

## CASE STUDY: CORRIGAN SOWMAN

# Golden Bay irrigator early adopter of technology

***Despite farming in a high-rainfall region, irrigation plays an important role at Uruwhenua Farms in Golden Bay. Janine Holland talks with Corrigan Sowman about irrigating in an environmentally-sensitive location.***

Many people associate irrigation with New Zealand's drier environments, typically on the East Coast. But irrigation is vital even in regions such as Golden Bay, says Corrigan.

"We're a high rainfall environment, much like the West Coast; we can get two months of rain but not in a uniform way. It's particularly dry from early November to late March. But we had 70ml of rain this morning in January. We're also dealing with high drainage free flowing West Coast soils. So water goes through quite quickly."

Uruwhenua Farms has been in Corrigan's family for more than 60 years since his grandparents purchased the farm post-war. His parents were next on the land, and unlike neighbours – content to slow down as they closed in on retirement – initiated irrigation developments and land acquisition.

Today the property Corrigan and his brother Sam have run since 2008 boasts a 270ha milking platform for 850 cows, on 240ha of irrigated land; with a 130ha support block of which 30ha is irrigated. This makes them one of the most prominent irrigators and largest abstractor of water in the Golden Bay area.

Given their proximity to the internationally and culturally significant Te Waikoropupu Springs (known locally as Pupu Springs), working with the environment is pivotal.

"Community perceptions around the sustainability of agriculture are pretty intense in this community. We've been very mindful of how we behave and how our actions might build people's opinions of farm practice."

Water for irrigation comes from the Takaka River, which also supports the Cobb Generation and Storage Project operated by Trustpower. This means irrigators like Uruwhenua Farms have to manage their water takes around hydro-generation flows.

"The river is significantly influenced by hydro; it can change from one to eight cubic metres of water within ten minutes and they can generate for eight hours so we might get water for that period."

Because of this volatility, Corrigan says automated systems and monitoring have always been vital tools.

"Because of our unique situation we had to be early adopters of technology. Due to the topography we can be on and off three to four times in 24 hours. It led us to have to come up with ways to best manage the resource. We use telemetry to control the pumps."



**Telemetry enables the Corrigan's to meet consent conditions.**



**Fixed grid helps preserve the landscape at Uruwhenua.**

There is simply no other way to meet our consent conditions and make good use of water."

Initially investing in K-line irrigation, Corrigan says as he modernised the property he discovered new ways to improve its design

"I guess, as is often the case with irrigation, when the first bit went in (170ha) and we realised how good it was, we subsequently expanded to 270ha. The idea when we started out was irrigating from one rain to the next. All our learnings and knowledge has grown from there."

## CASE STUDY: CORRIGAN SOWMAN (CONTINUED)



Corrigan Sowman (left) with brother Sam. The pair work together at Uruwhenua with Corrigan taking care of the business side and Sam the day-to-day operation.

"So with the K-Line, we set out to find ways to improve its efficiency. We did that through reducing return intervals, tweaking design and also moving to twice a day shifting. All the time trying to use water more efficiently and grow more grass."

A programmable logic controller connects through to the pumps improving automation and system efficiency.

"It gives us certainty that the pumps won't exceed the maximum allowable take in any period."

And Corrigan says the farm has been metered for ten years with automated telemetry in place for seven years.

"In terms of New Zealand, we were early adopters of the move to metering and using technology. Irrigation initially helped us lift our production by about a third. That was a real turning point in our business and gave us consistency. We've been able to generate a reasonably good profit over time which has helped us redevelop the property," he says.

The two herringbone sheds and large staff have now been replaced with an automated rotary cow shed, reduced staff and better working hours.

"While we had to borrow to achieve this, it was based on equity and repaying debt on a regular basis. Irrigation was important for this."

Golden Bay summers vary in extremes so reliable water is critical. Three years ago, Corrigan worked with Think Water to install fixed grid irrigation to further improve their application efficiency.

"We had nearly ten years of K-Line so I didn't just want to chuck it out. We ultimately ended up with 130ha of fixed grid so that's been a pretty big change for us. All of a sudden we didn't have that

130ha of K-Line to shift and we were able to see how efficient regular watering could be. That was our first big change in terms of becoming a more modern system."

Since then another 85ha has been converted to fixed grid and the ability to retain the existing landscapes has been another advantage.

"Grid is a brilliant system as it's allowed us to preserve our landscape and a lot of our trees which is good for the community. We've made sure we have told people why we are doing what we are doing. That has been really positive because doors have been opened to work closely with the community, and we've built some good relationships which you can't put a value on."

In terms of future irrigation development, Corrigan says there's not much else he would change and the reduced dairy payout means they need to concentrate on the basics.

"We're not in a position to do any further large capital projects, so I feel very pleased that we've got a good irrigation system. Our farm is largely future-proofed."

Corrigan says they will concentrate on refining systems and making the best use of the data they capture.

"We've got eight soil moisture sensors with real time evapotranspiration and soil moisture levels in different zones. Our latest grid is designed to water specific bands of soils at different quantities; it's the next best thing to variable rate irrigation. We'll now look at nozzling down to individual soils within a paddock. We've got this race car, now we need to make sure we can go fast under race conditions."