



A real-time grain forecast platform for Australia

Graincast™ is a digital agriculture tool that provides real-time and early-season crop monitoring and identification, and crop-yield forecasts.

Using simple local paddock information, national high-resolution satellite and sensor data sources, Graincast™ helps growers with their crop decision-making.

The challenge

The development of the Graincast™ app started as a response to feedback from farmers about the type of data needed for crop production and the format in which they wanted to receive the information. Specifically, farmers wanted to be able to learn or verify key details about land conditions via a system that was mobile, timely, and easy to use. Rather than be prescribed on-farm activities to maximise yield, farmers stressed the need for additional data that they could analyse themselves to make production decisions.

The response

Graincast™ enables users to monitor and forecast grain yields after entering a series of inputs into a smartphone app. The data generated through the app is then used to inform machine learning models to determine what crops are grown where. The app can help grain growers forecast soil moisture and crop yield in individual paddocks or at whole of farm level, and also enables forecasting of grain production at the regional and national scales. The technology has been licensed to Melbourne-based start-up, Digital Agriculture Services.

Greater grain yields and more efficient input management for growers.

The impact

Graincast™ is currently in commercial development. Although there is not yet a commercial product offering, the app is being used by farmers in Western Australia to help inform yield projections. It is also being piloted by a few companies within the larger agricultural supply chain to test its capabilities for informing purchasing, logistics and planning decisions.

A recent independent evaluation found that Graincast™ has the potential to provide between \$33 million and \$420 million in economic impacts (present value terms, 2020) across the Australian agriculture supply chain between 2021–30. The largest proportion of benefits are expected to come from on-farm use, which would likely result in improved input application efficiency, and therefore improved yields.

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