

Case Study: WARREN AND BARBARA FARGHER: “WIRREALPA”

Tank Level Monitor: Farmbot



In January 2023, Warren and Barbara acquired the Farmbot Tank Level Monitoring device (“the device,”) as a participant in the BIGG “On-Farm Water Innovation” Project.

Warren and Barbara Fargher have a beef enterprise in the Barossa Valley, South Australia. Their property is situated in the region of Flaxman Valley, which currently has no source of external water security or infrastructure, so is totally reliant on capture and storage of rain water and surface water run-off. They have extensive experience in beef farming, as they also have owned and operated a cattle station in the Flinders Rangers, South Australia for many, many years. The water tank supplies 4 different watering points over their property, and waters approximately 35 Angus cattle.

Before installing the water monitoring device, the Farger’s would spend approximately 20 minutes per visit to the tank, travelling a 7 km round trip, approximately 3 times a week. This totals one hour of their time, every week, commuting to the tank and home again. Without additional checking time, (eg, during Summer,) this calculates out to 52 hours per year, which was previously required to personally monitor one water tank with water distribution points.

Warren and Barbara both highlight that since they have had the device installed, it has also assisted with a reduction in stress levels, or any worries or concerns that they may have previously experienced during hot summers. Now they do not feel any cause for concern, and the device has been, so far, extremely reliable and accurate. They are confident that their livestock will have water, and they know exactly the rates of water consumption of their livestock, due to the regulation of their feeder tank. It has been a very positive experience in every possible way.

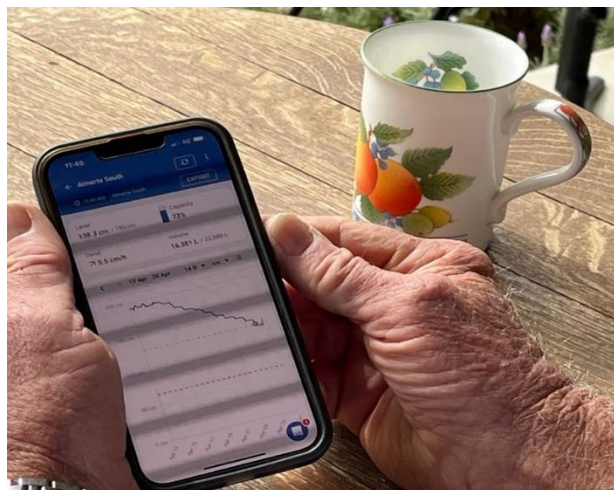
Figure 1: Farmbot Tank Level Monitor



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Dashboards:



Farmbot provides the user with a text alert when the tank level height has changed or if there has been a marked rate of fall. Alerts are sent in real-time within minutes of a low, high or critical water mark has been hit, enabling the user to address any issues in a timely manner.

Alerts can be accessed by multiple users either via a text, email and in-platform. Warren and Barbara check their dashboard numerous times a day from any location, even when on holidays 100’s of kilometres away, and when in Adelaide.

Farmbot Savings Calculations:

Current Operating Costs: Over 3 Years.

Total Time (Hours)	156.00
Total Kilometres Driven	3,276.00
Labour Cost (@\$50/hr)	\$7,800.00
Fuel Cost (@ \$1.72/litre, diesel)	\$563.00
Current Cost To Check Water Tank.	\$11,795.00

Farmbot Operating Costs: Over 3 Years.

Farmbot Hardwater/software	\$1,290.00
Operational Costs with Farmbot	\$300.00 x 3= \$900 (+ \$50 shipping)
Farmbot Costs to Check Water	\$2,240.00 (Includes GST of \$104.00)

Farmbot Costs Savings: Over 3 Years.

Total Costs Savings	\$9,555.00
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Farmbot Costs Savings: Over 3 Years = \$9,555.00

Additional Business Costs

Water Waste – how many litres of water are lost if a leak goes undetected?

Animal Weight and Welfare – how much weight are your livestock losing if temporarily without water?

Vehicle wear and tear – capital vehicle depreciation.

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Vehicle maintenance savings on costs – every landholder’s vehicle maintenance costs are subjective. If these figures were included these would have increased the landholder’s savings figures, however, for consistency with calculations, the focus was on fuel, labour costs and time.

Carbon Emissions – how much carbon is your vehicle use contributing to the environment?

Connectivity requirements:

- The tank water level sensor connects into a Farmbot monitor, which transmits the data.
- Compatible with satellite or cellular networks.

Installation and power:

- Installed by the user – no technical skillsets required.
- Power is supplied through a solar panel with a large battery capable of operating for more than a week without sunlight.

Pricing model:

- Hardware and annual subscription costs for data and service.
- Hardware \$1,290
- Annual Subscription Fee: Cellular \$342.00, Satellite \$456.00. (The Fargher’s were offered an annual reduced subscription fee of \$300.00.)

How can I view this?



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Contact

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