



**Hon Tim Mulherin MP**  
Member for Mackay



**Queensland**  
Government

**Minister for Primary Industries,  
Fisheries and Rural and Regional  
Queensland**

Reference: 10844/10

24 DEC 2010

Inquiry into Rural Research and Development Corporations  
Productivity Commission  
Locked Bag 2  
Collins Street East  
**Melbourne Vic 8002**

Dear Sir/Madam

I am writing in relation to the Productivity Commission's Inquiry into the Rural Research and Development Corporations. Please find enclosed the Queensland Government's submission in response to the draft Report.

The Queensland Government looks forward to the release of the Final Report in February 2011 and has appreciated the opportunity to respond to the Inquiry by commenting on the draft Report.

If you require any further information regarding this matter, please do not hesitate to contact Professor Beth Woods of the Department of Employment, Economic Development and Innovation on telephone 07 3239 0511 or email [beth.woods@deedi.qld.gov.au](mailto:beth.woods@deedi.qld.gov.au).

Yours sincerely

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**QUEENSLAND GOVERNMENT**  
**SUBMISSION IN RESPONSE**  
**TO THE DRAFT PRODUCTIVITY**  
**REPORT ON**  
**THE RURAL RESEARCH DEVELOPMENT**  
**CORPORATIONS**



**Queensland**  
Government

**November 2010**

## **Key Points**

- The Queensland Government does not support the proposed withdrawal of Australian Government funding to rural R&D of \$60 million over 10 years. Current R&D funding levels should be maintained in line with the commitment through the development of the National RD&E Framework.
- The assumption that industry or other funding sources will fully compensate for a reduction in Australia Government funding is doubtful due to the fact that the R&D funding model is complex and reliant on the ability to leverage. The Queensland Government considers this unlikely to occur.
- The draft report identifies the need for better data collection and this is supported by the Queensland Government. Such information is valuable as it will improve evidence based policy decision making and the effective use of funds.
- The distinction between private and public benefits resulting from R&D investment is not straightforward. Private benefits in agriculture arising from productivity gains and other flow-on economic benefits to regional and national economies are often associated with public benefits.
- The coordination of cross-sectoral rural R&D is supported. However, to use a new entity such as the proposed Rural Research Australia (RRA) is questioned and exploring other methods of achieving this which avoids generating additional overhead costs is suggested. In addition, it is not clear how the RRA will facilitate industry adoption of R&D outcomes.
- The draft report assumes elastic supply of R&D in Australia and that it is sufficiently flexible to respond to varying funding levels from year to year. The Queensland Government considers this not to be the case in practice. Reduced or unreliable funding will impact on critical agricultural science skills and expertise and presents a real risk of losing agricultural science capacity and capability.

## 1 Introduction:

One of the biggest challenges facing the world today is future “food security”. The challenge is to ensure that people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. It is estimated that by the year 2050 the world population will be in excess of 9 billion, and the increase in food demand will equate to somewhere between 50 – 80% above current demand. The challenge is to ensure this increase in demand is met in light of issues affecting food production and consumption. The issues in food production include: availability of quality land and water; the cost of inputs including oil (used for fertiliser, transport, and processing of food); climate change; the loss of biodiversity in the production of cultivars; pollution; deforestation; and fisheries depletion. The issues associated with consumption are food wastage, competition between production for human food or production for alternative uses (e.g. fuel), and increased human demand for variety and quantity of foods.

While Australia does not face a pressing food security issue, it does have a role to play in addressing future regional and global food security issues.

With those issues and the challenging economic environment due to the effects of the global financial crisis, it is critical that government at least maintains the expenditure on innovation and in particular rural research and development (R&D) to ensure the capability and capacity to increase agricultural productivity to contribute to meeting these demands in the future.

The Australian Government RDC model is valuable in providing the ability to support rural R&D in a balanced way. The draft report states that the RDC model is comparatively well supported and well regarded. In addition, Australia’s unique RDC model appears to be highly regarded internationally. The draft report makes comparisons with other international rural R&D systems. However, any comparison needs to be carried out in context. Australia has a different portfolio of industries and policy approaches. Direct comparisons may not be relevant or appropriate.

The Queensland Government welcomes the opportunity to respond to the Draft Productivity Commission Inquiry Report into Rural Research and Development Corporations (RDCs) in Australia as RDCs are an important component of rural R&D investment. In addition, the Queensland Government maintains extensive rural R&D and associated extension programs focussing on a number of key Queensland primary industries. These include collaboration with the RDCs and strong dependence on RDC funds to drive innovation and productivity in the State.

The draft report identifies the need for better data collection to enhance understanding of funding and spending flows. This is supported by the Queensland Government. Such information is valuable as it will improve evidence based policy decision making and the effective use of funds.

The draft report recommendation not supported by the Queensland Government is the reduction in funding. The proposal to withdraw \$60 million of funding per annum

from rural R&D within 10 years will markedly decrease Australia's ability to address the challenges confronting the sector and maintain its position as a 'clean and green' competitive global food producer.

In addition there are other areas where the Queensland Government has concerns:

- i) The coordination of cross-sectoral rural R&D is supported but the establishment of new entity such as the proposed Rural Research Australia (RRA) is questioned when there may be other methods of achieving this without generating additional overhead costs.
- ii) The draft report assumes that industry or other rural R&D funders will take up the gap created when funding is withdrawn and the Queensland Government considers this unlikely to occur.
- iii) The draft report assumes elastic supply of R&D in Australia and that it is sufficiently flexible to respond to varying funding levels from year to year. The Queensland Government considers this not to be the case in practice. Funding reduction or uncertainty will impact on critical agricultural science skills and expertise and presents a real risk of losing agricultural science capacity and capability.

Ongoing investment in R&D in the rural sector is critical to remaining internationally competitive and to meet the future demands of an increasing global population.

The Queensland Government response addresses the three central themes identified in the draft PC Report. These include the:

- Role governments play in R&D Investment
- Risks of reducing R&D funding
- RDC Model

## **2 The Role Governments play in R&D Investment**

### ***2.1 National Research, Development and Extension Framework***

The National RD&E Framework for primary industries is a positive step forward in building and improving collaborations between jurisdictions and other R&D providers across Australia. The driver for the Framework is not about 'picking winners' but rather improving coordination and direction of investment and research strategy, reducing duplication and capitalising on strengths through industry specific R&D plans. The draft report (pp.112-113) questions the potential longer term risks and costs of the National RD&E Framework particularly that 'directive consolidation could go too far in the central planning direction'. The draft report also expresses reservations that the role of governments in directing specific research and 'picking winners' will be too strong. At least in relation to the sectoral R&D plans, it is industry interests (through the R&D Corporation) which identify aspirations and challenges which in turn, direct research priorities.

The Queensland Government does not support these sentiments and is committed to driving the Framework forward.

Although the detailed implementation of the Framework is still evolving, the RDCs provide an important platform for delivering the outcomes sought and influencing direction setting under the Framework. The potential importance of the Framework in more effective R&D delivery in Australia should not be underestimated.

### ***2.2 Adoption of R&D Outcomes***

In addressing the challenges associated with the uptake of R&D, an effective commercialisation process is required to exploit intellectual property to deliver private and any associated public benefits.

R&D and the associated adoption of R&D outputs are major facilitators of competitiveness for rural industries and regional economies. The impact of improved productivity and flow-on environmental and social benefits extend well beyond the farm gate.

Private benefit R&D outcomes are often a strong catalyst for adoption of associated integrated ecologically beneficial practices that confer wider public benefits.

The draft report (p. 34) indicates that Australia is a small player and undertakes only 2% of global agricultural R&D. On this premise, the Productivity Commission considers R&D effort locally should focus on adaptation. Queensland already adapts R&D conducted elsewhere to suit local industries and geographical conditions where possible. It is sensible for Australia to extract maximum value from the 98% of R&D that is carried out elsewhere, but this does not replace or equate to the requirement for Australian rural R&D which needs to be tailored to unique Australian conditions.

Some types of R&D are intrinsically specific to a specific location or region. One example of this is the domestication of native timber species for use in timber-producing plantations. There are examples where improvement work (genetic selection) of Australian species has occurred in other countries where Australian native pests are absent. Attempts to re-introduce this improved material into Australia have not been successful, because any natural resistance to local pests and diseases was effectively lost during the overseas 'improvement' program. The entire selection and improvement process on such native material must occur in the environment where the production will take place.

An analogous situation would occur with domestication and or improvement of either native Australian product lines or introduced species (major crops and animals). In all cases, it is not effective to substitute R&D undertaken in other countries or regions for local R&D.

For instance, there are few comparable tropical countries with R&D programs targeting areas of interest for the Queensland tropics. Tropical production has specific drivers of profitability, and the associated natural resource management issues tend to be location specific. Under these circumstances, Queensland is a significant supplier of R&D (much greater contribution than 2% globally) in some industries such as sugar, beef, native plantation timber and tropical tree fruit. To this end, the draft Report has not addressed sufficiently the current suboptimal agricultural and related R&D investment relative to future opportunities in northern Australia.

Working with our near neighbours can deliver considerable economic and social benefits. Australia has a role to play in applying and sharing its rural R&D knowledge base particularly in the areas of subtropical and tropical R&D with neighbouring countries such as Papua New Guinea (PNG) and Indonesia. Projects, for example, increasing the productivity of sweet potatoes in PNG, and improving animal health by managing animal diseases in Indonesia deliver significant direct benefits to those nations. However, Australia also receives significant spin-off benefits through increased prevention and preparedness in addressing biosecurity threats. Erosion of funding to the RDCs will diminish the role that they can play, along with DFAT agencies such as ACIAR, in cooperating with neighbouring countries to build regional economic prosperity and biosecurity buffer capacity.

### ***2.3 Delivering Public and Private Benefits***

Government's main role is to fund R&D where there are clear public benefits and/or where there is market failure. Much research comprises a mix of private and public benefits. Where R&D combines shorter term private benefits with longer term public benefits government investment in such R&D in partnership with industry is justified. The RDCs represent a mechanism for this to occur.

Some types of R&D can be linked more closely with public benefits. However, it is often problematic to differentiate between private and public benefits due to a complex inter-relationship in that short term private benefits frequently lead to adoption of practices which deliver broader long term public benefits. The value of linking private and public benefits from R&D should not be underestimated.

Private benefits encourage business innovation, with extension providing a vital role in the uptake of R&D at the 'grass roots' level. Industry organisations often play a central role in disseminating R&D outputs and encouraging their uptake by the relevant constituency base. The drivers for uptake of R&D conferring private benefits are generally stronger and the R&D uptake is often more timely. However, ways of encouraging and accelerating the adoption process are often required for practice changes designed to deliver public benefit (wider environmental or social outcomes), and our experience is that linking private and public benefits together is a highly effective adoption strategy.

## **2.4 Market Failure**

Given the structure and size of many rural industries and the relatively limited capacity for R&D, in the absence of Government intervention, large gaps in the R&D mosaic would emerge, reducing the overall productivity of the sector. Although producers receive significant benefits derived from R&D, the assumption that industries will increase levies to compensate for the withdrawal of Australian Government funds is doubtful. Matching contributions provide the incentive for private investment.

Market failure in rural R&D is generally more prevalent when compared to other industries because there are large numbers of small producers with limited market power producing similar products and adopting similar processes in doing so. Any new findings from research are generally broadly disseminated with the result that rates of return to industry are quite high. The draft report acknowledges this point.

The concept of additionality is a strong theme throughout the draft Productivity Commission report used to justify how and when Governments should invest in R&D. Additionality refers to any increase in innovation outputs and behaviours which are achieved with intervention through government funding. The draft report describes it as the ability "to deliver 'value for money' in public expenditure, [and] governments should seek to use funding contributions to induce socially valuable research that would otherwise not have occurred — that is, *additional* R&D." However, applying the concept of additionality purely on that basis, i.e. funding projects that would not otherwise be pursued — is complicated by *imperfect information*.

Market failure is not the only justification for Governments to engage in R&D investment. If confidently predictable returns to the state economy are sufficiently positive, such investment may be valid and beneficial for social or other reasons. In addition, Government investment can accelerate benefits to both the industry and community that are derived from R&D.

The Queensland Government already applies a broad strategic decision-making process to investing in, undertaking and delivering R&D. This includes considering R&D and non-R&D related options influencing how and where the Queensland Government invests its industry development, resource management and community development effort. Non-R&D related factors can be the catalyst for the development of an R&D program or project to address an industry need, respond to a crisis or address a policy problem. Flow-ons, such as the benefits derived from



R&D through productivity gains and providing opportunities to skill agribusiness workforce, are of fundamental importance to regional economies and, feed into the decision-making process.

## **2.5 Beyond the Farm Gate**

Potential market failure may also occur along the supply chain. The Queensland Government recognises that the impact of improved productivity and the social and environment benefits accorded to R&D extend well beyond the farm gate. Rama and Harvey (2009) affirm that Governments already actively intervene throughout the food supply chain at a number of levels to address matters such as trade practices, animal welfare considerations, biosecurity, and food safety.

The Draft Report (p. 37) states that the Productivity Commission is not convinced that a number of arguments put forward provide sufficient or even good grounds for government intervention including those relating to supply chain issues. Rama and Harvey (2009) conclude that market failures do exist to varying degrees along the supply chain, creating conditions which may justify Government intervention.

As noted in the Queensland Government's initial submission to the Productivity Commission Inquiry, some RDCs already allow for contributions from supply chain operators, although this is not consistent across all RDCs nor is the ability to attract matching funds from the Australian Government.

While R&D taxation provisions provide incentives for funding R&D delivering private benefits, these are not widely used in the agribusiness sector except by large organisations. Current investment in R&D across small to medium enterprises particularly in the food processing industry is low. Further, access to those provisions would be for predominantly private benefit.

The opportunity for voluntary contributions to be matched where a clear market failure and/or public benefit case can be established should be available for projects such as animal welfare, transport systems and food safety, etc.

## **2.6 Sustainability Issues**

Funding from the RDCs has been important for Queensland in supporting improved practices to manage established pests where there has been a productivity link (e.g. bio-control for rubber vine and giant rat's tail grass, rabbit bio-control, mice management, calotrope management).

Invasive weeds and pest animals have a direct impact on primary production as well as an impact on the natural resource base. This occurs through:

- loss of soil from destruction of ground cover;
- waterways impacts;
- impacts on biodiversity and ecosystem function; and
- social impacts (e.g. health, recreation associated with waterways and bushland).

Mitigation of impacts on the natural resource base of primary production plus the non-primary production impacts on biodiversity and social amenity (both on- and off-farm) by improving management of invasive species provides strong public benefits. The Government has a role in intervening under these circumstances. It should be noted that some Queensland Government investment in this area occurs through agencies such as the Department of Environment and Resource management and through regional bodies leading catchment management.

## **2.7 Infrastructure**

Since the inception of the Queensland Government's Smart State Strategy in 1998, in excess of \$3.6 billion has been invested in science, research and innovation. Strategic investments have created 36 new research institutes that form part of a comprehensive and collaborative network of infrastructure and precincts, including some with a focus on primary industries.

Strategic investments by the Queensland Government are assisting to build some of the largest and most significant research centres, institutes and precincts in the Southern Hemisphere, positioning Queensland as an Australasian centre of excellence for science and technology.

Over the past 5 years, the Queensland Government and partners have invested nearly \$400 million in science infrastructure directly related to agricultural and environmental sciences.

This has included:

- Centre for Advanced Animal Science at Gatton - \$33 million in collaboration with University of Queensland. This facility is attracting strong investment interest from the private sector.
- Queensland Crop Development Centre at Redlands - \$8 million in collaboration with UQ and QUT.
- Sustainable Fisheries Resource Facility at Bribie Island - \$5 million with similar further investment from CSIRO to co-locate Queensland fisheries and aquaculture research at the one site.
- Ecosciences Precinct at Boggo Road - \$275 million investment by Queensland Government science agencies and CSIRO commissioned in 2010.
- Health & Food Sciences Precinct at Coopers Plains - \$100 million investment by the Queensland Government and CSIRO also commissioned in 2010 which is attracting further investment by commercial food processing industries and vaccine companies.

New agricultural R&D infrastructure in Queensland would not have occurred without joint State Government, CSIRO and university investment. Increased collaboration within a research field, between research fields, and between researchers and businesses leads to greater long term productivity, with infrastructure investment being an important catalyst. Geographical clustering and co-location of industries supported by scientific infrastructure can also lead to productivity gains and associated enhanced public benefit R&D.

In addition, the Queensland Government spends over \$22 million annually to operate and maintain its existing R&D infrastructure footprint of more than 38 sites. The Queensland Government is currently undertaking a process of renewal to reform its R&D services and infrastructure through more strategic investment to focus on science quality, critical mass and collaboration with the goal of building R&D capacity for Queensland primary industries into the future. These significant investments and support for R&D infrastructure have not been fully captured or acknowledged in the draft report.

## **2.8 Data Collection and State Government Investment**

The Queensland Government supports recommendations 5.2 and 5.3 that relate to developing a framework to collect data and undertaking program coordination for assembling and maintaining robust data. Superior data availability will greatly enhance planning and priority setting processes. Better understanding of national investment and R&D funding flows is welcomed.

The move towards transparency and more effective priority setting is also endorsed. Consistency in the collection of data and information is a key requirement. However, the process for improving data collection should be cost effective and should not duplicate current reporting requirements or place unnecessary administrative burden on the RDCs.

At the State level, there is a distinction between investment in, and expenditure on R&D by State Government. The figures utilised from ABS data in the draft Report may not fully capture the extent of State and Australian Government investment as expenditure can be and often is undertaken by a third party. The statistics capture the expenditure activity of the agent funded by Governments and may not fully reflect the level of Government investment.

State Governments also invest in a wide range of Natural Resource Management (NRM) and sustainability oriented research that is closely linked to production based R&D. The Queensland Government invests substantial funds in R&D carried out by external organisations, including commissioned research, collaborations, and grants and fellowships provided to universities and industry. The draft Report appears to acknowledge the extent of Australian Government investment in this area but as noted earlier similar State Government investment in NRM and sustainability R&D in Queensland does not appear to be captured.

### **3 Risks of Reducing R&D Funding**

#### ***3.1 Impact of reduced Australian Government Investment***

There are a number of trends that provide strong arguments for the maintenance and/or increase of R&D investment:

- Strong world population growth and increased demand for food;
- Increasing agricultural input costs;
- Uncertainty around the impact that climate change may have on agriculture; and
- Threats to Australian agriculture through incursions from exotic pests and diseases.

Mullen (2010) estimates that investments in Australian agricultural R&D and associated extension have earned around 15 to 40 per cent real return per annum, contributing half the increase in gross value of Australian agriculture in recent times. Similar benefits are attributed to investments in agricultural R&D in the US (Alston et al 2010).

The Queensland Government does not endorse any reduction in rural R&D investment as it is not in line with the agreed principles of the National RD&E Framework. The Statement of Intent for the Framework states that the parties will endeavour to at least maintain RD&E funding levels to which the Australian government committed for primary industries and that savings should be redirected to improve the capability of the national system. The Productivity Commission recommendation is therefore contrary to the spirit of the principles of the national RD&E Framework. The proposition to reduce the cap on matching statutory levies for the industry specific RDCs from the current 0.50 per cent to 0.25 per cent of an industry's GVP is not endorsed. Current levels of Australian Government funding should be preserved and the incentives for private investment maintained.

The impact of implementing the Commission's recommendation would be a decrease of \$60 million in Australian Government funding to rural R&D and the prospect of a significant decline in private sector R&D funding as the incentive for the private sector to co-invest by way of levies or voluntary contributions is reduced. The implications of reduced private investment in rural R&D, including a reduction in levy revenue, have not been adequately addressed in the draft Report.

Furthermore, it is important to highlight that funding through the RDCs to Queensland provides a mechanism to further leverage funding from other sources such as CSIRO, industry organisations and universities. This is an important flow-on benefit of R&D investment. In real terms, a decrease of \$60 million will translate into a much greater impact as the leverage capacity is reduced. The cascading effect of a funding withdrawal should be addressed.

The assumption that the gap created when funding is withdrawn will be taken up by industry or other rural research funders is unlikely. RDC funding is interlinked with State Government investment, which is not eligible to attract ARC or other Australian government research funds. Hence the RDC funding is critical in

maintaining investment in collaborative projects delivering outcomes that will benefit Queensland rural industries.

Even a short-term decline in R&D investment risks a decline in future capacity and the core commitment of State and Territory jurisdictions to invest. Should Australia's competitive capacity be diminished through inadequate R&D investment, then it will be difficult to regain this loss. R&D investment is also a major factor in maintaining Australia's image internationally of 'clean and green' agriculture and in supporting Australia's role in meeting the future food requirements of a growing world population.

### **3.2 Levies and Voluntary Contributions**

Despite the complexity of the levy system, the Queensland Government agrees with the PC conclusions (p. 215) that there is no fundamental need to transform the current arrangements. The Queensland Government also supports draft recommendations 9.1, 9.2, 9.3 and 9.4. These recommendations will support increased flexibility and assist in maximising potential levy revenues.

Reducing Australian Government funding to the industry specific RDCs will increase the seasonal volatility of levy revenue. If levies form a greater proportion of the RDCs funds, this will decrease the ability of the RDCs to invest in certain projects and infrastructure due to the annual volatility in levy collections and levy revenue i.e. increased uncertainty.

There is a significant benefit from the Australian Government levy matching process in buffering against the variability of levy collections that arise particularly through unforeseen circumstances such as drought, natural disaster or other adverse seasonal conditions. Recognition of the impact of the high degree of variability in producer output and returns is essential. Without some mechanism to buffer the impact on levy revenues, the capacity for RDCs to maintain current levels of investment will diminish. The Australian Government has an important role in stabilising levy fluctuations which adversely impact on the continuity of and ability to undertake R&D.

In relation to the proposal to collect a separate marketing levy, the Queensland Government endorses flexibility to allow the collection of levies applicable to marketing activities along the supply chain, providing that it does not adversely impact the capacity to deliver R&D.

In the case of embryonic industries, sourcing private investment, particularly for R&D, can be especially difficult. Mechanisms to create incentives for voluntary contributions are especially important to ensure industries demonstrating promise can reach their full growth potential. The box below provides a case study of the lychee industry in Queensland outlining the industry development pathway. This case study demonstrates that without the capacity to collect voluntary contributions (VCs) matched by government funds and the assistance of Rural Industries RDC (RIRDC), the lychee industry may not have realised its potential.

## **Lychee Industry Case Study**

### **Industry Snapshot**

Over the past three decades, the Australian lychee industry has grown from its infancy into a mature levy-funded industry which produces 2,500-3,500 tonnes of fruit per year, valued at \$18-20M. The industry comprises around 250 growers and contributes to regional economies between Cooktown in Far North Queensland and Coffs Harbour in Northern New South Wales. The Australian lychee industry produces less than 1% of world lychee production but has the unique advantage of having the longest lychee production season in the world. It also produces counter-seasonally to the main world producers and is well placed to deliver high quality product into premium export markets.

A key goal of the Australian lychee industry is to increase export sales to 30% of total production by 2012. HAL-funded projects are also underway to increase domestic demand for lychee and to improve handling and display of lychee by major retailers, with the aim of growing domestic market demand by 10% by 2012.

### **Industry Development Pathway**

The history and growth of the Australian lychee industry reflects the pathway made available by the Australian Government, through RIRDC and HAL, to support establishment and development of horticultural industries.

Australia's first lychee orchard was established near Cairns in the 1930s and is still farmed to this day. By the mid 1970s a fledgling industry was established. Over the next decade, the industry gained momentum and the Australian Lychee Growers Association (ALGA) was established in 1986, following the first industry conference held on the Sunshine Coast. With the formation of the ALGA, the industry with the support of the Queensland Government was able to obtain financial support from RIRDC for R&D to develop appropriate varieties, key production techniques, postharvest handling issues and crop protection.

Without access to State and Federal Government support, the Australian lychee industry would have languished under conditions of "market failure". Like most new rural industries, the initial production base was very small – numbering just a few producers. This meant that funds for R&D were very difficult to source and without access to RIRDC support for "promising products" it is very unlikely that sufficient R&D would have ever been undertaken.

Building upon the R&D supported by RIRDC, the industry grew rapidly during the 1990s and commenced the transition from an "emerging" to "mature" industry in partnership with HAL, which culminated with establishment of an industry levy in 2004. During the 1990s the industry took advantage of HAL funding through "voluntary contributions" to undertake a range of development projects in production and supply chain handling systems.

Without access to the voluntary contribution funding mechanism utilising matching funding from HAL, the industry would not have been able to maintain the momentum needed to progress to the point of levy establishment.

Several other examples of VC co-funded projects exist, where Queensland can clearly demonstrate a large public benefit, allied to technically based industry development, technology transfer/communication activities, and market access initiatives based on the VC funding model managed by HAL (see the case study below relating to the Management of Fruit Fly in the Central Burnett). Without the VC co-funding model, this project would have struggled to produce the regional

employment, environmental benefits from reduced pesticide use, and trade benefits that have been achieved through this initiative.

### **Central Burnett - Case Study**

The Area wide Management of Fruit Fly in the Central Burnett.

Fruit Fly impacts this region in terms of reducing productivity and limiting market access. In this example, the State Government, private consultants, fruit growers, Shire Council and Horticulture Australia Ltd. (HAL) contributed to a project to reduce fruit fly in the central Burnett.

It was the voluntary contributions that were the critical factor in getting the collaboration to work and leveraging additional in-kind support and attracting funding from the national levy. Approximately \$3.2 million was invested in Phase I over 3 years. It comprised 67% from State Government and private entomology consultants, 33% from HAL and Industry voluntary contributions (matched investment), and 3% national levy.

Due to the success of Phase I, Phase II involved an investment of \$0.3 million comprising 73% from State Government and private entomology consultants, and 27% from HAL and Industry voluntary contributions (matched investment).

Phase I and II resulted in a dramatic reduction in the incidence of fruit fly in the Central Burnett leading to simplified and expanded market access for local producers. In addition the citrus industry reduced reliance on agricultural chemicals and facilitated new employment opportunities.

The proposed halving of the GVP cap will make VC funding difficult to access, as the 0.25% of GVP will be absorbed by levy-funded projects, leaving no funds available to match voluntary contributions from industry. In such an environment, promising industries such as those currently nurtured by RIRDC will not have access to the funding required to facilitate establishment of a mature, levy-funded industry.

### **3.3 Impacts on R&D Supply**

The draft report assumes elastic supply of R&D in Australia that can flexibly respond to varying funding levels from year to year. However, this is not the case in practice.

Levies are collected on an annual basis. However, most R&D projects are funded over a three year period which creates a degree of uncertainty. The variability in the amount that may be collected through levies also presents difficulties.

Short term funding of up to three years for R&D projects results in the temporary appointment of scientific staff. This type of tenure presents difficulties in retaining skilled staff and building the necessary future science capability. This impacts on the attractiveness of career pathways for scientists engaged in agriculture and related disciplines.

Reduced Australian Government matching arrangements will further undermine the ability to attract and maintain a skilled scientific workforce in Australia and will

translate into fewer highly skilled individuals engaged in this area nationally. In a time of skill shortages and falling productivity, reduced funding for R&D projects is not desirable. Once this capacity is diminished, it will be difficult to rebuild in the future.

One way the Queensland Government is attempting to address R&D supply and skills base issues is through partnering with universities. The Queensland Government has recently created an arrangement with the University of Queensland (UQ) through the establishment of the Queensland Alliance for Agriculture and Food Innovation (QAAFI).

QAAFI is a hub for undertaking 'high-end' science that will give Queensland an internationally competitive edge in tropical and sub-tropical research. This arrangement will also improve the quality and breadth of the teaching capacity at UQ, which will assist in addressing the skills shortage in the agricultural sector. The Queensland Government is also currently developing a similar arrangement with James Cook University in tropical research areas.

## **4 The RDC Model**

The Queensland Government welcomes the Productivity Commission findings that the core elements of the RDC model are sound. The model's key strength is derived from the close links that the RDCs maintain with industry. This is fundamental in ensuring that R&D is adopted and translated into increases in productivity and other economic, environmental and social outcomes. Although there is scope to improve the operation of the RDC model especially with respect to administrative efficiency and cross-sectoral issues, the Queensland Government considers that it is fundamentally sound.

### **4.1 *Rural Research Australia***

Whilst the Queensland Government considers that cross-sectoral issues could be better addressed, the establishment of a new entity such as the proposed Rural Research Australia (RRA) is questioned.

It is unclear how a new entity with its own set of overheads and overlays will maximise the R&D spend and deliver the outcomes required. In the absence of any detailed information relating to its role, the proposed governance arrangements, and how the RRA would link to industry and the other RDCs, it is difficult to provide substantive analysis and comment.

Although it is understood that the Productivity Commission's basis for nominating a \$50 million funding commitment per year for the proposed RRA is benchmarked on the \$40 million allocation received by the former Land and Water Australia (LWA) RDC in 2007-08, it is difficult to nominate a workable budget without clarity around its responsibilities.



Expansion of the scope and role of RIRDC could be a more administratively efficient and straightforward option in delivering the outcomes sought from the proposed RRA. This would avoid the potential for confusion in roles if both RIRDC and the proposed RRA were in place.

The experiences of the former LWA should be drawn upon in considering the best approach to coordinate and address cross-sectoral issues. One of the fundamental risk is the adoption pathway. Unless there is a mechanism to tie the RRA very closely to the industry RDCs, there is potential for 'on the ground' adoption to be problematic. The challenge confronting the proposed RRA particularly in relation to the adoption of cross-sectoral R&D is to ensure a sense of industry ownership and perceived value.

The proposed RRA would need to establish close linkages with the industry RDCs and build its credibility at a very early stage, to avoid co-ordination and information flow weaknesses.

Additionally, the draft report does not appear to acknowledge that there are existing RDC collaborations occurring on a variety of projects. For example, several RDCs collaborated with RIRDC for several years to manage an agroforestry R&D program. However, there will always be scope for improved coordination between the industry RDCs.

Encouraging inter-industry linkages is important for delivering enhanced R&D outcomes for the rural sector. The success of adopting and addressing cross-sectoral issues relies on a high degree of industry involvement and ownership.

Furthermore, should the RRA proceed, clarity needs to be established regarding the level and scope of current R&D investment in cross-sectoral issues undertaken by other research providers such as CRCs to avoid potential duplication.

#### **4.2 Fisheries RDC**

The proposition to leave the current Fisheries RDC (FRDC) arrangements in place is supported. The fisheries RDC delivers both public and private benefits. However, because of the nature of the fishing industry and the use of a common resource, the R&D delivering public benefits, tend to be more easily distinguishable. It is believed that it is difficult to transpose the fisheries RDC arrangements onto the industry specific RDCs as the separation of public and private benefit is less clear.

#### **4.3 Government Directors**

The feasibility of *draft Recommendation 8.4* relating to a provision for the Australian Government to appoint a director of the boards of industry owned RDCs to complement existing board skills and improve dialogue with the Government is questioned. The inclusion of Government Directors on RDC Boards creates a potential conflict of interest because these Directors are required to act in the interests of the RDC but also in the interests of the Australian Government. The recommendation of your draft report – to reduce Australian government matching

funding to the RDCs, indicates one example of where these interests will not coincide.

## **References**

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