



# Farm Focus Day

Wednesday, 16 November 2016

## 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





# HAZARD SUMMARY

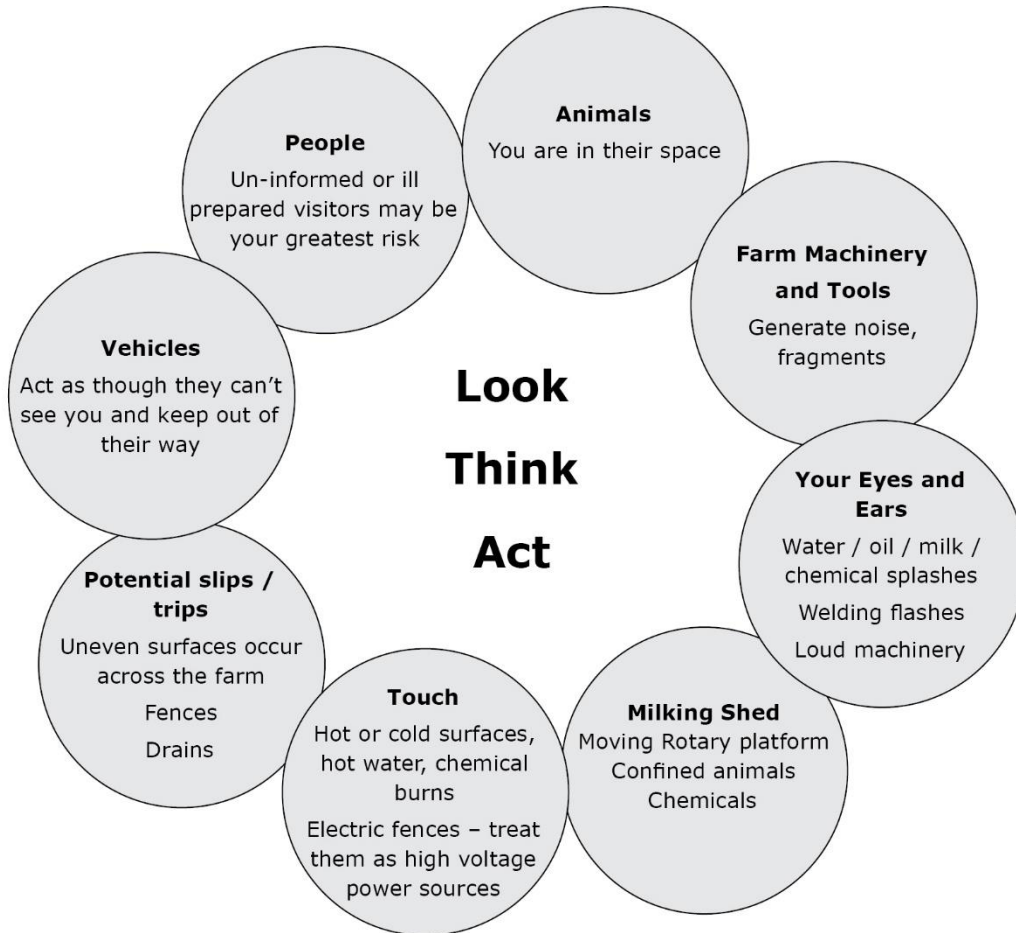
## Welcome to Owl Farm

Owl Farm is 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 providing access to visitors therefore all staff and visitors MUST watch for potential hazards and act with caution.

## Hazard Summary

The following diagram provides a reminder of the types of hazards present.



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

**If you are uncertain how you should act or proceed stop and  
contact the farm manager, other farm staff or your host.**

In being on Owl Farm you are acknowledging your receipt of this hazard summary. By doing so you also agree to be personally responsible for monitoring any potential hazards and agree to act conscientiously to protect yourself and any others who are also on-farm.





## **CONTENTS**

Hazard Summary	2
St Peter's Farm Maps	4
Owl Farm: St Peter's School Lincoln University Demonstration Farm Strategy	6
Owl Farm Snapshot	8
Owl Farm Report – Season to Date	9
Health and Safety for Owl Farm	29
Farm Finances	35
Setting up for summer: getting the most out of your pastures	42





# Owl Farm

Contains data sourced from Land Information New Zealand under CC-BY

**Legend**

- ☐ Paddock
- ☐ Farm and school extent
- ☐ Parcels (as at 02/04/2016)

0 100 200 m  
1:2,500 @A0

N

Projection: NZGD 2000 New Zealand Transverse Mercator  
Project No: 3-38970.00  
Date: 28/04/2016  
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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.

### 4. Stage 1 Operational Objectives

#### a. Dairy Farm Performance

Owl Farms high level operational objectives relating to the farms performance throughout the duration of stage 1 (2015/16 – 2017/18) are outlined below. A full breakdown of specific key performance indicators within each of the following objectives can be found within the separate Stage 1 – Dairy Farm Performance Plan in which the farms annual performance can be measured and reviewed.

##### i. Planning, monitoring and reporting

- To ensure all farm management and commercial planning is supported by a sound business case, solid rationale and effective modelling
- Set appropriate goals that reflect the strategy, objectives and development plans for Owl Farm, with time bound action plans and key performance indicators.
- To ensure accurate and transparent reporting of success or failures of objectives is undertaken in line with agreed timeframes.
- To ensure performance is reviewed in line with objective timeframes set out within Stage 1 Plan.

##### ii. Financial

- To optimise profit returned through balanced financial management within the farms existing management system
- Invest appropriately in capital development to enable improved productivity.

##### iii. Environmental

- To implement sound science supported environmental management systems to achieve sustainable growth and profit while protecting the wider environment.
- To ensure compliance with all regulatory and industry requirements



- To engage with stakeholders to lead towards sustainable farming objectives while influencing future direction.
- To show leadership in establishment of biodiversity management practices relevant to the Waikato.

**iv. People**

- To implement best practice in people management.
- To develop and implement best practice effective health and safety systems and build a culture that ensures staff, contractors and any other visitors are protected as much as practicably possible while on farm.

**v. Herd Performance**

- To capitalise on genetic merit of herd with regard to per cow production
- To achieve or exceed industry targets for mating performance
- To meet or exceed all recognised industry standards regarding body weights and condition within a profitable system
- Use data to measure effectiveness of actions and make information readily available
- Effective health control is optimised through preventative treatments and any immediate health issues are treated as a priority
- To adopt practices in line with the animal welfare code

**vi. Soil**

- To have soil fertility levels (and fertiliser application) sufficiently high to optimise pasture and/or crop production
- To review and enhance Nutrient use efficiency over time
- To actively strive to avoid physical damage to the soil from pugging or mechanical means

**vii. Pasture, crops and feeds**

- To optimise pasture and crops grown and harvested so that cows consume as much metabolisable energy as practical from grazed pastures, home grown crops and supplements.
- To integrate strategic use of appropriate supplementary feed when there is a genuine feed deficit and where there's a clear financial return.

**viii. Community engagement**

- To establish Owl Farm so as to develop and demonstrate good practice in pasture based dairy farming systems and to transfer good practices to dairy farmers.
- To develop and implement a communications plan to engage the wider community around what we are doing and why.
- Contribute to building positive perceptions around dairying.

**b. Stage 1 – Students**

**i. Educational**

- Facilitate student farm visit's to provide genuine exposure to farm and associated activities.
- Facilitate partner presentations within the educational curriculum.
- Provide data for student analysis that may benefit their area of school learning.
- Support the re-establishment of TeenAG programme within the school.

**ii. Career opportunities**

- Demonstrate career opportunities which exist within dairying and the primary industries through providing exposure with partners and associated companies businesses.

**iii. Community engagement**

- Provide farm as a resource to other school groups (primary/secondary) to support positive exposure to the dairy industry.
- Facilitate and complete a farm open day for all secondary schools.

**5. Stage 2 – Operational Targets**

**a. Dairy Farm Performance**

Stage two will continue to evolve over the space of the next 3-6 years.



# OWL FARM SNAPSHOT

## Area

- Milking: 150 effective hectares
- Free hold land: 132 hectares
- Lease land: 18 hectares

## Stock

- 430 – 460 cows milked
- BW 110/43
- PW 133/50
- Ancestry 99%
- There is historically 6 weeks of AB followed by 4 weeks with bulls for a total mating period of 10 weeks.

## Soils

- The farm is long and narrow with 3.4km's boarding the Waikato River.

<i>Soil Type:</i>	<i>Location:</i>
Otorohanga deep clay	SH1, river and centre north
Pukehina deep sand	North of farm
Kainui deep slit clay	Behind the Kahikatea Stand
Turangi deep sand	Deer block
Rotokauri deep clay loam	School grounds
Kaipaki deep peat	Gully below the Avantidrome

## Topography

- Vary dramatically from heavy clays to light sands. The topography is flat contour over three terraces.

## Cowshed

- 36 bale rotary shed with cup removers, built in 1970 with an updated Waikato plant.
- Cows are run in two herds due to capacity of yard being only 400.

## Staff

- Farm Manager, Assistant Farm Manager and Dairy Assistant (3FTE).

## Effluent

- Direct application through sump and pump to travelling irrigator when conditions suit to 44ha.
- Effluent holding pond used when conditions don't suit application.

## Nitrogen

- 150kgN/ha is generally the maximum applied in any year
- Soil testing is undertaken in April annually to provide the fertiliser recommendations for coming season.

## Cropping / pasture

- 10% pasture renovation strategy achieved through summer cropping.
- Either turnips or chicory dependent on predicted summer conditions.
- Weekly pasture metering undertaken as well as annual pasture condition scoring, allows us to identify paddocks most in need of renovation.

## Supplement

- A mixture of grass silage, PKE and maize is used annually.



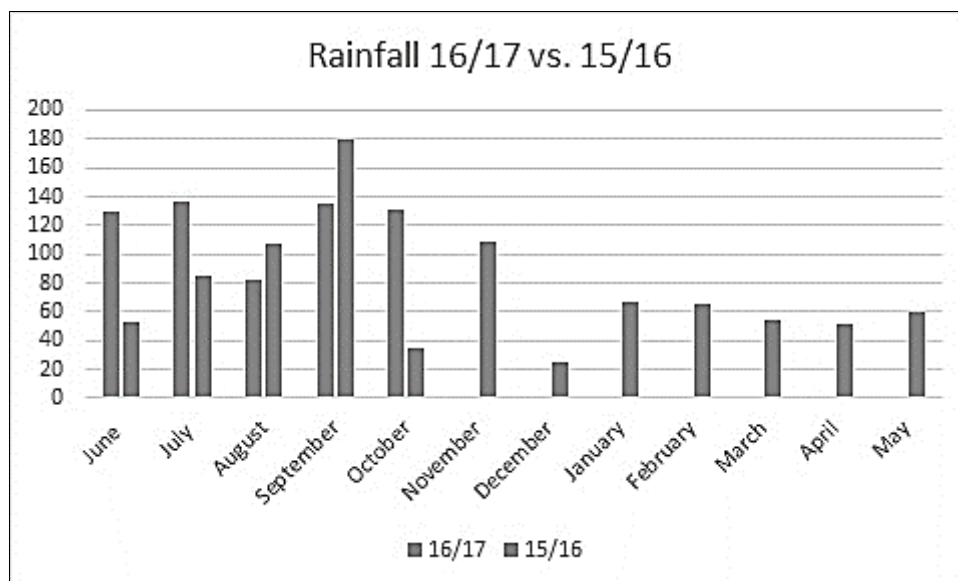
# OWL FARM SEASON TO DATE

NB: All information below can be found on our new and interactive website [www.owlfarm.nz](http://www.owlfarm.nz)

## General

- We put a lot of emphasis at the beginning of the season in planning for the worst and hoping for the best. This conservative approach was what we hoped would help us exceed our kgMS/cow, \$FWE/kgMS and kgDM/ha targets.
- We don't want to be in the position of making excuses but despite best efforts across all fronts the reality is even our conservative modelling has exceeded the actual production we have experienced so far.
- At the core of this has been the weather. So far this season we have had 614mm of rain, compared to 460mm at the same point last season, this is already 70% of last season's total rainfall. Not only have we had more rain but it's also been consistent. During September and October there were only 14 days that it didn't rain.

Rainfall (mm) 16/17 vs. 15/16		
Month	16/17 rainfall	15/16 rainfall
June	129.2	53
July	137	85.2
August	82.2	107.2
September	135	180.2
October	131	34.6
November		108.4
December		24.6
January		67
February		65.4
March		54.6
April		51.6
May		59.8
Total	614.4	891.6



NOTES





- Figures out of Fonterra show the Waikato is currently down 7.5% for the season and were down 12.8% on a daily basis at the end of October. Similarly Cambridge is down 6% for the season and was down 11% on a daily basis at the end of October. Some of this decline will be down to changes in farm systems as a result of last season but the majority will have undoubtedly been significantly influenced by the weather and not being able to utilise high quality feed.
- When reviewing our performance based on production alone it doesn't currently paint great picture. However there has been a considerable number of improvements which have occurred across our operational objectives which tells a slightly more positive story in terms of overall performance. The improvements we have seen are as follows:
  - Considerable improvements in pasture quality and we are on track to improve pasture harvested (kgDM/ha)
  - Management of young stock
  - Lameness and cow condition
  - Infrastructure
  - Staff
  - Planning, monitoring and reporting
  - Community engagement
- In saying that we now have a lot of the required components or we have plans in place to achieve them, the focus now is pulling these aspects together to maximise milk in the vat and money in the bank.

## Milk Production

- It has been a challenging start to the 16/17 season with weather plaguing production right throughout the Waikato.
- Currently we are down 9% for the month of November and 5% for the season compared to 15/16 season.
- We do however have 7% less cows this season with the loss of 5ha and the requirement to cull an additional 30 cows to maintain our stocking rate. On a per cow basis we are therefore slightly ahead, up 2% year to date (166kgMS/cow 16/17 vs. 163kgMS/cow 15/16) and on a per cow basis currently only down 2% for November. A solid effort all things considered and a credit to Tom and his team for the resilient nature in which they have dealt with the challenge.

Production per cow: Budgeted vs. Actual vs. 15/16 (kgMS/cow)			
Month	Budgeted kgMS	Actual kgMS	15/16 production
June			
July	1.69	1.57	1.6
August	1.93	1.95	1.79
September	1.97	1.93	1.95
October	1.88	1.63	1.86
November	1.78		1.66
December	1.73		1.52
January	1.39		1.48
February	1.02		1.35
March	0.91		1.1
April	0.77		0.98
May	0.59		0.6

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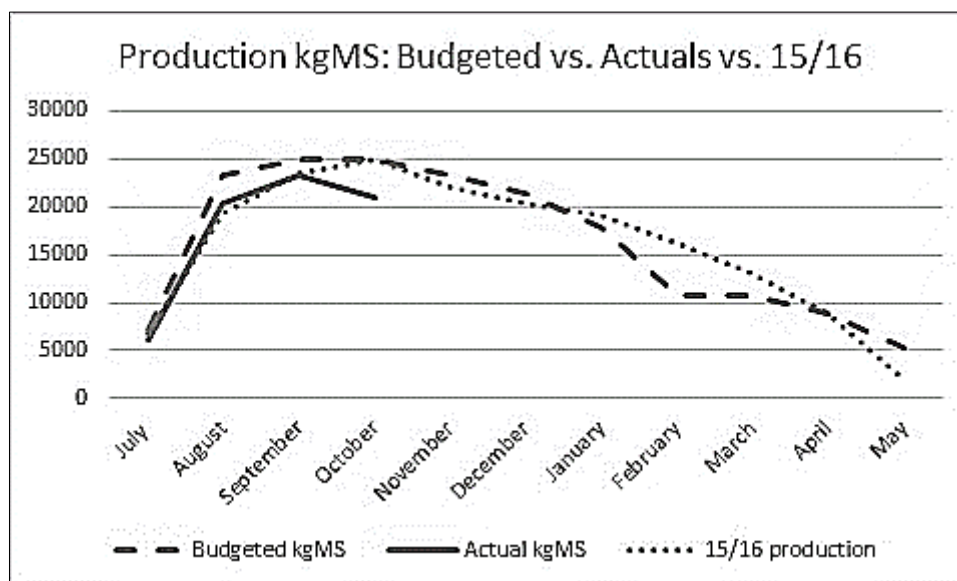
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- Although we are up slightly on a per cow basis we are unfortunately still considerably down (12%) on what we had budgeted through our Farmax modelling that was undertaken at the outset of the season.

<b>Budgeted production vs. Actual Production vs. 15/16 production (Total kgMS)</b>			
<b>Month</b>	<b>Budgeted kgMS (16/17)</b>	<b>Actual kgMS (16/17)</b>	<b>15/16 production</b>
<b>June</b>			
<b>July</b>	7140	6095	6756
<b>August</b>	23205	20440	19277
<b>September</b>	24990	23267	23422
<b>October</b>	24990	20896	24899
<b>November</b>	23205		22137
<b>December</b>	21420		20397
<b>January</b>	17850		19201
<b>February</b>	10710		16258
<b>March</b>	10710		13066
<b>April</b>	8925		8766
<b>May</b>	5355		2019
<b>Total</b>	178500	70698	176198

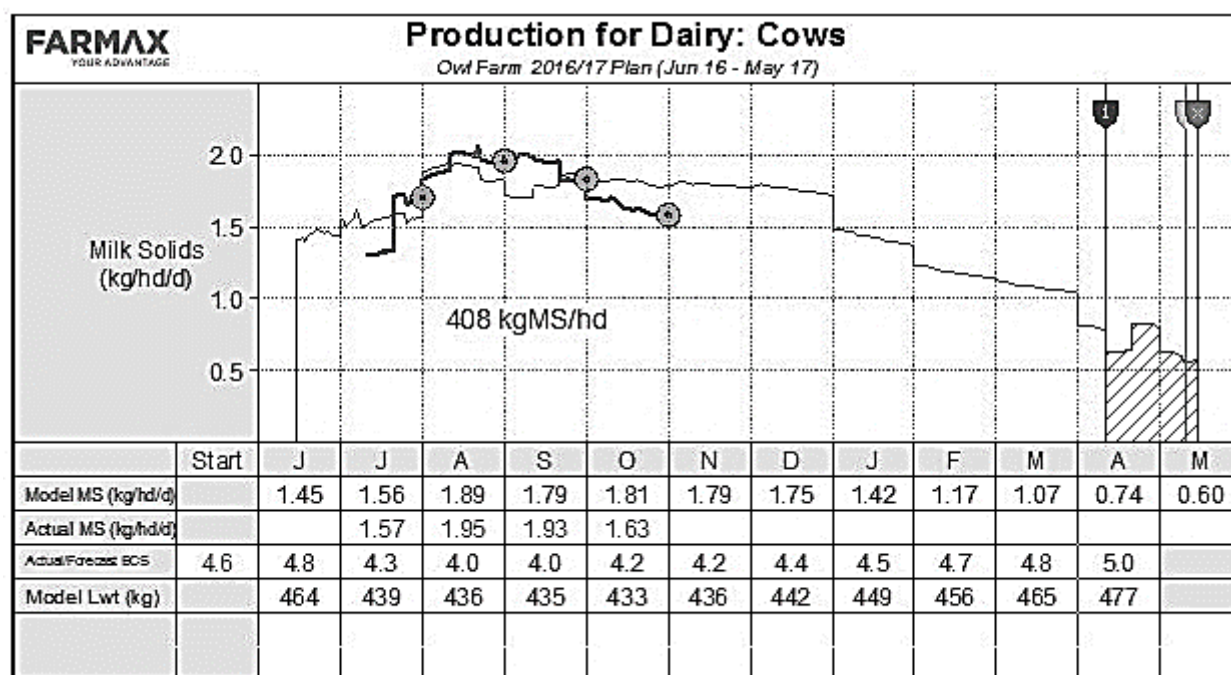


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- The falling production this season is fairly well publicised as much of the Waikato are in the same position however the following overview briefly outlines our position.
  - Utilisation: have been offering plenty of pasture but utilisation levels have been significantly down on what we had budgeted.
  - Our farm system hasn't supported the ability to provide additional high quality feed:
    - Conditions not conducive to feeding PKE in the paddock.
    - Not enough contingency pasture silage on hand.
    - Lack of appropriate feeding infrastructure for reserve maize on hand.
  - Feed Quality:
    - Weather has meant energy and DM levels in the pasture are down.
    - Inability to harvest silage when surplus identified meant managing pasture quality over the past month has been difficult.
    - Haven't been able to top pre grazing until recently so quality of regrowth from last round was poor.
- Although production is down the cost of production is also down. Higher than expected growth rates through September meant the budgeted PKE earmarked for October and now November hasn't been required. This allows us to push this feed further into the season and given we only contracted 160t of the budgeted 200t we may be able to survive without purchasing more.
- The plan for the remainder of the season is to focus on pasture quality and managing our post peak decline as best as possible. Following discussions with the Farm Management Committee the ability to pull production back to say 1.8kgMS is unlikely so maintaining our current production level for as long as possible will be critical for minimising lost production.
- The below graph represents the Farmmax production curve. This demonstrates the actuals season to date and the modelled production for the remainder of the season based on the predictive feed budget. With PKE redistributed through the summer months we may be able to reduce our post peak decline and extend the lactation curve to recover some of the lost production which has occurred over the past two months. If the feed budget plays out as planned this could see us achieve around 408kgMS/cow. Prior to the redistribution of PKE modelled production was sitting at 390kgMS/cow, if can achieve somewhere in the vicinity of 408kgMS/cow we would only end up 2% down for the season on what was initially forecast (416kgMS/cow). We are under no illusion in regards to the challenges associated with achieving that, like the winter/spring we are equally as vulnerable to climatic factors over the summer.



NOTES





- In general it's been a very challenging season to date. At the end of August the cows were 6% up on the previous season doing over 2kgMS/cow and looking good to exceed our expectations. Not having yet reached peak intakes we were cautiously optimistic about what they could have gone on to achieve, this just highlights the seasonal challenges which we face when operating a biological system. This has further challenged us to think outside of the box with regards to stage 2 in how we can manage the external elements to ensure they don't significantly impact operations.

Date	Litres	KgMS This Season		KgMS Last Season	Total KgMS	KgMS (%)	Avg. SCC
NovMTD	70,418	5,536.9	↓ 11.4%	6,246.8	76,234	8.84	113
October	240,442	20,895.7	↓ 16.1%	24,899.3	70,697	8.69	97
September	263,880	23,266.5	↓ 0.7%	23,422.1	49,802	8.82	116
August	225,559	20,440.1	↑ 6%	19,276.5	26,535	9.06	147
July	62,475	6,095.2	↓ 9.8%	6,755.6	6,095	9.76	204
Total	862,774	76,234.3	↓ 5.4%	80,600.3	76,234	—	—

#### NOTES

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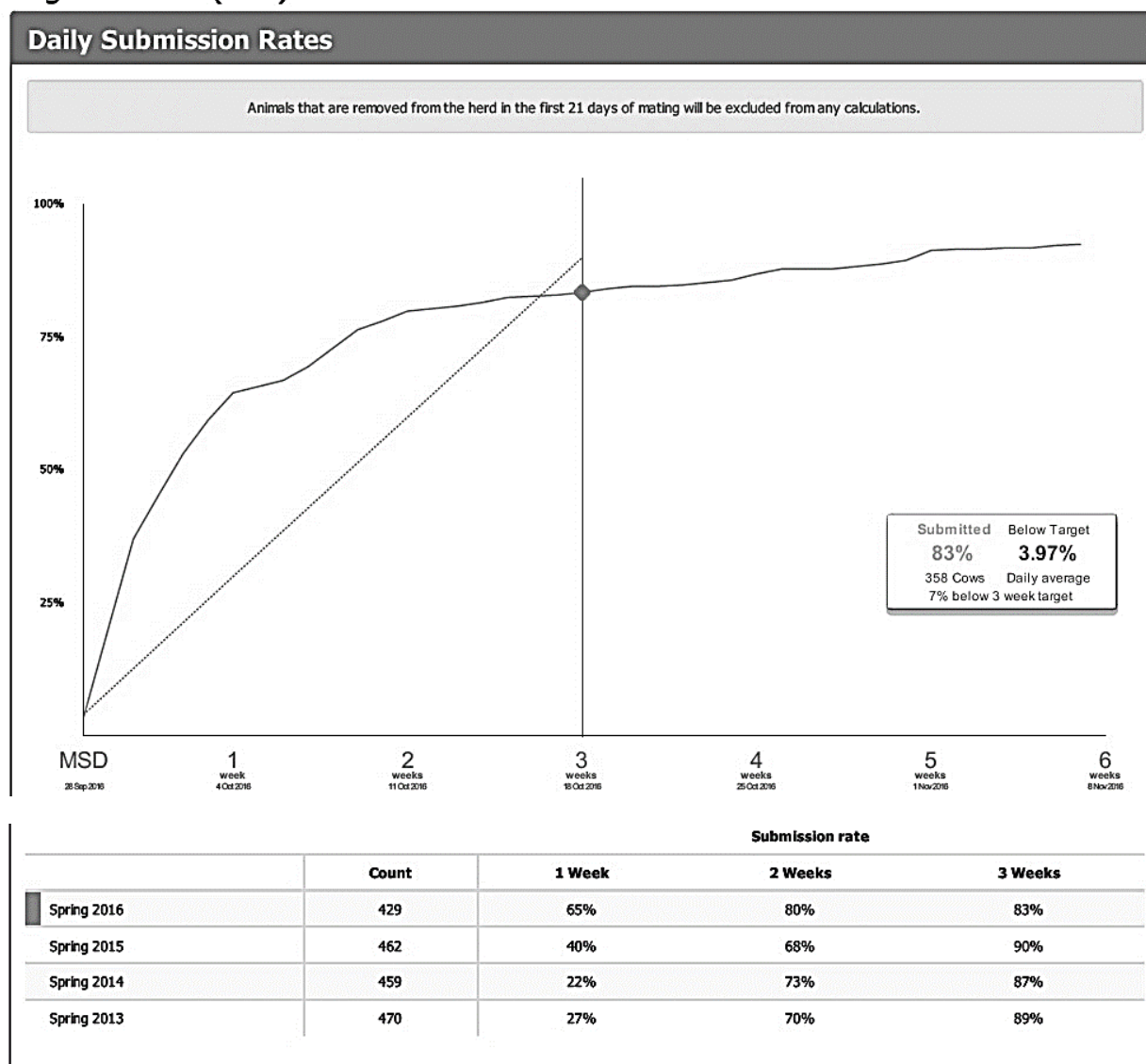


## Animal Health

- Pre-mating cycling still identified a large number of younger stock not cycling. Our use of CIDR's was once again high with 111 used.
- We also used LIC's Why Wait programme using PG treatments to bring cycling events forward to tighten up our calving pattern next season and maximise days in milk. We modelled the cost of the additional feed requirement to satisfy the more condensed calving spread and the additional days in milk meant the return outweighed the cost.
- 6 weeks into mating and only 11 out of a possible 420 we wanted to put up have had AI, this puts submission rates at 97%.
- The below graph shows 83% submissions at week 3 however there are missing inseminations from 15 animals which makes 3 week submissions 89%.

## Mating Reports for Spring 2016 (HPTT)

### Eligible Cows (FFR)



### NOTES

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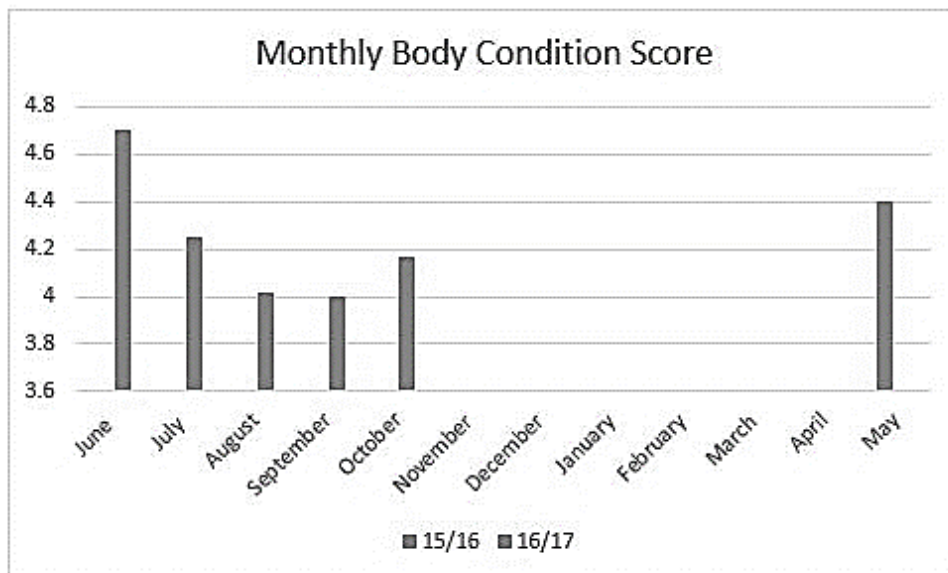


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- Unfortunately returns have been much higher than we would have liked with 148 (34%) having returned once and an additional 42 (9%) having returned twice. 1.4 straws per cow has been used. This is obviously much higher than we would have liked but with 331 being mated within the first 10 days and 111 of these being on their first cycle it is to be expected. This along with the poor weather and feed quality we have experienced would have affected conception rates.
- Body condition scoring is done monthly thanks to Wade (DairyNZ) and Tom. Given where the herd came from and what they have been through the past few months they are currently in good shape, credit to Tom's careful management. Based on results below you can see they bottomed out at BCS of 4 in September and are now on the way back up.



REPORTS DairyNZ	
AVERAGE SCORE 4.25	
SCORE	PERCENT
2.5	-
3	1.9%
3.5	1.9%
4	50.9%
4.5	34.0%
5	11.3%
5.5	-
6	-
> 6.5 +	-

REPORTS DairyNZ	
AVERAGE SCORE 4.00	
SCORE	PERCENT
2.5	-
3	13.0%
3.5	24.0%
4	32.0%
4.5	16.0%
5	12.0%
5.5	1.0%
6	2.0%
> 6.5 +	-

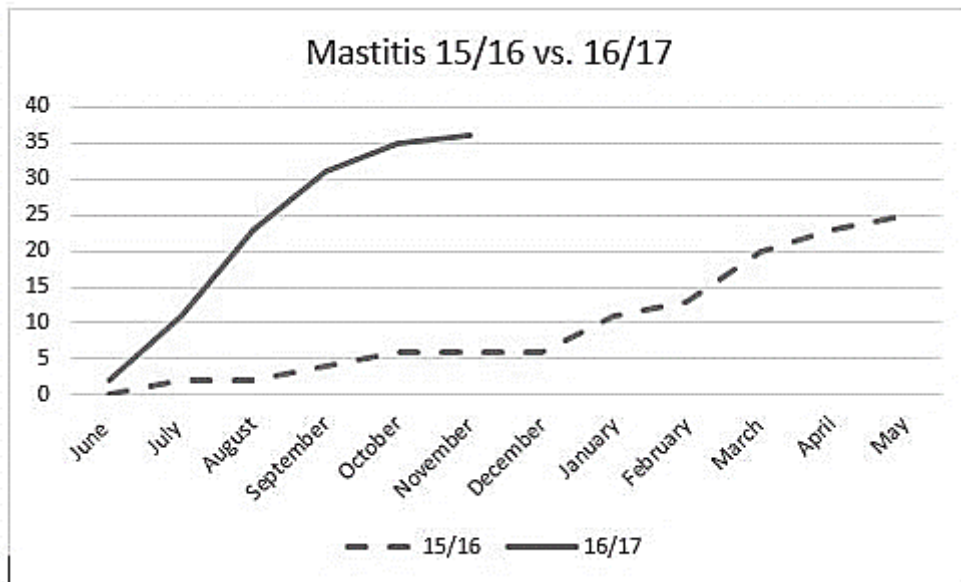
REPORTS DairyNZ	
AVERAGE SCORE 4.17	
SCORE	PERCENT
2.5	-
3	1.0%
3.5	11.7%
4	52.4%
4.5	24.3%
5	9.7%
5.5	-
6	1.0%
> 6.5 +	-

- We have had some challenges with both milk fever and mastitis early in the season. Much of the increase in mastitis comes down to not blanket teat sealing and using dry cow therapy on the entire herd when they dried off last season. This was done at the time to save money but based on previous mastitis rates, it's evident it had an impact.

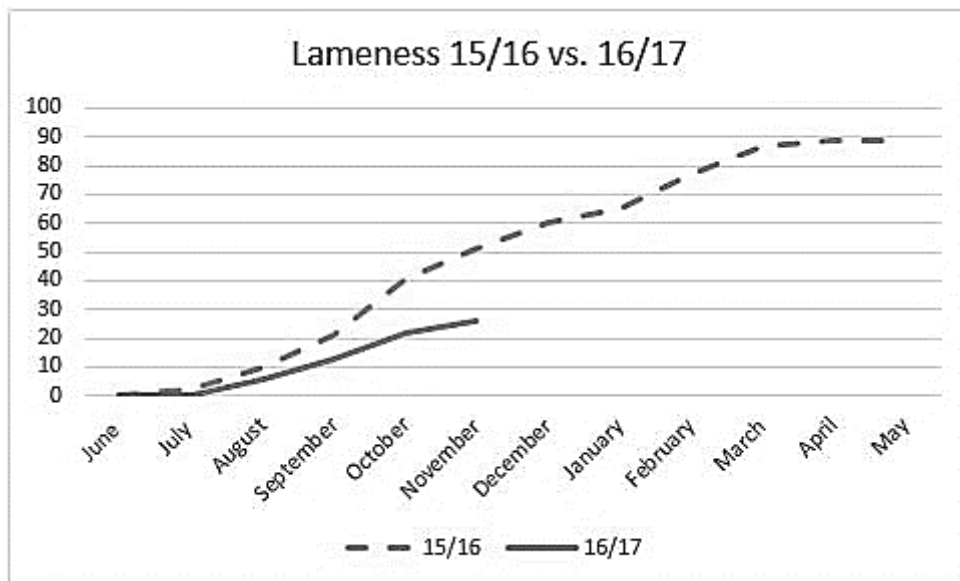
NOTES







- On a more positive note season to date we have had significantly less lame cows identified with 26 having currently been picked up compared to 51 at the same time last year. What's even more pleasing is that none have been on penicillin compared with 13 at the same time last season. Of the 26 they have been predominantly precautionary. The investment in track improvements along with great staff demeanour has resulted in this improvement. With the investment of the wrangler Tom is able to treat any lameness quickly and have them back in the herd faster.



- We have recently signed off an SOP for managing eczema based on the problems this created last year, water treatment alone isn't enough of a guarantee and due to H&S and cow flow concerns of every day drenching, and we are going down the path of bolusing everything to ensure maximum protection.
- Calves and heifers are tracking well but they have also felt the impact of the wet spring and haven't all hit their target weights, further emphasis is going into both of these groups now to recapture lost ground.

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# 2016 Spring Born

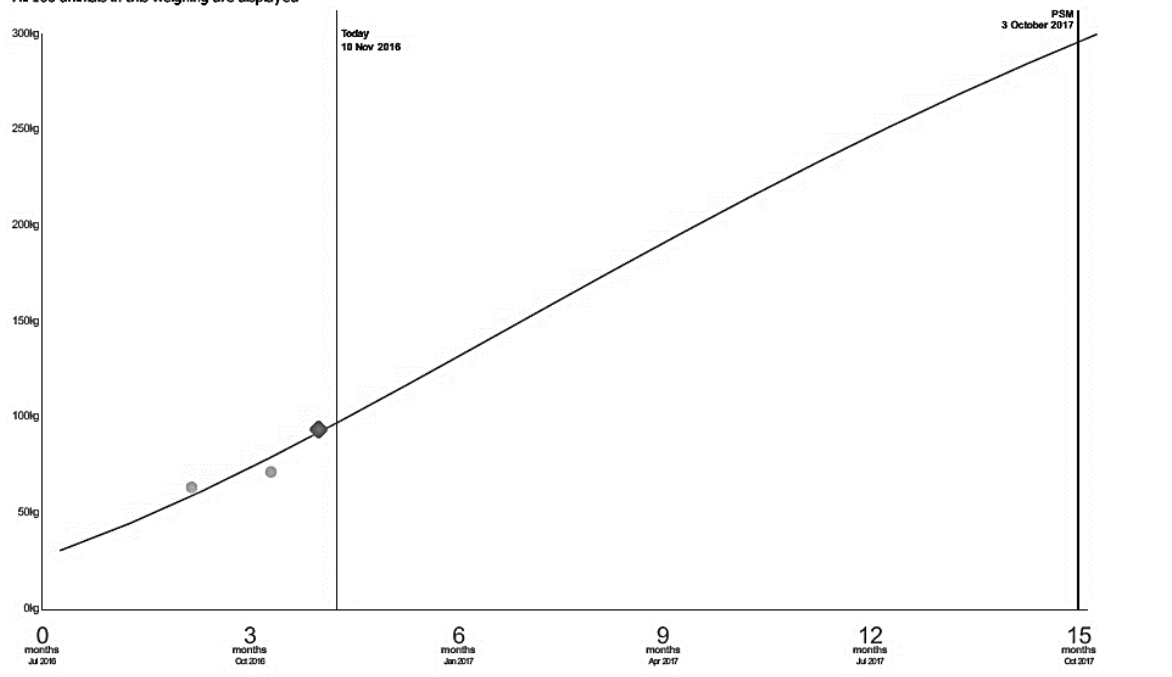
nov calf weights 2016

2/11/2016

HPTT

## Young stock trend

All 100 animals in this weighing are displayed



LIC

NOTES





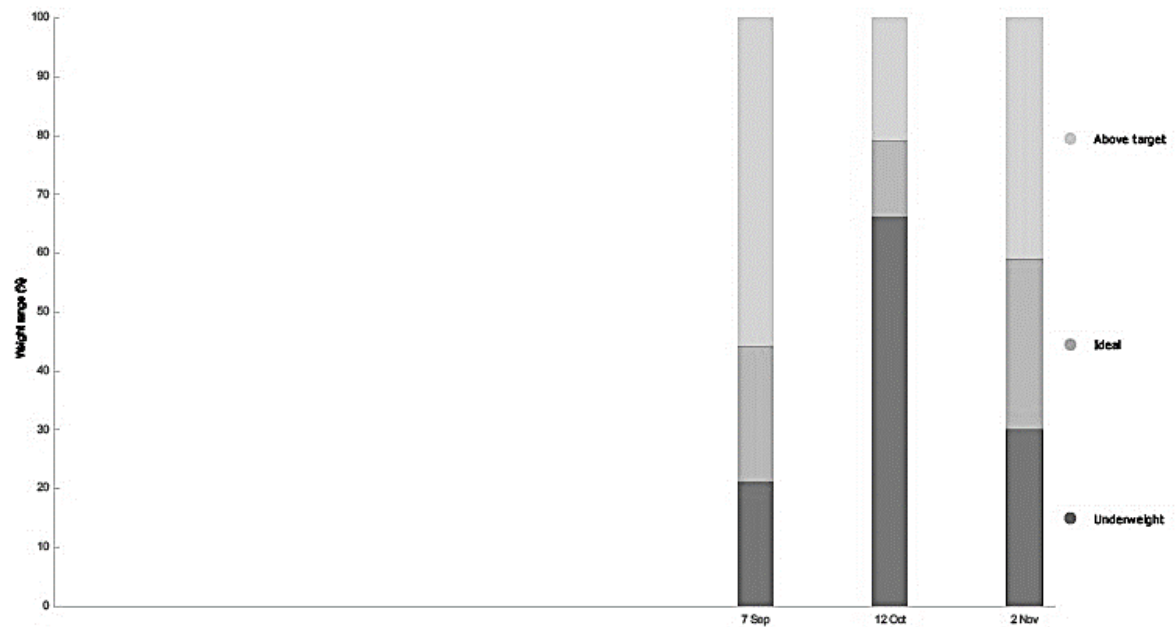
# 2016 Spring Born

nov calf weights 2016

2/11/2016

HPTT

## Weight ranges



Weight date

More than 10% of animals were underweight at the last weighing

Range	September 2016		October 2016		November 2016	
	No.	%	No.	%	No.	%
<i>Above target</i>	53	55.8	21	21	41	41
<i>Ideal</i>	22	23.2	13	13	29	29
<i>Underweight</i>	20	21.1	66	66	30	30
<b>Total Animals</b>	95		100		100	



- Calves have been managed as to best practice as possible. The above graph demonstrates just how difficult the end of September/start of October was for this group of animals also.

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# 2015 Spring Born

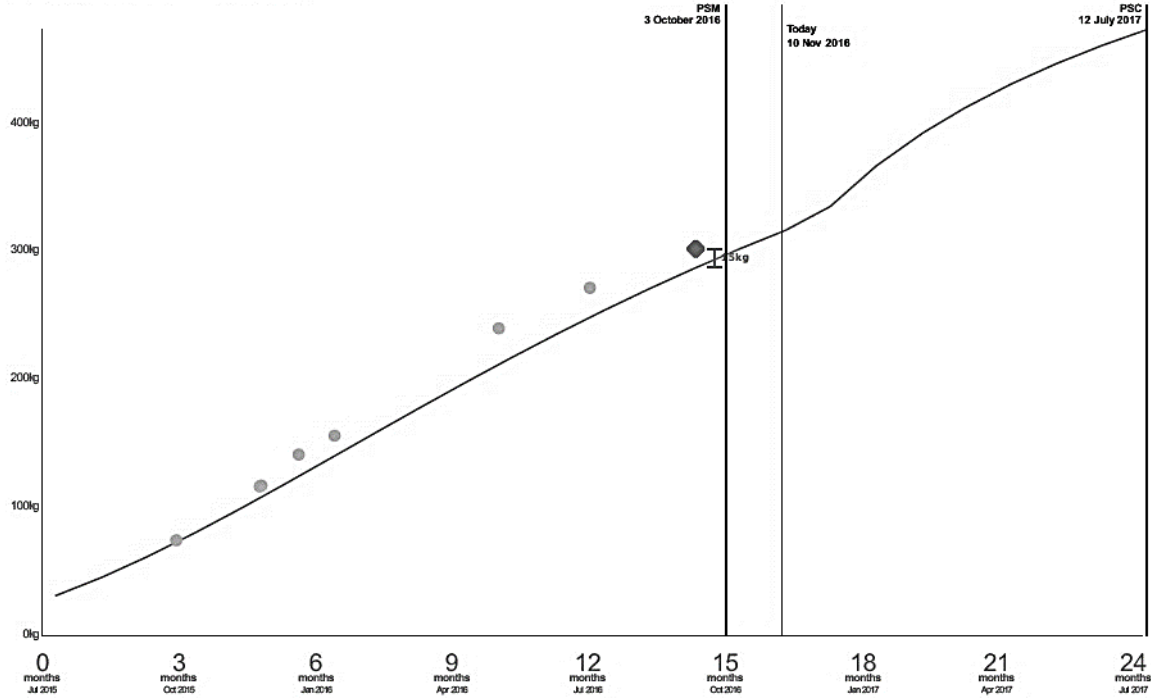
15 Born Heifer Sep 16

13/09/2016

HPTT

## Young stock trend

All 94 animals in this weighing are displayed



**ALIC**

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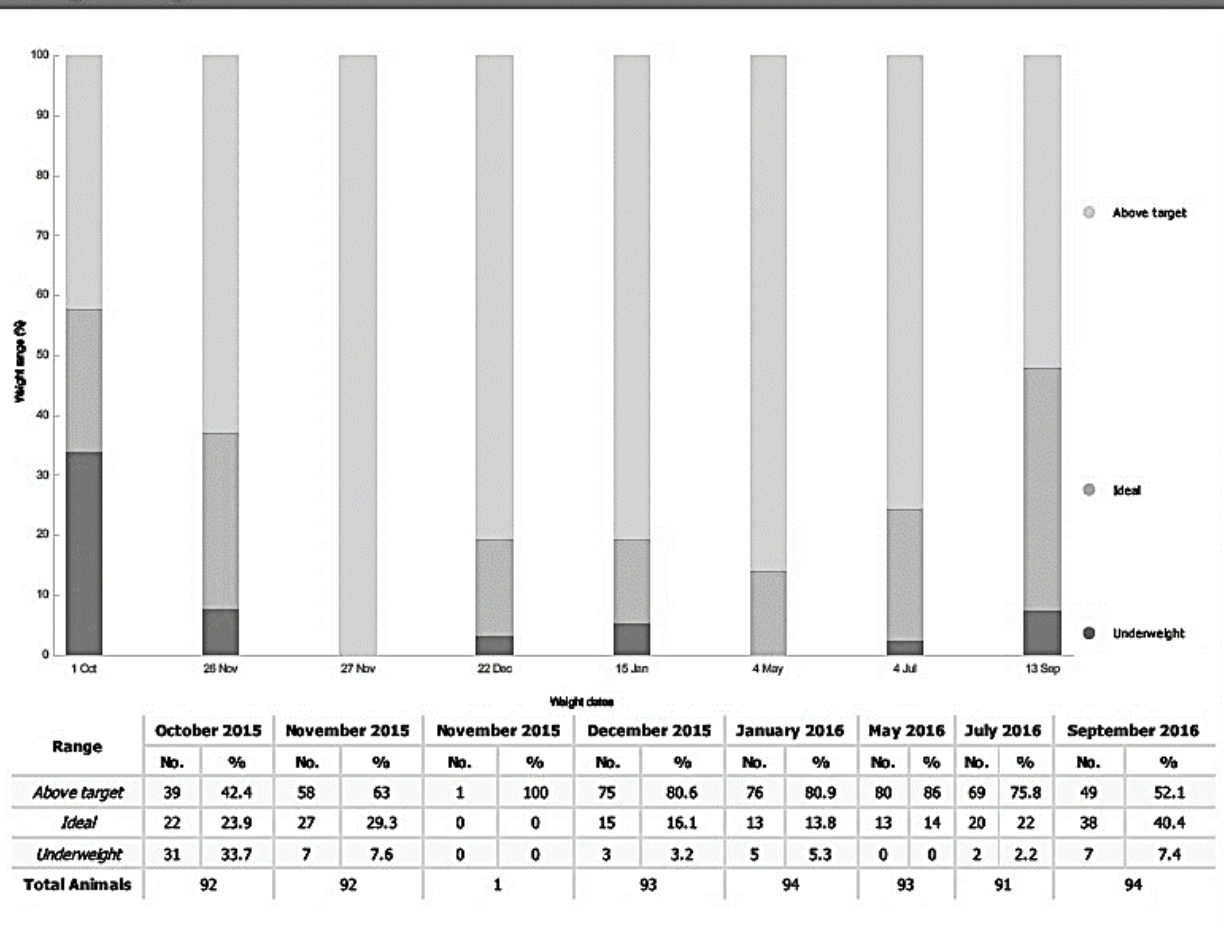
# 2015 Spring Born

15 Born Heifer Sep 16

13/09/2016

HPTT

## Weight ranges



ALIC

- The R2's on average are still above target but its concerning when the bottom is increasing as it shows above. The grazier is located at Ngaroma where they have also had a particularly difficult winter/spring weather wise. Given the high rainfall this area experiences they generally have favourable summers, after further discussions with the grazier we are confident we can get everything above target. We have also requested bi-monthly weighing rather than quarterly so we can manage more closely. Yes this is another cost to the business but based on what we have identified over the past couple of years we need to prioritise our young stock.

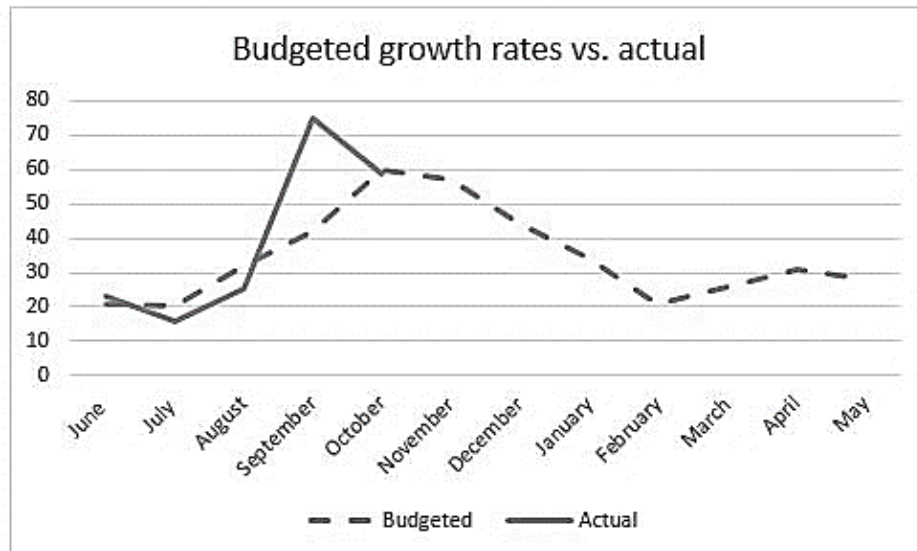
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## Pasture, Crops and Feeds

- We had an explosion of feed in September which made managing quality very difficult as there was only a certain amount of land we could shut up for silage without compromising available feed and putting us in deficit further down the track. The weather meant we couldn't get the silage off until late October and resulted in some of the earlier shut paddocks having to be feed in situ. We managed to get 36ha of the 150ha effective milking platform off along with 10ha of neighbouring land which has given us ~85-90TDM. This will be invaluable next winter and spring.
- The below graph demonstrates our actual growth rates we've experienced compared to those budgeted at the outset of the season.



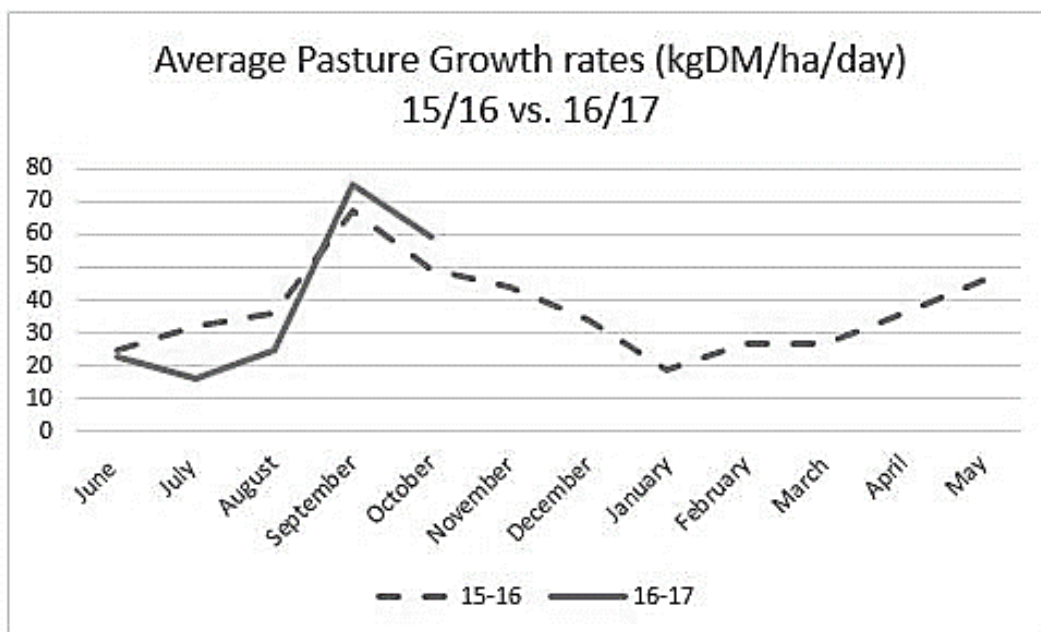
- Pasture covers were managed exceptionally well over winter and early spring and despite the atrocious weather there has been minimal pugging and compaction damage.
- One specific area which we have however addressed as an area for improvement is pasture management in the critical period leading into balance day and ensuring we have further support in terms of the key decisions at this time. In reflection we should have let the cows go a week earlier which could have allowed us to better maintain quality.
- We are now topping prior to grazing where suitable and hopeful that with rising temperatures, plenty of nitrogen in the soil and high soil moisture, we should get a good quality regrowth next round. Close attention is still required to manage this in the coming months.
- The cows are currently on 6ha per day on a 20day rotation.

Average pasture growth rates 16/17 vs. 16/17 (kgDM/ha/day)		
Month	15-16	16-17
June	25	23
July	32	16
August	36	25
September	67	75
October	49	59
November	44	
December	34	
January	19	
February	27	
March	27	
April	36	
May	46	

NOTES







Average Pasture Covers modelled vs. actuals vs. 15/16 (kgDM/ha)			
Month	Budget	16-17	15-16
June	2266	2400	2052
July	1865	2045	1984
August	1716	1992	1902
September	1844	2440	1897
October	2192	1975	2244
November	2139		2129
December	2316		2296
January	2235		2173
February	2016		1989
March	1944		2110
April	2228		2447
May	2346		2729

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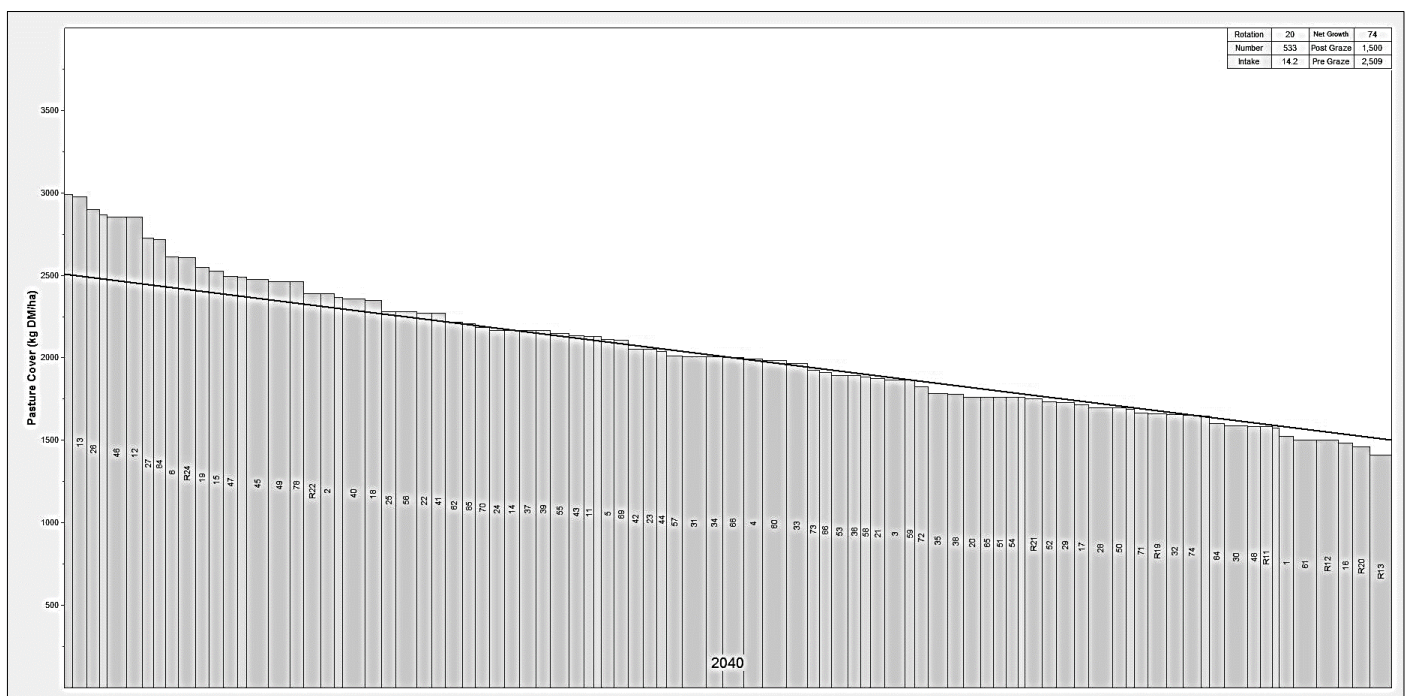
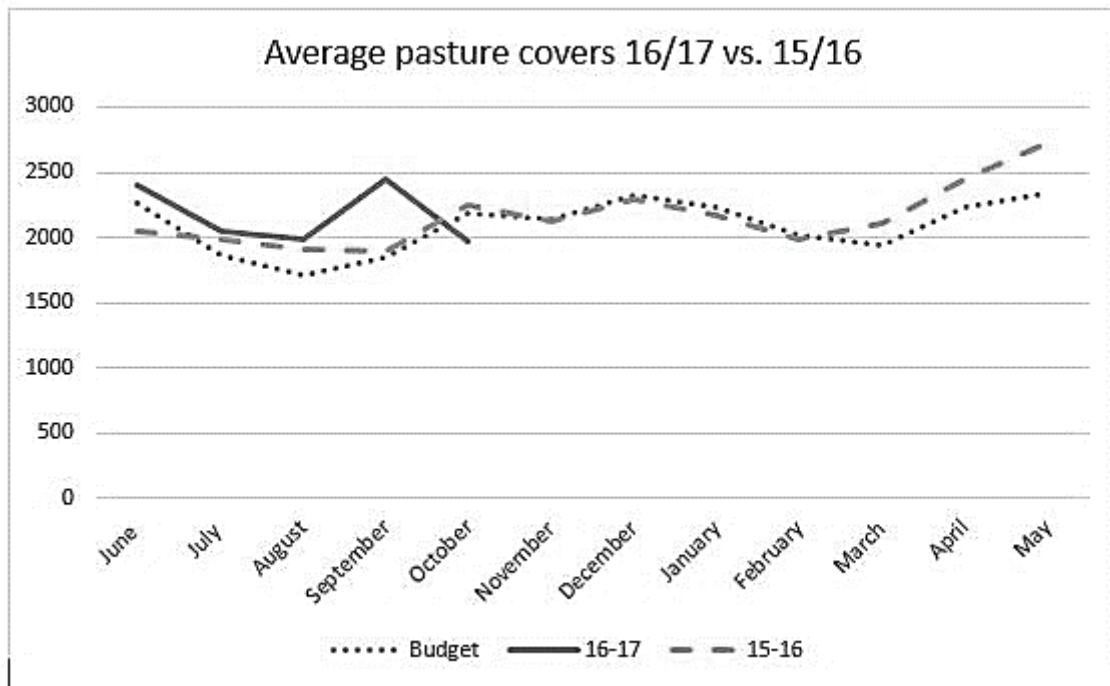
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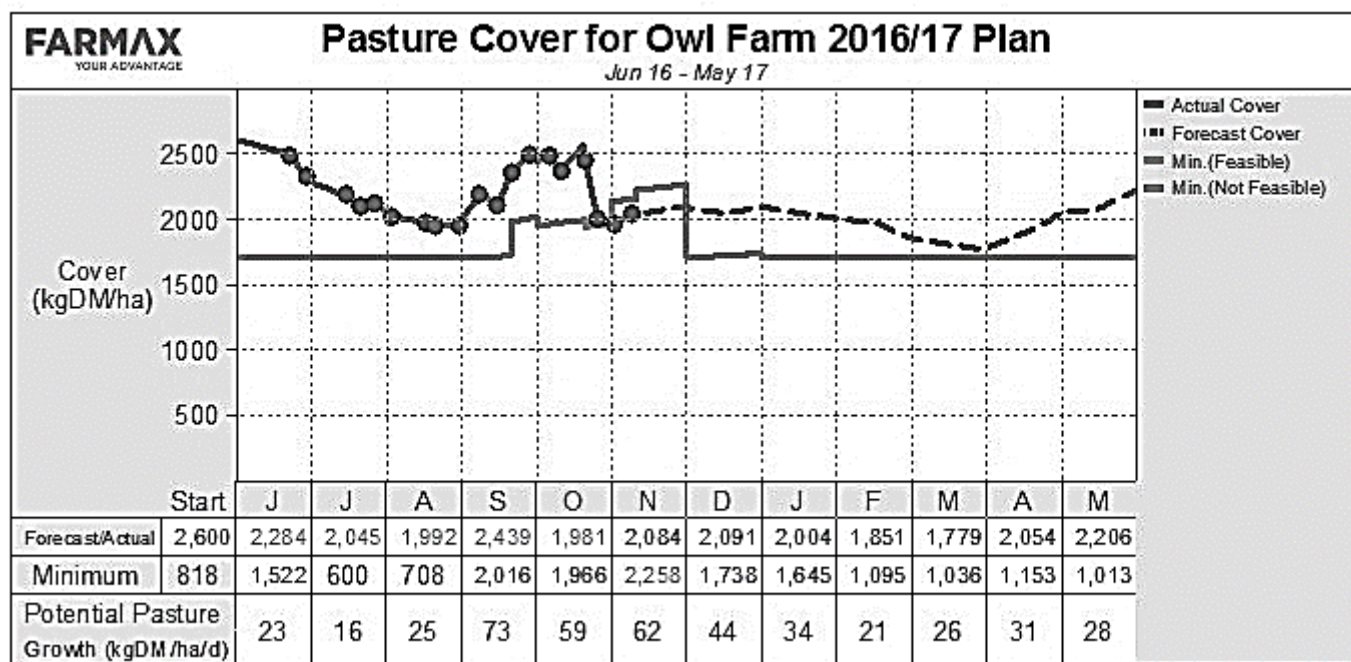


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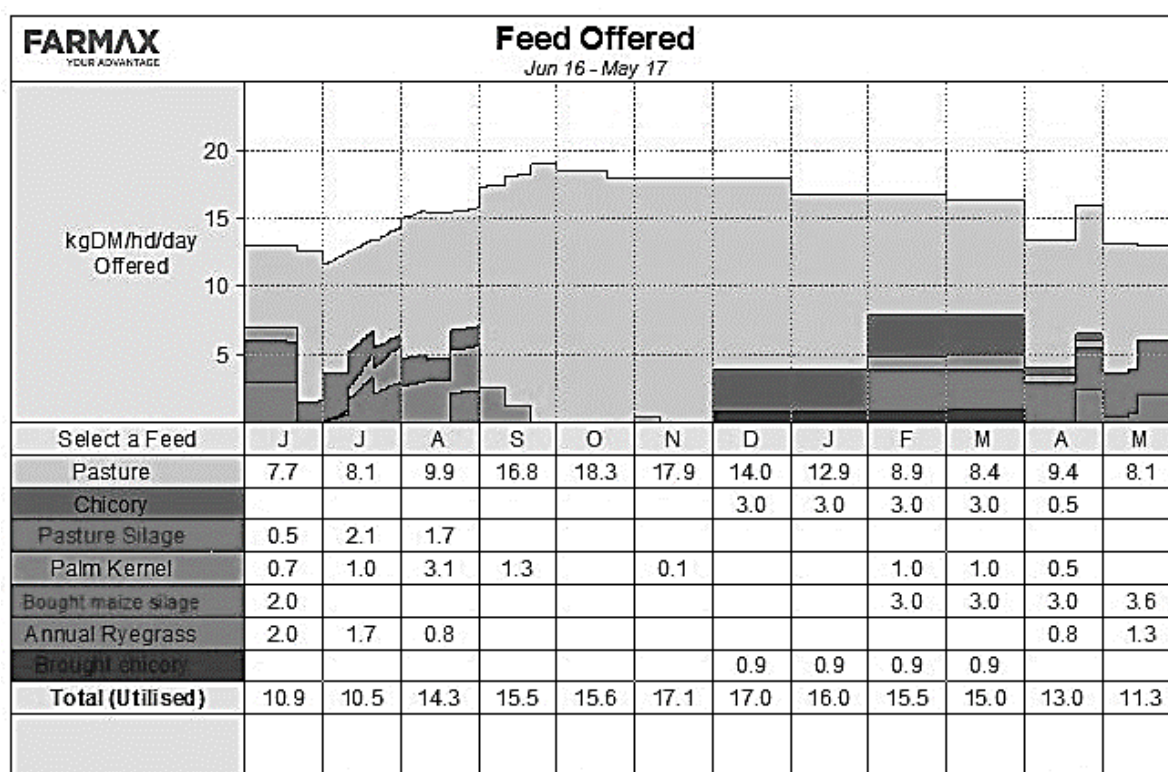




- Below is the average pasture covers and average growth rates from Farmax. The solid line with the dots represent the actual pasture covers taken from measurements from the tow behind pasture meter. The dashed line thereafter is the modelled covers based on feed budget and predictive growth rates. The significant drop in covers at the end of October reflects the silage.



- Below is also the feed budget out of Farmax which reflects the actuals from June-October vs. the predictive for the remainder of the season.

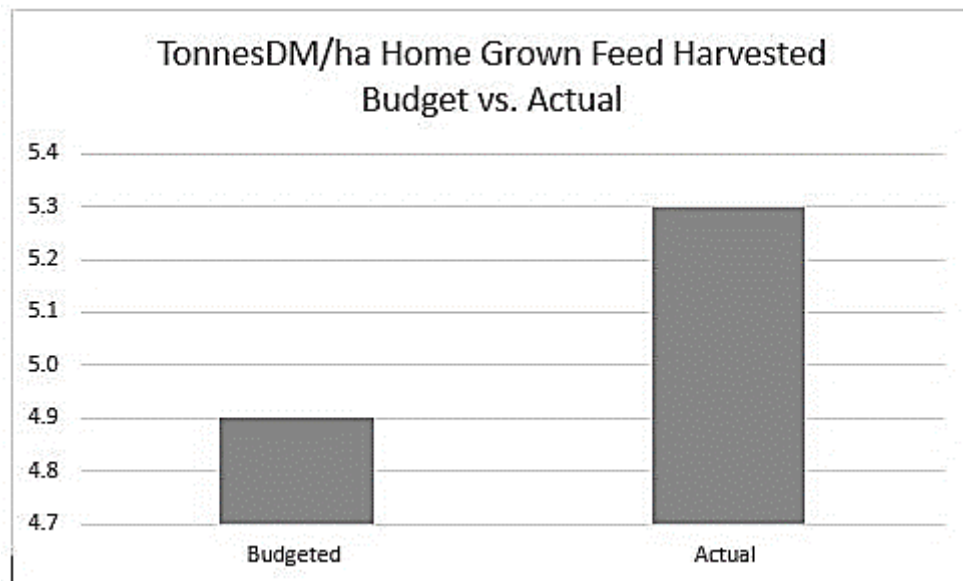


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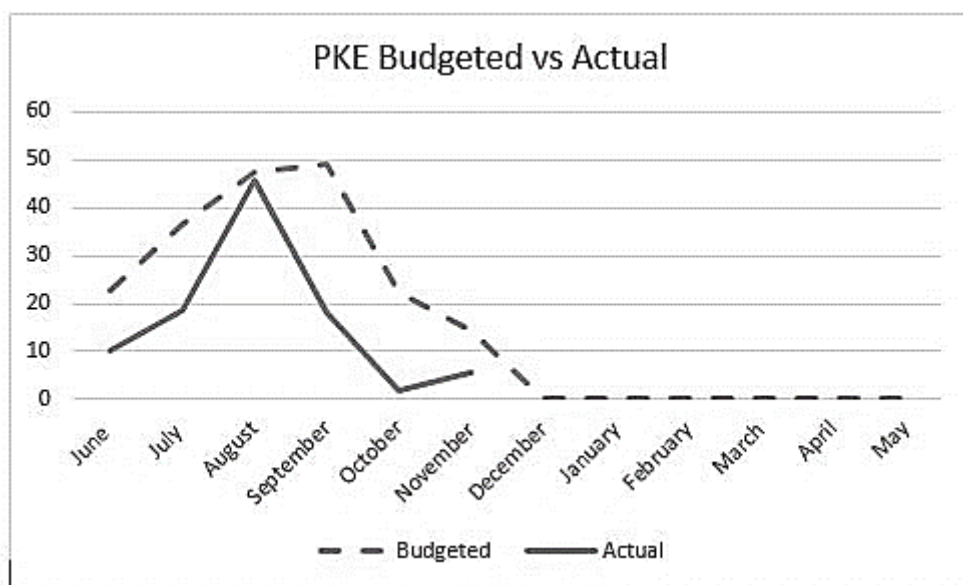




- We have also been tracking actual home grown feed compared to budgeted home grown feed to try and validate the investment undertaken in pasture renovation. We have budgeted 13.6TDM grown with 12.4TDM/ha harvested which is a big improvement on last season. Currently we are sitting at 5.3tonnesDM/ha harvested vs. a budgeted 4.9tonnesDM/ha. We have already grown far more pasture but with utilisation levels being so low in the early part of the season much of this has been lost.



- PKE had initially been budgeted for both October and November but with Septembers growth rates and inability to feed in wet paddocks, we have used much less than budgeted although this may have cost some production due to less energy. Any additional production wouldn't have outweighed the cost and financially we are better as a result. Conditions also didn't suit feeding in the paddocks.



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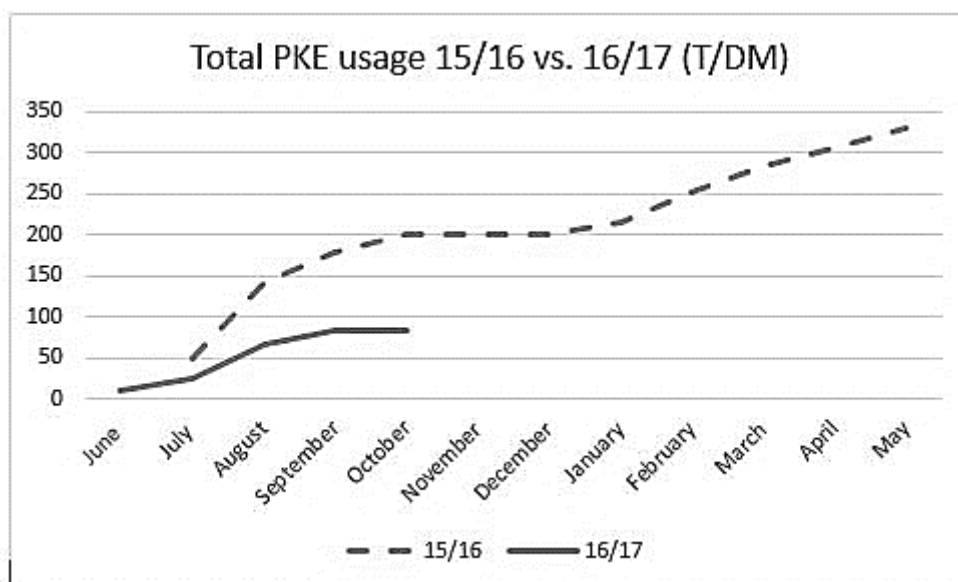
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- We have decided not to continue with maize under the current farm system as we don't have appropriate infrastructure to maximise the value. In terms of next seasons feed budget, we are purchasing additional pasture silage (less than amount budgeted for maize) and are hopeful that with the continued investment in pasture renovation, demands on external supplements continues to decrease.
- The 15ha (10% of milking platform) of chicory crops are up having been planted on the 19<sup>th</sup> of October. All plants have now emerged and we are working closely with PGGW Seeds to establish the optimal time for spraying weeds without damaging the plants. Last season we had a split germination which meant that those which germinated later had growth stunted by the weed spray and ultimately impacted total grown. It doesn't appear we will have further issues this year. The majority of the 15ha were direct drilled with a cross slot applying 200kg/ha of DAP down the spout.
- 4ha of land outside of the milking platform which was to be maize is also going into chicory, this additional 44tDM along with redistributed PKE is what we are hoping allows us to regain lost production.

## Nitrogen

- Nitrogen use is in line with what's been budgeted. We are currently sitting just shy of 90kgN/ha out of a budgeted 150kgN/ha for the season. Applications of nitrogen so far this season have come via way of PhaSedN during July, Ammo during August/September and SustaiN during October.
- We have two remaining applications left this season. One in November/December of SustaiN to get covers up prior to summer and a further dressing of SustaiN in April to get covers up coming into winter.

## Climate

- Rainfall has largely been the talking point so far this season. Season to date this year we have received 614.4mm compared to 460mm at the same time last year. Over September and October there were only 14 days where it didn't rain.

## NOTES

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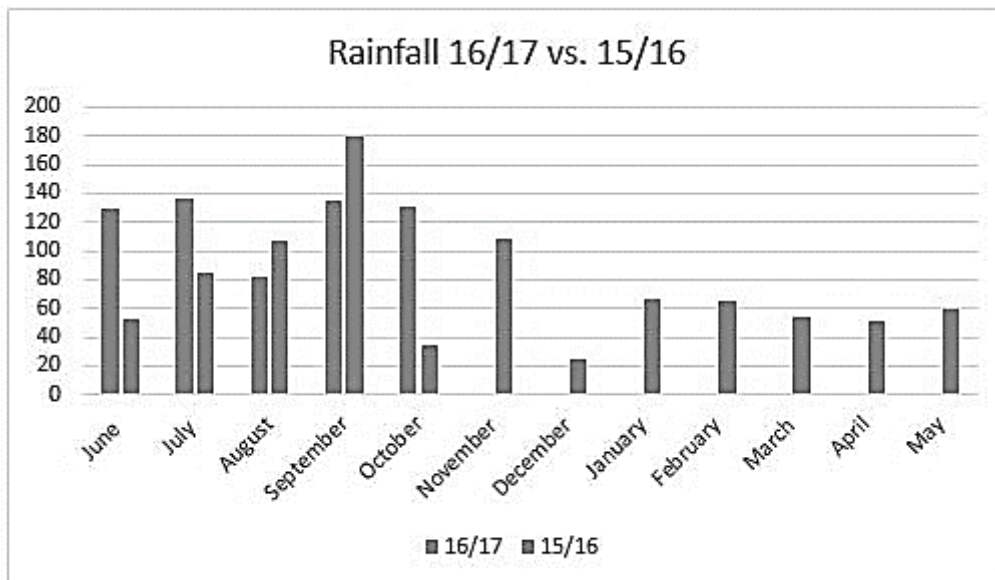


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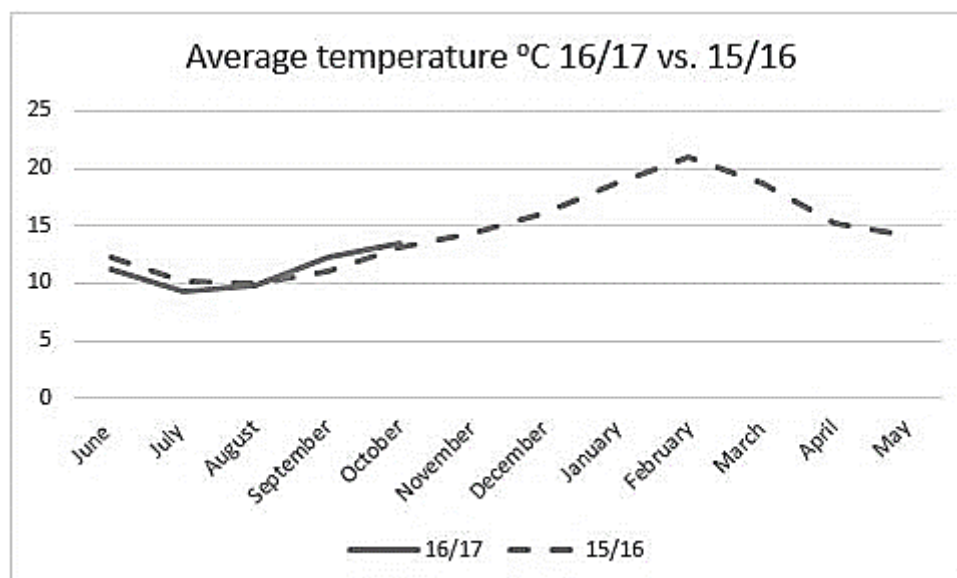
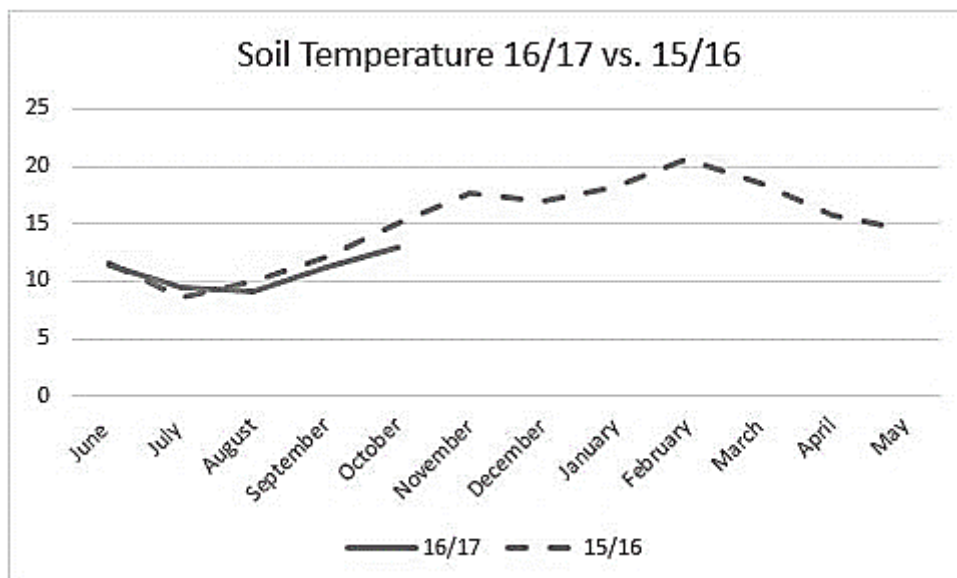
Rainfall 16/17 vs. 15/16		
Month	16/17	15/16
June	129.2	53
July	137	85.2
August	82.2	107.2
September	135	180.2
October	131	34.6
November		108.4
December		24.6
January		67
February		65.4
March		54.6
April		51.6
May		59.8
Total	614.4	891.6



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## HEALTH AND SAFETY FOR OWL FARM: NOVEMBER 2016 UPDATE



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## Overall Approach

- What is suitable for farm this size?
- Consistent with overall St Peter's School systems.
- Easy to use for staff.

## Paper Based System

- Covers aspects staff don't need to know day to day.
- Compliments current gaps in technology and the OnSide system we are utilising.

## What is OnSide?

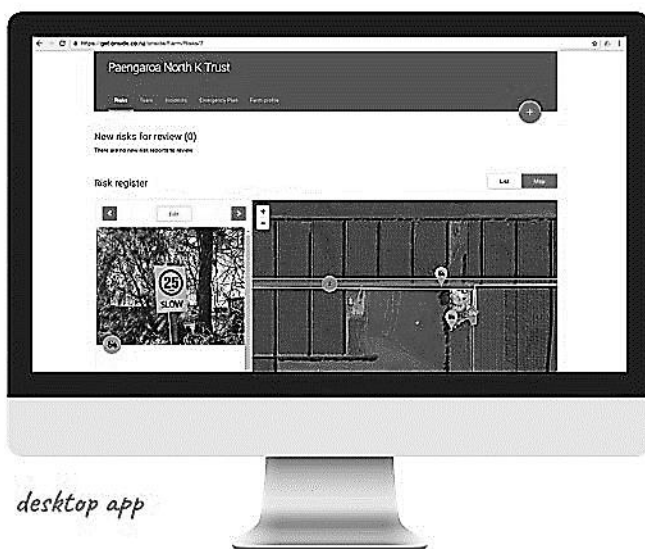
*Be smart. Get OnSide.*

### The practical, paperless health and safety management system

If you dread the words "compliance", run a mile at "risk management", don't have time for admin or paperwork, and never know who is coming or going on your property, then OnSide could be right for you.

### The app that's made for outdoor workplaces

Say goodbye to piles of paper, induction meetings, and painful sign-ins. With OnSide you'll always know who's on your property, and they'll get the info they need to keep safe. Manage risks and incidents as they happen. Build health and safety plans that ticks the boxes. No worries.



## NOTES

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## How OnSide Works

### Contractor

- Sign-in and out
- Know risks when visiting
- Report risks/incidents to manager
- Know emergency response info



### Manager

- Manage risk register
- Load emergency plan
- Induct staff
- Report risk / incidents
- Manage team
- Know who is on the property



### Visitor

- Sign-in and out
- Know risks when visiting
- Review H&S systems online
- Report risks/incidents to manager
- Know emergency response info



### Farm Team

- Know risks
- Auto sign-in and out
- Report risks/incidents
- Know who is on the property



## Viewing risks and signing in



*Automated, paperless sign-in*

- **Arrive on farm** – When you arrive on the property you will receive an alert asking you to check out the risks and sign in.
- **Open the app to sign in** – Clicking on the alert will allow you to review the risks and sign in. You can also manually search for OnSide farms and pre-induct to save time when you arrive.
- **View the risks** – Risks are presented as pictures and pins on a map. OnSide remembers the risks you have previously seen and only shows you the new ones.
- **Acknowledge risks and sign in** – Once you have reviewed the risks you can sign in.
- **Successfully signed in** – Once signed in, the farm team will receive an alert so they know you have arrived.



*Offline function for rural areas*

- **View risks** – The risk map is available to view at any time on the mobile app. You can click on the risk pins to drill down for more information.
- **Add a risk or incident** – If you see a risk or have an incident, you can report it on the app. The manager will receive an alert and can quickly take action. When a risk is added, everyone on the farm will be alerted. This keeps the register live and real-time.
- **Emergency plan** – Ensure that everyone on your property know what to do if something goes wrong.
- **Who is on my farm?** – Check out your farm visitor history, click on their name to contact them.

## NOTES

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## Web Features

**Set up one or more properties.** View risks on a map, click the risk for more detail.

**Add your team.** Assign different levels of responsibility.

**Manage risks.** Build a risk register, edits risks, accept and edit new risks.

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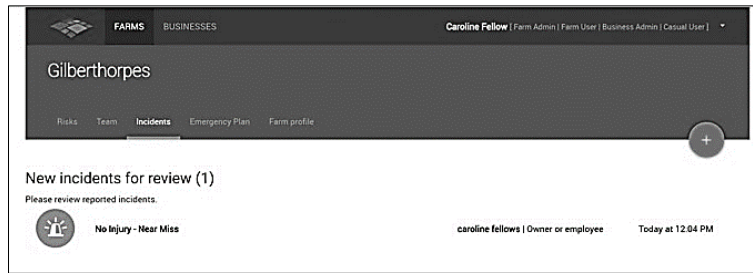


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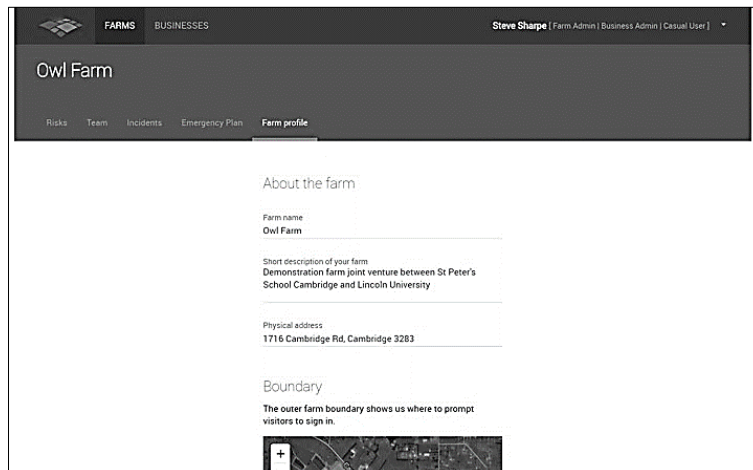
**Manage incidents.** View and manage incidents. Add new ones.



**Build emergency plan.** Set up an emergency plan and select emergency locations.



**Edit farm profile.** Make changes to your property quickly and easily.



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## Further Information

**Steve Sharpe**  
**Sharpe People Solutions**  
**021 826 838**  
**steve@sharpe.solutions**

**Writing or updating  
Health & Safety systems**

**Subscription for year around updates  
and access for ad hoc queries**

**Audits, training or reviews for  
owners or officers to assist with  
due diligence obligations**

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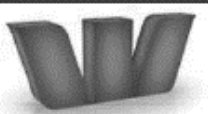
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# FARM FINANCIALS

## Initial 16/17 Owl Farm Budget and Cash Flow

		<b>Agribusiness</b>		<b>DAIRY BUDGET (GST excl.)</b>					
<b>CLIENT:</b> OWL Farm		<b>FOR YEAR ENDED:</b> May-17				<b>Total ha</b> 165			
<b>STOCK</b>	<b>2016</b>	<b>2017</b>	<b>RECONCILIATION</b>			<b>Eff ha milking</b>	150		
COWS	350	350	Opening	550	Closing	550	Cows Milked	441	
R2 Heifers	100	100	N. Increase	383	Sales	433	Cows per ha	2.94	
R1 Heifers	100	100	Purchase	0	Deaths	7	Total kg ms	178,500	
STEERS R 1YR			Total	933	Total	990	Kg ms per ha	1190	
OTHERS			Calving%	85%	% milk chq	100%	Kg ms per cow	405	
			Deaths	7	% of grazing acc	100%	Eff Cash Payout	\$4.49	
TOTALS	550	550	May advance	\$3.15	Finals	\$0.50	EPS/ha	\$1,815	
		\$ per Cow	\$ per Kg ms	Total	<b>STOCK SALES</b>		Price		
WAGES		399.5	0.99	176,200	93 CULL COWS		\$600	55,800	
ANIMAL HEALTH		65.0	0.16	28,668	340 CALVES		\$50	17,000	
BREEDING		65.8	0.16	29,000	433 TOTAL			72,800	
DAIRY SHED & ELECTRICITY		56.7	0.14	25,000	<b>STOCK PURCHASES</b>		Price		
PURCHASED FEED		175.1	0.43	77,200	0		\$0	-	
GRAZING-yearlings 100 52 9.00		106.1	0.26	46,800	<b>NET STOCK SALES</b>			\$72,800	
GRAZING-calves 100 22 7.00		34.9	0.09	15,400					
FERTILISER		147.4	0.36	65,000	<b>MILK INCOME</b>				
FERTILISER SPREADING		11.3	0.03	5,000	SUPPLY NO. 72847 100% share			802,152	
FRIEGHT (Stock)		20.4	0.05	9,000	<b>DIVIDEND</b> 186,000 \$0.40			74,400	
CARTAGE (Fertiliser)		10.2	0.03	4,500					
WEEDS & PESTS		11.3	0.03	5,000	<b>GROSS FARM INCOME</b>		\$2153	\$949,352	
CONSULTANCY		16.3	0.04	7,200					
SILAGE		34.0	0.08	15,000	<b>Rental Income</b>			23,400	
CROPPING		56.7	0.14	25,000	<b>TOTAL INCOME</b>			\$972,752	
REGRASSING		56.7	0.14	25,000					
R & M		56.7	0.14	25,000					
VEHICLE Exp.'s		88.0	0.22	38,800					
GENERAL		45.4	0.11	20,000					
OVERHEADS		131.0	0.32	57,759					
<b>FARM COSTS</b>		72%	1588	3.92	\$700,527				
<b>INTEREST COST</b> \$4,350,000 @ 4.50%					195,750				
<b>LEASE LAND</b>					30,000				
<b>EFFECTIVE FARM SURPLUS (EFS)</b>		5%	105	0.26	\$46,475				
<b>PRODUCTION LAST YR</b>		2016	176197 kg ms	<b>PRODUCTION May</b>		2016	2019 kg ms		
Month	Production	Production Curve	Advance For Month	Capacity Adjust Payment	Final Payments	Payout for last Mays Pro	Advance Payout	Final & Top up payments	Notes
JUN				\$0.51	\$0.00	\$3.15	\$7,390	\$0	May P.+ June F
JULY	7140	4%	\$2.50	\$0.51	\$0.05			\$8,810	July Final
AUG	23205	13%	\$2.80	\$0.51	\$0.20		\$21,491	\$35,239	Aug Final
SEP	24990	14%	\$3.60		\$0.15		\$76,809	\$28,572	From Aug Prod
OCT	24990	14%	\$3.60		\$0.10		\$89,964	\$41,896	From Sep Prod
NOV	23205	13%	\$3.60				\$89,964	\$0	From Oct Prod
DEC	21420	12%	\$3.60				\$83,538	\$0	From Nov Prod
JAN	17850	10%	\$3.70	\$0.51			\$77,112	\$0	From Dec Prod
FEB	10710	6%	\$3.70	\$0.51			\$75,149	\$12,495	From Jan Prod
MAR	10710	6%	\$3.80	\$0.51			\$45,089	\$0	From Feb Prod
APR	8925	5%	\$3.85	\$0.51			\$46,160	\$15,351	From Mar Prod
MAY	5355	3%					\$38,913	\$8,211	From Apr Prod
Total	178500	100%					\$651,578	\$150,574	
Check	178500	Annualised Payout=	\$3.85	\$0.51	\$0.50			\$4.49	
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### NOTES

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CLIENT: OWL Farm		FOR YEAR ENDED: May-17											
INCOME	TOTAL	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
CATTLE	72,800				8,500	8,500					18,600	18,600	18,600
MILK	802,152	7,390	8,810	56,731	105,380	131,860	89,964	83,538	77,112	87,644	45,089	61,511	47,124
DIVIDEND	74,400					37,200						37,200	
REBATES	-												
OFF FARM	23,400	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950
<b>TOTAL</b>	<b>972,752</b>	<b>9,340</b>	<b>10,760</b>	<b>58,681</b>	<b>115,830</b>	<b>179,510</b>	<b>91,914</b>	<b>85,488</b>	<b>79,062</b>	<b>89,594</b>	<b>65,639</b>	<b>119,261</b>	<b>67,674</b>
EXPENSES	TOTAL	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
CATTLE	-												
WAGES	176,200	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683
ANIMAL HEALTH	28,668	1,425	7,125	1,425	2,280	1,140	4,560	1,995	1,140	1,140	2,565	285	3,588
BREEDING	29,000	-	-	-	1,200	4,800	20,600		1,200	-	-	1,200	-
DAIRY SHED & ELECTRICITY	25,000	1,150	4,100	1,750	2,150	3,200	1,600	1,600	3,000	1,600	1,700	2,600	550
PURCHASED FEED	77,200	4,332	10,287	9,310	9,747	18,770	6,034	1,080	1,080	1,080	15,480	-	-
GRAZING-yearlings	46,800	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900
GRAZING-calves	15,400							2,567	2,567	2,567	2,567	2,567	2,567
FERTILISER	65,000	1,000	5,000	1,500	13,000	10,000	7,000	5,000	-		19,000	-	3,500
FERTILISER SPREADING	5,000	-	-	-	5,000	-	-	-	-	-	-	-	-
FRIEGHT (Stock)	9,000	-	-	-	-	-	-	4,000	-	-	-	-	5,000
CARTAGE (Fertiliser)	4,500	-	300	-	1,050	500	550	400	-	-	1,450	-	250
WEEDS & PESTS	5,000	-	-	-	-	2,000	-	-	-	3,000	-	-	-
CONSULTANCY	7,200	600	600	600	600	600	600	600	600	600	600	600	600
SILAGE	15,000	-	-	-	-	7,500	7,500	-	-	-	-	-	-
CROPPING	25,000	-	-	-	10,000	5,000	-	-	-	-	10,000	-	-
REGRASSING	25,000										15,000	10,000	-
R & M	25,000	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083
VEHICLE Exp.'s	38,800	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233
GENERAL	20,000	1,066	1,066	1,066	1,066	4,066	1,066	1,066	1,066	1,066	4,066	2,266	1,074
OVERHEADS	57,759	2,818	6,931	2,818	17,932	2,818	2,818	2,818	5,168	2,818	2,818	5,168	2,834
INTEREST COST	195,750	16,313	16,313	16,313	16,313	16,313	16,313	16,313	16,313	16,313	16,313	16,313	16,313
LEASE LAND	30,000	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
<b>TOTAL</b>	<b>926,277</b>	<b>55,104</b>	<b>78,122</b>	<b>61,182</b>	<b>106,738</b>	<b>103,107</b>	<b>95,041</b>	<b>63,838</b>	<b>58,533</b>	<b>56,583</b>	<b>117,958</b>	<b>67,398</b>	<b>62,675</b>
<b>MONTHLY SURPLUS</b>	<b>0</b>	<b>-45,764</b>	<b>-67,362</b>	<b>-2,501</b>	<b>9,093</b>	<b>76,403</b>	<b>-3,127</b>	<b>21,650</b>	<b>20,529</b>	<b>33,010</b>	<b>-52,319</b>	<b>51,863</b>	<b>4,999</b>
<b>CLOSING BALANCE</b>	<b>46,475</b>	<b>-45,764</b>	<b>-113,126</b>	<b>-115,626</b>	<b>-106,534</b>	<b>-30,131</b>	<b>-33,257</b>	<b>-11,607</b>	<b>8,922</b>	<b>41,932</b>	<b>-10,387</b>	<b>41,476</b>	<b>46,475</b>

PRODUCTION/PRICE SENSITIVITY					
PRICE VARIANCE	\$0.45				
PRODUCTION VARIANCE (KG's)	17850				
	\$3.60	\$4.04	\$4.49	\$4.94	\$5.39
142800	-\$242,300	-\$178,128	-\$113,956	-\$49,784	\$14,389
160650	-\$178,128	-\$105,934	-\$33,740	\$38,453	\$110,647
178500	-\$113,956	-\$33,740	\$46,475	\$126,690	\$206,905
196350	-\$49,784	\$38,453	\$126,690	\$214,927	\$303,163
214200	\$14,389	\$110,647	\$206,905	\$303,163	\$399,421

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## NOTES

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# Owl Farm - For Year Ended: May 2017



INCOME															
	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Total	Budget YTD	Variance YTD
Milk Solids KG	-	5,623	20,912	23,267	-	-	-	-	-	-	-	-	49,802	55,335	(5,533)
Milk	8,517	51,459	96,728	120,093	-	-	-	-	-	-	-	-	276,797	216,360	60,437
Dividends	18,617	3,010	-	18,617	-	-	-	-	-	-	-	-	40,244	40,244	0.00%
Cattle	1,950	8,276	12,724	913	-	-	-	-	-	-	-	-	22,387	17,000	5,387
Other Income	-	1,950	1,950	1,950	-	-	-	-	-	-	-	-	7,800	7,800	0.00%
<b>Total Income</b>	<b>29,058</b>	<b>65,195</b>	<b>111,402</b>	<b>141,573</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>347,228</b>	<b>241,160</b>	<b>106,068</b>
															43.99%
															849,935
															(502,707)
															-59.15%

EXPENSES															
	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Total	Budget YTD	Variance YTD
Wages	10,246	13,178	18,021	13,598	-	-	-	-	-	-	-	-	55,043	58,732	(3,689)
Animal Health	5,923	5,662	5,950	3,552	-	-	-	-	-	-	-	-	21,087	12,255	8,832
Breeding	65	625	200	9,305	-	-	-	-	-	-	-	-	10,195	1,200	8,995
Dairy Shed and Electricity	4,564	4,101	1,719	1,844	-	-	-	-	-	-	-	-	12,228	9,150	3,078
Purchased Feed	-	6,148	12,775	8,184	-	-	-	-	-	-	-	-	27,107	33,676	(6,569)
Grazing - Replacement Heifers & Calves	3,707	3,828	4,756	3,707	-	-	-	-	-	-	-	-	15,998	15,600	398
Fertiliser	6,160	10,524	11,695	10,455	-	-	-	-	-	-	-	-	38,834	30,000	8,834
Gibberellic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	4,000	-
Fertiliser Spreading	-	-	-	-	-	-	-	-	-	-	-	-	-	5,000	(5,000)
Cartage - Fertiliser	-	1,230	1,506	2,619	-	-	-	-	-	-	-	-	5,355	1,350	4,005
Freight - Stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weeds and Pests	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consultancy	900	900	300	300	-	-	-	-	-	-	-	-	2,400	2,400	-
Silage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cropping	-	-	-	6,511	-	-	-	-	-	-	-	-	6,511	10,000	(3,489)
R&M	1,029	8,032	1,124	498	-	-	-	-	-	-	-	-	10,683	8,332	2,351
Vehicle Expenses	3,238	2,948	3,948	4,000	-	-	-	-	-	-	-	-	14,134	12,932	1,202
General	1,336	315	788	2,038	-	-	-	-	-	-	-	-	4,477	3,264	1,213
Overheads	3,090	4,378	2,183	8,747	-	-	-	-	-	-	-	-	18,388	31,499	(13,111)
															-41.62%
															0.00%
															0.00%
<b>Total Farm Working Expenses</b>	<b>40,248</b>	<b>61,869</b>	<b>65,103</b>	<b>75,358</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>242,578</b>	<b>239,390</b>	<b>7,188</b>
															3.00%
															700,527
															(457,949)
															-65.57%

Financial Changes															
	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Total	Budget YTD	Variance YTD
<b>Net Surplus before Financial Changes</b>	<b>(11,190)</b>	<b>3,326</b>	<b>46,299</b>	<b>66,215</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>104,650</b>		
Interest Cost	16,667	16,667	16,667	16,667	-	-	-	-	-	-	-	-	66,668	66,664	4
Lease Land	1,966	1,966	1,966	1,966	-	-	-	-	-	-	-	-	7,864	10,000	(2,136)
<b>Total Financial Changes</b>	<b>18,633</b>	<b>18,633</b>	<b>18,633</b>	<b>18,633</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>74,532</b>	<b>76,664</b>	<b>-2,132</b>
															-21.35%
															230,000
															(155,468)
															-67.59%
<b>Surplus (Deficit) after Financial Changes</b>	<b>(29,823)</b>	<b>(15,307)</b>	<b>27,666</b>	<b>47,582</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30,118</b>		

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## Season to date budget

- The variance budget represents our current position vs. planned position. Our budgeted cost of production has gone up from the initial budget of \$3.70kgMS to \$3.90kgMS. The increase has come about due to the lower budgeted milk production with 30 less cows. Although there is some relativity with animal health, reproduction and feed costs down on a per cow basis and fertiliser down on a per ha basis there are still a significant number of fixed costs which inevitably pushed the cost of production higher.
- Overall our expenses are largely in line with expectations but the significantly lower milk production than initially budgeted is inflating the costs per kgMS. Based on where we are currently at we will not hit our targeted farm working costs of \$3.50kgMS which we thought was achievable based on initially conservative production targets.
- Income:
  - Although production is down 10% milk income is up thanks to lifts in the Fonterra forecast pay out.
  - Cattle sales higher than budgeted as we had to cull additional cows with loss of 5ha.
  - Dividend came earlier than cash flowed.
- Expenses:
  - As a whole we are tracking well, season to date expenses are \$242,578 down from \$265,251 at the same time last year.
  - Animal health is higher than anticipated due to:
    - Higher levels of mastitis down to cost cutting at the back of last season with teat seal and dry cow therapy, the mud has also been a significant contributor.
    - Milk fever was more common than expected, mobilisation of mg with rain a challenge and carry over affects from eczema. More costs in higher rates of mg both dusted and in water.
    - CDIR's and PG programme, more non cyclers than anticipated.
  - Feed down due to PKE not required at levels initially budgeted.
  - General expenses are up due to higher repairs and maintenance requirements than budgeted, major issues so far have been replacing motor in rotary and continuously fixing old silage wagon.
  - Overheads are under as we haven't yet received rates and ACC levies.

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Reforecast budget for the seasons end with revised production figure and expenses

CLIENT:		OWL Farm		FOR YEAR ENDED:		May-17		Total ha		165	
STOCK	2016	2017		RECONCILIATION				Eff ha milking		150	
COWS	350	350		Opening	550	Closing	550	Cows Milked		441	
R2 Heifers	100	100		N. Increase	383	Sales	433	Cows per ha		2.94	
R1 Heifers	100	100		Purchase		Deaths	0	Total kg ms		172,377	
STEERS R 1YR				Total	933	Total	990	Kg ms per ha		1149	
OTHERS				Calving%	85%	% milk chq	100%	Kg ms per cow		391	
				Deaths	7	% of grazing acc	100%	Eff Cash Payout		\$4.58	
TOTALS	550	550		May advance	\$3.15	Finals	\$0.50	EFS/ha		\$1,886	
				\$ per Cow	\$ per Kg ms	Total	STOCK SALES		Price		
WAGES				399.5	1.02	176,200	93 CULL COWS		\$600	55,800	
ANIMAL HEALTH				90.7	0.23	40,000	340 CALVES		\$50	17,000	
BREEDING				65.8	0.17	29,000	433 TOTAL			72,800	
DAIRY SHED & ELECTRICITY				56.7	0.15	25,000	STOCK PURCHASES		Price		
PURCHASED FEED				116.1	0.30	51,200	0		\$0	-	
GRAZING-yearlings 100				52	9.00	106.1	NET STOCK SALES			\$72,800	
GRAZING-calves 100				22	7.00	34.9					
FERTILISER				136.1	0.35	60,000	MILK INCOME				
FERTILISER SPREADING				11.3	0.03	5,000	SUPPLY NO. 72847		100% share	788,917	
FRIEGHT (Stock)				20.4	0.05	9,000	DIVIDEND		186,000	\$0.40	74,400
CARTAGE (Fertiliser)				10.2	0.03	4,500	GROSS FARM INCOME		\$2123	\$936,117	
WEEDS & PESTS				11.3	0.03	5,000					
CONSULTANCY				6.8	0.02	3,000	Rental Income			23,400	
SILAGE				34.0	0.09	15,000	TOTAL INCOME			\$959,517	
CROPPING				56.7	0.15	25,000					
REGRASSING				56.7	0.15	25,000					
R & M				56.7	0.15	25,000					
VEHICLE Exp.'s				88.0	0.23	38,800					
GENERAL				45.4	0.12	20,000					
OVERHEADS				131.0	0.34	57,759					
FARM COSTS				71%	1534	3.93					
INTEREST COST						200,000					
LEASE LAND						30,000					
EFFECTIVE FARM SURPLUS (EFS)				6%	120	0.31					
PRODUCTION LAST YR				2016	176197	kg ms	PRODUCTION May		2016	2019	kg ms
Month	Production	Production Curve	Advance For Month	Capacity Adjust	Final Payments	Payout for last Mays Pro	Advance Payout	Final & Top up payments	Notes		
JUN				\$0.51	\$0.00	\$3.15	\$7,390	\$0	May P. + June F		
JULY	6519	4%	\$2.50	\$0.51	\$0.05			\$8,810	July Final		
AUG	20785	13%	\$2.80	\$0.51	\$0.20		\$19,622	\$35,239	Aug Final		
SEP	21649	14%	\$3.60		\$0.15		\$68,798	\$28,385	From Aug Prod		
OCT	23189	14%	\$3.60		\$0.10		\$77,936	\$39,463	From Sep Prod		
NOV	22721	13%	\$3.60				\$83,480	\$0	From Oct Prod		
DEC	22733	12%	\$3.60				\$81,796	\$0	From Nov Prod		
JAN	18050	10%	\$3.70	\$0.51			\$81,839	\$0	From Dec Prod		
FEB	13146	6%	\$3.70	\$0.51			\$75,991	\$11,760	From Jan Prod		
MAR	12634	6%	\$3.80	\$0.51			\$55,345	\$0	From Feb Prod		
APR	8179	5%	\$3.85	\$0.51			\$54,453	\$14,879	From Mar Prod		
MAY	2772	3%					\$35,660	\$8,071	From Apr Prod		
Total	172377	100%					\$642,309	\$146,608			
Check	172377	Annualised Payout=	\$3.85	\$0.51	\$0.50			\$4.58			

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**Agribusiness**

# DAIRY CASHFLOW (GST excl.)

CLIENT: **OWL Farm**

FOR YEAR ENDED: May-17

INCOME	TOTAL	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
CATTLE	72,800				8,500	8,500					18,600	18,600	18,600
MILK	788,917	7,390	8,810	54,862	97,184	117,399	83,480	81,796	81,839	87,750	55,345	69,332	43,732
DIVIDEND	74,400					37,200						37,200	
REBATES	-												
OFF FARM	23,400	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950
<b>TOTAL</b>	<b>959,517</b>	<b>9,340</b>	<b>10,760</b>	<b>56,812</b>	<b>107,634</b>	<b>165,049</b>	<b>85,430</b>	<b>83,746</b>	<b>83,789</b>	<b>89,700</b>	<b>75,895</b>	<b>127,082</b>	<b>64,282</b>

EXPENSES	TOTAL	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
CATTLE	-												
WAGES	176,200	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683	14,683
ANIMAL HEALTH	40,000	1,425	7,125	1,425	2,280	1,140	4,560	1,995	1,140	1,140	2,565	285	3,588
BREEDING	29,000	-	-	-	1,200	4,800	20,600		1,200	-	-	1,200	-
DAIRY SHED & ELECTRICITY	25,000	1,150	4,100	1,750	2,150	3,200	1,600	1,600	3,000	1,600	1,700	2,600	550
PURCHASED FEED	51,200	4,332	10,287	9,310	9,747	18,770	6,034	1,080	1,080	1,080	15,480	-	-
GRAZING-yearlings	46,800	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900
GRAZING-calves	15,400							2,567	2,567	2,567	2,567	2,567	2,567
FERTILISER	60,000	1,000	5,000	1,500	13,000	10,000	7,000	5,000	-		19,000	-	3,500
FERTILISER SPREADING	5,000	-	-	-	5,000	-	-	-	-	-	-	-	-
FRIEGHT (Stock)	9,000	-	-	-	-	-	-	4,000	-	-	-	-	5,000
CARTAGE (Fertiliser)	4,500	-	300	-	1,050	500	550	400	-	-	1,450	-	250
WEEDS & PESTS	5,000	-	-	-	-	2,000	-	-	-	3,000	-	-	-
CONSULTANCY	3,000	250	250	250	250	250	250	250	250	250	250	250	250
SILAGE	15,000	-	-	-	-	7,500	7,500	-	-	-	-	-	-
CROPPING	25,000	-	-	-	10,000	5,000	-	-	-	-	10,000	-	-
REGRASSING	25,000										15,000	10,000	-
R & M	25,000	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083
VEHICLE Exp.'s	38,800	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233
GENERAL	20,000	1,066	1,066	1,066	1,066	4,066	1,066	1,066	1,066	1,066	4,066	2,266	1,074
OVERHEADS	57,759	2,818	6,931	2,818	17,932	2,818	2,818	2,818	5,168	2,818	2,818	5,168	2,834
INTEREST COST	200,000	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667	16,667
LEASE LAND	30,000	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
<b>TOTAL</b>	<b>ERROR</b>	<b>55,108</b>	<b>78,126</b>	<b>61,186</b>	<b>106,742</b>	<b>103,111</b>	<b>95,045</b>	<b>63,842</b>	<b>58,537</b>	<b>56,587</b>	<b>117,962</b>	<b>67,402</b>	<b>62,679</b>

		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
MONTHLY SURPLUS	0	-45,768	-67,366	-4,374	892	61,939	-9,614	19,903	25,251	33,113	-42,068	59,679	1,602
CLOSING BALANCE	#VALUE!	-45,768	-113,134	-117,508	-116,616	-54,677	-64,292	-44,388	-19,137	13,976	-28,092	31,588	33,190

PRODUCTION/PRICE SENSITIVITY					
PRICE VARIANCE	\$0.46				
PRODUCTION VARIANCE (KG's)	17237.7				
	\$3.66	\$4.12	\$4.58	\$5.03	\$5.49
137901.6	-\$231,152	-\$168,039	-\$104,925	-\$41,812	\$21,301
155139.3	-\$168,039	-\$97,036	-\$26,034	\$44,969	\$115,971
<b>172377</b>	<b>-\$104,925</b>	<b>-\$26,034</b>	<b>\$52,858</b>	<b>\$131,750</b>	<b>\$210,641</b>
189614.7	-\$41,812	\$44,969	\$131,750	\$218,530	\$305,311
206852.4	\$21,301	\$115,971	\$210,641	\$305,311	\$399,981

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- Production:
  - Given we are almost half way through the season we thought it was appropriate to reforecast our budgets from both a production and expenditure perspective. After what's been experienced through the past couple of months and the impact that's had on production its inevitable cost structures will go up as there is less milk to dilute the costs.
  - It's important we reforecast so that we can keep focused on realistic targets as our initial targeted cost structure is largely out the window.
  - At the outset of the season modelled production was 178,500kgMS or 415kgMS/cow. After the weather and subsequent utilisation/pasture quality issues our actuals along with season ending modelled production put per cow performance down to 390kgMS/cow.
  - With the redistribution of contracted PKE not currently used we have managed to lift modelled production back to 408kgMS/cow or 172,376kgMS total. 408kgMS/cow is only 3.5% behind our initial production figure and considering we are currently 12% behind that initial target it would be a huge success to achieve the reforecast production figure.
  - The aim is to pull back lost production over the coming months through fully feeding and minimising post peak decline we may give ourselves a chance but realistically we also need to appreciate that given our farm system is so vulnerable to the weather it's going to be increasingly difficult. In reality the damage has largely been done during September and October.
- Expenses:
  - With animal health already sitting at 72% of the budgeted spend for reasons previously outlined we have decided to up the budgeted spend to \$40,000 from \$28,668. This reflects the more expensive bolus zinc treatment we are undertaking along with dry cow and teat seal to ensure we minimise mastitis next season.
  - Initially we budgeted 200t of PKE at \$200/tonne. At the outset we only contracted 160t at \$190/tonne. The redistribution of this feed having not fed as much as planned over winter/spring has meant we will likely not require the additional 40t at \$200/tonne. This provides a cost saving of \$8000.
  - Similarly we made a call not to purchase maize silage this year as our lack of infrastructure doesn't support feeding this supplement in an efficient or cost effective manner. We initially budgeted \$36,000 for maize. With our tighter calving pattern next year we have identified brought pasture silage as a suitable supplement to feed through this time. \$18,000 of the \$36,000 has been earmarked to purchase further silage off farm.
  - Season to date there has been a saving of \$23k, although some expenses categories are expected to be higher than originally budgeted, others are under meaning that reforecast budget to the end of the season is only showing \$24k FWE savings.
- Outcome:
  - **With the decrease in modelled production and the changes to expenses the current modelled cost structure for seasons end is \$3.93kgMS. Although still some way off what was initially modelled it would still be a great achievement given the \$4.96kgMS cost structure which played out last season.**

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# SETTING UP FOR SUMMER: GET THE MOST OUT OF YOUR PASTURES

## Target residuals for maintaining high quality pasture

Maintaining high quality pasture through good grazing practices will help maximise late spring and early summer milksolids production.

The post-grazing residual from which a pasture regrows has a significant impact on pasture composition and quality at subsequent grazings, and subsequent milk production. Recommendations are to graze pastures to a residual of 1500-1600 kg DM/ha (height of 3.5 to 4.0 cm).

At this time of year, achieving the target grazing residuals consistently helps control the development of reproductive tillers (and emergence of seed heads) which impacts on pasture quality offered at future grazings.

Research in New Zealand and overseas has demonstrated that lax grazing during spring results in pastures with greater stem content, higher amounts of dead material and of lower digestibility at subsequent grazing events. As a result, laxly grazed pastures in spring will support lower levels of milk production in early summer.

### ⇒ **Post-grazing Residual Project (Scott Farm)**

In 2015, DairyNZ set up farmlets at Scott Farm (Hamilton) and WTARS (Hawera) to demonstrate the benefits of maintaining target post-grazing residuals (1500-1600kg DM/ha) during spring on pasture quality in summer/autumn.

At each site, cows on one farmlet grazed to the recommended **Target Residual** of 1500-1600kg DM/ha, while cows on the **High Residual** farmlet grazed to a post-grazing residual of 1800-2000kg DM/ha. The treatments were run from early spring to December, to **test the effect of spring grazing management on pasture quality in summer**.

### Pasture composition and quality: key findings

While pasture composition and quality at Scott Farm was similar in spring, high post-grazing residuals in spring resulted in summer and autumn pastures with a lower perennial ryegrass content and higher proportion of dead material, while leaf and soft stem content was lower on that High Residual farmlet. This change in pasture composition resulted in reduced pasture quality in summer and autumn (**Tables 1 and 2**).

**Table 1.** Botanical composition of the Target Residual and High Residual pastures during spring and summer/autumn at Scott Farm.

	Target residual	High residual	Sig
<b>Spring</b>			
Ryegrass leaf and pseudostem	69%	68%	ns
Ryegrass reproductive stem	17%	21%	ns
White clover	3%	2%	ns
Dead material	7%	7%	ns
Other species	4%	2%	ns
<b>Summer/autumn</b>			
Ryegrass leaf and pseudostem	52%	42%	*
Ryegrass reproductive stem	4%	3%	ns
White clover	7%	5%	ns
Dead material	20%	32%	*
Other species	17%	18%	ns

ns = not significantly different

\* means significantly different

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**Table 2.** Metabolisable energy (MJ ME/kg DM), crude protein and neutral detergent fibre (% of DM) of the Target Residual and High Residual pastures during spring and summer/autumn at Scott Farm.

	Target residual	High residual	Sig
<b>Spring</b>			
Metabolisable energy (MJ/kg DM)	12.6	12.5	ns
Crude Protein (%)	19.2	18.5	ns
NDF (%)	44.4	45.0	ns
<b>Summer/autumn</b>			
Metabolisable energy (MJ/kg DM)	10.8	10.0	***
Crude Protein (%)	18.3	14.8	***
NDF (%)	51.1	55.7	**

ns = not significantly different

\* means significantly different

The reduced milksolids production in summer/autumn of the High Residual cows (87 kg compared with 91 kg MS/cow for the Target Residual cows) was attributed to the poorer pasture composition and lower nutritive value arising from higher residuals in spring.

This is consistent with previous research. This demonstration highlighted the carry-over consequences of not achieving target post-grazing residuals in spring.

### Take home messages

- **At this time of year, keep achieving post-grazing residuals of 1500-1600kg DM/ha (7-8 clicks on the RPM; 3.5 to 4 cm).**
- **Failure to do so will result in poor pasture quality and lower MS production from pasture in summer/autumn.**

### Transitioning from spring to summer: nitrogen fertiliser

Nitrogen boosted pasture is a valuable feed source to encourage greater growth rates in early summer. Successive trials at Ruakura in the mid-1990's demonstrated that a late spring application of nitrogen to boot pasture cover, and provide extra summer feed, gave the highest profit.

N simply multiplies the growth that is occurring. Therefore, it is important to apply N fertiliser before moisture becomes limiting. Applying 25-35kg N/ha in late spring/early summer (late November/December – *moisture permitting*) will help boost pasture supply over the coming months.

N application in early summer will boost the growth of new perennial ryegrass tillers, or 'daughter tillers', which will help thicken up the pasture going into summer.

### Extend the rotation length

In summer, each ryegrass leaf normally needs about 10 days to grow. That means achieving a 30-day rotation is important to maximise pasture growth and coincide grazing with the growth of three leaves.

Slowing down the round in December by increasing the number of days in the rotation will help achieve maximum growth during summer and help ensure there is adequate feed ahead of your herd for grazing.

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A 30-day rotation will prevent overgrazing and help plants manage the stress of summer. Moving from a spring rotation of about 23 days to a summer rotation of 30 days will require a gain of one day per week over seven weeks. Steps to take include:

- One day per week, leave a single paddock (maybe larger in area than others) to grow longer for a few days and then use the electric fence to provide grazing for an extra 12 or 24 hours.
- Bring in crop (or supplement if profitable) to extend the rotation. Remove cows from pasture to eat the allocated crop/supplement, and keep them off pasture for the rest of the day.
- Deferred grazing of late-spring surplus grass – the surplus area will be skipped and not grazed until at least February. *To learn more about deferred grazing, read DairyNZ Technical Series, September 2016, pg 12.*

## Options to regain quality

### Mowing before the cows

The use of pre-graze mowing can be useful to manage a small surplus or to restore quality.

The use of higher pre-grazing covers can make achieving target residuals challenging. Pre-graze mowing has been proposed by some as a way of meeting target residuals and maximising pasture utilisation, particularly for those with a lower stocking rate

Cons: expect some feed to be wasted when mowing; additional time and cost.

### Pre-grazing and mowing trial, Lincoln University Research farm





The pre-grazing and mowing trial (October 2016 to February 2017) was designed to examine the effects of pre-graze mowing as a management tool.

The 4 treatments are shown in the diagram below.

The trial investigates pre-grazing mowing during a pasture surplus, on pasture growth rate and ME and animal performance (dry matter intake, milk production, BCS, and liveweight).

The outcome will help determine the **costs and benefits of pre-graze mowing**.

⇒ Follow the progress of the trial and sign up for updates: [dairynz.co.nz/about-us/research/key-projects/pre-grazing-and-mowing-trial/](http://dairynz.co.nz/about-us/research/key-projects/pre-grazing-and-mowing-trial/)

		Pre-grazing cover	
		Low - 2900kg DM/ha	High - 3500kg DM/ha
Harvesting	Grazing		
	Mowing		

### Mowing after grazing to restore quality

Mowing residual pasture after cows have been offered a high allowance can maintain pasture quality through the late spring. This method should be used to correct errors in pasture allocation – for example growth rates were underestimated.

Cons: waste of pasture; cost of time, diesel and depreciation; only useful for small feed surpluses; increases risk of eczema in autumn.

- Dairy farmers should remain focused on removing grazing area as silage to capture potential pasture production, rather than mow to waste, and to increase grazing pressure so that recommended grazing residuals are maintained during the late spring

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NEW ZEALAND  
**DAIRY INDUSTRY**  
AWARDS

**A BRIGHTER  
TOMORROW AWAITS  
GREAT FARMERS  
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**ENTER THE DAIRY INDUSTRY AWARDS**

and enjoy the opportunities that come your way

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## Are you one of today's achievers with an eye on the future?

Now's the time to celebrate your successes. The New Zealand Dairy Industry Awards promote and champion excellence across three categories - Share Farmer, Dairy Manager and Dairy Trainee of the Year.

### EARLY BIRD ENTRY PRIZES:



NEW ZEALAND  
**SHARE FARMER**  
OF THE YEAR

**\$6,000**

\$4,000 travel voucher +  
\$2,000 spending money

Enter before 10<sup>th</sup> November  
2016 to be in the draw\*



NEW ZEALAND  
**DAIRY MANAGER**  
OF THE YEAR

**\$4,000**

\$2,500 travel voucher +  
\$1,500 spending money

Enter before 10<sup>th</sup> November  
2016 to be in the draw\*



NEW ZEALAND  
**DAIRY TRAINEE**  
OF THE YEAR

**\$2,000**

\$1,500 travel voucher +  
\$500 spending money

Enter before 10<sup>th</sup> November  
2016 to be in the draw\*

enter:

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Past finalists and winners are today's new dairy leaders. So if you'd like to follow in their footsteps - why not throw your hat in the ring?

**ENTRIES OPEN 20<sup>TH</sup> OCTOBER 2016**

**ENTRIES CLOSE 30<sup>TH</sup> NOVEMBER 2016**

Enter today and enjoy the opportunities that come your way.

\*Entry prize draw terms and conditions apply, see our website for details.

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# Next Farm Focus Day

Wednesday, 08 March 2017



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