Backtrack Dairies – Weekly Summary

Week ending Saturday 30th April 2016

Backtrack Dairies
Two farming systems. One biological (Whakapono) and one conventional (Waiora). Both farms have a stocking rate of 3.3 cows/ha at peak.

Week Ending	23/4/16		30/4/16	
Backtrack Dairies	Whakapono	Waiora	Whakapono	Waiora
Farm grazing ha	155	210	155	210
Peak Cows	506	690	506	690
Stocking Rate (cows in milk/ha)	2.9	2.9	2.9	2.9
Cows in Milk	443	614	443	614
Cows in Vat	435	610	435	610
Ave. Pasture Cover	2553	2811	2340	2732
Ave. Pasture Growth	43	52	24	38
Area Grazed	4.84	5.76	5.26	4.67
Grazing Interval	32	36	32	45
Pasture Intake (est kgDM/cow)	18	21	18	18
Grass Silage Fed (kgDM/cow)	1	1	0	0
Grain/PKE Fed (kgDM/cow)	2	2	2	2
Total Fed KgDM/cow	21	23	20	20
Milk Solids (Kg/cow/day)	1.67	1.58	1.56	1.49
MS/ha/day	4.69	3.27	4.37	4.31
Nitrogen applied (kg N/ha)	0	27	0	27
Rainfall (mm for week)	5	5	7	7
Irrigation applied	0	0	13907	15795
Soil Temperature at 9am	13	12	12	11
Soil Moisture (between 65-76%)	67	78	66	78
Cell count (000's)	131	152	147	144
Mastitis Cases	0	1	0	1
Lameness Cases	4	0	2	0
Body Condition Score	4.3	4.32	4.3	4.32
Totals To Date				
Milk Solids to factory	230486	303901	234563	311271
Milk Solids inclu calf milk	235589	313225	239666	320595
MS/ha	1495	1449	1521	1484
Nitrogen applied (kg N/ha)	119	160	119	104
Supplements Fed (kg/cow)	751	780	791	780
Deaths %	2	2	2	2
Culls %	16	14	16	14

Summary

- Overseer N loss to water 35kg/ha Whakapono / 40 kg/ha Waiora
- Per cow and per ha production has dropped to 1.56 kg MS/cow and 4.37 kgMS/ha on Whakapono, with Waiora dropping also to 1.49kg MS/cow and 4.31 kgMS/ha.
- Moving from 36 to 48 days has meant cows are eating lower quality pit silage and PKE and grazing harder into the poorer quality of the base of pastures as this is the last round.
- Growth rates have fallen dramatically the last week (24/38) despite favourable weather.
- Finishing last round of Sustain Ammo 30N to Waiora (27 units N)
- Moved to 48 days this week with pit silage 3- 4 kgDM/cow/day and 1kg PKE with waiora herds coming together to make it easier to get to a 48 day round (600 cows get half a paddock and one load of silage)
- Still producing higher per cow than last season with 120 less cows over both farms (10%) and production down 3% on Whakapono and 8% on Waiora to factory.
- Overall 6.0% down to factory but less supplement used to date.
- 7mm rain so irrigated with pivots only according to moisture meters.
- Whakapono decreased cover again significantly from 2553 kgDM /ha to 2340 with a PGR of 28kgDM/ha/day, while Waiora has dropped a lot less from 2811 kgDM /ha at 2732 at PGR of 38 kgDM/ha/day which seems correct given the growth rates and levels of supplement fed.
- Having to increase level of silage to Whakapono (4 vs 3 kgDM) to try to maintain residuals above 1500 and also maintain per cow production and liveweight
- Residuals on both farms starting to look more acceptable around 1500 to 1600 and plate meter starting to read more accurately as base disappears on final round.
- Delayed culling most MT cows a month due to high pasture covers available and opportunity to make cheap milk and reach our budgeted production target
- Have decided 90 cull cows will go to buyers for grazing winter feed on liveweight basis early May before we go to 48 day round. Lincoln has also decided to turn their high covers into milk. Whakapono will need to drop cow numbers earlier given lower cover, drop in growth rates and production.
- This difference is obviously due to lack of nitrogen in last two rounds but curiously milk production per cow and per ha remains higher on Whakapono as it has done all summer in the order of 4- 6%

Production

Whakapono production is ahead of Waiora in per cow and per ha/day probably due to better quality pasture available overall (more clover?). Pastures appear similar in composition visually.

PKE has been maintained at 1kg/cow/day with grain dropped out as considered not economic at new lower milk price.

Pit silage is added as needed to help extend the round to 48 days at 3-4 kg DM/cow/day

Irrigation

7 mm rain but due to warm temperatures and fact that scheme is going off on May 9th means irrigation is on and moisture meters are trending down also.

Only using pivots at present alternating every second day but will have to start K line next week and double shift them to get around faster and avoid over irrigating

Have 1 day of stored water left but can purchase more at current price (8c/m3). This works out at about $1000/day for both farms.

Animal Health

	Whakapono	**Waiora**
Mastitis %	0%	0%
Lameness %	0.4%	0%
Penicillin Herd %	1.8%	2.1%

There is minimal mastitis on both farms. Lameness still a problem on Whakapono with 4 new cases this week and none on the larger Waiora.

Whakapono does have disadvantage of one herd of 500 cows compared to two herds of 300-350 on Waiora so a lot less time on concrete.

Also Whakapono has longer walks on tracks which the two pivots go over and wet continuously whereas Waioras four pivots don't cross any tracks so stay mostly dry and clean, which could be why there is less footrot there.

Pastures

Covers on Whakapono have decreased a lot from 2553 to 2340 on a 36 day round moving to 48 days, while Waiora is down from 2811 cover to 2732 as we move to an average 48 day round The first and second herd on Waiora are now combined and Whakapono receiving 1 kg extra of silage to make up for lower pregraze covers.

Residuals on both farms are starting to look more acceptable around 1500 on Whakapono and 1600 on Waiora.

Growth rates (24 Whakapono / 38 Waiora kgDM/ha/day) seem to line up with the changes in cover and reflect strongly the effect of extra N but Waioras cover 400 higher is maybe carrying more base. Extra N effect on Waiora is obvious with extra cover available. Whakapono cover lower but appearing to satisfy cows and production still superior at same stocking rate and round length.

May have to drop cow numbers sooner to negate this drop in cover as don't want to feed more supplement at current level of production.

Whakapono maintaining higher per cow production but lower cover may mean quality is better to the base of the sward and is being turned into milk instead of being rejected or taking more energy to digest.

Herbage samples, two from each farm directly in front of cows to be grazed are remarkably similar, one excellent and one average from each farm so cast no more light on per cow differences

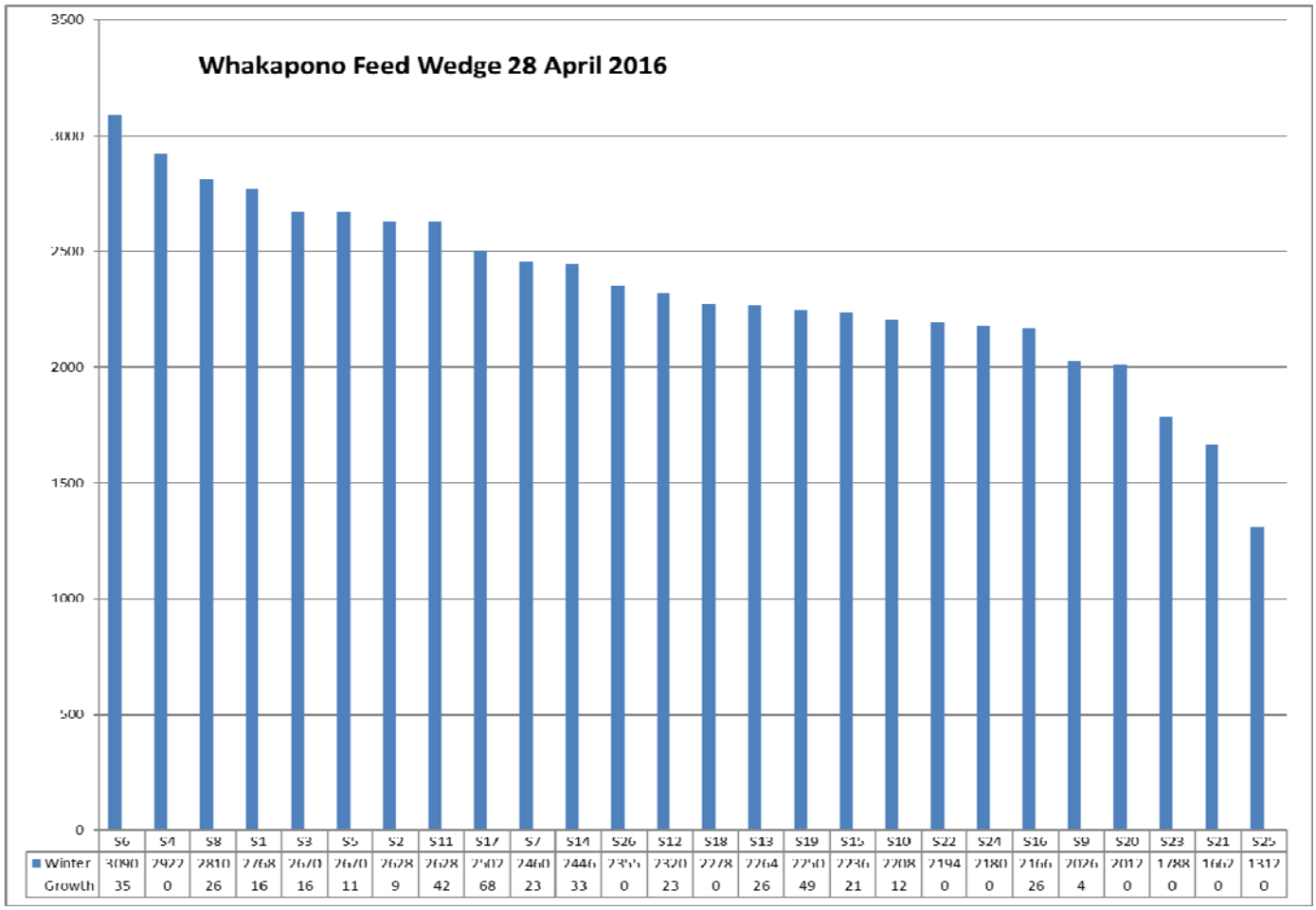
Check them below.

Demand at 3.0 cows x 18 kgDM/cow/day = 54 kgDM/ha/day so should be decreasing cover, with PKE in shed at 2 kg/hd/day and 1 – 2 kgDM silage helping to offset this pasture demand

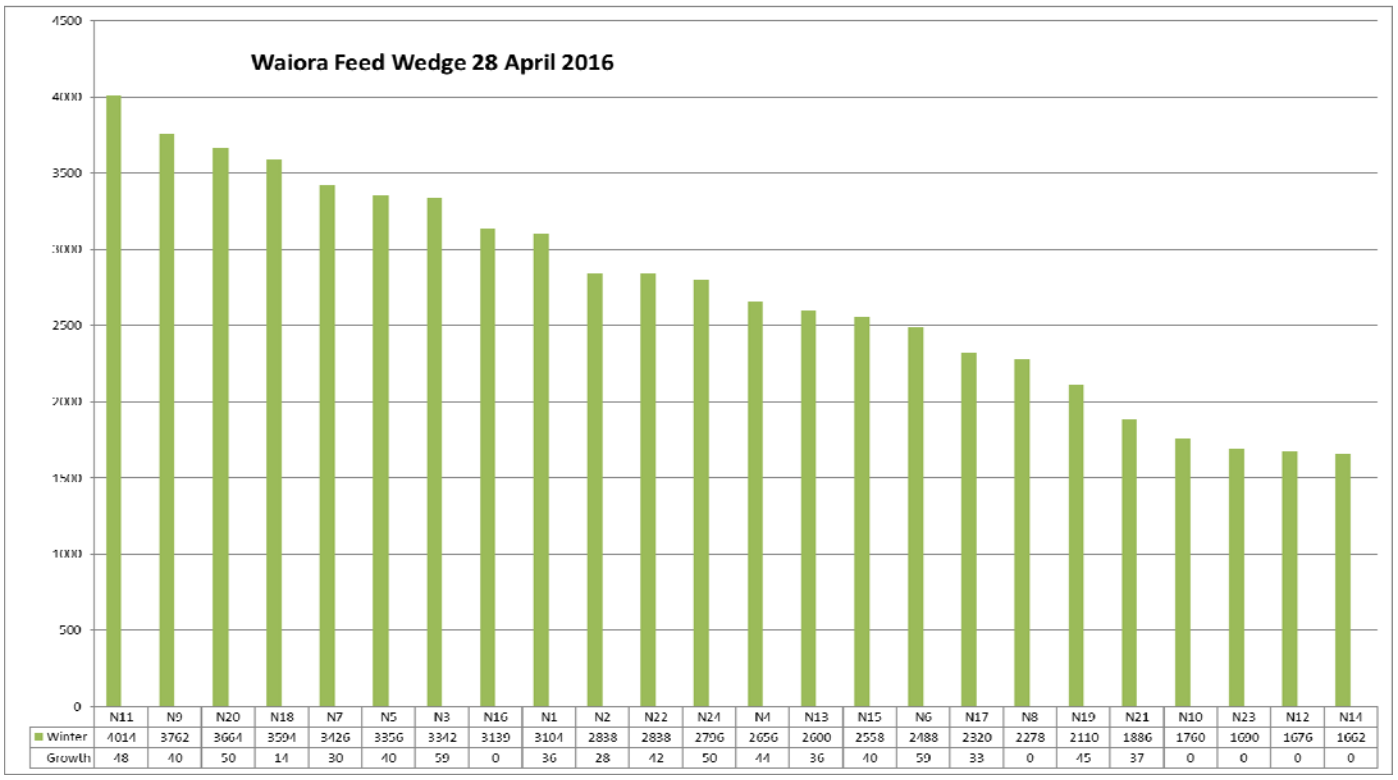
Feed Wedges

Both wedges have similar shape but Waiora has a much higher pregraze nearer 4000 which looks good but may hinder regrowth.

Waiora has higher middle which reflects the effect of 28 kg/ha urea applied last round and the nearly 300 extra cover produced from artificial N.



	S6	S4	S8	S1	S3	S5	S2	S11	S17	S7	S14	S26	S12	S18	S13	S19	S15	S10	S22	S24	S16	S9	S20	S23	S21	S25
Winter	3090	2922	2810	2768	2670	2670	2628	2628	2502	2460	2446	2350	2320	2278	2264	2250	2236	2208	2194	2180	2166	2026	2017	1788	1662	1312
Growth	35	0	26	16	16	11	9	42	68	23	33	0	23	0	26	49	21	12	0	0	26	4	0	0	0	0



	N11	N9	N20	N18	N7	N5	N3	N16	N1	N2	N22	N24	N4	N13	N15	N6	N17	N8	N19	N21	N10	N23	N12	N14
Winter	4014	3762	3664	3594	3426	3356	3342	3139	3104	2838	2838	2796	2656	2600	2558	2488	2320	2278	2110	1886	1760	1690	1676	1662
Growth	48	40	50	14	30	40	59	0	36	28	42	50	44	36	40	59	33	0	45	37	0	0	0	0

Mating

	Whakapono	**Waiora**
Submission Rate	84%	82%
Non-cyclers	9%	12%
AI length	8 weeks	8 weeks
Mating length	11 weeks	11 weeks
Detection Method	Manager/2IC checking cows every morning and tail paint	Manager/2IC checking cows every afternoon and tail paint

Timeframe of Mating	**Dates**
Planned Start of Mating	30th October
Metri-checking & PG 1	23rd November
PG 2	4th December
Change to short gestation semen	10th December
AI Finished	22nd December
Bulls entered herd	22nd December
Bulls removed from herd	10th January
Pregnancy Scanning 1	2nd February
Pregnancy Scanning 2	3rd March

Pregnancy Test Results

1st Scan	**Whakapono**	**Waiora**
Total Cows Scanned	493	652
August Calving (first four weeks)	304 (62%)	390 (60%)
September Calving (second four weeks)	105 (21%)	148 (23%)
Rechecks	84 (17%)	114 (17%)

2nd Scan	Whakapono	Waiora
Total Cows Rechecked	80 (16%)	117 (17%)
Late Oct to Bull	12 (2%)	19 (3%)
No of Cows Empty	68	98
% of cows Empty	14%	15%

So very disappointing results but appear to be quite common around the county and also Lincoln posted a similar result at 14% after 10 weeks. I will check how many of these are culls that I didn't mate until late on purpose, which will make me feel a bit better if they make up some of these MT's.
Good job the beef schedule is good and I have plenty of heifers (317).
Heifers on the three blocks ranged from 4-7% MT which is normal for us.

Fertiliser

Whakapono – Top Soils

Month	Fertiliser Product	Application Rate (kg/Ha)	N	P	K	S	Mg	Ca
July	Sulphate Ammonia	150	32			35		
	Mag Sulphate (K)	25				4	4	
October	Sulphur	10				9		
	Sulphate Ammonia	25	6			6		
	Pot Sulphate/KCL	25			12	3		
	DAP	75	14	15				
December	Urea	20	9.2					
	Sulphate Ammonia	50	11			12		
	Pot Sulphate/KCL	52			25	6.8		
	DAP	48	8.6	9.6				
	Sulphur	10				8.6		
	Lime	639						383
	Dolomite	1080					119	540

January	Urea Sulphate Ammonia Pot Sulphate/KCL DAP	5 64 5 5	2.3 14 0.9	 1	 2.4 	 15 0.7 	 	
February	Urea Sulphate Ammonia Pot Sulphate/KCL DAP	5 50 5 5	2.3 11 0.9	 1	 2.4 	 12 0.7 	 	
Total to Date Applied			114	27	41	112	123	923

Waiora - Ballance

Month	**Fertiliser Product**	**Application Rate (kg/Ha)**	**N**	**P**	**K**	**S**	**Mg**	**Ca**
July	SustaiN Ammo 30N	100	30	1		13		
October	Muriate of Potash/SustaiN Urea	100	25		22			
November	Serpentine Super/Sulphurgain Pure (Olsen P < 20) Serpentine Super/Sulphurgain Pure (Olsen P > 20)	526 626		22 15		40.5 28.5	16 11	53 37
December	Muriate of Potash/SustaiN Urea	100	25		22			
January	Muriate of Potash/SustaiN Urea*	100	25		22			
March	SustaiN Urea	60	28					
April	SustaiN Ammo 30N	90	27			12		
Total to Date Applied			160	38	67	94	27	90

*Waiora fertiliser going on mostly at 100 kg/ha which is a 50:50 mix of Sustain Urea and MOP with one third of paddocks only receiving 50 kg of Sustain urea if K levels were > 6.

March

Commenced applying fert to Waiora following cows as we prepare to head out to 30+ day rotation using Sustain Urea at 60 kg/ha or 28 kg/ha of nitrogen to boost cover. This will take total to 133 kg/ha of N to date.

A final application of Sustain Ammo 30N will go on in April taking N total to 160 units very similar to Lincoln at 167 units of N who are limited by their nutrient budget.

Total spend from Ballance including lime $111,000 or $529/ha well under our $600/ha budget.

Also started applying autumn mix to Whakapono with low rate of nitrogen at 14 units and very small amounts of P, K and S and should be the final application this season to this farm.

This will take farm to total N use of 119kg/ha for season.

Despite this total spend for the season will total $101,000 or $653/ha well over the budgeted $600/ha.

It is worth noting that of the $200/ha spent on Ca/Mg on Whakapono to achieve the desired 68%/12% of base saturation that could be viewed as a capital application of nutrients. The next soil tests will show this as will Waiora's need for lime next season if pH drops below desired levels around 6.2.

One thing is for sure, given the current situation with dairying, next seasons budget will be tighter as we strive to be more efficient with nutrients and remain profitable.

I feel confident given the recommendations on both farms that we have nutrients "in the bank" that we can draw on if things get much tougher.

Started applying final round of Ammo 30N to Waiora following cows

Whakapono will receive no more fertiliser this season and will be very interesting to see what grows from this point on.

April

Completing last round of fert for Waiora which equates to 27 kg/ha N with total for season 160 kg/ha

Nutrient Budget

Overseer N loss to water show Whakapono at 35 and Waiora at 40.

Programme assumes if you grew the grass and did the production then the N must have come from clover.

This N in feed still has to go through the cow and excess be excreted in the urine therefore able to be leached the same way fertiliser N is consumed and lost

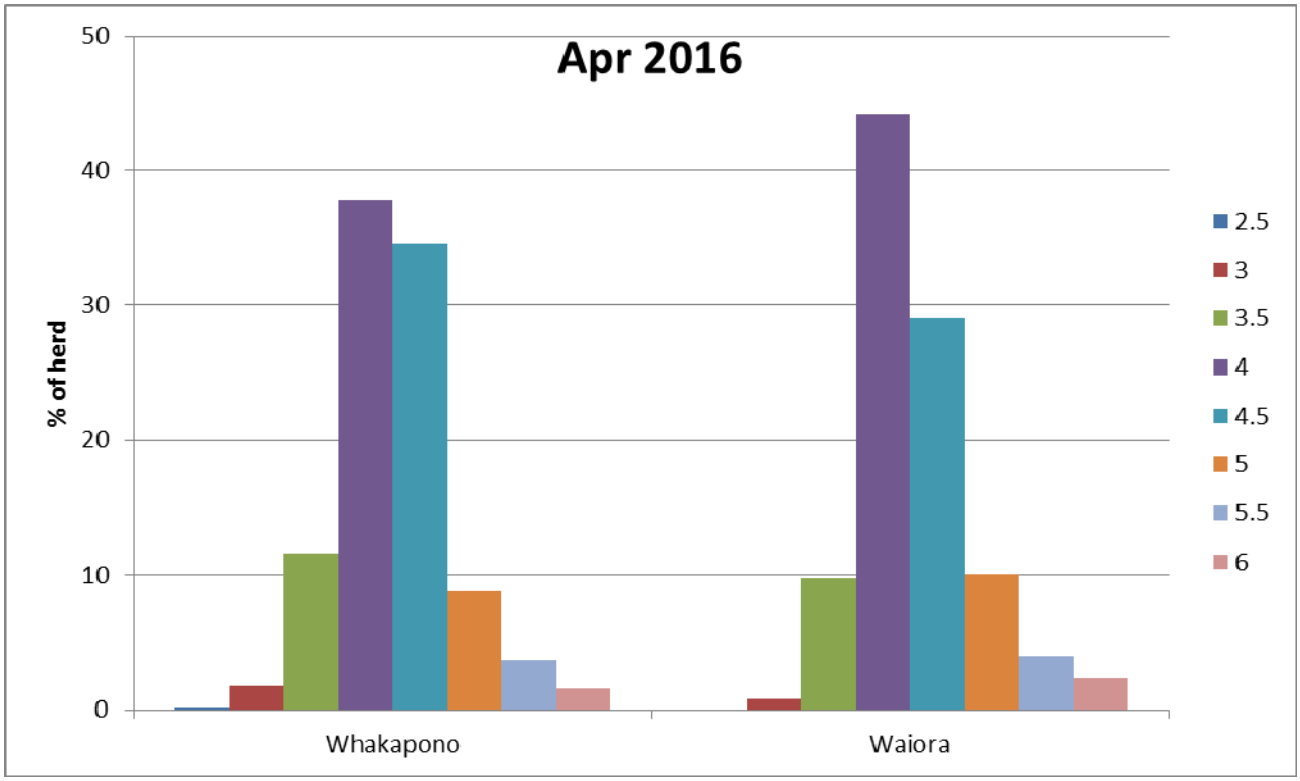
Previous years have given a 5 kg advantage to Whakapono with 50 units less N applied and a similar amount of supplement fed on each unit and milk produced.

Should be plenty of debate on this at the field day.

Check Overseer files attached below

Cow Condition

Cow condition has declined slightly on both farms with the average at 4.3. There is 13% of Whakapono cows below CS 4.0 and 11% on Waiora below CS 4.0. The industry target is no more than 10% of the herd below CS 4.0 at this time. This means that both farms are just over this target, but are still in a good position to make calving condition targets. The spread is shown in the graph below.



Herd Test Results

Farm	No. of herds	Herd Size	Milk (L)	Milkfat (%)	Milkfat (kg)	Protein (%)	Protein (kg)	Milk Solids (kg)
Whakapono		473	23.0	5.04	1.16	4.20	.97	2.12
Waiora		626	21	4.63	.97	4.06	.85	1.82
Canterbury	94	648	19.5	4.71	.92	3.92	.77	1.69

Management

Increase rotation to 48 days using supplement and reducing cow numbers.

Make use of N in fert on Waiora to boost growth rates while weather still warm.

Delay culling MTs except problem culls bearing in mind we still have our target production in mind and a relatively low stocking rate compared to previous years.

Still 35 heifer calves on farm

64 R2year heifers split between farms grazing in front of cows.

Control weeds, Californian thistle and gorse on fence lines.

Irrigation K-line and pivots as per moisture meter.

River water available so maintain moisture levels at upper end of optimum in case of breakdown and to reduce need to use stored water unnecessarily.

Cancel final herd test as don't have scope with MT rate to cull too many more culls on low production.

We can still use our milk meters to find obvious ones and back that up with herd test data.

Same with high cell count cows.

Start preparing info for May 10th field day