

# Peace of mind that job gets done

The eastern side of the Ruamahanga Valley is primed for growing grass. It gets more sunshine hours than west of the river, and with good soils, just add water and the paddocks turn green, says Te Ore Ore dairy farmer, Cameron Stuart.

The trouble is, water is not as plentiful as it once was. All the more reason then to keep a close watch on its use.

The telemetered water monitoring device Cameron installed earlier this year is all part of his new management style on the farm.

The Harvest Electronic's ITU Nano operates remotely, collecting and processing water meter readings every ten minutes and displaying it in an easy-to-read format on the Harvest website. Harvest forward the data automatically to Greater Wellington Regional Council to ensure Cameron's compliance requirements are met.

The telemetry device is tacked on to the existing water meter, making installation straight forward.

Cameron says the beauty of the system is the task of having to manually record and log the readings daily, is now automatically taken care of.

"It was just another one of those jobs that you had to do, and after a while sometimes forgot to do," he says.

"Now I don't do anything, except pay the subscription fee."

It gives peace of mind that the job is getting done, he says.

Now that he has the tool, Cameron has started thinking about adding other components to the system, such as soil moisture and temperature probes, effluent monitoring etc.

A lot of farmers are moving in this direction, he says.

"The probes will certainly save us money because you can get more highly targeted timing of when to irrigate, and obviously when not to irrigate."

A winter milk farm, Cameron runs a herd of 320 Friesians. He has two gun irrigators taking water from a bore.

Previously, the bore had only been to top up his water requirements with the bulk of his supply coming from the Te Ore Ore water

race. But the race was shut off last year due to changes in the level of the Ruamahanga River.

"The level has dropped about two metres at the intake so we couldn't get a gravity feed into the race."

Cameron still has rights to take water directly from the river, but working out how to do so effectively is proving difficult – and expensive.

It has forced him to think differently about how he manages the farm.

"We've changed our system, we've put in new grass and there is now a lot more cropping going on to get us through the dry months," he says.

Production is down, from 150,000 milk solids in a good year, to about 130,000 this year.

"Our break even is at \$4.50, so on current pay-out we are still making a return, but just have to do things a little differently.

"Devices like probes and other technologies will certainly make a difference going forward, helping to save us money."

"We've changed our system, we've put in new grass and there is now a lot more cropping going on to get us through the dry months."



Te Ore Ore dairy farmer, Cameron Stuart, says his telemetered water monitoring device means there is now one less job on the farm he has to do.

# Economics will drive land use change, not dairying

Scaremongering about mass dairy farm conversion in a post region-wide irrigation scheme is damaging to the future prosperity of Wairarapa, according to a top local farming figure.

Graeme Tulloch says critics of the Water Wairarapa scheme clearly don't understand how farmers would use the water, nor have they done their homework on what it will do for the local economy.

"The Wairarapa scheme is a no-brainer, it is the single biggest thing that we can do to make this district go," he says.

"It will create enormous job opportunities, in the service sector and secondary processing. In time we could even see the likes of McCain's building a canning factory here."

Nearly all of the 'anti' sentiment towards the project focuses on claims that it will drive large-scale dairy conversion.

Mr Tulloch, who owns two dairy farms among his TSM Farms operation, says this couldn't be further from the truth.

Economics will determine land use change created by reliable water, he says, and it won't be dairy farming because there will be better profits to be made from other farming practices.

Specialist crops and seeds provide far higher returns and also have the potential to give rise to secondary processing, he says.

"We have the right soil type and also the dry summers needed for harvesting, but you can't rely on the weather to produce a top yielding crop every time."

TSM Farms is one of a number of farms growing specialist crops and seeds, but without a region-wide irrigation scheme there will never be the critical mass required to expand the industry to the next level, he says.

"The seed companies want to grow here to spread their risk, but without reliable water they are scared off because they are not really sure what sort of yield they are going to get back. Irrigation will change that."

Entrepreneurial, innovative and hard working, Mr Tulloch has forged a hugely successful career in the agricultural sector, both



With a region-wide irrigation scheme, Wairarapa valley dairy farmers will likely switch some of their operation to growing crops and seeds where there are better returns believes Graeme Tulloch.

on and off the farm.

For many decades the name Tulloch has been synonymous with farm machinery, an importing business that Graeme and his brother David formed with their father, William, in the 1960s. At its height Tulloch Farm Machinery had more than 50 dealerships stretching from Kaitaia to Invercargill.

As a farming business, TSM Farms Ltd is equally impressive. Formed in 2002, the business includes four farms: two dairy farms, on the Taratahi plains at Cornwall Road and Somerset Road; a sheep and beef farm at Mauriceville; and a cropping farm at Gladstone.

Mr Tulloch says cowcockies know better than anyone the value of water. On his own two dairy farms he has invested more than \$700,000 to find secure and reliable water.

Existing irrigating dairy farmers are short of water so would welcome more, but they will gradually shift some of their operation to growing crops and seeds for the simple reason that it is more profitable, he says.

"We did it here this year. We had a few

empty cows so grew a paddock of wheat and produced 10 tonne to the hectare, which is quite profitable. Once irrigation is here a lot more of that will start to happen."

As the land use shift starts to gain momentum, Mr Tulloch says a lot of dairy farmers will reduce stock in favour of growing more crops. Some may even change completely, but it won't happen on day one, he stresses.

Currently, about 12,000 hectares of the Wairarapa Valley is irrigated. The Water Wairarapa scheme, currently at feasibility stage, could increase the irrigable footprint in the area of the valley by an additional 30,000 hectares. This would require storing approximately 2-4% of the volume of water flowing from the valley per year.

The scheme would consist of one or more off-river storage reservoirs and a distribution network to deliver pressurised water to customers. The two proposed reservoir locations currently being considered are situated at Black Creek in the Kaituna area west of Masterton, and Tivdale, north-east of Masterton.

# Report signals huge job growth

A new report provides clear evidence that the Water Wairarapa scheme is critical to the future prosperity of the region.

The *Economic and Community Outcomes* report forecasts thousands of jobs created from potential new land uses in the Ruamahanga Valley made possible with reliable water from the scheme.

Using Business and Economic Research Limited (BERL) modelling, the report quantifies the likely economic and employment outcomes derived from various land use options, taking a 25-year view after scheme construction.

Among the key findings, every \$20 million increase in GDP attributable to irrigated land production would mean a 5.9% increase in the primary sector, as opposed to the current decline of 3.7% for the Wairarapa in the last decade.

The report references other already-operational schemes, especially in New Zealand, and builds a picture of how they have performed and what factors are influenced by infrastructure of this scale and nature.

Security of water supply will promote investment in more diverse land use options such as orchards, seeds and vegetable cropping, sheep dairying and intensive meat production, the report says. The BakerAg Future Land Use Scenarios report, published last year, made

the same conclusion.

Among some of the different land use scenarios explored in the report is: if 2,400 hectares of the irrigated area was converted to outdoor vegetable production, that would equate to another 1400 jobs and an extra \$87 million pumped annually across the local economy; if 1,000 hectares was converted to apple production that equates to another 1500 jobs and \$91 million annually for the local economy; if 4,000 hectares was in sheep dairy that would generate 600 jobs and an extra \$41 million annually. The job numbers do not include likely downstream employment, such as factory processing or pack houses.

Increased food production will result in commercial opportunities for handling and processing plants in the region. For example, a sheep milk processing factory in Southland employs 70 staff. An apple handling and storage facility in Bay of Plenty employs 64 permanent and 540 seasonal staff.

Increased land-based production resulting from other New Zealand irrigation schemes has been shown to contribute to increasing school rolls, improved ability to fund community amenities and job opportunities.

It is estimated that 1,400 jobs will be generated during the construction phase and would result in about \$73 million direct value

added (GDP) for the Wairarapa economy.

The report concludes that without the scheme – a business as usual scenario – with limited ability to supply further water from rivers and aquifers equates to a continuing decline in the primary sector for Wairarapa. In 2015 the primary sector employed around one in five people in Wairarapa.

The report notes that water is our most precious commodity. Global demand for it is forecast to increase at least 40% by 2030. Over this same period, food production is to increase 50%. Happening in parallel are the impacts of climate change.

“The future prosperity of Wairarapa may well depend on how it responds to such water-demand pressures and the opportunities to produce more food,” the report says.

Water Wairarapa director, Michael Bassett-Foss says, the report is compelling reading, giving an evidence-based snapshot of the significant economic and community gains that could be derived from the scheme.

“The report provides a helpful reference to illustrate how the proposed Water Wairarapa scheme might affect the community,” he says.

“The opportunities potentially provided by high value land uses able to be grown with reliable water are significant both in terms of local employment and the revenue generated.”



Converting 2,400 hectares of the irrigated area in the Ruamahanga Valley to outdoor vegetable production would equate to another 1,400 jobs, according to a new report.

[www.waterwairarapa.co.nz](http://www.waterwairarapa.co.nz)

Water Wairarapa is led and funded by GWRC with assistance from Crown Irrigation Investments Ltd.

 **Water  
Wairarapa**

Securing a sustainable future

WINTER 2017 IRRIGATION NZ NEWS

# Smart technologies for smart farmers

Given that water is fundamental to a farming operation, why wouldn't you do everything realistically possible to maximise its use?

Not only is there compliance to consider, but also the considerable efficiencies to be gained from smart management of the whole lot who are yet to be convinced.

Many irrigating farmers have already embraced smart technologies, but there remains a whole lot who are yet to be convinced.

Harvest Electronics is a leading developer of online monitoring solutions for a variety of industries. The Masterton-based company is one of several providing state-of-the-art telemetry monitoring systems to farms in Wairarapa.

Their technologies range from basic entry-level water monitoring systems, to a full farm monitoring and control system.

Managing director, Peter Munn, says there was a time when farmers used to protest at having to have water usage metered, now they welcome it because of the efficiencies.

Harvest is monitoring about 900 water meter systems around the country. This involves collecting and processing water meter readings taken every ten minutes, and displaying it

in an easy-to-read way on their website. Harvest also forward the data automatically to Regional Councils to ensure users compliance requirements are met. "We have a dedicated customer support team that provide immediate response to any farmers enquiries"

One of their biggest growth areas is soil moisture probes. Knowing the exact soil moisture conditions on their paddocks means that farmers are able to use less water to grow pasture. It also enables them to increase yields

and the quality of the grass by improved management of soil moisture during critical plant growth stages.

The probes are used to determine field capacity, wilting point and refill point, which is an artificial point halfway between the two.

"You get the most grass growth if you keep between the refill point and field capacity."

Farmers can check the moisture level readings 24/7 on their computers or smartphones.



Harvest Electronics has developed a number of smart farming innovations. Pictured is managing director Peter Munn, in the Masterton workshop.

## IN BRIEF

### IRRIGATORS – TIME TO SUBMIT WATER USE RECORDS!

Unless telemetered (real time) water use data has already been supplied to GWRC, now is the time for irrigators to submit their water use records for the 2016/17 water year. Records can be submitted via our online WATER USE data management system ([wateruse.gw.govt.nz](http://wateruse.gw.govt.nz)) or via e-mail to [notifications@gw.govt.nz](mailto:notifications@gw.govt.nz)

### MINIMAL WATER RESTRICTIONS THIS YEAR

The previous two dry summers resulted in significant restrictions on water use across the Wellington region. However, this most recent irrigation season it was a different story. Most irrigators with takes directly from, or connected to, rivers and stream had a reprieve this past irrigation season. Only a couple of catchments in the Wairarapa experienced low flows that required restrictions on water use for a short period of time.

### PROPOSED NATURAL RESOURCES PLAN PROGRESSING

GWRC has recently held two pre-hearing meetings with submitters on water allocation provisions in the Proposed Natural Resources Plan. The water allocation provisions are timetabled for a hearing in August 2017. For more information on the hearing process go to [pnrp.gw.govt.nz](http://pnrp.gw.govt.nz).



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