WATERSMART DAMS: TRANSFORMING AGRICULTURAL RESILIENCE

Photo: Annie Leitch

BACKGROUND

The Shire of Jerramungup located within the UNESCO designated Fitzgerald Biosphere, relies heavily on agriculture. Despite recent above-average rainfall, climate projections indicate a concerning trend of reduced rainfall, especially in winter and spring. This decline in annual rainfall is expected to persist through the century. In this context, capturing and conserving water resources is essential for sustainable farming. Many existing dams are outdated, designed for traditional farming systems, and do not account for current climate data.

CHALLENGE

The challenge addressed by the WaterSmart Dams project is to enhance agricultural resilience in the face of changing climate conditions. With decreasing rainfall and altered seasonality, re-engineering dams to capture more water and reduce evaporation has become a necessity.

Early results from the project's grower survey indicated that issues related to dam function, water supply, and water quality were impacting farm businesses economically and operationally. The project seeks to reevaluate existing dam technologies, re-design or expand dams, optimise catchment design, ensure water quality for both crops and livestock, and enhance drought resilience by providing solutions that focus on capturing every drop of water efficiently. This includes improving dam design, implementing dam covers, silt traps, and technological innovations.

SOLUTION

The WaterSmart Dams project focuses on revisiting and reimagining existing dam technologies and design. It emphasises good catchment design to capture available rainfall efficiently. Additionally, it recognises the importance of dam quality for both cropping and livestock management. The project encompasses data gathering, research, and collaboration between government, industry, and local farmers.

IMPLEMENTATION

The project involves farmer-hosted demonstration sites to review and implement dam-based solutions. It seeks to understand how dams can function effectively, especially during dry years. The UWA and DPIRD experts are partnering to provide technical insights and data analysis. One of the key outcomes is the development of the WaterSmart Evaluation Tool (WET), a customisable tool to support individual farms, private contractors, water planners, and local communities in making drought-resilient investment decisions.

This project represents a crucial collaboration that addresses drought resilience, aiming to enhance economic, environmental, and social well-being in the face of changing climate conditions.

GROWER GROUP ALLIANCE

Together we grow

The Grower Group Alliance (GGA), operating in Western Australia, is dedicated to shaping the future of WA agriculture through a producer-led system of innovation, adoption, and collaboration. Their strategy centres on building capacity in grower groups, connecting them with industry partners, and leveraging their extensive network to broker impactful programs. They collaborate closely with regional partners and local farmers to address pressing challenges in the agricultural sector.

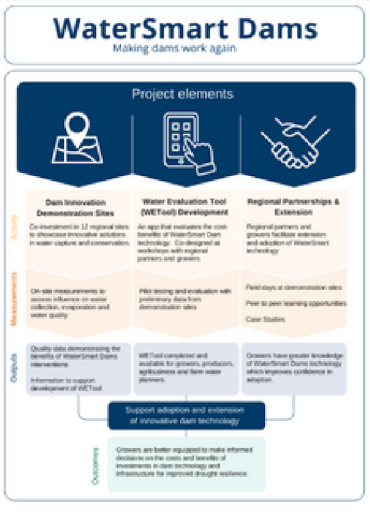
WaterSmart Dams is led by GGA and supported by the South-West WA Drought Resilience Adoption and Innovation Hub. It is jointly funded through the Australian Government's Future Drought Fund and the Western Australian state government's Agriculture Climate Resilience Fund.

Fitzgerald biosphere Community Collective

unesco Biosphere Reserve

Fitzgerald Biosphere Group (FBG) is a member of the GGA, working in collaboration with the Department of Primary Industries and Regional Development (DPIRD), and the University of Western Australia (UWA).

STAY UPDATED ON WATERSMART DAMS DEVELOPMENTS AND SEE HOW GOVERNMENT, INDUSTRY, AND LOCAL FARMERS TACKLE THE NUANCED SUSTAINABILITY CHALLENGES FACING THE REGIONAL AGRICULTURE SECTOR.



gga.org.au/activity/watersmart-dams/