



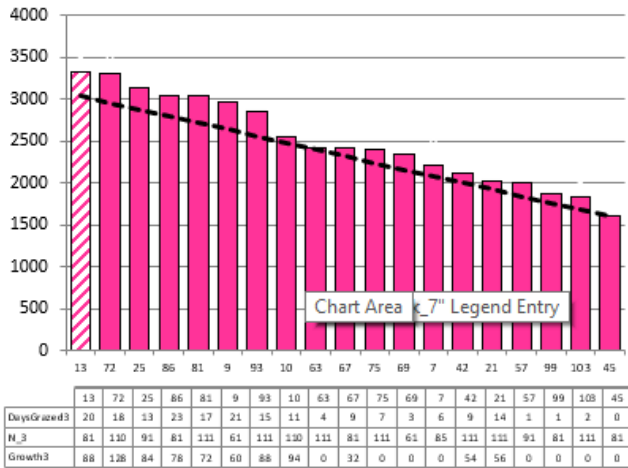
2021/22 Season Hub Weekly Farm Update Date: 9/12/2021

Date 08-12-21

Herd size (cows)	194	Average Cover	2497
Target residual (kg DM/ha)	1600	Average Growth	76
Target pasture intake (kg DM/cow)	17	Farmlet area	55.1
Target Area offered (ha/day)	2.30	Target rotation length	24
Last week actual rotation (d)	26	Target demand	60
Last week supp (kg DM/cow)	1.1	YTD supp (kg DM/cow)	301
Last week N (kg N/ha)	7	Fert N YTD	85
Milk yield (L/cow)	19.5	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

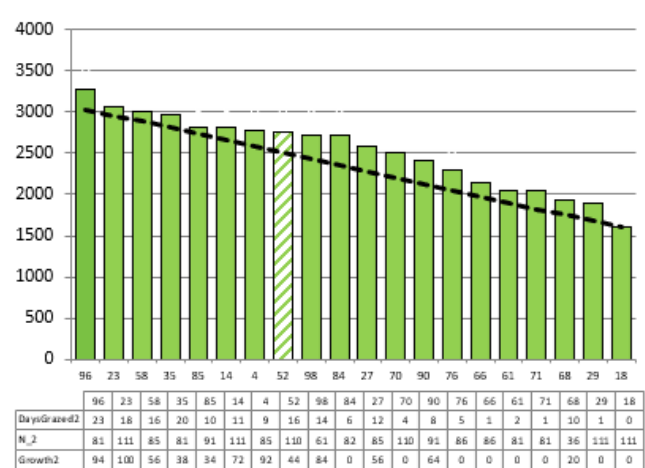
Herd size (cows)	194	Average Cover	2516
Target residual (kg DM/ha)	1600	Average Growth	63
Target pasture intake (kg DM/cow)	17	Farmlet area	57.7
Target Area offered (ha/day)	2.3	Target rotation length	25
Last week actual rotation (d)	26	Target demand	57
Last week supp (kg DM/cow)	0.9	YTD supp (kg DM/cow)	250
Last week N (kg N/ha)	9	Fert N YTD	81
Milk yield (L/cow)	18.3	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



Farmlet notes: Visual APC 2318, GR 77; x1 pdk dropped for conservation; holding current rotation & supplement input; x1.5 pdks topped & 1.4 pdks conserved this week; Milk yield holding; last crop pdks planted this week & pre-emergent sprays applied where required; new grass pdks getting close to passing the pull test so will start plating them again next week.

Standard Fodder Beet



Farmlet notes: Visual APC 2306, GR 70; x1 pdk dropped for conservation; holding current rotation & supplement input; only approx. 1 weeks worth of lifted fodder beet remaining; x2 pdks conserved this week; Milk yield holding but lower than kale farmlets; new grass pdks getting close to passing the pull test so will start plating them again next week.

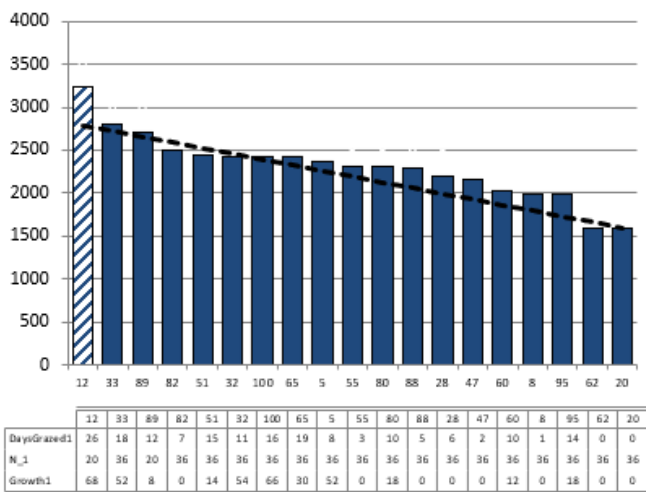


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Herd size (cows)	161	Average Cover	2308
Target residual (kg DM/ha)	1600	Average Growth	36
Target pasture intake (kg DM/cow)	17	Farmlet area	55.2
Target Area offered (ha/day)	2.3	Target rotation length	24
Last week rotation avg	27	Target demand	50
Last week supp (kg DM/cow)	1.2	YTD supp (kg DM/cow)	219
Last week N (kg N/ha)	9	Fert N YTD	30
Milk yield	19.2	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

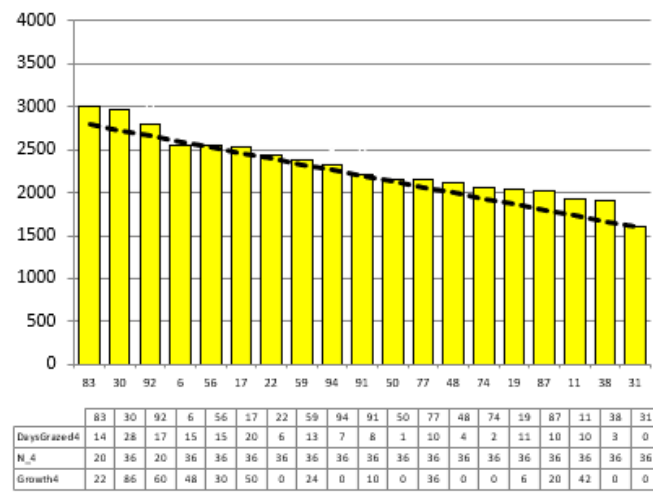
Herd size (cows)	162	Average Cover	2302
Target residual (kg DM/ha)	1600	Average Growth	36
Target pasture intake (kg DM/cow)	17	Farmlet area	55.1
Target Area offered (ha/day)	2.3	Target rotation length	24
Last week rotation avg	24	Target demand	50
Last week supp (kg DM/cow)	0.9	YTD supp (kg DM/cow)	220
Last week N (kg N/ha)	10	Fert N YTD	30
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 2177, GR 64; x1 pdk dropped for conservation; holding current rotation & supplement input; half a pdk topped & x1 pdk conserved this week; Milk yield holding; last crop pdks planted this week & pre-emergent sprays applied where required; new grass pdks getting close to passing the pull test so will start plating them again next week.

Low Impact Fodder Beet



Farmlet notes: Visual APC 2155, GR 57; no pdks dropped for conservation; holding current rotation & supplement input; only approx. 1 weeks worth of lifted fodder beet remaining; will feed more beet if required to hold the rotation; no conservation & half a pdk topped this week; Milk yield holding but lower than kale farmlets;

Table 1: Key Herd Numbers 9/12/2021 – number of cows in each mob

DATE: 9 th Dec 2021	Std Kale	LI Kale	Std FB	LI FB	Total
Cows on Farm	193	160	194	161	708
Milkers TAD	161	135	155	147	598
Milkers OAD	29	25	32	13	99
Sick OAD	3	0	7	1	11
Slips/empty/deaths	7	6	15	5	33



2021/22 Season

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General Farm Information

Table 2: Key Weather and Feeding Numbers 9th December 2021

Soil Temp (°C) (weekly average)	18.9°C			
Rainfall (mm)	20mm			
Allocation Targetkg DM/cow/day	Std. Kale	LI Kale	Std FB	LI FB
Milkers	18 kg DM 17 kg pasture 1 kg inshed feed	18 kg DM 17 kg pasture 1 kg inshed feed	18 kg DM 17 kg pasture 1kgDM fodder beet	18kg DM 16-17 kg pasture 1-2kgDM fodder beet

Key Decisions and Why?

- Both standard farmlets have surplus pasture after a week of good growth so x1 paddock from each has been removed for conservation.
- The LI farmlets are now getting their second round of N for the season and with the moisture also present now, these paddocks should have strong regrowth coming through over the next few weeks. While growth dropped below demand this week we expect that with current conditions these farmlets will be growing at levels at or above demand going forward.
- The FB herds will continue to get FB in the paddock, however there is only around 1 weeks' worth of FB left to feed. The Std FB herd will continue to receive 1kg/DM/cow/day and the LI FB herd will increase to 2kgDM/cow/day.
 - Why: We need to get through the FB as soon as possible as the quality is starting to drop and with periods of wet weather and higher temperatures there is increased risk of it spoiling. The LI FB herd are the have lower APC and some pdks may not reach pre-graze target so they will need additional supplement.
 - With bulls going into the herds we also want to minimise any nutritional risks given they have not been transitioned onto the beet.
- Inshed feeding will remain for the kale herds for the next week but due to improving feed quality coming through the wedge the plan is for non-deficit supplement to be removed from all herds after the next farmwalk once the cows have grazed the last of the paddocks with significant seedhead.
- Supplementary feed will be put reintroduced if herds move into a feed deficit. For the kale herds, this will be in the form of in-shed feed and the FB cows will receive baleage.
- All 4 farmlets will continue on a 25-day round, as after a reflection on last year, 30 days is too long through the summer on this farm.
- We will continue to assess pasture allocation, residuals and milk production to determine the amount of pasture we need to offer once the supplement is removed with a likely target between 17 and 18 kg DM/cow/day.
- Friday this week is our last morning of AI and the bulls will be arriving on farm and going in with the cows.

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- This year we will be running 3 bulls per mob (1 bull/60 cows for the Stds and 1 bull/55 cows for the LI) and rotating the remaining 6 in and out as required.
- For the first few days we will run an extra bull per herd as this period corresponds to 3 weeks after our last round of CIDR's so we could expect more returns during this period.
- Bulls will be painted and numbered for easy identification and rotation through the herds
- All cows will be tail painted again before the bulls go out and the tail paint read once per week. This data plus the collar data will be used to identify any cows that are still be cycling.

General Notes:

- The last of the swede paddocks were sown with the precision drilled swedes on Thursday.
- Both the stripped tilled FB and the direct drilled FB have now emerged and in the demonstration paddock, there is a clear difference between the two in the size of the plants. However, these were sown one week apart, so we look forward to comparing the different cultivation methods through the remainder of the season and next winter.



Figure 1: Comparison between strip tilled FB (left) and direct drilled FB (right)

- All Fodderbeet paddocks have had their first pesticide spray.
- Both italian and permanent new grass paddocks have had their first spray for weeds. There was a great kill rate in the permanent pasture paddocks due to the lower covers in those paddocks.
- The Non return rate for the first 2 weeks was 60%, with the day by day between 47% and 73% of cows being put up that haven't returned.



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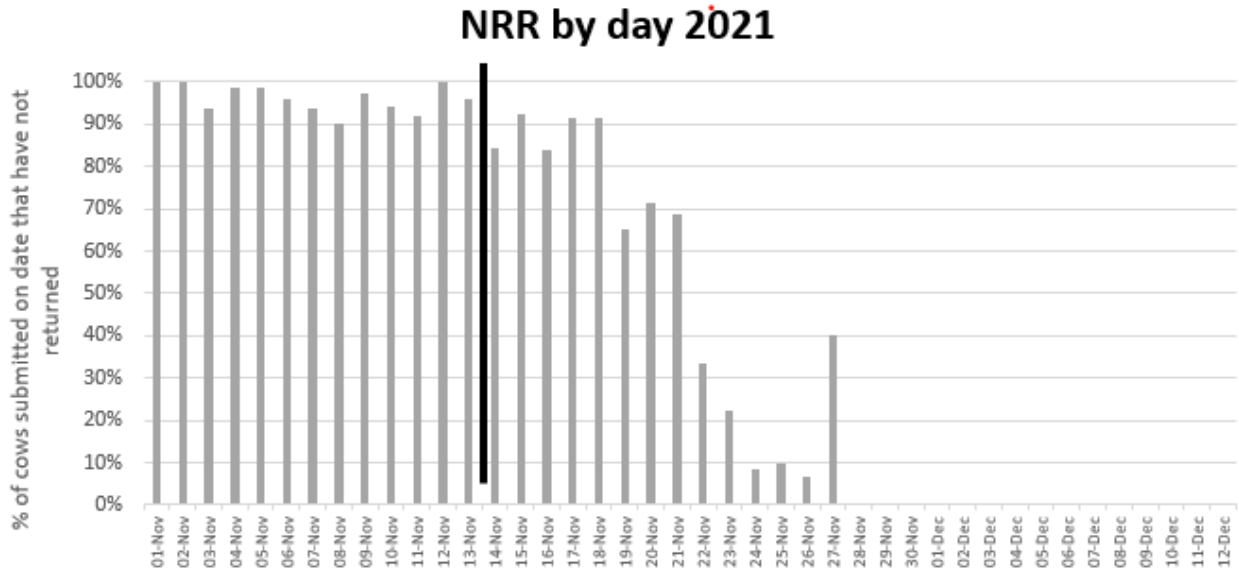


Figure 2: Daily non return rate for mating 2021

- There are 4 cows that have not cycled. Of these 4, 1 hadn't cycled pre mating, 2 were late calvers and one had been cycling pre mating. The late calving pair were assessed for a round 2 CIDR as they had cycled before planned start of mating, these two were also palpated by the vet as active but are yet to come up.
- Pregnancy scanning has been booked for the end of January as an early scan, and the late scan will be done towards the end of February/ start of March.
- Milk production, whilst it has dropped away from peak, on a whole production is going better than last season and the farm is in a much better feed situation heading into summer. As we are past peak heading date for the pastures, we expect that production should continue to hold with better quality pasture on offer in the next round than the last.
- The LI FB herds continue to be the poorest performing herd on the farm despite being managed under the same decision rules and grazing similar pastures.



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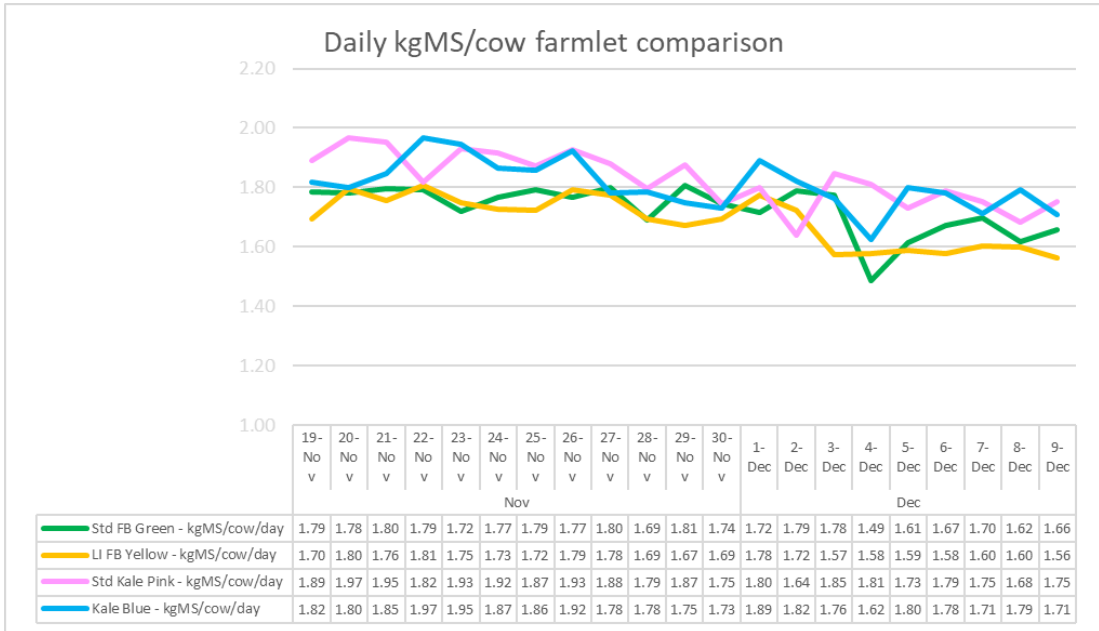


Figure 3: Daily milk solids per cow

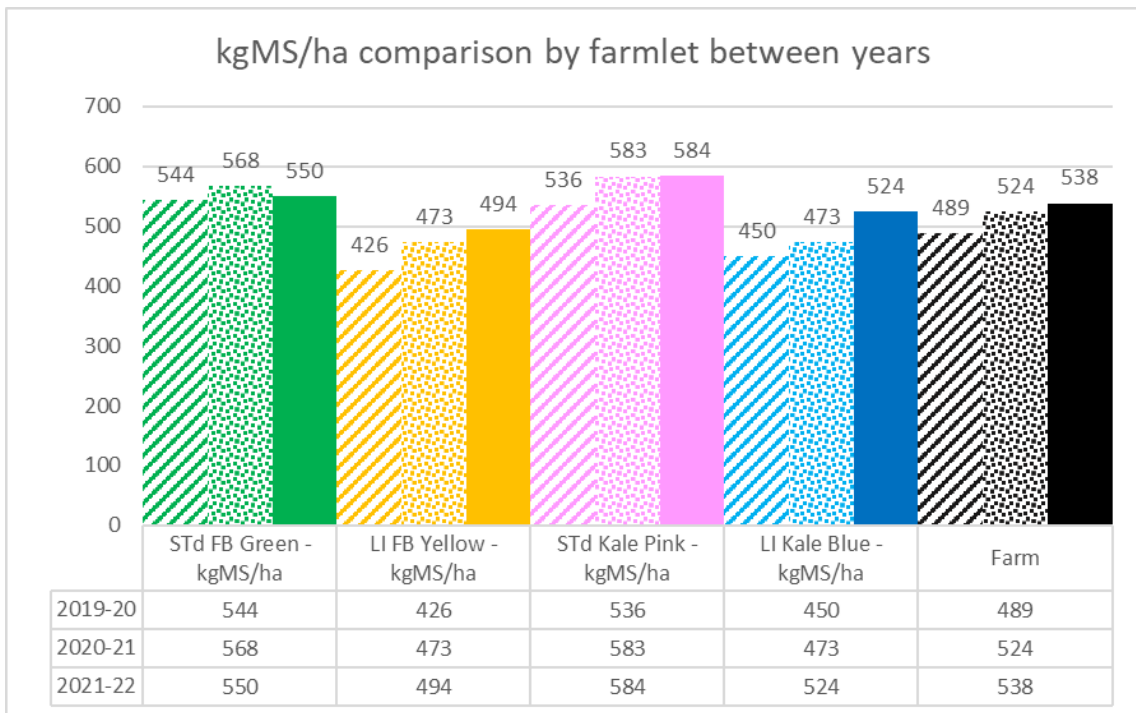


Figure 4: Season to date milk solids production comparison for the last 3 years

- With differences in effective stocking rate and supplements available differences are emerging in the proportion of each farmlet that has either been topped or



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conserved for baleage. Currently more baleage has been made from the fodder beet farmlets compared with the kale.

Table 3: Grazing area available and proportion of each farmlet topped or conserved this season

	Current Grazeable area	Proportion topped	Proportion conserved	Bales made till 2 nd Dec
Std Kale	55.1	22%	26%	58
LI Kale	55.2	31%	26%	67
Std FB	57.7	31%	30%	85
LI FB	55.1	34%	21%	95

- With the PKE being introduced into the diet of the older calves at the support block last week, they are now eating in excess of 1kg/calf/day.
- The bulls are currently out with the heifers and will be removed on the 23rd of December. The heifers will also be scanned in late January.

SDH Research & Demonstration

- This week we did pre and post plating of x2 paddocks per farmlet to estimate pasture DM intake. In addition, pasture and supplement samples were taken to allow us to estimate the intake of nitrogen and other minerals to see if there are differences between the farmlets related to supplementary feeding or nitrogen fertiliser input. Pasture quality results will be reported once we have them back from the lab.
- The tech team are busy working their way through the 3.5 months of behaviour data from the 140 cows that had behaviour devices on them through winter and early lactation. It will be interesting to compare the lying behaviour of dry cows on crop vs lactating cows in early lactation.

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>



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