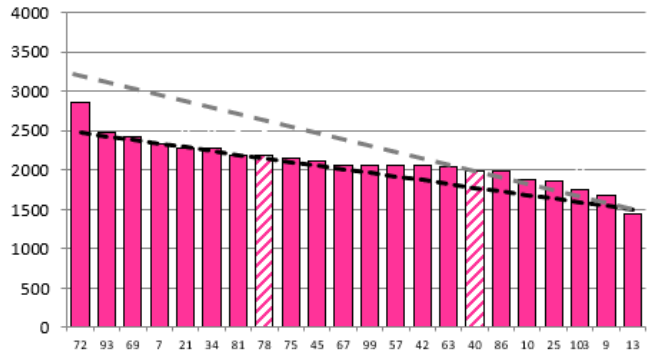
2021/22 Season
Hub Weekly Farm Update
Date: 30/09/2021

Date 29-09-21

Herd size (cows)	185	Average Cover	2095
Target residual (kg DM/ha)	1500	Average Growth	26
Target pasture intake (kg DM/cow)	10	Farmlet area	62.3
Target Area offered (ha/day)	1.90	Target rotation length	33
Last week actual rotation (d)	33	Target demand	30
Last week supp (kg DM/cow)	3.2	YTD supp (kg DM/cow)	156
Last week N (kg N/ha)	10	Fert N YTD	32
Milk yield (L/cow)	22.2	Effluent N YTD	0
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)	172	Average Cover	2150
Target residual (kg DM/ha)	1500	Average Growth	37
Target pasture intake (kg DM/cow)	12.5	Farmlet area	63.5
Target Area offered (ha/day)	1.9	Target rotation length	33
Last week actual rotation (d)	35	Target demand	34
Last week supp (kg DM/cow)	5.5	YTD supp (kg DM/cow)	119
Last week N (kg N/ha)	11	Fert N YTD	33
Milk yield (L/cow)	21.7	Effluent N YTD	0
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

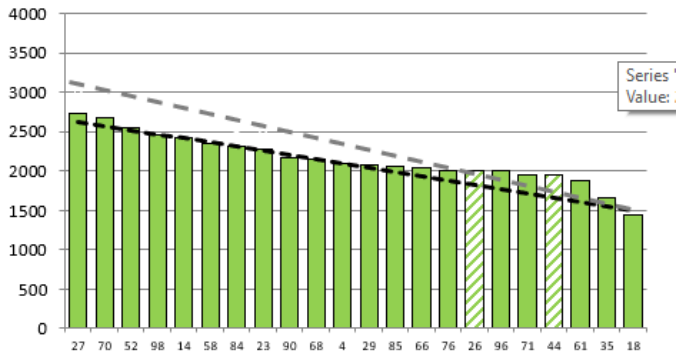
Standard Kale



	72	93	69	7	21	34	81	78	75	45	67	99	57	42	63	40	86	10	25	103	9	13
Days Grazed 3	32	23	17	15	28	30	25	49	23	19	11	13	6	21	7	46	9	0	4	1	9	3
N_3	31	31	0	31	56	56	31	0	31	31	31	31	36	31	56	0	31	31	36	56	36	56
Growth 3	42	50	10	22	48	26	16	12	0	6	10	64	0	24	50	30	12	0	0	0	2	0

Farmlet notes: Vis APC 2077, GR 32; only 10 cows to calve; holding rotation at 30 d requires 9 kg DM supplement; holding rotation due to pasture damage in 1st round & below av growth; 4.5 kg inshed feed & 4.5 kg baleage; N continuing after grazing; switched to 10:7 milking interval for next 2-3 wks to protect pastures, people and cows; low attrition rate in herd this spring

Standard Fodder Beet



	27	70	52	98	14	58	84	23	90	68	4	29	85	66	76	26	96	71	44	61	35	18
Days Grazed 2	25	0	33	21	30	27	23	37	5	14	15	19	5	10	17	49	12	2	21	8	1	3
N_2	31	31	31	31	56	31	0	56	36	36	31	31	36	31	31	0	31	56	0	31	56	56
Growth 2	58	28	36	56	56	32	20	46	0	38	50	20	0	20	18	40	61	0	18	32	0	0

Farmlet notes: Vis APC 2126, GR 40; only 7 cows to calve; holding rotation at 30 d requires 7.5 kg DM supplement; holding rotation due to pasture damage in 1st round & below av growth; 1.5 kg PKE & 3.5 kg FB bulb & rest as baleage; N continuing after grazing; switched to 10:7 milking interval for next 2-3 wks to protect pastures, people and cows; all FB lifted; 4 culls

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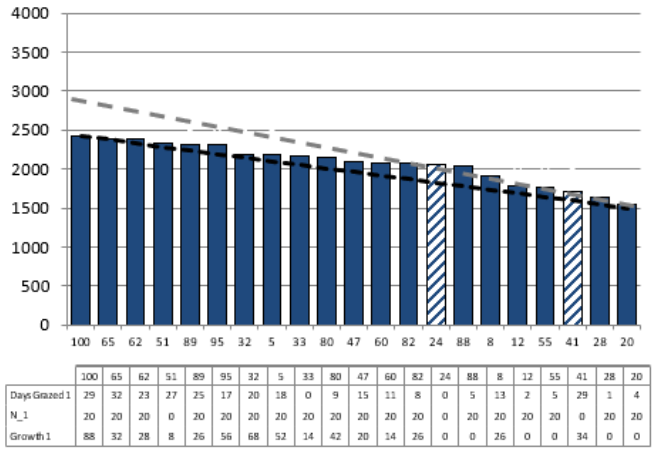
Herd size (cows)	146	Average Cover	2073
Target residual (kg DM/ha)	1500	Average Growth	36
Target pasture intake (kg DM/cow)	12	Farmlet area	61.0
Target Area offered (ha/day)	1.9	Target rotation length	32
Last week rotation avg	29	Target demand	29
Last week supp (kg DM/cow)	4.0	YTD supp (kg DM/cow)	115
Last week N (kg N/ha)	2	Fert N YTD	16
Milk yield	24.4	Effluent N YTD	0
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)	144	Average Cover	2113
Target residual (kg DM/ha)	1500	Average Growth	40
Target pasture intake (kg DM/cow)	15	Farmlet area	60.9
Target Area offered (ha/day)	1.9	Target rotation length	32
Last week rotation avg	29	Target demand	35
Last week supp (kg DM/cow)	5.0	YTD supp (kg DM/cow)	115
Last week N (kg N/ha)	1	Fert N YTD	16
Milk yield	21.8	Effluent N YTD	0
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

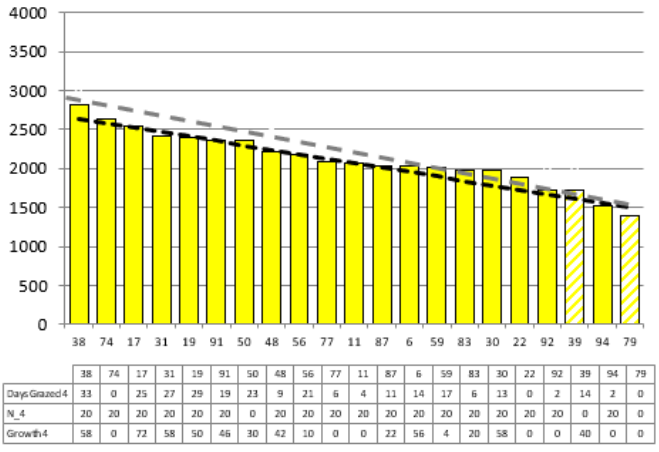
Low Impact Kale



	100	65	62	51	89	95	32	5	33	80	47	60	82	24	88	8	12	55	41	28	20
Days Grazed 1	29	32	23	27	25	17	20	18	0	9	15	11	8	0	5	13	2	5	29	1	4
N_1	20	20	20	0	20	20	20	20	20	20	20	20	20	0	20	20	20	20	0	20	20
Growth 1	88	32	28	8	26	56	68	52	14	42	20	14	26	0	0	26	0	0	34	0	0

Farmlet notes: Vis APC 2087, GR 39; only 9 cows to calve; holding rotation at 30 d requires 4 kg DM supplement; holding rotation due to pasture damage in 1st round & below av growth; 4 kg inshed feeding & 2.5 kg as baleage; switched to 10:7 milking interval for next 2-3 wks to protect pastures, cows & people; good retention of cows; best performing herd so far this spring

Low Impact Fodder Beet



	38	74	17	31	19	91	50	48	56	77	11	87	6	59	83	30	22	92	39	94	79
Days Grazed 4	33	0	25	27	29	19	23	9	21	6	4	11	14	17	6	13	0	2	14	2	0
N_4	20	20	20	20	20	20	0	20	20	20	20	20	20	20	20	20	20	20	0	20	0
Growth 4	58	0	72	58	50	46	30	42	10	0	0	22	56	4	20	58	0	0	40	0	0

Farmlet notes: Vis APC 2125, GR 43; only 11 cows to calve; holding rotation at 30 d requires 4.5 kg DM supplement; holding rotation due to pasture damage in 1st round & below av growth; 1.5 kg PKE & 3.5 kg FB bulb; 3 pdks badly damaged with pugging; switched to 10:7 milking interval for next 2-3 wks to protect pastures, people and cows; all FB lifted & cultivation started

NB: Hatched paddocks are springer paddocks
Grey - - - - - - - target line is for 30 day rotation with 18.5 kg DM pasture intake and no supplements

Table 1: Key Herd Numbers 23/09/2021 – number of cows in each mob

DATE: 22 Sep 21	Std Kale	LI Kale	Std FB	LI FB	Total
Cows on Farm	201	165	190	165	721
Current being milked	191	156	184	154	685
Springers	10	9	7	11	37
Slips/empty/deaths	2	3	12	3	20

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General Farm Information

Table 2: Key Weather and Feeding Numbers 30th September 2021

Soil Temp (°C) (weekly average)	10.6°C			
Rainfall (mm)	27.8 mm			
Allocations kg DM/cow/day	**Std. Kale**	**LI Kale**	**Std FB**	**LI FB**
Milkers	18-19 kg DM 4.5 kg inshed + 4.5 kg baleage	18-19 kg DM 4 kg inshed + 2.5 kg baleage	18-19 kg DM (3.5 kg FB + 1.5 kg PKE and baleage as required)	17-17.5 kg DM (3.5 kg FB + 1.5 kg PKE and baleage as required)
Colostrum	15-16 kg DM (11-12 kg DM pasture + 1.5 kg inshed + 3 kg baleage)			
Springers	4-5 kg pasture & 5-6 kg baleage			

Key Decisions: this week

- It's mental health week this week and we know this is more applicable than ever with the challenges we have been facing on farm especially those in coastal and central Southland. A prolonged wet spring and slow growth has meant pressure on staff and animals as we try to ensure cows are fully fed and pasture damage is kept to a minimum. If you are currently struggling please get in contact with your local DairyNZ representative to organise an on farm visit https://www.dairynz.co.nz/contact-us/regional-teams/?region=southlandsouth-otago or the Rural Support Trust on 0800 787 254 (0800 RURAL HELP); we are here to help.
- It has been another wet week on farm with 28mm of rain, pasture covers dropping, feed utilisation challenging and overall pressure on staff wellbeing and cow health. In the interest of preserving BCS and feeding the cows as best as we can with current feed resources, we have decided to put all the herds onto 10n7 milkings for a period of approximately 3 weeks until pasture cover and weather improves allowing us to look forward into the future and match feed supply and demand.
- All alternative milking frequencies were considered i.e. full OAD, 3 in 2 and more traditional 10n7 however we have settled on a modified 10 milkings in 7 days with cows being milked TAD at 5 am and 2.15 pm Mon, Wed and Fri, OAD on Tues and Thu at 10 am and OAD Sat at 10 am and Sun at 7 am
- With different milking intervals and inshed feeding requirements we now have a milking management chart to help with the implementation of the plan (Figure 1).

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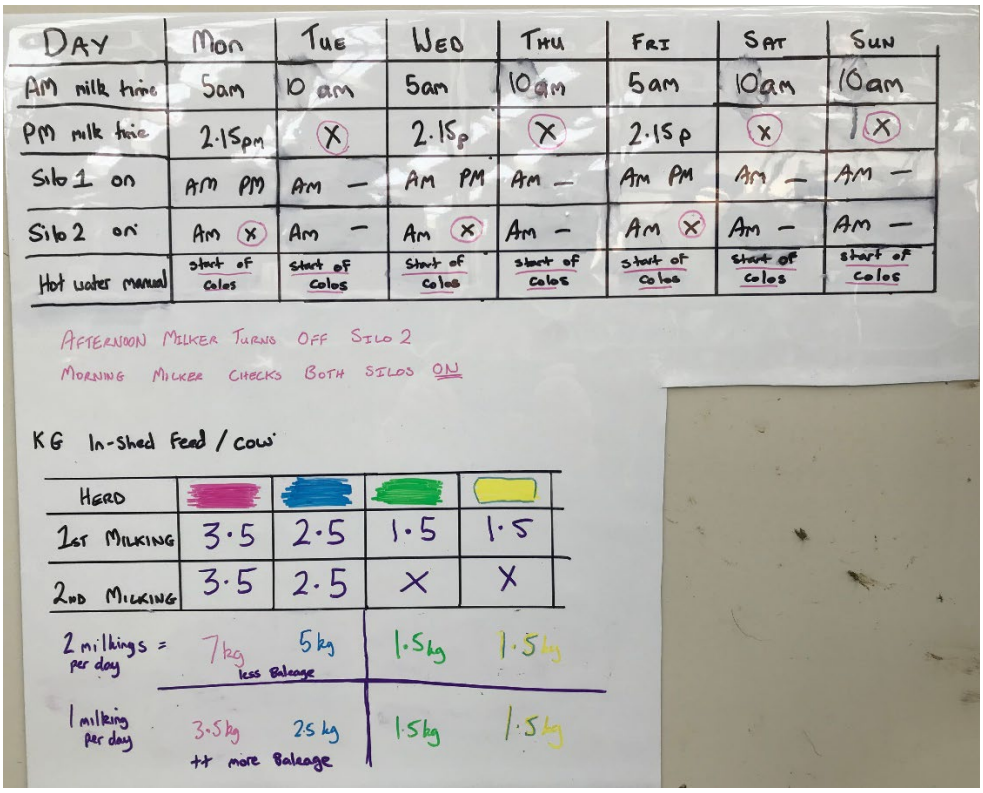

DAY	Mon	Tue	Wed	Thu	Fri	Sat	Sun
AM milk time	5am	10 am	5am	10am	5am	10am	10am
PM milk time	2.15pm	X	2.15p	X	2.15p	X	X
Silo 1 on	AM PM	AM —	AM PM	AM —	AM PM	AM —	AM —
Silo 2 on	AM X	AM —	AM X	AM —	AM X	AM —	AM —
Hot water manual	start of cows	start of cows	start of cows	start of cows	start of cows	start of cows	start of cows

AFTERNOON MILKER TURNS OFF SILO 2
MORNING MILKER CHECKS BOTH SILOS ON

KG In-Shed Feed / cow

HERD				
1ST MILKING	3.5	2.5	1.5	1.5
2ND MILKING	3.5	2.5	X	X

2 milkings per day	7kg	5kg less Baleage	1.5kg	1.5kg
1 milking per day	3.5kg	2.5kg ++ more Baleage	1.5kg	1.5kg

Figure 1: Milking management chart

- We will hold the current rotation length of approx. 30 days as speeding up now increases the risk of being in an even bigger hole in 3 weeks time if growth continue to be erratic. To do this we will require additional supplement.
- To ensure consistency of pasture allocation with different periods of time between milking we have had to expand the grazing plan template. Below is half of the grazing plan outlining the plan for the Std kale and fodder beet herds for the next week.

29-Sep			Pink	Time	% pdk		Time	% pdk	Green	Time	% pdk		Time	% pdk
1-Oct	Fri	TAD	72			93	3pm	50%	27			52	3pm	35%
2-Oct	Sat	OAD	93	11am	15%	93	3pm	35%	52	6am	15% + Beet	52	3pm	35%
									52	11am	15%			
3-Oct	Sun	OAD	39/43b	8am	100%	34	3pm	100%	27	8am	30%	58	3pm	35%
4-Oct	Mon	TAD	21	6am	35%	21	3pm	50%	58	6am	30%	58	3pm	35%
5-Oct	Tue	OAD	21	11am	15%	81	3pm	35%	14	6am	15% + Beet	14	3pm	35%
										11am	15%			
6-Oct	Wed	TAD	81	6am	30%	69	3pm	50%	14	6am	35%	23	3pm	35%
7-Oct	Thu	OAD	69	11am	15%	81	3pm	35%	23	6am	15% + Beet	23	3pm	35%
										11am	15%			
8-Oct	Fri	TAD	69	6am	35%				98					

Figure 2: Grazing plan for the Std kale and FB herds for this week

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- FB has finished being lifted and we have already sold 90t wet weight. We will increase our FB allocation from 2.5 to 3.5kg/cow/day as it is the best source of ME supplement available and has better utilisation that what we have been getting from baleage. We were surprised to see the large amount of FB remaining in the paddock post lifting and will talk with our agronomist around the impacts of leaving it there and planting into pasture.

Figure 3: harvesting the last of the fodder beet for our Std and LI FB herds

- Once conditions improve on farm we will need to consider stitching pastures as the density of the pastures has decreased due to pugging damage and will impact on season pasture production.
- As an extra source of feed we will revisit some springer paddocks with the milkers to nip off regrowth. A decision around what to do with these paddocks, what crops to plant etc. will be discussed this week at the Farmer Reference Group. We have decided to continue the minimum tillage of the direct drilled kale crop paddocks as we put them back into pasture so we do not undo the good work, this will include no ploughing, and instead aeration and surface working only).
- For the FB cultivation trial we discuss options with the FRG about the best way to put back into pasture and whether this will be a blanket approach or vary for conventional vs. minimum tillage.
- We continue to follow cows on the Std farmlet with N fertiliser applied via helicopter. Conditions are too wet for truck applications but with soil temperature at 10.6°C this meets the conditions for application and pasture response.

Figure 4: N fertiliser being applied by helicopter

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General Notes:

- The grazing strategy in the first rotation of splitting paddocks up the middle and grazing each side separately when the herds were smaller has helped minimise pasture damage and the block grazing is still evident in the paddocks. It is by no means a silver bullet though and damage is still quite extensive across the farm which will take some time to recover.
- We have managed to source 80 bales of milking quality baleage which will be a good buffer going forward with the uncertainty around how long the current conditions last for.
- We are pleased that our APC is higher than our original feed budget as at 1900 APC there would be a lot more supplement required to meet demand under the current conditions. This season has highlighted that while it is good to get the farm chewed out in the first rotation there needs to be contingency plans for when pasture growth does not kick off in the spring. We will definitely be taking this years learnings into planning for next spring.

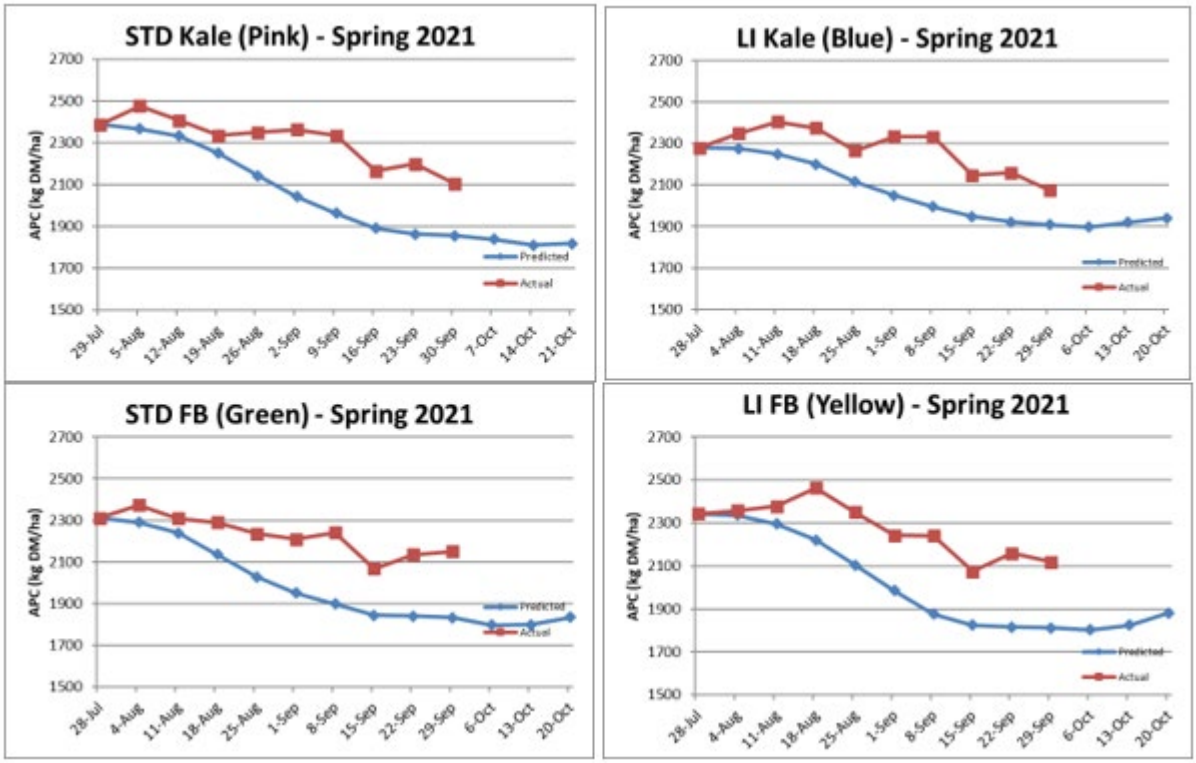

Figure 5: Average pasture cover for all farmlets this week

- Our milk graphs have been a bit wobbly and obviously changing to OAD impacted consistency across the graphs earlier in this period. Production has begun to stabilise with TAD but from the graph below the Std. FB took a drop between 27th/28th September.

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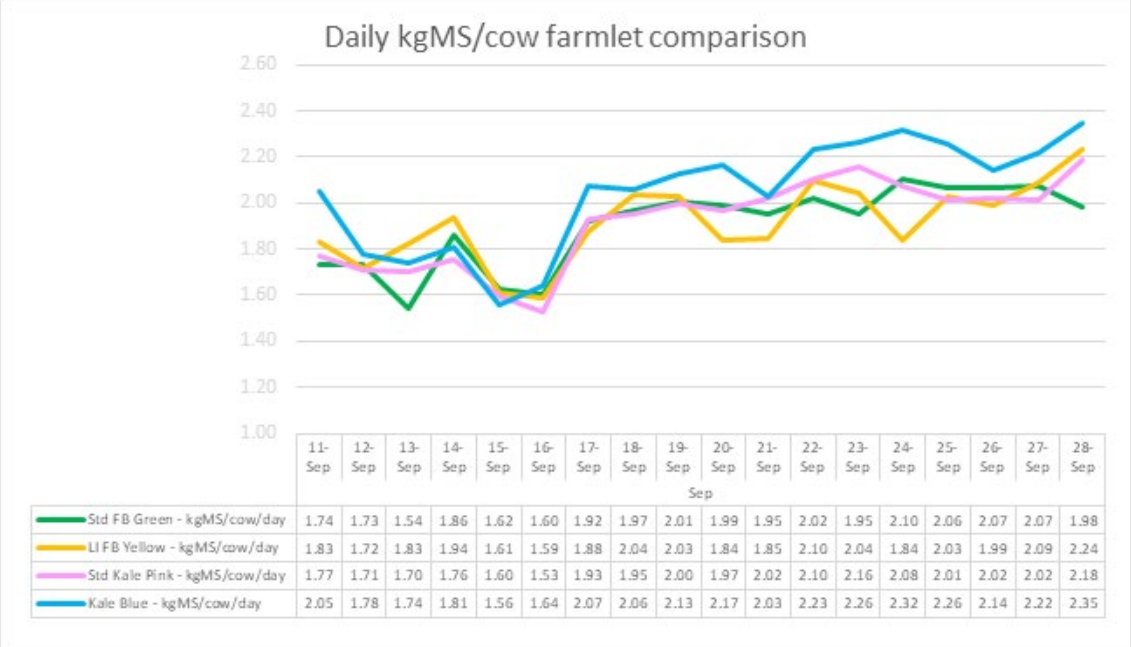
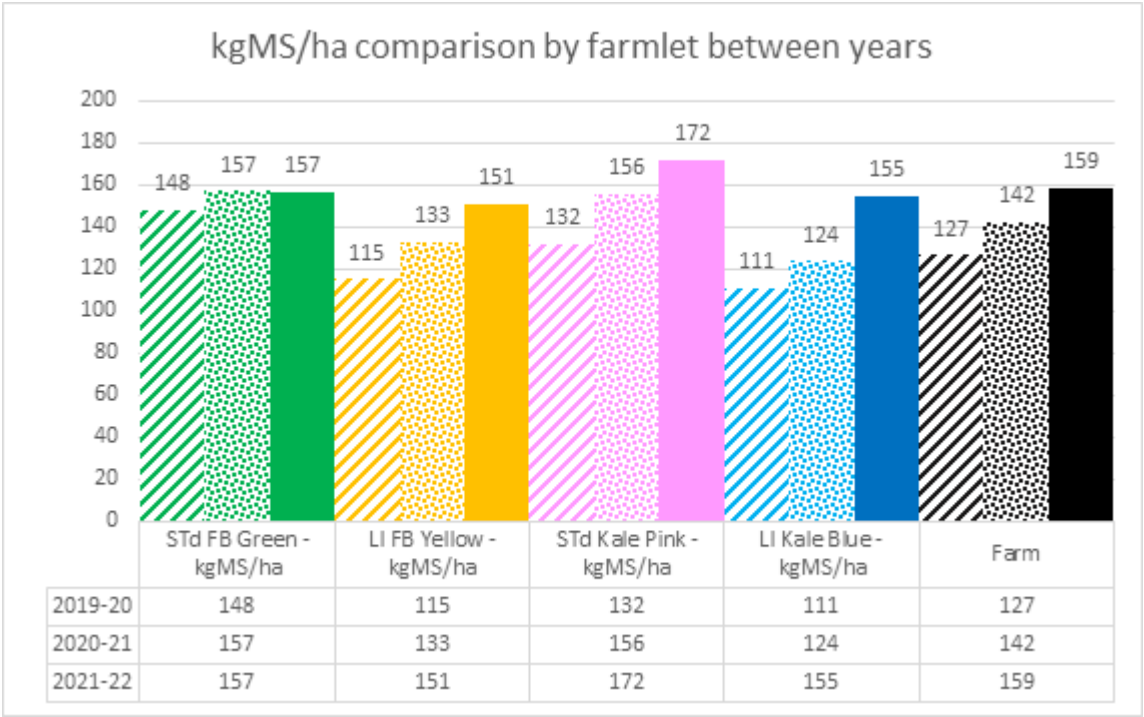


	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep
	Sep																	
Std FB Green - kgMS/cow/day	1.74	1.73	1.54	1.86	1.62	1.60	1.92	1.97	2.01	1.99	1.95	2.02	1.95	2.10	2.06	2.07	2.07	1.98
LI FB Yellow - kgMS/cow/day	1.83	1.72	1.83	1.94	1.61	1.59	1.88	2.04	2.03	1.84	1.85	2.10	2.04	1.84	2.03	1.99	2.09	2.24
Std Kale Pink - kgMS/cow/day	1.77	1.71	1.70	1.76	1.60	1.53	1.93	1.95	2.00	1.97	2.02	2.10	2.16	2.08	2.01	2.02	2.02	2.18
Kale Blue - kgMS/cow/day	2.05	1.78	1.74	1.81	1.56	1.64	2.07	2.06	2.13	2.17	2.03	2.23	2.26	2.32	2.26	2.14	2.22	2.35

Figure 6: Average daily MS/cow for each farmlet



	STd FB Green - kgMS/ha	LI FB Yellow - kgMS/ha	STd Kale Pink - kgMS/ha	LI Kale Blue - kgMS/ha	Farm
2019-20	148	115	132	111	127
2020-21	157	133	156	124	142
2021-22	157	151	172	155	159

Figure 7: Season to date production comparison for all the herds

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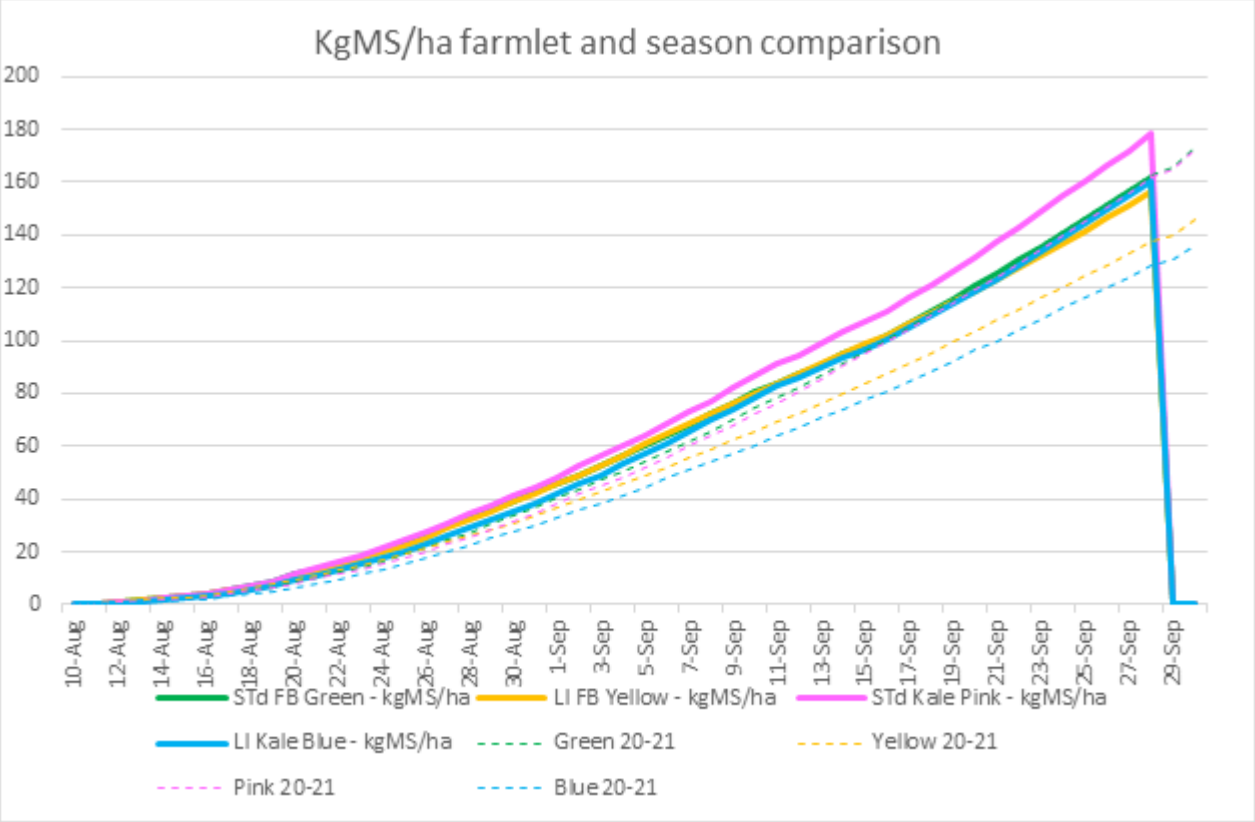

Figure 8: Cumulative milk solids production relative to last season

- Although the weather has been unfavourable weather we have still been observing strong cycles in the cows with heavy heats. We will start recording pre-mating heats from the 9th October.
- We visited our R2s this week and they are looking good. We gave them a Se jab and Cu bolus.
- The 45 calves sent to the support block have adjusted well and are enjoying their tent shelter. We lay down some straw to reduce mud in the tent. Overall calves are looking good and we are on top of the rotavirus that appears each season. We will weigh the next lot of calves tomorrow.
- It can be tiring during this period, especially with being one staff member down, but we are now at a stage where staff are able to get a sleep-in.
- The milking shed has been serviced and hopefully this will have addressed the mastitis that keeps occurring in the back right quarter of cows.

Animal Health

- X5 culls were sent away this week (x4 Std FB and x1 LI FB) for varying reasons such as x3 heifers drying themselves off, bad attitude etc.
- We continue to supplement cows with minerals including Mg Oxide, limeflour and DCP.
- Our next round of metrichecking will be booked into for the 9th November. Last time we had 8/9 cows from each herd that were metricured.
- Some cows have been scratching and loosing hair so we are investigating options to treat for lice.

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SDH Research & Demonstration

- Today we removed the behaviour devices we have had on cows since the beginning of June. It will take us a few months to extract all the data and get it summarised but it will be good to see what lying behaviour has done while the cows were on crop and also for the first part of lactation.
- With all the rain we have been having the team have been busy collecting leachate from the Plant and Food catch crop lysimeter study on farm


Figure 9: Leachate sampling from the Plant & Food lysimeters

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