eConnected Grainbelt project | Decision support tools

# Current decision support tools

Each of the following tools are designed to help growers understand how the current seasonal conditions will impact the growth and yield of their crops. This information may then inform seasonal decisions including time of sowing, choice of crop or variety, timing and rates of fertilizer and herbicide applications. They form a suite of tools that will link together, where maps provided by the Seasonal climate information tool will link to other tools for location-specific graphs.

All of these tools are available on the Department of Agriculture and Food, Western Australia’s (DAFWA) website, and we are seeking feedback via eDemonstration site events on how they can be made more beneficial to grain growers. The information you provide will determine enhancements to the tools. Any feedback on usability or features will help us improve these products.

Don’t forget that you are not limited to the decision support tools that have been developed by DAFWA, you can use and evaluate tools that have been developed by other organisations.

# Seasonal climate information

The seasonal climate information tool provides up to date information about the coming season and its potential impacts on cropping and agriculture. Seasonal climate information includes statistical seasonal rainfall forecasts, maps of modelled plant available soil water at the start of the growing season, maps of potential yield given possible rainfall outcomes and maps of risk of frost.

Now available on the DAFWA website: [agric.wa.gov.au/drought/seasonal-climate-information](http://www.agric.wa.gov.au/drought/seasonal-climate-information)

This collection of forecasts can give you an idea of how the season is predicted to develop compared to average, based on historical observations. It provides maps of forecasts for seasonal rainfall, soil water, potential yield and frost risk. You can see rainfall forecasts for the grainbelt as a whole, or drill down to a particular DAFWA weather station near you. By clicking one of the points on the map you will be provided with more detailed information for that location. This tool is currently best used on a laptop/desktop, with Chrome, Firefox or a recent version of Internet Explorer.

# Rainfall to date

The rainfall to date tool provides graphs of the amount of rainfall accumulated from the start of the grain growing season and possible rainfall outcomes for the rest of the season. It can be used to help understand how much rainfall is available to a crop.

Now available on the DAFWA website: [agric.wa.gov.au/climate-weather/rainfall-date](http://www.agric.wa.gov.au/climate-weather/rainfall-date)

You can select your nearest weather station, as well as summer and growing season start and end dates. The tool will then calculate summer rainfall and the current rainfall to date for the growing season, provide you with information on how this compares to other years, and show what additional rainfall could be expected with average, high, or low rainfall for the remainder of the season. This tool is currently best used on a laptop/desktop, with Chrome, Firefox or a recent version of Internet Explorer, but is functional on smartphones/tablets.

# Soil water

The soil water tool provides graphs of the amount of soil water accumulated from the start of summer through the grain growing season and can assist growers in understanding how seasonal rainfall is affected by soil type and evaporation before becoming available for crops to use.

Now available on the DAFWA website: [agric.wa.gov.au/climate-weather/soil-water](http://www.agric.wa.gov.au/climate-weather/soil-water)

You can select your nearest weather station via a drop down list, and select from 10 representative soil types, and whether the ground is fallow or sown with a wheat crop. By hovering over the graph you can see daily rainfall amounts, and estimations of the current soil water content. This tool is currently best used on a laptop/desktop, with Chrome, Firefox or a recent version of Internet Explorer, but is functional on smartphones/tablets.

# Potential yield

The potential yield tool provides information on the maximum yield possible, in the absence of any other constraints, given the growing season rainfall to date and possible rainfall outcomes for the rest of the season.

Now available on the DAFWA website: [agric.wa.gov.au/climate-weather/potential-yield](http://www.agric.wa.gov.au/climate-weather/potential-yield)

You can select your nearest weather station, as well as summer and growing season start and end dates. The tool will then calculate summer rainfall and the current rainfall to date for the growing season, as well as additional rainfall that could be expected with average, high, or low rainfall for the remainder of the season. This information is then combined to provide the potential year that can be expected with average, high, or low rainfall for the remainder of the season. This tool is currently best used on a laptop/desktop, with Chrome, Firefox or a recent version of Internet Explorer, but is functional on smartphones/tablets.

# Weather stations

The weather stations tool provides access to the latest climate and weather information collected by DAFWA’s network of automatic weather stations. This data includes air temperature, humidity, rainfall, wind speed and direction, with most stations also measuring incoming solar radiation to calculate evaporation.

Now available on the DAFWA website: [agric.wa.gov.au/weather-stations](https://www.agric.wa.gov.au/weather-stations)

Note: the weather data on this page is unchecked, coming from automated equipment. Faults will be attended to as soon as practicable.

# MyCrop

MyCrop is a collection of interactive tools to help growers and agronomists diagnose problems in wheat, barley, canola, lupin, field pea and oat crops. The tools include high quality photographs to assist diagnosing constraints as well as technical information about each constraint. Users simply select from a range of paddock and soil clues to identify the likely cause of their problem including pests, diseases, soil deficiencies, environmental and weather factors.

Now available on the DAFWA website: [agric.wa.gov.au/mycrop](http://www.agric.wa.gov.au/mycrop)

The tools are downloadable as five individual apps for Apple and Android devices and can also be used on laptop/desktops. Whilst the diagnostic apps are the flagship MyCrop products, MyCrop also supports the following decision support tools:

* Five MyCrop diagnostic apps (wheat, barley, canola, pulses and oats)
* Variety guides for wheat and barley (in MyCrop apps)
* CropCheck crop monitoring information (online and in apps)
* MySoil soil identification tool (online)
* MyEconomic calculator (online)
* Wheat yield constraints calculator (online)
* MyPaddock online tool (compares the impact of crop constraints on yield)