

Farm Walk Notes

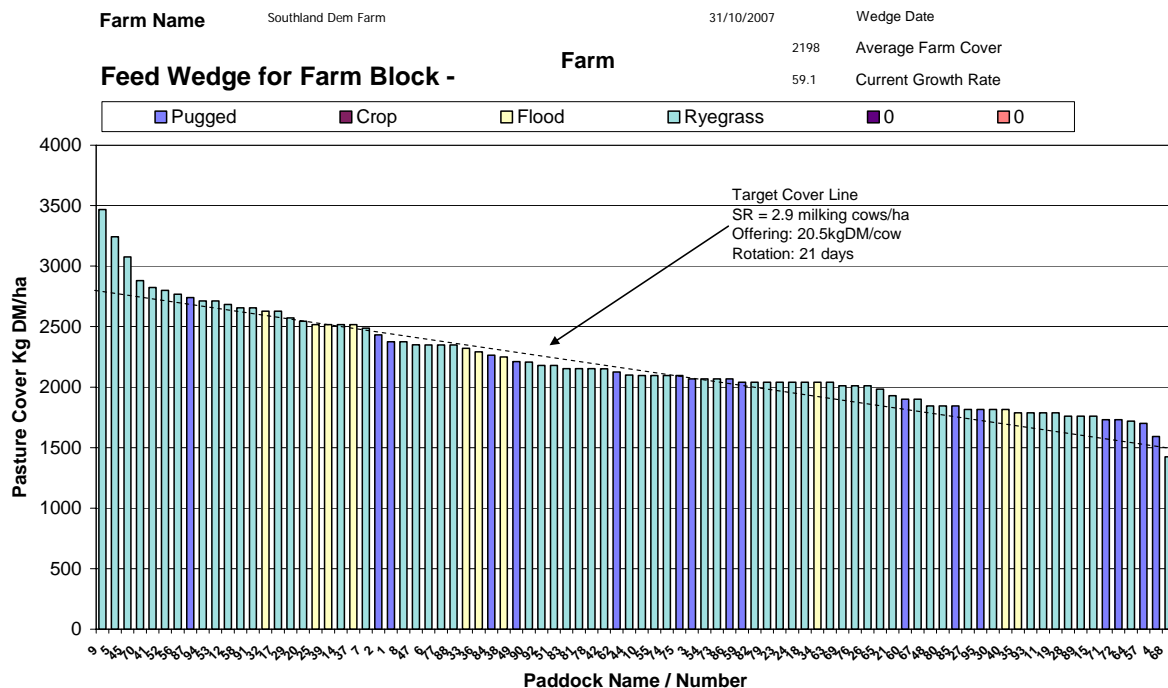
Wednesday, 31st October 2007

Critical issues for the short term

1. Lengthen round out to 26 days over next 2 weeks in anticipation of winter crop ground coming out of pasture
2. Maintain residuals to keep quality.
3. Pick all cycling cows and ensure that they are drafted and mated.

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

1. Soil temperatures have lifted from an average of 10.2°C last week to 11.7 this week, with a range from 10.3 to 13.6 degrees.
2. The pasture growth rate has lifted to 59.1 kg DM/ha/day from 41.8 kgs DM/ha/day last week. This growth rate is possibly slightly overstated as the farm was plated in the rain last week (adding weight to the plate) which could have resulted in covers being underestimated last week.
3. Average pasture cover is has lifted by 83kgDM/ha to 2198kgDm/ha (up from 2115kgDM/ha last week) after holding the cows at 1/20th of the farm a day and offering them approximately 20.5kgDM/cow/day.
4. This weeks Pasture Wedge



5. This week the feed wedge should allow us to lengthen round to 21 days (from 20 days last week). The bulge above the target line at the lower end of the graph is mostly due to higher residuals being left on wet weather days.

6. Over the next two weeks we are aiming to increase the round length up to 25-26 days in anticipation of having to take out new area for crops (30 ha). This will mean that when the new crop area is excluded from the grazing round, we will continue to be able to allocate the same area per day. The rotation length will drop to 22 days which will still be long enough to cope with periods of colder weather. We need an average growth rate of 64 kg DM per day over the next two weeks, (5 kg above demand) to achieve this goal. This target of 64 a day is less than the average growth rate for the first half of November calculated from Woodland pasture growth data.
7. The farm is now well set up to maintain pasture residuals and so to maintain pasture quality over the next few weeks. Our aim is to eat the developing seed heads before they appear. When this is done the grass tillers go back to vegetative growth and a new generation of daughter tillers are encouraged to develop. These new tillers are the source of the summer growth in ryegrass pastures.
8. Only 25% of the grazing residuals this week have been in the target height range of between 3.5 to 4 cm of compressed height when measured with a platometer (1480 to 1620 kg DM/ha) due to wet weather. The remaining residuals are only just above 4 cm of compressed height (or “8 clicks” or 1620 kg DM/ha) and occurred during periods of heavy rain. These high residual paddocks have been noted on the farm notice board and the residual will be re-established with the help of a mower either when the paddock is made into silage or mowed to target residual before or after a grazing. We are expecting to use the mower to commence “bottoming” some paddocks to maintain pasture quality from now on, where necessary. We aim to use the mower in front of the cows between 12 and 24 hours prior to grazing.
9. We have been targeting correct allocation for 12 or 24 hour feeds, but will continue to put cows back into paddocks to achieve the target residuals if weather conditions allow.
10. The allocations above residual are continuing at 22 kg DM/cow/day to the big herd (older, larger cows that have been calved longer) and 18kg DM/cow/day to the small herd (heifers, lighter cows and late calvers) which means that we require a pre-grazing cover of 2750 kg DM/ha and average cover of 2125 kg DM/ha, based on a stocking rate of 2.9 cows per ha and rotation of 21 days averaging 20.5 kg DM / cow / day offered.
11. We have applied a total 4.5 t urea this week at a rate 37 kg N/ha (80 kg urea/ha) following the cows this week. We are putting on a higher rate than previously (50 kg urea per ha) as we need to grow more than demand in order to ideally lift cover back to that required for a 24 -25 day round to prepare for next winter’s cropping paddocks being taken out of the round. We are also aiming to generate a surplus to harvest for autumn silage and baleage for the crop paddocks.
12. Milk solids production has dropped to 1.90 kg MS/cow/day from 1.97 kg MS/cow/day last week. Per hectare production has dropped from 5.4 kg MS /ha/day to 5.3 kg MS/ha/day. We believe this is due to a range of factors such as weather, fluctuating milking times due to power outages, cows being held in the yards for long periods while checking anoestrus cows and the high level of oestrous activity in the herd.

13. The cows are continuing to receive 120 gm /cow/day of MgCl flake through the inline dispenser. We have discontinued dusting MgO due to the inclement weather conditions. MgO and Lime-flour are still on hand if dusting again required.
14. Our contractor has yet to complete cultivation and sowing last winter's crop paddocks back into pasture. The hold is due to the wet weather resulting in soil conditions being too wet for proper cultivation.
15. Heifers have been synchronised and started mating on Sunday to premier sires Jersey.
16. All non-cycling cows were pulled out on 25th October, 310 checked 8 days before planned start of mating (PSM). All were palpitated and 134 treated with CIDRs. Most others were 'very active' so were not treated. CIDRs are planned to be pulled tomorrow, a day before PSM.
17. Planned Start of Mating (PSM) is the 2nd November.
18. Cows have been Condition Scored by Vet – Herd one was 4.3, and Herd two 4.4.

The next WEEKLY farm walk is on Wednesday, **7th November 2007 at 9.00am**

Management Group

David Newport, (Farm Manager), Alex Hunter (Consultant for Trust), Peter Macfarlane, Adrian van Bysterveldt (Dexcel), Brad Houghton (Herd Manager).

Farm Walk Notes

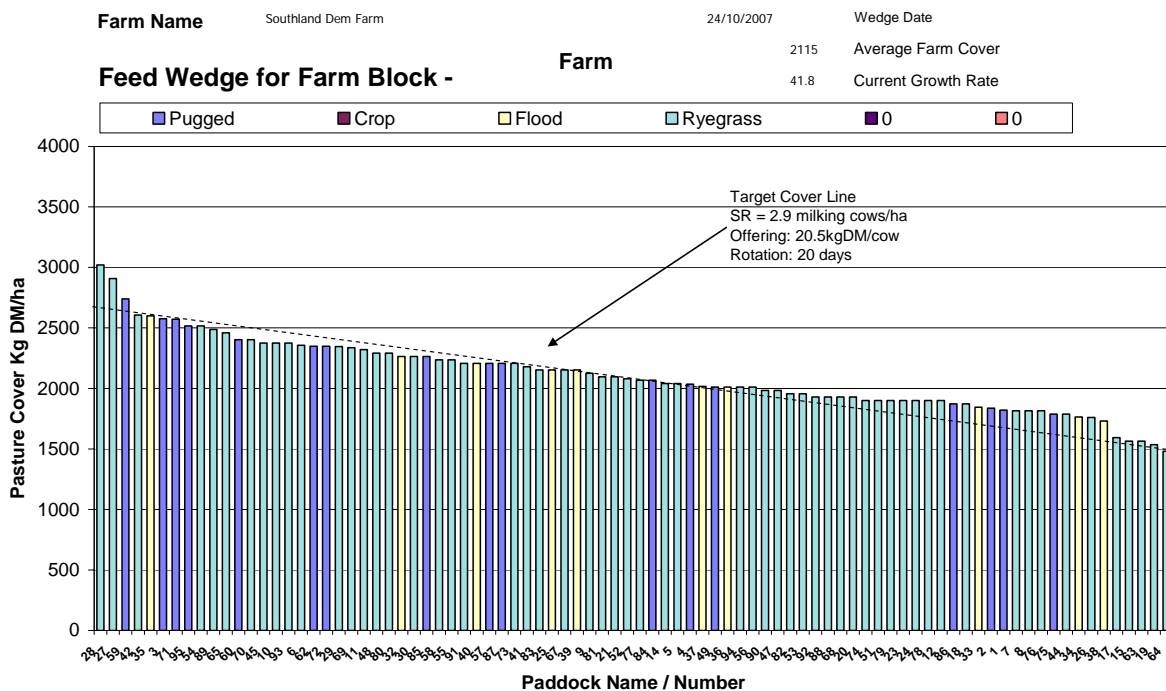
Wednesday, 24th October 2007

Critical issues for the short term

1. **Final arrangements for synchronised heifer matings**
2. **Vet inspect and treat non-cycling cows with CIDR's**
3. **Update pre-mating heat charts**

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

4. Soil temperatures have dropped to an average of 10.2°C as a result of the continued cold wet weather this week.
5. The pasture growth rate was 41.8 kgs DM /day, down from 47 kg DM per day last week. This was well below our demand of 58kg/day.
6. Average pasture cover has dropped further to 2115kg DM/ha (down from 2178 kg DM / ha last week) after grazing the cows on 1/24th of the farm a day and offering them approximately 20.5kgDM/cow/day.
7. This weeks Pasture Wedge:



8. With the drop in average cover and change in the feed wedge we have decided to speed up to a 20 day rotation rather than staying on a longer round and adding supplements. This will mean that our current pre-grazing covers are close to target as is our average cover target of 2094 kg DM per ha. By targeting a longer rotation of 24-26 days over the last 3 weeks we have been able to use some of the extra cover to buffer the deficit caused by the poor growth rates over the past 2 weeks without having to add supplement.

9. We do not want to graze any faster than a 20 day round so will consider putting in supplement next week if cover has dropped further. We will be testing the quality of the remaining silage in the stack and the baleage which we made 2 weeks ago. We will feed the highest quality feed available if need be as we want to minimise any drop in energy intake by the herd coming up to mating.
10. We are expecting growth rates to lift over the next two weeks, given the time of year and favourable long range weather forecast, so will look at extending the rotation back out to 24 days as soon as possible which will once again provide us a buffer of cover in case of more bad weather and its effect on growth rates.
11. The shape of the pasture wedge is almost perfect for a 20-day rotation. We do however have a small deficit in a few days time which will be covered by taking slightly longer to graze the first few paddocks which are above the target line.
12. Residuals have been on target over the past 2 days, but were a bit high earlier in the week with the wet weather as can be seen in the group of paddocks with covers above target at the bottom of the wedge. This is not unexpected due to the wet ground conditions, which make achieving 7-click residuals difficult. We have made a decision to leave slightly higher residuals if necessary in wet conditions as putting cows back into paddocks to clean up will cause more harm than good.
13. We are offering 22 kg DM/cow/day to the big herd (older, larger cows that have been calved longer) and 18kg DM/cow/day to the small herd (heifers, lighter cows and late calvers) which means that we require a pre-grazing cover of 2660 kg DM/ha and average cover of 2080 kg DM/ha, based on a stocking rate of 2.9 cows per ha and rotation of 20 days averaging 20.5 kg DM / cow / day offered.
14. We will apply urea at a rate 37 kg N / ha (80 kg urea / ha) following the cows as soon as weather conditions permit to those paddocks on the lower half of the feed wedge. We are putting on a higher rate than previously (50 kg urea per ha) as we need to grow more than demand in order to ideally lift cover back to that required for a 24 day round. We are also aiming to generate a surplus to harvest for autumn silage and baleage for the crop paddocks.
15. Milk solids production has lifted to 1.97 kg MS/cow/day from 1.94 kg MS/cow/day last week. Per hectare production has risen from 5.3 kg MS /ha/day to 5.4 kg MS/ha/day.
16. The cows are continuing to receive 120 gm /cow/day of MgCl flake through the inline dispenser plus dusting 90 gm MgO /cow/day in front of the cows.
17. Pre-mating heats have been recorded for the herd over the last four weeks. The vet will inspect all non-cyclers this week (a week prior to official mating start), which have been calved over three weeks, and any cows identified as showing no signs of the onset of oestrous will be CIDR treated.

The next WEEKLY farm walk is on Wednesday, **31st October 2007 at 9.00am**
Management Group

David Newport, (Farm Manager), Alex Hunter (Consultant for Trust), Adrian van Bysterveldt, Peter Macfarlane (Dexcel), Brad Houghton (Herd Manager).

Farm Walk Notes

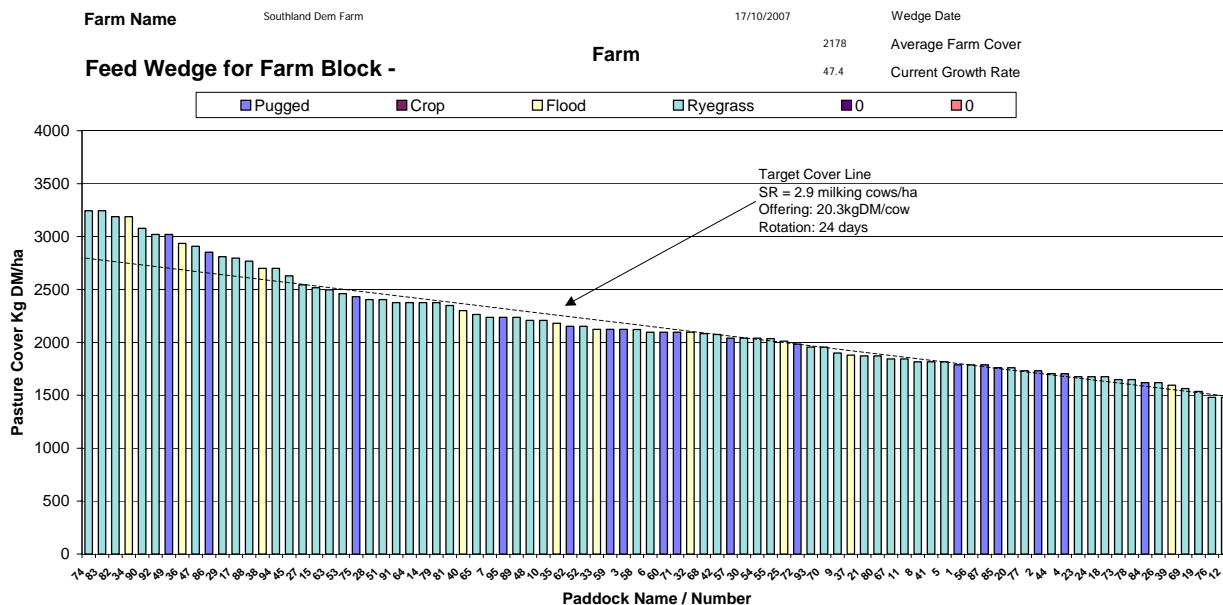
Wednesday, 17th October 2007

Critical issues for the short term

1. **Order semen for mating.**
2. **Empty effluent drain**
3. **Complete and update herd records prior to mating start**

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

4. Soil temperatures have held at 10.6°C despite cold, wet weather at times.
5. The pasture growth rate was 47 kg DM /day (72 last week) with no sign of Nitrogen deficiency (due to input of 50 kg urea per ha applied last round).
6. Average pasture cover is now 2178 kg DM per ha (down from 2482 kg DM / ha last week) after holding the cows at 1/24th of the farm a day and harvesting 253 bales of silage (37.5t DM)
7. This weeks Pasture Wedge



8. The shape of the pasture wedge is almost perfect and indicates that harvesting the silage was exactly the correct decision. Our average cover is also at target.
9. The farm is now well set up to maintain pasture residuals and so to maintain pasture quality over the next few weeks. Our aim is to eat the developing seed heads before they appear. When this is done the grass tillers go back to vegetative growth and a new generation of daughter tillers are encouraged to develop. These new tillers are the source of the summer growth in ryegrass pastures.
10. Over 90 % of the grazing residuals have been in the target height range of between 3.5 to 4 cm of compressed height when measured with a platometer (1480 to 1620

- kg DM/ha). The remaining residuals are only just above 4 cm of compressed height (or “8 clicks” or 1620 kg DM/ha) and occurred during periods of heavy rain. These few high residual paddocks have been noted on the farm notice board and the residual will be re-established with the help of a mower either when the paddock is made into silage or mowed to target residual before or after a grazing.
11. Growth rates can still be variable, so we are continuing with our 24 day rotation. This rotation length still provides us with a buffer of cover if growth rates fall below demand.
 12. We are offering 22 kg DM/cow/day to the big herd (older, larger cows that have been calved longer) and 18kg DM/cow/day to the small herd (heifers, lighter cows and late calvers) which means that we require a pre-grazing cover of 2895 kg DM/ha and average cover of 2187kg DM/ha, based on a stocking rate of 2.9 cows per ha and rotation of 24 days averaging 20.3 kg DM / cow / day offered.
 13. The baleage was cut last Wednesday afternoon, left one day and the baled on Friday. A grass sample was taken prior to mowing and the results back from ARL indicate that ME of the pasture was 11.9 MJ / kg DM, 21% crude protein, 45% NDF and 19.1% DM. It will be interesting to test the baleage once ensiled to record the change in quality from the original pasture sample.
 14. The pasture quality of 11.9 ME compares poorly with a pre-grazing pasture sample taken at the same time which had an ME of 12.7 MJ / kg DM, and was 25.9% CP, 37.5% NDF and 17.1% DM. This clearly shows that the longer the grass is left before making silage the lower the quality of that silage will be.
 15. The re-growth on pastures cut for silage has been close to farm average where these were still green to base. On the longest cover silage paddocks (over 4000 kg DM /ha) which were yellow at the base when cut, the re-growth has been about half of the farm average for the week. Under these higher covers new daughter tillers do not get enough light to survive. The high covers were because harvesting was delayed two weeks due to contractor availability and weather hold-ups.
 16. The mower height was set to match the grazing post grazing level – 50 mm or compressed height of 7 clicks on the RPM.
 17. Nitrogen has been applied at a rate of 23 kg N/ha (50 kg urea per ha) to 94 ha following the cows and 37 kg N / ha (80 kg urea / ha) following harvesting of the silage paddocks (28.75 ha). A total of 7 t of urea was applied by contractor.
 18. Milk solids production has dropped from 1.98 kg MS/cow/day 1.94 kg MS/cow/day. Per hectare production has risen from 5.28 kg MS /ha/day to 5.3 kg MS/ha/day.
 19. The cows are continuing to receive 120 gm /cow/day of MgCl flake through the inline dispenser plus dusting 90 gm MgO /cow/day in front of the cows.
 20. Contractor has completed ripping and ploughing last winter’s crop paddocks, and these are getting close to ready for sowing into permanent pasture.

The next WEEKLY farm walk is on Wednesday, **24th October 2007 at 9.00am**
Management Group

David Newport, (Farm Manager), Alex Hunter (Consultant for Trust), Adrian van Bysterveldt (Dexcel), Brad Houghton (Herd Manager).

Farm Walk Notes

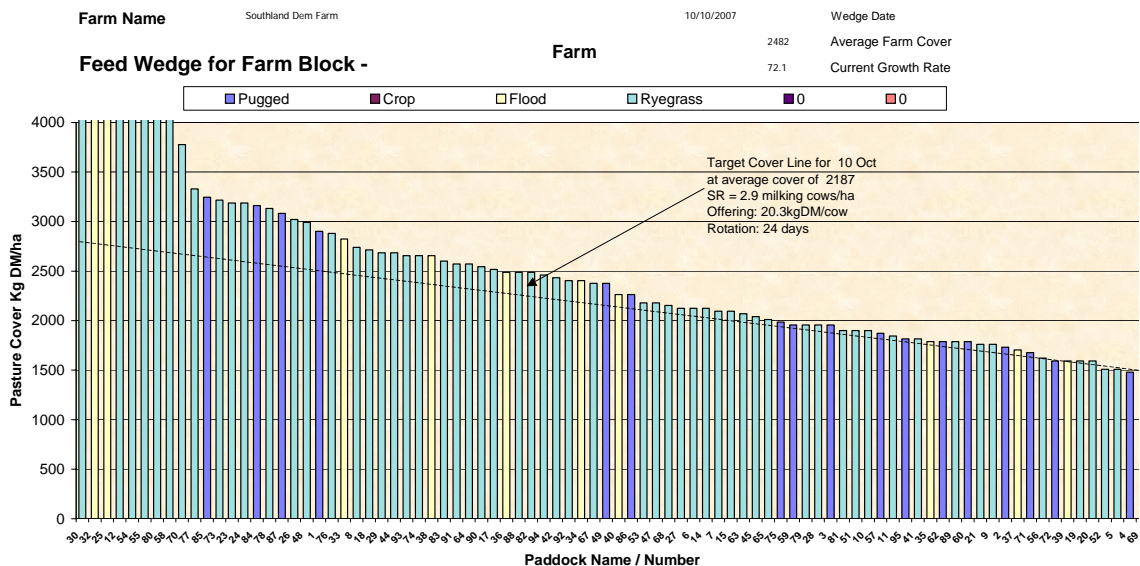
Wednesday, 10th October 2007

Critical issues for the short term

1. **Contractor to harvest surplus grass.**
2. **Meeting with Vet to discuss mating plans for herd and replacement heifers.**
3. **Pre-mating heats are being recorded.**
4. **51 cows treated with Metricure after full herd check by vet.**

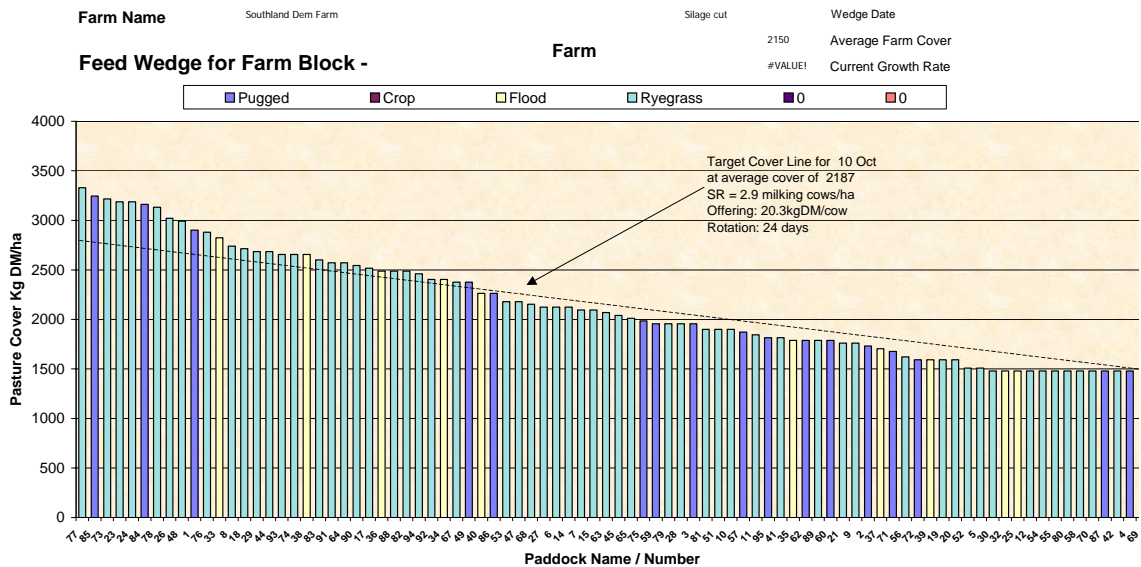
Summary of Key Factors affecting Grazing Management & Animal Performance
--

5. Soil temperatures have held at 10.5°C despite cold, wet weather over the weekend.
6. The pasture growth rate was 72 kgs DM /day (80 last week) with no sign of Nitrogen deficiency (due to input of 50 kg urea per ha applied last round).
7. Average pasture cover has risen for the third week in a row (no supplement harvested last week as planned) and is now 2482 kg DM per ha (up from 2413 kg DM / ha last week) which is 295 kg DM /ha above our target cover for this week which equates to a standing surplus of 75t DM.
8. The surplus identified last week has still not been harvested due to the unsuitable weather. However, with three days dry weather forecast as from today, the contractor is currently mowing 28.75 ha (11%) of the farm.
9. This weeks Pasture Wedge



10. The shape of the pasture wedge again indicates a further change over the past week as a result of pasture growth exceeding demand (budgeted growth was 53 kg DM/ha/day (including N)).

11. Growth rates can still be variable, but given that theoretical balance date (growth = demand) for the farm has now passed, we have decided to target a slightly faster rotation length than last week, going from 26 days to 24 days this week. This rotation length still provides us with a buffer of cover if growth rates again fall below demand.
12. We are targeting to offer cows 22 kg DM/cow/day to the big herd (older, larger cows that have been calved longer) and 18kg DM/cow/day to the small herd (heifers, lighter cows and late calvers) which means that we require a pre-grazing cover of 2895kgDM/ha and average cover of 2187kgDM/ha, based on a stocking rate of 2.9 cows per ha and rotation of 24 days averaging 20.3 kg DM / cow / day offered.
13. The following wedge is what the farm will look like once the 28.75 ha is mowed for silage today. The average farm cover after silage removal will be 2150 kg DM / ha, close to our target of 2187 kg DM / ha.



14. There are still some paddocks above the ‘trigger level’ of 2895 kgs DM /ha that we have not cut for silage at this stage due to the requirement to hold a slight buffer of pasture at the top end of the wedge should growth conditions change. Also, as mentioned last week most of these paddocks are either too rough to mow properly by the contractor or because these pastures are very clumpy. We also have paddocks at the bottom half of the wedge falling below the cover line and these will receive 50 kg urea per ha within the next two days.
15. Making early silage is definitely proving to have significant weather challenges which we will try to manage in several ways as mentioned in last weeks notes. We have consulted the available weather forecasts and believe now is the time to mow, accepting that there is some risk to this. The contractor is utilising a mower conditioner and we aim to make the silage (weather permitting) after 48 hrs even though the silage will not have wilted to the ideal % because again research has consistently shown that after this point “in field” losses will be much greater than losses in the bale or stack. Silage innoculant will be used, and an extra layer of wrap will be added to the baled silage to reduce the impact of in-bale losses.

16. We will continue to apply 23 kg N/ha (50 kg urea per ha) following the cows and 35 kg N / ha (75 kg N / ha) following harvesting of the silage paddocks.
17. Milk production has lifted from 1.94 kg MS/cow/day last week to 1.98 kg MS/cow/day and from 4.9 MS/ha/day to 5.28kg MS /ha/day.
18. The cows are currently getting 120 gms /cow/day (up from 66 gm last week) of Mg Cl flake through the inline dispenser plus dusting 90 g MgO / cow / day in front of the cows. We continue to get the odd case of milk fever and also lost a cow in the herd due to metabolic problems, and this has led to the increase in use of magnesium.
19. Last winter's crop paddocks have been ripped this week as part of their cultivation prior to going back into permanent pasture.
20. The oldest calves (45) that were weaned onto grass and ad-lib meal last week have been sent to grazing off farm, continuing to get access to meal and hay. Another mob of 60 calves to be put outside today.
21. Herd has been metri-checked this week. 135 cows were identified as being at risk (difficult calvings, RFMs, twins and inductions), and final numbers for treatment was 51 out of the entire herd.
22. Pre-mating heats are being carried out – cows have been initially painted red as 'non-cyclers', being painted blue when a pre-mating heat is observed. All pre-mating heat dates are being recorded.
23. A total of two paddocks (5 ha) have been boom-sprayed for scotch thistle control.
24. Wayne Nichol, Agronomist from Wrightson Seeds, has walked the farm this week noting each paddock conditions, as part of putting in place a 10 year programme for pasture renovation and winter cropping. Next winter's crop paddocks have been identified.

The next WEEKLY farm walk is on Wednesday, **10th October 2007 at 9.00am**

Management Group

David Newport, (Farm Manager), Alex Hunter (Consultant for Trust), Peter Macfarlane and Adrian van Bysterveldt (Dexcel), Brad Houghton (Herd Manager).

Farm Walk Notes

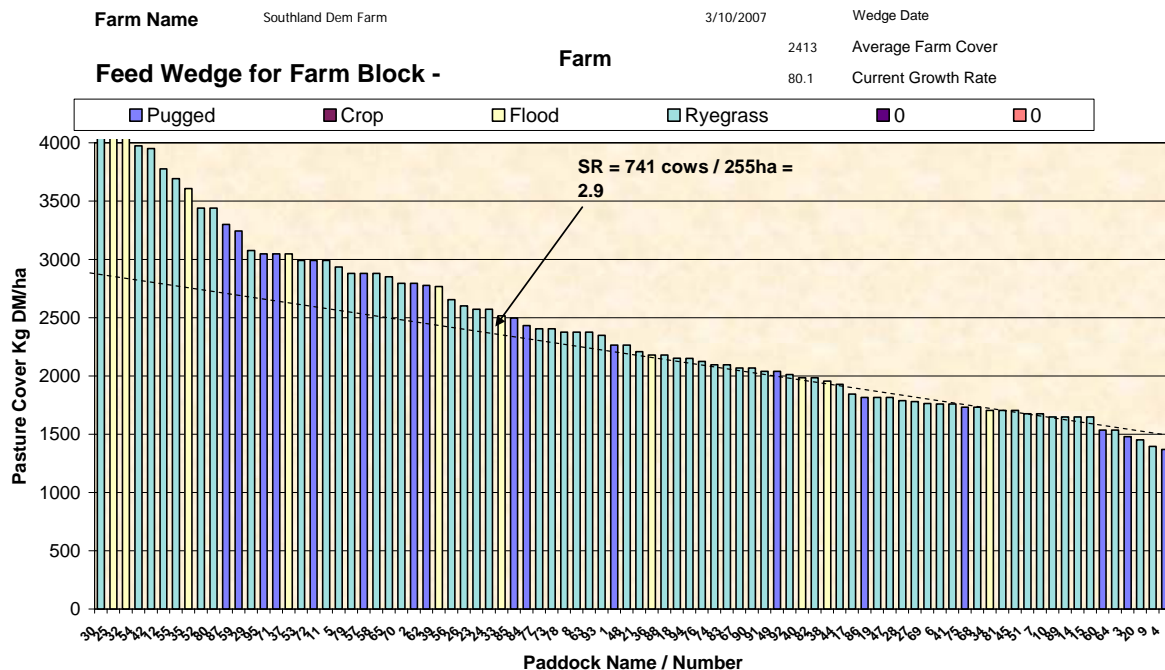
Wednesday, 3rd October 2007

Critical issues for the short term

1. **Identify and harvest surplus grass.**
2. **Cultivate last winters crop paddocks for re-grassing.**
3. **Metri-check all calved cows and treat according to vets recommendation.**
4. **Mating plan including treatment of non-cycling cows finalised.**

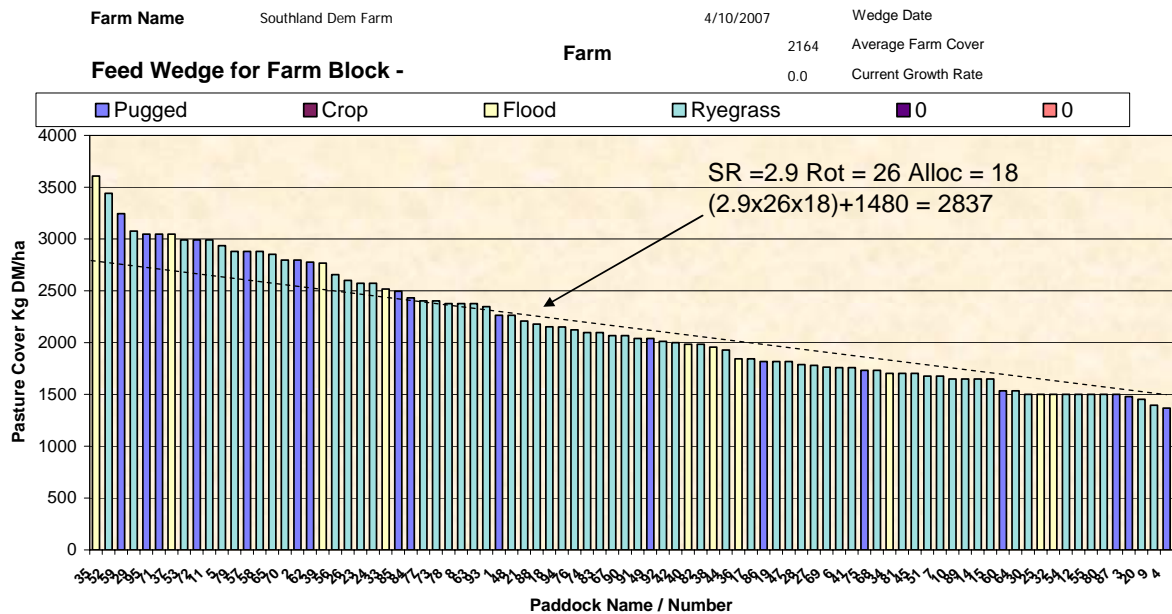
Summary of Key Factors affecting Grazing Management & Animal Performance
--

5. Soil temperatures have held at 10.5°C.
6. The pasture growth rate was 80 kgs DM /day (75 last week) with no sign of Nitrogen deficiency. Clover is also growing rapidly.
7. Average pasture cover has risen for the second week in a row and is now 2413 kg DM per ha (up from 2305 kg DM / ha last week), and is now 273 kg DM /ha above our target cover for this week which is standing surplus of 70t.
8. The surplus identified last week was not harvested as no contractors contacted were ready to operate.
9. This weeks Pasture Wedge



10. The shape of the pasture wedge has again changed drastically over the past week as a result of pasture growth exceeding demand (budgeted growth was 45kg DM/ha/day (including N)).
11. Growth rates can still be variable and so we have decided to target a 26 day rotation at present. This rotation length provides us with a buffer of cover if growth rates again fall below demand.

12. We are targeting to offer cows 18kg DM/cow/day which means that we require a pre-grazing cover of 2840kgDM/ha and average cover of 2150kgDM/ha.
13. We need to remove a large area of the farm from the grazing round. It is still too early to cultivate for next winters crops so the only option is to turn this surplus into silage. The following wedge is what the farm would look like if we did 24 ha as silage today (9% of the farm). This is different than identified last week because this week we have only selected those paddocks that are suitable for making silage. Consequently, the average farm cover after silage removal will be higher than indicated last week.



14. By cutting this immediately we will drop our average cover to 2164 kg/DM/ha which is 20 above our current target. The weather forecast for the next week is not as favourable as last week but we still expect our growth rates to be above demand and be about 60 kg DM /ha/day.
15. There are some paddocks above 3000 kgs DM /ha that we have not taken as silage. This is because these paddocks are either too rough to mow properly by the contractor or because these pastures are very clumpy. The problem with the clumpy paddocks is that there is a huge difference between the cover in the clumps and the cover between the clumps. If we were to cut this for silage we would have very high in paddock losses of the short grass between the clumps.
16. The decision has been made to remove surpluses as lighter crops to get these paddocks back into the grazing round rather than to go for heavier silage crops. To successfully maintain pasture quality without putting the farm at risk of a pasture shortage is the objective. Some of these high cover paddocks are also in the flood prone area of the farm and if flooded in this state would result in a loss of valuable grass. The Oreti River is regularly threatening to flood across the farm.
17. When paddock covers get above 4000 kg DM /ha canopy closure will have occurred and then three undesirable things will result. These are stem elongation, yellowing at the base, and daughter tiller death.

18. Stem elongation and yellowing of the base will result in much slower re-growth after the silage has been removed. This is the most important time of the year for daughter tiller growth. These new tillers are a key to summer growth so leaving high covers (and high residuals) which result in daughter tiller death will reduce that paddocks ability to grow grass in the late spring, summer and autumn.
19. Making early silage does have significant weather challenges which we will try to manage in several ways. Firstly, we will consult the available weather forecasts but will still be prepared to take some risk. Secondly, we will encourage wilting by using a mower conditioner and tedding the grass soon after it has been mown. Research trials consistently show that the practice of tedding after a mower conditioner improves wilting efficiency by 55% compared with not tedding. Thirdly, we will make the silage after 48 hrs even though the silage has not wilted to the ideal % because again research has consistently shown that after this point “in field” losses will be much greater than losses in the bale or stack.
20. We will continue to apply 23 kg N/ha following the cows and also following harvesting of the silage paddocks.
21. Milk production has lifted from 1.93 kg MS/cow/day last week to 1.94 kg MS/cow/day and from 4.7 MS/ha/day to 4.9 kg MS /ha/day.
22. The cows are currently getting 66 gms /cow/day of Mg Cl flake through the inline dispenser. This has been reducing from a higher level as more cows have gone in the herd. The rate will be increased to over 100 gms /cow/day. Two things to be aware of with administering Mg through inline dispensers is firstly the impact of water leaks and secondly the fact that cows drink much less water on cold wet days compared with warm sunny days. Cow water consumption can vary from 10 litres /cow/day to 50 litres /cow/day (from 3 years of data collection at LUDF). At a consumption of 10 litres of water /cow/day some cows will not have got much Mg and will be at risk of grass staggers.
23. Bloat oil will be added to the water supply through the inline dispenser.
24. Six light cows (below Condition Score 4.0) have all been found to be lame and have been put into the mob being milked OAD.
25. The crop paddocks will be ripped, ploughed and cultivated as soon as weather will allow.
26. The oldest calves have been weaned and are out on grass but also getting ad lib meal.
27. Pugged areas have not yet had short rotation ryegrass seed applied. We will be under sowing and rolling with a Cambridge roller where appropriate. These areas will also be targeted for aeration.

The next WEEKLY farm walk is on **Wednesday, 10th October 2007 at 9.00 am.**

Management Group

David Newport, (Farm Manager), Alex Hunter (Consultant for Trust), Peter Macfarlane and Adrian van Bysterveldt (Dexcel), Brad Houghton (Herd Manager).