GRDC
Grains Research & Development Corporation

Australian Government
Grains Research and Development Corporation

3 November 2014

Committee Secretary
Senate Standing Committees on Rural and Regional Affairs and Transport
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Committee Secretary

Inquiry into the "Industry structures and systems governing the imposition of and disbursement of marketing and research and development (R&D) levies in the Agricultural Sector"

Levies are very important to Australian grain growers, and whilst everyone would like some more money in their pocket, grain growers utilise and understand the importance of the levy and the resultant RD&E to their profitability. This is apparent from the 2014 Grower Survey where 89% of respondents regarded R&D as critical to the success of their farm business.

The Grains Research and Development Corporation (GRDC) is a statutory corporation and resides in the Australian Government's Agriculture portfolio. The GRDC exists to drive the discovery, development and delivery of world-class innovation to enhance the profitability, productivity, and sustainability of Australian grain growers and benefit the grains industry and the wider community.

The GRDC invests in research, development and extension (RD&E) and related activities across a portfolio spanning temperate and tropical cereals, coarse grains, pulses and oilseeds. This involves coordinating and funding activities; monitoring, evaluating and reporting on their impact; and facilitating the dissemination, adoption and commercialisation of their results.

Please find attached a submission from the GRDC on this Inquiry with respect to specific issues affecting the grain growers and their levy. This is in addition to the response from the Council of Rural Research Development Corporation on behalf of all RDC's.

Thank you for the opportunity to comment on this Inquiry on R&D levies by the Rural and Regional Affairs and Transport References Committee.

Yours sincerely

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Your GRDC working with you

'The industry structures and systems governing the imposition of and disbursement of marketing and research and development levies in the agricultural sector.'

Key messages

The Australian grains industry plays a vital role
Each year Australian farmers grow between 20 and 45 million tonnes of grain. Grains and oilseeds play a vital role in Australia's economy, with an annual gross value of production of more than $9 billion, of which 45% (about $4 billion) is exported.

Grain is grown on approximately 20 million hectares across the Australian landscape, under a wide range of conditions. Despite diverse challenges, the Australian grains industry has a reputation for high quality and competes successfully in both domestic and export markets.

Growers understand the importance of R&D
Growers understand the important role R&D plays in the future of their farm business. In the 2014 Grower Survey, 89% of respondents regarded R&D as critical to the success of their farm business. 76% of growers believed they had directly benefited from grains R&D activities over the past five years. Virtually all growers have adopted a new variety resulting from R&D in that same timeframe.

Most growers are too small to do their own R &D
It's not viable for 20,000 individual growers to negotiate, leverage and contract their own research. It is much more efficient and effective for one organisation to contract research on behalf of all growers and for the outcomes to be shared. This market failure argument, which was foundational to the establishment of the GRDC more than 20 years ago, is still valid today and will remain so into the foreseeable future.

The compulsory nature of the levy is integral to the success of grains R&D in Australia. A voluntary scheme opens the way for "free riding" where individuals can access the benefits from R&D without necessarily having to contribute to the costs.

Grower's support the R&D levy scheme
A 2014 survey of 1200 grain growers representing each of the agro-ecological zones, reported that 76 per cent either felt comfortable or extremely comfortable paying the R&D levy.

GRDC is focused on making grain growers more profitable
The GRDC invests in research, development and extension (RD&E) and related activities across a portfolio spanning temperate and tropical cereals, coarse grains, pulses and oilseeds. This involves coordinating and funding investment activities; monitoring, evaluating and reporting on their impact; and facilitating the dissemination, adoption and commercialisation of investment outputs.

The GRDC does not undertake R&DE itself. Rather, it partners with a range of national and international organisations that have the expertise to undertake this specialised work.

The research partnership between grain growers and the federal government works
The partnership has been successful. It has delivered innovations that have improved the profitability of Australian grain industry as well as improved the sustainability of the natural resource base.

Since the early 1990s, the GRDC has invested in a balanced portfolio of RD&E on behalf of our primary beneficiaries – Australian grain growers. During this period the GRDC has generated significant returns. For example, economic analysis of 38 groups of projects supported by GRDC between 2007-08 and 2012-13, returned a benefit: cost ratio of 5:1.

The GRDC model is the envy of the world

The partnership between Australian grain growers and the federal government is unique in the world and is the envy of our competitors, particularly, Canada and the USA.

GRDC is now a major component of Australian grains R&D

20 years ago the GRDC provided marginal supplementary funding to large traditional public sector agricultural research institutions including universities, CSIRO, and the state departments of agriculture.

Today the GRDC plays a critical and central role in grains R&D in Australia. The GRDC is now responsible for over 50% of total expenditure, and increasingly is investing with a broader range of partners including grower groups, consultants, agricultural advisers and private sector organisations both here and overseas.

GRDC has an excellent record of leveraging resources from its research partners.

In addition to the federal governments matching funding, the GRDC has a very strong record of leveraging additional resources (at least 50%) from universities, CSIRO and state departments of agriculture and ensuring their focus remains squarely on addressing the research priorities of the grains industry.

Growers are in the R&D driver's seat

The strength and competitive advantage of the GRDC is that the RD&E priorities are set by the growers that contribute to the levy. As a consequence, the GRDC invests in the areas of greatest benefit to our primary beneficiary, Australian grain growers.

The priorities are set by growers through various stakeholder engagement mechanisms including the Regional Panels (Northern, Southern and Western), the Regional Cropping Solution Networks (RCSN) and engagement with the representative organisation – Grain Producers Australia (GPA).

GRDC is accountable to growers and government

The GRDC is accountable to Australian grain growers through the Representative Organisation, GPA. The GRDC also consults widely with a range of other grower organisations including Grain Growers Limited, Grain Producers South Australia, Western Australia Grain Group, NSW Farmers Association, Western Australian Farmers Federation, Pastoralist and Graziers Association of Western Australia, AgForce, National Farmers Federation, Victorian Farmers Federation and Tasmania Farmers and Graziers Association.

The GRDC is also accountable to the government via the requirements and reporting obligations in the PIRD Act and the PGPA Act.

Governance review

In February 2014, a representative group of grains industry levy payers commissioned Marsden Jacob Associates (Marsden Jacob) to undertake an independent review to seek to ensure that the GRDC has a structure that will deliver robust, accountable and commercial research, development and extension (RDE) outcomes to levy payers for years to come.

The review concluded that the current status quo governance arrangements are not the preferred structural option for the GRDC. The review identified two preferred structural governance options moving forward:

a. A hybrid model – that draws valuable components of an industry owned corporation into the current statutory corporation structure; or
b. An industry owned corporation.

The findings of the review have been subsequently supported by the representative group of grains industry levy payers.

About the Grains Research and Development Corporation (GRDC)

The GRDC was established in 1990, under the then Primary Industries and Energy Research and Development Act 1989 (PIERD Act), as a transparent accountable entity to fund and administer the levy into RD&E to increase the profitability of the grains industry in Australia. As a result of amendments made in December 2013, that Act is now known as the Primary Industries Research and Development Act 1989 (PIRD Act).

The PIRD Act provides for the funding and administration of primary industries R&D to:

- increase the economic, environmental and social benefits to members of primary industries and to the community in general by improving the production, processing, storage, transport or marketing of the products of primary industries
- achieve sustainable use and management of natural resources
- make more effective use of the resources and skills of the community in general and the scientific community in particular
- support the development of scientific and technical capacity
- develop the adaptive capacity of primary producers
- improve accountability for expenditure on R&D activities in relation to primary industries.

The GRDC is a statutory corporation and as such, is subject to requirements of the Public Governance, Performance and Accountability Act 2013. The GRDC resides in the Australian Government's Agriculture Portfolio and contributes to the Portfolio's goal of achieving more sustainable, profitable and competitive Australian agriculture, food, fisheries and forestry industries.

The GRDC exists to drive the discovery, development and delivery of world-class innovation to enhance the profitability, productivity, and sustainability of Australian grain growers and benefit the grains industry and the wider community.

The GRDC invests in RD&E and related activities across a portfolio spanning temperate and tropical cereals, coarse grains, pulses and oilseeds. This involves coordinating and funding activities; monitoring, evaluating and reporting on their impact; and facilitating the dissemination, adoption and commercialisation of their results.

The GRDC does not undertake RD&E itself. Rather, it partners with other organisations that have the necessary capabilities to undertake the specialised work. The GRDC also contributes to the development of strategic national approaches to grains industry RD&E, to reduce fragmentation and duplication, and to help address industry-wide issues such as biosecurity and climate variability.

While its focus is on delivering benefits to its primary stakeholders, Australian grain growers, the GRDC also generates outcomes from investing in RD&E that benefit other participants in the Australian grains industry value chain, the research community and the wider Australian community.

The GRDC is accountable to Australian grain growers through the Representative Organisation, Grain Producers Australia (GPA). The GRDC also consults widely with a range of other grower organisations including Grain Growers Limited, Grain Producers South Australia, Western Australia Grain Group, NSW Farmers Association, Western Australian Farmers Federation, Pastoralist and Graziers Association of Western Australia, AgForce, Victorian Farmers Federation, National Farmers Federation and Tasmania Farmers and Graziers Association.

Senate RRATR Committee inquiry - (R&D) levies in the agricultural sector.

Submission from the Grains Research and Development Corporation (GRDC)

The industry structures and systems governing the imposition of and disbursement of marketing and research and development (R&D) levies in the agricultural sector, with particular reference to:

a. an audit of reports, inquiries and reviews relevant to this inquiry;

There are a number of reviews of particular relevance to this Inquiry and we draw you attention to

- Productivity Commission Inquiry Report, No. 52, (10 February 2011); *Rural Research and Development Corporations*, Issues Paper, Productivity Commission, Canberra
    - Outlined that while the broad RDC model should be retained and is valuable and facilitates faster uptake of research outputs, there needed to be some changes to the way the government contributes its funding. In addition the current model did not account for broader rural R&D needs.
- *Review of the National Innovation System*, Australian Innovation System Report, 2011
- *Nossal K, Lim K (July 2011) Innovation and productivity in the Australian Grains Industry*, ABARES report 11.06
    - This report found that improving innovative capacity among growers is likely to increase efforts towards innovation adoption and enhance the ability of growers to realise productivity gains.
- Hughes, N, Lawson, K, Davidson, A, Jackson, T, Sheng, (May 2011) *Productivity Pathways: climate adjusted production frontiers for the Australian broadacre cropping industry*, ABARES Research Report 11.5
    - This study investigated total factor productivity and found a slowing over the last decade, even once the impact of climatic variation was taken into account. The study also analysed the various 'pathways' of productivity growth and found that technical change has been the primary driver of long run productivity growth over the past three decades, however the rate of technical change has slowed. The decline in technical efficiency implied that the gap between the most efficient farms and the average farms has widened.

Please also refer to the reports, inquiries and reviews noted by The Council of Rural Research and Development Corporations in their submission to this Inquiry.

In addition, we draw your attention to the Independent Strategic Governance Review of the GRDC, commissioned by Grain Producers Australia, Marsden Jacob 2014. This independent review was undertaken to ensure the GRDC has a governance structure that will deliver robust, accountable and commercial RD&E outcomes to levy payers in a changing operating environment. The scope and other relevant information are noted in section *i*.

Other documents referred to throughout this submission are detailed in the *References* section.

b. the basis on which levies are imposed, collected and used;

The basis on which levies are collected

The statutory levy is needed in the Australia grain industry because there are characteristics of the rural sector that make market failure more likely than in other sectors of the economy. Therefore it's not possible for 20,000 growers to negotiate, leverage and contract researchers to conduct research on their own. The industry levy directly addresses market failures issues by coordinating funding across growers. This leads to the most effective and efficient model where one organisation contracts research on behalf of the growers, and the resultant research outcomes and innovations are shared.

Without a statutory levy there is also a high potential for free-riding among growers, where research paid for by a few, but within the public domain, is utilised, by the many. This is especially important as growers may not see the benefits of research where there can be long lead times between when research is conducted and when the benefits are fully realised. In addition, there are benefits associated with GRDC funded research activities that accrue to parties other than the growers themselves. Some of these benefits arise from the strong linkages between benefits on-farm and to the community more widely — particularly with respect to land stewardship and natural resource outcomes — while others are due to operators along the supply chain being able to capture the savings associated with productivity improvements on-farm.

The levy also promotes efficient outcomes through the way growers take up the benefits of research and implement them on-farm. Since growers are required to pay a levy, a profit-maximising levy payer will want to get the most that they can out of the research that they fund. Requiring growers to pay a levy provides them with a strong incentive to engage in the RD&E process and engagement improves the rate of take-up of the GRDC commissioned findings — both of which have implications for productivity and sustainability. The GRDC's Regional Panels and RCSN's operate in order to provide growers with a forum through which they can be engaged at all points along the process, from identifying research needs, to providing updates on progress, to handing down and implementing findings.

The GRDC is also able to leverage considerable co-investment and additional funding from state governments and higher education and private sector providers for research to benefit grain growers and the broader community. This is not possible for an individual grower. An example of this leverage is in a $100M five year bi-lateral research program with Curtin University in a Centre for Crop and Disease Management. The GRDC is investing $5m a year for 5 years, with the remainder coming from Curtin University.

How the levies are collected

The RD&E investments made by the GRDC on behalf of Australian grain growers are funded by a grower levy and matching Australian Government contributions. The grower levy is based on the net farm gate value of the annual production of 25 crops: wheat; coarse grains—barley, oats, sorghum, maize, triticale, millets/panicums, cereal rye and canary seed; pulses—lupins, field peas, chickpeas, faba beans, vetch, peanuts, mungbeans, navy beans, pigeon peas, soybean, cowpeas and lentils; and oilseeds—canola, sunflower, safflower and linseed. The levy is collected from the buyer at the first point of sale and is 0.99% farm gate value for all grains except maize which is 0.693%.

It's important to note that the levy is calculated on the net farm gate value – as this differs from the gross value of production. The farm gate value deducts costs of storage, handling, freight and 'free on board' costs.

The levies are collected as stipulated by the:

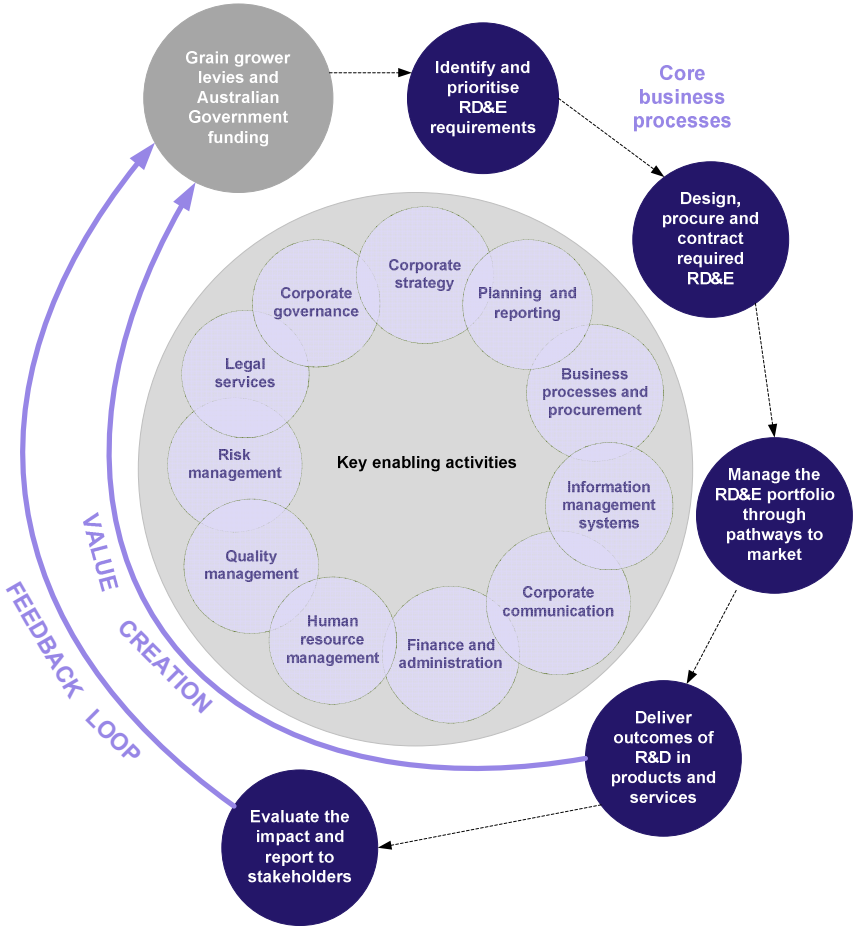
- Primary Industries (Excise) Levies Act 1999, supported by the Primary Industries (Excise) Levies Regulations 1999, Schedules 4, 12, 20 and 25
- Primary Industries Levies and Charges Collection Act 1991, supported by the Primary Industries Levies and Charges Collection Regulations 1991, Schedules 8, 19, 29 and 34 and collected by the Australian Government's Levies Revenue Service (LRS), Department of Agriculture.

The Australian Government matches the grower funds from the levy up to a limit of 0.5 percent of the three-year rolling average of the gross value of production of the 25 leviable crops.

How GRDC uses the levies

The GRDC invests in RD&E and related activities across a portfolio spanning temperate and tropical cereals, coarse grains, pulses and oilseeds. This involves coordinating and funding investment activities; monitoring, evaluating and reporting on their impact; and facilitating the dissemination, adoption and commercialisation of R&D outputs. The RD&E investments drive the discovery, development and delivery of world-class innovation to enhance the profitability, productivity, and sustainability of Australian grain growers and benefit the grains industry and the wider community.

The GRDC does not undertake RD&E itself. Rather, it partners with a range of national and international organisations and private sector businesses that have the necessary capabilities to undertake the specialised work. The GRDC also contributes to the development of strategic national approaches to grains industry RD&E, to reduce fragmentation and duplication, and to help address industry-wide issues such as biosecurity and climate variability.



While its focus is on delivering benefits to its primary stakeholders, Australian grain growers, the GRDC also generates outcomes from investing in RD&E that benefit other participants in the Australian grains industry value chain, the research community and the wider Australian community.

The figure above demonstrates the business processes that the GRDC undertakes to invest the RD&E levy and create value for Australian grain growers and the broader community.

Despite the long lag times most often associated with this type of R&D, GRDC has managed to generate considerable returns on these investments, with a cost benefit ratio of 5:1 for 38 projects groups from 2007-08 to 2012-13 (GRDC Annual Report, 2013). GRDC regularly undertakes independent economic analysis of its portfolio to evaluate performance, and ensure maximum return to the Australian grain grower.

c. competing pressures for finite R&D funds;

There are competing pressures for R&D funds within the finite grains levy resource. In addition, there is an overall reduction in the resources that Australian Government R&D agencies such as CSIRO and the state and territory government agriculture agencies have available for agriculture related R&D.

Whilst it is hard to quantify in absolute terms, there is obvious evidence, as supported by Keogh (2014), and the Australia Council of Deans of Agriculture (2010) that the dollars available to RD&E in Australia have been reducing. This is evident from the overall reduction in staff numbers at CSIRO where this year alone 1200 jobs were cut with budgetary cuts of $100M, as well as reductions in research staff at State Government agricultural research facilities, and the overall decline of extension services from State Governments.

Grains RD&E has not been immune from these cuts. As a consequence, the GRDC has moved from being a funder at the margin, to the major investor and is now supplying over 50% of the grains RD&E funding. This means that in many cases GRDC investments are now funding all operational costs, with research partners just covering institutional overheads.

At the national level there has been a National RD&E Strategy for the Grains Industry developed by the Primary Industries Standing Committee's R&D subcommittee chaired by the GRDC and made up of representatives from the PISC agencies (state governments, CSIRO), a representative for the universities and a grower from each of the northern, southern and western regions. This subcommittee has focused on collaboration to ensure that the national R&D programs are developed to make the most efficient use of the limited resources available for grains RD&E, and that there is no unnecessary duplication of effort. The plan responds to the growing recognition that Australia's limited science, technology and extension resources need to be aligned through a national strategy that facilitates collaboration in identifying needs and finding solutions.

The funds invested in grains RD&E are finite, and the projects and programs they are invested in need to be carefully managed to ensure a balanced portfolio, across new information and technologies, to ensure delivery of innovations both now, and into the future.

To achieve this balance, the GRDC has designed six themes to focus the RD&E investment portfolio on the activities that will make the biggest difference and deliver the best return to Australian grain growers, the wider grains industry and the wider community. These themes were developed through extensive consultation with Australian grain growers in 2012. All investments in projects are evaluated under these themes.

These investment themes are:

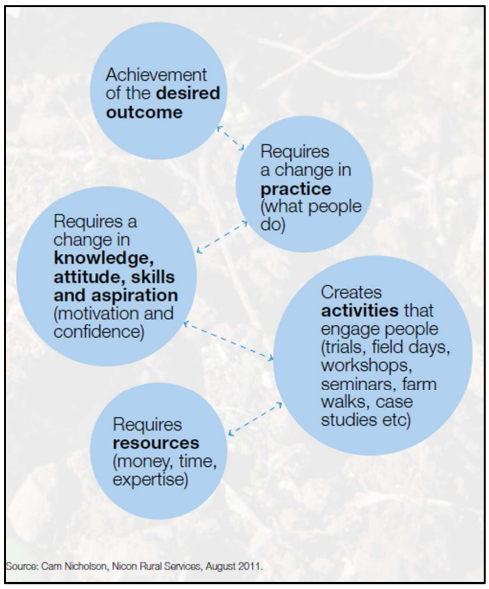
1. *Meeting market requirements* – producing grain that matches what customers want;
2. *Improving your yield* – developing varieties with the greatest production potential;
3. *Protecting your crop* – protecting your crop requires that the battle against those things which would reduce, damage or compete with crops is won;
4. *Improving your farm resource* - the growing medium (soil, water and air) needs to be as productive as possible, while minimising the potential impacts on and off farm;
5. *Advancing profitable farming systems* - achieving higher profitability comes from correctly navigating complex trade-offs and interactions in the farming system, not from any single aspect of production; and
6. *Building skills and capacity* – this theme addresses the ability of the grains industry to grow knowledge and adopt new practices to become more profitable.

These themes are shown in the following figure along with GRDC's vision for profitable and sustainable Australian grains industry, valued by the wider community.

This strategic approach is underpinned by continual evaluation, measuring progress against key indicators of success in achieving the planned outcomes of each investment theme.

Investment themes

The application of the investment themes are based on a 'program logic' approach (as shown in the figure below), which in effect means that changes in practice need corresponding changes in knowledge, skills, attitude and applications, through activities that engage people, and of course, require resources.



Under each theme there are long term aspirational goals, to be achieved over 10 or more years. To achieve these long term goals, there are several short and medium term outcomes needed. And underpinning these are changes to practices, particularly on-farm, needed for these goals to be achieved. Therefore, this focus enables the GRDC to direct its RD&E investments to activities that most efficiently enable and foster the practice changes required.

d. the opportunities levy payers have to influence the investment of the levies;

The strength and competitive advantage of GRDC is that the R&D priorities are set by the growers. At the decision-making level, grain growers have the opportunity to represent their industry as members of regional groups or networks, as appointed members of regional panels, and ultimately on the board of the GRDC.

As a consequence, GRDC enjoys strong support from growers. A recent survey of 1200 grain growers representing each of the agro-ecological zones, reported that 76 per cent either felt comfortable or extremely comfortable paying the R&D levy.

The investment of funds into RD&E is a rigorous process that starts with the grain grower. At the ground level, farmers can contribute to the development of grains RD&E by:

- participating in and contributing to discussions at GRDC grower events and grower updates;
- discussing issues and making suggestions and comments directly to representatives on the GRDC Regional Cropping Solutions Networks (RCSN's) and Grower Solutions Groups (CSG);
- discussing issues and making suggestions and comments directly to representatives on the GRDC regional panels;
- making comments and suggestions about RD&E on the GRDC website (www.grdc.com.au/About-Us/Contribute); and
- making comments and suggestions about RD&E through social media by following the GRDC on Facebook and Twitter.

The GRDC investment planning process is designed to ensure that the grain growers levy is managed so it can be the best investment a grower can make to improve their business. Additionally, the GRDC must ensure accountability for all monies invested.

Regional Panels

The GSGs and RCSNs provide information and recommendations on priority issues to the GRDC's regional panels. Regional Panels have been key to the success of the GRDC's model allowing RD&E investment to be directed by grain growers. These Regional Panels were established in three regions across the nation based on variations in environment, conditions and issues. They represent the northern, southern and western grain-growing regions of Australia, to ensure the different market and production realities are considered and reflected in the investment program. Each region has distinctive features that warrant focused planning and research management in plant breeding, farming systems, soil, grain storage and handling, product development, market opportunities and technology marketing.

The Regional Panels consider information gained from their own structure and interaction with GSGs and RCSNs, as well as information provided by communication with grower groups, government research and extension agencies, private research and extension organisations, and industry organisations.

The Regional Panel members are appointed by the board of the GRDC, and comprise grain growers, agronomists, agribusiness representatives, researchers and GRDC executive managers. Currently 73% of the panel members over the three regions are grain growers ensuring that RD&E investments are aligned to the needs of our key stakeholder.

The Regional Panels are appointed for three, two-year rolling terms. The role of each panel is to:

- identify and monitor regional and national grains industry issues that are relevant to the region;
- interact with grower groups, research advisory committees and other interested parties in the region to exchange information;
- identify and develop priorities for RD&E investment and with recommendations to the National Panel;
- keep growers and advisers in the region informed about the GRDC's strategic direction, investment portfolio and research projects; and
- assist staff in monitoring the effectiveness of the investment portfolio.

National Panel

The Regional Panels work with a National Panel, to ensure that GRDC investments are directed towards the interests of all grains industry stakeholders and to deliver relevant products and services in each grain-growing region.

The National Panel is composed of the chairs of the three regional panels (growers), the Managing Director and executive managers of the GRDC. The National Panel:

- addresses national RD&E priorities across the GRDC's investment portfolio and makes recommendations to the Board; and
- assists the Board of GRDC to maintain links with grain growers, the Australian Government, state and territory governments and research partners. The GRDC is guided by constant two-way communication with growers through its panels and grower networks.

Local grower groups and networks

There are many sources of information used by the GRDC to guide its planning and investment of RD&E funds. Grower groups and networks have been established in the three grain-growing regions of Australia. The groups and networks make suggestions and provide feedback to regional panels to help set priorities for RD&E. The groups and networks also have access to some direct funds to address immediate local research priorities in the short term.

The RD&E priorities identified by the grower networks, and the related actions and investments by the GRDC, are presented annually in the report *From the Ground Up* available on the *GRDC website.*

The format of each group or network differs between regions, based on historical RD&E management, industry structures and grower needs.

Northern region

There are four GRDC grower solutions groups (GSGs) in the northern grain-growing region of Australia. The first group established, in 2007, was the Northern Grain Alliance and successive groups have followed this model.

Each group has 40 to 60 members, as well as a steering committee and a local consultative committee and/or board, which are made up of local growers, advisers and researchers. The groups meet annually to ensure effective collaboration across the regions and with the larger GRDC northern investments.

On a more regular basis, the GSGs address immediate local research priorities by instigating projects of one to three years' duration. The projects focus on emerging issues that require a fast response and ultimately deliver information on the best way to manage problems at farm level. They provide essential on-ground linkages between growers, agronomists and researchers to identify local issues and research priorities that can be further investigated by the GSGs or fed into the GRDC's larger three to eight-year regional investments.

Western and Southern regions

There are nine GRDC Regional Cropping Solutions Networks (RCSNs) across the western and southern grain-growing regions of Australia. Each network comprises up to 16 members representing farmers, agronomists, agribusiness and researchers, and includes a representative of the relevant GRDC regional panel; each is coordinated by an independent facilitator. The RCSNs were established in the western region in 2011 and the southern region in 2012.

The RCSN initiative was developed to provide a vital role in the GRDC's effort to understand and address priority issues in each region. The initiative was also seen as a way for the GRDC to work with growers to reduce the time it takes for new varieties, practices and technologies to be adopted.

The RCSN initiative grew out of feedback from major stakeholders of the GRDC indicating that:

- growers want more effective delivery of RD&E that drives growth in their productivity, profitability and sustainability;
- growers continue to face a broad spectrum of demands on their time and resources;
- the grains industry operates in the context of increasing consolidation of public sector resources, most critically in development and extension services;
- Australia's competitiveness in global grain markets will increase if the time between development, field testing and ultimate adoption is accelerated; and
- the GRDC's delivery of development and extension must continue to adapt to changing physical and operational environments to meet the priorities of stakeholders.

The development of the RCSN initiative was aligned closely with the vision of the Primary Industries Ministerial Council. This vision included a national restructuring of RD&E resources, which aims to foster greater cooperation between the Commonwealth and the states, avoiding unnecessary duplication, and maximising benefits from the investment in research, development and extension.

The objectives of the RCSN initiative are to:

1. Create and manage knowledge.

2. Build regional development and extension capacity among growers and advisers.

3. Proactively respond to regional industry issues in a timely manner.

4. Provide enduring links between growers, advisers and the GRDC.

Case study – Regional Cropping Solutions Networks - national R, regional D and localised E in action

The grains industry is undergoing a period of profound change. In parallel, the RD&E sector is experiencing a period of significant consolidation and growers are facing more demands on their time. Farmers seek more effective and relevant regionalised RD&E to drive growth in their profitability and faster development, field testing and adoption of systems to increase competitiveness in global markets.

Each RCSN meets formally twice a year to "identify critical needs to ensure prosperity of the grains industry in each zone", for consideration in the GRDC's annual investment planning cycle. Limited funds also support RSCN "fast-track projects" where significant, local issues can be addressed in a short timeframe with a relatively small investment.

The RCSNs have enhanced the GRDC's appreciation of grower region-specific challenges and its ability to tackle these problems. Some important issues have received "fast track" funding and enabled a quick turnaround from identification of the problem through to research, trials and extension to growers.

Grower Craig Reynolds, from Congupna (Victoria), is a member of the southern region's Irrigation Zone RCSN. He has been impressed with the effectiveness of the initiative, particularly the progress to develop irrigated National Variety Trials for canola and cereals.

"As a group, we've successfully had five of our projects receive funding from GRDC and begin the research phase," Mr Reynolds said in early 2014.

"I'm excited about the irrigated NVT project. To get the NVT trials up and running this year has been a big win. We're looking to get better data on varieties as far as irrigation goes. We grow differently to most dryland cropping systems, but we're growing dryland varieties – it will be interesting to see what we can learn from the NVT Irrigation Zone data."

In the western region, mixed cropper Stuart Witham from Tambellup in the Albany Port Zone has been involved in a research project into retained stubble and its relationship to frost.

"Historically, everyone has been pessimistic when it comes to frost and its impact on our crops, however (because of the RCSN project) we're more upbeat. For example, we know much more about genetics and the types of crops that work for us. We've also seen a correlation between stubble and heightened levels of frost damage. What that means is that, the more stubble you have in a susceptible area the greater the chances are of bad frost damage. "

"To get around this people are now looking to sow more resilient varieties and to use other management techniques such as raking and then burning their stubble in areas and paddocks that are susceptible to frost."

The primary goal of the RCSNs is to provide region-specific feedback to the GRDC regional panels on relevant issues affecting growers, to assist the panel prioritise issues for consideration of RD&E. The RCSNs develop a sound understanding of the GRDC's current research investments and determine where there are gaps in current RD&E, with a specific focus on regional issues. The local knowledge of the RCSNs helps build essential on-ground linkages between growers, farming systems groups, agribusiness and researchers.

As well as influencing investment at a regional and national scale, the RCSNs have the ability to determine and facilitate fast track projects, where significant local issues can be addressed in a short timeframe with a relatively small budget.

The RCSN initiative complements the *National Grains Industry RD&E Strategy*, with its aim to plan and design local research and activities of greatest benefit.

There are currently 122 RCSN members over the three regions, and of these 71 are grain growers, ensuring a strong representation and focus by our key stakeholders.

e. the opportunities levy payers have to approve and reapprove the imposition of levies;

Each year the GRDC prepares a Stakeholder Report. In conjunction with the GRDC Strategic Research and Development Plan 2012-17, Annual Operating Plan; Annual Report and the GRDC Growers' Report, the Stakeholder Report provides crucial information to industry stakeholders, including Grain Producers Australia (GPA), and its members about GRDC activities, key achievements and an analysis of revenue and expenditure estimates.

Through GPA, the report is also provided to other industry stakeholders including Grain Growers Limited, Grain Producers South Australia, Western Australia Grain Group, NSW Farmer Association, Western Australian Farmers Federation, Pastoralist and Graziers Association of Western Australia, AgForce, Victorian Farmers Federation, National Farmers Federation and Tasmania Farmers and Graziers Association.

This information is provided to enable GPA, as the industry representative organisation, to make an informed decision and recommendation to the Minister on the R&D levy rate. After consulting broadly, the representative organisation makes a recommendation about the levy rate to the Minister, annually. It should be noted that the Representative Organisation have never recommended that the levy be reduced and there has been discussions within industry forums on increasing the levy.

The RD&E levy is based on the net farm gate value of the annual production of 25 crops, and is collected from the buyer at the first point of sale and is 0.99% farm gate value for all grains except maize which is 0.693%.

It should be noted that volatility in grain prices, production, farm gate costs, and growers' marketing decisions mean that revenue estimates are highly uncertain. Increased grain price volatility, in particular, has created a very difficult revenue forecasting environment in recent years and this is

expected to continue. When GRDC's income is lower than expected due to grain price fluctuations and climatic variations GRDC uses these financial reserves to support the RD&E investments.

f. the transformation of R&D and marketing into increased returns at the farm gate, including the effectiveness of extension systems;

Australia's grains industry produces between 20 and 45 million tonnes of grain each year, grown across an area of about 20 million hectares. The industry has an annual gross value of production of more than $9 billion, of which 45% (about $4 billion) is exported. Grain production also underpins Australia's growing food processing sector, including the milling, malting and brewing industries (which have annual gross revenue of more than $6.6 billion) and the feed compounding industry that services Australia's $14.6 billon intensive animal production sector (beef, dairy, pork and poultry). (NFF, 2012)

Internationally and domestically, the grains sector is changing at a rate that far outstrips previous predictions. In competitor countries with cheaper input costs, such as Brazil, access to cheap new cropping country maintains downward pressure on global prices. With limited new land available for cropping in Australia, growers can only maintain global competitiveness, and hence, profitability through continuous innovation. Therefore it absolutely essential for long term financial viability that the industry increases productivity: increases returns and decreases costs.

Growers understand the important role R&D plays in the future of their farm business. In the 2014 Grower Survey (1200 grain growers), 89% of respondents regarded R&D as critical to the success of their farm business. 76% of growers believed they had directly benefited from grains R&D activities over the past five years. Virtually all growers have adopted a new variety in that same timeframe. If asked, most growers would say that they would be 'out of business' if they were required to farming using the practices that were 'state of the art' only 20 years ago. Not surprisingly, 76 per cent of growers are comfortable or extremely comfortable paying the R&D levy.

The impact of the RD&E invested is evaluated as a core business process within the GRDC. Several independent impact assessment studies are commissioned each year to examine economic, environmental, and social benefits of the GRDC's investment in projects. The GRDC uses these impact assessment studies to understand how effectively it is delivering desired outcomes to its key stakeholders. To make sure that the impact assessments methods are meaningful to our key stakeholders the GRDC uses the Council of Rural RDC's Impact Assessment Guidelines (2014). These are based on the initial CRRDC Evaluation Guidelines (2007) and were endorsed by the Productivity Commission and the Treasury Department. These guidelines are designed to ensure that the results of impact assessment studies are valid, transparent and comparable. These guidelines have been enhanced by the methodologies and approaches adopted by the Australian Centre for International Agricultural Research and the Consultative Group of International Agricultural Research which are considered better practice approaches to impact assessment of agricultural R&D.

Analysis of 44 groups of GRDC projects funded during the period from 2008-09 to 2013-14 delivered an average a benefit cost ratio of 5:1, a Present Value of Benefits of $2.9B; a Present Value of Costs $547M; Net Present Value of $2.3B and an internal rate of return of 33%.

An example of a long term project that GRDC has funded is the Australian Cereal Rust Control Program which has demonstrated a cost ratio of 23 to 1 and a Net Present Value of $632 million over 20 years. This program has lowered the cost of control of rust epidemics, resulted in lower cost to industry of fungicides and in addition, has avoided massive yield losses by providing the industry with resistant varieties.

The GRDC also invests in projects with public as well as private good outcomes. This reflects the nature of the research funds consisting of levies and federal government matching funds. As stated by the *Australian Council of Deans of Agriculture – Response on the Agricultural R&D System by RRDC, 2010* growers gain private benefit though improved crops, new technologies, better practices, more efficient modes of operating and the public receives benefits from inexpensive, consistently high quality, safe food supply, better environmental and social outcomes, and economic benefits from export earnings.

Grain and Graze is an example of such a program that demonstrates public and private good outcomes. Grain and Graze 2 was a four-year mixed farming systems program funded by the GRDC and the Australian Government through the Caring For Our Country initiative. It was delivered in Western Australia (western region), South Australia, Victoria, Southern New South Wales (southern region) and the northern NSW and southern Queensland (northern region). At the end of the program in 2013 these programs have delivered a cumulative net farm profit to growers of over $100M from a project cost of $12M. These outcomes were obtained through better management of stubbles, increased stocking rates and adoption of novel rotations and fodders. Importantly, this was achieved without increasing the risk to farming businesses and is delivering significant benefits to the environment and broader Australian community.

The GRDC focuses on ensuring maximum return on growers' investment in R&D, leading to benefits for the wider community, in the immediate future and longer term. The GRDC is able to leverage a great deal of additional funding (approximately 50%) from the private and public sectors including state governments, CSIRO, and higher education providers for research to benefit grain growers and the broader community. For every $1 contributed by the Australian Government, industry levies and contributions add a further $1.50 on average. This serves to leverage the total investment and create far greater benefits for Australia than would otherwise be the case. (RRDC, Pg5, 2008)

Embedded in all of the GRDC projects is an extension component focused on delivering the research and development outcomes to grain growers. In addition to this, the GRDC also has a Regional Services Delivery Team that focuses on delivering extension through thirteen core products and services that work together to achieve the practice changes that the GRDC seeks and increase the recognition of the benefits of GRDC's research, development and extension on farm. These include

the GRDC's flagship newspaper GroundCover, Project Summaries, GrowNotes, ResearchNotes, Trial Results, NVT Online, Media/Press Releases, GRDC Facebook, Twitter and LinkedIn, GRDC YouTube channel and podcasts, Apps, Grower, Adviser and Farm Business Updates, Workshops for Advisers and Field Days for growers including trial walks and shed meetings.

The GRDC supported field days, workshops, training sessions, and updates where presentations were provided to 21,849 growers and 9,198 advisers in 2013–14.

Case study – Eureka Prize for RD&E improving water efficiency

Australian grain farmers are boosting yield by more than 50 per cent without using any extra water. For their game-changing success developing more water-efficient grain-farming methods, the Water Use Efficiency Initiative team consisting of CSIRO's John Kirkegaard and James Hunt, and Stuart Kearns of the Grains Research and Development Corporation, have been awarded the *Department of Agriculture Landcare Eureka Prize for Sustainable Agriculture*.

The Water Use Efficiency team has discovered a few deceivingly simple changes in farming practice that can make staggering differences to water-yield efficiencies. On farms across Victoria, NSW and WA, grains farmers are seeing the light, and are adjusting time-honoured practices to switch to the new Water Use Efficiency principles.

"The Water Use Efficiency team has certainly overachieved," Australian Museum Director and CEO Kim McKay said. "From an initial aim of increasing yield by 10 per cent, they are helping growers achieve yield increases of well over 50 per cent. The implications for farming in a country with periodic water shortages are obvious".

This research has had real results adding to the bottom line:

- **The team has increased participating farms' returns by $250 per hectare**
- On some farms weed control and maintaining ground cover over summer increased yield by 60 per cent and earlier sowing of slow-maturing grain added another 22 per cent
- Sowing a legume 'break crop' between crops could increase yield by up to 83 per cent
- Average winter yield was increased across all regions by 25 per cent.

g. collaboration on research to benefit multiple industry and research sectors;

National and international collaboration is essential within the project portfolio mix, and in developing the innovations needed to address future challenges and increase productivity, which are the two preconditions for farm gate profitability. There are also issues effecting other agricultural sectors and Australian communities where joint research can offer greater and more cost effective solutions.

Currently, the GRDC has a portfolio of 77 projects of collaborative research. The collaborative research is with other research development bodies such as Sugar Research Association, Meat and Livestock Australia, Horticulture Australia, Pork Research Corporation, Dairy Australia and RIRDC. The research partners are within state government research departments, CSIRO and a range of Universities such as Queensland University of Technology (QUT), University of Queensland (UQ), Charles Sturt University (CSU), Australian National University (ANU), The University of Western Australia (UWA) and Monash University (MU).

The GRDC not only initiates the leadership of collaboration programs, but also supports the programs initiated by others. The GRDC currently leads the Nitrous Oxide Research Program, a national initiative within the Australia's Farming Future framework that measures the release of nitrous oxide under different farming systems, and explores methods for its mitigation.

The GRDC has also led a successful bid for funding from the Australian Government 'Caring For Our Country' scheme. The GRDC worked with farmers, advisers and researchers in regional Australia to develop a nationally integrated RD&E program to address natural resource management issues in mixed farming systems. This project "Grain and Graze 2" was a four-year mixed farming systems program funded by the GRDC and the Australian Government through the Caring For Our Country initiative. It was delivered in Western Australia (western region), South Australia, Victoria, Southern New South Wales (southern region) and the northern NSW and southern Queensland (northern region).

The GRDC has also been a strong supporter of cross RDC programs such as the Managing Climate Variability (MCV) programs previously administered by Land and Water Australia (LWA). The MCV program brings together six partners in a coordinated effort to better prepare producers to manage climate risk on the ground. The following case study outlines this program and the outputs from this program.

Case study: Managing Climate Variability Program (MCVP)

MCVP is a collaborative program between the Grains, Rural Industries and Sugar Research and Development Corporations; the Australian Government through the Department of Agriculture; Dairy Australia; Meat & Livestock Australia (MLA); and the former LWA.

The aim of the program is to help primary industries and natural resource managers manage the risks and exploit the opportunities afforded by Australia's variable and changing climate by:

- improving forecasting accuracy, lead-time and ease of use,
- providing tools and services for managing climate risk, and
- increasing adoption of climate risk management.

There are three particularly notable outputs from the program:

- More rapid development of the Predictive Ocean Atmosphere Model for Australia (POAMA) to replace current statistical forecasts which are likely to be less useful as a result of climate change,
- Accelerating the use of POAMA to provide a new forecast at a multi-week timescale and a new forecast of the monsoon onset, and
- The launch of CliMate, a free mobile application with a web version forthcoming, that can be used to readily access and interrogate recent weather and likely climate probabilities for a location, and which had 3,000 downloads in its first six weeks.

The benefits from this investment will largely accrue to Australian primary industries, as that is largely where the tools and products being developed are targeted. There are also some public benefits such as better natural resource management, enhanced scientific knowledge and some community spillover benefits.

The benefits include:

- Increased farm profits and reduced farm losses
- Enhanced awareness and adoption of climate risk information and capacity to adapt to climate change
- Diverse non-farm benefits from improved seasonal and multi-week forecasts
- The total investment of $15.45 million (present value terms) has been estimated to produce total gross benefits of $94.97 million (present value terms) providing a net present value of $79.52 million, a benefit-cost ratio of 6.15:1 and an internal rate of return of 37.2%.

h. *industry governance arrangements, consultation and reporting frameworks;*

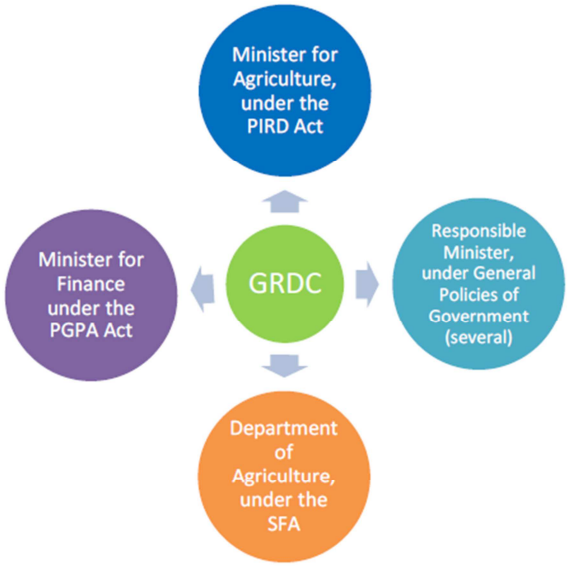
The *Primary Industries and Research and Development Act 1989* (PIRD Act) sets out the legislative framework and rules for the establishment and operation of the GRDC. As well as its responsibilities under the PIRD Act, the corporation has accountability and reporting obligations set out in the *Public Governance, Performance and Accountability Act 2013*. Corporate governance within the GRDC is guided by the Australian National Audit Office's *Better Practice Guide: Public Sector Governance*. The GRDC is a part of the Agriculture portfolio and, through its Board, is accountable to the Australian Parliament through the Minister for Agriculture.

The GRDC formally reports to grain growers through their representative organisation, Grain Producers Australia (GPA) and formally consults with GPA twice a year.

As part of the corporate governance the GRDC also undertakes the following activities:

- Independent internal and external audits are applied to the GRDC's financial, risk, fraud, quality and RD&E management.
- The GRDC reports annually on its performance in relation to ecologically sustainable development and other matters outlined in the *Environment Protection and Biodiversity Conservation Act 1999*.
- The GRDC maintains accounts and records of transactions and affairs in accordance with accepted accounting principles generally applied in commercial practice, and with legislative requirements.
- As part of the quality management system, the GRDC's fraud and risk management framework includes processes for project, program and portfolio-level risk management, general compliance and operational risk management, financial risk management, and prudential guidelines for business ventures.

Table 1 outlines the list of reports, audits and requirements that the GRDC undertakes.



Source: Marsden Jacob Associates, 2014.

Table 1: **Accountability and reporting requirements**

Legislation/ Agreement	Reporting and duration	Requirements	Approval
PIRD Act	R&D Plans – 5 years duration, with annual review	The R&D Plan must include: • statement of the GRDC's objectives and priorities for the period; • outline of the strategies that will be adopted to achieve the objectives	Minister for Agriculture
	Annual Operational Plan (AOP)	The AOP must: • specify the broad groupings of R&D activities that the GRDC proposes to fund during the financial year. • describe how and to what extent they will: give effect to the R&D Plan, and pursue the strategies in the R&D Plan. • provide an estimate of: total amounts likely to be spent and paid by the GRDC.	Minister for Agriculture – no longer required to pre-approve.
	Annual Report	The GRDC must produce an annual report in line with the *CAC Act*	Minister for Agriculture Representative
	Annual reports of Selection Committee	Presiding Member of the Selection Committee for the GRDC must report on the annual operations of the Selection Committee	Minister for Agriculture
Statutory Funding Agreement	Strategic Plan	Must cover a three to five year period and be reviewed at least once every year. *The Strategic Plan overlaps with the R&D Plan under the PIRD Act but has several additional requirements, such as collaboration with other RDCs, assessment of the RDC's operating environment.*	Department of Agriculture
	Annual Operating Plan	Annual Operational Plan to implement the Strategic Plan.	Department of Agriculture
	Annual Report	Compliant with the *Corporations Act 2001*	Department of Agriculture

Legislation/ Agreement	Reporting and duration	Requirements	Approval
	Risk Management Plan	This plan must be developed and reviewed at least every 3 years.	Department of Agriculture
	Fraud Control Plan	This plan must be developed and reviewed at least every 3 years.	Department of Agriculture
	Intellectual Property Management Plan	This plan must be developed and reviewed at least every 3 years.	Department of Agriculture
	Compliance Audit Report	RDC compliance with its obligations under application of the funds (clause 6) and management of the funds (7)	Department of Agriculture
	Certification Report	Compliance with the obligations under the Act	Department of Agriculture

Source: Marsden Jacobs Associates 2014

The GRDC also communicates with stakeholders through a range of channels, including:

- regular meetings with and reports to the Department of Agriculture
- publications and online content
- consultation with grower groups, agribusiness and R&D partners
- a grower survey, conducted every two years
- conferences, workshops, grower updates and similar activities
- the GRDC complies with the *Freedom of Information Act 1982* and the *Privacy Act 1988*.

The GRDC supported field days, workshops, training sessions, and updates where presentations were provided to 21,849 growers and 9,198 advisers in 2013–14. This compares with 11,906 growers and 3,313 advisers in 2012–13.

The GRDC's corporate planning and reporting mechanisms include:

- strategic R&D plan—sets out the GRDC's high-level goals, strategies and performance measures for a five-year period, developed in consultation with stakeholders and approved by the Minister
- investment plan—informs potential research partners about some of the GRDC's new investment priorities for the next financial year and invites interested parties to submit research proposals

- annual procurement plan—makes procurement information publicly available through the Australian Government's AusTender procurement management website
- annual operational plan—specifies the annual budget, resources and research priorities that give effect to the strategic R&D plan during a given financial year
- portfolio budget statements—as part of the Australian Government budget process, summarises the planned outputs, outcomes, performance information and financial statements for a given financial year
- annual report—provides information on the GRDC activities and their performance in relation to the goals set in the annual operational plan and portfolio budget statements for a given financial year

i. other related matters

There are a number of influences, from domestic and international factors changing the Australian grain growing landscape. Our overseas competitors are changing, adapting and becoming increasingly productive. In Australia, the amount of arable land with suitable climatic conditions that can be viably farmed is a relatively static resource. Therefore to improve profitability the only option for farmers is to adopt RD&E innovations that drive productivity. Within Australia, the rate of farm consolidation has been accelerating over the last decade, with the total number of grain producing farms down from 35,000 in 1997 to 19,000 today. Australia is now characterised by fewer but larger and more specialised grain growing farms. (GRDC Annual Report, 2012-2013)

There have also been cuts to overall funding of grains RD&E, where the GRDC has moved from being a funder at the margin, to the major investor and is now supplying in the region of 60% of the grains RD&E funding.

International agricultural grain research companies invest large sums into new technologies in their key markets such as Canada and the USA. These global private sector research companies such as Monsanto, Du Pont, BASF, Bayer, Limagrain and Syngenta have a total annual research spend estimated to be over US$5 billion per annum.

In Australia we need access to technological innovations that these companies can provide. The GRDC provides a unique point for global R&D interactions and is increasingly an important platform for collaborative private sector investment with overseas organisations.

An example of how GRDC does this is in the following case study on Nuseed.

Case study – Nuseed

Nuseed is a collaboration between Nufarm Ltd, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Australian Grains Research and Development Corporation (GRDC).

Nuseed is leading the commercialisation of a $50 million dollar research collaboration which will use leading edge gene technology to develop and commercialise vegetable oil which will contain the same high quality, DHA (docosahexaenoic acid) rich long chain omega-3 that traditionally comes from fish.

Already as part of the project, CSIRO scientists have made a significant breakthrough by enabling canola plants to generate long chain omega-3 oils that contain DHA, something that until now has only been found in beneficial quantities in ocean-based algae and the fish that eat it. Some land-based plants, like flaxseed, can produce short chain omega-3 oils, but are unable to produce the more beneficial long chain omega-3 oils containing DHA.

The three parties have signed two major agreements to develop and market plant made 'DHA-rich' long chain omega-3 oils, utilising world leading gene technology. The first agreement is a multi-year collaborative research project to achieve a series of development milestones and complete a broad range of studies. The second agreement is a global exclusive commercial license to Nuseed for existing and co-developed long chain omega-3 intellectual property.

DHA and EPA (eicosapentaenoic acid) long chain omega-3s are fatty acids which have well-documented roles in heart and brain health, child and infant development, treating inflammation and other health functions. Awareness of their health benefits and inclusion in diets – either as supplements or used to fortify processed foods – has grown exponentially over the last decade.

The Global Organisation for EPA/DHA (GOED) currently value the total long chain omega-3 market at $US 18.6 billion. The primary source of these long chain omega-3s is fish, and as demand continues to grow faster than can be sustainably supplied from wild fish stocks, the race is on to find potential new sources which can satisfy burgeoning consumer demand. This is why the long chain Omega-3 Oil Research Collaboration has been created.

The CSIRO and Nuseed, with the financial support of the GRDC, have come together to undertake the research and trials to develop the highest quality of long chain DHA omega-3 in oilseed plants at levels equal to or better than fish oil.

The CSIRO has long led the way in research aimed at developing plants, through the transfer of genes from one plant (microalgae) to another (canola), which can produce the omega-3 fatty acids typically found in fish oil. The first phase of the project is to assess milestones, obtain regulatory approval, and launch a canola based product in Australia. The new collaboration aims to trial elite canola lines as early as 2013 and have seed commercially available by 2016.

The GRDC provided financial support to assist in the development of the technology to make the production of the special canola possible and Nuseed has joined to support the next stage of development, regulatory approval and global commercialisation.

To position the Australian grains industry advantageously in this environment the GRDC need to be agile and commercial. The current governance structure has a number of key impediments to delivering these future needs. These are:

- use of financial reserves — GRDC revenue is highly variable at times. Large RD&E investments are required and the flexibility to draw on reserves is highly desirable for future agile and commercial performance. The GRDC does not have autonomy over accessing reserves as approvals from government are required to operate a deficit budget. Under current government guidelines a deficit budget can also have flow-through impacts on workforce matters that can affect recruitment and employment conditions, creating a disincentive to their efficient use.
- labour market arrangements — the GRDC is bound by a public service enterprise agreement that limits the ability of the Board to attract, pay and retain commercially relevant skills and expertise of GRDC staff.

It must be noted that these impediments can be tackled through 'workarounds' in order to achieve desired RDE organisational outcomes. However, the first preference is for the GRDC to have a governance structure that avoids these impediments in the first place.

In February 2014, a representative group of grains industry levy payers commissioned Marsden Jacob Associates (Marsden Jacob) to undertake an independent review to seek to ensure that the Grains Research and Development Corporation (GRDC) has a structure that will deliver robust, accountable and commercial research, development and extension (RDE) outcomes to levy payers for years to come. The terms of reference for the review were:

Purpose:

> Seek to ensure GRDC has a governance structure that will deliver robust, accountable and commercial RDE outcomes to levy payers in a changing operating environment.

Scope:

> Review the current structure of GRDC to identify the structural and cultural strengths and impediments to delivering on the RDE agenda that will enable world-class innovation in, and profitability of, the Australian grains industry, with particular examination of:
>
> 1. The strengths and weaknesses of other RDC structures and other non RDC organisations;
> 2. Whether potential changes to the PIERD and CAC Acts, or structural change, including but not limited to an industry owned company, are necessary to address impediments identified in (1);
> 3. Assess whether alternate models have the potential to improve the RDE outcomes and profitability of the grains industry; and
> 4. Identify costs associated with change, both transactional and operating impact

The key messages from the review were:

1. The current status quo governance arrangements are not the preferred structural option for the GRDC. The review identified two preferred structural governance options moving forward:
    a. A hybrid model – that draws valuable components of an industry owned corporation into the current statutory corporation structure; or
    b. An industry owned corporation.
2. The GRDC is a respected organisation that is operating in an increasingly dynamic research, development and extension (RDE) environment with substantial domestic and international changes across the length of the grain industry supply chain. For example, the number of grain growers has halved in Australia in the last ten years, research has become more internationalised and private companies have become significant providers of research and extension.
3. In order to deliver the best possible RDE outcomes for levy payers, the GRDC needs a governance structure and arrangements that sharpen its connection to growers and their needs; and helps it to rapidly seek out, decide on and seamlessly manoeuvre resources into RDE investments that will meet those needs in the short and long term (a balanced portfolio of RDE investment).
4. This requires the removal of unnecessary red tape and constraints to accountability and decision making autonomy. Unfortunately, changes to governing legislation of the GRDC (Primary Industry Research and Development Act 1989 and Public Governance, Performance and Accountability Act 2013) are:
    a. increasing the GRDC's accountability to the Australian Government and reducing accountability to levy paying growers.
    b. embedding limitations on decision making autonomy that are available to industry owned corporations. For instance, the review has revealed that industry owned corporation have decision autonomy over access to financial reserves, employment flexibility and ability to establish new business entities, which gives them greater ability to manoeuvre their RDE investment, and recruit and retain the best possible staff. The GRDC does not.
5. Of interest to some stakeholders has been whether the form of structural governance in itself might affect organisational culture and performance. Comparative assessments of GRDC organisational efficiency were outside of the scope of this study. However, the report noted that governance arrangements per se do not singularly drive organisational performance. Under similar operating conditions (reporting, accountability and autonomy) it is reasonable to expect the statutory corporation and industry owned corporation structural models would perform in a similar fashion. A wide variety of factors including leadership, culture and processes will affect performance — the report noted that the GRDC has made substantive efforts to improve such matters.
6. Nonetheless structural governance arrangements can set precursors to these drivers and indirectly affect organisational efficiency and effectiveness. Among others in this review we

note that the alternative structural governance arrangements do not have similar starting conditions. As discussed above, additional conditions are imposed on the statutory corporation model. This is of serious concern to many stakeholders, because these conditions place unnecessary time and resource burdens on the GRDC Board and team.

In September 2014 the Marsden Jacob Associates report was considered at a meeting of grain farmer representative organisations including:

- Grain Producers Australia
- VFF Grains Group
- AgForce Queensland
- Tasmanian Farmers and Graziers
- Grain Growers Ltd
- NSW Farmers
- WA Grains Group
- Grain Producers South Australia, and
- WA Farmers

These grain farmer organisations were unanimous in their acceptance of the recommendations of the Marsden Jacob review and wish to work cooperatively with Government, GRDC and levy-payers to transition to new governance arrangements by moving from the existing RD&E model to one with greater levy-payer involvement and more commercial operational terms.

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Appendix 1

Examples of companies that GRDC has invested in:

- Australian Grain Technologies Pty Ltd
  - Undertakes commercial wheat and barley breeding.
  - GRDC is a 39% shareholder.
- Arista Cereal Technologies Pty Ltd
  - undertakes development and commercialisation of high-amylose wheat
  - GRDC is a 21% shareholder
- Australian Centre for Plant Functional Genomics Pty Ltd
  - Conducts functional genomics research into abiotic stress.
  - GRDC is a 19% shareholder and provides research funding in return for equity.
- Canola Breeders Western Australia Pty Ltd
  - Undertakes commercial canola breeding focused on Western Australian low-rainfall areas with some adaptation to other regions of Australia
  - GRDC is a 39% shareholder
- Novozymes Biologicals Australia Pty Ltd
  - Develops and markets inoculants products to benefit growers.
  - GRDC is a 50% shareholder.