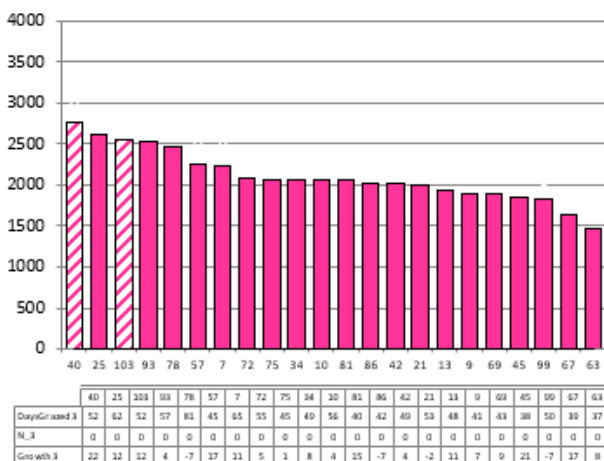


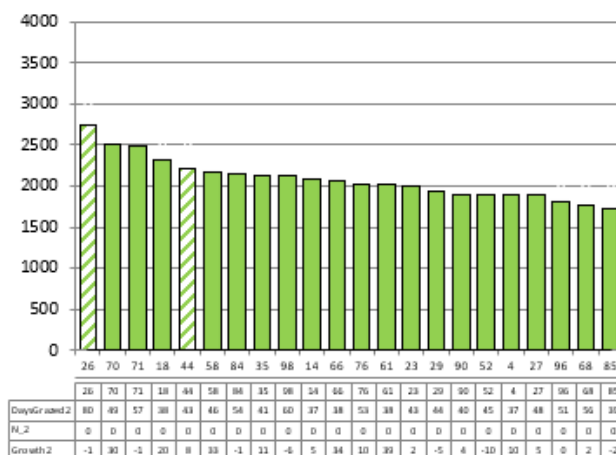


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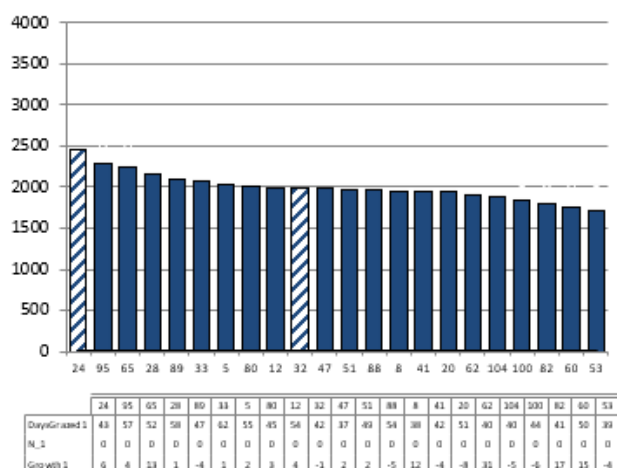
Standard Kale



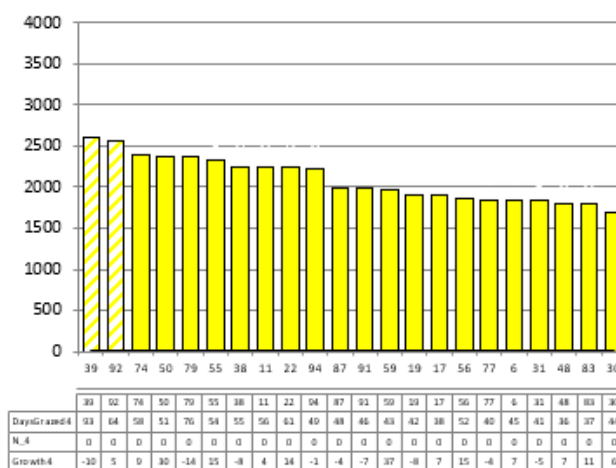
Standard Fodder Beet



Low Impact Kale



Low Impact Fodder Beet



NOTE: Hatched paddocks are springer paddocks

Table 1: Key Herd Numbers 7/07/2021 – number of cows in each mob

DATE: 7 July 2021	Std Kale	LI Kale	Std FB	LI FB	Total
Current milked	0	0	0	0	0
Dries	202	168	201	167	738
Slips	1		2	1	4

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General Farm Information

Table 2: Key Weather and Feeding Numbers 07/07/2021

Soil Temp (°C) (weekly average)	7.0			
Rainfall (mm) - June	71 (50 mm in June 2020)			
Rainfall (mm) – July to 7th	10			
Allocations kg DM/cow/day	Std. Kale	LI Kale	Std FB	LI FB
Dry cows once transitioned	Kale 10.8-11.8 kg DM/cow	Kale 11.8 kg DM/cow	Beet 9-10 kg DM/cow	Beet 9.8 kg DM/cow
	Baleage 4.4–3.3 kg DM/cow	Baleage 3.3 kg DM/cow	Baleage 4.2–3.3 kg DM/cow	Baleage 3.3 kg DM/cow

Key Decisions: this week

- Ground conditions in paddock were a bit wet this week and lying bowls have decreased because of the weather, although we are still observing cows lying during the day. To provide a drier area to lie we have been continuing with our wheat straw bedding in the worst paddocks and increased baleage as required to ensure cows are full.



Figure 1: Cows enjoying their baleage and fodder beet

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Figure 2: An example of the lying bowls that we look for to indicate cow lying time

- It seems like winter has passed quickly and we need to start focusing our attention to calving and springtime. Key pre-spring items on our list include:
 - Pulling together our springer paddock plan and how we will draft up mobs. Our mobs will be drafted 3 ways for the MA cows (springer, early, mid/late) and 4 ways for the heifers. Heifers will be managed in a separate springer mob this year.
 - Springer aid paddock boxes: the team has already pulled together springer aid boxes for all 3 springer mobs. These include essential items required for calving and downer cow treatment.
 - Springer feed budget and spring rotation planner. This will help us manage supplements and pasture area through spring leading up to balance date without getting caught short. You can find DairyNZ templates for this here: [Spring Rotation Planner Tool - DairyNZ](#)
- At the start of the season kale leaves at the top of kale plants sit at around 20% crude protein (CP) and 12-13 ME compared with the bottom of kale stalk which might only be 7-8% CP and 7 ME. As we track through winter, we get reduced energy and protein in the kale leaf and increased poor quality in the stem.
Last winter we noticed the kale cows put on good condition in June but then began to lose condition in July which we attributed to making them eat too far into the stalky, fibrous kale stems that had matured and declined in quality over winter. To prevent a repeat, we have assessed the kale to make sure we don't push the cows too hard into eating the stalky, end of season residuals by targeting no more than 80% utilisation. Another indicator for us will be looking at the big woody stems grazed in the crop and whether cows are eating into them as we want to leave behind 15-20cm length on these thick kale stems.
- There are x4 cows – x1 Std Kale, x2 Std FB and x1 LI FB that we decided to keep off crop for the winter. They have eaten their allocated pasture area on the milking platform and now have been trucked to the support block where they continue to be offered ad libitum baleage and 3 kg PKE/day.

General Notes:



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- From our fortnightly pasture walk, pasture growth is sitting between 3-9kg DM/day for the plate meter and 8-12kg DM/day for the visual. All farmlets sit in a range of 2000-2200kg DM/ha average pasture cover and there appears to be minimal yellowing from frost damage.
- With animal sampling coming up we will also BCS the herds. In our light fodder beet mob there still appears to be a couple of lighter animals. We will decide what to do with these animals depending on numbers. Options include increasing crop allocation to the whole mob or drafting them off for preferential treatment.
- We have ordered our new Allflex collars and hope these will arrive at the end of the month. We will have to delegate out time for staff to help put them all on but look forward to the informative results we will gain from extra data collected.
- Calves were weighed this week and we are extremely happy with the results. A big shout out to the farm team and especially Billy who took on the role of improving calf weights and performance this season. The average calf weight was 242kg, which is 20kg heavier than this time last year; the daily gain since the last weigh just prior to winter was 0.7kg /day.
- This year will be the first year that we do not need to keep separate kale and FB calves. All colostrum from kale and FB cows will be blended and calves will be split in mobs as either replacement or not. We will not be rearing extra replacements and will not have any trial calves.
- Our calf sheds are setup and already to go for the start of calving. Calving is always an exciting time at the hub and the first calf, no actually most calves, get very spoilt and named by the team which normally follows them right through to when they enter the herd as cows. The team love rearing quiet calves that become friendly milking cows.
- We have managed to get up to date on shed rubber wear a whole month earlier this year and are setup and ready to roll for when the first cow comes in.

Animal Health

- Next Monday we will Rotovac the majority of the herd to help improve immunity to rotavirus in the calves.
- Our lame cow that had slipped has been culled
- This week we had several cows (10% of the herd) in one of the kale herds alerting on decreased rumination time from our Smaxtec boli. When we checked these cows there was nothing obvious causing this decrease in rumination.

SDH Research/Demonstration

- The science technician team are busy as ever. They have been doing crop yielding, calibration cuts and fortnightly farm walks
- Our winter animal sampling is coming up on the 20th July. Here we will collect blood, urine and faeces samples to look at mineral and nitrogen levels.
- The Hedgehope-Makarewa Catchment Cultivation pilot paddocks are keeping the team busy although the last measurements have been taken in the kale paddock this week. We have about a week left of beet in the fodder beet trial paddock. Daily measurements include visual soil assessments, gumboot scores and measuring pugging depth with a ruler.
- Walking across the trial paddocks there is definitely noticeable differences between the establishment methods in how solid the soil is underfoot and the soil surface conditions, however it is difficult to capture this in photos. We are still seeing differences in the ability of the bulbs to be removed from the soil between the treatments.

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Figure 3: crop conditions in the new fodder beet break a couple of hours after feeding



Figure 4: ground conditions in the fodder beet trial paddock after a period of rain

Communication

- This week we had the SDH field day. We had a great turnout, and although a cold winters day, the warm lunch provided by Ravensdown, use of a minivan for transport, and heaters in the woolshed all made it a bit more enjoyable.

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Figure 5: Attendees at the SDH field day

- The handout will be up online shortly and key topics of the day included:
 - An update on how the 2020/2021 season went, where we managed to finish 16,176kg MS ahead of the previous season, totalling 298,360kg MS
 - Overall it was a good season to reflect on and we can attribute a lot to Charlie and his awesome farm team
 - We had guest farmer speaker Rob Dingle talk about his involvement in the Participatory research project which is aimed at supporting dairy farmers in achieving profitable businesses with a lower environmental footprint. He is 1 of 4 farms chosen of which we have investigated the environmental and financial performance of their farms and identify management and mitigation options to improve performance and achieve future environmental loss targets. His key message was to know your numbers.
 - We also had Natalie Stocker talk about the Hedgehope/Makarewa Catchment cultivation pilot project and how the trial has gone at SDH, although still early days, we are looking at how the different cultivation techniques of FB have held up over wintering which included strip tillage, direct drill and conventional.
 - We went through the KPI comparison between the farmlets which highlighted that although our low impact farmlets grew less pasture produced less milk and had a lower EFS/ha, they achieved their targets of reduced N surplus and reduced GHG emissions compared to the Std. farmlets Figure .



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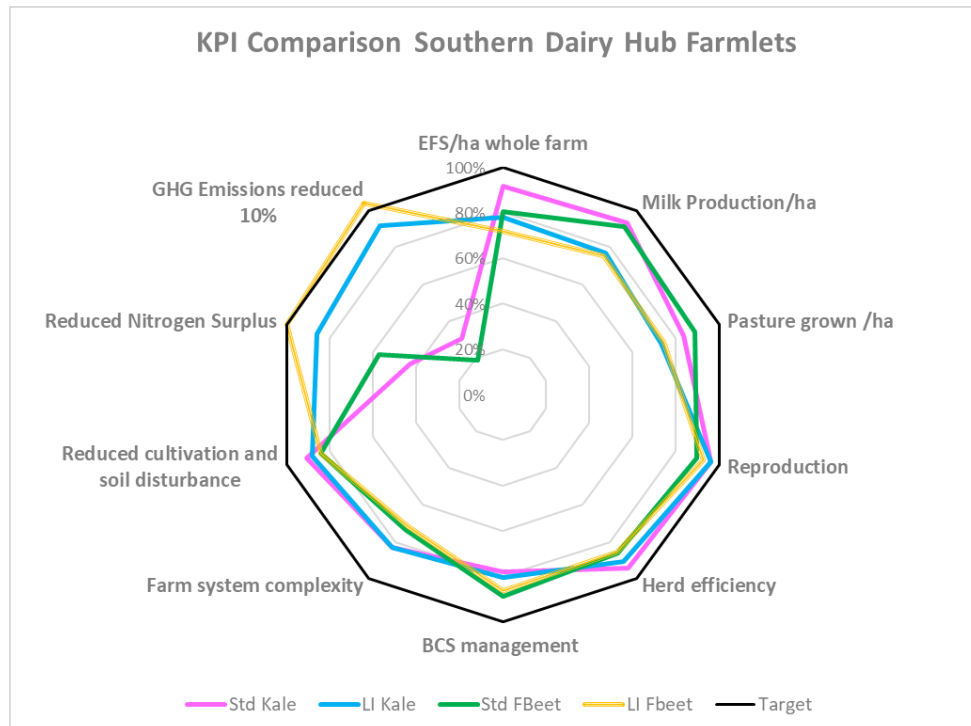


Figure 6: Wagon wheel summary of the farmlets against key system KPI's

- Finally we discussed the future research options at SDH as our current research project on farm will conclude in May 2022. We have been gathering a lot of feedback, doing surveys, asking our farmer reference group where they think we should direct our next big research project and how bold and how far into the future we should go. Watch this space and get in touch if you have some ideas

People

- The team had a LEAN management meeting last week in preparation for calving. Together they came up with a process for how calving will be done and pulled together some SOPs. They also created springer aid boxes for each springer paddock so that they never get caught short.
- Following a review of the General Manager role and the operation of the farm there has been some restructuring of the team to ensure we are achieving good mental and physical well-being off all the team. As a result, Louise has stepped back from the daily operational planning & implementation allowing Charlie to move into an overseeing operations managers role. This means Charlie will spend less time cupping cows and more time on system implementation and strategic planning and Billy will step up into the farm manager role. We are very excited with this new setup and having everyone working well together to meet their own personal objectives and that of the farm. It is great to have been able to create role advancement within our own team.

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



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- *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>