

Award winning irrigation software could save 800 gigalitres a year

A Queensland water scientist has received a prestigious international award for his role in developing software that saves 20 per cent of water used to irrigate over a million hectares of crops such as cotton, grains and sugar cane in Australia.

Dr Malcolm Gillies, a hydrologist with the Cooperate Research Centre for Irrigation Futures (CRCIF), won the Young Professional Award presented recently in New Delhi by the International Commission on Irrigation and Drainage.

Malcolm said the software can be used

to monitor the performance of furrow, bay and basin irrigation, which are the main methods to irrigate crops in Australia.

“Water savings averaging 20 per cent, and as high as 50 per cent, can be achieved through improved flow rates and scheduled irrigation times suited to various field layouts and soil types. Potential total water savings in Australia are estimated at over 800,000 ML (800 GL) a year.

“The saving is potentially applicable to farming systems in Australia which use more than four million megalitres (4000 GL) of irrigation water,” he said.

Malcolm developed three new software tools to improve current irrigation efficiency procedures. The tools are calibrated to field conditions using measurements such as inflow rates, water travel times, flow depths and runoff.

The measurements are used to produce a model that evaluates the performance (efficiency and uniformity) of the irrigation system. The tools can also be used to conduct ‘what if’ scenarios and help farmers identify strategies to improve crop watering.

The new tools will be integrated into an existing suite of irrigation technology (Irrimate), developed primarily by scientists at the University of Southern Queensland.

The Irrimate service is currently being delivered to Australia’s cotton industry by a network of registered consultants. To date, it has provided \$36 million in benefits to the industry in terms of water and energy savings, and productivity improvements.

The CRC for Irrigation Futures is a partnership of universities, state and federal government agencies, water service providers and industry. It exists to provide tools and knowledge for better decision-making about irrigation in Australia.

Further information:
www.irrigationfutures.org.au

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Malcolm Gillies, a hydrologist with the Cooperate Research Centre for Irrigation Futures.

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