

New irrigation technology for the Gwydir Valley

By Stuart Bray, Industry & Investment NSW

The NSW Sustaining the Basin Gwydir Valley pilot project (STBGV) is demonstrating water saving technologies to irrigators in the Gwydir Valley to allow them to assess their potential to save water in the future.

The STBGV pilot project commenced in the Gwydir Valley last month and focuses on improving on-farm water use efficiency through investment in infrastructure to modernise farming systems.

Research and development continues to be an integral part of guiding irrigators to improve water use efficiency in the Gwydir Valley. Growers will have the opportunity over the next 12 months to examine some new irrigation technologies in operation on several farms in the region.

The Government's water reform agenda and the pressure of dwindling water have set a pace of rapid change in irrigation industries. In this context it is important for growers to be aware of the options for optimising their water use efficiency.

The Cooperative Research Centre for Irrigation Futures (CRCIF) has been engaged in the pilot project to demonstrate three irrigation technologies:

Satellite technology

Irrigation water management by Satellite and SMS (IrriSATSMS) uses satellite images to determine crop water



Janelle Montgomery, I&I NSW Water Use Efficiency Officer downloading storage data. (PHOTO: D Wiggington)



Troy Symes, Facilitator for the monolayer application demonstration system project.

(PHOTO: National Centre for Engineering in Agriculture (NCEA))

use in real time and deliver irrigation scheduling information to irrigators. It also provides a feed back mechanism to assist in improving water ordering and capacity management. The project will work closely with two local consultants and I&I NSW extension staff who will be assisting to evaluate the technology for broadacre irrigation.

Automation of irrigation

Furrow irrigation is the most popular system of water application in the Gwydir Valley and is likely to remain so. One of the main impediments to getting more out of furrow irrigation is sufficient labour. Automation of irrigation deals with this problem. The demonstration project is intended to show three levels of benefits:

- Some labour saving;
- Better distribution of water from large outlets; and,
- Management of irrigation to its full potential.

Reducing evaporation losses

Storage losses are the third area of potential savings. Evaporation in the Gwydir Valley from on-farm water storages when they are full has been estimated to be as high as 69 GL per year. This is equivalent to losing up to two metres of water from storages per annum.

Preliminary results from a Cotton Catchment Com...20▷



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munities Cooperative Research Centre project in the northern Murray Darling Basin demonstrate that evaporation losses from storages are more significant than seepage losses.

The CRCIF will demonstrate and evaluate the application of chemical monolayers which are chemical fluids that float on the surface of irrigation storages to reduce evaporation. Current research is fast tracking the chemistry of the polymers as well as making improvements in their application to the water surface to improve the performance of these chemicals.

Michael Murray, Chief Executive Officer of the Gwydir Valley Irrigators Association said, "there's no doubt our biggest efficiency saving is the reduction of evaporation losses and if successful this could be very exciting for irrigators."

The CRCIF is planning a field day on irrigation automation during February 2010 in the Moree district where they will show the potential of southern technologies for northern cotton farming systems.

Demonstrating these technologies in the Gwydir Valley will provide an opportunity for irrigators to see and hear how these systems work and assess how they can introduce them into their current farming systems and irrigation practices.



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2010 promises to be a big year for the irrigation industry, with the biennial exhibition and conference making its way back to Sydney after its eight year circuit around four capital cities.

The dates to put in your diary now are Tuesday June 8 to Thursday June 10 and the venue will be the Sydney Convention and Exhibition Centre at Darling Harbour.

The conference will be a unique event as it will be jointly presented by Irrigation Australia Limited and the Cooperative Research Centre for Irrigation Futures.

This will be the first and only time, as it will be the final event for the CRCIF, which is coming to an end of its seven year term.

"We are delighted that the CRC will be joining us for this conference, which will provide topics of interest for anyone involved in the irrigation industry in Australia," said CEO of Irrigation Australia Limited, Chris Bennett.

Irrigation Australia, the largest event of its kind in the southern hemisphere, is recognised as a truly international event with delegates to the conference and visitors to the exhibition expected to come from several Asia Pacific countries.

"The conference and exhibition theme 'One Water many Futures' is particularly relevant to Australia at present as we look to the competition for water and sharing of this important resource across agriculture and horticultural sectors, as well as the pressures on its more efficient use in the urban sector," said Chris.

The Australian Irrigation Exhibition and Conference 2010 will follow from the huge success of the 2008 Melbourne event, where the exhibition attracted record attendances of well over 3800 irrigation industry professionals interested in new products and services and over 400 delegates attended the conference.

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The 2008 Irrigation Exhibition and conference was a great success.