



# Two Pond Effluent System

**Name:** John Murray, Jenny and Kevin Gannon

**Location:** Inverloch, South Gippsland

**Dairy Shed:** Herringbone

**Milking Area:** 208ha

**Herd Size:** 260 Cows

**Land Type:** Flat Dryland

The addition of a second pond was a practical and cost-effective way for Inverloch dairy farmers, John Murray and his daughter and son-in-law Jenny and Kevin Gannon, to improve the performance of their effluent system.

The two pond system provides them with other benefits as well, including the ability to use the water in the second pond for irrigation, and for washdown. In wet weather, they can also pump excess water from their underpass into the ponds, to prevent it from flooding.

John says that excavating the second pond - which holds around four megalitres - cost around \$6,000, and was money well spent. "The old system just wasn't coping with the size of the herd," he says. "We also wanted to be able to irrigate the paddocks and we couldn't do that with a one pond system because the water would be too sludgy to be able to use the irrigator."

The system currently allows them to irrigate 24ha direct from the pond, using an electric pontoon pump, 300m of poly piping and a travelling irrigator. Irrigation takes place twice a year, in autumn and spring, and the increase in production has been impressive. "They're easily our most productive paddocks," says John.



*“We get a lot more silage and hay and we don't have to pay for as much fertiliser.”*

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The benefits have been so great, in fact, that the family plans to invest around \$10,000 to extend the irrigation system to almost half the farm. This will involve laying around 2km of underground piping and installing outlets in seven paddocks to hook up to the travelling irrigator. Water will be pumped to the irrigator using a tractor-mounted Doda effluent pump that the family already owns.

Maintaining the system is very simple, and relatively cheap. "We have to clean out the first pond every year because it gets a crust on the top," he explains.

*“We tie it with other excavation jobs and it only takes the contractor an hour or so to scoop it off.”*



In comparison, cleaning out the single pond system was a much larger and a much more expensive job that had to be done every two years, involved four or five days labour, and cost \$6,000.

John says that being able to carry out washdown with recycled second pond water using a high pressure hose powered by an electric pump, is extremely time and water efficient. "It only takes a matter of minutes and it's done, and we're not using town water."

The main benefit for the family, however, has been the ability to turn a waste product into a valuable resource. "You've got to get rid of the effluent somewhere," says John. "It's much better to use it like this than letting it run out in a heap somewhere and end up growing rubbish."



## System Upgrade

### General Benefits

- 2nd pond water used for irrigation to increase production on 24ha
- Underpass can be pumped into effluent system and flooding prevented
- Much cheaper to maintain
- Recycled water used for yard wash, instead of town water. High pressure system much faster

### Costs

- \$6,000 to dig pond
- \$1,200 to install water reuse system
- \$12,500 pontoon pump

## Helpful Hints For Any Effluent System

### Benefits

- Correct application of effluent will boost pasture production
- Possible cost savings through reduced need for fertiliser
- Effluent can be an excellent soil conditioner (a source of organic carbon)
- Containing nutrients and sediment on-farm reduces contamination of waterways
- Reduced spread of animal and human disease (by eliminating waterway contamination of the harmful bacteria in effluent)
- Conserving water by recycling and/or reducing amount used (amount depends on size of alleys, yards, etc, and quality of cleaning)

*This table is from DairySAT.*

### Costs

- Initially it will cost time and money to install a new system or improve your current one
- Young stock (up to a year old) cannot graze or have access to areas where effluent has been applied
- Milking cows cannot graze paddocks where effluent is applied for a recommended three weeks after application
- Recycling the water in the yard washdown from the effluent system concentrates the nutrients and salts
- If pond effluent is not tested before spreading, pastures may receive excess nutrients (e.g. N or K), salts and organic matter loads

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