



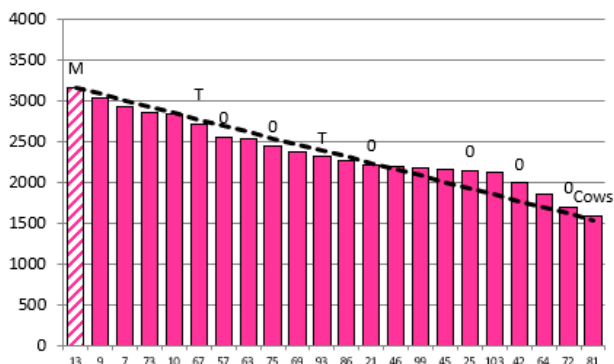
2021/22 Season Hub Weekly Farm Update Date: 13/01/2022

Date 12-01-22

Herd size (cows)	192	Average Cover	2367
Target residual (kg DM/ha)	1550	Average Growth	49
Target pasture intake (kg DM/cow)	16	Farmlet area	62.8
Target Area offered (ha/day)	1.90	Target rotation length	33
Last week actual rotation (d)	28	Target demand	49
Last week supp (kg DM/cow)	2.0	YTD supp (kg DM/cow)	380
Last week N (kg N/ha)	0	Fert N YTD	111
Milk yield (L/cow)	17.9	Effluent N YTD	3
Fat%	N	Last wk MS	W
Prot%	E	YTD MS/cow	E
SCC	X	YTD MS/ha	E
Average BCS	T	% less than BCS 4	K

Herd size (cows)	193	Average Cover	2495
Target residual (kg DM/ha)	1550	Average Growth	49
Target pasture intake (kg DM/cow)	17.5	Farmlet area	63.5
Target Area offered (ha/day)	1.9	Target rotation length	33
Last week actual rotation (d)	36	Target demand	53
Last week supp (kg DM/cow)	1.1	YTD supp (kg DM/cow)	284
Last week N (kg N/ha)	0	Fert N YTD	102
Milk yield (L/cow)	17.4	Effluent N YTD	5
Fat%	N	Last wk MS	W
Prot%	E	YTD MS/cow	E
SCC	X	YTD MS/ha	E
Average BCS	T	% less than BCS 4	K

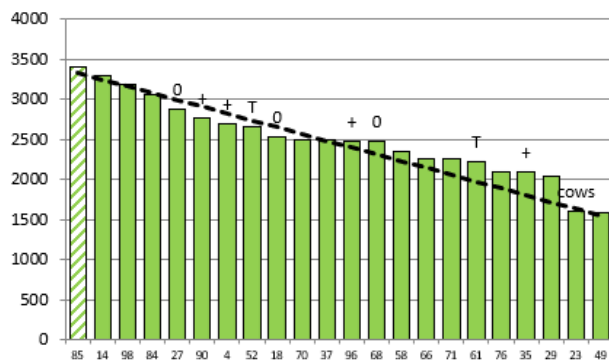
Standard Kale



13	9	7	73	10	67	57	63	75	69	93	86	21	46	99	45	25	103	42	64	72	81	
DaysGrazed3	26	22	23	13	27	25	17	21	20	14	9	6	16	11	5	8	3	12	19	4	2	0
N_3	111	121	111	93	136	111	91	111	111	86	111	111	25	136	136	146	136	111	25	136	136	
Growth3	66	52	52	106	40	60	20	10	40	22	26	97	52	104	0	36	0	24	26	0	0	0

Farmlet notes: Visual APC 2346, GR 55; inshed feeding reduced to 1 kg DM/cow/day as 70:30 PKE barley blend & pdk 13 dropped for conservation as above pre-graze target & residual needs resetting; N fertiliser to resume at 30 kg N/ha to all grass pdks; N fertiliser onto crops at canopy closure & italian ryegrass for wintering; bulls removed from herd today

Standard Fodder Beet



85	14	98	84	27	90	4	52	18	70	37	96	68	58	66	71	61	76	35	29	23	49	
DaysGrazed2	27	25	28	21	18	20	22	24	17	15	14	8	15	3	5	11	13	10	2	6	0	239
N_2	121	136	136	107	111	91	111	110	111	110	25	111	72	111	86	81	81	111	136	136	136	25
Growth2	96	40	36	84	64	54	24	36	58	22	122	44	28	0	0	24	18	21	0	63	0	0

Farmlet notes: Visual APC 2554, GR 60; inshed feeding removed as not hitting residual in the previous 2 pdks; N fertiliser to resume at 30 kg N/ha to all grass pdks, including new grasses; N fertiliser onto crops at canopy closure & italian ryegrass for wintering; last new grass pdk (49) will have nip off grazing this week; bulls removed from herd today

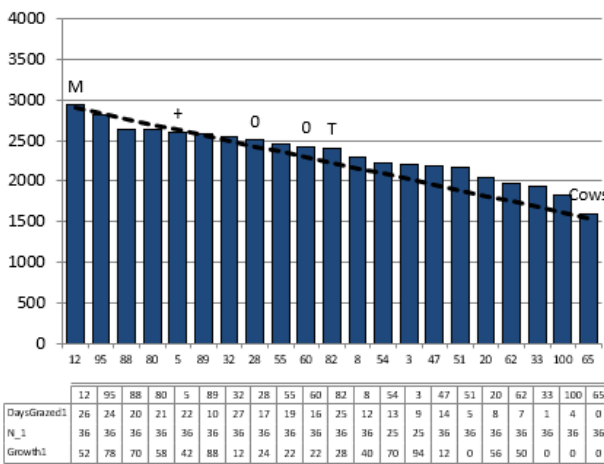


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Herd size (cows)	160	Average Cover	2331
Target residual (kg DM/ha)	1550	Average Growth	48
Target pasture intake (kg DM/cow)	16	Farmlet area	61.1
Target Area offered (ha/day)	1.9	Target rotation length	32
Last week rotation avg	36	Target demand	42
Last week supp (kg DM/cow)	2.3	YTD supp (kg DM/cow)	287
Last week N (kg N/ha)	0	Fert N YTD	34
Milk yield	18.4	Effluent N YTD	5
Fat%	N	Last wk MS	W
Prot%	E	YTD MS/cow	E
SCC	X	YTD MS/ha	E
Average BCS	T	% less than BCS 4	K

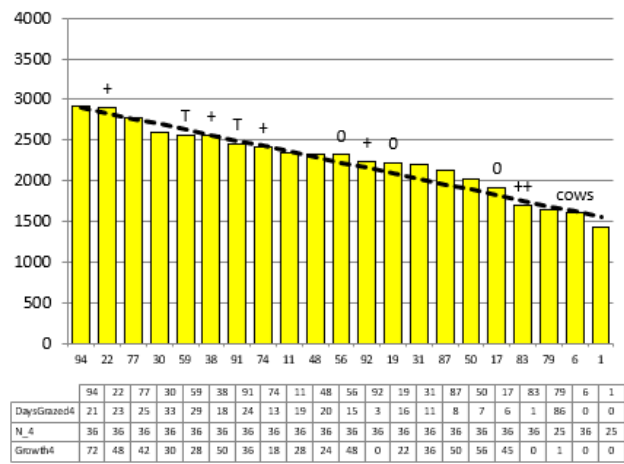
Herd size (cows)	160	Average Cover	2248
Target residual (kg DM/ha)	1550	Average Growth	37
Target pasture intake (kg DM/cow)	16	Farmlet area	61.2
Target Area offered (ha/day)	1.9	Target rotation length	32
Last week rotation avg	37	Target demand	42
Last week supp (kg DM/cow)	1.4	YTD supp (kg DM/cow)	270
Last week N (kg N/ha)	0	Fert N YTD	34
Milk yield	17.7	Effluent N YTD	7
Fat%	N	Last wk MS	W
Prot%	E	YTD MS/cow	E
SCC	X	YTD MS/ha	E
Average BCS	T	% less than BCS 4	K

Low Impact Kale



Farmlet notes: Visual APC 2339, GR 57; inshed feeding reduced to 1 kg DM/cow/day as 70:30 PKE barley blend as not hitting residual at the higher allocation; N fertiliser to be applied to all new grass pdks at 25 kg N/ha; N fertiliser onto crops at canopy closure & italian ryegrass for wintering; bulls removed from herd today; all new grass pdks back in rotation

Low Impact Fodder Beet



Farmlet notes: Visual APC 2364, GR 42; continue with inshed feeding of 1 kg DM/cow/day PKE but revisit in the next few days and remove if cows not hitting residual; N fertiliser to be applied to all new grass pdks at 25 kg N/ha; N fertiliser onto crops at canopy closure & italian ryegrass for wintering; bulls removed from herd today; pdk 1 due for grazing this wk

Table 1: Key Herd Numbers 13/01/2022 – number of cows in each mob

DATE: 13 Jan 2022	Std Kale	LI Kale	Std FB	LI FB	Total
Cows on Farm	192	160	193	160	705
Milkers TAD	172	144	172	152	639
Milkers OAD	18	14	20	8	60
Sick OAD	3	1	4	1	9
Slips/empty/deaths	9	6	16	6	37



2021/22 Season

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General Farm Information

Table 2: Key Weather and Feeding Numbers 6 January 2022

Soil Temp (°C) (weekly average)	19.1			
Rainfall (mm)	16.2 mm			
Allocation Target kg DM/cow/day	Std. Kale	LI Kale	Std FB	LI FB
Milkers	18 kg DM 17 kg pasture 1 kg DM PKE:barley blend	18 kg DM 17 kg pasture 1 kg DM PKE:barley blend	18 kg DM 18 kg pasture Baleage as required	18kg DM 11 kg pasture 1 kg DM PKE Baleage as required

Key Decisions

- **Feed:**

Simple rules around feed management will serve us well as we head further into the summer i.e., earmarking paddocks for baleage, good residual management etc. In previous years, topping/mowing would be coming to a stop around this time, however with some moisture in the system this week we will continue to use this tool to control quality. With the new grass pdks back in the rotation the round length has been sat between 30 and 35 days across the farmlets this week. Growth rates for all but the LI FB herd is meeting demand, ranging between 46-49kgDM/ha/ day, however the LI FB farmlet is only growing 36kgDM/ha/day. Across all 4 farmlets, covers will need to remain controlled and not overgrown to avoid losing quality in dry periods.

Based on residuals from the last couple of paddocks in each farmlet the inshed feeding has been removed from the Std FB and reduced to 1 kg DM/ha for all other herds. Kale herds are back on a 70:30 PKE:barley blend and the LI FB on PKE only.

Results from pasture samples this week have helped us interpret our farm walk data, pasture feeding levels and residuals. Compared with earlier in the season the DM content has increased significantly and ranged between 18 and 25%. As we use the winter equation to convert plate height to mass it is likely we are currently underestimating the available pasture DM. Based on this information and the residuals in the last few paddocks for all herds we have made our feeding decisions this week assuming that the pre-graze pasture mass is higher than the plate is estimating. The farm team will monitor each herd daily and adjust supplementary feed as required.

Standard Farmlets

- 1 paddock in each of standard farmlet was identified as surplus on Thursday and mown for baleage and will be baled before the weekend.
- Nitrogen applications will resume this week after 3 weeks of not being applied. With the rain that has fallen in the last week combined with the forecasted



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rain, we think conditions are right for good uptake and minimal volatilisation. The application rate will be 25kgs N/ha as N protect following the cows for these farmlets.

- New grass paddocks will have N applied at a rate of 30kgN/ha as N Protect.

Low Impact Farmlets

- New grass in the LI farmlets that have been grazed will have 20kgN/ha applied as N Protect this week.

• **Milk Production**

- Relative to this time last year daily milk solids production is lower and is declining rather than increasing.
- As shown in figure 2, over the last week both FB herds have remained relatively stable on a kgMS/cow/day basis. However, production in both Kale herds has declined, a surprising result based on the level of supplementary feeding they were receiving and that they have not been hitting residual which would indicate they are maximising intake.
- Pasture samples taken this week returned crude protein contents between 11 and 16%, a drop from the 16-20% range observed in December. This lower pasture crude protein may be contributing to the decline in milk solids production.

Standard Farmlets

- Figure 1 shows the cumulative kgMS/ha for each of the herds with both standard herds producing higher than the LI herds due primarily to the difference in stocking rate i.e. 3.1 cows/ha for Std and 2.6 cows/ha for LI. However, for the Std FB herd, comparing to this time last year this herd is performing worse and the Std Kale herd has produced the same season to date.

LI Farmlets

- Both LI farmlets are ahead of the last 2 seasons on a season to date production per hectare basis, with the kale herd over 50kgMS/ha ahead than this time last season.



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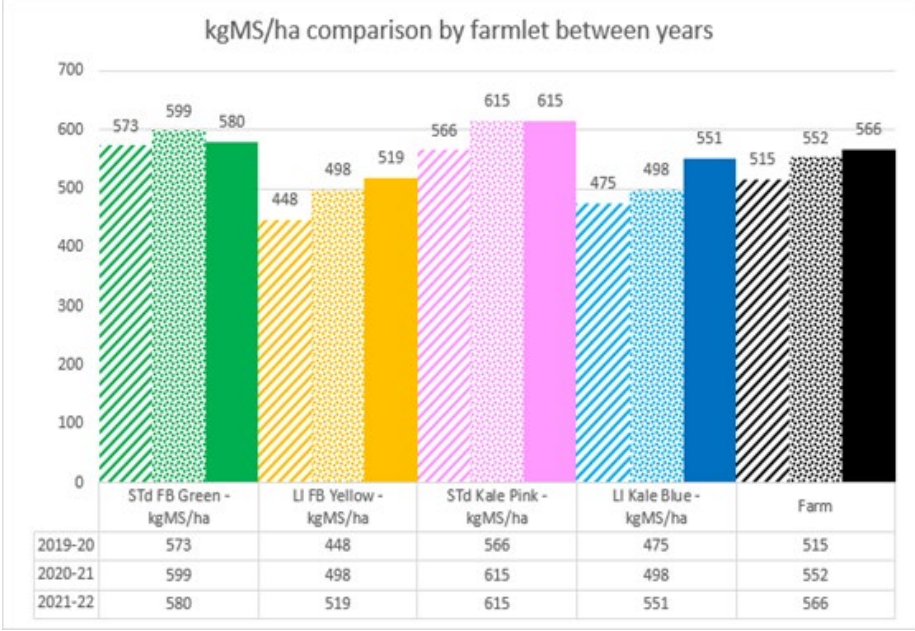


Figure 1: Cumulative kgMS/ha season to date per farmlet across 3 seasons

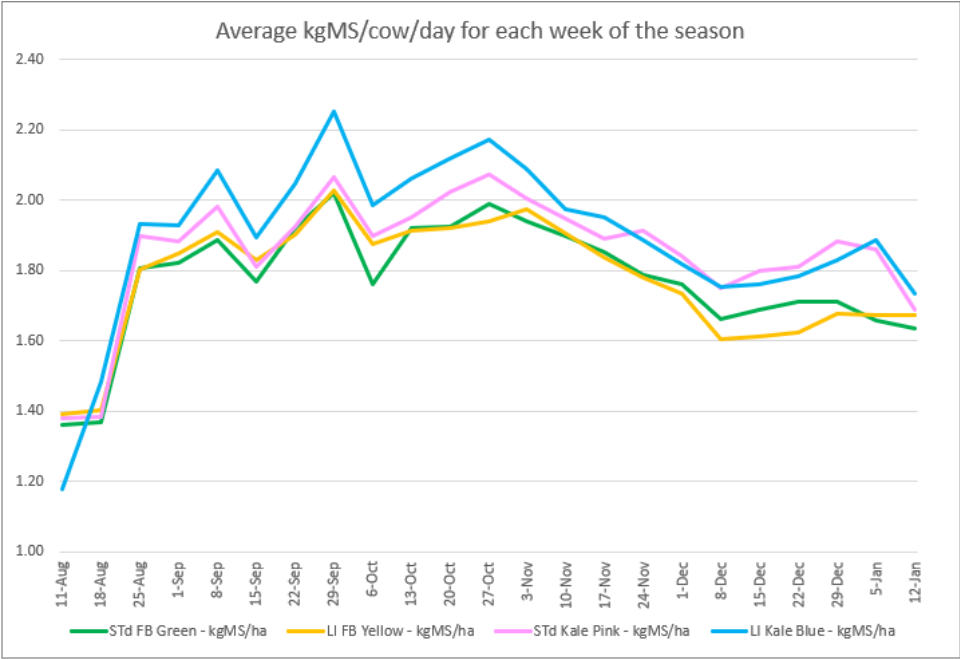


Figure 2: Average kgMS/cow/day for each week of the season

General Notes:

- **Wintering:**
 - The first cut of baleage will be taken off the Italian paddocks this week. These paddocks & the supplement they produce will be used for grass and baleage wintering this year.

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- Several of the buffer zones in the crop paddocks that have been planted out in Italians will also be cut for baleage this week. Multipurpose buffer zones!!



Figure 3: Example of Italian buffer zone to be cut for baleage

- Nitrogen will be applied to the Italian paddocks this week at a rate of 80kgN Protect/ha.
 - Nitrogen will also be applied to the crop paddocks that have reached canopy closure over the next week as weather allows.
 - Spray contractors are due as soon as conditions allow to spray the crop paddocks for grass and weeds.
 - To prevent the contractors spraying our grass buffers in the crop paddocks these areas have been entered as exclusion zones in the mapping software.
- **Animals:**
 - The bulls have been removed from the herds this week with 10 bulls going straight from the paddock onto the truck. Of the remaining 8, 2 are slightly lame and will be checked by the vet to determine if they are fit for transport. Last year we had 5 that were quite lame at the end of mating and couldn't leave the property for several weeks.
 - We have had a lot less lameness in the bulls this year which reflects that great work by the farm team in identifying lameness early and removing these bulls from the herds and in regularly rotating the bulls in and out of the herds.
 - Young stock: The calves were weighed this week, with 80% of the mob weighing over 120kgs. Across the 208 calves, the average weight gain per day since weaning has been 0.73kg/day. For the 12 calves that were weaned off milk last, they have been growing at 0.99kg per day since weaning.
 - With the amount of clover on the platform, bloat oil is still going through the dosatron.

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- The top-up iodine and selenium have been removed from the inline dispenser on veterinary recommendation, and blood samples have been taken this week to ensure that the blood levels are sufficient again.
- Herd tests and BCS will be completed next week.

- **People**

- The farm team visited Tim Watt's farm near Riverton this week to gain an understanding of how different systems manage tasks day to day as well as learning how Tim delegates jobs out to his team. Thanks for the visit, Tim!

- **Research**

- Quarterly animal sampling was completed this week with blood, urine, faeces, and milk samples being taken and sent away for analysis.
- Several of the farm team did the pasture calibration walk with the technicians this week. By doing this, it allows us to discuss and debate the plate meter and visual estimates in a range of paddocks to ensure everyone on the farm is assessing pasture the same way.



Figure 4: Farm and tech team members completing this week's calibration walk

- Relative to December there has been a decrease in ME in the LI pastures
- For all farmlets there has been a decrease in crude protein but an increase in dry matter, lignin and non-structural carbohydrates



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Table 3: Average pasture quality for each farmlet for December 2021 and January 2022

	Month	DM%	ME (MJ/kg DM)	Crude protein (%)	NDF (%)	Lignin (%)	NSC (%)
StdKale	Dec-21	18.20	11.3	19.9	45.2	5.7	20.8
	Jan-22	21.25	11.3	15.5	45.8	4.4	26.4
LIKale	Dec-21	19.50	11.3	16.5	44.7	4.6	25.9
	Jan-22	21.50	11.1	12.8	45.4	5.0	28.7
StdFB	Dec-21	17.60	11.4	16.3	45.0	4.4	25.8
	Jan-22	20.50	11.3	13.8	44.8	5.0	28.4
LIFB	Dec-21	19.40	11.4	17.3	43.9	4.6	25.9
	Jan-22	22.60	11.0	14.8	45.0	6.4	26.3

- **Environment:**
 - We are continuing to use N protect to minimise the risk of N volatilization and ensure higher response to the N fertiliser and therefore indirectly reduce greenhouse gas emissions.

General Farm Systems information

The project farm systems comparison has been designed to better understand crop-based wintering in relation to consequences for environmental impact and profit

- *The four herds are split evenly on age, BW / PW, calving date and breed to ensure the herds are as even as possible.*
- *Each herd allocated a farmlet corresponding to their herd tag colour Green, Blue, Yellow and Pink.*
- *Farmlets have paddocks allocated so each herd has equal walking distance from the shed and the same proportion of each soil type and equal proportions of pastures in the FVI trial (forage value trial – refer web site section on research).*

Research Proposals

The SDH welcome research proposals for any sampling or research on the SDH, these are assessed by the Research Advisory Committee (RAC). Just send your request or ask for information via louise.cook@southerndairyhub.co.nz

For more information check out the DairyNZ link:

<https://www.dairynz.co.nz/about-us/research/research-farms/southern-dairy-hub>