

Media Release

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A trial of second-hand materials to provide practical water catchment solutions

A 'paddock-scale' experiment exploring the benefit of using second-hand CBH tarpaulins to line dam catchments, is being trialled at a community dam site in southwest Western Australia.

The WaterSmart Dams project team – the Grower Group Alliance (GGA), the University of Western Australia's Centre for Water and Spatial Sciences (CWSS), the Department of Primary Industries & Regional Development (DPIRD), and the Fitzgerald Biosphere Group (FBG) – and the Department of Water and Environmental Regulation (DWER) have been collaborating on improvements and trialling water security innovations at a Strategic Community Water Supply (SCWS) dam in Jerramungup.

In 2022, on the back of successive dry seasons experienced in 2018-2020 and their work in the Shire of Jerramungup, DWER approached Jacup grower, Mark Lester looking to trial second hand CBH tarpaulins on catchments at the Jacup Community Dam residing on his farm.

Initial funding, from the WA Government's \$3.7M program to expand and enhance off-farm strategic dams, was directed through DWER to establish the site.

The Department undertook the earthworks, tested, laid, and sewed together the tarpaulins, and set up the research infrastructure required for the WaterSmart Dams team to measure the efficacy of the trial.

FBG Executive Officer Maddy Wylie said the experiment was of interest to local farmers, where capturing every drop of water from catchments was of critical importance in successive dry seasons.

"This site is used as a public access point for emergency livestock water supply, and fire-fighting purposes," she said.

"So, it is crucial that this water source remains reliable in the face of climate challenges."

"Practical solutions using what is on hand is of interest to local growers."

"Using second hand materials is often spoken of, but not many growers have taken the plunge."

"The WaterSmart Dams project de-risks this for local farmers and aims to give good tools on workable solutions," she said.

Mr Lester said it was something that he was interested in trialling but would not have had the time to implement without the involvement of DWER and the WaterSmart Dams project team.

"I am very interested to see how long the second-hand plastic works as a catchment lining option, and looking at the logger data to see what is actually running off the catchment," Mr Lester said.

Project technical lead Associate Professor Dr Nik Callow said implementing water supply infrastructure that helped growers adapt to the hotter drier seasons was a strong motivation of the project team.

"Developing the infrastructure with the grower groups and the growers ensures the solution is capturing the specific needs of the community and district," Dr Callow said.

“The WaterSmart Dams project is an example of universities conducting research that is translated into a project which people can interact with and adopt into their on-farm water infrastructure practices.”

“Smart Dams Champions, like Mark Lester, are facilitating grower led water supply and quality demonstrations to benefit their local communities,” he said.

Jointly funded by the Australian Government’s Future Drought Fund (FDF) and DPIRD, the WaterSmart Dams project team is working across 12 sites in southwest WA to research and implement technology and engineering solutions to make dams work again and improve drought resilience.

Other engineering solutions being demonstrated by the [Smart Dams Champions](#) include improved dam design and maintenance of roaded catchments, dam covers, silt traps, and technological innovations to improve water quality.

Exploring ways to enhance water catchment efficiency was identified as a high priority for growers who completed a [key survey](#) for the WaterSmart Dams project late last year, but it’s not a standalone effort to aid community water supply.

Funded by the WA Government’s community water supplies program DWER is running an [adjacent project](#) at two Esperance sites to address a similar water catchment need in the Wheatbelt.

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