Pete Morgan and Ann Bouma South West Waikato System 2
2023-24 Mid Season Update January 5th 2024
Season numbers at a glance

KPI's	Budget	Updated forecast Budget/Actuals
Milk Production (kgMS/ha)	844	803
Milk Production (kgMS/cow)	381	355
Net Dairy Cash Income ($/kgMS)	$8.40	$9.40
Total Farm Working Expenses ($/kgMS)	$5.10	$5.53
Cash Operating Surplus/Deficit ($/kgMS)	$3.30	$3.87
Gross Farm Revenue ($/kgMS)	$8.47	$9.37
Operating Expenses ($/kgMS)	$5.76	$6.25
Operating Profit ($/ha)	$2,283	$2,500

* These KPI's are based on cash book budget/actuals to the 31/12/2023 and estimated non-cash adjustments. The final financial performance based on financial statements may differ

Key Points
- Milksolids to the end of December is 2% up on budget, with peak cows milked up 2%.
- Although unplanned, capital expenditure to upgrade the dairy sheds and plant has improved efficiencies for milking, stock handling and weighing.
- Savings in costs of supplements made, regrassing, cropping and fertiliser have more than offset increases in R & M.
- Conservative budgeting for milk price plus and increase in forecast stock income means income is tracking about 6% up on budget.
- Farm working expenses and dairy operating expense are currently tracking 4% up on budget.
- Operating profit should be on budget or up slightly.

Comments
Milk production to 31st December is 130,580 kgMS, 2% up on the 127,000 originally budgeted. Peak cows milked is 520 which is 2% up on budget, (10 more cows).
The herd peaked at 2.0 kgDM/cow/day in late September. The previous season daily peak per cows was 1.85 kg MS/c/day. This is a very satisfactory performance considering the herd this year consists of about 28% first calvers.
Supplements fed to date are 54 t DM PKE, 30 tDM pit silage, 50 tDM maize and 5 tDM of hay, which equates to about 270 kgDM/cow or 600 kgDM/ha. This is more than double to the same time last season although some of this total has been fed to the 104 yearlings carried on farm.
The PKE has been fed at rates of 1.0-1.5 kgDM/c/d to deliver minerals at rates that will supplement the minerals in the water supply. This enables levels in the water supply to be kept lower so palatability is not impacted.

Pasture growth rates have been good on average but there has been some wide variation particularly in October and December when there were a couple of prolonged drier periods. The main challenges with pasture management have been making good strategic decisions on rotation length this season. We have not managed to control 10% of the farm pasture well and while the 2 dry periods so far this season have pushed the seed heads rapidly, our lack of experience in blending young mobs with the herd grazing decisions has contributed. Some good learning in it for us all.
To date 29 ha, (108 tDM), have been harvested for pit silage and baleage and 3.8 ha, (6.75 tDM), of hay has just been made. This is about half of what was in the budget.
The opportunity arose to purchase 18.7 t DM of hay. It was good quality, a good price, ($700/tDM compared with budget of $760/tDM), and locally grown, so transport costs were low. This 8.7 t DM more than budgeted, but the extra feed will provide additional feed security for next spring as part of a more conservative approach to management.
Nitrogen use is similar to last season with only 25 kg N/ha being applied to date. Nitrogen, (and fertiliser), applications continue to be much more targeted, using information on pasture cover and growth rates from Halter. All nitrogen has been applied with own equipment which has allowed for better timing and placement of applications. All nitrogen applied is as SustaiN or DAP at 23 kg N/ha.
To work around an unplanned absence from the farm in October, (Pete), the cropping programme was revised. Instead of planting 20 ha of chicory, 9 ha of turnips and 7.4 ha of Maize, only 12 ha was undersown with plantain and 10 ha of maize was planted. In addition, about half a ha was undersown with left over chicory seed from last year, and there is 2 ha of last year's chicory crop that was not sprayed out when regrassed which is growing well.
This has significantly reduced cropping and regrassing and weed and pest costs even with more spent on the maize.
It also has meant that more of the farm is in permanent pasture going into the summer and less will be out of rotation in the autumn for regrassing.
The maize was planted 8th November and growth rates have been a bit behind usual due to cooler and cloudier weather to date.

The updated budget is currently being worked on 185,600 kgMS for the season (184,600 kg to the end of April, payment received in May), which is erring on the side of caution. This milksolids is actually about 4.3% down on the original budget of 194,100. The spectre of El Nino is large and a long dry summer/autumn is still possible hence the conservative forecast for the seasons milksolids.
Milk income is still looking to be up about $99,000 as the original budget was based on a milk price of $6.05/kgMS and dividend payments of $0.20 /share. It has now been updated to $6.10 advance milk price and $ 0.55/share. The deferred payment was $30,000 up on budget as well.
Total farm working expenses and operating expenses are on track to be similar to budget, but on slightly less milksolids could be up $0.40-$0.45kgMS.
Repairs and maintenance costs are up over 200% largely due to additional work needing to be done in addition to the capital expenditure for the dairy shed upgrades. This includes replacement milk lift pump and old front gates and upgrades to the roof and guttering of the second shed.
Feed made, regrassing and fertiliser costs are well down and more than offset the increase in R & M costs.

Current situation
Pasture cover as at 5th January 2024 is 2,350 kg DM/ha. Current growth rates are 62 kgDM/ha/day, (as per **Halter pasture pro**) and rotation length is 31 days. This is longer than usual for this time of year.
A conservative approach was adopted in December, to lengthen the round and try to protect pasture cover earlier than usual when soil conditions were becoming dry and growth rates were dropping. Rainfall between Christmas and New Year meant that with hindsight 31 days was probably a bit long, and now pasture quality is a bit lower as a result.
However, the farm is well set up going into the middle of summer with higher cover than usual and already on a longer round.
There are 515 cows currently in milk, 255 younger and lighter cows with lower SCC that have been on once a day milking since mid-December and 249 older cows on twice a day. A "resting mob" of 11 cows has been maintained all year with cows moving in and out as needed.
Daily per cow production is1.2 kg/cow/day, (average for all herds). This is 14% down on the daily per cow production for the same time last year and is a reflection of the lower pasture quality from being on a longer round, as well as the higher percentage of first calvers in the herd.
The whole herd was weighed and condition scored mid-December. The herd average was 435 kg liveweight, with the first calvers at 395 kg and second calvers at 412 kg. The latter had suffered growth checks as calves and had pre calving liveweights that were 26 kg lighter than the current crop of first calvers. This liveweight and BCS information was used split the herds in mid-December.
The cows are currently being fed about 17kgDM/cow/day made up of pasture and 0.4kgDM/c/d of PKE with zinc supplementation just started. Zinc through the water supply will start soon, particularly if the current high humidity continues.

There are 100 weaners on farm and 104 rising 2 year olds, (R2's). Their grazing management has been simple with the R2s, (all with **Halter** collars), moved daily and the weaners behind a fence and getting 1-3 day breaks.
Since all the R2's are collared, we are experimenting with 11 R2's running with our young cow mob. The feeding level and access to PKE at the shed should give them an advantage and we will test the assumption on their next weighing. They are all very well handled now and quiet and we are looking to build on this by rotating all the R2s through the milking mob to train them to the shed for next season as well as the PKE and daily routines under **Halter**.
One part time staff member is responsible for all young stock work. The animals are weighed regularly which gives the opportunity to rotate any lighter weight animals in to a second preferentially fed mob. All young stock are looking good and as at January 7th the weaners averaged 142 kg liveweight and the R2's averaged 367 kg which is above target, so a very pleasing result.

Looking Forward

Reasonable rainfall at the end of December means soil moisture levels are OK for this time of year. The farm has light soil types which dry out very quickly so the situation could change suddenly with the return of some hot, sunny weather.

Feed budgeting remains a priority and all decisions from now on will be a balancing act of managing feed supply and demand to ensure end of season targets for cow condition and pasture cover are met so that next season is not impacted.

Silage, baleage and hay on hand at present equate 194.5 t DM. There is also about 160-170 tDM of maize silage to harvest mid-March and 33.3 tDM of PKE still on contract. Of this about 80-90 t DM will be carried over for next season so this leaves about 300-310 t DM available for the summer and autumn or 600 kgDM/cow.

Pregnancy testing is planned for mid-February, and once empty cows are identified a culling list can be made. If de-stocking is necessary the policy is to remove any cows that are not wanted for the next season regardless of production.

Culls have been booked in to the works early again. There are 50-60 cows scheduled to go between 15th February and 31st March. Getting culls away early also means that higher cull prices are more likely as well as it frees up feed for the rest of the herd.

Further culling will be done in stages from mid-March, depending on feed supply. Some of these will be as in A 2 in milk empties and some as empty carry over cows, (these will also be higher than cull price)

Calving and reproduction

• The calving rates for this year were; 3 weeks, 64 %, 6 weeks, 85%, 9 Weeks, 96%. These are similar to last season, (62%, 82% and 99%)..

• The 3 week submission rate for spring 2023 was 88%, which similar to last season, but give that 40 of the purchased A2 cows didn't calve until September, this is a reasonable result.

• The submission rate for the first calvers is 97% which is particularly pleasing given that their live weights were below target going into the winter.

• Mating ended 22 December, with AB used the entire 11 weeks, (short gestation semen used on the last 2 weeks). 6 bulls were run with the 104 yearlings.

• The early estimate is for a 6 week in calf rate of 69% which is up slightly on last year, (67%).

Other points of interest

• Significant capital outlay to upgrade the sheds has helped to make stock work and weighing a lot easier. The information from this means decision making is easier as it is based on fact.

• The plant changes were all in the North shed. With the changes to our farming system and lower peak cow numbers, we can now milk all cows through this shed 80% of the time.

• The shed upgrades included rebuilding the plant wash system, a new milk lift pump, adding automatic cup removers and automatic teat spraying.

• The main benefits of investment and ability to enhance our use of Halter would come from making the North shed the most efficient.

• We also have plans to put auto drafting Protrack in there but have delayed as manual drafting, ("Bro-track"), is simple and can be done with the collar lights from **Halter** easily.

• The combined cost of drafting and the modifications to the yard, (>140k) was outside our current capex plans.

• The changes to the North shed have enabled us to either remove one person from the shed or increase the amount done during milking, (tail trimming, drafting, lame cows etc…).

• In addition, the cows are milking out well and getting thoroughly teat sprayed resulting in a vast improvement in teat condition. We had not realized how variable we were in our judgement of milking time even using Tmax.

• Both sheds have had their vet/AB races modified to improve their ease of handling the regular weighing and managing of young stock along with AB and general cow work.

• Information from Halter is continuing to improve decision making processes. The pasture management modelling has been upgraded to now model and predict responses to changing round length, stocking rate, feed intakes, nitrogen applied and supplements fed. The model is using growth rates predicted from local and actual farm data which provides much better output, and is not impacted by overcast days and cloud cover like other some other system.

• It has allowed a better understanding of the feed situation at any one moment and the ability to better predict the feed ahead.

• Based on this improved modelling the decision was made to drop other formal forms of pasture cover assessment.

• Rumination data was used again this season to aid with decisions about keeping cows in the colostrum mob. It has been more successful this year, (that is, less issue with cows going into the herd too soon).

• Springers and colostrum cows were fed more hay to increase their rumination. This has resulted in much reduced clinical metabolic issues during calving and transition. Numbers of animals and metabolic treatments used is similar to last year but we have been very liberal in treating preventatively any at risk animals (old, difficult calving, light BCS…). Losses to date are below 1%.

Environment

• This year the focus is on maintaining the riparian areas that were planted previously, particularly the 17,729 plants planted in the autumn and spring of 2023. This large number of plantings was only able to be done with support from two local industry bodies who helped willow removal, planting, and providing plants at a subsidised cost. **Waipa Rerenoa Restoration Project** is a Waikato River Authority funded project and P**uniu River Care** our local marae based river care group, (https://puniuinc.org/)

• There is a long maintenance list including preparing future planting areas. This can have a 2-3 year lead in. For example, controlling blackberry and moving fences out 5 m from waterways.

• We have committed to panting another 5,000 plants, (about 0.5 ha and 4,000 plants of new riparian area plus 1,000 bigger trees planted into existing riparian areas).

Future Plans

We continue to be involved in industry projects including a field day on farm in the autumn as part of DairyNZ's Step change project. This is a follow up on work done a year ago with modelling for the farm changing from a system 2 to a system 1 with all young stock home.

Another industry project is the **Resilient Pastures** project that was initiated in Northland by a group of farmers, industry bodies and scientists to collectively design a research and extension programme. It will address the declining pasture persistence and develop proven adoptable adaptation strategies for farmers to future proof pastoral farming across Aotearoa.

We will all be challenged to continue maintaining healthy pastures from the threats of climate extremes, pests, diseases and weeds as well as our own management, (overgrazing in summer). This project looks to build long term resilience through research, extension and collaboration.

Annual Cash Budget and updated forecast *December 2023*

Name:	**South West Waikato Owner System 2**					**Budget Period**	1	/	6	/	2023	**to**	31	/	5	/	2024
Farm Details: Budget	**194,100**	**kgMS**	**510**	**Cows**	**230.0**	**ha**	**381**	**kgMS/cow**		**844**	**kgMS/ha**		**2.22**	**cows/ha**			
Farm Details: Budget/Actual	**184,600**	**kgMS**	**520**	**cows**	**230.0**	**ha**	**355**	**kgMS/cow**		**803**	**kgMS/ha**		**2.26**	**cows/ha**			
Variance (Actual less Budget)	**-9,500**	**kgMS**	**10**	**cows**		**ha**	**-26**	**kgMS/cow**		**-41**	**kgMS/ha**		**0.04**	**cows/ha**			

Income	Budget	Budget/Actual	Variance
Net Milk Sales	$1,522,900	$1,622,000	$99,100
Net Dairy livestock sales (calves + culls + other - purchases)	$76,800	$82,000	$5,200
Other dairy cash income	$31,000	$31,000	
Net Dairy Cash Income	**$1,630,700**	**$1,735,000**	**$104,300**

Expenses	Budget	Budget/Actual	Variance
Wages	$270,000	$283,500	$13,500
Animal health	$45,000	$52,000	$7,000
Breeding and herd improvement	$45,000	$44,200	-$800
Farm dairy	$9,000	$13,100	$4,100
Electricity (farm dairy, water supply)	$30,000	$27,700	-$2,300
Supplements made (incl. Contractors)	$77,200	$47,700	-$29,500
Supplements purchased	$52,600	$59,300	$6,700
Calf rearing	$12,800	$15,600	$2,800
Young and dry stock grazing			
Winter cow grazing			
Run-off lease			
Fertiliser (incl. N)	$95,900	$61,700	-$34,200
Irrigation			
Regrassing and cropping	$66,900	$15,600	-$51,300
Weed and pest	$14,000	$4,800	-$9,200
Vehicles and fuel	$40,000	$46,300	$6,300
R&M (land, buildings, plant, machinery)	$50,000	$152,800	$102,800
Freight and general farm expenses	$9,700	$15,300	$5,600
Administration e.g. accountant, consultant, phone	$20,000	$22,400	$2,400
Insurance	$17,000	$21,000	$4,000
ACC	$5,000	$8,500	$3,500
Rates	$26,000	$22,500	-$3,500
Halter	$104,000	$106,000	$2,000
Total Farm Working Expenses	**$990,100**	**$1,020,000**	**$29,900**
Cash Operating Surplus / Deficit	**$640,600**	**715,000**	**$74,400**

Non Cash Adjustments	Budget	Actual	Variance
Value of change in livestock numbers	$12,400	-6,200	-18,600
Labour adjustment	$40,000	40,000	
Less Feed inventory Adjustment	-$18,000	-13,900	4,100
Owned support block adjustment			
Depreciation	$70,000	80,000	10,000
Dairy Gross Farm Revenue	**$1,643,100**	**$1,728,800**	**$85,700**
Dairy Operating Expenses	**$1,118,100**	**$1,153,900**	**$35,800**
Dairy Operating Profit	**$525,000**	**$574,900**	**$49,900**
Dairy Operating Profit/ha	**$2,283**	**$2,500**	**$217**

Commentary re variance

	Actual to Budget Variance	
Milksolids	-9,500	Milksolids production to date is slightly up on budget, however the likelihood of a hot dry summer is still high so the budget has been revised based on 185,600 kg MS, (184,600 kg MS to the end of April, paid for in May).
Cows	10	The budget was prepared in April so final stock numbers for the 23-24 season were only a guesstimate. Had 8 more cows to calve at the start of the season than originally planned, and wastage was lower than expected.
Hectares	0	
Net Milk Income	99100	The original budget was based on a milk price of $6.05/kgMS and dividend payments of $0.20 /share. It has now been updated to $6.10 advance and $ 0.55/share. The deferred payment was $30,000 up on budget as well.
Net Dairy livestock sales (calves + culls + other - purchases)	5200	Plan to take 8 less R 2 heifers and MA cows into the 24-24 season plus losses in the spring have been lower than expected so there are a few more animals to cull.
Other dairy income	0	
Net Dairy Cash Income	104300	
Expenses		
Wages	13500	Another 0.2 FTE of casual labour has been employed.
Animal health	7000	The increase is largely related to extra vaccinations and BVD and trace element testing for bought in cows. Also with extra heifers to calve, (also bought in), there were more to teat seal, so paid for a vet tech to do that.
Breeding and herd improvement	-800	
Farm dairy	4100	
Electricity (farm dairy, water supply)	-2300	
Supplements made (incl. Contractors)	-29500	Costs were down as only made 29 ha of baleage/silage instead of budgeted 60 ha, plus 3.8 ha of small hay bales. Planted 10 ha of maize instead of 7.4 ha budgeted so total cost for maize is up about $10,000.
Supplements purchased	6700	Had the opportunity to purchase 18.7 t DM of good quality hay locally for a good price so ended up with 8.7 t DM more purchased than budgeted. This will also provide some feed security for next spring as part of a more conservative approach to management.
Calf rearing	2800	Spent more on BVD testing of calves plus the cost per ton of meal was up on budget.
Young and dry stock grazing	0	
Winter cow grazing	0	
Run-off lease	0	

Fertiliser (incl. N)	-34200	With a lot less cropping, the quantity of fertiliser used is much reduced. All nitrogen has been applied with own equipment so have been able to be very selective about where and when it is used. This has also reduced the amount of product used.
Irrigation	0	
Regrassing and cropping	-51300	Completely changed the cropping programme as Pete was overseas when the crops were to be planted. The revised plan is 12 ha undersown with plantain plus left over chicory seed from last year undersown in 0.5 ha. This also means there will be significantly less regrassing in the autumn.
Weed and pest	-9200	Less cropping so less weed and pest control needed.
Vehicles and fuel	6300	
R&M (land, buildings, plant, machinery)	102800	Majority of this increase relates to the upgrades to the two dairy sheds that was outside of the $140,000 of capital expenditure. This is predominantly fixing one dairy shed roof and guttering and upgrading a milk lift pump and front gates for the other and upgrading vet and AB races in both sheds.
Freight and general farm expenses	5600	Increase relates to freight for new cows and heifers coming on the farm in May.
Administration e.g. accountant, consultant, phone	2400	
Insurance	4000	
ACC	3500	
Rates	-3500	
Other Expenses	2000	Have averaged more cows than originally budgeted so will likely have to top up payment.
Total Farm Working Expenses	29900	
Non Cash adjustments		
Value of change in livestock numbers	-18600	Started with 8 more cows to calve than originally budgeted and still plan to finish with similar numbers to the budget, (520 cows to calve), so actually have a decrease in value of livestock numbers rather than the budgeted increase.
Labour adjustment	0	
Less Feed inventory Adjustment	4100	
Owned support block adjustment	0	
Depreciation	10000	Spent $140,000 capital on shed upgrades.