

Backtrack Dairies – Weekly Summary

Week ending Saturday 7th 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	30/4/16		7/5/2016	
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)	2.9	2.9	2.9	2.9
Cows in Milk	443	614	442	615
Cows in Vat	435	610	425	596
Ave. Pasture Cover	2340	2732	2403	2593
Ave. Pasture Growth	24	38	44	19
Area Grazed	5.26	4.67	3.22	4.64
Grazing Interval	32	45	44	45
Pasture Intake (est kgDM/cow)	18	18	11	18
Grass Silage Fed (kgDM/cow)	0	0	4	3
Grain/PKE Fed (kgDM/cow)	2	2	1	1
Total Fed KgDM/cow	20	20	16	22
Milk Solids (Kg/cow/day)	1.56	1.49	1.51	1.51
MS/ha/day	4.37	4.31	4.15	4.29
Nitrogen applied (kg N/ha)	0	27	0	0
Rainfall (mm for week)	7	7	0	0
Irrigation applied	13907	15795	24902	33279
Soil Temperature at 9am	12	11	13	12
Soil Moisture (between 65-76%)	66	78	85	82
Cell count (000's)	147	144	127	148
Mastitis Cases	0	1	0	1
Lameness Cases	2	0	4	5
Body Condition Score	4.3	4.32	4.3	4.32
Totals To Date				
Milk Solids to factory	234563	311271	239701	318501
Milk Solids inclu calf milk	239666	320595	244804	327825
MS/ha	1521	1484	1554	1518
Nitrogen applied (kg N/ha)	119	104	117	160
Supplements Fed (kg/cow)	791	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 1.51 kg MS/cow and 4.15 kgMS/ha on Whakapono, with Waiora maintaining at 1.50kg MS/cow and 4.29 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 picked up on Whakapono (44) since last week while Waiora (18) has dropped a lot despite favourable weather and receiving 40 units more N over the last six weeks.
- 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 giving 3 kgDM/cow
Whakapono the same round length at half a paddock with same size load of silage giving 4 kgDM/cow
- Overall 6.0% down to factory but less supplement used to date.
- No rain so irrigated with pivots every second day and double shifted k-line for a week as scheme goes off on the 10th of May.
- Whakapono increased cover slightly from 2340 kgDM/ha to 2403 with a PGR of 44kgDM/ha/day, while Waiora has dropped from 2732 kgDM /ha at 2593 at PGR of 18 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

No rain so 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.

Using pivots at present alternating every second day and double shifting Kline 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%	0.2%
Lameness %	0.9%	0.8%
Sick Herd %	3.8%	3.1%

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 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 increased a bit from 2340 to 2402 on a 48 day round, while Waiora is down from 2732 cover to 2593 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 1600 on Waiora.

Growth rates (44 Whakapono / 18 Waiora kgDM/ha/day) are the opposite to last week and seem to line up with the changes in cover but Waioras cover 200 higher is maybe 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 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 2.9 cows x 17 kgDM/cow/day = 50 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.

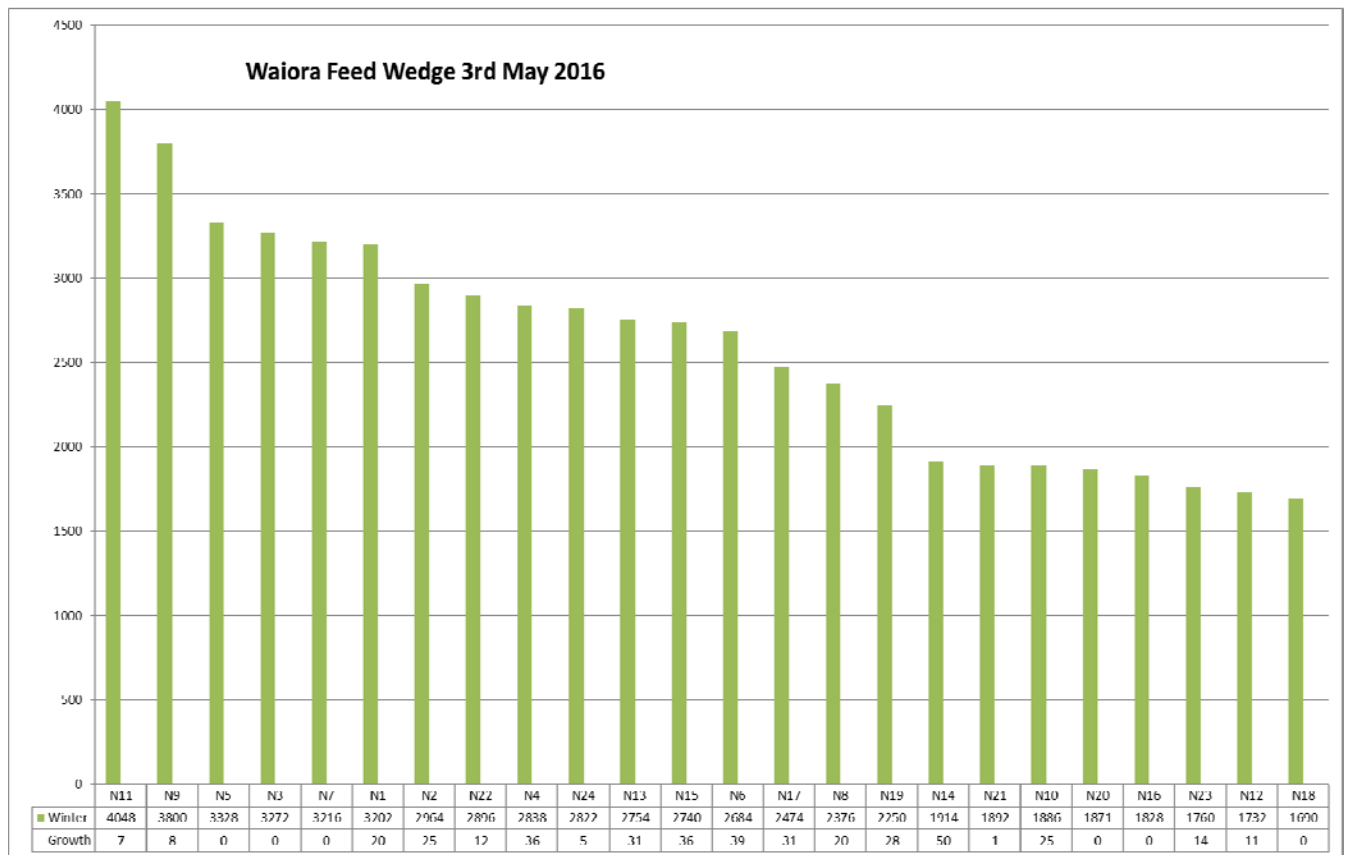
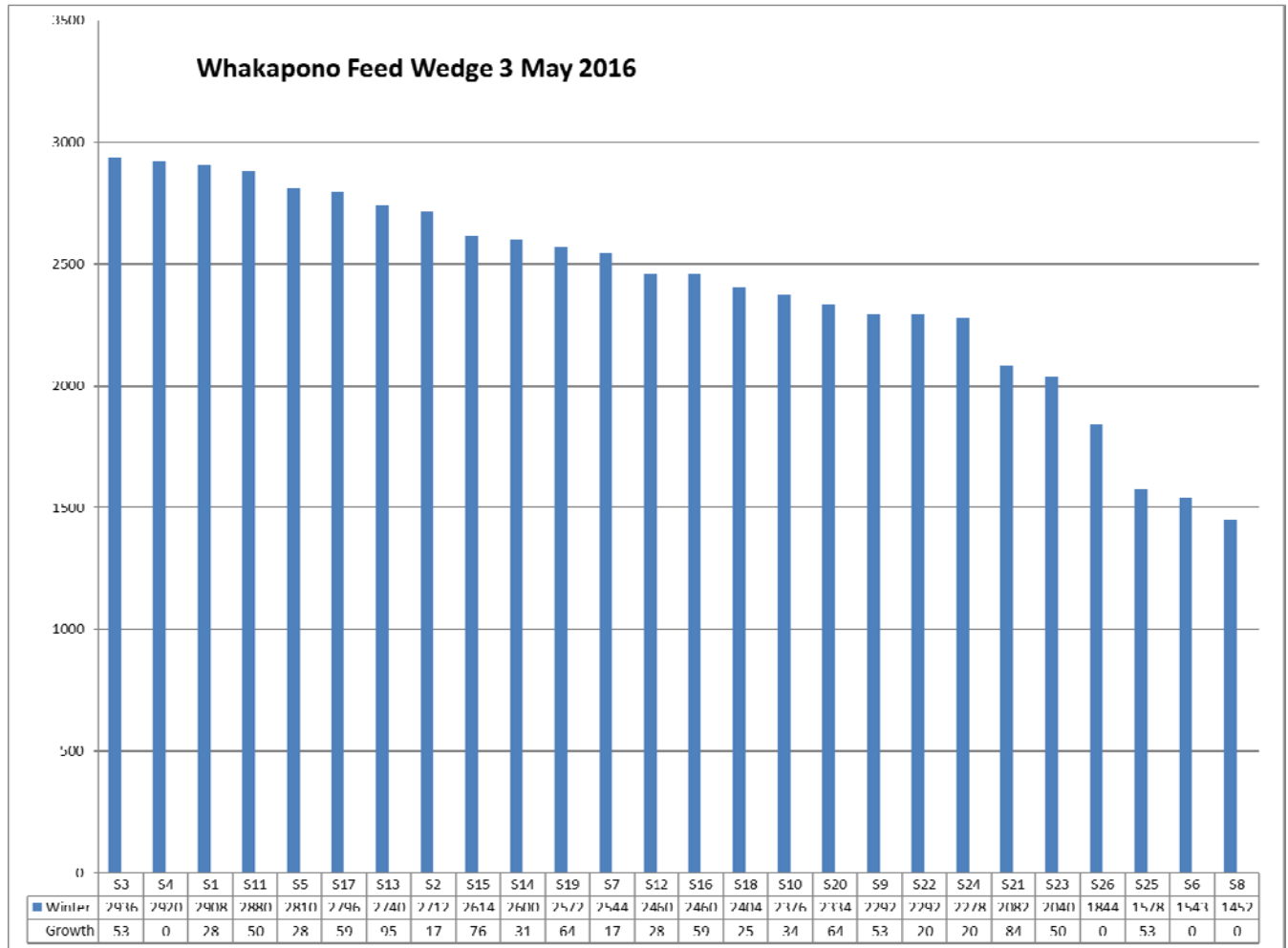
Feed Wedges

Both wedges have similar shape but Waiora has a much higher - 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.

Whakapono is making a come back 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.



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 th October
Metri-checking & PG 1	23 rd November
PG 2	4 th December
Change to short gestation semen	10 th December
AI Finished	22 nd December
Bulls entered herd	22 nd December
Bulls removed from herd	10 th January
Pregnancy Scanning 1	2 nd February
Pregnancy Scanning 2	3 rd 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%)

2 nd 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	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				
Total to Date Applied			114	27	41	112	123	923

Waioira - 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		
Total to Date Applied			160	38	67	94	27	90

*Waioira 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 Waioira 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

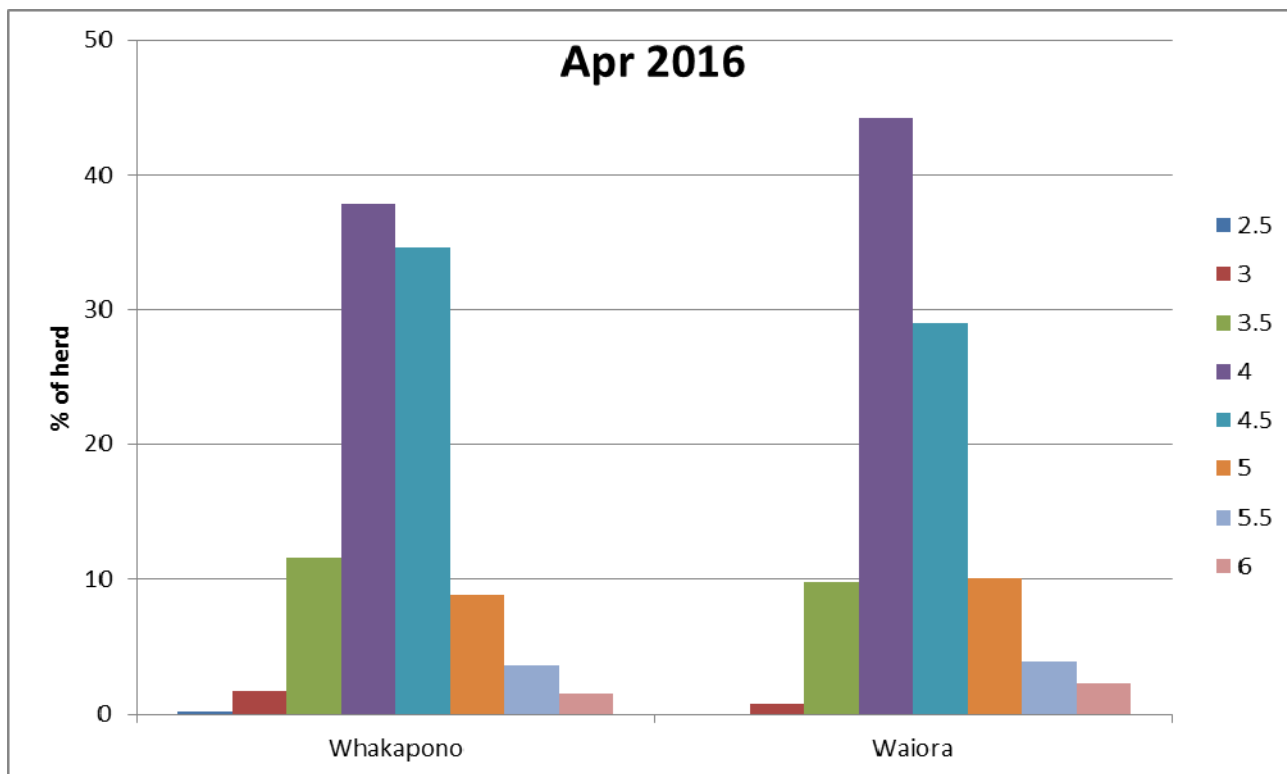
Previous years have given a 5 kg advantage to Whakapono with 50 units less N applied and a similar amount of supplement fed on each unit and milk produced.

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.

