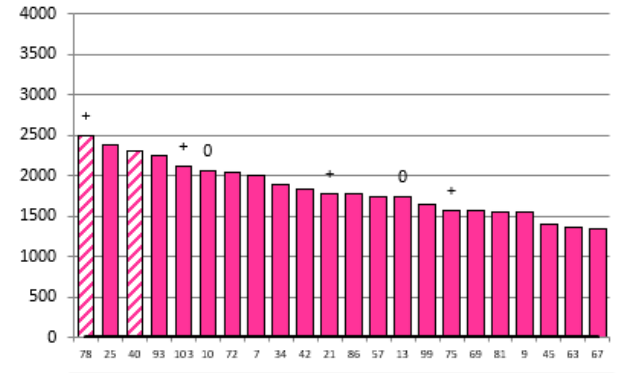
2021/22 Season
Hub Weekly Farm Update
Date: 3/06/2021

Date 02-06-21

Herd size (cows)		Average Cover	1839
Target residual (kg DM/ha)		Average Growth	8
Target pasture intake (kg DM/cow)		Farmlet area	62.3
Target Area offered (ha/day)		Target rotation length	#DIV/0!
Last week actual rotation (d)	#####	Target demand	0
Last week supp (kg DM/cow)	#####	YTD supp (kg DM/cow)	702
Last week N (kg N/ha)	0	Fert N YTD	185
Milk yield (L/cow)	#REF!	Effluent N YTD	17
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)		Average Cover	1784
Target residual (kg DM/ha)		Average Growth	7
Target pasture intake (kg DM/cow)		Farmlet area	63.5
Target Area offered (ha/day)		Target rotation length	######
Last week actual rotation (d)	#####	Target demand	0
Last week supp (kg DM/cow)	#####	YTD supp (kg DM/cow)	419
Last week N (kg N/ha)	0	Fert N YTD	182
Milk yield (L/cow)	#REF!	Effluent N YTD	16
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

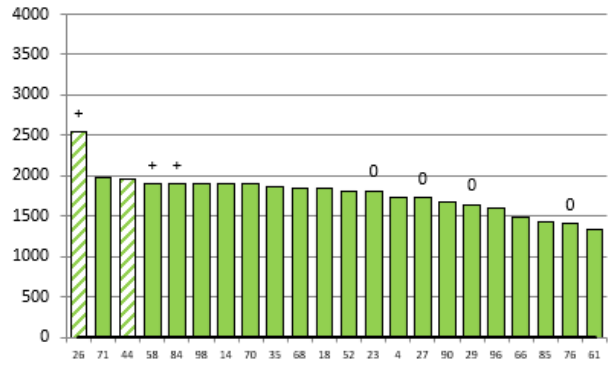
Standard Kale



	78	25	40	93	108	10	72	7	34	42	21	86	57	13	99	75	69	81	9	45	63	67
DaysGrazed3	53	34	24	29	24	28	27	37	21	21	25	14	17	20	22	17	15	12	13	10	9	11
N_3	202	177	184	177	101	204	204	208	163	177	177	202	101	202	183	200	198	187	202	220	197	187
Growth3	0	31	1	2	7	0	2	0	4	0	11	0	4	0	0	0	0	0	0	0	0	0

Farmlet notes: Visual APC 1857, Visual GR 11; All cows fully transitioned onto crop; x2 lame animals pulled off crop onto baleage in a grass pdk; Current winter allocations of 11.8 kg kale & 3.3 kg baleage being offered once a day in the morning; wheat straw purchased for use during adverse weather events if a drier area is not available;

Standard Fodder Beet



	26	71	44	58	84	98	14	70	35	68	18	52	23	4	27	90	29	96	66	85	76	61
DaysGrazed2	52	29	15	18	26	32	9	21	13	28	10	17	15	9	20	12	16	23	10	11	25	10
N_2	152	200	197	195	202	228	197	148	175	197	162	101	172	158	145	203	177	202	196	202	202	202
Growth2	0	0	20	1	9	3	0	1	0	1	0	0	0	0	0	0	19	4	0	0	0	0

Farmlet notes: Visual APC 1802 , Visual GR 17; Cows in final week of transitioning onto beet; currently at 7.5 kg DM beet plus baleage to total allocation of 13.5 kg DM; x8 lames on pasture with access to beet; x1 case of acidosis off crop on baleage & grass; x1 mob moved to drier pdk after water trough leak in wet weather; straw for adverse events

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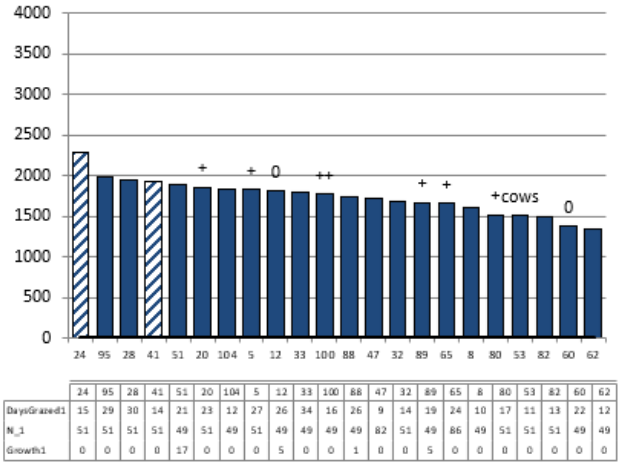
Herd size (cows)		Average Cover	1744
Target residual (kg DM/ha)		Average Growth	7
Target pasture intake (kg DM/cow)		Farmlet area	63.5
Target Area offered (ha/day)	2.3	Target rotation length	28
Last week rotation avg	#####	Target demand	0
Last week supp (kg DM/cow)	#####	YTD supp (kg DM/cow)	395
Last week N (kg N/ha)	0	Fert N YTD	53
Milk yield	#REF!	Effluent N YTD	16
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)		Average Cover	1830
Target residual (kg DM/ha)		Average Growth	5
Target pasture intake (kg DM/cow)		Farmlet area	63.8
Target Area offered (ha/day)	2.3	Target rotation length	28
Last week rotation avg	#####	Target demand	0
Last week supp (kg DM/cow)	#####	YTD supp (kg DM/cow)	369
Last week N (kg N/ha)	0	Fert N YTD	55
Milk yield	#REF!	Effluent N YTD	15
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

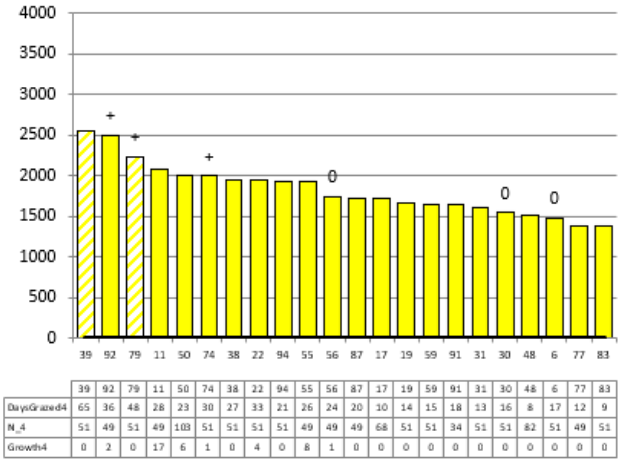
Low Impact Kale



	24	95	28	41	51	20	104	5	12	33	100	88	47	32	89	65	8	80	53	82	60	62
DaysGrazed1	15	29	30	14	21	23	12	27	26	34	16	26	9	14	19	24	10	17	11	13	22	12
N_1	51	51	51	51	49	51	49	51	49	49	49	49	82	51	49	86	49	51	51	51	49	49
Growth1	0	0	0	0	17	0	0	0	5	0	0	1	0	0	5	0	0	0	0	0	0	0

Farmlet notes: Visual APC 1777, visual GR 12; All cows fully transitioned onto crop; Current winter allocations of 11.8 kg kale & 3.3 kg baleage being offered once a day in the morning; 2 wintering mobs - heavies or lights and R2's; wheat straw purchased for use during adverse weather events if a drier area/paddock is not available;

Low Impact Fodder Beet



	39	92	79	11	50	74	38	22	94	55	56	87	17	19	59	91	31	30	48	6	77	83
DaysGrazed4	65	36	48	28	23	30	27	33	21	26	24	20	10	14	15	18	13	16	8	17	12	9
N_4	51	49	51	49	103	51	51	51	51	49	49	49	68	51	51	34	51	51	82	51	49	51
Growth4	0	2	0	17	6	1	0	4	0	8	1	0	0	0	0	0	0	0	0	0	0	0

Farmlet notes: Visual APC 1841, Visual GR 11: Cows in final week of transitioning onto beet; currently at 7.5 kg DM beet plus baleage to total allocation of 13.5 kg DM; x2 lames on pasture with access to beet; x1 mob moved to drier pdk after water trough leak in wet weather; straw for adverse events; start grazing crop establishment pilot trial pdk next week

NOTE: Hatched paddocks are springer paddocks

Table 1: Key Herd Numbers 3/06/2021 – number of cows in each mob

DATE: 3 June 2021	Std Kale	LI Kale	Std FB	LI FB	Total
Current being milked	0	0	0	0	
Dries	203	168	202	168	741

General Farm Information

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Table 2: Key Weather and Feeding Numbers 3/06/2021

Soil Temp (°C) (weekly average)	8.2			
Rainfall (mm)	17.6			
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 Baleage 4.4–3.3 kg DM/cow	Kale 11.8 kg DM/cow Baleage 3.3 kg DM/cow	Beet 9-10 kg DM/cow Baleage 4.2–3.3 kg DM/cow	Beet 9.8 kg DM/cow Baleage 3.3 kg DM/cow

Key Decisions: this week

- Due to the next two 'quieter' months on farm with reduced pasture walks and fewer key decisions to be made we will change our weekly notes to fortnightly.

  We will however be preparing for our **SDH Field Day** which will be held on farm on the **7th July, 12pm-2.30pm** (lunch and registration at 12pm and commencing at 12.30pm). So pencil this day into your calendar and we will have more details to come!

- The decision was made to move 2 mobs from their existing paddock during the week due to wet conditions underfoot. Unfortunately, in both paddocks the wetness was compounded by portable water trough issues!
- After discussions around our Plan B at last week's meeting Charlie purchased 30 bales of wheat straw. This will be rolled out when paddock conditions become saturated and muddy to provide a drier lying surface. Below you can see our cows having a sniff of their new bedding rolled out earlier in the week. Due to limited Plan B options we hope this will be a successful alternative option.

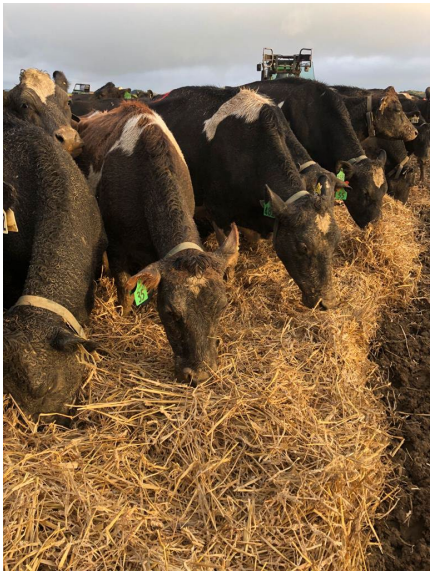

Figure 1: Cows having a sniff of their wheat straw bedding

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- We have been feeding out more baleage than predicted due to wet weather and lower crop utilisation. With the fodder beet cows still in the transition phase it is important that they do not get hungry and start testing the fence and pushing standards.
- The kale cows have been utilising their crop well but as we get further into winter and the quality of the kale begins to drop off we need to make sure we don't push these animals too hard to clean up. This was a key learning we took away from last season as it began to impact BCS.
- The last of our culls (x14) will finally be leaving this week! We will get liver biopsies taken from them and report back on the results.
- Kale yields on the support block are less than budgeted so the decision was made to increase the proportion of baleage in the diet for at least the next 2 weeks to ensure we have sufficient crop to get through to the 10th August. Another crop yield is due in the next 2 weeks so this will help with decision making.
- With one clinical case of acidosis in the R1's this week we have reduced the amount of beet being offered and will slow the transition down to their full allocation
- Next week the Science tech team will do crop measurements for all crop paddocks. It's a big job but gives a good indicator of how fast the crops have grown and what is actually in paddock to assure accurate crop allocations.
- Next week Wednesday we should have the FB cows fully transitioned onto FB.
- The R1's will be brought in and weighed next week.

General Notes:

- From our pasture walk this week, our APC is sitting between 1750 – 1850kg DM/ha, which is slightly lower than planned. Our growth rates were <10kg DM/day over the last two weeks and in the clumps there appears to be some decay of the long pasture highlighting the importance of cleaning up residuals well prior to dry off.

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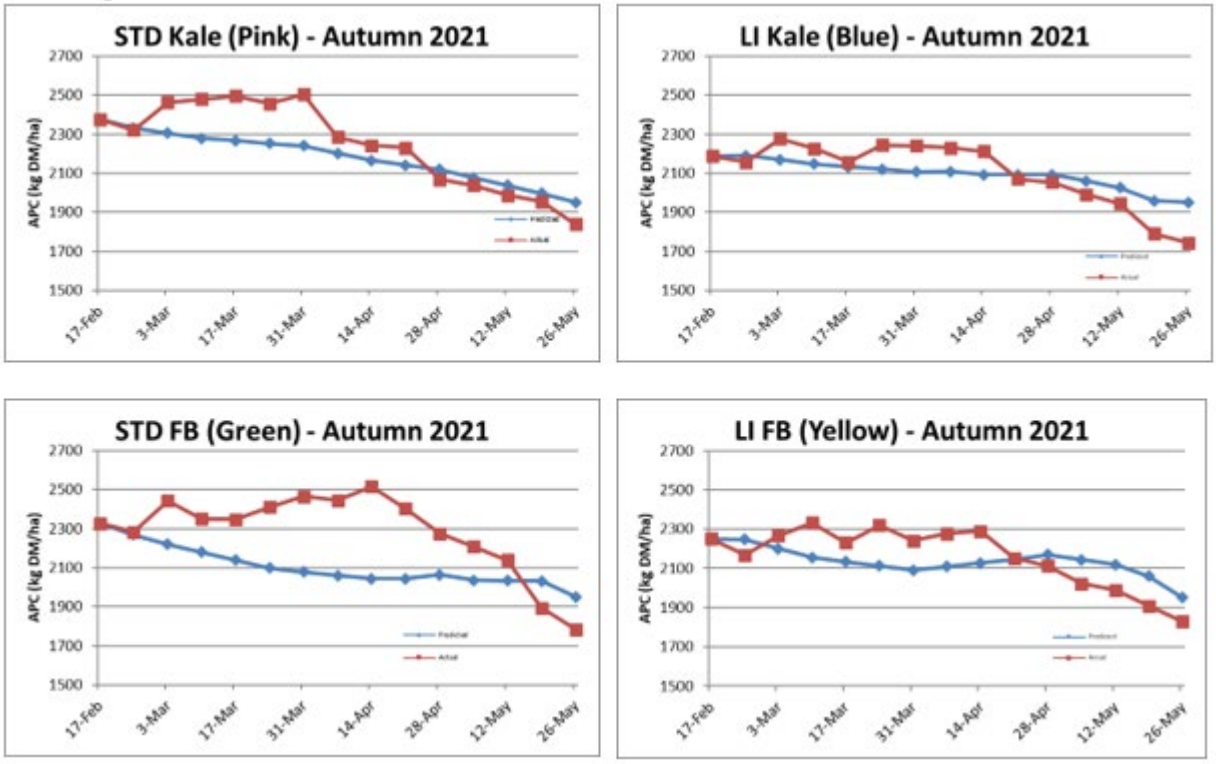

Figure 2: Autumn feed budget summary of actual average pasture cover vs predicted

- This week we fitted x140 cows with ICE tags (pedometers) to wear over winter. Hopefully these staying on a bit better than last year's HOBO devices.

Figure 3: Cow fitted with a behaviour monitoring device leaving the cowshed

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- There is still the odd cow that has not dried down fully, however we are much happier with our drying off process this year compared to last with no cases of mastitis having been detected.
- Our end of season milk results are in and once again we have superseded previous seasons! A great result for the farm and the huge amount of work the team puts in every day. On average we were 16,176kg MS ahead of last season and totalled 298,360 kg MS for the season; just shy of 300,000kg MS!!! You can see the seasonal year on year comparisons below and how we have managed to keep on increasing our overall milk solid production.

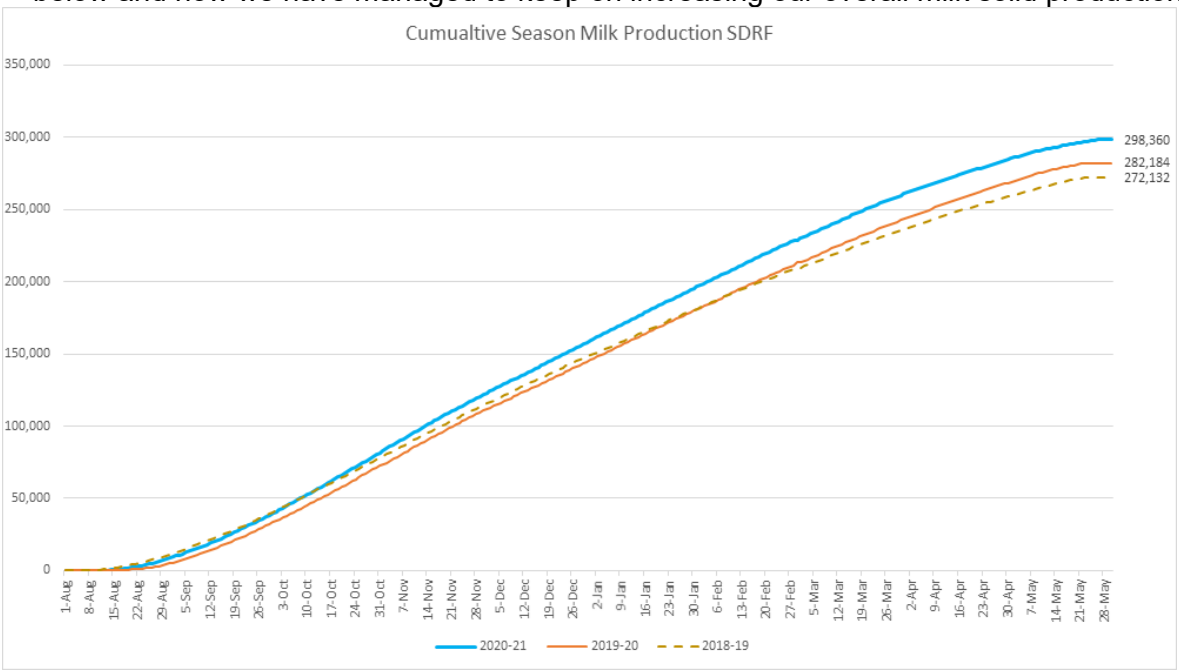

Figure 4: Cumulative season milk production comparison between 2018/2019, 2019/2020 and 2020/2021

- This year all farms exceeded 1000 kg MS/ha with the Std kale cracking 1300 kg MS/ha. Each farmlet increased on average around 50kg MS/ha.

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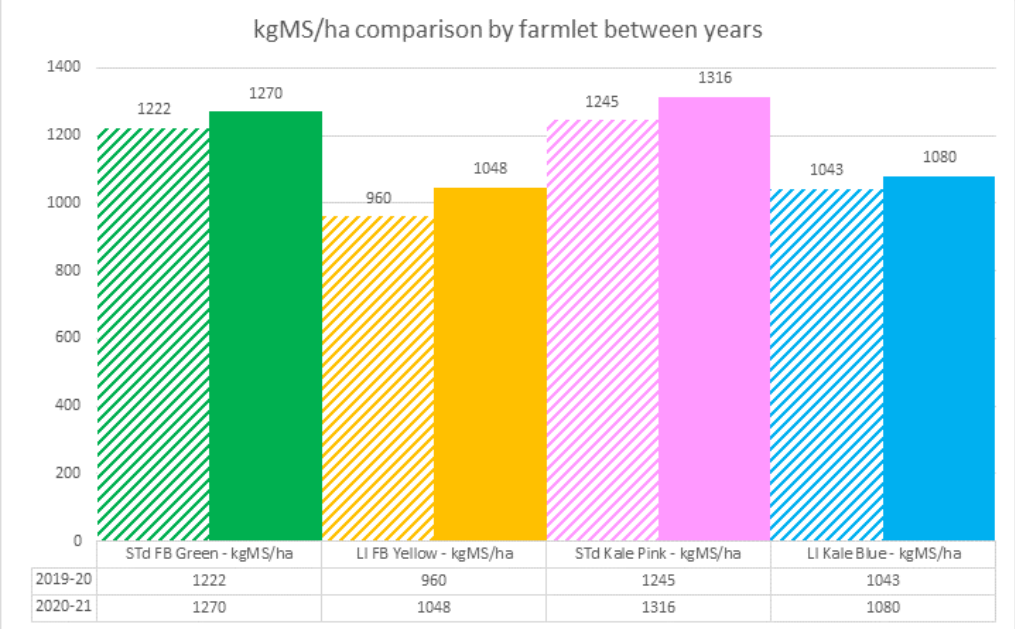

Figure 5: kg MS/ha comparison by farmlet between years

- There were some fluctuations through the year with per cow milk production, summarised in the graph below. Visually the LI kale appears to have held consistently the highest kg MS/cow production throughout the season. Clearly feed management in late November/December needs assessing to reduce the drop in production from peak.

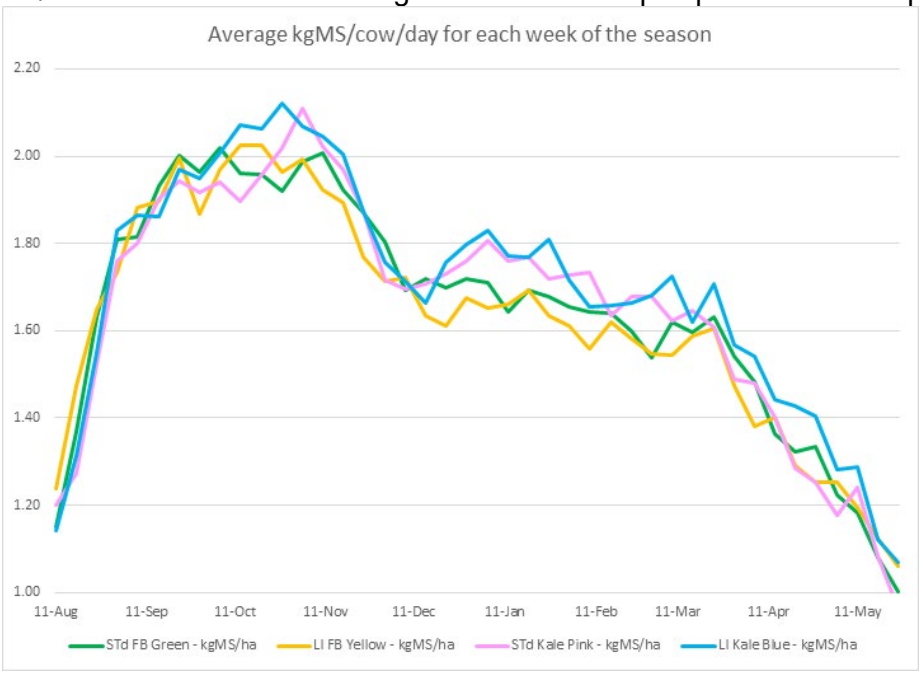

Figure 6: Average kg MS/cow/day for each week of the season

- There was some deviation from our autumn feed budgets with all the herds however on the whole we fed a similar amount of supplement as predicted in total, just different proportions of baleage, inshed feed or fodder beet.

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Table 3: Autumn feed budget supplement use summary.

	Std Kale	LI Kale	Std FB	LI FB
Baleage (Pred including dries)	15	43	72	39
Baleage (Act)	40	38	50	57
	+25 bales (5500kg DM)	-5 bales (-1100 kg DM)	-22 bales (-4840 kg DM)	+18 bales (+3960 kg DM)
Grain (Pred)	30458	20839	8755	7090
Grain (Act)	30893	25656	6067	4300
	+463 kg DM	+4817 kg DM	-2688 kg DM	-2790 kg DM
FB (Pred)			11326	8323
FB (Act)			12366	12481
			+1040 kg DM	+4166 kg DM

Animal Health

- We have had a couple of cases of acidosis this week, including one R1 death. The autopsy showed that the papillae could be easily rubbed off inside the rumen and it had signs of dehydration. Last year it took longer for the R1s to adapt to the FB, however this year they tucked into it straight away, so even though we followed the industry recommended transition plan of 0.5 kg DM increase every second day some animals were clearly eating too much.
- Removal off FB, drenching with magnesium oxide and extra forage such as hay and silage has been offered to any mature animals showing signs of acidosis.
- The R1s have received a Cu bolus and long acting selenium.
- We had one recorded slip this week.
- Lameness continued to be a challenge in the fodder beet herds at the end of the season. While the cows were not spending more time on concrete or walking more they were spending an hour a day grazing fodder beet crop in wet conditions. Lame cows are now kept in their own mob but still have access to fodder beet.
- Final rainfall tally from mid-June was just short of 800 mm. Soil temperature is currently hovering around 8 °C.

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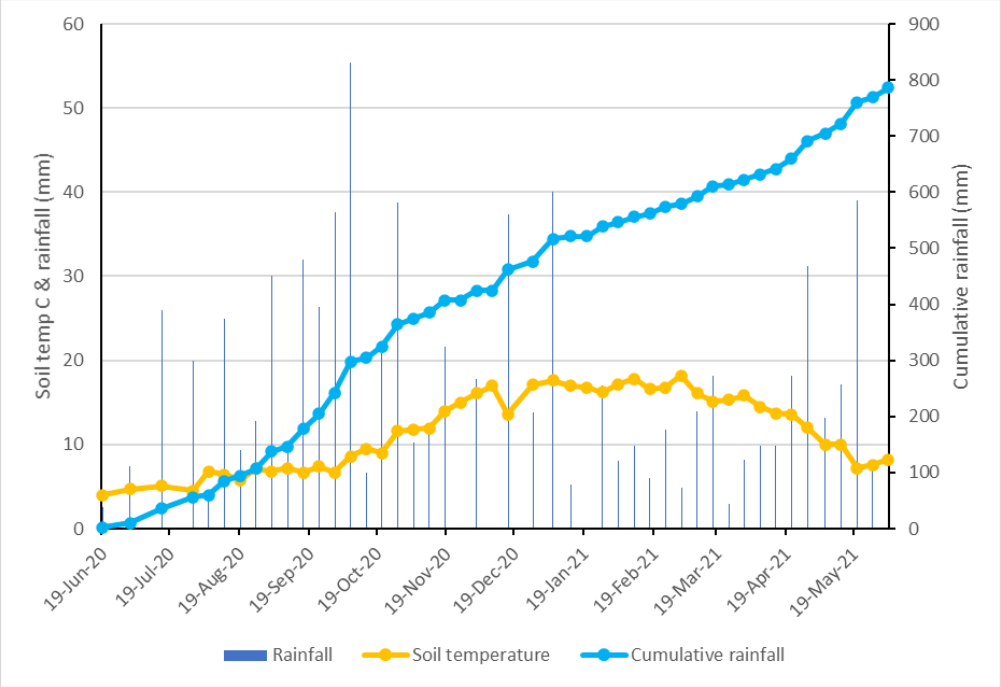

Figure 7: Average soil temperature, rainfall events and cumulative rainfall for the season

SDH Research

- Our citizen science project with Hedgehope-Makarewa Catchment group has kicked off in earnest this week with the team out and about on commercial farms doing crop yields and soil measurements. We plan to start grazing the two paddocks at SDH around the 10th of June once all mobs are fully transitioned onto crop. The latest crop yields have been done in the first part of our paddocks and our strip tilled fodder beet has not recovered from the impact of pest damage in the early stages and weeds just before canopy closure. There are definitely things that we could have done differently that would have likely resulted in a better outcome e.g. paddock preparation and weed & pest management. There were also timing differences between the establishment of the treatments which need to be considered. It will be interesting to see the yields of the crops on commercial farms that have been established the same way.

Table 3: Crop yields in our establishment demonstration paddocks.

	Yield	% leaf	No. plants/quad
Conventional Fodder beet	21.8	31	19
Strip Till Fodder beet	6.1	26	8
Direct Drilled Fodder beet	17.2	26	10
Conventional Kale	10.9		
Direct drilled Kale	9.3		

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Figure 8: On-farm measurements with Natalie Stocker, DairyNZ technical team and local farmer volunteers.

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