Weekly Farm Summary

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)	170	138	166	137
Pasture Stocking rate	2.7	2.3	2.6	2.3
Winter Feed Milking supplement	Kale In-Shed feed		Fodder beet Fodder beet/Baleage	
Average Cover	2138	2053	2150	2095
Average Growth	17	17	14	16
Target rotation length	44	42	44	42
Last week act rotation (d)	44	42	45	41
Last week supp (kg DM/cow)	6.4	5.5	5.4	6.0
Average BCS	4.67	4.48	4.42	4.46
% of herd on priority feeding	25%	22%	8%	16%
Milk yield (L/cow)	12.8	11.6	11.9	11.2
Milk yield (kgMS/cow)	1.38	1.26	1.32	1.24
Nitrogen Cap kgN/ha/yr	**193**	**50**	**193**	**50**
% Nitrogen used (kgN/ha) YTD	74% (143kg)	76% (38kg)	68% (132kg)	78% (39kg)
Effluent N YTD	7	11	18	18
Profit/ha comp to Control	$0	-$210	-$173	-$166
YTD supp (kg DM/cow)	661	517	533	497
YTD MS/cow	366	367	343	345
YTD MS/ha	1,125	982	1,048	924

Business Area	Current Status
Feed	Pre-graze pasture covers have dropped allowing for only 10kgDM/cow pasture allocation on the current rotation. Fodder beet was introduced in paddock for both FB farmlets this week and in-shed feed being increased for the Kale farmlets
Milk Production	All herds shifted to OAD milking last Friday, with production dropping by approx. 1 L/cow. SCC hasn't spiked and is sitting between 130 and 160 000. FEI has reduced for both vats, with a larger reduction for the kale vat. Managing milking speed is critical to ensure cows have time to consume all their in-shed feeding
People	Team continuing to manage well with the altering feeding regimes as well as the switch to OAD milking.
Animals	BCS completed this week with a wide range of scores being observed across all herds. OAD milking has started 1 week earlier than usual, giving the team the ability to hold off on drying cows off for 2 more weeks due to low number of at-risk cows.
Environment	No nitrogen fertiliser applied this week due to dry conditions. With warmer soil temperatures, N application will continue further into the season than planned if moisture allows.
Wintering	March crop yields completed with promising yields being measured in the direct drilled fodder beet crops.
Extension	Our autumn field day was held on farm and online on the 31st March. The handout is available from the website News - Southern Dairy Hub

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

Feed

Principles of Pasture Management this week

Feed Quality	Limited options for influencing pasture quality under the current dry conditons. Quickly eating through home grown baleage for each farmlet so the baleage fed going forward will be 50:50 imported vs farmlet. More lucerne baleage has been purchased and is arriving over the weekend. All herds expect LI FB herd have eaten more autumn supplement so far than was budgeted for. FB now being fed in pasture paddock to the FB herds, transitioning into the crop paddock on Monday.
Growth Rate Management	Residuals have lifted with the increase in supplementary feeding Due to warmer weather not all baleage has been eaten so team will reduce the amount of supplement being fed in advance to minimise wastage.
Nitrogen Strategy	N applications remain on hold; with the 10th of April nearing but with soil temperatures remaining high we are considering applications past this date providing we are confident in a good growth response.

	Standard Kale Pink	**Low Impact Kale Blue**	**Standard Fodder beet Green**	**Low Impact Fodder beet Yellow**
Quantity	Growth only 39% of demand	Growth only 38% of demand	Growth only 46% of demand	Growth 56% of demand
Quality	New grasses holding quality, others very dry	New grasses holding quality, others very dry	New grasses holding quality, others very dry	New grasses holding quality, others very dry
Surplus Management	None	None	None	None
Deficit Management	3.0 kg inshed (down 1kg from last week) 3.3 kg DM baleage	3.0 kg inshed (no change from last week) 2.4 kg DM baleage	3.1 kg inshed (down 0.9 from last week) Baleage 3.1 kg/cow/day	2.0 kg inshed (down 0.8 from last week) Baleage 3.8 kg/cow/day
Rotation Length	44 days	42 days	44 days	42 days

Milk Production

Principles of Milk production management this week

Milk Production	OAD milking started last Friday as a way of limiting the impact the dry conditions on BCS. Standard FB herd are still the furthest behind on seasonal production compared to last season with the LI Kales the closest to last season being 1.3% behind. Std Kale herd continue to out produce the other farmlets even with the change in milking frequency.
Key influences on milk production	Total energy intake is likely the biggest contributor to milk production this week with the hot temperatures impacting on intake, especially of the baleage OAD milking has seen a slight reduction in litres but very little impact on SCC, interestingly milk solids % dropped in the first few days post switch to OAD.
Cow Management	Light BCS, early calving cows continue to receive priority feeding inshed at milking Have a handful of cull cows who will not cope well with OAD milking so will look to exit these ASAP Likely to dry off the first round of at risk cows in the next 2 weeks

	Standard Kale Pink	**Low Impact Kale Blue**	**Standard Fodder beet Green**	**Low Impact Fodder beet Yellow**
kg Milksolids per cow this week / (last week)	1.38/(1.53)	1.26 /(1.48)	1.32/(1.49)	1.24/(1.34)
kg Milksolids per ha this year / (this time last year)	1125/(1169)	982/(950)	1048/(1116)	924/(915)
Season to date compared to last year	Down 1.6% total milk Half paddock extra in grass this year affects KPI.	Down 1.3% total milk One paddock less in grass this year affects KPI.	Down 5.9% total milk	Down 3.5% total milk One paddock less in grass this year affects KPI.
Cows needing preferential feeding (% herd)	42 cows (25%)	30 cows (22%)	13 cows (8%)	22 cows (16%)
Animal health peculiarities	None	None	None	None

Extension

Topics covered at SDH Fieldday 31st March

Spotlight on herd improvement and production efficiency and how liveweight data has been used in the system to seek more efficiencies.

LIC Hoofprint index

Reproductive performance trends

Greenhouse gas footprint of the 4 farmlets.

Infrastructure development and final concept designs

Current farm systems trial- results to date

Handout available from: News - Southern Dairy Hub

Figure 1: Cows from each farmlet representing their herd for trial comparison

Figure 2: Farmers and RP's at the event

Figure 3: Tony Van Der Weerden presenting GHG footprint information

Extension

GHG Emissions Results from the 4 farmlets- Tony Van Der Weerden (AgResearch)

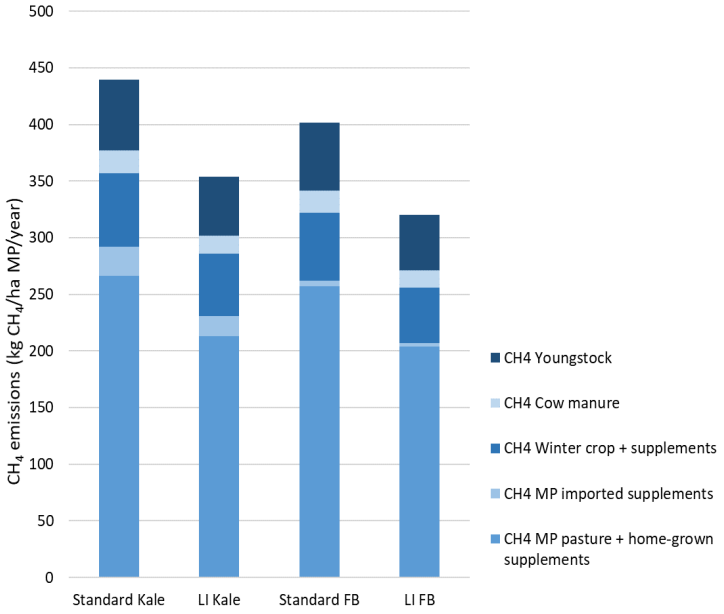
Key results of this research were:

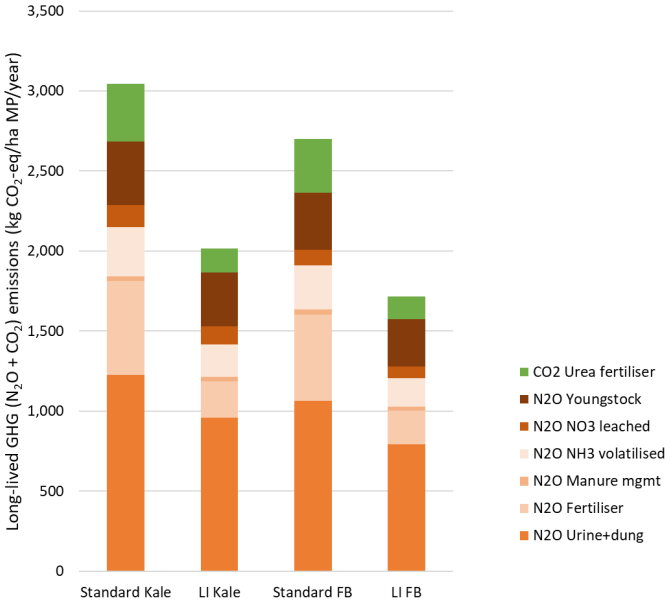
The effect of a lower input system (reduced N fertiliser, lower supplement use and lower stocking rate) had a much larger effect on GHG footprint than the choice of winter crop type.

The LI systems had a 20% lower methane footprint and 35% lower long-lived gas footprint than the standard farmlets.

The FB systems had a 9% lower methane footprint and 13% lower long-lived gas footprint than the Kale systems

The reduced N inputs in the LI systems also resulted in a reduction in direct and indirect N_2O emissions from fertilizer use and from urine and dung deposition

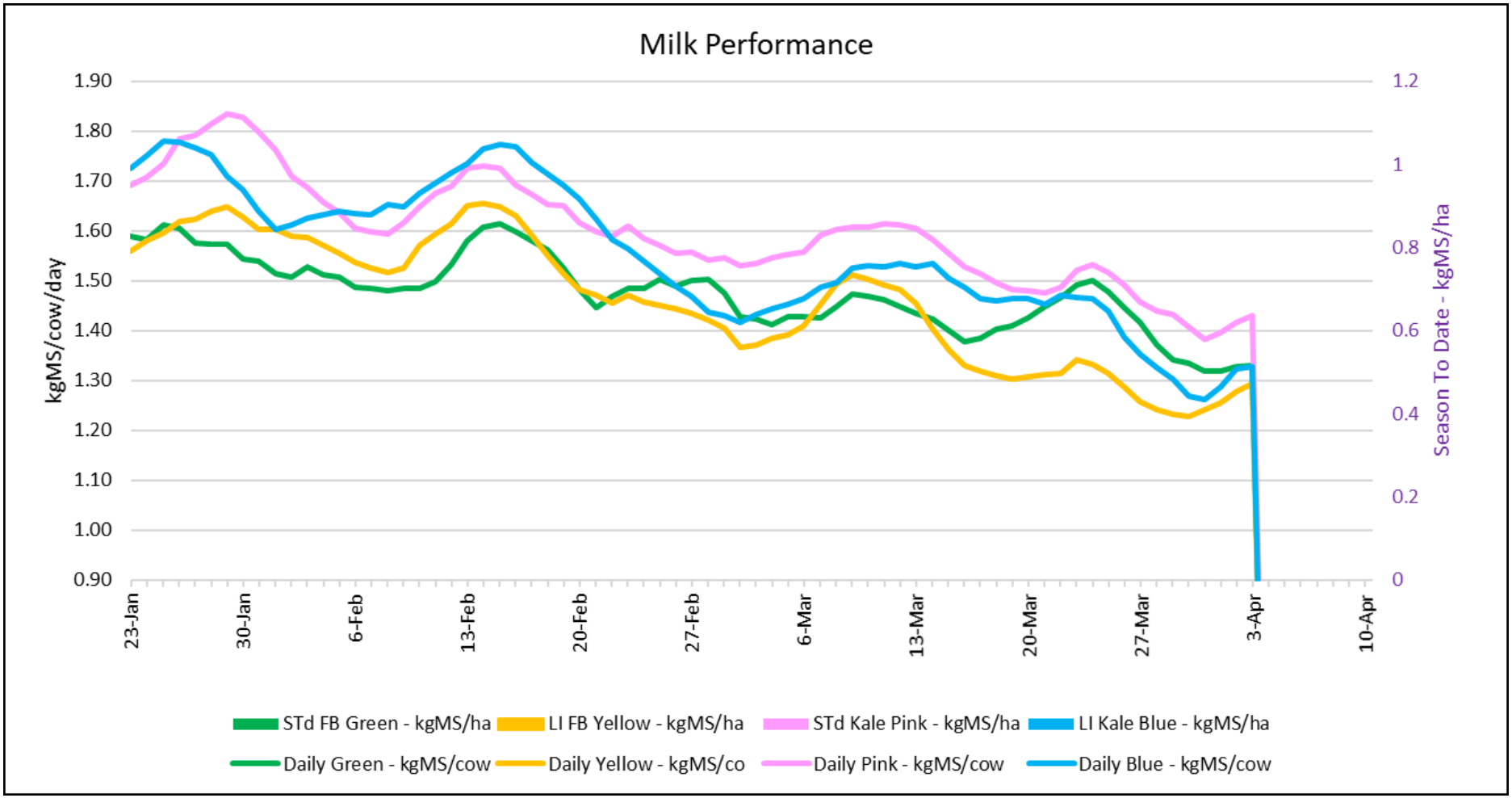




Farm system impacts: of Kale vs Fodder beet for winter AND Reducing N loss to water by 30%.

Kale, Winters on kale - in-shed feed available. Fodder beet, winters on Beet, Beet as lactation supp.

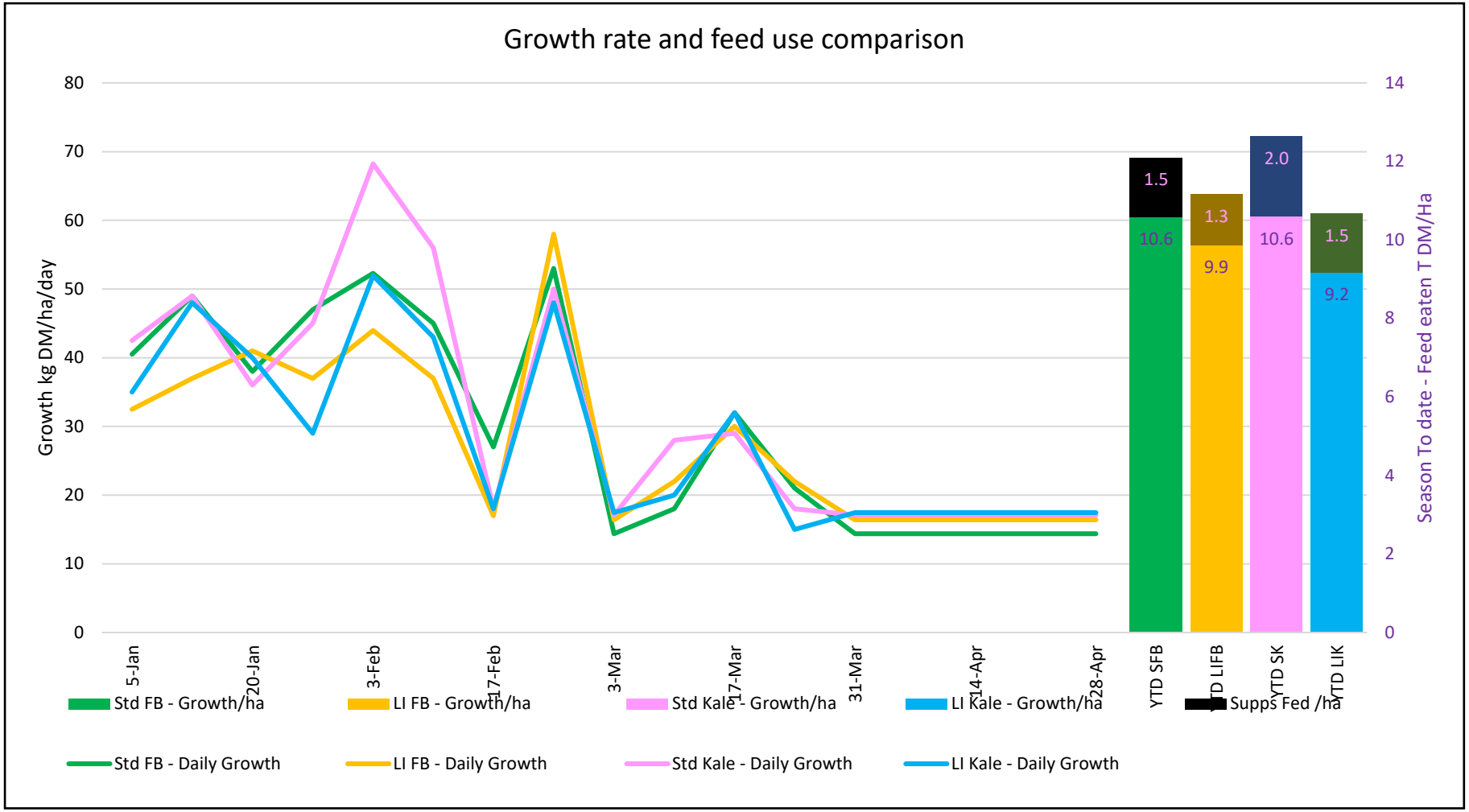
Low impact (LI) limited Max 50kg N/ha/year vs Std 193kg N/ha/year



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.

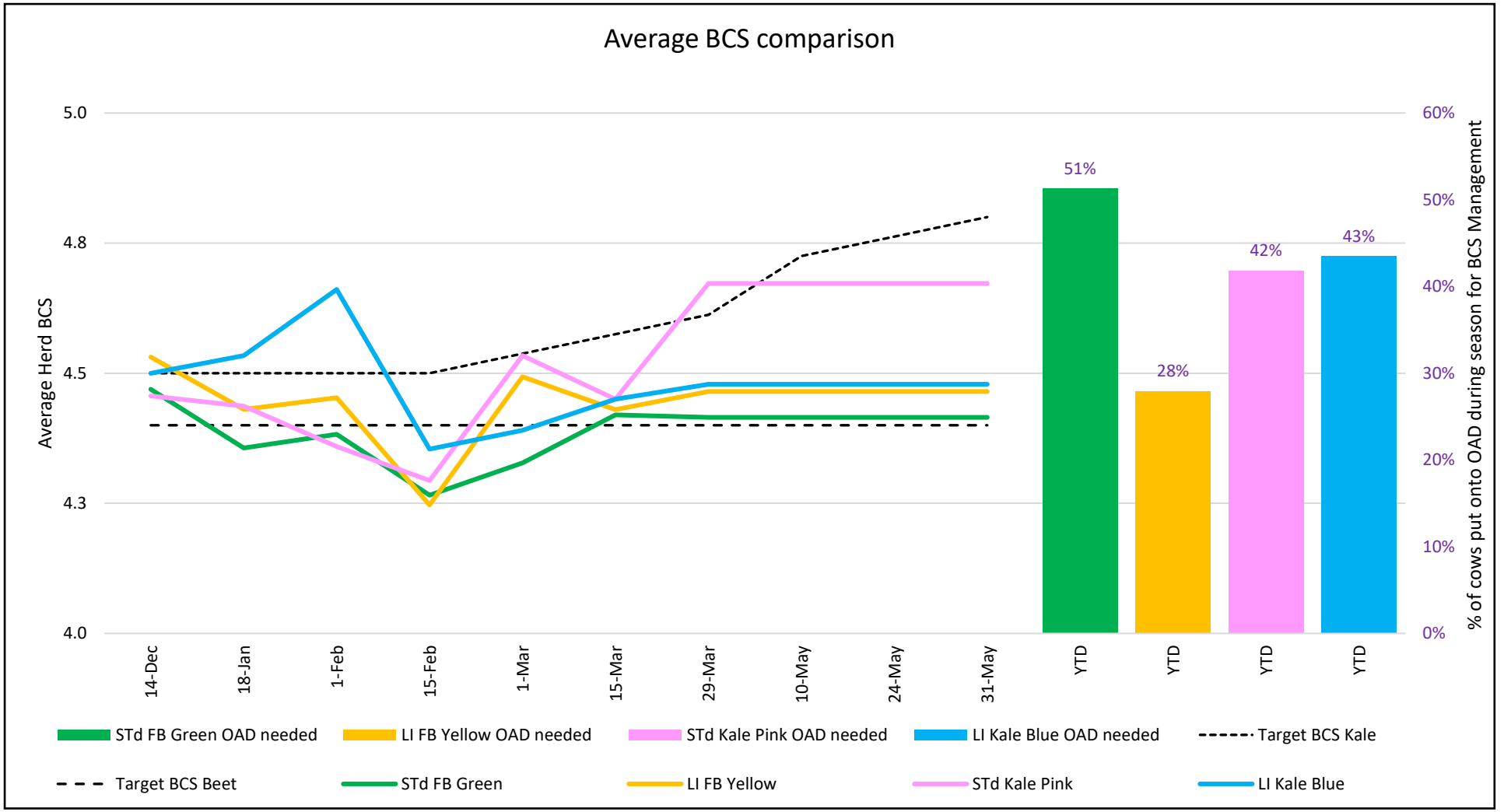
Low impact (LI) limited Max 50kg N/ha/year vs Std 193kg N/ha/year



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.

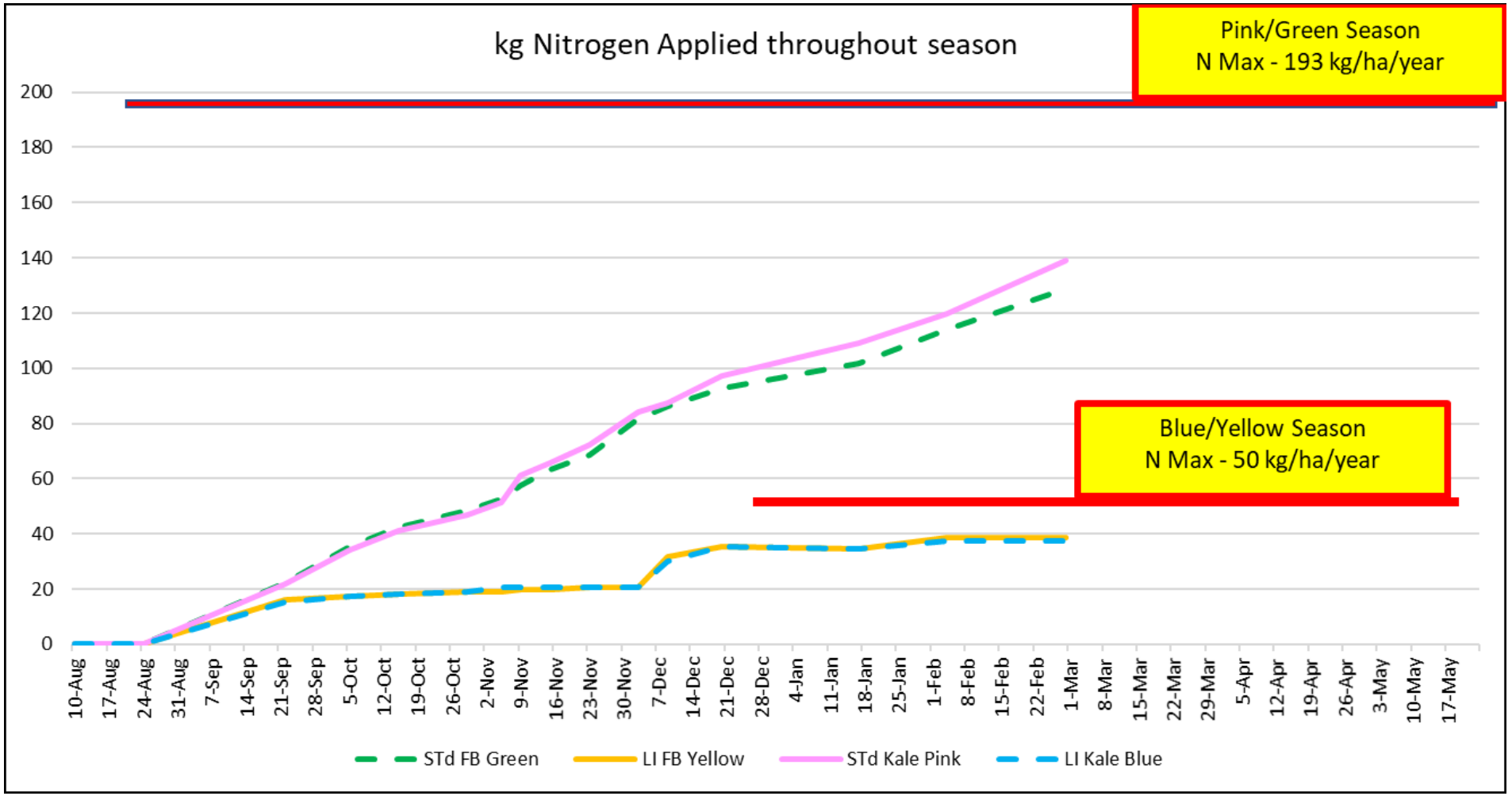
Low impact (LI) limited Max 50kg N/ha/year vs Std 193kg N/ha/year



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

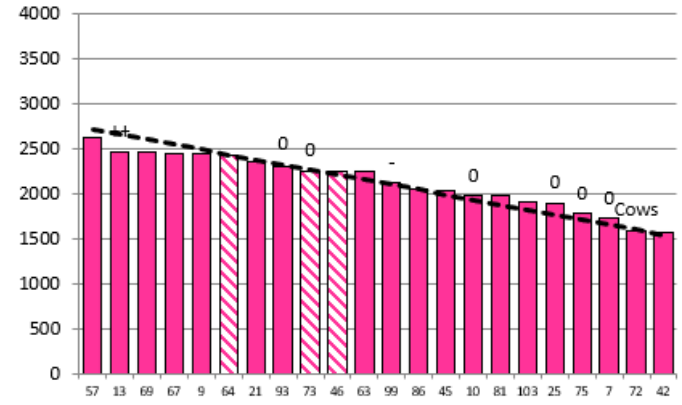
Kale, Winters on kale - in-shed feed available. Fodder beet, winters on Beet, Beet as lactation supp.

Low impact (LI) limited Max 50kg N/ha/year vs Std 193kg N/ha/year



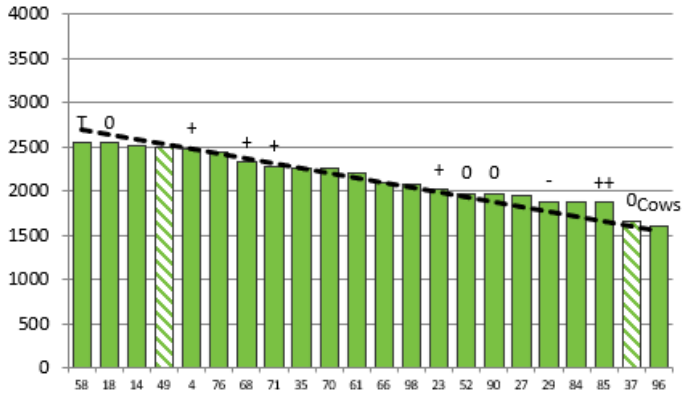
Farm-system impacts of: Kale vs Fodder beet for winter AND Reducing N loss to water by 30%.

Standard Kale



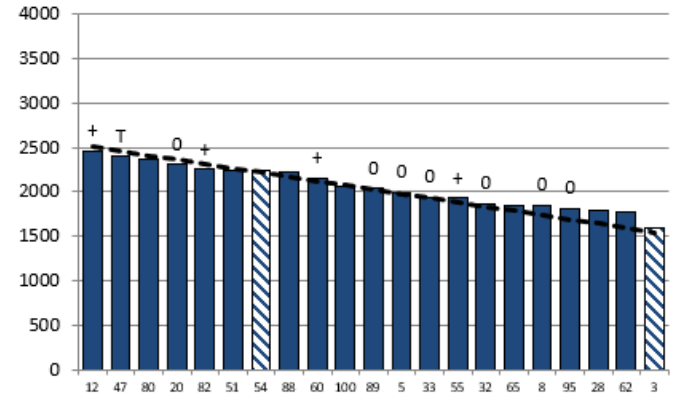
	57	13	69	67	9	64	21	93	73	46	63	99	86	45	10	81	103	25	75	7	72	42
DaysGrazed3	38	24	32	44	22	27	28	30	20	25	33	16	10	14	8	12	18	2	4	6	0	72
N_3	141	136	136	162	146	50	136	136	78	76	161	136	136	162	161	161	161	171	161	136	161	111
Growth3	36	2	10	21	18	21	23	20	40	16	4	0	10	16	30	8	14	0	0	19	0	0

Standard Fodder Beet



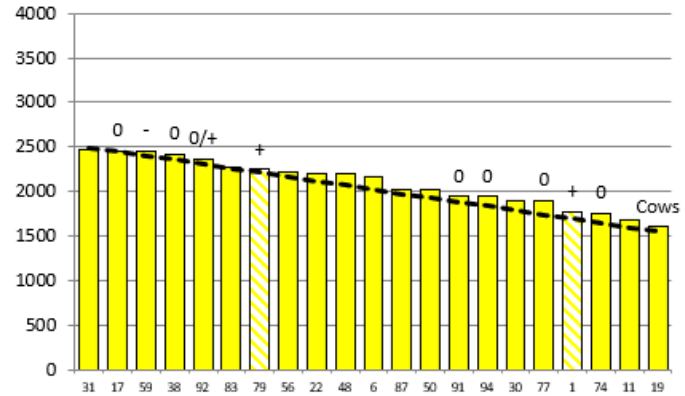
	58	18	14	49	4	76	68	71	35	70	61	66	98	23	52	90	27	29	84	85	37	96
DaysGrazed2	48	36	22	28	26	29	33	25	20	34	24	18	14	10	12	8	6	16	4	75	2	0
N_2	136	136	136	50	136	136	123	106	136	161	106	111	136	161	136	141	161	161	133	121	67	162
Growth2	4	14	10	7	14	1	8	4	32	6	19	24	6	10	12	48	20	20	0	0	0	0

Low Impact Kale



	12	47	80	20	82	51	54	88	60	100	89	5	33	55	32	65	8	95	28	62	3
DaysGrazed1	25	30	34	27	35	24	22	33	32	20	10	18	16	72	2	14	8	12	6	4	0
N_1	36	52	36	36	36	36	41	36	36	36	36	36	36	36	36	52	36	36	36	36	41
Growth1	16	21	2	29	4	11	54	0	3	23	42	4	12	2	0	16	28	17	13	0	0

Low Impact Fodder Beet



	31	17	59	38	92	83	79	56	22	48	6	87	50	91	94	30	77	1	74	11	19
DaysGrazed4	31	27	46	34	30	18	29	35	20	24	23	12	14	8	16	72	10	2	6	4	0
N_4	36	52	36	36	36	36	41	36	36	61	36	36	52	36	36	36	36	41	36	36	36
Growth4	22	26	23	12	10	42	4	14	0	10	4	12	0	22	20	1	18	0	23	0	0

NB – Target line set for 10 kg DMI of pasture

NB: Hatched bars are new grass paddocks being grazed on a faster return interval to maintain quality

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

31 Mar 2022