

Technology helps keep track of precious water resources

Charlie Crocker, wife Marie and a part-time employee farm 4000 acres near Violet Town and in Strathbogie.

The Crockers run 4000 composite ewes and 280 beef cows and followers. A 6 ML dam provides water to about seven paddocks across 700 acres. A solar pump is used to move water around the farm.

However, Charlie was having an issue with the effort required to check water levels on a daily basis.

Recognising the challenges Charlie faced were shared by other farmers in the region Gecko CLaN organised a field day at Charlie's property.

The field day covered:

- Assessment of his water requirements (ie how much is needed in storage for domestic and livestock use).
- Evaluation of water reserves (evaporation rates).
- Options for meeting water requirements (flow rates, pumps, tanks and troughs).
- Livestock management options and contingency.
- Demonstration on how to measure dam depth and calculate its storage potential.
- Wireless water level monitoring and solar pump demonstration.

Brad Costin from Agriculture Victoria presented at the field day demonstrating a simple system to measure a dam and its water capacity without the need to get into the dam. The system uses a string line across the dam, a float and a weight on a measuring tape with a series of rings allowing it to be moved around the dam and across the water to measure depth.

The group at the field day also learned that up to 1.7m of water a year can be lost from a dam and that silting can alter dam capacity.

Since the field day Charlie has been monitoring his dam level for evaporation rates on a monthly basis.

He sends an image of the dam marker to Gecko CLaN Landcare Co-ordinator Kerri Robson to keep a record of the figures which are then shared with the broader group (see photos above).

Charlie has fenced off his dam to ensure the water is clean for his stock and they cannot foul the dam.

He is also using an Observant telemetry tank water monitoring unit sourced through Euroa-based Farm Monitoring Systems.

Kerri helped assess and evaluate the unit, which cost $1800, and was bought through a Goulburn Broken CMA Beyond SoilCare grant, which supported the project.

Charlie was so impressed with this unit that he bought a second with his own funds.

The units are fitted at two sites: the home site is a tank 6km from the dam; the second site is a tank at the Strathbogie block about 40km away. Various alerts and alarms can be set to make the system relatively worry free. For example, a pump breakdown or a broken water trough can mean water levels drop quickly but as the system alerts Charlie to any issues, he can address the problem straight away.

Charlie notes there are ongoing monthly mobile costs associated with the system but he believes that the cost is only a fraction of what he would have spent on fuel driving around to monitor the sites manually.

"The system is robust and is expected to operate without any issues for years - the system has saved me an enormous amount of money and time," says Charlie.

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