



Rice CRC Update

Cooperative Research Centre for Sustainable Rice Production
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We are approaching the end of the seventh year of this CRC. I look back



With The Grain

by Rice CRC Director
Dr Laurie Lewin

on the time with mixed emotions but with the knowledge that we have made a difference to the sustainability of the rice industry and have cemented some excellent partnerships along the way. I am particularly pleased that so many of the students are now completing their study and have moved on to new employment.

The past months have seen some important events in the life of the CRC.

Most would now be aware that 2004 has been designated by the United Nations as the International Year of Rice. A very successful Australian launch of the IYR was held in the Australian Parliament House in late March. The IYR is essentially a time to focus on the place of rice in the world community and its importance as a staple for about half of the world's population.

International Year of Rice

Australia is a very small player in the international rice scene but the IYR is a chance to evaluate the contribution of the crop to Australia and our potential to contribute to world rice development. The Australian rice industry has been criticised as a high water user. While it is a large consumer of irrigation water, the industry has been successful through its dedication to innovation, to continued improvement and its contribution to farm and regional prosperity.

The rice industry has done much to move towards environmental sustainability and responsibility. The RGA led environment program, to be delivered through the Environment Champions program, will lead to further improvements in environmental management and lead the world in this initiative. We also have much to offer to world programs in

this IYR. It is now acknowledged that the world rice industry must match productivity increases with improved water productivity and environmental management programs. Our experience in these areas suggest that we have much to offer in stabilising this important world food crop, Good examples are the contributions of the Griffith CSIRO team to the WMO/ UNESCO HELP program, other contributions to water management programs, and the RGA environment program.

The field day on March 5 included displays of CRC work on in areas such as water allocation

Rice Field Day

prediction, remote imaging, cereal chemistry research and determination of soil suitability. Congratulations to the NSW Ag rice breeding team at Yanco for the release of 'Reiziq', a variety bred specifically for the important Middle-East market.

Cold Workshop

An international cold workshop is planned for the 22nd and 23rd July in Canberra. Details are available on the Rice

CRC website (www.ricecrc.org).

A first stage business case for the CRC for Value Added Rice-Based Systems (CRC VARBS) was submitted in March.

New CRC Bid

This application has drawn in some new partners including BRI Australia, Southern Cross University, Healthereis, Terrabyte and the Irrigation Companies. The new bid has a much greater emphasis on combining components of the rice-based system and on post-harvest value adding to boost commercial returns. We have just learnt that the 1st stage submission was successful and the rebid committee have been invited to lodge a 2nd stage submission by 2nd July 2004.

Coleambally Survey

CRC/CSU
PhD student
Andy

Brown has recently launched a survey to gather the opinions of Coleambally farmers on current rice farming issues. Commencing on April 28, its purpose is to finalise and ground truth his previous field work.

The work will culminate in recommendations for agricultural extension which could enhance the sustainability of rice growing. Andy can be contacted on 02-69334329 or email "abrown@csu.edu.au" for more information.



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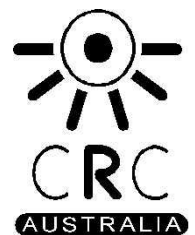
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The Rice Food Experts



LAND & WATER
CONSERVATION



Earlier this year staff from the Adelaide Botanic Gardens obtained some materials from the Rice CRC and other industry groups to set up its "Rice is Life" exhibition in the Museum of Economic Botany. In combination with a Living Rice display in the nearby Victoria House, the exhibition has already been enjoyed by numerous school students and members of the general public. Staff from the Botanic Gardens have expressed their appreciation for our support and on-going advice.

Rice lives in Adelaide Botanic Gardens



Rice Field Day - the Organic way

The CRC held an Organic Rice Field Day at Bill Barnhill's property near Leeton on March 26 which attracted farmers, processors and researchers. The field day was centred around Rice CRC fertiliser trials carried out on the Barnhill property to investigate the response of various rice varieties to the application of different organic fertilisers.

The trials looked at responses from the varieties Quest, Calrose, Pelde and the newly released Reiziq to the application of guano, compost, Alroc, BioAg and four products from Fertico. The trials are incomplete but results will be available after the trial plots are harvested in the near future.

Weed control is a major challenge for organic rice growers and the field day also looked at the various techniques employed to deal with this problem. Long crop rotations and two or three year pasture phases reduce the weed seed bank but other techniques are now available to help farmers overcome the problem. Bill Barnhill recently purchased an Hatzenbichler Original Harrow which is used to cultivate the rice crop early in the growing season. The spring tyne harrows displace the barnyard grass seedlings with very little damage caused to the rice plants.

Trials have shown a 91% reduction in barnyard grass with only 4% damage to the rice. In other weed related trials liquid lime and molasses and a bio-dynamic weed pepper were sprayed at different rates to evaluate the effect on grasses and broad leaf weeds but no significant results have been observed at this stage.

The field day also visited Peter Randall's organic rice crop. Most agreed this crop was very impressive given the fact the Peter had not used any inputs other than a commercially produced product called "Beneficial Micro-Organisms". This is a mixture of various naturally occurring micro-organisms and yeasts which is trickled into the water as it enters the crop. In contrast, Bill Barnhill used guano on his sod sown crop and compost on his combine sown crop. Both farmers had chosen to grow the NSW Agriculture developed "Quest" variety, with a shorter growing season. Mr Barnhill's crop had been under permanent water for only 3 months leading to significant water savings.

The field day also offered an opportunity for farmers to discuss other issues related to the growing and marketing of organic rice.

Cold damage significant

Mr John Lacy (NSW Agriculture) has confirmed what most growers have already heard - significant cold damage has occurred this season, particularly in the Murray Valley, with yields also being lower than expected in the CIA. Cold damage appears to have been worst in the earlier sown crops, with yields of late sown crops often higher, particularly in the MIA. As some of you know, the CRC has a strong emphasis on cold tolerance research in its research programs, with teams based at NSW Ag at Yanco and CSIRO Plant Industry in Canberra. Our thanks to Kathryn Fox (NSW Ag, Yanco) who has kindly provided us with the following update on the cold trials at Yanco this season, for your information.

The 2003/2004 Cold Water Trial has been successful in differentiating between varieties that are sensitive and tolerant to cold temperatures. 103 varieties from various origins (including Australian and international varieties) were tested using the cold water (bore) facility. Both known sensitive and tolerant varieties were included to determine the level of cold tolerance of previously untested varieties.

This is the 2nd season this system has been in place and visual results indicate that management of the trial has been improved.

This improvement is due to the reduction of the water level (from 42cm to 30cm) during the cold treatment and the inclusion of control plants in the experimental design.

The plants were moved to the cold water facility and exposed to the cold water treatment when the panicle was approx. 20mm in length and moved back to the polyhouse at head emergence. Pollen number, anther size, stigma size and flowering date are the important measurements recorded at flowering, whilst at harvest visual sterility, real sterility and plant height are the critical measurements for determining the level of cold tolerance.

Harvest of the control and treatment plants has only just started, however visually the trial appears to have been a success. HSC 55 (a cold tolerant variety from Hungary) had an average visual sterility of 33%, compared to Sprint (a sensitive variety from Russia) with an average visual sterility of 95%. Most of the Australian varieties have not been harvested as of yet, but will be in the near future.

The CRC will continue its cold research during its final Year 8. As mentioned in the Director's Report, the CRC is holding an International Cold Workshop in July 2004 and details on this are available on the Rice CRC website.

