



Providing knowledge.

ST PETER'S SCHOOL & LINCOLN UNIVERSITY
DEMONSTRATION DAIRY FARM



St. Peter's

CAMBRIDGE N. Z.



LINCOLN
UNIVERSITY

TE WHARE WĀNAKA O AORAKI

FARM FOCUS DAY: 20 FEBRUARY 2025





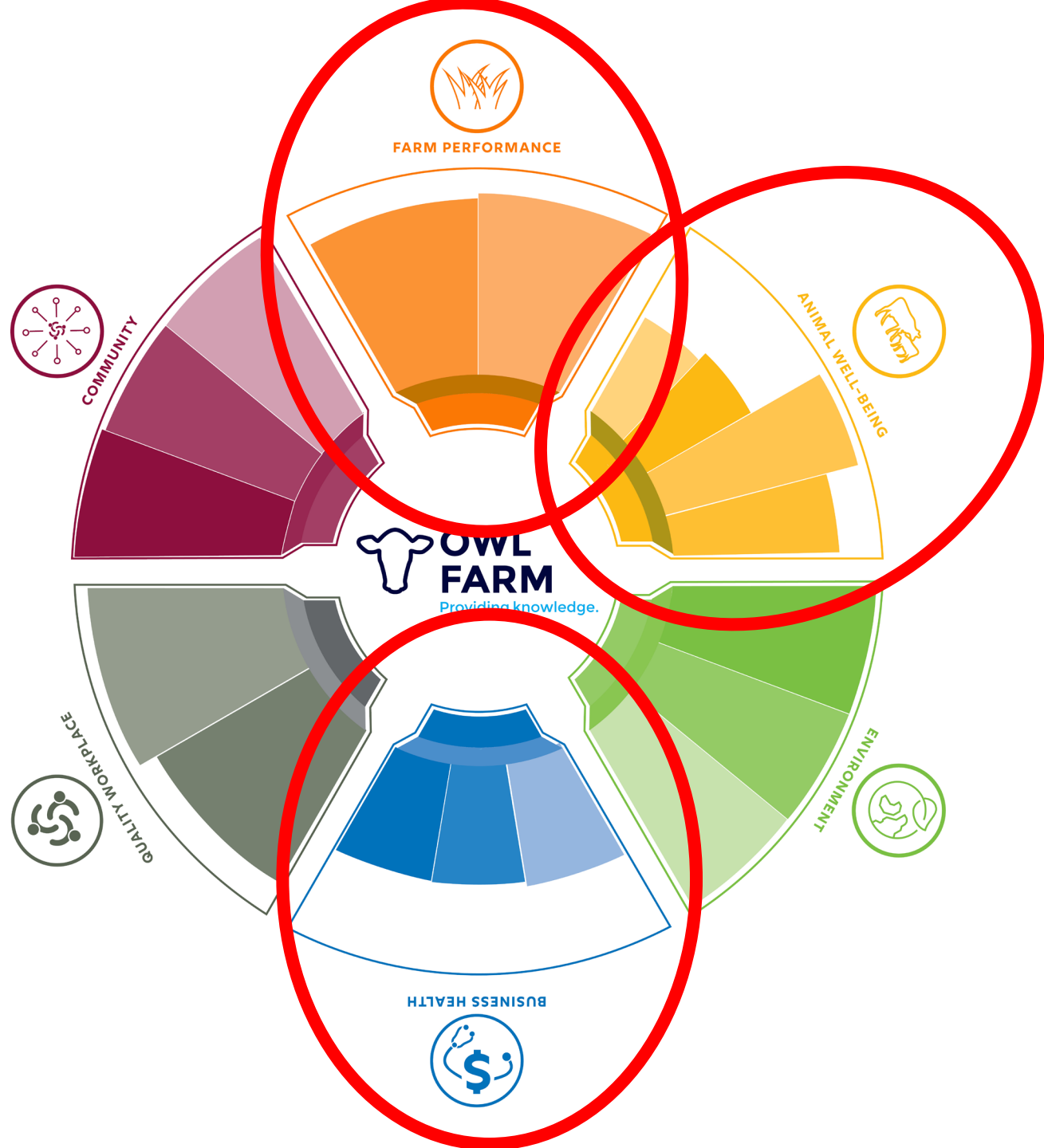
AGENDA

Time	Topic
10.30am	Owl Farm Wagon Wheel KPIs Focus area - involuntary culls
10.40am	Herd Pathogen Profile
11.20am	Herd visit Repro review Autumn management
12.40pm	Halter review
1.00pm	LUNCH

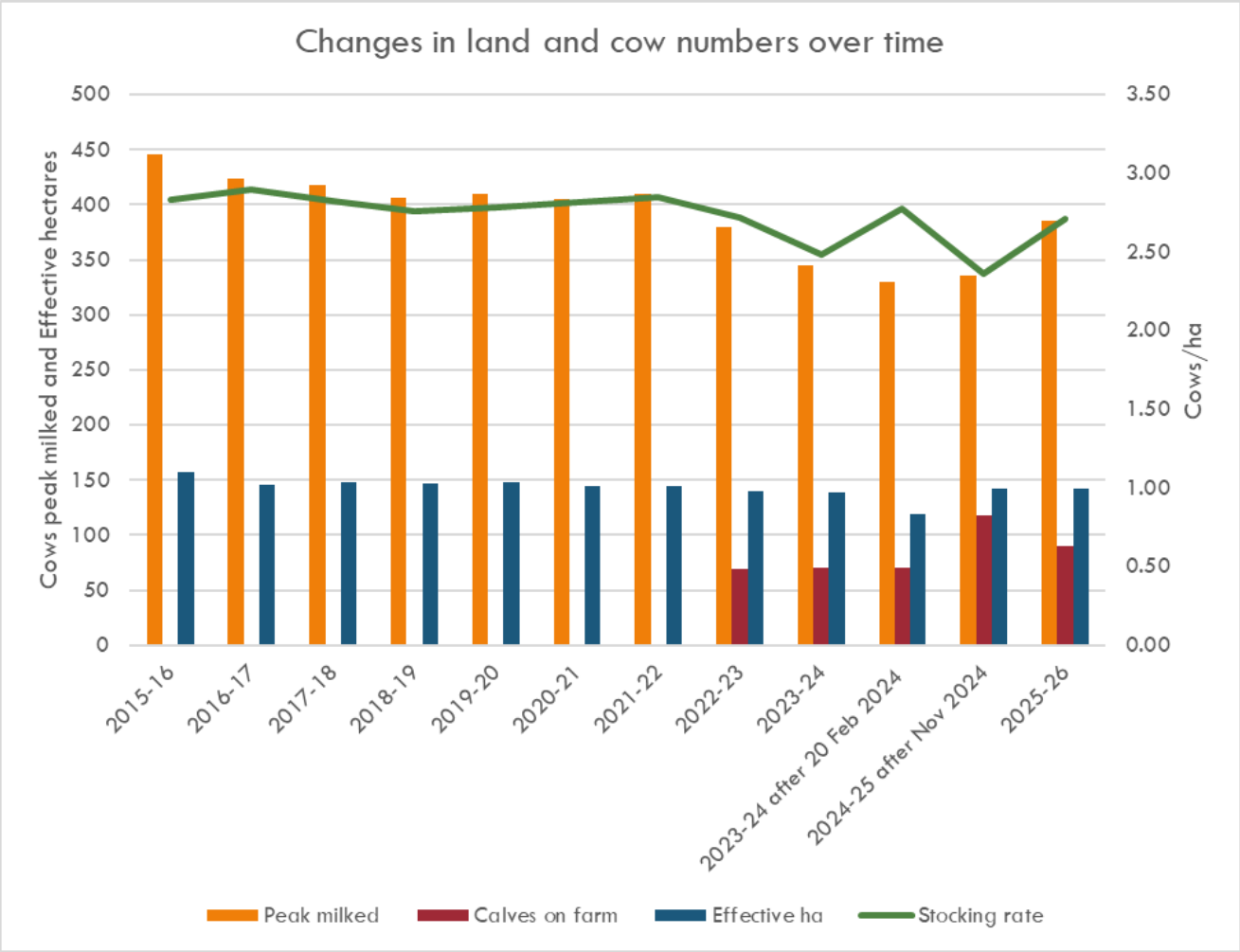
2023/2024



2023/2024



Land area changes over time

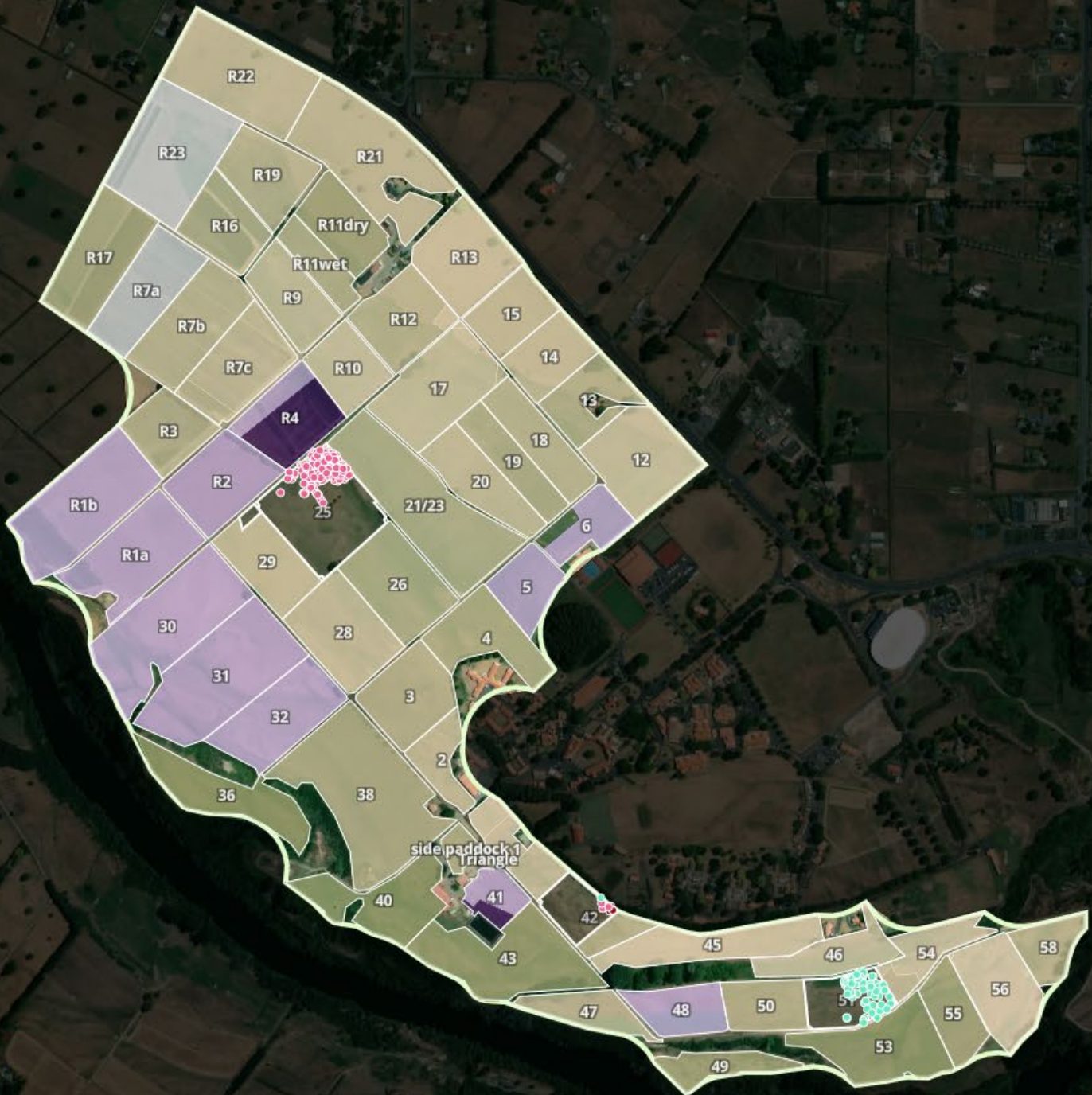


Owl Farm

APC
1772 kg DM/ha

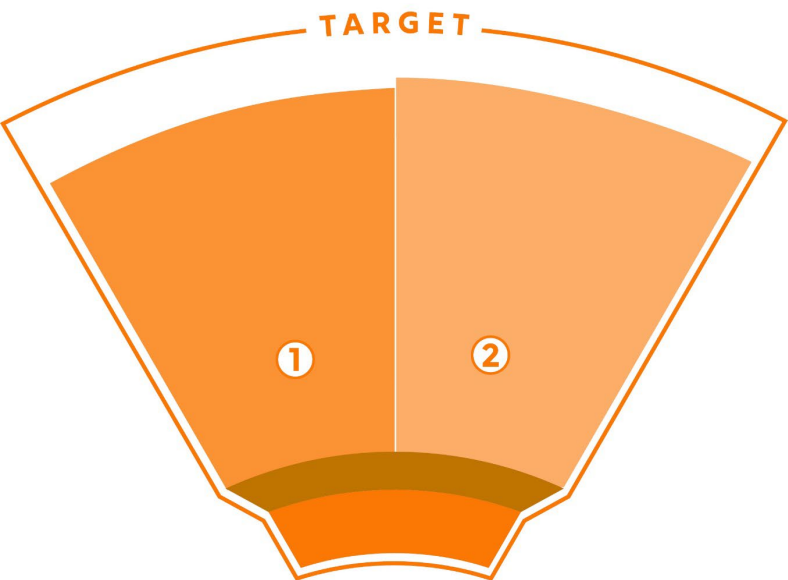
Round length
37 days (3 day avg.)

Growth rate
11 kg DM/ha/d





Farm Performance KPIs



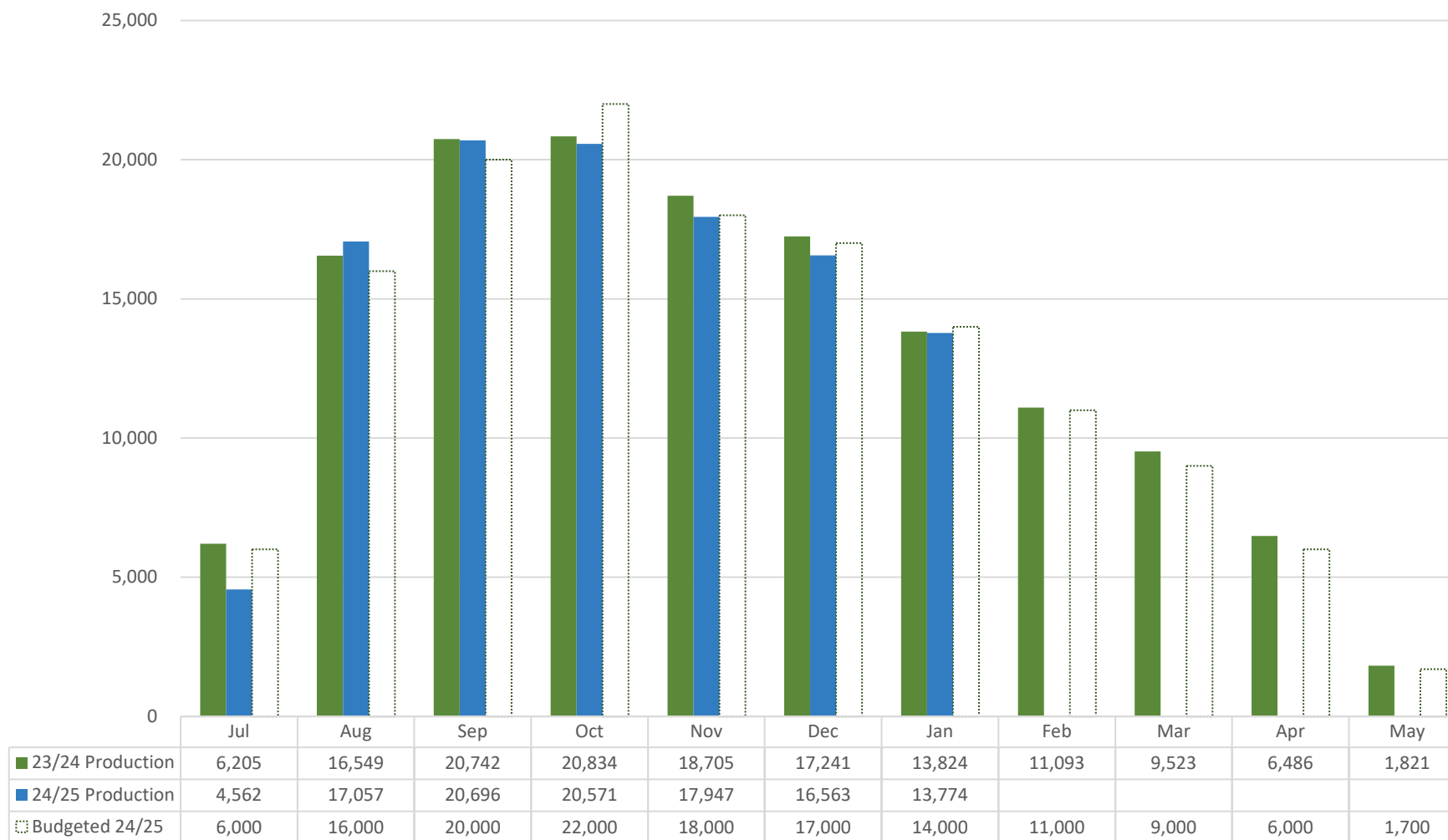
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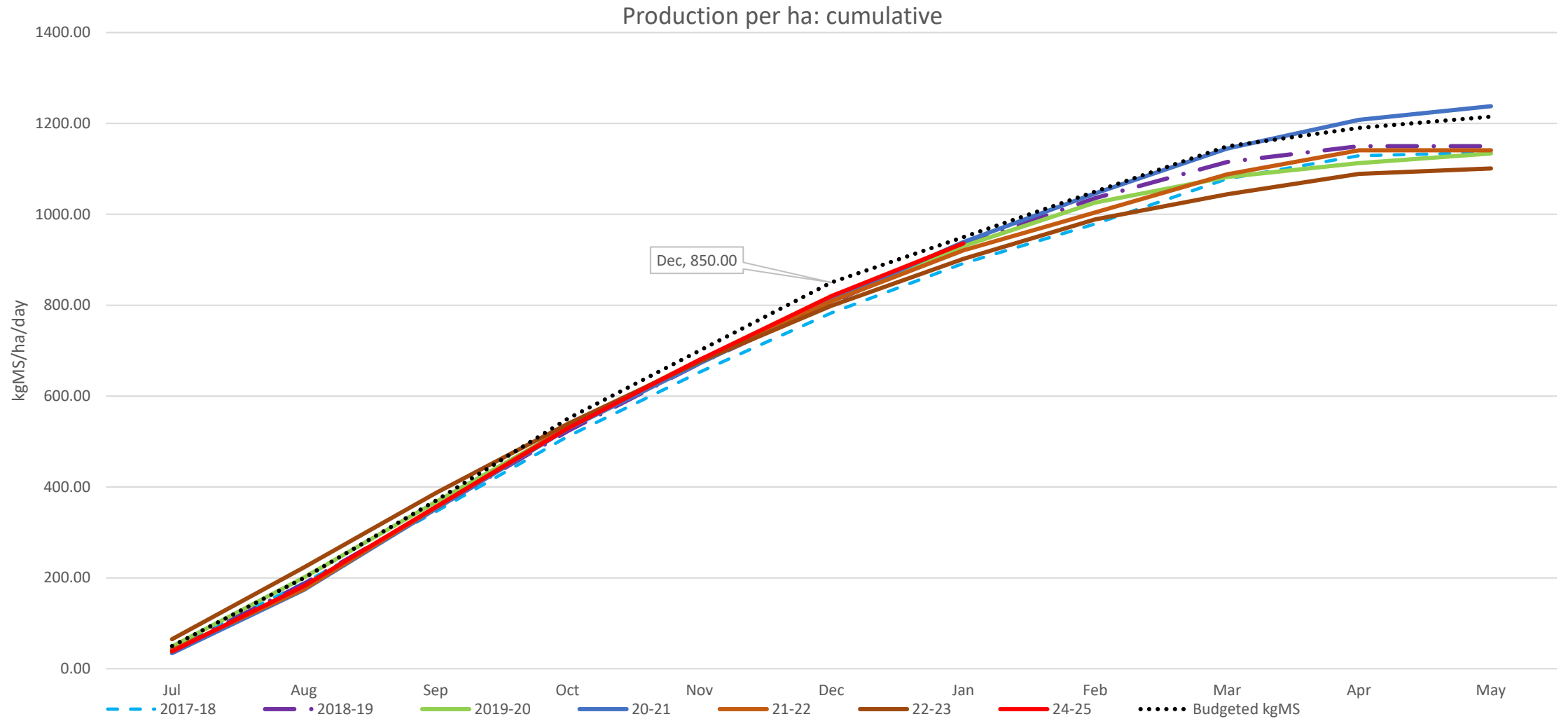
PRIMARY KPI	OWL FARM TARGET	2023/24	2022/23	2021/22	2020/21	2019/20	2018/19
P&C harvested/ha	15t DM/ha - measured via DairyBase	12.7	11.2	13.2	13.7	13.1	13.1
MS/ha to 31st Dec	850 kgMS/ha	729	766.5	808	810	816	819

Monthly kg MS vs target

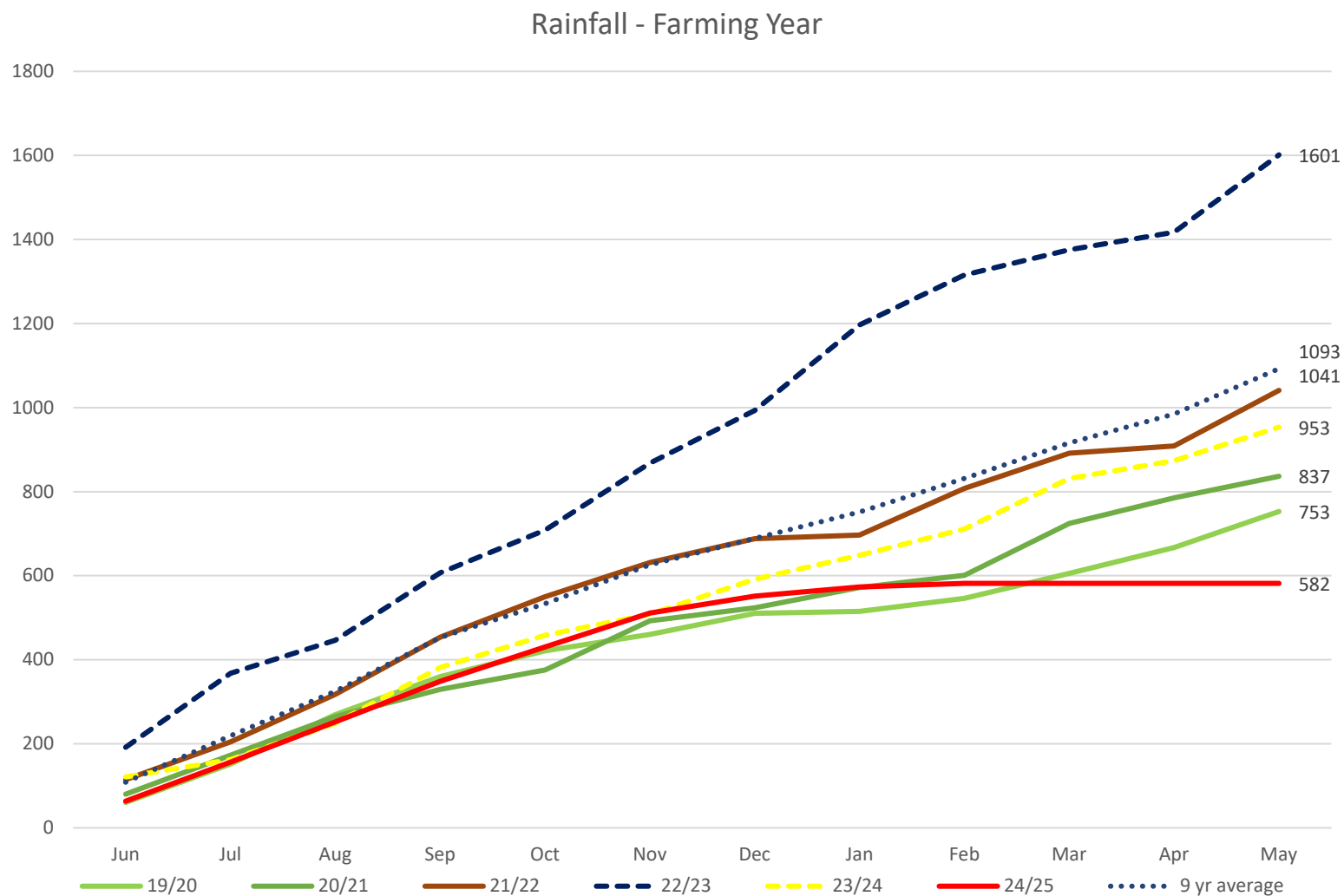
Production: Monthly Performance



kg MS/ha cumulative



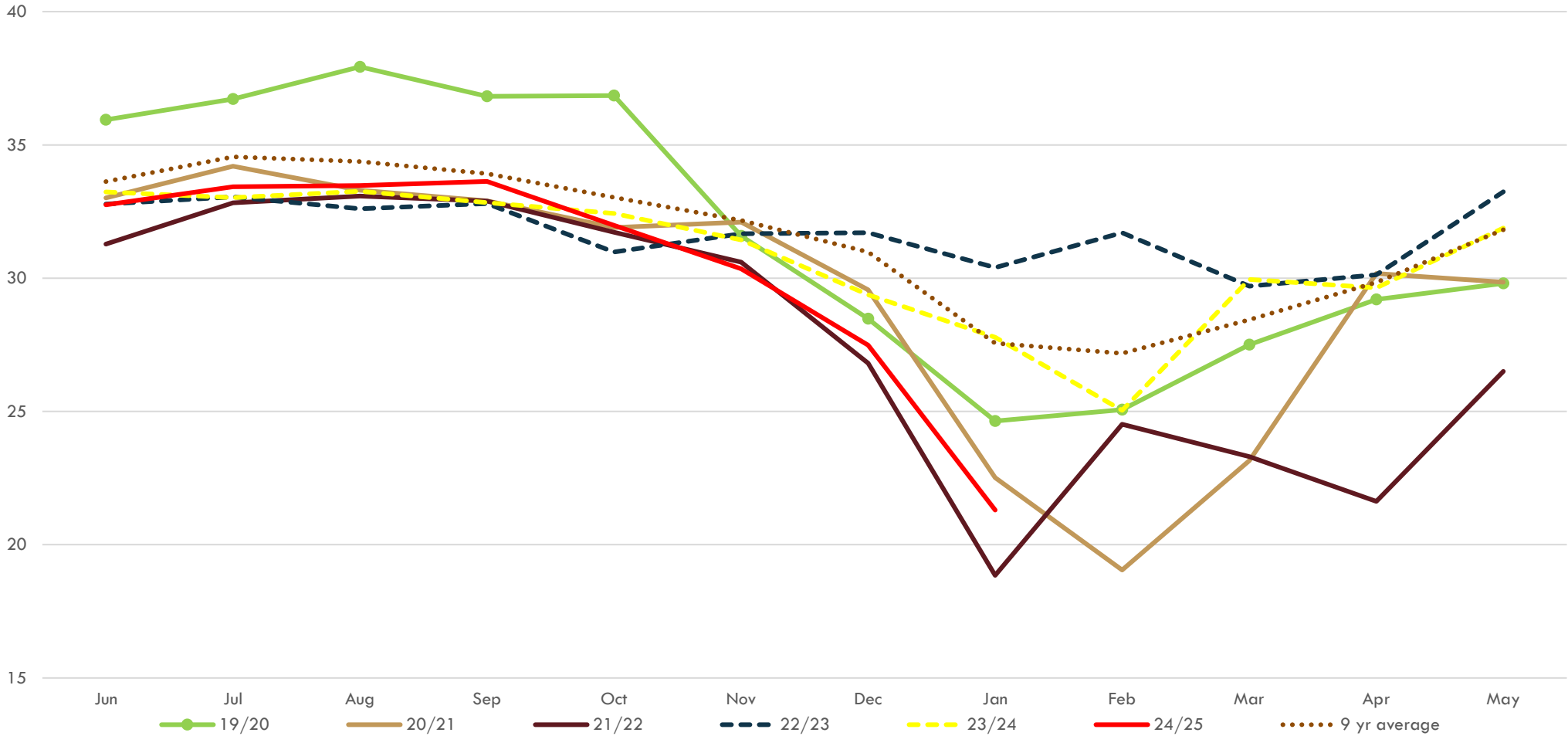
Rainfall cumulative



Soil moisture



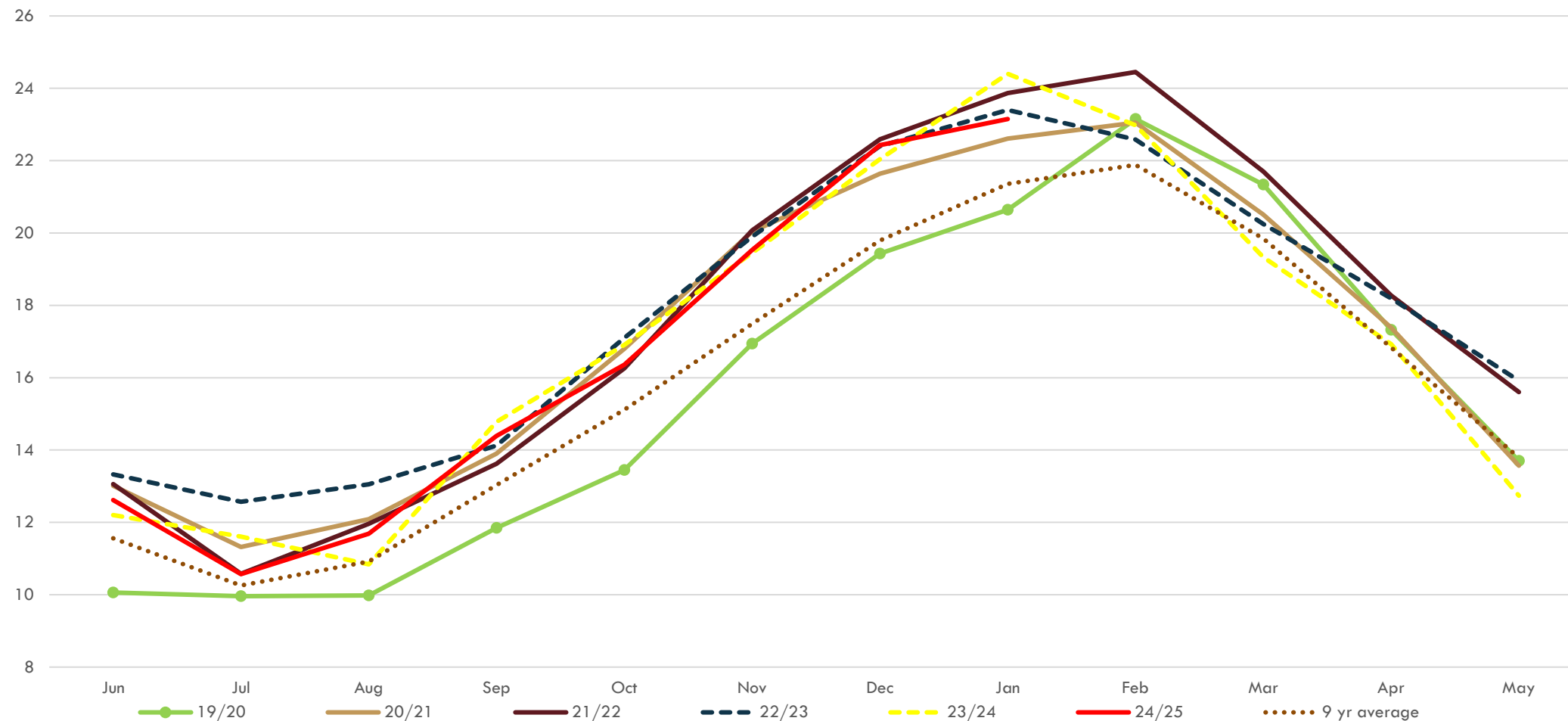
Average Soil Moisture



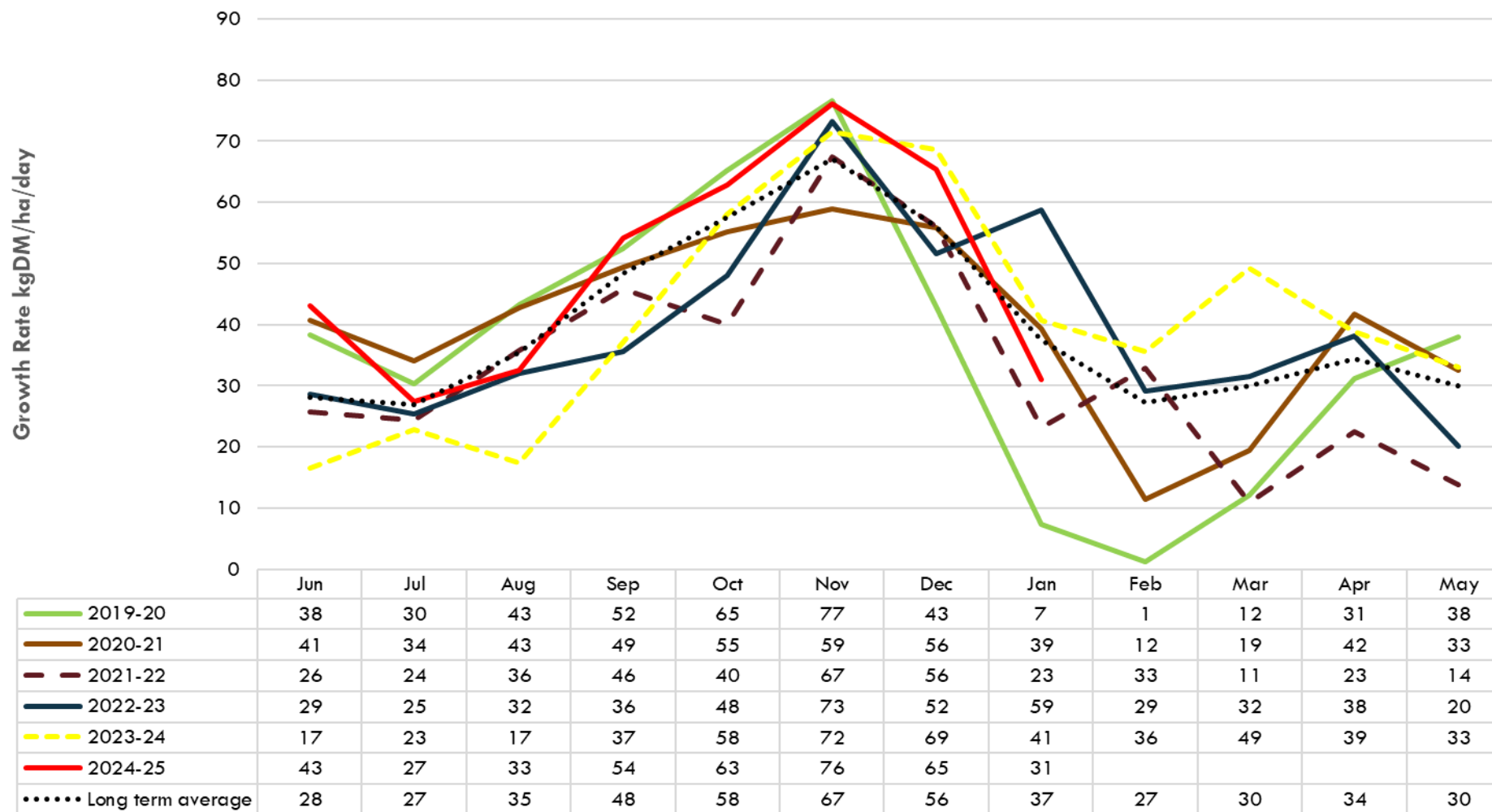
Soil temperature



Average Soil Temperature



Farmax Potential Growth Rates



Season summary



Celebrations	Challenges
Early spring	Establishing crops with insect pressure
High peak/cow milk production	Incorporating new area
Healthy well grown calves	Getting a visa for one of our team
Having a full team	Buying and selling stock
	Shed maintenance

How much of your feed eaten is converted into milk?

Benchmark group is farm system by region. Your farm's average herd liveweight is assumed as 460kg based on your breed mix.

From your records, we estimate that the proportion of feed eaten and converted into milk on your farm is:

55%

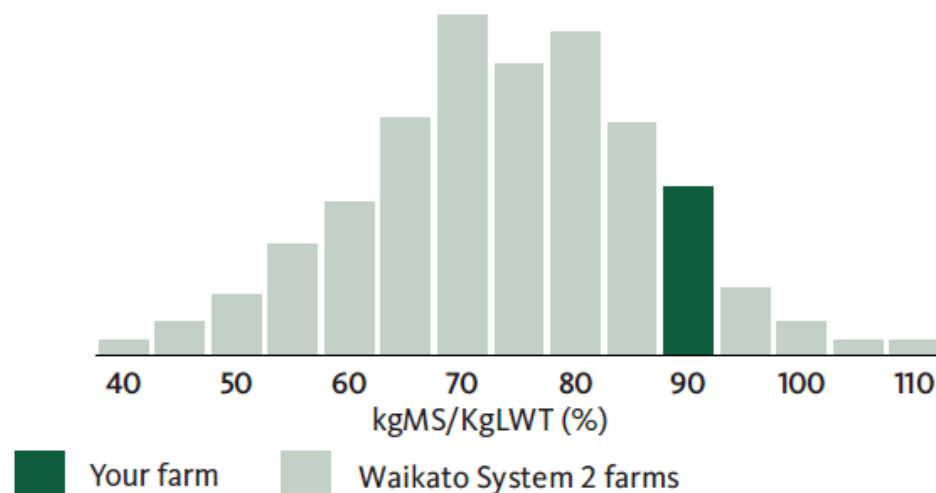
Benchmark average

50%

Benchmark top 20%

54%

Your farm's milk production per kilogram of liveweight



Great job – you are in the top 20% regionally

Based on these insights, your conversion of feed-eaten-to-milk is in the top 20% of similar farms in your region. Improving this even further could help improve your overall production and could help reduce your GHG/kgMS.

	Pasture Cover (kgDM/ha)	Feed allowance (kgDM/cow/day)	Feed demand (kgDM/ha/day)	Pasture Growth (kgDM/ha/day)	Post grazing Residuals (kgDM/ha)	Rotation Length	Imported Supplement (kgDM/cow)	Homegrown forage (kgDM/cow)	Nitrogen (kg/ha applied)	Milk production (kgMS/cow /day)
June	2400 =	Dries 12	33	28	1300	90		2 baleage		
1 st July PSC	2400 =	Milkers 17 Springers 12 Dry 10	45	36	1500 1400 1300	SRP	3 kg PKE	4 grass silage 2 hay 2 baleage		1.6
Aug	2200 ↓	Milkers 17 Springers 12 Dry 10	45	40	1500 1400 1300	SRP	3 kgPKE	4 grass silage	20	2.1
28 Aug Balance Date	2100 ↓	19	53	53	1500	25	3 kgPKE	4 grass silage		2.1
Sept	2200 ↑	21	57	57	1550	25	2kg PKE		20	2.2
Oct-Dec	2100-2400 ↑	19-21	57 + 2 calves	66	1600	21-25			20 and 20 with spring fertiliser	2.1-1.6
Jan-Feb	2000 ↓	18	49	27	1600	30		4 brassica 3 grass silage		1.4
March	2000 =	18	45	30	1600	30		3 brassica 4 maize silage	20	1.2
April	2200 ↑	Milkers 16 Dries 12	40	34	1500	45		4 maize silage	20	1.1
May	2300 ↑	Milkers 16 Dries 12	35	30	1500 1200	45-60				1.0



Animal Well-being KPIs



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①

②

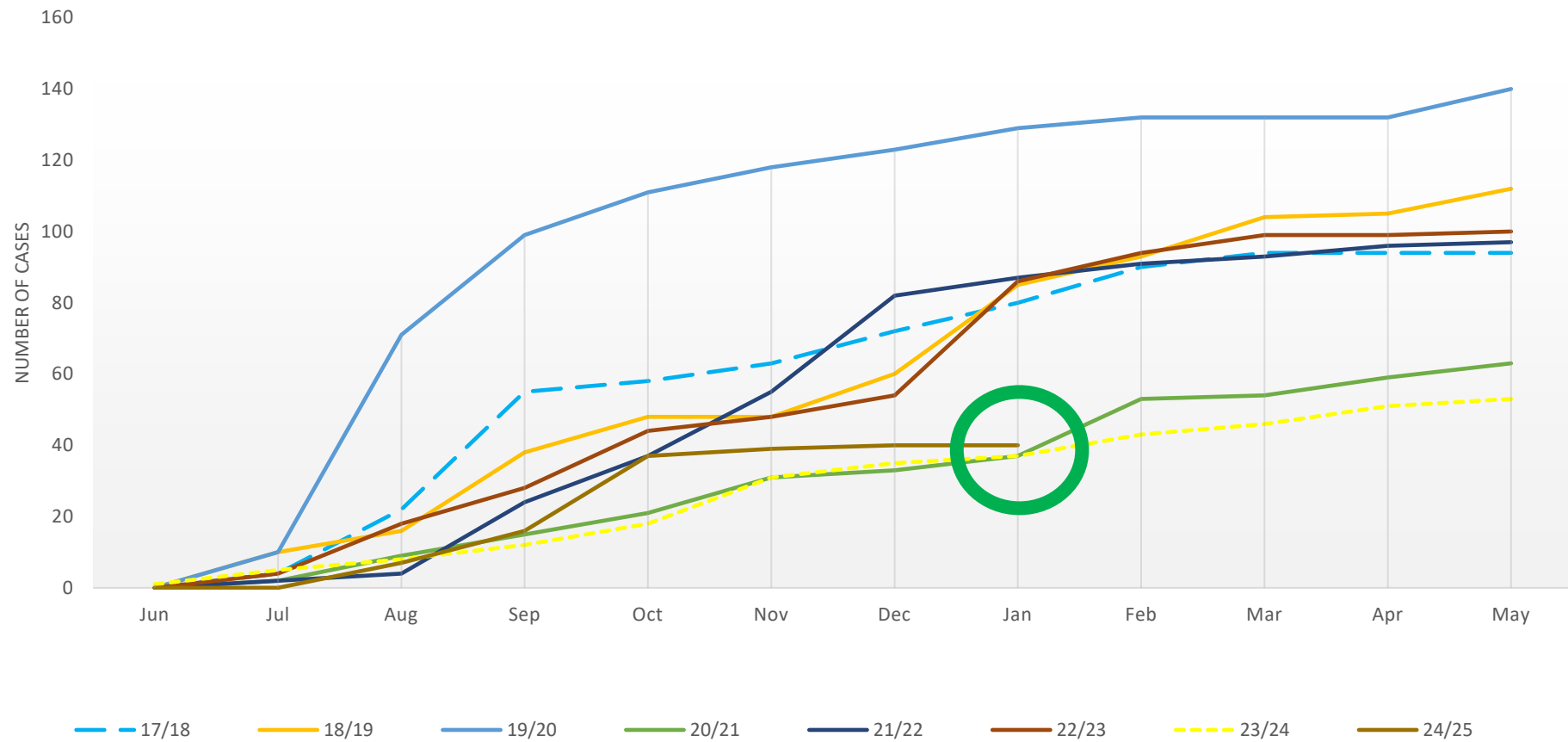
③

④

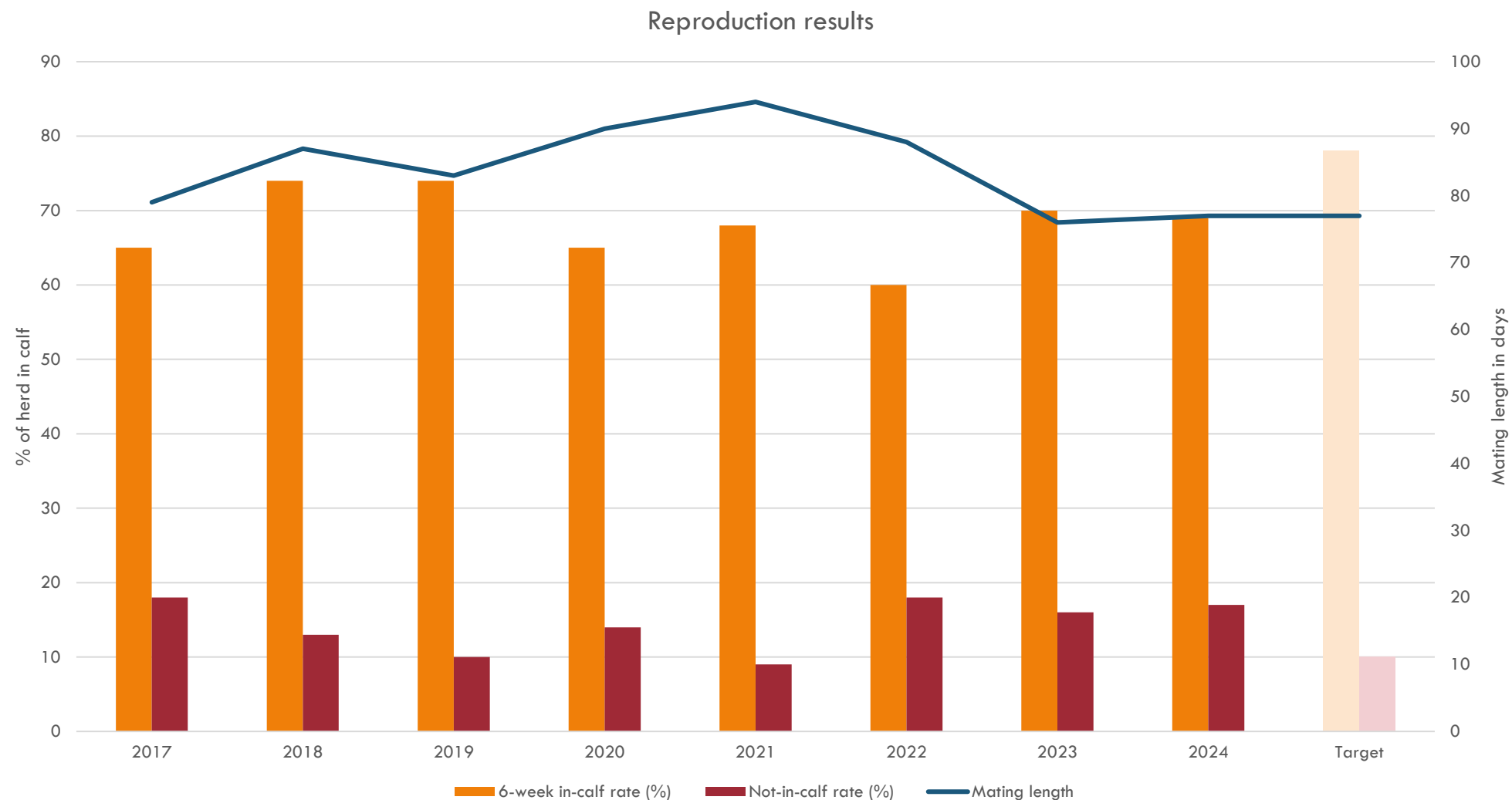
PRIMARY KPI	OWL FARM TARGET	2023/24	2022/23	2021/22	2020/21	2019/20	2018/19
Healthy cows	15% or less involuntary culls	22%	22%	12%	19%	20%	-
Purposeful lives for calves	100% reared past 4 days on farm	54%	61%	70%	60%	39%	34%
Replacements reared	21% - at weaning	20%	19.4%	19.4%	22.9%	23.4%	23.1%
Healthy calves	100% adequate total protein	92%	83%	83%	80%	-	-

Lameness

Lameness events



Repro results between years

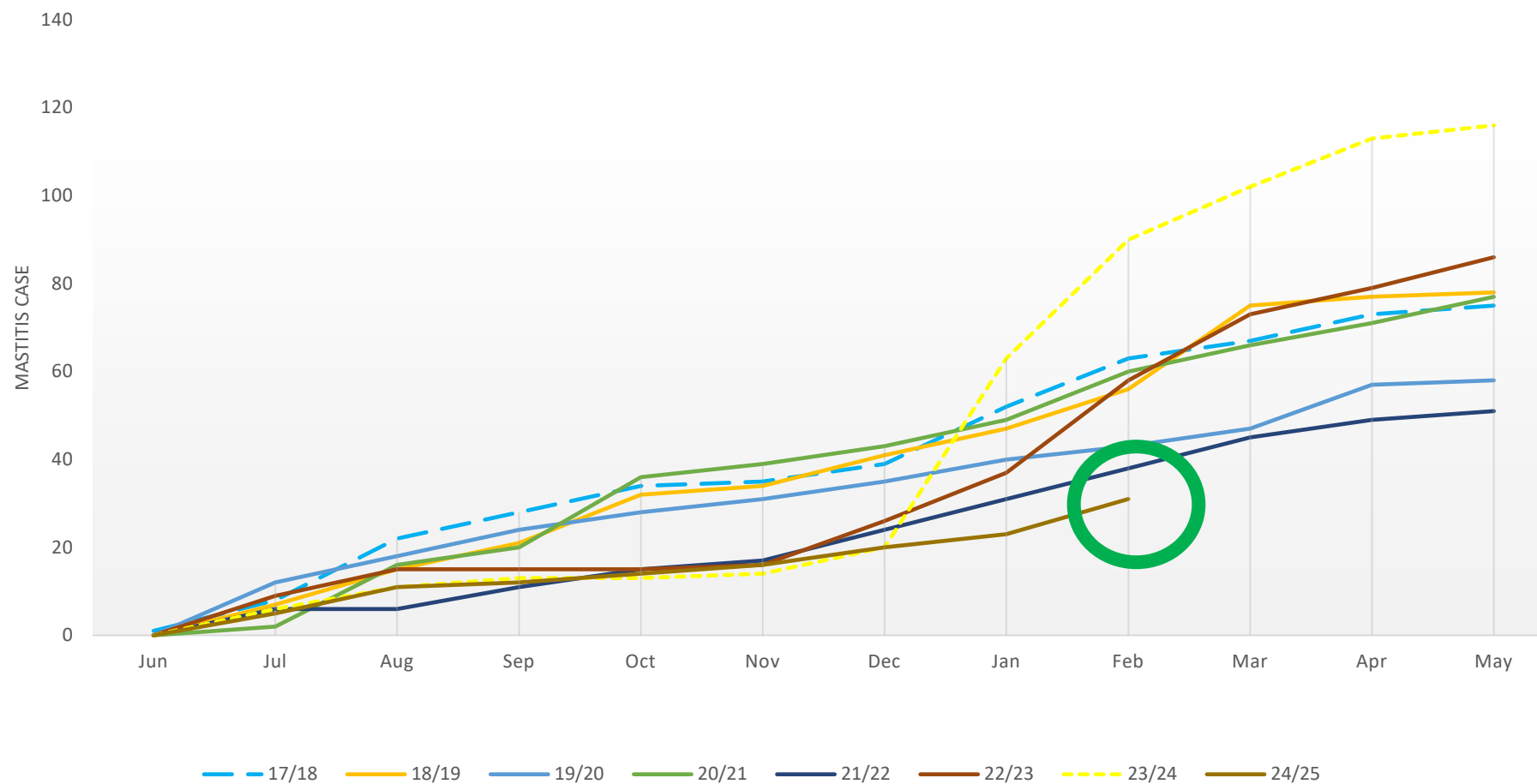


Mastitis



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Mastitis - cases treated



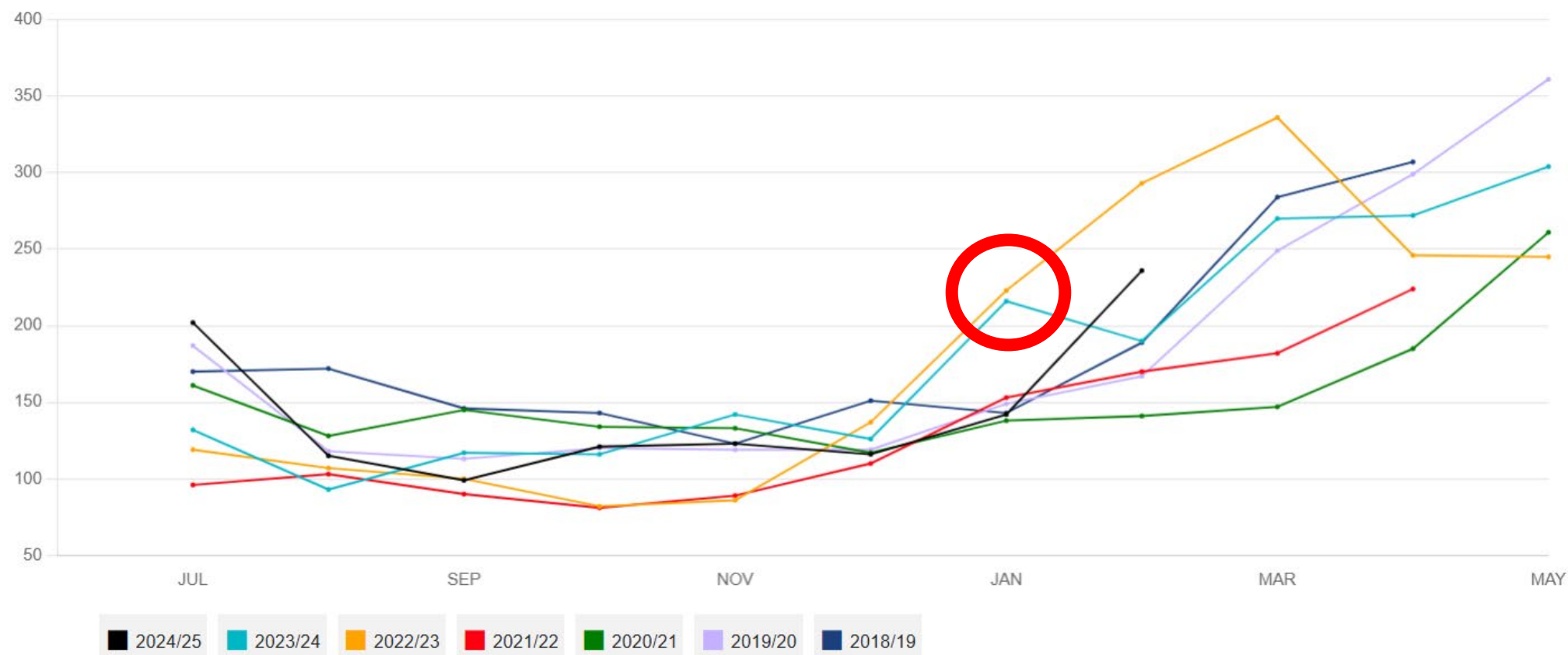
Somatic Cell Count



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SCC

1 Jun - 31 May



Action Plan



- Snapshot bulk test in December to determine the pathogens in the herd (alongside LIC research project test)
 - Skellerup to visit and advise rubber replacement needs including correct liners before being changed this month.
 - Peter to carry out milking review including teat scoring
 - Crops will be transitioned first week of January
 - Emollient to be increased to 15% before starting crops
 - All herds remain on OAD until at least February
 - Bucket of disinfectant for handwashing between handling teats
 - Develop cull list of any identified Staph aureus cows and 3 titters
-

Herd Pathogen Profile

Snapshot Report - Pathogen Identification				
Priority Level	Pathogen	Types	Nature	Risk Level
1	Strep. uberis (Streptococcus uberis)	Bacteria	Environmental (Can behave contagious)	Of Concern
2	Staph. aureus (Staphylococcus aureus)	Bacteria	Contagious	Moderate
3	CNS/NAS (Coagulase Negative OR Non-aureus Staphylococci)	Bacteria	Opportunistic (skin flora, normally not pathogenic)	Low

USEFUL VIDEOS



UNDERSTANDING SOMATIC CELL COUNT (SCC)

The Blue Milk Experiment

Natasha Maguire, Chief Scientific Officer at Farm Medix talks about Somatic Cell Count (SCC). Learn more about what SCC means and the uses and limitations of SCC.



PREVENTING TREATMENT RELATED INFECTIONS

Iatrogenic Infections

In this video, Natasha Maguire, Chief Scientific Officer at Farm Medix, explores how infections can be accidentally introduced during treatments. The video demonstrates best practices for hygiene and tips to prevent these harmful infections.



REDISCOVER RMT/CMT

Why do it & how to do it right - Dr Jess Shelgren, DVM

In this video, meet Dr Jess Shelgren, DVM who takes you on a tour of everything you need to know about RMT/CMT.





MILK SAMPLING BASICS

Best Practices and Pitfalls

Accurate diagnostics start with proper milk sampling of one (or more) teats. This video covers the steps for aseptic collection and common pitfalls to avoid—ensuring reliable results every time.



ON-FARM CULTURE

Instructional video

Watch the video to see how on-farm culture works and how to get accurate results with simple and easy steps.



FARM MEDIX
Empowering Dairy Farmers

Learn more at
www.farmmedix.com



Repro results between years



Mating season	6-week in-calf rate (%)	Not-in-calf rate (%)	Mating length
2024 target	78	12	77 days
2024	69	17	77 days
2023	70	16	76 days
2022	60	18	88 days
2021	68	9	94 days
2020	65	14	90 days
2019	74	10	83 days
2018	74	13	87 days
2017	65	18	79 days

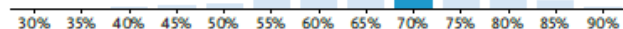
Animal efficiency

Reproductive performance is key in a seasonal calving system. Cows that cycle earlier will have more opportunities to conceive, and more days in milk the following season.



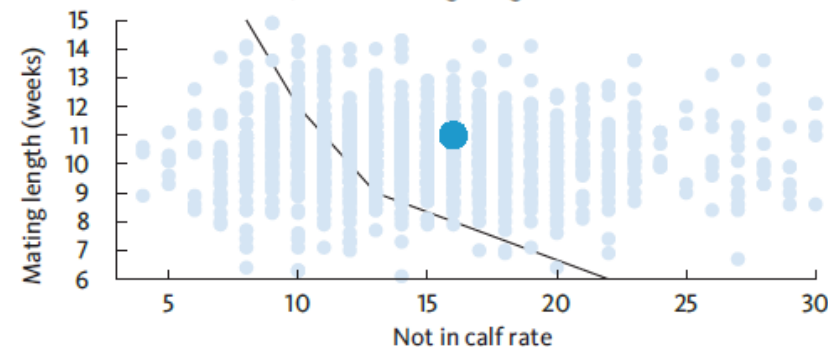
Reproductive performance

Your 6-week in-calf rate: 70%



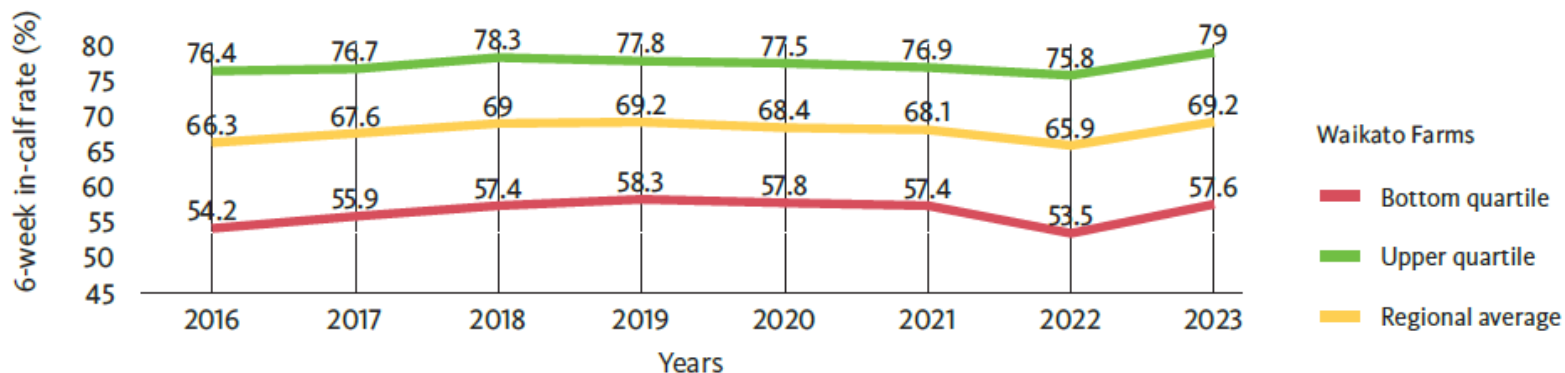
Your farm Fonterra farms in Waikato region

Your not in-calf rate, and mating length



Your farm Fonterra farms in the Waikato region
 Expected not in-calf rate

Reproductive performance over time



Waikato Farms
 Bottom quartile
 Upper quartile
 Regional average

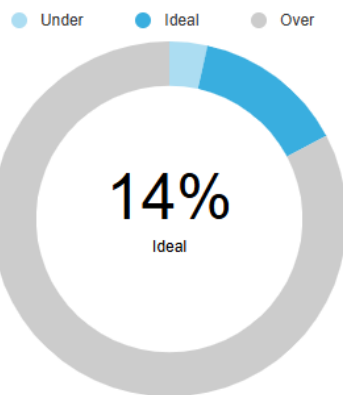
Focus Area	2024 Actions
Genetics	Include fertility traits in genetic selection
Calving transition period	Monitor recovery rate and return cows to Colostrum mob if poorly recovering
	Early splitting of young herd once 100 cows have calved
Spring feed management	Utilise supplements to slow the round down at Balance Date
	Regular pasture sampling through spring
	Monitor rumination minutes
	Update residuals in breaks grazed regularly to ensure accurate representation of feed offered
Conception Rates	Add 2 heats to sexed semen criteria instead of 1 heat
	Target 3 heats before PSM
BCS	Focus on feeding R2 and those with poor health status
Phantom cows	Pull PD forward to 30 th Nov to ID phantom cows allowing time for SGL insemination. Final PD 14 Jan

MINDA dashboard

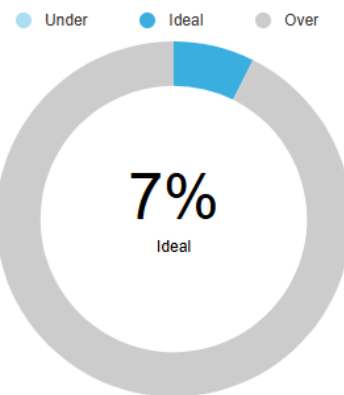


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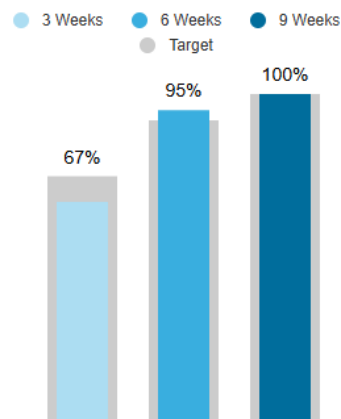
Rising 1 Year Old Weights



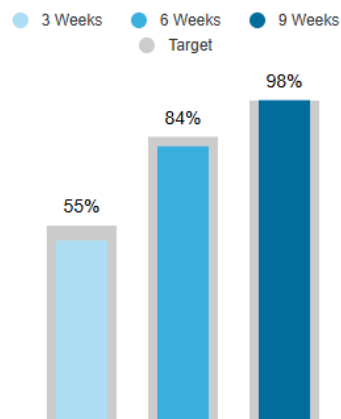
Rising 2 Year Old Weights



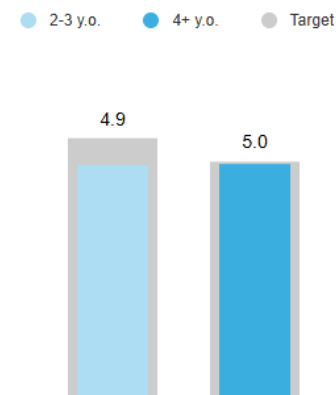
Two Year Old Calving Rate



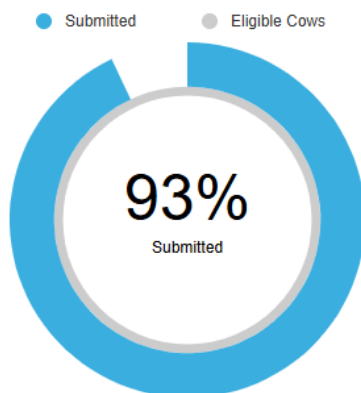
Whole Herd Calving Rate



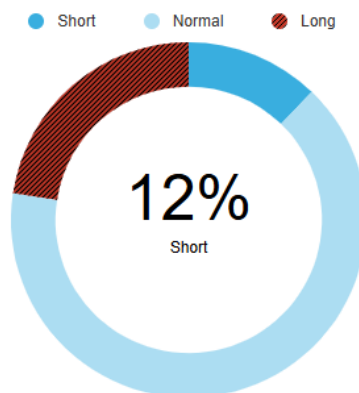
Calving BCS



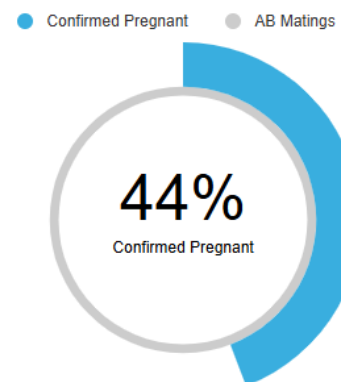
Submission Rate



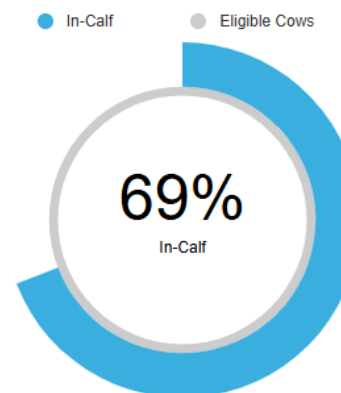
Return Interval Analysis



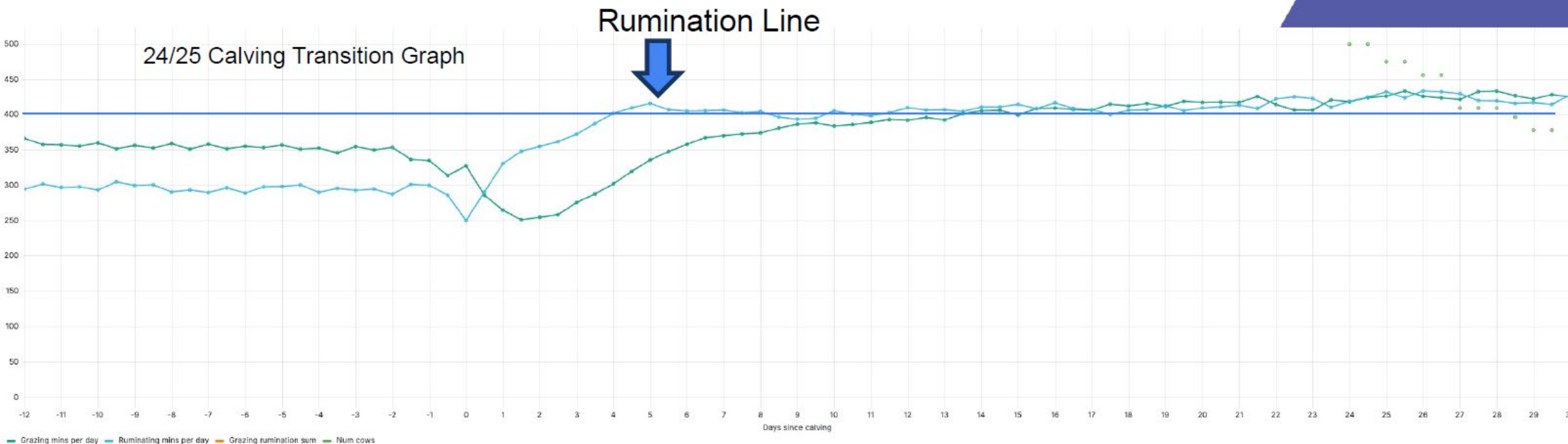
Conception Rate



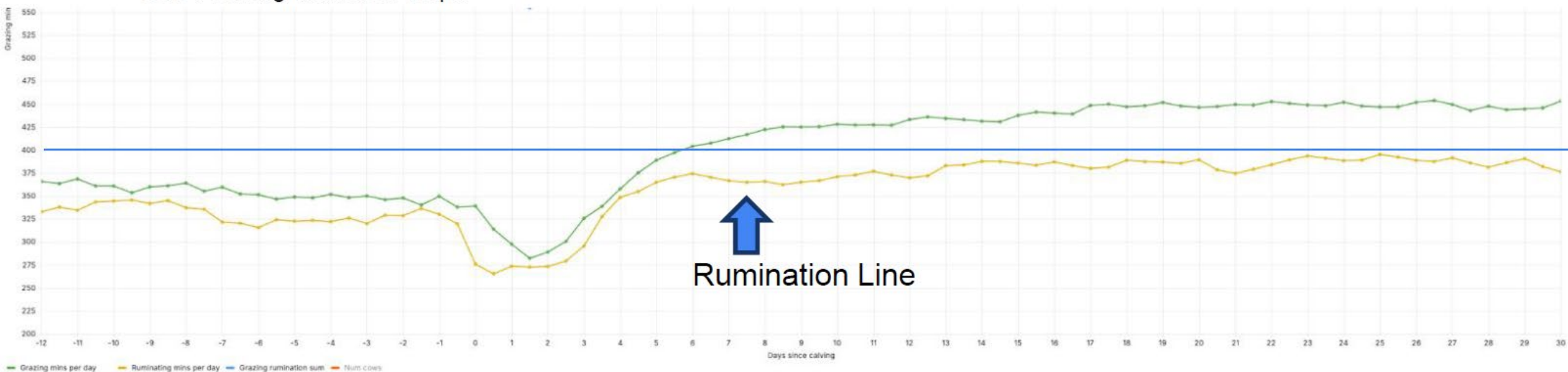
6 Week In-Calf Rate

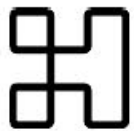


24/25 Calving Transition Graph



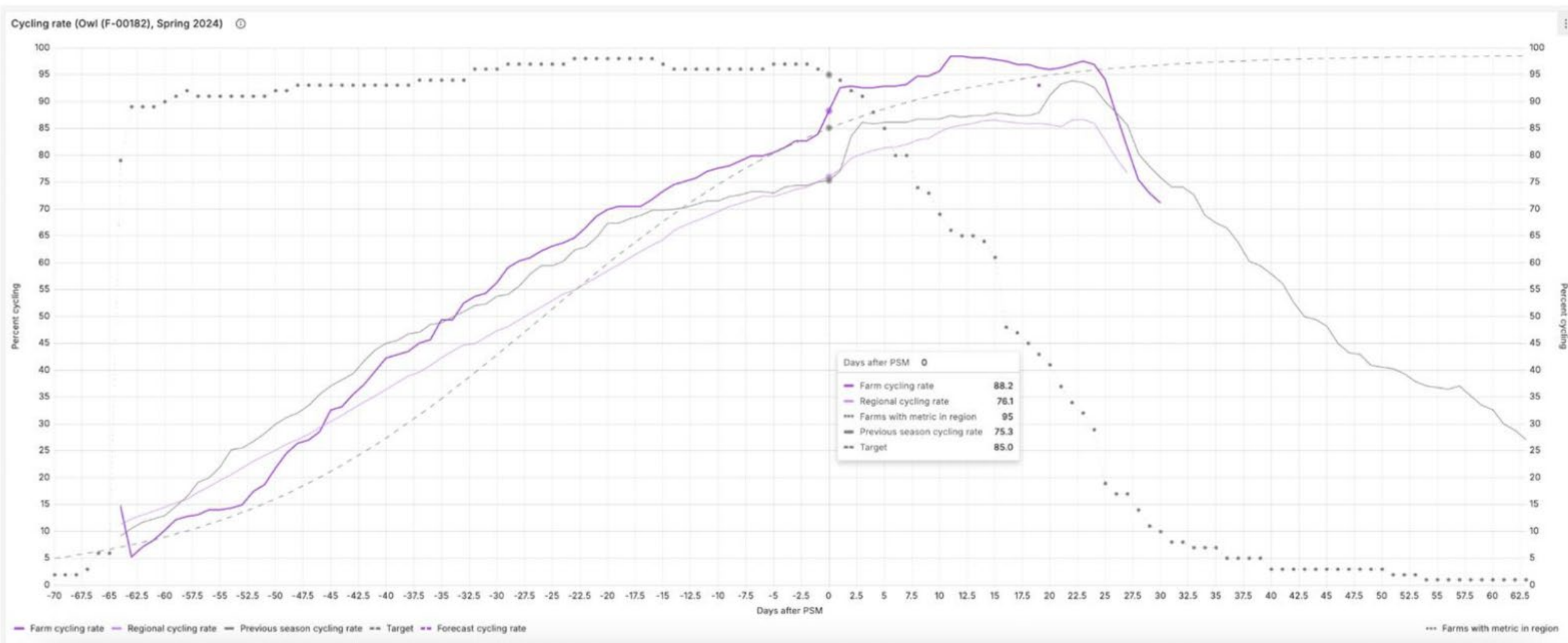
23/24 Calving Transition Graph





Cycling Rate | 2024

Cycling rate at PSM was 88%, Last year 75%



Cycled after calving ⓘ



Cycled in first 6 weeks

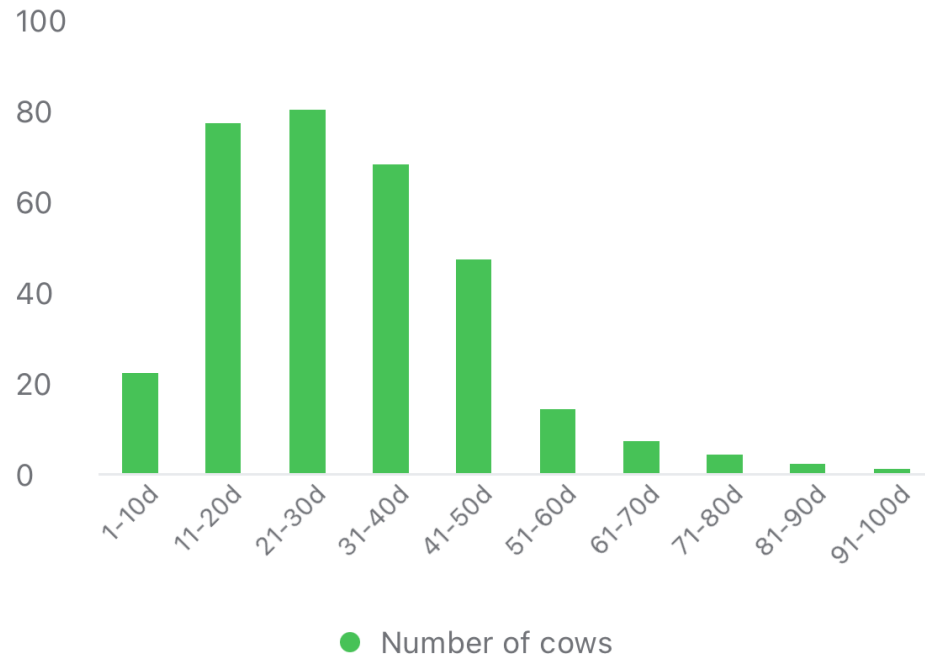
82%
cows

Target

82%
cycled

Average

30 days
to first heat



You had **19% more** cows cycle in the first 6 weeks after they calved compared to nearby farms which averaged **63%**

Submission ⓘ



Submitted

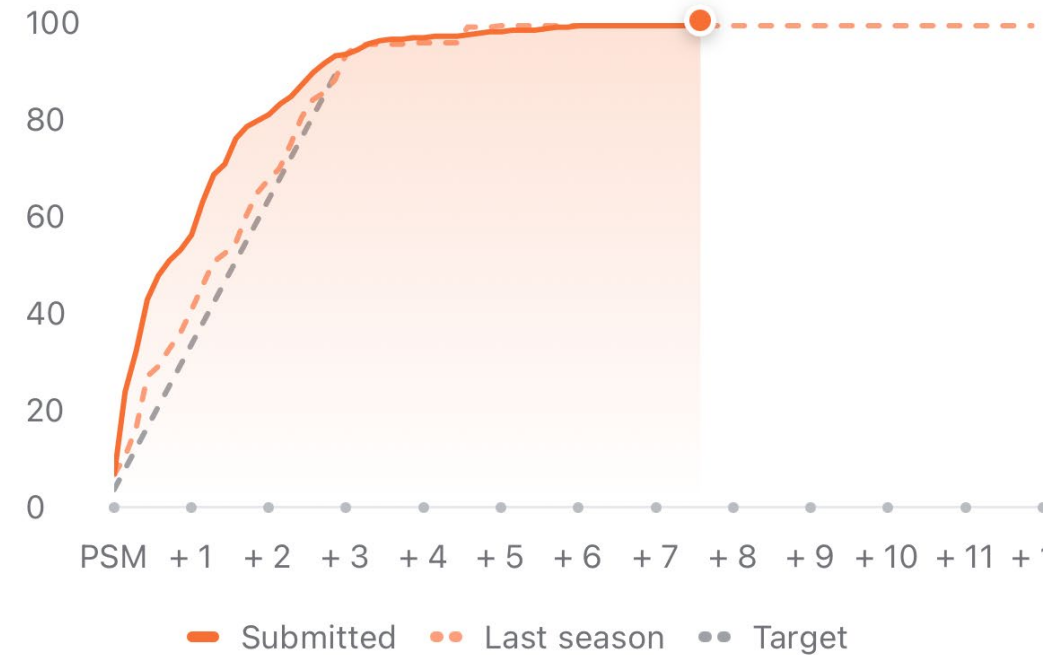
100%
of cows

3 week sub. rate

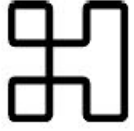
94%
of cows

Target

90%
3 week SR

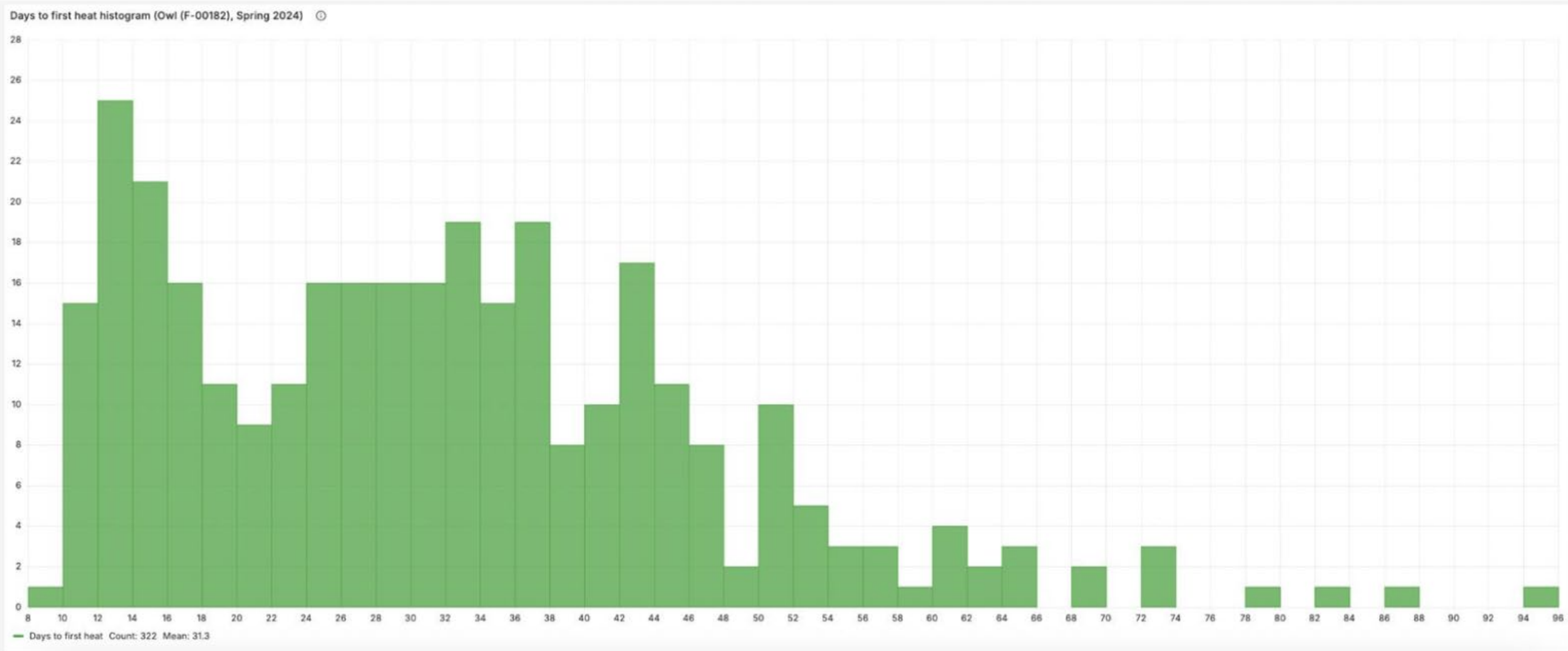


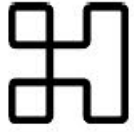
3 week submission rate was **11% above** nearby farms which had an average of **83%**



Days to first heat | 2024

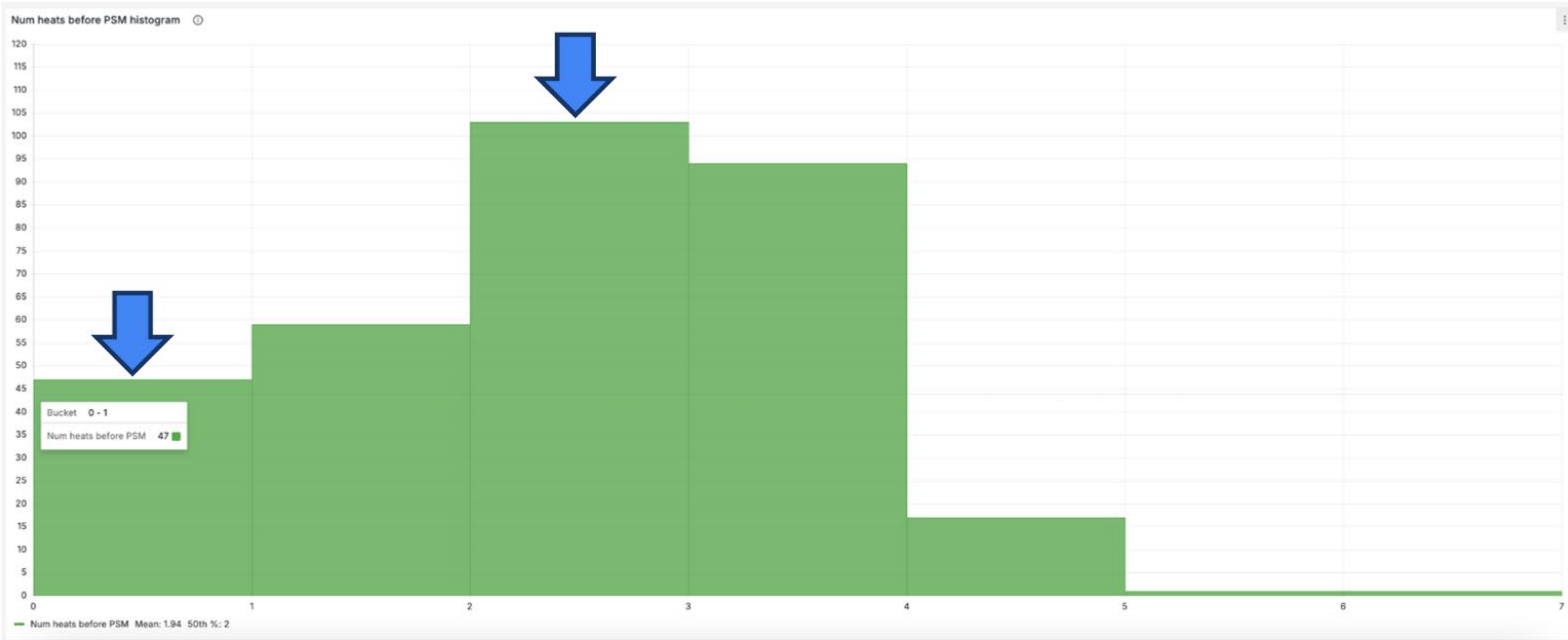
Average = 31.3 Days, Last year 32.7





No. heats before PSM | 2024

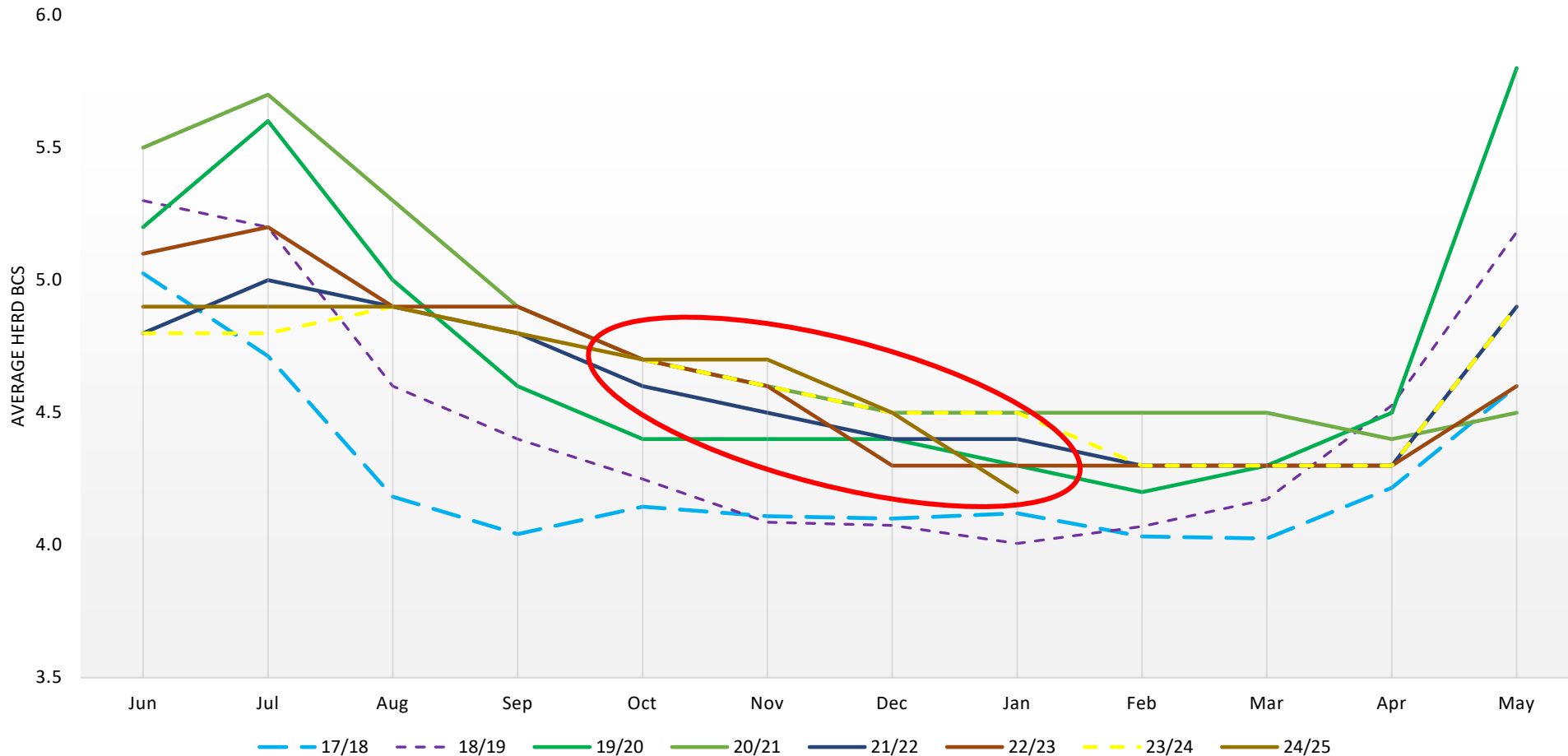
Average = 1.94 Heats, Last year 2.03. Less non cycling cows this year at PSM 47 vs. 62 cows last year



Body Condition Score



Monthly Body Condition Score

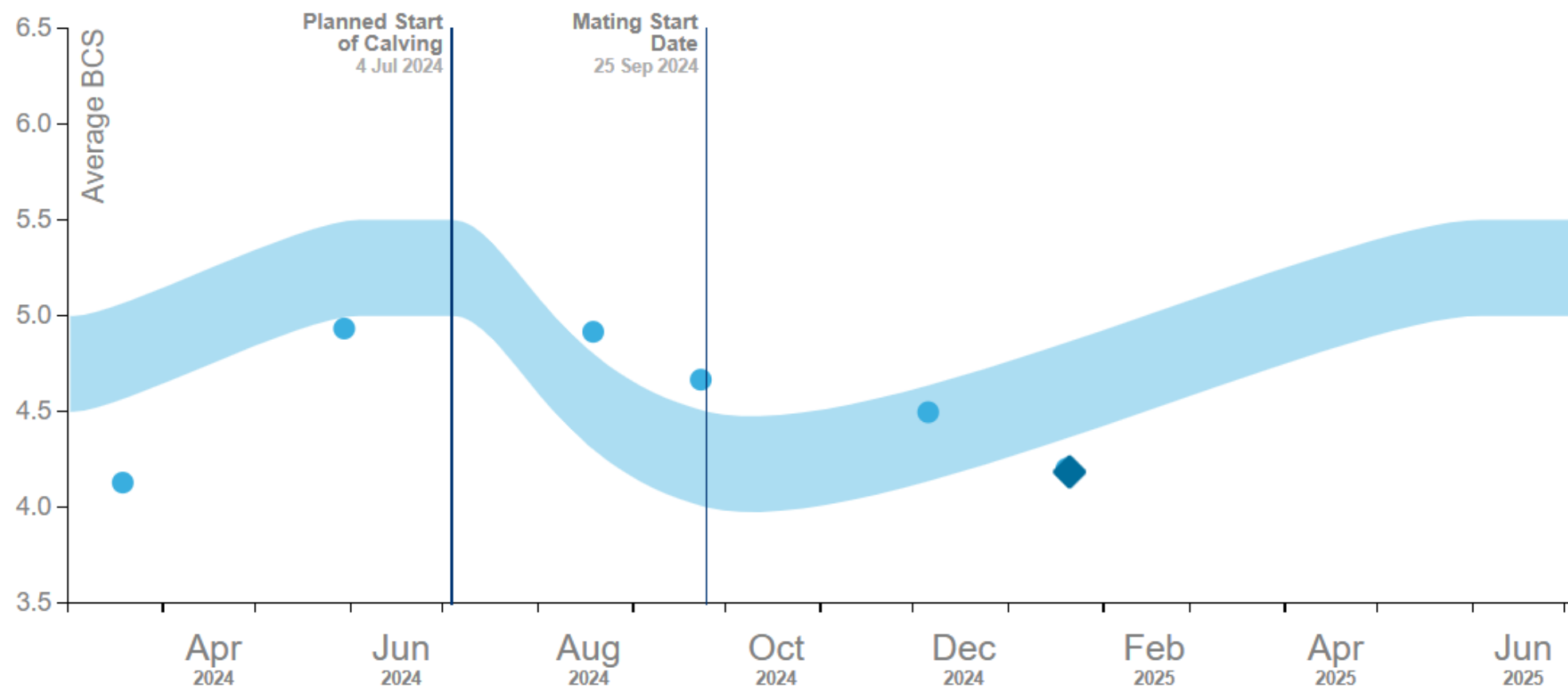


BCS profile

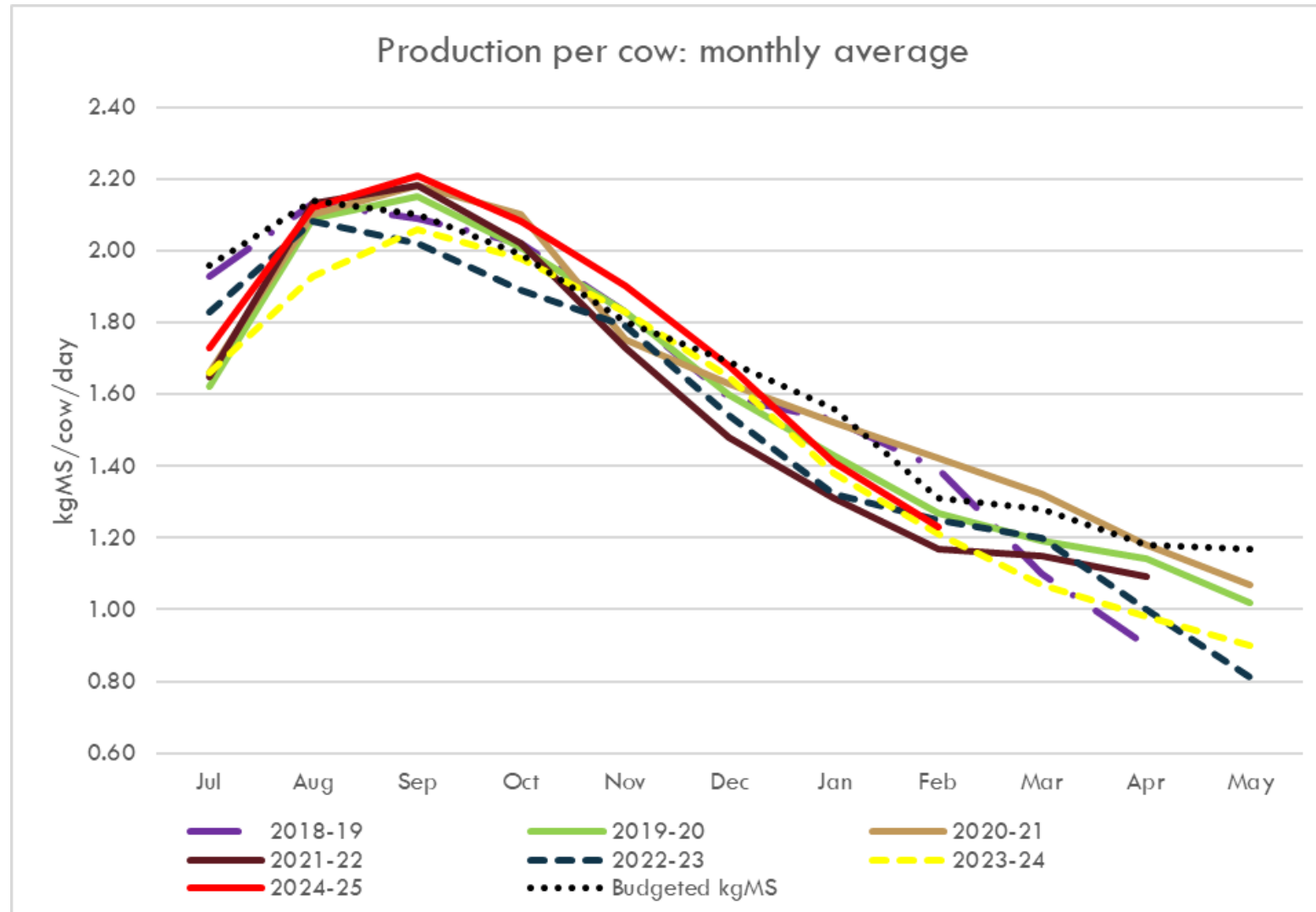


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Body Condition Scores ?

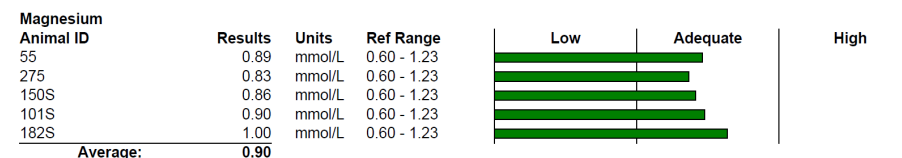
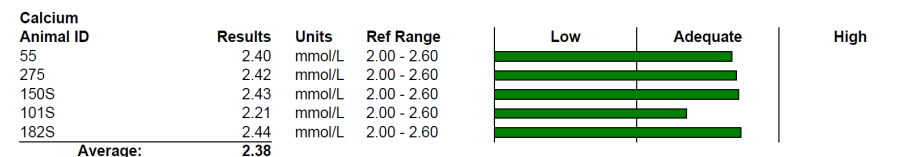
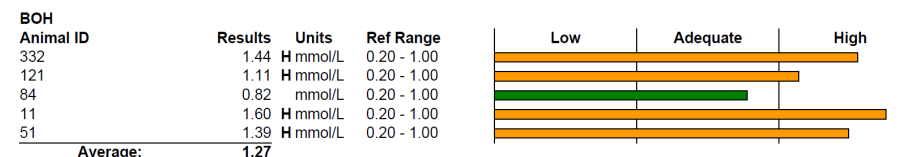
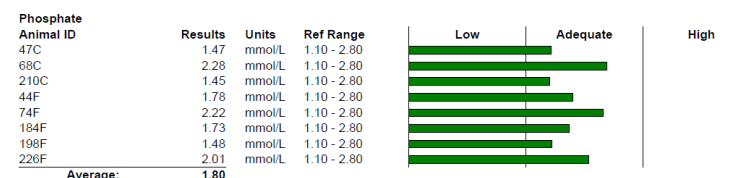
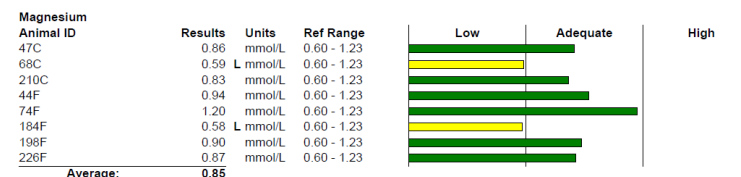
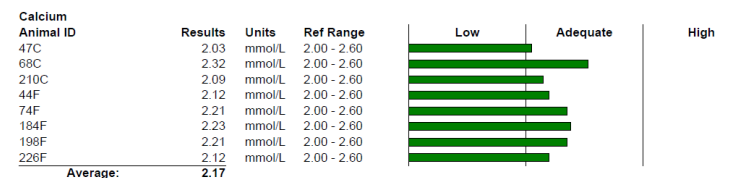


Monthly average MS/cow



Health and disease

- Calving assists 8.4%
- RFM 2%
- Metri-clean 8.5%
- Down cow 4%
- Bloods taken in July, August and October



In-calf rate



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In-calf rate

Age Group	Count		3 weeks	6 weeks	9 weeks	9+ weeks	Not in-calf rate
Two year olds	61	19%	52%	74%	80%	82%	18%
Three year olds	54	17%	39%	70%	83%	89%	11%
Four to eight year olds	189	59%	44%	68%	77%	80%	20%
Nine+ year olds	17	5%	41%	65%	76%	88%	12%

In-calf rate

Calving Pattern			Count		3 weeks	6 weeks	9 weeks	9+ weeks	Not in-calf rate
Early calvers	< 3 weeks	24 Jul	187	58%	50%	72%	83%	84%	16%
Medium calvers	3-6 weeks	14 Aug	88	27%	40%	69%	80%	86%	14%
Late calvers	6-9 weeks	4 Sep	40	12%	33%	60%	63%	73%	27%
Very late calvers	9+ weeks	25 Sep	6	2%	17%	33%	50%	50%	50%

Semen selection

- Sexed Semen – 187 straws, 47% CR
 - Forward Pack – 17 straws – 47% CR
 - Charolais 722400 – 232 straws, 45% CR (includes CIDR cows)
 - Angus bull 722144 – 72 straws, 42% CR
 - Profit maker 722320 – 20 straws, 45% CR
 - Profit maker 721323 – 10 straws, 60% CR
 - Charolais 723404 – 15 straws, 27%
 - Angus bull 721181 – 14 straws, 21% CR
 - SGL Dairy – 31 straws – 26% CR (includes phantom cows)
-

- CIDR date 16/9
 - 6/27 pregnant 22% CR final pregnant 100%
 - CIDR date 26/9
 - 4/14 pregnant 29% CR final pregnant 64%
 - CR to first service 25% vs target of 45%
 - Cows calved > 42days 45% CR with 100 pregnant
 - Cows calved < 42 days 16% CR with 64% pregnant
-

Why Wait Program



- Carried out on the 23/9, 25/9 and the 30/9
- Submission Rate 73% (expect approx. 85%) and conception rate 45%
- Two of the Why Wait programs outperformed the herd average and one matched it

Phantom cows

- Scanned 10 days before end of mating
- 13 cows AI'd, no subsequent heat, empty
- CIDR'd
- 5/13 in calf = 40%
- Also gave us accurate early pregnancy data



Opportunities to close the gap

Increase CR from 44% to 60%



Factor	Goal	Action
Cow	Ensure 3 year olds reach 5.5 target Reduce the variance in MA cows	Increase frequency of BCS and carryout a PSC BCS by running the cows through the shed.
	Reduce BCS loss through early and mid lactation	Monitor negative energy balance through blood test program. Adjust feed system to ensure feed pinches are filled during early lactation – reduce the risk of cows buffering the feed system. Aim for <8% monthly peak decline
	Reduce disease incidence	Strengthen calving cow care observations and protocol. Ensure Calcium uptake after calving is quick and consistent. Use multiple shift function for Colostrum mob to get them eating and intaking Ca. Balance Ca in the diet post colostrum mob. Less but more consistent Magnesium supplementation using trough and inshed

Opportunities to close the gap

Increase CR from 44% to 60%



Factor	Goal	Action
Intervention	Why Wait program	Too complicated for our system relative to rewards. Multiple drafting and managing sexed semen takes focus off feeding cows.
	CIDR	Useful if used on cows calved > 42 days early in mating. Requires programmed approach to elimination once cow numbers reach 400 again
	Wearable technology for heat detection	Add optimum window for insemination to sexed semen criteria. Use less straws per day. Criteria 2+ heats/no intervention/optimum window for sexed/BW
	Artificial Insemination	Ensure facilities and process is optimum for tech use. Work with LIC to mitigate risks over a prolonged AB period.
Semen	Bull fertility in straws	Explore results from bulls and ensure enough variety in dairy beef team to reduce risk on reduced CR with new bulls to the team.

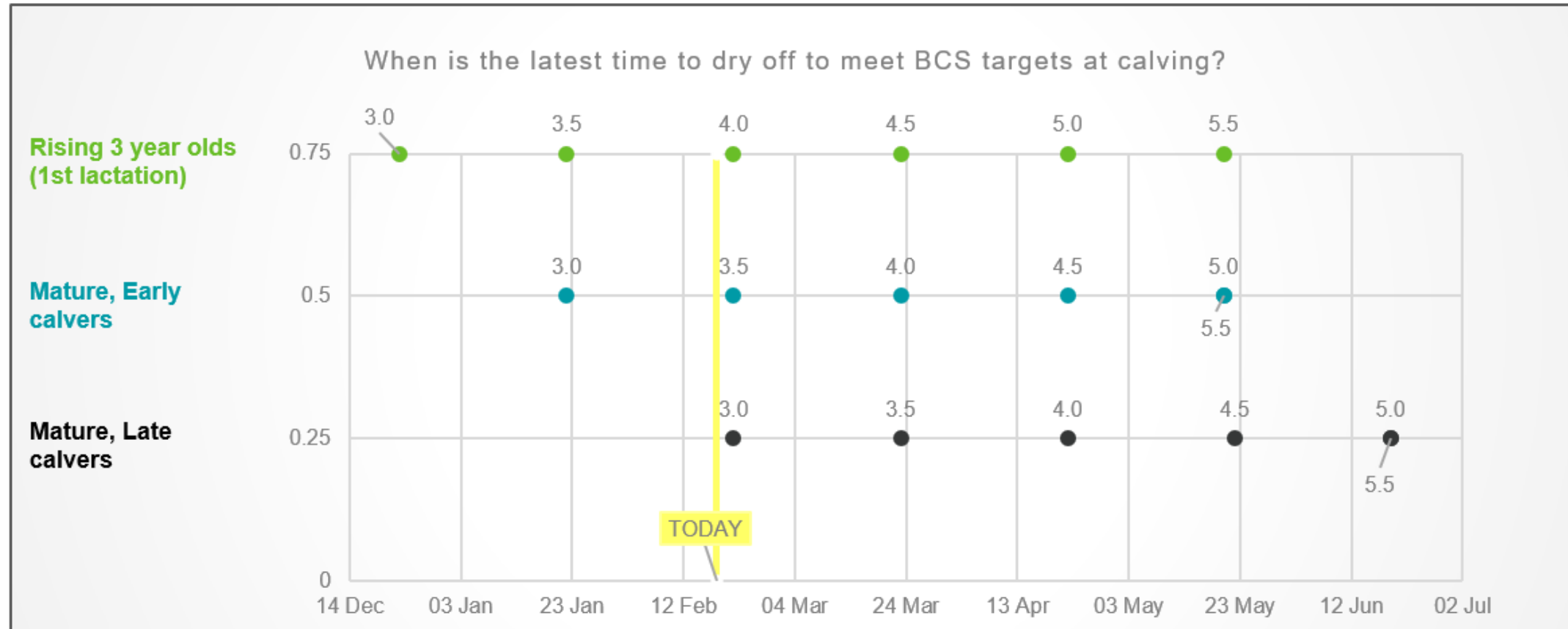


Summer Management Plan

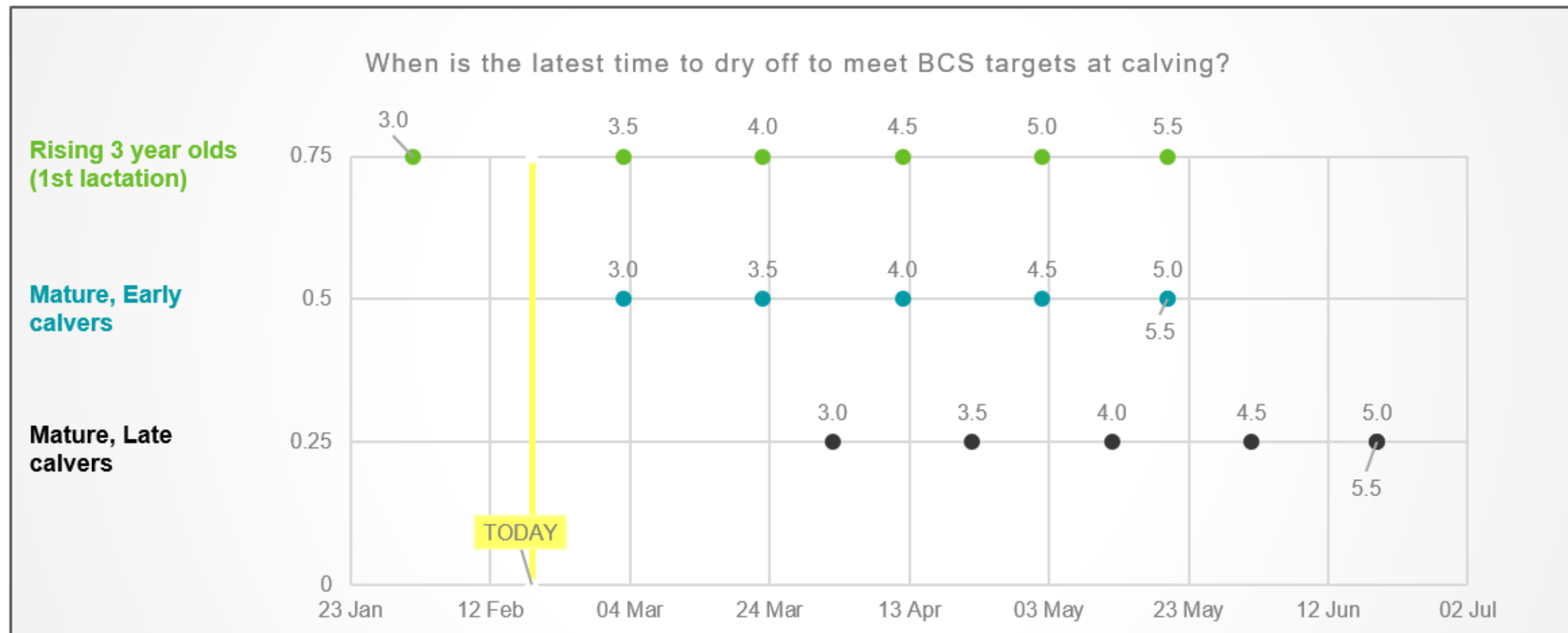


- Pregnancy test – late January
 - Updated feed inventory and feed budget
 - Sold culls – 1st week February
 - Purchased PK to replace pasture not grown: 30t and another 30t this week
 - BCS data – based off 21 January
 - Dry cow consult early March
 - Start dry off to protect next season
 - New pasture seeds and fertilizer in ground by mid-March
 - N fertilizer once PGR lifts
-

Moderate BCS gain – 0.5BCS/month

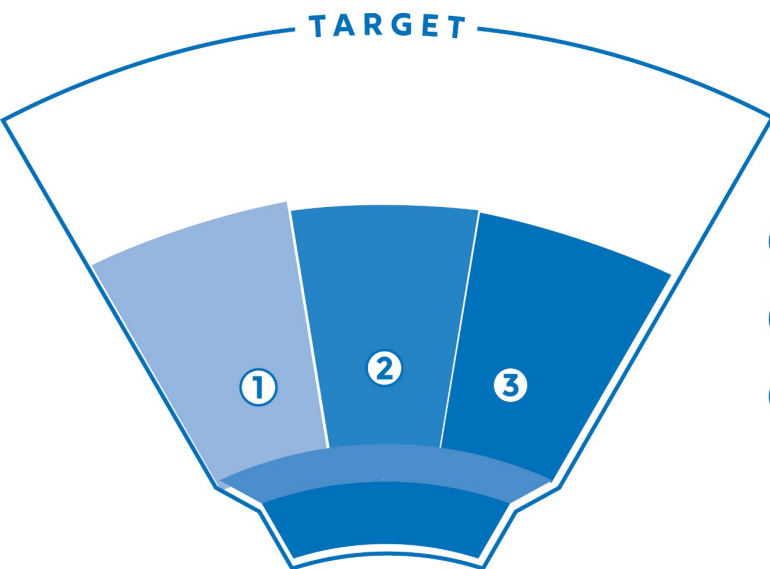


High BCS gain – 0.6BCS/month





Business Health KPIs



①

Farm Working Expenses

\$4.70/kgMS - via DairyBase

2023/24

\$6.73

2022/23

\$6.81

2021/22

\$6.30

2020/21

\$4.60

2019/20

\$4.96

2018/19

\$4.66

②

Op profit/ha (eff dairy)

> top 20% - via DairyBase

2023/24

\$2314

2022/23

\$2362 vs
\$4550

2021/22

\$3886 vs
\$6950

2020/21

\$3482 vs
\$4820

2019/20

\$2405 vs
\$4395

2018/19

\$2147 vs
\$3533

③

ROA

6% - via DairyBase

2022/23

3.00%

2021/22

5.50%

2020/21

5.00%

2019/20





3.40%

2018/19

3.10%

Cashflow update to 31 Dec



										
	YTD Total	YTD Budget	YTD Variance	Original Full Year Budget	Jun-Dec actual plus Jan- May revised budget	Notes				
Milksolids KG	97,396	99,000	1,605	140,700	143,071	1				
Total Milk Receipts	(1,008,536)	(772,778)	235,758	(1,114,433)	(1,396,773)	2				
Dividends Received	(78,292)	(29,317)	48,975	(47,933)	(105,292)	3				
All Cattle Sales	(33,326)	(34,440)	(1,114)	(101,540)	(101,226)	4	28 dairy beef heifer calves still to sell			
All other Income	(12,697)	(15,600)	(2,903)	(15,600)	(12,697)	5				
Total Income	(1,132,850)	(852,134)	280,716	(1,279,506)	(1,615,988)	6				

Wages	172,408	138,167	(34,242)	226,214	283,156	7	Cover due to periods of sickness during calving, \$40k over on salaries/wages. Contractors budget spent. Under spent on staff training and awards
Animal Health	37,820	27,650	(10,170)	47,800	57,970	8	Repro \$7k over Heifer synchrony not budgeted, phantom cow CIDR not budgeted.
Breeding & Herd Improvement	49,449	57,860	8,411	77,400	68,989	9	
Farm dairy	6,520	4,840	(1,680)	5,740	7,420	10	More product used for cleaning
Electricity	17,960	15,500	(2,460)	23,200	25,660	11	
Silage made	20,480	25,600	5,120	28,580	23,460	12	Invoice from last season
Supplements purchased	34,898	32,000	(2,898)	36,800	39,698	13	PK bought earlier will even out
Calf rearing	53,313	25,222	(28,091)	25,722	53,813	14	Underbudgeted amount of CMR required 2.5 bags/calf used vs 1bag budgeted
Young & dry stock grazing	37,683	40,831	3,148	70,000	66,852	15	
Fertiliser (incl. N)	47,720	35,507	(12,213)	51,440	63,653	16	Includes fert that should be coded to cropping
Regrassing & cropping	25,592	35,038	9,446	50,350	40,904	17	
Weed and pest	4,455	6,200	1,745	10,400	8,655	18	
Planting	459	2,300	1,841	2,300	459	19	
Effluent spreading	499	2,000	1,501	4,000	2,499	20	
Vehicles - Fuel and R&M	14,133	12,600	(1,533)	21,600	23,133	21	
R&M (land,buildings, plant, machinery)	68,706	24,700	(44,006)	46,600	92,506	22	\$29k spent on rotary shed, \$15k on fencing new block and farm repairs, \$12k spent on water and new troughs to new block
Freight and general farm expenses	27,192	25,680	(1,512)	45,060	46,572	23	
Administration	14,625	12,081	(2,544)	20,263	22,807	24	
Rates, Insurance, ACC	20,735	20,699	(36)	47,484	47,520	25	
CASH Farm Working Expenses	654,647	544,475	(110,172)	840,953	975,725	26	
Surplus before Finance charges	(478,204)	(307,659)	170,544	(438,552)	(640,262)	27	

Cashflow update to 31 Dec



	YTD Total	YTD Budget	YTD Variance	Original Full Year Budget	Jun-Dec actual plus Jan- May revised budget	Notes	
Lease Land on Milking Platform	31,439	38,378	6,939	68,168	61,229	28	Lease not paid on new block yet
Interest - Farm Loan	70,000	69,125	(875)	118,500	119,375	29	
Depreciation	61,414	62,337	923	106,863	105,940	30	July and August depreciation estimate
Total Financial Charges	162,853	169,840	6,987	293,531	286,544	31	
Principal	-	-	-	-	150,000	32	
Capital Expenditure	-	1,400	1,400	101,400	212,500	33	EID wand \$2.5k, In-shed feeding \$60k, 60 cows \$150k
Surplus After Finance charges, Principal and CAPEX	(315,351)	(136,419)	178,931	(43,621)	8,782	34	



How to improve the hoof health of your dairy cows?

Gain knowledge and practical skills.

Lameness is now amongst the top three health issues on-farm and it is costing New Zealand dairy farmers millions of dollars every year.

LAMENESS MANAGEMENT WORKSHOP

What you will learn?

- Anatomy and function of the hoof
- Animal management and its impact on lameness
- Safe trimming techniques
- Hoof trimming according to the 5-step method

Outline:

This workshop is designed to give students an overview of issues relating to lameness management and introduce them to the 5-step trimming method. The workshop is made up of both practical and theory components. The theory consists of 5 online modules that need to be completed before the practical day. Certificate on completion of both practical and theory components.



Date: Friday 28 February 2025

Time: 9am - 3pm

Location: Cambridge

Course Fees:

\$395 + gst

On-farm group course

- up to 8 people \$2,880 + gst

- up to 10 people \$3,500 + gst

"It is a really good way to learn all of the things that contribute to lameness and it is explained very well. It also helps to be able to do the practical section and know that someone is there to guide you"

- *Margot, Gore*

"You have no idea how lameness works - do the course. It will change your mind!"

- *Johan, Morrinsville*

"Very good, I like Fred's view on feeding and the health of the hoof"

- *Kieryn, Otautau*

REGISTER TODAY
CLASS SPACES ARE LIMITED

*Payment must be received in full within 1 week prior to the date of the workshop.

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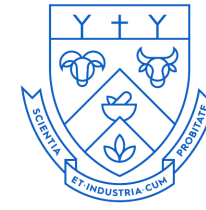


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21 May 2025 FARM FOCUS DAY





Thank you