

## Backtrack Dairies – Weekly Summary

Week ending Saturday 21<sup>st</sup> May 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	14/5/16		21/5/2016	
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)	2.8	2.9	2.6	2.7
Cows in Milk	427	606	406	571
Cows in Vat	416	596	403	565
Ave. Pasture Cover	2392	2582	2303	2528
Ave. Pasture Growth	27	39	21	32
Area Grazed	3.66	4.05	2.77	4.46
Grazing Interval	42	45	56	47
Pasture Intake (est kgDM/cow)	13	14	13	16
Grass Silage Fed (kgDM/cow)	4	3	4	3
Grain/PKE Fed (kgDM/cow)	1	1	1	1
Total Fed KgDM/cow	13	14	18	19
Milk Solids (Kg/cow/day)	1.48	1.43	1.48	1.44
MS/ha/day	3.93	3.98	3.92	3.94
Nitrogen applied (kg N/ha)	0	0	0	0
Rainfall (mm for week)	0	0	32	32
Irrigation applied	10204	11719	0	0
Soil Temperature at 9am	13	12	11	10
Soil Moisture (between 65-76%)	88	81	73	75
Cell count (000's)	131	138	133	166
Mastitis Cases	0	0	1	0
Lameness Cases	11	0	1	3
Body Condition Score	4.30	4.32	4.30	4.32
<b>Totals To Date</b>				
Milk Solids to factory	243969	324351	248228	330148
Milk Solids inclu calf milk	249072	333675	253331	339472
MS/ha	1582	1546	1609	1574
Nitrogen applied (kg N/ha)	117	160	117	160
Supplements Fed (kg/cow)	791	780	899	870
Deaths %	3	2	3	2
Culls %	19	15	24	20

## Summary

- Good field day on May 10<sup>th</sup> attended by 60 people highlighted the good performance and profit of the biological unit despite elevated fertiliser costs.
- Environmental impacts were also lower with less N used (117 vs 160)
- Overseer N loss to water 35kg/ha Whakapono/40 kg/ha Waiora
- Per cow and per ha production has maintained per cow but dropped per ha as a result of culling with 1.48 kg MS/cow and 3.92 kgMS/ha on Whakapono, and Waiora similar at 1.44kg MS/cow and 3.94 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 dropped again on Whakapono (21) since last week while Waiora (32) has also dropped but covers on both remain slightly lower.
- Aim to have both covers the same at dry off around 2000 cover in first week of June
- Maintained 48 day round 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 giving 3 kgDM/cow  
Whakapono the same round length at half a paddock with same size load of silage giving 4 kgDM/cow
- 32mm rain in previous week has broken dry spell
- Scheme now off.
- Used practically all our stored water allocation.
- Whakapono decreased cover slightly from 2392kgDM/ha to 2302kgDM/ha with a PGR of 21kgDM/ha/day, while Waiora has dropped from 2582kgDM/ha to 2528kgDM/ha at PGR of 32kgDM/ha/day which seems logical.
- Having to maintain 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 on Whakapono around 1500 but Waiora carrying another 200 in base from the extra N making it harder to graze down.
- Culled 21 cows from Whakapono and 35 cows from Waiora not suitable for grazing at \$1.40/kg liveweight truck weighed.
- 317 R2yr heifers home on Waiora grazing one 10 ha paddock as they transition onto kale next door. this feed will be credited as income as grazing at \$11/hd per week for one week.
- 70 R2yr heifers to be sold as surplus next week
- 35 R1 yr calves gone to grazing with 4 below par calves returned here from other grazing blocks.

## Production

Whakapono production is ahead of Waiora in per cow and per ha/day probably due to better quality 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

32mm rain so no irrigation needed

## Animal Health

	<b>Whakapono</b>	<b>Waiora</b>
Mastitis %	0.2%	0%
Lameness %	0.2%	0.5%
Sick Herd %	0.7%	1.1%

There is minimal mastitis on both farms. Lameness still a problem on Whakapono with only 1 new case this week and 3 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.

This is starting to show up on Waiora with the two herds combined now

Also Whakapono has longer walks on tracks which the two pivots go over and wet continuously whereas Waiora's 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 slightly from 2392 to 2302 on a 48 day round, while Waiora is down slightly also from 2582 cover to 2528 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 pre-graze covers.

Residuals on both farms are starting to look more acceptable around 1500 on Whakapono and 1700 on Waiora carrying more base.

Growth rates (21 Whakapono / 32 Waiora kgDM/ha/day) are lower than last week given some cold wet weather and seem to line up with the changes in cover but Waioras cover 200 higher is carrying more base. Extra N effect on Waiora is obvious with extra cover available but the economics would start to come into question if cover only 200 higher after 40 units more of N over the last six weeks.

Whakapono cover lower but appearing to satisfy cows and production similar at same stocking rate and round length although not per ha as more culls have been culled

Whakapono holding cover without the extra N and only 1 kg /cow/day of extra supplement but falling behind per ha daily production at slightly lower SR

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 2.6 cows x 17 kgDM/cow/day = 44 kgDM/ha/day so should be decreasing cover, with PKE in shed at 1 kg/hd/day and 3 – 4 kgDM silage helping to offset this pasture demand while dropping cover is also contributing significantly.

### **Feed Wedges**

Both wedges have similar shape but Waiora has a much higher pregraze- nearer 3500 which looks good but may hinder regrowth.

Waiora now has a lower middle which reflects a possible lag after grazing off too higher pregraze levels which will be shaded and still have a rough base

On the contrary Whakapono is increasing in that middle region meaning growth rates are better on those paddocks and without artificial N over the last six weeks.

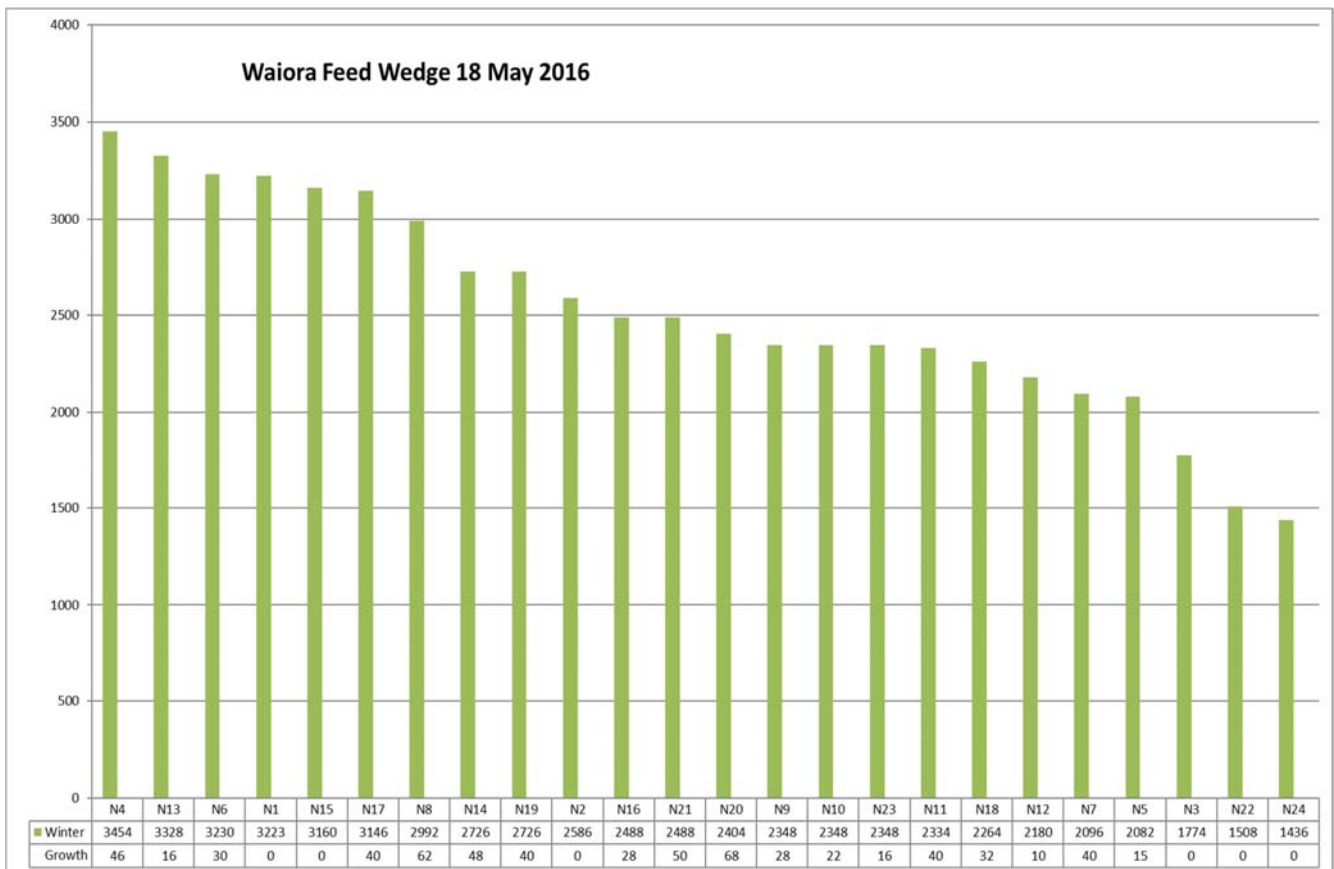
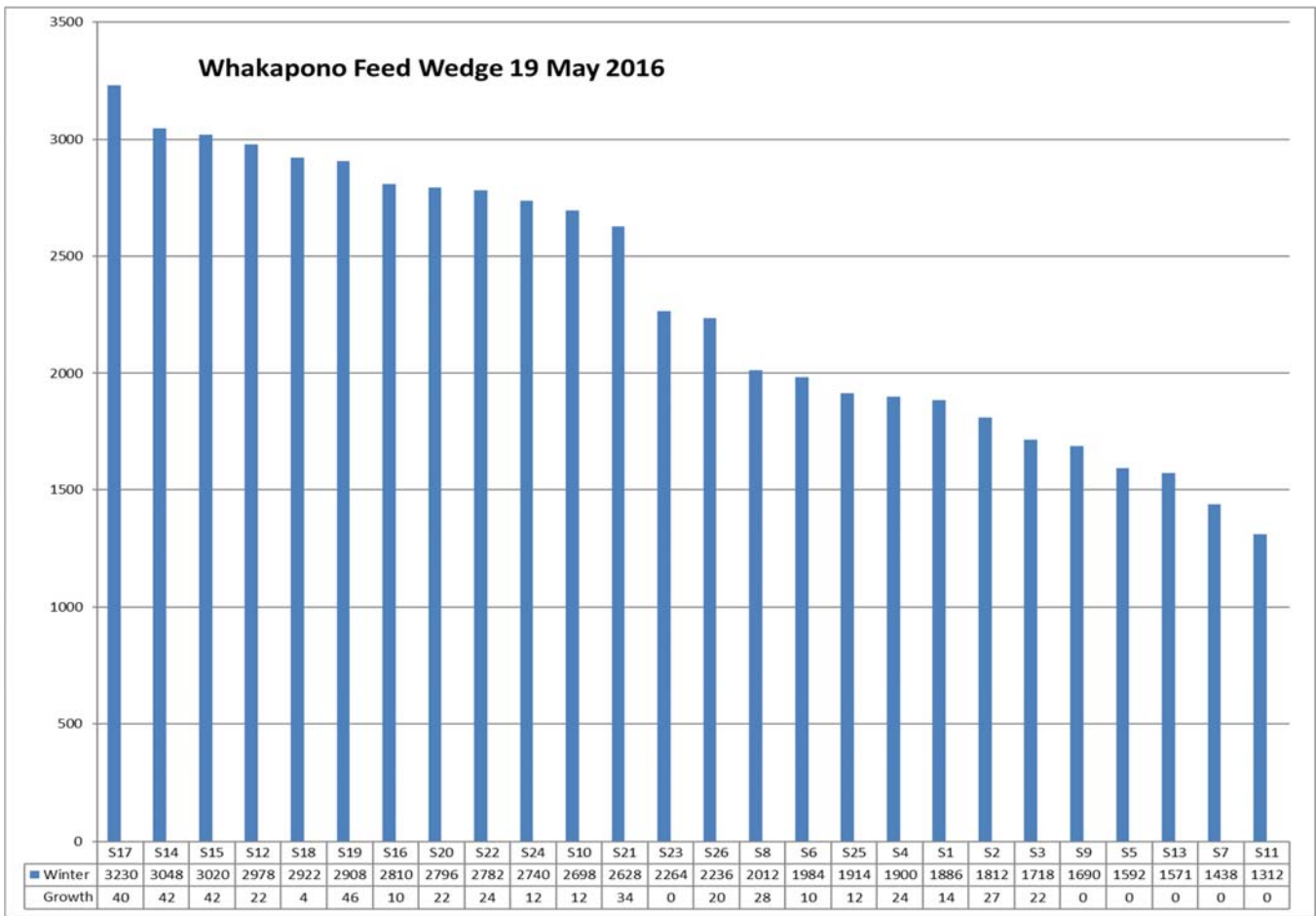
Whakapono is making a comeback without artificial N and is operating at better pre and post graze levels which improves utilisation and regrowth.

Certainly less growth between clumps on Whakapono and cows cleaning easily to 1500 residual.

Can see a step in the wedge where the 48 day round cut in pushing residuals and growth rates down on both farms

Can also see the effect of skipping some strategic paddocks handy for calving that have been closed for this purpose

Aim at 31<sup>st</sup> May is to have both covers the same then dry off quickly in 1<sup>st</sup> week of June hence taking on the R2 heifers to clean up one paddock on Waiora



## 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	30 <sup>th</sup> October
Metri-checking & PG 1	23 <sup>rd</sup> November
PG 2	4 <sup>th</sup> December
Change to short gestation semen	10 <sup>th</sup> December
AI Finished	22 <sup>nd</sup> December
Bulls entered herd	22 <sup>nd</sup> December
Bulls removed from herd	10 <sup>th</sup> January
Pregnancy Scanning 1	2 <sup>nd</sup> February
Pregnancy Scanning 2	3 <sup>rd</sup> March

## Pregnancy Test Results

1 <sup>st</sup> 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%)
----------	----------	-----------

2 <sup>nd</sup> 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 Dolomite	639 1080					119	383 540
January	Urea	5	2.3					
	Sulphate Ammonia	64	14			15		
	Pot Sulphate/KCL	5			2.4	0.7		
	DAP	5	0.9	1				
February	Urea	5	2.3					
	Sulphate Ammonia	50	11			12		
	Pot Sulphate/KCL	5			2.4	0.7		

	DAP	5	0.9	1				
<b>Total to Date Applied</b>			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)	526		22		40.5	16	53
	Serpentine Super/Sulphurgain Pure (Olsen P > 20)	626		15		28.5	11	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		
<b>Total to Date Applied</b>			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

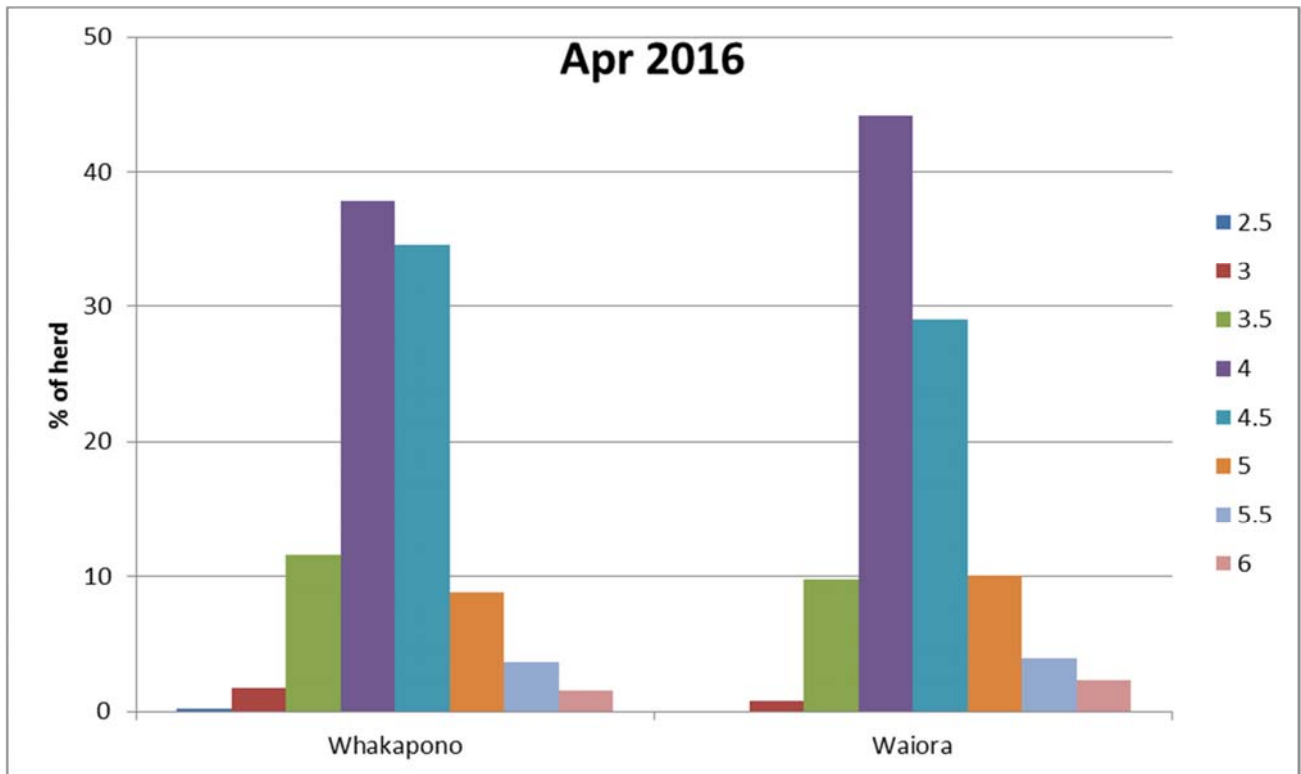
Previous years have given a 5 kg advantage to Whakapono with 50 units less N applied and a similar amount of supplement fed on each unit and milk produced.

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

Maintain rotation at 48 days using supplement and reducing cow numbers.

Put 65 R2yr heifer together on Waiora with another 252 which arrived back from grazing last week May 12<sup>th</sup> making 317

Cull remaining poor performers and problem cows

Keep 25 smaller young MT cows to fatten then works in spring when they get into higher weight range and price lifts

They will take out one paddock 10 ha on Waiora and transition onto kale over the next 10 days through gate into neighbours. The value of this grazing or milk production foregone will be credited to Waiora and will also help even up covers as we approach May 31<sup>st</sup> end of season where we aim to dry off at cover of 2000.

Cows will be milked normally twice a day until that point then dried off quickly and removed from farm. Obviously if cover is lower on one farm then it will dry off earlier as not economic to continue high levels of supplementation at \$4.00 payout.

