Owl Farm

Providing knowledge

St Peter's School/Lincoln University
Demonstration Dairy Farm

St Peter's · Cambridge
New Zealand

Lincoln University
Te Whare Wānaka o Aoraki
AOTEAROA · NEW ZEALAND
New Zealand's specialist land-based university

Farm Focus Day

Wednesday, 21 March 2018

PROVIDING KNOWLEDGE

Owl Farm Season Update: how can too much summer feed be a bad thing?

Financial Review: How does the cashflow look so far?

Owl Farm Future – Two viable pathways, a roadmap for all dairy farmers

Feedback session – on your phone browser visit kahoot.it

Wi-Fi access today – Find StPeters-Guest - **Password** - WhB9xRGK

OPUS LIC PGG Wrightson Seeds DairyNZ Ballance FARM SOURCE

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HEALTH AND SAFETY

Welcome to Owl Farm. We are a fully operational, commercial dairy farm with a number of potential hazards to both visitors and staff. Many of these potential hazards cannot be eliminated while also providing access to visitors therefore all staff and visitors MUST watch for potential hazards and act with caution.

St Peter's School / Owl Farm Hazard Notifications

- Children are the responsibility of their parent or guardian
- Normal hazards associated with a dairy farm
- Other vehicle traffic on farm roads and races
- Races may be slippery

ARE YOU TRAINED FOR WHAT YOUR ARE ABOUT TO DO? If not, STOP.

Emergency Contact Information

In the event of an emergency, ensure the scene is safe and raise the alarm to get Owl Farm staff and emergency services to assist.

Emergency Services

- **Fire, Police and Ambulance** **111**
  1716 Cambridge Road, Follow Hanlin Road through the school to the farm

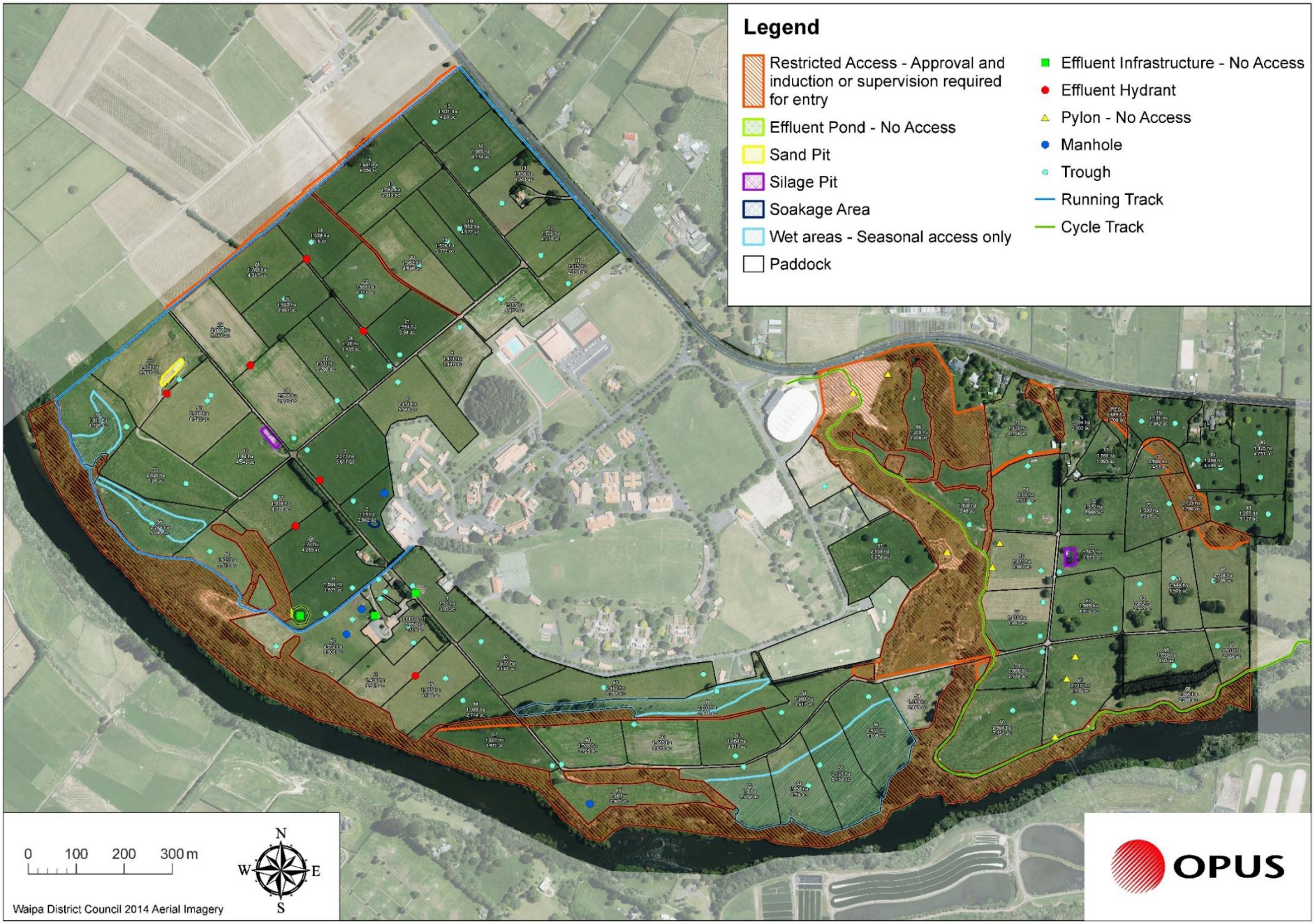
Farm Staff

- Louise Cook – Demonstration Manager 027 808 5777
- Tom Buckley – Farm Manager 021 058 4916
- Sheryl Watkins – Demonstration Co-ordinator 021 039 3703

Safety Equipment Location

- First Aid Kits Dairy Shed and Vehicles
- Fire Extinguishers Dairy Shed and Tractor
- Defibrillator Main Office and St Peter's Medical Centre

By entering Owl Farm and signing in at registration, you are acknowledging your understanding of any potential hazards and agree to take personal responsibility and act in such a manner as to protect yourselves and others also on-farm.


Legend
Restricted Access - Approval and induction or supervision required for entry
Effluent Pond - No Access
Sand Pit
Silage Pit
Soakage Area
Wet areas - Seasonal access only
Paddock
Effluent Infrastructure - No Access
Effluent Hydrant
Pylon - No Access
Manhole
Trough
Running Track
Cycle Track
0 100 200 300 m
N
W
E
S
Waipa District Council 2014 Aerial Imagery
OPUS

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OWL FARM - ST PETER'S SCHOOL / LINCOLN UNIVERSITY DAIRY FARM STRATEGY

1. Vision

a. Dairy Farm

- To apply proven research, utilising good on farm practice and scientific monitoring for the farm to become an exemplar in dairy production, financial, environmental and people performance, while maintaining the highest standards of health and safety.

b. Students

- To encourage more young people into the dairy industry.

2. Strategic Objectives

a. Dairy Farm

- Providing leadership to dairy farmers and the wider community by demonstrating progressive practices that can be achieved on farm.
- Optimise profit through identifying the appropriate dairy production system for Owl Farm.
- Achieving a farm sustainable environmental footprint based on industry good management practice.
- To attract, train and retain quality employees.

b. Students

- To provide educational opportunities and exposure to the dairy industry which demonstrates career opportunities to students.

3. Farm Development Stages

a. Stage 1 Objective (2015/16 – 2017/18)

Establish credibility by addressing current issues and performance, whilst setting up the farm for future development. During this stage, the farm will operate a pasture based system, with tactical supplementation strategies, based largely on existing infrastructure, to optimise profit while developing a resilient farm system.

b. Stage 2 Objective (2018/19 – onwards)

Testing and investigating in conjunction with partners, innovative strategies to lead sustainable profit. The farm system will be developed over years 1-3 and reflect demonstration requirements of industry that are relevant and appropriate at that time point.

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CONTENTS

OWL FARM SNAPSHOT

	Year	2015-2016	2016-2017	2017-18 forecast
Physical Info	Total Farm Area	177	172	171
	Effective Area	151	146	148
	Effective area Leased	23	18	18
	Leased Run off	3	7	5
	Cows Wintered	470	453	432
	Peak Cows (1Dec)	445	423	418
	Peak Stocking Rate Cows/ha	2.95	2.90	2.84
Production	Total kgMS	176,197	178,294	171,135
	MS/cow	396	421	409
	MS/ha	1,167	1,221	1,156
	MS/ha from homegrown feed	868	945	998
Feed and Inputs	Feed Grown TDM/ha	13.9	14.2	17.2
	Feed Harvested TDM/Ha (actual kgs)	11.9	12.5	13.0
	Feed harvested TDM/ha (@11.0MJME/kgDM)	12.4	12.8	14.4
	Supplements Imported TDM/Ha	4.2	3.1	2.2
	Nitrogen Applied/effective ha	149kg	163kg	150kg
Financials	FWE/kgMS	$4.97	$4.07	$4.15
	OPEX/kgMS (incl deprn &feed inventory adj)	$4.91	$4.75	$4.39
	EFS/ha actual payout ($3.90/$6.15/$6.40)	-$144	$2,742	$3,495
	EFS/ha @ $5.80 farmgate milk price	$2,101	$2,287	$2,812
	Opening Debt/kgMS held	$20.00	$23.02	$21.23
Statistics	Cowshed	36 Rot	36 Rot	36 Rot
	Feed infrastructure	NIL	NIL	NIL
	Herd Figures	BW 162/189 PW	BW 107/128 PW	BW 112/135 PW
	Industry BW/PW	BW 110/122 PW	BW 64/73 PW	BW 64/73 PW
	Effluent Storage	Clay lined pond	Clay lined pond	New lined pond
	% farm effluent applied to	44Ha 29%	51Ha 35 %	51Ha 34%
	Soils are a mix of Clays and Sands, on largely flat terraced contour Operational regrassing via crop and regrassing ~ 10-15% per year 3 permanent staff members are employed - with no relief staff required to cover time off or calf rearing duties.			

SEASON TO DATE

	Year to date 15/03/18	2015-2016	2016-2017	2017-2018	Notes
Stock	Milking Platform	160	146	148	
	Cows on farm	390	378	412	
	Peak cows	445	423	418	
	Cows calved	460	425	420	
	Cows in vat	385	374	408	
	Stocking rate on farm	2.44	2.59	2.78	*
	6 week in-calf rate	75%	73%	64%	*
	Non Pregnant rate	11%	13%	17%	*
Production	Total kgMS Season to date	158,617	156,411	151,777	1
	MS/cow/day - last 10 days	1.13	1.48	1.20	2
	MS/ha/day - last 10 days	2.72	3.79	3.31	
	MS/cow Season to date	356	370	363	
	MS/ha Season to date	991	1,071	1,026	
	MS/ha from homegrown feed to date	812	826	860	3
Feed and Inputs	Pasture cover 1 June	2,142	2951	2256	
	Pasture grown TDM/ha	11.4	11.6	13.9	4
	Winter pasture cover eaten TDM/ha (1 Jun to BD)	0.3	1.0	0.0	
	Total pasture supply TDM/ha	11.7	12.6	13.9	5
	Crop grown/ha	1.1	1.0	0.9	6
	Supplements fed/ha	2.5	1.9	1.5	7
	Total Feed supply TDM/ha	15.3	15.5	16.3	
	Homegrown grass eaten TDM/Ha (grown this year)	8.9	8.5	9.7	
	Silage harvested TDM/ha Season to date	0.0	0.7	0.8	
	Crop eaten per total farm/ha	0.9	0.9	0.7	
	Homegrown feed Harv TDM/ha (grown this year)	9.9	10.1	11.2	8
	Winter pasture cover eaten TDM/ha	0.2	0.8	0.0	
	Imported Supplements eaten TDM/ha	2.1	1.6	1.3	
	Total Feed eaten/ha	12.2	12.6	12.5	
	Feed conversion Eff (kgDM/kgMS)	12.3	11.7	12.2	9
	Nitrogen Applied/effective ha	99kg	122.1	122kg	
Feed Inventory	Homegrown silage/hay TDM	40	99	144	10
	PKE in budget TDM	67	43	97	
	Bought silage hay TDM	79	58	74	
	Maize silage TDM	283	132	0	
	Total supplements until calving TDM	469	332	316	

NOTES

Owl Farm Numbers – Seasonal Update

"CHASING RAIN"

INCREASED PRODUCTION SEASON TO DATE

1. To date we are just under 5,000kgMS (3%) behind for the season, and still tracking behind on a daily basis.

2. Performance/cow is tracking below last year, meaning that even with more cows on hand we are not beating last year's yield. However the system change to exclude Maize silage plus high summer pasture growth has significantly changed the cow's diet between years. Notwithstanding that in addition the whole herd has been on OAD since New Year and remains there today.

   Disappointingly, the OAD strategy hasn't lifted our cow condition as we'd hoped, largely as a consequence of low energy feeds being fed through the summer. However they also haven't lost weight and we can likely milk more cows for longer than we originally anticipated.

   We have monitored heat stress this year in cows. It has been prolonged, significant, well above normal levels and has contributed to over 2200kgMS not produced because cows were too hot.

More milk from homegrown feed

3. Despite the challenges over summer, we are still clearly tracking ahead on milk made from homegrown feed. We've made 4% more milk from homegrown feed than at the same time last year – a total of 5,000kgMS this season.

Feed first – farmers grow feed for cows, cows make milk

4. So far this year we have grown 2.3TDM/ha (20%) more than the same time last year. Whilst a large portion of this was prior to our last field day, by far the biggest contributor has been our wet summer and its exceptional growth rates.

5. Between 1 June and Balance date last year, cover dropped from 2951kgDM/ha to 1950kgDM/ha as this feed was eaten by the herd. This drop in cover last year, represents a store of feed that was on hand, that was homegrown (albeit the previous financial year in May) and was eaten by the cows last year.

6. With only half the area growing crop, the amount of crop grown in total is reduced when spread over the whole milking platform. This also works to account for some of our extra pasture grown as well, with more hectares in grass.

   Crops were healthy, well grown and good quality and we had very few issues with Brassica/rape scald in the herd. Carefully managing the other feeds to avoid cows being able to gorge was a key strategy to protect the herd. Our average crop yield was 11.4TDM/ha. This sounds low, and this lines up with the Dry matter % we measured in the crops this year. Turnips on average were closer to 9% dry matter – the bottom end of the typical range.

7. The total feed supply this year is also made up of imported supplements. We have used 20% less imported supplement to date, and this number will only increase from now until the end of season. Overall our total feed supply to date is nearly 1 ton per/ha higher than last year.

8. Our total homegrown feed harvested this year is only 11% higher than last year. Poor utilisation in the spring period, and the protective mechanism of summer topping to aid our very hot cows in making eating easier have contributed to this result.

9. This increase in feed supply, feed harvested and reduction in total production to date points out a poorer feed conversion efficiency than last year. This is predominantly to the gross deterioration of pasture quality from late November. December, January and February pasture samples of what cows ate measured less than 10.8MJME/kgDM despite largely being green and leafy pastures obviously with some stem (see images next page). Summer heat, causes ryegrass to build more fibre and less sugar. The longer our pre-grazing was, the worse the pasture quality became, dropping 0.5MJME from being 2,800kgDM to being grazed at 3,200kgDM/ha.

   Our decision over summer to not feed supplement and run on grass and crops only made some cheap milk by comparison to previous years. It was the right thing to do, and we would do it again. But the unintended consequence of such a drop in production due to low pasture quality and lack of weight gain have certainly contributed cost to our system in one way or another. A longest possible lactation without compromising next year are our key recovery strategies.

10. There is an extra 54T of feed on homegrown silage and hay compared to the same time last year. Plus the 65T of sorghum from the run-off (our largest spend on purchased feed outside of PKE this year) meaning we have plenty of winter supplement available for the herd, allowing us to recover some lost milk via days in milk.

NOTES

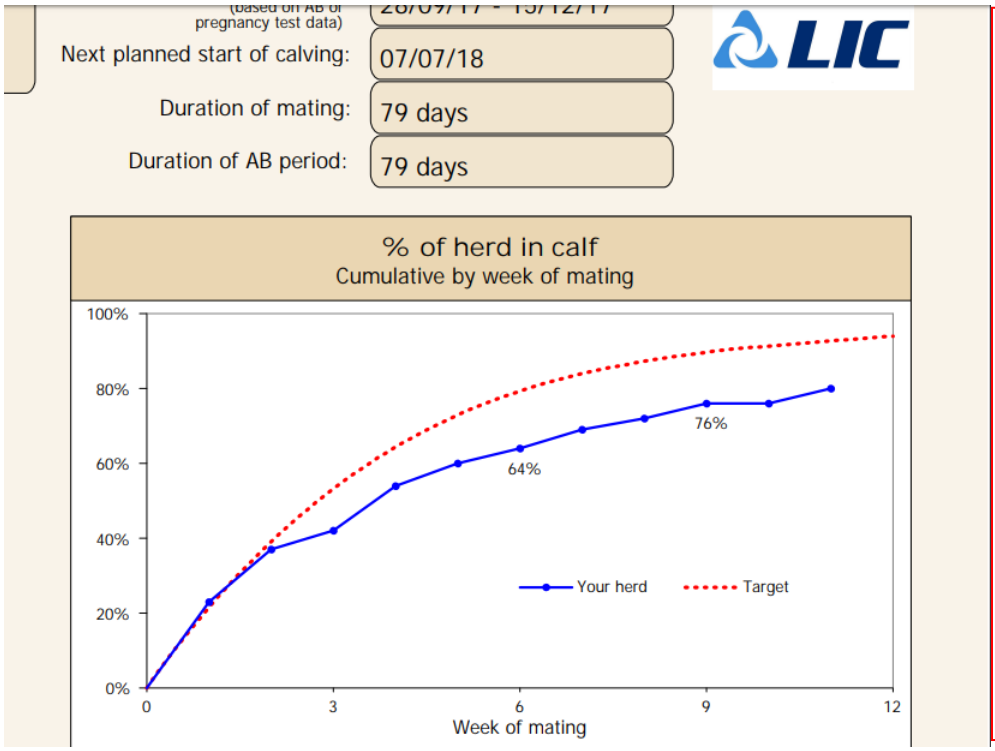
* REPRODUCTION DATA

Despite the early position from mating that looked like our 2017 spring mating was tracking well, the results couldn't be much further from the truth.

We don't have all the answers yet. We may never have them. What we know for a fact is that our conception rate or rate of pregnancies that were maintained is very low from week 2.5 onwards. Heat detection does not appear to have been an issue, neither was the number of non-cyclers pre-mating.

There are indications in one place that cows were under an energy challenge that was mirrored in milk production, but this episode lasted for 10 days, and does not explain the entirety of poor conception over an 8-week period.

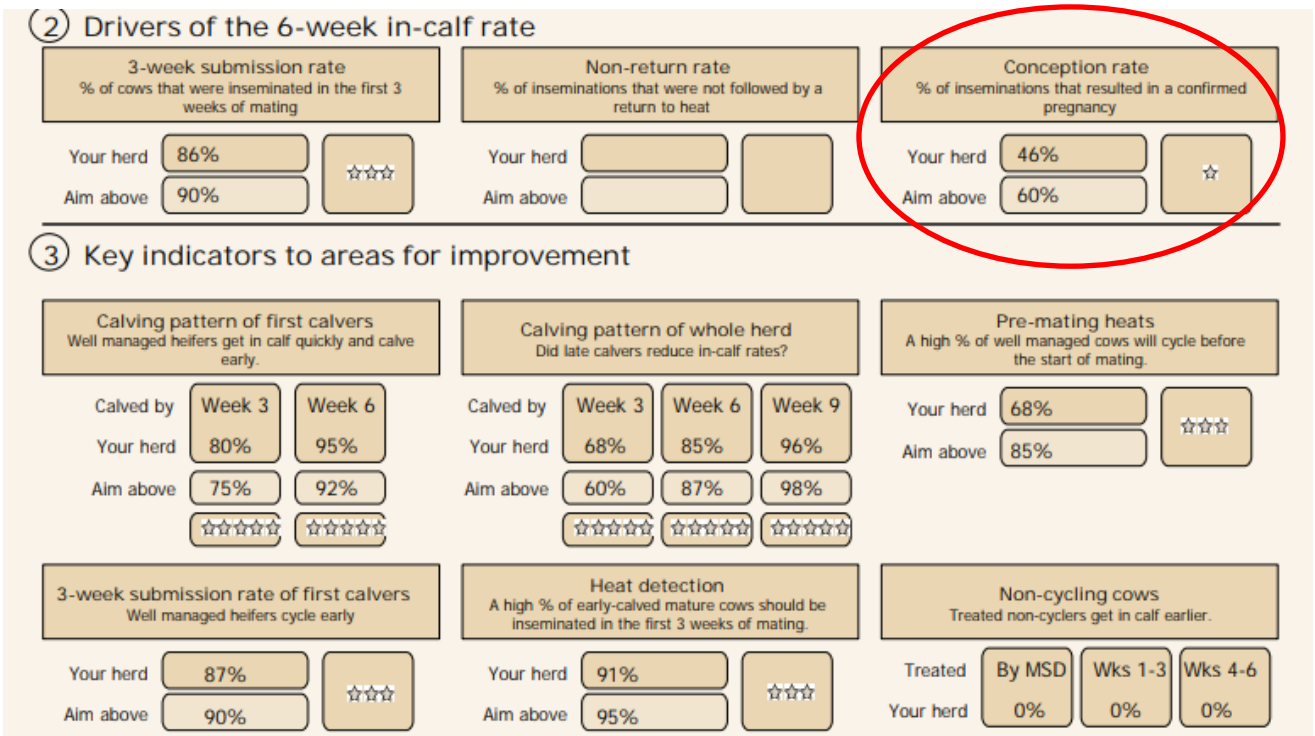
Since final scanning, one cow has aborted a confirmed Neospora foetus. Sadly we believe these two topics are unrelated.



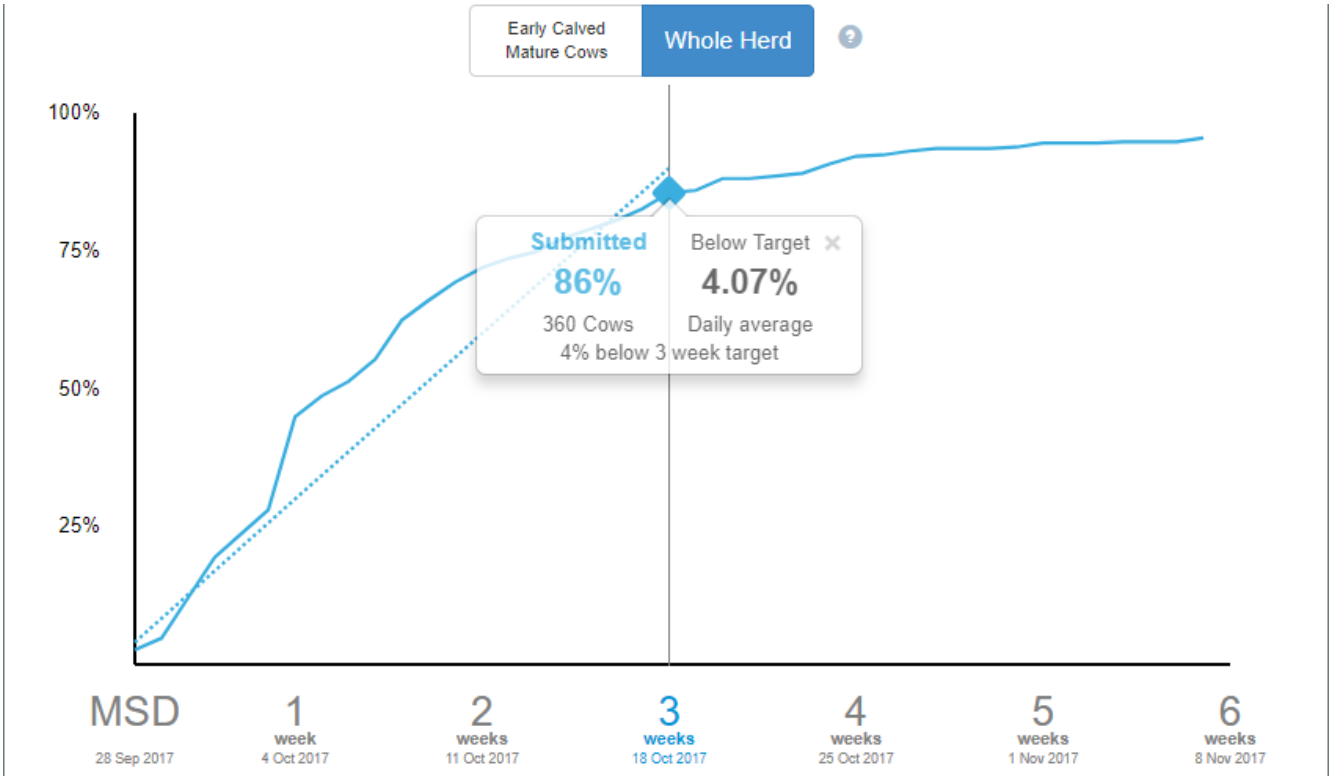
The 2017 Mating has yielded a very low conception rate, and this is the primary driver of a disappointingly low 6 week in-calf and final MT Rate.

There are 71 non-pregnant cows including one subsequent slip from Neospora.
These 71 cows represent 17.2% of the cows on farm today (412) or 16.9% of the 418 cows on hand at start of mating.

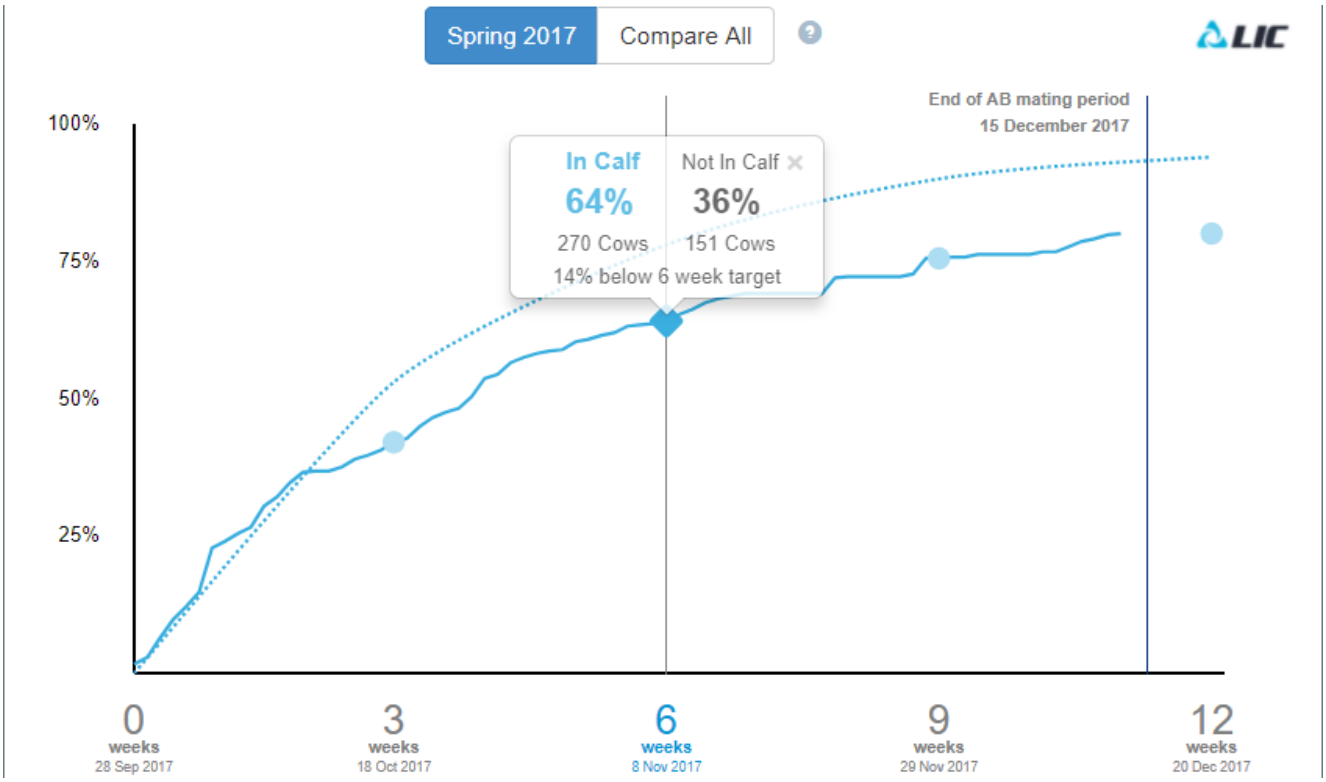
Change in cow numbers since mating were udder/feet culls in January and one death in February.



3-WEEK SUBMISSION RATE



CUMULATIVE PREGNANCY RATE



NOTES

Owl Farm

FINANCIAL UPDATE

Financial performance year to date has seen a net change in profit to date of approximately $14,000. This shows a pleasing improvement in gains from payout increase and expenditure reduction.

TO 28 FEBRUARY	2015-16	2016-17	2017-18	VARIANCE	NOTES
PRODUCTION	152,346	148,681	144,910	(3,771)	Down over Summer months (feed type/quality)
REVENUE	$623,591	$802,867	$795,204	($7,663)	$5,985 milk rev, $1,500 less total stock sales
OPERATING EXPENDITURE	$655,890	$591,947	$568,014	($23,933)	
OPERATING PROFIT/(LOSS)	*(53,849)*	$186,066	$199,626	$13,560	
MILK PRICE RECEIVED	*$3.45*	*$4.85*	*$4.93*	*$0.08*	
TOTAL REVENUE/KGMS	*$4.09*	*$5.40*	*$5.49*	*$0.09*	
FWE/KGMS	*$4.04*	*$3.44*	*$3.32*	*($0.12)*	
OPEX/KGMS	*$4.31*	*$3.98*	*$3.92*	*($0.06)*	
PROFIT/KGMS	*($0.35)*	*$1.25*	*$1.38*	*$0.13*	

TO 28 FEBRUARY		2016-17	2017-18	Variance	Variance
1 COMPARE MILK PAYOUT	$512,911	$720,953	$733,576	$12,623	Net price paid on first 144,910kgMS this year
2 REDUCED REVENUE - LESS KGMS	$12,642	$18,288	0	($18,608)	Reduction in Revenue from less milk YTD
3 MIXED AGE COW SALES	$55,561	$32,944	$25,945	($6,999)	
4 ANIMAL HEALTH COSTS	$32,664	$43,490	$34,345	($9,145)	
5 REGRASSING	$3,720	$138	$14,475	$14,337	
6 FEED	$138,852	$117,170	$96,788	($20,382)	

1. Some comparative improvement in milk revenue has occurred as the advance rate is still higher than last year.
2. However, with production 3,711kgMS behind last year, there is $18,288 earned last year and not this year.
3. Mixed age cows sales are behind last year as all culls are still on hand (culled early Feb 2017 for last year)
4. Reductions in Animal Health costs with no Zinc boluses administered year to date.
5. Early spring regrassing due to our change in crop policy sees us spent well ahead of last year in regrassing.
6. Reduced total feed costs, half the cropping area used, less purchased silages and no Maize used

BENCHMARKING

The table below shows our Farm Working Expenditure (exGST) YTD for comparison with your own data.

Measure – to end of October	Total	/ha	/cow	/kgMS 2018	$/kgMS 2017	Your Fig
Total volume	Total	148	418	144,910	148,681	
Total Labour Costs	105,328	712	252	0.73	0.76	
Animal Health	34,345	232	82	0.24	0.29	
Breeding	35,730	241	85	0.25	0.23	
PKE	34,936	236	84	0.24	0.24	
Grass Silage Harvested	31,322	212	75	0.22	0.18	
Purchased silage	19,895	134	48	0.14	0.18	
Maize silage fed	0	0	0	0.00	0.09	
Cropping	10,635	72	25	0.07	0.10	
Calf Meal	5,839	39	14	0.04	0.04	
Fertiliser Spreading	3,834	26	9	0.03	0.02	
Fertiliser - Maintenance	16,323	110	39	0.11	0.14	
Fertiliser - Nitrogen	34,469	233	82	0.24	0.20	
Freight	6,868	46	16	0.05	0.06	
Re-grassing	14,475	98	35	0.10	0.00	
Heifer grazing costs	46,899	317	112	0.32	0.31	
Shed Expenses	5,735	39	14	0.04	0.08	
Electricity	11,640	79	28	0.08	0.08	
Water Charge	13,751	93	33	0.09	0.11	
R & M - Land & Buildings	17,753	120	42	0.12	0.13	
R & M - Plant & Equipment	11,533	78	28	0.08	0.08	
Vehicle Maintenance	9,020	61	22	0.06	0.05	
Petrol/Diesel	5,224	35	12	0.04	0.04	
Weed & Pest Control	956	6	2	0.01	0.00	
Other Expenses	4,579	31	11	0.03	0.04	
Total Farm Working Expenses	486,660	3,288	1,164	3.36	3.47	

NOTES

PASTURE QUALITY – WHAT DOES <10.8MJMELOOK LIKE?

14 December sample, mixed pasture – 5+years old 3,010kgDM/ha, 20 days since last grazed.

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ANALYSIS REPORT — Page 4 of 7

Client:	Owl Farm	**Lab No:**	shpv1
Address:	1716 Cambridge Road Cambridge 3283	**Date Received:**	15-Dec-2017
		Date Reported:	19-Dec-2017
		Quote No:	
		Order No:	
		Client Reference:	Feed testing
Phone:		**Submitted By:**	Louise Cook

Sample Name: 18 — **Lab Number:**
Sample Type: Mixed Pasture (P1)

Analysis		Level Found	Medium Range	Low / Medium / High
Nitrogen*	%	3.1	4.0 - 5.0	
Nitrogen*	%DM	3.3		
Dry Matter*	%	19.3	12.0 - 30.0	
Crude Protein*	%DM	20.8	20.0 - 30.0	
Acid Detergent Fibre (seq)*	%DM	25.6	20.0 - 30.0	
Neutral Detergent Fibre*	%DM	47.6	30.0 - 45.0	
Lignin*	%DM	4.8		
Ash*	%DM	9.6	7.0 - 14.0	
Organic Matter*	%DM	90.4		
Soluble Sugars*	%DM	9.8		
Starch*	%DM	< 0.5		
Crude Fat*	%DM	2.9		
Digestibility of Organic Matter in Dry Matter (DOMD)*	%	67.9	65.0 - 80.0	
Metabolisable Energy*	MJ/kgDM	10.9	9.0 - 12.0	
Non Structural Carbohydrate*	%DM	19.1		
OMD in-vivo*	%DM	75.1		

18 January Sample, New grass last autumn. 3,350kgDM/ha, 27 days since last grazing. This is when we first dropped out silage. This paddock was grazed badly affected by rust (inset), so took two simple samples. Rust low quality and low palatability.

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ANALYSIS REPORT — Page 4 of 7

Client:	Owl Farm	**Lab No:**	shpv1
Address:	1716 Cambridge Road Cambridge 3283	**Date Received:**	18-Jan-2018
		Date Reported:	22-Jan-2018
		Quote No:	
		Order No:	
		Client Reference:	Feed testing
Phone:		**Submitted By:**	Louise Cook

Sample Name: N23 — Green area of Pasture — **Lab Number:**
Sample Type: Mixed Pasture (P1)

Analysis		Level Found	Medium Range	Low / Medium / High
Nitrogen	%	3.9	4.0 - 5.0	
Nitrogen	%DM	4.2		
Dry Matter	%	14.8	12.0 - 30.0	
Crude Protein	%DM	26.5	20.0 - 30.0	
Digestibility of Organic Matter in Dry Matter (DOMD)	%	67.1	65.0 - 80.0	
Metabolisable Energy	MJ/kgDM	10.7	9.0 - 12.0	

Sample Name: R23 — Rusted pasture — **Lab Number:** 1909886.2
Sample Type: Mixed Pasture (P1)

Analysis		Level Found	Medium Range	Low / Medium / High
Nitrogen	%	3.0	4.0 - 5.0	
Nitrogen	%DM	3.2		
Dry Matter	%	19.9	12.0 - 30.0	
Crude Protein	%DM	20.3	20.0 - 30.0	
Digestibility of Organic Matter in Dry Matter (DOMD)	%	64.0	65.0 - 80.0	
Metabolisable Energy	MJ/kgDM	10.2	9.0 - 12.0	

14 February Sample, 2,966kgDM/ha 26 days since grazing. Mixed pasture 5 + years old

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ANALYSIS REPORT — Page 4 of 7

Client:	Owl Farm	**Lab No:**	shpv1
Address:	1716 Cambridge Road Cambridge 3283	**Date Received:**	14-Feb-2018
		Date Reported:	21-Feb-2018
		Quote No:	
		Order No:	
		Client Reference:	Feed testing
Phone:		**Submitted By:**	Louise Cook

Sample Name: 3 — **Lab Number:**
Sample Type: Mixed Pasture (P1)

Analysis		Level Found	Medium Range	Low / Medium / High
Nitrogen*	%	3.8	4.0 - 5.0	
Nitrogen*	%DM	4.0		
Dry Matter*	%	13.4	12.0 - 30.0	
Crude Protein*	%DM	25.0	20.0 - 30.0	
Acid Detergent Fibre (seq)*	%DM	24.6	20.0 - 30.0	
Neutral Detergent Fibre*	%DM	45.4	30.0 - 45.0	
Lignin*	%DM	7.2		
Ash*	%DM	10.8	7.0 - 14.0	
Organic Matter*	%DM	89.2		
Soluble Sugars*	%DM	4.3		
Starch*	%DM	2.5		
Crude Fat*	%DM	3.8		
Digestibility of Organic Matter in Dry Matter (DOMD)*	%	68.2	65.0 - 80.0	
Metabolisable Energy*	MJ/kgDM	10.9	9.0 - 12.0	
Non Structural Carbohydrate*	%DM	14.9		
OMD in-vivo*	%DM	76.5		

Owl Farm

AUTUMMN MANAGEMENT PLAN

With a relatively healthy looking feed budget, the two volatile areas we have to manage are pasture growth rates and cow condition.

FEED PLAN – ROTATION LENGTH IS KEY

The plan for the next 2 months from the feed budget is as follows.

1. March, stagger and undertake all regrassing activities. Homegrown silage will continue to the herd at 3kgs/cow minimum until the end of season. 30T of our spring cut silage will be kept for next spring to milkers. This will transition into the lower quality summer silage we have made in May. PKE will be used until June, using the remaining feed on our contract and assist milking and weight gain.

   Assess risk and determine timing of use of Zinc boluses for Eczema Protection.

2. April, brings drying off cows for condition score, and culls will be removed as soon as necessary to balance the feed budget. The longer we can run them the better, but cows we are keeping come first. PhasedN fertiliser is due for Application through Mid-April and into May. This will stock up on Sulphur for our soils, as well as adding the first dressing of N since December.

3. Expect to finish milking herd 10th of May, approximately one third of our current cows in milk will get to the last day of milking.

COW PLAN – NO COW LEFT BEHIND

1. With a disappointing mating result, we reflected on cow condition and wintering last year. There was about 10% of the herd in total that didn't meet their condition score completely satisfactorily by calving in spring. We also only started drying cows off in late April, at which point some of the early calvers were still well below a BCS 3.5. It took a LOT of feed to pile on as much weight as we could.

2. This year we are going to individually condition score the herd monthly so we have absolute data at an individual cow level. Cows can then be dried off based on age, calving date and current BCS allowing a half-score/month gain for the herd on average.

3. We also do not have maize silage to add weight this year, and the herd is currently lighter than this time last year. But a large portion of the herd lost weight in autumn last year on Twice a Day milking, so we have many different variables to manage and sure targets are met.

FEED TYPES AND FEI IMPACT THIS YEAR

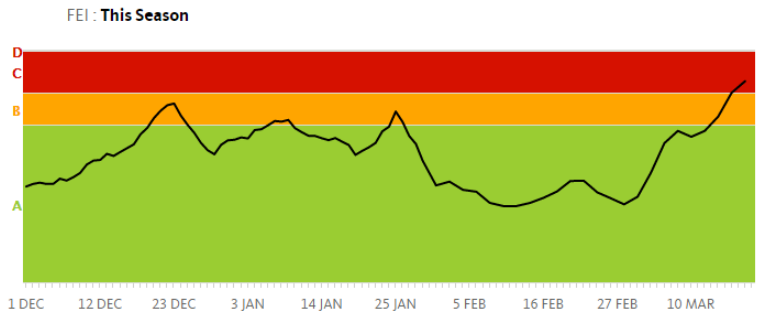
Whilst this year the FEI grades are only advisory this is the only window we will get for an experiment of where the limits for our farm are with a PKE and Turnip feed combination.

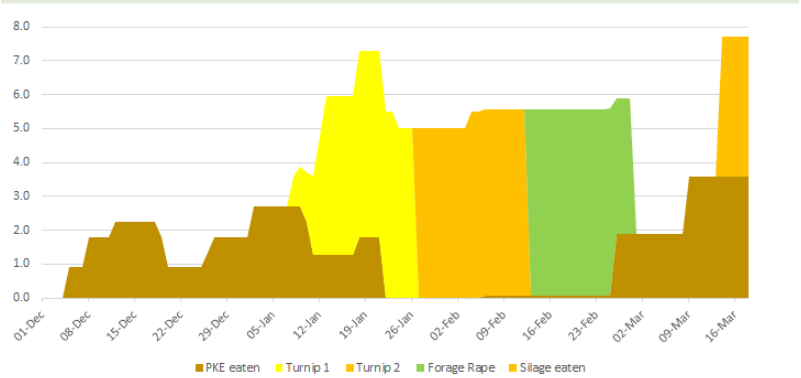
Our summary of feed is included along with our FEI here. Last pick up is our first C grade after 10 days of 4kgPKE/cow.

There's a very strong relationship to changes in feed usage. The test shows a rolling 6 day average, so a consistent diet change will show 6 days later.

Please note I have shown our best estimate of feed offered to cows. The last 10 days our cows have been offered 4 kg of PKE. This is 3.6kgDM of PKE.

The silage and PKE were all fed in paddock. Utilisation so far for all supplements is approximately 85% (over summer months).





NOTES

AUTUMN FERTILISER

Our autumn fertiliser is used to build our wedge moving into winter, and to protect our winter growth rates by ensuring no nutrient is limiting. Through the wet months, lack of available sulphate can be as limiting to grass as lack of available Nitrogen. Topping up the sulphur levels in autumn helps protect our winter growth. It also means we have the ability to reduce our winter Nitrogen use as we've optimised all the elements we can for plants to grow.

WHAT ARE WE USING?

PhaSedN is a premium combination of SustaiN, fine elemental sulphur and fine lime. PhaSedN is a unique autumn fertiliser that boosts pasture growth on either side of winter.

The SustaiN provides nitrogen for an immediate autumn boost while the fine elemental sulphur remains in the soil over winter and releases in early spring to support growth at a key time of year.

Ideal for low sulphur soils, high rainfall areas where there's a risk of sulphur leaching, areas high in phosphate but low in sulphur and nitrogen or effluent blocks requiring tactical nitrogen and sulphur.

Product Benefits

- A single application of two key nutrients (N & S) in one granule
- Fine elemental sulphur that does not leach. The elemental sulphur is present as very fine particles, which means faster release for plant uptake
- SustaiN reduces nitrogen losses by approximately 50% meaning more nitrogen stays in the soil

What will it cost?

Using PhasedN now, and PhasedN Quick start for our first round in next season keeps available sulphur levels high, plus our N is protected from volatilisation in the form of SustaiN. In August a top up with Ammo if really wet, or switch to SustaiN.

Timing	Product	Rate	N	P	K	S	Price
Apr/May	PhasedN	120kg/ha	30			34	$10,301
Jul	PhasedNQS	80kg/ha	25			14	$6,654
Aug	Ammo 30N	85kg/ha	25			11	$6,353
Total			80			59	$23,308

The alternative? There are cheaper products we could use right now, but N Losses through volatilisation in autumn and winter will drive us to need extra round of N, and no sulphur top-up means N may not be the only limiting feature.
The result: by August we will have used more N, lost more N and spent a little bit more on fert, plus driven one extra lap of the farm in the wet months with the tractor.

Timing	**Product**	**Rate**	**N**	**P**	**K**	**S**	**Price**
Apr/May	Urea	65kg/ha	30				$5,002
Jun	N-rich SOA	130kg/ha	25			29	$8,658
Jul	N-rich SOA	130kg/ha	25			29	$8,658
Aug	Urea	55kg/ha	25				$4,233
Total			105			58	$26,551

NOTES

OWL FARM SYSTEM FUTURE

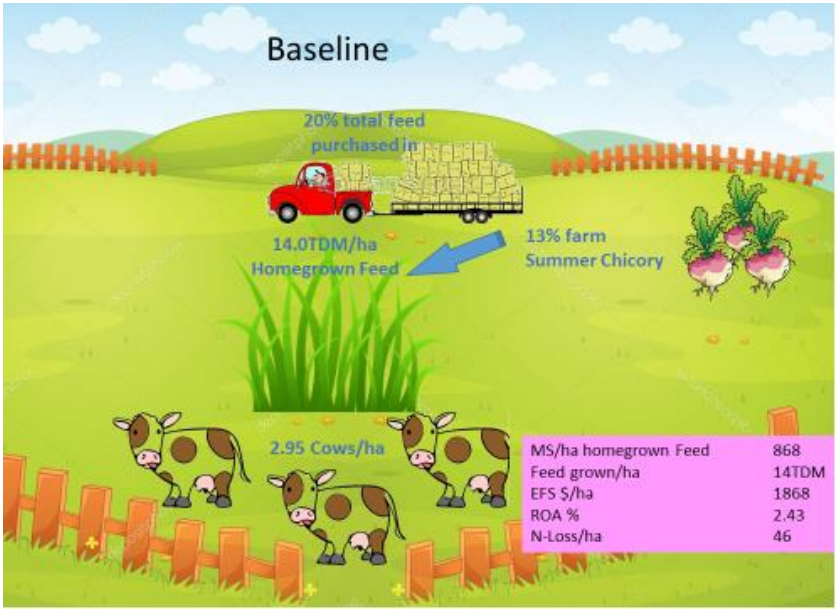
WHERE DID WE START?

The original farm system imported 700T/year in feed Maize silage (250T), PKE (370T), Grass silage (80T).

No Infrastructure on farm to minimise feed wastage, and milking 2.95 cows/ha (470 wintered on 160ha – 30ha leased).

The EFS on a standard $6 payout (excl dividend payments) was $1868/ha and growing a total of 14T grass per ha per year, and approximately 12% of the farm in a summer Chicory crop.

The N losses from the farm were approximately 46kgN/Ha/year.



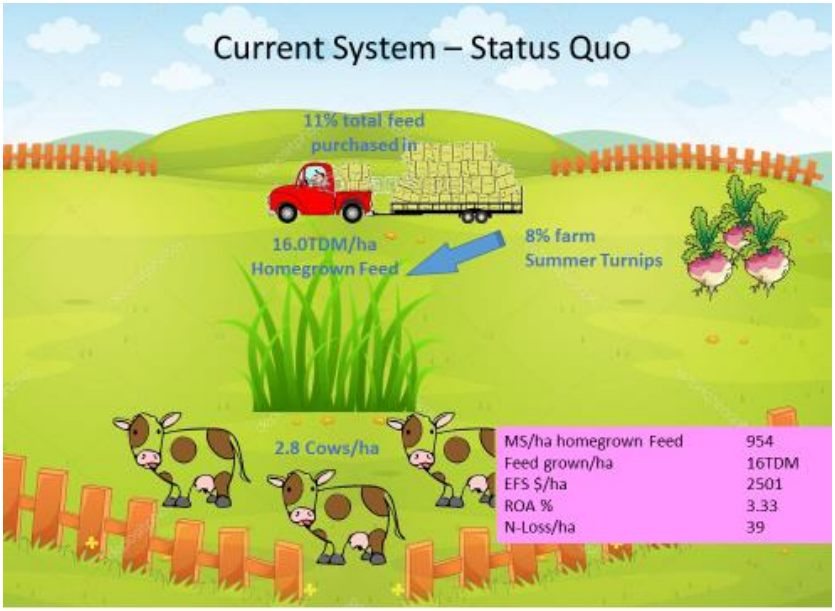
WHERE ARE WE NOW?

The current farm system imports 300T/year in feed, PKE (250T), Grass silage (30T).

No Infrastructure on farm to minimise feed wastage, and milking 2.8 cows/ha (430 wintered on 148ha – 18ha leased).

The EFS on a standard $6 payout (excl dividend payments) is now $2,501/ha and growing a total of 16T grass per ha per year.

The N losses from the farm areapproximately 39kgN/Ha/year.



WHERE ARE WE HEADED?

The current farm performance is much improved from where we once were. However we still need to improve our profit figures, and we need to reduce our environmental footprint to achieve our strategic aims for the future.

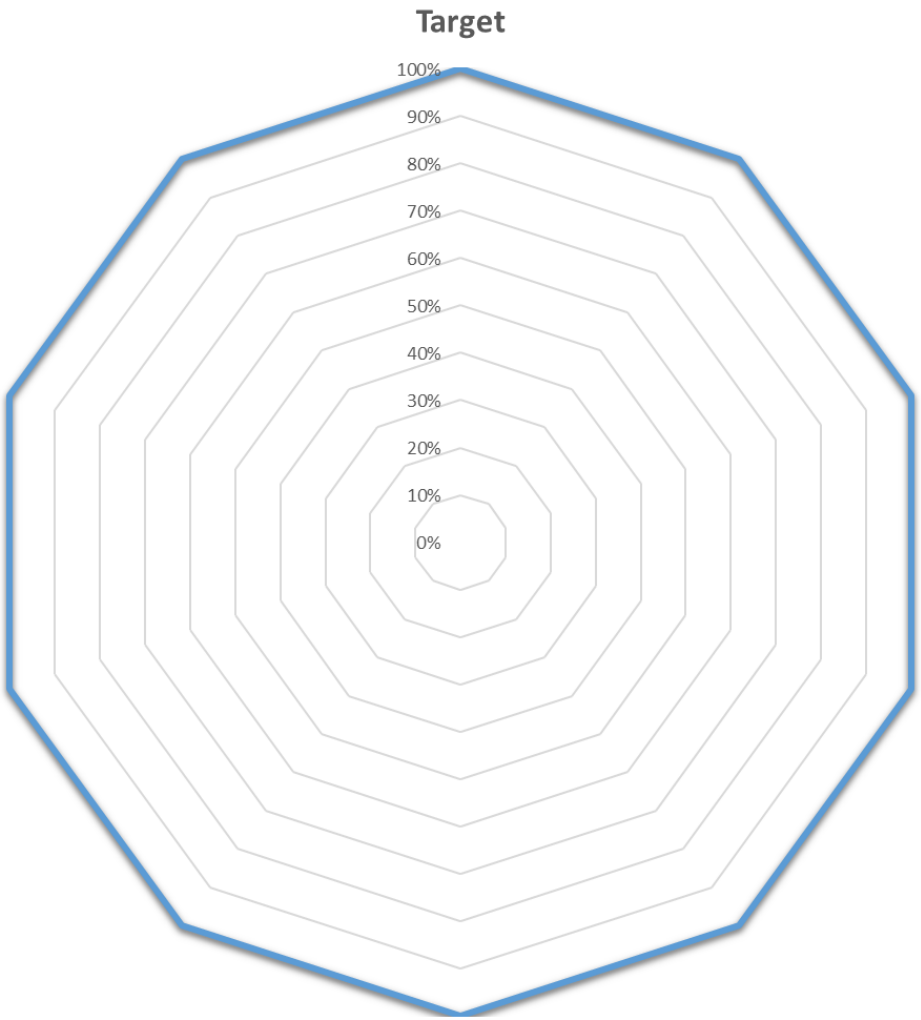
Without infrastructure, we don't expect much more lift in productivity or reduction in N losses, and little further movement in profit.

Owl Farm's Stage 2 – using innovative strategies to maintain or increase profit alongside a continued journey of environmental performance that demonstrated leadership to local farmers

NOTES

WHAT IS ON YOUR WAGON WHEEL? – SOME EXAMPLES ARE LISTED, THERE WILL BE MORE!

What are the things you need from your farm system? What things are important to get out of your farm? Most people will have profit on there, but why is it there?



Profit	*Low cost of production*
Time off	*No capital investment needed*
Happy cows	*Maintain production levels*
Happy public	*Safe for family to enjoy*
Reduced N leaching	*Reduces water use*
Low empty rate	*Lower Phosphate losses*
Well-fed cows	*Simple system for staff*
Reduce climate risk	*Opportunity for more milk*
Protect pastures	*No feed price changes*
Strong cashflow	*Attractive to succession partners*
High per cow	*High per Ha*

WHAT IS ON OWL FARM'S WAGON WHEEL?

Measure and track our Return on Asset to ensure any farm systems change Requires a return from any capital investment.

Efficient use of water on the farm and reducing our dependence on fresh water

Profit (EFS/ha) equivalent to at least the top 20% of farms in our region. A strong cash return Is essential

No soil and phosphate loss to waterway. They aren't making more soil, we want to keep ours

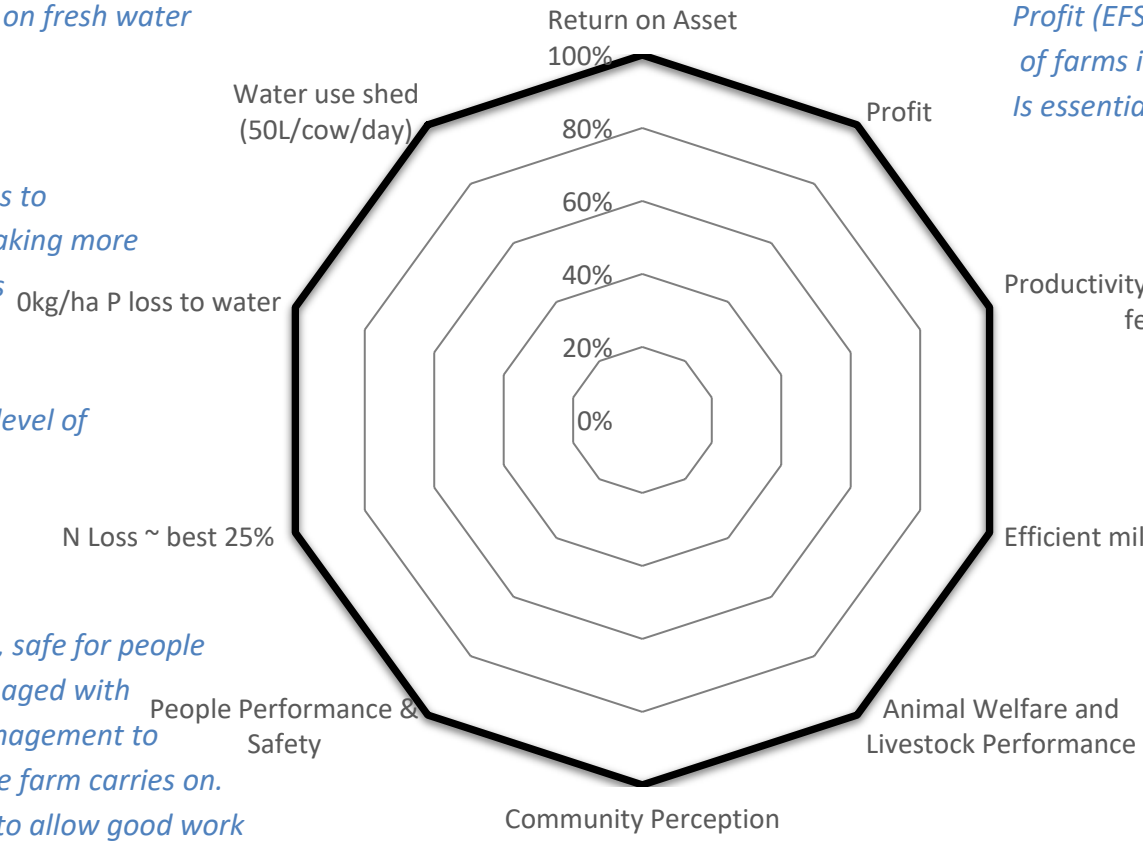
Drive maximum yield of homegrown feed. Ensure Techniques that drive high Utilisation of that feed.

Reduce our N Loss to the level of the best 25% of industry.

Milk is made from the efficient conversion of feed Of all types.

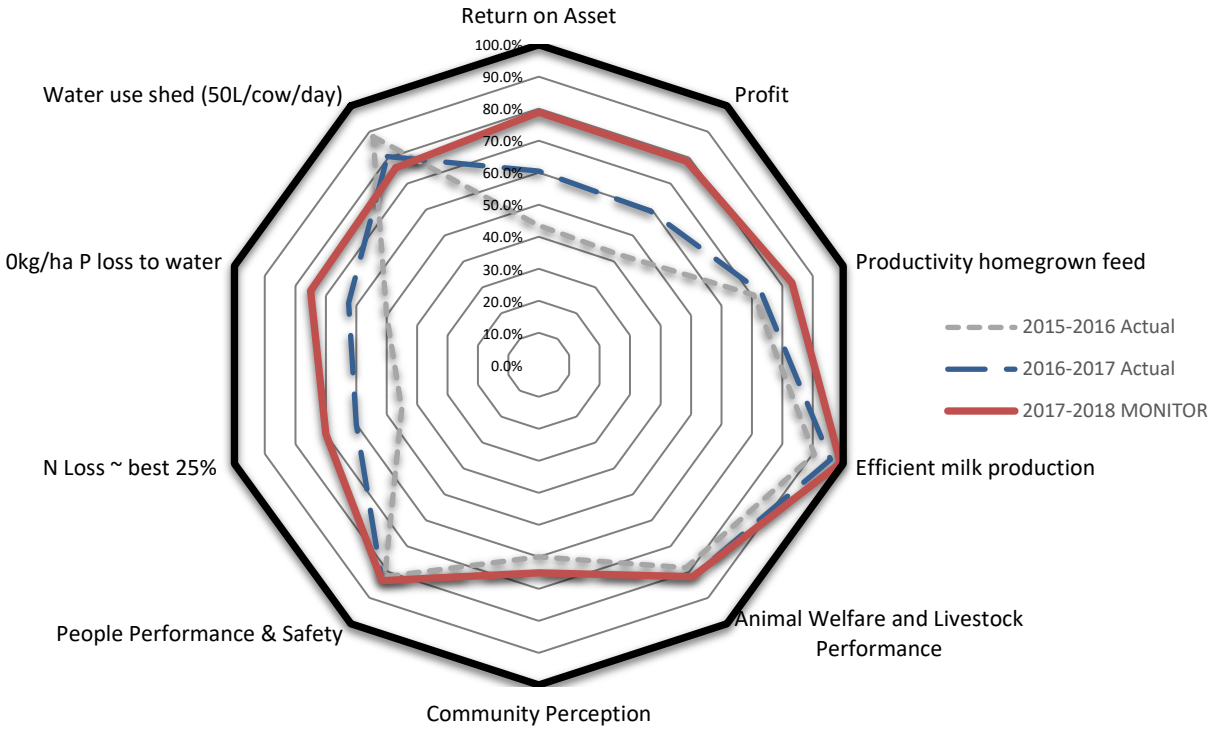
A system that is above all, safe for people a system that can be managed with clear plans. Allowing management to take annual leave, and the farm carries on. Hours of work controlled to allow good work life balance for all staff.

Cows are cared for as best we are able. Cows produce 90-100% of Their liveweight annually in milk. Stock wastage and reproductive performance allow for rearing only 18% of the herd as a target replacement rate.

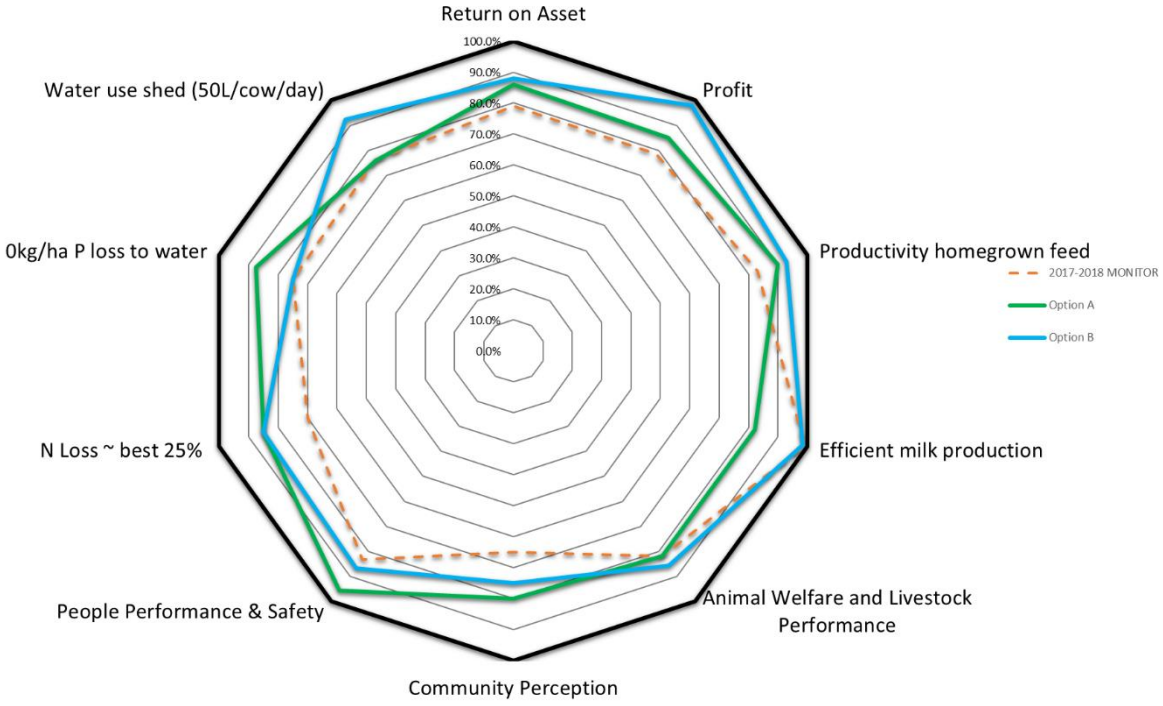


Our farming, rural, urban NZ, global consumer and neighbouring community have a view that we care for our environment, our people and our animals and farm responsibly.

PROGRESS SO FAR, AGAINST OUR OWN TARGETS



OUR NEW SYSTEMS STACK UP BETTER



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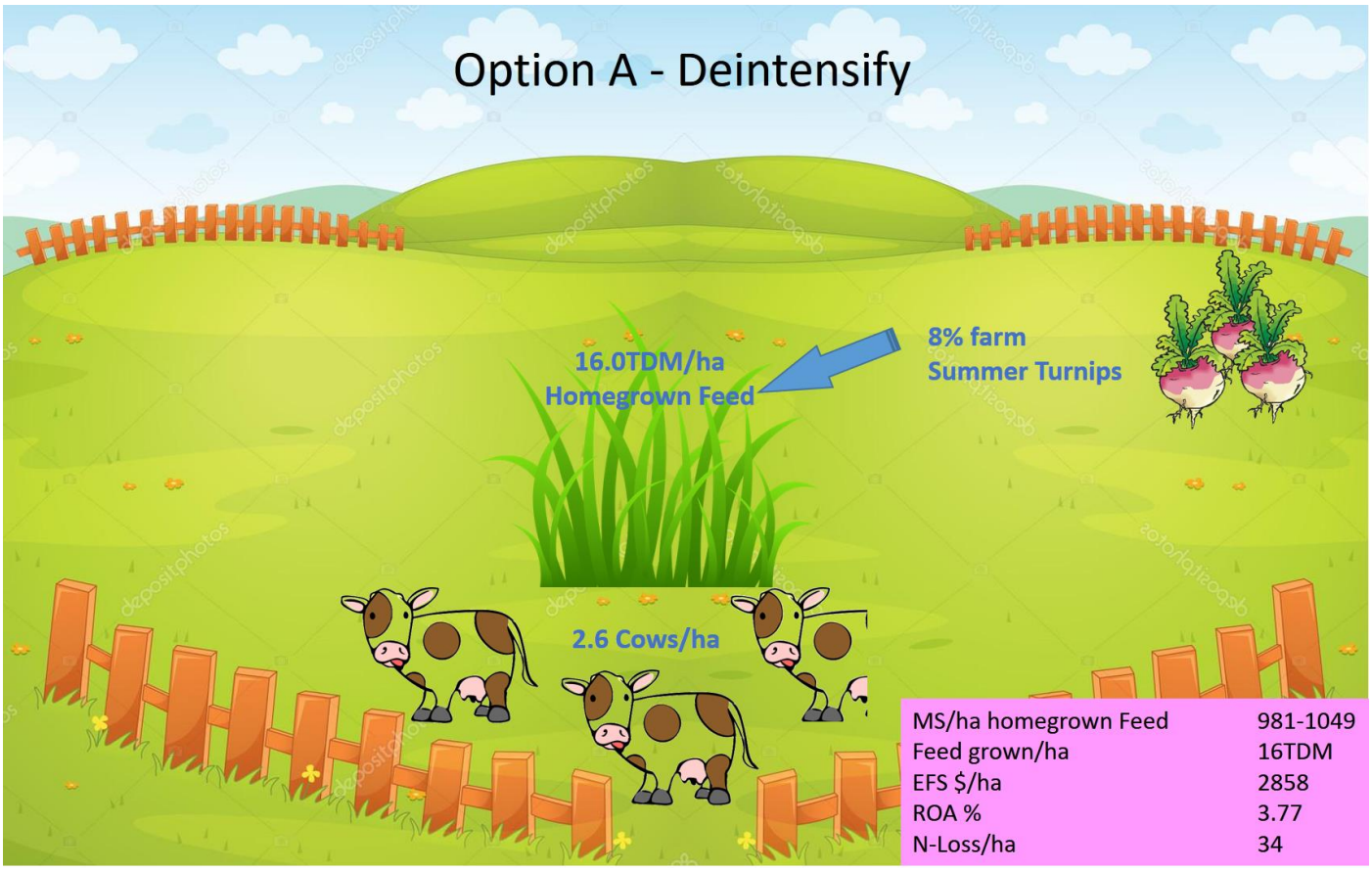
Owl Farm

Two pathways to reduce Environmental losses, but maintain viable farming businesses

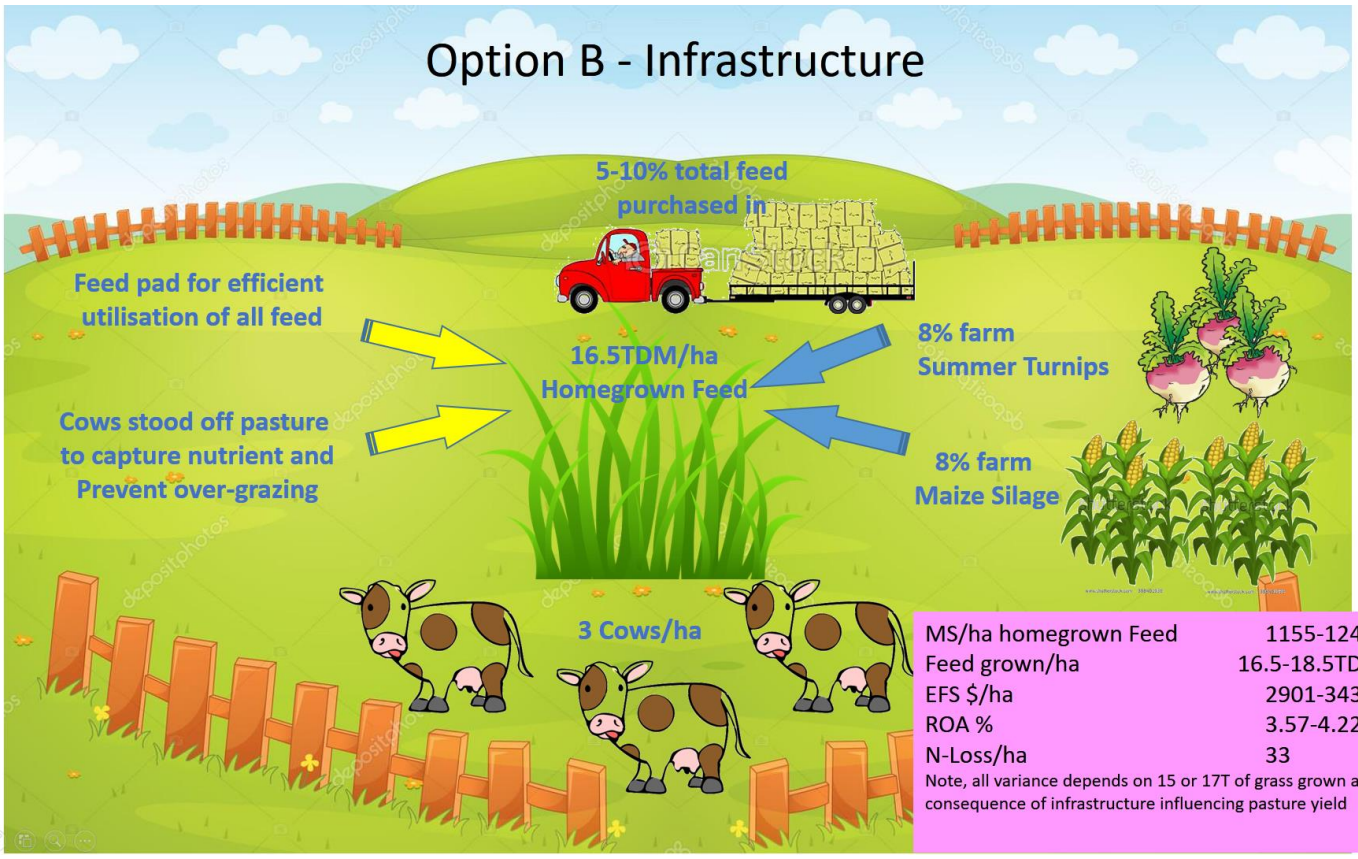
De-intensify plus innov/Tech/Science	Invest in infrastructure plus innov/Tech/Science
Reduction and restriction of total nutrients cycled to minimise Environmental losses	Nutrients Captured by holding cows off Pasture to minimise Environmental losses
Negatives	Positives	Negatives	Positives

Owl Farm

THE TWO FARM SYSTEMS OWL FARM IS CONSIDERING FOR EACH PATHWAY



MS/ha homegrown Feed	981-1049
Feed grown/ha	16TDM
EFS $/ha	2858
ROA %	3.77
N-Loss/ha	34



MS/ha homegrown Feed	1155-1247
Feed grown/ha	16.5-18.5TDM
EFS $/ha	2901-3432
ROA %	3.57-4.22
N-Loss/ha	33

Note, all variance depends on 15 or 17T of grass grown as a consequence of infrastructure influencing pasture yield

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Two pathways to reduce Environmental losses, but maintain viable farming businesses

De-intensify plus innov/Tech/Science

Reduction and restriction of total nutrients cycled to minimise Environmental losses

Negatives	Positives
Some farmers will not support this choice	Takes a strong position of Leadership to industry
Interim and total opportunity cost could be significant	Environmental outcomes occurs through reduction in nutrients cycled
Very little flexibility in system to deal with variable climatic experiences	Fewer variables, makes for a simpler system. Ability to make clear decision rules is easier.
Will not be easy to extract highest returns from homegrown feed with minimal stocking rate	Money saved on capital outlay could be deployed elsewhere later for productivity gains
Little upside opportunities for increased profit	Paddock to plate traceability of feed much simpler
Provides no change to current levels of animal comfort	Public perception of Environmental benefit more easily achieved
Provides no more tools to protect pastures and soils from damage	
Ability for manging debt/kgMS if indebted now and reducing production	

Invest in infrastructure plus innov/Tech/Science

Nutrients Captured by holding cows off Pasture to minimise Environmental losses

Negatives	Positives
Some farmers will not support this choice	Takes a strong position of Leadership to industry
This system requires investment in infrastructure for immediate Environmental impact	The immediate investment for the environment gives large and rapid Environmental outcomes
"You can't unpour concrete" and recover capital spend if it doesn't work out like you hoped	Insulates profitability and presents many opportunities for increased returns
Uncontrolled feed inputs risks increased nutrient cycling. Discilipine needed to prove system	Flexibility presented by being able to re-arrange inputs provides huge opportunities to drive profit.
Will be easier, but still difficult to extract higher returns from homegrown feed with more cows	Actively taking steps to improve animal comfort
Potential ETS influence on this system unknown	Actively standing off cows to protect pasture, soils, and prevent loss of seidment and ecoli to water
Total farm footprint in food miles, support land and number of heifers reared - higher.	
Access to capital may be limited	

NOTES

Owl Farm

Owl Farm Evolution, defining what is really important.

There is no doubt that the world we farm in is changing. It's changing quickly and it's changing on multiple fronts and as farmers we've got just one choice – Evolve. The question is, how do you set about actively and deliberately changing what you do? Where do you start? We at Owl Farm have been on an incredible pathway for the last 12 months, and we thought we'd share our process with you.

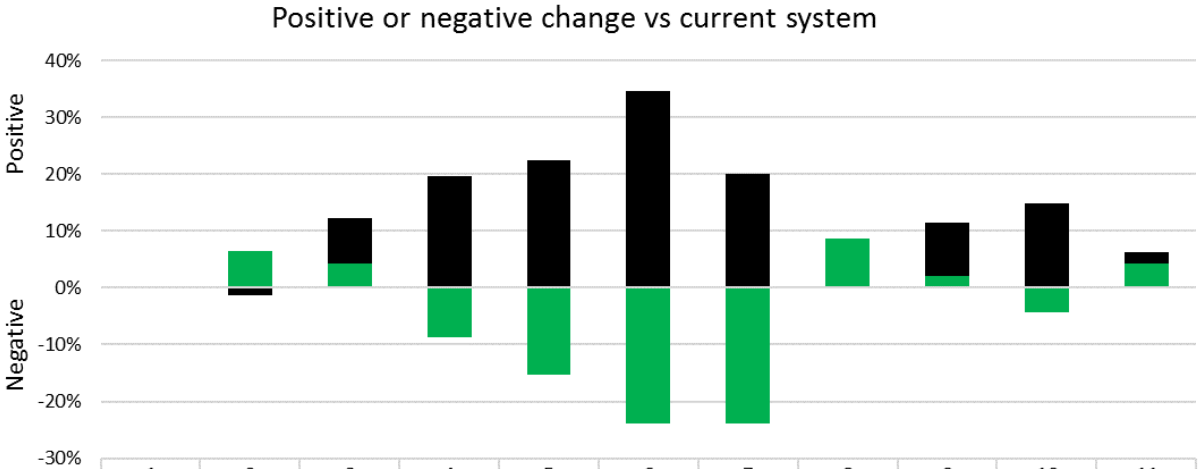
As we move forward – all farms in New Zealand will need to cross this bridge and it's important for farmers to know that it is a winding road with the odd dead end. But if you can define early on in the process what is really important to you, you'll find a much straighter pathway to the destination.

We're now looking at Owl Farm's Stage 2 – using innovative strategies to maintain or increase profit alongside a continued journey of environmental performance that demonstrated leadership to local farmers. The question of "what next" for the farm has been a far more involved and complex one to ponder.

For the past 12 months, work has been ongoing that looked at what options lay before Owl Farm that might deliver on the strategic objectives in the future. A "shortlist" of 11 possible scenarios that provided a vast range of performance. These all looked at changing in some way from the current farm system of; spring calving with no feed infrastructure and all cows wintered on. These included the following ideas and in some cases combinations of ideas:

- Wintering off 20% of cows, In-shed feeding, Feedpad, Herd homes, Winter milk, Very low/no input and lower stocking rate, Higher stocking rate

Out of this work some clear data came to the fore about: variance in profit between each of the farm systems, the capital cost that it took to achieve this new system and also about the environmental outputs that each system produced.



	1	2	3	4	5	6	7	8	9	10	11
Change in Profit	0%	-1%	12%	20%	22%	35%	20%	1%	12%	15%	6%
Change in Environment	0%	7%	4%	-9%	-15%	-24%	-24%	9%	2%	-4%	4%

The graph shows the summary improvement in Profit and improvement in Environmental performance of the systems considered. It's fair to say that this is when the head scratching sets in. Some systems offer a large improvement in profit, but they make environmental performance a lot worse without further investment in tools to reduce the environmental footprint. Other options offer environmental improvement but don't improve profit at all.

NOTES

It's fair to say that this is when the head scratching sets in. Some systems offer a large improvement in profit, but they make environmental performance a lot worse without further investment in tools to reduce the environmental footprint. Other options offer environmental improvement but don't improve profit at all.

It had become clear to us that to move forward we must look at where the farm is now and select a system that addressed the current weaknesses on the farm and built on the current strengths. Once this task was completed our desire to see the farm performing in all areas moved us to setting some key targets to benchmark our past, present and future performance on.

With everything being equal, what results would our high performing system produce in 5 years' time? At the outset, we were very strict that nothing in a new system would see us compromise health, safety or welfare of our animals. When we had finished, the targets we set looked at:

- Financial performance and a defined minimum EFS/Ha at a $5.80 payout, equivalent to what the top 20% of the region is achieving. A target cash Return on Asset that would ensure any investment in infrastructure didn't lead to over-capitalisation.
- Physical farm performance measures that focused on increasing the amount of homegrown feed grown and harvested and driving ever more towards more milk produced from homegrown feed.
- Livestock performance measures that look at high quality cows, efficiently producing our milk. A total replacement rate that would need to be reared, as a sum of all reproductive and livestock wastage measures.
- Community and how the rural, urban or international markets may respond to our system now and in the future.
- The impact of the system on people, and the intention to offer a job with a good work-life balance and controlling the hours of work. The usability of the system and whether the key-people on farm are able to take their leave entitlements every year, or is the system too complicated to allow this to happen?
- And of course, environmental KPI's – moving the farm close to the best 25% in industry for Nitrogen loss to water. Targeting no loss of Phosphate to water and a focus on the amount of freshwater consumed/day in the process of milking and shed hygiene to reduce our consumption.

It's important to add that there are many things that sit underneath each of these targets. For example within our "Community" target we consider how well industry is placed to emulate our choice, physically, financially and theoretically. We consider, perception of the wider audience of farming – out to the Market and Urban neighbours. We consider whether the system will still be able to run as successfully in the face of changing legislation e.g. the Emissions Trading Scheme.

Comparing a system against all of these targets simultaneously is quite a difficult thing to do. It is a case of seeing which system was the most well-rounded? As if each target were a spoke on the wagon wheel and the more round your wheel the more smoothly the ride will be.

This led us to the following comparison of the systems performance on the "Wagon Wheel". Each system's score for each target is represented as a "percentage achieved" of that target. For example, if a system scored 75% for home grown feed harvested, it would have achieved 75% of the target (Harvesting 12TDM/ha when the target is 16TDM/ha).

When viewed like this the variance in performance is highly visible and in general we still have quite a "wobbly wheel" when you look down the left hand side of the graph as someone noted at our September Focus Day.

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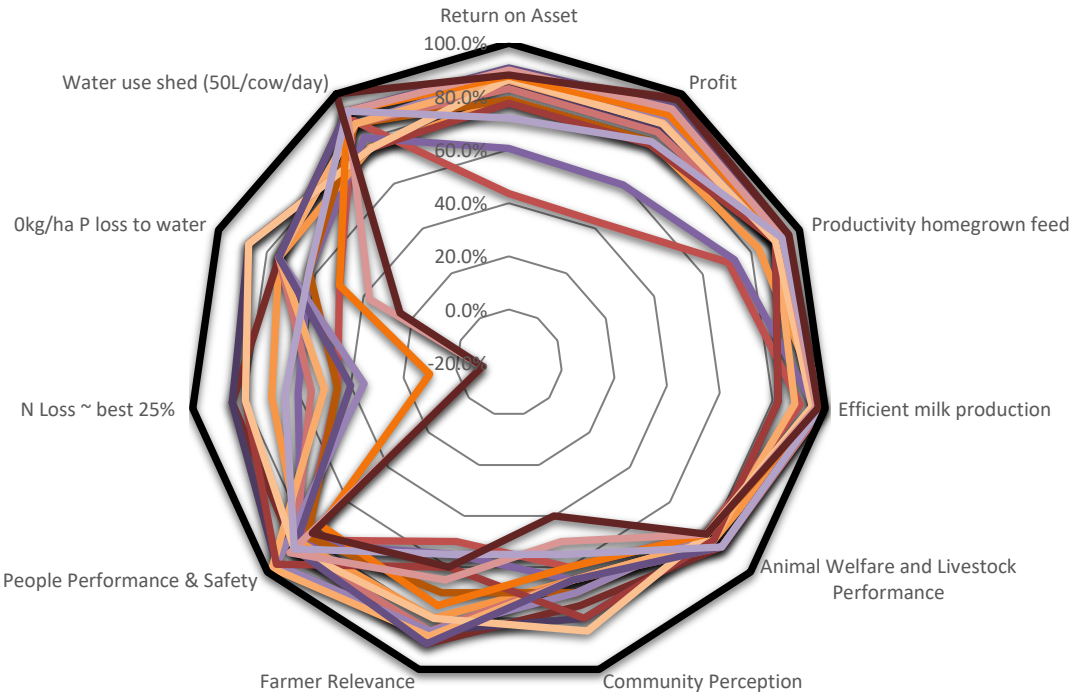


This tool however, started to add some real clarity for us about which systems were the most consistent performers. A number of systems could now be eliminated as we moved along this pathway due to such severe underperformance in certain areas that they just would not be feasible.

It's much easier to operate the drafting gate when you know precisely which beast you are looking for. Now that we had the ability to funnel and filter the systems, based on their total performance, we felt we had a robust process that helped us narrow down to just two.

There was still one nagging question that had to be answered though, where do we draw the line around compromise? Would we sacrifice the highest performance in one area for an improvement in another area?

There has been some more talking and thinking done and the most fruitful conversation of them all leading to the understanding that our Financial performance, our Environmental performance, our Community and people performance and our Livestock performance all need to be good enough to allow us to continue the new farm system into the future.

It means poor livestock performance, will affect our community engagement and perception and undoubtedly also our profit. If we can't deliver on our Environmental objectives we won't be able to continue farming the way we are which will affect how others see us and possibly remove the ability to generate profit. If we can't find a viable financial model then we won't be able to afford to meet our environmental objectives and look after our stock.

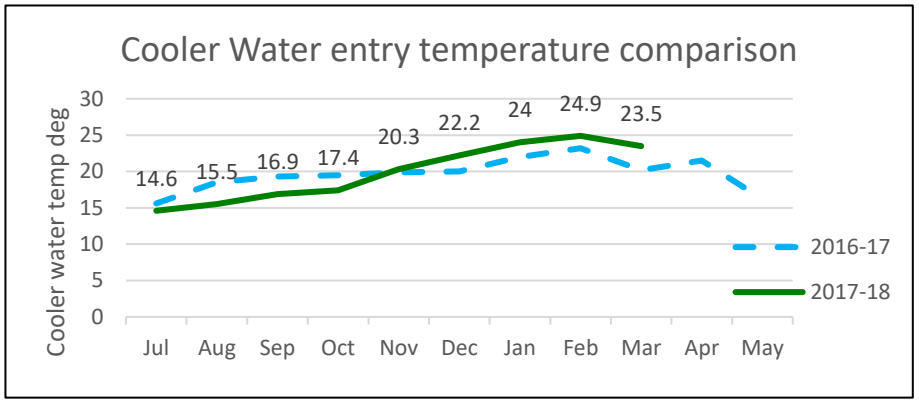
What is it that Owl Farm would like to be famous for? ***Owl Farm will be famous for: Demonstrating a sustainable Farm System.*** Using the true definition of sustainable: able to be maintained at a certain rate or level.

NOTES

PRIMARY COOLING REVIEW

Our new primary cooling solution has been performing as expected, but it wasn't without a few hiccups. On 1 November our two smaller milk vats were replaced with one larger vat while the new Primary cooling system was being installed. The new cooling system (Varichill) is performing as expected, despite the fact that a voltage supply issue to the shed means it is being throttled to 80% of its potential capacity. There is also now 800L of hot water on hand at the end of each milking, pre-heated from the heat recovery system

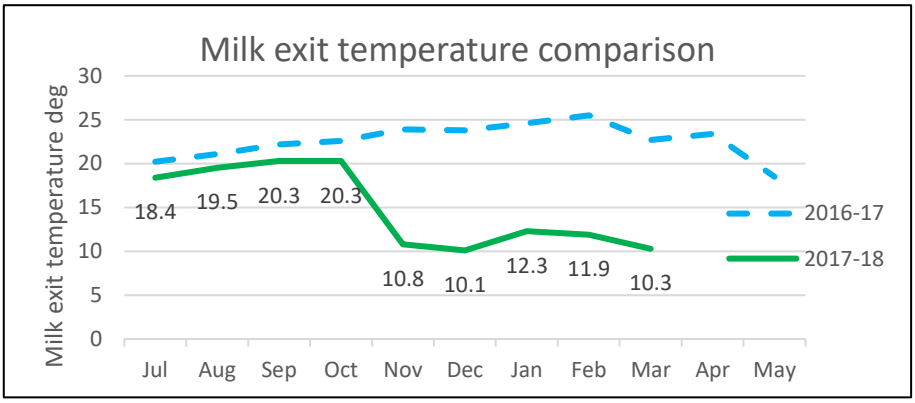
Water entering the cooler was cooler in spring but then warmer from Nov onwards – more cooling required in the hotter months.



Milk exit temperatures from the primary cooler were lower in spring, due to colder water.

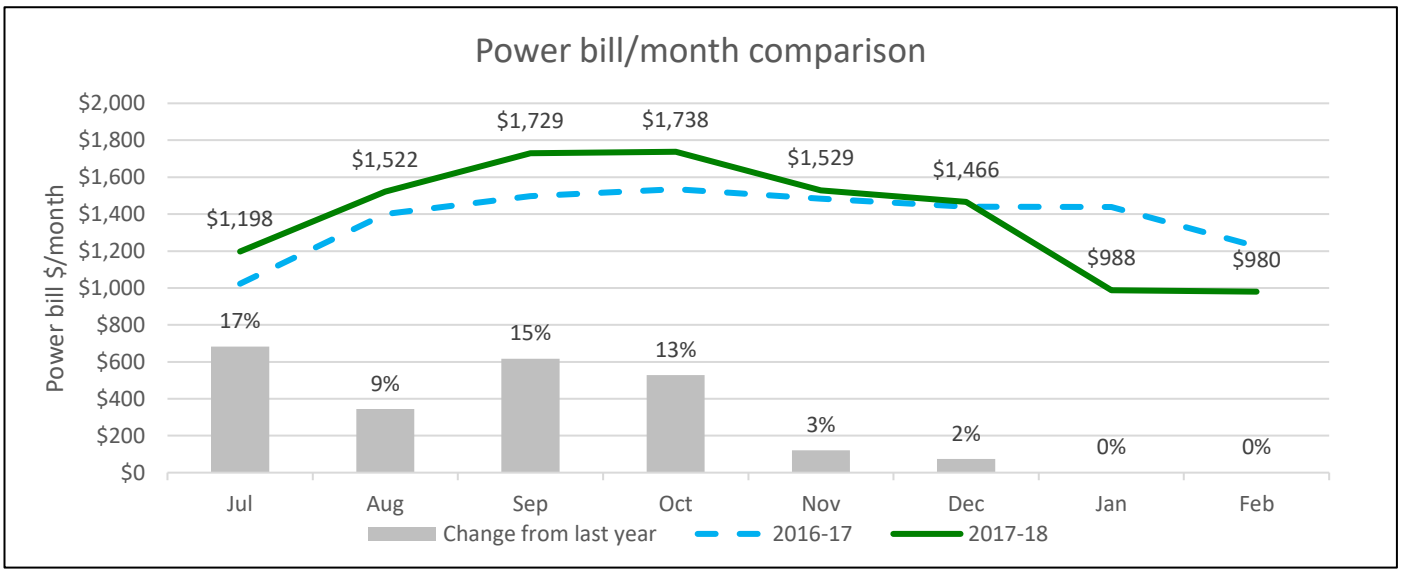
Once the new chiller was installed, these have reduced significantly as the system works.

OAD milking has challenged the system, with a high flow of milk in one milking at hottest time of year.



We're not sure why our power bill in spring was higher than last year, but averaged 13% more than last year ever month. With new chiller and significant improvement in cooling, our power dropped $280 in November from October.

With compliant milk temperature our power bill was basically the same as last year for November and October. Comparison in January and February includes whole herd OAD and other power savings that make it unfair to compare.



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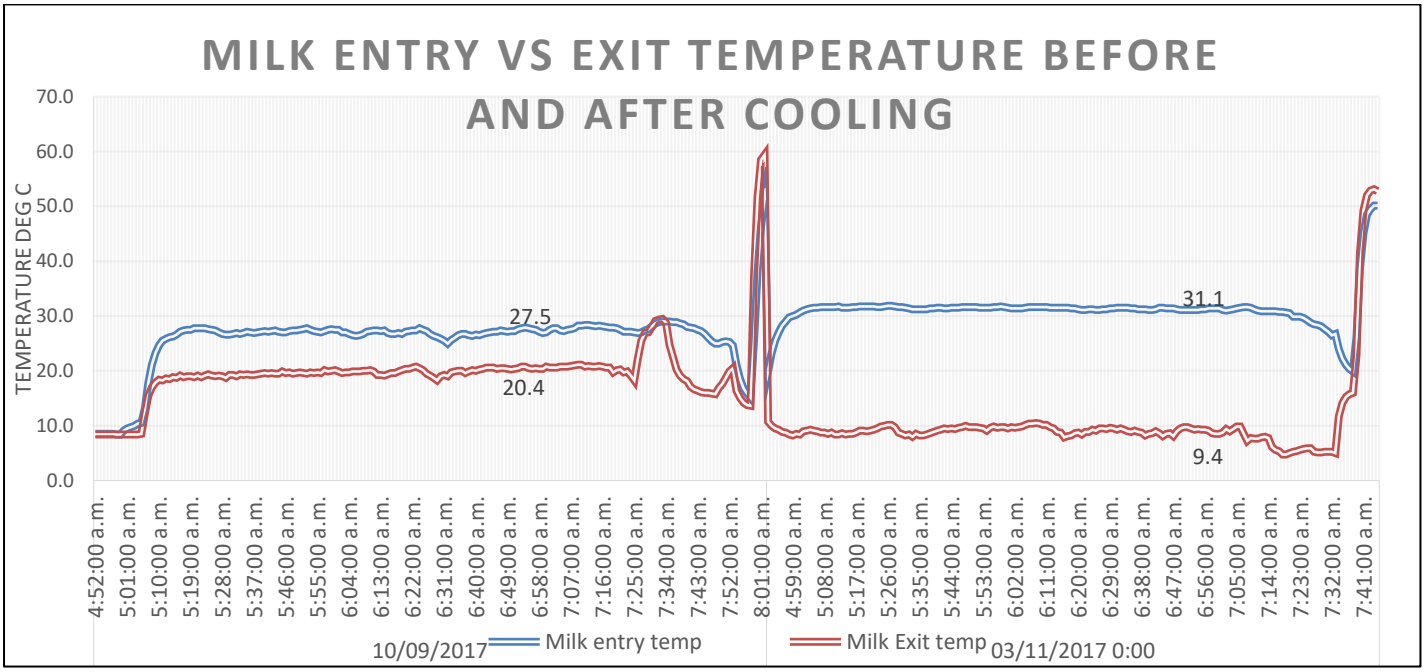
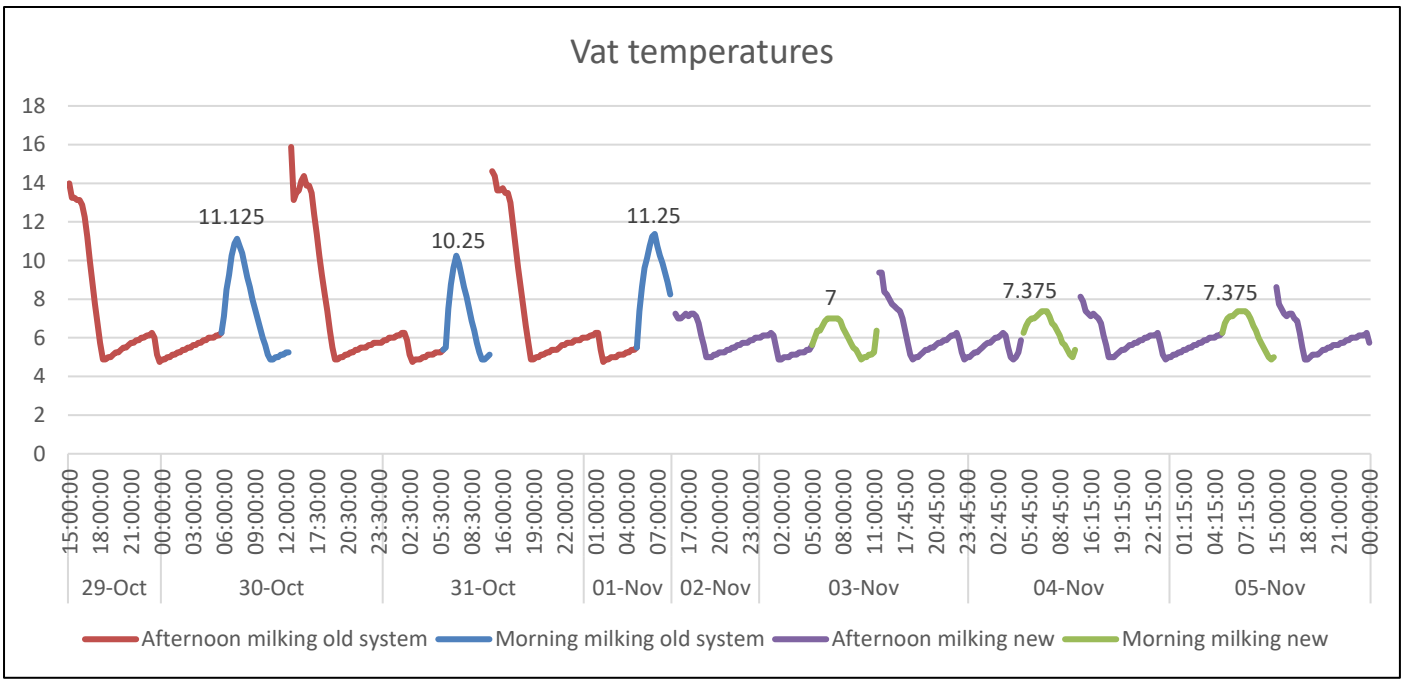
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Power bill	2016-17	$1,023	$1,401	$1,498	$1,535	$1,484	$1,440	$1,438	$1,225	$721	$1,094	$385
	2017-18	$1,198	$1,522	$1,729	$1,738	$1,529	$1,466	$988	$980			
	Change prev	+17%	+9%	+15%	+13%	+3%	+2%	OAD	OAD			
Water temp	2016-17	15.6	18.5	19.3	19.5	19.9	20	22	23.2	20.2	21.5	16.2
	2017-18	14.6	15.5	16.9	17.4	20.3	22.2	24	24.9	23.5		
milk exit temp	2016-17	20.2	21.1	22.2	22.6	23.9	23.8	24.6	25.5	22.7	23.4	18.5
	2017-18	18.4	19.5	20.3	20.3	10.8	10.1	12.3	11.9	10.3		



The graph below shows the comparison of vat temperature during afternoon milkings then as the morning milkings arrived into the vat before and after new system was installed. Note, in the old system, only about half of the morning milking entered this vat of cold milk, the rest of the milk went directly to the old 2nd vat on farm.



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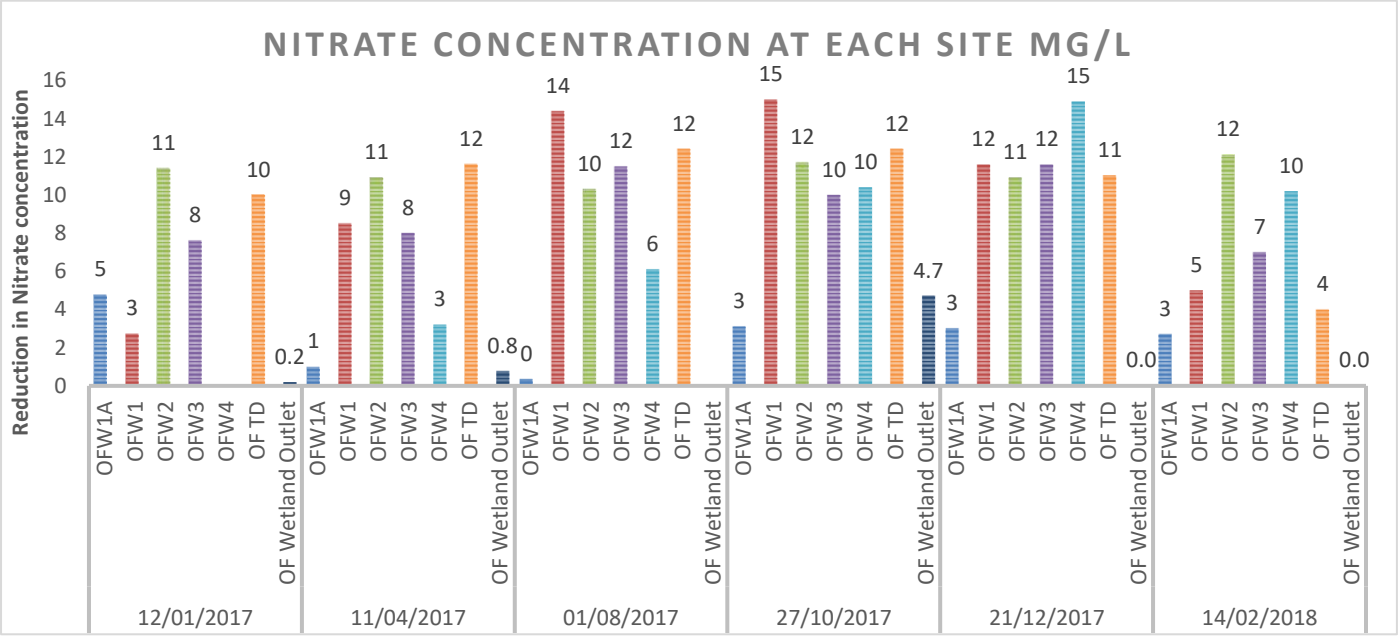
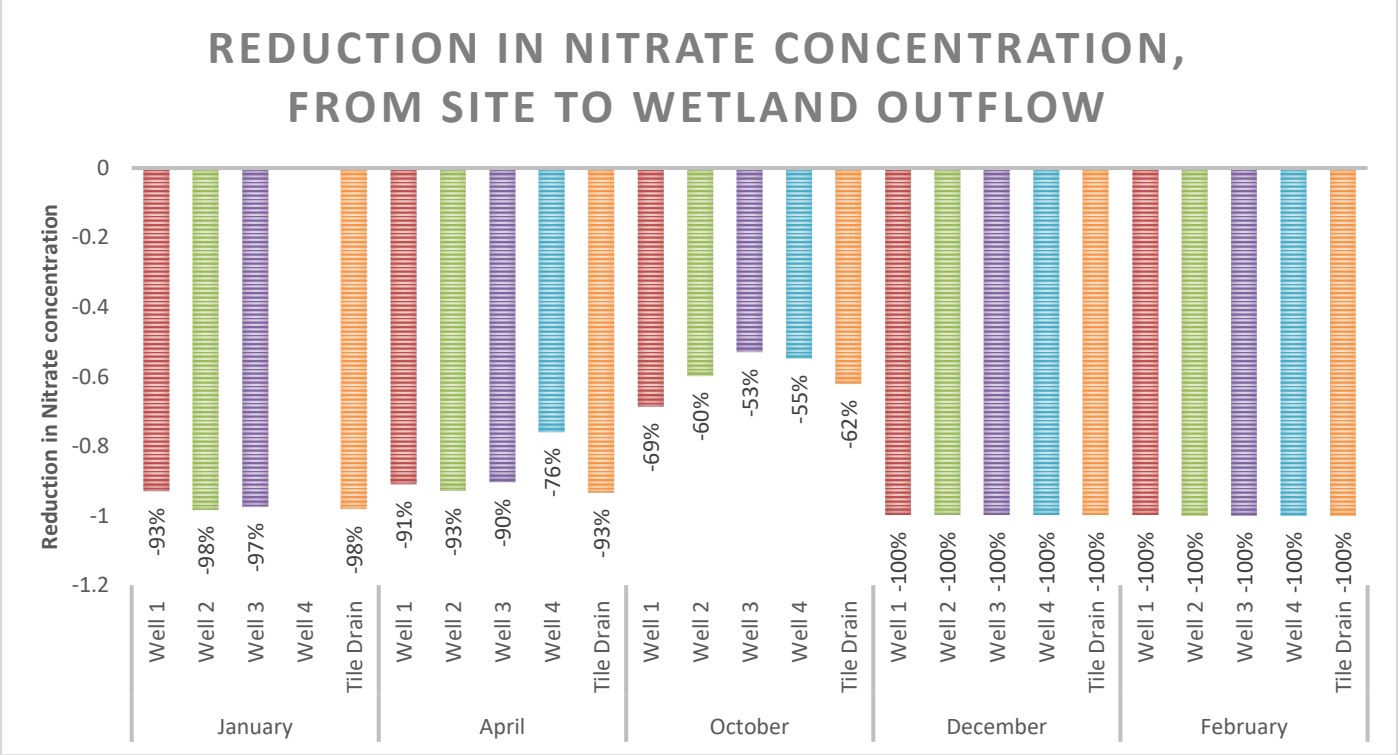
Owl Farm

WETLAND UPDATE

Another round of testing of the wetland has shown that even after a very wet winter and spring, our constructed treatment wetland is continuing to remove substantial volumes of Nitrate from the water sources that supply it.



The total concentration of Nitrate as shown in this first graph largely crept up as soil conditions got wetter. We also saw quite a large change at the wetland outflow in concentration. It has now reduced to 0 detectable ntrate leaving the wetland.



While the % reduction in nitrate concentration for each site dropped over the wetter months, even then it was still far higher than was anticipated when the wetland was designed. Over December and February, there was no detectable nitrate in the outflow sample, where testing can detect levels as low as 0.02mg/L and our ground water samples averaged 7-10mg/L at the same times.

There is a lot we still don't know about, but these results are again very promising.

NOTES

OWL FARM WEEKLY MONITOR WALK

As we move forward into a new season with a much-diminished arsenal of supplements and a strong desire to increase our pasture harvested and pasture quality – the focus on pasture management is as important as it has ever been. This means that we need to ensure we validate our own maths by focussing on what our residuals are, as the cows very good at telling us whether we got the pre-grazing cover right.

We are starting a weekly monitor walk of the top block of the farm – approximately 80 ha that will be completed at 11am every Tuesday.

We hope that this regular platemetering will keep us fit and focussed, along with giving a second validation of pre-grazing and post grazing covers to ensure we maximise out pasture grown and eaten.

These walks are open to the farming community, so individuals, groups, visitors and students can share the experience with us and enjoy some robust discussion as we work to ensure we get the best estimate of what the cows are being fed.

The other outcome of these walks is hopefully a further opportunity to engage with other farmers for advice and support in both directions!

So feel free to drop by and bring your own platemeter, probe, or eye-ometer to the Demonstration office, leaving at 11am Tuesdays!

NOTES

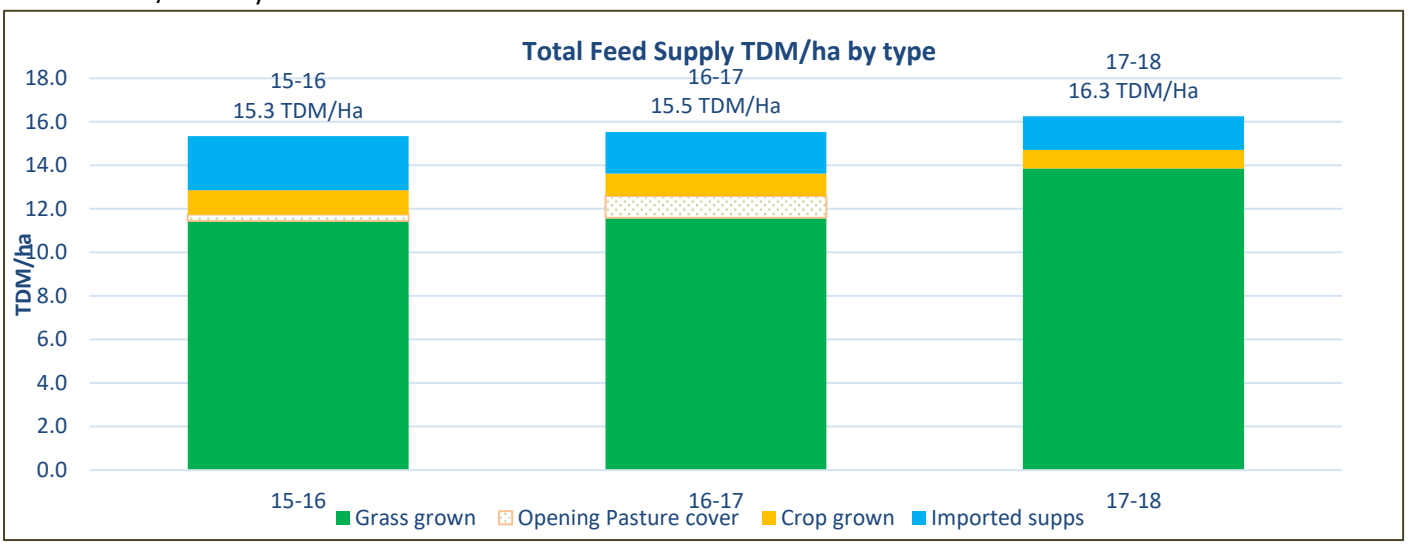
SUMMARY DATA

FEED INFORMATION

In short, we've grown more grass so far this year, and we've also eaten more of what we've grown which is pleasing! Although, Pasture eaten to date is a little bit complex. Pasture growth this year, has definitely occurred in greater quantities than last year for a variety of reasons. To date pastures have grown an average of 13.9TDM/ha compared to only 11.6T grown last year.

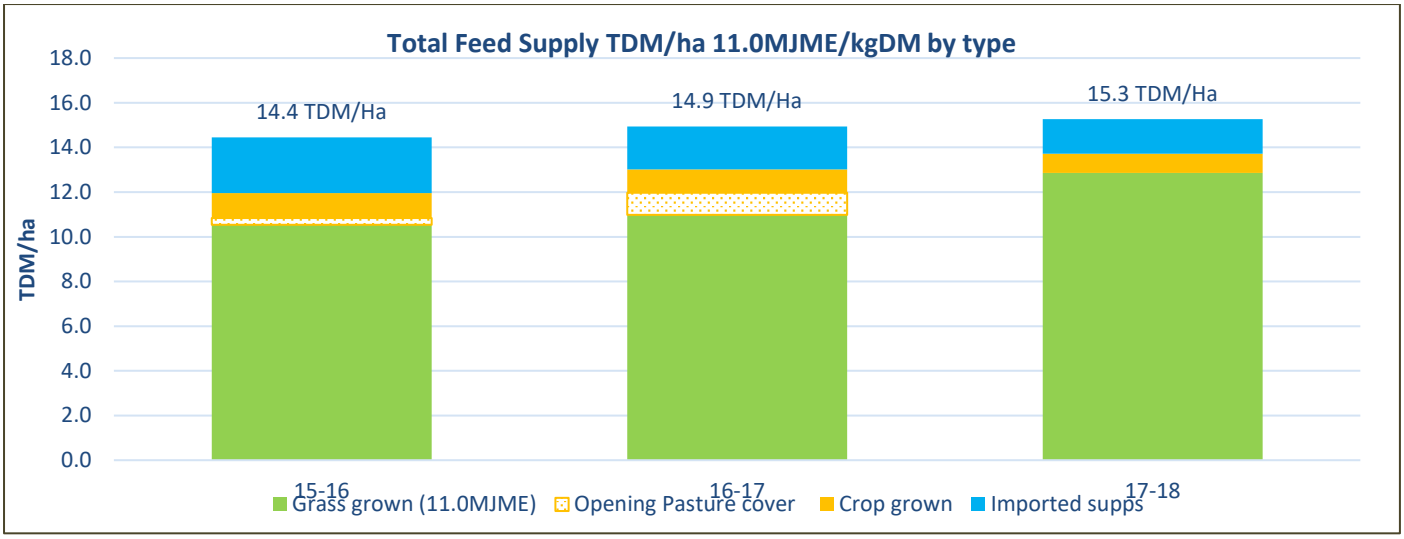
In addition to pasture grown, last year the farm started with a feed bank in the way of Pasture cover on hand at 2,951kgDM/ha which quickly eroded down to 1,950kgDM/ha. Whilst grown in the previous final year in May, it was eaten in the 2016-17 financial year and does contribute to homegrown feed harvested.

Imported Supplements fed out (whether homegrown in prior years or imported) have supplied 1.5TDM/ha this year and 1.9T DM/ha last year.



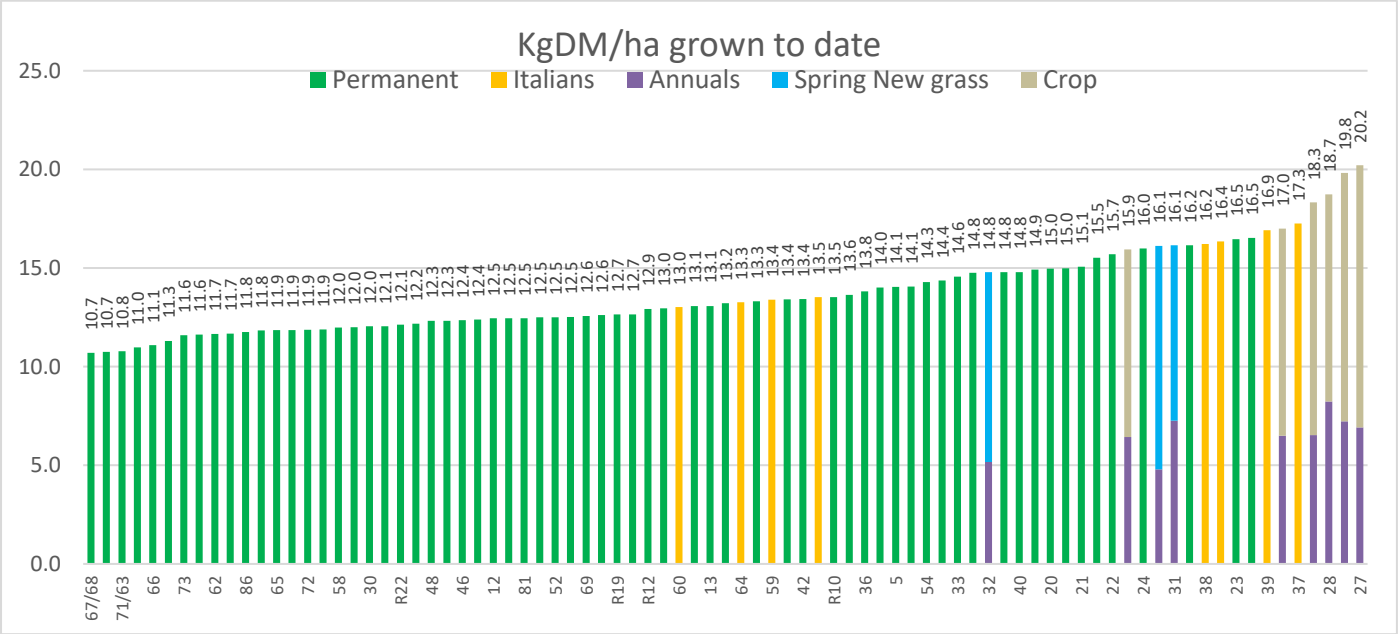
So far, we've had a total increase in feed supply for the year of 0.8TDM/ha. Not all of this was good-quality for milk conversion or harvested (we did a big chunk of topping over summer), but we do have an extra 54T of Grass silage still on hand (0.4TDM/ha) to help us through until next October.

If we look at our standard pasture grown (or converting all grass grown to 11.0MJME/kgDM), the amount of energy grown/ha gap between seasons isn't as great. This reflects and capture the large volume of much poorer quality feed this Summer.



NOTES

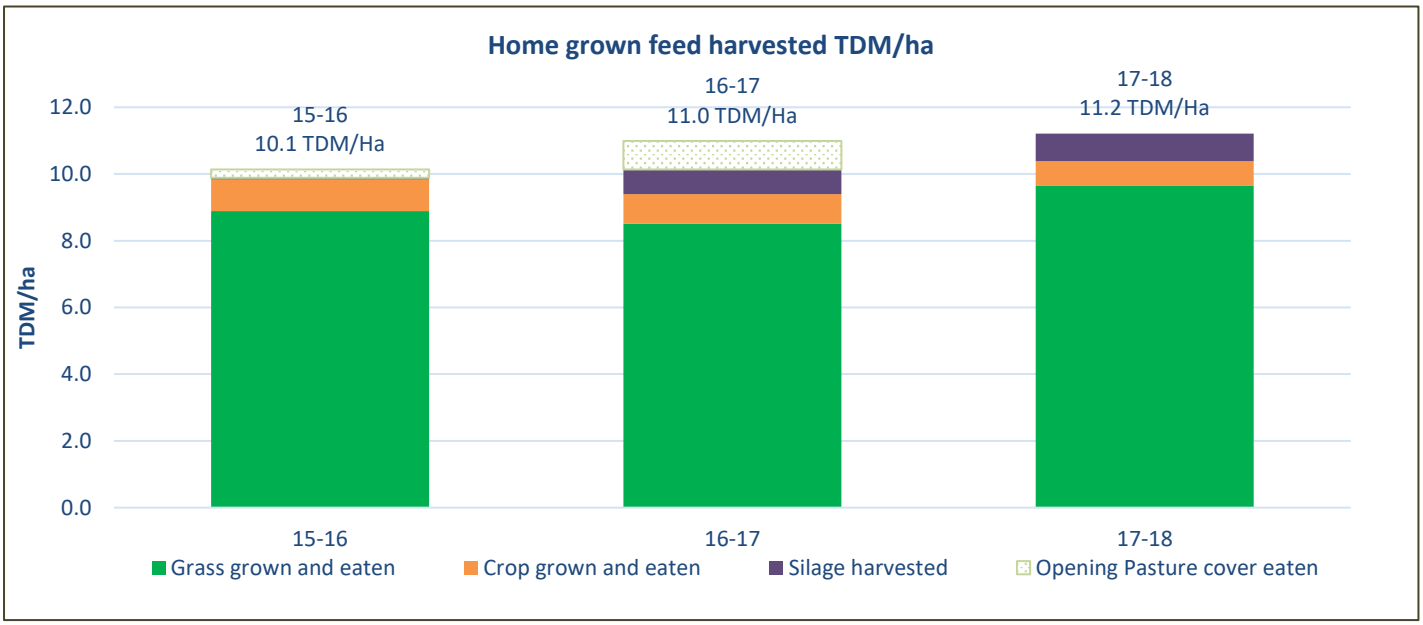
To date the range of pasture grown by paddock is quite varied with Annuals having grown 6.7TDM/ha in spring, plus 9.9TDM if into spring new grass, or 11.4TDM in crop giving a yield to date between 16.5-17.9TDM/ha. Italians have averaged 15TDM/ha so far and permanent pastures 13.1TDM/ha Ranging from 10.7 – 16.5TDM/ha.



This year we have eaten 11.2TDM/ha of the 13.9TDM grown. This time last year, we had eaten 8.5TDM/ha of the 11.6T grown. Ultimately this is an increase in pasture eaten of 13% of the grass grown this season.

This year 0.8T/ha DM has also been harvested in silage, compared with 0.7TDM/ha harvested last year. Crop harvest adds 0.7TDM/ha this year compared to 0.9TDM/ha last year. This brings the total harvested of homegrown feed GROWN this year to 11.2TDM/ha versus last year of 10.1TDM/ha.

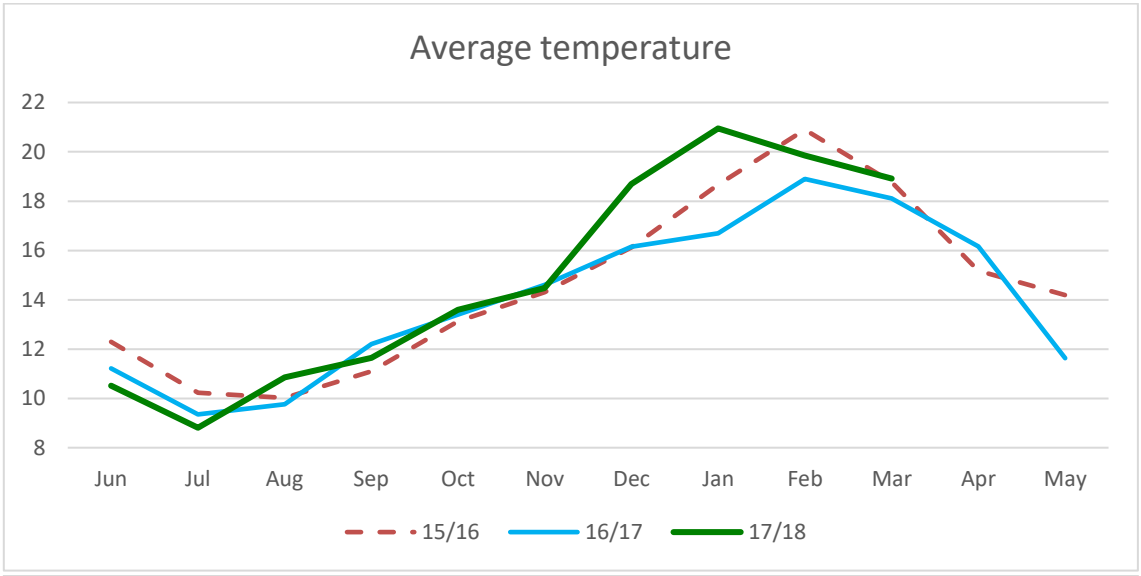
Additionally there is 0.8TDM of the winter pasture cover eaten in the year last year compared to 0TDM this year. So the total of homegrown feed eaten this year is 11.2TDM vs 11.0TDM last year.

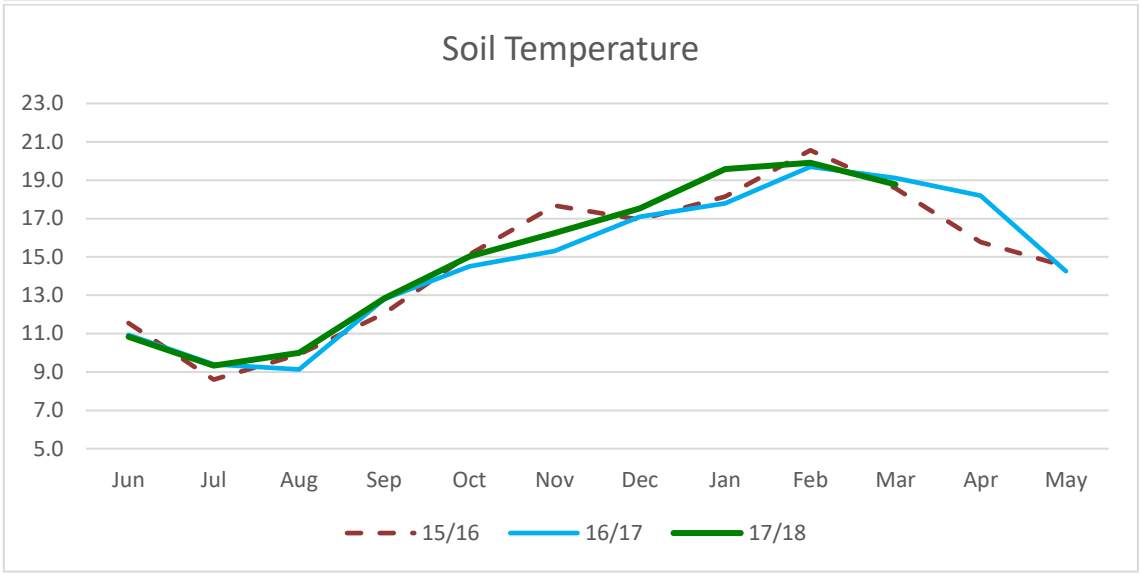


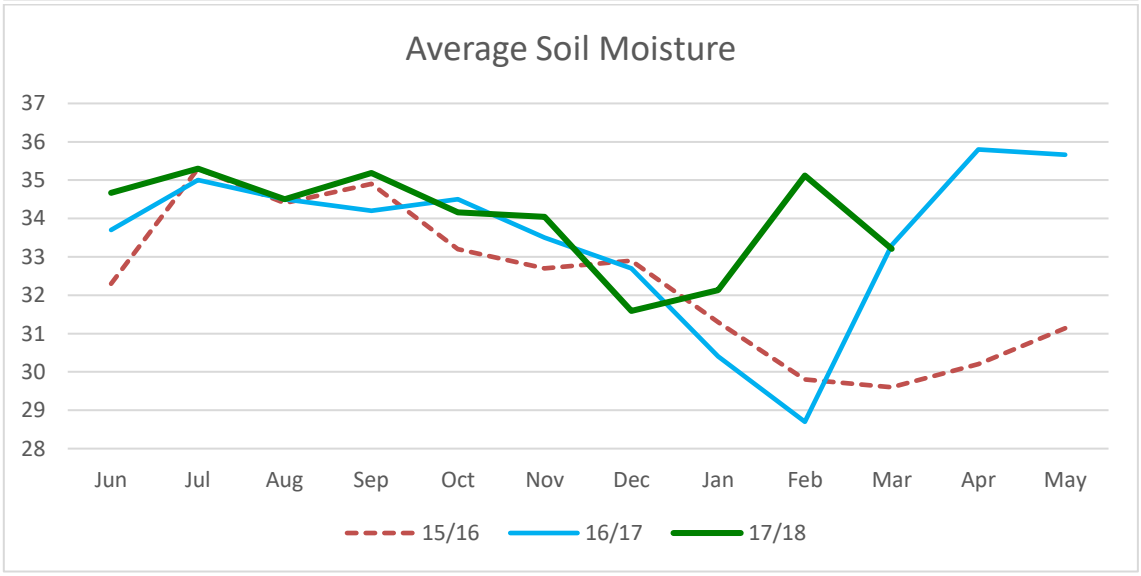
NOTES

Owl Farm

CLIMATE

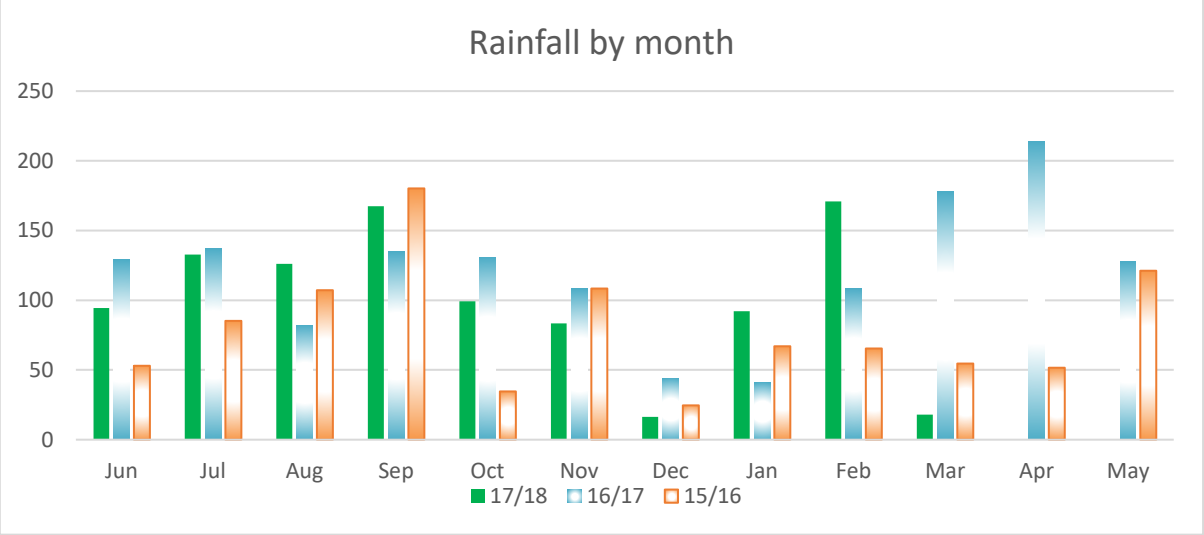


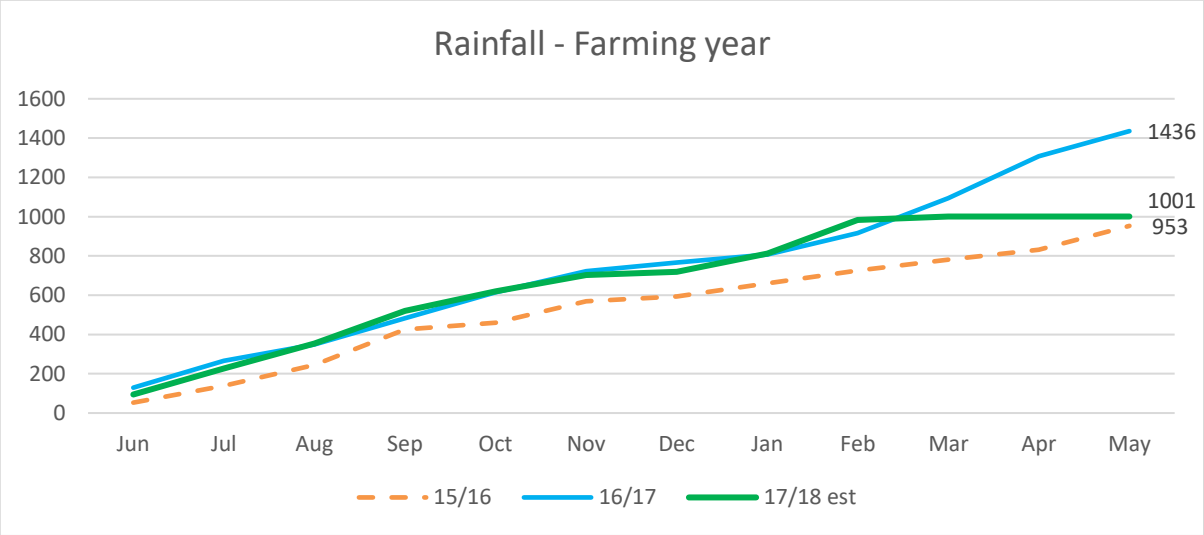


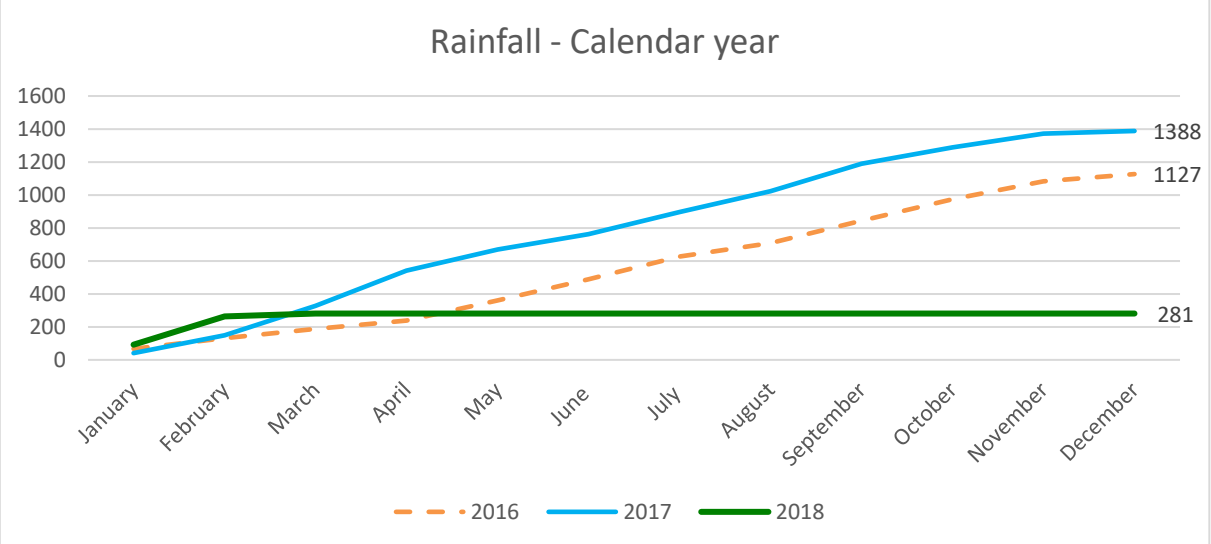


NOTES

RAINFALL







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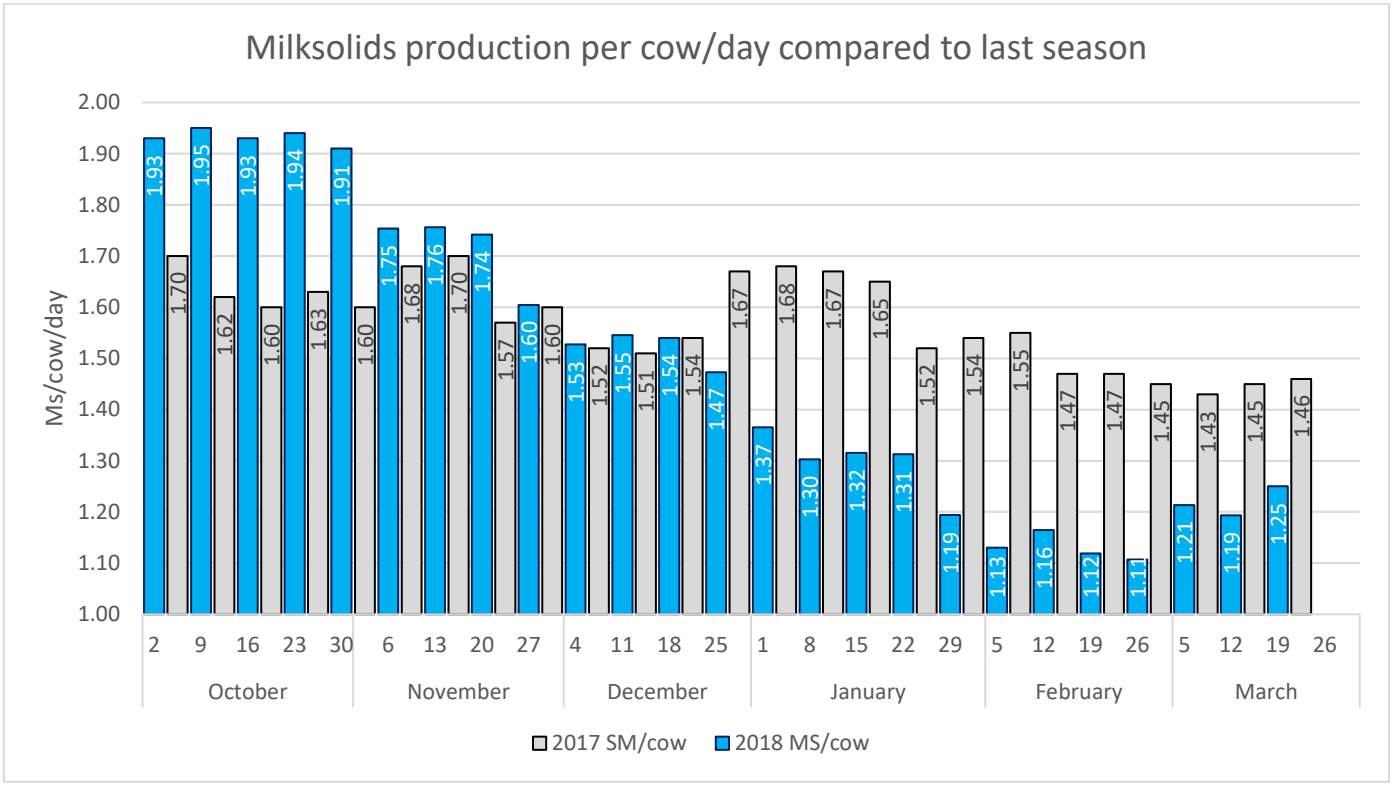
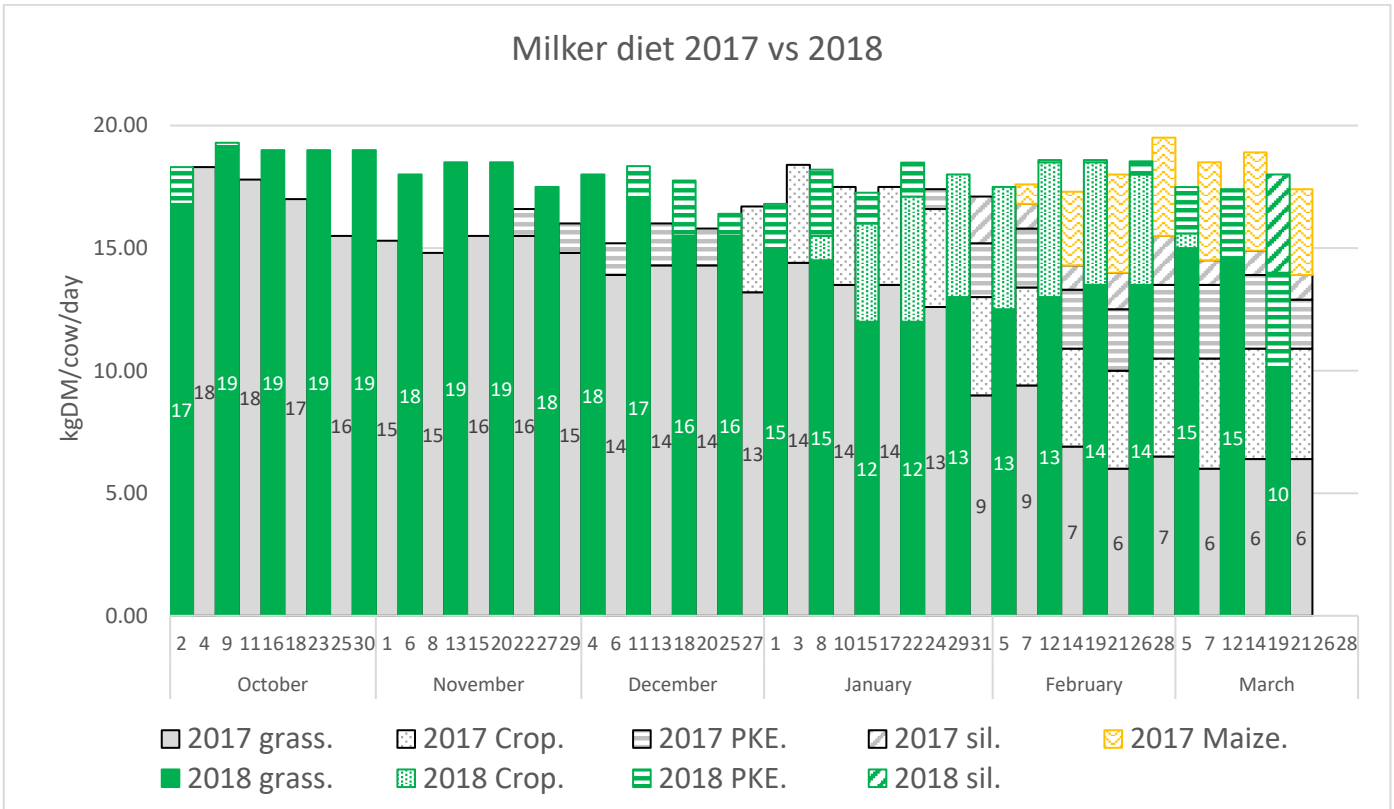
Owl Farm

PRODUCTION





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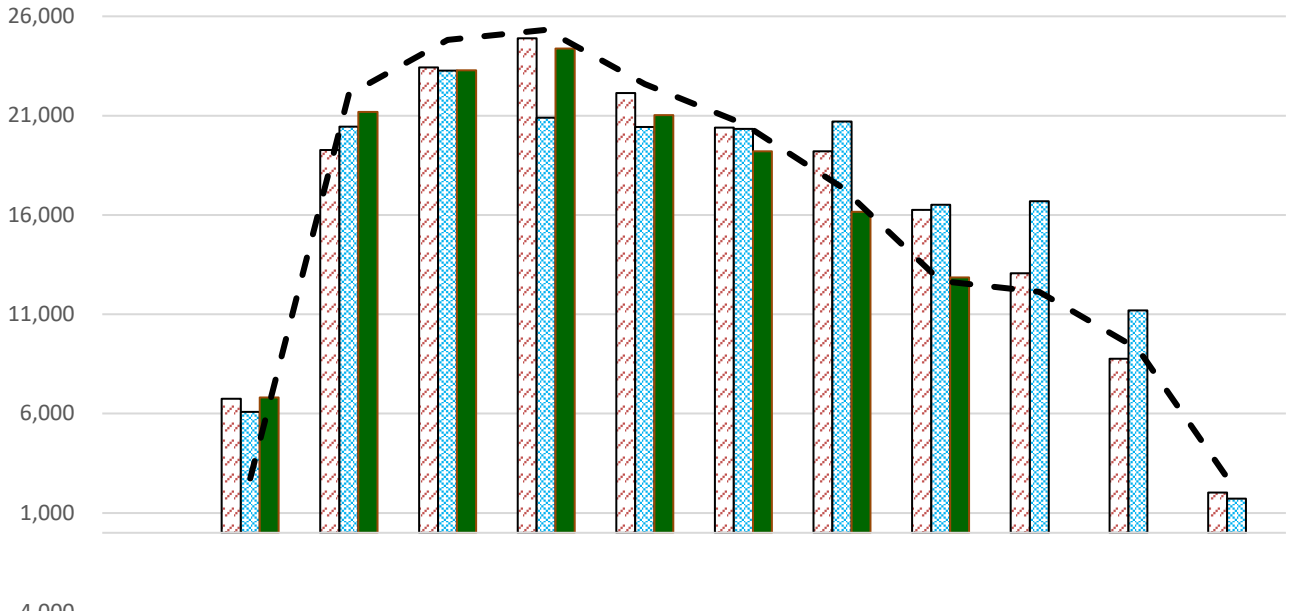
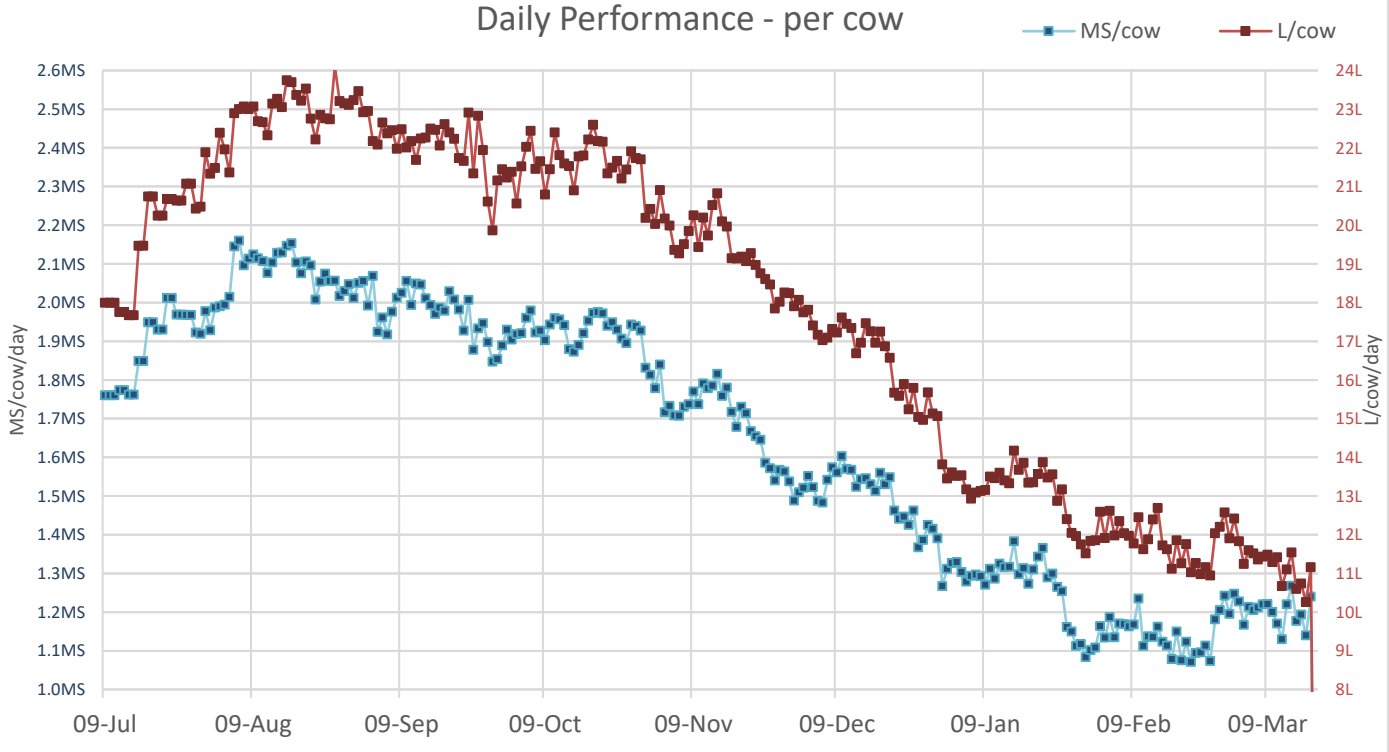
Production: Monthly Performance



	June	July	August	September	October	November	December	January	February	March	April	May
15/16 production		6,756	19,277	23,422	24,899	22,137	20,397	19,201	16,258	13,066	8,766	2,019
16/17 production		6,095	20,440	23,267	20,896	20,431	20,337	20,697	16,519	16,693	11,202	1,717
17/18 production		6,807	21,183	23,287	24,376	21,030	19,213	16,158	12,856			
Budgeted 17/18		2,732	22,055	24,806	25,322	22,589	20,598	17,378	12,675	12,133	9,250	2,087

15/16 production 16/17 production 17/18 production Budgeted 17/18

Daily Performance - per cow



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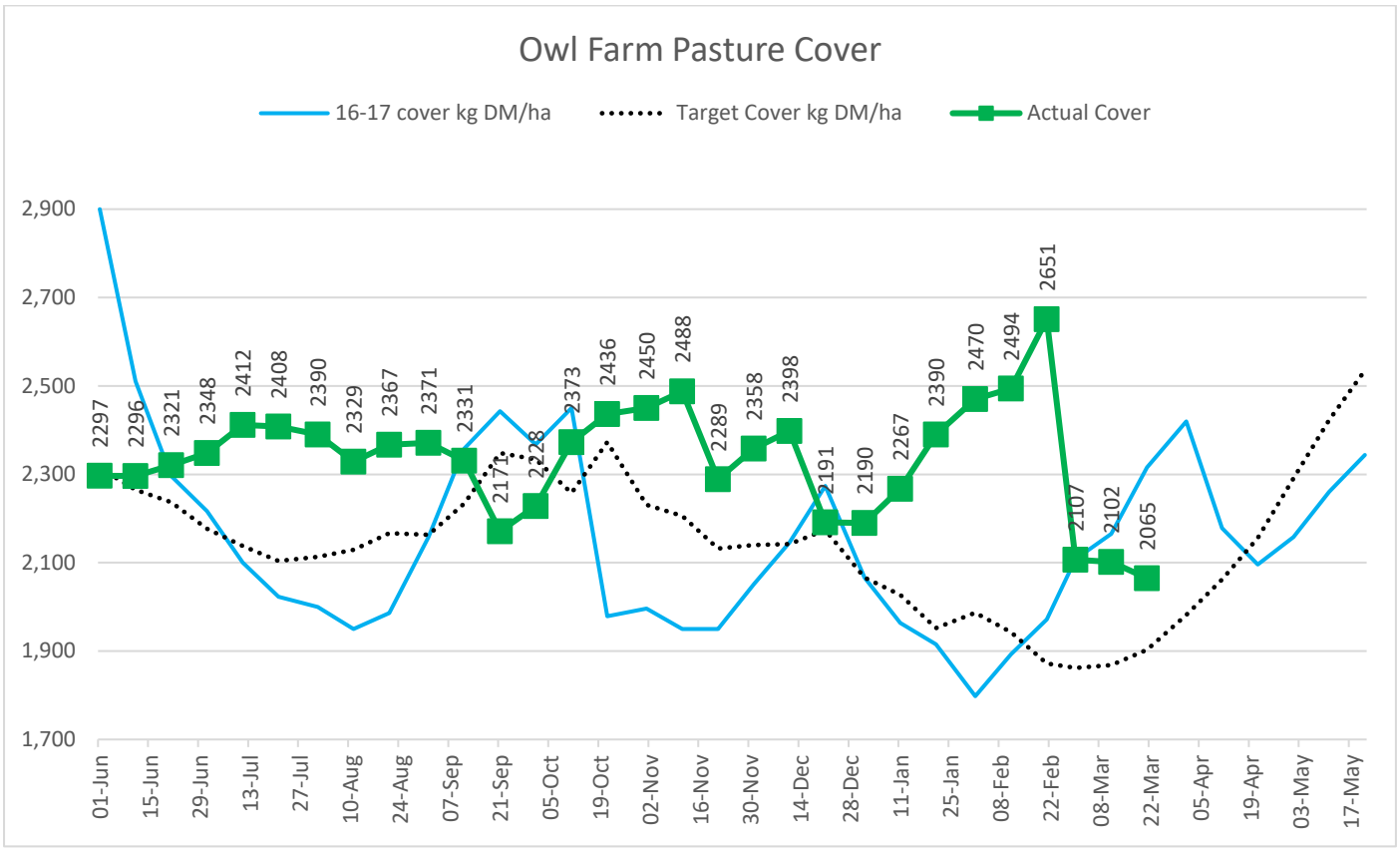
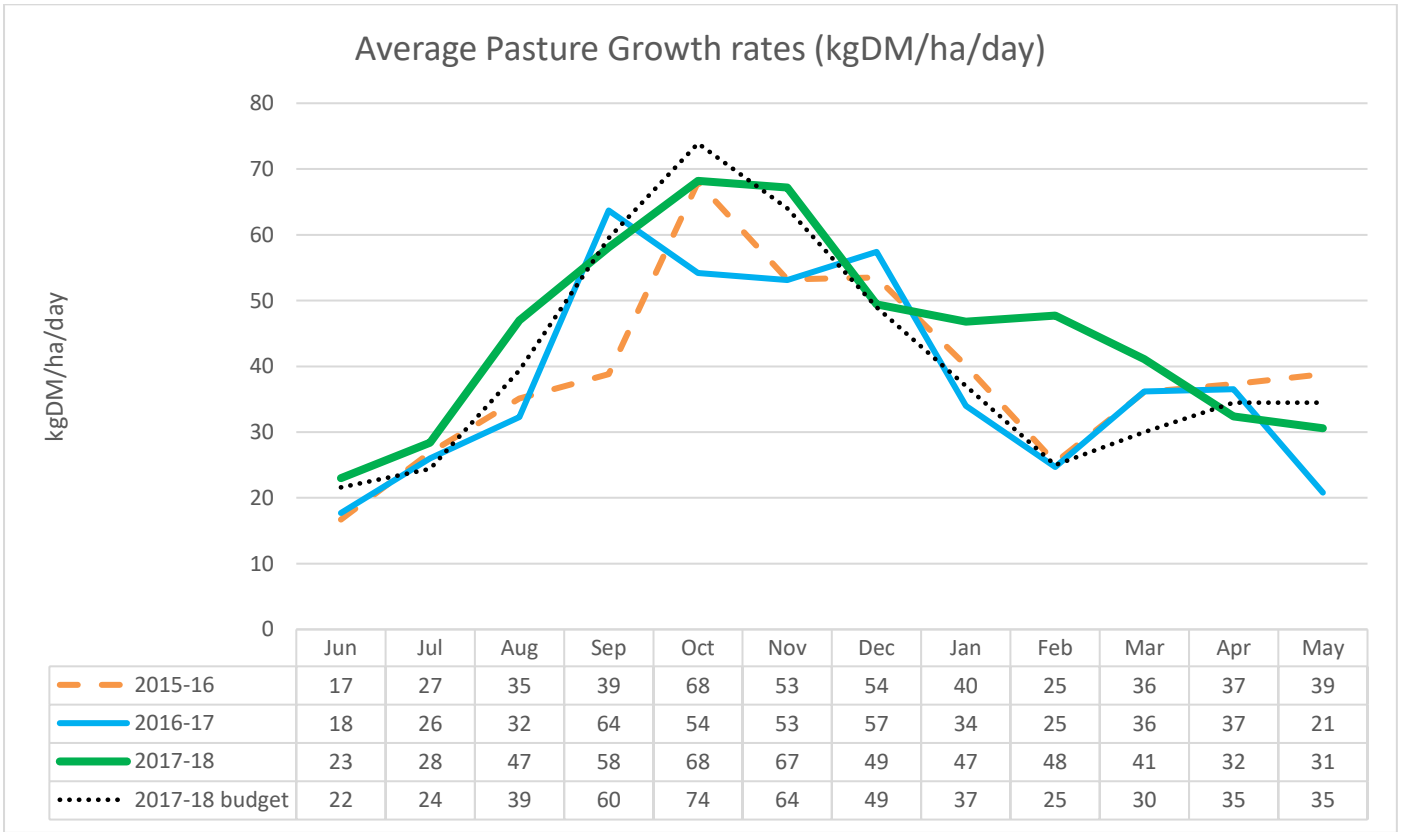
Owl Farm

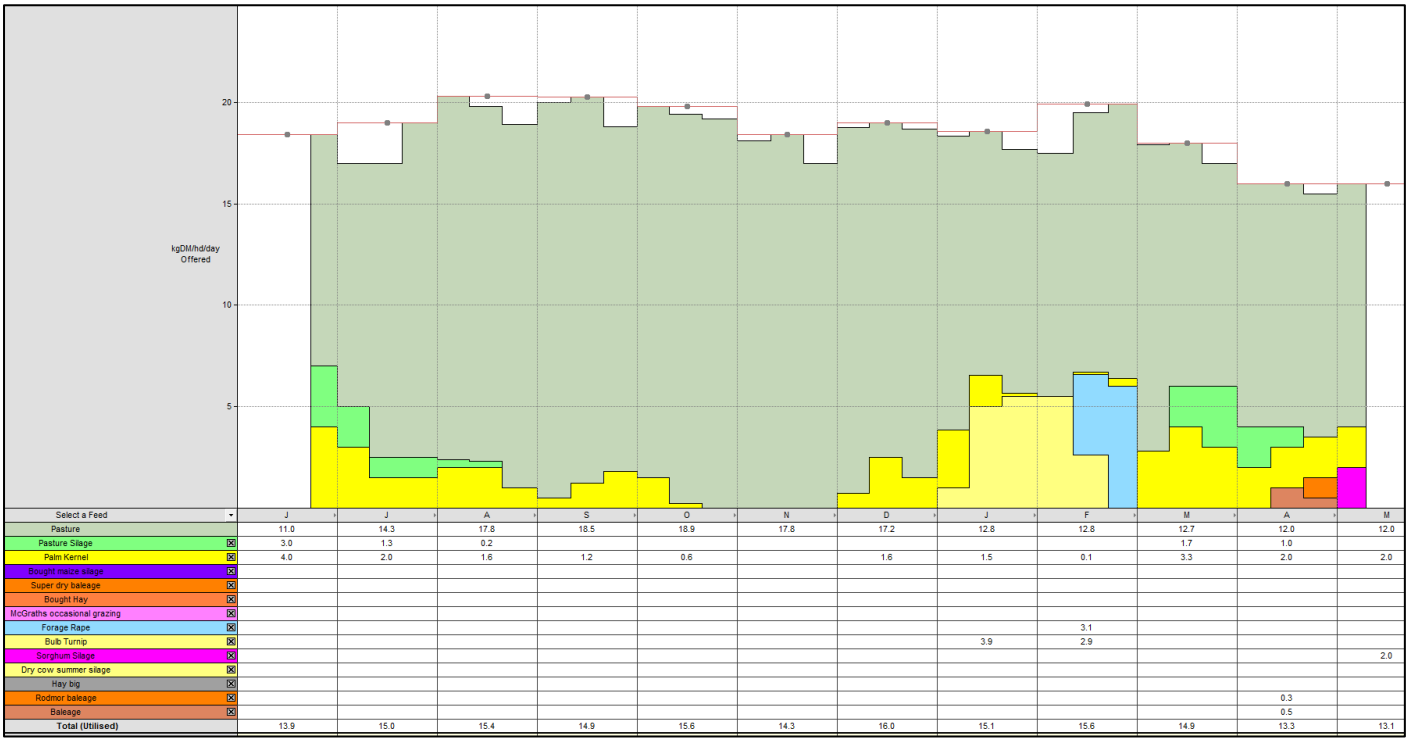




	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
2015-16	17	27	35	39	68	53	54	40	25	36	37	39
2016-17	18	26	32	64	54	53	57	34	25	36	37	21
2017-18	23	28	47	58	68	67	49	47	48	41	32	31
2017-18 budget	22	24	39	60	74	64	49	37	25	30	35	35

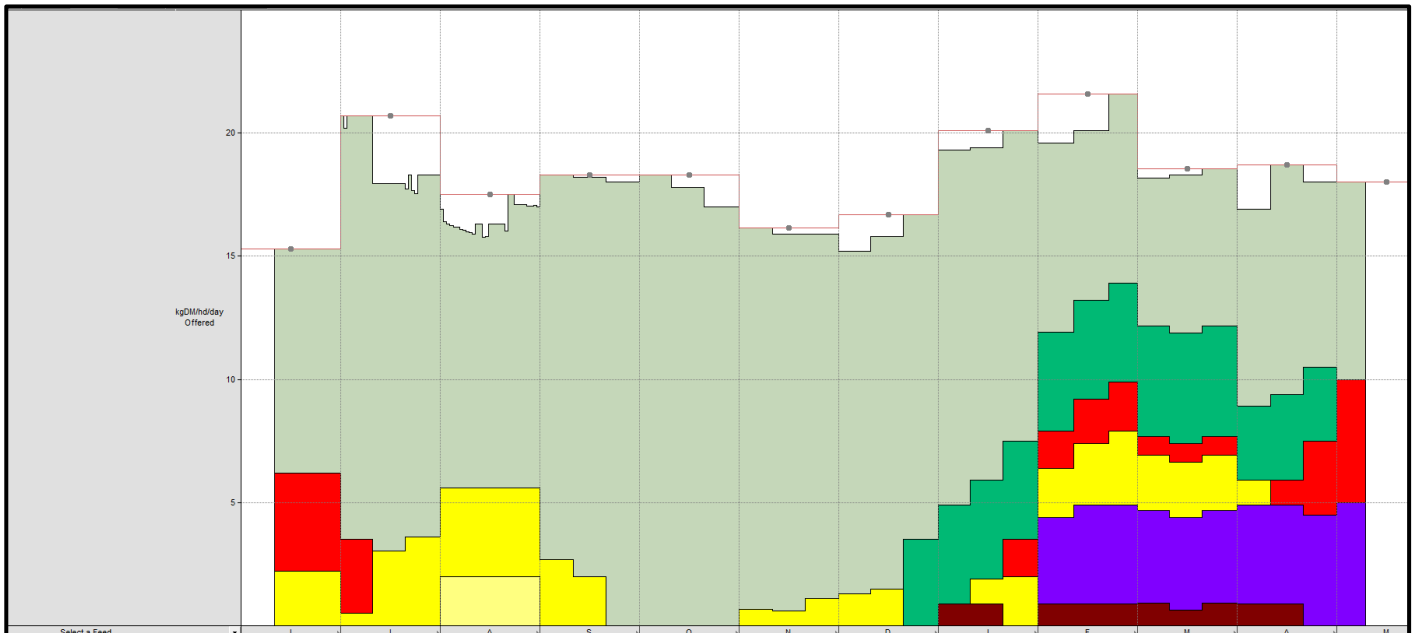
SEASONAL FEED BUDGET

Supplementary feed use to date and forecast throughout the 2017-2018 season

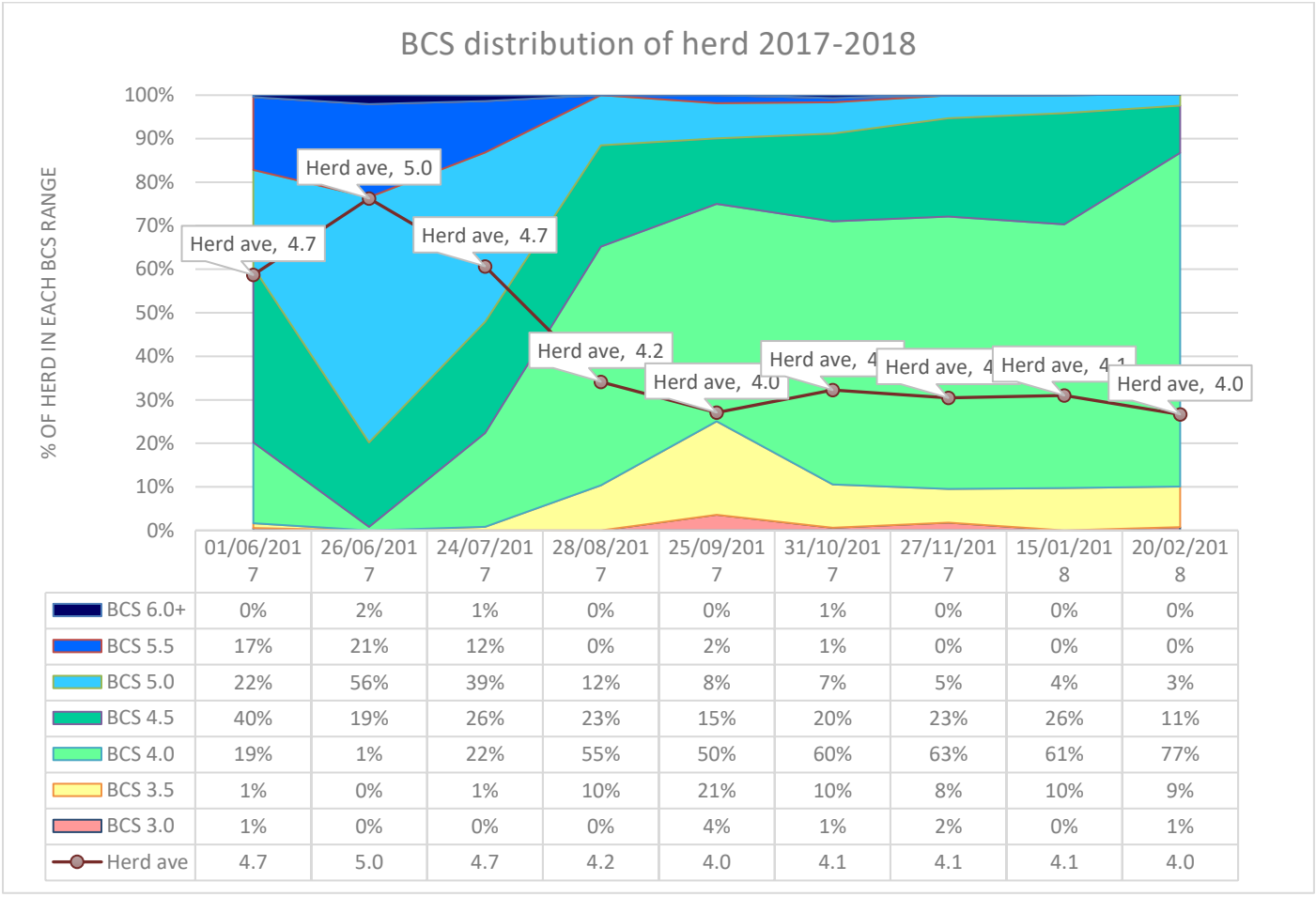


Select a Feed	J	J	A	S	O	N	D	J	F	M	A	M
Pasture	11.0	14.3	17.8	18.5	18.9	17.8	17.2	12.8	12.8	12.7	12.0	12.0
Pasture Silage	3.0	1.3	0.2							1.7	1.0	
Palm Kernel	4.0	2.0	1.6	1.2	0.6		1.6	1.5	0.1	3.3	2.0	2.0
Bought maize silage												
Super dry baleage												
Bought Hay												
McGraths occasional grazing												
Forage Rape									3.1			
Bulb Turnip								3.9	2.9			
Sorghum Silage												2.0
Dry cow summer silage												
Hay big												
Rodmor baleage											0.3	
Baleage											0.5	
Total (Utilised)	13.9	15.0	15.4	14.9	15.6	14.3	16.0	15.1	15.6	14.9	13.3	13.1

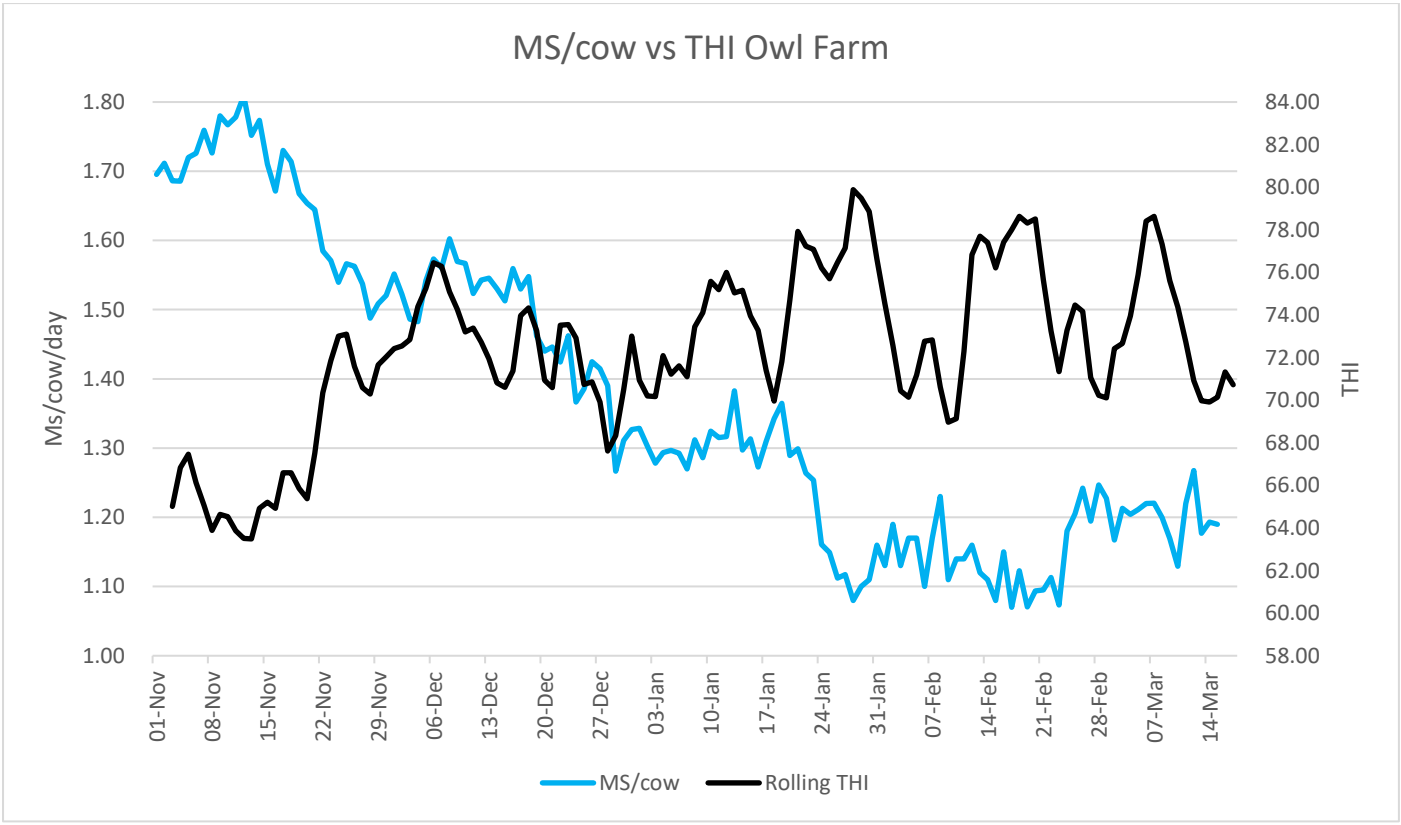
Supplementary feed use throughout the 2016-2017 season



Select a Feed	J	J	A	S	O	N	D	J	F	M	A	M
Pasture	9.1	15.6	11.3	16.6	17.7	15.2	13.8	13.5	7.4	6.3	8.3	7.9
Chicory							1.2	4.0	4.0	4.5	3.2	
Pasture Silage	4.0	1.0						0.5	1.7	0.7	1.3	5.0
Palm Kernel	2.2	2.4	3.6	1.6		0.8	0.9	1.0	2.5	2.2	0.3	
Bought maize silage									3.8	3.7	4.2	5.0
Brought chicory								0.6	0.9	0.8	0.6	
Bought Baleage			2.0									
Total (Utilised)	12.8	15.3	14.8	15.4	14.1	14.3	14.3	17.5	17.6	16.0	15.3	13.3



	01/06/2017	26/06/2017	24/07/2017	28/08/2017	25/09/2017	31/10/2017	27/11/2017	15/01/2018	20/02/2018
BCS 6.0+	0%	2%	1%	0%	0%	1%	0%	0%	0%
BCS 5.5	17%	21%	12%	0%	2%	1%	0%	0%	0%
BCS 5.0	22%	56%	39%	12%	8%	7%	5%	4%	3%
BCS 4.5	40%	19%	26%	23%	15%	20%	23%	26%	11%
BCS 4.0	19%	1%	22%	55%	50%	60%	63%	61%	77%
BCS 3.5	1%	0%	1%	10%	21%	10%	8%	10%	9%
BCS 3.0	1%	0%	0%	0%	4%	1%	2%	0%	1%
Herd ave	4.7	5.0	4.7	4.2	4.0	4.1	4.1	4.1	4.0



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Next Farm Focus Day

Wednesday 23 May, 2018

Weekly Monitor Walk

Tuesdays, 11am

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