Weekly Farm Summary 13 December 2023

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	Baleage	Baleage	Beet	Beet
Milking supplement	In-shed feed 500kg/cow + silage as required			
Average Cover (kgDM/ha)	2169	2397	2357	2254
Average Growth (kgDM/ha/d)	54	43	53	59
Target rotation length (d)	24	30	26	29
Last week actual rotation (d)	23	28	23	27
Last week supp (kgDM/c)	4.0	3.2	3.6	2.3
Latest Average BCS	4.9	4.7	4.8	4.9
% of herd on priority management	18.7%	27.1%	25.5%	18.5%
% in Milk	100%	100%	100%	100%
7-day Average Milk yield (L/cow)	23.6	20.7	21.7	22.1
7-day Average Milk yield (kgMS/c)	2.05	2.00	2.08	2.00
Nitrogen Cap kgN/ha/yr	**180**	**50**	**180**	**50**
% Nitrogen used (kgN/ha) YTD	39% (70kg)	54% (27kg)	36% (65kg)	58% (29kg)
Effluent N YTD	3	7	7	5
YTD Pasture growth TDM/ha	7.9	7.4	7.7	7.5
YTD supp (kg DM/c)	291	233	369	240
YTD MS/c	216	215	220	255
YTD MS/milk ha (YTD MS/farm ha)	768 (678)	545 (477)	732 (586)	594 (509)

Focus area	Current Status
Milk Production	Continues to be above last season to date by ~300kgMS (0.2%). Farm level production has dropped to an average 2.0 kgMS/cow/day. To try and understand the lower milk production for the LI herds, for the five days ending the 13th December we milked the two Std herds in one vat and the LI farmlets in the other to see if there were differences in milk urea N concentrations. Over the 5 days the Std farmlets MUN averaged 20.3 and the LI farmlets 17.8. So, while there was a difference, at 17.8 it is unlikely nitrogen intake is negatively impacting milk production in the LI farmlets.
Pasture & Feed	Growth rates have increased from last week, with only the three paddocks stepped over last week still to be made into baleage. Residuals have been mostly good, but with a fair amount of seedhead still coming through. Have continued with limiting our silage allocation to no more than 50% of the total supplement required. While the latest tests have come back higher in crude protein and ME it is still not good milking quality. Latest pasture samples have come back at 24% crude protein, 11.3 ME and 50.2% NDF
Animals	A few more new cases of lameness across all the farmlets, still mainly interdigital damage and white line. Protocols and separation of interdigital damage cases has been actioned until confirmation of cause. No new cases of mastitis with the 7-day farm SCC average being 77. Had an isolated case of grass tetany, that responded well to treatment. Latest BCS is 4.8 (see website farm update for details).
Environment	Pond level has dropped again to 37% full. Continuing to apply effluent at every opportunity, whilst monitoring applications to make sure they are spread evenly across all the farmlets. Effluent sample to be collected for analysis.
Wintering	Agronomist has been on farm this week. New grass paddocks have been slow to germinate (weather related). Fodder beet continues to grow nicely, with some weeds appearing (more in the 2nd year crop paddocks) so will be sprayed. Weather dependent, an application of nitrogen is scheduled for next week.
People	Team will have their Xmas party this week. Unfortunately, our relief milker is moving on to a new role. New team members Redson and Callum have fitted in well.
Research	Planning for some paired paddock comparisons of baleage wintering for 2024 continues.

Milk production

Principles of Milk Production management this week

Milk production	We have definitely come off peak production, especially in the last week with the changeable weather. Our protein: fat ratio has been quite variable since the start of December, sitting at an average of 0.8 in the baleage and 0.79 in the fodder beet herds, but has dropped as low as 0.75 on occasions. Both milk fat and milk protein percentages have increased with an average of 5.1% fat and 4.1% protein and little difference between the herds.
Key Influences of Milk Production	With a range of pasture cultivars across the farm we are still seeing seedhead emergence which will be contributing to the increase in fibre in the latest pasture samples sent for analysis. This together with the quality of the silage being feed will be impacting on milk production. Cycling activity has dropped off significantly which hopefully means we have lots of cows in calf early.
Cow Management	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.

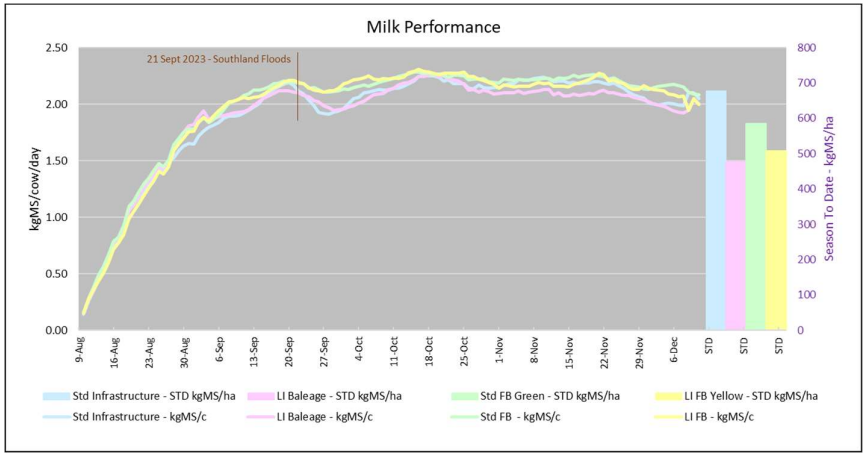


Figure 1. Milksolids per cow/day STD and kgMS/ha STD

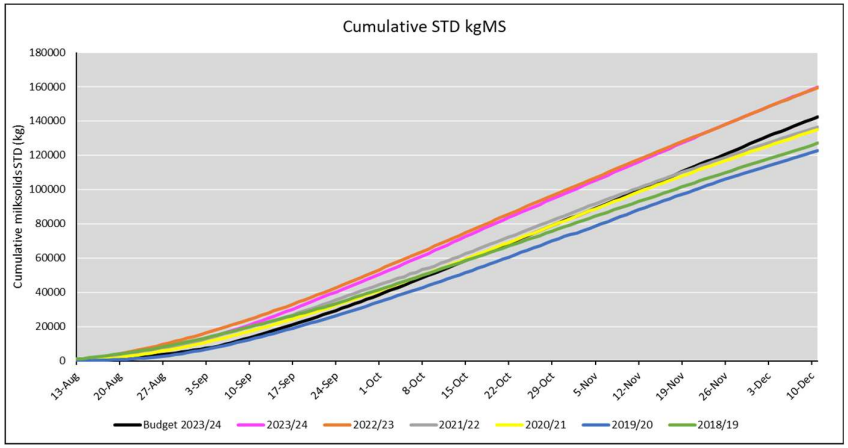


Figure 2. Cumulative kg Milksolids & Budget season to date

Feed Management

Principles of Feed management this week

Feed Quality	Pasture crude protein levels are high across both the standard and lower impact farmlets indicating that the lower nitrogen fertiliser applications to the lower impact farmlets is not negatively impacting pasture quality. It will be interesting to see if there have been any changes in the proportion of clover in the paddocks when we do the botanical composition assessments on all paddocks starting end of January. The decision was made this week to aim for silage being no more than 50% of the total supplement requirement for each herd unless this requires more than 3 kg inshed feeding due to the quality. With dry conditions predicted we will be minimizing the amount of topping we do heading into summer.
Growth Rate	The changeable weather is continuing to result in variable growth rates and despite regular rainfall, and more rainfall season to date than last, the soils appear to be drying out. Unfortunately, our soil moisture tape has malfunctioned, so we are not getting any data at the moment. The drier soils together with lower soil temperatures is likely impacting growth. With dry summer conditions predicted we are constantly reassessing our rotation length, supplement inventory and nitrogen fertiliser applications to set ourselves up as best we can if it does go dry. This means we will continue with weekly farm walks during the holiday period so we can adjust our management if conditions change quickly.
Nitrogen Strategy	The aim is to complete the third round of N fertiliser applications to the LI farmlets before Christmas, but we will need to reassess the 4th round applications to the standard farmlets

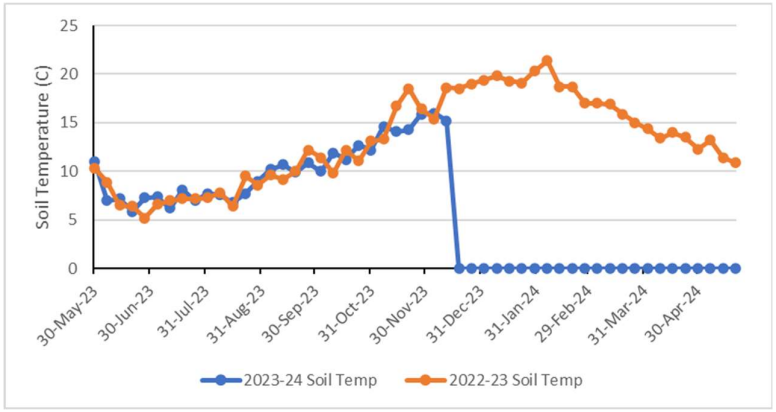


Figure 3. Soil temperatures 2023-24 vs 2022-23

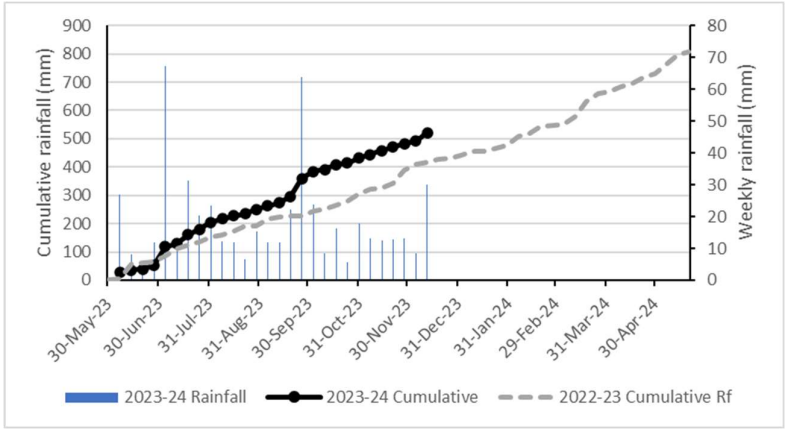


Figure 4. Season to date rainfall compared with cumulative rainfall 2022-23

Feed Management

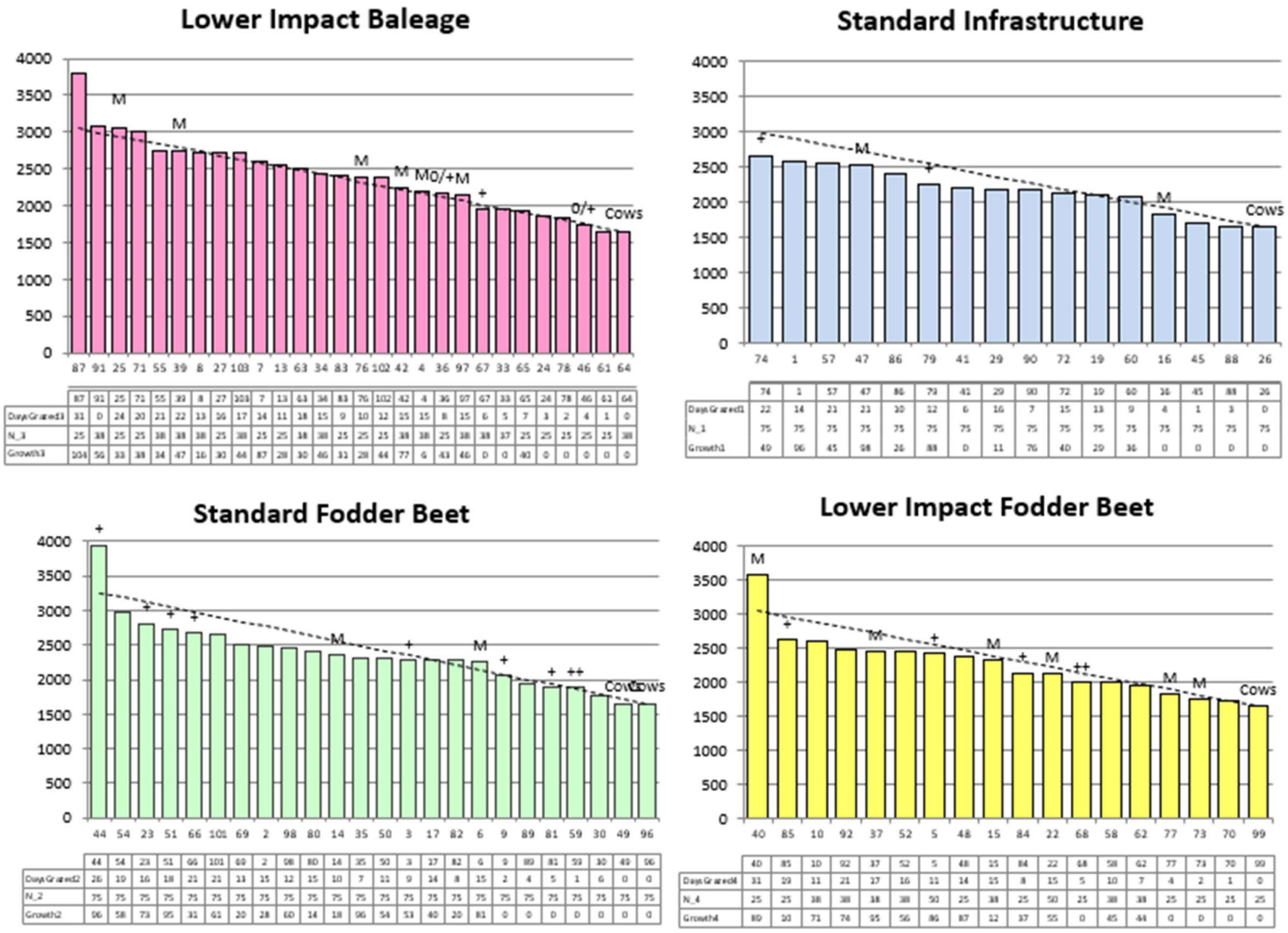
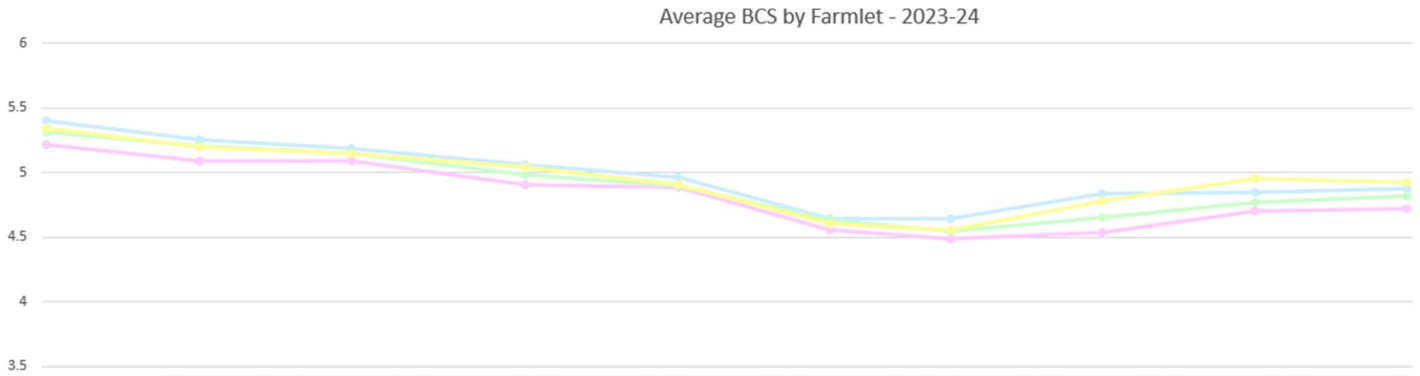


Figure 5. Plate meter feed wedges as at 12 December 2023

Latest BCS



	8/08/2023	22/08/2023	5/09/2023	21/09/2023	5/10/2023	19/10/2023	30/10/2023	13/11/2023	27/11/2023	11/12/2023
Std Infrastructure	5.4	5.3	5.2	5.1	5.0	4.6	4.6	4.8	4.8	4.9
LI Baleage	5.2	5.1	5.1	4.9	4.9	4.6	4.5	4.5	4.7	4.7
Std FB	5.3	5.2	5.1	5.0	4.9	4.6	4.5	4.7	4.8	4.8
LI FB	5.3	5.2	5.1	5.0	4.9	4.6	4.6	4.8	5.0	4.9

Figure 6. Average BCS by Farmlet – updated 11 December 2023

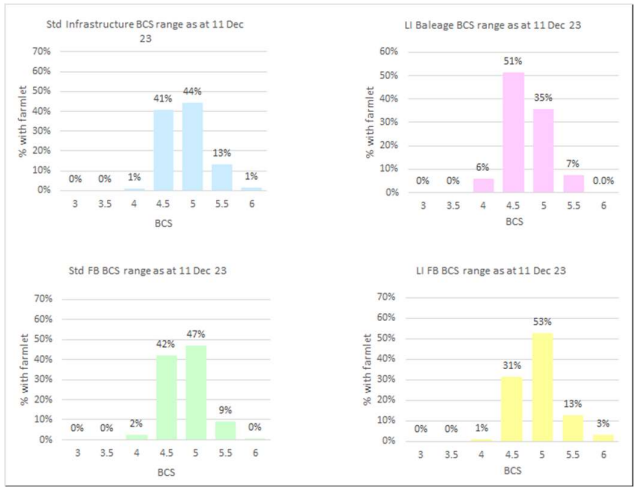


Figure 7. BCS Ranges for all cows – updated 11

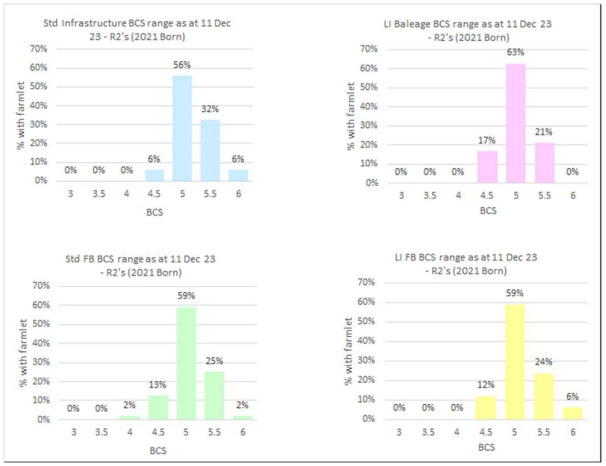


Figure 8. BCS Ranges of 2021 Borns – updated 11 December 2023