



IRRIGATION RESEARCH & EXTENSION COMMITTEE

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FOR IRRIGATION CROPPERS

Irrigation informatics for irrigation

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Researchers and PhD students at the CSIRO Griffith Irrigation Research Labs are working on providing new forms of decision support to drip irrigators. The new forms of decision support being investigated are mobile support, through SMS and other platforms, personalised support, using some details from an irrigator along with local biophysical information, and decision support that goes beyond the traditional biophysical realms. The overall objective is to provide decision support to irrigators that is both relevant to the individual and easy to use.

With regard to mobile decision support, there are several modes of decision support that the team are investigating: the most basic is looking at providing past and predicted evapotranspiration (ET) readings from publicly accessible weather stations to irrigators via SMS. Another mode uses a very basic water balance model of the previous week's ET and rainfall collected from weather station networks to schedule irrigations. This information combined with the drip emitter rate of an irrigator's system is used to turn an estimation of the previous day's crop water requirements needed to maintain soil moisture levels, in millimetres, into dripper run times, expressed in minutes.

Expressing decision support information in a simple format that makes sense to irrigators (such as dripper run times) and delivering it where and when needed (for example SMS allows the irrigator to access the information while standing by the dripper system pump) is thought to be what is required to increase the uptake of objective scheduling practices.

With the advent of fast mobile phone networks (like Telstra's NextG and Optus' 3G service), further modes of decision support may include sending data images to mobile phones and the creation of web pages that can be accessed via SmartPhones. A demonstration web page, designed for web-enabled phones, but also viewable by a normal desktop Internet browser, is the irriGATEWAY mobile trial page at <http://www.irrigateway.net/dev/mobile/>