Too High: 5.2 % Too High: 0.0 % Too High: 9.6 % Too High: 9.9 % Too High: 7.8 % Too High: 4.4 %
Butterfat Protein ratio	Average: 1.4	> 1.0	Too High: 1.5 %

Table 2: Quantification of Specific Cases (% of herd) and Loss in Production on 2024-11-25

Loss in Production due to:		Avg/Median SCC (Number (n)):	
SSC (kg per day):	173.4 (8.3 %)	1st Lact Cows:	170/85 (31)
DIM (kg per day):	166.5 (8.0 %)	2nd Lact Cows:	933/52 (17)
		3rd Lact Cows:	1026/55 (12)
No. of Cows Under Pressure:	4 (5.9 %)	4th Lact Cows:	229/64 (6)
No. Cows with SCC > 200k:	17 (25.0 %)	5th Lact Cows:	0/ (0)
No. Cows with SCC > 750k:	10 (14.7 %)	6+ Lact Cows:	1103/1103 (2)
No. New Infections:	10 (14.7 %)		
No. Recurring Infections:	3 (4.4 %)	Avg. SCC for SCC > 750k (n):	3092 (10)
Cure Rate for SCC > 200k:	16.7 % (2)		
Cure Rate for SCC > 750k:	50.0 % (1)	Avg. Days In Milk (DIM) for Herd:	192
No. Chronic Infections (SCC > 200k):	4 (5.9 %)	Median of DIM for Herd:	186
No. Chronic Infections (SCC > 750k):	1 (1.5 %)		
		Avg. DIM for SCC < 200k (n):	188 (51)
No. of Possible Ketosis Cases:	7	Avg. DIM for SCC > 200k and < 750k (n):	206 (7)
No. of Possible Acidosis Cases:	1	Avg. DIM for SCC > 750k (n):	199 (10)
Avg. Age at First Calf (Months):	26	Avg. Parity for Herd:	2
Avg. Inter-Calf Period (Days):	420	Avg. Parity for SCC < 200k:	2
No. Flushings:	NA	Avg. Parity for SCC > 200k and < 750k:	2
No. Embrios:	NA	Avg. Parity for SCC > 750k:	3

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	30.6	4.62	3.40	4.79	545	15.77
Top 25%	40.0	6.01	4.25	5.03	34	16.80
Breed Avg	32.3	4.38	3.53	4.74	232	10.73
Bottom 25%	24.9	3.90	3.28	4.67	637	8.70

*** 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 68 Holstein Cows

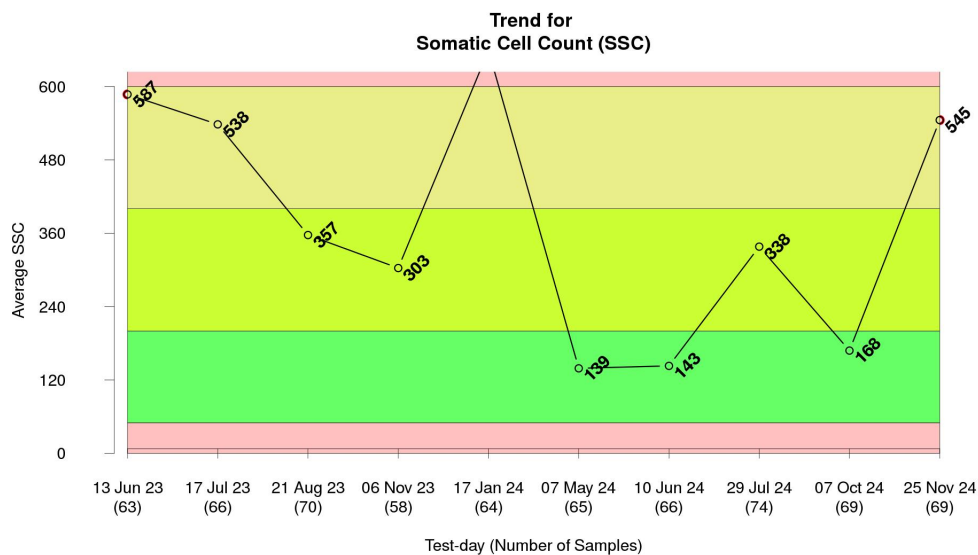
Lactation Group	% of Herd	Early Lactation	Mid Lactation	Late Lactation	% SCC > 200k	% SCC > 750k
1	45.6% (31)	10.3% (7)	17.6% (12)	17.6% (12)	8.8% (6)	2.9% (2)
2	25.0% (17)	5.9% (4)	7.4% (5)	11.8% (8)	5.9% (4)	4.4% (3)
3	17.6% (12)	2.9% (2)	4.4% (3)	10.3% (7)	5.9% (4)	2.9% (2)
4	8.8% (6)	1.5% (1)	4.4% (3)	2.9% (2)	1.5% (1)	1.5% (1)
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)	0.0% (0)	2.9% (2)	2.9% (2)	2.9% (2)
Herd	99.9% (68)	20.6% (14)	33.8% (23)	45.5% (31)	25% (17)	14.6% (10)

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 68 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)	25.0% (3)	8.3% (1)
2	25.0% (1)	0.0% (0)	40.0% (2)	40.0% (2)	12.5% (1)	12.5% (1)
3	0.0% (0)	0.0% (0)	66.7% (2)	66.7% (2)	28.6% (2)	0.0% (0)
4	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)
5	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
6+	0% (0)	0% (0)	0% (0)	0% (0)	100.0% (2)	100.0% (2)

Table 6: Bulk Tank Results for 2024-11-25 (Number of Samples Tested: 0)

Tank No	Butterfat (%)	Protein (%)	Lactose (%)	SCC (x1000/ml)	MUN (mg/dl)	pH
Calculated Tank	4.58	3.35	4.80	385	16	

**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.

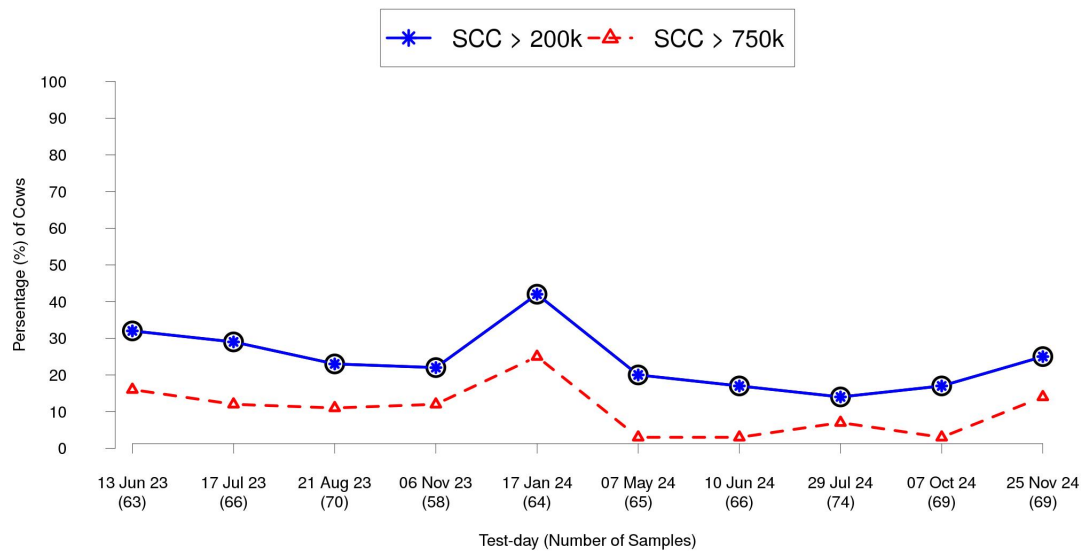


Figure 2: Percentage (%) of Cows with Somatic Cell Counts (SCC) more than 200k and 750k, respectively, per Test-day

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.

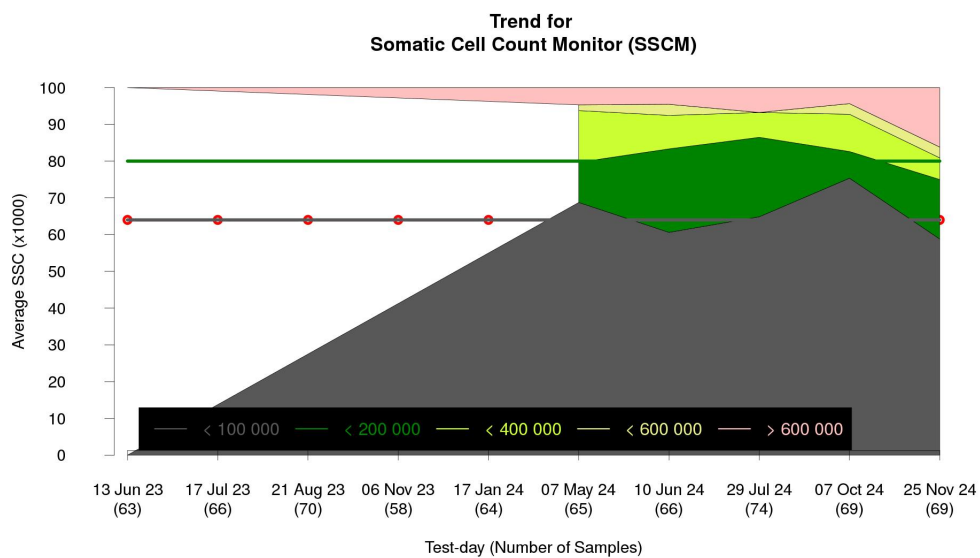


Figure 3: Somatic Cell Count (SCC) Monitor Trend

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.

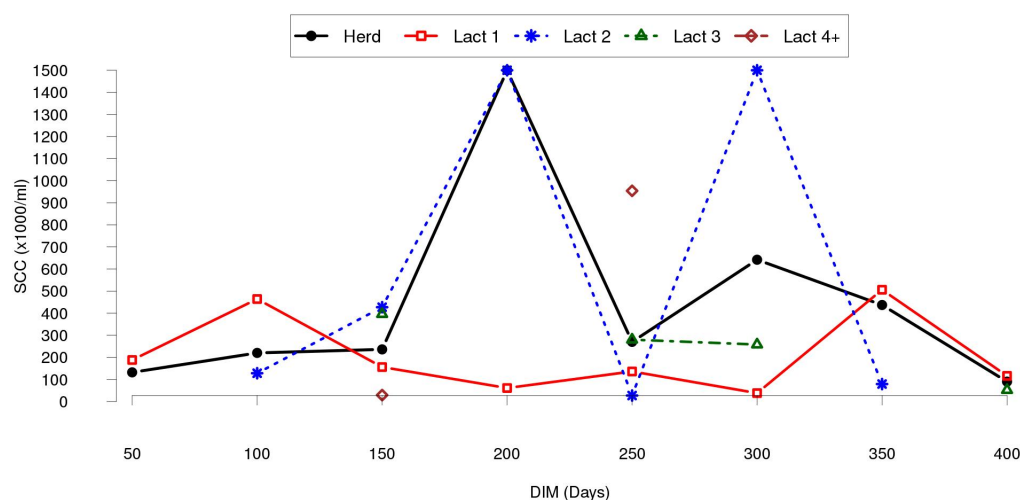


Figure 4: Average Somatic Cell Counts (SCC, x1000/ml) per Day In Milk (DIM)

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.

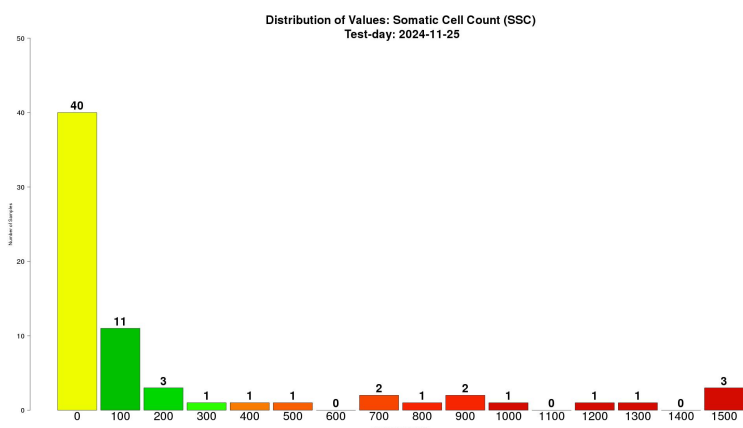


Figure 5: Somatic Cell Count (SCC) Distribution for Test-day (2024-11-25)

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 2024-11-25

SSC Levels	< 100k	100k - 200k	200k - 500k	500k - 800k	800k - 1 500k	> 1 500k
Number Cows	40	11	5	3	6	3
% Cows	58.8 %	16.2 %	7.4 %	4.4 %	8.8 %	4.4 %
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 2024-11-25 for the herd, was 545 000. This figure places the herd in the "Orange" SCC Zone and the milk quality is Poor. Milk loss due to SCC is between 8 and 10 %.

Udder Health: Mastitis infections are evident and needs slight improvement. Your mastitis control program needs improvement. Consult your veterinarian and/or registered animal scientist for assistance. Due to high somatic cell counts, your ability to supply milk is at risk.

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

Cow ID	Name	SCC	Lactose %	DIM	Parity	Production
20002	20002	9999	3.46	157	3	6.8
21020	21020MOVER	9999	4.08	151	2	22.6
1621	1621	1375	4.43	314	6	31.4
1835	1835	1077	4.59	241	4	33

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 2024-11-25	SCC 2024-10-07	SCC 2024-07-29	Production	DIM	Parity	Status
20002	20002	9999	327	55	6.8	157	3	N
21020	21020MOVER	9999	14	20	22.6	151	2	N
21003	21003	3761	235	115	28.1	276	2	R
1621	1621	1375	546	280	31.4	314	6	C
21009	21009 HURION	1215	69	44	28.3	148	2	N
1835	1835	1077	303	809	33	241	4	C
21040	21040	991	40	30	27.8	314	1	N
22024	22024LUNAR	905	446	-	31.4	66	1	N
1604	1604	831	1306	1267	36.2	214	6	C
20010	20010	770	59	-	40.4	113	3	N
1936	1936 MEGAMAN	713	382	389	27.4	212	3	C
22030	22030	580	-	-	13.7	13	1	N
1917	1917 INTACT	460	347	96	43.4	288	3	R
22009	22009 LIWAY SIL	302	149	61	27.2	220	1	N
21023	21023	299	-	148	38.7	508	1	R
21007	21007 INTACT	279	24	-	33.3	82	2	N
22027	22027VEKOMA	279	51	-	30.2	121	1	N

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
21008	21008 MOVER	41.9	74	2	0.58	HST
20032	32MOVER	40	13	3	0.59	HST
20019	20019	37.1	87	3	0.60	HST
1828	1828	45.5	30	4	0.69	HST
21007	21007 INTACT	33.3	82	2	0.70	HST
22028	22028VEKOMA	23.1	58	1	0.72	HST
22062	22062	30.1	45	1	0.73	HST

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

Cow ID	Name	Production	DIM	Parity	Prot % to Fat %
1929	1929 DUNHILL	32.4	400	3	1.09

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
ZNDP170045	1745	HST	-	-	-	1812	1518
ZNDP210006	21006	HST	-	-	-	655	352
20029	20029	HST	-	-	-	737	252
ZNDP190015	1915 MEGAMAN	HST	386	429	2	347	55
210001	21001 HURION	HST	325	325	1	348	55

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
ZNDP170045	1745	HST	-	-	-	1812	-
ZNDP150019	1519	HST	500	401	5	784	-
20029	20029	HST	-	-	-	737	-
ZNDP210006	21006	HST	-	-	-	655	-
21023	21023	HST	-	-	-	514	38.7
ZNDP180028	1828	HST	481	418	2	508	45.5
1932	1932 DUNHILL	HST	350	350	1	476	33.9
ZNDP180029	1829	HST	389	416	2	465	-
21024	21024	HST	-	-	-	460	35.8
ZNDP190043	1943	HST	453	453	1	429	-
-	20025	HST	362	362	1	419	-
1929	1929 DUNHILL	HST	440	392	2	406	32.4