

Piimakarjakasvatustehnoloogia

Jere High

Tegevdirektor

Lancaster'i jõudluskontrolli organisatsioon

WWW.LANCASTERDHIA.COM

Jere@LancasterDHIA.com

Päevakord

Firma ülevaade

Teenuste tüübid ja uued uuringud

SRA haldusraportid

Mastiidi DNA uuringu kasutamine ja raportid

Lancaster DHIA

Põhieesmärk

Aidata meie liikmetel ja põllumajandussektoril olla edukas, toetades turvalise ja rikkaliku toidu kättesaadavust.

Tuumikväärtused

Meeskonnatöö, ausus, kuldreegel, uhkus ja innovatsioon

Strateegilised sihid

Pakkuda meie klientidele
jätkuvalt paremat
teenindust

Tugevadada meie
reputatsiooni valdkonna
tehnoloogia- ja
innovatsioonialase liidrina

Püüelda säästliku arengu
poole, mis põhineb
piimakarja parendamisel
ja toob kasumit läbi iga
meie pakutava toote või
teenuse

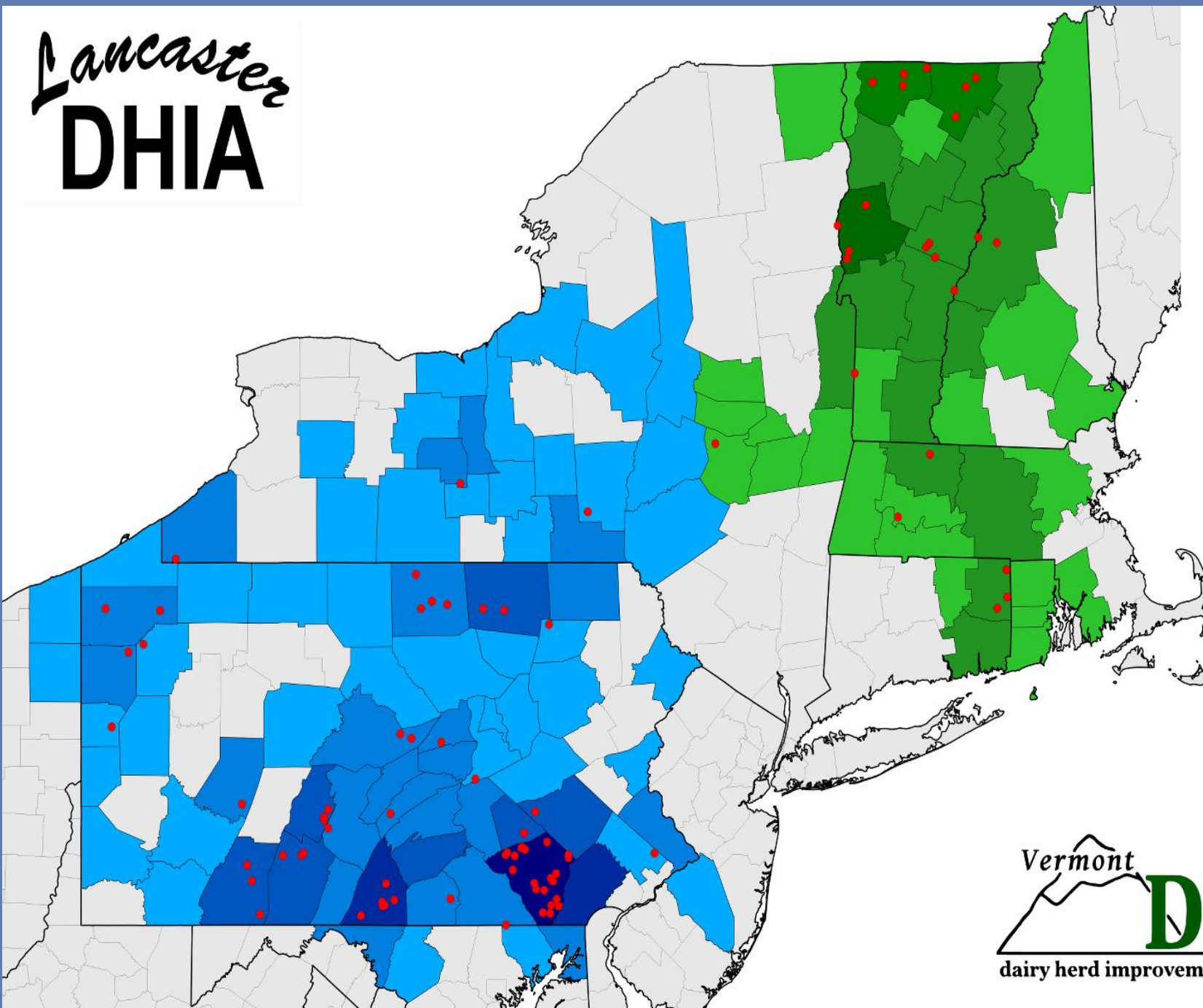
Luua andekas meeskond
tõhusa kommunikatsiooni,
vastastikuse austuse,
usalduse ja vastutuse
keskkonnas



Lancaster DHIA

Cows by County

- Lancaster DHIA
- 1 - 1,000
- 1,001 - 5,000
- 5,001 - 10,000
- 10,001 - 50,000
- 50,001+
- Vermont DHIA
- 1 - 1,000
- 1,001 - 5,000
- 5,001 - 10,000
- 10,001 - 50,000
- 50,001+
- Field Technicians



Juhatus 15 piimakarjakasvatajast (3400+ liiget)



**Tegevdirektor ja
12 töötajaga haldusmeeskond**



92 välitehnikut



**8 DHIA laboritehnikut
5 mikrobilooogiatehnikut
4 koresöödaanalüüsi tehnikut
9 kontor / postitused / tehniline tugi
8 autojuhti (5 marsruuti)**

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Väliteenused

DHIA uuringud

Pidamiskonsultatsioonid

Laborteenused

DHIA piimalabor

Koresööda analüüsi labor

Mikrobioloogia labor

Bakterioloogialabor

Mastiidi DNA labor

Piima ELISA labor

Patogeenide uuringu labor

Lancaster DHIA

Koresööda analüüsi labor





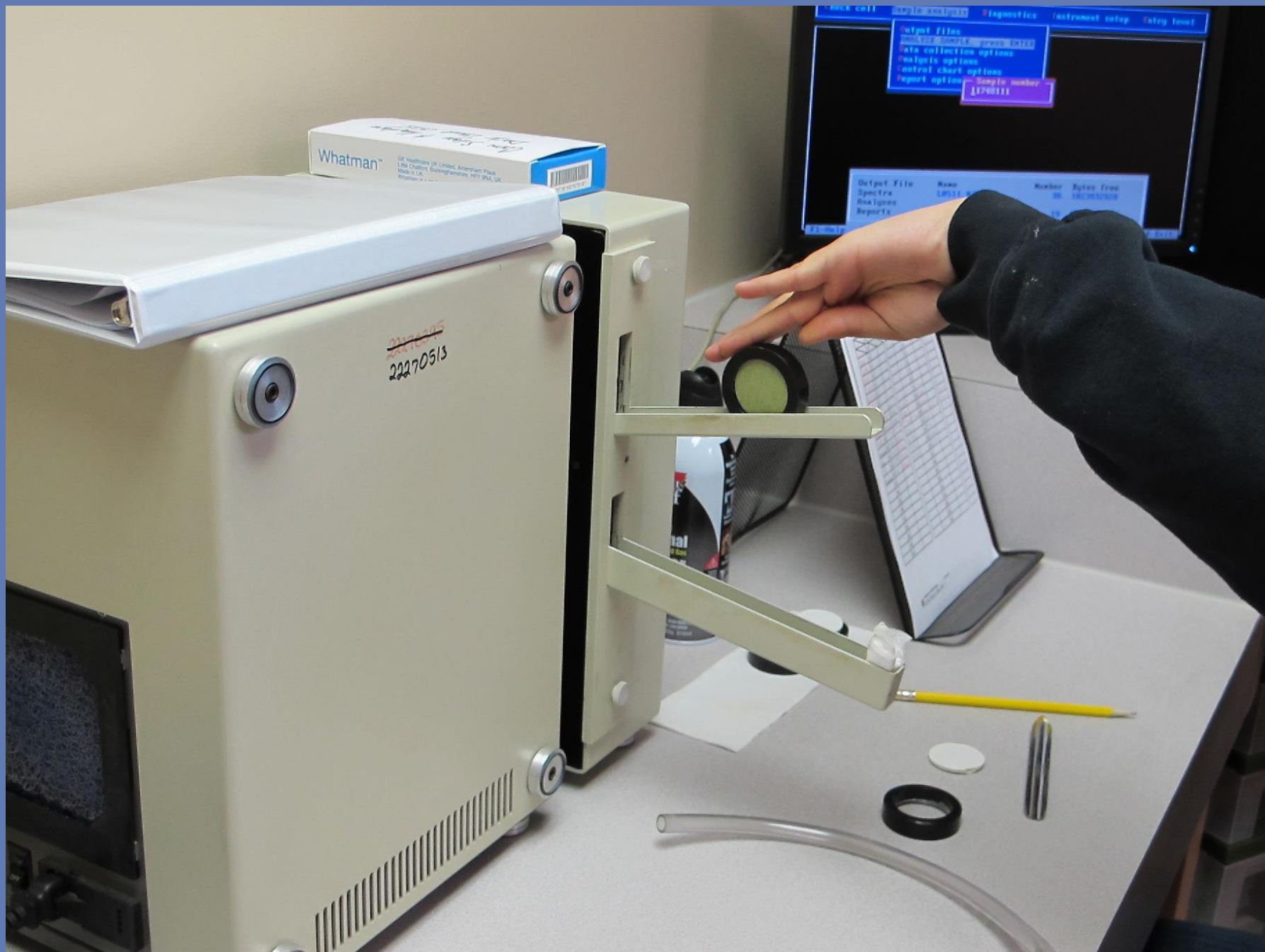












N I R A N A L Y S I S R E S U L T S Type: LEGUME FORAGE

Moisture	43.0	%	Minerals		
Dry Matter	57.0	%	Ash	12.0	% DM
Proteins			Calcium	0.99	% DM
Crude Protein	22.0	% DM	Phosphorus	0.40	% DM
Adjusted Protein			Magnesium	0.30	% DM
Soluble Protein	58.4	% CP	Potassium	3.64	% DM
Ammonia	4.9	% CP	Sulfur	0.32	% DM
ADF Protein (bound protein)	1.96	% DM	Sodium		
NDF Protein	3.6	% DM	Iron	No/low soil contamination	
Rumen Degr Protein	79.2	% CP	Manganese		
Rumen Undgr Protein (Strep. G)			Zinc		
Fibers			Copper		
Acid Detergent Fiber	32.9	% DM	Selenium		
Neutral Detergent Fiber	41.8	% DM	Molybdenum		
Crude Fiber			Nitrate Ion		
Lignin	6.45	% DM	Chloride Ion		
Lignin / NDF Ratio			DCAD (Meq/100gdm)		
Soluble fiber	13.0	% DM	Energy / Indexes		
peNDF			TDN	59.9	% DM
NDF Digestibility, Invitro			Net Energy Lactation	0.62	Mcal/lb
12 hr digestibility			Net Energy Maintenance	0.59	Mcal/lb
24 hr digestibility			Net Energy Gain	0.33	Mcal/lb
30 hr digestibility			Relative Feed Value (RFV)	141	
48 hr digestibility	48.2	% NDF	Relative Feed Quality (RFQ)	144	
Indigestible NDF, Invitro 120 HR	19.1	% DM	Milk/ton		
NDF Dig. Rate (Kd)	4.43		NFC	24.3	% DM
Non-Fibers, Structure, Utilization			Enzymatic NSC		
Digestible Dry Matter (fast)			Qualitative		
Sugar	4.4	% DM	pH	5.35	
Starch	2.4	% DM	Total VFA	4.41	% DM
--Enzyme Available			Lactic acid	3.80	% DM
--Digestibility, 2 hr			--Lactic/TVFA		
--Digestibility, 7 hr			Acetic acid	0.28	% DM
Fatty Acids, Total	1.8	% DM	Propionic acid		
Crude Fat	3.5	% DM	Butyric acid	0.36	% DM
Acid hydrolysis fat			Isobutyric acid		
CS Processing Score			1, 2 Propandiol		
Particle size > 0.75"			Titrateable Acidity (meq NaOH)		
... 0.31" - 0.75"			Mold		
... < 0.31"			Yeast		

LANCASTER DHIA
1592 OLD LINE ROAD

MANHEIM, PA. 17545

Sample : HAYLAGE
Farm Name :
Received :
Complete :
Regression :
Originator :

Kõik algab farmis



piimaproovi võtmisega

55999999

Jan 11 2013



Cow Page



Lists



Find



Input

Milking Cows

Quick View

To Calve

To Repro

To Breed

To Dry

25 - Hoof Trim

22 - DRY Close-up
Due in Next 2
Weeks

51 - BREEDING-
Heat Detect
List-40+ DIM

82 - HEIFERS-
Bred Last 60
Days

19 - B VITA
ELIGIBLE

302 - Open
Cows Pen 3

Filter

All Animals
All Groups

Lancaster DHIA kontor



Piimauuringute labor



Mida saame DHIA piimaproovist uurida?

Rasv, valk ja soomaatiliste rakkude arv
227 000 proovi kuus

Tiinus piimast
3000 proovi kuus

Paratuberkuloos
750 proovi kuus

Mastiidi DNA
500 proovi kuus

Teadusuuringud

Kaseiin

Vabad rasvhapped

Ketoos

Mikrobioloogia labor



Mida saame uurida mikrobioloogia laboris?

Sertifitseeritud tootja makse

Piima komponendid (rasv, valk, SRA, piima uurea)

Bakterid, antibiootikumijäägid

Sertifitseeritud lõpptooted

Pudelipiim, jogurt, jäätis ja juust

Bakterioloogia laboranalüüs standardbakteritele

Piima ELISA paratuberkuloosile ja tiinus piimast

Mida saame uurida patogeenide laboris?

Sertifitseeritud patogeenid
Kontroll toorpiima müügiloa jaoks

Listeria

Campylobacter

E Coli O157

Salmonella

**2014. a. maiks
sertifitseeritud
toorpiima jaoks**

**Samuti juust
jt. toidutooded**

LDHIA esimene laudas kohapeal tehtav test

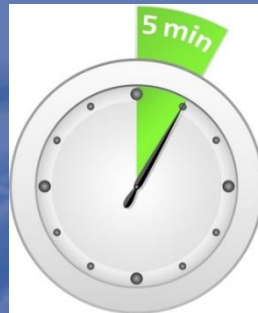


**P4 Rapid on kohapeal
tehtav piima progesterooni-
sisalduse test**

Kuidas P4Rapid toimib



Asetage
testriba
piima



Oodake 5 või
enam minutit



Üks
joon

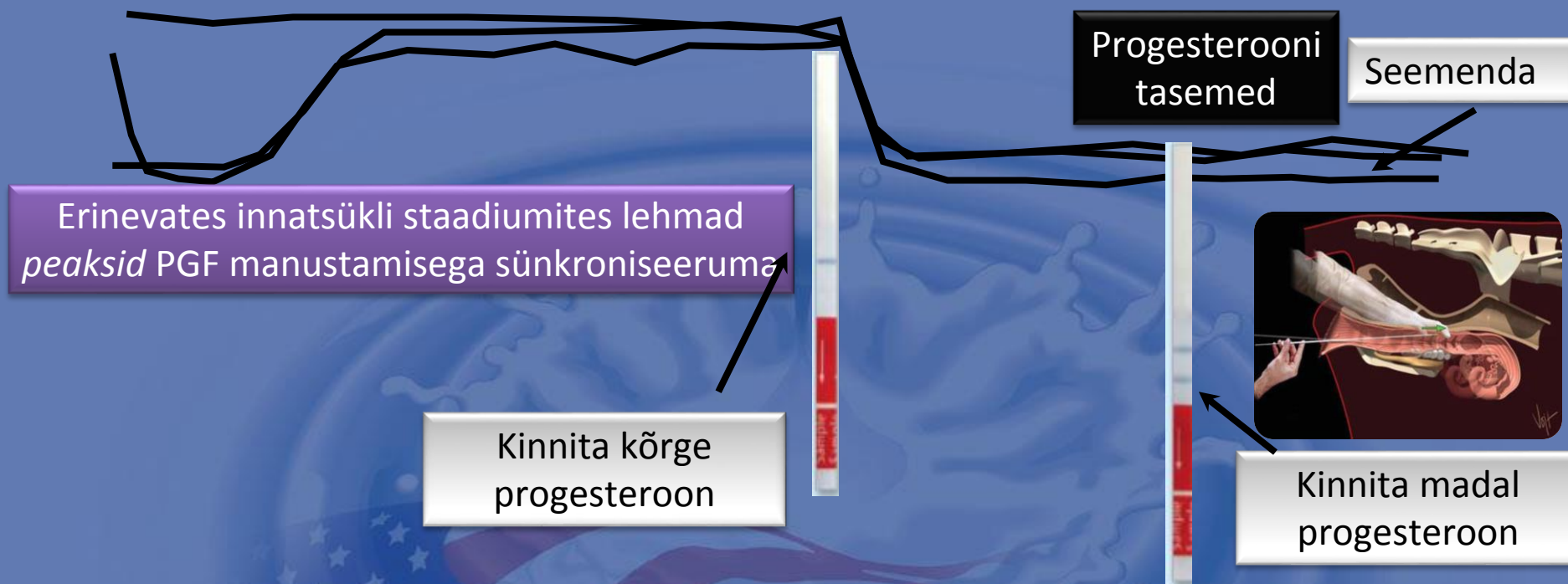
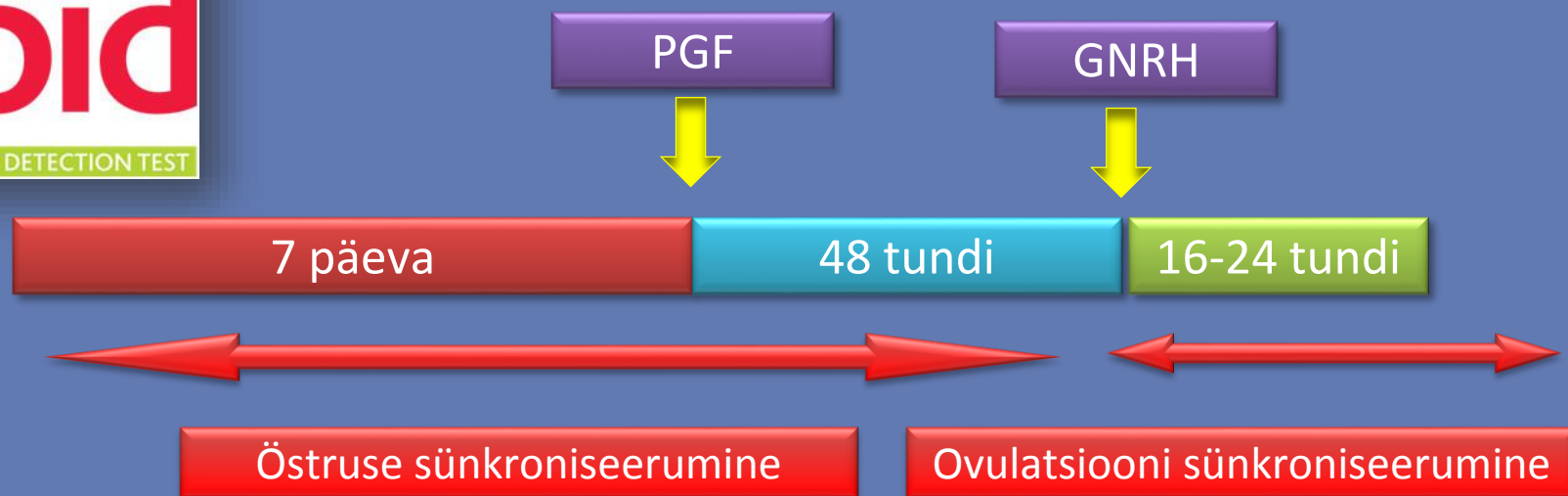
Mitteindlev
Progesterooni
tase KÕRGE



Kaks
joont

Indlev
Progesterooni
tase MADAL

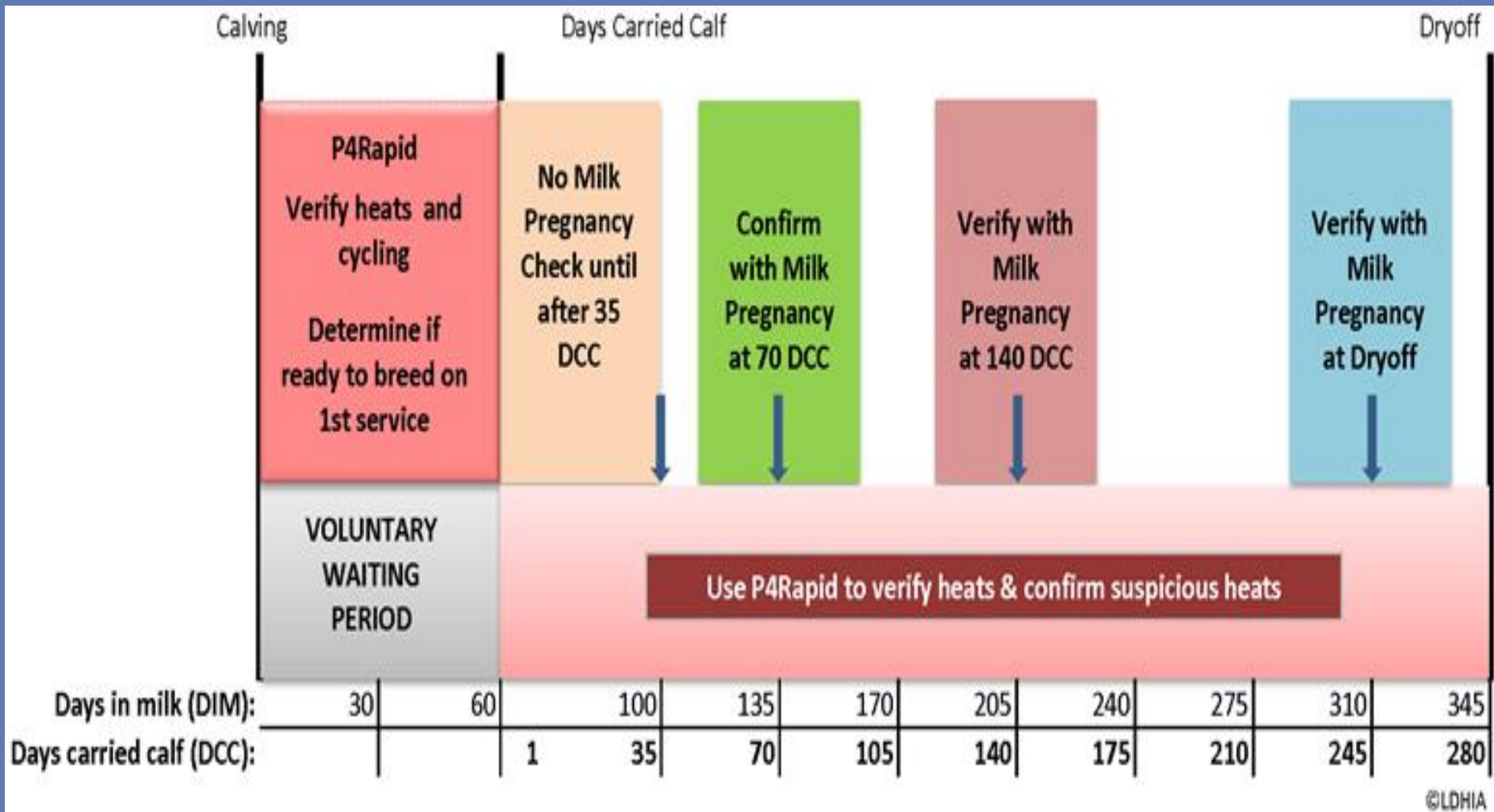




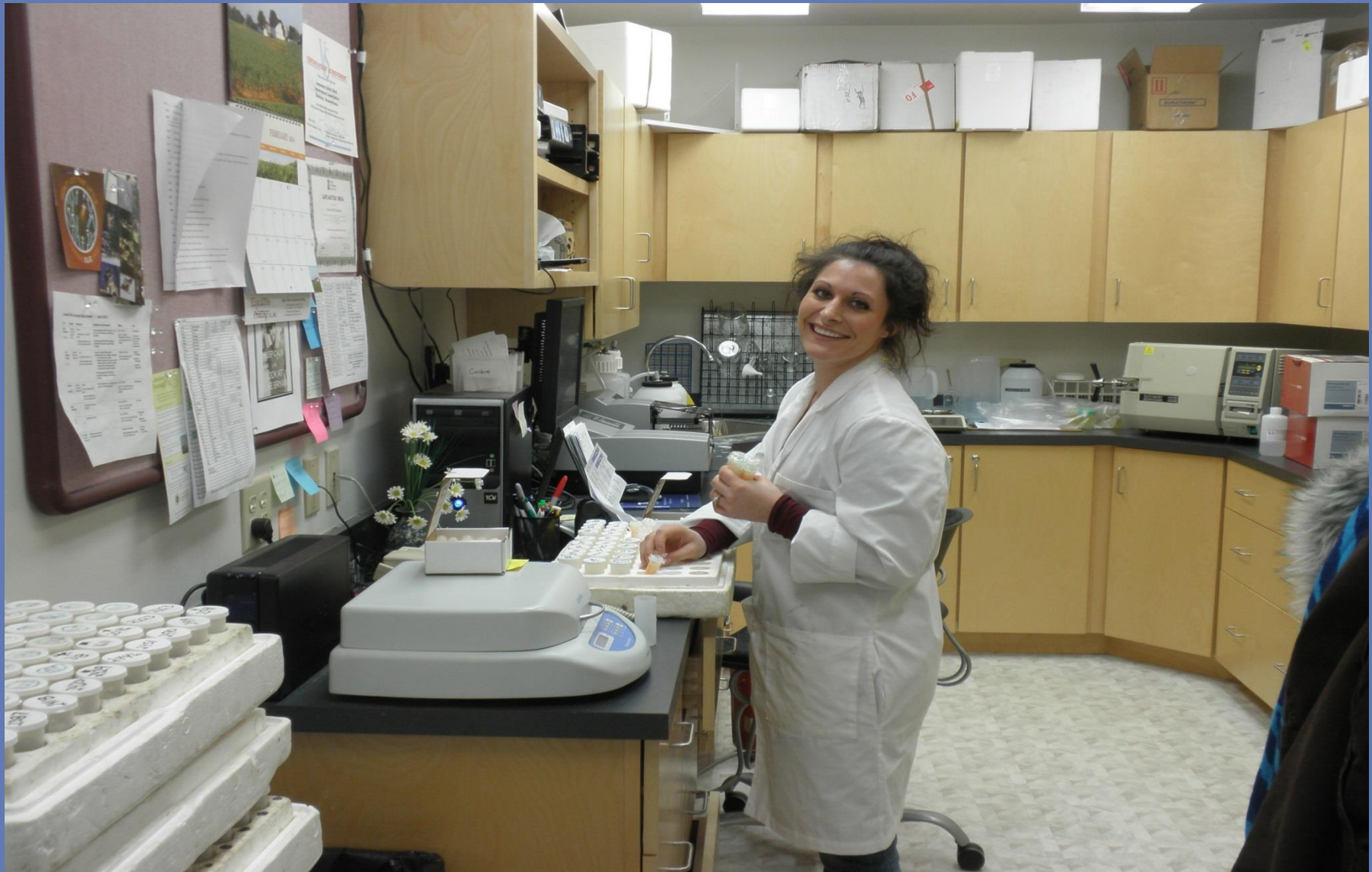
Katseuuring 25 lehma

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	100 = Low Progesterone Test line 100% as dark as control			50 = Slightly Low Progesterone Test line 50% as dark as control		Bred 21 Days							10-20 = Low Progesterone Test line is barely visible			Dark outline Indicates Breeding	
2						1/27	1/28	1/29	1/30	1/31	2/1	2/2	2/3	2/4	2/5	2/6	
3	Cow	Lact#	Service #	AgeDays	notes	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	
4	38	2	1	1340		20	20	20	10	10	10						
5	72	2	1	1212		20	10	20	10	20	20						
6	73	2	2	1211		100	80	100	20	20	20						
7	78	2	2	1205	Heat Sun 6am	10	10	10	20	50	100	Bred					
8	106	2	1	1117	Heat Wed 9pm	20	100	100	100	75	100						
9	109	1	2	1113		20	20	20	20	10	10						
10	154	1	3	878		20	10	20	20	10	20						
11	156	1	1	873		20	10	20	10	10	20						
12	163	1	1	860	Heat Thurs 5am	100	100	100	75	75	75						
13	166	1	2	843		20	10	20	20	10	20						
14	167	1	1	841		20	10	20	20	10	10						
15	175	1	1	830		20	20	20	20	75	75						
16	186	1	1	807		20	10	10	30	10	10						
17	196	1	1	773		20	10	20	10	10	10						
18	920	2	3	1675	Bled out Wed 1pm	100	100	100	100	100	100						
19	931	3	1	1639		20	20	20	10	20	10						
20																	
21																	
22						Timed AI											
23	Cow	Lact#	Service #	AgeDays		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	
24	55	2	1	1280		20	75	100	bred								
25	77	2		1205		20	100	100	bred								
26	134	1	4	941		20	20	100	bred								
27	149	1	3	884		20	20	100	bred								
28	155	1		877	Did not Breed	100	100	100					no structures				
29	838	4		1971		50	100	100	bred								
30	857	3		1911	Did not Breed	20	20	20					Folicle				
31	860	3		1882		20	20	75	bred								
32	925	3		1655		10	10	75	bred								

Millal kasutada P4 Rapid ja tiinuse määramist piimast



Tiinuse ELISAuuring piimast



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Mastiidi DNA uuringu kasutamine ja raportid

**DHIA raportid aitavad
farmeritel võidelda
kõrge SRA
probleemiga ja valida
välja lehma mastiidi
DNA PCR uuringuks**



DHIA laboriraport

01/94

RPT # 06 ** HERD: 55999967
LAB REPORT

REF DATE: 01-26-09 PAGE: 1
HERD AVG SCC= 278

COW INDEX	COW BARN NAME	CUR TD MLK	DAYS IN MILK	L A C	CUR TD% FAT	CUR TD% PRO	CUR TD% O S	PRV SCC SCR	CUR SCC SCR	CURR SCC CNT	SCC W/O COWS	PCT TNK SCC	LCT AVG SCC
267	TOOTSIE	95	113	3	3.2	2.7	5.3	7.2	7.8	2786	182	38	6.0
138	APRIL	67	73	10	2.5	2.6	4.9	6.7	7.1	1715	140	16	6.3
245	CHEWY	62	251	3	4.8	3.6	5.4	6.6	6.3	985	117	9	5.6
146	DIXIE	80	19	8	4.4	2.8	5.7		5.3	492	104	6	5.3
256	S-BERRY	39	342	3	3.7	3.2	5.6	5.0	5.8	696	94	4	2.6
250	TRUTH	73	377	3	3.6	3.4	5.8	3.7	4.8	348	85	4	4.5
283	JANICE	90	119	2	3.9	3.0	5.9	2.7	4.2	230	79	3	3.6
221	ISABEL	61	395	5	3.6	3.4	5.3	5.5	4.7	325	72	3	4.0
297	DAHLIA	52	134	1	4.7	3.1	5.6	8.8	4.6	303	66	2	3.1
229	BUDDY	69	275	4	3.2	3.0	5.7	4.1	3.7	162	62	2	4.8
194	ANGEL	101	93	5	3.4	2.6	6.1	3.7	3.6	152	57	2	3.7
301	LOYAL	54	44	1	4.1	2.9	6.0	1.1	3.0	100	56	1	2.1
299	DEE	68	189	1	3.6	2.8	5.9	2.8	2.2	57	56	1	1.8
286	TERRI	40	10	2	4.6	4.0	5.3		4.0	200	52	1	4.0
271	INGER	42	369	2	3.6	3.5	5.4	3.0	3.5	141	50	1	1.9
266	DANISH	92	14	3	4.0	3.3	5.7		3.1	107	46	1	3.1
260	SHEILA	86	143	3	3.3	2.9	6.0	1.2	2.4	66	45	1	2.0
255	RACHELE	71	239	3	3.9	3.1	5.5	1.2	2.5	71	44	1	1.5
251	ANNA	62	223	3	3.9	2.9	5.3	2.8	3.2	115	40	1	2.2
207	HELENA	60	287	4	3.2	2.8	5.3	2.5	3.1	107	37	1	2.2

Karja progressiraport

HERD PROGRESS

DHI-217



Test Date: 01-20-2014

Processed: 01-21-2014

23-36-0268

STEVE AND BRENDA HERSHEY

Page 1 of 1

Test Date	# Cows	% In Milk	Milking Cow Average						1-40 Day Milk	Fresh Cows	% Brd at 100d	% Succ	% Preg	Proj Min Calv Int	Preg Rate	Serv Sire \$	Days Dry	Turn-over Rate	Death Rate	Prod Index			Rolling Herd Avg			
			DIM	Milk	% Fat	% Pro	ECM	SCC												1st	2nd	3+	Milk	Fat	Pro	ECM
01-20-14	267	94	199	67	3.9	3.3	73	652	72	24	98		42	14.5		565	52	3.3	0.7	109	103	87	24687	909	762	25673
12-14-13	268	93	194	74	3.8	3.3	80	441	77	28	99		38	14.7		557	52	2.9	0.7	108	102	88	24878	917	765	25863
11-18-13	264	90	202	74	4.0	3.3	81	272	85	18	99	33	39	14.5	25	551	53	3.7	1.1	107	102	89	24927	919	764	25897
10-21-13	267	90	201	76	3.3	3.1	75	337	83	17	99	26	36	14.4	15	535	53	2.9	0.7	106	104	90	24894	920	762	25884
09-16-13	270	93	194	72	3.5	3.0	73	447	75	29	99	16	36	14.6	11	475	53	2.2	0.4	105	103	90	24670	918	757	25746
08-19-13	273	88	202	76	3.9	3.0	81	519	72	27	99	14	42	14.4	10	440	52	2.5	0.4	103	104	91	24452	909	750	25505
07-21-13	276	83	210	69	3.3	2.9	67	360	79	21	99	9	49	14.2	5	447	52	3.6	0.4	102	104	93	24356	903	748	25380
06-17-13	280	90	217	82	3.7	3.0	85	356	89	8	99	15	50	14.0	8	545	51	1.8	0.0	103	103	92	24193	895	744	25193
05-16-13	283	95	209	81	3.6	3.0	83	307	84	16	99	21	46	14.0	16	545	51	3.2	0.7	103	102	93	23778	878	732	24745
04-18-13	284	94	198	73	3.6	3.1	76	452	69	18	99	27	44	14.2	21	530	51	3.9	1.4	103	104	92	23441	867	724	24431
03-19-13	284	94	193	71	3.8	3.1	75	353	68	55	99	31	40	14.2	24	523	51	3.9	2.2	109	102	89	23295	862	721	24296
02-13-13	263	89	210	76	3.8	3.1	80	352	79	15	99	28	49	14.2	17	563	53	2.9	0.4	109	99	90	23198	853	717	24117
01-16-13	267	91	204	80	4.0	3.1	86	319	81	29	99	23	49	14.1	13	547	53	2.5	1.1	108	100	90	22980	841	710	23837
12-11-12	266	89	202	77	3.8	3.2	82	378	84	15	99	35	42	13.9	22	540	53	2.8	0.0	109	98	90	22707	827	702	23505
11-15-12	274	87	194	77	3.9	3.1	82	378	87	18	99	34	39	14.0	22	554	53	1.8	0.0	110	98	87	22603	822	700	23391
10-16-12	277	91	201	71	3.7	3.2	74	409	76	32	99	24	41	14.1	17	565	53	3.2	0.4	110	98	88	22540	821	699	23350
09-12-12	281	86	205	69	3.6	3.1	71	383	78	28	99	10	48	14.1	6	578	53	2.5	0.7	108	97	88	22553	823	700	23388
08-13-12	284	85	216	69	3.5	3.0	69	488	78	19	98	19	53	14.0	12	569	53	3.2	0.7	108	95	88	22604	824	701	23425
07-10-12	290	87	216	67	3.4	3.0	66	369	77	13	98	18	54	14.2	9	577	53	0.7	0.7	107	97	87	22745	830	704	23572
06-13-12	290	92	217	73	3.6	3.0	74	313	75	24	98	39	54	14.3	24	592	52	1.4	0.7	108	97	86	22685	829	701	23516
05-15-12	288	89	214	66	3.6	3.1	68	324	70	16	98	32	54	14.3	22	583	52	2.2	1.1	108	96	87	22668	826	700	23464
04-10-12	284	95	209	68	3.8	3.2	72	318	65	22	98	23	51	14.4	21	570	52	3.3	1.1	108	97	88	22842	829	703	23583
03-13-12	279	95	204	68	3.5	3.0	69	423	76	19	98	29	49	14.6	22	566	53	4.0	0.7	108	96	89	22897	831	703	23627
02-14-12	280	94	199	67	3.7	3.1	70	293	69	35	98	31	47	14.8	22	551	53	7.0	1.1	108	97	88	22956	834	704	23693

SRA

ajas

◆	SOMATIC CELL COUNT SUMMARY DHI-521	23-36-0268 STEVE AND BRENDA HERSHEY	Test Date: 01-20-2014	
			Processed: 01-21-2014	
			Page 1 of 1	

	Herd Average SCC By Test Day									
	5-16	6-17	7-21	8-19	9-16	10-21	11-18	12-14	1-20	Top 25%
SCC Actual	307	356	360	519	447	337	272	441	652	86
SCC Linear Score	2.3	2.9	2.6	3.5	3.3	2.8	2.7	2.9	4.0	1.7

SCC Summary				
SCC		Animals	Herd %	Top 25%
Actual	Score			
< 100	< 3.1	101	42	80
100 - 200	3.1 - 4.0	30	13	11
201 - 400	4.1 - 5.0	29	12	6
401 - 800	5.1 - 6.0	17	7	3
> 800	> 6.0	62	26	1

Milk Loss Per Day			
Per Milking Cow		Per Herd	
Lbs	Dollars	Lbs	Dollars
3.2	0.64	756.0	153.24

	Lact #	Days In Milk This Test Day					Total	Top 25%
		1 - 40	41 - 100	101 - 199	200 - 305	> 305		
Number Cows	1	6	18	11	24	30	89	~~~~~
	2	3	9	27	14	21	74	~~~~~
	3+	10	23	27	9	15	84	~~~~~
	All	19	50	65	47	66	252	~~~~~
Average Milk	1	61	81	72	64	56	66	67
	2	83	93	70	70	50	68	79
	3+	75	81	73	50	49	69	85
	All	72	83	72	63	53	67	77
Average SCC (Actual)	1	78	261	770	679	714	559	73
	2	173	460	553	243	547	457	80
	3+	698	689	901	1450	1479	923	110
	All	448	481	734	652	819	652	86
% SCC >= 200 (Actual)	1	26	27	33	33	37	33	6
	2	33	22	44	43	50	42	9
	3+	30	70	46	56	79	57	14
	All	22	45	42	43	59	46	10
Number New Infections	1		2	2	7	13	24	~~~~~
	2		2	9	5	4	20	~~~~~
	3+		4	7	1	7	19	~~~~~
	All		8	18	13	24	63	~~~~~
Number Chronic Infections	1		3	1	2	4	10	~~~~~
	2			3	1	6	10	~~~~~
	3+		9	5	4	4	22	~~~~~
	All		12	9	7	14	42	~~~~~

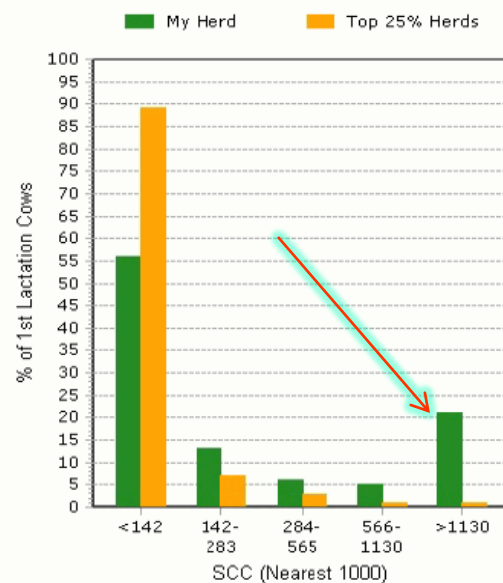
SRA graafik

SCC GRAPHS
DHI-522

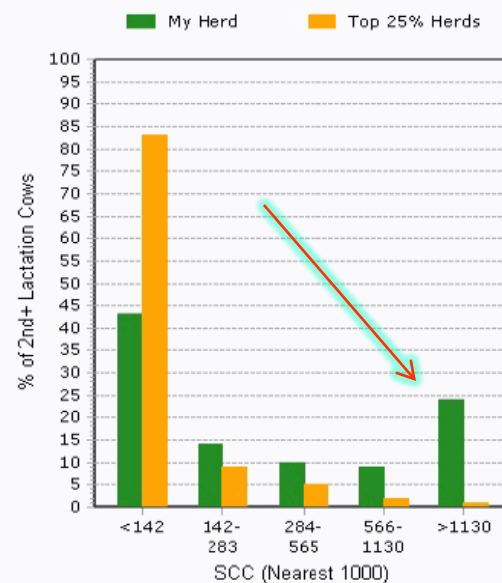
23-36-0268
STEVE AND BRENDA HERSHEY

Test Date: 01-20-2014
Processed: 01-21-2014

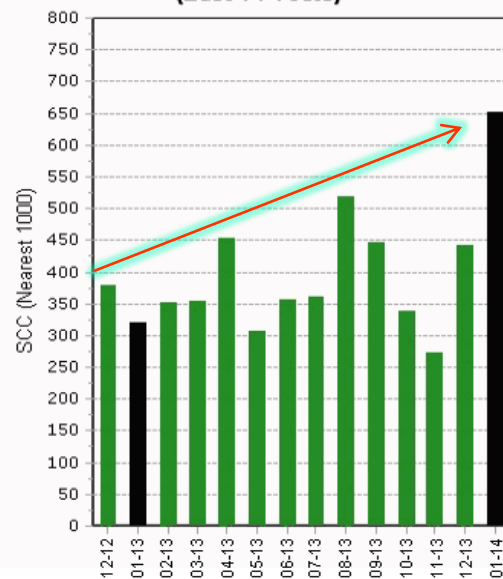
1st Lactation Cows



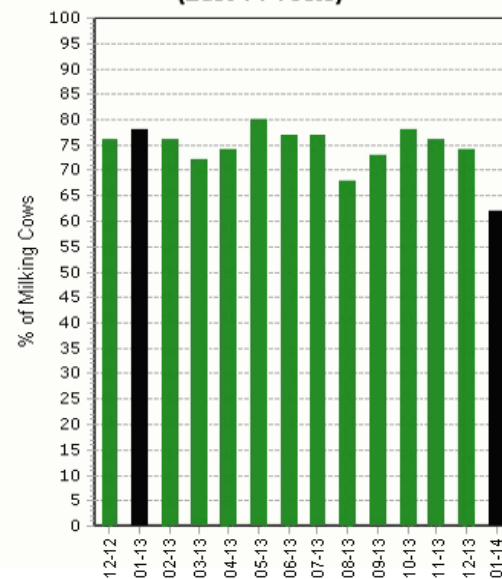
2nd+ Lactation Cows



Herd Average SCC Count (Last 14 Tests)



Percent SCC Count < 284,000 (Last 14 Tests)



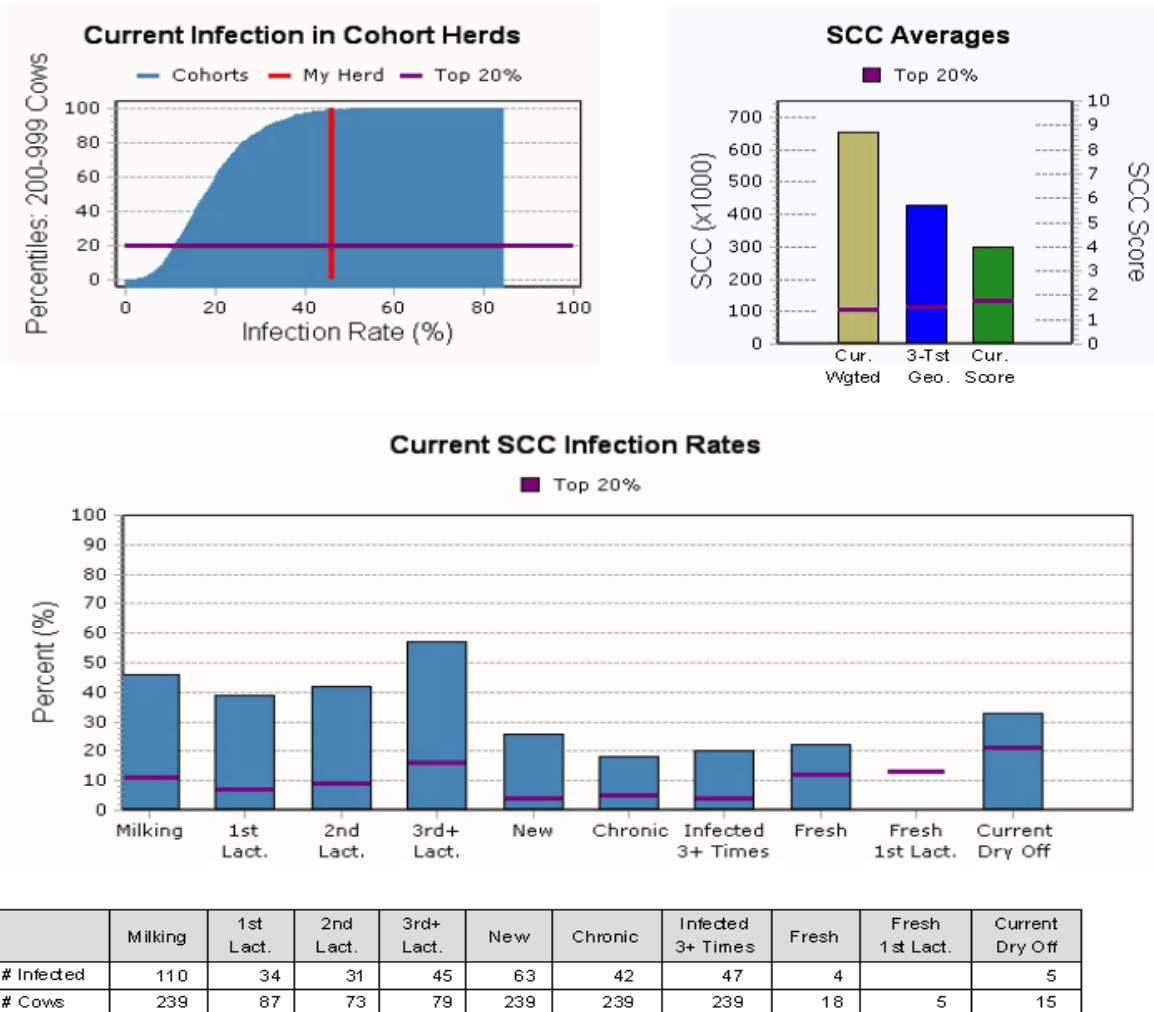
Udara- tervise jälgimine

Mastitis can be caused by many factors typically related to environmental or contagious bacteria that are introduced by less than optimal milking procedures or hygiene of facilities or cattle. Mastitis can cause large economic losses from reduced milk production, discarded milk, lowered reproductive performance and excessive herd turnover.

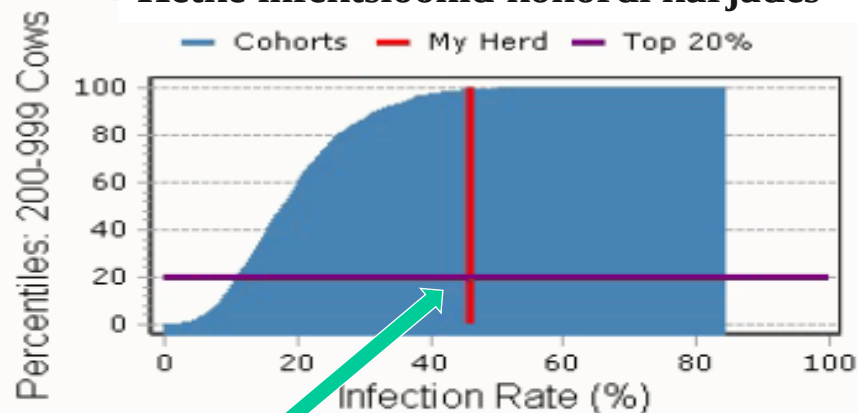
Somatic Cell Count (SCC) from a day's milk is a standard indicator of the impact of udder infection. Cows with levels less than 100,000/ml are considered healthy - and levels of 200,000+/ml typically indicate an udder infection. [This Monitor labels SCCs between 100,000 and 199,999 as SUSPECT](#) and reveals cows that are not optimally healthy.

Since 2010, some processors have reported 3-month rolling geometric SCC averages to herds because of international pressure for on-farm milk to be less than the E.U.'s legal limit of 400,000/ml. A 3-test day geometric average = cube root of (current test day SCC average X prior test day SCC average X 2nd prior test day SCC average). This method reduces the impact of any single SCC on the average for the 3-month period.

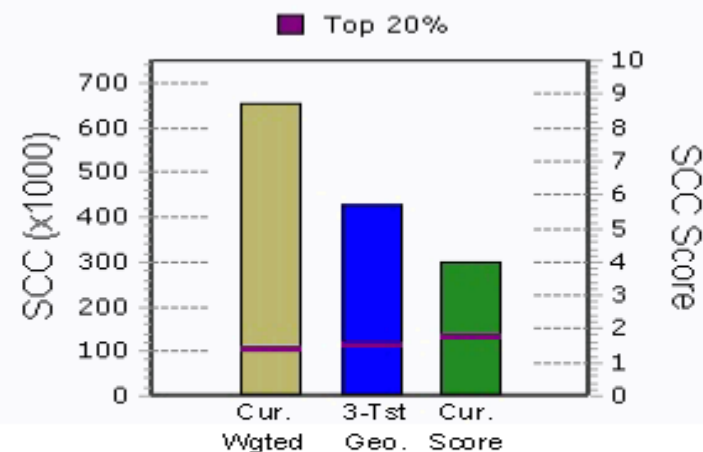
How well are top herds doing? Usually herd managers should set their own goals - but 'performance of top herds' can illustrate what can practically be achieved. [This Monitor defines 'Top 20%' herds using each herd's weighted average SCC](#). Although average performance is similar across all herd sizes, more small herds have high infection rates than larger herds. The herd size categories for the 'Top 20%' are 1 to 199 cows; 200 to 999 cows, and; 1000+ cows.



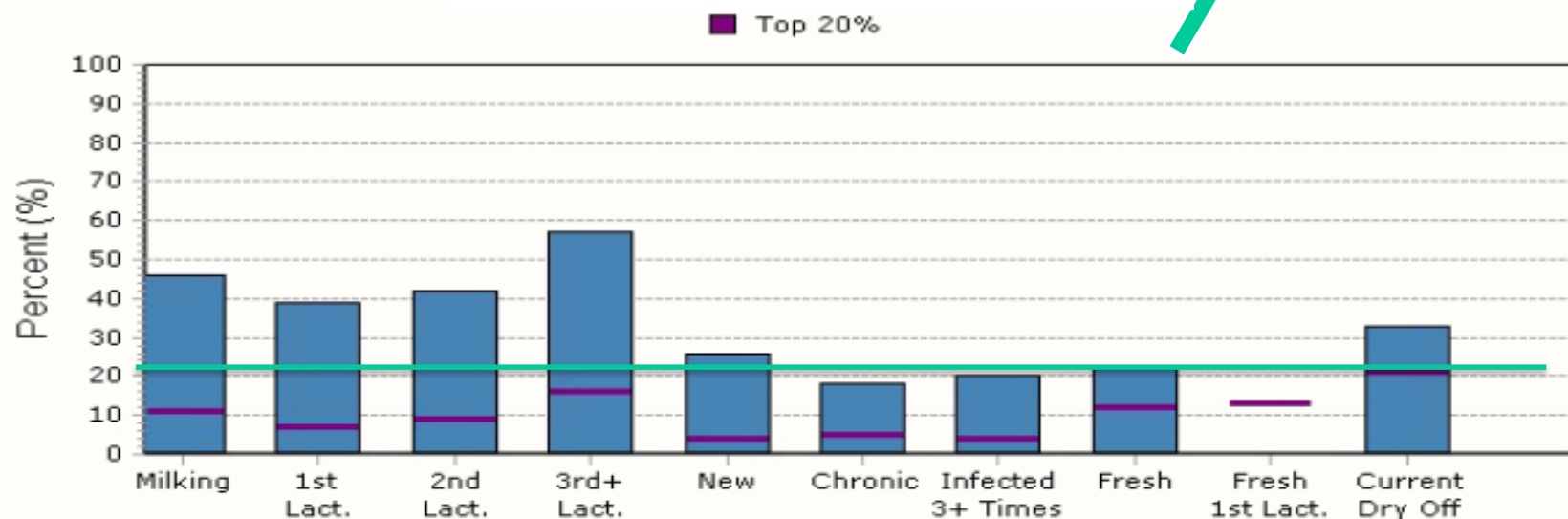
C Hetke infektsioonid kohordi karjades



Keskised SRAd



Hetke SRA haigestumus



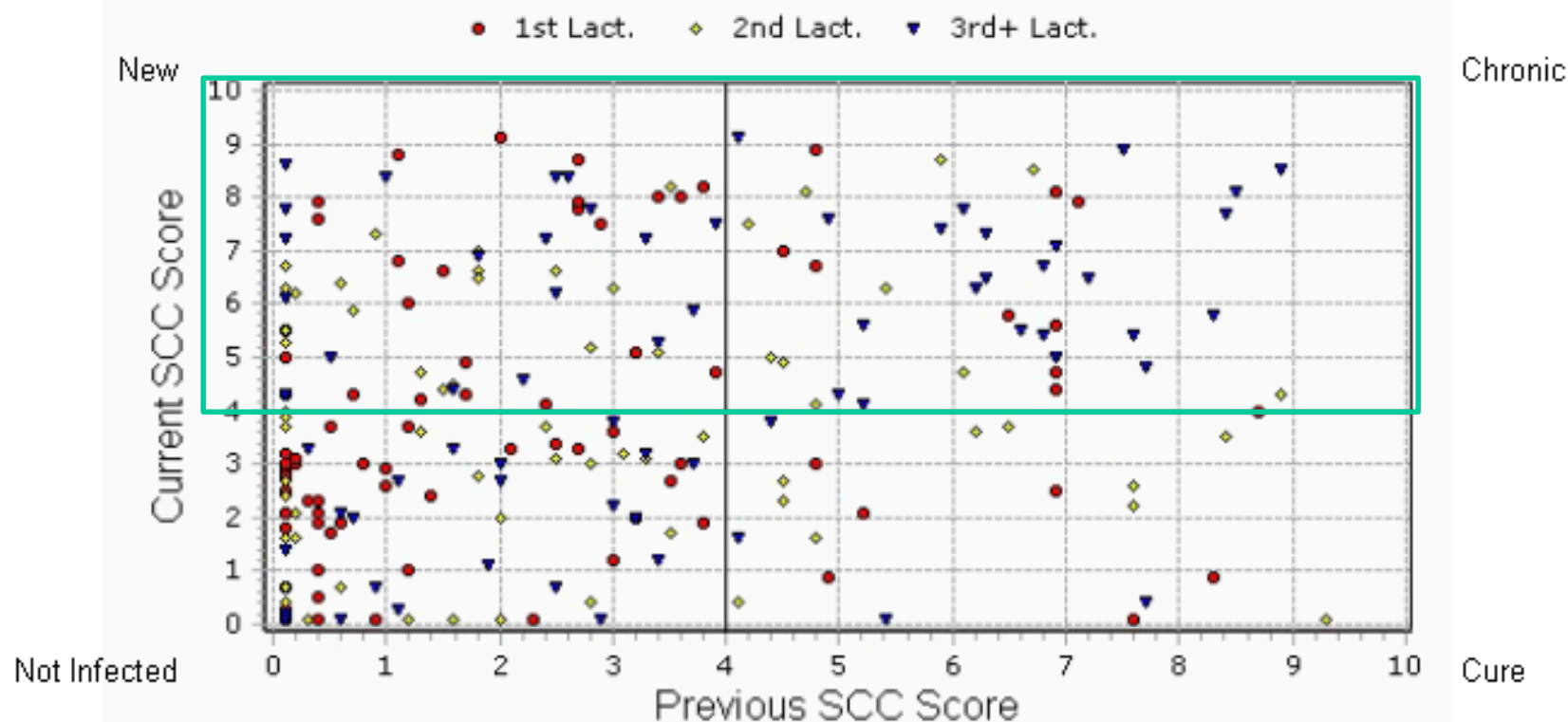
	Milking	1st Lact.	2nd Lact.	3rd+ Lact.	New	Chronic	Infected 3+ Times	Fresh	Fresh 1st Lact.	Current Dry Off
# Infected	110	34	31	45	63	42	47	4		5
# Cows	239	87	73	79	239	239	239	18	5	15

Not Infected SCC = 0-199K (0-3.9 SCs)

Infected SCC = 200K+ (4.0-9.9 SCs)

Both 'Normal' and 'Suspect' are considered Not Infected and are sometimes called 'Negative'

SRA staatus muutused – eelmisest praeguse uuringuni laktatsiooni kaupa



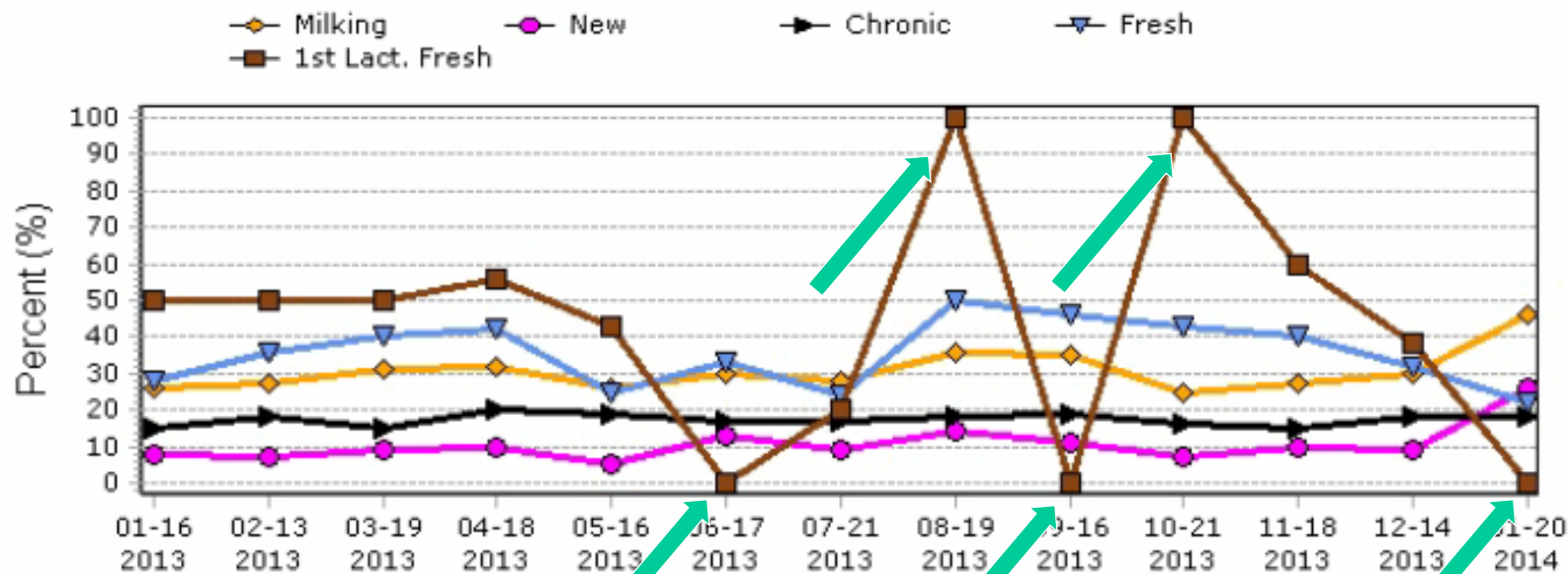
	Previous to Current Test			Last Dry Off to Fresh		
	My Herd		Top 20%	My Herd		Top 20%
	#	%	%	#	%	%
Not Infected	114	52	89	113	72	87
New Infections	63	29	5	22	14	9
Cures	20	32	47	32	58	79
Chronics	42	19	6	23	15	4
Net Trans. Rate	~~~~	315	88	~~~~	69	70

Net Transmission Rate
New Inf. / Cures * 100

Infected this test or last test (SCC >= 200K (SCS >= 4.0) and DIM >= 5

Index	Grp	Lact. #	DIM	Milk	SCC	Prev. SCC	Inf. Level	Lact. Avg. SCC	Prev. Lact. Avg. SCC	Tests Infected		Date 1st Infected	DIM 1st Inf.	30 Day Milk Loss	305 Act. Milk	Prv. Lact. 305 Act. Milk	Days Since Bred	COW
										#	%							
1949		1	331	24.0	6860	50	NEW	66	NA	2	18	9-16-13	205	160	20,783	NA	185	P
1987		1	218	58.0	5972	348	CHR	100	NA	2	29	12-14-13	181	155	23,725	NA	31	
1975		1	354	15.0	5572	27	NEW	62	NA	2	17	2-13-13	13	153	21,293	NA	157	P
1917		1	340	18.0	5199	81	NEW	606	NA	8	73	3-19-13	33	151	16,029	NA	234	P
2009		1	155	53.0	3676	174	NEW	230	NA	1	20	1-20-14	155	140	20,117	NA	3	
1985		1	178	63.0	3430	1493	CHR	2111	NA	6	100	8-19-13	24	137	21,390	NA	31	
1929		1	335	54.0	3200	152	NEW	66	NA	2	18	8-19-13	181	135	26,867	NA	121	P
1993		1	282	15.0	3200	132	NEW	174	NA	3	30	4-18-13	5	135	17,607	NA	129	P
1907		1	267	72.0	2986	1715	CHR	1493	NA	9	100	5-16-13	18	133	23,504	NA	17	
1991		1	199	56.0	2986	81	NEW	141	NA	1	14	1-20-14	199	133	19,893	NA	69	P
1989		1	257	52.0	2986	17	NEW	66	NA	2	22	5-16-13	8	133	22,894	NA	59	P
1956		1	329	71.0	2786	81	NEW	76	NA	2	18	3-19-13	22	131	23,305	NA	87	P
2020		1	77	69.0	2425	17	NEW	200	NA	2	67	11-18-13	14	126	19,962	NA	10	
1953		1	332	35.0	2263	93	NEW	76	NA	3	27	6-17-13	115	124	22,757	NA	164	P
1967		1	326	67.0	1600	283	CHR	650	NA	9	82	3-19-13	19	113	24,346	NA	129	P
1988		1	279	42.0	1393	27	NEW	71	NA	1	11	1-20-14	279	108	21,927	NA		
2037		1	48	75.0	1300	348	CHR	696	NA	2	100	12-14-13	11	106	18,764	NA		
2006		1	206	49.0	1213	35	NEW	47	NA	1	14	1-20-14	206	104	18,409	NA	37	
1912		1	339	21.0	800	29	NEW	29	NA	1	9	1-20-14	339	90	27,635	NA	227	P
1903		1	317	72.0	696	1131	CHR	800	NA	10	91	3-19-13	10	86	24,562	NA	3	
1938		1	433	44.0	606	1493	CHR	528	NA	12	86	12-11-12	28	81	20,698	NA	115	P
1939		1	320	85.0	566	13	NEW	132	NA	4	36	3-19-13	13	79	23,803	NA	3	
2002		1	214	69.0	429	115	NEW	57	NA	1	14	1-20-14	214	70	21,898	NA	101	P
1969		1	306	68.0	400	13	NEW	27	NA	1	10	1-20-14	306	68	23,343	NA	31	
1983		1	277	62.0	373	41	NEW	71	NA	3	33	6-17-13	60	65	21,914	NA	87	P
2023		1	91	75.0	325	1493	CHR	1393	NA	3	100	11-18-13	28	61	18,698	NA	24	
2003		1	212	71.0	325	187	NEW	348	NA	5	71	7-21-13	29	61	21,582	NA	80	P
2031		1	58	98.0	264	1493	CHR	650	NA	2	100	12-14-13	21	54	23,932	NA		
1919		1	337	47.0	246	41	NEW	29	NA	1	9	1-20-14	337	52	21,642	NA	227	P
1933		1	329	82.0	246	20	NEW	50	NA	2	18	11-18-13	266	52	26,630	NA	45	P
1977		1	311	79.0	246	13	NEW	47	NA	2	20	8-19-13	157	52	23,758	NA	115	P
1976		1	324	65.0	230	31	NEW	35	NA	1	9	1-20-14	324	50	20,765	NA	115	P
2036		1	52	84.0	214	66	NEW	123	NA	1	50	1-20-14	52	47	20,817	NA		
1914		1	330	46.0	200	5199	CHR	132	NA	6	55	3-19-13	23	45	20,858	NA	87	P
2042		1	67	89.0	100	348	PRV	187	NA	1	50	12-14-13	30	23	22,600	NA		
2015		1	104	53.0	71	1493	PRV	348	NA	3	75	10-21-13	13	11	16,048	NA	37	
1979		1	270	65.0	54	460	PRV	62	NA	1	11	12-14-13	233	2	22,893	NA	115	P
2018		1	99	82.0	23	3940	PRV	528	NA	3	75	10-21-13	8		20,737	NA	37	
2033		1	51	54.0	23	373	PRV	93	NA	1	50	12-14-13	14		14,952	NA		
1964		1	303	60.0	13	2425	PRV	35	NA	1	10	12-14-13	266		20,727	NA	37	

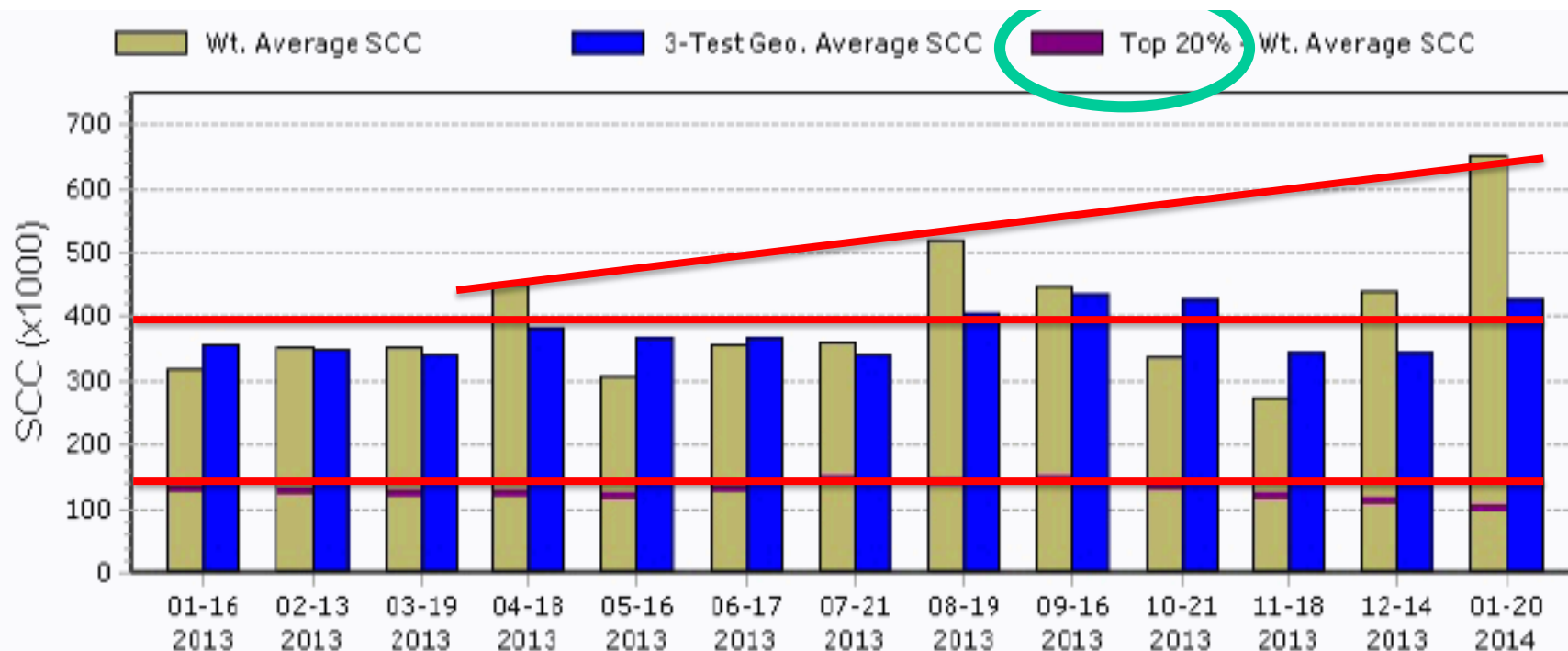
Haigestumuse muutused lüpsil, uuslüpsil, krooniliste, uute juhtude ja 1. laktatsiooni lüpsmatulnud lehmade puhul



Lehmade ja infektsioonide arv

	Date of Test													Avg.
	01-16 2013	02-13 2013	03-19 2013	04-18 2013	05-16 2013	06-17 2013	07-21 2013	08-19 2013	09-16 2013	10-21 2013	11-18 2013	12-14 2013	01-20 2014	
Infected Cows	63	64	82	84	67	75	62	84	85	60	64	75	110	75
New Infections	19	17	24	25	13	32	20	32	26	17	23	22	63	26
Chronic Infections	37	41	39	53	50	41	38	41	47	37	34	44	42	42
Milking Cows	241	234	261	263	262	247	221	234	246	237	233	246	239	243
Fresh Infections	7	5	19	5	3	2	4	11	12	6	6	8	4	7
Fresh Cows	25	14	48	12	12	6	17	22	26	14	15	25	18	20
1st Lact Fresh Inf.	2	2	14	5	3		1	2		5	3	3		3
1st Lact Fresh	4	4	28	9	7	1	5	2	3	5	5	8	5	7

SRA kaalutud keskmise ja 3 testi ajas muutuva geomeetrilise keskmise muutused

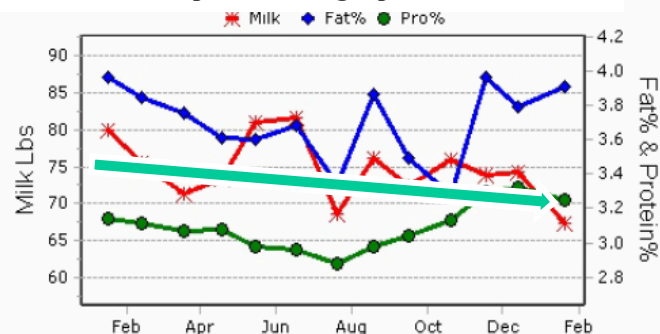


Keskmine SRA skoor

	Date of Test													Avg.
	01-16 2013	02-13 2013	03-19 2013	04-18 2013	05-16 2013	06-17 2013	07-21 2013	08-19 2013	09-16 2013	10-21 2013	11-18 2013	12-14 2013	01-20 2014	
Avg. SCC Score	2.6	2.7	2.9	2.9	2.3	2.9	2.6	3.5	3.3	2.8	2.7	2.9	4.0	2.9



Päeva keskmine piimatoodang lüpsil lehma kohta

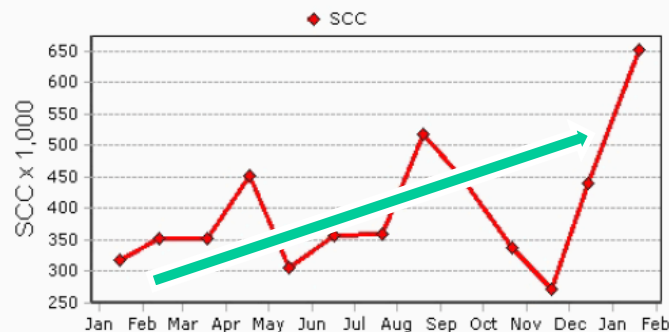


Milk Yield

	Current	Prev. Test	01-16-13	Top 25%	Affiliate Average
Daily Milk	67	74	80	84	74
150 Day Milk	74	81	85	87	78
Days in Milk (DIM)	199	194	204	143	171
Test Day Fat %	3.9	3.8	4.0	4.3	3.8
Test Day Protein %	3.3	3.3	3.1	3.2	3.1
Rolling Herd Average Milk	24,687	24,878	22,980	25,819	23,055
Peak Milk 1st Lactation	91	91	91	85	75
Peak Milk 2nd Lactation	99	100	98	107	95
Peak Milk 3+ Lactation	99	99	100	114	101
Test Day Fat Corrected Milk	72	78	86	87	77
305 Day ME Milk 1st Lact	25,344	25,936	25,923	28,498	25,218
305 Day ME Milk 2nd Lact	23,237	23,929	23,349	29,179	25,748
305 Day ME Milk 3+ Lact	20,061	21,238	21,296	27,588	24,293

Peaks are for cows that calved 100-280 days before test date.

Karja somaatiliste rakkude arv

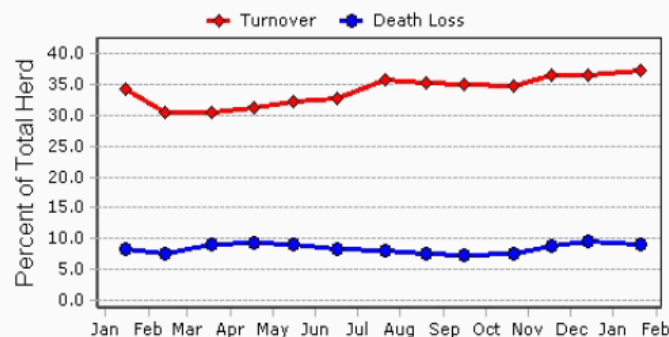


Milk Quality

	Current	Prev. Test	01-16-13	Top 25%	Affiliate Average
Somatic Cell Count (X 1000)	652	441	319	84	194

		Current	Prev. Test	01-16-13
New Infections	#	63	22	19
	%	26	9	8
Chronic Infections	#	42	44	37
	%	18	18	15
Cured Infections	#	20	13	22
	%	8	5	9
Fresh Cow Infections	#	4	8	7
	%	2	3	3
Clean Cows	#	94	141	136
	%	39	57	56

Loomade käive ja surmade määr



Turnover / Death Loss

	12 Mo. Rate	Prior Year	Top 25%	Affiliate Average
Left All Reasons - Turnover (%)	37	34	24	38
Left Non-Dairy (%)	37	34	22	35
Death Loss (%)	9	8	< 1	5

	12 Mo. Rate	Top 25%	Affiliate Average
Left Non-Dairy 1st Lact (%)	26	6	20
Left Non-Dairy 2+ Lact (%)	44	26	45
Left Non-Dairy ≤ 60 DIM 1st Lact (%)	9	< 1	4
Left Non-Dairy ≤ 60 DIM 2+ Lact (%)	9	1	9

Piimatoodang	Praegune	Eelm. test	01-16-13	Top 25%	Liikmete keskmine
Daily Milk	67	74	80	84	74
150 Day Milk	74	81	85	87	78
Days in Milk (DIM)	199	194	204	143	171
Test Day Fat %	3.9	3.8	4.0	4.3	3.8
Test Day Protein %	3.3	3.3	3.1	3.2	3.1
Rolling Herd Average Milk	24,687	24,878	22,980	25,819	23,055
Peak Milk 1st Lactation	91	91	91	85	75
Peak Milk 2nd Lactation	99	100	98	107	95
Peak Milk 3+ Lactation	99	99	100	114	101
Test Day Fat Corrected Milk	72	78	86	87	77
305 Day ME Milk 1st Lact	25,344	25,936	25,923	28,498	25,218
305 Day ME Milk 2nd Lact	23,237	23,929	23,349	29,179	25,748
305 Day ME Milk 3+ Lact	20,061	21,238	21,296	27,588	24,293

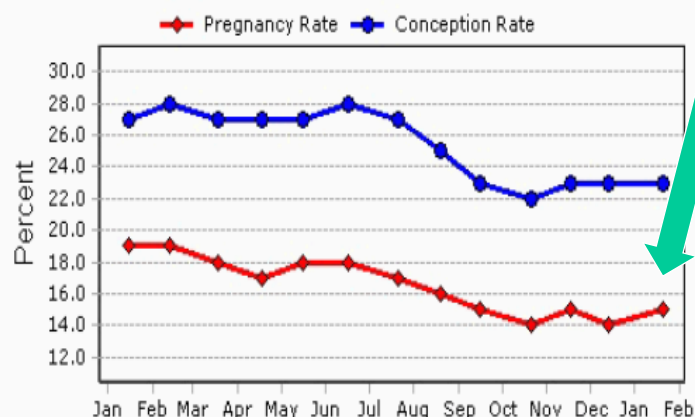
Peaks are for cows that calved 100-280 days before test date.

Piima kvaliteet	Praegune	Eelm. test	01-16-13	Top 25%	Liikmete keskmine
Somatic Cell Count (X 1000)	652	441	319	84	194

		Current	Prev. Test	01-16-13
New Infections	#	63	22	19
	%	26	9	8
Chronic Infections	#	42	44	37
	%	18	18	15
Cured Infections	#	20	13	22
	%	8	5	9
Fresh Cow Infections	#	4	8	7
	%	2	3	3
Clean Cows	#	94	141	136
	%	39	57	56

Kõrge SRA võib viia reproduktsiooniprobleemideni

Pregnancy & Conception Rates



Pregnancy and Conception Rate graph values are Year Averages.

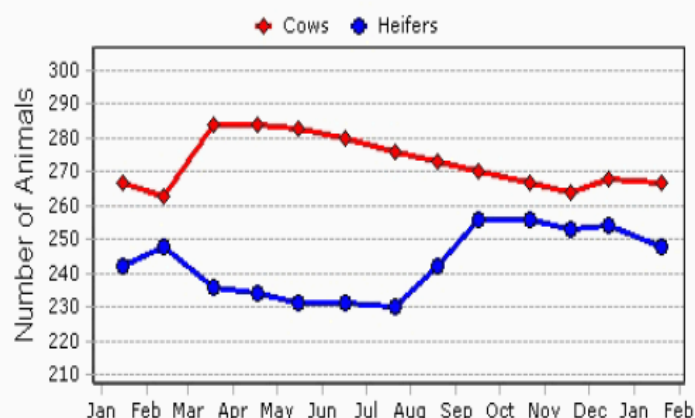
Reproduction

	Current	Prev. Test	01-16-13	Top 25%	Affiliate Average
Heat Detection Rate	59	53	54	73	51
Days to 1st Service	64	64	65	71	86
Calving Interval	14.4	14.1	14.5	12.8	13.6
Pregnant Cows (%)	42	38	49	57	43
Pregnant Heifers (%)	23	16	23	34	15
Do Not Breed (%)	7	~~~~~	~~~~~	~~~~~	2
Projected Age 1st Calving (Mos.)	25.9	~~~~~	~~~~~	22.8	24.4
Age at 1st Breeding (Mos.)	15.8	15.8	~~~~~	13.1	14.7
VWP	60	60	60	~~~~~	~~~~~

	Current 4 Cycles	Year Avg.	Top 25%	Affiliate Average
Pregnancy Rate	~~~~~	15	~~~~~	~~~~~
Conception Rate	31	23	65	39
Heifer Conception Rate	62	63	90	29

Pregnancy and Conception Rate Top 25% and Affiliate Averages are based on the Current 4 Cycles values.

Herd Inventory



Herd Inventory

	Current	Prev. Test	01-16-13	Top 25%	Affiliate Average
Total Cows	267	268	267	~~~~~	85
Total Heifers	248	254	242	~~~~~	83
Heifers as % of Total Cows	93	95	91	119	93
Calves Born Dead (%)	4	11	7	< 1	7
Total Calvings	24	28	29	~~~~~	~~~~~
Total Pregnant Cows	112	102	130	~~~~~	~~~~~
Total Pregnant Heifers	58	41	56	~~~~~	~~~~~

Projections - Six Months

	Feb	Mar	Apr	May	Jun	Jul
Milking Cows (#) *	262	262	267	257	236	230
Dry Cows (#)	10	11	14	27	43	46
Cows to Calve (#)	9	8	6	9	13	17
Heifers to Calve (#) **	5	8	16	11	3	5

* Assumes your current cull rate or 2.5% per month.

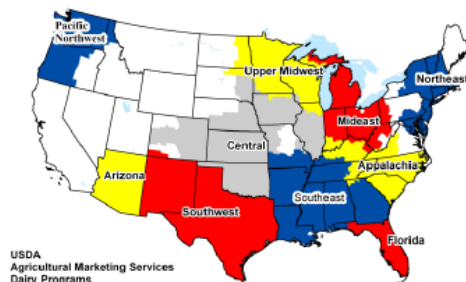
** Heifers to calve only appears if you give DHIA breeding dates.

Determining U.S. Milk Quality Using Bulk-tank Somatic Cell Counts, 2012

The USDA's Animal and Plant Health Inspection Service's Centers for Epidemiology and Animal Health, in conjunction with USDA's Agricultural Marketing Service (AMS) and the National Mastitis Council's Milk Quality Monitoring Committee, monitor U.S. milk quality using bulk-tank somatic cell count (BTSCC) data provided by 4 of the Nation's 10 Federal Milk Marketing Orders (FMOs*) [fig. 1]. The remaining six FMOs do not collect BTSCC information.

Figure 1.

Federal Milk Marketing Order Areas



BTSCC refers to the number of white blood cells (primarily macrophages and leukocytes), secretory cells, and squamous cells per milliliter of raw milk.¹ BTSCCs are used as a measure of milk quality and as indicators of overall udder health. There is an inverse relationship between BTSCCs and cheese yield and the quality/shelf-life of pasteurized fluid milk.^{2,3,4} Numerous studies have also shown that operations with increased BTSCCs are more likely to have milk that violates antibiotic residue standards.^{5,6,7} The most frequently cited reason for antibiotic residues in milk is placing

cows treated with antibiotics in the milking string before the recommended withdrawal period.⁸

To ensure high-quality dairy products, BTSCCs are monitored in milk shipments using standards outlined in the U.S. Pasteurized Milk Ordinance (PMO).⁹ In the United States, the legal maximum BTSCC for Grade A milk shipments is 750,000 cells/mL. If a producer has two out of four shipments that test above the maximum (usually tested 30 to 45 days apart) a written notice is issued and an additional sample is tested within 21 days. If three of the last five counts exceed the maximum, regulatory action is required, which includes:

- 1) suspend the producer's permit, or
- 2) forego permit suspension, provided the milk in violation is not sold as Grade A, or
- 3) impose monetary penalty in lieu of permit suspension, provided the milk in violation is not sold or offered for sale as Grade A product.

Maximum BTSCC levels for other countries is 400,000 cells/mL in the European Union (EU),⁹ Australia, New Zealand,¹⁰ and Canada.¹¹ The maximum BTSCC level in Brazil is 1,000,000 cells/mL.¹²

Although there has been increasing support in the last few years for lowering the maximum BTSCC for Grade A milk in the United States to 400,000 cells/mL, no changes have been made to the PMO. In May 2013, the National Conference on Interstate Milk Shipments did not lower the U.S. limit, despite EU regulations requiring a 400,000 cells/mL limit that went into effect in January 2012.^{13,14}

EU regulations are also centered on testing milk from individual farms but require adherence to a 3-month geometric mean BTSCC of less than 400,000 cells/mL. EU member states have some latitude in formulating the specific details of their individual programs.

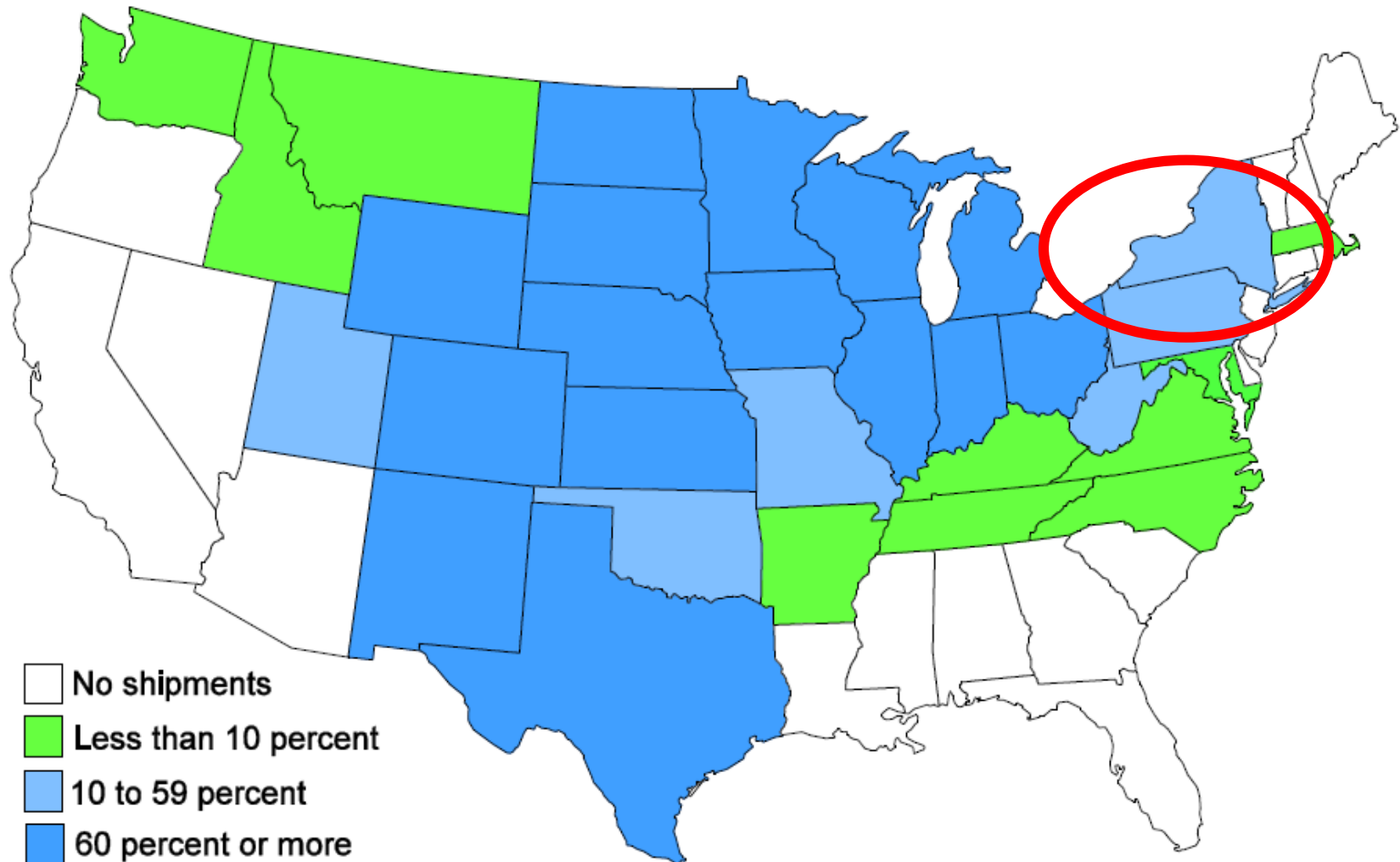
U.S. producers that have four consecutive rolling 3-month SCC means greater than the 400,000 cells/mL limit cannot export milk to the EU unless derogation** is requested and approved. If derogation is not approved, the milk supplier must suspend, segregate, or discontinue certification.¹³

A few States have reduced or are in the process of reducing the SCC limit for producers in their States. These States include California, Idaho, Montana, Nevada, Oregon, and Washington (J. Jonker, National Milk Producers Federation, pers. comm.).

* FMOs are administrative units made up of groups of States and were established under the authority of the Agricultural Marketing Agreement Act of 1937, as amended. Their purpose is to stabilize markets by placing requirements on the handling of milk; data are collected to provide accurate information on milk supplies, utilization, and sales. Monitored orders were Central, Midwest, Southwest, and Upper Midwest.

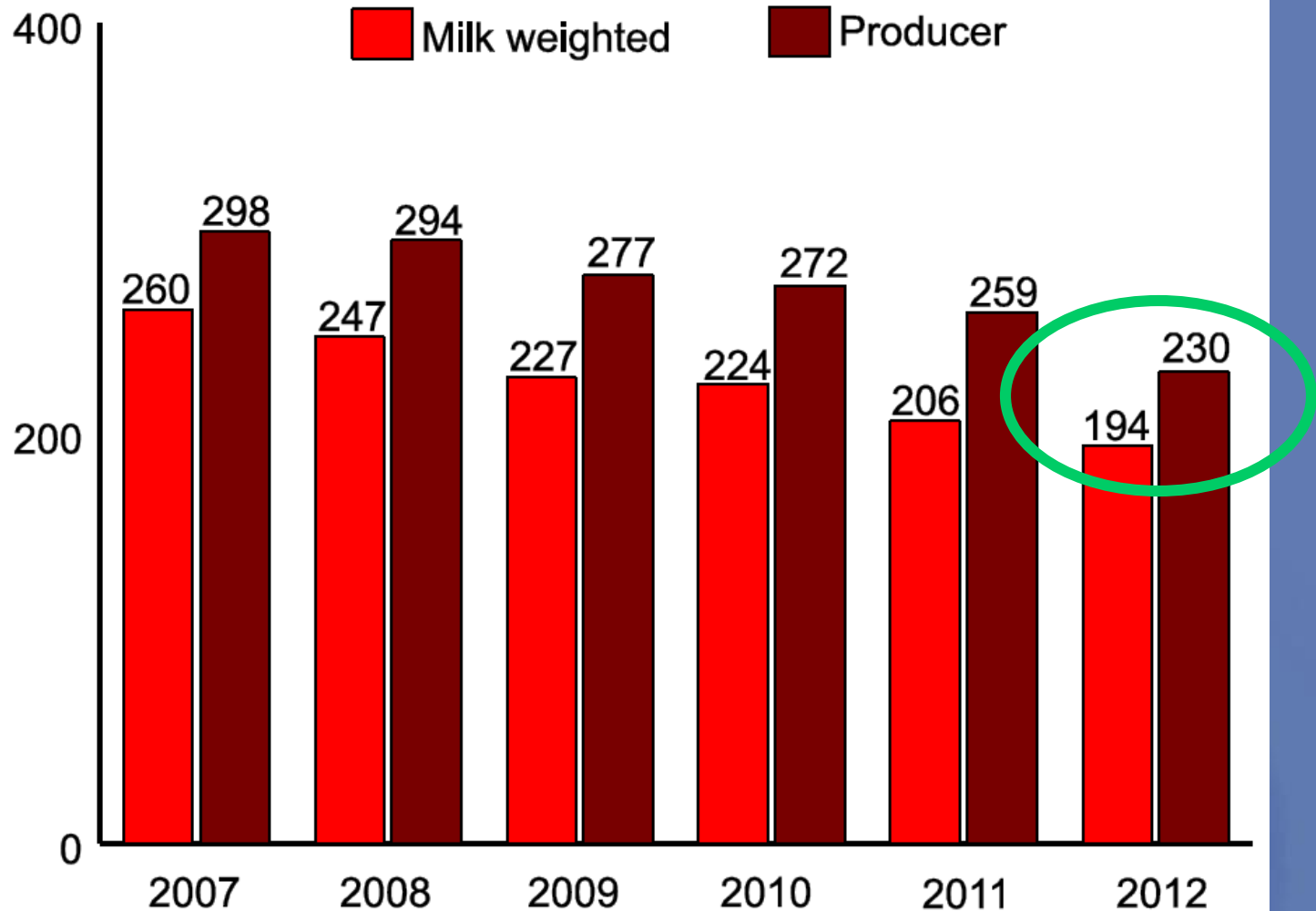
**A derogation is a provision in an EU legislative measure that allows for all or part of the legal measure to be applied differently, or not at all, to individuals, groups, or organizations.

Joonis 2. Protsent kogupiimatoodangust, mis transporditakse läbi jälgitud FMO-de 2012. aastal, osariikide kaupa



Joonis 3. Piima kaalutud ja tootja tankipiima SRA, 2007–2012

BTSCC
x1,000



Lancaster DHIA uuringuajalugu

Year	Average # Cows	Lbs. Milk	Lbs. Butterfat	Lbs. Protein	SCC
1963-64	14,440	12,083	482		
1964-65	14,732	12,211	486		
1965-66	15,793	12,355	485		
1966-67	16,641	12,465	490		
1967-68	16,976	12,264	479		
1968-69	18,077	12,478	487		
1969-70	18,727	12,598	489		
1970-71	19,368	12,574	488		
1971-72	19,543	12,644	485		
1972-73	20,162	12,675	488		
1973-74	21,480	12,898	502		
1974-75	22,317	13,501	521		
1975-76	23,600	13,762	529		
1976-77	24,270	14,424	555		
1977-78	24,476	14,737	558		
1978-79	27,353	14,963	557		
1979-80	29,203	14,941	556		
1980-81	31,726	15,484	580		
1981-82	34,241	15,940	590		
1982-83	35,648	16,264	594		
1983-84	35,403	16,152	608		
1984-85	36,952	16,376	600		
1985-86	37,675	17,049	617		
1986-87	37,604	17,476	635		
1987-88	38,389	17,496	644		
1988-89	36,612	17,623	656		
1989-90	37,848	17,739	652		
1990-91	37,792	18,634	681		
1991-92	38,316	19,153	714	606	
1992-93	37,320	19,140	689	607	
1993-94	38,033	19,155	693	614	
1994-95	40,739	19,504	707	620	
1995-96	45,143	19,625	723	630	
1996-97	81,804	20,053	711	636	
1997-98	90,110	21,132	754	663	
1998-99	94,000	20,659	754	653	
1999-00	117,118	21,062	781	652	
2000-01	131,736	20,761	759	621	
2001-02	146,483	21,099	780	632	
2002-03	162,711	20,571	774	620	355,000
2003-04	191,332	20,328	742	613	342,000
2004-05	197,323	20,911	764	631	322,000
2005-06	196,627	21,027	781	638	326,000
2006-07	199,670	20,827	780	634	309,000
2007-08	207,322	21,324	797	648	305,000
2008-09	206,792	21,093	789	642	280,000
2009-10	209,827	21,015	774	635	260,000
2010-11	217,170	21,077	792	643	256,000
2011-12	259,148	20,862	782	638	240,000
2012-13	270,566	21,410	809	653	223,000

Viimased 11 muutuste aastat

Year	Average # Cows	Lbs. Milk	Lbs. Butterfat	Lbs. Protein	SCC
2002-03	162,711	20,571	774	620	355,000
2003-04	191,332	20,328	742	613	342,000
2004-05	197,323	20,911	764	631	322,000
2005-06	196,627	21,027	781	638	326,000
2006-07	199,670	20,827	780	634	309,000
2007-08	207,322	21,324	797	648	305,000
2008-09	206,792	21,093	789	642	280,000
2009-10	209,827	21,015	774	635	260,000
2010-11	217,170	21,077	792	643	256,000
2011-12	259,148	20,862	782	638	240,000
2012-13	270,566	21,410	809	653	223,000



Päevakord

Firma ülevaade

Teenuste tüübid ja uued uuringud

SRA haldusraportid

Mastiidi DNA uuringu kasutamine ja raportid



WANTED ~ DEAD OR ALIVE ~
MASTITIS DNA

Mis on PCR-põhine mastiidiuuring

PCR on tehnoloogia, mille abil on võimalik ühte või mõnda üksikut DNA fragmenti mitmekordselt amplifitseerida, tekitades nii miljoneid konkreetse DNA järjestuse koopiaid.

Millised on eelised?

- Proovid ei pea olema steriilsed, kuid tuleb võtta aseptiliselt ja laborisse saata.
- Kasutada võib DHIA uuringutest jäänud proove.
- Pole vaja eraldi proovi võtta.
- Kulude säästmiseks võib rühma lehmade proovid üheks prooviks segada.

- Eeliste hulka kuulub ka võimalus valida uuringuks vaid teie kõrge SRAga lehmad pärast SRA uuringut DHIA laboris.
- Võite samuti valida testitavaks kõigi üle teatud SRA väärtusega lehmade proovid.
- Lisaks võite lasta testida kõik viimase kuu jooksul lüpsmatulnud lehmad uute mastiidijuhtude ärahoidmiseks.

Proovid tulevad erineval kujul (DHIA & steriilsed)



Proove saadetakse Kaliforniast, idarannikult, Kanadast ja Mehhikost





Rühmaproovid ja karjauuringud

- Soovitame kasutada 5-10pealiste rühmade testimist mittenakatunud lehmade väljaarvamiseks. Seejärel uurige kõiki lehmi nakatunud rühmades.
- Karjataseme uuringuks suuremad kuni 250 pealised rühmad
- Tankipiima uuring väiksemate, alla 250 pealiste karjade kontrollimiseks nakkuslike patogeenide osas.



Mastitis PCR Assay Report

1592 Old Line Road
Manheim, PA 17545

Phone: (877) 572-4115

Fax: (717) 664-2911

Email: DNA@LancasterDHIA.com

Customer: Contagious Analysis Sample Report, pooled groups **Herdcode:** 12345678

Address:

Phone:

Fax:

Email:

Veterinarian:

Email:

Fax:

QUANTITY
(specific to each
bacterial target):

+ Low

++ Medium

+++ High

Contagious Analysis (includes *Staph. aureus*,
Strep. ag., and *Mycoplasma bovis*)

Please review these results with your veterinarian.

Date: 1/30/2010 3:00:04 PM

Calibration: 1/22/2010 3:24:02 PM

Instrument: PCR2Major3 (Stratagene Mx3000P/Mx3005P QPCR System)

Sample	Bacterial finding	Quantity	Proportion
1	Negative	-	-
2	Negative	-	-
3	Negative	-	-
4	Negative	-	-
5	Staph. aureus	+	-
6	Negative	-	-
7	Negative	-	-
8	Negative	-	-
9	Staph. aureus	+	-
10	Negative	-	-

1, 3, 5, 7, 10

11, 13, 14, 15, 16

18, 20, 21, 22, 23

26, 27, 28, 29, 30

37, 38, 40, 41, 42

44, 45, 46, 47, 49

53, 54, 55, 56, 57

59, 60, 62, 63, 64

71, 76, 77, 78, 80

85, 87, 86, 90, 93

Rühmaproovi raport

Instrument: PCR2Major3 (Stratagene Mx3000P/Mx3005P QPCR System)

Tee 20 testi 50
asemel, säästa \$\$

Proov	Bakterleid	Kogus		
1	Negatiivne	-	-	1, 3, 5, 7, 10
2	Negatiivne	-	-	11, 13, 14, 15, 16
3	Negatiivne	-	-	18, 20, 21, 22, 23
4	Negatiivne	-	-	26, 27, 28, 29, 30
5	Staph. aureus	+		37, 38, 40, 41, 42
6	Negatiivne	-	-	44, 45, 46, 47, 49
7	Negatiivne	-	-	53, 54, 55, 56, 57
8	Negatiivne	-	-	59, 60, 62, 63, 64
9	Staph. aureus	+		71, 76, 77, 78, 80
10	Negatiivne	-	-	85, 87, 86, 90, 93

Tankipiima ja suurte rühmade proovid

Sample	Bacterial finding	Quantity	Proportion
tank	Staph. aureus	+	Enamik DNAs leitud, kui üle 90%
	Beta-lactamase gene	+	
	Str.dysgalactiae	+	
	Staph.sp.	+	
	Str.uberis	++	
	A.pyogenes and P.indolicus	+	
1	Str.uberis	++	
	Klebsiella sp. (including oxytoca and pneumonia)	+	
2	Staph.sp.	+	
3	Staph.sp.	+	>99%
	Str.uberis	++	
4	Staph.sp.	+	
	Str.uberis	+	
5	Beta-lactamase gene	+	
	Staph.sp.	+	
	S.marcescens	++	
6	Beta-lactamase gene	+	>99%
	Staph.sp.	++	
	S.marcescens	+	



Esmalt rühmauuring, siis individuaalne uuring

Peamise 3 Test

Proov	Bakterileid	Kogus	Suhtarv
30	Negatiivne	-	-
27	Staph. aureus	+	
65	Staph. aureus	++	
64	Staph. aureus	+	
93	Negatiivne	-	-
56	Staph. aureus	+	
62	Staph. aureus	++	
31	Negatiivne	-	-
46	Staph. aureus	+	
36	Staph. aureus	++	
310	Staph. aureus	+	
564	Staph. aureus	+	
66	Staph. aureus	++	
99	M. bovis	++	
19	Staph. aureus	++	
42	M. bovis	++	
8	M. bovis	+	
	Staph. aureus	+	
10	Staph. aureus	++	
17	Staph. aureus	++	
16	M. bovis	+++	

Kasutatakse DHIA labori “kuuma nimekirja”

Lancaster DHIA Lab
23001234 45 samples

***** HOT SHEET *****
collected 12-31-09

tested 1-05-10

Cows in SCC order

Weighted Average SCC: 438

Index	Barn	Milk	Fat	Pro	OS	SCC	Count	DIM	Lac	CAR	W/O	%
4	4	42.0	4.3	3.5	5.4	9.0	6400	232	2		338	24.2
159	159--J	51.0	5.5	4.1	5.9	7.9	2986	272	1		283	13.7
48	48	38.0	4.6	3.7	5.3	7.9	2986	361	4		240	10.2
158	158	67.0	4.3	3.3	5.9	6.1	857	198	1		222	5.2
14280	14--280	67.5	4.3	3.3	5.8	6.0	800	295	1		205	4.9
125	125	79.0	5.2	3.2	5.9	5.7	650	8	2		189	4.6
333	333	47.0	3.3	3.1	4.7	6.4	1056	425	4		170	4.5
165	165	33.0	4.1	3.3	5.5	6.7	1300	609	1		152	3.9
8	8	94.0	3.9	2.8	6.0	4.9	373	109	3		142	3.2
18	18	63.5	4.4	3.4	5.5	5.3	492	332	2		131	2.8
13	13	18.0	4.2	3.4	5.6	7.0	1600	35	2		117	2.6
33	33	97.0	3.8	2.6	5.3	4.1	214	51	5		112	1.9
365	365	32.5	4.0	2.8	5.3	5.6	606	325	1		103	1.8
50	50	61.5	3.0	3.1	6.0	4.6	303	129	3		96	1.7
11	11	45.5	4.5	3.5	5.5	4.9	373	332	2		88	1.5
48261	48--261	79.0	3.7	3.3	5.9	4.1	214	327	2		82	1.5
166	166	75.0	4.5	3.7	5.8	3.9	187	173	2		77	1.3
2234	2234	55.0	3.6	3.0	5.4	4.3	246	224	5		71	1.2
99	99	36.0	5.1	4.0	5.1	4.6	303	336	2		65	1.0
137	137	63.0	3.6	3.3	5.7	3.7	162	429	2		60	0.9
4236	4236	18.0	5.9	3.1	5.2	5.3	492	21	3		55	0.8

Tehnik täidab DNA laborsaatekirja



Lancaster DHIA PCR DNA Mastitis Diagnostics

~ 1592 Old Line Road, Manheim, PA 17545 ~ Office Phone 1-888-202-3442 ~ Fax 717-664-2911
~ DNA Lab 1-877-572-4115 ~ Email DNA@LancasterDHIA.com

DNA Lab Form

LDHIA Tech # & Name: _____

LDHIA Herd Code ____-____-____ Date: _____ Not a LDHIA Customer: _____

Name: _____

Send to Veterinarian/Consultant:

Name _____

Address: _____

Email: _____

Fax: _____

Phone: _____

Email: _____

Bill To: _____

Fax: _____

Phone: _____

Select testing options below.

See back for descriptions of Complete-16, Complete-12 and Contagious tests.

Lancaster DHIA Member Price

Complete-16

\$30 _____

Complete-12

\$24 _____

Contagious

\$19 _____

Non-Member Price

Complete-16

\$32 _____

Complete-12

\$26 _____

Contagious

\$21 _____

Please check the box below that applies:

Whole Herd Test	Cows over _____ SCC	Top ____ Cows for SCC	Cows listed on back
-----------------	---------------------	-----------------------	---------------------

Additional testing instructions:

Lancaster DHIA Technicians ~ Please circle specific cows requested with **RED** magic marker on **Lab List**

For DNA Sample Pooling Please contact the DNA Lab 1-877-572-4115

		Nakkuslikud		
		täielik-16	täielik-12	
		↓	↓	↓
1	<i>Staphylococcus aureus</i>	X	X	X
2	<i>Streptococcus agalactiae</i>	X	X	X
3	<i>Corynebacterium bovis</i>	X	X	
4	<i>Streptococcus dysgalactiae</i>	X	X	
5	<i>Streptococcus uberis</i>	X	X	
6	<i>Staphylococcus sp.</i>	X	X	
7	<i>Escherichia coli</i>	X	X	
8	<i>Enterococcus sp.</i>	X	X	
9	<i>Klebsiella sp.</i>	X	X	
10	<i>Serratia marcescens</i>	X	X	
11	<i>A. pyogenes</i> & <i>P. indolicus</i>	X	X	
12	<i>Stafülokoki</i> β -laktamaasi geen	X	X	
13	Pärmid	X		
14	<i>Mycoplasma bovis</i>	X		X
15	<i>Mycoplasma spp</i>	X		
16	<i>Prototheca</i>	X		

Miks valida tavabakterioloogia asemel PCR-põhine mastiidiuuring?

- Keskmiselt 25–40% kliinilise mastiidiga lehmadel võetud piimaproovidest on tavalise bakterkülvil puhul kasvuta.
- PCR-põhine mastiidiuuring viib tõhusama ravini tänu järgnevale:

- Koliformide täpsem kindlakstegemine.
- Mastiidiallikate kindlakstegemine individuaalsest või tankipiimaproovist.
- Mastiidiallikate kindlakstegemine juba ravitud lehmade hulgas.
- Uuringuks kuluva aja lühenemine 2-10 päevalt (traditsiooniline bakterioloogia) 1-2 päevani alates proovi laborisse saabumisest.
- Subkliiniliste juhtude leidmine enne nende kliiniliseks või krooniliseks muutumist.

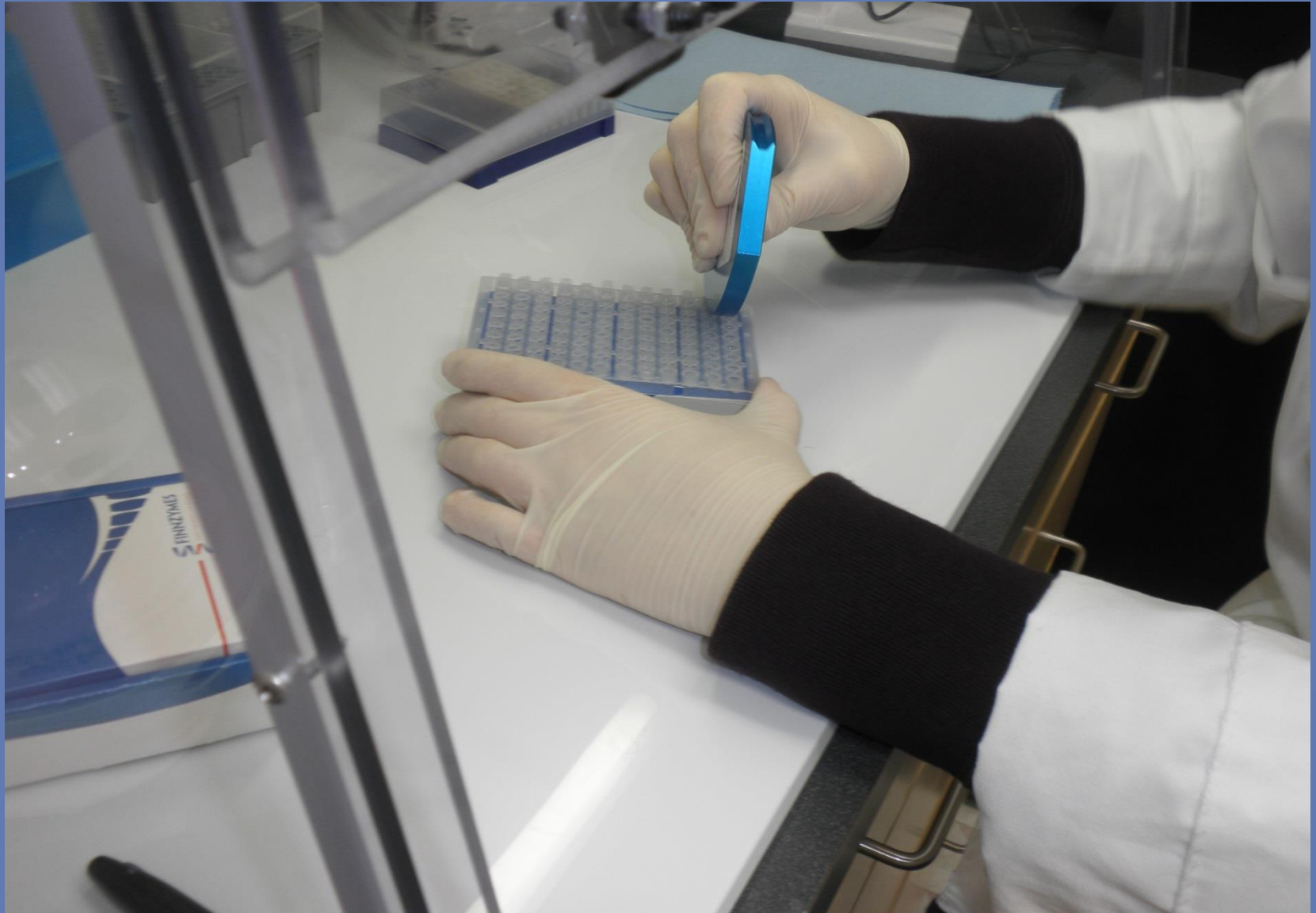
DNA labor uurib proove PCR-põhise analüüsiga



Plaatide ettevalmistus



Plaatide ettevalmistus



Mastiidi DNA ekstraheerimine



Agilent Technologies Mx3005P analüsaator





1592 Old Line Road
Manheim, PA 17545

Phone: (877) 572-4115

Fax: (717) 664-2911

Email: DNA@LancasterDHIA.com

Mastitis PCR Sample Pooling Report

Customer: John Henry Smith
Address: 123 Short Horn Lane
Phone: 777-525-1234

Herdcode: 12345678

Fax: 777-528-4567

Email: MoreMilk@Preg.com

Veterinarian: Dr. Kool Hands
Email: MooCow@Clopen.com
Fax: 777-525-4321

When multiple bacteria targets are detected in a sample the percentage of the most abundant bacteria is reported if its proportion is over 90 %.

QUANTITY + Low
(specific to each ++ Medium
bacterial target): +++ High

Full Panel Analytix (includes *Staph. aureus*, *Staph. sp.*, *Strep. ag.*, *Strep. dysgalactiae*, *Strep. uberis*, *E. coli*, *Enterococcus sp.*, *Klebsiella sp.*, *Serratia marcescens*, *Corynebacterium bovis*, *A. pyogenes* and *P. indolicus*, and *Staphylococcal beta-lactamase gene*)

Date: 12/31/2009 8:58:40 AM

Calibration: 9/28/2009 1:41:09 PM

Instrument: PCR1 (Stratagene Mx3000P/Mx3005P QPCR System)

Sample	Bacterial finding	Quantity	Proportion
pool 1	Str.dysgalactiae	++	>99%
	Klebsiella sp. (including oxytoca and pneumonia)	+++	
pool 2	Staph. aureus	++	
	E.coli	+	
	Klebsiella sp. (including oxytoca and pneumonia)	++	
21 RF	Negative	-	-
21 LF	Staph. aureus	++	
83 RR	Klebsiella sp. (including oxytoca and pneumonia)	++	
83 LR	Negative	-	-
585 LR	Negative	-	-
46 RR	E.coli	++	

Classification	Bacteria	Contagious or Environmental	Source	Spread	Control	Treatment
<i>Staphylococcus</i> spp.	<i>Staph. aureus</i>	Contagious	Infected udders, hands of milkers	Milking time	Post-dip, DCT ¹ , segregation and cull if necessary	Please consult your veterinarian
	Coagulase (-) staph. & <i>S. hyicus</i>	Neither	Skin flora & occasionally environment	Infect teat canal from skin sources	Post-dip, DCT	
<i>Streptococcus</i> spp. and <i>Enterococcus</i> spp.	<i>Strep. agalactiae</i>	Contagious	Infected udders	Milking time	Milking time hygiene, post-dip, DCT	
	<i>Strep. dysgalactiae</i>	Contagious and environmental	Infected udders and environment	Milking time & environmental contact	Milking time hygiene, pre- & post-dip, DCT, teat seal	
	<i>Strep. uberis</i>	Environmental	Environment – early dry period	New IMI ² during early dry period	Milking time hygiene, pre- & post-dip, DCT, teat seal	
	Environmental strep & <i>Enterococcus</i> spp.	Environmental	Environment	Environmental contact	Milking time hygiene, pre- & post-dip, DCT, teat seal	
Coliform	<i>Escherichia coli</i>	Environmental	Bedding, manure, soil	Environmental contact	Cows clean & dry, use of sand bedding, pre-dip, a J5 vaccine	
	<i>Klebsiella</i> spp.	Environmental	Organic bedding	Environmental contact	Avoid sawdust & recycled manure, pre-dip, J5 vaccine	
	<i>Enterobacter</i> spp.	Environmental	Bedding, manure, soil	Environmental contact	Cows clean & dry, use of sand bedding, pre-dip, a J5 vaccine	
	<i>Serratia</i> spp.	Environmental	Soil and plants	Environmental contact	Cows clean & dry, pre-dip (no chlorhexidine products)	
	<i>Pseudomonas</i> spp.	Environmental	Water & wet bedding	Environmental contact	No water use in parlor, no cooling ponds, sand bedding, a J5 vaccine	
	<i>Proteus</i> spp.	Environmental	Bedding, feed & water	Environmental contact	Not much known, use of sand bedding, a J5 vaccine	
	<i>Pasteurella</i> spp.	Probably contagious	Upper respiratory tract of mammals and birds	Unknown – likely cow to cow	Prevent teat injuries, remove affected cows from herd	
Other	Yeast & mold	Environmental	Soil, plants, water	Dirty infusions	Aseptic infusions	
	<i>Corynebacterium bovis</i> & other coryneforms	Contagious	Infected udders	Cow to cow	Post-dip	
	Prototheca	Environmental	Soil, plants, water	Dirty infusions, infected udders	Aseptic infusions, eliminate infected cow	
	<i>Bacillus</i> spp.	Environmental	Soil, water, air	Dirty infusions	Aseptic infusions	
	<i>Arcanobacterium pyogenes</i>	Contagious/Environmental	Teat injuries	Flies	Fly control	

Information obtained from NMC Laboratory Handbook on Bovine Mastitis and veterinary consultation for treatment recommendations).

*These are general treatment recommendations; actual recommendations may vary from herd to herd. Please consult your veterinarian.

**Extra label usage; please consult your veterinarian before starting this protocol.

***Nonsteroidal anti-inflammatory drugs.

¹ – DCT, dry cow therapy; ² – IMI, intramammary infection; ³ – IMM, intramammary.

C. S. Petersson-Wolfe and J. Currin
Virginia Tech Mastitis & Immunology Laboratory &
Virginia Maryland Regional College of Veterinary

Järgige oma unistusi...

**Te ei tea iial, kuhu nad teid
viia võivad.**

See võiks olla Eesti



Põhja-Lancaster



Põhja-Lancaster



TÄNAN TEID & küsimused

