

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 26th February 2008

Critical issues for the short term

1. Achieve a rotation of 25 days for this next week.
2. Feed silage to lengthen round and meet cow intakes requirements.
3. Maintain grazing residuals to 7 “clicks”.

Summary of Key Factors affecting Grazing Management & Animal Performance

4. SOIL TEMP at 10am was again 14°C at the beginning of the week but has now risen to 17°C.
5. PASTURE GROWTH was 72 kg DM/ha (last week 78) on the milking platform.
6. Average pasture cover has risen slightly at 2224 kg DM/ha (last week 2193 kg DM/ha.)
7. We used an average of 7.3 ha per day, that is 1/22nd of the farm each day with the cows. Our target was to get to 1/23rd of the farm so we didn't quite make it.
8. We have fed out silage all week at an average rate of 4.97 kg DM/cow/day.

This week's pasture wedge

SR = 673/161.5 = 4.17
 (4.17 x 25 x 18) + 1480 = 3356
 (3356-500)/140 = 20.4clicks

Farm Feed Wedge - Week Starting

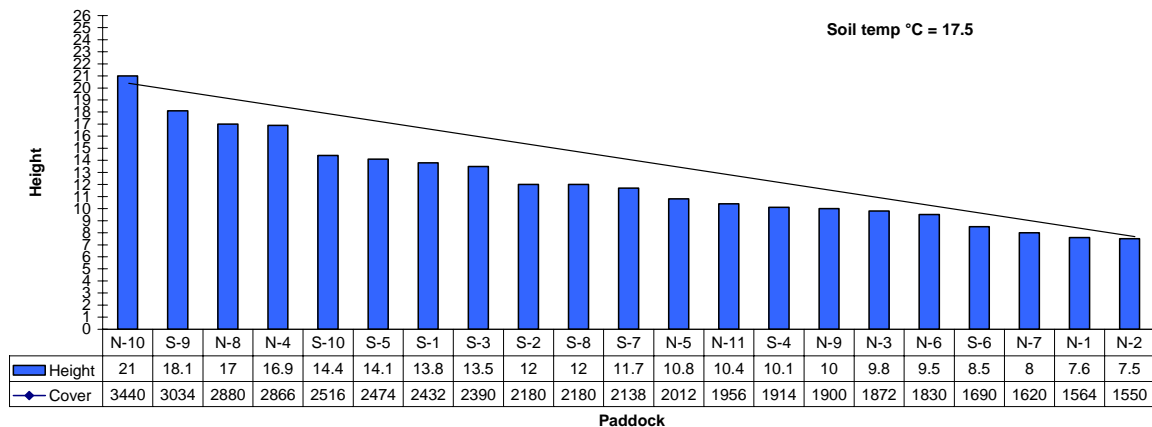
26-Feb-08

■ Height

Weeks Growth Rate 72

Average Farm Cover 2224

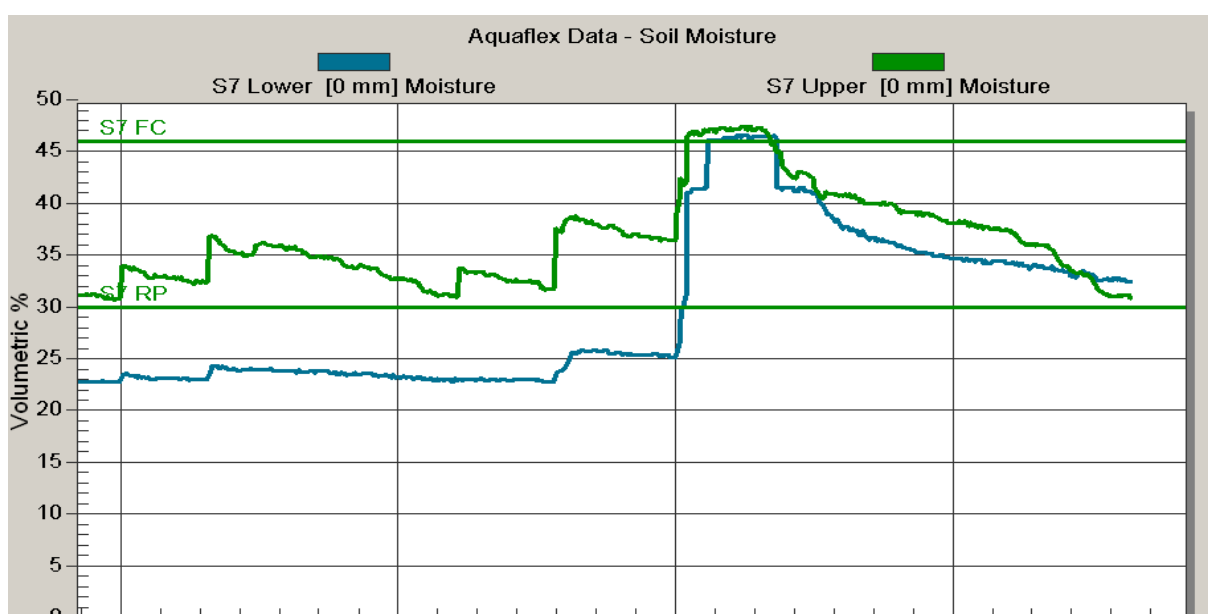
Soil temp °C = 17.5



9. The new target line presumes the cows are eating 18 kg DM and will be on a longer rotation of 25 days. This requires a pre-grazing cover of 3356 kg DM/ha. Eighteen kgs allocation is a nominal figure to make sure that there is enough cover in the paddock for 24 hours. It appears that currently the plate meter is over reading how much pasture is there.
10. The wedge shows a deficit most of the way down the graph. Last weeks growth rate of 712kg DM/ha/day met demand but because we are continuing to lengthen the round to 25 days we will need to put in silage to achieve this.

11. A recent herd test has identified that we have about 35 cows producing less than 1 kg MS/day. These cows will probably be eating as much silage as other cows but will be giving us an uneconomic response to the supplements they eat. To purchase phone Peter 027 4409 285 for immediate delivery.
12. Silage is fed out in the new paddock before the cows get there. We spread it out thinly all over the paddock. The reasons for doing it like this are
 - a) so that cows don't associate the tractor with getting fed
 - b) to get the cows to spread out all over the paddock rather than to concentrate in small areas like along fence lines or large clumps of silage.

This practice fits in well with 24 hr grazing where the cows get their next paddock after the afternoon milking. It also means that if there had been too much silage fed out, so that if the cows had not achieved the target pasture residual by afternoon milking time they can easily be sent back to the paddock to clean up, and then be shifted later after milking.



13. Soil moisture levels have dropped since the rain 10 days ago and we have now started irrigating where we have a return interval of more than 6 days (i.e the guns, laterals and k-lines).
14. Our second round of N application since the start of February will be 40 kg N/ha. We have saved 90 kgs N (out of our 200) to be used in the autumn in anticipation of reducing soil temperatures over the next month which will lead to lower rates of N mineralization out of the soil organic pool leading to an N deficiency large enough to impact negatively on pasture growth rates.
15. Milk production has dropped very slightly to 1.44 kg ms/cow/day (1.46 kg MS/cow/day last week) and 6.0 kg MS/ha/day (6.06 kg ms/ha /day last week).
16. We have found 6 mastitis cows and as a result our somatic cell counts have dropped to 200,000. Other high somatic cell count cows identified in the herd test have been put onto alert status in ProTrack and are being checked daily.

17. The pregnancy scan on Thursday last week showed that 29 cows have lost their pregnancies since the 9 week scan. From weeks 9 to 12 a minimum of 5 bulls were run with the herd each day and another group of more than 5 bulls were being rested. Bulls were changed daily. The resulting in-calf rate to the first 12 weeks of mating is 86%.
18. Cow live weights have risen slightly this week after taking into account some lift for more rumen residual mass because we are feeding silage.

The next WEEKLY farm walk is on Tuesday, **4th March 2008 at 9.00am.**

Farmers or their managers are always welcome to walk with us. Please call to notify us of your intention and bring your plate meter.

Management Group

Peter Hancox (Farm Manager), George Reveley (for SIDDC), and Adrian van Bysterveldt (DairyNZ).

Lincoln University Dairy Farm - Farm Walk notes

Tuesday, 19th February 2008

Critical issues for the short term

1. Achieve a rotation of 23 days for this next week.
2. Feed silage to lengthen round and meet cow intakes requirements.
3. Maintain grazing residuals to 7 “clicks”.

Summary of Key Factors affecting Grazing Management & Animal Performance

4. SOIL TEMP at 10am dropped during the week to 14 °C but have risen again to 16⁰C.
5. PASTURE GROWTH was 78 kg DM/ha (last week 78) on the milking platform.
6. Average pasture cover has held at 2193 kg DM/ha (last week 2200 kg DM/ha.)
7. We used an average of 8 ha per day that is 1/20th of the farm each day with the cows. Our target was to get to 1/21st of the farm but heavy rain on two days and soft soil conditions prevented this.
8. We have fed out silage on the last three days of this week at a rate of 3.2 kg DM/cow/day

This week's pasture wedge

SR = 673/161.5= 4.17
 (4.17 x 23 x 18) + 1480 = 3206
 (3206-500)/140 = 19.3 clicks

Farm Feed Wedge - Week Starting

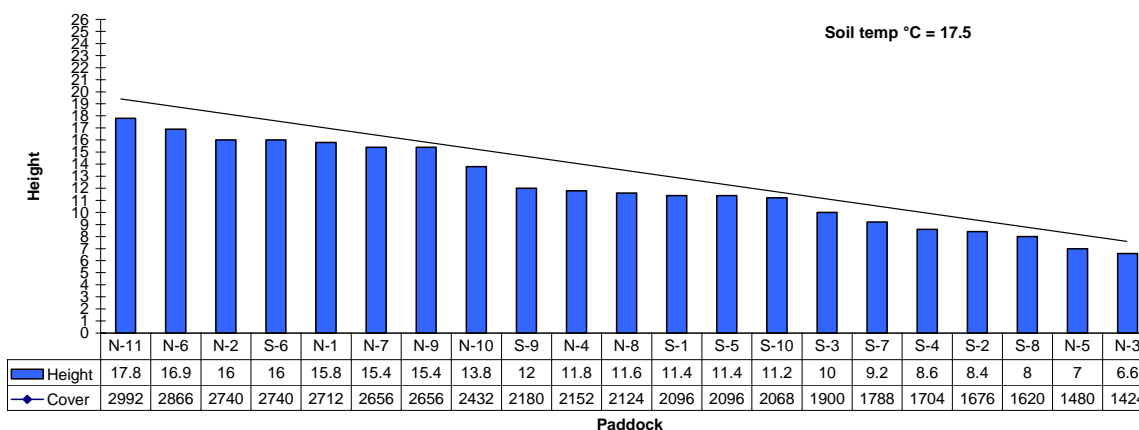
Weeks Growth Rate 78

19-Feb-08

■ Height

Average Farm Cover 2193

Soil temp °C = 17.5



9. The new target line presumes the cows are eating 18 kg DM and will be on a longer rotation of 23 days. This requires a pre-grazing cover of 3206 kg DM/ha a lift of 200 kg DM over last week pre-grazing target.
10. The wedge shows a deficit most of the way down the graph. Last weeks growth rate of 78 met demand but because we are lengthening the round to 23 days we will need to put in silage to achieve this. We will need to feed about 3 kg DM/cow/day of silage to make this happen.

11. Silage is fed out in the new paddock before the cows get there. We spread it out thinly all over the paddock. The reasons for doing it like this are
 - a) so that cows don't associate the tractor with getting fed
 - b) to get the cows to spread out all over the paddock rather than to concentrate in small areas like along fence lines or large clumps of silage.

This practice fits in well with 24 hr grazing where the cows get their next paddock after the afternoon milking. It also means that if there had been too much silage fed out so that if the cows had not achieved the target pasture residual by afternoon milking time they can easily be sent back to the paddock to clean up, and then be shifted later after milking.

12. Soil moisture levels are near field capacity on all blocks of the milking platform and runoffs. All irrigation has stopped. Monitoring of soil moisture levels continues and if required irrigation will be resumed.
13. We have completed a round of Nitrogen applications. This first round of N application is 25 kg N/ha. The next round of N application will be between 30 and 40 kg N/ha in anticipation of reducing soil temperatures over the next month which will lead to lower rates of N mineralization out of the soil organic pool leading to an N deficiency large enough to impact negatively on pasture growth rates.
14. Milk production has dropped to 1.46 kg ms/cow/day (1.52 kg MS/cow/day last week and 6.06 kg MS/ha/day (6.3 kg ms/ha /day last week).
15. Somatic cell counts have risen again and have averaged about 300,000 for the last four days. Two bad cases of mastitis were found last night which are the first mastitis cows that have been found in 10 days. We had a herd test today and will be looking closely at the somatic cell count numbers for individual cows.
16. We also have a pregnancy scan occurring on Thursday that will allow us to confirm the cows still in-calf to mating in the first 12 weeks.
17. We have a small group of 10 lame cows on once a day at the moment. Our lame mob has remained steady at about this numbers for several months.
18. The somatic cell data and pregnancy data, and other animal health records will be used to generate a small cull list of about 10 cows.
19. Cow live weights have stayed the same this week.

The next WEEKLY farm walk is on Tuesday, **26th February 2008 at 9.00am.**

Farmers or their managers are always welcome to walk with us. Please call to notify us of your intention and bring your plate meter.

Management Group

Peter Hancox (Farm Manager), George Reveley (for SIDDC), and Adrian van Bysterveldt (DairyNZ).

Lincoln University Dairy Farm - Farm Walk notes

Tuesday, 12th February 2008

Critical issues for the short term

1. Achieve a rotation of 21 days for this next week.
2. Service tractor and silage wagon and train staff on health and safety issues.
3. Maintain grazing residuals.

Summary of Key Factors affecting Grazing Management & Animal Performance

4. SOIL TEMP at 10am dropped to 16 °C for most of the week but has now lifted again to 17.5^oC.
5. PASTURE GROWTH was 78 kg DM/ha (last week 92) on the milking platform.
6. Average pasture cover has dropped to 2200 kg DM/ha (last week 2343 kg DM/ha).
7. We used an average of 8.15 ha per day that is 1/19.8th of the farm each day with the cows.

This week's pasture wedge

SR = 673/161.5= 4.17
 (4.17 x 21 x 18) + 1480 = 3056
 (3056-500)/140 = 18.3 clicks

Farm Feed Wedge - Week Starting

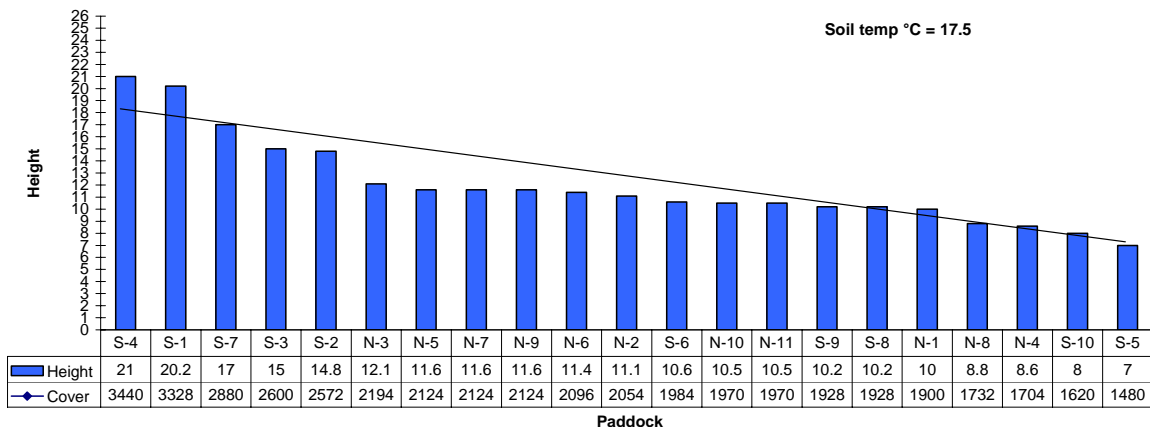
Weeks Growth Rate 78

12-Feb-08

■ Height

Average Farm Cover 2200

Soil temp °C = 17.5



8. The target line presumes the cows are eating 18 kg DM and will be on a 21 day round. This requires a pre-grazing cover of 3058 kg DM/ha. We have lifted the nominal allocation from 17 to 18 kg DM/cow to better reflect the amount of grass that we measure (with the plate meter) is disappearing during each grazing. Last week we were cautious about the apparent surplus we had. The surplus was not there.
9. We also currently have very high clover % in many paddocks. The nutritive value of clover is the same as leafy green ryegrass pasture. Clover is much easier for cows to harvest because the bulky part of the leaf is at the end of a long stem and is high in the grazing sward. This will also be contributing to us needing to lift the apparent allocation to the cows.

10. The wedge shows a deficit in a few days time. At the same time it is now very important that we increase the rotation length. Our target for this week is to only graze 1/21st of the farm a day.
11. The weather forecast suggests good growing conditions for the rest of the week, so we are again expecting growth rates above demand.
12. Evapo-transpiration rates have reduced significantly this last week.
13. Soil moisture levels have increased on both blocks, mostly due to reduced ET and lately with the addition of rain. In the clay soils of the south block under the pivot soil moisture levels are now high enough that we have stopped irrigating in expectation of further rain this week and continued reduced ET's before then. Similarly for the area under the North Block that is under the pivot. We will continue to irrigate with the corner long line laterals and with K-line on the milk platform and with the guns on the runoffs. All these areas grass growth is still being held back by lack of moisture. These will require at least another 50 mm of rain this week to be able to stop irrigating.
14. We have resumed Nitrogen applications. We have a total of 86 kg N/ha left in our budget for this season. The first round of N application is 25 kg N/ha and after today we will have covered 2/3rd of the farm.
15. Milk production has held at 1.52 kg ms /cow/day and 6.3 kg ms/ha /day, very similar to last week
16. Somatic cell counts have been very variable but have averaged about 250,000.
17. The R1yr and R2yr replacements graze our two runoffs and are required to achieve lower residuals than the milking herd. Most commonly the residuals have been between 5 and 7 "clicks" (between 1200 and 1480). Both these age groups continue to exceed growth rate targets which shows that pasture quality is the key.
18. For the last two months our pasture management, paddock grazing order and identification of surpluses on the two runoffs is now being done from measurement with a Rapid Pasture Meter. We are using a pasture wedge generated from the height measurements made by this machine.

The next WEEKLY farm walk is on Tuesday **19th February 2008 at 9.00am.**

Farmers or their managers are always welcome to walk with us. Please call to notify us of your intention and bring your plate meter.

Management Group

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Lincoln University Dairy Farm - Farm Walk notes

Tuesday 5th Feb 2008

Critical issues for the short term

1. **Maintain a rotation of between 20 and 22 days.**
2. **Keeping irrigation system going properly.**
3. **Maintain grazing residuals.**

Summary of Key Factors affecting Grazing Management & Animal Performance

4. SOIL TEMP at 10am has continued to average 17.5⁰C.
5. PASTURE GROWTH was 92 kg DM/ha (last week 94) on the milking platform.
6. Average pasture cover 2343 kg DM/ha (last week 2264 kg DM/ha.)
7. We used an average of 8.6 ha per day that is 1/19th of the farm each day with the cows.

This week's pasture wedge

SR = 680/161.5= 4.21
 (4.21 x 21 x 18) + 1480 = 3071
 (3071 -500)/140 = 18.4 clicks

Farm Feed Wedge - Week Starting

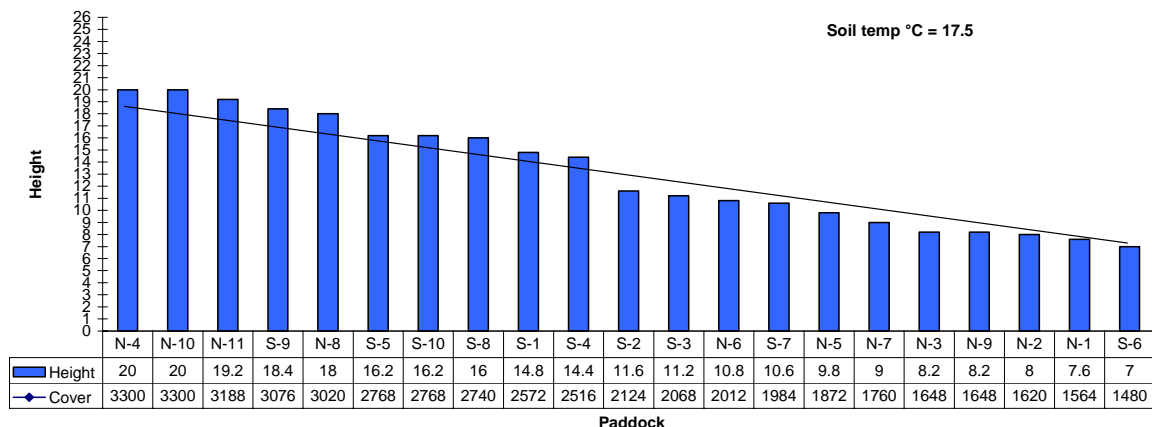
Weeks Growth Rate 92

5-Feb-08

■ Height

Average Farm Cover 2343

Soil temp °C = 17.5



8. The target line presumes the cows are eating 18 kg DM and will be on a 21 day round. This requires a pre-grazing cover of 3071 kg DM/ha. We have lifted the nominal allocation from 17 to 18 kg DM/cow to better reflect the amount of grass that we measure (with the plate meter) is disappearing during each grazing. During December and January pasture DM rose from under 15% to over 16%. This was probably due to the slower growth rates due to day time temperature regularly being around 30 °C In response we had to reduce the nominal allocation to 17 kg DM/cow/day to reflect how much grass was eaten (disappeared from the paddock) in 24 hours. With recent cooler temperatures (20 to 26 °C) and higher growth rates we suspect that the DM% trend has reversed and are returning to 15%. This would explain why the cows appear to eat more grass in 24 hours. Pasture samples are due to be taken this week. In previous years we have seen a low pasture DM% when growth rates increase in summer.

9. We also currently have very high clover % in many paddocks. The nutritive value of clover is the same as leafy green ryegrass pasture. Clover is much easier for cows to harvest because the bulky part of the leaf is at the end of a long stem and is high in the grazing sward. This will also be contributing to us needing to lift the apparent allocation to the cows.
10. The wedge shows an apparent surplus, but for the reasons discussed above we do not believe that it is as big as it appears. If part of the surplus is real, we will soon know because the cows will consistently have to go back to their paddock after 24hrs of grazing to continue grazing until they achieve the target “7” clicks residual. Over the week we will then use less than an average of 1/21st of the farm a day. We are currently comfortable with the rotation length increasing up to 22 days this week and aim to continue to increase it slowly during February to be eating only 1/25th of the farm a day by the end of the month
11. The weather forecast suggests good growing conditions for the rest of the week, so we are again expecting growth rates above demand. If we end up with a surplus greater than we need to lengthen the rotation length we will still make it into baleage.
12. Soil moisture levels have increased on both blocks due to recent rain. In the clay soils of the south block soil moisture levels are now high enough that we have stopped irrigating in expectation of further rain on the weekend and only average ET's before then. We will continue to irrigate the north block and runoffs (more free draining soils with lower moisture holding capacity) for a few more days and watch the weather forecast closely. If the prediction for rain on the weekend holds we may stop irrigating before it arrives, otherwise we will stop after the rain and continue to monitor soil moisture.
13. The high ET's of the last two months has showed up even minor faults in the centre pivot sprinklers that have lead to reduced water volume or poor placement. These areas and those covered by individual sprinklers and the K-lines have had signs of moisture stress.
14. We have resumed Nitrogen applications. We have a total of 86 kg N/ha left in our budget for this season. The first round of N application is 25 kg N/ha.
15. Milk production has held at 1.56 kg ms /cow/day and 6.45 kg ms/ha /day, very similar to last week
16. Somatic cells have dropped from 275,000 into the low 200,000's but are still very variable.
17. The R1yr and R2yr replacements graze our two runoffs and are required to achieve at least the same consistent residuals as the milking herd. Most commonly the residuals have been between 5 and 7 “clicks” (between 1200 and 1480). Both these age groups continue to exceed growth rate targets.
18. For the last two months our pasture management, paddock grazing order and identification of surpluses on the two runoffs is now being done from measurement with a Rapid Pasture Meter. We are using a pasture wedge generated from the height measurements made by this machine.

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