

## Lincoln University Dairy Farm - Farm Walk notes

Tuesday 12<sup>th</sup> July 2016

**LUDF – focus for 2016/17 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 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)

### Key Numbers - week ending Tuesday 12<sup>th</sup> July 2016

Ave Past Cover	2478 kgDM/ha	Past Growth Rate	13 kgDM/ha/day
Round length	0 (for 160 ha)	Ave Supplement used	0
No Cows on farm	4	Ave Soil Temp (week)	7.2 degrees

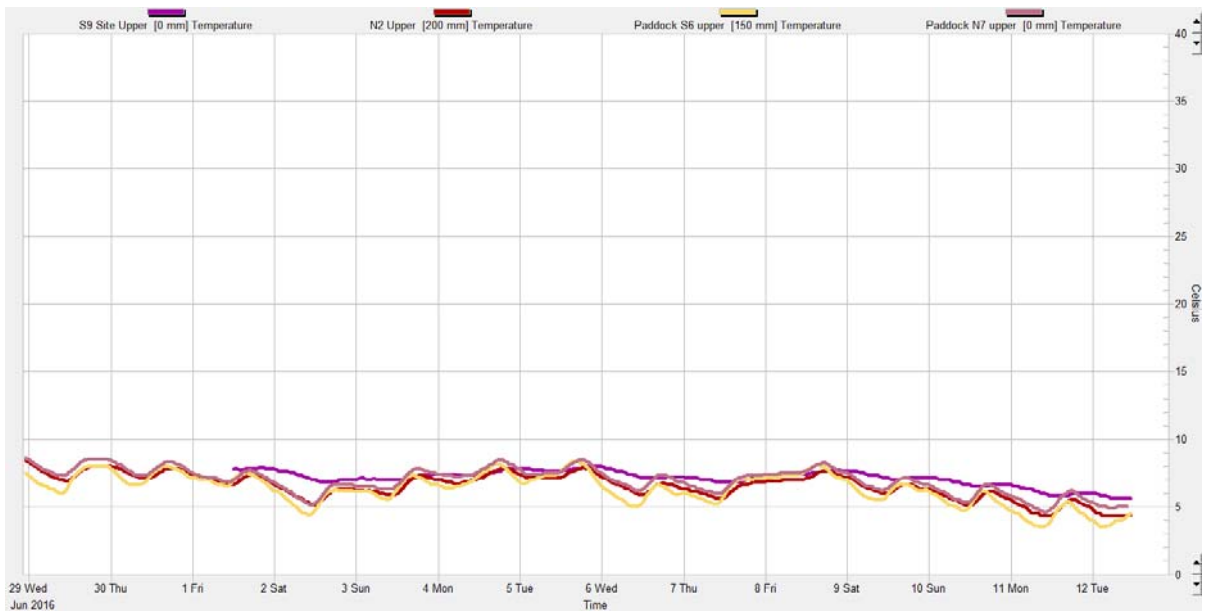
### Herd Management

5. There are 4 milking cows (2 cows slipped and 2 heifers calved)
6. 142 heifers were brought back from the wintering block in Hororata to join the late calving cows at the neighbouring wintering block.
7. At the moment we have 177 heifers and cows at a neighbouring wintering block, 40 animals in the East Block (14 springers and 15 cows) and 369 cows at grazing.
8. The first cut from the cows will be done on the 20<sup>th</sup> July with cows calving up until the 10<sup>th</sup> of August being brought back to the East Block.
9. Springers are being fed grass and silage, and minerals going through the dosatron.
10. All calving cows and heifers will receive a B12 and Selenium shot pre calving

### Growing Conditions

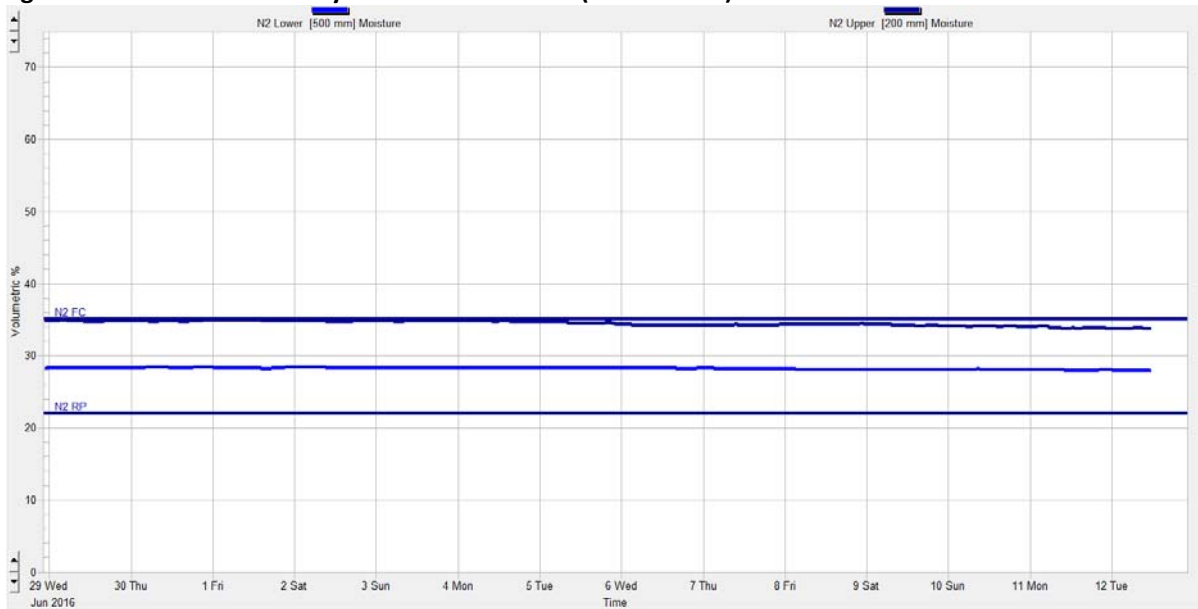
11. The average 9 am soil temperature for the week was 7.2°C, down 1.6°C from 2 weeks ago and remains 3.2 degrees warmer than at the same time last season.

### Figure 1: Soil temperature history for the last 2 weeks



12. The farm received 3.8 mm of rain through the past 2 weeks. The Aquaflex has remained close or at field capacity. In general, conditions underfoot remain firm though there are some wet patches (mainly in the South Block).

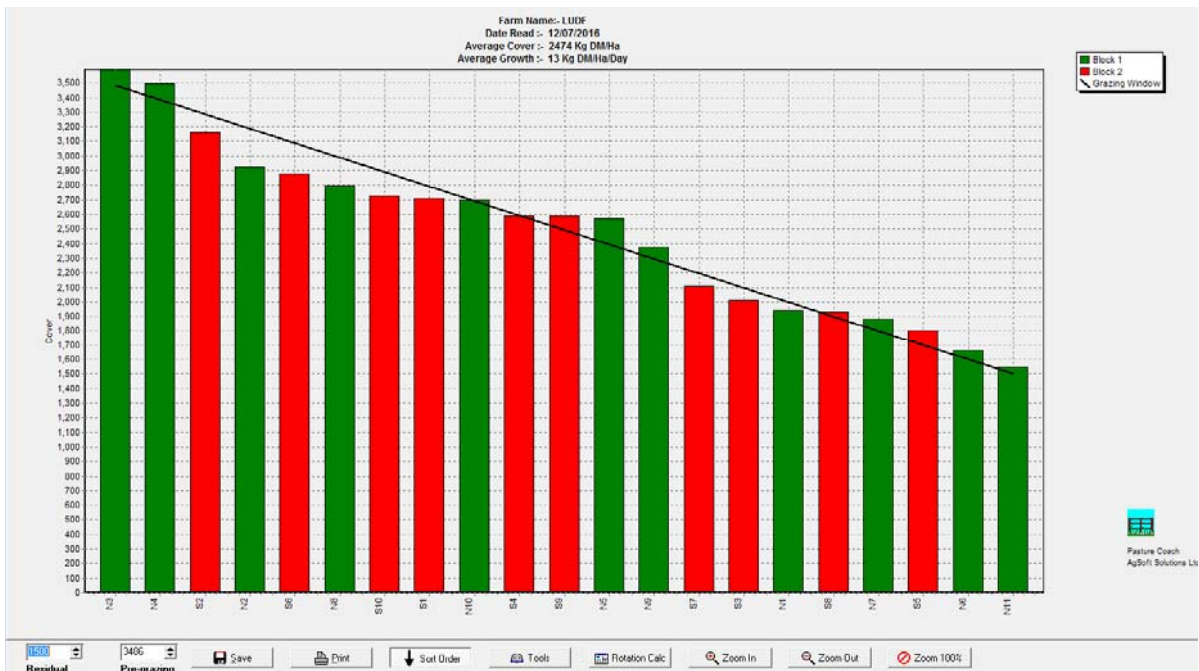
**Figure 2: Soil moisture history for the last 2 weeks (Paddock N2).**



**Pasture and Feed Management**

13. Fertility patches remain obvious in a number of paddocks though not necessarily at the top of the wedge.

**Figure 3: This week's feed wedge**



14. Based on the full farm area of 160 ha in the grazing round, and with only 4 cows on the platform, there is virtually no demand on the farm at this stage.

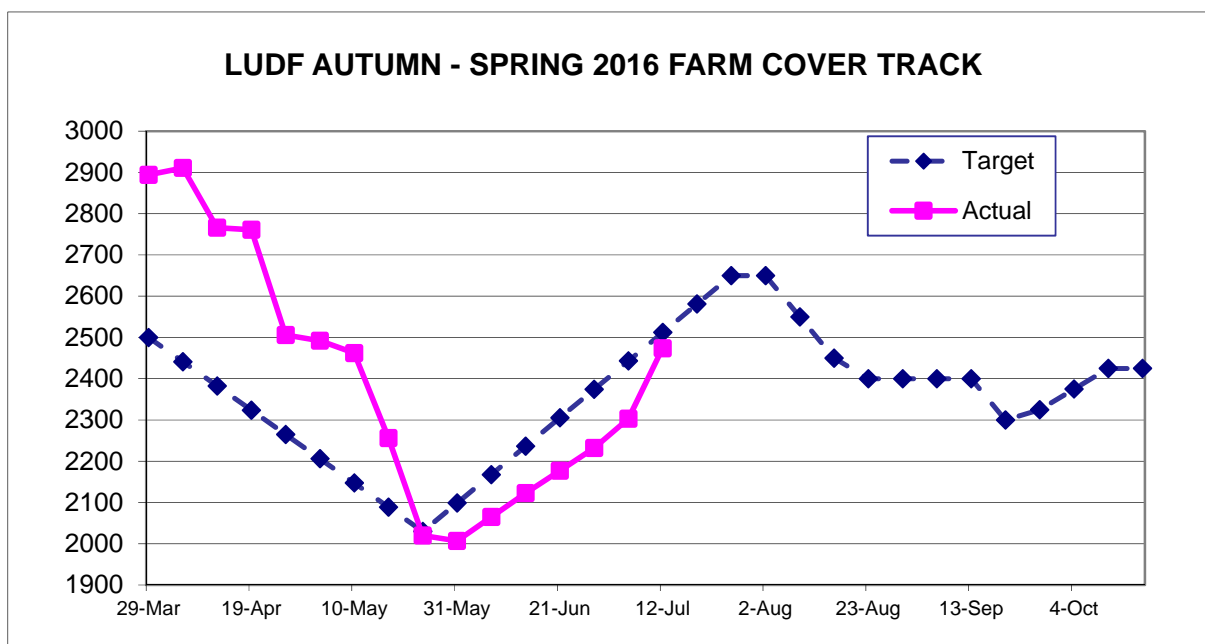
15. The pre-graze cover for the demand line above is calculated from the target pasture cover tracker for the winter:

- Target average pasture cover from the tracker: 2512 kgDM/ha
- Target residual: 1500 kgDM/ha
- Current average pasture cover: 2474 kgDM/ha
- Using this APC and target residual of 1500kgDM/ha allows the pregraze target to be calculated as follows.

Pregraze cover = (Target APC minus residual) x 2 + residual or  $(2512 - 1500) \times 2 + 1500 = 3524$  kgDM/ha. This provides better understanding of pregraze cover targets compared to budgeted pasture cover.

16. Below is our autumn/winter pasture cover tracker.

## LUDF AUTUMN - SPRING 2016 FARM COVER TRACK



17. It is pleasing to see the difference between target and actual current cover slowly but steadily decreasing.
18. At this stage we are about 38 kgDM/ha below target.
19. Our target remains to accumulate pasture cover over the next 20 days to reach target average pasture cover at calving (1<sup>st</sup> August). The target average pasture cover for planned start of calving is 2600 kgDM/ha to effectively set up our spring rotation planner. An average growth rate of 6.5kgDM/ha/day over the next 20 days will be required for us to achieve our target of 2600kgDM/ha at PSC.

### Feeding Management for the coming month:

20. For the coming month our aims are to continue to monitor average pasture cover over the coming weeks, particular after the frosty weather forecast from the end of this week.
21. Springers will be fed a diet of pasture and silage at the East Block

Note that farm walks will remain fortnightly till August.

LUDF Weekly report	24-May-16	31-May-16	14-Jun-16	28-Jun-16	12-Jul-16
Farm grazing ha (available to milkers)	160	160	160	160	160
Dry Cows on farm / East blk /Jackies/other	405/0/0/0	67/0/0/373	15/0/52/372	0/15/52/512	0/40/177/369
Culls (Includes culls put down & empties)	0	5	0	0	0
Culls total to date	118	123	0	0	0
Deaths (Includes cows put down)	0	0	0	0	0
Deaths total to date	13	13	0	0	0
Calved Cows available (Peak Number 560)	405	0	0	1	4
Treatment / Sick mob total	0	0	0	0	0
Mastitis clinical treatment	0	0	0	0	0
Mastitis clinical YTD (tgt below 64 yr end)	95	95	0	0	0
Bulk milk SCC (tgt Avg below 150)	197	0	0	0	0
Lame new cases	0	0	0	0	0
Lame ytd	179	179	0	0	0
Lame days YTD (Tgt below 1000 yr end)	3612	3612	0	0	0
Other/Colostrum	0	0	0	0	0
Milking twice a day into vat	405	0	0	0	0
Milking once a day into vat	0	0	0	0	0
Small herd	0	0	0	0	0
Main Herd	405	0	0	0	0
MS/cow/day (Actual kg / Cows into vat only)	1.23	0.00	0.00	0.00	0.00

MS/cow to date (total kgs / Peak Cows	522	522	0	0	0
MS/ha/day (total kgs / ha used)	3.12	0.00	0.0	0.0	0.0
Herd Average Cond'n Score	4.40	0.00	0.00	0.00	0.00
Monitor group LW kg WOW early MA calvers	0	0	0	0	0
Soil Temp Avg Aquaflex	9.1	8.7	8.7	8.8	7.2
Growth Rate (kgDM/ha/day)	13	22	12	18	13
Plate meter height - ave half-cms	10.9	10.8	11.6	12.4	14.1
Ave Pasture Cover (x140 + 500)	2020	2007	2123	2232	2474
Surplus/[deficit] on feed wedge- tonnes	[9.9]	[8.1]	0	0	0
Pre Grazing cover (ave for week)	2931	2850	2720	0	0
Post Grazing cover (ave for week)	1500	1500	1500	0	0
Highest pregrazing cover	2992	2850	2720	0	0
Area grazed / day (ave for week)	5.50	1.18	0.25	0.00	0.00
Grazing Interval	29	136	640	0	0
Milkers Offered/grazed kg DM pasture	17	0.0	0.0	0.0	0.0
Estimated intake pasture MJME		0	0	0	0
Milkers offered kg DM Grass silage	0	0	0	0	0
Silage MJME/cow offered		0	0	0	0
Estimated intake Silage MJME		0	0	0	0
Estimated total intake MJME		0	0	0	0
Target MJME Offered/eaten (includes 6% waste)		0	0	0	0
Pasture ME (pre grazing sample)		0.0	0.0	0.0	0.0
Pasture % Protein		0.0	0.0	0.0	0.0
Pasture % DM - Concern below 16%		0.0	0.0	0.0	0.0
Pasture % NDF Concern < 33		0.0	0.0	0.0	0.0
Mowed pre or post grazing YTD	236.5	236.5			
Total area mowed YTD	312.3	312.3			
Supplements fed to date kg per cow (560 peak)	409.2	409.2	0.0	0.0	0.0
Supplements Made Kg DM / ha cumulative	964.35	964.35	0	0	0
Units N applied/ha and % of farm	0	0	0	0	0
Kgs N to Date (whole farm)	179	179	0	0	0
Rainfall (mm)	38.2	37	3.8	11.4	1.2
Aquaflex topsoil rel. to fill point target 60 - 80%	60-90	90-100	90-100	80-100	80-100

Next farm walk: 26<sup>th</sup> July, then weekly from 2nd August 2016, always at 9am. 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.

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Peter Hancox, Farm Manager, Natalia Benquet, Charlotte Westwood.

## Lincoln University Dairy Farm - Farm Walk notes

Tuesday 26<sup>th</sup> July 2016

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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 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 remaining later calving cows also 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)

### Key Numbers - week ending Tuesday 26<sup>th</sup> July 2016

Ave Past Cover	2723 kgDM/ha	Past Growth Rate	20 kgDM/ha/day
Round length	0 (for 160 ha)	Ave Supplement used	0
No Cows on farm	47	Ave Soil Temp (week)	5.8 degrees

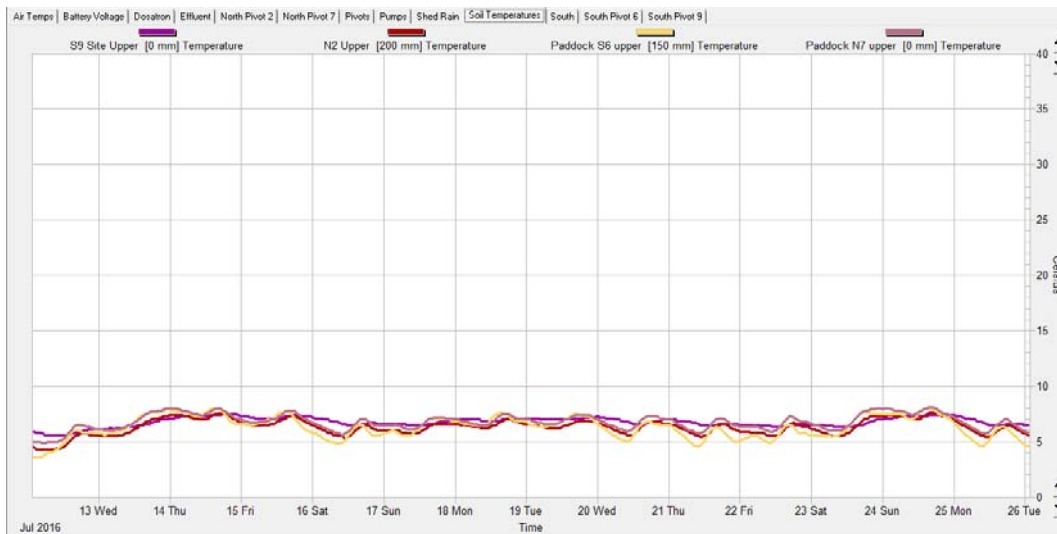
### Herd Management

5. There are now 47 milking cows
6. 140 cows (calving date till 10<sup>th</sup> August) were brought back from wintering and are now in the east block.
7. 340 cows remain grazing off.
8. The next draft from the dry cows will be done on Wednesday the 3<sup>rd</sup> August and all cows calving up until 10<sup>th</sup> September will also be brought to the east block.
9. Springers are being fed grass and silage, and mineral going through the dosatron.
10. All calving cows and heifers have received a B12 and Selenium shot pre calving

### Growing Conditions

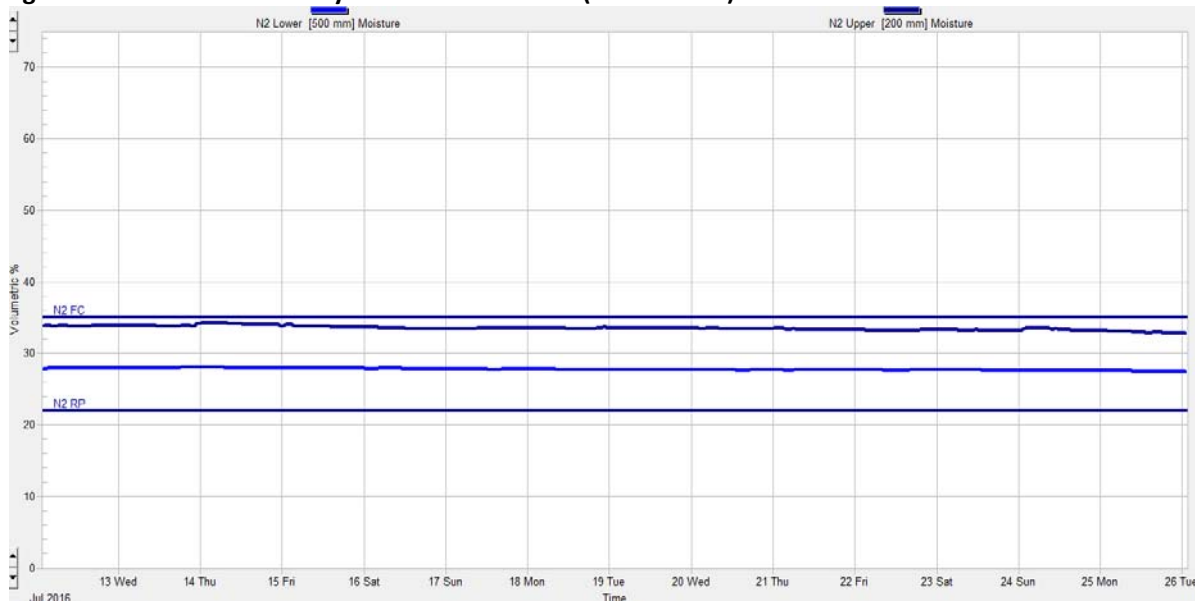
11. The average 9 am soil temperature for the week increased from last week, reaching 5.8°C, down 1.4°C from 2 weeks ago and 0.2 degrees warmer than at the same time last season.

### Figure 1: Soil temperature history for the last 2 weeks



12. The farm received 9.6 mm of rain through the past 2 weeks. The Aquaflex have now dropped below field capacity and conditions under foot are firm. We will observe how the moisture meter readings evolve very closely through August.

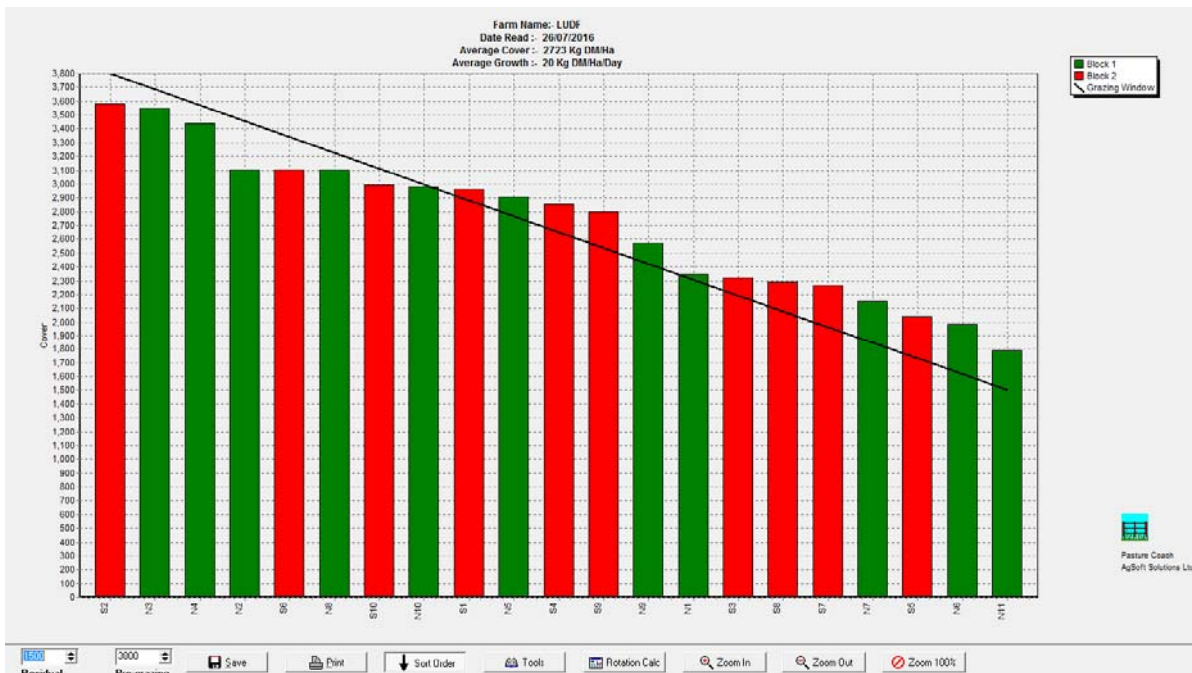
**Figure 2: Soil moisture history for the last 2 weeks (Paddock N2).**



### Pasture and Feed Management

- 13. Fertility patches remain obvious in a number of paddocks though not necessarily at the top of the wedge
- 14. Current average pasture cover is 2723 kgDM/ha.

**Figure 3: This week's feed wedge**



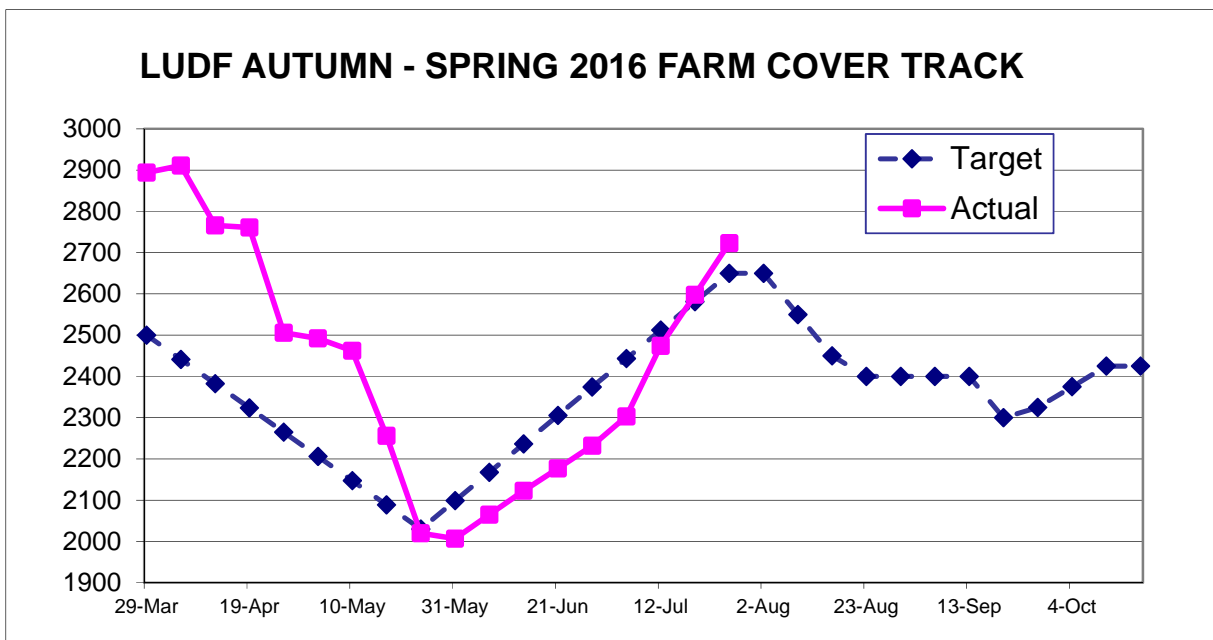
15. The pre-graze cover for the demand line above is calculated as follows:

- Target average pasture cover from the tracker: 2650 kgDM/ha
- Target residual: 1500 kgDM/ha
- Using the target APC and the target residual above, it allows the pregrazing target to be calculated as follows:  $\text{Pregraze target} = (\text{targets APC} - \text{target residual}) \times 2 + 1500$  OR,  $\text{Pregraze cover} = (2650 - 1500) \times 2 + 1500 = 3800 \text{ kgDM/ha}$

16. The target pregraze cover of 3800 is similar to the current pre-graze cover of the paddock the cows are going into where they are grazing at the moment.

17. With 47 cows on the platform, and an allocation of 13 kgDM/cow/day, the daily allocation is about 50m<sup>2</sup>/cow/day.

18. Below is our autumn/winter pasture cover tracker.





19. It is pleasing that this winter's milder growing conditions and the decision back in June to remove the remaining dry cows has contributed to the farm now surpassing its target APC at plan start of calving, (officially next week). This puts the farm in a good position in terms of having a small surplus of pasture at the start of calving that should help reduce the need for early spring supplements.
20. The feed wedge above estimates a feed surplus of 11 tonnes at this stage. This could be short lived if we have wet conditions or of grass stops growing

**Feeding Management for the coming week:**

21. For the coming week our aim is to feed the milking cows as much grass as they can eat (moving fences as required) and monitor growth through the week.
22. We will effectively start the Spring Rotation Plan in the next week.
23. Springers will be fed a diet of pasture and silage at the East Block

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Culls total to date	123	0	0	0	1
Deaths (Includes cows put down)	0	0	0	0	0
Deaths total to date	13	0	0	0	0
Calved Cows available (Peak Number 560)	0	0	1	4	47
Treatment / Sick mob total	0	0	0	0	1
Mastitis clinical treatment	0	0	0	0	0
Mastitis clinical YTD (tgt below 64 yr end)	95	0	0	0	0
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Post Grazing cover (ave for week)	1500	1500	0	0	1500
Highest pregrazing cover	2850	2720	0	0	3600
Area grazed / day (ave for week)	1.18	0.25	0.00	0.00	0.11
Grazing Interval	136	640	0	0	61
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
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