

Drought resilience dashboard for Southern WA

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KEY MESSAGES:

- Enhanced local weather forecasting and a centralised dashboard were produced to enable farmers to make better business decisions and improve their farm’s resilience to climate change.
- The project included the installation of weather stations, soil moisture probes and digital rain gauges in southern WA and integrated the data into a dashboard to maximise farmer usage and understanding.
- Increasing the weather data collected from local locations will continually improve the accuracy of weather forecasting at a local level (through machine-learning).
- Soil moisture probes will enable farmers to measure the water stored in the soil and determine how risky it would be to grow a summer crop or cut fertiliser applications late in the season.

Background

Enhanced local weather forecasting and a centralised dashboard will enable farmers to make better decisions & improve their farm’s resilience to a changing climate. Once farmers are armed with better forecasting, they will make better input decisions (fertiliser & herbicides) for either cropping or livestock enterprises. Real-time data is beneficial but predicting pasture growth rates or cropping yields is the ultimate project goal to help build resilience and optimise productivity without negatively affecting our soils, water systems and vegetation.

As an example, summer rain can be utilised via stored soil moisture for the upcoming winter crops. In some environments, growing summer fodder crops can generate income directly or provide feed for livestock in the form of silage, grain, or hay. The stored feed gives farmers fodder in the bank, which can be utilised during dry winters. Additionally, summer crops offer an alternate way to increase cropping diversity into farming systems. For example, Cowpea is a summer legume that can grow nitrogen and provide grain for feed.

Weather & climate data collected over time will become more helpful to landholders and reduce sub-optimal decisions. Poor decisions might be avoided if the complexity of the scenario is better understood through quantified data to complement farmer experience and intuition.

Introducing Climate Great Southern

Launched in 2022, Climate Great Southern hosts the following information publicly available to farmers in the Great Southern Region of WA:

- Soil moisture monitoring & pasture forecasting information for five locations in the Great Southern – Gairdner, Gnowellen, Mount Barker, Palmdale & South Stirlings.
- Weather forecasting for 20 additional locations, including Amelup, Green Range, Kendenup, Kojaneerup South, Many Peaks, Narrikup, Perillup, Wellstead & Woogenellup,
- Drought resilience resources (information materials).

To learn more about the project’s activities, visit www.climategreatsouthern.com.au

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