



BRUCE PYKE

# COTTON COTTON COTTON RESEARCH ROUNDUP



BRUCE FINNEY

## PREPARING FOR 'AFTER THE DROUGHT'

The CRDC is aware of the adversity facing every person, business and community in our industry. When this drought will end is anyone's guess.

But it is highly likely that growers will adapt their farming system and the industry service sector will respond to future climate and water availability risk. Similarly, the industry research effort needs to place increasing focus on these challenges.

The CRDC has recently joined a national climate change research strategy for primary industries. The strategy will bring together all the Rural R&D Corporations with the CSIRO and the Australian, State and Territory Governments in a coordinated and collaborative approach to climate change. It is vital that this comprehensive research strategy provides sound information and practical outcomes to assist the cotton industry to respond.

## FUTURE DIRECTION FOR R&D IN PLANT BREEDING AND BIOTECHNOLOGY

The CRDC acknowledges the recent announcement by CSIRO and CSD of a new commercial joint venture in cotton breeding and research.

The development of varieties adapted to local conditions by Cotton Breeding Australia with world leading yield, quality and agronomic traits will continue to be vital to the performance and competitiveness of the industry.

This arrangement brings to an end over 30 years of industry research investment in plant breeding through CRDC. The CRDC will consider if there is a need for new ways of working in plant breeding and biotechnology research into the future. The results of those deliberations will form part of a new five year strategic R&D Plan for investments from 2008–2013. CRDC welcomes any feedback on this matter.

## IN GOOD HANDS

If the future of the industry is gauged by our future scientists, we are all in good hands.

In September, cotton scientists Angus Crossan and Warren Conaty were announced winners in the 2007 DAFF Science and Innovation Award for young people in agriculture, fisheries and forestry.

Dr Angus Crossan, a PhD researcher at University of Sydney was awarded for his work to develop a catchment-based risk assessment framework incorporating land

use and climatic data to help design a better method for sustainable pesticide use. His award was sponsored by CRDC.

Angus says existing pesticide regulation is based on a 'one-size-fits-all' approach. "My aim is to explore the option of catchment-specific pesticide management to ensure sensitive ecosystems are protected, while still meeting the needs of rural industries."

"Many catchments are unique and should be managed as such," he said.

Also awarded was Warren Conaty, a PhD researcher at the University of Sydney, who believes a new method of irrigation timing for cotton crops involving leaf canopy temperatures may be more effective.

He said cotton growers currently rely on soil/water deficit measurements to determine their irrigation needs. "But it is

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CRDC will evaluate its future role in investing in plant breeding following the announcement of the CSD and CSIRO Plant Industries venture.



Dr Angus Crossan was awarded the CRDC recipient of the science and innovation award for young people in agriculture. He is pictured with Senator the Hon Eric Abetz, Minister for Fisheries, Forestry and Conservation at the awards ceremony.

well established that stressed plants exhibit higher leaf temperatures due to reduced evaporative cooling," Warren said.

"By using infra-red thermometers, leaf temperatures in the canopy can be monitored to determine when a crop is water stressed.

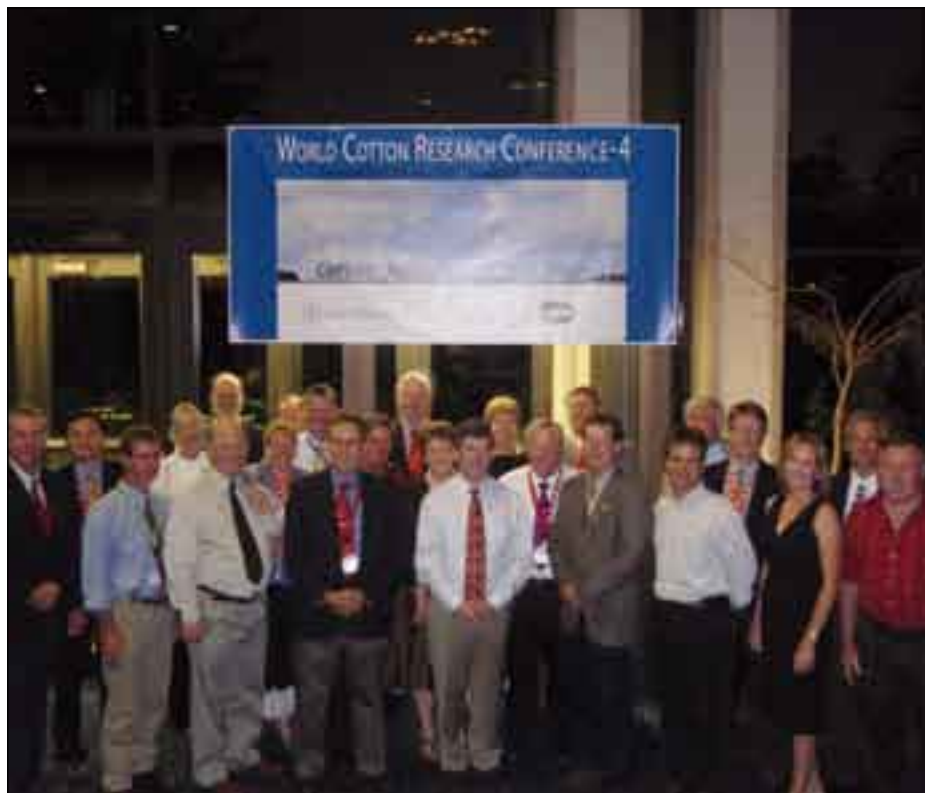
"Water savings can then be achieved by scheduling irrigation at the optimum temperature threshold."

Warren is investigating suitability for Australian conditions of BIOTIC (Biologically Identified Optimal Temperature Interactive Console), an irrigation scheduling tool developed in the United States.

### **WORLD COTTON RESEARCH CONFERENCE 4 – LUBBOCK TEXAS**

The US hosted the fourth World Cotton Research Conference (WCRC-4) in Lubbock between September 10 and 14. This was the fourth time this event has been held since Australia kicked it off in 1994. This year the conference was well attended with just over 600 participants from all around the world.

Australia was well represented with a good cross section of researchers as well as a few growers and industry people. All of the researchers sponsored by CRDC and the Cotton CRC gave papers and/or posters and our industry can be proud of the high quality of these. Gary Fitt and Greg Constable were invited to give plenary ad-



**Australian scientists at the World Cotton Research Conference at Lubbock in September.**

resses on the final morning of the conference and as usual did an excellent job.

Overall the quality of the most of the technical papers and the plenary sessions at the conference were of a high standard. Plenary sessions were held each morning and were followed by up to six consecutive breakout sessions dealing with specific areas of research. For the first time the conference included sessions on extension, ginning and fibre measurement.

Lubbock is a major cotton growing centre with up to 3.5 million acres of dryland and irrigated cotton spreading out across the Texas High Plains. In general the crops looked good but were very late due to a cool start to the season. They will need a warm finish to the season to gain the benefit of the potential that is there. Plantings on the High Plains are now dominated by Fibermax varieties.

It is pleasing to see that there is strong support for continuing the WCRC, with both India and Brazil submitting strong cases to hold WCRC-5 in 2011. An international committee organised by the ICAC met to consider where the next conference should be held and the decision came down in favour of India.

WCRC-5 will take place in New Delhi in 2011.

### **RESEARCH REPORTS PRESENTED**

Fifteen final research reports were presented to CRDC in September. In a day-


long program, researchers represented expertise in research findings ranging from soil fertility, disease and pest management, to rapid measurement of fibre maturity and fineness. CRDC research managers, AC-GRA leaders, cotton producers and many from the research community attended.

Findings from many of the research projects handed down were already being implemented on farm and being incorporated into best practice cotton production and value-chain applications.

The content of these presentations and the likely implications for cotton production and the industry arising from the research are available through the cotton industry extension team. For assistance in accessing the findings in any final research reports, or your nearest extension officer, contact CRDC 02 6792 4088.



### **SPOTLIGHT ON COTTON R&D**

The spring 2007 edition of CRDC's Spotlight on cotton R&D magazine is now available. The spring issue includes a report on the emerging importance of the value-chain, based on research undertaken by Allan Williams in his EMS Pathways project. Allan presented his research findings and report to industry in Moree in July 2007. Also featured in the spring issue is a summary of the latest research in crop protection.

All articles from the winter 2007 and spring 2007 editions are available online. 


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