



THE CRAWFORD FUND

*For a Food Secure World*

25 years of doing well  
by doing good

**Annual Report  
2011–12**



## SIR JOHN CRAWFORD

*The Fund was named to honour the life of Sir John Crawford, a remarkable Australian who fervently supported international agricultural research for rural development and contributed greatly to the establishment of the CGIAR and its associated research centres. He was also, along with Mr James Ingram and the Hon Malcolm Fraser, one of the principal architects of ACIAR.*

*Born in Sydney in 1910, Sir John began his role in the public service during the Second World War and became Director of Research at the Department of Post-War Reconstruction in 1943. After the war he was appointed as Director of the Bureau of Agricultural Economics, and then Secretary of the Department of Commerce and Agriculture. Later, as Secretary of the Department of Trade, he played a prominent role in reshaping Australia's trade relationships with the United Kingdom and Japan. With counterparts in Japan and the United States, he helped construct an Asia-Pacific economic and policy community.*

*In 1960 Sir John joined the Australian National University as the inaugural Director of the Research School of Pacific Studies and subsequently served as Vice-Chancellor and Chancellor. He was instrumental in setting up the Australian Government's international aid agency in the 1970s. In being awarded the title of 'Australian of the Year' in 1981, then Governor General Sir Zelman Cowen described Sir John as "one of the foremost architects of Australia's post-war growth."*

*Sir John's international contribution from the 1960s through to his death in 1984 was equally remarkable: as an adviser to governments in India, Indonesia, Papua New Guinea and elsewhere, and to the World Bank; and as chair of the CGIAR's technical advisory committee. His wisdom is sorely missed.*

# What is the Crawford Fund?

Established in 1987, the Crawford Fund is celebrating 25 years of doing well by doing good in 2012. We are a non-profit, nongovernmental organisation (NGO) dedicated to raising awareness of the benefits to developing countries and to Australia of international agricultural research. The Fund encourages investment by governments and the private sector in such research and its applications.

Why is there a need for our work? In short, the majority of people in less developed countries live in rural areas and depend on the land for their employment and food security. As such, support for agricultural research is one of the most effective ways for Australia to help the environment, economies and people — food producers and consumers alike — of developing countries.

We aim to sustain international agricultural research for the decades to come by promoting and supporting research and development activities in which Australian organisations and companies are active participants. We also support the Australian Centre for International Agricultural Research (ACIAR) and the Australian Agency for International Development (AusAID), as well as the centres of the Consultative Group on International Agricultural Research (CGIAR) and other international research centres. The Fund depends on grants and donations from governments, private companies, corporations, charitable trusts and individuals.

The Fund carries out its work through a range of activities. Our public awareness program, which includes journalist visits, media stories and innovative events, increases understanding of the importance and potential of international agricultural research. Our training program offers practical, highly focused instruction to men and women engaged in agricultural research and management in developing countries.

Those involved with the Crawford Fund share our vision of a better world realised through the dedicated efforts of agricultural scientists leading research, development and training in developing countries. Through their work, we can achieve more productive and sustainable agriculture, less poverty and hunger, and a more secure world.

# From the Chair and the Executive Director

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## IT IS ALL ABOUT PEOPLE

The Crawford Fund is about people: the developing country scientists, policy-makers and agriculturalists who join its training programs; Australian scientists, planners and officials who give of their time, freely, to contribute to such training; its State and Territory Coordinators and Committees who act in a voluntary way to help form the partnerships between trainers and trainees, drawing on a wide network within their jurisdictions; its unpaid Board of Directors of highly experienced retired politicians, public servants, tertiary administrators and farmers, who ensure the Fund has the highest standards of governance; journalists interested in international agriculture and news stories about the role of agricultural research and training, if they are given the chance to see on-the-ground evidence through our 'Seeing is Believing' programs; and four or five staff, all but one of whom operate on a part-time and/or semi-voluntary basis.


People, therefore, form a natural focus for this Annual Report on the Fund: from reference to an autobiography of Derek Tribe, the founder of the Fund which is to be distributed at the 2012 parliamentary conference; listings of our board members, coordinators and staff; word pictures of the increasing number of young Australian scholars and scientists attending our parliamentary conferences; and longer pieces on some of the 500 developing country people that the Fund has trained during the year.

These trainees provide the best evidence of the benefits of international agricultural research and training. Their stories form an organic link between the Fund's public awareness and capacity building purposes, and take up the bulk of the Annual Report. As the stories show, the trainees benefit directly through enhancement in their career progression; the institutions to which they return benefit from the new ideas, approaches and methodologies they bring back with them; and the communities they serve benefit from the resulting enhanced products and services the institutions can provide as a consequence of the training. The Fund's involvement with real training also ensures that our promotional efforts remain anchored to the real world of developing country agriculture.

Their examples also illustrate the broader contribution, made by others in the international agricultural research network, to a food-secure world. An unshakeable belief in the potential of that contribution, articulated by both Sir John Crawford and Professor Derek Tribe, is what gets us up in the morning and has kept the fund focused for 25 years.



John Kerin, Chairman



Denis Blight, Executive Director



**THE HON JOHN KERIN AM  
FTSE, CHAIRMAN OF THE  
CRAWFORD FUND**



**DR DENIS BLIGHT AO  
FRSA, EXECUTIVE  
DIRECTOR OF THE  
CRAWFORD FUND**



# Overview

## TWENTY FIVE YEARS OF DOING WELL BY DOING GOOD

'Doing well by doing good' was the title of Derek Tribe's first book on the subject of international agricultural research.<sup>1</sup> It was the founding philosophy of the Crawford Fund whose early history was intertwined with the last 15 years of Derek's life. The organic link between Tribe and the Fund is reflected in the title of his biography, published this month, by agricultural scientist Professor J. Lindsay Falvey: *Derek Tribe, International Agricultural Scientist, Founder of the Crawford Fund*.

We are sure that 25 years after he set the organisation up as an initiative of the Australian Academy of Technological Sciences and Engineering (ATSE), Derek would be satisfied with its progress. Although he was impatient with attention to detail, he was passionate about the potential contribution of science to a better world, and to the practical improvement of the human condition. He started the Fund, in concert with ATSE and the CGIAR Secretariat, as Australia's national support organisation for international agricultural research with a primary purpose of advocacy.

Over the last 25 years the emphasis on advocacy – always seen as an exchange of information and knowledge sharing rather than lobbying – has been balanced by an increased investment in the training of agricultural scientists, technicians and policy-makers from the developing world. Those wishing to appreciate the history of the Fund over its first 25 years may need to wait a little longer for a comprehensive account covering the full period, but a lot can be learnt from Falvey's book and the two most recent quinquennial reviews of the Fund (available on the Fund's website). Glimpses of its recent history can be gained from this anniversary Annual Report of the Fund for the financial year 2011–12.

Broadening support for international agricultural research was Tribe's driving objective: not only to persuade farmers and consumers in Australia that it was in their interests to see increased investment in international agricultural research, but also to persuade

governmental and nongovernmental aid agencies that agricultural research and training was one of the most effective forms of development assistance. It is aid that works – a theme that was taken up by the Independent Review of the Australian Aid Program due at least in part, we like to think, to our evidence-based advocacy. The Fund's latest policy work to support our position is the series 'A wider canvas for international agricultural research', with policy briefs on emerging trends. These were launched this year. The advocacy continues today in the Fund's public awareness program under the leadership of Cathy Reade.

The Fund's annual development conference has been a centrepiece of its public interface for most of its 25 years. The keynote speakers at these events make a somewhat eclectic though eminent group, and included: Dr Cristián Samper, then Director of the National Museum of Natural History of the Smithsonian Institution; Professor Steve Hopper, then Director of the Royal Botanic Gardens, Kew; Professor Per Pinstrup-Anderson, World Food Prize winner; Dr Sylvia Earle, deep sea explorer from the National Geographic Society; M.S. Swaminathan, the father of the Green Revolution in India; and Dr Gordon Conway from the Rockefeller Foundation. These distinguished speakers have all added their voices to the Fund's efforts to focus national attention on food security issues and the importance and impact of research for development. The 2011 conference on 'The supermarket revolution in food' is described on page 4.

The annual conference is only part of a broad public awareness program, much of it based on synergies with networks of international and Australian agricultural research, development assistance agencies and the media, built over the last 25 years. The Fund is now invited to bring its public awareness skills to bear on other conferences and events, such as the 5<sup>th</sup> World Congress on Conservation Agriculture, described on page 5; and the 2012 national conference of the Australian Agricultural and Resource Economics Society, also on page 5.

International visitors also serve a public awareness purpose by exposing Australians to prominent speakers, such as World Food Prize winner Professor Per Pinstrup-Anderson; Dr Shakeel Bhatti, the inaugural Secretary of the International Treaty on Plant Genetic Resources; Dr Howarth Bouis, Director of Harvestplus; and Professor David Hawkesworth, a leading fungal scientist. A list of such visitors over the last 25 years would occupy a large part of a Who's Who of international agriculture.

<sup>1</sup> *Doing Well by Doing Good – Feeding and Greening the World*. D.E. Tribe (1991), Pluto Press in association with the Crawford Fund.

Master Classes are another feature of the Fund's work. Begun in 1992 at the initiative of ATSE Fellow Bruce Holloway, they focus on key topics in agricultural research and development. They are delivered to groups of about 15 middle- to senior-level scientists, research managers and policy-makers. The first Master Class focused on agricultural biotechnology. There have been 43 since, on topics as varied as fish health, land care, research management, communication, impact assessment, climate risk, plant breeding, plant health and aquaculture issues. Some 850 people have been trained in Master Classes.

The Fund has also supported specialist training as needs have been identified by its international network of advisers and volunteers. From its first such training activity in New South Wales (NSW) in 1989 up to the end of June 2012, the Fund had trained about 8200 people in workshops and group training activities. The Fund also trained nearly 500 individuals, either in their own countries or in Australia. The pie charts on page 10 of this report illustrate the diversity of training topics supported over 25 years, and reports in this publication detail training and its impact in 2011–12.

As Derek Tribe knew, the success of training across cultural boundaries requires sensitivity and a long-term commitment on the part of the trainer. Professor Lester Burgess is one of a number of Crawford Fund trainers who has demonstrated such characteristics. He has provided training for Crawford Fund Master Classes and workshops since the late 1990s. His story is told on page 16.

Part of Tribe's vision was for an independent Fund in close association with ATSE. In 2008, the Fund was incorporated as a separate not-for-profit company, with ATSE as its sole and founding member. He also saw the need for the Fund to be eligible for tax-deductible donations, a privilege it enjoyed as a division of ATSE, and which it was granted in its own right when it recently gained Deductible Gift Recipient Status.

A long-standing feature of the Fund is its federal character. Its voluntary State and Territory Committees extend the organisation's Australian network (now covering every State and Territory), attract interested members of the community into its work, implement most of its training programs and ensure that it does not become locked into a national focus. State governments have been prepared to provide financial support for the Fund – recognition, perhaps, that it is doing well by doing good.

Lastly, the special relationship we have with the ACIAR, also celebrating an anniversary this year – its 30<sup>th</sup> – bears mentioning in this, our 25<sup>th</sup> anniversary year. In our public awareness and training activities, we are able to complement and supplement ACIAR's work, for the benefit of developing countries and our nation. Other long-term Australian partners and supporters include AusAID, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Grains Research & Development Corporation (GRDC), many universities, and the research institutes and individuals who have made our training and public awareness work possible over our 25 years. We thank them all and look forward to ongoing collaboration in the years to come.



**PARTICIPANTS IN THE MASTER CLASS ON 'MANAGEMENT OF CLIMATE VARIABILITY' IN MOROGORO, TANZANIA – SEE PAGE 12**

# Public Awareness Program

The Crawford Fund's public awareness program is about people – from its Director Cathy Reade who is recognised as the linchpin of the program, through the nationally and internationally renowned speakers who participate in its conferences and other events, scientists such as Dr Gabrielle Persley who sets aside time in her busy international schedule to write thoughtful analyses of the issues in international agricultural research and beyond, to the journalists who go beyond the normal limits to report stories of human and scientific interest in the media.

Over the past year, the Crawford Fund's public awareness program has included another highly successful annual development conference, the launch of a new series of research briefs, support for visits to Australia by world leaders in international agricultural research and development (R&D), a series of 'Seeing is Believing' journalist visits to developing countries, and promotion in the media of significant developments and key issues in agricultural research. These efforts complement meetings and briefings to explain the impact and effectiveness of improved policy and research for agricultural development, as well as stories around our own training program. This section provides program highlights from July 2011 to June 2012.

## PUBLIC EVENTS

### *The Supermarket Revolution in Food*

In August, the Crawford Fund's 2011 annual development conference discussed the growing impacts (both good and bad) of supermarkets on consumers, producers and traders in Australia and the developing world, and the global implications of supermarket dominance for food security and trade. A range of other issues related to the food marketing chain were also

discussed. The conference was held in Parliament House, Canberra, and featured leading international and Australian speakers. It was attended by politicians, including two Cabinet ministers and members of the Opposition front bench, and attracted national media coverage.

The conference began with a presentation by President Kuroda of the Asian Development Bank, who gave an overview of the issues. He argued that, if markets work inclusively, effective food supply chains can be a major force in improving food security. This was followed by an economic analysis of the rise and rise of supermarkets by the leading international scholar in the field, Professor Thomas Reardon. Other presentations provided various perspectives from both Australia and the developing world, and asked what effect the supermarket revolution has had on consumers, producers and traditional retailers. Related issues, such as market access, cooperatives, value chains and logistics were discussed, as well as the costs, benefits and policy implications of different business models. The conference also considered the opportunities for agricultural research to address the challenges that had been identified.

The conference's findings have implications for Australia's aid program, both in terms of prioritising agricultural R&D generally and, more specifically, in the provision of effective assistance to national, regional and global food chains. It demonstrated that Australia's agricultural R&D has the potential to make contributions to food security throughout the whole food chain. ACIAR already has programs in this area, some in partnership with AusAID, and the recent review of the Australian aid program provides a context in which such support can be explored further. Proceedings of the conference are available for download from our website.



**IN AN INTERVIEW WITH RADIO NATIONAL BREAKFAST, PROFESSOR THOMAS REARDON REPORTED THAT, "CHINESE SUPERMARKETS HAVE RISEN TO DOMINATE AT LEAST HALF OF THE FOOD SALES GOING INTO THE MAIN CITIES OF CHINA."**



### ***Reinventing farming with conservation agriculture***

Conservation agriculture (CA) uses the principles of minimal soil disturbance, mulch soil cover and crop rotations to increase farm yields and income, while reducing the need for labour, fuel consumption and chemical inputs on the farm. The impacts of CA have been seen in many regions of the developing world, with benefits to farmers and the environment. The 5<sup>th</sup> World Congress on Conservation Agriculture and International Farming Systems Design Conference was held in Brisbane from 26 to 29 September 2011. The conference was organised by ACIAR and GRDC.

Over 500 participants from more than 70 countries discussed the application of CA principles to diverse farming systems, ranging from large-scale, high-tech commercial enterprises to smallholder farms in developing countries. They were joined by the then Australian Foreign Minister, Kevin Rudd, and the Parliamentary Secretary for Agriculture, Fisheries and Forestry, Mike Kelly. Delegates heard how CA practices have spread rapidly to cover about 8% of agricultural crop land worldwide. Australia has the highest adoption levels, with 100% uptake in some regions. The approach is now a core element in the Food and Agriculture Organization of the United Nations (FAO) strategy for the sustainable intensification of smallholder crop production.

As part of its support for the congress, the Crawford Fund managed a successful media campaign that resulted in around 50 interviews with conference speakers and extensive coverage in national television, print and broadcast media. In radio and television interviews, Dr Theodor Friedrich, the FAO's expert on CA, expressed the view that governments around the world should provide sustained policy and institutional support to encourage further adoption. "Particularly in developing countries where the effects are most needed, governments should make a firm commitment to encourage and support

conservation agriculture," he explained. "They should do this through policies including the mainstreaming of public advisory, research and education services."

### ***The economics of agricultural development***

The 2012 national conference of the Australian Agricultural and Resource Economics Society (AARES) was held from 7 to 10 February in Fremantle. In over 200 presentations, the conference addressed a wide variety of topics, such how to assign a monetary value to land-use decisions and whether Australian consumers are prepared to pay for carbon-neutral food. The Crawford Fund again provided media support for this event, to raise awareness of food security issues and the important role played by agricultural policy. Interviews and media coverage were secured for conference speakers such as World Food Prize winner Professor Per Pinstrup Andersen (see International Visitors section), Dr Will Martin from the World Bank, and Dr Phil Pardey from the University of Minnesota, as well as speakers from developing countries.

## **INTERNATIONAL VISITORS**

### ***The future for food prices***

International economist and World Food Prize laureate Professor Per Pinstrup-Andersen visited Australia in February, as keynote speaker for the AARES annual conference (see Events section). He also spoke at the National Forum on Food Security in Adelaide. The Crawford Fund managed media relations for him during his visit. The Professor warned that increased food price volatility is likely to be with us for the foreseeable future and that some national governments are making things worse with, for example, protectionist policies. However, catastrophic famines do not necessarily lie ahead. He believes the solution is to boost the ability of farmers in Africa and Asia to increase their productivity. "The whole doomsday scenario that the world is running short of the capability to produce more food for an increasing population



**ROBYN MCCONCHIE FROM ABC COUNTRY HOUR  
INTERVIEWING CA EXPERT DR THEODOR FRIEDRICH**



**PROFESSOR PER PINSTRUP-ANDERSEN ADDRESSES THE  
NATIONAL FORUM ON FOOD SECURITY IN ADELAIDE**

is simply not true,” he asserted in an interview with *The Australian*. “We might like to think that Africa and Asia can never grow enough food to feed their own populations, but that is not the case.”

### **Shared access to plant genetic resources**

Dr Shakeel Bhatti’s visit to Australia in March was an opportunity for the Fund to raise awareness of the importance of conserving biological diversity and sharing access to it. Dr Bhatti is inaugural Secretary of the International Treaty on Plant Genetic Resources for Food and Agriculture at FAO. The Treaty provides members with access to a global gene bank, containing around 1.5 million samples of genetic material of 64 crops, stored in collections around the world. Member countries can use this material freely in their breeding programs and produce crop plants that better withstand the effects of pests, diseases and climate change. The Crawford Fund arranged Rural and National Press Club appearances and a series of meetings and seminars for Dr Bhatti in Melbourne, Adelaide, Canberra and Sydney with key stakeholder groups including AusAID, ACIAR, the Department of Agriculture, Fisheries and Forestry (DAFF), the Department of Foreign Affairs and Trade (DFAT) and GRDC, and media outreach that resulted in national media coverage for these important issues.

### **Fighting the hidden hunger**

A lack of vitamins and minerals affects the health of more than two billion people worldwide. Such micronutrient malnutrition, sometimes called ‘hidden hunger’, can be prevented by breeding crops with improved nutritional content (biofortification). In June, the Crawford Fund arranged for some of Australia’s top biofortification specialists to meet with Dr Howarth Bouis, Director of HarvestPlus. HarvestPlus is a non-profit organisation based in Washington, D.C., which leads a global effort to breed and

disseminate biofortified staple food crops. Scientists from Australian universities such as Adelaide and Flinders met with Dr Bouis to discuss Australia’s contributions to the global biofortification effort and consider future partnerships. The Crawford Fund publicised this visit to the media, raising national awareness of biofortification as one of the best tools we have to fight hidden hunger.

### **Fungi and food security**

In July 2011, the national press reported that more needs to be done to discover, name and preserve the vast array of fungal species in Australia and elsewhere. This was the view of leading fungal scientist, Professor David L. Hawksworth of London’s Natural History Museum, Honorary President of the International Mycological Association. The Crawford Fund helped publicise the Professor’s views during his visit to Australia to speak at the International Botanical Congress in Melbourne. “Downy mildews, filamentous fungi, lichens, moulds, mushrooms, slime moulds, water moulds and yeasts all play a critical role in the way our planet operates,” the Professor explained.

## **JOURNALIST VISITS**

The Crawford Fund’s public awareness campaign supports visits by Australian journalists to agricultural research projects throughout the developing world. These ‘Seeing is Believing’ visits provide the journalists with an opportunity to report with first-hand accounts of work to improve agriculture, fisheries and forestry in developing countries through research and training. As Cathy Reade, the Crawford Fund’s Director of Public Affairs and Communication, explains, “The visits not only provide the journalists with an opportunity to learn about and report widely on food security projects in developing countries, but also help hone their skills, often under very difficult circumstances.”



**SHAKEEL BHATTI, WHO ADDRESSED THE NATIONAL PRESS CLUB DURING HIS AUSTRALIAN VISIT**

“ **Micronutrient malnutrition, sometimes called hidden hunger, can be prevented by breeding crops with improved nutritional content** ”



### ***'Seeing is Believing' in Kenya***

Laura Poole from ABC Rural and Catherine Miller from Rural Press visited Kenya in November on a 'Seeing is Believing' visit. The journalists visited a range of research projects, supported by ACIAR, CSIRO and others, and attended a Crawford Fund biosecurity Master Class (see Training section). They reported back in a series of print, radio and online articles that highlighted the importance of international agricultural research in finding long-term solutions to the food crisis currently gripping East Africa. Last year's Crawford Fund-supported visit to Kenya by ABC TV's 'Catalyst' program resulted in features on livestock biodiversity conservation and UG99 wheat rust, which were aired in July and August 2011.

### ***'Seeing is Believing' in Indonesia***

In July 2011, support from the Crawford Fund and the DFAT Australia Indonesia Institute enabled Helen Brown, ABC's Jakarta correspondent, to travel to Aceh, the Indonesian region devastated by the 2004 tsunami. She visited local projects designed to improve food security, including an aquaculture rehabilitation project funded by ACIAR and AusAID, and the development of a group for women in agriculture. Her reports were aired on both ABC TV and radio channels.

## **MEDIA AWARDS**

The Crawford Fund's Director of Public Affairs and Communication, Cathy Reade, was once again asked to judge the International Federation of Agricultural Journalists' (IFAJ) Yara award for sustainable agriculture reporting. She has been associated with the Crawford Fund since 1989 and has a long history of interaction with the Australian media on food security issues. That connection brought Cathy to the attention of IFAJ. The judging panel chose Kerry Staight, from ABC TV's 'Landline' program for the award. Her winning story, 'The Future of Food', was broadcast in June 2011 and featured interviews with delegates at the Crawford Fund's

2011 conference 'A food secure world: challenging choices for our north'. Kerry is a former participant in the Crawford Fund's 'Seeing is Believing' visits to developing countries. Cathy said, "I am impressed to see Australian journalists, and journalists who have taken part in 'Seeing is Believing' visits, so well represented in these international awards." The Crawford Fund is currently working with the Australian Council of Agricultural Journalists to develop and launch a Crawford Fund journalist award for food security reporting.

## **MEDIA HIGHLIGHTS**

A few of the media stories that were facilitated by the Crawford Fund are described here. A full listing of updated media coverage is provided on our website – the Fund's public awareness program maintains an ongoing media effort to highlight food security, training and agricultural R&D developments. The website also provides weekly highlight stories on food policy and agricultural training by the Crawford Fund and our partners. We now have an active Twitter presence @CrawfordFund.

### ***The Australian International Food Security Centre***

At the Commonwealth Heads of Government Meeting in October 2011, the Prime Minister of Australia, the Honourable Julia Gillard, announced the establishment of the Australian International Food Security Centre (AIFSC), based within the ACIAR. Mellissa Wood, formerly Director of Operations for the Global Crop Diversity Trust, has been appointed as director. The new centre's emphasis is on the delivery of improved technology, strengthening links between research and extension, and developing long-term partnerships between the public and private sectors. The Crawford Fund has welcomed this development, which is further evidence of the growing recognition finally being given to the importance of food security and international agricultural research.



**ABC's LAURA POOLE (FRONT) MEETS KENYAN WOMEN INVOLVED IN ACIAR'S SIMLESA PROJECT DURING HER 'SEEING IS BELIEVING' VISIT**



**ACEH FARMERS BEING INTERVIEWED BY ABC's JAKARTA CORRESPONDENT, HELEN BROWN, FOR ABC TV AND RADIO REPORTS**

The centre has an international focus and its first priority is sub-Saharan Africa. The Crawford Fund's Research Study Director, Dr Gabrielle Persley, chaired the AIFSC's strategy working group. She explained, "Achieving the levels of productivity possible in African agriculture requires accelerating research delivery and adoption of innovations so as to increase food availability. But it's not just about productivity. The centre will also focus on enabling better market access for smallholder farmers and livestock keepers and give new attention to increasing the nutritional quality of food and reducing post-harvest waste."

The Crawford Fund is now assisting with the development of an international conference on African food security, to be held in late 2012, which will help establish partnerships and priorities for the centre.

Since its inception, the Fund has been using the media to raise awareness of the AIFSC and its role. In TV, print and radio interviews throughout the year, the Crawford Fund's Executive Director, Dr Denis Blight, and Dr Gabrielle Persley commented on the implications of this exciting development.

#### ***Press briefings on crop diversity***

Valuable crop genetic diversity that is vital to future food security is being lost at a worrying rate. In 2012, two televised National Press Club events, supported by the Crawford Fund, raised awareness of this issue. In January, former Crawford Fund Chairman (also former Australian Deputy Prime Minister), the Honourable Tim Fischer, discussed food security and his new position on the board of the Global Crop Diversity Trust, whose mission is to protect the world's food crop varieties. "Worldwide, preserving the original genetic material in our food crops matters a great deal," he explained. "It goes to the core of the future of agriculture and preventing famine."

In March, Dr Shakeel Bhatti, Secretary of the International Treaty on Plant Genetic Resources for Food and Agriculture at FAO, gave briefings to both the National Press Club and the Victorian Rural Press Club. "About 75% of the world's crop biodiversity has been lost since 1900," he said. "Our mission is to protect what we have left for the benefit of the present and future generations." Their comments were covered widely in the Australian national media.

#### ***International Women's Day***

Each March, the Crawford Fund highlights the crucial role women play in food security for International Women's Day. This year, the Crawford Fund's NT Committee Coordinator, Tania Paul, was interviewed by national and regional radio stations, and spoke of her work in developing countries, including East Timor and South Africa. Tania has worked for both the Fund and Charles Darwin University, looking at issues such as water supply and biological control. "I've spent time in Timor and Indonesia and one of the things that strike me is the very difficult lives that women have there," she said.

#### ***Achieving food security in the face of climate change***

In the lead up to the UN Climate Change Conference in Durban, South Africa, the Global Commission on Sustainable Agriculture and Climate Change released a set of evidence-based recommendations for policy-makers on how to achieve food security in the face of climate change. This independent global commission comprised senior scientists and high-level government advisers, including Dr Megan Clark from CSIRO. The Commission aims to build a consensus on a clear set of interventions across the entire food system to confront the threats to food security from climate change, rising populations, chronic poverty and volatile markets. The Crawford Fund assisted with the Australian media effort to launch their report, resulting in Australian radio and television coverage for the Commission's findings.



**CROP GENETIC DIVERSITY IS VITAL TO FUTURE FOOD SECURITY**

“About 75% of the world's crop biodiversity has been lost since 1900”

### ***The supermarket sweep***

The Crawford Fund's annual development conferences continue to attract national media attention. 'The supermarket revolution: good, bad or ugly for the world's farmers, consumers and retailers?' sparked debate in the media about how the dominance of supermarkets over food chains and their rapid spread across Asia is reshaping farming systems and causing the demise of the family farm. There was also publicity for 'Plant breeders without borders' the brainchild of Victorian plant breeder Anthony Leddin. Anthony was one of 12 young scientists whose attendance at the conference was supported by the Fund. He used the occasion to launch his idea that plant breeders should be sent abroad to offer their skills in the developing world, just as doctors are by Médecins Sans Frontière.

### ***Youth Ambassadors for communication***

The Crawford Fund continues to support the Australian Youth Ambassadors for Development (AYAD) program, an AusAID initiative that supports skilled young Australians to live, work and contribute to development in Asia, the Pacific and Africa. In 2011–12, Jane Hawtin completed her 12-month placement as Communications Officer at Biosciences Eastern and Central Africa (BecA); Andrew Nguyen took up a position as Social Media and Communications Support Officer with the International Livestock Research Institute (ILRI) in Vietnam; Christopher Mesiku was placed with the World Agroforestry Centre as a Communications Officer in Kenya; and Lee Davelaar worked as an Agricultural Knowledge Management Officer at the International Water Management Institute (IWMI) in Ghana. We now have a display on the AYAD program at our annual food security conference.



**LEE DAVELAAR (RIGHT) PROVIDES TRAINING FOR RESEARCHERS IN VIDEO AND AUDIO EQUIPMENT**

## Young Crawford Fund recipients

The Crawford Fund continues its efforts to foster the interest of young agricultural students and scientists in international agricultural research and development. Once again, our State Committees provided support for young Australian scientists with a strong interest in international agricultural development to attend the 2011 Crawford Fund conference. Other students are also offered free entry. In addition, we have a growing 'Young Crawford' group. For example, our Tasmanian Committee invites university students to its monthly meetings, at which they learn more about the interesting futures they can have working in developing countries.



**2011 CONFERENCE SCHOLARS FROM ACROSS AUSTRALIA AT PARLIAMENT HOUSE, WITH THE HON JOHN KERIN AM FTSE, CHAIRMAN OF THE CRAWFORD FUND**



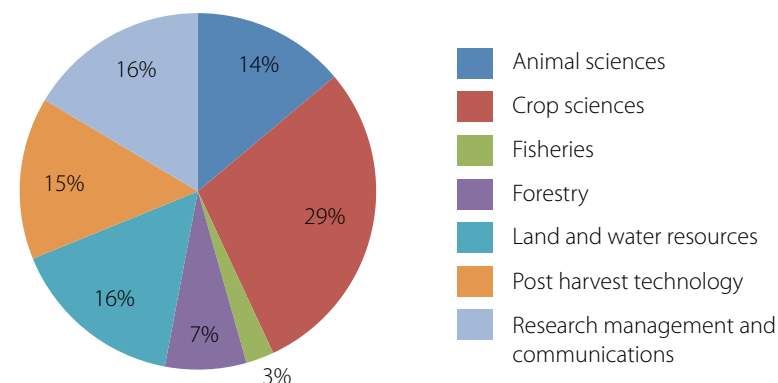
# 25 Years of Crawford Fund Training

State and Territory Committees are the linchpins of the Crawford Fund's training program. Committee members are drawn from local government, education and development communities, and commonly engage senior, experienced individuals. Each Committee is serviced by a co-ordinator, who is the first point of contact for enquiries from training candidates or their Australian partners, and who facilitates the process of preparing proposals for consideration and decision by the Committee.

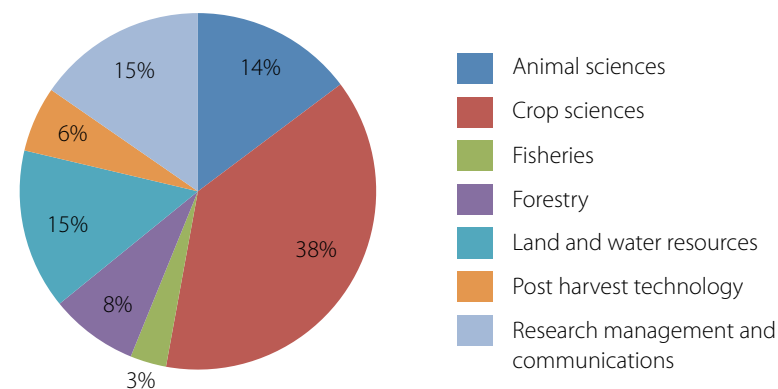
The Crawford Fund's training program is designed to increase the practical skills of scientists and technical personnel from developing country governments, universities and NGOs involved in agricultural development. Australian research and development agencies organise and often host individual trainees or groups, but much of the training of groups is conducted overseas. Australian institutions involved, whether from the public or private sector, give freely of their time and facilities, appreciating the mutual benefits that often flow from the training. Mutual benefits in fields such as biosecurity provide sufficiently clear incentives that Australian research and development funding agencies have sponsored their own staff to attend Crawford Fund training courses. The Fund welcomes other funding agencies to collaborate in providing funds in support of training activities.

State and Territory Committees each develop strategies to focus on particular developing regions or areas of research in which their State or Territory has strengths. In some cases, two or more Committees jointly support training awards for individuals or groups. The training, whether for individuals or groups, is commonly designed to be highly focused and practical.

Master Classes continue apace under the leadership of Dr Eric Craswell. In 2011–12, topics included: the laboratory in the field, bringing modern communication technology to bear on community-based extension for farmers in Africa; helping extension workers, agronomists and meteorologists to prepare farmers for rainfall variability; and communication of research outcomes to stakeholders. This section describes Master Classes and selected training activities which provide a snapshot of the wide range of topics, countries and Australian institutions involved over the last 25 years and particularly in the reporting period of 2011–12.



**FIGURE 1. MIX OF TOPICS FOR CRAWFORD FUND COURSES 1989–2012**  
(ATTENDED BY AROUND 8200 INDIVIDUALS IN OVER 350 COURSES)



**FIGURE 2. MIX OF TOPICS OF ALMOST 500 INDIVIDUAL TRAINING AWARDS 1989–2012**

## MASTER CLASSES

Over the years, the Crawford Fund has held 43 Master Classes for some 850 people, on topics as varied as land care, research management, impact assessment, plant breeding, plant health and aquaculture issues. The following are reports on this year's Master Classes.

### ***Master Classes in East Africa***

Master Classes are critical to the Fund's goal of strengthening the research, training and extension capacities of developing countries. They are aimed at mid-career scientists or policy-makers from developing countries, who already have basic training in an appropriate, related field and are actively working in the Class's topic area. This year, the

emphasis has been on methodologies and approaches that provide practical help to African farmers.

### ***The laboratory in the field: new technologies in community-based extension***

This regional Master Class was a unique opportunity for scientists and extension workers from across sub-Saharan Africa to learn the latest methods for identifying and detecting pests and diseases, and how to apply these methods in order to generate better advice for farmers. New techniques included the use of digital microscopy imaging for diagnosis from a distance. The Master Class also aimed to improve urgently needed plant health services by encouraging better cooperation and communication between extension workers and laboratory-based scientists.



*This map shows the global reach of our efforts, highlighting the countries from which trainees have come.*

Twenty-nine participants, working in extension, diagnostics, crop protection and biosecurity, attended the workshop, held in Nairobi, Kenya, from 21 November to 2 December. CAB International (CABI) was the main organiser of the Master Class, under its 'Plantwise' initiative, which aims to provide poor farmers in developing countries with better access to plant health advice. Australian expertise was provided by the Cooperative Research Centres (CRC) For Plant Biosecurity. AusAID joined with the Crawford Fund in providing financial support.

***Management of climate variability: a participatory approach with researchers, extension officers and smallholder farmers***

Farmers in southern and eastern sub-Saharan countries have to contend with low and/or highly variable rainfall, as well as depleted soil fertility. Climate risk tends to discourage farmers from investing in technologies. This makes it harder to increase their productivity and reduce their risk. Research on these challenges in an ACIAR project provided the substance behind a Crawford Fund Master Class.

Twenty smallholder farmers from Morogoro, Tanzania, met and worked with 20 extension officers, agronomists and meteorological officers from Botswana, Ethiopia, Kenya, Malawi, Mozambique, Tanzania and Sudan. This participatory exercise trained researchers and extension officers on how to prepare farmers to deal with rainfall variability. It also raised awareness among farmers and extension workers of existing sources of climate information and products (such as micro-insurance for smallholder farmers) and explained how they could be used to help farmers make better-informed decisions and reduce climate-related risk. The International Maize and Wheat improvement Centre (CIMMYT)/ACIAR SIMLESA project organised the Master Class in collaboration with the University of Queensland and the Department of Employment, Economic Development and Innovation (DEEDI).

***Communicating research to stakeholders***

There is growing acknowledgement of the importance of communicating research outcomes to interested stakeholders. In many developing country institutes, this important task falls to science staff with no communications training. To help fill this gap, the Crawford Fund held the first of a planned new series of Master Classes to boost the communications capability of 18 senior scientists from research institutes across Asia. The course was designed to be highly practical and provide participants with materials that could be used immediately by their institutes. "As well as being media trained, participants returned to their institutes with a communications plan, a press release, a list of relevant

local media contacts, and a research fact sheet for their website," explained Cathy Reade, the Crawford Fund's Director of Public Affairs and Communication.

The course was facilitated by Jenni Metcalfe, Toss Gascoigne, Tom Dixon and Meg Heaslop. Working journalists from the region provided training and mock interviews. The Crawford Fund received support for the Master Class from ACIAR, CSIRO, the International Rice Research Institute (IRRI), the WorldFish Center, and Chiang Mai University (see page 17).

## TRAINING

### Crop improvement

***Breeding capsicums to resist fungal attack***

The fungus *Colletotrichum acutatum* attacks capsicum in several world regions and is particularly problematic in Southeast Asia. In Thailand, it is the most important capsicum disease and affects other crops, such as legumes and strawberries. Although it can usually be effectively controlled with fungicides, recent research indicates that some isolates are fungicide resistant. For this reason, new cultivars of capsicum with disease resistance bred into them are needed.

With sponsorship from the **Victoria** Committee, Patiporn Temiyakul of Kasetsart University (KU), Thailand, visited the Melbourne School of Land and Environment to be trained by Associate Professor Paul Taylor in the quantitative polymerase chain reaction. "My newly gained knowledge and skills will enable the breeding program to select more efficiently for resistance to the pathogen, developing better cultivars of capsicum and leading to eventual reduction of fungicide use," Ms Temiyakul said.

Reducing the use of fungicides has potential benefits for both farmers and the environment. During her training, Ms Temiyakul used the quantitative polymerase chain reaction to study the function of putative resistance genes in the chili pepper's wild relative, *Capsicum baccatum*. She succeeded in identifying promising genes, which are already being used by KU's breeding programme. Her research is being published academically and the Thailand Research Fund has provided funding to transfer the most promising genes into elite capsicum breeding lines. Associate Professor Paul Taylor reported another positive outcome from Ms Temiyakul's Australian training. "Ms Temiyakul's English improved dramatically, giving her the confidence to present her research in English at an international plant breeding conference," he said.



### ***Clearing a plant-breeding bottleneck***

“Training that will have lasting impact on the rice industry in my country.” That was the verdict of Dr Gous Ali, one of the participants in a ‘Phenotyping for stress tolerance in rice’ workshop supported by the **Western Australia** Committee. The workshop, which was held at IRRI in the Philippines, provided hands-on training for rice breeders and physiologists from 12 countries across Asia and Africa.

Rice is a staple crop for over half the world’s population, but it can succumb to stresses such as drought, flooding, salinity, high temperatures and nutrient deficiency. An increasing reliance on marginal areas for food production and the impacts of climate change mean that more rice production is taking place in sub-optimal conditions. “Plant breeders need to effectively assess plants for their ability to tolerate adverse environments,” said course coordinator Dr Abdelbagi Ismail of IRRI. “The lack of skills in this area has proved a real bottleneck for crop breeding.”

The course provided participants with the skills to effectively screen plants for stress tolerance and enhance the rice-breeding programs in their home countries. It also created a new network of international colleagues working in this subject area. “The new techniques I have learnt, such as how to assess photosynthesis and respiration in deep water rice plants, will considerably benefit our institute. Our goal is to improve the livelihood of poor farmers in Bangladesh, especially in areas severely affected by these stresses,” said Dr Ali.

## **Plant pathology**

### ***Faster, more accurate nematode identification***

Plant nematodes can cause serious crop losses, but since there may be more than a million nematode species and they have few distinguishing features, accurate identification is a real problem. With the support of the **South Australia** Committee, Herti Endang Rosmayani and Mohammed Auwal Hassan spent two weeks in Australia to learn how to sample, extract, process

and identify nematodes. During their visit, they took part in a workshop on nematodes in cropping systems at the University of Adelaide, South Australia, and a pest nematode workshop at CSIRO, Canberra.

Herti is a Plant Quarantine Officer for the Indonesian Department of Agriculture, in charge of the nematode laboratory for Bandung. “As international trade increases, effective plant quarantine is becoming increasingly important to protect Indonesia from invasion by alien pest species such as nematodes,” she said. “I have to be sure that the laboratory’s results are fast and reliable. The improved techniques I have learnt have really helped my work. I have now transferred these skills to my colleagues.”

Mohammed is a University of Maiduguri scientist in Nigeria, where plant parasitic nematodes are a major pest problem. “We can lose 25–40% of crop production to them here,” he explained. “There can be no effective control without accurate identification of the species causing the damage. The training certainly boosted the quality of our agricultural research and development activities.”

### ***Cleaning up Papua New Guinea’s potato production***

Potato and sweet potato are important staple food and cash crops for Papua New Guinea (PNG). Both are seriously threatened by viral disease. Australia cannot import plant samples for identification, so it is vitally important that PNG can independently diagnose viral disease in these crops. However, until recently, the country had no such capability.

The Crawford Fund has supported training for three women – Winnie Maso, Niligur Rangan and Dorcas Homare – who now provide the country with core competence in plant virus identification. The women are also helping PNG to adopt the production and distribution of virus-free potato and sweet potato plants to farmers. They travelled to **Victoria** and **Queensland** to extend their skills in virus identification, virus elimination from germplasm, and micro propagation. The training was organised by Dr Mike Hughes at



**MR TIM COLMER, UNIVERSITY OF WESTERN AUSTRALIA, (LEFT) WITH DR GOUS ALI AND DR ABDELBAGI M. ISMAIL (RIGHT) AND TWO OTHER TRAINEES AT IRRI**



**NILIGUR RANGAN AND WINNIE MASO WITH NARELLE NANCARROW AND MIRKO MILINKOVIC DURING TRAINING AT DPI KNOXFIELD**

DEEDI in Queensland and Dr Rudolf De Boer from the Government Department of Primary Industries (DPI) in Victoria.

Since returning home, Dorcas has used immunodiagnostic testing in her laboratory and identified Potato Leaf Roll Virus in potato leaf samples from the highlands of PNG. This is a first for the country and it would not have been possible without her Australian training. "This training not only helps PNG, but also strengthens biosecurity in the region," said Dr De Boer. "The ELISA test with which Dorcas is now proficient will help certification officers from the Fresh Produce Development Agency confirm the presence of the virus and track its source and spread."

## Soil pathogens

### *Biosecure anthrax testing for Indonesia*

Anthrax is endemic in Indonesia, with both humans and livestock cases occurring every year. Diagnosis currently depends on a risky and dangerous procedure, which involves culturing live anthrax bacteria. With help from the Crawford Fund, a much safer, biosecure method has been introduced. The polymerase chain reaction (PCR) test uses blood scrapings or smears from suspect carcasses, thus avoiding the need to culture live anthrax bacteria or transport whole tissue samples. It is also far more sensitive than the existing method and can be used on carcasses several weeks old. This enables authorities to control further outbreaks by pinpointing areas requiring soil decontamination.

The test was developed at the **NSW** DPI's Elizabeth MacArthur Agricultural Institute (EMAI), and is now used throughout Australia. The Crawford Fund supported the visit of three Indonesian veterinarians to EMAI to learn the PCR diagnostic method. These trainees then returned home to teach the new technique to regional veterinary laboratories. Further training is also planned with funding from the Australia Indonesia Partnership for Emerging Infectious Diseases program. The Australian method has now been translated into Indonesian to facilitate further adoption. "Following

this, I am hopeful that bacterial culture of anthrax will be phased out as an approved diagnostic method across Indonesia," said Helen Scott-Orr, former NSW Chief Veterinary Officer.

### *Understanding rice production systems in the Mekong Delta*

Rising sea levels and climate change threaten rice production in the Mekong Delta area of Vietnam, undermining the region's food security. A better understanding of rice production systems is increasingly needed, particularly in terms of their impact on water supplies, water quality, human health and agro-ecosystem maintenance.

In March 2012, the Crawford Fund sponsored a workshop on 'Soil and water sampling for rice-based agriculture' at Can Tho University (CTU), Vietnam. The workshop was attended by 29 Vietnamese researchers and extension officers from local organisations such as CTU and the Cuulong Rice Research Institute. Participants learnt field experimental design, layout and statistical analysis in rice-based agricultural systems. There was a particular focus on the sampling and analysis of soil and water. Participants will use these skills in the 'Climate change affecting land use in the Mekong Delta: adaptation of rice-based cropping systems' project, based at IRRI. The course was organised and delivered by Dr Ben Macdonald (CSIRO), Dr Annabelle Keene of the Southern Cross University, Kyle Horner of the Australian National University (ANU), Dr Violeta Bartolome (IRRI) and Dr Chau Minh Khoi (CTU).

## Extension

### *Blossoming skills in Papua New Guinea*

The Crawford Fund is supporting the development of two very different flower-growing industries for PNG. Women in PNG often grow colourful flowers such as heliconias, orchids and anthuriums alongside their food crops. Now, training sponsored by the Crawford Fund has given them the skills and knowledge to turn this hobby into a business.



**PARTICIPANTS CONDUCT HANDS-ON RESEARCH AT THE SOIL AND WATER WORKSHOP IN VIETNAM**



**CRAWFORD FUND TRAINEES DR HENI, DR KETUT AND DR SAIFUL AT EMAI**

The workshop on 'Post-harvest treatment and marketing of tropical cut flowers' was led by **Northern Territory (NT)** horticulturalist Jan Hintze and Maria Linibi from PNG Women in Agriculture. Around 90 growers, most of whom were women, learnt post-harvest care, quality control, and business and marketing skills at training events in Lae and Port Moresby. "This training plays an important role in empowering women, giving them an independent income upon which they can draw to provide for themselves and their households," Jan Hintze explained.

A training manual was produced for growers who could not attend the workshop. One important feature was photographs of each flower type, along with their correct name. This standardisation of nomenclature will ensure that florists can reliably obtain the flower type they want, even when ordering over the phone. The manual quickly sold out and was so well received that a wider publication and distribution list is being considered.

A safe, organic insecticide can be extracted from the flowers of the pyrethrum plant. The Fund is supporting efforts by ACIAR and Botanical Resources, Australia, to re-establish the pyrethrum growing and processing industry in PNG. Pyrethrum growing is a potentially valuable industry for growers in the highlands. "The crop complements the fresh vegetable industry in the same way as in **Tasmania**, where farmers have a perennial crop alongside the annual vegetable crops," says Neville Mendham, coordinator of the **Tasmania** Committee. Four research and extension officers (Janet Yando, Willie Poo, Manday Yaso and Enopa Lindsay) travelled to Australia to receive training, visit growers and research centres, and attend the International Pyrethrum Symposium. "The trip has really changed my view of pyrethrum," Mr Lindsay explained. "Promotion and development of emerging food and cash crops, such as pyrethrum, provides alternate income sources for people in marginal areas and improves self-reliance and food security."

## Sustainable forestry

Sustainable forest management can be a valuable income source for poorer nations and forestry has been a key focus for the Fund's training activities this year. The **Victoria** Committee facilitated a wood-processing course for PNG representatives from the education and research sectors, while the **Tasmania** Committee supported an 'Australia–Laos forestry capacity building and training project'.

### *Veneer processing for Vietnam*

In June 2012, the Fund held a workshop on quality veneer processing and products from hardwood at the DAFF Salisbury Research Facility in Brisbane, **Queensland**. The training is linked to an ACIAR project which aims to enhance the production of veneer products in Vietnam and Australia. Five Vietnamese representatives from forestry research organisations and from the veneer processing industry attended.

The course gave participants experience of the latest processing and quality assurance systems used in the Australian veneer industry. It included both theoretical and practical components, and a trip to two **Queensland** veneering facilities (Austral and Pro-veneer). The equipment and facilities required are either available to research institutions in Vietnam or are currently being purchased by the ACIAR project. "I can apply this knowledge to my job as a researcher and also for technology transfer to veneer companies," said participant Dr Trinh Hien Mai, from the Forestry University of Vietnam.

The workshop was led by Henri Bailleres and Frederik Lane from DAFF. "The information and skills gained by participants will have direct application to their activities in the ACIAR project, and will accelerate the adoption of quality veneer processing and production in Vietnam," said Henri Bailleres.

### *Learning to treasure trees*

More than 90% of Tonga's natural forests have been cleared for subsistence farming, mainly under agroforestry systems. The Tongan Government has developed codes of practice for sustainable management of the forests and trees that remain, and the Tongan Forestry Division is now implementing these.

The Crawford Fund has supported a series of workshops to raise awareness among stakeholders of the new code and of the environmental, economic and social benefits of trees for Tonga. Nine workshops on the mainland and islands of Tonga were attended by landowners, village officers, forestry officers, representatives of government agencies, and staff of the public enterprise, Tonga Forest Products. A 'train the trainer' course was also held to build capacity among local forestry officers.

The training was led by Graham Wilkinson of the Forest Practices Authority, **Tasmania**. "The workshops have provided a basis upon which the Government of Tonga can introduce an appropriate legal and regulatory framework to enhance the management of the forests and tree resources of Tonga and to control unsustainable practices," he explained.



# Crawford Fund Trainer

## PROFESSOR LESTER BURGESS



**LESTER BURGESS WHERE HE'S HAPPIEST – AMONG PLANTS WITH PROBLEMS – IN THIS CASE, SUGARCANE IN VIETNAM**

Professor Lester Burgess is an eminent plant pathologist and internationally recognised expert on the biology and control of *Fusarium* diseases. He is Honorary Professor in the Faculty of Agriculture and Environment at the University of Sydney. Professor Burgess has provided training for the Crawford Fund Master Classes and workshops since the late 1990s.

### ***How did you first become involved with the Crawford Fund?***

My first contact with the Crawford Fund was through Professor Bruce Holloway, who encouraged me to convene the first Master Class on the biology and management of crop diseases caused by soil-borne fungal pathogens. Since then, I have been involved with Crawford Fund training programmes in China, Indonesia,

Lao PDR, Tunisia, Turkey and Vietnam. I estimate that, in total, I have trained around 100 participants in Master Classes and about the same number again in other Crawford Fund training schemes.

### ***What research areas does your training cover?***

My key areas of training are in plant pathology and research management. These have included workshops on soil-borne pathogens and the first laboratory workshops on *Fusarium*, which have been held worldwide, training pathologists from both developed and developing countries.

### ***Why is such training needed?***

Some regions are definitely lacking in critical expertise. In 2009, we started working with young plant pathologists at the Plant Protection Centre (PPC) in Vientiane, Laos. The PPC team had little training prior to our involvement. With our support, they have improved their professional skills and their English significantly, and have made progress in managing a devastating dieback disease of durian through working closely with farmers.

### ***What has been the most important impact from this training?***

Undoubtedly the most important aspect has been identifying promising researchers on the courses who can deliver effective research and extension, and provide leadership for the discipline in their country. We then continue to support, train and mentor these individuals over a long period. One example is Dr Nguyen Vinh Truong from Vietnam. He first attended a workshop in 1997. We have continued to support him since then, helping him secure scholarships in the Philippines and Australia. He is now Associate Dean of Agriculture at Hue University and training young plant pathologists himself.

### ***Why have you maintained your commitment for so long?***

I believe that long-term commitment is the only way to have real and lasting impact. It takes repeated visits to develop the respect of the local researchers and build their confidence in working with farmers. The Crawford philosophy is to facilitate farmer participatory training as a key element in capacity building programs. Continued commitment also enables the trainer to develop cultural sensitivity and a thorough understanding of the local farming systems. Such knowledge is crucial to my discipline, as the farming system has a critical impact on the biology of crop diseases and integrated disease management.

### ***Can you tell us about your recent work in Tunisia?***

My wife and I agree that our experiences in Tunisia have been the most remarkable in our careers. Following a tourist visit last year, we have returned to work there. A comprehensive research program on soil-borne diseases of wheat has developed and we have presented the first *Fusarium* workshop for North Africa, co-sponsored by the Crawford Fund. The country's history, culture and unique farming systems provide a challenging situation for research and extension. We plan to return regularly.

### ***What would you say to other researchers thinking of getting involved as trainers?***

Training in such countries is a two-way learning experience. I've learnt about crop diseases in a wide range of climates and farming systems. I've also learnt about people and cultures. It is also incredibly rewarding to see the trainees become the trainers. But you have to be flexible – I once arrived to deliver training on one pathogen, only to find that they were suffering from an epidemic of a quite different species and had to rethink my plans. My advice to newcomers is: be very patient, expect the unexpected, and commit for the long term.

# Crawford Fund Trainee

## DR DELLA GRACE GALOPE-BACALTOS



**DELLA BEING INTERVIEWED DURING THE CRAWFORD FUND COMMUNICATION MASTER CLASS**

Dr Della Grace Galope-Bacaltos is a marine scientist and a professor in the Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST). She is also a coordinator for the Philippine Council for Aquatic and Marine Research and Development. She has won many awards for her work on aquaculture and the wellbeing of aquatic ecosystems. In 2011, Dr Galope-Bacaltos participated in the Crawford Fund's first Master Class in Communicating Research to Stakeholders, held in Chiang Mai, Thailand. She then went on to run a further communications workshop for staff at SPAMAST.

### ***How did you become involved with the Crawford Fund?***

Dr Maripaz Perez, the Director of the WorldFish Center, invited me to apply for this Master Class. I was so pleased when my application was successful and I was selected to take part.

### ***What did you learn at the Master Class?***

I learnt many techniques and strategies for effectively relaying my research results to non-scientific audiences, including government officials, farmers and the general public. This involved learning to develop and use communication tools such as press releases, fact sheets and policy briefs. One important skill is to convey the essence of what you do and why, rather than dwell on the details. It's also crucial to effectively convey your message, using direct and simple words. I was interviewed by practising journalists, which was quite exciting, and I discovered that they really can ask you anything, so you have to be well prepared.

### ***What impact has this training had on your institute?***

I thought the Master Class training was very useful so, together with my co-trainees Dr Alice Ferrer and Dr Maripaz Perez, we put on similar training at a national level for my institute. This three-day workshop was an opportunity to raise awareness among key officials and researchers of the importance of working with the media. I also trained them in some of the communications skills that I had recently acquired, such as how to put together a research fact sheet. There is a lot of great research in academic papers that just stays in the library. We need to do more to make this research more widely accessible.

### ***How has this experience benefitted you?***

Since going on the workshop, I have had to present my research results at the International Coral Reef Symposium (ICRS) in Cairns, Australia. In presenting my work, I put into practice my new skills. The journalists I met on the Master Class and also at the national training event were impressed by this initiative. We have agreed to keep in touch and sustain the sharing of research results that may be newsworthy.

### ***How can this training benefit your country?***

My country is new to science communication. There needs to be a much better common understanding of research science in the Philippines and greater access to research outputs. The focus in the media is on the arts, while science is under-represented and poorly understood by most people. Researchers mainly communicate technical scientific knowledge among themselves, but there is a real need to talk to other stakeholders, such as farmers and those working to promote environmental protection, who want to know what researchers are doing. At the ICRS, the Queensland Governor, Penelope Wensley, said there was a big gap between scientific knowledge generation and public awareness and understanding. I intend to help address this gap in the Philippines.

### ***How do you plan to use these new skills in the future?***

The Master Class has altered my career path. I have become a passionate advocate for effective science communication. Not only that, but I have found that it is something I love to do. I would like to take my interest in this area further by pursuing formal training, such as a Master's degree in science communication.

# AWARDS

## THE CRAWFORD FUND FELLOWSHIP

Each year we award the Crawford Fund Fellowship to a young scientist from a less-developed country. In 2011, the recipient was Vilayphone Sourideth from the Rice and Cash Crop Research Center, National Agricultural and Forestry Research Institute, Ministry of Agriculture and Forestry, Vientiane, Lao PDR.

Ms Sourideth spent two months at the School of Agriculture and Food Science, University of Queensland, where she learned new plant breeding techniques, analysed and wrote up collaborative experiments, and conducted an experiment on nutrient and water use by maize. She presented a paper at the 5<sup>th</sup> World Congress on Conservation Agriculture, and joined discussions with private sector plant-breeding companies in Queensland.

Her training will bolster her work as a maize breeder and enable her to continue investigations on water-use efficiency in rice and maize. Ultimately, this will help provide improved varieties of maize – a crop that is in increasing demand as a feed grain in Lao PDR and other Southeast Asian countries, where incomes are rising and demand for animal protein is growing.

## THE CRAWFORD FUND DEREK TRIBE AWARD

The Crawford Fund Derek Tribe Award was inaugurated in 2001 to mark the outstanding contribution of Professor Derek Tribe, Foundation Director of the Crawford Fund, to the promotion of international agricultural research. The award is made biennially to a citizen of a developing country in recognition of their distinguished contributions to the application of research in agriculture or natural resource management in a developing country or countries.

In 2011, the recipient was Professor Siti Subandiyah from the Faculty of Agriculture, Universitas Gadjah Mada, Yogyakarta, Indonesia. The award was given in recognition of Professor Subandiyah's dedication to research and education in the field of agriculture – particularly her work on fruit crop diseases.

Professor Subandiyah's research has focused on reducing the impacts of plant diseases on horticultural crops, particularly the impacts of huanglongbing (citrus greening) on citrus and wilt diseases of banana. She has participated in the development and implementation of integrated management programs based on accurate early identification and detection of diseases, regular monitoring, and practical strategies for mitigating the impacts of diseases. This is increasingly important in Asia, as incomes rise and the demand for fresh fruit expands.

Her work has contributed to the health and welfare of farmers and their families throughout the Indonesian archipelago. Her knowledge and skills have had important implications for Australia's preparedness to deal with incursions of pests and diseases of horticultural crops, thus substantially contributing to Australia's national biosecurity. She recently played a major role in a Crawford Fund Master Class in Yogyakarta on the surveillance, identification and management of huanglongbing.

## CRAWFORD FUND MEDALS FOR ENDURING CONTRIBUTIONS

The Crawford Fund's success is based on people: trainees and trainers who are seeking to make an enduring contribution to global food security. Their commitment and perseverance, often over long periods, mark the Fund out as a unique contributor. Many go unnoticed and their contributions unheralded. Accordingly, in 2010 the Crawford Fund decided to recognise people who have made a considerable and continued contribution to international agricultural research through our programs and related activities.

Each year, on the recommendation of State and Territory Committees, we will award medals to a limited number of people in recognition of a seminal contribution. In 2011–12, a medal was awarded to the outstanding agronomist, Professor Benjavan Rerkasem from Chiang Mai University, Thailand. Professor Rerkasem received her medal from Dr Eric Craswell, the Crawford Fund's Director of Training, following her participation in the Fund's Master Class in communicating with stakeholders (see page 12). Professor Rerkasem was selected because of her leadership role in sustainable agriculture and her outstanding contribution to agricultural research and development.



**CRAWFORD FUND FELLOW VILAYPHONE SOURIDETH IN THE GLASSHOUSES AT THE UNIVERSITY OF QUEENSLAND**



**DR ERIC CRASWELL PRESENTS PROFESSOR RERKASEM WITH HER CRAWFORD FUND MEDAL**



# A Wider Canvas for International Agricultural Research

Work on the Crawford Fund's new series of research briefs, 'A Wider Canvas for International Agricultural Research,' started last year. In February, we launched the first edition, which included an overview to explain the context for the series. These briefs are the result of a study that the Fund has commissioned to explore emerging trends in food security, agriculture and international development. The study takes place in the context of renewed concerns about world food security, with food prices in 2011 rising close to those that shocked the world in 2008.

Dr Gabrielle Persley, the Crawford Fund's Research Study Director, is leading the initiative. The series is being developed under a partnership with the Doyle Foundation, the Syngenta Foundation for Sustainable Development, and the University of Queensland's Global Change Institute.

Dr Persley gave the first brief in the series a high profile launch at the National Forum on Food Security, held by the University of Adelaide. This event's program included many experts on food security, such as the World Food Prize winner, Professor Per Pinstrup Anderson (see page 5), Will Martin (Research Manager for Agriculture and Rural Development with the World Bank), Nick Austin (Chief Executive Officer of ACIAR) and the Fund's Executive Director, Denis Blight.

Future briefs will consider issues such as biodiversity, biosecurity, energy and climate change, with 10–12 briefs planned in total. These will provide regular opportunities for raising international awareness of the role that agricultural research can play in addressing new challenges to food security.

The study's findings will affect the Crawford Fund's future funding decisions and help identify topics for future conferences and Master Classes. However, the aim is also to influence strategy formation more widely, by informing politicians and other relevant decision-makers of current funding gaps and future areas for research. The study also considers the benefits of international agricultural research to a broad range of stakeholders in both the public and private sectors, and identifies new organisations and individuals who might support it through partnerships or funding.

An overview of the study can be found on our website and readers are encouraged to provide feedback as the Fund's study progresses, through the website and project blog.



**GABRIELLE PERSLEY LAUNCHING THE CRAWFORD FUND BRIEFS SERIES**

# Directors' Report

The printed Annual Report includes the following extracts of the financial accounts: the Operating Result to 30 June 2012, Statement of Comprehensive Income for the Year Ended 30 June 2012 and Statement of Financial Position as at 30 June 2012. Full accounts, including a Summary of Significant Accounting Policies and Information on Directors is published at [www.crawfordfund.org](http://www.crawfordfund.org).

Crawford Fund Limited ABN 86 141 714 490

**Crawford Fund Limited**

**ABN 86 141 714 490**

**Financial Report for the Year Ended 30 June 2012**

## DIRECTORS' REPORT

Your directors present this report on the company for the financial year ended 30 June 2012.

### Principal Activities

The principal activities of the company during the year, which are set out in an accompanying Annual Report, were:

The conduct of 27 specialist training courses in Australia and the developing countries;

Specialist training activities in Australia for 24 developing country scientists;

3 Master Classes on key topics in international agricultural research;

The Annual Crawford Fund Parliamentary Conference conducted in Parliament House on 15 and 16 August 2011. The Conference, which was attended by approximately 300 people, focussed on The Supermarket Revolution in Food World Food Security. A series of other public awareness activities including journalist visits, public speaking engagements, development and launch of a new food policy series, assisting international partners with visits to Australia, and broad media coverage, webstories and twitter items were used to highlight the impact of agricultural research, development and training. Notable amongst these were journalist visits to India, Indonesia and East Africa; media attention on Crawford Fund training; a new Crawford Fund Master Class in Communicating with Stakeholders; providing assistance to our partners with media efforts for their conferences; and national media outreach on agricultural development and research issues.

The company conducts assessments of the impact of its activities to measure their contributions to the achievement of its objectives. The Directors are satisfied that all of its activities are contributing satisfactorily either directly or indirectly to the promotion and application of science and technology to ecologically sustainable agriculture.

### Objectives

The principal objective of the Company is to promote the application of science and technology to the practical purpose of ecologically sustainable agriculture development and the effective management of natural resources, in the developing world and in Australia.

Further objectives of the Company are to: make more widely known the benefits that accrue from international agricultural research; encourage greater support for, and participation in this research by Australian governmental and non-governmental organisations and in particular the industrial and scientific communities of Australia; work together and in conjunction with the community in the developing countries; undertake cooperative activities and develop relationships with existing organisations to provide support for the communities; and do such other things as are incidental or ancillary to the attainment of the objects of the Company.

### Governance

The names of each person who has been a director during the year and to the date of this report are:

Dr Robin J Batterham AO FREng

The Hon Margaret Reid AO

Dr Denis G Blight AO FRSA

Em Prof Helen M Garnett PSM FTSE FAICD

Mr Terence J Enright

Ms Sallyanne Atkinson AO

Dr John C Radcliffe AM FTSE

The Hon John D Anderson AO

Professor Ross Garnaut (until November 2011)

Dr Tony K Gregson AM FTSE

## Crawford Fund Limited ABN 86 141 714 490

Mr Ian M MacKinnon  
 The Hon John C Kerin AM FTSE  
 Mr Michael J Taylor AO FTSE  
 Dr Margaret L Hartley FTSE

Directors have been in office since the start of the financial year to the date of this report unless otherwise stated.

Eight of the Directors had special responsibility to Chair a State and Territory Committee of the company as follows:

The Hon John D Anderson – NSW  
 The Hon John C Kerin – ACT  
 Mr Terence J Enright – WA  
 Ms Sallyanne Atkinson – QLD  
 Em Prof Helen M Garnett – NT  
 Mr Ian M MacKinnon – TAS  
 Dr John C Radcliffe – SA  
 Dr Tony K Gregson – VIC

Dr Tony Gregson and Dr Denis Blight served on the Investment and Audit Review Committee of the Australian Academy of Technological Science and Engineering, which body oversees the company's financial accounts on behalf of the Board<sup>1</sup>.

The Australian Academy of Technological Science and Engineering is the initial and sole member of the company. Under Article 16.1 of the company's constitution the liability of the member on winding up is an amount not to exceed \$20.

### Operating result

As will be evident from the audited accounts, at 30 Jun 2012, there was a net deficit of \$12,272 against a budgeted surplus to the end of June 2012 of \$218. The total equity of the company as at 30 Jun 2012 was \$473,852

The total current assets of the company (including non-current) are \$645,226 with \$437,422 cash on hand (includes Interest Bearing Deposit accounts). The total liabilities of the Company are \$171,374. Trade and other receivables are \$78,715 all are current, as are trade and other payables of \$152,032

The main points to be noted are:

- Spending on all programs totalled \$1,182,551 being 90.07% of the company's budget for such programs for the full financial year.
- Funds on all programs for the financial year were fully committed.
- Retained surpluses have been reduced by \$12,272 to \$473,852.

<sup>1</sup> Under a deed of transfer between the Academy and the Fund and for so long as ATSE is a member of the Fund, and the Fund has less than four members in total, it has been agreed that the Crawford shall:

- Maintain and audit its accounts in accordance with any requirements notified by ATSE's audit committee (to the extent such requirements are consistent with the law);
- Give ATSE access to inspect the accounting records and other documents of the Fund
- Establish an audit committee that includes the members of ATSE's audit committee, provided that the Fund has at least one director on that audit committee;
- Procure that CF Limited's auditor is the same as ATSE'S auditor.

## Crawford Fund Limited ABN 86 141 714 490

## STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 30 JUNE 2012

	Note	2012 \$	2011 \$
<b>Revenue</b>			
Revenue from government and other grants	2	1,242,500	1,195,000
Other income	2	205,789	289,573
Total revenue and other income		1,448,289	1,484,573
<b>Expenses from ordinary activities</b>			
Employee benefits expense		(160,615)	(115,783)
Depreciation and amortisation expense		(6,582)	(6,356)
Rental expense		(30,839)	(27,500)
Audit, legal and consultancy expense		(4,800)	(9,080)
Program expense		(1,182,551)	(1,257,141)
Other expenses		(75,174)	(76,073)
Total expenses		(1,460,561)	(1,491,933)
<b>Current year deficit before income tax</b>		(12,272)	(7,360)
Income tax expense		-	-
<b>Net current year deficit</b>		(12,272)	(7,360)
<b>Other comprehensive income</b>		-	-
<b>Other comprehensive income for the year</b>		-	-
<b>Total comprehensive income for the year</b>		(12,272)	(7,360)
Net current year deficit attributable to members of the entity		(12,272)	(7,360)
Total comprehensive income attributable to members of the entity		(12,272)	(7,360)

The accompanying notes form part of these financial statements.

## Crawford Fund Limited ABN 86 141 714 490

## STATEMENT OF FINANCIAL POSITION AS AT 30 JUNE 2012

	Note	2012 \$	2011 \$
<b>ASSETS</b>			
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	4	437,422	456,187
Accounts receivable and other debtors	5	78,715	65,125
Financial assets – short term	6	25,000	-
Other current assets	7	73,006	53,359
<b>TOTAL CURRENT ASSETS</b>		614,143	574,671
<b>NON-CURRENT ASSETS</b>			
Financial assets – long term	6	15,344	-
Property, plant and equipment	8	15,739	21,499
<b>TOTAL NON-CURRENT ASSETS</b>		31,083	21,499
<b>TOTAL ASSETS</b>		645,226	596,170
<b>LIABILITIES</b>			
<b>CURRENT LIABILITIES</b>			
Accounts payable and other creditors	9	152,032	102,047
Provisions for employee benefits	10	12,229	8,000
<b>TOTAL CURRENT LIABILITIES</b>		164,261	110,047
<b>NON-CURRENT LIABILITIES</b>			
Provisions for employee benefits	10	7,113	-
<b>TOTAL NON-CURRENT LIABILITIES</b>		7,113	-
<b>TOTAL LIABILITIES</b>		171,374	110,047
<b>NET ASSETS</b>		473,852	486,123
<b>EQUITY</b>			
Retained surplus		473,852	486,123
<b>TOTAL EQUITY</b>		473,852	486,123

The accompanying notes form part of these financial statements.



# Crawford Fund Board and Committee Members and Staff

## THE CRAWFORD FUND BOARD OF DIRECTORS

### **The Hon. John Kerin AM FTSE**

Chairman of the Crawford Fund, former Minister for Primary Industries and Minister for Trade and Overseas Development

### **The Hon. John Kerin AM FTSE**

Chairman, the Crawford Fund; Former Minister for Primary Industries and Minister for Overseas Trade and Development

### **The Hon. John Anderson AO**

Former Deputy Prime Minister and Leader of the National Party

### **Mrs Sallyanne Atkinson AO**

Chair, Barton Deakin; Honorary Consul for Brazil

### **Dr Robin Batterham AO FREng FAA FTSE**

President, ATSE

### **Dr Denis Blight AO FRSA**

Chief Executive, the Crawford Fund

### **Mr Terry Enright**

Former Chairman, GRDC

### **Professor Helen Garnett PSM FTSE FAICD**

Chair, Australian Biosecurity Intelligence Network Board of Management

### **Dr Tony Gregson AM FTSE**

Chairman, Plant Health Australia; former Board Chair, Bioversity International

### **Dr Margaret Hartley FTSE**

Chief Executive Officer, ATSE

### **Mr Ian MacKinnon**

Tasmanian Agriculturalist; Former Chairman, Grains Research & Development Corporation Southern Panel

### **Dr John Radcliffe AM FTSE**

Former Deputy Chief Executive, CSIRO; Director General of Agriculture, South Australia

### **The Hon. Margaret Reid AO**

Former President of the Senate and Liberal Whip

### **Mr Mike Taylor AO FTSE**

Former Chairman, Murray Darling Basin

## CENTRAL OFFICE

Dr Denis Blight AO FRSA

Chief Executive

Dr Eric Craswell

Director, Training and Master Classes

Ms Cathy Reade

Director, Public Affairs & Communication

Mr Phil Jackson

Financial Controller

Mrs Marchien van Oostende

Office Manager

Dr Gabrielle Persley AM

Director, Research Project

Mrs Helen Laughlin

Web Support Officer

## COMMITTEE MEMBERS

### ACT

#### **Chair**

The Hon. Margaret Reid AO

Former President of the Senate and Liberal Whip

#### **Coordinator**

Dr Tony Fischer AM FTSE

Visiting Scientist, CSIRO Division of Plant Industry

Dr Joanne Daly PSM FTSE

Group Executive, Strategic Advisor, Science, Strategy & People

Mr Tim Healy

Private Consultant

Professor John Lovett

Chair, CRC Plant Biosecurity

Dr Peter McCawley

Visiting Fellow, (Indonesia Project), Arndt-Corden, Department of Economics ANU College of Asia and the Pacific

Dr Jim Ryan

Private Consultant

## New South Wales

#### **Chair**

The Hon. John Anderson AO

Former Deputy Prime Minister and Leader of the National Party

#### **Coordinator**

Dr Bruce Standen

Private Consultant; Former Managing Director of the Australian Meat and Livestock Corporation

Mr Dick Austen AO	Cattle Producer; Former Chair of the Australian Meat and Livestock Corporation
Hon. Professor Lester Burgess	Former Dean of Ag. Science, University of Sydney
Dr John Christian AO FTSE	Former Chief of Food Resources Division, CSIRO
Mr George Davey	General Manager, Agriculture, Royal Agricultural Society of NSW
Dr David Godden	Adjunct Professor, Charles Sturt University; Honorary Associate, University of Sydney
Mr Neil Inall AM	Agricultural Commentator
John McKillop	Chief Executive Officer, Ag Strategies Pty Ltd; Former Chief Executive Officer, Clyde Agriculture
Hon Associate Professor Helen Scott-Orr PSM	Former Chief Veterinary Officer of NSW
Emeritus Professor Graham Swain AM	University of Western Sydney
Mr Bob Whan AM	Former Member of Parliament

## Northern Territory

### Chair

Professor Helen Garnett PSM FTSE FAICD	Chair, ABIN Board of management; Former Vice Chancellor, Charles Darwin University
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### Coordinator

Ms Tania Paul	Senior Lecturer, Charles Darwin University
Mr Neil MacDonald	Regional Director, Department of Primary Industries and Fisheries
Dr Jeremy Russell-Smith	North Australian Indigenous Land & Sea Management Alliance, Charles Darwin University
Mr Tim West	Director, Tropigro NT
Mrs Katherine Sarneckis	Chief Executive Officer, NT Seafood Council
Mr Dick Slack-Smith	Former NT Assistant Director Fisheries R&D and Director, Fisheries
Professor Andrew Campbell	Director, Research Institute for the Environment and Livelihoods, Charles Darwin University

## Queensland

### Chair

Ms Sallyanne Atkinson AO	Chairman, Barton Deakin (Qld); Honorary Consul for Brazil
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### Coordinator

Dr Kep Coughlan	Former Director of Land Management Research, Queensland
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Professor Kaye Basford FTSE	President, Academic Board, The University of Queensland
Dr Richard Hodgson	Affymetrix, Senior Manager, International Markets Group

Professor Bob Lawn FTSE	Genotyping and AgBio Development
Mrs Janet Lawrence	Tropical Crop Science, James Cook University
Dr Bruce Pengelly	Science Communicator

Dr George Rayment	Partnerships Leader- Food Security initiative, CSIRO
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Mrs Michelle Sinn	Ecosystems Sciences
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Dr Yasmin Sultanbawa	Former Senior Principal Scientist, Queensland Department of Primary Industries, and Department of Energy, Resources and Mining
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Dr Christine Williams	Principal Coordinator (External Funding), Department of Agriculture, Fisheries and Forestry
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Mr Peter Wood	Senior Research Fellow, Queensland Alliance for Agriculture and Food Innovation
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## South Australia

### Chair

Dr John Radcliffe AM FTSE	Assistant Director General, Science Delivery, Department of Science, Information Technology, Innovation and the Arts
	Private Consultant

### Coordinator

Mr Roger Wickes PSM FAIAST	Former Deputy Chief Executive, CSIRO; Director General of Agriculture, South Australia
The Hon Neil Andrew AO FTSE	Former Speaker of the House of Representatives
Professor David Coventry	Consultant
Mr Trevor Day	Former Chief Research Scientist, CSIRO; Director, CRC for Soil and Land Management
Ms Jane Greenslade	Former Director, Innovation Development, Primary Industries & Resources SA
Dr Ann McNeill	
Dr Kathy Ophel-Keller	
Dr Ian Pitman	
Dr Albert Rovira AO FTSE	
Mr Glen Weir	

## Tasmania

### Chair

Mr Ian MacKinnon  
Tasmanian Agriculturalist; Former Chairman, Grains  
Research & Development Corporation Southern Panel

### Coordinator

Dr Neville Mendham FAIAST  
Honorary Research Associate, Tasmanian Institute of  
Agriculture

Mr David Addison  
Farmer/AUSVEG Board Member, Charlton Farm Produce PL

The Hon. Paul Calvert AO  
Deputy Chair, Governing Council of Old Government House

Professor Gustaaf Hallegraeff  
Chair, Education Committee, Institute for Marine and  
Antarctic Studies

Professor Holger Meinke  
Director and Head of School, Tasmanian Institute of  
Agriculture & School of Agricultural Science

Professor Bob Menary  
Adjunct Professor, Tasmanian Institute of Agriculture &  
School of Agricultural Science

Dr David Parsons  
Research Fellow, Tasmanian Institute of Agriculture &  
School of Agricultural Science

Ms Mel Rae  
Consultant, Macquarie Franklin

Mr Bob Reid  
Director, Tasmania Global Seeds

Ms Deidre Wilson  
Director, Department of Primary Industries, Parks, Water and  
Environment

## Victoria

### Chair

Dr Tony Gregson AM FTSE  
Chairman, Plant Health Australia; Former Board Chair,  
Bioversity International

### Coordinator

Mr Ted Hayes FAIAST  
World President, Rotary International

Mr Royce Abbey AO DCM  
Ret. Associate Professor, Animal Breeding, University of  
Melbourne

Dr Alex Buchanan AM FTSE  
Former Executive Director, the Crawford Fund

Mr Ben Dunlop  
Vice President, Credit Suisse

Mr Bob Edgar  
Consultant, Phillips Agribusiness Geelong

Ms Alexandra Gartmann  
Chief Executive Officer, Foundation for Rural & Regional Renewal

Mrs Helena Hughes

Mr Bruce Lloyd AM

Dr Ron Prestidge

Dr Peter Sale

Dr Paul Taylor

Dr Ron Wells

Private Consultant

Former Deputy Leader of the National Party

Executive Director, Future Farming Systems

Associate Professor and Reader, La Trobe University

Associate Professor and Reader (Plant Pathology), University  
of Melbourne

Veterinary Surgeon

## Western Australia

### Chair

Mr Terry Enright  
Sheep, grain and cattle producer; Former Chairman, Grains  
Research and Development Corporation

### Coordinator

Em. Professor Jen McComb  
AM FTSE FAIAST  
Former Professor Biological Sciences, Murdoch University

Professor Lyn Abbott FAIAST  
Head of School of Earth Geographical Sciences, University  
of Western Australia

Em. Professor John Edwards  
Director, One Health Solutions

Professor William Erskine  
Director, International Centre for Plant Breeding Education  
and Research, University of Western Australia

Dr Mike Ewing  
Future Farm CRC, University of Western Australia

Dr Peter Lilly FTSE  
Senior Manager for R&D Resource and Business  
Organisation, BHP Billiton

Em. Professor David Lindsay  
AO FTSE  
Former Professor of Agriculture, University of Western Australia

Dr Juliann LLOYD-Smith  
Principal, Rural Research Consultancy

Mr Mick McGinniss  
Director of Board, Cooperative Bulk Handling

Dr T James Ridsdill-Smith  
FTSE FAIAST  
Former Principal Scientist, CRC National Plant Biosecurity,  
CSIRO Entomology

Dr Graeme Robertson  
Private Consultant; Former Director of Department of  
Agriculture and Food, Western Australia

Mr Robert Sewell AM  
Director, Wheat Quality Australia

Professor Kadambot Siddique  
AM FTSE  
Director, University of Western Australia Institute of  
Agriculture, University of Western Australia

Mr Leith Teakle  
Cooperative Bulk Handling Ltd



# Acronyms

AARES	Australian Agricultural and Resource Economics Society	DEEDI	Department of Employment, Economic Development and Innovation
ABC	Australian Broadcasting Corporation	DPI	Department of Primary Industries
ACIAR	Australian Centre for International Agricultural Research	EMAI	Elizabeth MacArthur Agricultural Institute
ACT	Australian Central Territories	FAO	Food and Agriculture Organization of the United Nations
AIFSC	Australian International Food Security Centre	GRDC	Grains Research and Development Corporation
ANU	Australian National University	ICRS	International Coral Reef Symposium
ATSE	Academy of Technological Sciences and Engineering	IFAJ	International Federation of Agricultural Journalists
AusAID	Australian Agency for International Development	ILRI	International Livestock Research Institute
AYAD	Australian Youth Ambassadors for Development program	IRRI	International Rice Research Institute
BecA	Biosciences Eastern and Central Africa	IWMI	International Water Management Institute
CA	Conservation agriculture	KU	Kasetsart University
CABI	CAB International	Lao PDR	Lao People's Democratic Republic
CGIAR	Consultative Group on International Agricultural Research	NGO	nongovernmental organisation
CIMMYT	International Maize and Wheat improvement Centre	NSW	New South Wales
CRC	Cooperative Research Centres	NT	Northern Territories
CSIRO	Commonwealth Scientific and Industrial Research Organisation	PCR	Polymerase chain reaction
CTU	Can Tho University, Vietnam	PNG	Papua New Guinea
DAFF	Department of Agriculture, Fisheries and Forestry	PPC	Plant Protection Centre
		R&D	research and development
		SPAMAST	Southern Philippines Agri-Business and Marine and Aquatic School of Technology

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THE CRAWFORD FUND

*For a Food Secure World*

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