

# Lincoln University Dairy Farm - Farm Walk notes

Tuesday, 30<sup>th</sup> December 2008

## Critical issues for the short term

1. **Keep the rotation length to no faster than 19 days.**
2. **Identify grass surpluses on the runoffs and make into silage immediately.**

### Summary of Key Factors affecting Grazing Management & Animal Performance

3. The SOIL TEMP at 9am temperature began the week at 14°C and has steadily risen to 18°C by this morning. This is the warmest so far this year and on our North block maximum soil temperatures are now reaching over 25°C. These sorts of high day time temperatures will slow growth.
4. SOIL MOISTURE levels have been falling on the freer draining North Block soils even with full time irrigation. Irrigation is holding soil moisture levels on the heavier clay soils of the south block. There are clear signs that the guns on the runoffs are not keeping up with the water loss happening on these light soils.
5. PASTURE GROWTH was 93kg DM/ha (previous week 66).
6. Average pasture cover has risen to 2292 kg DM/ha (last week 2195 kg DM/ha).
7. Last week the overall rotation length was 20 days with 2.3 kg DM/cow/day of silage being fed on two days to enable us to hold this round length.
8. The Pasture Wedge today.



9. The wedge target line reflects the pre-grazing target for a 21 day rotation, feeding an average of 17 kg DM/cow at a stocking rate of 4.53.  $(4.53 \times 21 \times 17) + 1480 = 3080$
10. Last week we took an optimistic view of pasture growth for this week and expected to be able to grow our way out of the small deficit of 3t. Soil temperatures took a couple of days longer to rise and so we ended up feeding out 3t of silage to fill the deficit and

hold the round at 1/19<sup>th</sup> of the farm a day. The soil temperature lifted rapidly in the second half of the week and pasture growth really took off. As a result we were allocating less than 1/21<sup>st</sup> of the farm a day by the end of the week.

11. N11 is a paddock of Bealey Tetraploid ryegrass and even though it has a higher than target cover this pasture is still very high quality and we will allocate this to the cows. The herd consistently hits below target residual in this paddock.
12. Weather conditions continue to be warm for the rest of the week so as long as we can keep up with irrigation we expect another week of pasture growth above demand (80). This will definitely see the small deficit in a week time disappearing, or we will speed up to 1/19<sup>th</sup> of the farm a day to get through it. The wedge indicates another surplus on the way in about 14 days.
13. We applied a dressing of 30 kg N/ha this week over all but 3 paddocks of the farm. One of these paddocks is the new grass paddock which is about 2 weeks from its first nip off when it will then get N fertilizer. The other two paddocks will get their N application tonight through the fertigation system. We will then stop N applications until 9am soil temperatures again consistently drop below 16°C.
14. Currently the cows are still getting over 200ME which is sufficient for their current production plus over 40 ME for weight gain. The walk over weighing data shows that the herd has increased weight by another 3 kg over this last week.
15. Production /ha has risen slightly from 6.45 kg MS/ha/day to 6.62 kg MS/ha/day. Per cow production has also risen slightly from 1.52 kg MS/cow/day to 1.56 kg MS/cow/day.
16. Mating using AB continues with 9 weeks completed this Thursday. We did another partial herd scan (cows mated in week three) and found another 5 phantom pregnancies and have treated these cows with a Cidr. These will be mated on the last day of mating, which will be the end of week 10. We will do a full herd pregnancy scan on 19 January to confirm the 6 week in-calf rate and probably date all the other pregnancies.
17. The average Somatic cell count ended the week down from 210,000 to 167,000 which is an improvement over the last few weeks.
18. The number of lame cows has dropped to 9 lame cows which are half of last week and fewer than we usually have at this time of the year.
19. We also monitor the pasture covers on the two runoffs each week using the C-Dax Rapid Pasture Meter. Ryan Moffat, one of the farm staff, has this responsibility and we use this information to schedule the removal of surpluses into silage.

The next WEEKLY farm walk is on Tuesday **6th January 2009 at 9.00am.**

**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. Phone SIDDC – 03 325 3629**

### **Management Group**

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

# Lincoln University Dairy Farm - Farm Walk notes

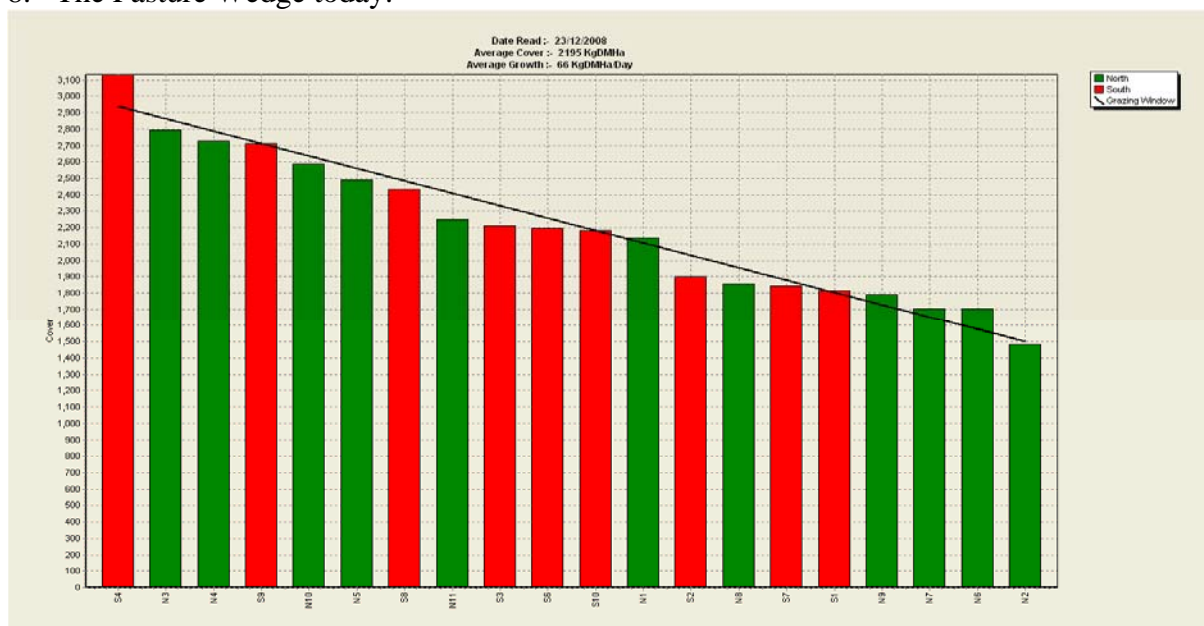
Tuesday 23<sup>rd</sup> December 2008

## Critical issues for the short term

1. **Keep the rotation length to no faster than 19 days.**
2. **Identify grass surpluses on the runoffs and make into silage immediately.**

### Summary of Key Factors affecting Grazing Management & Animal Performance

3. The SOIL TEMP at 9am temperature has been between 11°C and 16°C. Slightly lower average than last week.
4. The 50mm of rain and low ET has resulted in SOIL MOISTURE levels rising without the need for irrigation.
5. PASTURE GROWTH was 66kg DM/ha (previous week 87).
6. Average pasture cover has dropped to 2195 kg DM/ha (last week 2310 kg DM/ha).
7. Last week the overall rotation length was 20 days. No silage has been made or fed this week.
8. The Pasture Wedge today.



9. The wedge target line reflects the pre-grazing target for a 19 day rotation, feeding an average of 17 kg DM/cow at a stocking rate of 4.53.  $(4.53 \times 19 \times 17) + 1480 = 2943$
10. We are taking an optimistic (have no idea) view of pasture growth for the next week and expect to be able to grow our way out of the small deficit of 3t. This is because soil moisture is excellent and soil temperatures have lifted 1 deg back to 14°C this morning. We expect soil temperatures to continue to lift this week but unlikely to go over 16 deg.

11. During the week we will closely monitor soil temperatures and if they do not continue to lift we will assume that growth will not have risen to match demand and so we are prepared to go in with silage to hold the round.
12. We have not applied any nitrogen for 6 weeks and after two weeks of average daily minimum soil temperatures of below 16 deg we are now seeing definite sign of N deficiency. The pastures are now more patchy, with dung and urine area standing out as having lush leafy pasture, and the areas between growth is stunted and there are more seed heads and less leaf. We will apply a dressing of 30 kg N/ha this week over those paddocks in the bottom half of the wedge.
13. Pasture quality is better than two weeks ago with less seed head and pastures becoming denser. Most recent quality tests showing quality at 12.1 MJME /kg DM which is better than the previous test.
14. Currently the cows are still getting over 200ME which is sufficient for their current production plus over 40 ME for weight gain. The walk over weighing data shows that the herd has increased weight by 9 kg over the week. This is the highest weekly weight gain so far this season. The amount of energy being partitioned into weight gain is surprising and may be related to the long difficult wet spring when the cows lost more weight than in previous years. The herd is still 20 kg lighter than this time last year.
15. Production /ha has continued to drop from 6.84 kg MS/ha/day to 6.45 kg MS/ha/day. Per cow production has also dropped from 1.61 kg MS/cow/day to 1.52 kg MS/cow/day.
16. Mating using AB continues with 8 weeks completed this Thursday. So far we have confirmed 214 cows in-calf in the first two weeks through a partial herd scan. We have found 19 cows who had a first mating and then had gone anoestrus, these cows have again been treated with a Cidr.
17. We plan to continue to mate for 10 weeks and will use Short Gestation Semen for the last two weeks of mating. A full herd scan will occur on 19 January to find out how many cows are in calf in the first 6 weeks.
18. Yesterday the bulls were removed from the R2yr heifers after 9 weeks of mating. These will get one Pd at the end of January to find out how many are in calf.
19. The average Somatic cell count went from 186,000 to 268,000 and back to 180,000. One new case of mastitis was found.
20. We currently have 17 lame cows. This is a lot higher than we have had for many weeks.

The next WEEKLY farm walk is on Tuesday, **30th December 2008 at 9.00am.**

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### **Management Group**

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Peter Hancox (Farm Manager), George Reveley (for SIDDC), and Adrian van Bysterveldt (DairyNZ). Special input from Jacob the Swede!

# Lincoln University Dairy Farm - Farm Walk notes

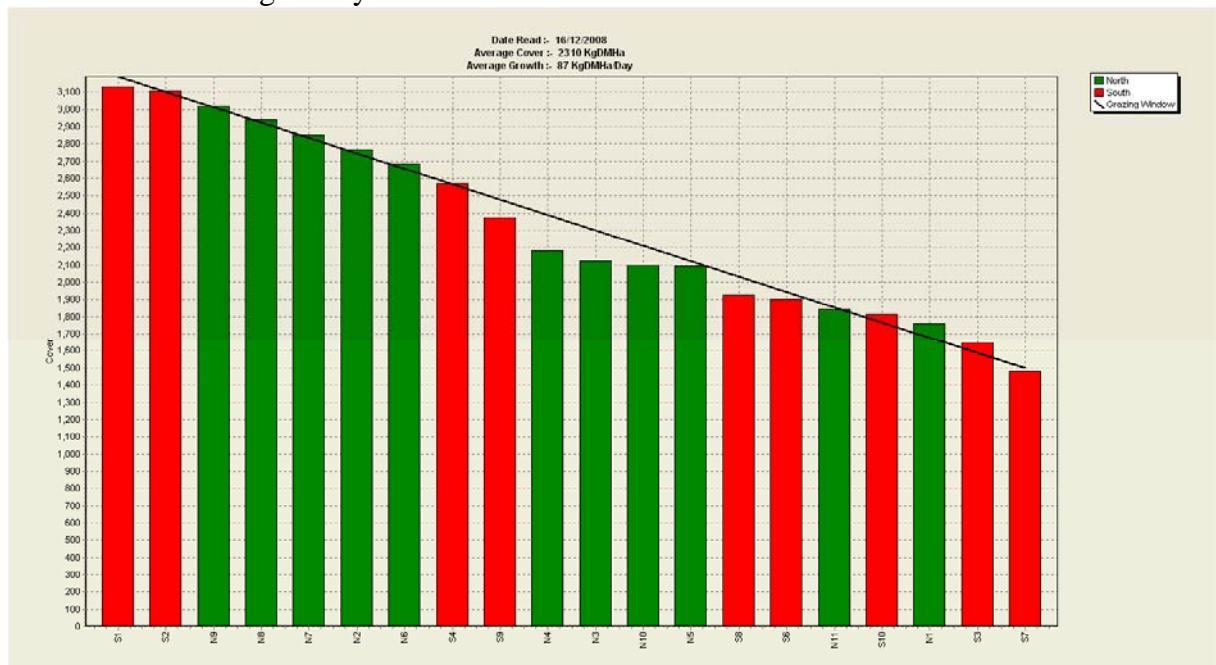
Tuesday, 16<sup>th</sup> December 2008

## Critical issues for the short term

1. **Keep the rotation length to no faster than 19 days.**
2. **Identify grass surpluses on the runoffs and make into silage immediately.**

### Summary of Key Factors affecting Grazing Management & Animal Performance

3. The SOIL TEMP at 9.00 am temperature has been between 14°C and 16°C. Slightly lower average than last week.
4. The SOIL MOISTURE has held this week and is in the wetter half of the desired range. A small but welcome 18mm of rain during the week has allowed the pivots to be off for 6 days. Most of the corner sprinklers are still running as they have a longer return interval and application rate lower than the pivots.
5. PASTURE GROWTH was 87 kg/DM/ha (previous week 80).
6. Average pasture cover has remained stable at 2310 kg DM/ha (last week 2324 kg/DM/ha).
7. Last week the overall rotation length was 19.7 days. No silage has been made or fed this week. We will lengthen this back to 21 days if possible.
8. The Pasture Wedge today.



8. The wedge target line reflects the pre-grazing target for a 21 day rotation, feeding an average of 18 kg DM/cow at a stocking rate of 4.53 ( $4.53 \times 21 \times 18$ ) + 1480 = 3192)

9. Paddock S5 has now been sprayed out, cultivated and had some surface grading carried out to assist with drainage. It is being roller drilled today with 12 kg/ha each of Alto and Arrow perennial rye grasses 2 kg/ha each of Kotare and Weka white clovers.
10. Production /ha has dropped from 7.06 kg MS/ha/day to 6.84 kg MS/ha/day. Per cow production has also dropped from 1.66 kg MS/cow/day to 1.61 kg MS/cow/day.
11. Pasture quality is looking better than two weeks ago with less seed head and pastures becoming denser. Most recent quality tests showing quality at 12.1 MJME /kg DM which is better than the previous test.
12. We are watching closely for any signs of N deficiency. Soil temperatures are borderline for continuing to not use more N fertilizer.
13. AgResearch have been monitoring LUDF for Clover Root Weevil for several years. Last week we had the first capture of this pest on LUDF. Clover Root Weevil has already been found from Greenpark through to the Rakaia River so we were not surprised to finally have found them on LUDF. If anything we have been surprised at how long it has taken for them to be found here.
14. Mating using AB continues with 7 weeks completed this Thursday.
15. There were 103 cows mated in the first week that have not shown subsequent heat (assumed pregnant). We have done a pregnancy scan on these and 5 were not pregnant. These 5 cows have been treated with a CIDR.
16. The average Somatic cell count has settled in the 177 – 204 range this week. One new case of mastitis was found and 4 new lame cows. Total sick mob is 15 cows.

The next WEEKLY farm walk is on Tuesday **23<sup>rd</sup> December 2008 at 9.00am.**

**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. Phone SIDDC – 03 325 3629**

### **Management Group**

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

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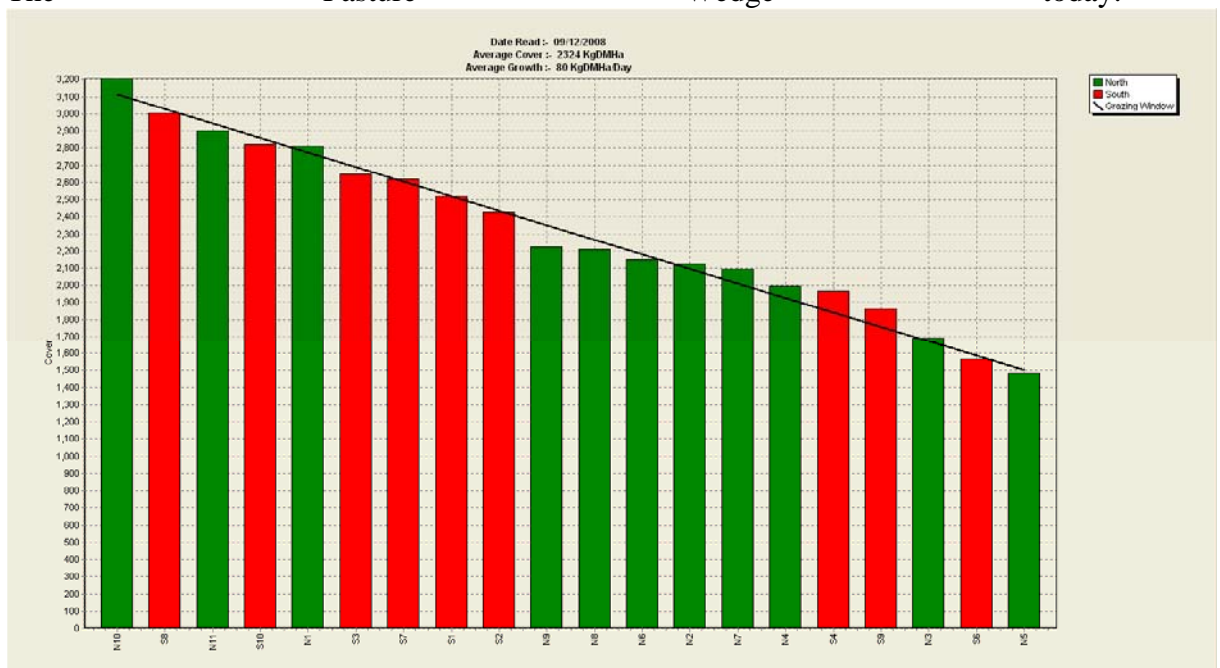
Tuesday, 9<sup>th</sup> December 2008

## Critical issues for the short term

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2. **Identify grass surpluses on the runoffs and make into silage immediately.**

### Summary of Key Factors affecting Grazing Management & Animal Performance

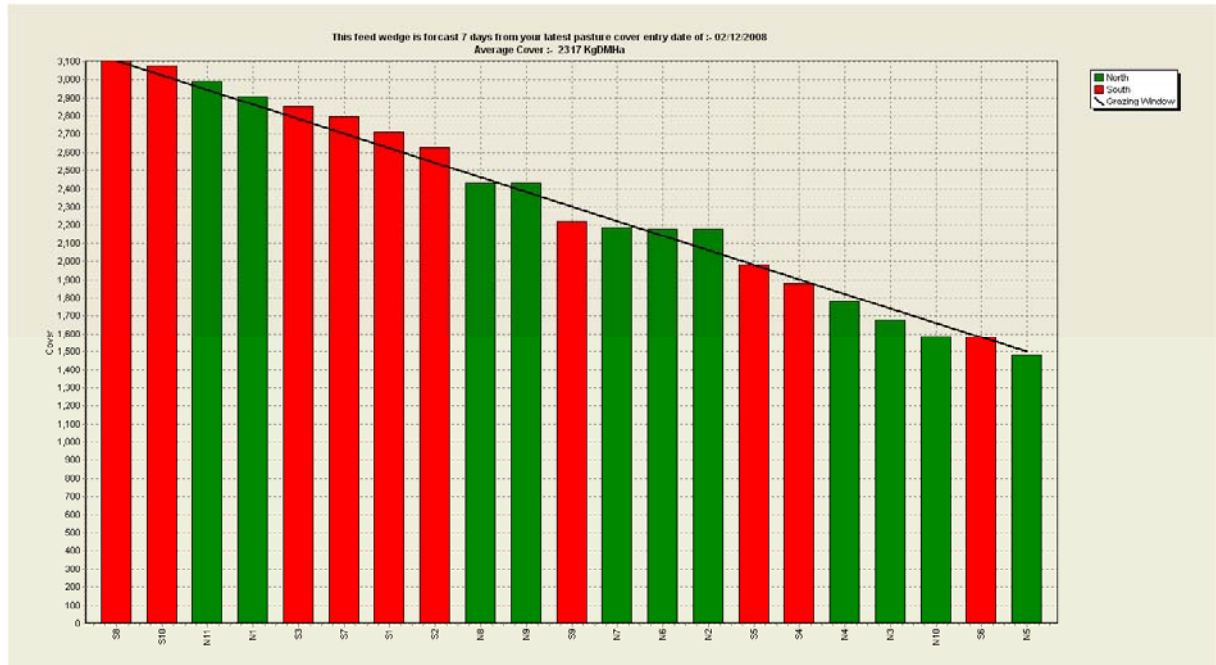
3. The SOIL TEMP at 9am temperature has been between 14°C and 16°C. Slightly lower average than last week.
4. The SOIL MOISTURE has held this week and is in the wetter half of the desired range. A small but welcome rain today will help to support the irrigation.
5. PASTURE GROWTH was 80 kg DM/ha (previous week 106).
6. Average pasture cover has decreased to 2324 kg DM/ha (last week 2510 kg DM/ha).
7. Last week the overall rotation length was 15.6 days. The cows were on 1/20.5<sup>th</sup> of the farm a day (grazing interval) and then we also cut two and a half paddocks for silage. (17.5ha)
8. The Pasture Wedge today.



9. The wedge target line reflects the pre-grazing target for a 20 day rotation, feeding an average of 18 kg DM/cow at a stocking rate of 4.3.  $(4.55 \times 20 \times 18) + 1480 = 3118$ .
10. Stocking rate has increased from 4.3 cows/ha to 4.55 because paddock S5 has now been sprayed out to prepare it for regrassing.

Last week we predicted that with the 2 ½ paddocks removed for silage the wedge would look like the one below. Pasture growth has been a little less than predicted but we are very happy with the decision process we used and the wedge generated by taking the silage off last week.

Predicted wedge for today (with the silage removed as per plan).



11. Production /ha has dropped from 7.1 kg MS/ha/day to 7.06 kg MS/ha/day. Per cow production has also dropped from 1.7 kg MS/cow/day to 1.66 kg MS/cow/day.
12. Ongoing grass seed head production and subsequent lower quality feed reported last week is decreasing with regrowth becoming more dense with less seed head at day 18 and 19 after previous grazing.
13. Mating using AB continues.
14. The average Somatic cell count has settled in the 177 – 204 range this week. One new case of mastitis was found and 4 new lame cows. Total sick mob is 9 cows.

The next WEEKLY farm walk is on Tuesday, 16<sup>th</sup> December 2008 at 9.00am.

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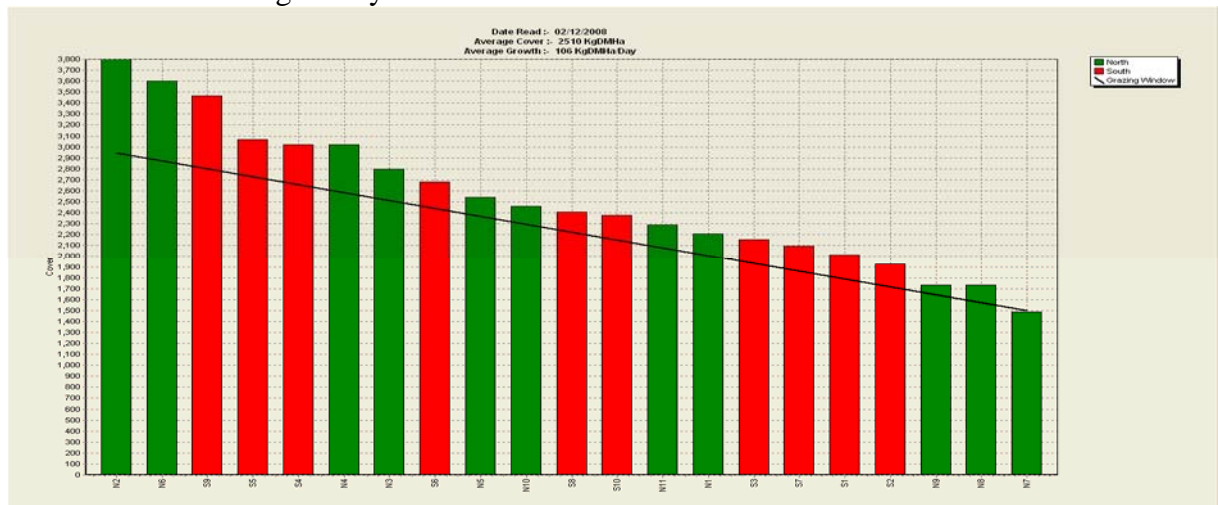
Tuesday, 2<sup>nd</sup> December 2008

## Critical issues for the short term

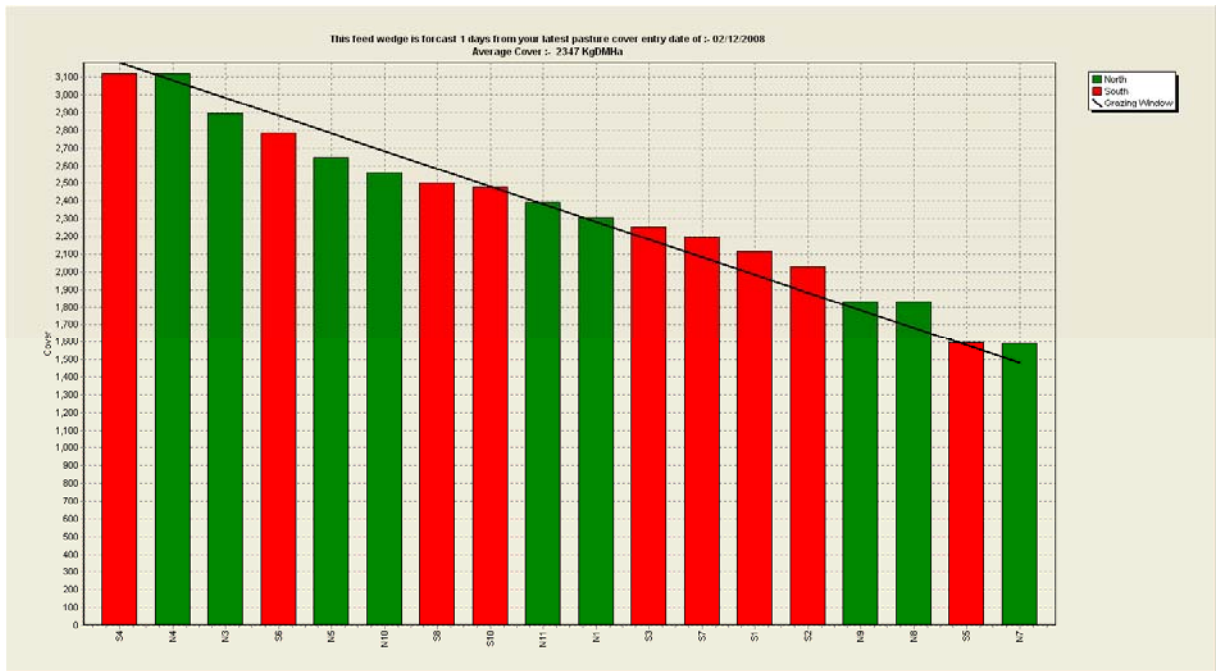
1. **Keep the rotation length to no faster than 19 days.**
2. **Identify grass surpluses on the runoffs and make into silage immediately.**

### Summary of Key Factors affecting Grazing Management & Animal Performance

3. The SOIL TEMP at 9am temperature has been stable between 15°C and 16°C.
4. The SOIL MOISTURE has held this week and is in the wetter half of the desired range.
5. PASTURE GROWTH was 106 kg DM/ha (previous week 99).
6. Average pasture cover has increased to 2510 kg DM/ha (last week 2397 kg DM/ha).
7. Last week the overall rotation length was 18.7 days. The cows were on 1/21.6<sup>th</sup> of the farm a day and then we also cut two paddocks for silage.
8. The Pasture Wedge today.



9. The wedge target line reflects the pre-grazing target for a 19 day rotation, feeding an average of 18 kg DM/cow at a stocking rate of 4.3.  $(4.3 \times 19 \times 18) + 1480 = 2948$ .
10. We have dropped the allocation to 18 to better describe what is happening with the cows in the paddock and the amount we need to put in front of them to still hit the 7 “clicks” residual in 24 hours.
11. We have a surplus of about 47t. The contractor had been pre-warned and will arrive this afternoon to cut 2½ paddocks for silage. The next wedge shows our position today with the silage paddocks removed.



12. The target line is now based on a 19 day round and we will be prepared to speed this up to 1/18<sup>th</sup> of the farm a day to get through the slight deficit at the top of the wedge. This deficit will be smaller than it appears because all the weather conditions are right for growth rates to continue at about 100 a day which is 20 a day more than demand.

13. The wedge below is our prediction for a weeks time when all the silage paddocks are back in the round and if we continue to have a growth rate of 100 kg DM/day. The target line is again based on a rotation length of 21 days.



14. On Friday this week we will do another farm walk if pre-grazing covers are increasing to check if growth rates have been above 100 kg DM/day. If this is the case and the wedge confirms a surplus we will remove another paddock of silage straight away.

15. Production /ha has dropped from 7.3 kg MS/ha/day to 7.1 kg MS/ha/day. Per cow production has also dropped from 1.72 kg MS/cow/day to 1.7 kg MS/cow/day.

16. Pasture quality samples taken last week show that there has been a drop in pasture quality. Normally this would still be well above 12ME but this year we have samples between 11.6 and 11.9 ME. This half ME drop adequately explains the 0.1 – 0.2 kg MS/cow/day drop in production. The drop in pasture ME is a surprise. Residuals have been consistently at the target of 7 “clicks” and there is no sign of a nitrogen deficiency and we have been on a 19 to 21 day round. However, there is more seed head than normal and the pasture quality tests show more structural fibre than normal for early December. As a result the digestibility (ME) is lower. The plants are behaving as though they have been going through a period of stress and are responding with more stem elongation and continuing seed head production. The only possible source of this stress on LUDF was the recent three week period where we were losing soil moisture faster than we could replace with irrigation. At the time we almost reached stress point in the free draining soils on the North Block.
17. Mating has been running for 34 days and 673 cows (out of 683) have had their first insemination. We will do a first pregnancy scan next Tuesday for the 129 cows mated on day one so that we can find out if any of the CIDR’ed cows mated that day have gone silent and are not actually in-calf. It should also give us a quick snapshot of how conception rates will be for both the treated cows and those that were cycling normally.
18. The average Somatic cell count has risen again and the range is now from 192,000 to 227,000. Two new cases of mastitis were found and 4 new lame cows. Total sick mob is only 9 cows.

The next WEEKLY farm walk is on Tuesday **9th December 2008 at 9.00am. 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. Phone SIDDC – 03 325 3629**

### **Management Group**

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