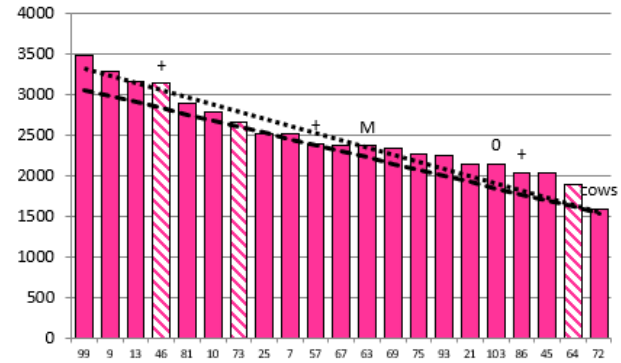
# 2021/22 Season
# Hub Weekly Farm Update
Date: 10/02/2022

## Standard Kale

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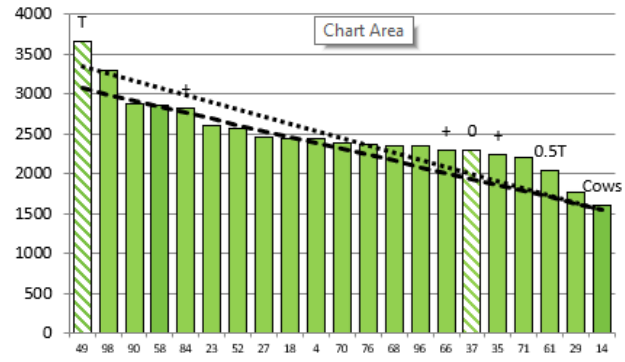
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 99 | 9 | 13 | 46 | 81 | 10 | 73 | 25 | 7 | 57 | 67 | 63 | 69 | 75 | 93 | 21 | 103 | 86 | 45 | 64 | 72 |
| DaysGrazed3 | 33 | 24 | 26 | 16 | 28 | 27 | 12 | 10 | 21 | 13 | 20 | 12 | 9 | 14 | 7 | 12 | 6 | 5 | 3 | 2 | 0 |
| N_3 | 136 | 121 | 111 | 50 | 136 | 136 | 53 | 146 | 111 | 116 | 136 | 136 | 111 | 136 | 136 | 136 | 136 | 111 | 136 | 50 | 136 |
| Growth3 | 62 | 24 | 28 | 112 | 36 | 20 | 86 | 52 | 28 | 20 | 16 | 4 | 38 | 46 | 95 | 14 | 79 | 0 | 0 | 0 | 0 |

Farmlet notes: Visual APC 2452, GR 43; x2 pdks at top of wedge will be baled to get cows into better pre-graze mass; continuing with 3 kg DM/cow inshed feeding as milk production has improved; waiting on final preg scanning results to finalise discretionary cull list; 95% pregnancy rate in heifers; empty heifers back at support block; new grass pdks growing rapidly

## Standard Fodder Beet

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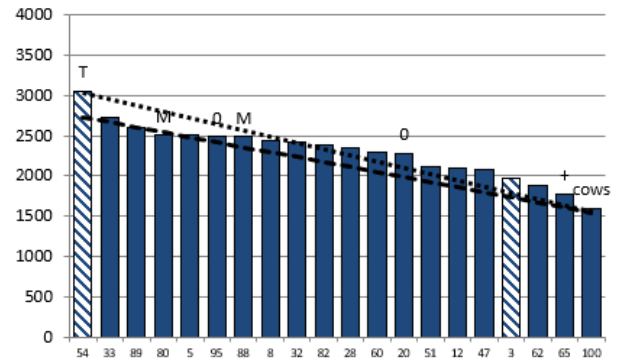
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 49 | 98 | 90 | 58 | 84 | 23 | 52 | 27 | 18 | 4 | 70 | 76 | 68 | 96 | 66 | 37 | 35 | 71 | 61 | 29 | 14 |
| DaysGrazed2 | 19 | 25 | 20 | 31 | 24 | 28 | 20 | 18 | 16 | 12 | 15 | 10 | 14 | 11 | 3 | 8 | 1 | 7 | 5 | 4 | 0 |
| N_2 | 50 | 136 | 116 | 136 | 107 | 136 | 110 | 136 | 111 | 136 | 136 | 111 | 98 | 136 | 111 | 41 | 136 | 106 | 81 | 136 | 136 |
| Growth2 | 145 | 80 | 81 | 22 | 40 | 4 | 50 | 34 | 50 | 58 | 20 | 64 | 14 | 44 | 0 | 100 | 0 | 85 | 0 | 0 | 0 |

Farmlet notes: Visual APC 2532. GR 57; milk production still struggling; x1 pdk more than 30d post grazing will be baled this week; baleage fed as planned this week but monitoring amount as residuals creeping up; growth holding at current demand with supps; 1.5 kg PKE/cow this week; 95% preg rate in heifers; waiting on final scan of cows to determine discretionary culls

## Low Impact Kale

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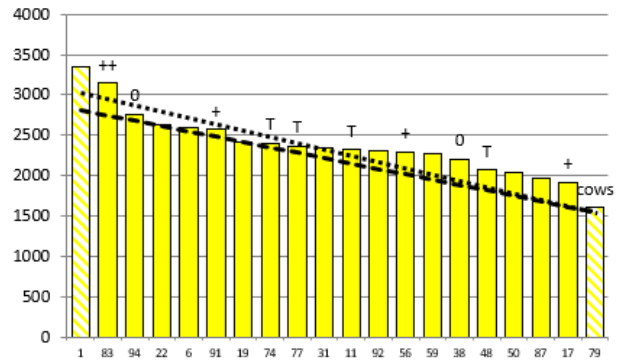
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54 | 33 | 89 | 80 | 5 | 95 | 88 | 8 | 32 | 82 | 28 | 60 | 20 | 51 | 12 | 47 | 3 | 62 | 65 | 100 |
| DaysGrazed1 | 17 | 29 | 5 | 12 | 24 | 25 | 12 | 11 | 21 | 16 | 14 | 13 | 8 | 4 | 7 | 10 | 3 | 4 | 2 | 1 |
| N_1 | 41 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 52 | 41 | 36 | 52 | 36 |
| Growth1 | 110 | 26 | 84 | 34 | 22 | 14 | 28 | 30 | 20 | 26 | 24 | 4 | 46 | 0 | 71 | 14 | 0 | 0 | 0 | 0 |

Farmlet notes: Visual APC 2386, GR 41; growing demand on current pasture allocation; milk production lifted this week; will offer 3-4 kg inshed feed this week based on residuals; no pdks identified for conservation; 96% pregnancy rate in heifers; empties back at support block ready for culling; new grass pdks currently on 18-20d return interval; identifying discretionary culls

## Low Impact Fodder Beet

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 83 | 94 | 22 | 6 | 91 | 19 | 74 | 77 | 31 | 11 | 92 | 56 | 59 | 38 | 48 | 50 | 87 | 17 | 79 |
| DaysGrazed4 | 19 | 29 | 22 | 25 | 28 | 18 | 13 | 16 | 20 | 10 | 15 | 7 | 8 | 25 | 12 | 6 | 5 | 4 | 2 | 0 |
| N_4 | 41 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 61 | 52 | 36 | 52 | 41 |
| Growth4 | 112 | 50 | 46 | 20 | 12 | 54 | 48 | 58 | 37 | 26 | 20 | 101 | 12 | 2 | 27 | 67 | 0 | 0 | 0 | 0 |

Farmlet notes: Visual APC 2381, GR 38; growth meeting demand on current pasture allocation; reducing PKE to 1.5 kg/cow/day with 1 bale baleage per day; pdks 83 & 6 stepped over for baleage based on days post grazing & still to graze thru new grass pdk 1; only 85% preg rate in R2's; discretionary culls to be finalised after final herd scanning; milk production improved this week

NB hatched bars are our 2021 new grass paddocks which we need to keep on top of grazing

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Table 1: KPI Table across all farmlets

| KPI | STd Kale Pink | LI Kale Blue | STd FB Green | LI FB Yellow |
|---|---|---|---|---|
| Farmlet area inc wintering | 75.0 | 72.1 | 75.0 | 69.2 |
| Peak cow numbers | 195 | 162 | 194 | 162 |
| Milking Area | 63.4 | 60.5 | 63.4 | 60.5 |
| Herd size (cows) | 192 | 160 | 192 | 160 |
| Pasture Stocking rate | 3.0 | 2.6 | 3.0 | 2.6 |
| Winter Feed<br>Milking supplement | Kale<br>In-Shed feed | | Fodderbeet<br>Fodderbeet/Baleage | |
| Average Cover | 2495 | 2301 | 2470 | 2383 |
| Average Growth | 45 | 37 | 56 | 43 |
| Target rotation length | 32 | 31 | 32 | 31 |
| Last week act rotation (d) | 31 | 26 | 30 | 32 |
| Last week supp (kg DM/cow) | 2.7 | 2.6 | 2.5 | 1.6 |
| Average BCS | 4.44 | 4.53 | 4.36 | 4.43 |
| % of herd on OAD | 17% | 17% | 19% | 9% |
| Milk yield (L/cow) | 16.1 | 16.7 | 14.7 | 15.4 |
| Milk yield (KGMS/cow) | 1.64 | 1.66 | 1.47 | 1.61 |
| **Nitrogen Cap kgN/ha/yr** | **193** | **50** | **193** | **50** |
| % Nitrogen used (kgN/ha) YTD | 62% (120kg) | 74% (37kg) | 60% (115kg) | 76% (38kg) |
| Effluent N YTD | 5 | 8 | 11 | 9 |
| Profit/ha comp to Control | $0 | -$210 | -$173 | -$166 |
| YTD supp (kg DM/cow) | 439 | 336 | 339 | 319 |
| YTD MS/cow | 294 | 300 | 276 | 283 |
| YTD MS/ha | 905 | 802 | 846 | 757 |

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## General Farm Information

Table 2: Key Weather and Feeding Numbers 10 February 2022

| | | | | |
|---|---|---|---|---|
| **Soil Temp (°C) (weekly average)** | **17.6** | | | |
| **Rainfall (mm)** | **1.4** | | | |
| **Allocation Target kg DM/cow/day** | **Std. Kale** | **LI Kale** | **Std FB** | **LI FB** |
| **Milkers** | 18 kg DM<br>15 kg pasture<br>3 kg DM PKE:barley blend | 18 kg DM<br>14 kg pasture<br>4 kg DM PKE:barley blend | 17.5 kg DM<br>15 kg pasture<br>1.5 kg DM PKE<br>1 kg DM baleage | 18.0 kg DM<br>15 kg pasture<br>1.5 kg DM PKE<br>1.5 kg Baleage as required |

## Key Decisions

**Feed:**

- Despite the lack of rain over the last week pasture growth has continued to meet or exceed demand at the current pasture allocations for each herd (range 14-15 kg DM/cow) resulting in small increases in average pasture cover
- Visually pasture quality appears to have improved and with 3 herds grazing new grass paddocks this week we have seen a lift in milk production.
- We are observing significant differences in the colour and evenness of pastures between the Std and LI herds (Figures 1 & 2 below) with large urine patch responses in the LI farmlets. Season to date the Std farmlet paddocks have received 115-120 kg N/ha compared to 38 kg N/ha to the LI farmlet paddocks

Figure 1: Pre-grazing paddock for a Std farmlet

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Figure 2: Pre grazing paddock for a LI farmlet

- We continue to see aftermath seed head emergence in the ryegrass in several paddocks which is unusual for this time of year in Southland.
- Average pasture cover for the Std and LI farmlets is very similar to the same time last year.

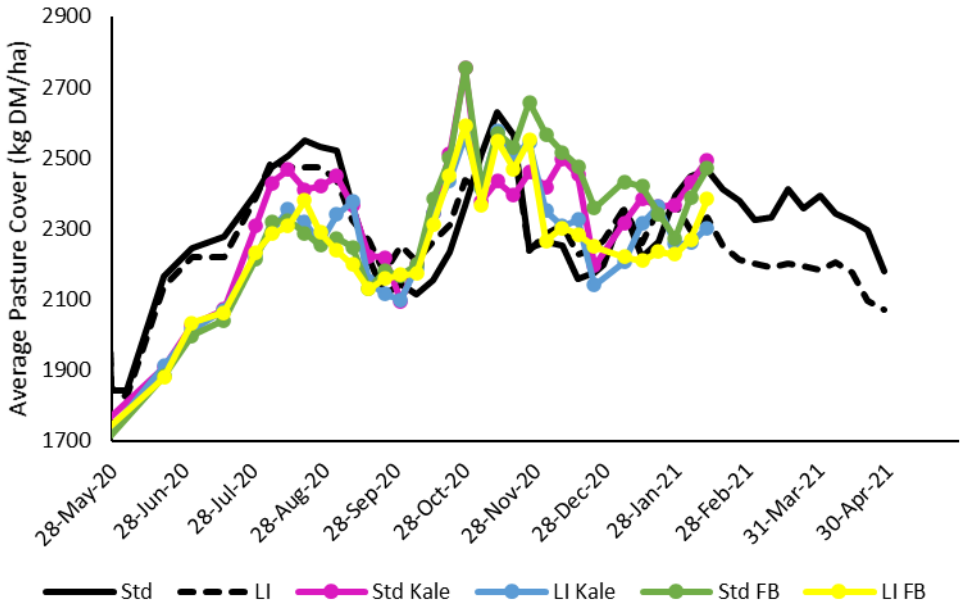


Figure 3: Average pasture cover (kg DM/ha) compared to last season

- We are sticking with our decision to avoid grazing paddocks longer than 30 days post grazing, in a bid to ensure that the cows are going into paddocks of better quality. As a result, this week we will step over x2 Std kale, x1 Std FB and x2 LI FB paddocks for conservation. These will be harvested as soon as possible to get the paddocks back into rotation.

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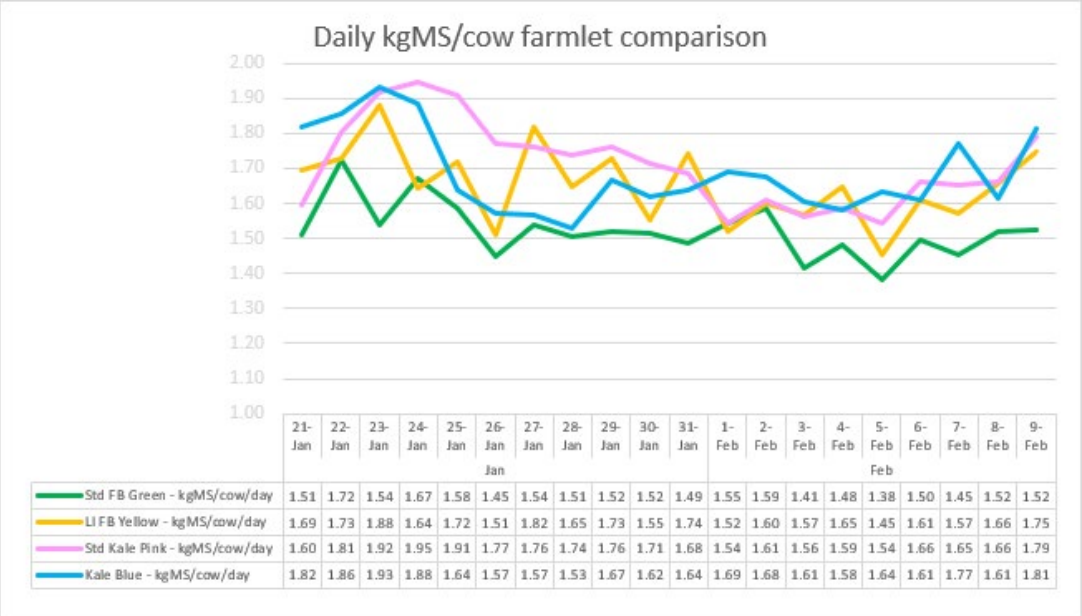
- Supplement will continue to be offered to all herds this week with a minimum of 2.5 kgs DM (Std FB) and the LI Kale herd getting 4kgs DM.
- Round length, based on area allocation, is to remain at 30 days for all farmlets. This means we can allocate up to two paddocks per farmlet each week for 2 grazing's rather than 3.
- The two new grass paddocks with willow weed were grazed this week so have been topped
- The willow weed in the fodder beet paddock is now too mature to get a good kill if sprayed so hopefully the fodder beet will out compete
- One stack of silage is being put down this week with purchased pasture plus a cut from the winter Italian paddocks and support block pastures. This stack is earmarked for lactation feeding to the new farmlets in spring 2022.
- Snail bait has been applied to the grass to grass renovation paddocks that were planted a couple of weeks ago.

**Milk Production:**

- Milk production has lifted for the Std Kale and two LI herds this week but the Std FB continue to lag behind. This herd only grazed their new grass paddock at the end of the period so that milk is not included. Milk production in the Std FB took a hit in late spring following the period of 10 n 7 milking and they have never fully recovered.




| | 21-Jan | 22-Jan | 23-Jan | 24-Jan | 25-Jan | 26-Jan | 27-Jan | 28-Jan | 29-Jan | 30-Jan | 31-Jan | 1-Feb | 2-Feb | 3-Feb | 4-Feb | 5-Feb | 6-Feb | 7-Feb | 8-Feb | 9-Feb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | | | | | | | | | | | | | | | Feb | | | | |
| Std FB Green - kgMS/cow/day | 1.51 | 1.72 | 1.54 | 1.67 | 1.58 | 1.45 | 1.54 | 1.51 | 1.52 | 1.52 | 1.49 | 1.55 | 1.59 | 1.41 | 1.48 | 1.38 | 1.50 | 1.45 | 1.52 | 1.52 |
| LI FB Yellow - kgMS/cow/day | 1.69 | 1.73 | 1.88 | 1.64 | 1.72 | 1.51 | 1.82 | 1.65 | 1.73 | 1.55 | 1.74 | 1.52 | 1.60 | 1.57 | 1.65 | 1.45 | 1.61 | 1.57 | 1.66 | 1.75 |
| Std Kale Pink - kgMS/cow/day | 1.60 | 1.81 | 1.92 | 1.95 | 1.91 | 1.77 | 1.76 | 1.74 | 1.76 | 1.71 | 1.68 | 1.54 | 1.61 | 1.56 | 1.59 | 1.54 | 1.66 | 1.65 | 1.66 | 1.79 |
| Kale Blue - kgMS/cow/day | 1.82 | 1.86 | 1.93 | 1.88 | 1.64 | 1.57 | 1.57 | 1.53 | 1.67 | 1.62 | 1.64 | 1.69 | 1.68 | 1.61 | 1.58 | 1.64 | 1.61 | 1.77 | 1.61 | 1.81 |

Figure 4: Daily kgMS/ cow comparison

- Residuals suggest that the milk production challenges continue to be quality rather than quality driven.
- When looking at farm kgMS/ha season to date compared to the same time in previous years the Std FB farmlet is now nearly 40 kg MS behind last season while the Std kale farmlet is only 15 kg MS/ha behind. Both the LI herds are still ahead on a MS/ha basis (Figure 5).

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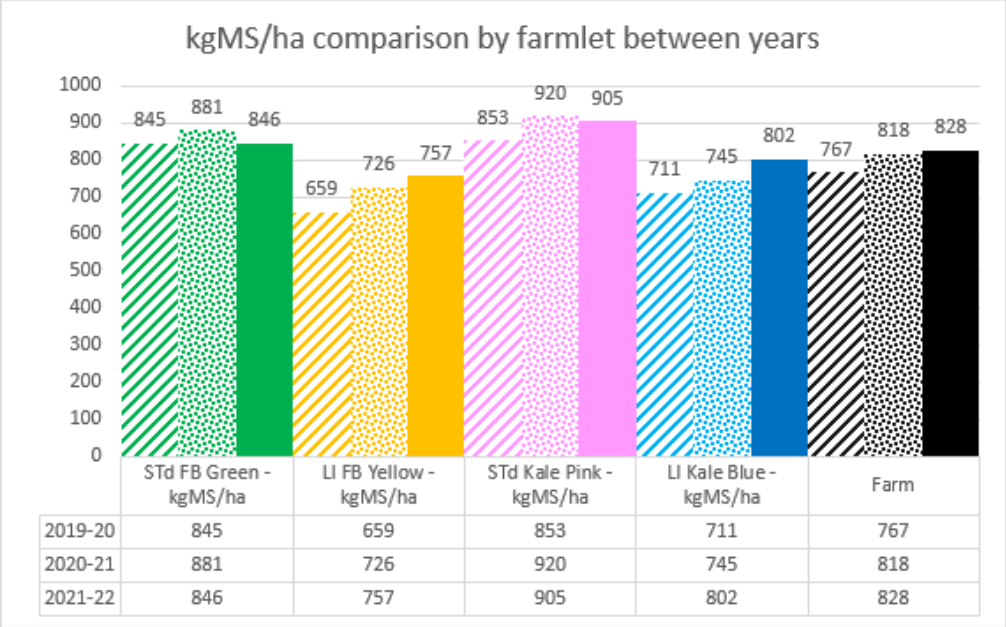


| | STd FB Green - kgMS/ha | LI FB Yellow - kgMS/ha | STd Kale Pink - kgMS/ha | LI Kale Blue - kgMS/ha | Farm |
|---|---|---|---|---|---|
| 2019-20 | 845 | 659 | 853 | 711 | 767 |
| 2020-21 | 881 | 726 | 920 | 745 | 818 |
| 2021-22 | 846 | 757 | 905 | 802 | 828 |

Figure 5: Yearly comparison of kgMS/ha season to date

## General Notes:

**Animals:**

- We are now making feeding and milking frequency decisions for low BCS cows based on calving date and age. A list has been created of cows who need to gain more than 0.75 of a BCS unit and heifers that need to gain more than 0.6 of a BCS unit for first calvers before 25th May.
- The final scan for the R2's was completed this week. Pregnancy rates for replacements from the Std Kale, Std FB and LI Kale herds were 95-96% while the LI FB herd only achieved an 85% pregnancy rate.

**Wintering:**

- With changes to our wintering regime for 2022 as we transition into the new farm system comparison, we are revisiting the winter feed budgets to ensure we will have enough supplement on hand to feed alongside the crop.
- At this stage the plan is to winter 215 animals on a baleage system in the Italian paddocks, 80 on kale, 80 on swedes and 370 on a modified fodder beet system with cows coming off beet approximately 1 month before their due calving date.
- With only 7 paddocks in crop, compared to our normal 15 we have increased requirement for baleage so are currently finalising the number required, estimating what we can still make on farm and what will need to be purchased.

**Research:**

- Nicole and Tash have observed a wide variation in the proportion of dead matter in the pastures while doing the botanical dissections. Each sample is sorted into ryegrass, other grasses, clover, weeds and dead material.

- Last year the proportion of dead matter across all paddocks averaged 10%, however with the paddocks sampled so far it is closer to 20% this year. For consistency across years the pasture samples for dissection are cut to ground level so will overestimate the proportion of dead material in the diet.
- There is huge variation between paddocks as seen in Figure 6 below.

Figure 6: Contrasting botanical composition samples

## 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).*

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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**