

Lincoln University Dairy Farm - Farm Walk notes

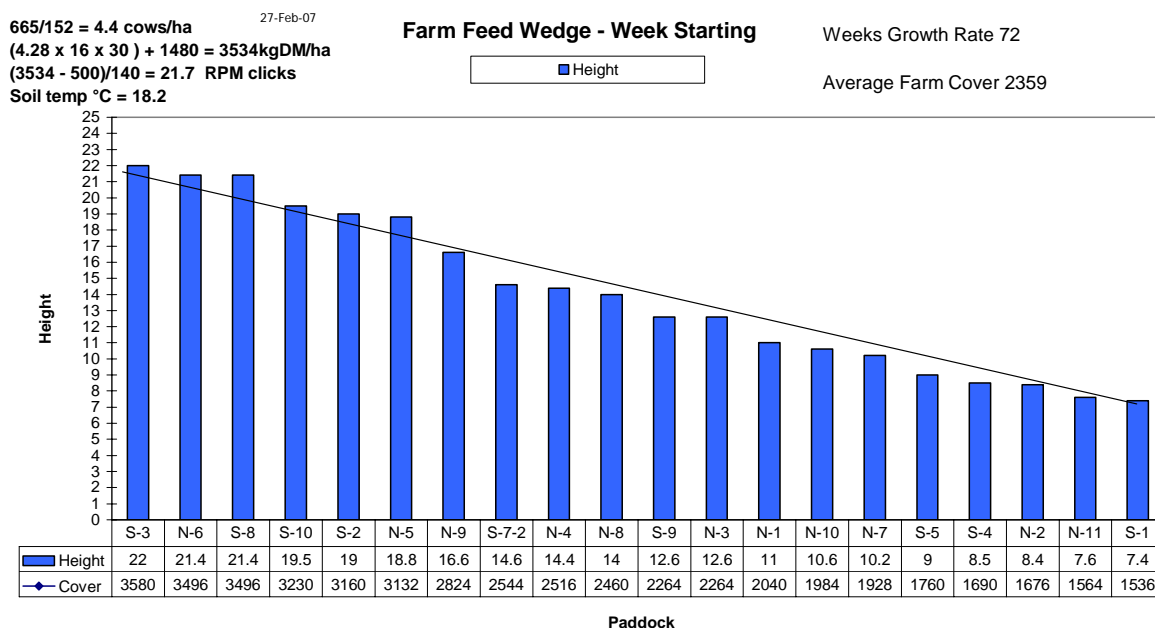
Tuesday 27th February 2007

Critical issues for the short term

1. Lengthen rotation length beyond 30 days by making the most of current good pasture growth rate, some added urea, feeding 3kg/cow baleage, and sell 40 culls.
2. Continue to apply Nitrogen fertilizer while response rates are high.
3. Make sure that the target residual of 7 “clicks” is reached to minimise pasture substitution.

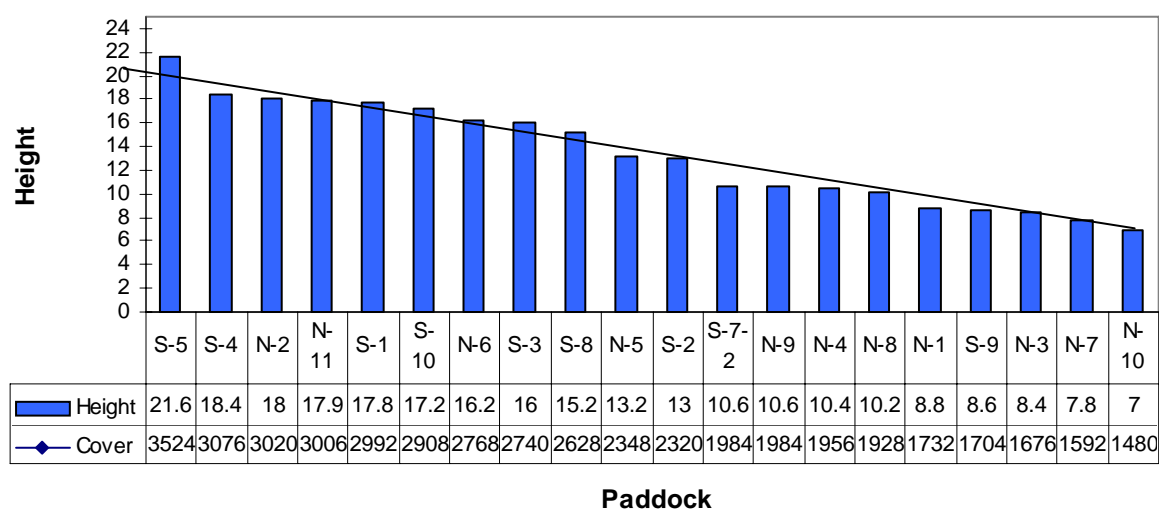
Summary of Key Factors affecting Grazing Management & Animal Performance

4. SOIL TEMPS have remained constant at 18.2 °C, with little rain, and some hot dry north west days. Night dews are noticeably heavier, but not cold.
5. PASTURE GROWTH over the last week was 72 kg DM/ha (last week 88). Break even is 62 so this growth rate together with silage feeding resulted in a lift in average farm cover. With the hot weather, and good irrigation, we thought pasture growth rate might have been higher than this, perhaps high air temperatures limited growth on some afternoons.
6. AVERAGE PASTURE COVER has lifted by 78 kgs DM/ha to 2359, assisted by feeding an average of 3.0 kgs of pasture baleage per cow per day. Round length was kept at 1/26th of the available farm (excludes the regressed areas still not in the grazing rotation).
7. We have not received the results of the additional pasture DRY MATTER tests – judging by the pastures, we expect DM% to still be low, the feed quality appears excellent, and clover growth has surged again with the higher day temperatures.
8. MILK PRODUCTION has lifted slightly, in the last 20 days, daily milksolids have lifted almost 4%. The milkers produced 1.44kgs MS/cow/day and 5.9 kgs MS/ha for the last 5 day period. The silage offered this week had an average ME of 11.3 MJ.
9. This weeks PASTURE FEED WEDGE is below.



Last week's Pasture Feed Wedge is below:

665/152 = 4.4 cows/ha 20-Feb-07 **Farm Feed Wedge - Week Starting**
 (4.35 x 16 x 28) + 1480 = 3430kgDM/ha Weeks Growth Rate 88
 (3430 - 500)/140 = 20.9 RPM clicks ■ Height Average Farm Cover 2281
 Soil temp °C = 18.4



10. This week's wedge is a great result for us. It shows that even on the existing area available (152ha) it looks like we can achieve the 30+ rotation length, possibly on an all-grass diet. Given (a) the current good pasture growth, (b) a forecast for the next week of average or better conditions, we will continue FEEDING SUPPLEMENT for the next week to build a buffer of pasture into the feed wedge.
11. Note that we expect the REGRASSED area (another 9 ha) to come back into the grazing round next week, so this further strengthens our likelihood of the autumn pasture feed buffer being established over the next two weeks.
12. We will continue using NITROGEN (urea) at 65 kg/ha (30kgN) to boost pasture growth at this time, by applying it to a further 7 paddocks (1/3rd of the farm) over the next week.
13. A further consideration is that 40 CULLS have been identified and will go this Sunday 4th March. This means that by the end of next week, once the regrassed area has come in, we will have our STOCKING RATE at 3.85 and feed demand at or under 60kgDM/ha/day.
14. This scenario will see us requiring PREGRAZING COVER of about 35-3600 kgDM/ha. We see no problem with pregrazing covers at this level, nights are progressively getting cooler and longer, and pasture quality should not be compromised.
15. The 12 week pregnancy scan on 21st February showed 13% EMPTY, a further improvement on last years result for 12 weeks of 17%. This recent test also revealed a further 12 lost pregnancies, bringing that total to 43 for the season. Blood tests indicate neospora is not the culprit. Perhaps this pregnancy loss is a normal factor, only revealed by the extensive and regular testing that this farm does – we have completed pregnancy tests to check results at weeks 1,2,3,6,9,and 12, with another planned for week 15.

The next WEEKLY farm walk is on **TUESDAY, 6th March 2007, at 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 20th February 2007

Critical issues for the short term

1. Lift average farm cover to over 3000 to allow for a longer rotation length for the autumn.
2. Determine the best use of the 137 tonne of silage remaining.
3. Continue to apply Nitrogen fertilizer while response rates are high.
4. Make sure that the target residual of 7 “clicks” is reached to minimise pasture substitution.
5. Identify culls following the 12 week pregnancy scan

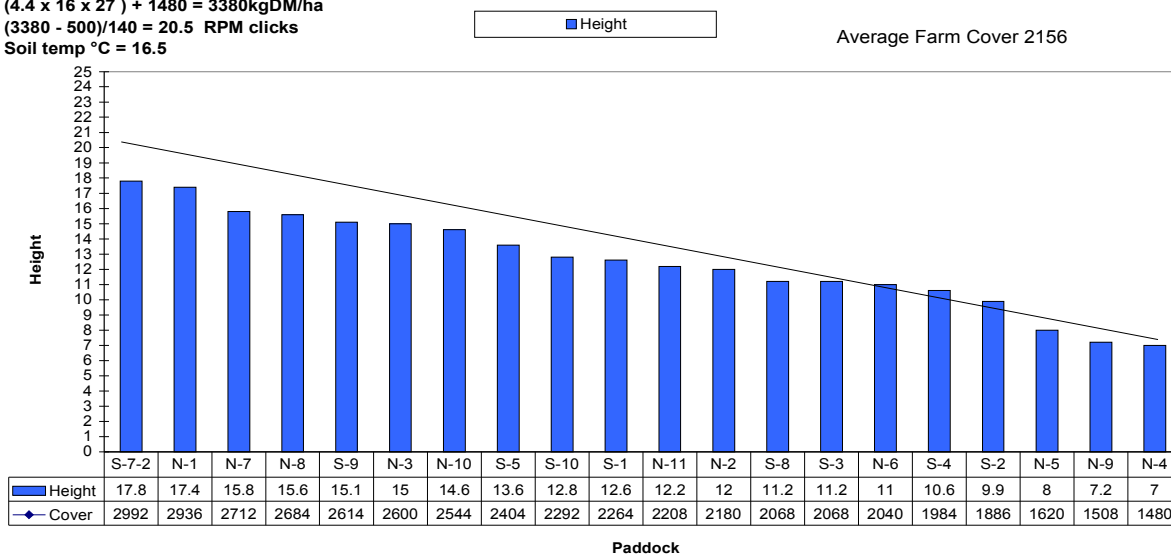
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| <h3>Summary of Key Factors affecting Grazing Management & Animal Performance</h3> |
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6. SOIL TEMPS have increased to 18.4° C after 4 days of sunshine. Nights are still cool with significant morning dew.
7. PASTURE GROWTH over the last week has increased to 88 kg DM/ha (last week 69). Break even is 62 so this growth rate together with silage feeding resulted in a lift in average farm cover.
8. AVERAGE PASTURE COVER has lifted by 125 kgs DM/ha to 2281 as a result of feeding an average of 3.5 kgs of silage. Round length was set for 1/26th of the farm however we only achieved 1/23rd of the farm. While we are still achieving the target 7 ‘click’ post-grazing residual, the fact that we were unable to maintain a 26 day rotation suggests that there may be less DM in the pasture that we are estimating. Calibration cuts have been organised for this week to check the plate meter readings against actual DM present.
9. Pasture DRY MATTER % has dropped to 14.5%, down from 16.2% at the beginning of February and still well below the 19% more commonly seen at this time of the year. Protein has lifted to from 19.4 to 23.3 % following recent applications of nitrogen. Average ME concentration is still high at 12.0 despite a decline in water soluble carbohydrate to 16.2% (22.2% two weeks ago).
10. MILK PRODUCTION has been stable at 1.39kgs MS/cow/day and 5.7 kgs MS/ha for the last two weeks. We are still having difficulty explaining the poorer than expected milk production given the feed being offered. The pasture being offered is high digestibility and therefore high ME. The silage offered this week had an average ME of 11.3 MJ.
11. Average LIVEWEIGHT data for the last week has shown a slight increase indicating that some energy is now being partitioned to liveweight gain.
12. Last weeks PASTURE FEED WEDGE was

13-Feb-07
 665/152 = 4.4 cows/ha
 (4.4 x 16 x 27) + 1480 = 3380kgDM/ha
 (3380 - 500)/140 = 20.5 RPM clicks
 Soil temp °C = 16.5

Farm Feed Wedge - Week Starting

Weeks Growth Rate 69
 Average Farm Cover 2156

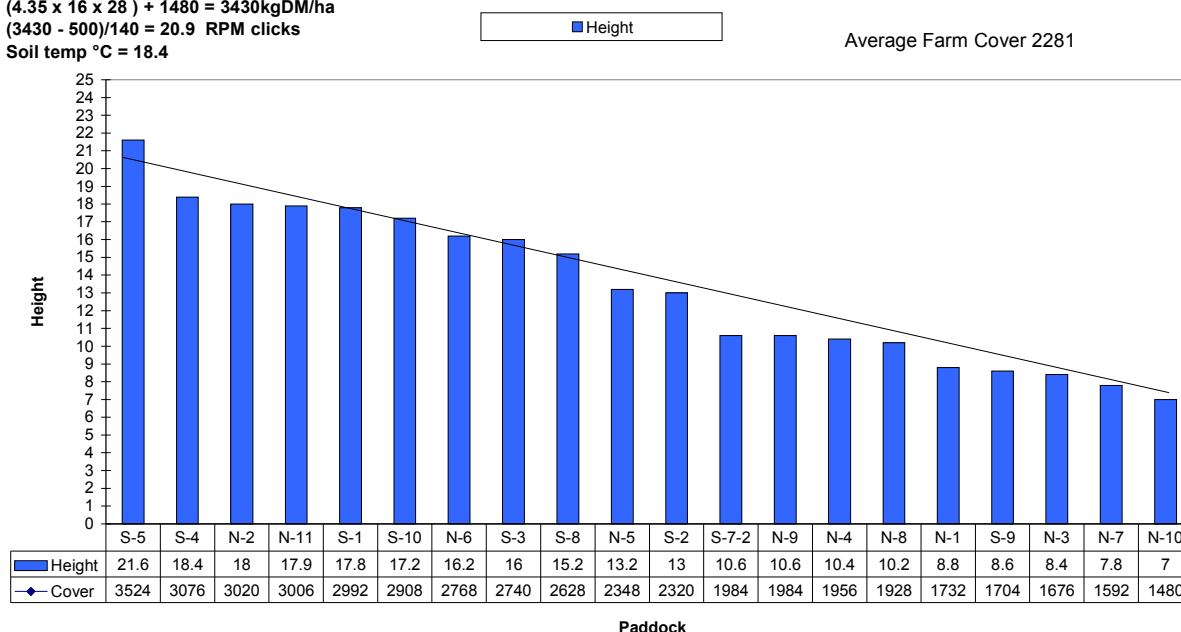


The weeks Pasture Feed Wedge is

20-Feb-07
 665/152 = 4.4 cows/ha
 (4.35 x 16 x 28) + 1480 = 3430kgDM/ha
 (3430 - 500)/140 = 20.9 RPM clicks
 Soil temp °C = 18.4

Farm Feed Wedge - Week Starting

Weeks Growth Rate 88
 Average Farm Cover 2281



13. The deficit at the top in the previous weeks wedge has filled as a result of continued silage feeding and the increase in pasture growth rate over the last week. However as we need to lengthen the round to 1/28th of the farm this week and 1/30th of the farm next week we will continue to offer high quality silage at a rate of 3.5 DM/cow per day.
14. We are now going to use our next best silage (average 11.2 ME) so that we can leave our best silage for the 50t of “insurance” silage we have on hand for the spring. With only 137 tonne of silage DM remaining decisions will be made within the next couple of weeks on how best to use this and whether we need to purchase an additional 50t as the spring insurance.
15. Seventy five percent of the non-effluent area of the farm has received 30 units of N/ha over the last two weeks. We currently have 41 units N/ha available for the rest of the

season, to be applied to the non effluent areas of the farm. The remaining 25% of the farm will receive 30 units following grazing in this rotation with the remainder being applied in the next rotation (approximately mid March).

16. The 12 week pregnancy scan is occurring on 21st February. Given the current feed situation, difficulty in moving out to a 30 day rotation and limited silage on hand culling of persistently lame, unsound, late calving and older cows will commence. We will have a better indication of our empty rate following the 15 week scan in mid March.

The next WEEKLY farm walk is on **TUESDAY 27th February 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 13th February 2007

Critical issues for the short term

1. Lift average farm cover to 2300.
2. Continue to apply Nitrogen fertilizer while response rates are high.
3. Make sure that the target residual of 7 “clicks” is reached to minimise pasture substitution.

Summary of Key Factors affecting Grazing Management & Animal Performance

4. SOIL TEMPS have dropped to 16.5° C. Nights are cooler with significant morning dew.
5. PASTURE GROWTH over the last week has dropped slightly to 69 kg DM/ha (last week 73). Break even is 62 so this growth rate resulted in a lift in average farm cover.
6. AVERAGE PASTURE COVER has lifted by 120 kgs DM/ha to 2156 as a result of holding the rotation length at 1/26 of the farm and feeding an average of 4.5 kgs of silage.
7. Pasture DRY MATTER % has lifted to 15%, which is much better than the 13% of previous weeks but still below the 19% more commonly seen at this time of the year. Water Soluble Carbohydrate levels are at 22% which is high for this time of the year and coupled with high digestibility is resulting in high M.E. test results i.e 12.2.
8. MILK PRODUCTION is now 1.4kgs MS/cow/day and 5.7 kgs MS/ha and we do not have a satisfactory explanation for the continued drop. Pasture allocation appears to be 16 kgs as targeted and grazing residuals are at 7”clicks”. Pasture ME and WSC are high and the grass silage also has an ME of over 12.
9. Last weeks PASTURE FEED WEDGE was

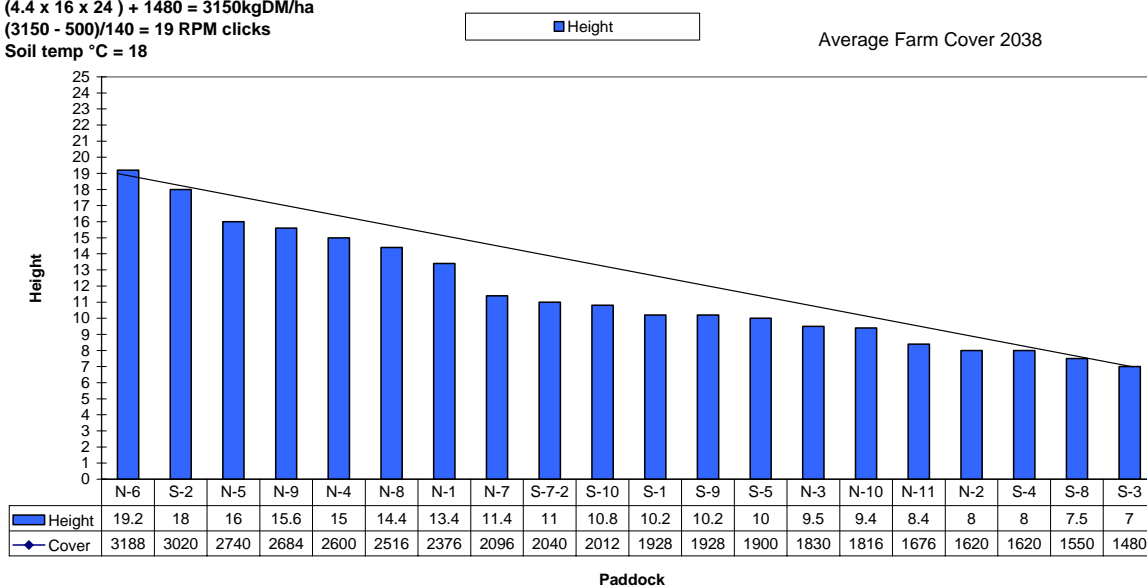
665/152 = 4.4 cows/ha
 (4.4 x 16 x 24) + 1480 = 3150kgDM/ha
 (3150 - 500)/140 = 19 RPM clicks
 Soil temp °C = 18

06-Feb-07

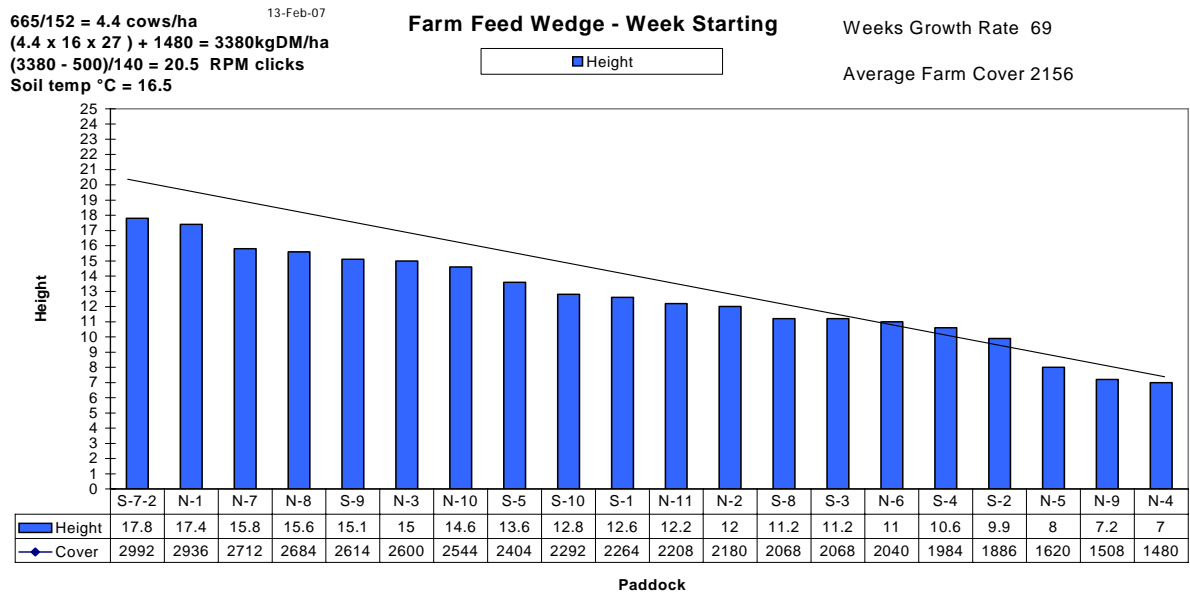
Farm Feed Wedge - Week Starting

Weeks Growth Rate 73

Average Farm Cover 2038



The weeks Pasture Feed Wedge is



10. The deficit in the middle in the previous weeks wedge has mostly filled and the deficit that now appears in this weeks wedge is as a result of lifting the target line to that required for a 27 day rotation. There is a deficit of about 240 kgs DM/ha, this is a bale of silage/ha or 6 bales of silage (one wagon load) per day and works out to 2 kgs DM /cow/day.
11. We are now going to use our second best silage (average 11.5 ME) so that we can leave our best silage for the 50t of “insurance” silage we have on hand for the spring.
12. We will use the remainder of the nitrogen in two applications in late Feb and mid March to assist us to get the rotation length out through the early autumn, to minimise our reliance on supplements, as we did last season. We believe it is prudent to organise the autumn pasture grazing strategy NOW rather than at the time. We will only apply nitrogen to the non-effluent areas of the farm. This means that we will follow the cows for the next rotation with 30 kgs of N/ha and apply the remaining N in the subsequent rotation. The N response will last through well into May.
13. The latest pregnancy scan has confirmed that we have 80% of the herd in-calf after 9 weeks of mating. This is after a further 11 lost pregnancies since the last scan 3 weeks ago (31 cows have had an early pregnancy loss). The 80% in-calf at 9 weeks compares with 75% at 9 weeks last year.

The next WEEKLY farm walk is on **TUESDAY 20th February 2007 10.00am.**

Management Group

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

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 6th February 2007

Critical issues for the short term

1. Lengthen rotation to 30 days for a week, feed silage for a week, and apply 20 units N to 1/3 of the farm to bring pregrazing covers back to 3150 for the next week.

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| <h3>Summary of Key Factors affecting Grazing Management & Animal Performance</h3> |
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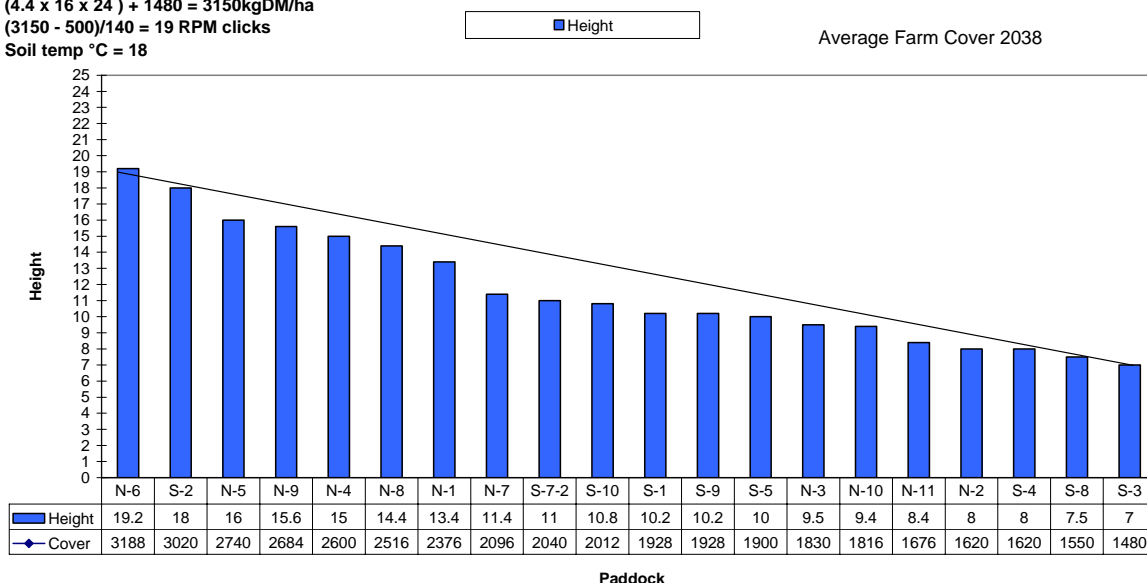
2. SOIL TEMPS have increased to 18 °C. Nights seem cooler with significant dews.
3. PASTURE GROWTH over the last week has averaged 73 kg DM/ha (last week 80).
4. AVERAGE PASTURE COVER has dropped by 362kgs DM/ha to 2038 kg DM/ha, a direct result of taking three paddocks for baleage.
5. The area “used” last week was 65ha. With one paddock being regrassed we have 151.7ha available. We grazed 44ha with the milkers and another 21ha was silage paddocks taken. Hindsight is a great thing – we probably took one paddock too many for silage, and the feed wedge below shows we still have a challenge on our hands.
6. Pasture DRY MATTER % seems to be lifting – we are awaiting the latest sample results and will post these on the website as soon as we receive them. The platemeter today indicated that there was more feed in the paddocks than we have seen for similar heights these last two weeks.
7. MILK PRODUCTION is holding at 1.44kgs MS/cow/day and 5.9 kgs MS/ha. Production to date is now 1.7% behind last season.
8. The PASTURE QUALITY appears to be back to its best for some time – no long covers left, and strong leafy pastures. Because we have taken silage off some 35ha in the last two weeks, we have a group of paddocks with covers from 1800 to 2100 kgDM/ha. We will put 20 units nitrogen on these to encourage growth and assist pre-grazing covers back to the 3150 target for now.
9. Today’s PASTURE FEED WEDGE is below.

06-Feb-07
 665/152 = 4.4 cows/ha
 (4.4 x 16 x 24) + 1480 = 3150kgDM/ha
 (3150 - 500)/140 = 19 RPM clicks
 Soil temp °C = 18

Farm Feed Wedge - Week Starting

Weeks Growth Rate 73

Average Farm Cover 2038



10. The first two paddocks are okay with PREGRAZING COVERS of 31-3200 kgDM/ha. After that we appear to be going into covers of about 2900, which is too low, and in 10-12 days, even if we get pasture growth of 70 kgDM/ha/day, we will still only have pregrazing covers of 28-2900 kgDM/ha. For this reason, we will feed out BALEAGE to keep us on a 30 day rotation for the next week, and then review the situation.
11. The 30 day ROTATION means we graze 5 ha per day, or 35 ha for the next week, or the first 5 paddocks on the wedge. If we assume average pregrazing covers of 3000 for the week, 5 ha grazed down to 1480/ha will give us 7600kgDM pasture, or 11.4kg/cow/day. This means we will require another 4.6 kgDM.cow as baleage or 3050 kgDM or 12 of our 240kgDM bales per day.
12. Because this is a significant part of their diet (28%) we will use the best silage we have available, ME 12.2.
13. We have available to us 40 units N for the remainder of this season, to keep us below the 200 kgN per hectare. We will use 20 kgN/ha on 1/3 of the paddocks this week, to assist the pregrazing cover targets to be met.
14. We have in mind using the remainder of the nitrogen in two applications in late Feb and mid March to assist us to get the rotation length out through the early autumn, to minimise our reliance on supplements, as we did last season. We believe it is prudent to organise the autumn pasture grazing strategy NOW rather than at the time.
15. We will prepare a list of culls, and prioritise these so that we can adjust stocking rate downward if required at short notice.

The next WEEKLY farm walk is on **TUESDAY 13th February 2007 10.00am.**

Management Group

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