

# NPIRD UPDATE

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## Irrigation research funding

In the last decade irrigated agriculture has grown in importance in terms of its contribution both to regional economies and to the growth of value adding industries such as dairying, wine grape growing and horticulture.

In this time irrigation research and development projects have been funded by a number of groups, including agencies, Murray-Darling Basin Commission and commodity R&D corporations. However, none plays the unique role that NPIRD does. NPIRD is the only program whose core business is the funding of irrigation R&D in Australia.

With almost 10 years of supporting irrigation research and the 3rd Phase of NPIRD almost complete, it's opportune to review the program's funding.

NPIRD's funding comes from industry and government partners in most states and federally. In the 9 years that it has been operating this funding has declined, in real terms. However, the program has achieved much on this budget with research results being recognised both nationally and internationally. In this time almost 100 projects have been funded.

According to Management Committee Chairman, Stephen Mills, funding for irrigation research must grow in the future. Irrigation is becoming more important in terms of both its economic contribution to agricultural income and its contribution to regional economies, and it is central to the debate of the future use of water extracted from streams.

"As we enter the 21<sup>st</sup> Century, a challenge for the irrigation sector is to confront issues and trends such as increasing demands for water for environmental, urban, industry and catchment use; decreasing water quality; growing climate change concerns affecting rainfall; increasing the number of times extracted water is used; and new technologies," said Mr Mills.

"With the rate of change accelerating, there has never been a more important time for well-targeted generic R&D to maximise Australia's opportunities and adjust where needed. Never have the activities of coordinated irrigation R&D through NPIRD been so important," he added.

According to Mr Mills, crucial to the future of irrigation research will be the commitment of more support from an increased number of partners.

## What is NPIRD?

NPIRD was first launched in 1993 by Land & Water Australia (then LWRRDC) in partnership with NSW, Queensland and Victorian organisations. It now constitutes 12 partners, the most recent new members being CSIRO Land & Water and Western Australian organisations. South Australia's Department of Primary Industries and Resources has committed to come on board with a national program from July 2002.

NPIRD has proceeded in 3-year phases that reflect both funding commitment timeframes and the need to often revisit national priorities in a dynamic industry and policy environment.

The program has been recognised internationally for its ground-breaking development and implementation of the National Irrigation Benchmarking Scheme. It also recently featured in Australia's top 100 innovations of the 20<sup>th</sup> Century for its exceptional research on partial rootzone drying technology which is already saving some commodities large quantities of water.

The program has been catalytic in placing water use efficiency on the national agenda (to which the second phase of NPIRD was totally devoted) which now attracts over \$100 million of investment in NSW and Queensland alone.

NPIRD continues to break new ground in fields such as ecological risk assessment, but has also made substantial inroads to tackling current issues, producing detailed guidelines for: best practice horticulture refurbishment, channel repair and replacement, subsurface drainage, soil water monitoring and participative action management.

### More information

For more information about NPIRD or its projects contact Liz or Murray Chapman, phone 03 5763 3214, email <rplan@benalla.net.au>.

## Project: Socio-economic issues affecting positive change in irrigation communities

The aim of this current project is to foresight what viable irrigation communities will look like in 30 years and scope the range of social and economic issues that could be aided through research now.

This study asks questions about what the world and the Australian irrigation industry may look like in 2030. Of interest are issues such as what will be the impacts on and challenges faced by irrigation communities between now and 2030.

So far a scoping paper and stakeholder interviews have been completed. A report recommending social and economic issues that could be being researched now will be produced mid year.

For more information contact Noel Beynon, phone 02 6255 583, email <capitalag@bigpond.com> or Onko Kingma, phone 02 6288 5173, email <onko.kingma@bigpond.com>.

## Project: A review of genetic algorithm (GA) technology for irrigation water ordering systems (DAV 37)

The aim of this project, completed last year and managed by Q.J. Wang from the Institute of Sustainable Irrigated Agriculture at Tatura, Victoria, was to review genetic algorithm (GA) technology for irrigation water ordering systems.

The focus of the project was to provide a report that: detailed the current state of research into GA technology; analysed the future applicability of GA for water ordering systems; quantified likely demand from industry; recommended a way forward and future role (if any) for NPIRD; and considered private versus public benefit issue as it related to any future project.

As part of the project sixteen water supply companies from around Australia were surveyed. While a previous NPIRD project on GA (Project UAD14) indicated that the technology is potentially applicable to commercial scale water ordering systems, interest among water authorities in Australia in investing in or adopting GA technology is currently low.

The report concluded that the survey results from this review suggest that further investment in this technology by the NPIRD cannot be justified.

Of the water authorities surveyed, only Goulburn-Murray Water was willing to make a small in-kind contribution to further evaluate the GA technology.

For more information contact Q.J. Wang, phone 03 5833 5348, email <qj.wang@nre.vic.gov.au>.

## Clarification

From the last issue of *NPIRD Update* some people might have the impression that there is a link between PRD and improved fruit quality. This is not the case.

According to Dr Brian Loveys, while some changes in fruit quality measures have been noted in grapevines where PRD has been used, researchers believe that this was most likely caused by effects on canopy density, which will influence fruit quality through effects on bunch exposure. There has also been some anecdotal evidence that wine quality is enhanced, but this needs verification. A student is now working on these questions.

## About NPIRD

NPIRD is funded jointly by the Commonwealth Government, through Land & Water Australia, and industry and agency funding partners. These partners are:

- Queensland Department of Natural Resources and Mines
- NSW Department of Land and Water Conservation
- WA Water and Rivers Commission
- CSIRO Land and Water
- Goulburn-Murray Water
- NSW State Water
- NSW irrigators
- Southern Rural Water
- South West Water (WA)
- Ord Irrigation Co-operative
- Sunraysia Rural Water
- Wimmera Mallee Water
- Agriculture WA

South Australia has committed to become a funding partner from July 2002.