Southern Dairy Hub

Transition, Pre-Mate, & Mating



Presented by

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Our Clinics

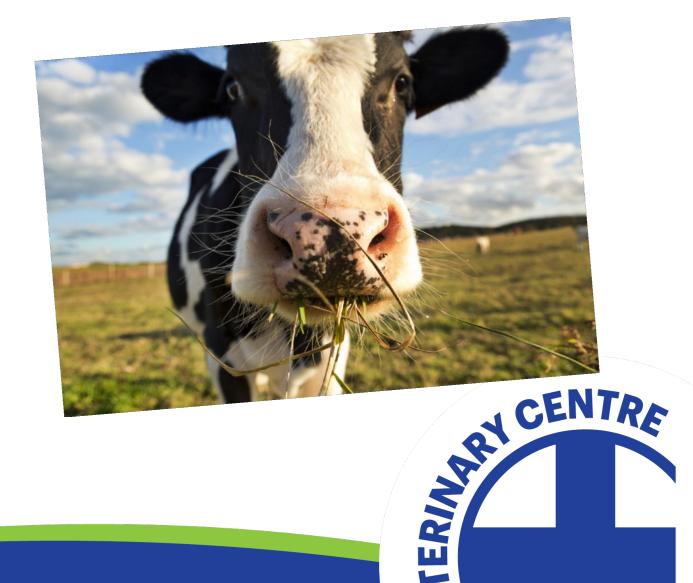
Waitaki, South Canterbury and East & Central Otago Districts





Key Opportunities with Collars

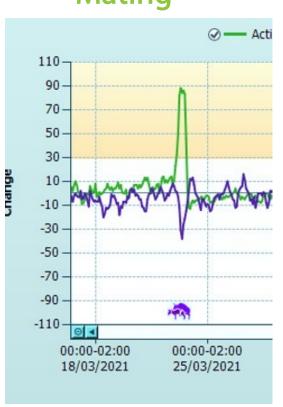
- 1. Getting the most out of collars what's required??
 - a) Transition
 - b) Pre-Mate Heats
 - c) Mating (and Mating Reviews)



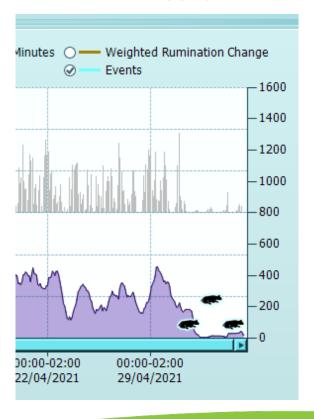
Overview

What does a collar do?





Health



Rumination

Daily Rumination		
443.0		
461.0		
458.0		
453.0		
507.0		
492.0		
443.0		
	ARY	
	443.0 461.0 458.0	443.0 461.0 458.0 453.0 507.0 492.0



Why are farmers getting collars?

The November blues

Staffing

Offsite oversight and risk management

Silver Bullet

Keep up with the Jones's

Heat and Health

Farm Management



What makes a successful collar user?

SUCCESS

Farm owner + Farm Team engaged

Buy-in and Trust of the Data

Willing to put time into data management

Willingness to change farm managment

LESS SUCCESSFUL
No Whole Team Buy-in

Poor records (garbage in garbage out)

Belief that "they are the top 10% farmer"

Expectation of a "Silver Bullet"



Making the Budget Work

50%

NO BULLS Policy

Typically covers ~ 50% of the collar cost

Heat Detection Aids
Staff Time
Bulls Savings

20%

HEALTH

IF used correctly, conservatively can cover ~ 20% of the collar cost

Alertable Deaths Earlier Treatment **15**%

MATING

IF ONLY picking up low HIS cows, expect 15% return

Picking up Silent Heats

15%

creased MILK

Reliant on farmer to utilise the data to make changes to improve mating AND milk production

Conservative +1KgMS

Additional gains if using full AI + Short Gestation

Biggest
variation due to
high farmer
reliance

Large increases
where underlying
Heat Detection is
an issue

BIGGEST OPPORTUNITY!!!

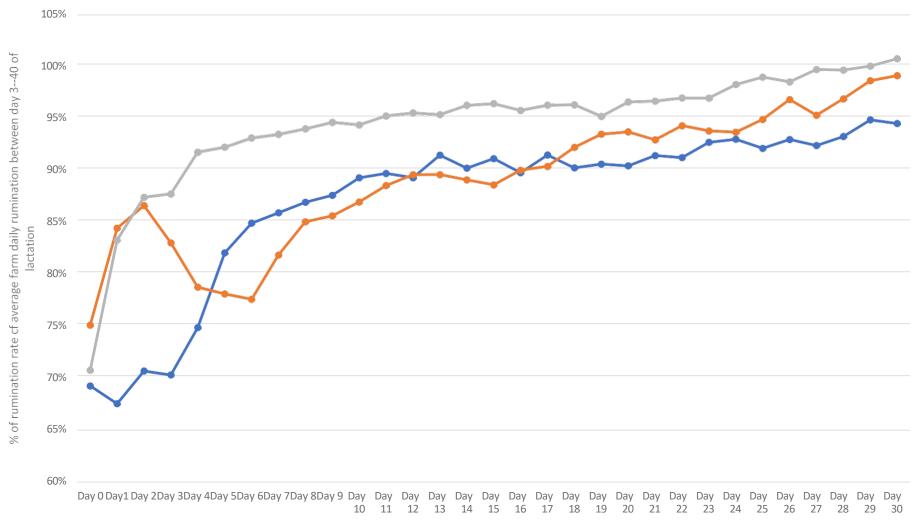


Transition Rumination

Daily Eating	Daily Ruminatio		
158.0	443.0		
173.0	461.0		
158.0	458.0		
165.0	453.0		
155.0	507.0		
151.0	492.0		
153.0	443.0		



Daily Rumination Average by DIM (cf average 30-40 day farm rumination rate)





Veterinary Centre by the Big Blue Cross

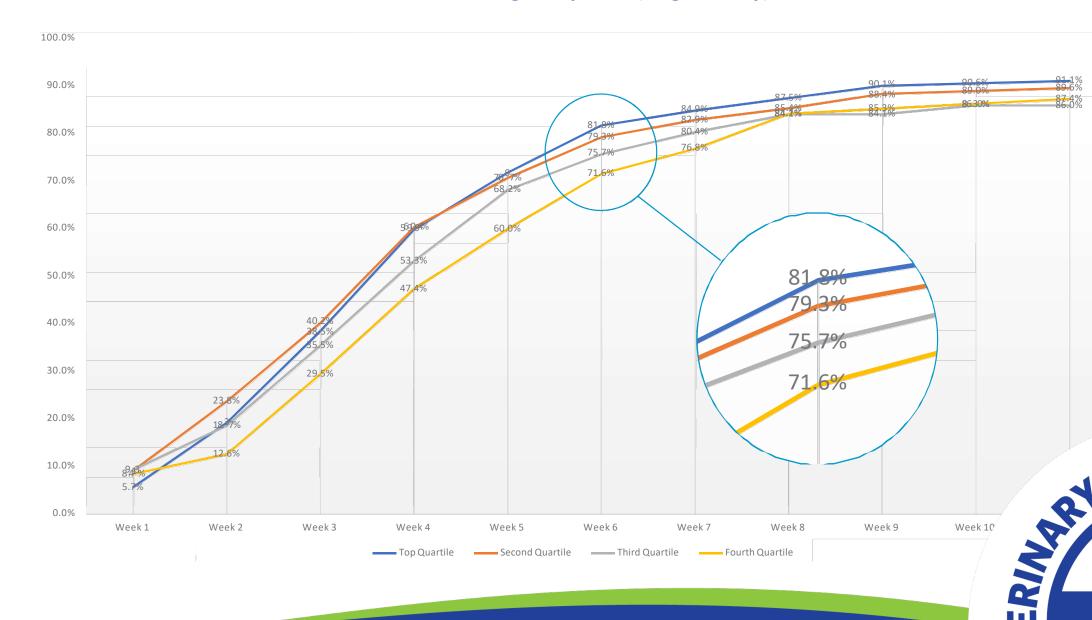


TAD Colostrum

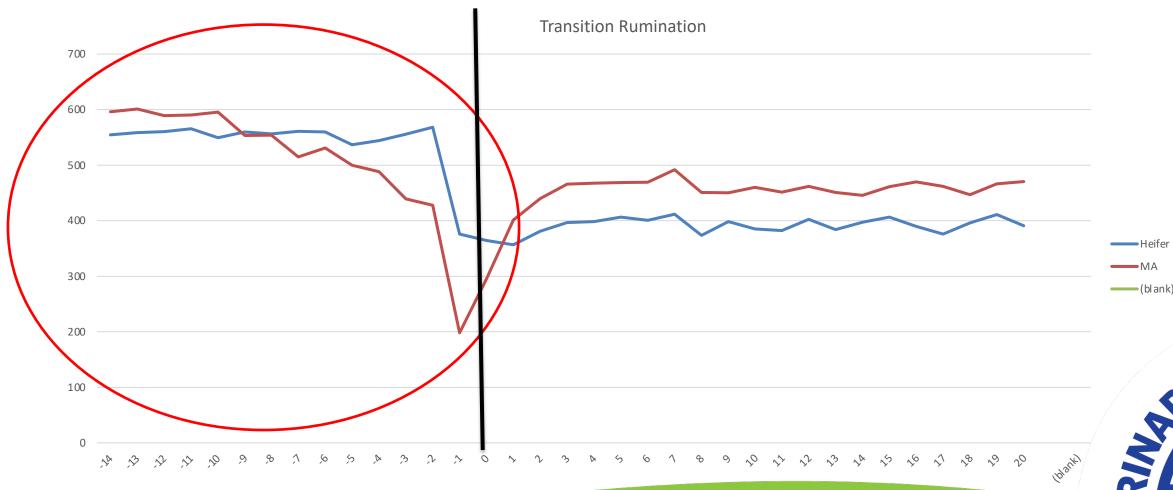
OAD 14x Days

OAD Variable (25 Days)

Rumination Quartile vs Pregnancy Rate (August Only) ORANGE FARM



Transition Monitoring





Why Transition Matters

(And Can you Monitor it??)

Key Influence on:

- BCS Loss Post Calving
- Endometritis Rates
- Oocyte quality (and first service conception rate)
- Cycling Rates
- Mastitis / Lameness
- Metabolic
- Peak Production



2022/2023

SDH vs Other Farms

How are they tracking?

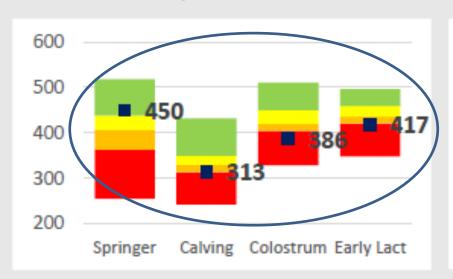
Pericalving Milestones

How did your cows transition?

Rumination activity gives an indication of how well the cows transitioned into lactation and Collar Health Events give an indication of underlying nutritional issues or peri-calving disease (eg metritis, metabolics & severe mastitis).

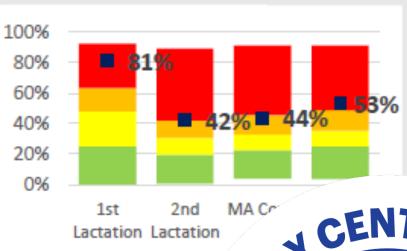
Rumination Activity

Mins/Day for Each Period



Collar Health Events





2023/2024

SDH vs Other Farms

How are they tracking?

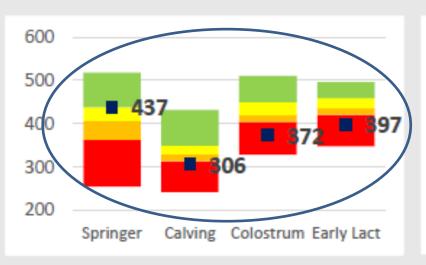


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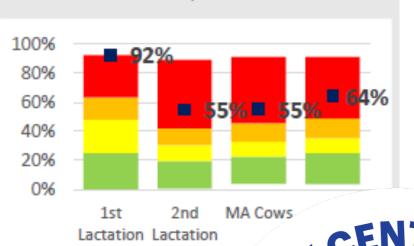
Rumination Activity

Mins/Day for Each Period



Collar Health Events

% of Group Affected



2023/2024

Fodderbeet

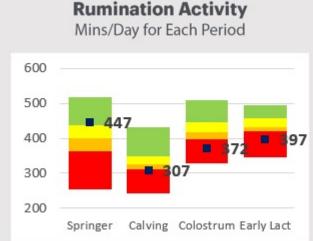
Baleage

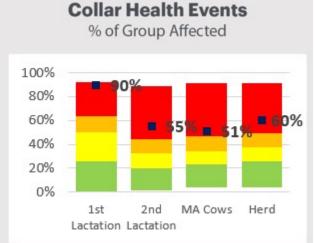
Fodderbeet vs Baleage Wintering

Pericalving Milestones

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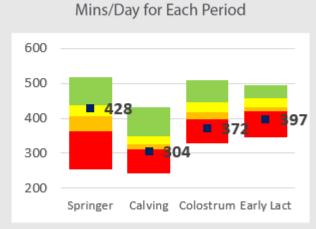




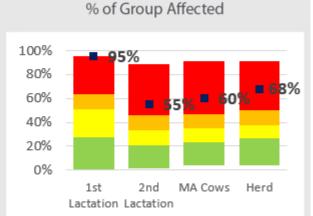
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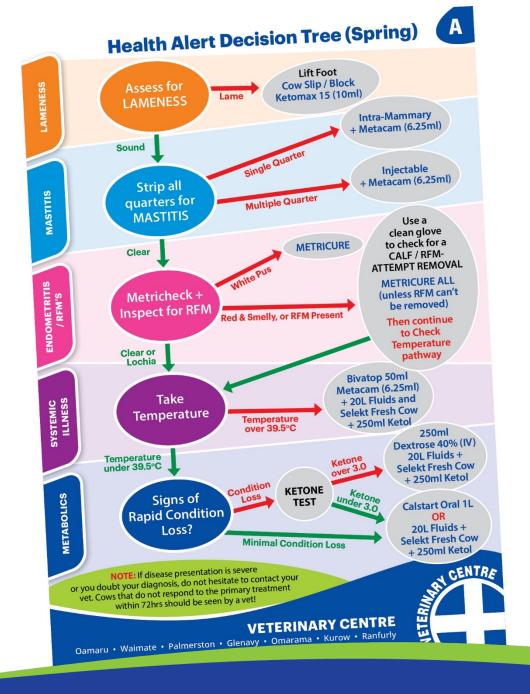


Rumination Activity



Collar Health Events

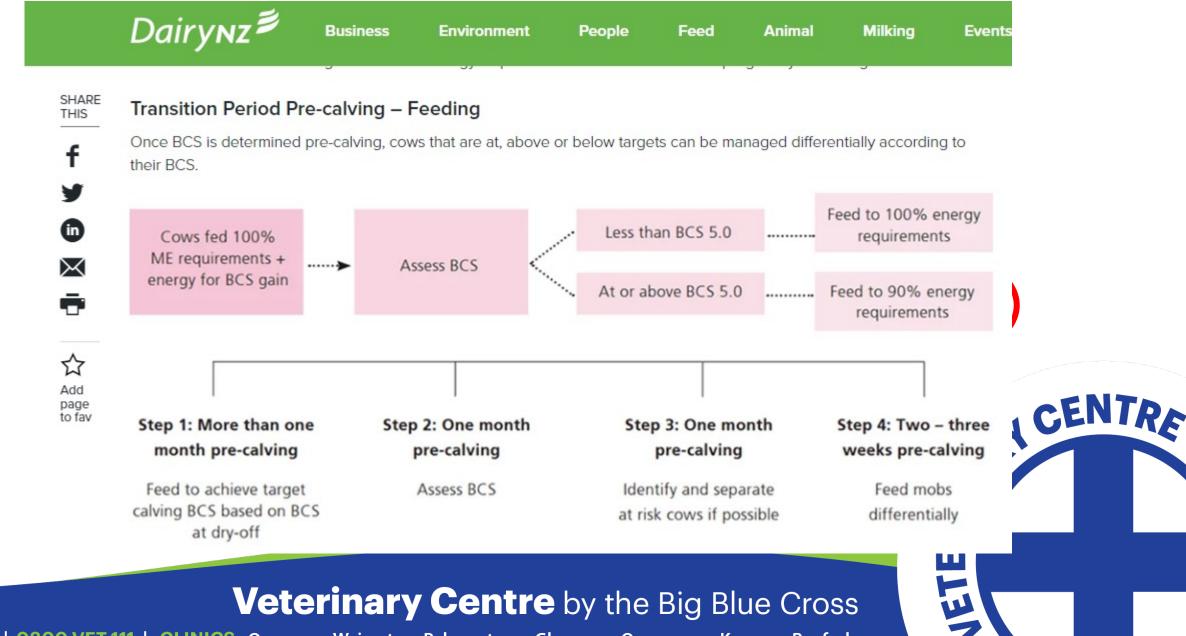








Springers + The 90% Feeding Rule



Springer Energy Budgets

	ME	Wastage	kg of Feed	Multiplier	ME	
Grass	12	10%	3	10.8	32.4	SPRINGERS
Silage	11	25%	4	8.25	33	
Grain	13	11%		11.57		
PKE	11	20%		8.8		
Baleage	10	20%		8		
Straw	6	40%	3	3.6	10.8	
Нау	10	20%		8		% Maintenance
Average ME of Diet (maintenance	4.0.0	TOTAL DM (kg) Offered	10.0	TOTAL ME	76	65%
demand increases with lower ME feeds)	10.2	TOTAL DM (kg) Eaten	7.5			

Liveweight (kg) 500 Maintenance 117 90% Target 105



Transition Monitoring



5 Key Factors

1) Day 0 is Critical!

2) Avoid grazing below 1800

3) Allocate Enough Feed

4) Offer multiple feeding opportunities

5) Limeflour!!!!





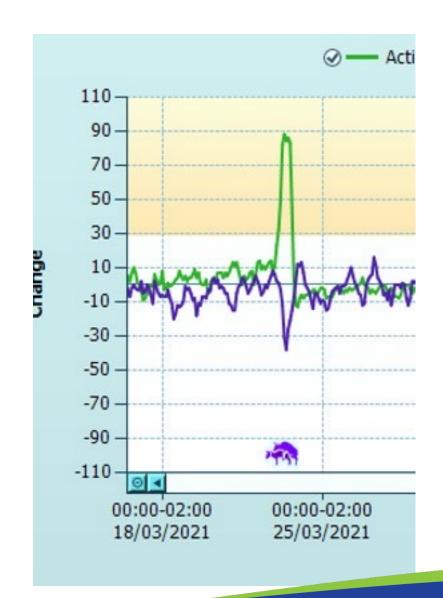
A timeline approach Collar Fertility Review Report - Vet Version 2022/23 Season by week after PSC Ahipene Farming PSM 25/10/2022 Collar Fertility Overview Report 118 by week before PSM **Key Outcomes** Days in Milk Herd Age Structure PSM 25/10/2022 2022/23 Season ■ 1st Lactation ■ 2nd Lactation ■ 3rd Lactation ■ 4th Lactation Mating Ahipene Farming Average DIM/Cow for this season Average DIM per cow from planned start of calving (PSC) until 120 days after PSC by week after PSM **Milestones** 20.0% 40.0% 60.0% 200 120.00% 100.00% Calving pattern drives 80.00% Days in Milk! Earlier calving cows have increased days in milk (DIM) and this is a key driver of 2nd Lactation * Note: Days in milk may not always highlight farm productivity. 9 Week Not-In-Calf Rate Note: Days in max may not aways migratum. tail-end calvers. Please refer to separate Proportion of Later Calvers Graph at bottom 1st Lacation ■ Herd ● 1st Lactation ● 2nd Lactation ▲ Number Submitted by Week Week 1 Week 2 Week 3 Week 4 Week 5 Week 6 Week 7 In-Calf Rate 1st lactation (2022) 2nd la ctation (2022) 100% Key Outcomes MA Cows (2022) MA Cows (Predicted 2023 Were there problem periods during mating? 20% 1st Lactation 2nd Lactation MA Coms 10% acting cows pregnant consistently across the whole mating period is key for a desirable future calving partiern. fow Not-In-Calf rates and lifetime of Not-In-Calf rates and lifetime introduced improvements. Mating Period Week7-9 Week 4-6 ■ Herd ● 1st Lactation ● 2nd Lactation Collar Health Events ■ 1st Lactation ■ 2nd Lactation ■ Early 2-6 Lactation ■ I 100% **Rumination Activity** 90% MA Cows (Weekly Average Rumination) • 1st Lactation (Weekly Average Rumination) Mins/Day for Each Period 30% — BM Protein % № variance of 9w k max) → Daily kgMS Prod (% variance of 9wk max) 70% Pericalving 60% 120% 50% 100% 40% 400 30% How did your cows 30% 300 60% transition? Rumination activity gives an indication 20% 200 40% of how well the cows transitioned into lactation and Collar Health Events give 100 20% lactation and Cottar Health Events give an indication of underlying nutritional issues or peri-calving disease (eg metritis, metabolics & severe mastitis). Springer Calving Colostrum Sarly Lact Proportion of Week 2 Week 3 Week 4 Week 5 Week 6 Week 7 Later Calvers Cows Cycling by Day -7 from PSM ■ Herd ● 1st Lactation ● 2nd Lactation Cows mated when airea dy Pregnant Premate Week1 Week2 Week3 Milestones How did your cows cycle premate? Livesto The proportion of cows cycling at Day 20% -7 from PSM is influenced by transition Returned & Cycled & Total NICE success and early season nutrition. Later calving cows are less likely to NEVER MATED MATED cycle by the PSM Not Cycled: Cows NIC and · Phantom: Cows NIC after insemination >30 days before the end of mating never cycled (eg major NCC

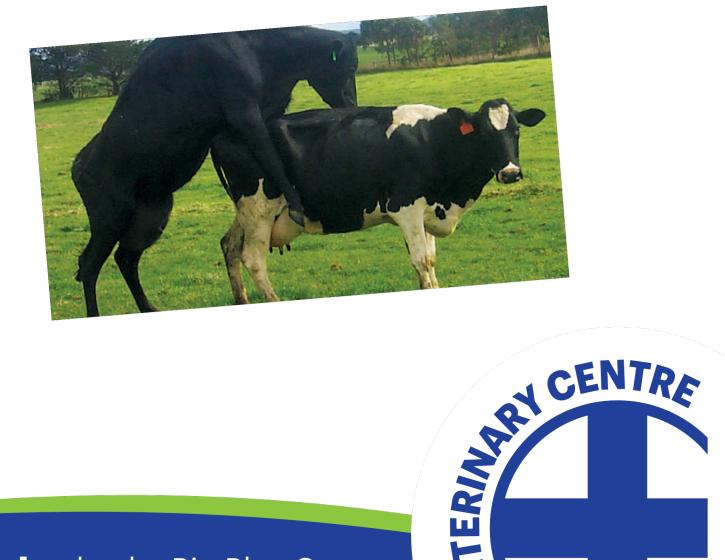
Veterinary Centre by the Big Bl

- with no subsequent return heat.
- Returned & Not Mated: Cows NIC with at least one mating and a subsequent Cycled: NIC Cows not mated unmated heat event <30 days before the end of mating (eg follicular heat and but with at least one heat over chose not to mate) mating period (eg draft error
 - Cycled & Mated: Cows NIC with an unsuccesful mating <30 days (+/- previous heats) before the end of mating (eg normal return cows not conceived)

or elected not to mate)

Pre-Mate Heats









Cows Cycling 7 Days BEFORE the PSM

2022/2023

Premate Milestones

How did your cows cycle premate?

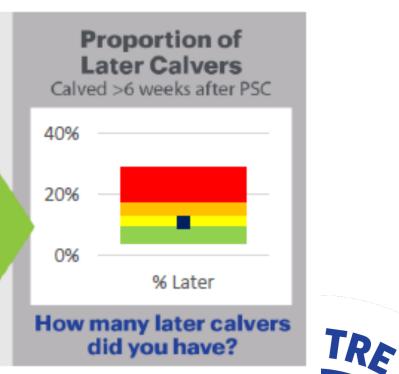
The proportion of cows cycling at Day -7 from PSM is influenced by transition success and early season nutrition.

Later calving cows are less likely to cycle by the PSM

Cows Cycling by Day -7 from PSM

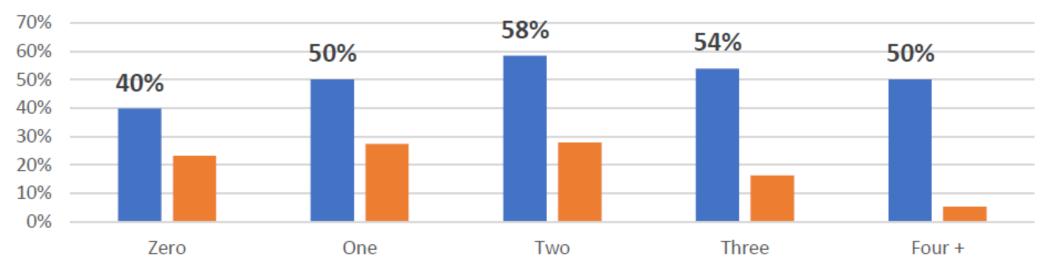
The following graphs highlight to what extent age and laterr calvers influenced cycling. Early calving young cows should cycle well by the PSM and issues in this group can highlight a more generalised nutritional or transition problem.





Why are pre-mate heats important??

Number of Pre-Mate Heats vs First Service Conception Rates

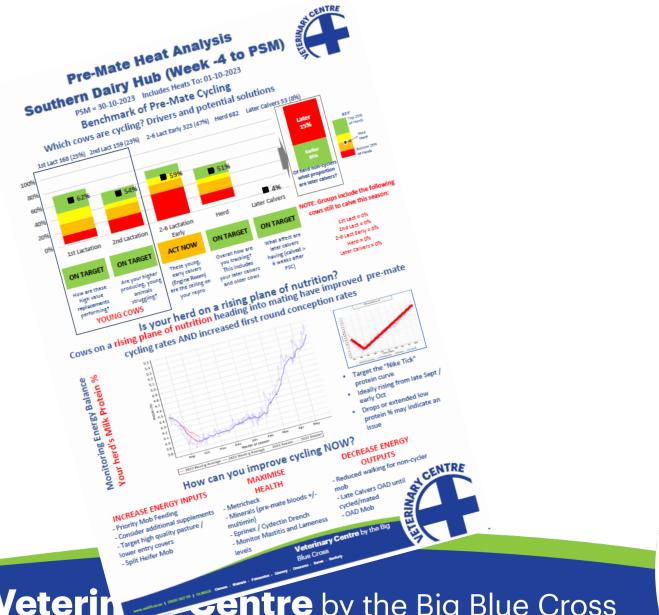


Total Pre-Mate Heats Per Cow

■ CR to First Service Percentage of Herd



Pre-Mate Heat Benchmarking Reports





Benchmark Groups

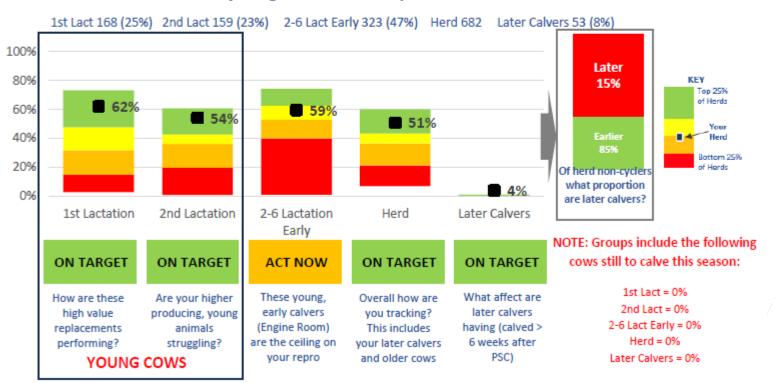
Pre-Mate Heat Analysis Southern Dairy Hub (Week -4 to PSM)

ETERMA

PSM = 30-10-2023 Includes Heats To: 01-10-2023

Benchmark of Pre-Mate Cycling

Which cows are cycling? Drivers and potential solutions







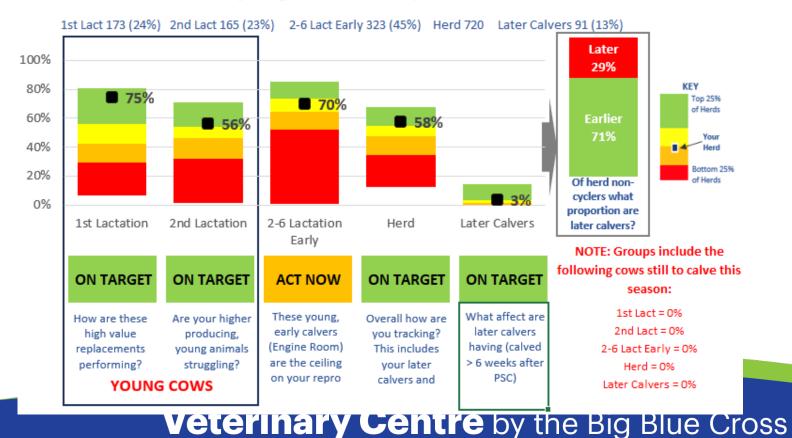
Benchmark Groups

Pre-Mate Heat Analysis Southern Dairy Hub (Week -3 to PSM)

PSM = 30-10-2023 Includes Heats To: 08-10-2023

Benchmark of Pre-Mate Cycling

Which cows are cycling? Drivers and potential solutions





Creating the Narrative

Cows on a rising plane of nutrition heading into mating have improved pre-mate cycling rates AND increased first round conception rates

How can you increase cycling rates now?

INCREASE ENERGY INPUTS

DECREASE ENERGY OUTPUTS

MAXIMISE HEALTH

- Priority Mob Feeding
- Consider additional supplements
- Target high quality pasture / lower entry covers
- Split Heifer Mob

- Reduced walking for noncycler mob
- OAD Mob
- Late Calvers OAD until cycled/mated

- Metricheck (if not already done)
- Minerals (pre-mate bloods
- +/- multimin)
- Eprinex / Cydectin Drench

ER

NTRE

- Monitor Mastitis and RYCENTAL

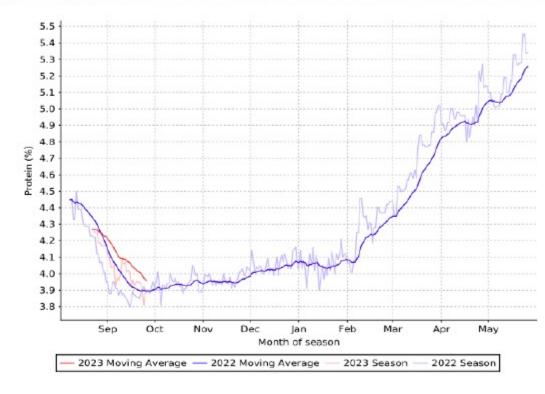
Lameness levels

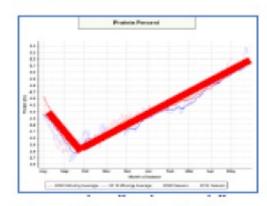
Monitoring Feeding (the major rule-out)

Is your herd on a rising plane of nutrition?

Cows on a rising plane of nutrition heading into mating have improved pre-mate cycling rates AND increased first round conception rates

Monitoring Energy Balance Your herd's Milk Protein %





- Target the "Nike Tick" protein curve
- Ideally rising from late Sept / early Oct
- Drops or extended low protein % may indicate an issue



Week -2

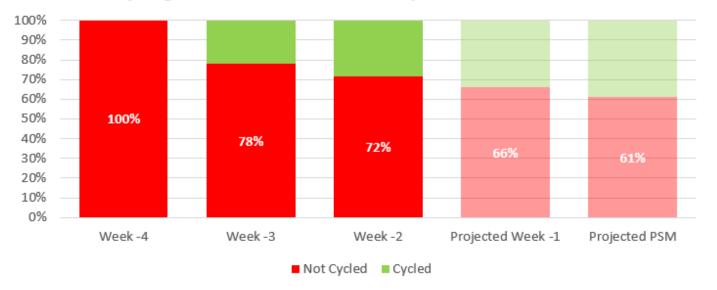
Estimating Non-Cycler **Numbers**

THE CENTRE **Non-Cycler Projections Southern Dairy Hub (7 Days Before PSM)**

PSM = 30-10-2023 Includes Heats To: 15-10-2023

How quickly are cows cycling?

Cycling rate of cows that were non-cyclers at Week -4



TRE

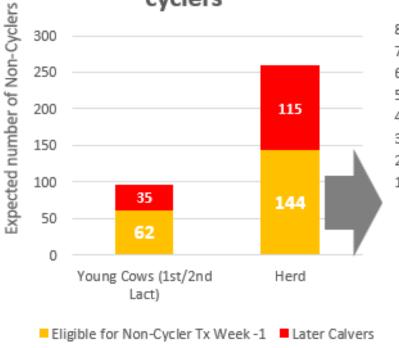


Week -2

Estimating
Non-Cycler
Numbers

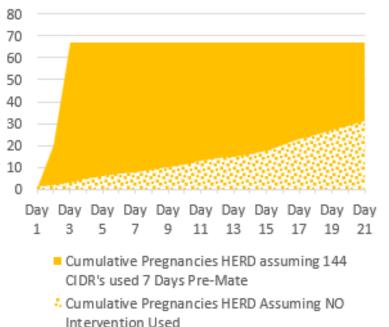
How many non-cyclers do we expect 7 days BEFORE the PSM?

Expected numbers of noncyclers



If eligible non-cyclers are treated, what impact does this have on pregnancy rates?

Non-Cycler Intervention (HERD) @ PSM -7 Days



Gains expected from early treatment of non-cyclers (144 early calvers):

Estimated impact on early DIM = +993days

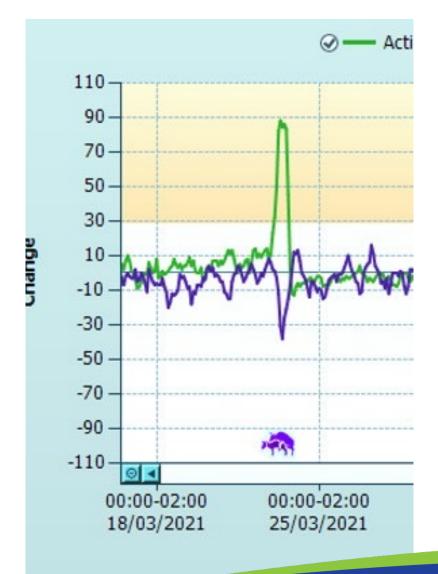
Estimated impact on HERD 3WICR +5%

Idio by the big blac cross



RE

Mating







Performance

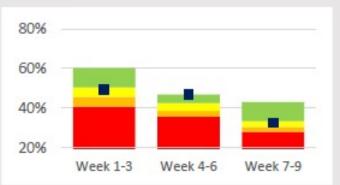
Key Outcomes Mating Period

Were there problem periods during mating?

Getting cows pregnant consistently across the whole mating period is key for a desirable future calving pattern, low Not-In-Calf rates and lifetime efficiency. It also provides scope for herd improvements.

In-Calf Rate

Percentage of non-pregnant animals conceiving in each 3 week mating round. This can highlight changes in nutrition over mating.



9 Week Not-In-Calf Rate

Percentage of animals Not-in-Calf by week 9 (therefore late calvers or MT). Indicates potential cow wastage.



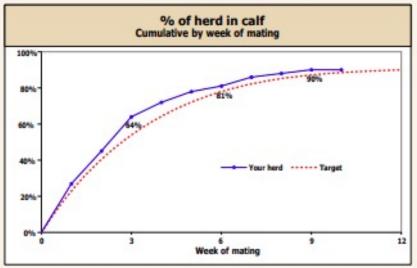
1 Overall herd reproductive performance

6-week in-calf rate
Percentage of cows pregnant in the first 6 weeks of mating

Your herd 81% अमेमिमिमि Aim above 78%

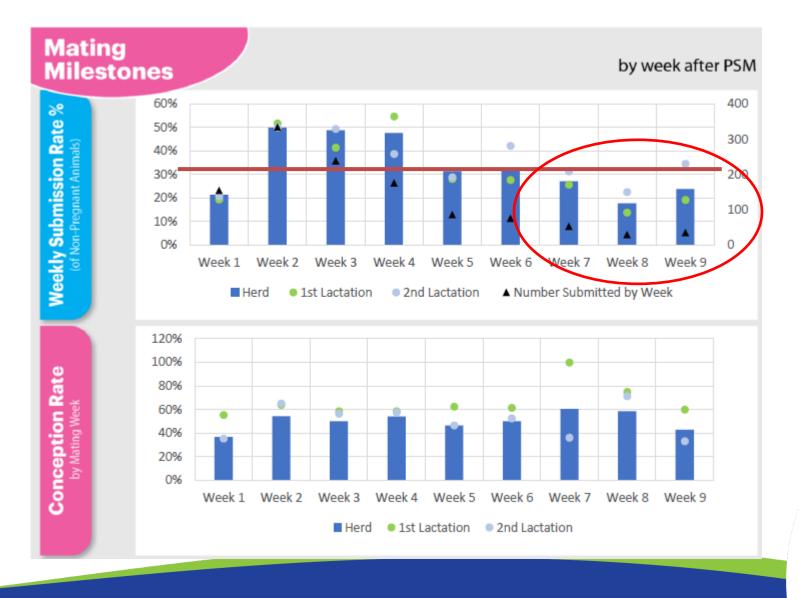
Not-in-calf rate
Percentage of cows not pregnant after 72 days of mating

Your herd 10% (5-10%) Aim for 11% Duration of AB period: 72 days



Vetermary ochre by the big blue cross

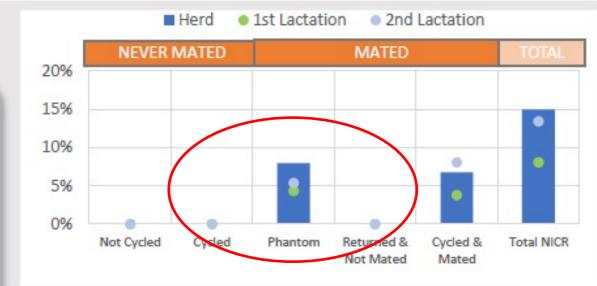
Performance

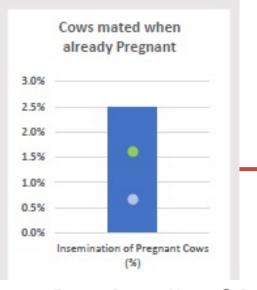




Performance







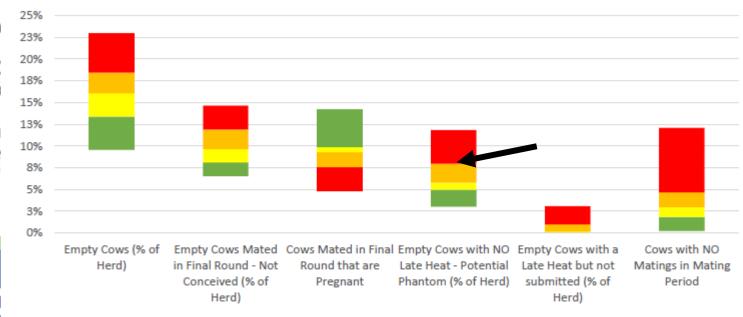
NEVER MATED

- Not Cycled: Cows NIC and never cycled (eg major NCC issue)
- Cycled: NIC Cows not mated but with at least one heat over mating period (eg draft error or elected not to mate)

MATED

- Phantom: Cows NIC after insemin with no subsequent return heat.
- Returned & Not Mated: Cows NK unmated heat event <30 days before chose not to mate)
- Cycled & Mated: Cows NIC with a heats) before the end of mating (e

Empty Cows - Heats & Submissions in last 24 Days of Mating



Second Quartile

Third Quartile

■ Fourth Quartile

Veterinary C



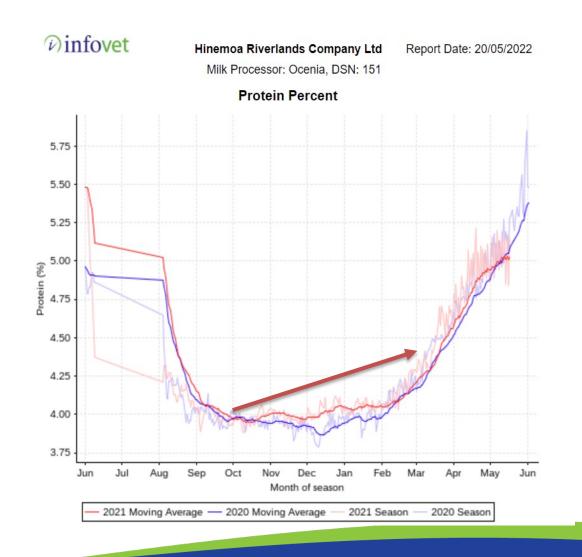
Non-Return Rate

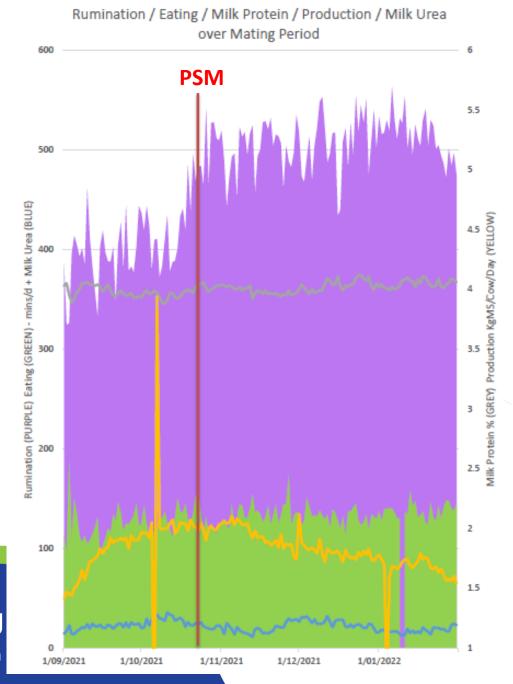
Percentage of cows that were last bred 24 or more days ago and have not returned to heat.



- LOW CONCEPTION RATE 0%-49%
- SWEET SPOT 50%-65%
- PHANTOM RISK 65%-100%

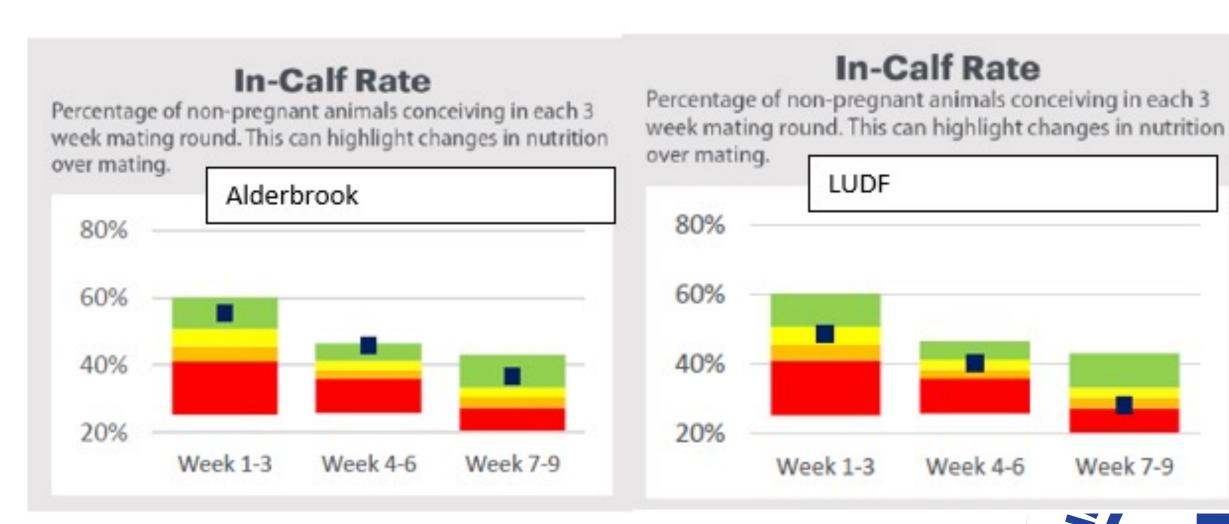
What can you see in real time?





Veterinary Centre by the Big

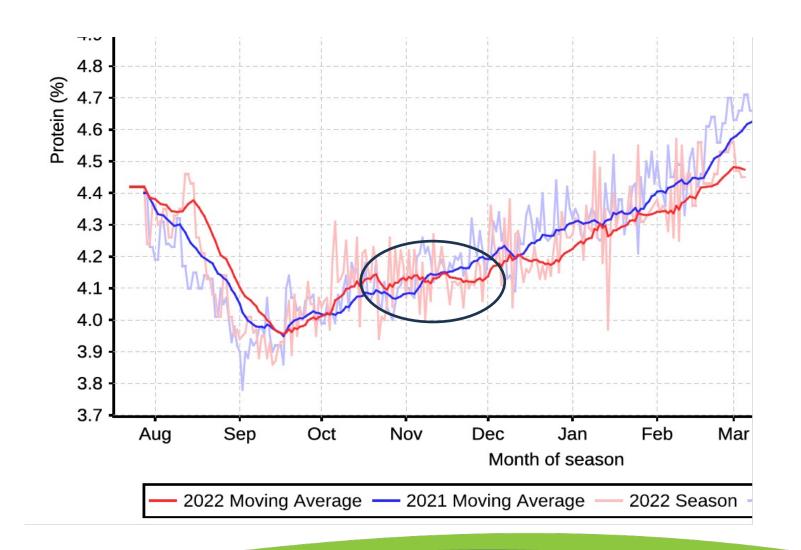
LUDF Benchmarking Project





RE

LUDF Milk Protein



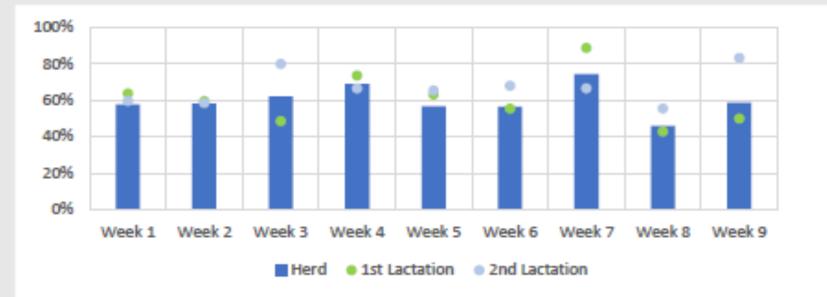


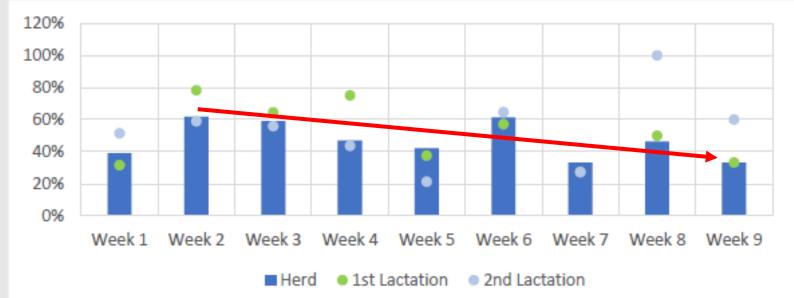
Weekly Conception Rates

Conception Rate by Mating Week **Alderbrook**

LUDF







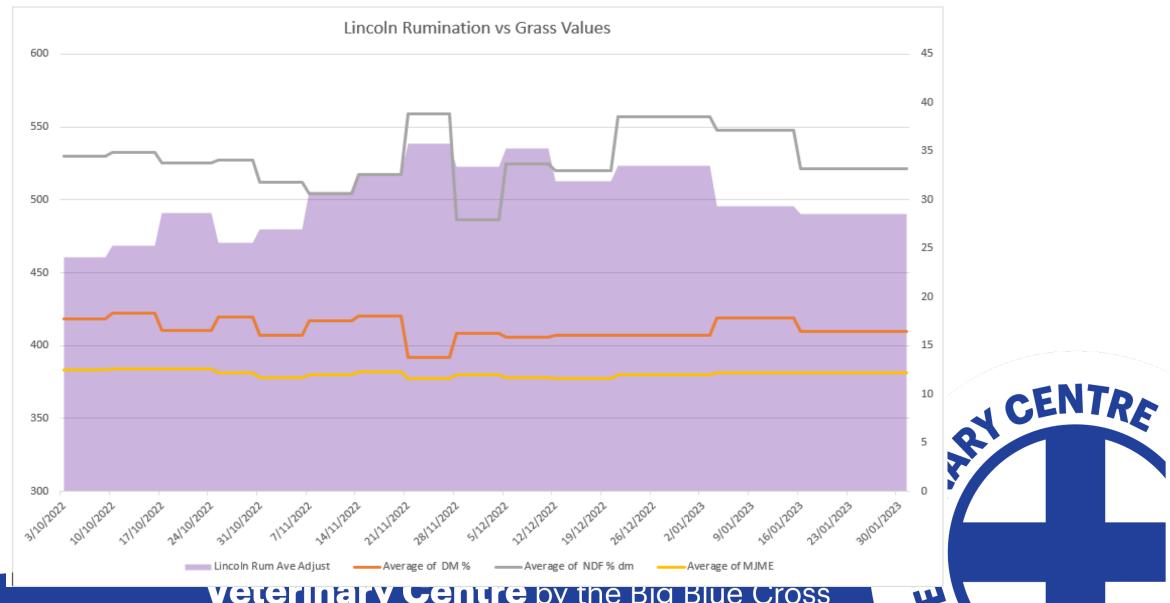


NEFA Levels (Fat mobilisation)

	LUDF	Liam
	NEFA Levels	NEFA Levels
10 th Aug	.7	.4
29 th Sept	.3	.3
27 th October	2	.3
10 th November	.4	.2
24 th November	.1	.2
8 th Dec	.1	.2
22 nd Dec	.2	.2



Grass Testing – the NDF story.....



Lactational Energy Calculator

Farm Name	High F	Producing Cow	Peak		Date	te 8/10/2021	
	ME	Wastage	kg of Feed	Multiplier	Protein %	Protein (kg)	ME
Grass	12.5	10%	18	11.25	25%	4.05	202.5
Silage	11	25%		8.25	8%		
Grain	13	5%	2	12.35	11%	0.21	24.7
PKE	11	5%		10.45	14%		
Baleage	10	20%		8	17%		
Molasses	12	5%		11.4	4%		
Straw	6	40%		3.6	3%		
Soy Bean Meal	12.5	5%		11.875	38%		
Average ME of liet (maintenance		TOTAL DM (kg) Offered	20.0		Totals	23.5%	227
& milk demand 12.6 increases with lower ME feeds)	12.6	TOTAL DM (kg) Eaten	18.1			Protein %	Total ME
					Maintenance (MJME)	57.	95
Liveweight (kg)	525	Walk (km) Flat	1.50		Milk (MJME)	189	9.6
Milk kgMS/Cow	2.40	Walk (km) Rolling			Walking	3	;



Feed Offered vs Demand (%)

91%

-23.35 MJME

NEGATIVE ENERGY BALANCE

Expected Weight Change

-0.64 Kg/Day

-0.56 BCS





Total Demand

(MJME)

251

Walk (km) Hilly/Steep

Ver 3

Will you be a successful collar user?

SUCCESS

Farm owner + Farm Team engaged

Buy-in and Trust of the Data

Willing to put time into data management

Willingness to change farm systems

LESS SUCCESSFUL
No Whole Team Buy-in

Poor records (garbage in garbage out)

Belief that "they are the top 10% farmer"

Expectation of a "Silver Bullet"



Making the Budget Work



Questions?



