

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 18th July 2017

LUDF – focus for 2017/18 Season: Nil-Infrastructure, low input, low N-loss, maximise profit.
 Farm system comprises 3.5 cows/ha (peak milked), Target up to 170kgN/ha, 300kgDM/cow imported supplement, plus winter most cows off farm. FWE of less than \$1.1 million and Target production of over 500kgMS/cow (>100% liveweight in milk production).

Critical issues for the short term

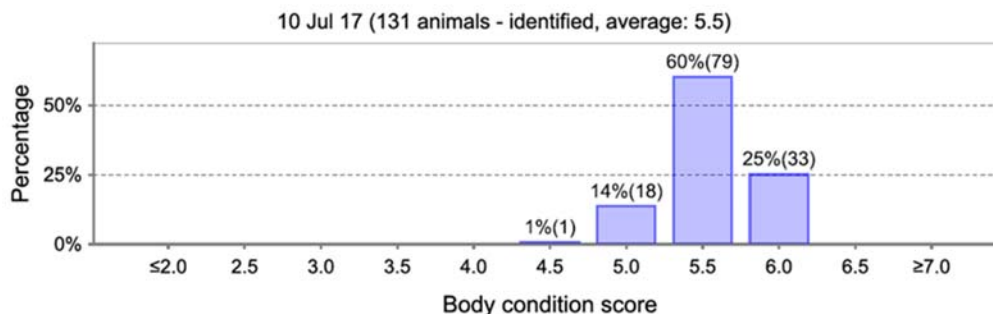
1. Monitor cows on wintering for health issues.
2. Monitor average pasture cover and shape of the wedge on the milking platform to meet planned cover at end of July (start of calving).
3. Watch cow BCS to ensure all cows meet BCS targets at calving (min 5 for MA cows and 5.5 for R2's and R3yr's)
4. Preparedness for calving (resources, staff and routines)
5. Cow health and pasture management through calving

Key Numbers - week ending Tuesday 18th July 2017

Ave Past Cover	2771 kgDM/ha	Past Growth Rate	17 kgDM/ha/day (2 week's average)
Round length	0 (for 160 ha)	Ave Supplement used	0
No Cows on farm	Calved heifers are returning to the farm daily as they calve. Currently 49 on farm.	Ave Soil Temp (week)	7 °C

Herd Management

6. 130 first calving heifers were brought back from the wintering block on the 8th July. They are grazing on the East block and in the neighbouring block at Jackies and they have been BCS on the 10th July. They received a Selenium and B12 shot on the 13th July and the second IBR boost vaccine on the 6th July.



7. 49 of those heifers have calved and are grazing on farm. 18 replacement heifers have been tagged.
8. There remains 433 cows wintering at Silverwood. These will be BCS next week and the first cut of 150 early calving cows will be transported to the east block on 21st July.
9. At Silverwood, the herd remains split in 3 mobs:
 - a. Light and early calving cows. Offered 11 kg FB/cow/day and 5 kgDM/cow/day silage
 - b. Middle BCS cows: 11 kg FB/cow/day and 3 kg DM/cow/day silage.
 - c. Higher CS / later calving cows: 7 kgDM FB/cow/day and 3 kgDM/cow/day low energy silage.

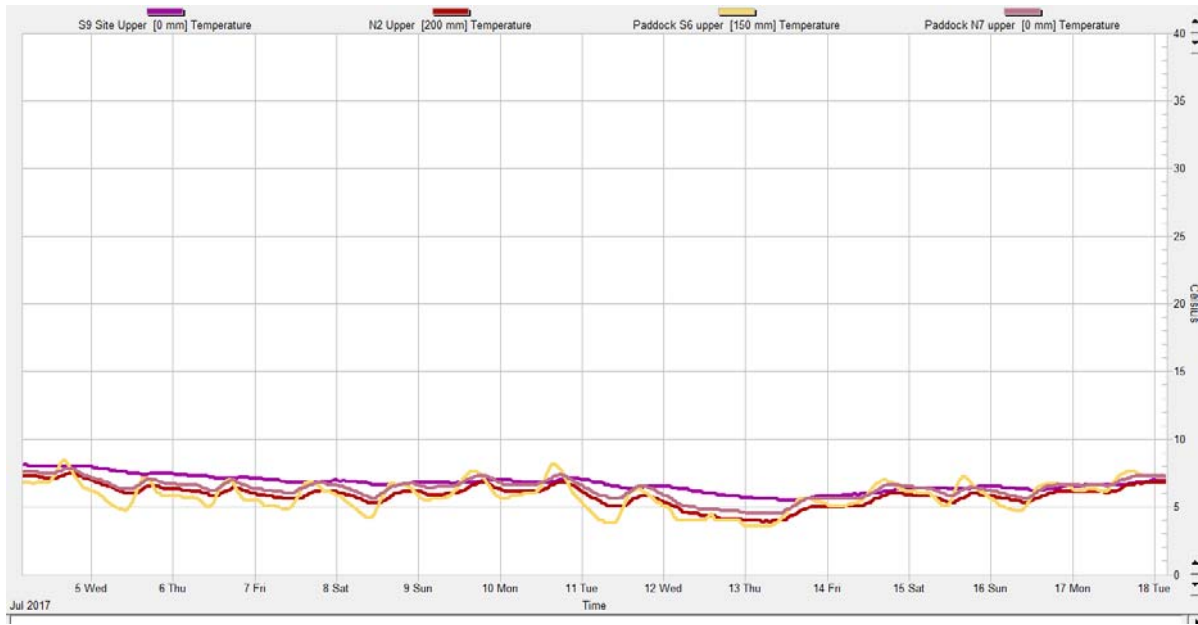
10. There have been 2 more slips and 2 deaths and bloods have also been taken of the R2 to check on mineral status.

Growing Conditions

11. The average 9 am soil temperature has continued to drop over the past two weeks and is now 5.7 °C (0.7°C below this same time last season).

12. With the rain and snow front received over these past 2 weeks, the farm is wet.

Figure 1: Soil temperature history for the last 2 weeks



13. The farm received about 37.6 ml of rain over the last week.

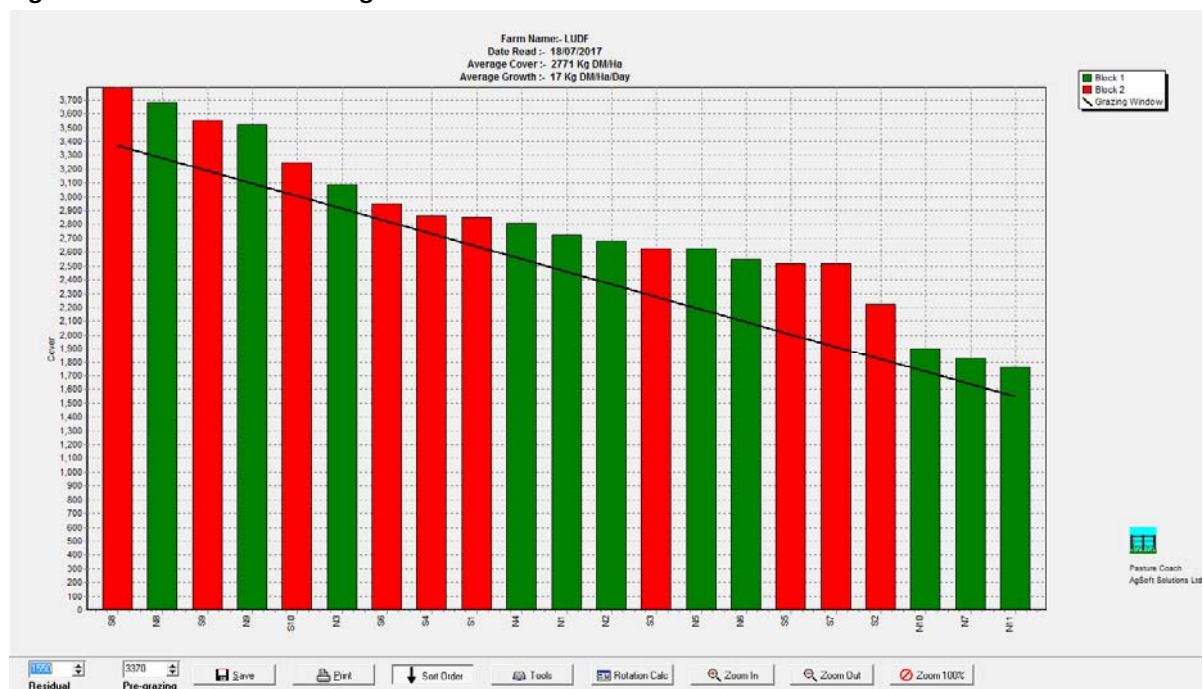
Figure 2: Soil moisture history for the last 2 weeks (Paddock N2).



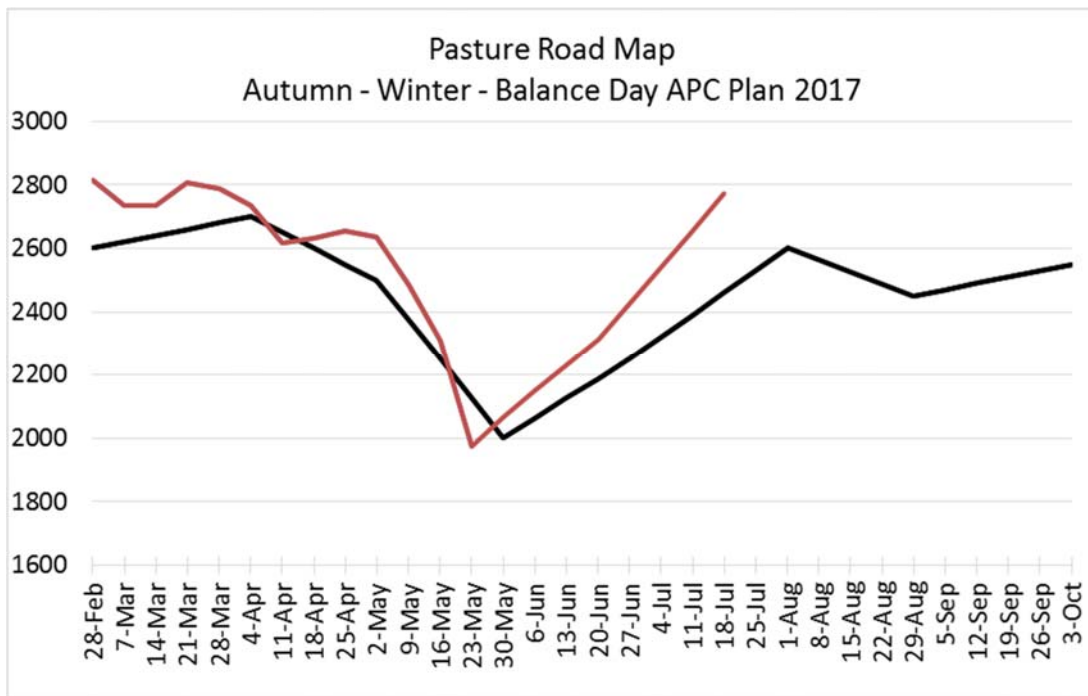
Pasture and Feed Management

14. The cold spell does not seem to have affected pasture growth a lot. There is some evidence of frost burn at the tips of the leaves (from earlier in the winter), but this is not wide spread across the farm.
15. The paddocks with highest covers are at the 2.5 to 3 leaves stage as of today and only S9 started showing some signs of decay at the bottom of the sward in urine patches only.
16. Paddocks grazed last in May are recovering well and growth does not seem to have dropped even with last week's bad weather.
17. The farm is wet though, so avoiding pugging damage will remain a focus, standing cows off if necessary.
18. The highest current cover is in paddock S8 with 3800 kgDM/ha. Paddock S9 has a similar cover and is now being used with the calved animals - though residuals are not being pushed in an attempt to avoid pugging.
19. The average growth rate of 17 kgDM/ha for the last 2 weeks is higher than expected given the cold weather, rain and snow. The south block tetraploid and hybrid paddocks seem to have grown quite a bit, while the highest paddocks have remained similar to 2 weeks ago. Hybrids in the north block have shown a good growth rate over the last 2 weeks.

Figure 3: This week's feed wedge



20. The pregrazing required for the demand line is calculated using the target APC and residual: (target cover for this date – 1550 (residual)) + target pasture cover for this date: (2460-1550)+2460= 3370 kgDM/ha
21. Below is our Pasture Road map to track covers through this period. The farm is about 300 kgDM/ha above the target line for this time of the season. This is a good position to be in as we already have 29 more animals calved than expected by the calving report (49 actual calved vs 20 expected from the report), and with the wet ground conditions, pasture utilisation will be low until ground conditions improve.



Feeding Management for the coming month:

22. Heifers will be fully fed on grass, allocating more area if necessary to avoid pugging.
23. Our Spring Rotation Planner will be started on the 25th July (next week Tuesday) as this year, with the synchronization of the heifers, the demand on platform will be enough for the expected allocated area.
24. We expect to continue accumulating cover on the farm until into August when demand will increase as cows are brought onto the platform as they calve. Springers can be brought back onto the farm earlier if required to manage any higher cover paddocks to maintain pasture quality.
25. Wintering of the herd is going well, cows will be condition scored again soon (as above) to assess BCS gains through the first month of winter. At that time, tweaks may be made to feeding levels and or groups of cows to ensure as much as possible all MA cows calve at BCS of 5 and all first and second calving heifers calve at BCS of 5.5. (and no cows are over-fat).

Note that weekly farm walks will start again from **1st August at 9am.**

LUDF Weekly report	6-Jun-17	13-Jun-17	20-Jun-17	4-Jul-17	18-Jul-17
Farm grazing ha (available to milkers)	160	160	160	160	160
Dry Cows on farm / East blk /Jackies/other	0/0/13/566	0/0/13/566	0/0/13/566	0/0/13/566	0/87/16/433
Culls (Includes culls put down & empties)	0	0	0	0	0
Culls total to date	0	0	0	0	0
Deaths (Includes cows put down)	0	0	0	0	0
Deaths total to date	0	0	0	0	0
Calved Cows available (Peak Number 560...)	0	0	0	0	49
Treatment / Sick mob total	0	0	0	0	13
Mastitis clinical treatment	0	0	0	0	0
Mastitis clinical YTD (tgt below 64 yr end)	0	0	0	0	0
Bulk milk SCC (tgt Avg below 150)	0	0	0	0	0
Lame new cases	0	0	0	0	0
Lame ytd	0	0	0	0	0
Lame days YTD (Tgt below 1000 yr end)	0	0	0	0	0
Other/Colostrum	0	0	0	0	0
Milking twice a day into vat	0	0	0	0	0
Milking once a day into vat	0	0	0	0	0
Small herd	0	0	0	0	0
Main Herd	0	0	0	0	0
MS/cow/day (Actual kg / Cows into vat only)	0.00	0.00	0.00	0.00	0.00
Milk Protein/Fat ratio					
Milk Fat %					
Milk Protein %					
MS/cow to date (total kgs / Peak Cows 560)	0	0	0	0	0
MS/ha/day (total kgs / ha used)	0.0	0.0	0.0	0.0	0.00
Herd Average Cond'n Score	0.00	0.00	0.00	0.00	0.00
Monitor group LW kg WOW 281 early calvers	0	0	0	0	0
Soil Temp Avg Aquaflex	8.5	7.1	6.5	7.0	5.7
Growth Rate (kgDM/ha/day)	0	0	11	16	17
Plate meter height - ave half-cms	0.0	0.0	12.9	14.6	16.2
Ave Pasture Cover (x140 + 500)	0	0	2312	2539	2771
Surplus/[deficit] on feed wedge- tonnes	0	0	0	0	0
Pre Grazing cover (ave for week)	0	0	0	0	0
Post Grazing cover (ave for week)	0	0	0	0	0
Highest pregrazing cover	0	0	0	0	0
Area grazed / day (ave for week)	0.00	0.00	0.00	0.00	0.00
Grazing Interval				0	0
Milkers Offered/grazed kg DM pasture	0.0	0.0	0.0	0.0	0.0
Estimated intake pasture MJME	0	0	0	0	0
Milkers offered kg DM Grass silage	0	0	0	0	0
Silage MJME/cow offered	0	0	0	0	0
Estimated intake Silage MJME	0	0	0	0	0
Estimated total intake MJME	0	0	0	0	0
Target total MJME Offered/eaten (includes 6% waste)	0	0	0	0	0
Pasture ME (pre grazing sample)	0.0	0.0	0.0	0.0	0.0
Pasture % Protein	0.0	0.0	0.0	0.0	0.0
Pasture % DM - Concern below 16%	0.0	0.0	0.0	0.0	0.0
Pasture % NDF Concern < 33	0.0	0.0	0.0	0.0	0.0
Mowed pre or post grazing YTD					
Total area mowed YTD					
Supplements fed to date kg per cow (555peak)	0.0	0.0	0.0	0.0	0.0
Supplements Made Kg DM / ha cumulative	0	0	0	0	0

Units N applied/ha and % of farm	0	0	0	0	0
Kgs N to Date (whole farm)	0	0	0	0	0
Rainfall (mm)	0	0	0	1.6	37.6
Aquaflex topsoil relative to fill point target 60 - 80%	0	0	0	90-100	100-100

Next farm walks: weekly from 1st August. Farmers or their managers and staff are always welcome to walk with us. Please call to notify us of your intention and bring your plate meter and gumboots. Phone SIDDC – 03 423 0022.

Peter Hancox, Farm Manager, Natalia Benquet, Chris Norton.

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 4th July 2017

LUDF – focus for 2017/18 Season: Nil-Infrastructure, low input, low N-loss, maximise profit.
Farm system comprises 3.5 cows/ha (peak milked), Target up to 170kgN/ha, 300kgDM/cow imported supplement, plus winter most cows off farm. FWE of less than \$1.1 million and Target production of over 500kgMS/cow (>100% liveweight in milk production).

Critical issues for the short term

1. Monitor cows on wintering for health issues.
2. Monitor average pasture cover and shape of the wedge on the milking platform to meet planned cover at end of July (start of calving).
3. Watch cow BCS to ensure all cows meet BCS targets at calving (min 5 for MA cows and 5.5 for R2's and R3yr's) and minimise number of cows above these targets
4. Preparedness for calving (resources, staff and routines)

Key Numbers - week ending Tuesday 4th July 2017

Ave Past Cover	2539 kgDM/ha	Past Growth Rate	16 kgDM/ha/day (2 week's average)
Round length	0 (for 160 ha)	Ave Supplement used	0
No Cows on farm	0	Ave Soil Temp (week)	7 °C

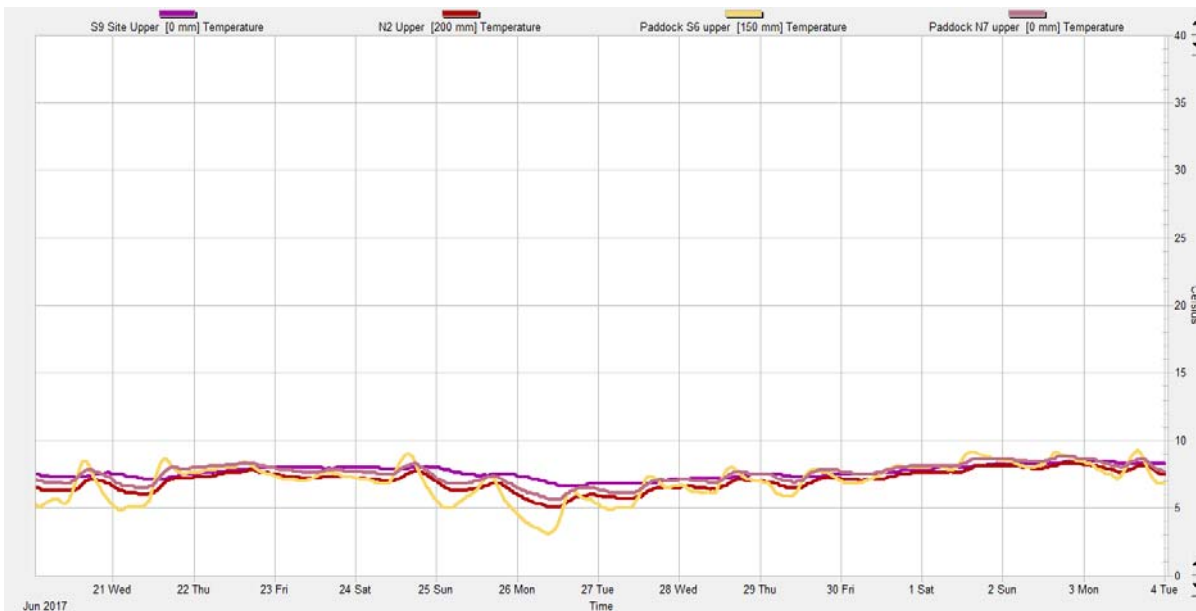
Herd Management

5. There are no cows on the milking platform at this stage.
6. 566 cows are being wintered at Silverwood farm and 13 lame cows have remained close-by and are being grazed at Jackie's (neighbouring farm)
7. At Silverwood, the herd has been split in 3 mobs:
 - a. Light and early calving cows. Offered 11 kg FB/cow/day and 5 kgDM/cow/day silage
 - b. Middle BCS cows: 11 kg FB/cow/day and 3 kg DM/cow/day silage.
 - c. Fat cows: 7 kgDM FB/cow/day and 3 kgDM/cow/day low energy silage. These will be in grass paddocks overnight to avoid break out problems.
8. Feeding continues without any problem in all herd and cows are putting BCS on at a good pace.
9. There have been 2 more slip (1 single and 1 twins) but none have come into milk. There have not been any further lameness problems.
10. The first load of (early-calving) heifers will be brought back from Silverwood on 7th July.

Growing Conditions

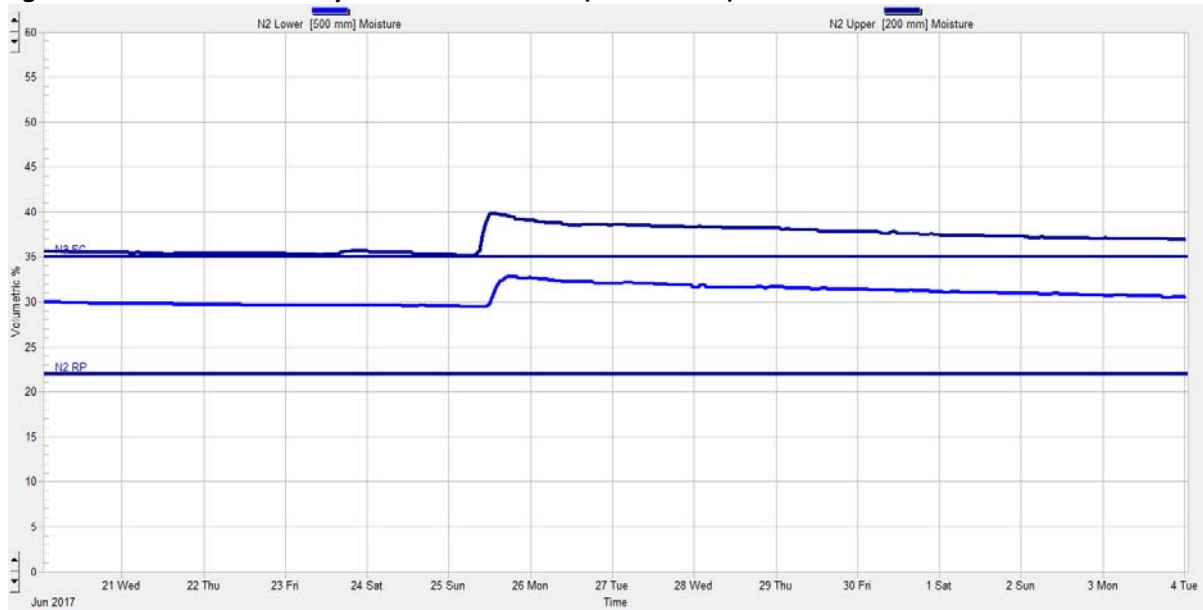
11. The average 9 am soil temperature has continued to drop over the past three weeks and is now 7 °C (0.6°C above this same time last season).
12. There have been no frosts over the past 2 weeks.

Figure 1: Soil temperature history for the last 2 weeks



13. The farm received about 16 ml of rain over the last 2 weeks.

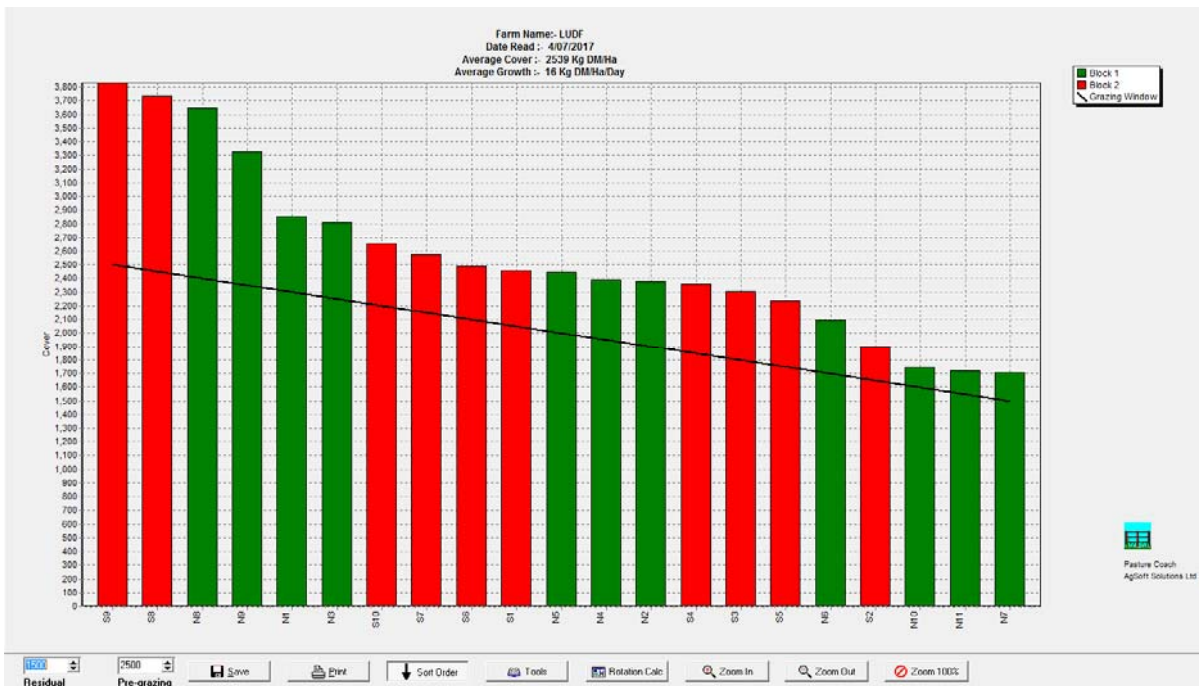
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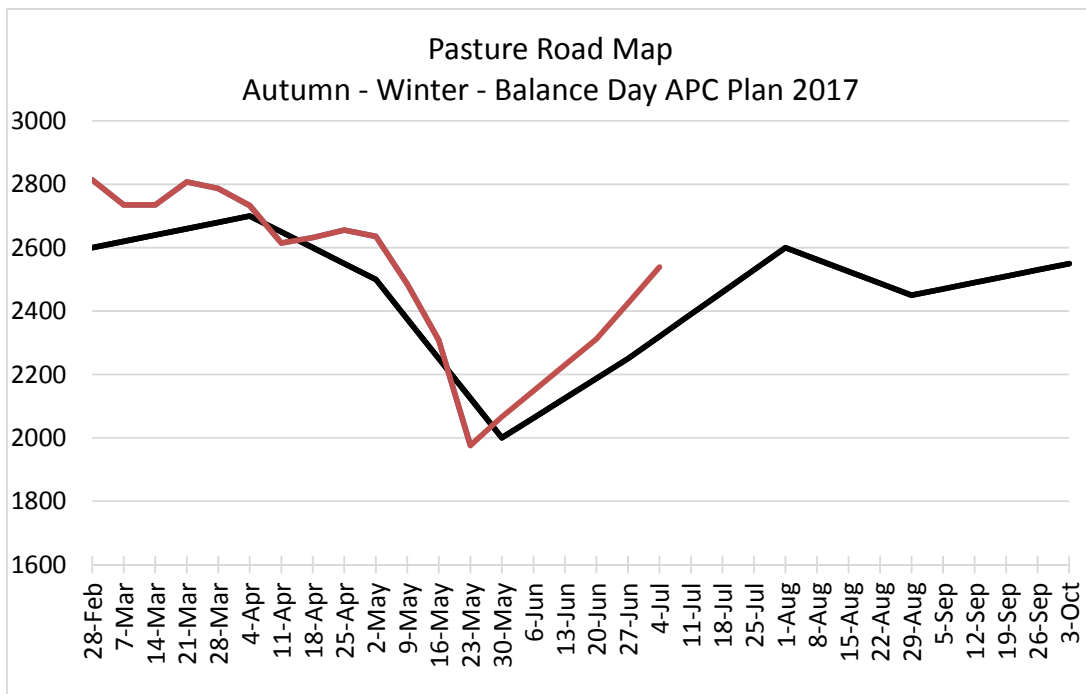
Pasture and Feed Management

- 14. The farm remains looking good, and paddocks remain soft underfoot, mainly in the south block. Some paddocks started showing some yellowing at the tips of the grass, potentially a result of the couple of frosts we had a couple of weeks ago. No dead matter is observed at the bottom of pastures, even in the high cover paddocks.
- 15. No more heavy rolling has been done over the past 2 weeks. General maintenance jobs are being done around the farm.
- 16. The highest current cover is in paddock S9 with 3800 kgDM/ha.

Figure 3: This week's feed wedge



17. Below is our Pasture Road map to track covers through this period. The farm is about 200 kgDM/ha above the target line for this time of the season. This is a good position to be in as heifers are due to start calving in another week to 10 days time.



Feeding Management for the coming month:

- 18. There will be no animals on platform until heifers start calving.
- 19. We expect to continue accumulating cover on the farm until August when demand will increase as cows are brought onto the platform as they calf. Springers can be brought back onto the farm earlier if required to manage any higher cover paddocks to maintain pasture quality.
- 20. Wintering of the herd is going well, cows will be condition scored again in early July to assess BCS gains through the first month of winter. At that time, tweaks may be made to feeding levels and or groups of

cows to ensure as much as possible all MA cows calve at BCS of 5 and all first and second calving heifers calve at BCS of 5.5. (and no cows are over-fat).

Note the next farm walk will be on **18th July at 9am**, then weekly from 1st August.

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Farm grazing ha (available to milkers)	160	160	160	160	160
Dry Cows on farm / East blk /Jackies/other	32/0/0/437	0/0/13/566	0/0/13/566	0/0/13/566	//13/566
Culls (Includes culls put down & empties)	0	0	0	0	0
Culls total to date	22	0	0	0	0
Deaths (Includes cows put down)	2	0	0	0	0
Deaths total to date	20	0	0	0	0
Calved Cows available (Peak Number 560...)	0	0	0	0	0
Treatment / Sick mob total	0				
Mastitis clinical treatment	0				
Mastitis clinical YTD (tgt below 64 yr end)	75				
Bulk milk SCC (tgt Avg below 150)	238				
Lame new cases	0				
Lame ytd	219				
Lame days YTD (Tgt below 1000 yr end)	5614				
Other/Colostrum	0				
Milking twice a day into vat	0				
Milking once a day into vat	0				
Small herd	0				
Main Herd	0				
MS/cow/day (Actual kg / Cows into vat only)	1.28				
Milk Protein/Fat ratio	0.80				
Milk Fat %	6.40				
Milk Protein %	5.14				
MS/cow to date (total kgs / Peak Cows 560)	516				
MS/ha/day (total kgs / ha used)	0.90				
Herd Average Cond'n Score	0.00				
Monitor group LW kg WOW 281 early calvers	0				
Soil Temp Avg Aquaflex	7.7	8.5	7.1	6.5	7.0
Growth Rate (kgDM/ha/day)	22	0	0	11	16
Plate meter height - ave half-cms	11.2	0.0	0.0	12.9	14.6
Ave Pasture Cover (x140 + 500)	2066			2312	2539
Surplus/[deficit] on feed wedge- tonnes					
Pre Grazing cover (ave for week)					
Post Grazing cover (ave for week)	1500				
Highest pregrazing cover					
Area grazed / day (ave for week)	0.49				
Grazing Interval	327				
Milkers Offered/grazed kg DM pasture					
Estimated intake pasture MJME					
Milkers offered kg DM Grass silage					
Silage MJME/cow offered					
Estimated intake Silage MJME					
Estimated total intake MJME					
Target total MJME Offered/eaten (includes 6% waste)					
Pasture ME (pre grazing sample)					
Pasture % Protein					
Pasture % DM - Concern below 16%					

Pasture % NDF Concern < 33					
Mowed pre or post grazing YTD	277.2				
Total area mowed YTD	310.4				
Supplements fed to date kg per cow (555peak)	500.9				
Supplements Made Kg DM / ha cumulative	361.47				
Units N applied/ha and % of farm	0				
Kgs N to Date (whole farm)	173				
Rainfall (mm)	0.6				16
Aquaflex topsoil relative to fill point target 60 - 80%	90-100				90-100

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