

CEO's Report

The CRC for National Plant Biosecurity will be officially launched on 4 September 2006 at Parliament House in Canberra. Invitations to the launch have been sent out and we hope that all our members, participants and associates will be able to attend this important event. In the two days following the launch, the CRC will run a Plant Biosecurity Symposium around the theme of 'Challenges to Australian Food Security' - read more about the symposium on [page 3 of this newsletter](#). Both the Launch and the Symposium will provide opportunities for our researchers to discuss the CRC's activities with stakeholders and a wider audience. The first day of the Symposium program will explore future directions in plant biosecurity research through CRCNPB's Science and Technology and Education Programs. The second day's program will provide an opportunity for delegates to discuss and debate many current and topical challenges to plant biosecurity research. Sue McKell and Mellanie Balment-Sanders have done a great job in getting these two events planned.

The Centre's Science Committee has invested considerable effort in developing CRCNPB's Annual Operating Plan. This has now been reviewed by the CRC Participants and, once finalised, will provide the CRC with the focus for the coming 12 months. The CRC now has a large number of projects that have either commenced or are in an advanced stage of development. The involvement and commitment of our Participants to Centre projects is high, and the Science Committee will continue their work to develop projects that address the CRC's objectives and provide value to our Participants.

In the past month, an important research collaboration has been developed between CRCNPB and NICTA (National Information Communication Technology Australia Ltd) to undertake research on developing new surveillance tools. The research will be undertaken with the NICTA Autonomous Systems and Sensing Technology Research Program. Dr Darryl Hardie has put together two strong CRCNPB teams that will investigate the potential for new information and communication technologies to improve the capacity of Australia to undertake plant biosecurity surveillance. The Centre's collaboration with NICTA will bring together national experts in plant biosecurity with national experts in ICT research, and offers good synergies for cooperative research.

The Centre is currently calling for the second round of Travel Proposals for 2006 - read more on [page 5 of this newsletter](#); details and application form are also available for [download from our website](#). These scholarships provide an ideal opportunity for CRCNPB members and Participant representatives to enhance their skills in plant biosecurity and to build stronger networks both within Australia and around the globe. Proposals must be received by the CRC office by Thursday 31 August.



Simon McKirdy
CEO

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View from the (arm of the) Chair

93rd Indian Science Congress Hyderabad, Andhra Pradesh 3-7 January 2006



Professor John Lovett

Chair

Eminent agricultural scientist Professor MS Swaminathan, "father of the Green Revolution", visited Canberra in September last year, took part in a number of meetings and, subsequently, invited John Lovett to speak on the topic of plant biosecurity at the 93rd Indian Science Congress.

A written paper entitled "The global challenge of biosecurity: an Australian perspective" was presented on behalf of the CRC for National Plant Biosecurity at the Indian Science Congress on 6 January 2006. The Congress, an annual event for all scientific disciplines, was held on the campus of the Acharya N.G.Ranga Agricultural University in Hyderabad. In the subcontinent's centenary year of agricultural colleges, the Congress theme, "Integrated Rural Development: Science and Technology", signaled the determination of India that its immense rural population should receive the benefits of high technology which are flowing to other sectors of a vibrant economy.

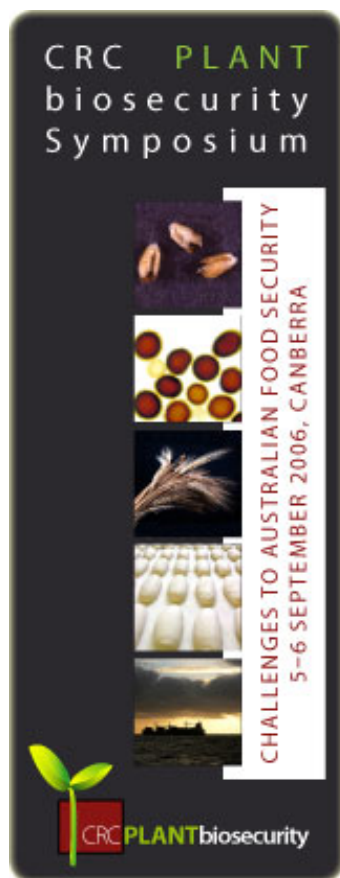
In India, over two-thirds of the estimated 1.025 billion population is agrarian, producing 25% of the nation's Gross Domestic Product and 15% of India's exports from holdings of (typically) no more than 1ha in size. India's rural population will continue to play a vital role in achieving future economic growth; with the infrastructure of major cities already over-stretched, there is an imperative to maintain rural population in rural areas, hence, an emphasis at the Congress on dealing with fundamental issues such as the lack of sanitation.

An estimated 5000 delegates attended the Congress. Emphasizing its significance, the Congress was inaugurated by the Prime Minister of India, Dr Manmohan Singh (3 January) an economist, and addressed by the President of India, Dr APJ Abdul Kalam (5 January). The need for a second "green revolution" was discussed by Professor Swaminathan during his visit to Canberra in September 2005 and was addressed by the Prime Minister in the context of achieving self sufficiency in agricultural production. He identified five components for agricultural renewal: enhancing soil health; water harvesting; access to affordable credit; development and dissemination of technologies; improved infrastructure; and regulation of marketing produce.

Sixty percent of the population of India is aged less than 36; there are 34,000 births a day; in population terms, this is the equivalent of one Australia *per annum*. In this context, a particular feature of the Congress was the involvement of young people, from primary school level upwards. Members of the "National Green Corps", a secondary school activity to stimulate action on environmental issues, were much in evidence.

Emphasising high-tech developments in India, a number of Congress speakers discussed R&D into transgenic crops, for example, the introduction of mangrove genes into rice, with the objective of achieving salt tolerance. Commercial release of salt tolerant rice cultivars is expected by 2008. Work in progress suggests that the same genes may also be effective in promoting salt tolerance in some pulse crops. Transgenic crops are also being developed for drought tolerance and resistance to pests and diseases.

CRC Plant Biosecurity Symposium



Registrations for the CRC Plant Biosecurity Symposium are now open - [click here to visit the registration page](#). The CRC Plant Biosecurity Symposium is planned for 5–6 September 2006 in Canberra to address current challenges to Australian food security. The CRC Plant Biosecurity Symposium will provide a forum for plant biosecurity researchers to meet with government and industry representatives and assess current challenges facing Australian Food Security, focussing on:

- Biosecurity risks to Australian plant production
- Australia's capacity to prevent and detect pest and disease incursions
- Market access for Australia's plant industries
- Food security—today and ten years from now

The symposium's two-day program will explore current issues and future research directions for Australian Plant Biosecurity. A brief overview of the symposium program is provided below; full program details are now available - [click here to visit the program page](#).

Day One (Tuesday 5 September 2006): A look at future directions for Australian plant biosecurity research through the Cooperative Research Centre for National Plant Biosecurity. Presentations on day one of the symposium will be delivered in seminar format, and topics will cover CRC Plant Biosecurity's five research and education programs: Preparedness and Prevention; Diagnostics; Surveillance; Impact Management; Education and Training.

Day Two (Wednesday 6 September 2006): An assessment of current and future challenges facing Australian food security. Presentations on day two of the CRC Plant Biosecurity Symposium will be delivered in relaxed café style with the aim of facilitating open discussion about issues raised in the talks. This second day of the symposium will include a broad range of speakers from industry, government, research, education to talk about topical issues in plant biosecurity, including recent Australian case studies:

- What are the real plant biosecurity risks?
- Australia's plant biosecurity diagnostic capability: today & 10 years from now.
- The role of plant biosecurity research in Australia's surveillance system.
- Plant biosecurity research: the future for Australian trade.

[Read more about the CRC Plant Biosecurity Symposium online...](#)

Sponsorship Opportunities for the CRC Plant Biosecurity Symposium are available now. Contact us to obtain a copy of our sponsorship prospectus—phone +61 (0)2 6163 6200 or email your name and contact details to symposium@crplantbiosecurity.com.au.

Research Update (Diagnostics Program)

**Dr Gary Kong**Program Leader,
Diagnostics Research

The challenge of securing our animal and plant industries from invasions of emergency pests and pathogens has increased with growth in the global movement of people and produce. The protection activities we implement - surveillance and preparedness - underpin biosecurity policy and underpinning these is our diagnostic capability. How do we recognise an emergency plant pest (EPP) from the myriad of pests and pathogens already present in Australia? And how quickly can we recognise a threat so that the processes of containment can begin to prevent spread? Timely and capable diagnoses are critical to our ability to react, contain and protect our agricultural industries.

So how capable are we? How well do our diagnostic abilities meet the demands of surveillance capability? Without wanting to reflect too much on the recent examples of Fire Blight and Citrus Canker, most would agree that we can do a whole lot better. Diagnostics requires expertise, resources, networks and most of all, good accessible information. Currently, there is no single web-based repository of information regarding EPPs nor does any inventory of available diagnostic information exist. Information on many EPPs is mingled with information on endemic species, fragmented across a number of databases, locked up in published and unpublished literature or resides in the minds of experts. Accessing diagnostic information is an obstacle course bound to delay any reaction to a suspected incursion. Then there is the diagnostic information itself. How good is it? Does it meet the needs of an accurate and speedy identification? We simply don't know the full answer to this, but extensive information is available for some organisms and is minimal for others, because information is gathered in a reactive way and we tend to know a lot about an

organism after there has been an incursion. So in looking for diagnostic information, you may find that in some instances, the cupboard is bare.

With these points in mind, I see the Diagnostic Program helping Australia move towards having an easily accessible diagnostics database for EPPs, that contains quality diagnostic information and which provides us with access to a national and global network of expertise. In an environment where expert capability is dwindling, there is an urgency to generate new information to fill in the gaps, to build on existing diagnostic information and to develop diagnostic platforms that are less dependent on individual expertise. DNA-based technologies have the potential to deliver fast, accurate diagnostic data, but in order to reduce reliance on specific capability, these techniques need to have broad application and be robust, cheap and simple to use. So in addition to organising existing diagnostic information into a web-based tool, the Diagnostics Program will support the development of diagnostic data for specific EPPs and explore the possibilities for developing diagnostic technologies that have general application.



CRC Plant Biosecurity Online

CRCNPB has launched its new website at: crcplantbiosecurity.com.au. The site will continue to grow over time, and we welcome your comments and suggestions to Sue McKell (s.mckell@crcplantbiosecurity.com.au).

Travel Grants

The second (and final) round for CRC Plant Biosecurity research travel grants for 2006 is now open to CRC members and researchers of Participant organisations.

Proposals should address the CRCNPB Strategic Plan, available for download from the CRC's website at crcplantbiosecurity.com.au. Applications will be assessed on their merits against the following criteria:

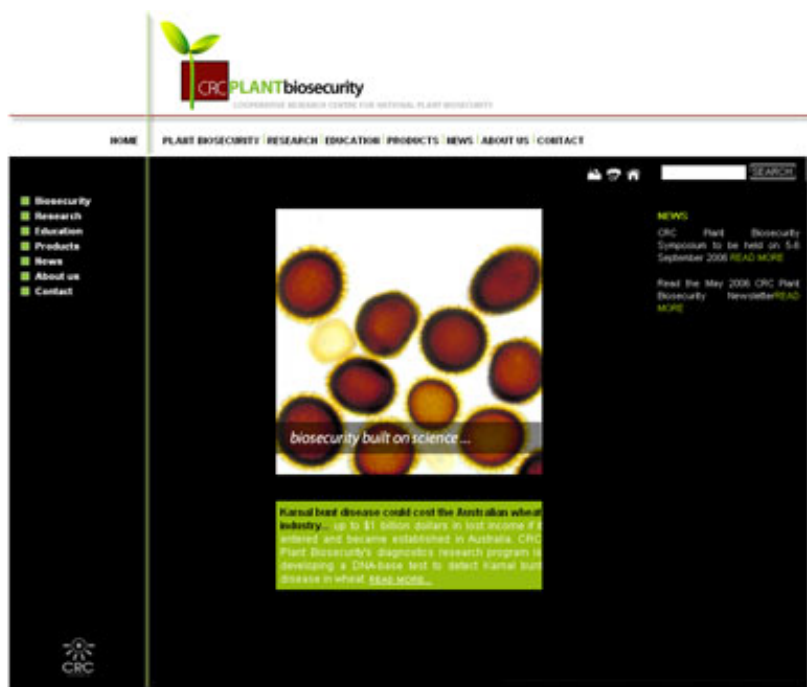
- appropriateness of the travel in relation to CRCNPB's objectives;
- value of the expected outcome to Australia's plant biosecurity system;
- demonstrated achievements of the applicant in the context of his/her career to date; and
- level of contribution made from a participant organisation towards the travel.

The potential for the travel to initiate or consolidate long-term collaborations and facilitate the development of the applicant's career will also be considered.

Travel proposals can seek funding up to \$5,000. Travel proposals will be assessed and awarded by the CEO in consultation with the Science Committee.

Proposals should be submitted using the Travel Proposal template, available for download from the CRC's website. Proposals must be submitted to CRCNPB's Office Manager, Mellanie Balment-Sanders by email (mbalment@crcplantbiosecurity.com.au) by close of business, Thursday 31 August. Researchers are encouraged to consult their relevant Program Leader with any questions regarding their travel proposals.

Visit the [research](#) page on our new [website](#) to download travel application forms



Visit CRC Plant Biosecurity online: crcplantbiosecurity.com.au

Researcher Profile: Darryl Hardie



Dr Darryl Hardie

Program Leader,
Surveillance Research

Profile: Darryl's preferred bubble wrap strategy indicates that he is **Pinch Popper**. This suggests that he is light-hearted and carefree. Darryl is inquisitive, loves new things and enjoys life to the fullest. If he weren't already a program manager with CRCNPB, Darryl would be well-suited to a career as an investigative journalist.

Where he comes from: He works: at the Department of Agriculture and Food, Western Australia, as a Surveillance Entomologist. **Describes his career path in one sentence as:** One could say that he has graduated 3 times undergraduate, honours and postgraduate with the last degree having the most impact on his career which has allowed him to become involved with surveillance at a National level.

What he does at CRCNPB: He works as: Leader, Program 3: Surveillance. **Decided to be involved with CRCNPB because:** he was volunteered by his Department and he would like to see surveillance become more technologically based and this has been the main driver for him pursuing an ongoing role in the CRC. **Would you like to see:** real collaborative effort between the States and the Commonwealth on surveillance so that initiatives like the National Plant Surveillance Reporting Tool (NPSRT) develop to facilitate trade between the States and with other countries. The CRC is ideally placed to develop the surveillance science to underpin this and other initiatives. Also, most surveillance staff in Australia are operational so the main challenge facing the surveillance area is the lack of research scientists involved and the ageing science population. The CRC will need to train a new generation of surveillance scientists for plant Biosecurity. **Expectations for the CRC include:** to be refunded in seven years.

What you should know about him: Preferred mode of exercise: Cycling to and from work around the Swan River. It is a great stress reliever after intense days in the office.

Indicates that his preferred bubble wrap popping strategy is to:

- 1) Pop each bubble individually, starting at the top and moving across the rows to the bottom of the sheet
- 2) Randomly choose bubbles to pop, slowly squeeze the air out of each bubble for maximum effect while displaying the pinched bubble for all to see
- 3) Throw Bubble Wrap ® material on the floor and stomp on it
- 4) Grasp it firmly in both hands and twist, popping the bubbles in rapid fire succession
- 5) Prefer to pop bubbles only from left to right or right to left
- 6) Always keep a stash of Bubble Wrap ® material on hand for quick pick-me-up or stress reliever
- 7) Quickly get on the internet and research what the implications for answering any of the above questions might be.