

Weekly Farm Summary 10 January 2024

Farm-system impacts of: Bales vs Beet for winter AND Reducing N loss to water by 30%.

	Std Infrastructure Blue	LI Baleage Pink	Std FB Green	LI FB Yellow
Farmlet area including wintering	49.3	93.6	86.9	60.8
Peak cow numbers	139	208	233	136
Milking Area	43.5	82.0	69.5	52.1
Current Herd size (cows)	138	208	232	136
Pasture Stocking rate (current)	3.2	2.5	3.3	2.6
Winter Feed Milking supplement	Baleage	Baleage	Beet	Beet
	In-shed feed 500kg/cow + silage as required			
Average Cover (kgDM/ha)	2528	2457	2547	2468
Average Growth (kgDM/ha/d)	102	73	108	93
Target rotation length (d)	24	30	26	29
Last week actual rotation (d)	23	27	24	29
Last week supp (kgDM/c)	1.3	2.8	3.0	4.7
Latest Average BCS	4.8	4.6	4.7	4.7
% of herd on priority management	20.1%	37.0%	30.7%	29.6%
% in Milk	100%	100%	100%	100%
7-day Average Milk yield (L/cow)	20.3	18.7	20.7	20.3
7-day Average Milk yield (kgMS/c)	1.90	1.75	1.95	1.92
Nitrogen Cap kgN/ha/yr	180	50	180	50
% Nitrogen used (kgN/ha) YTD	41% (74kg)	66% (33kg)	39% (70kg)	70% (35kg)
Effluent N YTD	3	7	7	5
YTD Pasture growth TDM/ha	7.9	7.4	7.8	7.4
YTD supp (kg DM/c)	364	317	466	358
YTD MS/c	280	257	284	279
YTD MS/milk ha (YTD MS/farm ha)	842 (743)	679 (595)	931 (745)	740 (634)
Focus area	Current Status			
Milk Production	After a drop in milk yield for all herds about 14 days ago we have seen a lift in production in the two standard herds and the LI fodder beet in the last few pickups. However, production in the LI Baleage herd continues to be below the other herds with cows not responding to increased feed allocation. We are in the process of identifying low producing potential culls ahead of the first pregnancy scan. This will enable us to be proactive with culling as information comes through.			
Pasture & Feed	Pasture growth has gone crazy in the last week following 64 mm of rain since just before Christmas. With soil temperature sitting around 18 C conditions are perfect for good grass growth. Nitrogen has continued to be applied to the standard farmlet, but no N will be applied to the LI farmlets until at least the end of February. Topping, conservation, and N decisions are being reviewed on a weekly basis as weather conditions change.			
Animals	We are still getting cases of white line lameness across all the herds however the frequency of these has slowed since pre-Christmas. We are currently doing some investigation and costing the option of including Biotin in our trace element mix to help support stronger hoof growth.			
Environment	Effluent pond level is well under control with current levels allowing 2 runs per day. When the level drops below 35% full this will drop to one run per day.			
Wintering	Removing bolters from the fodder beet paddocks is a priority this week. With two paddocks being second year beet that both had surplus beet lifted from part of them in spring, the remnant bulbs have sprouted and sent up seed heads.			
People	This week we welcomed DJ to the farm team which is perfect timing as Billy is about to head off for a much-deserved break. With often only 2 people rostered on each day over the holiday period the team have done a great job keeping on top of everything and making grazing management changes as growth conditions changed between farm walks.			
Research	It has been a quiet few weeks on the research front but starting next week we will be doing botanical composition analysis on every paddock before it is grazed.			

Milk production

Principles of Milk Production management this week

<p>Milk production</p>	<p>Cumulative milk production for the season continues to track ahead of budget and last seasons production. Of the farmlets all but the LI Baleage herd are ahead on production season date. Current milk solids per cow season to date ranges from</p>
<p>Key Influences of Milk Production</p>	<p>We attribute the lift in production this week to improvements in pasture quality following the rain. Inshed feed has been rationed to ensure we did not run out before the delivery due tomorrow. Managing the decline from peak is going to be critical to achieving the end of season milk solids target. With seed head still emerging in the mid/late season cultivars and weed grasses across the farm grazing management is going to be critical to ensure we continue to offer good quality pasture through the summer.</p>
<p>Cow Management</p>	<p>No change, TAD milking frequency with continued monitoring cow BCS on the fortnightly basis and adjusting the priority feeding and OAD milking groups as required.</p>

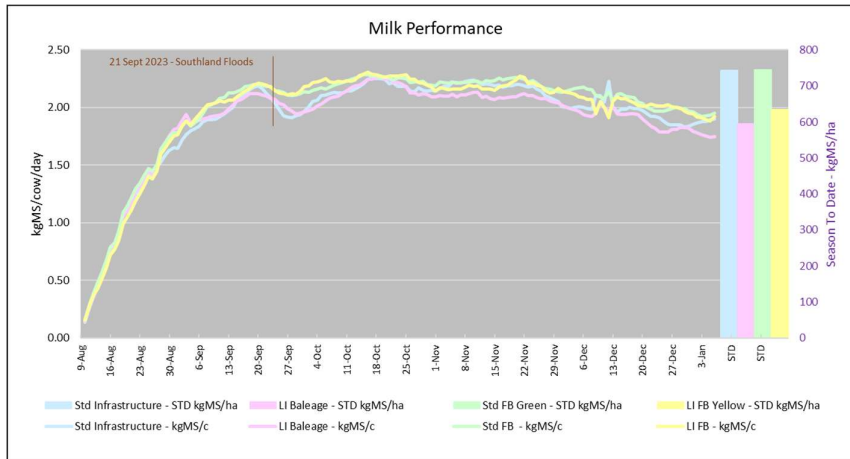


Figure 1. Milksolids per cow/day STD and kgMS/ha STD

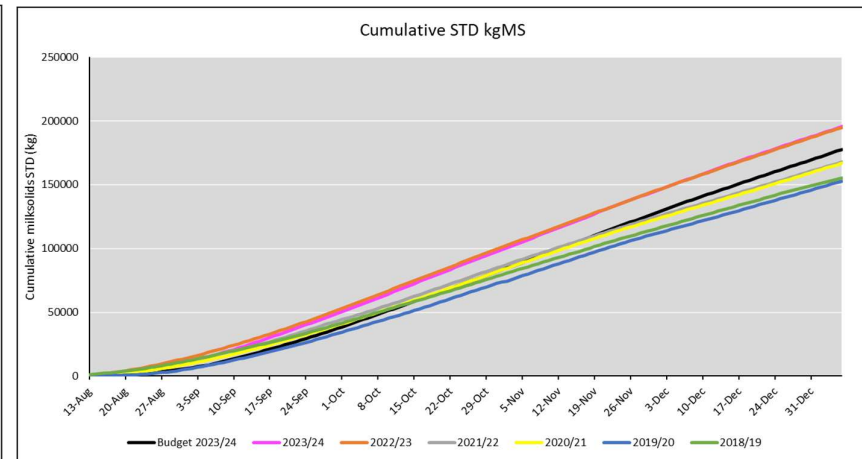


Figure 2. Cumulative kg Milksolids & Budget season to date

Feed Management

Principles of Feed management this week

<p>Feed Quality</p>	<p>There is a huge range in pasture quality between paddocks and farmlets with previous management, N regime, pasture species and age all contributing to the range. With the rapid increase in pasture growth, we have been caught out in a few paddocks with high residuals so have resumed topping in the short term to correct these. Pasture for the spring silage stack has been sampled to determine quality ahead of committing to purchasing it.</p>
<p>Growth Rate</p>	<p>As posted earlier in the week pasture growth has gone crazy in the last week with average growth ranging from 73 to 108 kg DM/day across the farmlets. As seen in previous years it is through this summer period that we really start to see higher growth in the Std farmlets than the LI farmlets. Last spring's new grass paddocks are continuing to perform well with good amounts of clover and plantain in most of them. It is nice to see improved growth in the paddocks we aerated in the spring after a couple of rounds of slower growth immediately after the aeration. It is over the next couple of months that we really notice the impact of soil compaction on pasture growth. The rapid change in growth has really caught us out with the grazing of this season's new grass paddocks that are currently on withhold after weed spraying early in the new year. They will require more than a nip off grazing when we can start grazing them next week.</p>
<p>Nitrogen Strategy</p>	<p>The third application of N for the LI farmlets was completed before Christmas and we are currently part way through the 5th application for the standard farmlets. While we continue to have good soil moisture and temperature, we will continue to apply N.</p>

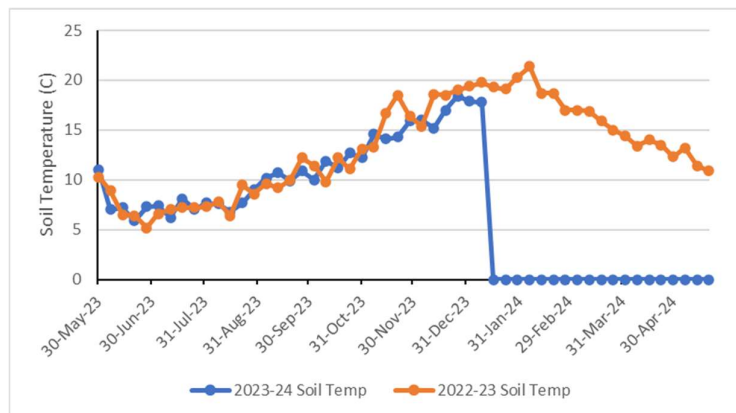


Figure 3. Soil temperatures 2023-24 vs 2022-23

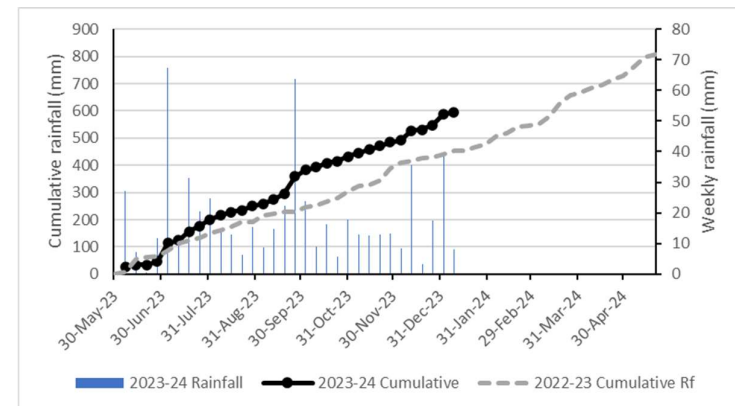
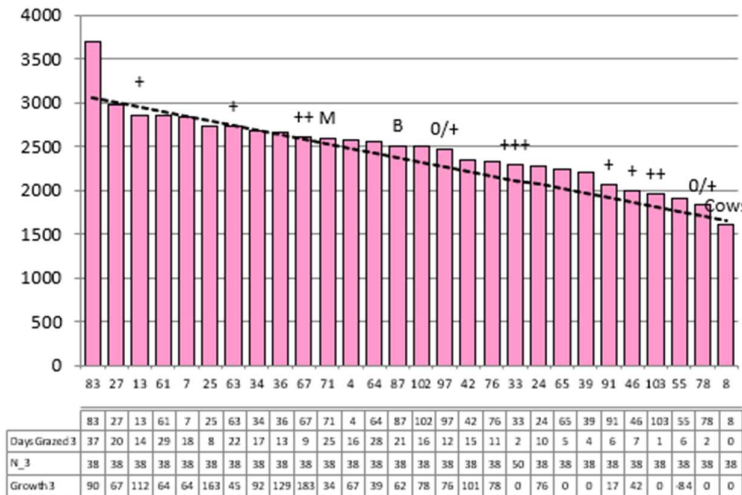


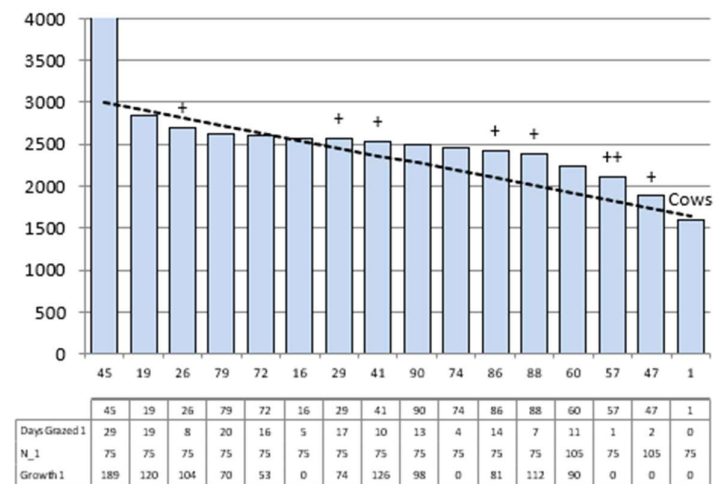
Figure 4. Season to date rainfall compared with cumulative rainfall 2022-23

Feed Wedges

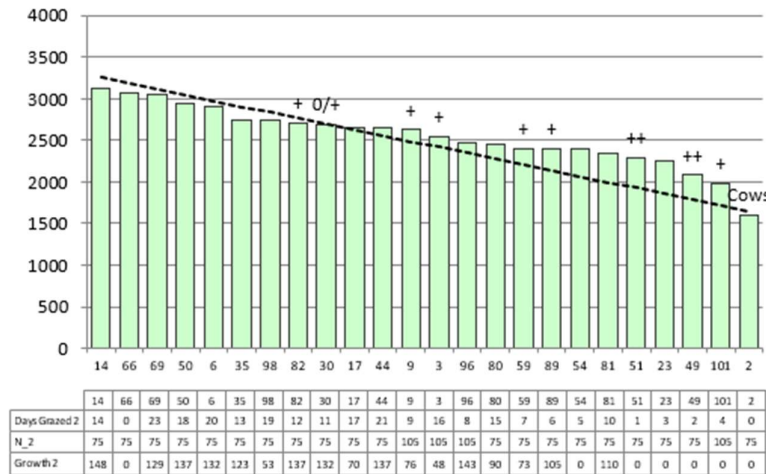
Lower Impact Baleage



Standard Infrastructure



Standard Fodder Beet



Lower Impact Fodder Beet

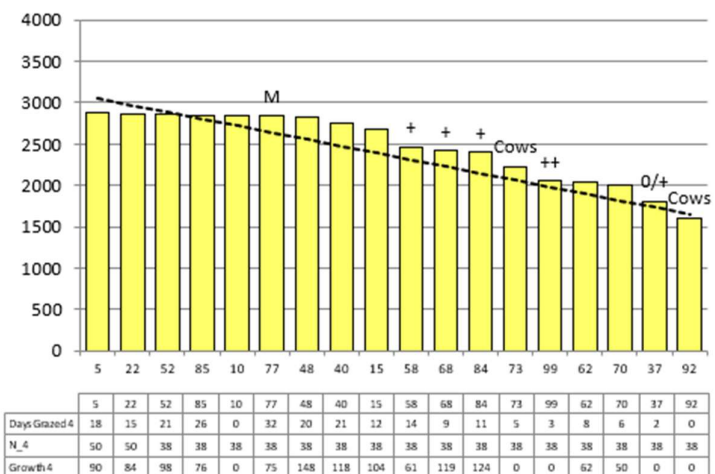


Figure 5. Plate meter feed wedges as at 9th January 2024

Pasture quality and growth

Seasonal pasture growth and quality

After a slower growth period during October, we have seen above average growth for November and December for both the Standard and Lower impact (LI) farmlets. Weather conditions have enabled us to continue with N fertiliser applications to both farmlets with the LI farmlets having received 75% (37.5 kg N) of their annual 50 kg N allowance while the standard farmlets are finishing their 5th applications (105 kg N/ha season to date).

While cumulative growth to date is 6-700 kg DM ahead of the long-term average, for both systems we are slightly behind cumulative growth of the 2022-23 season (Table below).

On the pasture quality front, the 5th round pastures have increased in DM% but are lower in metabolisable energy, driven by much lower nonstructural carbohydrates and soluble sugars. Crude protein has remained relatively consistent around 21-22%.

Table 1: Cumulative pasture growth compared with previous years.

	180-190 kg N						50 kg N					
	Mean	2019-20	2020-21	2021-22	2022-23	2023-24	Mean	2019-20	2020-21	2021-22	2022-23	2023-24
June	9	6	12	10	7	12	9	7	9	11	5	13
July	10	12	7	12	10	11	9	10	8	9	9	11
August	17	13	19	19	13	20	17	14	19	18	15	20
September	30	29	31	31	39	35	29	26	32	30	37	35
October	57	56	50	65	61	51	53	50	50	58	59	50
November	65	69	67	59	66	74	59	62	61	53	63	63
December	53	53	57	50	69	59	43	48	44	37	60	50
January	55	50	73	43	31		44	44	52	37	30	
February	49	51	57	41	31		40	42	41	36	29	
March	39	42	51	23	43		32	32	42	22	39	
April	33	42	33	24	51		28	33	32	20	46	
May	24	23	24	25	31		22	20	21	24	30	
STD (kg DM/ha)	7376	7321	7400	7486	8063	7987	6664	6705	6789	6577	7539	7377
Total (kg DM/ha)	13408	13479	14535	12264	13744		11655	11776	12419	10816	12793	
Diff to 4 yr Average						612						713
Diff to 2022-23						-76						-162

Pasture quality and growth

Table 2: Pasture quality from standard and lower impact monitor paddocks for each grazing

		DM (%)	ME (MJ/kg DM)	Crude protein (% DM)	NDF (% DM)	ADF (% DM)	Ash (%)	NSC (% DM)	Soluble Sugars (% DM)
Standard	1st round	17.6	12.2	20.0	39.8	20.6	9.9	26.9	11.4
180 kg N/ha	2nd round	18.3	12.3	23.0	39.2	20.9	10.7	23.7	10.7
	3rd round	15.8	12.0	23.4	43.3	21.7	10.6	18.7	8.1
	4th round	18.0	11.5	22.3	47.6	24.3	10.6	15.7	4.0
	5th round	20.1	11.1	22.5	49.4	25.8	11.3	12.8	2.8
Range		8.7-23.3	10.6-12.9	13.2-29.5	34.6-55.9	18.8-29.0	8.6-13.5	4.7-34.5	0.8-16.2
Lower Impact	1st round	17.1	12.2	20.8	39.3	20.0	10.4	25.8	11.0
50 kg N/ha	2nd round	16.4	12.1	22.8	39.3	20.8	11.3	23.5	12.4
	3rd round	16.1	12.1	20.6	40.2	21.1	10.5	25.5	11.4
	4th round	17.7	11.3	22.3	47.8	24.9	11.5	14.7	3.9
	5th round	20.0	10.8	21.2	49.8	27.4	12.3	12.7	2.6
Range		11.8-23.7	10.4-12.9	16.7-25.7	32.8-52.9	17.8-28.8	8.8-14.9	5.9-34.8	1.3-22.1

Table 3: Pasture quality from monitor paddocks with and without plantain for each grazing

		DM (%)	ME (MJ/kg DM)	Crude protein (% DM)	NDF (% DM)	ADF (% DM)	Ash (%)	NSC (% DM)	Soluble Sugars (% DM)
With Plantain	1st round	17.8	12.3	19.3	38.1	19.5	9.8	29.4	12.4
	2nd round	16.3	12.0	21.7	39.7	21.0	11.1	24.2	12.2
	3rd round	12.0	12.2	21.9	39.0	20.4	10.7	25.0	11.3
	4th round	18.3	11.2	18.6	46.8	25.3	11.4	20.0	5.9
	5th round	19.6	11.3	23.3	47.3	25.6	12.5	12.8	2.8
Range		8.7-23.0	10.6-12.7	13.2-25.6	32.8-51.6	17.8-29.0	8.6-14.9	9.5-34.5	2.3-22.1
No Plantain	1st round	17.0	12.1	21.2	40.6	20.8	10.3	24.2	10.4
	2nd round	18.2	12.4	23.8	38.9	20.7	10.9	23.1	11.0
	3rd round	17.6	12.0	21.8	42.5	21.7	10.5	21.7	9.5
	4th round	17.6	11.5	24.5	48.3	24.1	10.8	12.4	2.8
	5th round	20.3	10.8	21.3	50.8	26.8	11.2	12.7	2.7
Range		13.2-23.7	10.4-12.9	16.7-29.5	24.6-55.9	18.8-28.8	8.8-13.5	4.7-34.8	0.8-18.0

Latest BCS

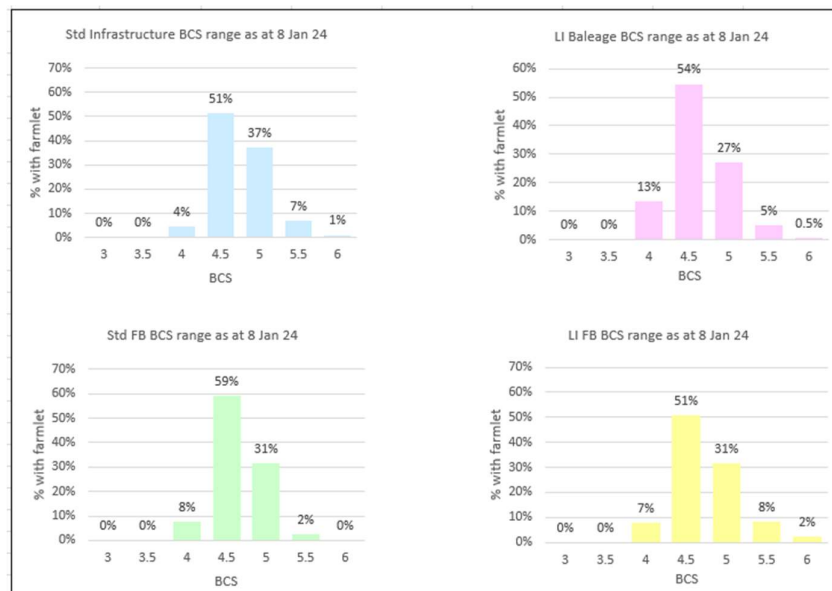
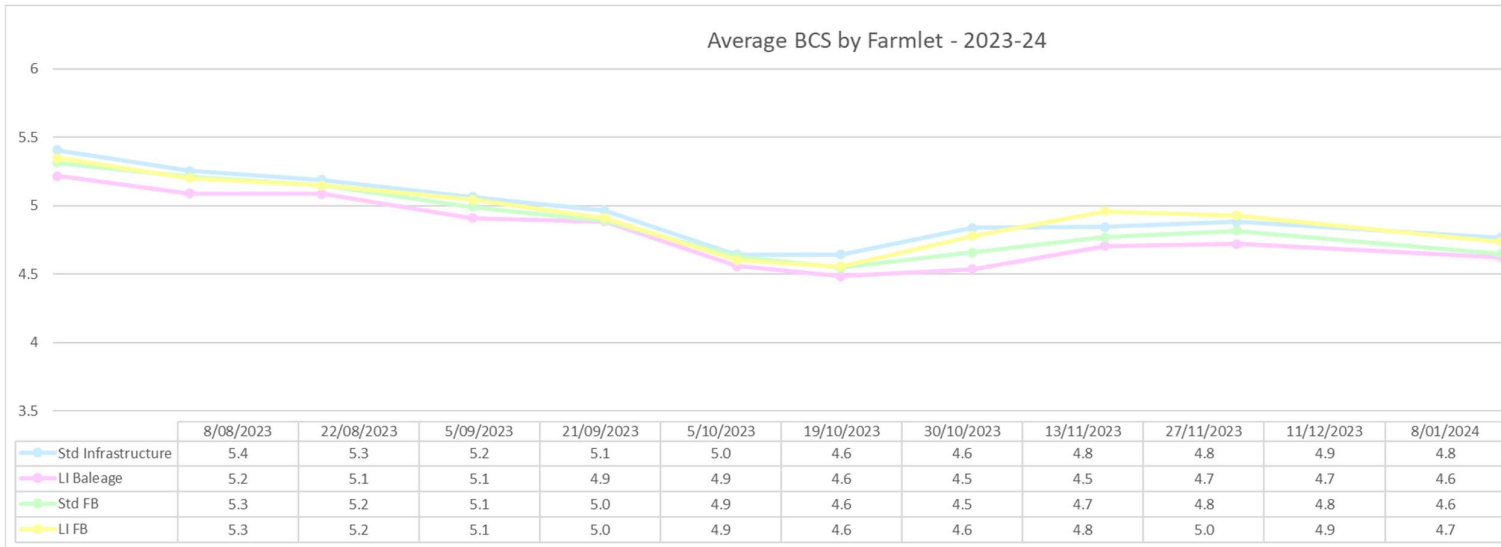


Figure 6. BCS as at 8th January 2024 (top) & Figure 7. BCS ranges within farmlets

Latest BCS



Figure 8. BCS ranges with in Farmlets for 2021 & 2020 born animals as at 8th January 2024