



Australian Government



Cotton Research and Development Corporation

Grains Research and Development Corporation

Fisheries Research and Development Corporation

Rural Industries Research and Development Corporation

Sugar Research and Development Corporation

Grape and Wine Research and Development Corporation

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The Secretary  
House of Representatives Standing Committee on Industry, Science and Innovation  
Parliament House  
Canberra ACT 2600

By email: [isi.reps@aph.gov.au](mailto:isi.reps@aph.gov.au)

12 February 2010

Dear Sir/Madam,

Please find attached the Council of Rural Research and Development Corporations Chairs (CRRDCC) submission to the House Of Representatives Standing Committee on Industry, Science and Innovation Inquiry into Australia's international research collaborations.

Please do not hesitate to contact Su McCluskey, CEO, CRRDCC on 02 6122 8436 or [su.mccluskey@crrdcc.com.au](mailto:su.mccluskey@crrdcc.com.au) if you would like to discuss further.

Yours faithfully

Enzo Allara  
Chair  
Council of Rural Research and Development Corporations Chairs



## Background

The Council of Rural Research and Development Corporations Chairs (CRRDCC) is a collaborative forum for consideration of matters of mutual concern to the Rural Research and Development Corporations (RDCs) and for coordination of collaborative activities.

The CRRDCC is a non incorporated body comprising 15 RDCs and provides the peak forum for evaluation of the collective efforts of the RDCs and for collaboration on major projects of national significance. Of the 15 RDCs, six are statutory corporations and nine are industry owned companies. The 15 RDCs are listed below.

The RDC model, based on industry and government collaboration, is an effective working alliance between government, industry and research partners. It is a unique example of government–industry partnership benefitting both the industry and the wider community.

The RDCs are major funders of R&D in Australian agriculture, investing \$441<sup>1</sup> million in R&D in 2008-09, which covered a range of priority areas including productivity, climate change and natural resource management. This amount includes \$244 million of industry investment and \$207 million in Government matching contributions.

<b>Statutory bodies</b>	
Cotton Research and Development Corporation	CRDC
Grains Research and Development Corporation	GRDC
Fisheries Research and Development Corporation	FRDC
Rural Industries Research and Development Corporation	RIRDC
Sugar Research and Development Corporation	SRDC
Grape and Wine Research and Development Corporation	GWRDC
<b>Industry owned companies</b>	
Dairy Australia	DA
Australian Wool Innovation	AWI
Meat and Livestock Australia	MLA
Australian Egg Corporation Limited	AECL
Horticulture Australia Limited	HAL
Australian Pork Limited	APL
LiveCorp	LiveCorp
Australian Meat Processors Corporation	AMPC
Forests and Wood Products Australia	FWPA

<sup>1</sup> Expenditure varies from year to year and total R&D expenditure does not necessarily equal the totals of industry and Government contributions due to carry forward balances of industry funds.

## Introduction

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The Council of Rural Research and Development Corporations Chairs (CRRDCC) welcomes the opportunity to make a submission to the House Of Representatives Standing Committee on Industry, Science and Innovation Inquiry into Australia's international research collaborations.

Globally there are significant challenges for food, water and energy security. Australia equally faces these challenges and has the capacity to make a difference through its R&D which improves the productivity and sustainability of its rural industries. In doing so there will be important spillovers from Australian rural R&D. Beyond this, international research collaboration will continue to grow in importance and impact.

The extent of international research collaboration varies across the RDCs but is considered an important component of RDC investment in rural R&D. Collaboration is considered a valuable approach in determining the most effective way to manage and leverage taxpayer and industry contributions. Importantly, collaboration extends beyond co-investment. Cooperation, coordination and communication are also important to achieving research outcomes and maximising investment impact.

Within Australia the RDCs actively collaborate with a wide range of R&D providers, industry, government and community organisations on both a formal and informal basis, where a common need or opportunity is identified and a clear value proposition for collaboration exists.

## The nature and extent of existing international research collaborations

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In global terms, Australia is a small investor in rural R&D, therefore it is imperative that we establish strong and productive relationships with international agricultural research centres and other R&D providers. Australia can make significant gains by leveraging international resources.

The RDCs provide considerable support across a range of industries for international research collaboration to assist in facilitating the exchange of research and development knowledge that can deliver benefits to Australian primary industries.

This support is provided by the participation in, and management of key international collaborations with international research centres and other R&D providers. This support covers areas including breeding, biotechnology, biosecurity, crop protection and agronomy to address the impacts of climate change. Some examples are provided below.

Much of this is undertaken through the support that the RDCs provide through the Consultative Group on International Agricultural Research (CGIAR). For example, through CGIAR, the GRDC supports interactions with the International Maize and Wheat Improvement Center in Mexico and the International Centre for Agricultural Research in the Dry Areas in Syria.

Through a joint venture between GRDC and Novozymes Biologicals Ltd in Canada, GRDC has invested approximately \$20 million over a five year period in more than 30 projects across a dozen organisations seeking to develop both management solutions and new soil inoculants products. The purpose is to increase plant productivity through both suppressing soil-borne disease and promoting plant growth.

The RDCs typically invest in international collaboration that builds basic science knowledge, industry and R&D capacity. The CRDC portfolio demonstrates this scenario and more recently has included strategic commercial initiatives where the CRDC is performing a development role in piloting product R&D through whole of supply chain collaborations, such as:

- Development of R&D capacity
    - International travel/conference/study grants and exchanges for Australian researchers.
    - International cotton and cotton pest genomics
  - R&D solutions - to address specific issues
    - biosecurity threats - viral diseases from Pakistan and whitefly from the USA
    - development of nutritionally improved cottonseed oil
    - water management technology.
  - Industry Development initiatives
    - International Cotton Advisory Committee - Taskforce for Commercial Standardisation of Instrument Testing of Cotton
    - International Cotton Advisory Committee - Taskforce for Social, Environmental and Economic Performance of Cotton Production
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- Cotton Incorporated (USA) - energy use life cycle analysis
- International conference and study grants for members of industry.
- Commercial initiatives
  - Working closely with overseas spinners, the CSIRO, a university in Hong Kong, Australian cotton industry organisations to develop contemporary market intelligence, processing and product innovation for Australian cotton.

Dairy Australia has strategic arrangements with DairyNZ, New Zealand's peak Dairy Industry Research funder and manager. This includes some participation and involvement with the dairy industries national RD&E strategy that has been endorsed by the Primary Industries Ministerial Council.

There is also collaboration between Dairy Australia and Human Clinical Research trials with Dairy Management Incorporated (US) and Dairy Farmers of Canada.

APL engages either directly or indirectly with a range of international research providers and is also indirectly involved in international research collaborations including projects to enhance and promote research capabilities by supporting the further of young and mid career scientists at international research institutes. In addition, APL is also indirectly involved in international collaboration via the CRC program, such as the Australian Biosecurity CRC, supporting partners from the EU and projects with private companies based in the USA and EU.

AMPC engages in direct collaboration with MLA and the NZ industry for Auto evisceration and also collaborates with Chicago University for Co Biotic.

## **The benefits to Australia from engaging in international research collaborations**

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The benefits of engaging in international research collaborations go beyond benefits for those in the agricultural sector.

International collaboration can be an effective means to:

- access complimentary research capabilities
- minimise duplication of research effort
- engage end users in the research process
- make most efficient and effective use of limited research resources
- build critical mass
- share risk
- tackle cross sector issues
- avoid restructuring costs
- apply multi-disciplinary perspectives.

Benefits equally accrue in improving the quality of the science, the impact of the research results and from building the future capacity of the research community, all of which can drive greater value from investment in research.

The benefits include access to expertise and infrastructure not available in Australia and can provide access to sophisticated and expensive equipment.

The ability of Australian researchers to work with the world's best researchers and conversely, to provide the opportunity to show the world where we excel, is also a benefit of international collaboration. For example, the Australian dairy industry is 2% of worldwide dairy production and international collaboration enables the local industry to access the R&D developed by the other 98% of world production. The Australian pork industry has also benefited significantly from the short term visits from key world renowned scientists. In the areas of health and disease management, collaboration with overseas scientists is essential, given that Australia is free from many diseases.

Economic benefits can also be realised through the global trade in knowledge and providing access to markets and world standards.

The ability to leverage R&D funds is a key benefit, providing access to greater levels of investment, providing greater technology transfer capability and leading to enhanced research productivity

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## **The key drivers of international research collaboration at the government, institutional and researcher levels**

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The CRRDCC considers that the key drivers in the rural R&D operating environment for encouraging international research collaboration are:

- leadership in international industry and science forums that enable discussion and identification of shared strategic objectives
- gaining access to new and/or novel technology for Australian farmers more rapidly
- scientific exchange or capacity building, particularly where expertise in Australia is lacking and needs to be built
- utilising R&D skills or technology not available in Australia
- declining levels of public investment and the need to leverage investment for outcomes
- declining government research capacity and the need to access or build alternative capacity
- having clear, strategic agreed and holistic view of research needs and outcomes for industry
- enabling national priorities to be addressed
- increased return on investment dollars

The ability to maintain an internationally relevant and highly regarded research community will be vital, as will the ability to facilitate top quality research.

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## **The impediments faced by Australian researchers when initiating and participating in international research collaborations and practical measures for addressing these**

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The CRRDCC considers that there are few structural impediments to international research. However, it is necessary to maintain a strategic view of the desirable outcomes and a culture that can encourage and support collaboration globally.

For international collaboration in rural R&D, there is a risk in ensuring the benefits to Australia are not outweighed by flow on improvements to the competitiveness of international competitors. Extending this further, the policy objectives of international aid and international research collaboration in rural R&D are not necessarily compatible.

Given that rural industries compete globally for markets, the risk that research outcomes will disproportionately improve the competitiveness of international producers is significant. In the cotton industry examples have included GM traits and elite cotton varieties.

Misalignment of R&D funding and procurement processes between Australian and international partners can be overcome through communication and negotiation.

There are also competing priorities in terms of needing to balance the needs of industry both here and overseas with the needs of governments. This applies to both the short and longer terms.

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## **Principles and strategies for supporting international research engagement**

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Australia is a small market on a global scale and is also geographically isolated. Australia represents just two percent of the world's knowledge-generating capacity, therefore international collaboration is critically important for growing Australia's innovation capacity. R&D undertaken overseas makes an important contribution to both productivity growth and the gross value of production in Australian agriculture.

Ensuring that Australia can engage globally is fundamental to facilitate the exchange of R&D knowledge to deliver benefits to Australian primary industries.

Government and industry support for developing and sustaining international forums is a key principle for enabling the discussion of strategic research needs as well as the organisational and personal relationships which underpin collaboration.

Likewise, supporting effective competition in global markets through enhanced profitability and environmental sustainability is important.

Rural R&D is not homogenous. Rural industries are trade exposed and therefore risk profiles need to be managed. It varies from sector to sector and the value proposition is different to other sectors.

The RDCs will continue to engage globally by supporting and contributing to the management of key international collaborations and will also continue to support capacity building activities which provide opportunities for the international exchange of human resources.

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