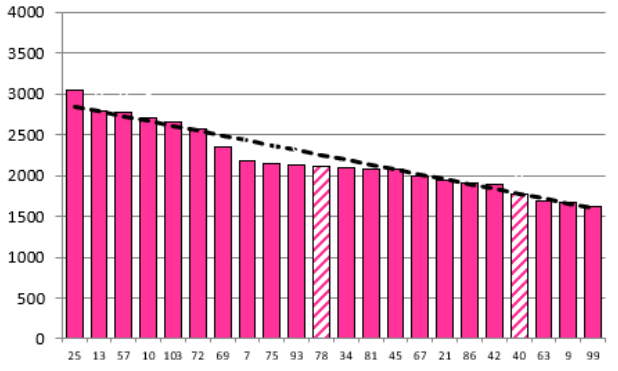
2021/22 Season
Hub Weekly Farm Update
Date: 23/09/2021

Date 22-09-21

Herd size (cows)	171	Average Cover	2192
Target residual (kg DM/ha)	1600	Average Growth	40
Target pasture intake (kg DM/cow)	14	Farmlet area	62.3
Target Area offered (ha/day)	1.93	Target rotation length	32
Last week actual rotation (d)	33	Target demand	38
Last week supp (kg DM/cow)	5.5	YTD supp (kg DM/cow)	133
Last week N (kg N/ha)	13	Fert N YTD	22
Milk yield (L/cow)	22.6	Effluent N YTD	0
Fat%	4.9	Last wk MS	2.0
Prot%	3.8	YTD MS/cow	87
SCC	92	YTD MS/ha	268
Average BCS	4.8	% less than BCS 4	4%

Herd size (cows)	160	Average Cover	2136
Target residual (kg DM/ha)	1600	Average Growth	41
Target pasture intake (kg DM/cow)	15	Farmlet area	63.5
Target Area offered (ha/day)	1.9	Target rotation length	33
Last week actual rotation (d)	39	Target demand	38
Last week supp (kg DM/cow)	6.1	YTD supp (kg DM/cow)	87
Last week N (kg N/ha)	12	Fert N YTD	22
Milk yield (L/cow)	22.2	Effluent N YTD	0
Fat%	4.8	Last wk MS	2.1
Prot%	3.8	YTD MS/cow	90
SCC	108	YTD MS/ha	269
Average BCS	4.8	% less than BCS 4	1%

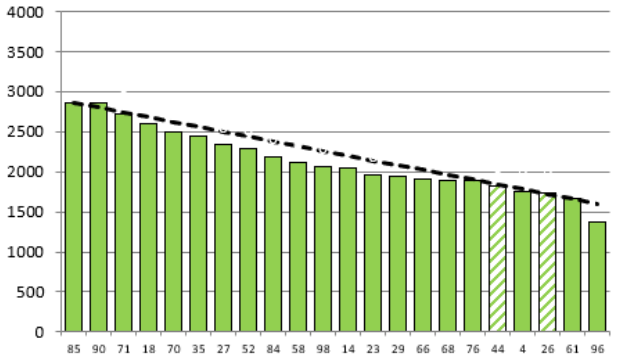
Standard Kale



	25	13	57	10	103	72	69	7	75	93	78	34	81	45	67	21	86	42	40	63	9	99
Days Grazed 3	40	36	0	41	30	25	10	8	16	16	42	23	18	12	4	21	2	14	39	0	2	6
N_3	0	31	0	31	31	31	0	31	31	31	0	31	31	31	31	31	31	31	0	31	0	31
Growth 3	34	34	28	66	30	40	22	80	62	28	37	24	14	14	0	46	0	62	56	0	0	0

Farmlet notes: Visual APC 2161; Visual GR 37: 91% of the herd calved; area allocation to increase to 1.9 ha/day with 1-4 kg supplement required depending on pre-graze mass of pdks; N to be applied to remaining 1st round pdks & 2nd round N of 25 kg/ha will follow the cows; all dry cows now in a single springer mob; started cultivating crop pdks going to grass

Standard Fodder Beet



	85	90	71	18	70	35	27	52	84	58	98	14	23	29	66	68	76	44	4	26	61	96
Days Grazed 2	0	124	38	42	30	0	18	26	16	20	14	23	30	12	3	7	10	14	8	42	1	5
N_2	0	0	31	31	31	31	31	31	0	31	31	31	31	31	31	0	31	0	31	0	31	31
Growth 2	34	15	64	71	40	38	42	44	6	34	30	37	47	52	0	0	42	61	42	34	0	0

Farmlet notes: Visual APC 2132; Visual GR 36; 90% of herd calved; area allocation increase to 1.9 ha/d with 2.5 kg DM lifted beet & 1.5 kg PKE. N to be applied to remaining 1st round pdks & 2nd round N of 25 kg/ha will follow the cows; all dry cows in a single mob; remaining beet to be lifted in next 2 weeks; starting cultivation on crop pdks going back to grass

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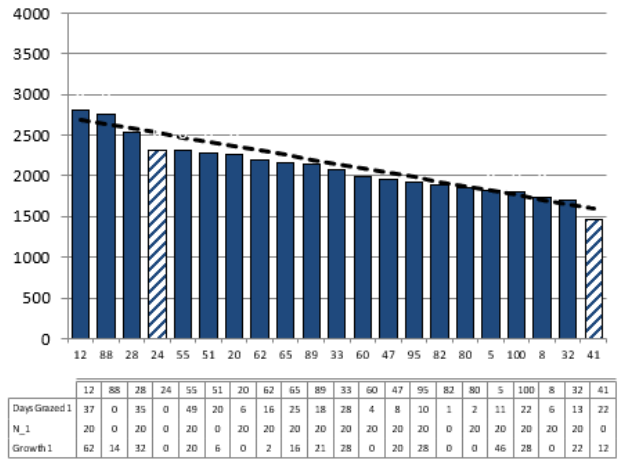
Target residual (kg DM/ha)	1600	Average Growth	24
Target pasture intake (kg DM/cow)	15	Farmlet area	61.0
Target Area offered (ha/day)	1.9	Target rotation length	32
Last week rotation avg	36	Target demand	34
Last week supp (kg DM/cow)	3.0	YTD supp (kg DM/cow)	91
Last week N (kg N/ha)	8	Fert N YTD	15
Milk yield	23.8	Effluent N YTD	0
Fat%	5.0	Last wk MS	2.2
Prot%	3.8	YTD MS/cow	94
SCC	121	YTD MS/ha	257
Average BCS	4.8	% less than BCS 4	2%

Herd size (cows)	137	Average Cover	2113
Target residual (kg DM/ha)	1600	Average Growth	34
Target pasture intake (kg DM/cow)	14	Farmlet area	60.9
Target Area offered (ha/day)	1.9	Target rotation length	32
Last week rotation avg	33	Target demand	32
Last week supp (kg DM/cow)	5.7	YTD supp (kg DM/cow)	83
Last week N (kg N/ha)	9	Fert N YTD	15
Milk yield	21.9	Effluent N YTD	0
Fat%	4.9	Last wk MS	1.9
Prot%	3.7	YTD MS/cow	88
SCC	143	YTD MS/ha	224
Average BCS	4.8	% less than BCS 4	0%

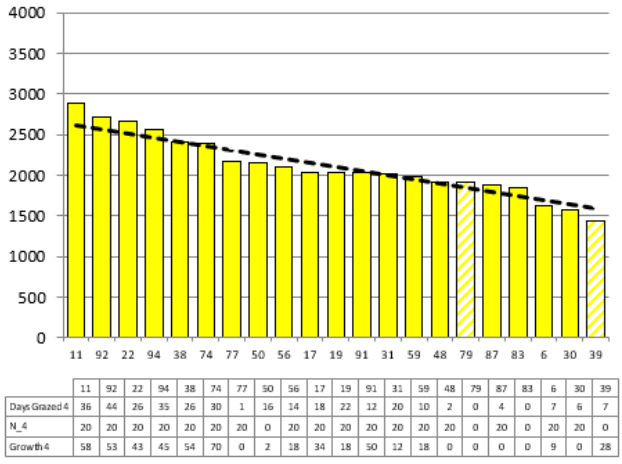
Low Impact Kale



	12	88	28	24	55	51	20	62	65	89	33	60	47	95	82	80	5	100	8	32	41
Days Grazed 1	37	0	35	0	49	20	6	16	25	18	28	4	8	10	1	2	11	22	6	13	22
N_1	20	0	20	0	20	0	20	20	20	20	20	20	20	20	0	20	20	20	20	20	0
Growth 1	62	14	32	0	20	6	0	2	16	21	28	0	20	28	0	0	46	28	0	22	12

Farmlet notes: Visual APC 2144 ; Visual GR 35: 90% of the herd calved; area allocation to increase to 1.9 ha/day with 0-3 kg supplement required depending on pre-graze mass of pdks; finished 1st rotation 1 week earlier than planned; N to be applied to remaining 1st round pdks; all dry cows now in a single springer mob; started cultivating crop pdks going to grass;

Low Impact Fodder Beet



	11	92	22	94	38	74	77	50	56	17	19	91	31	59	48	79	87	83	6	30	39
Days Grazed 4	36	44	26	35	26	30	1	16	14	18	22	12	20	10	2	0	4	0	7	6	7
N_4	20	20	20	20	20	20	20	0	20	20	20	20	20	20	20	0	20	0	20	20	0
Growth 4	58	53	43	45	54	70	0	2	18	34	18	50	12	18	0	0	0	0	9	0	28

Farmlet notes: Visual APC 2147 ; Visual GR 42: 90% of the herd calved; area allocation to increase to 1.9 ha/day with 2.5 kg lifted beet & 1.5 kg PKE; finished 1st rotation 1 week earlier than planned; N to be applied to remaining 1st round pdks; all dry cows now in a single springer mob; started cultivating crop pdks going to grass; Remaining beet to lift in 2wks

NB: Hatched paddocks are springer paddocks

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	166	195	166	728
Current being milked	185	151	176	150	662
Springers	16	15	19	16	66
Slips/empty/deaths	2	2	8	2	14

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General Farm Information

Table 2: Key Weather and Feeding Numbers 2nd September 2021

Soil Temp (°C) (weekly average)	9.3°C			
Rainfall (mm)	5.6 mm			
Allocations kg DM/cow/day	**Std. Kale**	**LI Kale**	**Std FB**	**LI FB**
Milkers	18-19 kg DM (4 kg inshed + baleage as required)	18-19 kg DM (1- 3 kg inshed + baleage as required)	18-19 kg DM (2.5 kg FB + 1.5 kg PKE and baleage as required)	17-17.5 kg DM (2.5 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 & Late dries	4-5 kg pasture & 5-6 kg baleage			

Key Decisions: this week

- All herds will move to 3 grazings per paddock (1.9 ha/day) for the majority of the paddocks although there are still a few higher mass ones that will be 3.5 grazings and ones that have had colostrums grazing the front of them that will be 2 grazings
- If herds are not cleaning up paddocks the inshed feeding will be turned off for the afternoon if required for specific paddocks with the aim of hitting residuals so that mobs don't need to go back for a cleanup grazing as this takes time and creates extra walking increasing the risk of lameness.
- The LI FB herd have used significantly more baleage than was in their feed budget and have a limited supply remaining. Based on this their baleage will not be fed to colostrum cows when they are grazing in their paddocks.
- The final paddocks of the first round for all farmlets will receive their N application.
- Std herds will commence their second round of N applications once the first paddocks have been grazed
- We now only have 1 springer mob for all herds. This herd will finish the springer paddock on the flats then move onto the top terrace
- The colostrum mob will do 5 feeds in the last springer paddock as the dries will not get through all that is left. They will be offered 60 m2/cow of fresh pasture but have access across the whole paddock to give more area to lie down on
- We are revising the spring feed budget based on finishing our first round a week earlier than planned and taking into account the pasture damage incurred during the wet weather earlier in the month. Last year our rotation length got too fast too early and it took a lot of supplement leading into Christmas to push back out. This year we propose to stay on the current rotation of 30 days for the next couple of weeks and will then drop down to 24-25 days. This will require a bit of strategic planning to avoid moving cows between paddocks mid-morning i.e 2.5 grazings per paddock. We will nominate about 1/3 of the paddocks that hold their quality better for 3 grazings with the remainder moving to 2 grazings.

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- For the fodder beet herds we will lift enough beet to feed on average 3 kg DM through October and 2 kg DM in November. Instead of storing all the lifted beet we will spread it across two of the bunkers and also do a windrow in a paddock to increase the storage life.
- Two Std FB paddocks were badly pugged, one in autumn and one early in spring – we will broadcast seed onto these paddocks prior to the next grazing (hoof and tooth) then direct drilled once conditions allow. Other smaller areas in paddocks will have seed broadcast prior to grazing as well.
- Baleage stocks for all herds are getting low so as soon as the weather settles the best quality paddocks at the support block will be made into baleage for the milking platform.
- In preparation for winter 2022 we are working through a plan for each of our springer and second year crop paddocks. We have an opportunity next winter to trial a few different on-paddock wintering options as we will be between farm systems comparisons. If you have any ideas of things you would like us to try let us know.
- With the effluent pond rather full we will get the umbilical system in to spread effluent on paddocks outside our effluent infrastructure area.

General Notes:

- Thankfully this week brought more settled spring conditions with some blue sky and sunshine.
- With better growth over the last week APC stabilised across all the farmlets. We are expecting this to drop again as we start grazing second round paddocks and clean up some of the higher residuals from grazing when it was wet and we sped the cows up through some paddocks

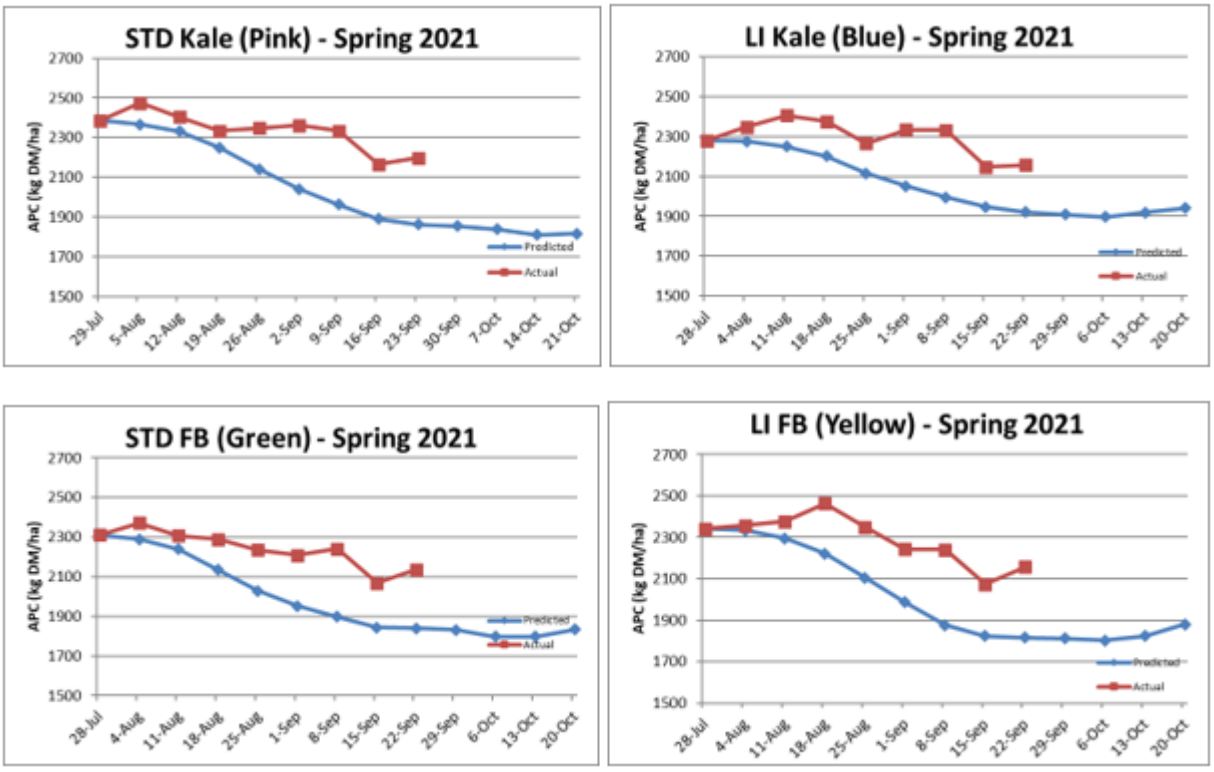

Figure 1: Actual vs. predicted average pasture cover between farmlets

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- In reassessing the spring feed budget we have summarised the supplements that have been fed vs what was predicted.

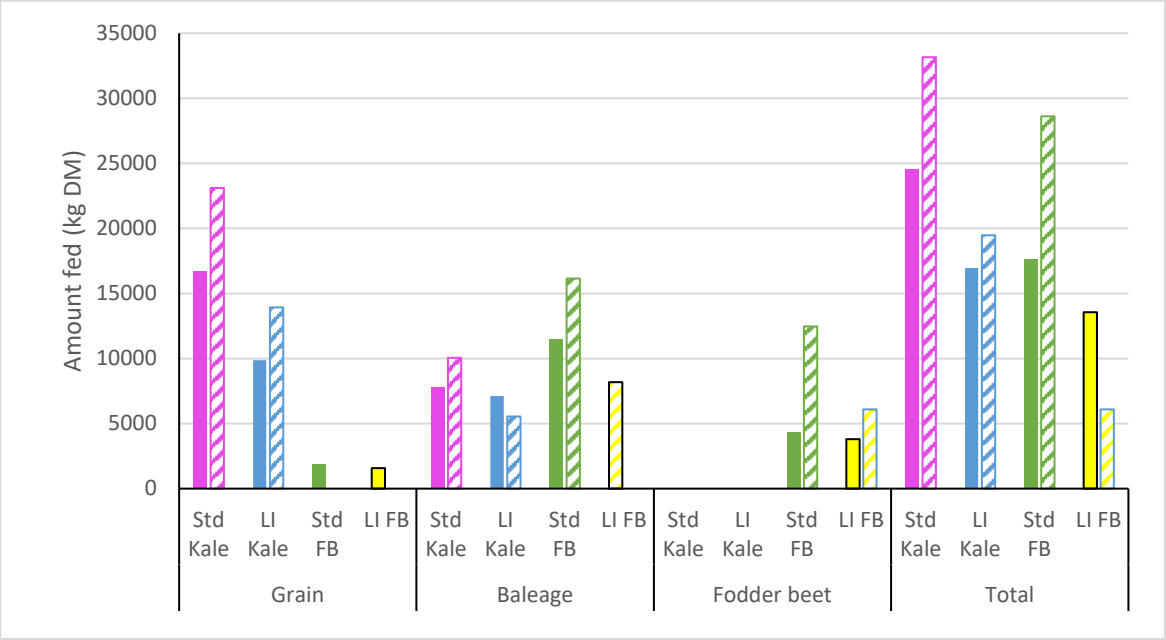

Figure 2: Feed budget summary – solid columns is supplement fed, hatched columns supplement predicted

- All cows had a BCS assessment this week. We are starting to see a few lighter conditioned cows across most lactating herds. These animals are being assessed regularly and put on OAD milking. For the dry cows the average for each herd are Std Kale 5.7; LI Kale 5.4; Std FB 5.2 and LI FB 5.5. There are 2 cows in the Std FB herd that are BCS 4 which is pulling their average down. We will be watching these 2 animals carefully as they approach calving.

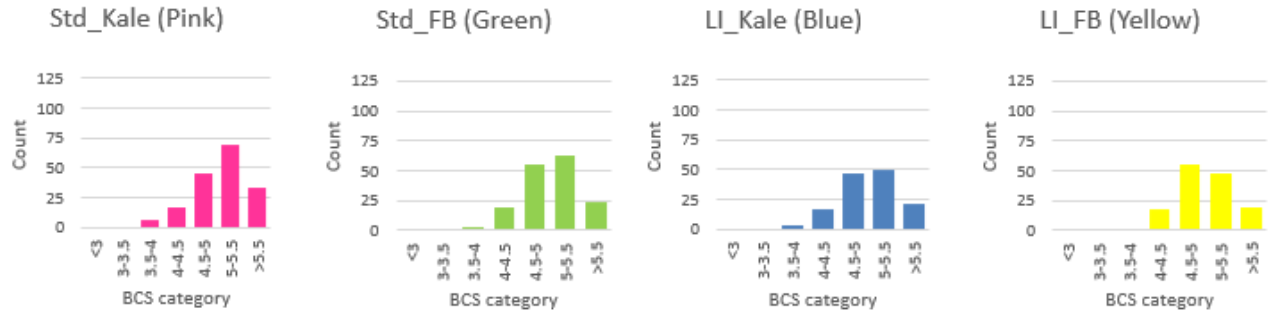

Figure 3: Body condition score distribution for milkers in the four farmlets

- Milk production has bounced back since TAD milking resumed on Friday last week. The LI FB team drop on the 20th September is an interesting story. Cows were grazing a 2020 new grass paddock that had more than enough pasture, however the cows just don't like the paddock. Every time they grazed this paddock at the end of last season we observed the same result. Despite sufficient feed the cows were observed standing at the gate wanting to be moved late morning!!

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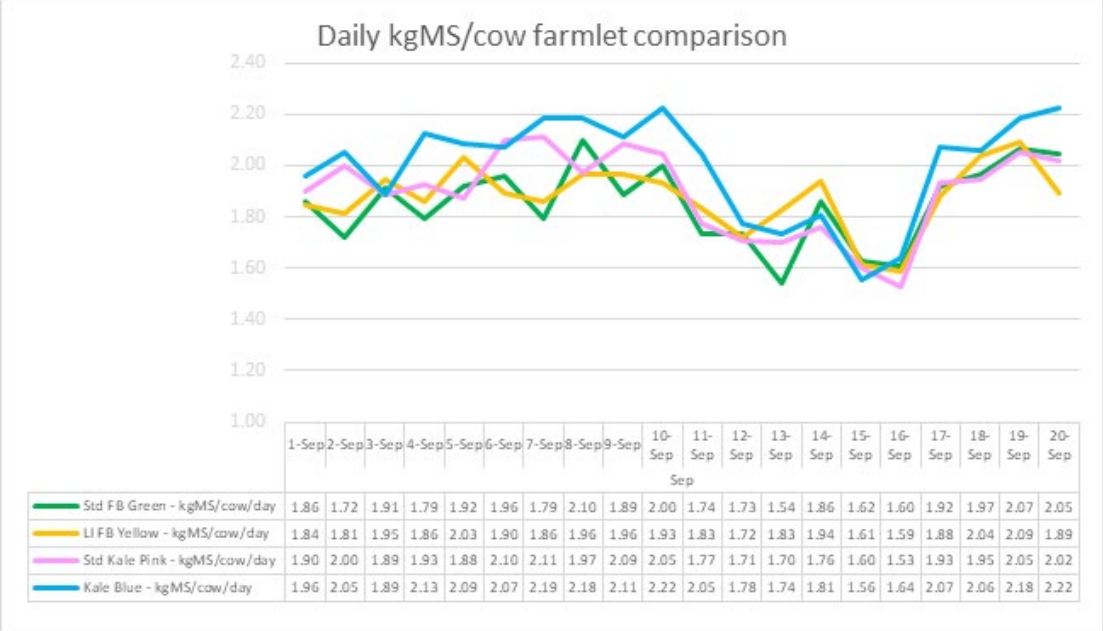
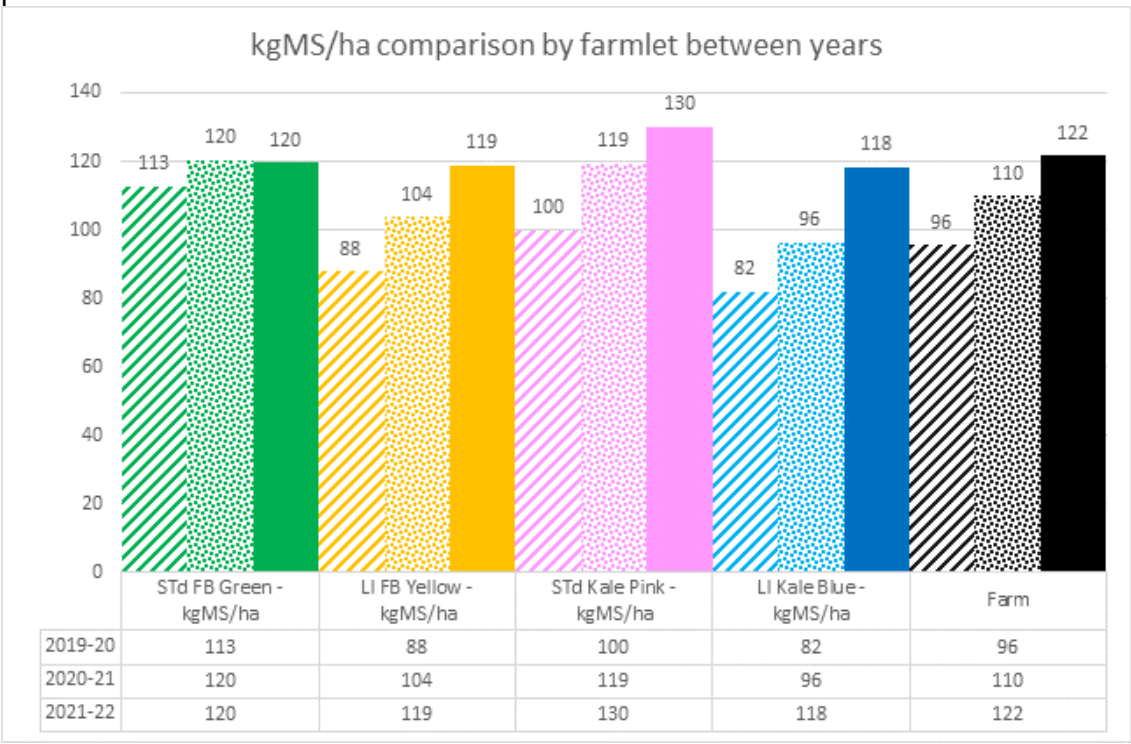


	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
Std FB Green - kgMS/cow/day	1.86	1.72	1.91	1.79	1.92	1.96	1.79	2.10	1.89	2.00	1.74	1.73	1.54	1.86	1.62	1.60	1.92	1.97	2.07	2.05
LI FB Yellow - kgMS/cow/day	1.84	1.81	1.95	1.86	2.03	1.90	1.86	1.96	1.96	1.93	1.83	1.72	1.83	1.94	1.61	1.59	1.88	2.04	2.09	1.89
Std Kale Pink - kgMS/cow/day	1.90	2.00	1.89	1.93	1.88	2.10	2.11	1.97	2.09	2.05	1.77	1.71	1.70	1.76	1.60	1.53	1.93	1.95	2.05	2.02
Kale Blue - kgMS/cow/day	1.96	2.05	1.89	2.13	2.09	2.07	2.19	2.18	2.11	2.22	2.05	1.78	1.74	1.81	1.56	1.64	2.07	2.06	2.18	2.22

Figure 4: Average daily MS/cow for each farmlet

- A long calving tail for the Std FB and also a higher early season attrition rate in this herd is not setting them up for a good season with them being the only herd not ahead on production season to date



	STd FB Green - kgMS/ha	LI FB Yellow - kgMS/ha	STd Kale Pink - kgMS/ha	LI Kale Blue - kgMS/ha	Farm
2019-20	113	88	100	82	96
2020-21	120	104	119	96	110
2021-22	120	119	130	118	122

Figure 5: Season to date production comparison for all the herds

- The LI herds are both tracking well above their performance last year

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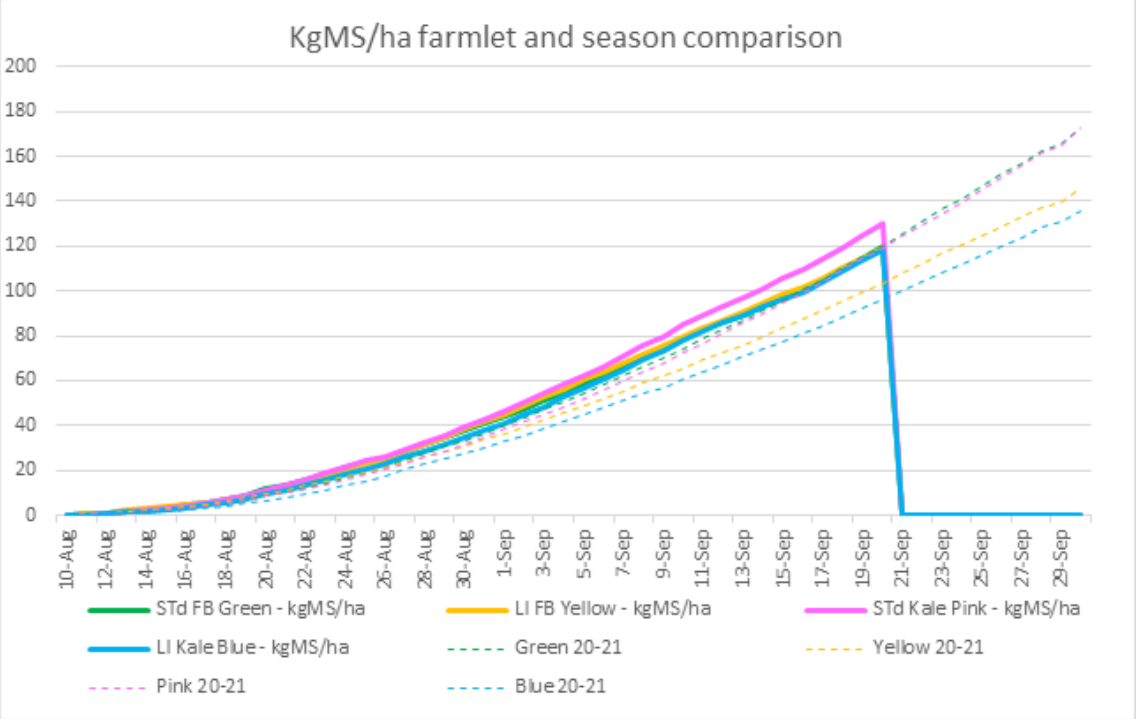

Figure 6: Cumulative milk solids production relative to last season

- For those who have visited the site over the winter you will be aware of the challenges we had with water ponding in the crop paddock by the dairy – the result of putting the dairy shed & laneways in a natural drainage channel!!. Remedial work started on it this week 😊.


Figure 7: Remedial work out from the dairy

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- The first of our 2021 crop paddocks was ploughed this week. We are concentrating on the paddocks coming out of second year crop so we can get pasture back in them as soon as possible.

Figure 8: First of our winter crop paddocks has been ploughed

Animal Health

- The first 45 calves have been adjusting to the cafeteria and outside this week and were moved to the support block today.

Figure 9: Calf shelter up at the support block in preparation for calves today

- Two animals have been euthanised this week. One had black mastitis which we think may have been a result of going to OAD milking 2 weeks ago. She had been treated for mastitis earlier in the season but had cleared but developed mastitis in 2 quarters early in the OAD period. The second cow had been a down cow a couple of times but was just not doing well. The autopsy was inconclusive but there were indications of a kidney infection.
- We have space for 4 culls next week – 2 will be heifers that have dried themselves off and the other 2 will be the worst of the bad attitude cows identified last week.

SDH Research & Demonstration

- We debriefed our decision making over the last few weeks to see what we could do differently if faced with similar situations in the future. It is always a juggle meeting the research requirements while making things workable for the farm team.
- Key points we noted/discussed include:
    - OAD worked really well from an animal and staff point of view in terms of having enough time of the day to make sure all herds were being fully fed and the cows were more settled in the paddocks

  Learning: next time we need to check mastitis history and SCC information to identify at risk animals that can be monitored more closely
    - we forgot to adjust the inshed feeding for the first OAD milking so cows only got half their daily ration on that day
    - given we had met as a team on the Thursday and done the plan we could have been more prepared for what eventuated. Basically the 30 mm of rain received on the Thursday night was not predicted and this rapidly changed the conditions on farm. We had planned for things getting wet over the weekend but it came earlier than anticipated.
    - We identified the need for more regular feedback from the team on the ground i.e. running short of time in the day to get all cows fed, cows making a mess, poor utilisation etc so that decisions could be more timely
    - Rather than individual phone conversations to make the plan a more efficient approach would have been a conference call or zoom meeting so that the expertise of the wider team could be utilised in the decision making process and everyone knew what the plan was and why
    - The milkings were slow so adjustments needed to be made to the timing of bringing herds to the dairy to reduce the amount of time they were standing on the yards. There was also the need to rotate the person cupping on with the floater as it was a long milking for just one person cupping.

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