



THE CRAWFORD FUND

PO Box 4477  
Kingston ACT 2604

+61 2 6188 4370  
Crawford@crawfordfund.org  
www.crawfordfund.org

25 September

Committee Secretary  
House of Representatives Standing Committee on Agriculture and Industry  
PO Box 6021  
Parliament House  
Canberra ACT 2600

Dear Secretary

**Re: Agricultural Innovation**

The Crawford Fund is pleased to make this brief submission to the inquiry on innovation being undertaken by the House of Representatives Standing Committee on Agriculture and Industry.

Innovation on farms and in agricultural value chains derives from research; and research on agriculture in Australia is inextricably linked to a global knowledge base that is, in turn, fed by international research. Australia, if it wishes to benefit from this global effort, must remain as an integral player in it. By doing so, Australia will be able to contribute to economic growth amongst the developing countries and to enhance its own agricultural industries.

*We submit, therefore, that the Standing Committee in exploring innovation in Australia's agricultural industries, should consider its international context.*

The Crawford Fund, throughout its more than 25 year existence, has sought to provide the evidence base for its 'win-win' claim. The evidence has been presented progressively at its annual Parliamentary Conferences and through a series of task forces. Most recently, it published the findings of its *Doing Well by Doing Good* task force, which was chaired by the Hon Neil Andrew and overseen by the Hon Tim Fischer and the Hon John Kerin.

The task force drew on independent studies that showed quantified benefits to Australia from just 48 of ACIAR's 600 bilateral projects exceeded \$2.5 billion, a sum close to *total* ACIAR investments since the Centre's inception in 1982. It found that aid programs benefit Australian farmers; and contribute to the knowledge and capacity of Australian science. International agricultural research both serve Australia's aid goals and constitute part of Australia's agricultural innovation system.

The task force recommended that ACIAR remain integral to Australia's aid effort and continue as part of its innovation system. ACIAR's portfolio should be progressively aligned with Australia's national primary industries RD&E framework and increasingly engaged with the private sector. It suggested that funding for Australia's international agricultural

research should grow at least at the rate of inflation and faster as regular reviews show an increasing contribution to Australian and developing country agricultural productivity.

Whilst the fiscal environment has meant that this growth in aid funding has not been possible over the last few years, other efficiencies have been pursued. The Crawford Fund Parliamentary Conferences of 2014 and 2015 sought to ensure that public and political support for investment in international agricultural research will, over the longer term, be sustained. The quintessential message in 2014 was the need to increase global food production in ways that are ethical and efficient, that are profitable for farmers and consumers, protect the environment and engage women and young people fairly.

The 2015 conference, which drew on the expertise of the private sector and NGO's, stressed the need for leadership from the sector in bringing new technologies and innovative practices to market at scale, and the value of partnerships between the private and not for profit sectors with pooled resources, shared risks and results, and investment in trust.

The private sector and its profitability have particular roles in food production and in natural resource management. Much of a company's environmental impacts are beyond the control of its operational footprint extending into its supply chain and typically into the production and harvesting of raw materials. In this context, not-for-profit leadership in engaging and brokering partnerships with major retailers, manufacturers and brands, traders and investors, can slow the loss of biodiversity and reduce the impacts of agriculture, forestry, fisheries and aquaculture on water and climate: in other words ensuring the sustainability of the globe's natural resource base upon which profitability rests.

The ingenuity of humankind, which is manifest in our capacity to innovate through research and development, is an essential part of the solution. It is through innovation and R&D that we can produce food more sustainably and aim to freeze environmental impacts.

Copies of the report of the *Doing Well by Doing Well by Doing Good* task force, the proceedings of the Crawford Fund's 2014 Parliamentary Conference, and an Executive Summary of the 2015 Conference are available on the Fund's website at [www.crawfordfund.org](http://www.crawfordfund.org). A summary of the *Doing Well by Doing Good* report is attached.

Yours sincerely

DG Blight AO FRSA

Chief Executive



# Doing Well by Doing Good

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

Report of the Crawford Fund  
Doing Well by Doing Good Task Force

DECEMBER 2013



THE CRAWFORD FUND  
*For a Food Secure World*

## Aid that works

**“It’s been proven that of all the interventions designed to reduce poverty, improving agricultural productivity is the best.”**

*– Bill Gates, chairman of Microsoft and founder of the Bill and Melinda Gates Foundation*

Australian aid abroad includes a specialised agricultural program. It funds and leverages Australia’s advanced agricultural science expertise in partnership primarily with developing countries and international research centres and aims to overcome production constraints of mutual concern and to improve food security.

The program has been largely administered by the Australian Centre for International Agricultural Research (ACIAR) since 1982. Projects have involved all production sectors: crops, livestock, horticulture, aquaculture, fisheries and forestry. Also included is research into soil deficiencies, energy and diminishing water resources. The work typically takes place in farmers’ fields and laboratories in developing countries backed by research in Australia. It takes the form of scientific research, technical knowledge transfer, management practices, policies, tools and training. Among the targeted beneficiaries abroad are some of the world’s poorest subsistence farmers, so that they can then grow more food and trade their way out of poverty, bringing entire rural communities with them.

Australia shares with developing countries similar production challenges – drought, floods, poor soils for example – and we benefit greatly from international engagement, co-investment and collaboration in seeking mutually beneficial solutions. Over the years, Australian partnerships have enabled former aid recipients such as India and Thailand to transform into donors of newly acquired expertise to poorer neighbours. ACIAR and the international centres have also come to draw on a greater range of project partners that now includes NGOs, philanthropic foundations and private sector companies.

## Enlightened self-interest

**“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 Tim Fischer and the Hon John Kerin*

Recently, in the face of a rundown in Australia’s agricultural research capacities, questions have been raised about whether agricultural aid should place more emphasis on benefits to Australian farmers and to our own research capabilities. The premise put forward by the National Farmers’ Federation (NFF) is that the split of benefits between developing countries and Australian agriculture should be moved somewhat in Australia’s favour. A task force led by The Hon Neil Andrew examined that very proposition. It has now released its findings in a report entitled: *Doing Well By Doing Good: International Agricultural Research – How It Benefits Australia As Well As Developing Countries*.

### WHAT IS ‘INTERNATIONAL AGRICULTURAL RESEARCH’?

International agricultural research is undertaken to enhance agriculture in developing countries. It has traditionally been conducted by institutions within the public and not-for-profit sectors and mostly funded by international development assistance bodies, philanthropic agencies and governments of the developing countries. New partnerships with the private sector are becoming increasingly important.

The Consultative Group on International Agricultural Research has been pre-eminent along with several other international agricultural research centres, usually in partnership with national research agencies in developing countries, farmers’ groups and advanced research centres.

## 2 The Crawford Fund

## R&amp;D, knowledge and leadership

## 1 Aid in the form of agricultural science is effective

It works and serves Australia's national interests of regional peace and security by alleviating poverty and by enhancing food security in developing countries. These impacts primarily take the form of increased farm incomes among smallholder and subsistence farmers.

## 2 The aid program benefits Australian farmers

ACIAR also functions within Australia's agricultural innovation system. Australia's ability to benefit from international agricultural research depends on it having strong domestic research institutions. This contributes to the depth, breadth and relevance of expertise in Australia that is available to the international agricultural research system. This, in turn, helps build enduring linkages between Australian research institutions and their global counterparts. It keeps Australia within the circle and enables access to global knowledge and product innovation networks, which also provide hands-on experience of biosecurity risks.

## 3 Aid activities contribute knowledge and capacity

ACIAR funds the same scientists that support Australian agricultural enterprises. This extends the reach and scope of Australian research; generates tools and experience invaluable to Australian agriculture; and provides Australian researchers with experience of biosecurity risks.

A focus on international agricultural research may also broaden the appeal of agricultural sciences for young Australians. Hundreds of fellowships provided to developing country scientists who undertake research in Australia add to Australia's knowledge bank.

## 4 Leadership is needed for aid and innovation goals

The independent review of ACIAR found that ACIAR and the international agricultural research it supports are integral to Australia's aid program and part of Australia's agricultural innovation system.

Pursuit of these twin roles and encouraging partnerships with the private sector requires skilled leadership directed at understanding, explaining and exploiting shared interests between Australian research institutions in the public and private sectors and their international counterparts.

## Deliver human security

*"If we can't deal with these issues of food security, we're going to see increased civil commotion, uncertainty and disturbances. Sometimes that may lead to government changes which are not for the best. And as we've seen elsewhere, that has led to mass out-migration from some of these countries putting great stress on our borders. There is a national imperative here, that as a wealthy western country, we should be investing money in food security because benefits are both ways."*

*– Dr Colin Chartres, former Australian Director-General, International Water Management Institute*

Independent studies show quantified benefits to Australia from 48 of ACIAR's 600 bilateral projects exceeded \$2.5 billion, a sum close to total ACIAR investments since its inception. This represents just 7 per cent of total benefits derived from the projects assessed. Australia has contributed about \$10 million per year to international agricultural research centres; three are especially relevant to Australian crops: the International Maize and Wheat Improvement Center, the International Crops Research Institute for the Semi-arid Tropics and the International Center for Agricultural Research in the Dry Areas. Annual benefit flows from breeding materials and resources from the three centres are estimated at \$100 million a year. Other centres contribute in agro-forestry, biosecurity, fisheries, forestry, livestock, policy, rice, tropical agriculture and vegetables.

There is concern about worldwide declining student enrolments in agriculture courses. International agricultural research centres support training through participation in Australian research activities. Benefits to Australia include: advanced research on Australian agriculture; development and acquisition of scientific tools and experience in developing countries that proves valuable in Australian agriculture; forewarning and experience of biosecurity risks; ongoing cooperation between Australian and international research institutions; and recognition of Australia's scientific credibility in international scientific forums.





## In a networked world

“In a networked world, biosecurity, food security and peace and security are interconnected in Australia’s national interests. The 1 billion people who live in abject poverty are a primary source of regional and global instability. Australia also needs to compete in export markets. Research is essential for both: to feed the poor, to sharpen our competitive trading edge and to help create new markets for our produce.”

*The Hon Tim Fischer and the Hon John Kerin*

International agricultural research interpreted on a wider canvas embraces natural resource management, analysis of policy options, and the role of the private sector. It can lead to: more efficient use of natural resources in Australia and developing countries and better global free trade policies and practices, which open markets for Australian and developing country produce equating to more Australian exports.

The International Food Policy Research Institute has undertaken policy-based research projects including in Indonesia and China, often in partnership with Australian researchers funded by ACIAR.

The Centre for Agricultural Bioscience International has supported effective biological control programs of invasive pests and weeds in Australia and globally, reducing resource depletion.



ACIAR’s review encouraged exploration of public/private research partnerships, an area of interest to the NFF. The task force believes such partnerships might be leveraged to deliver benefits to Australia as well as to the developing countries. It noted that some 40 percent of global spending on agricultural research is conducted by the private sector, but mostly by multinational firms in North America and Europe.

The Crawford Fund is undertaking a joint project with the Syngenta Foundation for Sustainable Development on demand-led research, characteristic of the private sector.

## More can be achieved

The task force has examined sympathetically a proposition from the NFF that international agricultural research programs, funded by the Australian aid program– and which are mainly delivered through ACIAR – should place more emphasis on benefits to Australia.

## Recommendations

The task force suggests that ACIAR:

- 1 Remain integral to Australia’s aid program and part of its innovation system.
- 2 Align its portfolio more closely with Australia’s national primary industries RD&E frameworks, thus drawing on a wider range of Australian expertise and interests, which would result in enhanced benefits to both developing countries and Australia.
- 3 Supplement its impact assessments by including measurements of the strengthening effect that participation in international agricultural research has on Australian institutions.
- 4 Explore the scope for greater private sector participation in international agricultural research, including exploration of benefits to Australia as well as the developing countries.
- 5 The task force also suggests that funding for Australia’s international agricultural research should grow at least at the pace of inflation and faster as regular reviews show an increasing contribution to Australian and developing country agricultural productivity.



## 4 The Crawford Fund

The task force drew upon independent impact assessments and surveyed Australian project leaders in ACIAR projects, inviting them to identify benefits to Australia from the projects in which they were involved.

We invited international agricultural research centres to identify areas of their work that were beneficial to Australia. We also conducted consultations with stakeholders that were held around Australia in May 2013, distributed a discussion paper and sought comments on the draft report. Finally, the task force drew extensively on the stock of knowledge recorded in the proceedings of the Crawford Fund's Parliamentary Conference conducted over the past 26 years.

The task force was guided by several major signals:

- The recently published Independent Review of ACIAR
- An Inquiry by the House of Representatives Standing Committee on Agriculture, Resources, Fisheries and Forestry
- A submission by Mr James Ingram, a former Executive Director of the World Food Program who was Director of AIDAB (AusAID's precursor) at the time of ACIAR's foundation
- The aspirations of the new Australian Government.

The resulting report therefore embodies inputs and experiences including from policy makers, farmers, scientists, researchers, extension workers and others involved in domestic and international agricultural research.

## The report

Doing Well By Doing Good: International Agricultural Research – How It Benefits Australia As Well As Developing Countries.

*by Dr Denis Blight, Dr Eric Craswell and Professor John Mullen December 2013*

"Against this background, we saw our task as one of striking the right balance between ACIAR's twin roles as an integral arm of the Australian aid program – its primary role – and as part of Australia's agricultural innovation system. We concluded that the factor that brings the two roles together is the national interest.

"We believe that the opportunities for win-win outcomes in the national interest are particularly high in agricultural research, just as they are, for example, in research on tropical health. In agriculture this is the case when countries on either side of this artificial divide share soil, water and climatic conditions, interests in the same plant or animal varieties, and are troubled by similar pests and diseases."

*– The Hon Neil Andrew, task force chair*

## About the Crawford Fund

The Crawford Fund was established in 1987 as an initiative of the Australian Academy of Technological Sciences and Engineering (ATSE) to honour and carry forward the work of Sir John Crawford, an Australian internationalist who made major contributions to enhancing world food production in the 1960s–70s in his role as adviser to governments and the World Bank.

The Crawford Fund's purpose is to make more widely known the benefits that accrue both to Australia and internationally from international agricultural research and development.

The Fund conducts a range of public awareness activities, arranges specialist training in Australia and abroad for developing country scientists, and conducts master classes for developing country personnel in key topics in agricultural research and development.

The Crawford Fund operates through state and territory Committees throughout Australia and has a small central office in Canberra.

The report can be viewed and downloaded at [www.crawfordfund.org](http://www.crawfordfund.org). Personal testimonies from international and Australian stakeholders are on the Crawford Fund YouTube site.

### FOR FURTHER INFORMATION, CONTACT:

Dr Denis Blight AO

Chief Executive

The Crawford Fund

Tel: 61 2 6188 4370

Em: [Crawford@crawfordfund.org](mailto:Crawford@crawfordfund.org)

Web: [www.crawfordfund.org](http://www.crawfordfund.org)

Twitter: @crawfordfund

YouTube: [www.youtube.com/user/CrawfordFund?feature=watch](http://www.youtube.com/user/CrawfordFund?feature=watch)



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