

## INTERNATIONAL AGRICULTURAL RESEARCH IS AID THAT WORKS - FOR AUSTRALIA AND DEVELOPING COUNTRIES

Collaborative projects on livestock, cereals, vegetables, fruit and aquaculture are just some examples of international agricultural research, involving NSW institutions and researchers, delivering benefits to NSW.

Much of the aid-funded agricultural research work is undertaken through projects funded by the Australian Centre for International Agricultural Research (ACIAR), and is assisted by training funded by the Crawford Fund.

Current and pipeline ACIAR projects involving NSW organisations account for a total expenditure commitment of approx \$136 million for 92 projects. This work has involved partnerships with researchers throughout Asia and the Pacific and is having a positive impact on NSW agriculture too.

*“The reasons for Australia being involved in international research and development assistance are at once altruistic and self-interested with tangible and non-tangible benefits; and our involvement is of immense benefit to our international and trade relations.”*

- The Hon John Kerin AM FTSE  
Chairman, The Crawford Fund  
and The Hon Tim Fischer AC FTSE  
Former Chairman, The Crawford Fund



The Crawford Fund's purpose is to make more widely known the benefits to Australia and internationally from international agricultural research. The Fund conducts a range of public awareness activities, researches food security issues, arranges specialist training in Australia and overseas for developing country scientists, and conducts master classes for developing country personnel in key topics in agricultural R&D. Please contact us for more information:

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*Our Doing Well by Doing Good report is available on our website or by contacting the Crawford Fund*

The Fund's NSW committee supports NSW institutions and scientists to deliver training that benefits those involved in both developing countries and Australia. By working with the Fund, institutions can gain further rewarding involvement in international agricultural research. Are you involved in an agriculture for development project that would benefit from training for your developing country partner scientists? Contact:

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**Doing Well by Doing Good**

*International agricultural research – how it benefits Australia as well as developing countries*

## INTERNATIONAL AGRICULTURAL RESEARCH WORKING FOR...

### NEW SOUTH WALES

The Crawford Fund believes that international agricultural research delivers a wide range of benefits to Australian agriculture.



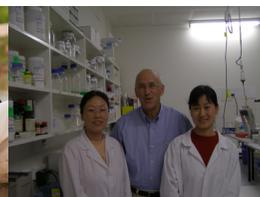
**THE CRAWFORD FUND**  
*For a Food Secure World*

It also holds the key to alleviating rural poverty in developing countries, opening the door to economic progress and serving our national interests of regional stability. By supporting agricultural research, Australia is “Doing Well by Doing Good.”

The Crawford Fund provides an avenue for Australia's highly experienced agriculturalists to exchange knowledge with their counterparts in developing countries.

*“Supporting agricultural research for food security provides Australia with benefits worth more than we spend on it through our aid program.”*

- The Hon Neil Andrew AO, horticulturalist,  
former Speaker of the House of Representatives  
and Chair of the Doing Well by Doing Good Task Force



## Biosecurity and exotic disease readiness

Working overseas provides scientists and students with a first-hand opportunity to observe and treat diseases not currently in NSW, without risk of introducing them here. Such experience is crucial for the early and accurate detection of biosecurity threats and builds our capacity to deal with exotic disease outbreaks.

For example, the citrus industry now has a better awareness and readiness for devastating diseases such as Huanglongbing (HLB) disease (citrus greening) which is present in countries such as Indonesia and Bhutan. **NSW DPI** researchers are a partner in this work and staff from **University of Western Sydney** assisted with the Fund's 2011 Master Class on HLB.

Vet students from the **University of Sydney** have the opportunity to visit ACIAR livestock projects in Lao PDR and Cambodia. The projects have defined Foot and Mouth Disease (FMD) 'hotspots' in the Mekong region, enabled more targeted FMD vaccination and biosecurity programs, and have been assisted by training supported by the Crawford Fund.

*"Biosecurity is the key area that benefits from our work in other countries... such experience is crucial for the early and accurate detection of an intrusion by an exotic pathogen."*

- Professor Lester Burgess  
Crawford Fund Medal Awardee and Trainer,  
& former Dean of Agriculture, University of Sydney

**NSW DPI** and the **University of Sydney** have worked on a range of ACIAR projects related to anthrax, brucellosis and rabies. The Fund has assisted this important biosecurity work with training, for example, on safe anthrax diagnostic techniques. Improving the response to the Bali rabies incursion through dog vaccination reduced the level of rabies and the risks to tourists as well as the local Balinese, and risk assessment of the spread of rabies has stimulated increased surveillance in Australia and our region.

**UNE** and the **University of Sydney** are working on poultry biosecurity and marketing in Indonesia to provide a better understanding of Avian Influenza and reduce the risk of this fatal disease entering Australia.

## Access to elite germplasm

Our cereal industries have benefited enormously from the introduction of productive, disease and pest resistant germplasm from international centres supported by Australia.

**Australia contributes about \$22 million per year to international agricultural research centres and the annual benefit flows from breeding materials and resources from just three key centres that are especially relevant to Australian crops are estimated at \$100 million a year.**

A tangible benefit to growers in NSW is the unique Indo-Australian wheat germplasm developed. By crossing Indian and Australian parents, developed in isolation over the past two decades, we've been able to leap ahead 20 years. These materials have shown remarkable adaptation at the **University of Sydney's** Narrabri Research Station. The new materials have also been accessed by commercial wheat breeding companies for NSW farmers.

## Creation of useful networks

An outcome of international agricultural research is the establishment of professional networks that enable the two way flow of information beyond the duration of a project. A few examples follow:

ACIAR funded rice and maize productivity and sustainability projects in North Korea have helped maintain the capacity of a **NSW DPI** and **CSU** multidisciplinary team and assisted them to develop collaborative links.

A long-term outcome of a fish health project in Indonesia involving the **University of Sydney** is the development of a broad network of aquatic health experts in Indonesia and NSW, facilitated by a program of information exchange and hands-on training. The Fund's Master Class on aquaculture feeds in PNG, involving **NSW DPI**, has further assisted with this fisheries network and capacity building.

ACIAR, the Fund and NSW institutions have been using their international networks to place young Australian researchers as volunteers in agriculture for development projects, which is invaluable in assisting them in their careers and work back in Australia.

Very successful work by **UNE** in Asia on livestock forages is providing our researchers with important knowledge for their research and extension in NSW. Awareness of this work has been assisted by the Fund facilitating a video on the project.

## Use of technologies developed overseas

New scientific tools and products for developing countries can also be used in Australian agriculture due to the fact that Australia has similar soil, water and climatic conditions, has interests in the same crops and livestock, and is troubled by similar pests and diseases.

One example is a feed balance analyser model, part of a project with China, being used at **CSU** to give students a more realistic understanding of livestock management on grassland, and to be adapted for use by commercial livestock producers. Another model for crop and livestock production systems has been used in Australia in the "Grain and Graze" program, funded by **Meat and Livestock Australia**.

Horticultural producers in Australia and Cambodia are benefiting from a new Field Guide for tomato, capsicum, chilli and eggplant production. This is the latest product of a vegetable industry development project run by **NSW DPI**.

## Improved reputations and careers

The number of our scientists involved with international research centres is like Australia's Olympic medal tally, with a disproportionately high number represented, relative to our population. Working on international projects broadens scientists' experience and reputations which can lead to being able to attract more funding and be involved in more projects. Just one example of this is research on biofertilisers for rice, too costly to run in Australia, which was conducted in Vietnam with the involvement of the **University of Sydney**. A number of PhDs resulted from the work, one of the NSW researchers is now a leader in quality control of Australian microbial products, and the work attracted a subsequent \$250,000 World Bank grant to promote this technology in the Mekong Delta. Ten publications in respected international journals were also produced.

