

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 26th December 2006

Critical issues for the short term

1. Get rotation length out to 21 days again. This is crucial.

Summary of Key Factors affecting Grazing Management & Animal Performance
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2. SOIL TEMPS are holding at 16° C, still slightly below normal for this time of the year.
3. PASTURE GROWTH over the last week has averaged 61 kg DM/ha (last week 76), a reflection of continued cloudy, rainy, drab weather. We had another 65mm rain last week, bringing Decembers total so far to 101mm.
4. AVERAGE PASTURE COVER has fallen by 82 kgs DM/ha to 2080 kgs DM/ha.
5. We have continued to feed high quality BALEAGE at an average of 2.0 kgs DM/cow, to try to maintain rotation length. The wet soils have adversely affected feed utilisation, so to avoid pugging or other pasture damage, we had to offer the milkers more area, reducing the requirement for baleage on those days. ie to avoid pasture damage, we INCREASED the average pasture rotation to 19 days for the last week. We now need to reverse this.
6. MILK PRODUCTION has reduced slightly to 1.68 kgs MS/cow/day and 6.92 kgs MS/ha. Production to date is now 1.1% down on last season and improving.
7. The calculations above the top left of the wedge are to calculate the pre-grazing cover. The first line calculates the actual stocking rate on the milking area. The second line (Stocking Rate x intake x rotation length) + target residual = pre – grazing target. The third line converts this to height (in compressed half centimetres).

670/159 = 4.2
 (4.2 x 17 x 21) + 1480 = 2999
 (2999 - 500)/140 = 17.9

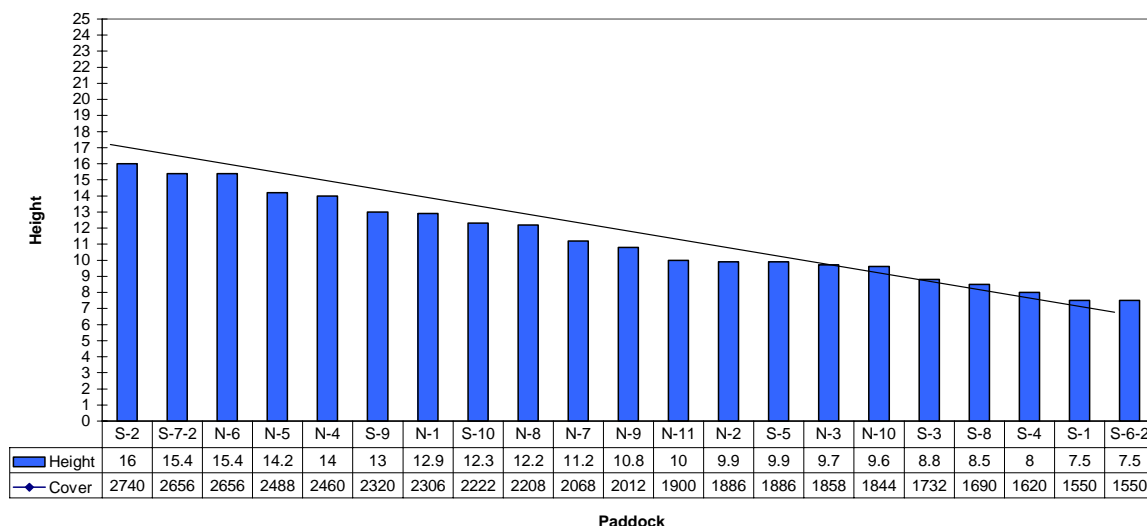
26-Dec-06

Farm Feed Wedge - Week Starting

Weeks Growth Rate 61

■ Height

Average Farm Cover 2080



8. Note that this week's FEED WEDGE shows the effect of our drop in cover. We expect ongoing challenges in average cover for another 10-14 days, depending on what happens with pasture growth, which is mainly a factor of warm weather. Bring it on.

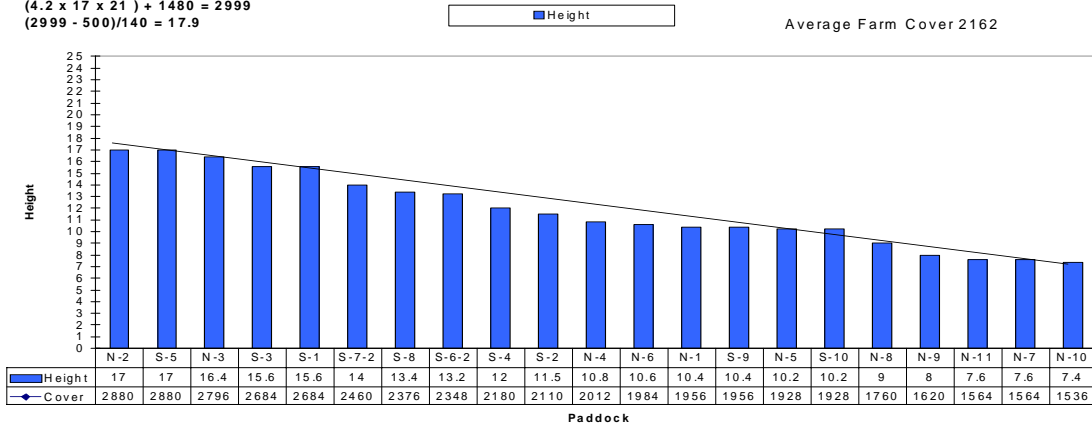
670/159 = 4.2
 (4.2 x 17 x 21) + 1480 = 2999
 (2999 - 500)/140 = 17.9

19-Dec-06

Farm Feed Wedge - Week Starting

Weeks Growth Rate 76

Average Farm Cover 2162



9. We will continue to use the baleage to bring the rotation to 21 days by ensuring the cows have no more than 7.6ha average daily for the week, and we bring their intake up to 17 kgDM by adding baleage – we expect this to average 2kg/cow/day. Depending on paddock size and pre-grazing cover, we may not feed baleage every day. You can see from the first wedge that we expect pre-grazing covers to average 2750kg/ha, and at 7.6 ha per day, this provides 15kgDM/cow as pasture.
10. We will continue to follow the cows with 25 kgs N/ha for this rotation of the farm. In addition, one paddock which receives NO effluent, will get 40kgN/ha, as it looks very nitrogen deficient and patchy.
11. Regarding mating, we have finished artificial breeding (as reported last week). We have 8 bulls. We are continuing to run 4 bulls with the herd (663 cows) and change these 4 bulls every day with our second team of 4 bulls.
12. Our pregnancy testing of the R 2yr heifers indicates that 113 are in calf to day 1 synchrony of the 161 mated to AB

The next WEEKLY farm walk is on **WEDNESDAY 3rd January 2007 10.00am.**

Management Group

Peter Hancox (Farm Manager), Peter Gaul (for SIDDC), and Adrian van Bysterveldt (Dexcel).

Lincoln University Dairy Farm - Farm Walk notes

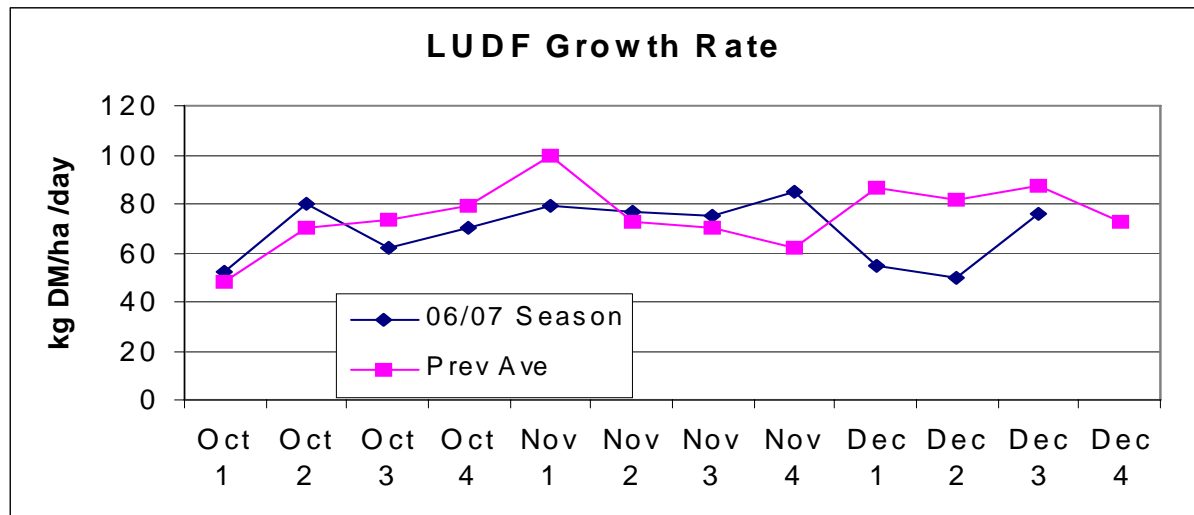
Tuesday 19th December 2006

Critical issues for the short term

1. Making sure that the irrigation is being applied properly.

Summary of Key Factors affecting Grazing Management & Animal Performance

2. SOIL TEMPS are holding at 16° C today, which is close to normal for this time of the year.



3. PASTURE GROWTH over the last week has averaged 76 kg DM/ha (last week 50). Last week when we looked forward the forecast suggested pretty average conditions, so we assumed growth of 67 for our planning.
4. AVERAGE PASTURE COVER has risen by 200 kgs DM/ha to 2162 kgs DM/ha.
5. Last week we continued feeding high quality BALEAGE at an average of 2.3 kgs DM/cow, down from 4kg/cow the previous week.
6. MILK PRODUCTION has reduced slightly to 1.71 kgs MS/cow/day and 7.01 kgs MS/ha. Production to date is now 1.6% behind last season but improving.
7. The calculations above the top left of the wedge are to calculate the pre-grazing cover. The first line calculates the actual stocking rate on the milking area. The second line (Stocking Rate x intake x rotation length) + target residual = pre – grazing target. The third line converts this to height (in compressed half centimetres).

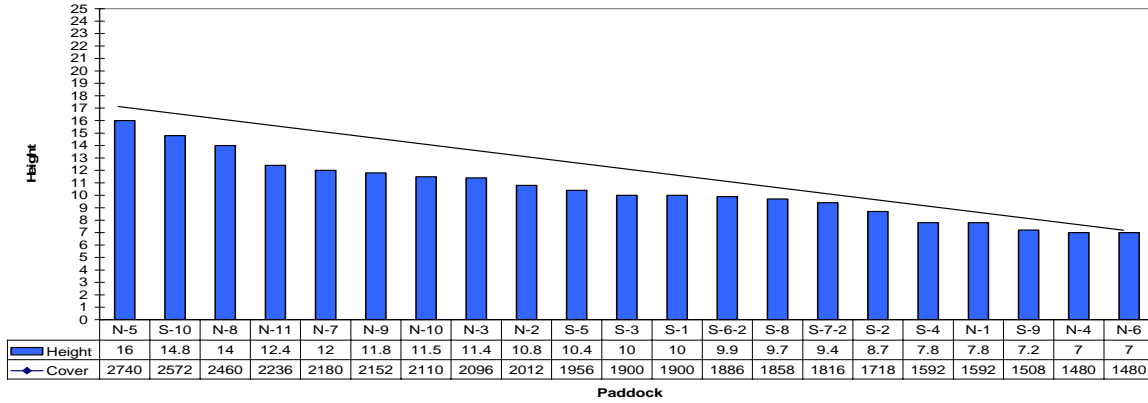
670/159 = 4.2
 (4.2 x 17 x 20) + 1480 = 2908
 (2908 - 500)/140 = 17.2

12-Dec-06

Farm Feed Wedge - Week Starting

Weeks Growth Rate 50

Average Farm Cover 1963



8. Using the silage to hold the rotation at 21 days has resulted in the deficit largely disappearing as soon as we had a growth rate that matched or bettered demand.

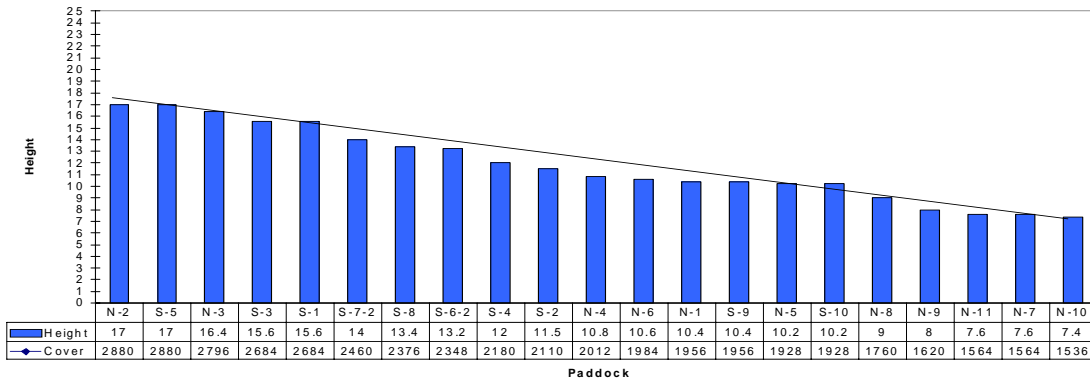
670/159 = 4.2
 (4.2 x 17 x 21) + 1480 = 2999
 (2999 - 500)/140 = 17.9

19-Dec-06

Farm Feed Wedge - Week Starting

Weeks Growth Rate 76

Average Farm Cover 2162



9. The wedge is much closer to the target line and we have now ceased feeding out silage. We will continue to hold the rotation length at 21 days and allocate 17 kgs DM/cow/day of pasture.

10. We will continue to follow the cows with 25 kgs N/ha for this rotation of the farm.

11. A scan of the cows mated in week two of mating has revealed that 54.3% are currently in-calf. We have stopped AB mating at the end of week eight. This is because we are confident that we have over 520 cows in-calf to AB. This is sufficient to get our required number of replacements (190 healthy heifer calves).

12. The bulls will be removed from the Rising 2yr Heifers this week. This will mean that all should calve before the end of September. We are also doing a PD this week to identify which R2's are in-calf to the AB mating.

The next WEEKLY farm walk is on **TUESDAY 26th December 10.00am**. These notes will not be posted to the website until the first week of the New Year.

Management Group

Peter Hancox (Farm Manager), Peter Gaul (for SIDDC), and Adrian van Bysterveldt (Dexcel).

Lincoln University Dairy Farm - Farm Walk notes

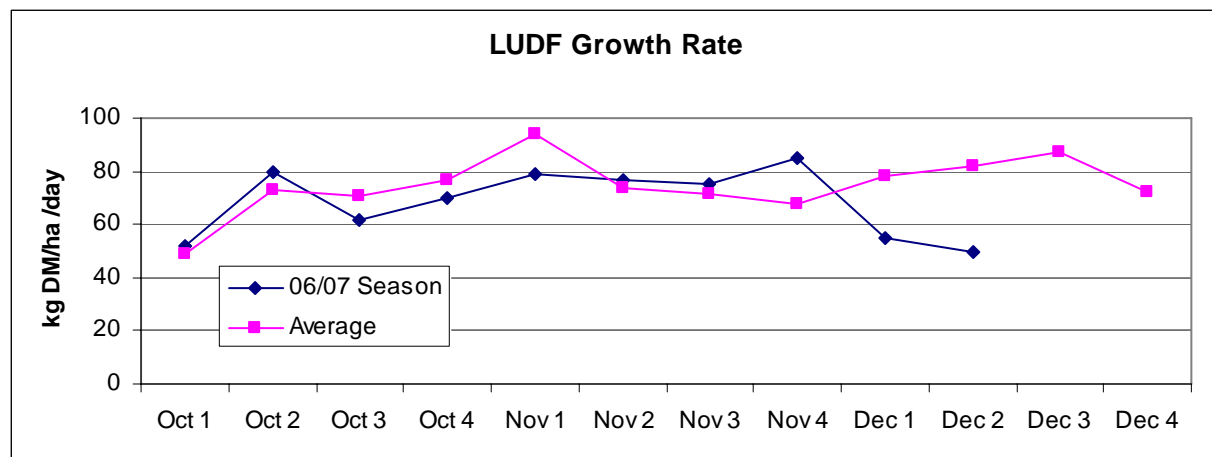
Tuesday 12th December 2006

Critical issues for the short term

1. Maintaining energy intakes to the cows.
2. Getting through the current pasture deficit.

Summary of Key Factors affecting Grazing Management & Animal Performance
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3. SOIL TEMPS are lifting slowly - at 16.2° C today.

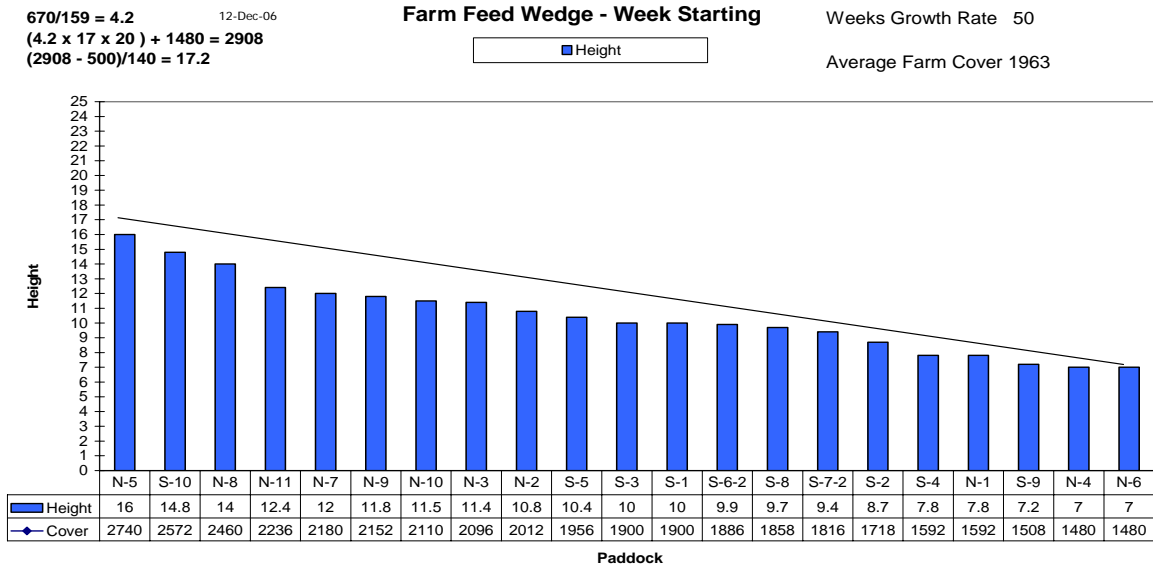


4. PASTURE GROWTH over the last week has averaged 50 kg DM/ha (last week 55), so for the second week in a row we have growth rates WELL BELOW AVERAGE for this time of the year. As explained last week, this is primarily a function of cool, changeable weather, and subsequent low soil temps. Like many of you out there, we look forward to this lifting, but the forecast for the next week suggests pretty average conditions, so we will assume growth of 67 for this coming week, the average of the last 4 weeks.
5. AVERAGE PASTURE COVER has dropped again by 62 kgs DM/ha to 1963 kgs DM/ha.
6. As indicated last week, we have fed high quality BALEAGE at 4kg/cow for most of the last week. This successfully offset the pasture cover drop – if we had not fed out, the pasture drop would have been another 117 kg/ha, and would have led us into a very difficult month ahead.
7. MILK PRODUCTION has improved slightly to 1.74 kgs MS/cow/day and 7.2. This reflects the increased feeding level made possible through the introduction of silage, and it clearly demonstrates the effect of HIGH QUALITY supplement. This silage has been purchased in from a grower, with careful selection of each paddock by our Farm Manager. The current line being fed has the following analysis, although fermentation was incomplete at sampling. It will be re-sampled.

	DM%	OM%	ph	Ammonia	Crude protein	Water sol CHO	NDF	ADF	Dig	ME
	45.7	90.5	6.1	1.5	20.5	29.0	35.4	19.5	84.2	12.6

8. At 15c/kg standing, plus 13.5 cents/kgDM baled and landed, this is expensive feed, but the results so far are pleasing.

9. Production to 10 Dec 2006 is as follows:
801 kg MS/ha and 190 kg MS/cow. This is 1.8% below last season to date, and 5.2% below our target for this season to date.
To put this into perspective, this equates to two days milk production.
10. The NEW GRASS paddock is performing very well – we have grazed it twice now, and it is strengthening each time – tighter sward, and consolidating well. We did not spray for broadleaf weeds – watch this space.



11. The calculations above the top left of the wedge are to calculate the pre-grazing cover. The first line calculates the actual stocking rate on the milking area. The second line (Stocking Rate x intake x rotation length) + target residual = pre – grazing target. The third line converts this to height (in compressed half centimetres).
12. The wedge has delivered a very predictable result, following last weeks graph. We anticipate a pre-grazing cover to average only 2600 to 2700 kg DM/ha this coming week. To maintain the rotation at 20 days, and expecting pasture growth to offset demand, we need to add supplement to compensate for the feed deficit. This means feeding 3kg silage DM per cow for the coming week. We could feed MORE FOR A SHORTER PERIOD, but if growth conditions improve to “average” or better, this will put us in a difficult surplus situation leading into Christmas, so we prefer to avoid this by a more measured allocation for a slightly longer period.
13. The FEED ALLOCATION to the milking herd will continue to be at 17 kgs DM/cow/day and this will include an average of 3 kgs of silage /cow /day.
14. We will continue to follow the cows with 25 kgs N/ha until soil temperatures are consistently above 16 degrees. Once soil temperatures reach these levels on our irrigated soils then the rate of mineralisation of N from the soil organic matter is sufficient to support growth rates above demand. Monitoring on LUDF indicates that as a result of the high rainfall (almost 800mm since Anzac day) there is less nitrogen available in the soil.

The next WEEKLY farm walk is on **TUESDAY 19th December 10.00am.**

Management Group

Peter Hancox (Farm Manager) Peter Gaul (for SIDDC) and Adrian van Bysterveldt (Dexcel).

Lincoln University Dairy Farm - Farm Walk notes

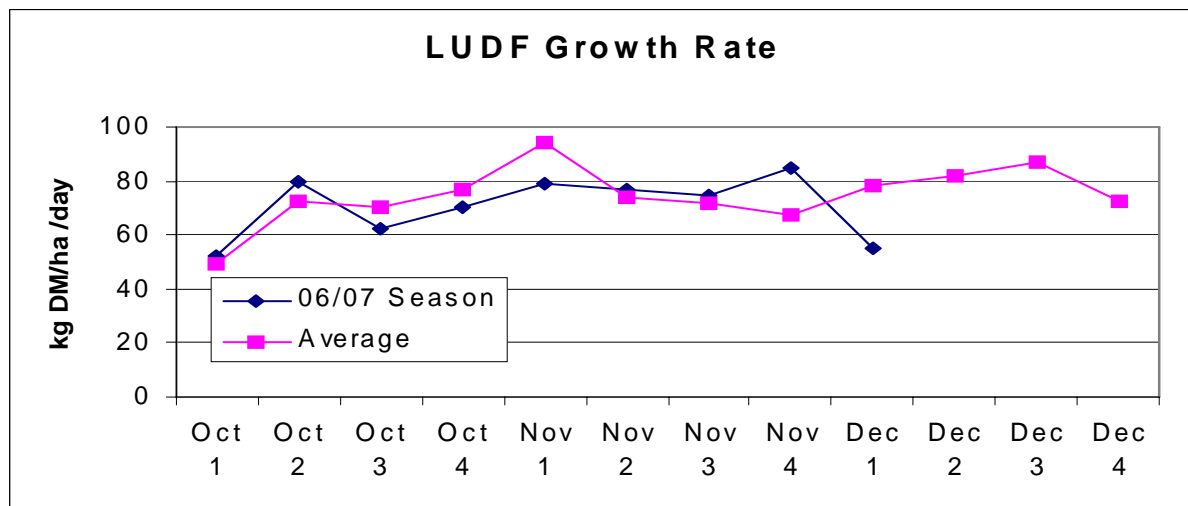
Tuesday 5th December 2006

Critical issues for the short term

1. Maintaining energy intakes to the cows.
2. Getting through the current pasture deficit.

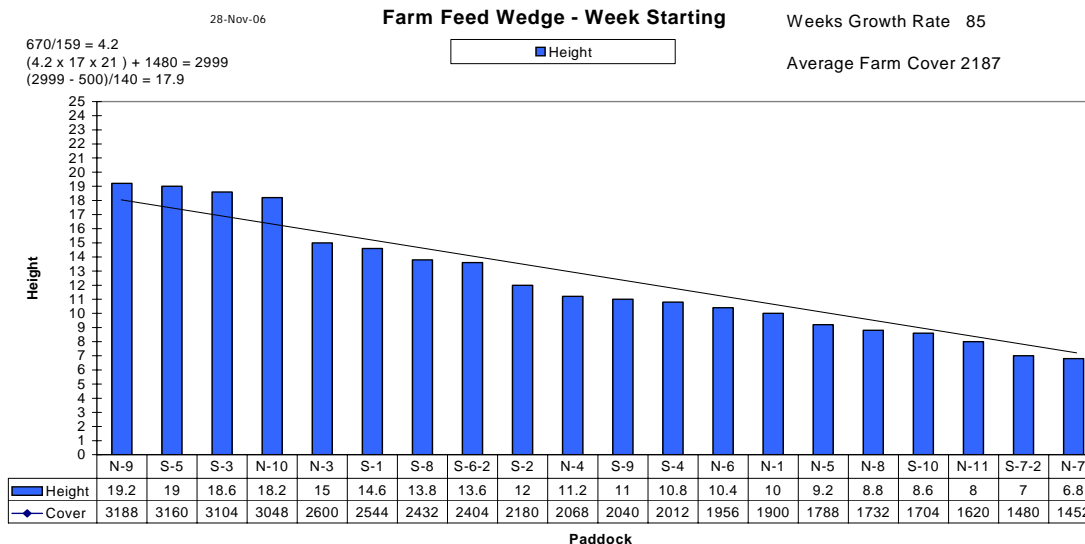
Summary of Key Factors affecting Grazing Management & Animal Performance

3. SOIL TEMPS have still fluctuating between 13.5 and 15.5 degrees, and was 14.5 today.

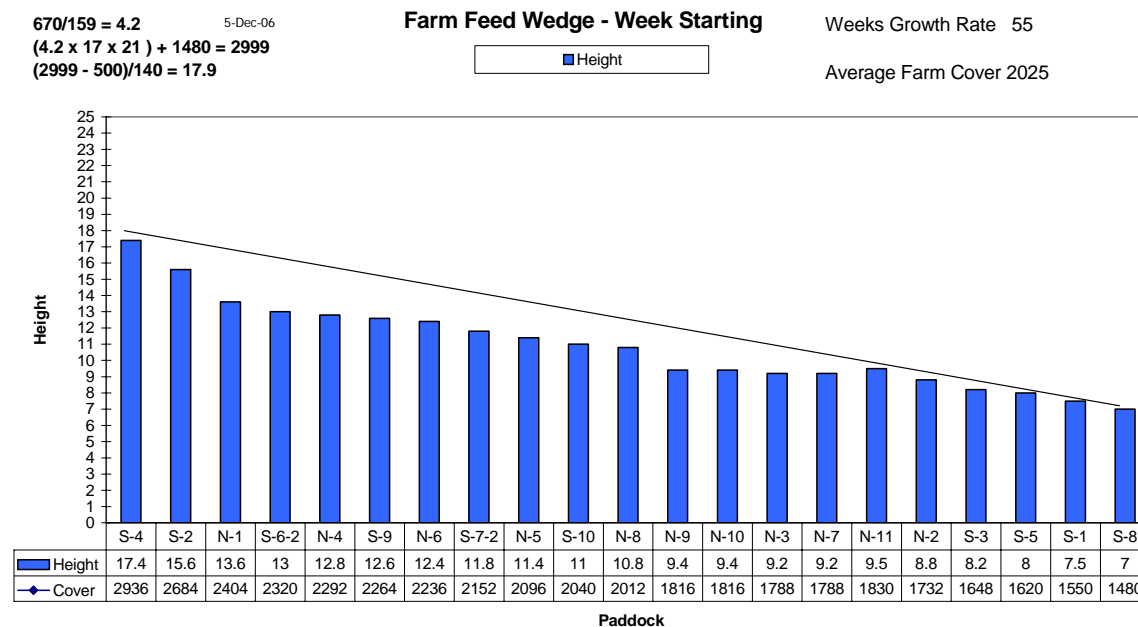


4. PASTURE GROWTH over the last week has averaged 55 kg DM/ha (last week 85) and was below average for December. The weather forecast for the next two weeks is average to below average temperatures with more rain. In the 7 months since the 1st May we have had 750mm of rain (our average annual rainfall is 660mm). The cold wet cloudy conditions have resulted in lower grass growth rates and much less clover in the sward.
5. Over the last week we grazed an average of 1/22 of the farm a day on the milking platform with no supplements. We lengthened the rotation this last week to try to make the available grass last longer into the approaching deficit noticed in the previous wedge.
6. Average pasture cover has dropped by 150 kgs DM/ha to 2025 kgs DM/ha.
7. We are now in the last rotation of the farm when the ryegrass is still trying to go to seed. Currently it is the Impact variety of ryegrass that is going reproductive.
8. The new grass paddock will get its second grazing this week. We are going in at a cover of about 12 “clicks” or 2200 kgs DM/ha to encourage tillering and clover growth. We will be following the grazing with an application of 20 kgs N/ha.
9. Milk production has dropped to 1.72 kgs MS/cow/day (last week 1.77 kg MS/cow), and 7.1 kgs MS/ha/day (last week 7.3). We are not clear about what is contributing to the drop in production. Dry matter intakes are remaining fairly constant at around 17 kgs of DM and the ME is holding up well above 12 so the cows ME intakes are still over 200 which is plenty of energy to be producing much better. The fact that the cows are increasing in liveweight by almost 600gms /week supports the 200 ME calculation.

Our pasture analysis continues to show Crude Protein % or about 20%, which is low compared with previous seasons. We have some measure comparing clover % in our pasture and these indicate a large reduction in clover this year compared with the last 3 years. This reduction in clover % is a logical explanation for the overall reduction in CP%. We are not yet sure that this is linked to the lower production levels that we are witnessing.



10. The calculations above the top left of the wedge are to calculate the pre-grazing cover. The first line calculates the actual stocking rate on the milking area. The second line (Stocking Rate x intake x rotation length) + target residual = pre – grazing target. The third line converts this to height (in compressed half centimetres).



11. The wedge is very different to last week. If the weather forecast was for warm conditions over the next two weeks we would speed up the rotation to 18 days. **HOWEVER**, the weather forecast for the next week is for average to cool conditions with an improvement in the week after.

In response to this we are going to stay on our 21 day rotation, add in grass silage for 5 to 7 days to make up the /cow allocation to 17 kgs DM, and allow us to hold our rotation. This deficit will disappear as soon as the weather returns to the normal warm dry conditions we normally get in December and growth rates again exceed demand.

12. The FEED ALLOCATION to the milking herd will continue to be at 17 kgs DM/cow/day, and this will include an average of 4 kgs of silage /cow /day for the last 5 days of the week. S2 is one of our larger paddocks, and even though the cover will be below target the extra area means that it will last 24 hours without feeding out silage.
13. We will continue to follow the cows with 15 kgs N/ha until soil temperatures are consistently above 16 degrees. Once soil temperatures reach these levels on our irrigated soils then the rate of mineralisation of N from the soil organic matter is sufficient to support growth rates above demand.
14. We will apply this N fertiliser (Urea) up to 4 days ahead of the grazing cows. This provides more response time for the N before the next grazing. We have used a total of 91 kgs of N/ha for the season to date.
15. Recent rain has lifted soil moisture levels and so delayed the need to irrigate for a few days. We monitor soil moisture levels weekly using neutron probes, and schedule irrigation according to this information. The heavy soils on the south block still only need occasional irrigation.
16. Faecal samples were collected from the weaned calves and indicated the need to drench for intestinal worms.

The next WEEKLY farm walk is on **TUESDAY 5th December 10.00am.**

Management Group

Peter Hancox (Farm Manager) Peter Gaul (for SIDDC) and Adrian van Bysterveldt (Dexcel)