

# Weekly Farm Summary 25<sup>th</sup> November 2022

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

	Std Brassica/ Baleage Pink	LI Baleage Blue	Std Fodder beet Green	LI Fodder beet Yellow
Farmlet area including wintering	82.7	60.9	82.7	60.9
Peak cow numbers	222	137	221	135
Milking Area	73.8	55.1	73.8	55.1
Current Herd size (cows)	222	133	215	134
Pasture Stocking rate (current)	3.0	2.4	2.9	2.4
Winter Feed Milking supplement	Swede/Bale	Baleage	Beet 80 days	Beet 60 days
	In-shed feed 500kg/cow + baleage as required			
Average Cover	2337	2373	2430	2328
Average Growth	42	46	55	48
Target rotation length	22	26	22	26
Last week act rotation (d)	28	33	28	30
Last week supp (kg DM/cow)	1.6	2.3	1.4	1.8
Average BCS	4.4	4.5	4.3	4.4
% of herd on priority feeding	8%	7%	10%	3%
Milk yield (L/cow)	23.3	24.6	23.1	23.4
Milk yield (kgMS/cow)	2.04	2.16	2.03	2.04
<b>Nitrogen Cap kgN/ha/yr</b>	<b>180</b>	<b>50</b>	<b>180</b>	<b>50</b>
% Nitrogen used (kgN/ha) YTD	32% (58kg)	44% (22kg)	32% (58kg)	42% (21kg)
Effluent N YTD	6	2	6	5
Profit/ha comp to Control	\$0	\$0	\$0	\$0
YTD supp (kg DM/cow)	341	221	295	258
YTD MS/cow	183	193	180	192
YTD MS/milk ha (YTD MS/farm ha)	550 (491)	479 (433)	540 (482)	471 (426)

Business Area	Current Status
<b>Milk Production</b>	Production continues to slowly decline for all herds, quality being the main driver with another drop in ME in the last samples sent away. Increases to quantity not bridging the gap resulting in a fall of production
<b>Pasture &amp; Feed</b>	Remain focussed on managing pasture quality, right pre-graze, identifying paddocks for baleage and topping as required.
<b>Animals</b>	No new cases of lameness or mastitis. Additional bloods being taken to monitor magnesium levels given increase in in-shed feeding that contains minerals. Mating is going well, with a comprehensive update on the last page of this farm update.
<b>Environment</b>	Continue to apply Round 3 of fertiliser for the Std farmlets. Round 3 for LI farmlets will begin following the cows at the start of December
<b>Wintering</b>	Fodder beet has emerged, however, in the direct drill paddock, ~ 50% is showing insect damage, and 30% killed since it went in the ground 10 days ago. Booked to be redrilled.
<b>People</b>	Farm staff are working hard and pulling together as a team to cover off everything as some members have fallen sick.
<b>Research</b>	Plantain trial still yet to be sown.

# Milk Production

## Principles of Milk Production management this week

Milk Production	Slight decline for all herds, with pasture quality being the key driver of this. Results from individual herd vat samples, Milk fat % LI Baleage stable at 4.8% significant drop from last month for the Std brassica/baleage herd with the two beet herds have the highest fat test, but both declined from last month. SCC, significant decrease for Std brassica/baleage and increase for the LI FB's. Protein %, Std brassica/baleage herd remain below the others
Key Influences on Milk Production	Production changes continue to be most likely driven by pasture quality as it progresses through the reproductive phase and quality (energy & protein) declines. In-shed feeding continues to provide minerals and a high-quality feed option but looking to decrease this over the week. Continue to focus on quality to maintain production levels and minimize the decline.
Cow Management	Continuing to manage lighter BCS cows below 4 on OAD milking with priority in-shed feeding. X3 light BCS, high SCC cows on priority feeding only.

	Std brassica/baleage Pink	LI Baleage Blue	Std Fodder beet Green	LI Fodder beet Yellow
kg Milksolids per cow this week / (last week)	2.04 (2.06)	2.16 (2.24)	2.03 (2.08)	2.04 (2.14)
kg Milksolids per ha this year / (same time last year)	550 (491)	479 (433)	540 (482)	471 (426)
% Var kg Milksolids per ha Season per ha to date vs last season to date	11.9	7.5	16.2	11.9
No. of Cows needing preferential feeding (% herd)	18 (8)	10 (7)	22 (10)	4 (3)
Animal Health peculiarities	None	None	None	None

# Milk Production

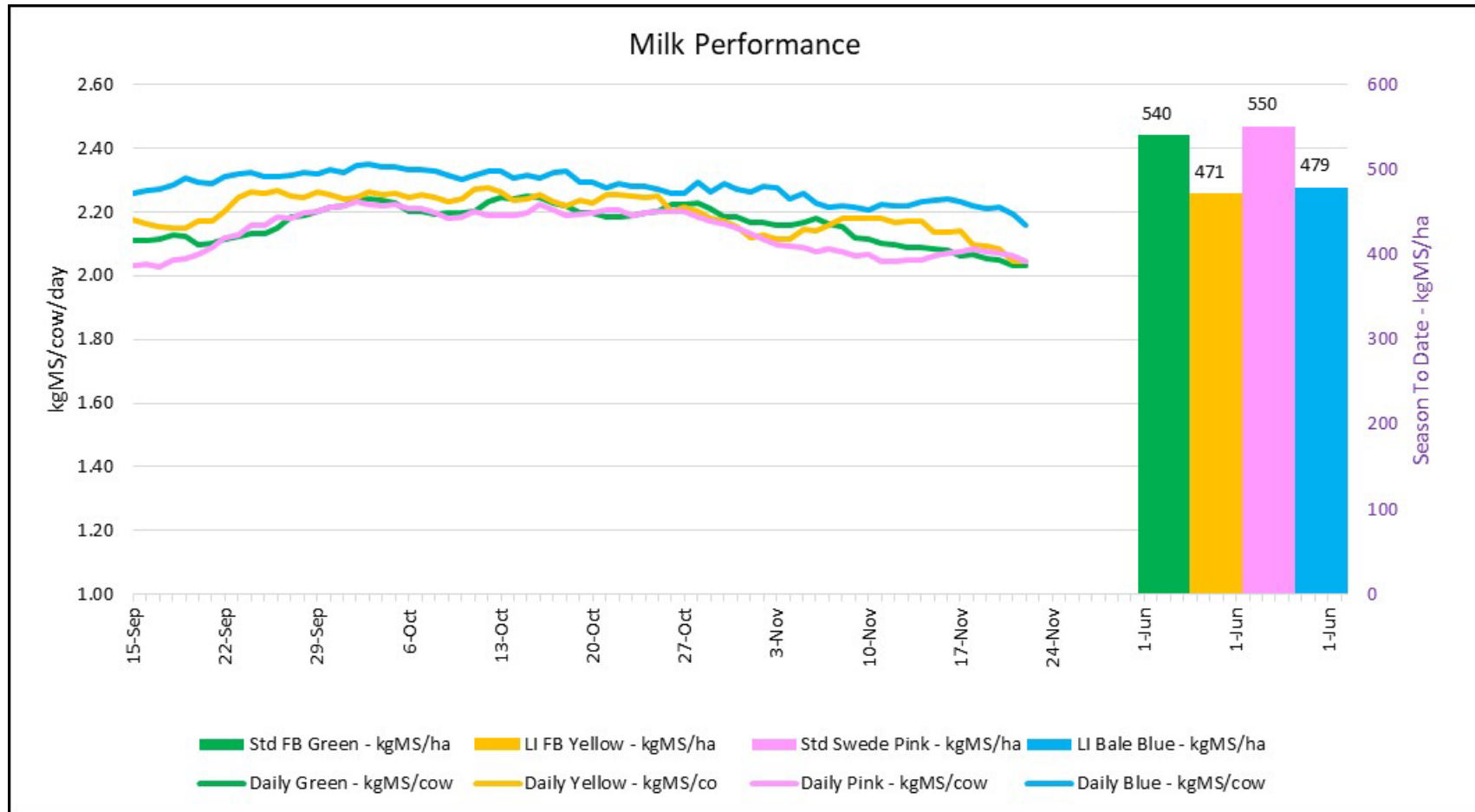


Figure 1: Milk solids production (/cow/day) plus cumulative season production (kg/ha)

# Body condition score

As at 16<sup>th</sup> November 2022 – updated fortnightly

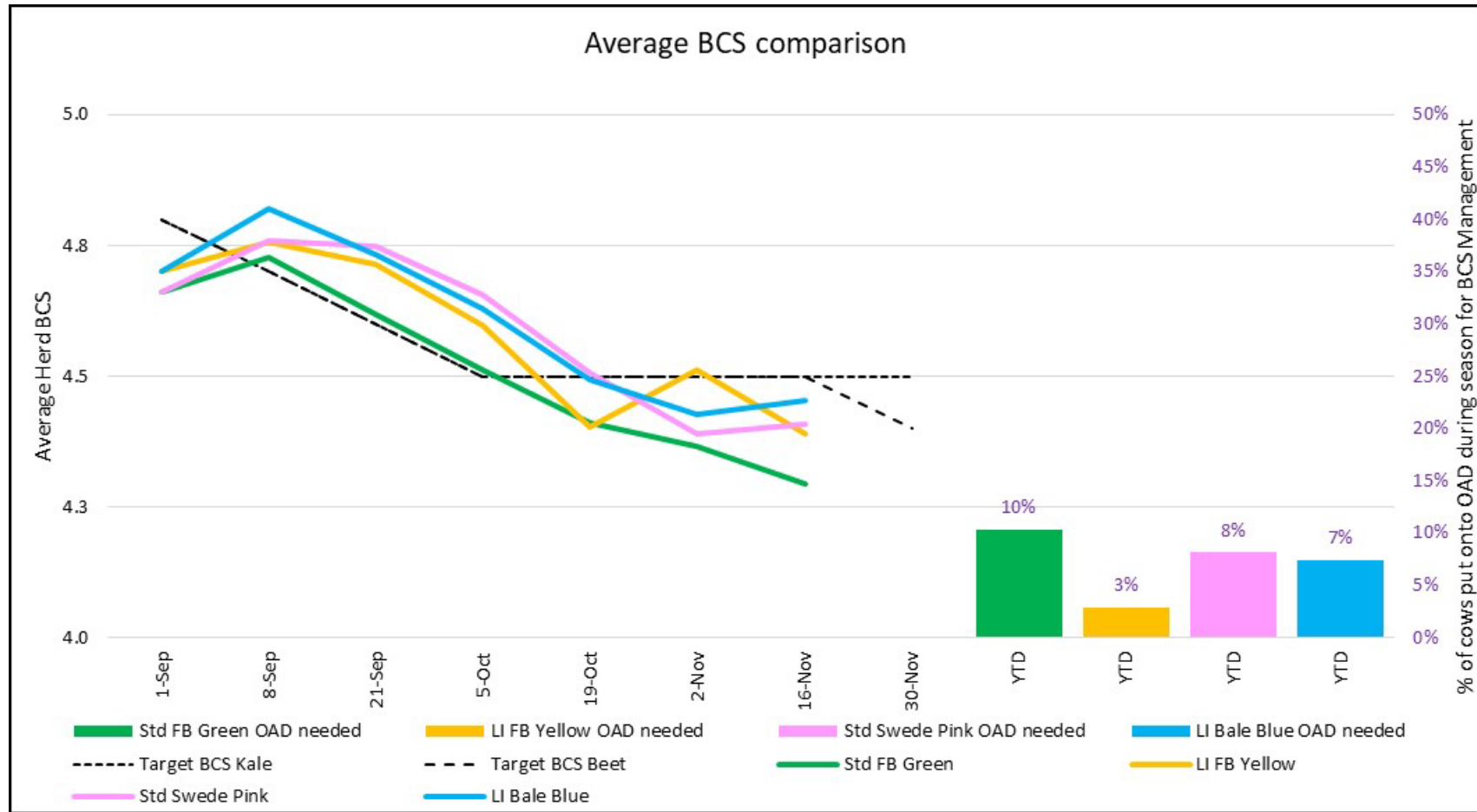


Figure 2: Fortnightly BCS trends and percentage of the herd requiring OAD milking season to date

# Feed

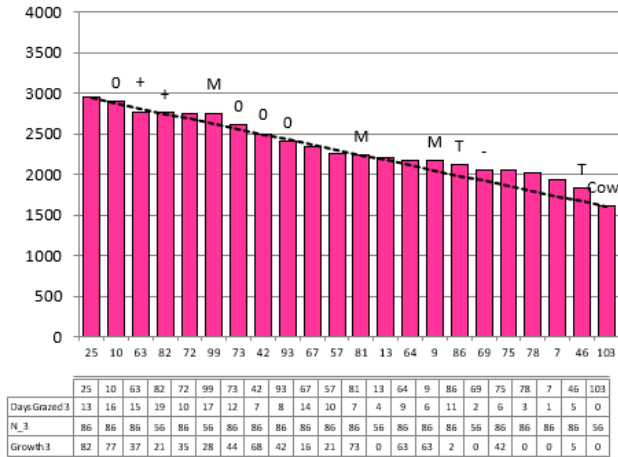
## Principles of Feed management this week

<b>Feed Quality</b>	Remain focused on maximizing pasture quality via the growth rate management strategy below. Observations have been that there is a fair bit of seed head and some flag leaves present combined with stem in the base. Some paddocks having good clover emerging, but latest pasture quality results have returned ME ranging from 9.9 to 11.6 MJ/kg DM with an increase in both NDF and lignin. Crude protein range was 14.7 to 26% with the lowest reading in the pasture with only 9.9 MJ ME/kg DM
<b>Growth Rate Management</b>	Remaining on our pasture quality management strategy, stepping over any paddocks greater than pre-graze target for baleage and topping to meet residual. Have utilized up to 2.5 kg in-shed feed/cow/day to support this strategy. Have high quality silage or increasing in-shed feeding to fill gaps if we have been too aggressive and find ourselves in a pasture deficit.
<b>Nitrogen Strategy</b>	Std herds on 3 <sup>rd</sup> round of Nitrogen applications (25 kg N/ha), Third round applications (12.5 kg N/ha) for LI due to begin following the cows at the start of December

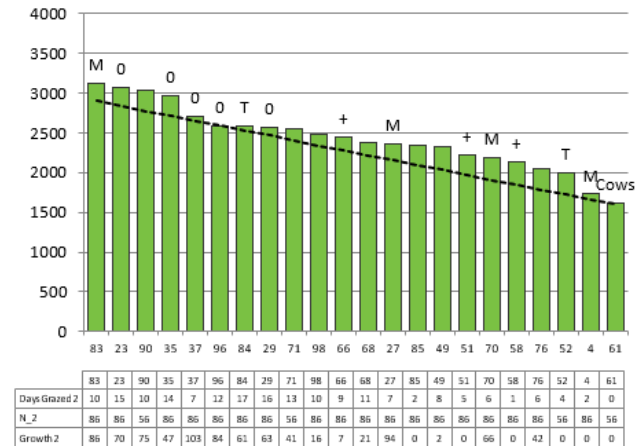
	Std brassica/baleage Pink	LI Baleage Blue	Std Fodder beet Green	LI Fodder beet Yellow
<b>Quantity</b>	Surplus	Surplus	Surplus	Surplus
<b>Quality</b>	Stem elongation	Stem elongation	Stem elongation	Stem elongation
<b>Surplus Management</b>	X 1 pdk conserved	X 1 pdk conserved	X 1pdk ID to skip	X 1pdk conserved
<b>Deficit Management - kgDM (diff from last week)</b>	1.5 (-0.1)	1.5 (-0.8)	1.5 (0.1)	1.5 (-0.3)
<b>Target Rotation Length (days)</b>	22	26	22	26

# Feed

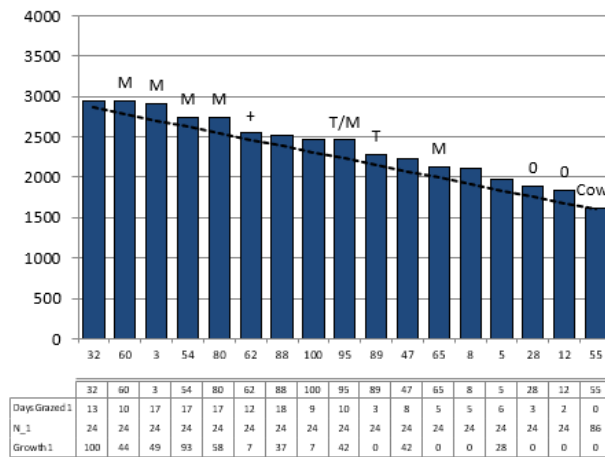
### Standard Brassica/Baleage



### Standard Fodder Beet



### Lower Impact Baleage



### Lower Impact Fodder Beet

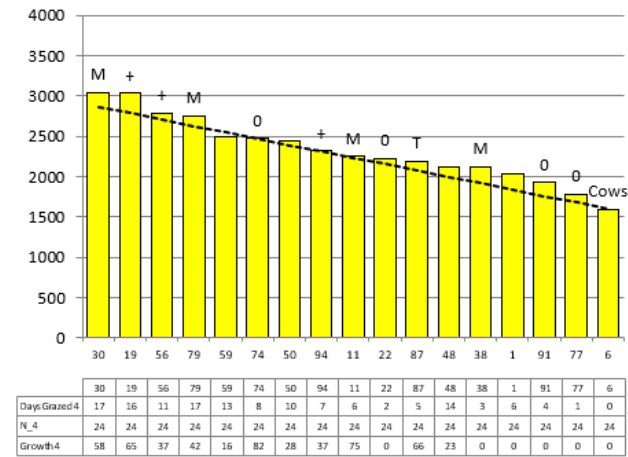


Figure 3: Feed Wedges as of 21st November 2022

# Feed

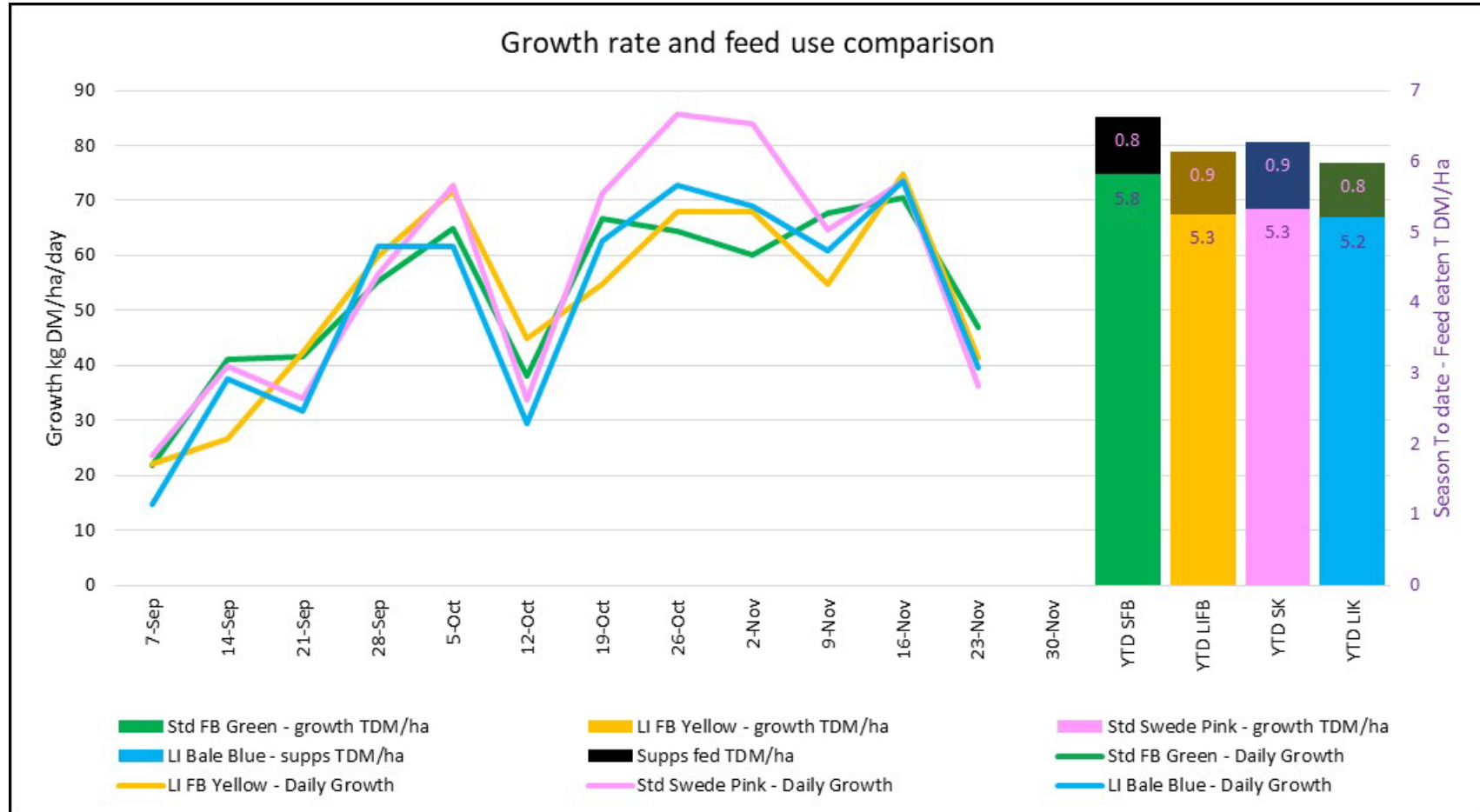


Figure 4: Weekly growth rate (kgDM/ha/d) & YTD feed use

# Nitrogen

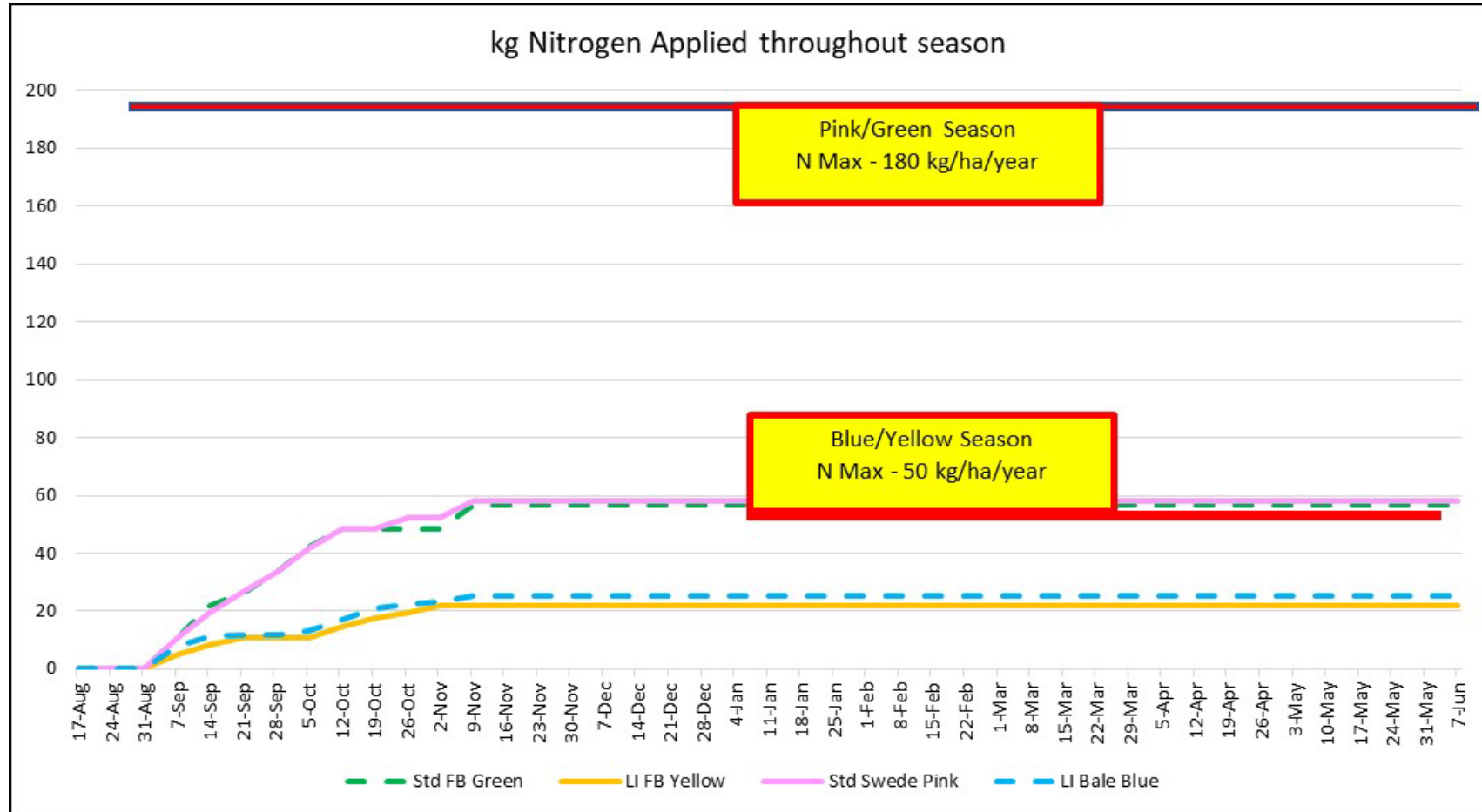


Figure 5: Cumulative nitrogen fertiliser applications (kg N/ha) for the 2022-23 season



# Mating 2022 Update

## Submission Rate

Continuing to focus on herd BCS at calving through to mating has been the biggest influencer on improving our 3-week submission rate across all the herds. Last year our 2<sup>nd</sup> round CIDR cows were mated on day 21 and contributed to the 3-week SR, this year they are done 2 days later and not sneaking into the first 3 weeks, hence the slight drop in SR compared to last year. Prior to this we were tracking 3% ahead of last season on day 20 of AB

The Pink or Standard Kale herd has been the most predictable in response to this, with the same techniques not always delivering the same result across the other 3 herds.

Year	Std FB	LI FB	Std Kale	LI Kale	Farm
2019	77%	80%	81%	88%	81%
2020	84%	93%	92%	92%	90%
2021	91%	91%	94%	97%	93%
2022	90%	87%	95%	93%	92%

## Non-cyclers

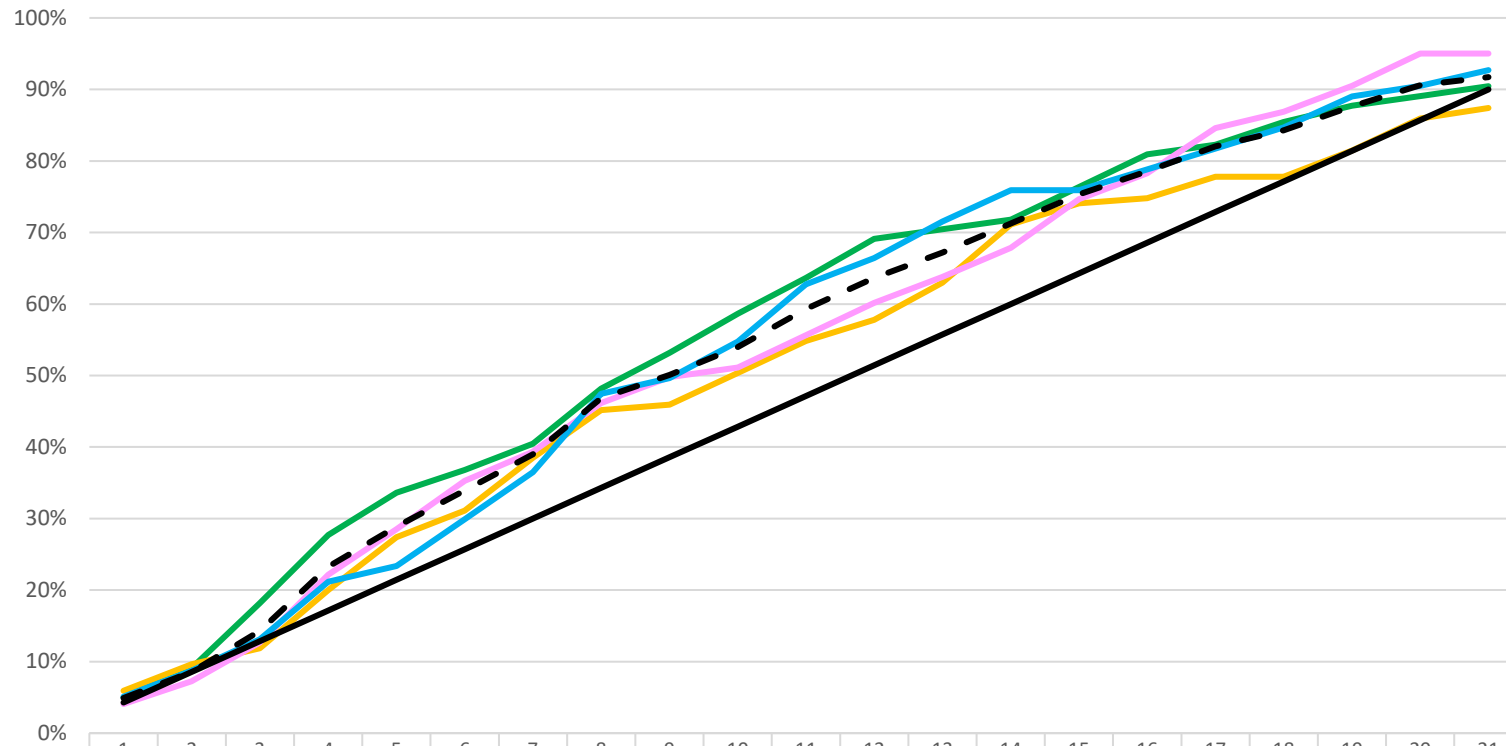
Non-cycler management focuses on 3 or 4 key metrics:

1. Cow BCS - if at BCS 4.0 or below, OAD is used if a cow is not yet cycling
2. Age - If a cow is 6 years or older, we won't use intervention
3. Health history this season – Cows with a hard calving, metabolics or metritis are given time and OAD before CIDR
4. CIDRs are then used on cows in good condition to kickstart them when they haven't started themselves.

Year	Cows OAD to Cycle	Round 1 CIDR	Further CIDR	3 wk Sub rate
2019	142	37	34	81%
2020	98	41	12	90%
2021	70	46	29	93%
2022	55	38	20	92%

# Mating 2022 Update

3-week submission rate of herd



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Std FB 2022	5%	9%	18%	28%	34%	37%	40%	48%	53%	59%	64%	69%	70%	72%	76%	81%	82%	85%	88%	89%	90%
LI FB 2022	6%	10%	12%	20%	27%	31%	39%	45%	46%	50%	55%	58%	63%	71%	74%	75%	78%	78%	81%	86%	87%
Std Kale 2022	4%	7%	13%	22%	29%	35%	39%	46%	50%	51%	56%	60%	64%	68%	75%	78%	85%	87%	90%	95%	95%
LI Kale 2022	5%	9%	13%	21%	23%	30%	36%	47%	50%	55%	63%	66%	72%	76%	76%	79%	82%	85%	89%	91%	93%
Herd	5%	9%	14%	23%	29%	34%	39%	47%	50%	54%	59%	64%	67%	71%	75%	79%	82%	84%	88%	91%	92%
Target	4%	9%	13%	17%	21%	26%	30%	34%	39%	43%	47%	51%	56%	60%	64%	69%	73%	77%	81%	86%	90%

— Std FB 2022   
 — LI FB 2022   
 — Std Kale 2022   
 — LI Kale 2022   
 - - Herd   
 — Target