Weekly Farm Summary 21st April 2022

Farm-system impacts of: Kale vs Fodder beet for winter AND Reducing N loss to water by 30%.

	Std Kale Pink	LI Kale Blue	Std FB Green	LI FB Yellow
Farmlet area including 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
Current Herd size (cows)	164	133	160	134
Pasture Stocking rate	2.6	2.2	2.5	2.2
Winter Feed Milking supplement	Kale In-Shed feed		Fodder beet Fodder beet/Baleage	
Average Cover	2236	2101	2265	2125
Average Growth	39	33	30	30
Target rotation length	44	42	44	42
Last week act rotation (d)	44	42	44	41
Last week supp (kg DM/cow)	6.9	8.2	7.8	8.7
Average BCS	4.66	4.50	4.49	4.49
% of herd on priority feeding	14%	20%	8%	5%
Milk yield (L/cow)	12.4	10.8	11.6	11.3
Milk yield (kgMS/cow)	1.37	1.22	1.30	1.29
Nitrogen Cap kgN/ha/yr	**193**	**50**	**193**	**50**
% Nitrogen used (kgN/ha) YTD	84% (162kg)	106% (53kg)	79% (152kg)	108% (54kg)
Effluent N YTD	12	11	18	19
Profit/ha comp to Control	$0	-$210	-$173	-$166
YTD supp (kg DM/cow)	862	689	736	689
YTD MS/cow	396	393	370	372
YTD MS/ha	1,217	1,052	1,133	996

Business Area	Current Status
Feed	Average pasture cover has lifted in all farmlets, with growth rates at or above target since the autumn feed budget was created. 33% reduction in supplements for all herds this week as grass returns, rotation length remains, and cows being dried off.
Milk Production	Production continues to be significantly driven by pasture quality, although milk solid percentage increased whilst litres decreased, after period of rough weather throughout the week.
People	Covid implications are no longer affecting the team. With 1 team member moving on at the end of the season, interviews are underway to fill the position.
Animals	BCS was completed this week, showing a large spread across the farmlets. However, the LI Kale herd having both the highest number of fat cows but also the highest number of skinny cows. Lameness incidents are increasing, largely due to wet lanes.
Environment	Effluent applications continue however these will cease around the 15th of May in line with decreased soil temp and plants likely to lose rather that use the nutrients.
Wintering	Winter grazing paddock plans to be completed on A3 sheets. These will include the number of cows per mob, grazing direction, how many bales they need a day etc. Face length measured and flags erected to mark where fences will go.
Research	Ag Research have been on farm this week finishing the last of the visual soil assessments looking at soil structure. This will aid in the process of re-randomising paddocks for the new farm systems trial.

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Feed

Principles of Pasture Management this week

Feed Quality	Dry matter % in the pasture is now at 17.5% which has dropped from mid 20's, however that is common at this time of the year. Residual management crucial as many of these paddocks are on their last grazing of the round. Dry cows will follow milkers in paddocks that need the residual taken lower, to ensure that clumps don't remain and quailty comes back well over the winter.
Growth Rate Management	Growth rates have lifted across the farm with the Std Kale farmlet growing more than the autumn target line for the first time in over 1 month. Increase the pasture proportion of the diet to 11kgDM. Supplement use will be monitored closely alongside residuals to ensure substitution is not occuring. Depending on growth levels, supplements are able to all be removed apart from the fodderbeet, to ensure that the wedge shape remains
Nitrogen Strategy	Effluent applications continue however this will cease in two weeks time.

	Standard Kale Pink	**Low Impact Kale Blue**	**Standard Fodder beet Green**	**Low Impact Fodder beet Yellow**
Quantity	Growth above demand	Growth above demand	Growth above demand	Growth above demand
Quality	DM% is now at 17.5%	DM% is now at 17.5%	DM% is now at 17.5%	DM% is now at 17.5%
Surplus Management	None	None	None	None
Deficit Management	3.2 kg inshed 3.1 kg DM baleage	3.0 kg inshed 3.1 kg DM baleage	0.8 kg inshed 2 kg FB 3.2 kg DM baleage	1 kg inshed 2 kg FB 3.2 kg DM baleage
Rotation Length	44 days	42 days	44 days	41 days

Milk Production

Principles of Milk production management this week

Milk Production	For the first time since January, the herd as a whole has matched last seasons production for the same week, however that has come at a cost in the form of imported supplements. (Please comment) SCC in both herds has spiked this week, with a number of mastitis cases being picked up in this weeks herd test.
Key influences on milk production	Milk production continues to fluctuate dramatically when herds move through paddocks of differing quality. However with good regrowth coming back this week, these effects should subside over the coming weeks. Windy and wet weather saw a reduction in yeild over the past week, however milk solids percentage increased at the same time.
Cow Management	Dry off has been booked in and the first 80 cows will be dried off next week. Decision factors around choosing these cows are driven from the hred test and are things such as high SCC, low produciton, anything now needing to gain more than 0.35BCS before winter. The remainder of the herd is booked in for dry-off on the 20th of May.

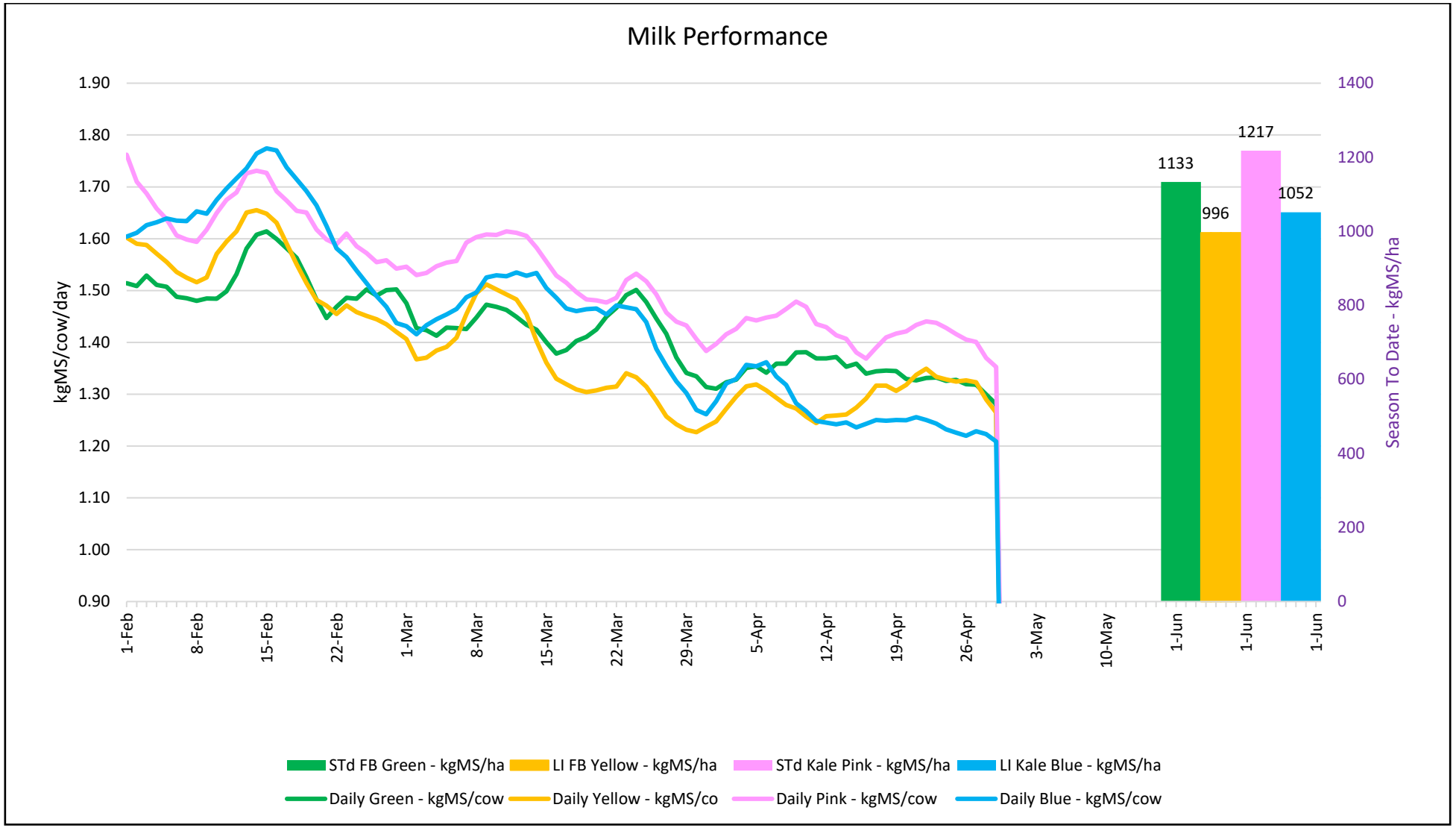
	Standard Kale Pink	**Low Impact Kale Blue**	**Standard Fodder beet Green**	**Low Impact Fodder beet Yellow**
kg Milksolids per cow this week / (last week)	1.37/(1.43)	1.22/(1.25)	1.30/(1.32)	1.29/(1.33)
kg Milksolids per ha this year / (this time last year)	1217/(1259)	1052/(1031)	1133/(1206)	996/(991)
Season to date compared to last year	Down 3.5% total milk	Up 2% total milk	Down 6% total milk	0% fluctation to last year
Cows needing priority feeding	41 cows (25% of herd)	29 cows (22%)	13 cows (8%)	21 cows (16%)
Animal health peculiarities	None	None	None	Mastitis spike

Environment

Key Summary	Coming out of an unspeakably difficult summer and autumn, it's wonderful to now have pasture growth happening along with some forgiving temperatures still present. It's a pivotal time of year to know and understand the environmental outcomes for our on-farm decision making. Future farming will offer us high accountability for low-efficiency of nutrient management in the shoulders of the season. We had some excellent discussion with Dale and Keiran from Ravensdown yesterday and got us thinking about sharing our decision rules.
Nitrogen	We use a decision rule geared around Soil temperatures to govern our autumn Nitrogen Applcations. Our rule is Nitrogen applications cease by 10th April, leaving a 6 week window where actively growing plants have enough supportive soil temperature and moisture to use that Nitrogen for growth. Anything the plant cannot use by the 20th of May wil likely be flushed out of the pasture root window by rainfall.
Effluent	For the lower rates of N present we have a longer window for effluent applications, but we are now approaching the points that the plants won't be able to uptake the Nitrogen from effluent, so our applications will cease until soil warms up to over 6.5deg C in Spetember.
Gibberalic acids	There is benefit to be had from use of Gibberellic acids and key times of the season, but for us now is not one of those options. The total increase in growth, only occurs if the growth is eaten within 30 days. Applications starting now are unlikely to be eaten in the milking round, and we have a solid plan to grown enough grass before calving starts in August. Soil temps are warm enough that we don't forsee plants being unable to produce their own gibberellins, meaning the response from applied gibberellic acid will be lower than at other times of the year.

Farm system impacts: of Kale vs Fodder beet for winter AND Reducing N loss to water by 30%.

Kale, Winters on kale - in-shed feed available. Fodder beet, winters on Beet, Beet as lactation supp. Low impact (LI) limited Max 50kg N/ha/year vs Std 193kg N/ha/year



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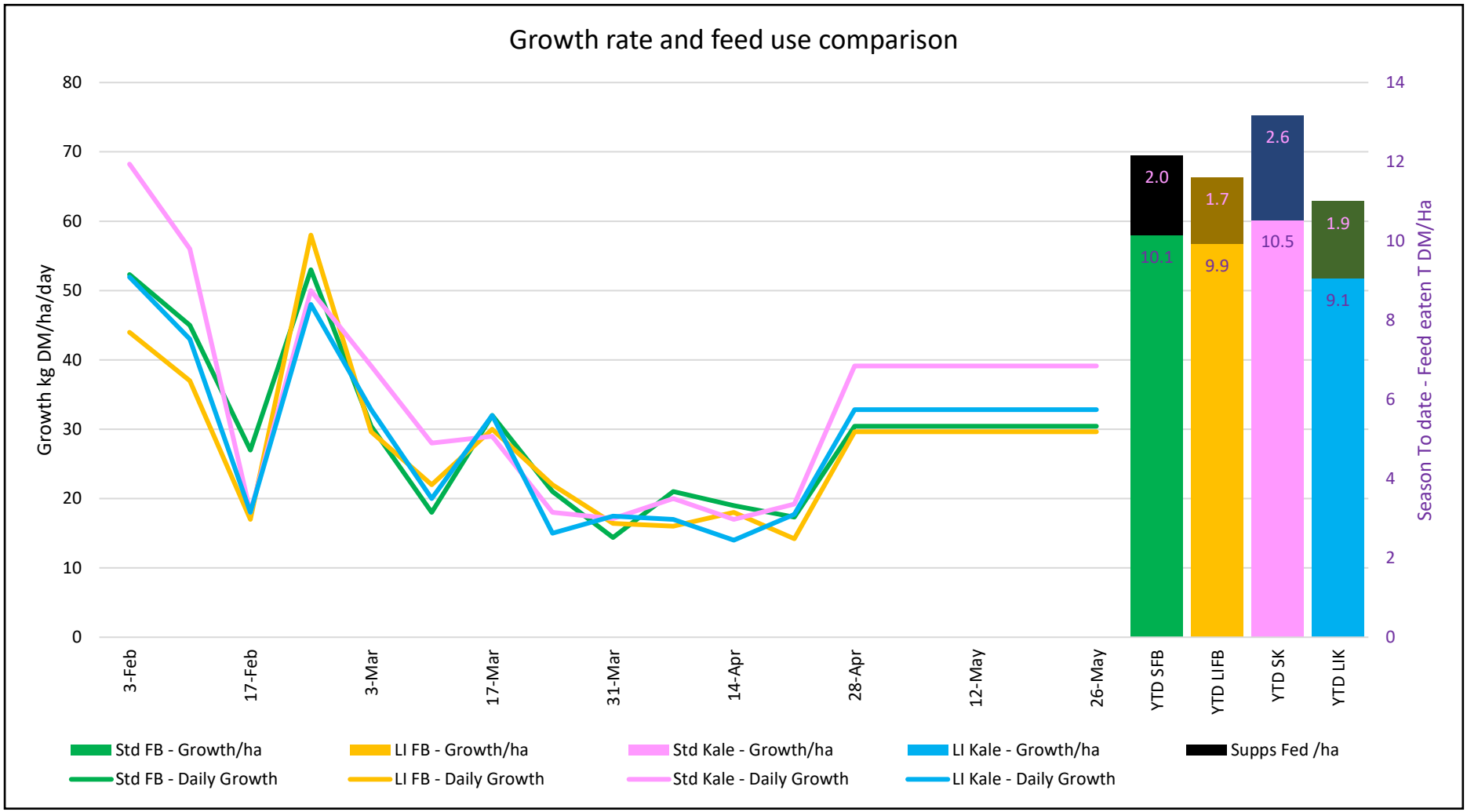

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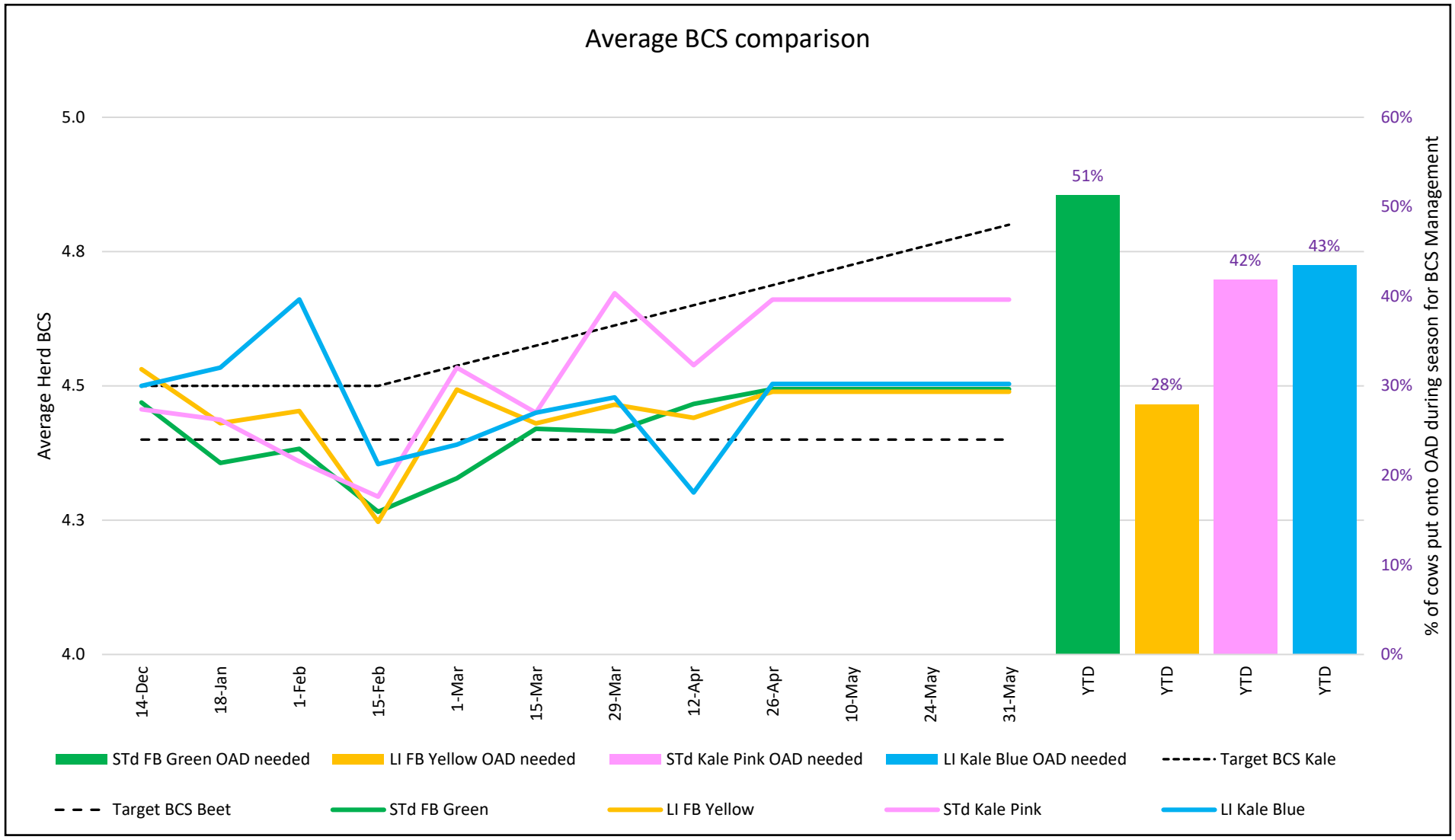

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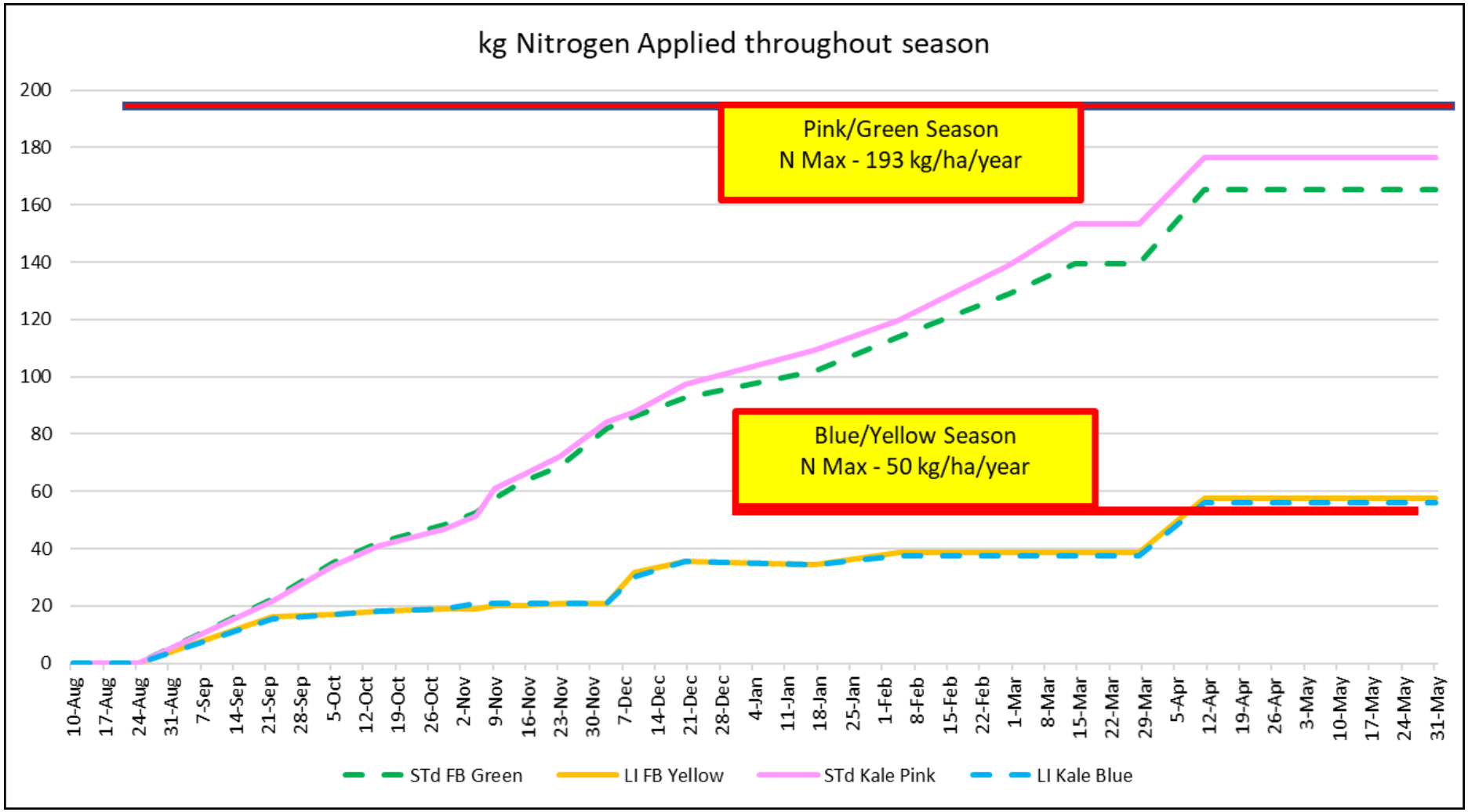

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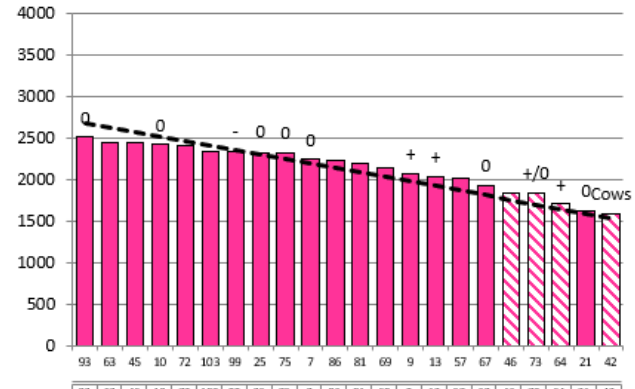
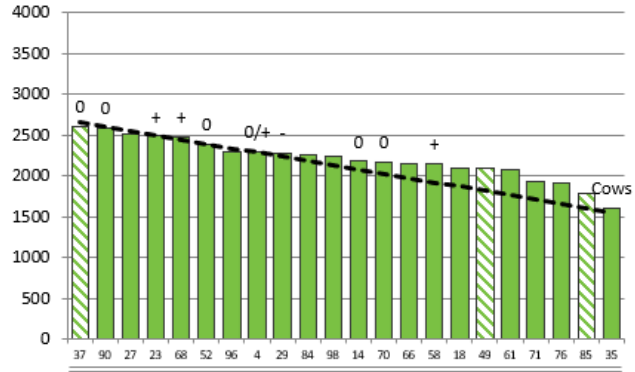
Standard Kale



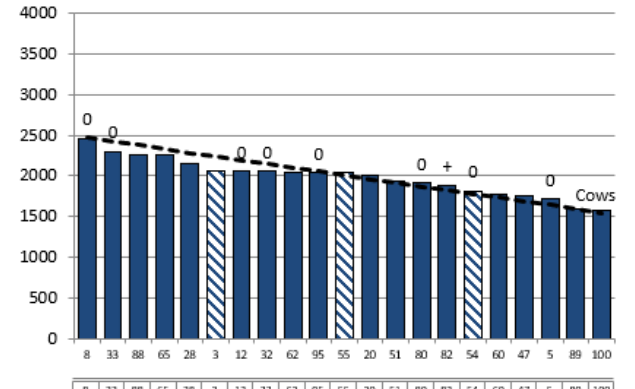
	93	63	45	10	72	103	99	25	75	7	86	81	69	9	13	57	67	46	73	64	21	42
DaysGrazed3	51	54	35	29	21	39	37	23	25	27	31	33	19	8	12	16	10	14	4	6	2	0
N_3	157	182	182	181	181	182	157	192	182	157	157	182	157	166	157	162	182	96	99	80	157	131
Growth3	17	14	21	33	62	7	7	5	52	28	-9	12	22	46	-10	6	34	28	0	17	0	0

Standard Fodder Beet



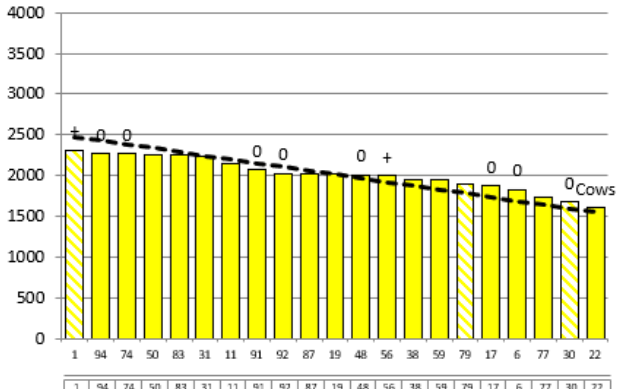
	37	90	27	23	68	52	96	4	29	84	98	14	70	66	58	18	49	61	71	76	85	35
DaysGrazed2	23	29	27	31	54	33	21	8	37	25	35	12	10	39	19	14	17	45	4	6	2	0
N_2	87	162	182	182	143	156	182	157	182	153	157	157	181	141	157	157	80	136	136	157	141	157
Growth2	77	27	45	34	14	42	50	56	44	-7	-2	46	32	-4	-4	24	28	0	0	45	0	0

Low Impact Kale



	8	33	88	65	28	3	12	32	62	95	55	20	51	80	82	54	60	47	5	89	100
DaysGrazed1	29	37	54	35	27	21	19	23	25	33	22	15	5	13	9	11	1	17	3	0	7
N_1	52	52	52	68	52	62	52	52	52	52	57	52	52	52	52	62	52	68	52	52	52
Growth1	45	7	8	40	5	60	0	10	7	2	0	18	0	-10	-2	12	0	4	0	0	-3

Low Impact Fodder Beet



	1	94	74	50	83	31	11	91	92	87	19	48	56	38	59	79	17	6	77	30	22
DaysGrazed4	23	37	27	35	39	15	25	29	11	33	21	9	4	7	19	17	13	5	3	1	0
N_4	62	52	52	68	52	52	52	52	52	52	52	77	52	52	52	62	68	52	52	52	52
Growth4	52	24	24	21	10	40	20	3	4	10	18	26	0	48	-4	16	12	0	0	0	0

NB: Hatched bars are 2021 new grass paddocks being managed on a faster rotation

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Figure 1: Kale crop and swede crop being yielded this week.

Figure 2: Calves at the runoff in great condition heading into winter. Diet consisting of grass, baleage and PKE.