

Lincoln University Dairy Farm - Farm Walk notes

Tuesday 3rd October 2006

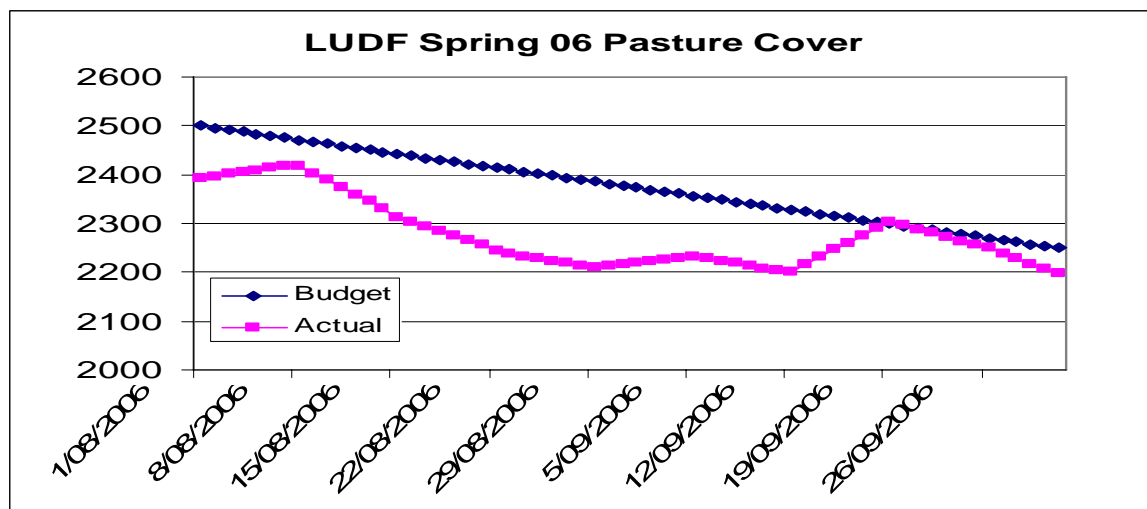
Critical issues for the short term

1. Fine tune the intakes, lifting them to milking cows while maintaining target residuals of 7 “clicks” (7 half cm as measured by the Plate Meter) ie don’t graze lower than this !

Summary of Key Factors affecting Grazing Management & Animal Performance

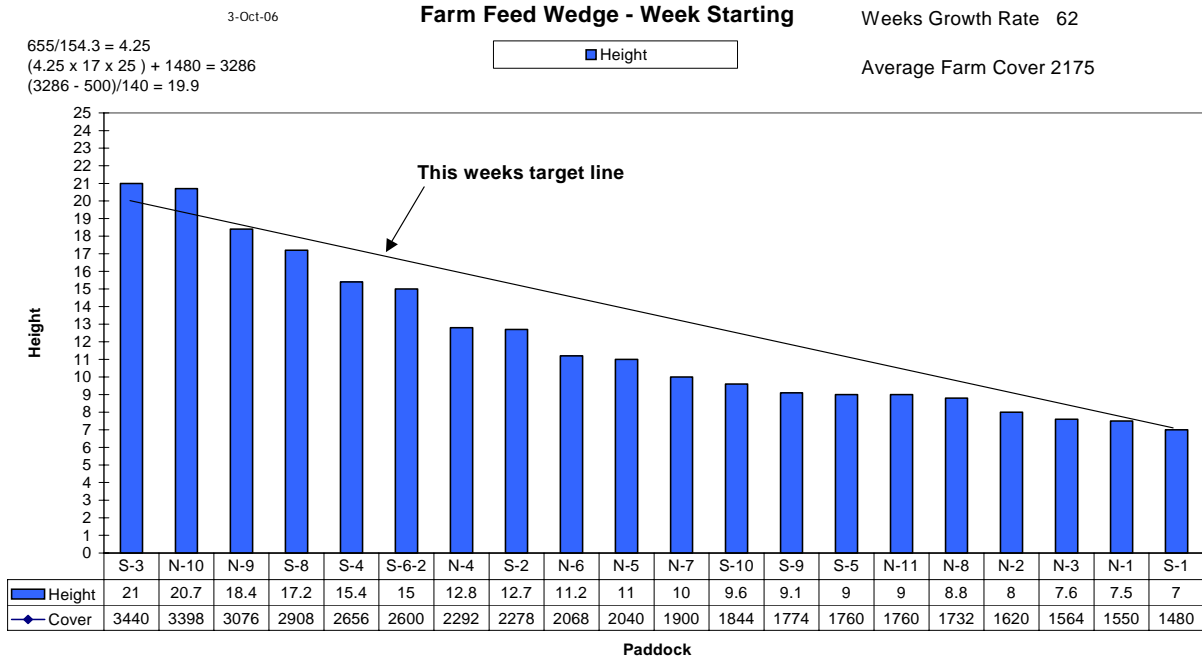
1. SOIL TEMPS have remained at 11.5 degrees at 10.30am.
2. PASTURE GROWTH over the last week has risen to 62 kg DM/ha (last week was 54, but looks like it was an underestimate) and is above our budgeted growth rates for the 2nd half of September (55).
3. PASTURE COVER is still below our target cover, no immediate cause for concern, but we may be looking at no/little effective surplus in the near future, unlike this time last year.

Fig 1. A check of our spreadsheet used to calculate average farm cover has revealed an incorrect calculation. Two weeks ago we reduced the milking area from 161.5 ha to 154.3ha when we sprayed out the spring sacrifice paddock and cultivated it. Before then this paddock was not re-growing grass and while it was included in the calculation it was reducing the average farm cover.



4. Ave PASTURE COVER has dropped by 75kg/ha, from 2249 kgDM/ha last week down to 2175 kg DM/ha today. Our cover target line is based on a grazing 1/22 of the farm (161.5 ha) on Balance Date and a cow intake allocation of 17 kgs DM above a residual of 1500 kgs DM /ha, at an assumed date of 1 Oct.
5. While cow intakes have progressed as planned, the milking area has been reduced and as a result the rotation length has been revised to ensure that there will be sufficient time to grow the grass at our increased effective stocking rate. This is currently 4.25 cows /ha
6. Over the last four weeks pasture growth rates have increased at the same rate as pasture demand from the herd has increased (more cows x increasing allocation). The farm has been “in balance” and if growth rates this week increase to over 62 then this balanced situation will continue.

Fig 2.



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)
8. This weeks farm walk was undertaken in rain and so there are doubts about the accuracy of the readings. They tend to read LOWER when wet. The projected dip in pasture cover in a weeks time (see above graph of cover) is a concern, but in part will be a function of the weight of the moisture on the plate meter resulting in a lower reading.
9. On our target rotation of 1/25 th of the available area we plan to graze 43.2 ha this week. This will be made up of S2 (partly grazed), S3, N10, N9 & S4. We will be using the extra cover in S2, S3 and N10 to get an extra 12 hours grazing which will result in S8 reaching target cover. S4 is a Tabu paddock and is growing at over 100 kgs DM/day and so will also be at or above target pre-grazing cover. We have no concerns about pasture cover for the next week.
10. Our plans for the following week will include continuing increase the area grazed for the week. This may increase to 1/22 nd of the farm and will again change the target cover line. The required pre-grazing cover will reduce even though their will be more cows on the farm.
11. The FEED ALLOCATION to the milking herd has again lifted and is now 17 kgs DM/cow/day (up from 15.7 kgs DM/cow/day last week). Remember this reflects the calving spread mix times the increasing and peak feed demands. We are monitoring this carefully.
12. Milk PRODUCTION continues to lift, last 5 day average was 1.89 kgs MS/cow/day (up from 1.80 kg MS/cow), and 7.2 kgs MS/ha/day (up from 6.7 kg MS/ha/day).
13. We are continuing to follow the cows with 20 kgs N/ha. ie 4-6 paddocks each week.

14. The herd has had a metri-check undertaken and only 14 animals required treatment
15. The herd has been tail painted and weekly recording of pre-mating heats has begun and 10 anoestrus light heifers have been put onto OAD.
16. The yearling heifers have begun their synchrony program and will get a second treatment in 10 days. Mating will commence 1 week before the herd and they will be mated with AB Jersey semen for the first 3 days and then followed with Jersey bulls.
17. The special monitor group of cows who calved in the first week of calving (44 cows) continue to put on weight (18 kgs since last weighing) and condition score (increased 0.06 to 4.41).

Note

Next SIDDC Focus Day at LUDF is on Thursday the 26 October.

The next WEEKLY farm walk is on **TUESDAY 3rd October 10.00am.**

Management Group

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

Lincoln University Dairy Farm - Farm Walk notes

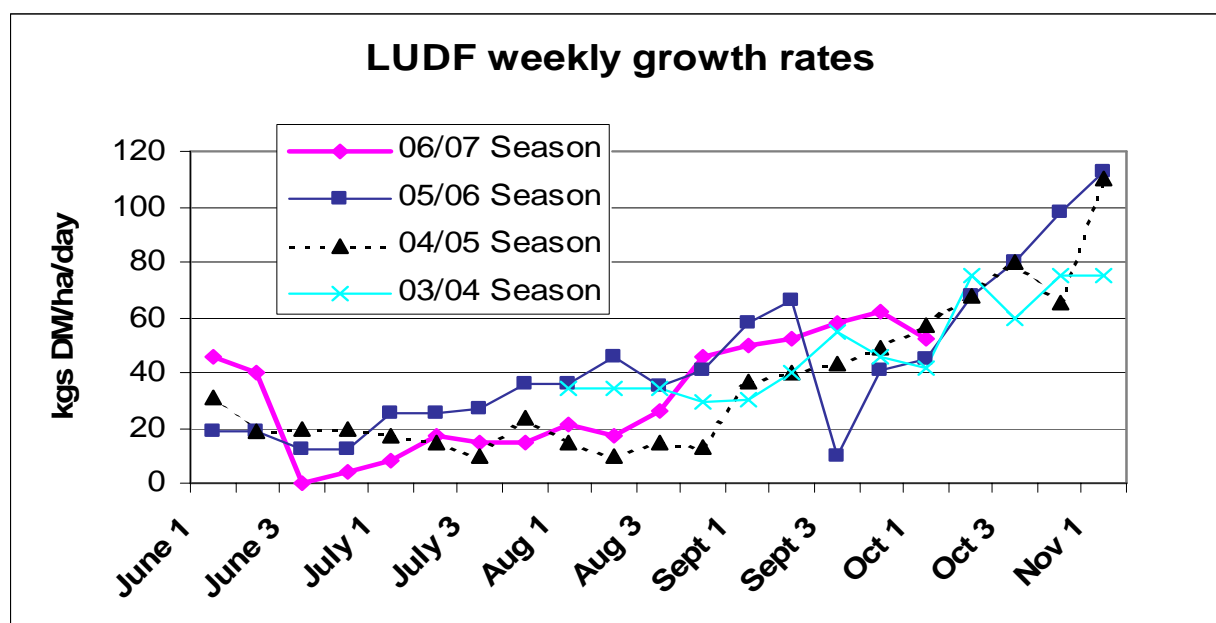
Tuesday 10th October 2006

Critical issues for the short term

2. Maintaining cow energy intake through this short term feed deficit which has occurred a week before Planned Start of mating.
3. Treating all anoestrus cows now so that they can be mated on the first day of mating for the herd.
4. Commence mating the synchronised maiden heifers.

Summary of Key Factors affecting Grazing Management & Animal Performance

5. SOIL TEMPS have declined at the end of the week to 9.5 down from 11.5 degrees last week.



6. PASTURE GROWTH over the last week have dropped to 52 kg DM/ha (last week 62) and is below our budgeted growth rates for the 1st half of October (65).
7. Milk PRODUCTION continues to lift, last 5 days average was 2.02 kgs MS/cow/day (up from 1.89 kg MS/cow), and 7.84 kgs MS/ha/day (up from 7.2 kg MS/ha/day).
8. Over the week our cow demand has continued to increase and is now 75 kgs DM/day (more cows on the farm and higher allocations /cow). At the same time the pasture growth rate declined to 52. The result is that average PASTURE COVER has dropped to 1990 and is well below our target cover of 2250. This is now of concern.
9. There were indications of this last week but because the farm walk was undertaken in rain we were of the view that the plate meter may have been under reading actual covers. This was because of the extra weight of the water on the plate. It now appears that the plate-meter was less affected by the rain, than we had assumed.

10-Oct-06

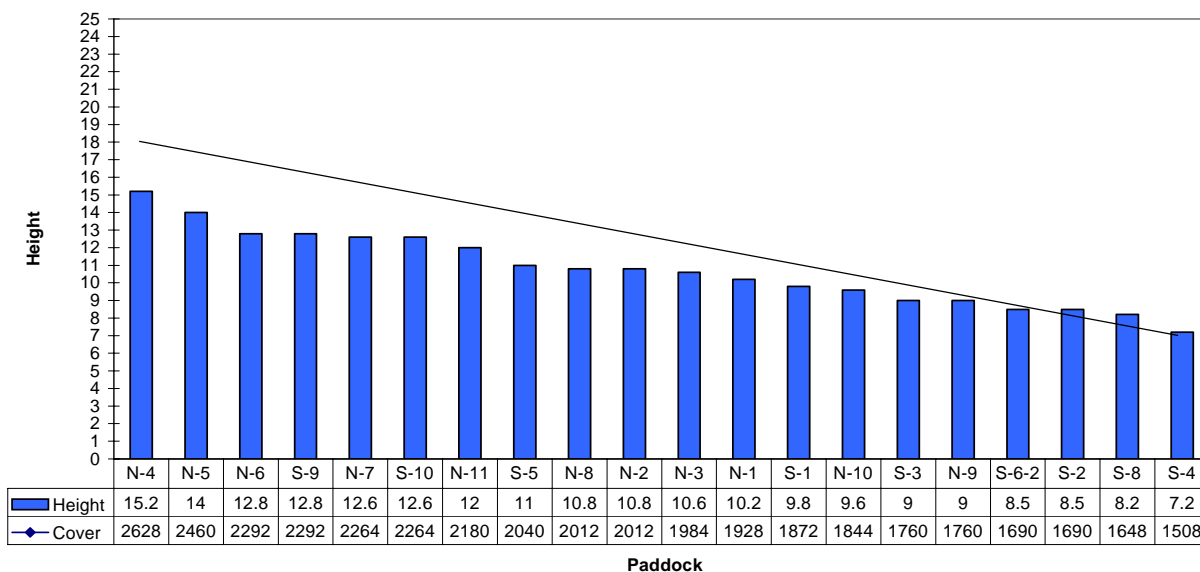
Farm Feed Wedge - Week Starting

Weeks Growth Rate 52

680/154.3 = 4.4
 (4.4 x 17 x 21) + 1480 = 3050
 (3050 - 500)/140 = 18.2

■ Height

Average Farm Cover 1990



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 indicates that we have a significant pasture deficit even when we speed up to a 21day round.

12. The FEED ALLOCATION to the milking herd will be held at 17 kgs DM/cow/day. This will be made up of 12.5 kgs of grass (above our target residual of 1480 or 7 “clicks”) and 4.5 of silage (ME 10.8). This will maintain our ME intakes above 210 ME.

13. Why feed silage ?? We only have two feeding options

- i. underfeed the milkers
- ii. introduce supplement

We are not prepared to underfeed cows immediately leading up to mating.

We prefer not to feed supplement in spring (it dilutes the diet) but we have to react to the slow cold spring, and we have baleage on hand.

The silage ME is below 11 so we need to keep our /cow allocation below 5 kgs to be able to achieve a /cow ME intake over 210 ME

14. At this level of pasture allocation we require a pasture growth rate of 55 to hold our current average pasture cover. We will review this on Friday. If soil temperatures improve more rapidly than we expect and pasture growth rates are higher as a result, we may be able to increase the allocation of grass and decrease the allocation on silage.

15. We are continuing to follow the cows with 20 kgs N/ha. ie 6 - 7 paddocks each week.

16. This morning the 157 cows which had been calved more than 23 days (30 days before our PSM (Planned Start of Mating)) but have not yet had a recorded oestrus, were palpated to check for ovarian activity. As a result 115 cows were treated with a Cidr. This means that 81% of the cows that had been calved more than 23 days are cycling (or 72% of the expected peak herd number of 680 cows).
17. The yearling heifers have had their synchrony program and mating will begin tomorrow. They will be mated with AB Jersey semen for the first 3 days and then followed with Jersey bulls.
18. During the farm walk we dissected some ryegrass tillers to observe how the development of the seed head was progressing. In the tillers from the old Canterbury ryegrass ecotype that made up the pastures before conversion, the seed head was already between 10 and 15 cm above the crown and they are about to emerge from the green stem. The tillers from Bronsyn ryegrass were only 5 cm above the crown and so are now entering the grazing zone (above 3.5cm of compressed height [7 clicks] on the plate meter). The developing seed heads in the Impact tillers are still well below the grazing height.
19. Maintaining the current post grazing height is critical in eliminating these developing seed heads before they emerge. By doing this we will be maintaining pasture quality for later grazing rounds by keeping the plant in a vegetative state. Removing the developing seed heads at this early stage also promotes the development of new daughter tillers. These new daughter tillers will be the basis of our pasture growth over the coming summer.

Note

Next SIDDC Focus Day at LUDF is on Thursday the 26 October.

The next WEEKLY farm walk is on **TUESDAY 17th October 10.00am.**

Management Group

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

Lincoln University Dairy Farm - Farm Walk notes

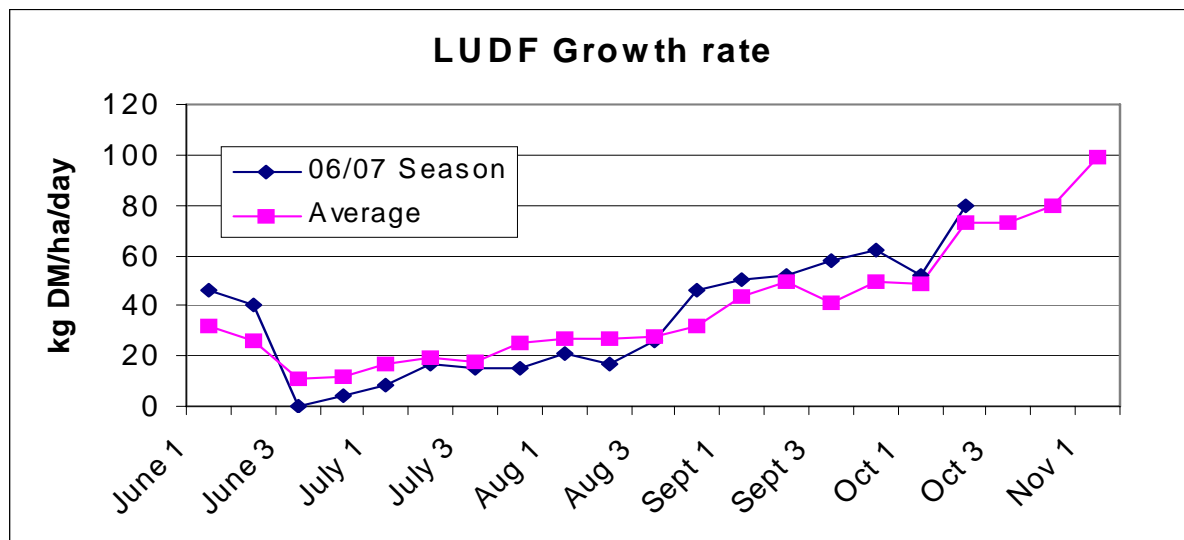
Tuesday 17th October 2006

Critical issues for the short term

20. Maintaining cow energy intake through mating.

Summary of Key Factors affecting Grazing Management & Animal Performance

21. SOIL TEMPS have declined in recent days to 10.4 down from over 13 degrees during the week and are still up on the previous week.



22. Weather forecast for the next 12 days is for mild to warm which leads to expect that our growth rate will be similar to last week. Soil temperatures are starting off a degree higher and the weather pattern is similar to this last week so we expect growth rates to be at above the average for the second half of October.

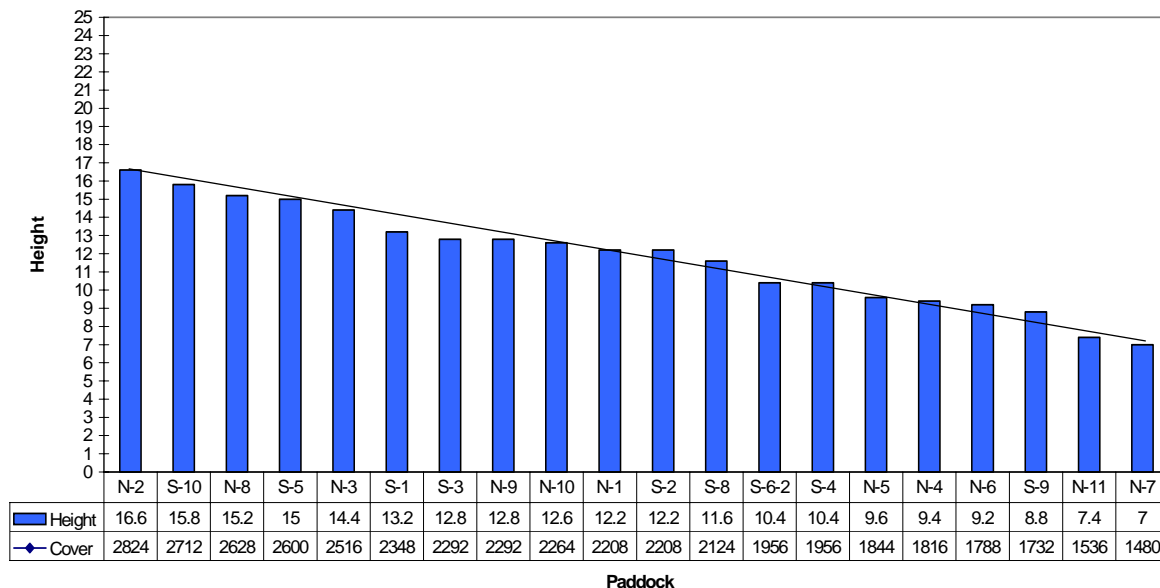
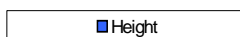
23. PASTURE GROWTH over the last week rose to 80 kg DM/ha (last week 52) and close to the average growth for this time of the year. However, October can be a cruel month with wide fluctuations in growth rates.

24. Over the last week we have been holding the round at 1/22nd of the farm a day to allow covers to lift from last weeks low of 1900. The average cover has lifted to 2173. We fed out an average of 5.5 kgs of DM of grass silage /cow to assist with this.

25. Despite the feeding of grass silage Milk PRODUCTION has dropped and the last 5 days average was 1.85 kgs MS/cow/day (down from 1.98 kg MS/cow), and 7.6 kgs MS/ha/day (down from 7.9 kg MS/ha/day).

26. The drop in production was more than we expected and may be related to the fact that almost 1/3rd of the cows diet was 10.5 ME silage rather than 13 ME grass. We had excellent utilisation of the grass silage, so the drop in production is showing that the cows were still under fed.

$680/154.3 = 4.4$
 $(4.4 \times 17 \times 18) + 1480 = 2826$
 $(2826 - 500)/140 = 16.6$



27. 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).

28. The wedge indicates that we have sufficient pasture to maintain an 18 day rotation length. We will need an average growth rate of 80 kgs DM/ha /day to be able to sustain this faster rotation length. It is our call that this is likely to occur.

29. The FEED ALLOCATION to the milking herd will be held at 17 kgs DM/cow/day. This will again comprise all grass.

30. We are continuing to follow the cows with 20 kgs N/ha. ie 6 - 7 paddocks each week.

31. The contractors have today cut the first batch of grass for silage that we are purchasing off-farm for the autumn. We are targeting 70t of silage of above 12 ME through cutting an early light crop. Weather conditions look very favourable for excellent wilting. The silage will be made into medium square bales.

32. The yearling heifers have had their synchrony program and 38 were mated on day one, 81 on day two, and the final 56 on day three. Only 20 of the yearlings mated on day three actually had an observed heat. Jersey bulls (to a ratio of 1 bull/30 yearlings) were joined with the yearlings later on day three of mating.

Note

Next SIDDC Focus Day at LUDF is on Thursday the 26 October.

The next WEEKLY farm walk is on **TUESDAY 24th October 10.00am.**

Management Group

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

Lincoln University Dairy Farm - Farm Walk notes

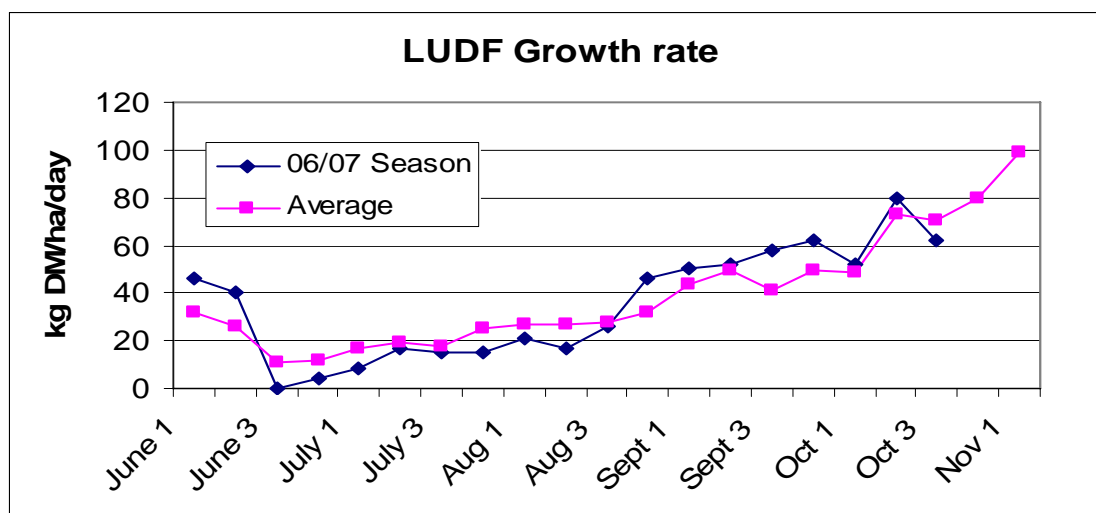
Tuesday 24th October 2006

Critical issues for the short term

- 33. Maintaining cow energy intake through mating.
- 34. Do not speed up the rotation length from the current 18 days.

Summary of Key Factors affecting Grazing Management & Animal Performance

- 35. SOIL TEMPS have maintained at 11.6 down from over 13 degrees during the week and are still up on the previous week.



- 36. Weather forecast for the next 12 days is for average to cool which leads us to expect that our growth rate will be similar to last week even though soil temperatures are starting off a degree higher.
- 37. PASTURE GROWTH over the last week dropped to 62 kg DM/ha (last week 80) and close to the average growth for this time of the year. October can be a cruel month with wide fluctuations in growth rates.
- 38. Over the last week we have been holding the round at 1/18th of the farm a day and the average cover has dropped to 2080.
- 39. Milk PRODUCTION has held and the last 5 days average was 1.87 kgs MS/cow/day (up from 1.85 kg MS/cow), and 7.66 kgs MS/ha/day (up from 7.6 kg MS/ha/day).
- 40. 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).

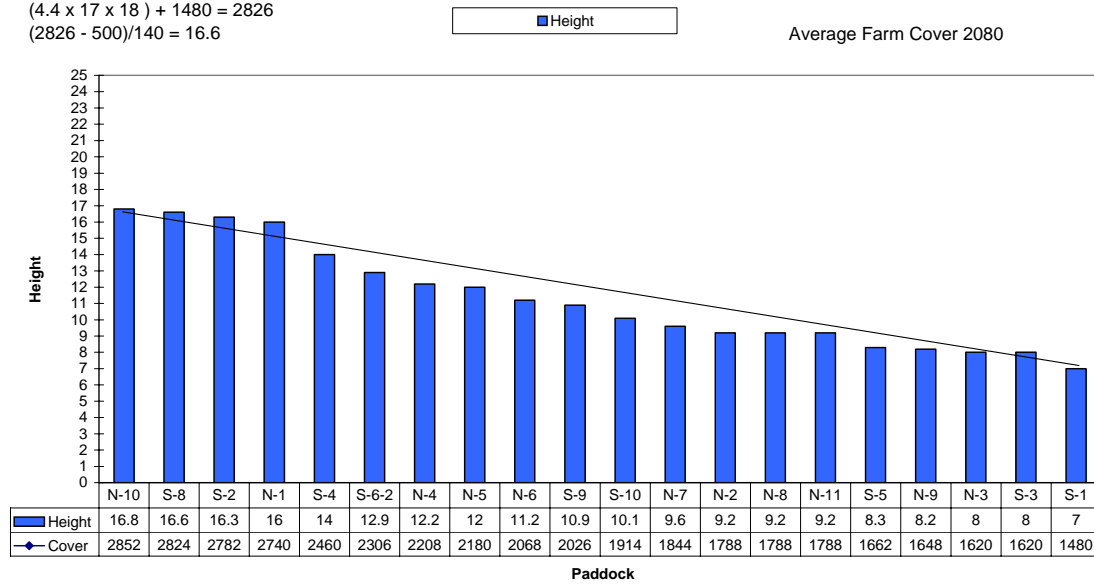
680/154.3 = 4.4
 (4.4 x 17 x 18) + 1480 = 2826
 (2826 - 500)/140 = 16.6

24-Oct-06

Farm Feed Wedge - Week Starting

Weeks Growth Rate 62

Average Farm Cover 2080



41. The wedge indicates that we do not have sufficient pasture to maintain an average of an 18 day rotation length over the next week with our current feeding levels. We will need an average growth rate of 80 kgs DM/ha /day to be able to sustain this faster rotation length.
42. Towards the end of the week we will be again be feeding out some supplement to the cows. In this case it will be pasture on the 18ha support block that has built up as a surplus and would normally be harvested as silage. It makes more economic sense in our current tight feed situation to graze this grass directly with the cows. The amount of pasture removed from this support block will be recorded as supplement fed to the milkers.
43. The FEED ALLOCATION to the milking herd will be held at 17 kgs DM/cow/day. This will again comprise all grass.
44. We are continuing to follow the cows with 20 kgs N/ha. ie 6 - 7 paddocks each week.
45. We have had 5 days of mating to date. All 175 of our replacement heifers have been mated, 100 out of our 116 anoestrus cows have also cycled after treatment with a Cidr, and in addition we have also mated a further 147 cows. A total of 422 animals out of the total of 855 that are to be mated.
46. The new grass in paddock S7 has finally emerged. The under-sowing in S5 is now about 50mm high and this paddock has just been grazed. This should give plenty of light for the new young grass plants.

Note

Next SIDDC Focus Day at LUDF is this Thursday the 26 October.

The next WEEKLY farm walk is on **TUESDAY 31st October 10.00am.**

Management Group

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

Lincoln University Dairy Farm - Farm Walk notes

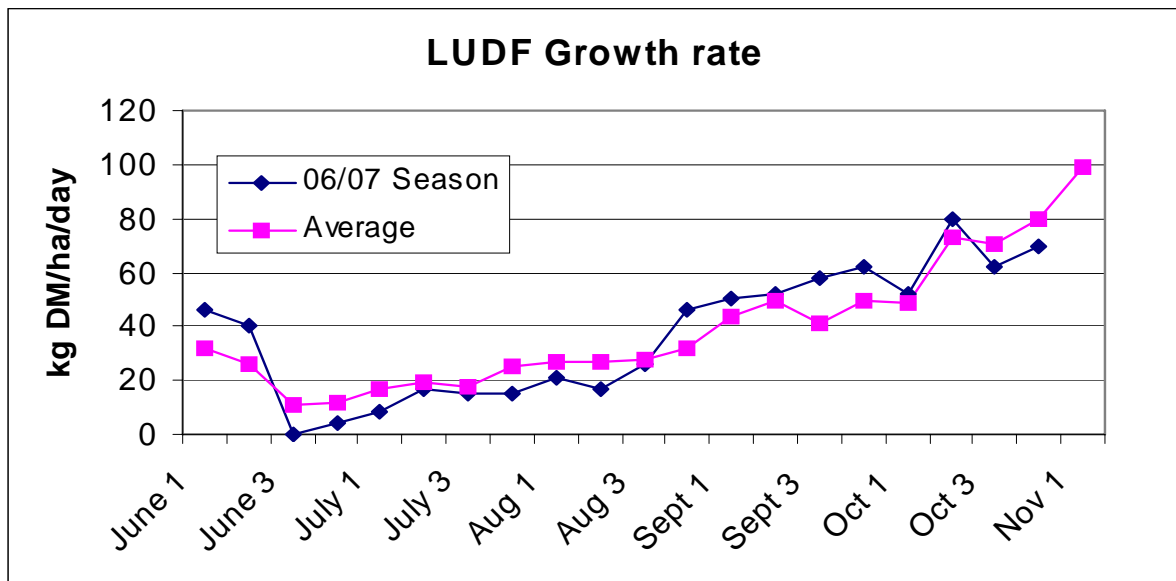
Tuesday 31st October 2006

Critical issues for the short term

- 47. Maintaining cow energy intake through mating.
- 48. Lengthening the rotation from the current 18 days to 22 days.

Summary of Key Factors affecting Grazing Management & Animal Performance

- 49. SOIL TEMPS have risen again to 12.5 and are starting the week 1 degree C above Tuesday last week.



- 50. PASTURE GROWTH over the last week has averaged 70 kg DM/ha (last week 62) and below the average growth for this time of the year.
- 51. Over the last week we have been holding the round at 1/18th of the farm a day on the milking platform and have also had 2 day-time grazings on the support block. As a result our average cover has held at 2112 kgs DM/ha, which is slightly up on last weeks 2080. We enter these grazings as “supplement” in our system.
- 52. Weather forecast for the next 12 days is for average to warm, which leads us to expect that our growth rate will be better than last week.
- 53. The two day-time grazings on the support block amounted to an additional 8.8t of feed into the system.
- 54. Milk PRODUCTION has risen slightly and the last 5 days average was 1.89 kgs MS/cow/day (up from 1.87 kg MS/cow), and 7.7 kgs MS/ha/day (up from 7.66 kg MS/ha/day). We are still behind last year on a daily basis.
- 55. 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).

31-Oct-06

Farm Feed Wedge - Week Starting

Weeks Growth Rate 70

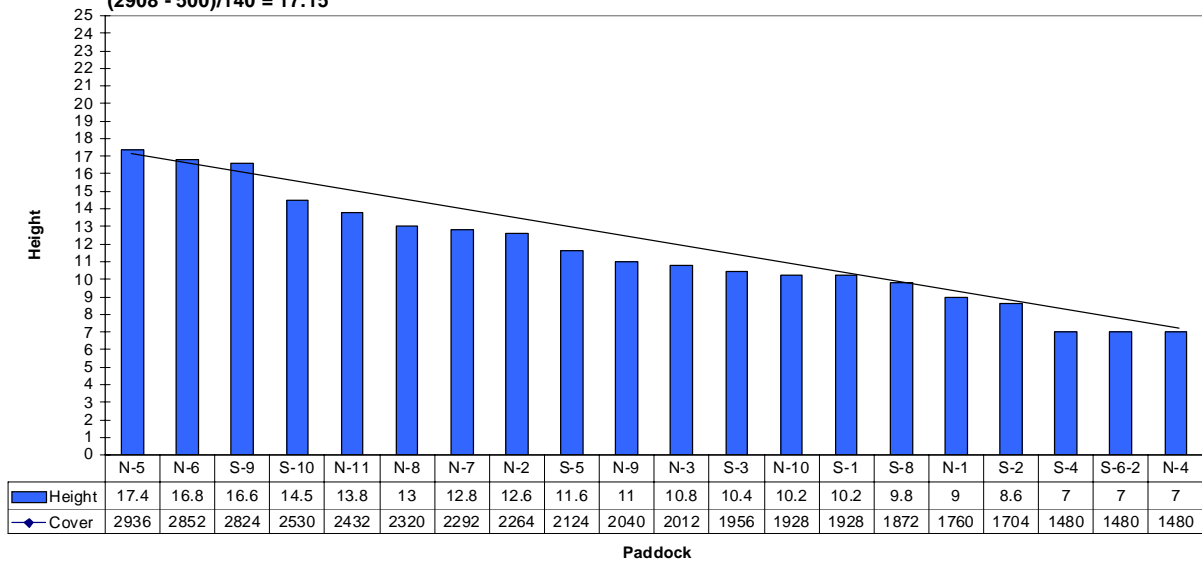
$$680/154.3 = 4.4$$

$$(4.4 \times 17 \times 19) + 1480 = 2908$$

$$(2908 - 500)/140 = 17.15$$

■ Height

Average Farm Cover 2112



56. The wedge indicates that we have sufficient pasture to try to lengthen our rotation length from 18 to 19 days. Included in this will be an additional day-time grazing on the support block. These grazings off the milking platform have eliminated the accumulating surplus on this support block. We will need an average growth rate of 75 kgs DM/ha /day to be able to sustain this rotation length but weather forecasts are favourable for the next week so we expect that growth rates will be closer to the 4 yr average of 80 kgs DM/ha/day.

57. The FEED ALLOCATION to the milking herd will be held at 17 kgs DM/cow/day. This will again comprise all grass.

58. We are continuing to follow the cows with 20 kgs N/ha. ie 6 - 7 paddocks each week. 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.

59. We have had 12 days of mating to date. All 175 of our replacement heifers have been mated, 105 out of our 116 anoestrus cows have also cycled after treatment with a Cidr, and in addition we have also mated a further 320 cows to normal cycles. A total of 600 animals out of the total of 855 that are to be mated.

60. It has been most pleasing that 66% of the 3yr olds (119 out of the 179) have been mated in these first 10 days.

61. The new grass in paddock S7 has finally emerged but is still not ready for its first light grazing. This paddock will be getting 20 kgs N/ha this week..

The next WEEKLY farm walk is on **TUESDAY 7th November 10.00am.**

Management Group

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