growcom

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Submission to

the Productivity Commission Inquiry into the Rural Research & Development Corporations Model

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Growcom
Level 1/385 St Paul's Tce Fortitude Valley
PO Box 202 Fortitude Valley QLD 4006
Tel: 07 3620 3844 | Fax: 07 3620 3880

Executive summary

Growcom is the peak body for the horticulture industry in Queensland. The horticulture industry is a major contributor to the national economy and a major employer in regional areas. Horticulture production in Australia is valued at approximately $9 billion per annum, with one-third of this production coming from Queensland.

There is clear evidence linking investment in agricultural research and development with productivity growth. Several evaluations of Australian R&D expenditure have highlighted the very high return on investment, and that the positive effects may continue for several decades. Similarly, many studies have linked the recent reduction in agricultural productivity growth to the erosion in public investment in rural R&D.

Despite the successes of the RDC framework, our experience working at the interface between the RDCs and industry has highlighted a number of deficiencies that should be addressed to maximize the productivity gains from future investment. Following our review of the RDC framework, we reached the following conclusions and recommendations:

1. The current RDC system has been an effective mechanism for coordinating and funding rural R&D.

2. Public investment in rural R&D has a direct and positive effect on agricultural productivity, resulting in a range of real economic and social benefits for all taxpayers.

3. In comparison to other sectors of the economy, the agricultural sector has several characteristics that limit private investment in R&D. Ongoing public investment is required to maintain productivity growth.

4. Despite the successes of the current RDC system, there are many areas in which the system can be adjusted to streamline processes, reduce bureaucracy, maximise efficiency, reduce duplication and ensure that more resources are directed towards R&D. These structural changes should address issues within and among RDCs.

5. RDCs should adopt a more flexible and adaptive approach to the prioritisation of activities and the allocation of resources.

6. RDCs should place more emphasis on demonstration and extension in addition to research and development, as these are essential for the rapid and widespread adoption of new innovations.

Growcom's policy on research and development

Research and development activities have returned significant outcomes to the industry and society. Examples include the introduction of more vigorous root stocks and high yielding varieties, extensive breeding of disease resistant varieties, more efficient irrigation practices, integrated biological and chemical pest control, automated planting and harvesting, consumer research and improved human resource management and workplace health and safety practices. In addition, new packaging methods and post-harvest technology have improved the quality of the product reaching the consumer.

The sector's growth during a time of increasingly difficult economic, environmental and social conditions is evidence of the effectiveness of primary industries research and development programs. However, there has been a decreasing level of research and development investment by government agencies compared to an increase in demand from industry for research and development on a broad range of issues.

We believe that research and development focused on achieving commercial outcomes is essential to our industry if it is to meet future technical, environmental and market challenges.

Commercially focused, innovative research and development in new and advanced technology as well as productivity, marketing, economic, environmental and social aspects of the industry are critical to industry development. A high level of industry capability and performance are essential to move to the initiation, management and delivery of research and development programs.

Growcom is committed to ensuring that properly targeted and conducted research and development for the sector continues in order to secure its future economic performance and sustainability.

Issues to be considered within the broader research and development policy heading include:

- Developing effective partnerships throughout the value chain to identify priority issues and effective, relevant response strategies.
- Commercializing the results of R&D for optimal outcomes.
- Ensuring access to research and development funding and information.
- Developing and promoting adoption of technology, information and management practices needed by industry to be internationally competitive.
- Creating new market opportunities and meeting market requirements.
- Developing strategies to minimise losses and trade risks due to pests and diseases.
- Decreasing barriers to market access and export markets.
- Developing production and post harvest practices to meet community expectations for food safety and protection of the environment.
- Promoting research into the link between management practices and NRM outcomes and benchmarking current levels of recommended practice uptake.
- Continued commitment of the Queensland Government to research and extension activities through the DPI and other agencies.

- R&D projects supported by effective communications, extension and adoption mechanisms.
- Recognition of funding sources such as industry contributions.

Responses to the Terms of Reference

1. examine the economic and policy rationale for Commonwealth Government investment in rural R&D;

Food is a basic requirement for life. With increases in the Australian population to 30 million or more in the next 30 to 40 years, the Australian government has a role in making sure reliable and healthy food sources are available for the expanding population.

Taking a risk management approach, the Australian government has a duty to its citizens to ensure that this vital resource will be available, and also able to be transported efficiently to an expanding consumer base.

With access to productive lands and reliable supplies of water becoming increasingly problematic due to competition for land from urban and mining interests, even current production levels are coming under threat. Add to this climate variability and perhaps restricted access to key inputs such as energy, fertilisers and chemicals then the risks become greater. Of growing concern to most farming operations is also the issue of profitability in a climate of increasing costs and lower returns which has limited for some time the ability of growers to continue to innovate and invest in future development.

A more recent development has been the buying up of land and resources and processing facilities by corporations backed by governments from such regions as the Middle East and Asia. The purchase of whole supply chains that will deliver products only to overseas consumers needs to be factored into the calculations to be undertaken by Australian food policy analysts about the available supplies of fresh produce to an expanding consumer base.

Growcom believes that investment in rural R&D is a primary driver of increased productivity and economic performance of agricultural industries. Relevant research, development and extension improve the efficiency and international competitiveness of Australian industries. More productive rural industries lead to more productive regional communities and higher living standards in addition to more readily available, better quality and healthier food. As a mainly domestic supplier, the fruit and vegetable sector will need continuing support for research, development and extension to be able to grow in a timely manner to feed these future Australians.

Additional targeted investment in agricultural R&D is likely to be a major contributor to long-term productivity growth (ABARE 2010).

Economic rationale

In a recent speech former federal Primary Industries Minister, John Kerin, pointed out that with declining terms of trade, just keeping farm profitability stable requires an increase in productivity by about two per cent per annum (Karin 2010). While many other sectors of agriculture in Australia are experiencing lower demand for their product, horticulture has the potential to take advantage of a large demand increase, with the right policy settings, including rural R&D.

Globally, horticulture markets and trade are growing at the equivalent of Australia's entire horticulture output each year. Through increased population and consumption, the Australian domestic market alone is projected to expand by the equivalent of nearly one Melbourne by 2020, while the world market will expand by approximately '600 Melbournes'.(Future Focus, 2010)

Through this expansion, Australia horticulture has the potential to bring in an extra $2.45 billion whole-of-chain extra profit per year by 2020. Australia cannot compete on cost alone, either domestically or internationally, with countries where wages and living standards are much lower, or with agricultural subsides ranging from 17% in the US to 34% in the EU and 71% in Scandinavia. But by continuing to build research capabilities, the Australian horticulture industry can capture some of this global growth and demand via leading-edge products, innovative commercial platforms and by placing more emphasis on consumer satisfaction. (Future Focus, 2010).

With the Queensland horticulture industry heavily reliant on backpacker labour, the industry makes a considerable contribution to the $2.5 billion per annum that working holiday makers spend in Australia. An economic study found that working holiday makers in Australia annually spend approximately: $592 million on accommodation; $381 million on general tourism, $324 million on transport; and $97 million on tuition, to mention just a few industries that benefit from the economic on-flow of the horticultural industry.

Total jobs created by working holiday makers in the above-mentioned industries by the 134,388 backpackers who arrived in Australia in 2007-08 was calculated at 28,448 full-time equivalent jobs, while they filled a total of 19,969 low skilled positions which are very difficult to fill with local labour given their seasonal and casual nature.

The agricultural industry is more resilient in times of economic downturn than most other industries, because everyone has to eat. In the December 2008, quarter, during the height of the GFC, National Accounts figures stated that agriculture was the only positive contributor (0.2 per cent) to GDP in Australia (Australian Industry Group 2009). The continued viability of the sector, via RD&E

funding, is vital to ensure the ability of Australia to survive any future major financial downturns.

Viable local economies

Both the Queensland and Victorian State Governments have recently implemented policies aimed at encouraging people to move from the overcrowded metropolitan areas of their respective states to less populated regional areas. This will only be a success if there are viable economies supporting jobs in these regions. Investment in R&D generates considerable economic activity in regional and rural areas and provides employment in a number of areas. Farm sector and farm related industries currently provide, on average, 24.2 per cent of regional employment.

Policy Rationale

Growcom, with funding from HAL and other organisations, has been responsible for several projects aimed at combatting Climate Control. This includes focused projects on growing avocados, apples and pears under changed climatic conditions. HAL also contracted Growcom to develop a climate change position paper for the horticulture industry.

The largest single project in Growcom's climate change programme is *Critical thresholds ('tipping points') and climate change impacts / adaptation in horticulture*. This is being funded as an across RDC project, involving Managing Climate Variability (MCV) and Horticulture Australia Ltd (HAL) with voluntary contributions from MCV and matched funds from the Commonwealth Government and from Woolworths Ltd through Queensland Primary Industries and Fisheries.

Growcom is collaborating with Queensland Primary Industries and Fisheries to assess the impact of projected temperature increases on a range fruit and vegetable crops. This project will identify those crops and regions that may be impacted by climate change, and suggest practical adaptation measures to reduce these impacts.

We have already produced a preliminary report that documents the temperature thresholds for the successful production of a range of important crops. The next step will be to consult with growers and supply chain participants to ground-truth these thresholds and fill any identified knowledge gaps.

We will then compare the biophysical thresholds of specific crops against temperature predictions under a range of climate change scenarios to identify where and when these thresholds might be reached or exceeded. Finally, we will

use this information to identify the adaptation strategies that will be most successful in minimising the impacts.

The UN's Food and Agriculture Organisation has stated that world food production must double by 2050 to avoid adding to the estimated 700 million people who currently suffer from hunger worldwide. Continued Australian Government support for RD&E will contribute to food security for Australia, and the Asia-Pacific region, leading to greater political stability and avoiding the food riots that have been seen in recent years in some countries.

2. examine the appropriate level of, and balance between public and private investment in rural R&D;

As a share of GDP, public investment in agricultural R&D has decreased over the last 30 years (please see section 3 for further details). While private sector funding has increased over this time, it has not been sufficient to completely offset the decline in public investment (Mullen & Crean 2007). Continued public investment is clearly required to ensure further productivity growth.

To better capture the benefits of public investment in agricultural R, D & E programs it is recommended that future projects be better monitored and evaluated for their public benefit outcomes from the early planning stages.

3. consider the effectiveness of the current RDC model in improving competitiveness and productivity in the agriculture, fisheries and forestry industries through research and development;

There is considerable evidence that investment in rural R&D has direct, if delayed, positive effects on agricultural productivity.

For example, an evaluation of R&D investment by the Council of Rural Research and Development Corporations (CRRDC) estimated that R&D investment delivered a benefit-cost ratio of 11:1 after 25 years (CRRDC 2009). A second evaluation the following year estimated the benefit-cost ratio to be about 2.4:1 after 5 years, 5.6:1 after 10 years and 10.5:1 after 25 years (CRDCC 2010). These results are supported by other research which demonstrates the positive return on investment in rural R&D. For example, benefit to cost ratios for public investment in Australian broadacre agriculture varied between 9.7:1 and 20.5:1 (Mullen 2007).

The reduced rate of productivity growth in recent years has been linked to the long-term erosion of public investment in agricultural R&D (ABARE 2010).Growth in research investment increased at a rate of 6.5 per cent per year between 1953 and 1980, but by only 0.6 per cent per year since 1980. Expressed as a share of gross value of agricultural production, R&D investment has fallen from about 5

per cent in the 1970s to about 3 per cent in 2007. An analysis of productivity growth in Australian broadacre agriculture (Sheng *et al*. 2010) concluded that the reduction in public R&D investment since the 1970s had a significant role in declining productivity growth (in addition to climatic conditions).

Furthermore, the lift in agricultural productivity lags behind the investment in agricultural R&D, and the positive effects may continue for up to 35 years (Alston *et al.* 2009). As a result, the current depression in investment growth may limit productivity gains for many decades. Growcom believes that continued public investment in rural R&D is essential ensure further growth in agricultural productivity over the long term.

Growers are continually calling for greater work to be done in fields such as soil health, particularly soil biology, as they see this as a key mechanism to assist them become more productive and sustainable. In May 2008, key Queensland primary industry groups, regional NRM bodies and key researchers in Queensland government departments such as the Department of Employment, Economic Development and Industry and the Department of Environment and Resource Management met in Brisbane to put together a road map of activity required to progress this agenda.

Although this group of technical and extension specialists, who are closest to the needs of the industry, could see the benefit of such a foundational program that would benefit the whole agricultural industry it has not gained any traction. This results from the people involved having limited time in their current positions and projects to devote to a process of writing multiple applications to a wide number of funding bodies and Rocs. The complexity and bureaucracy involved in this process limits the opportunities to establish a state-wide or national approach that encompasses the whole of agriculture.

To ensure that future opportunities such as these are not lost Growcom would like to see a national institutional arrangement set up that would be able to take ideas from the field and progress these with the research funding bodies and agencies that will be operating in the future.

4. examine the appropriateness of current funding levels and arrangements for agricultural research and development, particularly levy arrangements, and Commonwealth matching and other financial contributions to agriculture, fisheries and forestry RDCs;

Growcom believe that the current 1:1 funding model is appropriate for most agricultural sectors.

An arrangement on the direction of RD&E funding that needs revisiting in horticulture is the work of the National Horticulture Research Network and their

National RD&E Framework for Horticulture. The reason that it needs revisiting is that it has been prepared by research agencies with little input from industry. It appears to "pick winners" in allocating lead agencies and supporting agencies for particular crops and issues which is a dangerous proposition as it can miss opportunities from both the industry and the marketplace.

5. consider any impediments to the efficient and effective functioning of the RDC model and identify any scope for improvements, including in respect to governance, management and any administrative duplication;

We believe that the current administrative system within HAL is too restrictive, both in application and scope. The current system places too much emphasis on specific commodity groups at the expense of across-industry or regional issues such as climate change, integrated pest management or natural resource management. For example, HAL invested about $74 million in R&D during the 2008/09 financial year. Of this total, only about $1.2 million (less than 2 per cent) was directed to projects specifically targeting across-industry issues.

Another effect of the emphasis on specific commodity groups is the duplication and fragmentation of effort and a lack of coordination across the industry, even within the responsibilities of a single RDC such as HAL. This duplication and fragmentation applies equally well across all Rocs.

There is considerable evidence that investment in rural R&D has direct, if delayed, positive effects on agricultural productivity. However, it is not simply a case of more investment leading to greater output. The public investment in agricultural R&D must be well-coordinated and well-targeted to result in the greatest possible increase in productivity (ABARE 2009). The rural RDCs have (and should continue to have) a key role in providing the coordination and direction for this investment.

As an organisation that is at the coal face of interaction with fruit and vegetable producers across a vast state, a key impediment we observe is the lack of planning and forethought that goes into providing information to growers on what research is being undertaken and ways to adopt it. To take greater advantage of new research the knowledge needs to reach growers in a timely and usable format.

Productivity growth not only requires the development of new technologies and practices, but for those innovations to be widely adopted by the industry. A key factor driving adoption of innovation is the relative advantage of the innovation relative to the technology or practice it is intended to replace (Marsh 2010). To encourage landowners to invest in innovations, the relative advantage in terms of productivity and profitability must be demonstrated and then followed by targeted extension services to provide the relevant information to the decision makers - individual landowners. In our view, the RDCs should place more emphasis on

demonstration and extension services to accelerate the adoption of new technologies and maximise productivity growth. Industry bodies are ideally placed to provide targeted extension services to individual landowners, but require financial support to supply these services.

The current system of providing technology transfer is too disjointed to allow for rapid uptake of new knowledge or systems within the fruit and vegetable sector. Horticulture Australia Limited has yet to embrace more advanced extension methodologies that focus on adoption as the key outcome, and not simply technology transfer. Technology transfer as has been used by Horticulture Australia can simply be the provision of information at a workshop or on a website. It is a very one-sided process and does not encompass the adaptive management approaches that are required for real adoption of research within industry.

Research is still very focused on single issues or questions, and is isolated from the multiplicity of decision making that farmers need to undertake to incorporate new science or practices into their operations. Research is also based around a specific commodity such as bananas or potatoes and does not take into account that most farms are not single commodity, but operate a range of different enterprises.

Better alignment of research that could cover a range of issues such as climate change, soil health, emissions, integrated pest management and water management could also provide benefits for product quality, soil management, native vegetation and water quality and be more appropriate for managing the range of issues that growers need to take into account to farm sustainably.

Research on the economic value of new research or practices to their businesses needs to be incorporated into future research programs, to attract greater grower adoption. Uncertainty about the costs to their business of adopting new practices or systems means good research could be rejected due to these unknowns.

Growcom proposes that the RD&E framework needs to take a more adaptive management approach than it has in the past and needs to provide the support for a well-linked science community to a dedicated field extension team to practically support growers at a regional level.

Currently Growcom has dedicated field staff based in Tully and Mareeba in Far North Queensland; Townsville in North Queensland; Bundaberg in the Wide Bay-Burnett, and Brisbane and Toowoomba in southern Queensland. Through these field staff, who have built up good rapport and respect within these vital growing regions, the industry is able to direct new research and programs such as Reef Rescue and Water Use Efficiency to growers who produce a wide range of fresh produce to mainly domestic markets around Australia.

Research that ends up in reports or other written material and that is not imparted to the extension community is not good value for money. Growcom has observed that concepts such as knowledge management systems with new web-based research functions are now being developed, however these only provide access, if you know about it, to past research. The model we would like closer attention and investment being given to is the more interactive approach that has been described above which provides a much more dynamic and innovative link between growers and the research community.

State governments around Australia are backing away from investment in extension staff. In a survey conducted last year by the Queensland Department of Employment, Economic Development and Innovation (DEEDI) to look at extension and education that could support the updated Reef Water Quality Protection Plan, they were only able to identify eight extension personnel working in horticulture. Most of these were employed by Growcom, and all were on short-term contracts. These eight officers cover the 1,387 horticulture growers estimated to be located in the reef region. The survey also found that the majority of extension officers, for all industries in the reef regions, were employed by industry associations. The second highest employers of extension staff were the Natural Resource Management (NRM) bodies who have no specialist fruit and vegetable staff in their organisations.

For an industry such as horticulture which is now the second most valuable primary industry in the nation and in a state which produces one-third of all the fruit and vegetables in the country the lack of investment in long term programs that link research agencies with strong extension to industry is clearly a missed opportunity.

The funding mechanisms and contracting process are unnecessarily cumbersome, leading to delays and conflicts. The funding cycles are too restrictive and inflexible, limiting the ability to find complementary funding.

Growcom believes that significant public investment in rural R&D is essential ensure further growth in agricultural productivity over the long term, and we recommend that future RD&E programmes within Australia should adopt a more adaptive management model within their structures**.**

6. consider the extent to which the agriculture, fisheries and forestry industries differ from other sectors of the economy with regard to research and development; how the current RDC model compares and interacts with other research and development arrangements, including the university sector, cooperative research centres and other providers; and whether there are other models which could address policy objectives more effectively;

The biggest difference of the agricultural industry to other sectors is the status of much of the industry as price takers, caused by the perishability of crops, plus the fact that a crop of any particular commodity tends to all ripen at the same time, causing supply to exceed demand.

Demand for produce in Australia is also dominated by a powerful duopoly, with which growers have little to no ability to bargain collectively.

This market dominance and the threat of imports in the short term makes it impossible for farmers to demand higher prices, and many growers are receiving the same price for their produce that they were up to 20 years ago, despite the increased cost of wages, fertiliser and many other inputs.

Yet in the long term, there are projected world food shortages, and without a domestic farming industry, Australia would then be hostage to exorbitant prices being charged by those countries that do produce food.

Another feature that distinguishes the agricultural sector from other sectors in the Australian economy is that it is composed of a huge number of small and diverse businesses with vastly divergent needs and limited resources/capital. No individual business or industry body has the resources to mount a R&D programme, unlike some other sectors like manufacturing in which there are large corporations with the capacity for internal R&D programmes, and where competition and confidentiality require these sorts of programmes to be completed in-house. The RDC model provides a structure for resources to be amalgamated across similar businesses/industries, usefully deployed for appropriate and beneficial research programmes, and for the results to be adopted industry-wide. The addition of public money is appropriate given the strategic importance of the industry and public good that is obtained from productivity and efficiency gains.

A better model for RD&E with which we have had first hand experience is the Growcom *Water for Profit* program. The program has obtained great coverage of growers and growing regions across the state and has demonstrated greater industry adoption of good irrigation practices while also producing significant water savings to the economy and environment. This highly successful *Rural Water Use Efficiency* (RWUE) program is funded by the Queensland State Government and has attracted this investment due to its continued achievements for over a decade.

Considering the unique features of the agricultural sector, Growcom believes that the RDC model is an appropriate and effective one for facilitating rural R&D. However, there are many areas in which the current model can be improved.

One area that could be improved is in the linkage between production and natural resource management which was previously filled by the Land & Water

RDC. As the current system of levy arrangements is based on a commodity basis which is production based there is now no strong vehicle for linking production and environmental research to practical on farm management that takes in both the farm and the wider landscape impacts of farming.

Also within state governments, the silo mentality of decision making continues to separate economic production from environmental policy and program development leaving an even larger vacuum of research and extension in this area. This separation at both a funding and agency level means that growers are not getting the support they need to reach triple bottom line outcomes that are economic, environmental and socially sustainable.

As far back as the Bruntland Report commissioned by the United Nations in 1987 (known as "Our Common Future"), there was a call for governments to take a more integrated approach to institutional arrangements that captured both agricultural issues and the wider environment and economic agenda to ensure a more sustainable future. This recommendation should again be considered when looking at supporting a more sustainable RD&E effort within agriculture.

There is also a need to take a more global view in looking at R, D & E that could benefit Australian growers. Resources need to be provided to better link into research programs in other countries around the world. For example, a Horticulture Study Tour to South Africa in 2008 uncovered a major soil health program being conducted by horticultural industries there. As soil health is also a major issue identified by growers here, a more collaborative linkage to these initiatives can assist with greater leverage of research funds.

7. examine the extent to which RDCs provide an appropriate balance between projects that provide benefits to specific industries versus broader public interests including examining interactions and potential overlaps across governments and programs, such as mitigating and adapting to climate change; managing the natural resource base; understanding and responding better to markets and consumers; food security, and managing biosecurity threats;

As mentioned above in section 5, we believe that the current system places too much emphasis on specific commodity groups at the expense of across-industry or regional issues such as climate change, biosecurity, integrated pest management or natural resource management. For example, HAL invested about $74 million in R&D during the 2008/09 financial year (Horticulture Australia Limited 2009). Of this total, only about $1.2 million (less than 2 per cent) was directed to projects specifically targeting across-industry issues. Many of these across-industry issues may be seen as being in the broader public interest than many other industry specific issues.

Managing what matters: the cost of environmental decline in South East Queensland was a report commissioned by south-east Queensland Natural Resource Management (NRM) body, SEQ Catchments. Undertaken by resource economists Marsden Jacob Associates, it included a survey of 931 households in Brisbane and the wider south-east corner of Queensland. It found that the broader public is very interested in maintaining and protecting our natural resources, not only for amenity and perceived good health, but for the ongoing sustainability of our farming operations.

The survey and other information sources clearly demonstrated that residents are very concerned about the reduction in the quality of our land and water assets. 54 per cent of respondents thought the quality of the environment had declined, with 15 per cent saying it had declined significantly. With impacts from continuing population growth and changed climatic patterns already being felt, respondents today wanted to see that economic growth and the protection of the environment is given equal priority.

Taking the scenario of "doing nothing more" the economists also looked at the current value and projected value of the agricultural and horticultural sectors in south-east Queensland, and then looked at the economic impacts of a declining resource base.

The gross value of agricultural production in south-east Queensland is over $1.2 billion (2007-2008) with the sector having a higher concentration of horticulture crops than the state average. Horticulture is valued at $658 million in the region. By 2026 an estimate is that agricultural production could reach $2 billion if sufficient water is available at reasonable prices. Fruit, vegetable and nut production is expected to comprise a large amount of this growth and is predicted to be account for 65 per cent of this $2 billion by 2026.

However, if the resource base declines by only 1 per cent, the impact on industry turnover would the cost the community over $70 million in present value terms by 2031. A decline of 5 per cent would be $340 million by 2031 and a decline of 10 per cent would cost the industry $690 million. The damage to the south-east Queensland economy in total would be over $1 billion.

In acknowledging these types of scenarios the survey respondents had the following solutions:

- 60 per cent endorsed taking a regional approach to achieving natural resource management where it is more efficient, even if their local rates were spent elsewhere in the region
- 68 per cent endorsed paying farmers to provide ecosystem services where it is the most efficient means to achieve environmental targets
- 60 per cent endorsed taking preventative action now to reduce the decline in resource condition, rather than rehabilitate later

- 80 per cent endorsed the idea that all future housing and other development be required to compensate for negative environmental impacts.

The survey results showed that south-east Queensland households would be prepared to pay almost $300 per annum via higher rates, taxes and costs for goods and services if it will protect the current extent and condition of our natural assets. Such information is supportive of the need for investment in the sustainability of our farming systems as they are acknowledged as providing wanted ecosystem services by the community.

Growcom suggests that this report clearly demonstrates that there is a strong case for investment into research and extension that supports the sustainability of our farming systems and our catchments.

8. examine whether the current levy arrangements address free rider concerns effectively and whether all industry participants are receiving appropriate benefits from their levy contributions.

A voluntary levy is paid by most commodities at the first point of sale, with tomatoes being one of the few exceptions. The purchaser forwards these levy funds to the Commonwealth Government, which then matches them dollar for dollar and provides them to HAL.

From there, the Industry Advisory Committee for each commodity makes decisions on what projects to fund using the levies collected from their respective commodities. However, approximately 1.8 per cent of these levies is provided to the Across Industry Fund, for projects which would benefit many different commodities in the horticulture sector. Such Across Industry Fund projects can give rise to the occurrence of free riders. For example, an across horticulture project could benefit tomatoes, despite the fact that tomato growers do not pay an R&D levy.

While Growcom supports Minister Burke's public comments that he would like to see more across and multi industry projects, such free rider problems will need to be addressed.

Other Comments

Growcom appreciates that considerable criticism has been levelled at some RDCs that both internal and external politicking has been more prominent in their organisations than 'lab to farm' achievements. We do not believe that HAL has been guilty of this, but certainly supports the focus of RDCs being on the core

business of research and development, and avoiding becoming involved in either internal or external politics.

Growcom also understands that government wishes to see efficiency gains in the sector. While this submission predominantly argues for funding levels to remain constant or increase, Growcom acknowledges that there may be some room for minimising costs by merging some of the services of the various RDCs, such as payroll, IR and HR services, and potentially office accommodation.

Conclusions and Recommendations.

1. The current RDC system has been an effective mechanism for coordinating and funding rural R&D.

2. Public investment in rural R&D has a direct and positive effect on agricultural productivity, resulting in a range of real economic and social benefits for all taxpayers.

3. In comparison to other sectors of the economy, the agricultural sector has several characteristics that limit private investment in R&D. Ongoing public investment is required to maintain productivity growth.

4. Despite the successes of the current RDC system, there are many areas in which the system can be adjusted to streamline processes, reduce bureaucracy, maximise efficiency, reduce duplication and ensure that more resources are directed towards R&D. These structural changes should address issues within and among RDCs.

5. RDCs should adopt a more flexible and adaptive approach to the prioritisation of activities and the allocation of resources.

6. RDCs should place more emphasis on demonstration and extension in addition to research and development, as these are essential for the rapid and widespread adoption of new innovations in the industry.

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