

Water Efficient Farming



Reducing water use, step-by-step

Wonthaggi dairy farmer, Simon Park, wasn't surprised when his local water authority paid him a visit, asking him to cut down on his main water usage. He'd been using around 20 megalitres of mains water a year to run his business, primarily to water stock (600 head, including 330 milking cows) but also to wash down his shed and yards.

Fortunately, Simon was able to tell them that he was already working on it. "I'd realised that I was taking a fair amount out of the local reservoir, and it wasn't sustainable," he says. "I thought that if I could cut down on my usage, there'd be more for everyone else."

There were a couple of good economic reasons for reducing his reliance on mains water, too. The first is that Simon is currently paying \$930 per megalitre, and it's likely that this price will increase. The second is the threat of limits or quotas.

Rather than having to excavate new dams, Simon was lucky enough to be able to convert a drain running through his property into a catchment. "It had been built in the 1930's when Wonthaggi was still being designed, but had never been used," says Simon. "It puts down 100 megalitres a year – it was just a case of finding a way to tap into it."

Using local contractors, Simon cleaned out the drain, built a spillway, and installed a pressure pump powered by mains electricity. The project cost around \$20,000 – about the same as the previous year's water bill. Simon estimates that the drain holds around 5 megalitres, and says that it has cut his mains water usage by 85%, to 6 megalitres a year.

It's a huge saving, but converting the drain was only Stage One in a grander plan that aims to reduce Simon's mains water consumption to virtually nothing.



Simon Park explaining how he can reduce his farm water usage from town water supply.

The next two stages in the plan, which Simon has developed in conjunction with Barrie Bradshaw of the DPI, focus on turning the water sitting in Simon's effluent pond into a resource.

Stage Two involves the installation of a floodwash that will enable Simon to recycle water from his effluent pond to wash down his dairy holding yards and new feedpad. This project will cost around \$30,000, including the purchase and installation of a 120,000 l tank and electric pump. It should also reduce Simon's mains water to just 1 megalitre a year – the amount required to wash down the plant and platform in the dairy shed.

As well as saving water (Simon estimates the new feedpad alone will require 50,000l of washdown water per day), the floodwash will slash the amount of time needed for washdown. "There'll be 12 inches of water coming straight out of the tap," explains Simon. "It will take less than a minute and a half to wash everything down."

Stage Three involves using the nutrient-rich water in the effluent ponds to irrigate the nearby paddocks, and will be tackled when time and finances allow. "Our end goal is to utilise all our effluent water as fertiliser," says Simon, "and to have the drain as our main water source for the stock."

Finally, Simon plans to install a 260,000l rainwater tank to collect water from the dairy shed roof that will be used to wash down the plant and platform. Once this is operational, Simon believes that he will only need mains water for emergencies.

Cutting his reliance on mains water has given Simon the confidence to consider expanding his business in the future. He advises other farmers to take a step-by-step approach when developing a water efficiency plan, and to think bigger rather than smaller when creating or enlarging catchments. He also encourages farmers to take the opportunity – as he did – to contribute to community discussions about future strategies for storing and using water.



Simon highlighting the paddocks he'll aim to irrigate effluent on to. Effluent will also be used for flood wash to significantly reduce fresh water needed in the dairy.

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