Australian Government

Grains Research and Development Corporation

ANNUAL REPORT 2017–18

GRDC

The **Grains Research and Development Corporation** is a corporate Commonwealth entity established to plan and invest in research, development and extension (RD&E) for the Australian grains industry.

Its primary objective is to drive the discovery, development and delivery of world-class innovation to enhance the productivity, profitability and sustainability of Australian grain growers and benefit the industry and the wider community.

Its primary business activity is the allocation and management of investment in grains RD&E.

OUR PURPOSE

To invest in research, development and extension to create enduring profitability for Australian grain growers.

OUR MISSION

Create value by driving the discovery, development and delivery of world-class innovation in the Australian grains industry.

OUR VALUES

We are **committed** and **passionate** about the Australian grains industry.

We value **creativity** and **innovation**.

We build strong relationships and partnerships based on mutual **trust** and **respect**.

We act **ethically** and with **integrity**.

We are **transparent** and **accountable** to our stakeholders.

Cover photo: Evan Collis Photography, 'Harvesting at Dowerin, Western Australia'

Letter of transmittal

Australian Government
Grains Research and Development Corporation

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

15 October 2018

The Hon David Littleproud MP
Minister for Agriculture and Water Resources
Parliament House
CANBERRA ACT 2600

Dear Minister

It is my pleasure to present the annual report of the Grains Research and Development Corporation (GRDC) for the year ended 30 June 2018, in accordance with section 46 of the *Public Governance, Performance and Accountability Act 2013* and section 28 of the *Primary Industries Research and Development Act 1989* (PIRD Act).

The GRDC is confident that its performance in 2017–18 contributed to the industry's and the government's vision for a sustainable, productive, internationally competitive and profitable Australian grains industry.

This achievement is consistent with the GRDC's responsibility to plan, execute and report against the:

- objects of the PIRD Act as they apply to the GRDC
- planned outcomes of the GRDC's Strategic R&D Plan 2012–17 and Annual Operational Plan 2017–18
- outcome and performance measures set out for the GRDC in the Agriculture and Water Resources Portfolio Budget Statements 2017–18
- core requirements of the Funding Agreement 2015–19.

The annual report was prepared under the direction of the Board and approved by a resolution of the corporation's directors on 28 September 2018.

Yours sincerely

John Woods
Chair

cc: Senator the Hon Richard Colbeck, Assistant Minister for Agriculture and Water Resources

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Highlights of 2017–18

The GRDC:

- Invested more than $192m in 742 research, development and extension projects
- Supported the global 10+ Wheat Genomes Project, which delivered the world's first complete genome sequence for bread wheat
- Supported research on biological controls for snails, such as a parasitoid fly
- Invested in building new quarantine-compliant infrastructure at the Australian Grains Genebank to expand research capability for pulses
- Announced major five-year investments in projects to better understand soil nutrients in Western Australia and make mouse control more effective
- Invested in building skills and capacity in the Southern Region to assist grain growers to incorporate more pulses into their farming systems to increase profitability
- Released the Research, Development and Extension Plan 2018–23 following extensive industry-wide consultation

87%
of growers have undertaken at least one learning activity in the past year

97%
of growers undertake activities to improve the condition and productive capacity of their soils

Of growers that are aware of integrated weed, pest and disease management practices, an increased proportion are using those practices

82% 69% 72%

INCOME

- **$117.3m** Grain grower levy
- **$71.3m** Australian Government
- **$25.2m** Interest, royalties and other

EXPENSES

- **$192.1m** Research and development
- **$14.5m** Suppliers and other
- **$13.2m** Employee benefits

CROP LEVIES

- **$56.3m** Wheat
- **$27.1m** Coarse grains
- **$16.5m** Grain legumes
- **$17.4m** Oilseeds

RD&E investments

- **$9.4m** Meeting market requirements
- **$40.9m** Improving crop yield
- **$51.9m** Protecting your crop
- **$37.3m** Advancing profitable farming systems
- **$15.4m** Improving your farm resource base
- **$7.0m** Building skills and capacity
- **$24.5m** Foundational activities
- **$5.7m** R&D management

Table 1: Five years at a glance

	2017–18		2016–17	2015–16[a]	2014–15	2013–14
GRDC						
Revenue	$213.8m	▼	$242.4m	$200.9m	$203.1m	$209.1m
Expenditure	$219.8m	▼	$227.7m	$215.0m	$216.0m	$184.4m
Operating result	–$6.0m	▼	$14.8m	–$14.1m	–$12.8m	$24.7m
Total assets	$268.2m	▼	$307.2m	$271.9m	$278.4m	$267.7m
Total equity	$199.4m	▼	$205.8m	$187.5m	$191.3m	$203.8m
Industry contributions	$117.3m	▼	$139.4m	$110.4m	$117.5m	$120.2m
Commonwealth contributions	$71.3m	▼	$73.3m	$70.2m	$68.0m	$68.6m
R&D expenditure	$192.1m	▼	$198.1m	$192.8m	$194.1m	$165.4m
Employee benefits	$13.2m	▲	$10.9m	$10.5m	$10.7m	$9.6m
Suppliers	$10.5m	▼	$11.6m	$9.4m	$9.4m	$8.7m
Number of projects[b]	742	▲	700	898	942	939
Grains industry						
Estimated number of grain farms[c]	23,000	▲	22,156	24,000	25,350	19,101
Estimated gross value of production	$14.2b[d]	▼	$17.0b	$13.9b	$13.1b	$15.4b
Total grain production—summer and winter crops ('000 tonnes)	38,831[e]	▼	63,404	42,279	40,700	46,361

a Some 2015–16 figures were updated in 2016–17 as a result of a prior period correction.

b Projects that received funding during the financial year, including R&D investments, research support and foundational projects.

c Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) preliminary estimates. The methods used by ABARES to calculate numbers of grain farms have varied since 2013–14, but the results are broadly comparable.

d Gross value of production for grains determination issued by the Minister for Agriculture and Water Resources on 25 June 2018.

e Latest ABARES estimates for total summer and winter crop production, excluding cotton seed and rice—from the June 2018 *Australian Crop Report*.

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1 Overview

Report from the Chair and the Managing Director

In 2017–18, the GRDC continued to realign itself to deliver transformational impact on grain grower profitability. We implemented new systems to provide a robust and transparent investment process and completed the establishment of our regional offices. We recruited selectively and now have almost 50 percent of our staff based outside of Canberra in regional offices.

Our new leadership team worked closely with our new Board to develop and launch the GRDC Research, Development and Extension Plan 2018–23, which will drive our investment strategy over the next five years. The strategy focuses on delivering transformational impact on grain grower profitability through leveraging the maximum possible gains in yield, maintaining and/or improving prices, reducing both on-farm and post-farm-gate costs, and assisting grain growers to manage risk.

Throughout these changes we have listened, consulted and communicated our intent. We are now much better placed to meet the challenges of the next five to 10 years, and to deliver enduring profitability to Australian grain growers.

Board changes

The GRDC welcomed a new Board in 2017–18. Returning directors Helen Garnett and Roseanne Healy have been joined by first-time directors Dianne Angus, Chris Blanchard, Richard Heath and Stephen Powles.

We would like to take this opportunity to thank the outgoing directors, Andrew Barr, Jeremy Burdon, Kim Halbert and David Shannon, for their commitment to the Australian grains industry. They contributed enormous amounts of expertise, experience and passion to shape the future of the grains RD&E portfolio and the GRDC itself.

Financial performance

The GRDC continues to maintain a strong financial position, despite a slightly lower than average income in 2017–18 of $213.8 million.

The lower revenue was partly due to below-average winter rainfall in northern New South Wales, southern Queensland, many parts of South Australia and the northern grains region of Western Australia. Wheat prices remained relatively low because of large global wheat stocks. Chickpea and lentil prices fell, following the Indian Government's introduction of import tariffs on pulses in December 2017.

Despite lower revenue, we maintained our level of investment in RD&E. More than $192 million was invested across a portfolio of 742 projects aimed at delivering incremental and transformational outcomes to Australian grain growers.

RD&E investments

Our investment strategy is focused on delivering against our purpose—creating enduring profitability for Australian grain growers—while adopting flexibility in the scope and management of investments to meet unforeseen challenges and capture new opportunities as they arise.

In 2017–18, one of our long-term, transformational investments delivered results. The 10+ Wheat Genomes Project has sequenced the wheat genome—a monumental task, given that the wheat genome is five times larger than the human genome.

Over the past decade, the wheat reference genome sequence was constructed by an international consortium of more than 200 scientists from 73 research institutions in 20 countries. The reference genome sequence is an important resource for the development of breeding and pre-breeding genotyping tools and the identification of genes controlling traits of relevance to Australian crop production systems.

Through GRDC co-investment with Murdoch University and Agriculture Victoria, Australian researchers contributed to the development of the reference genome sequence by providing the sequence of wheat chromosome 7A, one of the 21 chromosomes of the genome of the bread wheat variety Chinese Spring.

Chromosome 7A was chosen as it carries genes which affect yield and flour quality attributes in wheat grown in Australia.

In generating the 7A chromosome sequence, Australian researchers developed innovative approaches to mapping wheat genes. Those approaches are now being deployed by GRDC-supported wheat researchers to identify the chromosomal location of wheat genes of interest to Australian breeders and pre-breeders and thereby facilitate more effective selection for those genes by breeders.

Other notable investments in 2017–18 included supporting two biological control options for snails and slugs. These invertebrate pests can cause damage to growing crops and have a significant negative impact on the quality of our exported grain.

The first of the biological control measures under investigation is a microscopic organism, a ciliate protozoa, that infects and degrades snail and slug tissue. This work is in the early phase of development and several factors, including regulatory requirements, will need to be addressed before an effective control product can be released.

The second biological control measure is a new strain of *Sarcophaga villeneuveana*, a fly that is a natural parasite of conical snails. This project is entering its second phase, focusing on delivering the biological control agent to Australian grain growers.

Other important research into pest management includes the development of endophytes for major crops. Endophyte technology has proven to be successful in pasture grasses, where a symbiotic relationship between the plant and a bacterium or fungus results in improved tolerance to attack by insect pests and some abiotic stresses. This is a novel approach that could reduce insecticide use and the development of insecticide resistance.

In response to the increased prevalence of mice in grain-growing areas, in March 2018 the GRDC announced a range of investments totalling $4.1 million into mouse control RD&E initiatives. Three of the key investments will be led by CSIRO. The first investment (more than $3.2 million) focuses on understanding mouse ecology, biology and management; the second on increasing surveillance; and the third on mouse feeding preferences. Our other investments in mouse control support research into the efficacy of mouse baiting, and the monitoring and surveillance of mouse populations to develop a national, real-time early warning system for potential plagues.

We have listened to grassroots grower feedback in Western Australia and initiated a suite of investments aimed at better understanding soil nutrient supply. Investments are targeted at achieving more efficient fertiliser use to meet crop requirements, understanding the distribution of nutrients when soils are renovated, and developing new in-the-field soil-sampling methods. Together with our research partners —the Western Australian Department of Primary Industries and Regional Development, the University of Western Australia, CSIRO, Murdoch University, CSPB, Summit Fertilizers and the University of Adelaide—we will invest the equivalent of $14.6 million over the next five years to improve knowledge about Western Australia's soils and crop nutrition requirements, to create enduring profitability for growers.

We have continued to support RD&E into soil amelioration methods to reduce the impacts of soil constraints—such as non-wetting soils, hardpans, acid subsoils and waterlogging—on crop productivity in the Western Region. Adoption of soil amelioration methods is increasing across the region as more growers recognise their long-term benefits.

Our commitment to farming systems and agronomy RD&E has included investments in building skills and capacity in the Southern Region to assist grain growers to incorporate more pulses into their farming systems to increase profitability.

The GRDC is working collaboratively with the Victorian Government to expand the grains industry's capacity to effectively, efficiently and safely introduce more genetic diversity for crop improvement in Australia, particularly for pulses.

Enhanced genetic diversity is critical to delivering transformational impact on the productivity and reliability of important crops such as chickpeas and lentils, which will be an important focus over the next five years.

Other significant research partnerships include maintaining support for the Australian Cereal Rust Control Program, a program that contributes to the genetic protection of Australian cereal crops against continually evolving rust diseases.

In 2017–18, the GRDC ran a pilot innovation investment model to test a different approach to attracting novel solutions to grains industry issues. We made a call for research partners who could assist the GRDC to accelerate the development of innovative new grains production technologies and the innovative use of existing technologies for broadacre grains.

Through the Innovation Fund, the GRDC awarded more than $4 million to organisations across Australia to underpin a suite of new projects aimed at delivering innovative technologies to help improve the profitability of the nation's grain growers, tackling constraints such as frost, weeds and hostile soils. The 10 successful projects, which will range in duration from one year to two years, are designed to accelerate the delivery of commercialised outcomes to Australian growers.

The year ahead

While the Australian grains industry is in a strong position overall, there is no doubt that 2018–19 will present significant challenges to grower profitability, as severe drought continues to affect many grain-growing areas. The GRDC will continue to invest in projects to assist growers to manage the risk of drought through improved water-use efficiency, crop varieties with improved drought tolerance, and methods of overcoming constraints to the capture and recovery of moisture from soil.

This year we will start delivering on the 30 key investment targets of our new five-year RD&E plan. Some of the high-priority targets look at new ways to reduce the impacts of severe cold (spring radiation frost) and heat (heat shock during grain fill) on grain yield and stability.

We will also focus on improving the productivity and reliability of production of high-value pulse crops such as chickpeas and lentils. This will include improving growers' access to profitable, high-value crops in farming systems, including those in Western Australia, and placing greater emphasis on overcoming soil constraints.

We will also pursue opportunities to capture more value for growers through further differentiation of Australia's current bulk commodity crops and the creation of new grain varieties with novel attributes to fill market niches.

Thanks

For their strong commitment to the restructure and realignment of the GRDC, and their perseverance and belief in our purpose, we thank the members of the GRDC Board, past and present; members of the GRDC regional panels, Regional Cropping Solutions networks and Grower Solutions Groups; industry and research partners; and last, but not least, GRDC staff.

John Woods
Chair

Steve Jefferies
Managing Director

About the GRDC

The purpose of the Grains Research and Development Corporation (GRDC) is to invest in research, development and extension (RD&E) to create enduring profitability for Australian grain growers.

The GRDC invests in RD&E projects to deliver new and improved varieties, farming practices, technologies and capability to the Australian grains industry. These investments drive the discovery, development and delivery of world-class innovation.

Structure

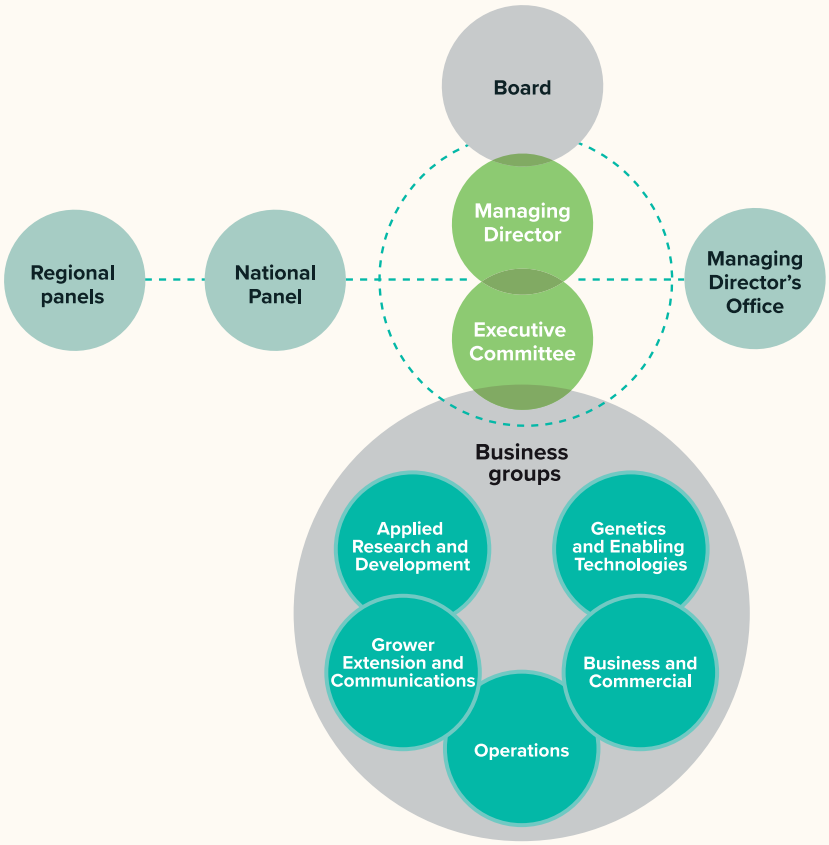
Figure 1 shows the GRDC's organisational structure at 30 June 2018.

Board and Executive Committee

The GRDC Board is responsible for the stewardship of the corporation, and oversees corporate governance within the GRDC. Its functions include setting strategic direction and monitoring the ongoing performance of the business and the Managing Director. More information on the Board is provided in Part 3 of this report.

The Executive Committee is composed of the Managing Director and the heads of the GRDC's business groups. The committee leads the GRDC's business activities, advises the Board and implements the Board's decisions. It meets regularly to ensure that the GRDC's operations are monitored and managed efficiently and effectively.

Figure 1: Structure at 30 June 2018



Business groups

The GRDC has six business groups with subgroups as follows:

- Managing Director's Office—Legal; Human Resources; and Industry and Government Relations
- Business and Commercial—Economics; Strategy; Commercial; and Business Development
- Genetics and Enabling Technologies—Pre-breeding; Data Analytics; National Variety Trials; and Statistics and Bioinformatics
- Applied Research and Development—Agronomy; Farming Systems; Soils; Nutrition; Crop Protection; and Regional Offices
- Grower Extension and Communications—Extension and Communications; and Corporate Affairs
- Operations—Governance and Reporting; Finance; IT; and Business Services.

Investment planning and assessment are performed by cross-functional teams involving input from relevant units across the GRDC, while individual investment contracts are negotiated and monitored by managers within relevant units.

Advisory panels

Four advisory panels provide input on priorities and proposals for RD&E investment.

The National Panel:

- assesses national RD&E priorities across the GRDC's investment portfolio and makes recommendations on investment priorities to the Managing Director
- assists the Managing Director to maintain links with grain growers, advisers and research partners.

The National Panel is informed by the knowledge and experience of three regional advisory panels—composed of grain growers, agribusiness representatives and researchers—representing each of Australia's major grain-growing regions.

More information on the advisory panels is provided on the GRDC website, at grdc.com.au/about/what-we-do/regional-panels.

Collaboration

Effective partnerships with co-investors enable the GRDC to leverage resources and research capability; share market knowledge, technologies and intellectual property; and reduce the risk associated with individual investments.

Most GRDC co-investors are also research collaborators. They include state government departments, CSIRO, universities, cooperative research centres, and private sector bodies. The GRDC also has links with agribusiness participants, which focus on identifying R&D priorities and facilitating the adoption of R&D outputs.

The GRDC co-invests with other rural R&D corporations, particularly in addressing cross-sectoral issues defined under the National Primary Industries Research, Development and Extension Framework. This includes cross-sectoral strategies on plant biosecurity, soils, climate research and water use, collaborations related to the Rural Research and Development for Profit (RRD4P) program, and other joint investments where mutual benefit is likely.

The GRDC also builds strong relationships with international partners, both to broaden the resources available to the Australian grains industry and to access international RD&E expertise and/or capacity not available in Australia.

Consultation

In developing its five-year strategy and annual operational plans, the GRDC works closely with Australian grain growers and their advisers to ensure that their identified priorities are effectively addressed through appropriate investment in RD&E.

The GRDC engages with growers through its advisory panels, the industry representative organisations, and a range of GRDC-supported channels such as Regional Cropping Solutions networks, Grower Solutions Groups, grower and adviser updates, and technical workshops.

Broader industry interests are captured through the GRDC's participation in and interaction with bodies such as:

- the Australian Grains Industry Discussion Group
- Wheat Quality Australia and the Wheat Quality Classification Council
- Barley Australia

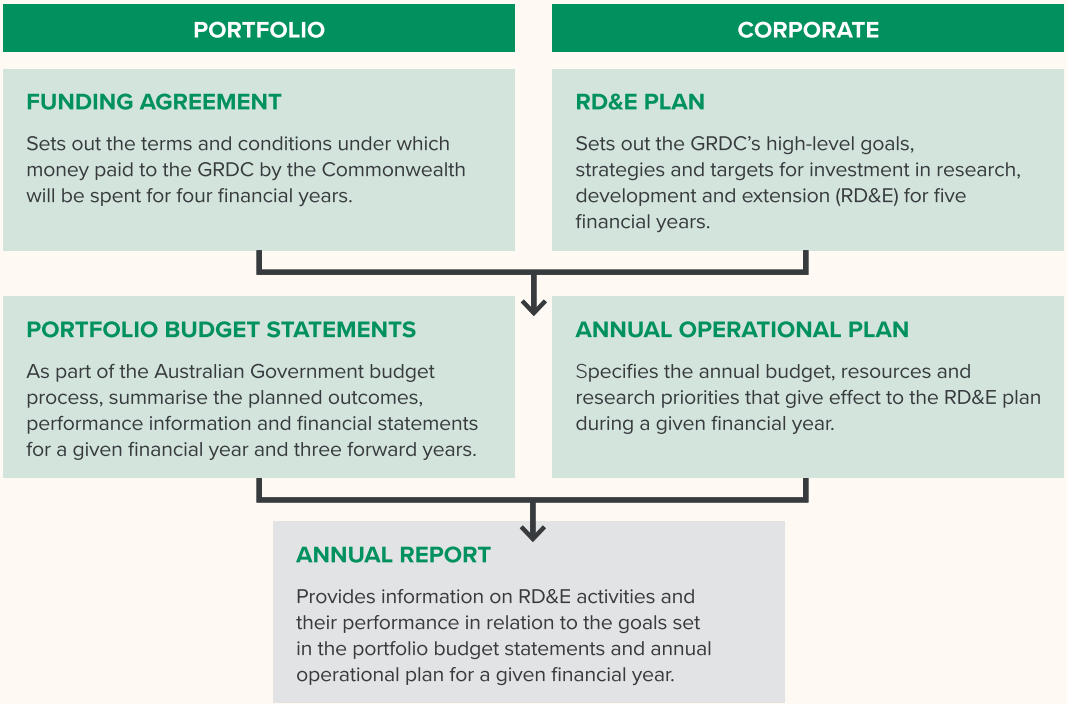
- Pulse Australia
- the Australian Oilseeds Federation
- the Grains Industry Market Access Forum
- farming systems groups
- working groups focused on specific issues (for example, glyphosate sustainability or mouse management)
- crop-breeding groups.

Planning and reporting

The GRDC is strongly committed to being accountable for its performance. More information on the GRDC's accountability to grain growers, and to the Australian Government and the broader community, is provided in Part 3 of this report.

Figure 2 outlines the core elements of the GRDC's annual cycle of planning and reporting against planned objectives and statutory requirements. The documents are available for download from the GRDC's website.

Figure 2: Planning and reporting framework



Location

Australian grains production occurs across three regions—comprising 13 different agroecological zones—with distinct climate, cropping and market characteristics, as described in Figure 3.

The GRDC manages RD&E investments and delivers services to meet the needs of each region, and the industry as a whole, through a network of four offices: a national office in Canberra and regional offices in Adelaide, Perth and Toowoomba (Queensland).

This network enhances the GRDC's ability to deliver tailored benefits to growers in regional locations. Regional staff have a particular focus on short-term and medium-term projects that address priority issues relating to farming systems, agronomy, soils, weeds, pests and diseases.

Contact details are listed inside the back cover of this report.

Figure 3: Grain-growing regions

NORTHERN REGION	SOUTHERN REGION	WESTERN REGION
Soil fertility is generally high, although there is increasing evidence that this has been run down over time. The region has relatively high seasonal rainfall and production variability compared with the other two regions. Yield depends, to a significant degree, on conservation of soil moisture from summer rainfall. The region has the highest diversity of crop production, including maize, sorghum and tropical pulses as well as wheat, barley, winter-growing pulses and oilseeds. It is the largest source of Australia's premium hard high-protein wheat. Demand for feed grains from the region's livestock industries is a key driver of production. Key characteristics: • high proportion of vertosol clay soils • tropical, sub-tropical and temperate environments • summer dominant cropping in Queensland, winter dominant cropping in New South Wales • high proportion of mixed farming, including sugarcane, cotton and pastures • large and diverse domestic and export markets.	The region has a diverse suite of soils with generally low fertility and many subsoil constraints, such as salinity, sodicity and toxic levels of some elements. However, some areas have very productive soils. Yield potential depends on seasonal rainfall, especially in autumn and spring, and is less dependent on stored soil moisture than in the Northern Region. Crop production systems are varied and include many mixed farming enterprises with significant livestock and cropping activities. Key characteristics: • relatively infertile soils • temperate climate • yield depends on reliable spring rainfall • smaller enterprise size and diverse production patterns and opportunities • innovative phase farming with perennials • shift toward intensive livestock production and demand for feed grains • large and diverse domestic market.	Soil fertility is generally low to very low, and yield depends on winter and spring rainfall. In many areas, low yields are compensated for by the large scale and degree of mechanisation of cropping enterprises. Long-term variability in seasonal rainfall and production is lower in the coastal areas than in the Northern and Southern regions. Wheat, barley, canola and lupins are the dominant crops. Mixed farming systems with livestock are generally less important. The region has a relatively small domestic market and exports more than 85 percent of its grain production. Key characteristics: • low soil fertility • Mediterranean climate • dependence on winter rainfall as spring rainfall is unreliable • large enterprise size • leading grain storage practices • narrow range of crop options • dominant export market, and transport advantage to South-East Asia.

Funding

The GRDC is principally funded by levies paid by grain growers and contributions paid by the Australian Government.

The levies are collected at the first point of sale and based on the net farm gate value 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, soybeans, cowpeas and lentils
- oilseeds—canola, sunflower, safflower and linseed.

The Australian Government matches the levy contributions 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.

Other sources, including interest, royalties and grants, contribute a small proportion of the GRDC's income.

2 Our performance

Performance framework

In 2017–18, the GRDC's performance was measured in terms of:

- the key performance indicators set out in the Agriculture and Water Resources Portfolio Budget Statements 2017–18 and the GRDC Annual Operational Plan 2017–18
- the planned outcomes of the six themes for RD&E investment set out in the GRDC Strategic R&D Plan 2012–17.

Figure 4 provides an overview of the relationships between the GRDC's outcomes and the priorities of the Australian Government and the grains industry, including:

- the common objectives for rural R&D corporations, as set out in the *Primary Industries Research and Development Act 1989* (PIRD Act)
- the grains sector objectives of the National Primary Industries Research, Development and Extension Framework, as set out in the *Grains Industry National Research, Development and Extension Strategy 2017*.

Figure 4: Performance framework

GOVERNMENT AND INDUSTRY OBJECTIVES	*AUSTRALIAN GOVERNMENT OBJECTIVES*			*INDUSTRY OBJECTIVES*	
	Primary Industries Research and Development Act 1989	**Science and Research Priorities**	**Rural Research, Development and Extension Priorities**	***Grains Industry National Research, Development and Extension Strategy 2017***	**Industry priorities**
	Increased 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 grain Sustainable use and management of natural resources More effective use of the resources and skills of the community in general and the scientific community in particular Development of scientific and technical capacity Development of the adoptive capacity of grain growers Improved accountability for expenditure on R&D activities	Food Soil and water Transport Cybersecurity Energy Resources Advanced manufacturing Environmental change Health	Advanced technology Biosecurity Soil, water and managing natural resources Adoption of R&D	Better varieties—to lift productivity and value Improved practices—to enhance productivity and sustainability Supply chain innovation and market competitiveness Building farm business and industry capability	Meeting market requirements Improving crop yield Protecting your crop Advancing profitable farming systems Improving your farm resource base Building skills and capacity

GRDC RD&E INVESTMENT THEMES	**1 Meeting market requirements**	**2 Improving crop yield**	**3 Protecting your crop**	**4 Advancing profitable farming systems**	**5 Improving your farm resource base**	**6 Building skills and capacity**
Intermediate outcomes (5 years)	Understanding market opportunities for Australian grain Crop and variety selection aligned with market requirements Crop production aligned with market requirements Grain harvest and storage practices aligned with market requirements	Genetic yield potential and stability improvement of cereal varieties Genetic yield potential and stability improvement of pulse varieties Genetic yield potential and stability improvement of oilseed varieties	Effective, sustainable and efficient management of weeds Effective, sustainable and efficient management of vertebrate and invertebrate pests Effective, sustainable and efficient management of cereal rusts Effective, sustainable and efficient management of cereal (non-rust), pulse and oilseed fungal pathogens Effective, sustainable and efficient management of nematodes Effective, sustainable and efficient management of viruses and bacteria Biosecurity and pesticide stewardship	Knowing what is important (key business drivers) Planning strategically (building system benefits and rotations) Responding tactically (individual crop agronomy)	Understanding and adapting to climate variability Improving soil health Managing water use on dryland and irrigated grain farms Understanding and valuing biodiversity Communication of sustainable production methods	Grains industry leadership and communication Capacity building in the extension sector Capacity building in the R&D sector Capacity building for grain growers
Aspirational outcomes (10+ years)	Australian grain growers maintain and increase access to current and future grain markets by aligning on-farm production practices with quality and functionality requirements	Cereal, pulse and oilseed varieties with significant, sustained and stable improvements in water-limited yield potential over current elite varieties in key agroecological zones and across a range of seasons	Australian grain growers managing their farms to maximise profit and reduce risk by adopting effective, sustainable and efficient control of weeds, pests and diseases	Australian grain growers managing farming systems that are able to respond and adapt to changing environmental and market conditions to reduce risk and deliver an increase in profitability	Grain growers valued for adopting practices that improve regional habitat, soil, water and atmosphere resources in a changing climate	A dynamic Australian grains industry with the skills and capacity to continuously innovate

GRDC CORPORATE STRATEGIES	Create value	Coordinate nationally	Deliver regionally	Connect globally	Engage with growers and industry

GRDC PORTFOLIO OUTCOME	New information and products that enhance the productivity, competitiveness and environmental sustainability of Australian grain growers and benefit the industry and wider community, through planning, managing and implementing investments in grains research and development

GRDC VISION	A profitable and sustainable Australian grains industry, valued by the wider community

Annual performance statements

The Board, as the accountable authority of the GRDC, presents the 2017–18 annual performance statements of the GRDC, as required under paragraph 39(1)(a) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) and section 28 of the PIRD Act.

In the Board's opinion, these annual performance statements are based on properly maintained records, accurately reflect the performance of the GRDC, and are in accordance with subsection 39(2) of the PGPA Act.

Purpose

The GRDC's purpose is to invest in RD&E to create enduring profitability for Australian grain growers.

Portfolio outcome

The GRDC delivered one outcome of the Agriculture and Water Resources portfolio in 2017–18:

> *New information and products that enhance the productivity, competitiveness and environmental sustainability of Australian grain growers and benefit the industry and wider community, through planning, managing and implementing investments in grains research and development.*

Results

The results against the GRDC's performance criteria in the portfolio budget statements and annual operational plan for 2017–18 are outlined in Table 2.

Table 2: GRDC performance

KEY PERFORMANCE INDICATOR	TARGET	RESULT
Theme 1		
Australian Export Grains Innovation Centre (AEGIC) joint venture is established and operating appropriately.	Required market information available	Investment in AEGIC was extended to 2020 following improved performance and interaction with the entire supply chain. Market information delivered included: • analyses of specifications for milling and noodle wheats in Vietnam and Thailand and malt barley in Vietnam and China • a review of oilseed markets in Japan and China to determine the impact of food and biofuel use on demand for canola and soybeans • a study of sorghum markets in China which found that the speciality baijiu market was expanding, along with demand for fish and poultry feeds.
Growers are interested in the benefits of measuring grain quality to meet customer requirements.	90%	The 2017 Grower Survey shows that 77% of growers are aware of and interested in the benefits of measuring grain quality.
Growers storing grain on farm use sealed silos to meet market requirements and provide for the continued effectiveness of pest control measures.	70%	The 2018 Grower Survey shows that 72% of growers store grain on farm in sealed silos that comply with the Australian Standard.

Table 2: GRDC performance (cont.)

KEY PERFORMANCE INDICATOR	TARGET	RESULT
Theme 2		
New cereal, pulse and oilseed varieties have minimum increases in genetic yield potential per annum as measured in National Variety Trials (NVT).	Cereals 1% Pulses 2% Oilseeds 1.5%	The yield advance of new main season wheat varieties compared to benchmark varieties has been 1.05% per year, averaged over seven years. Chickpea breeding was focused on resistance to disease; however, NVT uses stringent disease control. PBA Seamer (2016) is much higher yielding than PBA HatTrick (2009) in the presence of disease. Canola HyTTec Trophy® (2017) delivers a consistent 13% to 19% yield advantage over benchmark release Hyola® 559TTm (2012). This equates to a 2.6% to 3.8% yield gain per year.
New varieties currently available meet the expectations of growers.	60%	The 2018 Grower Survey shows that 76% of growers agree that new varieties meet their expectations.
Growers and advisers use NVT data in selection of varieties to plant.	40% access data, of which 90% consider helpful	The 2018 Grower Survey shows that 42% of growers use NVT data or visit NVT field days and, of those, 91% find that NVT information assists their decisions on varieties to plant.
Theme 3		
Growers and advisers are aware of and use integrated weed, pest or disease management practices.	70% are aware, 50% use	The 2018 Grower Survey shows that: • 82% of growers are aware of integrated weed management and of those 82% practise it • 83% of growers are aware of integrated pest management and of those 69% practise it • 71% of growers are aware of integrated disease management and of those 72% practise it.
Growers undertake on-farm practices to maintain or improve their biosecurity.	50%	The 2018 Grower Survey shows that 86% of growers undertake on-farm practices to maintain or improve biosecurity.
Theme 4		
Growers place a high importance on the use of decision tools to assist them with strategic or tactical decision making.	70%	The 2018 Grower Survey shows that 77% of growers place a high importance on using decision support tools.
Growers have a whole-farm business plan which takes account of strategic opportunities, constraints and risks.	25%	A survey conducted in 2017 shows that 29% of growers have a whole-farm business strategic plan.

Table 2: GRDC performance (cont.)

KEY PERFORMANCE INDICATOR	TARGET	RESULT
Theme 5		
Growers consider the potential effects of climate change on their farm business when making long-term decisions.	60%	The 2018 Grower Survey shows that 59% of growers have adopted new management practices to manage climate variability or climate change.
Growers undertake activities to improve the condition and productive capacity of their soils.	70%	The 2018 Grower Survey shows that 97% of growers undertake activities to improve the condition and productive capacity of their soils.
Growers use nutrient budgeting to better match application with anticipated crop needs.	65%	The 2018 Grower Survey shows that 74% of growers use nutrient budgeting.
Theme 6		
Each year Nuffield scholars include people from the grains industry.	At least three	The GRDC supported three Nuffield scholars in 2017–18.
Growers and advisers undertake at least one activity each year to learn more about opportunities to improve farm profit or sustainability.	75%	The 2018 Grower Survey shows that 87% of growers have undertaken at least one learning activity in the past year.

Note: Key performance indicators and targets are defined in the Agriculture and Water Resources Portfolio Budget Statements 2017–18, pages 157–159, and the GRDC Annual Operational Plan 2017–18, pages 9–10.
Survey results are derived from the most recent survey in which the target was measured.

Analysis

Feedback on the GRDC's performance is measured through the GRDC Grower Survey, which has been conducted regularly since 1993. In recent years the survey has collected data on key performance indicators as well as the GRDC's success in achieving goals set out in its five-year strategic R&D plan.

In total, 1,200 grain growers are interviewed for the survey, representing all of the agroecological zones in Australia's grain-growing regions. A quota is set on the number of interviews to be conducted in each zone, and final data is weighted to represent the true geographical spread of grain growers.

The GRDC's overall performance as an investor in research was rated highly by 80 percent of growers surveyed in 2018. The proportion of growers surveyed that feel they have directly benefited from grains industry RD&E is 76 percent.

The GRDC achieved most of its key performance indicator targets for 2017–18, with one target not achieved and one target partially achieved.

The result for the second Theme 1 key performance indicator was 77 percent of growers aware of and interested in the benefits of measuring grain quality, against a target of 90 percent. While grain quality is currently measured on less than half of the farms surveyed, survey results suggest that a large proportion of the growers who are not currently measuring grain quality will be interested in doing so in future.

The target for growers considering the potential effects of climate change on their farm business, a Theme 5 performance indicator, is 60 percent. The result in the 2018 Grower Survey was 59 percent. Although slightly below the target, this represents a significant improvement over the five years since the measure was introduced, compared to the result of 52 percent in the 2012 Grower Survey.

Several results exceeded targets in 2017–18. Notably, there has been a significant increase in the proportion of growers reporting the use of integrated management practices for weeds, pests and diseases. Awareness of these practices has been consistently high over recent years.

The proportion of growers undertaking on-farm practices to maintain or improve biosecurity also remains high, at 86 percent of growers surveyed.

The survey results suggest that the GRDC's investments in RD&E in these areas are having an impact. Growers are very aware of the costs and increasingly aware of the environmental impacts of applying chemical products to control weeds, pests and diseases.

The GRDC's total RD&E investment in 2017–18 was $192.1 million, across 742 projects.

Those projects included research to uncover new information on resistance, natural management strategies and biological control mechanisms for weeds, pests and diseases, such as projects to identify the genetic material and knowledge required to breed wheat, barley and oats with rust resistance.

Other examples in 2017–18 included investments in the development of biological controls for slugs and snails; a resistance management strategy for *Helicoverpa armigera* in pulses; and decision support apps, insect traps and other tools to improve the accuracy of—and reduce the time spent on—pest and disease diagnosis and control across Western Australia. The GRDC also funded workshops on practical pest management strategies for Victorian grain growers.

The GRDC invests in a range of projects to provide growers with information on ways in which whole-of-farm or farming systems can improve profitability—examples in 2017–18 included investing in a three-year project to identify key input products that are delivered by liquid systems and to evaluate the performance of those products.

The GRDC's investments in helping growers understand and respond to market requirements include projects to:

- develop varieties to capitalise on new market opportunities, such as canola oil for use in aquaculture and ultra-low gluten barley for malting
- develop laboratory tools and techniques to more effectively measure and screen for physical and functional attributes of grain that affect marketability
- understand and address genetic grain defects such as late maturity alpha-amylase in wheat and seed coat defects in pulses.

The GRDC's continuing long-term and transformational investments in genetics R&D include work on:

- water productivity traits introgressed into regionally adapted cultivars and validated in multi-environment trials
- genes controlling phenology that can be applied in wheat breeding
- a method of screening germplasm for resistance to Russian wheat aphid
- germplasm with enhanced resistance to root-lesion nematodes
- the identification of genetic variation for drought, heat and frost tolerance in chickpeas, and heat tolerance in lentils.

Theme 1—Meeting market requirements

This theme described the framework for the GRDC's investments in grain quality and functionality to help growers maintain and expand access to markets.

Australia's domestic and international customers seek a consistent supply of grain that is both:

- a quality product that is compliant with statutory and customer-specific requirements
- a functional product that performs reliably for the desired end use.

Aspirational outcome

Australian grain growers maintain and increase access to current and future grain markets by aligning on-farm production practices with quality and functionality requirements

RD&E	PROJECTS	INVESTMENT
New	3	$3.7m
Ongoing	36	$5.7m
Total	**39**	**$9.4m**

To deliver the highest value to growers, the GRDC must understand the requirements and the dynamics of current domestic and export markets for feed and food grains, and those of likely future markets.

Through the 'Meeting market requirements' theme, the GRDC interacted closely with participants in the Australian grains value chain to better understand market requirements, particularly for quality and functionality, to enable growers to maintain or increase access to current markets and secure access to new higher valued markets.

The GRDC's RD&E investments under this theme supported:

- gathering of market intelligence on key export markets
- development of laboratory tools and techniques to more effectively measure and screen for physical and functional attributes of grain that affect marketability
- projects to understand and address genetic grain defects such as late maturity alpha-amylase in wheat and seed coat defects in pulses
- independent wheat variety classification for Australian growers
- a pilot malting program to support improved malt barley accreditation processes
- strategic oversight and coordination of grain protection chemicals
- delivery of information and tools for growers and advisers, including
  - workshops to help growers monitor movements in markets and demand
  - agronomy and farm systems management, to help growers avoid grain defects; manage pests, weeds and diseases; and comply with minimum residue levels for chemicals
  - grain specification and defect charts for 12 export crops
  - advice on new techniques for on-farm grain storage, including the detection and treatment of stored-grain pests
- operations of
  - the Australian Export Grains Innovation Centre (AEGIC), which works on grain quality and market access issues in collaboration with growers, pre-breeders, breeders, value chain participants and Austrade
  - the Feed Grain Partnership, which integrates R&D initiatives between industries in the livestock feed supply chain
  - the industry-led Grains Industry Market Access Forum, which works to overcome trade barriers.

In 2017–18, representatives of the Grains Industry Market Access Forum and Pulse Australia travelled to India to gain understanding of the reasons for a large increase in India's import tariffs during the year.

Investments delivered through AEGIC included:

- reasearch into the preferences of grain buyers and millers in several of Australia's major markets, including an analysis of specifications for milling and noodle wheats in Vietnam and Thailand
- an examination of the potential for new oat products in Asian markets
- a review of oilseed markets in Japan and China, to determine the impact of food and biofuel use on demand for canola and soybeans
- a detailed study of the sorghum markets in China, which found that the speciality baijiu market was expanding along with demand for fish and poultry feeds
- an analysis of pulse markets in India, Pakistan and Bangladesh—markets where Australian grain is often blended with local grain, making it difficult to know how Australia's product compares with those of its international competitors.

Theme 2—Improving crop yield

This theme described the genetic approaches and associated tools and technologies that can be applied to produce varieties with increased water-limited yield potential (WLYP).

The WLYP of a variety is the maximum yield attainable when the variety is grown under average, rain-fed conditions without the limiting impacts of nutrient deficiency, soil toxicity, weed competition, insect damage and disease.

Although the actual yield that is captured on farm depends on a grower's ability to manage the biotic and abiotic factors that contribute to yield losses (and the cost limitations of management practices), WLYP is genetically determined.

Aspirational outcome

Cereal, pulse and oilseed varieties with significant, sustained and stable improvements in water-limited yield potential over current elite varieties in key agroecological zones and across a range of seasons

RD&E	PROJECTS	INVESTMENT
New	19	$9.5m
Ongoing	96	$31.4m
Total	**115**	**$40.9m**

Plant breeders aim to continually improve the WLYP of crops through new varieties. However, for many crops, continued improvements in genetic yield potential and stability are becoming harder to realise.

The 'Improving crop yield' theme focused on the delivery of new crop varieties with demonstrable improvements in genetic yield potential and yield stability. Given the wide range of farming environments and crop choice, targets were crop specific and region specific.

The GRDC's RD&E investments under this theme supported:

- research to understand the genetic bases for
  - water-use and nutrient-use efficiency
  - tolerance of soil constraints, high or low rainfall, and extreme temperatures
  - resistance to pests and diseases
  - crop characteristics affecting productivity, such as flowering time
  - grain characteristics affecting marketability
- delivery of crop varieties with WLYP improvements of no less than 1 percent for cereals, 1.5 percent for oilseeds and 2 percent for pulses—and significantly higher improvements in many cases
- development of innovative technologies and faster, more efficient techniques to facilitate variety improvement by Australian pre-breeding and breeding programs
- publication of regional crop variety guides, with details of the agronomic performance characteristics of current varieties of the 10 main commercial crops
- global research collaborations on variety improvement, such as the CIMMYT–Australia–ICARDA Germplasm Evaluation (CAIGE) program
- importation of selected germplasm—including hundreds of wheat lines from more than 40 countries—to be screened and evaluated for use in Australian conditions
- operations of
  - the Australian Pastures Genebank, which holds more than 70,000 genetic resources related to tropical and temperate pasture and forage plants
  - the Australian Grains Genebank, which stores genetic material for plant breeding and research, including 150,000 different types of seeds
  - Statistics for the Australian Grains Industry, which provides an extensive evidence base for industry-wide research projects
- production of tools to help growers manage their paddocks to optimise yield, including apps for in-paddock use.

In 2017–18, the GRDC and the Victorian Department of Economic Development, Jobs, Transport and Resources (DEDJTR) embarked on a strategic infrastructure co-investment in the Australian Grains Genebank, to construct a post-entry quarantine compliant glasshouse and headhouse. The infrastructure enhancement will provide additional capacity to quarantine approximately 650 accessions annually and increase Australia's capability to quarantine samples of temperate pulse crops.

Theme 3—Protecting your crop

This theme aimed to develop cost-effective control options to prevent pests, weeds and diseases from causing crop yield and quality losses, and to increase growers' profit.

Existing control measures for pests, weeds and diseases require ongoing review in the light of:

- potential and actual incursions of exotic pests
- changes in regulation of pesticide use and access
- the need to
  - reduce the cost and increase the speed of delivery of resistant and tolerant varieties
  - manage herbicide and pesticide resistance
  - provide ongoing stewardship of gene technology and pesticide products to support long-term access.

The 'Protecting your crop' theme developed the cultural, chemical and genetic options available to manage key pests, weeds and diseases in each region. Management options need to take into account cost-effectiveness, resilience of control strategies and flexibility to fit different farming systems.

Aspirational outcome

Australian grain growers managing their farms to maximise profit and reduce risk by adopting effective, sustainable and efficient control of weeds, pests and diseases

RD&E	PROJECTS	INVESTMENT
New	33	$5.5m
Ongoing	93	$46.4m
Total	**126**	**$51.9m**

The GRDC's RD&E investments under this theme supported:

- development of
  - innovative approaches to delay or manage herbicide resistance in weed populations
  - improved techniques and new tools for harvest weed seed management
- studies of the distribution, life cycles and impacts of crop pests, and analysis of the effectiveness of crop management and chemical options for their control
- identification of cropping practices and genetic sources of tolerance to reduce the economic impact of root-lesion nematodes
- research to
  - measure and manage the emergence of fungicide resistance
  - develop effective strategies to protect against economically significant diseases, such as rusts and crown rot in cereals and blackleg in canola
- an international collaboration to develop wheats with resistance to the Ug99 variants of stem rust, which pose a global threat to production
- delivery of information for growers and advisers on integrated management systems for endemic weeds, pests and diseases, and surveillance and biosecurity options to prepare for possible incursions by exotics
- release of guides and apps for identifying, monitoring and managing crop threats
- ongoing monitoring of the presence of weeds, pests and diseases in each region
- coordinated responses to an outbreak of beet western yellows virus in canola and the first incursion of Russian wheat aphid into Australia, including prompt delivery of advice for growers and follow-up research
- updates to the Grains Industry Biosecurity Plan and related contingency plans
- processes to secure regulatory approvals for minor use chemicals and label extensions for registered chemicals.

In 2017–18, the GRDC invested in R&D to enhance biological control options for slugs and snails, focusing on:

- the development of a biological organism that infects and degrades snail and slug tissue
- the release of a new strain of the conical snail parasite *Sarcophaga villeneuveana* that is better adapted to Australian conical snail genotypes.

Theme 4—Advancing profitable farming systems

This theme aimed to provide growers and their advisers with the tools to design and manage a farming system with the flexibility to adapt and respond; manage risk; and generate profit.

The 'Advancing profitable farming systems' theme:

- ensured that research results from the other themes were integrated on farm
- undertook production agronomy research for systems development
- provided an important conduit for identifying on-farm production constraints and opportunities to inform activities in other themes.

Aspirational outcome

Australian grain growers managing farming systems that are able to respond and adapt to changing environmental and market conditions to reduce risk and deliver an increase in profitability

RD&E	PROJECTS	INVESTMENT
New	30	$9.8m
Ongoing	81	$27.5m
Total	**111**	**$37.3m**

The investment strategies for this theme differed across agroecological zones and farming systems, and were a combination of:

- applied farming systems research to overcome major, widespread regional constraints
- short-term development and extension activities to improve technologies or practices for a target group of growers in an agroecological zone.

The GRDC's RD&E investments under this theme supported:

- research to equip growers to improve profits, manage constraints and reduce risks through crop management options such as
  - crop rotation, crop sequencing and break crops
  - sowing time and variety selection
  - conservation farming practices
  - nutrient budgeting and variable rate technology
  - soil amelioration and remediation
  - mapping of stored soil water and plant available water capacity
  - canopy management
  - integration of cropping and livestock
- analysis of the yield benefits of crop management practices under certain conditions, such as high rainfall or drought, frost or extreme heat, and soil constraints
- work to improve the cost-effectiveness of fertiliser inputs, including studies of
  - application techniques, such as deep placement and band spacing
  - application rates and combinations of key nutrients
  - the performance of commercial products, formulations and tools
  - fertiliser responses in high-rainfall areas
- development of benchmarks and tools to help growers quantify the production and profit impacts of their whole-farm and farming system management decisions
- creation of the Yield Gap Australia website and other tools to help growers estimate the potential yields of crops and varieties in their own farming systems
- a suite of projects to help growers close the significant gap between potential and actual yields in the Northern Region
- Regional Cropping Solutions networks, linking growers, farming systems groups, agribusinesses and researchers, in the Southern and Western regions.

In 2017–18, the GRDC supported projects to:

- enhance spatial temperature mapping and modelling to assist growers and advisers to manage heat stress at the farm scale
- improve knowledge of the relationships between crop sequences and cropping frequency and water infiltration and soil moisture, in low-rainfall zones
- examine whether the stratification of key nutrients—nitrogen, phosphorus, potassium and sulphur—is consistent enough to inform techniques for managing nutrients in particular soil types and profiles.

Theme 5—Improving your farm resource base

This theme focused on protecting and enhancing the farm's soil, water, habitat and atmospheric resources to maintain production performance under a variable climate and demonstrate to consumers and the wider community the sustainable nature of Australian grains production.

Aspirational outcome

Grain growers valued for adopting practices that improve regional habitat, soil, water and atmosphere resources in a changing climate

RD&E	PROJECTS	INVESTMENT
New	33	$4.6m
Ongoing	34	$10.8m
Total	**67**	**$15.4m**

Australian grain growers operate in a variable climate and will be significantly affected by climate change. In addition, growers will need to react to Australian Government and international policies, programs and market expectations set in response to climate change—for example, in relation to greenhouse gas emissions.

These impacts need to be understood so that the industry can minimise risk and maximise opportunities. The issues of climate variability and change need to be factored into both seasonal and longer-term farm business decisions.

Within the context of a changing climate, soils, water, habitat and atmospheric resources need to be improved across the environment in which the industry operates. Soil carbon is declining in many grains catchments, as is soil pH. Although water consumption by agriculture is being reduced and becoming more efficient, water quality in some key catchments requires further management. Native vegetation communities have become highly fragmented, affecting both biodiversity balance and the potential for exploitation as habitat for beneficial organisms.

In addition, as consumers are becoming more interested in how the food they buy is produced, the grains industry needs to be able to communicate its commitment to good stewardship. The 'Improving your farm resource base' theme assisted growers, across the industry and as individual producers, to demonstrate that they are using chemicals and fertiliser wisely and caring for the land.

The GRDC's RD&E investments under this theme supported:

- research into overcoming multiple soil constraints in the Western Region by amelioration through strategic soil inversion and/or incorporation of clay and lime to provide long-term increases in soil fertility
- field trials to demonstrate how growers can maximise the deep banding of phosphorus and potassium to maximise nutrient uptake and increase yields
- a nationally coordinated response to soil acidity, including field trials to identify barriers to the use of lime, the development of a website and decision support tools, and training, extension and communications activities
- research into the effects of the application of herbicides to biological activity within soils across Australia, as part of a joint investment with the New South Wales Department of Primary Industries, that will inform the development of an in-paddock tool to assess the persistence of different herbicides in individual soil types.

A joint investment by the GRDC and the Victorian DEDJTR in a long-term study of the effects of rising carbon dioxide levels on grain production in semi-arid environments delivered its findings in 2017–18. Field trials conducted over 11 seasons (from 2007 to 2017) found that wheat yields increased by an average of 25 percent with a simulated atmospheric carbon dioxide level of 550 parts per million. Carbon dioxide levels are currently about 400 parts per million and are expected to rise to 550 parts per million by 2050.

Theme 6—Building skills and capacity

This theme focused on generating leadership, innovation and education in the grains sector.

To compete and succeed internationally, the Australian grains industry needs a highly skilled and motivated workforce, including growers, advisers, researchers and managers.

The industry has identified several critical challenges:

- the grains industry and farming are becoming increasingly complex, with many types and sources of information that growers need to make decisions
- the number of appropriately skilled researchers and advisers being trained to replace the current generation is inadequate—this is compounded by a large number of experienced people reaching retirement age
- agricultural careers are not traditionally attractive to potential candidates
- the grains industry lacks a whole-of-industry approach to building skills and capacity
- growers are time poor and face succession-planning changes
- the uptake of technology often requires substantial technical support.

Through the 'Building skills and capacity' theme, the GRDC identified opportunities to focus its investment to address those challenges.

Aspirational outcome

A dynamic Australian grains industry with the skills and capacity to continuously innovate

RD&E	PROJECTS	INVESTMENT
New	51	$2.6m
Ongoing	80	$4.4m
Total	**131**	**$7.0m**

The GRDC's RD&E investments under this theme supported:

- delivery of outcomes of GRDC-supported research to support the adoption of improved technologies and practices, through update seminars tailored for growers and advisers and presented in regional locations
- networking, personal development and research opportunities for growers, including conferences, seminars and study tours, and GRDC-sponsored Nuffield Australia Farming Scholarships
- expansion of leadership capability in the grains industry, through the Resilient Grain Leaders program, GRDC Emerging Leader Award and Australian Rural Leadership Program
- skills development opportunities for agronomists and extension personnel, such as the Extension Adoption Training and Support Program
- implementation of the Grains Industry Tertiary Education Strategy, which identifies key issues in relation to
  - increasing industry involvement in tertiary education
  - funding scholarships and bursaries to attract high-quality students and support high-value research
  - integrating tertiary education with professional development opportunities for agronomists and other industry personnel
- expansion of grains industry research capability, through
  - provision of undergraduate and postgraduate research scholarships and traineeships
  - funding to enable researchers to participate in conferences, industry events and scientific workshops, in Australia and overseas
  - support for the creation of positions for recent graduates in regional locations
- promotion of careers in the grains industry among students, through programs such as the CSIRO Plant Industry Summer Student Program and events such as the Science and Innovation Awards for Young People in Agriculture.

The GRDC's investments to build the grains industry's R&D capability in 2017–18 included:

- delivering the GRDC Emerging Leader Award, the Grower and Adviser Development Program, and R&D and farm business updates
- funding 13 undergraduate scholarships, 62 PhD scholarships and six post-doctoral fellowships
- supporting personal development opportunities for growers and researchers, including the Science and Innovation Awards for Young People in Agriculture, Nuffield Australia Farming Scholarships and the Horizon Scholarship program.

Impact assessment

The GRDC regularly assesses the impact of its investments under guidelines released by the Council of Rural Research and Development Corporations. The guidelines were updated in April 2018. The analyses are undertaken by the GRDC and external organisations.

The criteria for impact assessments include analysis of financial benefits and costs.

The results of the financial analyses of the groups of projects assessed in 2017–18 are shown in Table 3.

In line with the objects of the PIRD Act, the assessments also consider broader economic, environmental and social benefits arising from the project groups, although not all benefits are quantified for formal analysis. Those findings are summarised in Table 4.

Table 3: Financial results of impact assessments

PROJECT GROUP	PRESENT VALUE OF BENEFITS[a] ($M)	PRESENT VALUE OF INVESTMENT ($M)	NET PRESENT VALUE ($M)	BENEFIT: COST RATIO	INTERNAL RATE OF RETURN (%)
New chemistry options for wild radish control	20.9	0.9	20.0	24.0	42.5
Sorghum with more feed grain energy: bigger grain with higher starch content	4.2	0.2	4.0	21.6	10.5
Improved management of slugs and snails	32.5	1.5	31.0	22.1	72.0
Optimising nitrogen fixation of grain legumes—Southern Region	3.8	0.9	2.9	4.4	17.7
Increasing yield and reducing risk through early sowing	143.0	1.4	141.6	99.1	152.0
Cereal rust control program	141.6	19.9	121.7	7.1	63.6

a Present value of benefits = the discounted value of benefits delivered by the projects. The stream of benefits is accrued over a period of 25 years commencing from the final year of investment, using a discount rate of 5% per year.

Table 4: Economic, environmental and social benefits identified by impact assessments

ECONOMIC BENEFITS	ENVIRONMENTAL AND SOCIAL BENEFITS
New chemistry options for wild radish control	
New herbicide options for wild radish control in wheat cropping will lead to less yield loss arising from the weed.	New herbicide treatments will relieve weed control pressure and reduce the need for tillage and stubble-burning practices. More timely, cost-effective and efficient weed control will reduce time commitments of growers.
Sorghum with more feed grain energy: bigger grain with higher starch content	
The potential for future work to improve sorghum varieties has been unlocked, leading to potentially higher yielding, more profitable varieties for growers.	Potential new varieties may have higher nitrogen-use efficiency.
Improved management of slugs and snails	
Improved management of slugs and snails will increase grain value by reducing yield losses, grain contamination, cleaning costs and rejection impediments in export markets.	Increased awareness of snail and slug distribution and more effective baiting methods may reduce environmental impacts of pesticides. Improvements in integrated snail and slug control (including biological control of pointed snails) may reduce soil erosion and the frequency of snail baiting.
Optimising nitrogen fixation of grain legumes—Southern Region	
Better understanding of optimal inoculation use may lead to input savings for growers. The expansion of pulse production in some regions will lead to more nitrogen fixation in cropping systems.	Optimising nitrogen inputs from pulse crops reduces the requirement for nitrogen fertilisers, which are more readily leached and are energy-intensive to produce. Legumes are widely recognised as a means to improve soil health and fertility.
Increasing yield and reducing risk through early sowing	
The research has shown that earlier sowing can increase yield while minimising exposure to frost and heat—yields of current wheat cultivars can be increased by up to 1.5 tonnes per hectare when sown at times that lead to optimal flowering times. Wheat-breeding companies have access to germplasm to commence selection for winter genotypes to continue the trend to earlier sowing.	National wheat yields can be maintained by altering sowing times, despite reduced rainfall and more hostile spring temperatures.
Cereal rust control program	
The most recent cereal rust control program delivered germplasm from the International Maize and Wheat Improvement Center (CIMMYT), genetic testing work in Australia and overseas, and work on surveillance programs to detect new pathotypes. The research has helped to improve understanding of the sources of genetic variation in leaf, stem and stripe rusts and create a database of known pathotypes. Other outputs included reports on the prevalence of new rust types from around Australia, and the identification of genes and molecular markers for rust resistance and novel sources for resistance genes.	Minimising cereal rusts reduces crop losses from airborne diseases and improves grain quality. A reduction in the amount of fungicide applied to crops reduces the exposure of farm staff and the wider community to fungicides. The program has built a bank of knowledge and resistance genes to deal with rusts that are currently in Australia as well as pathotypes that cause significant damage to cereal crops in the Middle East.

Portfolio management

The GRDC's RD&E investment portfolio in 2017–18 included 742 projects at various stages of development.

Under the Strategic R&D Plan 2012–17, the GRDC adopted a balanced portfolio approach to RD&E investment structured around six strategic themes aligned with the GRDC's purpose and government and industry objectives.

The new five-year strategic plan for RD&E investment focuses on the four key drivers of profit—yield, price, costs and risk—and comprises a balanced mix of investments to:

- maintain grower profitability
- support incremental improvements in profitability in the short to medium term
- achieve transformational impacts for the Australian grains industry in the long term.

Balance

To ensure the ongoing profitability of growers, the GRDC will continue to invest in RD&E in areas such as biosecurity; pest and disease management; weed management; grain quality and grain classification; and market access and competitiveness.

The GRDC's support for RD&E to increase profitability will include a mix of investments targeting incremental improvements of 1 percent to 2 percent and transformational changes of 10 percent to 20 percent.

Incremental profit improvements are important in maintaining grower competitiveness in current international markets. RD&E investment to support incremental improvements generally delivers on-farm changes in the short to medium term (up to eight years), and is characterised as having relatively low technical, commercial and/or adoption risk.

Transformational change underpins the innovation required to remain competitive in the long term and potentially provides opportunities for Australian growers to establish dominant positions in some markets. RD&E to support transformational change is generally high risk and requires longer time periods for delivery.

In keeping with its focus on an investment culture, the GRDC will continue to shape the RD&E investment portfolio to balance the need for continual incremental improvements in profit with the desire for larger transformational changes.

Geography

The GRDC's focus is on maximising the impact of RD&E investment on the profitability of the growers that contribute most of the funds, rather than on the locations where the funds are invested.

While investment on a regional and local basis is a critical component of any program seeking to influence growers' attitude, motivation or ability to adopt new innovations, the location where the RD&E to support the development of innovation is performed will be determined only by the capability and capacity that are required.

Therefore, for the provision of strategic and applied research at least, the GRDC will continue to identify the most suitable providers based on merit, regardless of location. This includes investment with international entities where appropriate.

Commercialisation

In many cases, commercial channels are the most efficient means of delivering the benefits of GRDC research investments to growers. The GRDC's commercialisation strategy consists of:

- analysing returns on investments to ensure that the GRDC is investing in areas that deliver on the GRDC's objective of creating enduring profitability for Australian grain growers
- leveraging capital and expertise from co-investors, to optimise opportunities to bring innovative technology to the marketplace
- managing intellectual property, to protect the GRDC's investments and leverage joint investments
- accessing technologies owned by third parties, for evaluation and use in Australia
- identifying appropriate paths to market for each new technology
- managing the GRDC's commercial investments and partnerships.

Usually the GRDC is only one of a number of public and/or private organisations investing in the development of a new technology. Investment partnerships are desirable and necessary not only from a financial viewpoint, reducing the risk to the GRDC in the funding of new technologies, but also because partner organisations bring benefits such as research capacity, market knowledge, commercial expertise, infrastructure and access to complementary technologies. Partnerships also reduce the GRDC's exposure to risk in funding new technologies.

Where the GRDC is a member of a research collaboration using public and private sector funds, it has influence over the terms of commercialisation, and determines them with the other investors to ensure that all parties achieve their desired outcomes.

New crop varieties

In 2017–18, collaborative breeding programs that received financial support from the GRDC released new varieties of:

- durum wheat—DBA Bindaroi and DBA Vittaroi
- narrow-leafed lupin—PBA Bateman and PBA Leeman
- albus lupin—Murringo
- field pea—PBA Butler
- mungbean—Onyx-AU.

In selecting commercial partners, the GRDC and its research partners take into consideration capabilities such as the ability to produce quality seed, the ability to market seed successfully, and the targets for seed production and variety uptake. The management and collection of end point royalties, including the terms and conditions imposed on growers, are also taken into consideration.

In the case of commercially bred crops such as wheat and canola, the GRDC has no ownership in new varieties and the responsibility for commercialisation lies with the breeding companies alone. The GRDC is an investor in some of the breeding companies.

Commercial partnerships

In 2017–18, the GRDC maintained existing commercial partnerships—such as the Herbicide Innovation Partnership with the Crop Science Division of Bayer, and a collaboration to commercialise improved canola varieties with Nuseed—and developed a new innovation framework to better capture commercial opportunities.

Business relationships

Many of the GRDC's business relationships are governed by research agreements, licence agreements to commercialise resulting intellectual property, and agreements which procure services.

In some cases, the formation of companies and joint venture partnerships (for profit or not for profit) is the most effective way to deliver technologies, services, information and policy advice to Australian grain growers and the wider grains industry.

Table 5 describes the companies in which the GRDC had shares or membership at 30 June 2018. In most cases the GRDC also nominated one or more directors to the company's board.

Table 5: Companies in which the GRDC had shares or membership at 30 June 2018

NAME	ACTIVITY	GRDC ROLE
Companies limited by guarantee		
Australian Crop Accreditation System Ltd ACN 093 984 902	Provides cereal variety details online for farmers and advisers, and manages National Variety Trials.	Is a member of the company and pays the company for services. Nominates a director.
Australian Export Grains Innovation Centre Limited ACN 160 912 032	Provides R&D related to the Australian export grains industry.	Is a member of the company. Nominates a director.
Invasive Animals Ltd ACN 114 965 276	Serves as the IP holding/management company for the Invasive Animals Cooperative Research Centre.	Is a member of the company. Does not nominate a director.
PB CRC Ltd ACN 115 589 707	Serves as the IP holding/management company for the Plant Biosecurity Cooperative Research Centre.[a]	Is a member of the company. Does not nominate a director.
Wheat Quality Australia Limited ACN 147 439 656	Manages and delivers the wheat variety classification process.	Is a member of the company and pays the company for services. May nominate a director.
Companies limited by shares		
Australian Grain Technologies Pty Ltd ACN 100 269 930	Undertakes commercial wheat and barley breeding.	Is a 39% shareholder. Nominates three directors.
InterGrain Pty Ltd ACN 128 106 945	Undertakes commercial wheat and barley breeding.	Is a 38% shareholder. Nominates one director.

a The Plant Biosecurity Cooperative Research Centre ceased operating on 30 June 2018.

Intellectual property management

The GRDC usually owns a share of all intellectual property generated by research projects that it funds. This consists of registrable intellectual property (plant breeder's rights, patents and trade marks) and non-registrable intellectual property (copyright and trade secrets).

The corporation actively manages its intellectual property to:

- ensure that research outcomes are adopted as quickly and effectively as possible, by either dissemination or commercialisation
- provide access to GRDC intellectual property and gain access to third-party intellectual property where it will facilitate the delivery of research outcomes.

The GRDC seeks protection of its intellectual property where to do so will achieve the above objectives, and maintains a register of its registered intellectual property.

Plant breeder's rights

The GRDC's plant breeder's rights (PBR) portfolio consists of 139 granted certificates and 23 applications for PBR, across 20 different crop species.

In 2017–18, the GRDC and its research partners lodged 13 new PBR applications and surrendered four certificates. Most of the activity in the GRDC PBR portfolio was related to the progression to grant of applications for new varieties released by the Pulse Breeding Australia chickpea, lentil and field pea programs, the Durum Breeding Australia program and the Australian National Soybean Breeding Program.

Patents and trade marks

At 30 June 2018, the GRDC had an interest in 22 patent families, comprising over 290 patent applications over 43 jurisdictions, and held 18 trade marks either in its own right or jointly.

3 Our organisation

Board

Directors at 30 June 2018

John Woods
BAppSc, MAICD

Chair
Director (Non-executive)

Appointed: 8 March 2012 to 30 September 2019

Appointed as Chair: 1 October 2016

Member: Remuneration, People and Performance Committee

John is a partner in and manager of a broadacre agribusiness based in northern New South Wales and southern Queensland. He has responsibility for all business aspects, including financial management, production and crop husbandry, marketing and logistics, resource management and work health and safety. He is also Chair of R&R Hire Services in Queensland.

John has a history of working collaboratively with a range of public and private organisations in the development, extension and adoption of new technology.

He was Chairman of the Science Advisory Group of the National Agricultural Monitoring System (NAMS) between 2005 and 2009, and a member of the NAMS Advisory Reference Group and Steering Committee. He also spent six years, to 2005, on the National Rural Advisory Council.

John was Chairman of ChemCert Training Queensland from 2002 to 2004 and has held positions with Cotton Australia and Farmsafe Queensland.

Roseanne Healy
BA (Econ), MBA, MBR (Com), GAICD

Deputy Chair
Director (Non-executive)

Appointed: 4 November 2014 to 30 September 2020

Appointed as Deputy Chair: 21 March 2018

Member:
Audit and Risk Committee (Chair from 6 December 2017)
Remuneration, People and Performance Committee

Roseanne started in corporate advisory roles as an economics and market analyst with a number of ASX 200 companies and later moved into market forecasting, mergers and acquisitions, and capital management transactions.

Roseanne is Managing Director of Enterprise Corporation, a corporate advisory company drawing on over 20 years experience in corporate strategy and governance.

Roseanne has been a tribunal member for the Office of Consumer and Business Affairs and is a former Chief Executive of SAGreat, which influenced South Australia's economic credentials for investment attraction.

An accomplished director, she is currently Chair of Vinehealth Australia, DairySafe and Peninsula Leisure Pty Ltd and a non-executive director of Airborne Research Australia Ltd, GP Partners Australia and Nyamba Buru Yawuru Ltd.

Roseanne was previously a director of the Rural Industries Research and Development Corporation.

Directors at 30 June 2018 (cont.)

Dianne Angus
BSc (Ed), BSc (Hons), MBiotech, Grad Dip IP, MAICD

Director (Non-executive)

Appointed: 1 October 2017 to 30 September 2020

Member: Audit and Risk Committee

Dianne has worked as an executive in the biotechnology industry for over 20 years. She held a senior management position in a joint venture alliance between Florigene (Australia) and Suntory (Japan) to yield and commercialise floricultural products; was Chief Operating Officer of Prana Biotechnology, a NASDAQ-listed company that develops novel neurological agents; and is a non-executive director of ASX-listed Neuren Pharmaceuticals.

Dianne's career is marked by her passion to build competitive product portfolios, through investment in innovative research to end-stage product commercialisation. She has created global partnerships between industry and academia to yield novel and competitive medical, pharmaceutical and agricultural product candidates.

Dianne has negotiated many commercial licences and product development agreements, with entities ranging from large pharmaceutical and agrichemical companies to global research institutes. She has expertise in business development, regulation, intellectual property and finance, together with strong capabilities in corporate governance and compliance.

Chris Blanchard
BAppSci (Hons 1), PhD

Director (Non-executive)

Appointed: 1 October 2017 to 30 September 2020

Chris has had a long association with the grains industry and the GRDC. He completed a GRDC-funded PhD in plant molecular biology/virology, and was a GRDC-sponsored participant in the Australian Rural Leadership Program.

Chris has more than 20 years experience leading research projects aimed at increasing the profitability of grain production. Currently, he leads the Australian Research Council Industrial Transformation Centre for Functional Grains, which focuses on research that aims to transform the Australian grains industry, and is involved in research aimed at improving outcomes for farmers in developing countries.

Chris has served on industry and academic committees such as the GrainGrowers National Policy Group and the National Committee for the International Year of Pulses. He was Chair of the Royal Australian Chemical Institute Cereal Chemistry Division, and is currently a member of the Australian Academy of Science's National Committee for Agriculture, Fisheries and Food.

Helen Garnett
PSM, BSc (Hons), PhD, FTSE, FAICD

Director (Non-executive)

Appointed: 4 November 2014 to 30 September 2020

Member:
Audit and Risk Committee
Remuneration, People and Performance Committee
(Chair from 5 February 2018)

Helen is an accomplished director and leader, building on an earlier research career, including with industry, in pathogenesis and the development of diagnostics. She was awarded the Public Service Medal (2004) and the Centenary Medal (2000) for scientific and institutional leadership.

Helen is Chair of Generator Property Management. She is a non-executive director of Sugar Research Australia, the National Centre for Vocational Education Research, Developing East Arnhem Ltd, the Crawford Fund and the Museum and Art Gallery of the Northern Territory.

Helen was previously Chair of the Australian Centre for Plant Functional Genomics Pty Ltd, Chair of the Australian Biosecurity Intelligence Network, a non-executive director of the Grape and Wine Research and Development Corporation, a director of Energy Resources of Australia Ltd, Vice Chancellor of Charles Darwin University, and Chief Executive of the Australian Nuclear Science and Technology Organisation.

Directors at 30 June 2018 (cont.)

Richard Heath
BSc (Hons), GAICD

Director (Non-executive)

Appointed: 1 October 2017 to 30 September 2020

Richard grew up on a family farm on the Liverpool Plains in north-west New South Wales. He managed the cropping operations of the farm for nearly 20 years, overseeing production of wheat, barley, chickpeas, faba beans, canola, sorghum, sunflowers, mungbeans and cotton. Richard has been an early adopter of new farming technologies and travelled on a Nuffield Australia scholarship in 2003 to research precision applications of fertiliser.

Richard is the Executive Director of the Australian Farm Institute, an independent agricultural policy research organisation. Prior to this role, Richard was Associate Professor of Agronomy and Farm Management at the University of Sydney, with responsibility for the management of the university's north-west farms group, including the Plant Breeding Institute at Narrabri.

Richard was a member of the Northern Regional Panel of the GRDC from 2005 to 2011 and was a director of Nuffield Australia Farming Scholars from 2011 to 2017. He is currently a member of the external advisory committee of CSIRO Agriculture and Food.

Steve Jefferies
AM, BAgSc, PhD, GAICD

Managing Director

Appointed: 4 July 2016

Steve had more than 30 years of experience working in the Australian grains industry, mostly in research management, prior to joining the GRDC as Managing Director in 2016.

Steve was CEO of Australian Grain Technologies, Australia's largest and market-leading wheat-breeding company, from its inception in 2002 until June 2016. From 1996 to 2002, Steve was a wheat breeder, barley breeder and senior lecturer at the University of Adelaide. From 1984 to 1996, Steve held positions in research management and ministerial liaison in the South Australian Government.

Steve has also been Chairman of the Australian End Point Royalty Steering Committee, a non-executive director of Birchip Cropping Group and Barley Australia, and a member of the Waite Institute Strategic Leadership Group and the Wheat Quality Classification Council of Wheat Quality Australia.

In June 2016, Steve was appointed Member of the Order of Australia for his significant services to primary industry.

Stephen Powles
BSc, MSc, PhD, FAA, FTSE

Director (Non-executive)

Appointed: 1 October 2017 to 30 September 2020

Member: Audit and Risk Committee

Stephen has an international reputation as a researcher in herbicide resistance, weeds and crop science. He was awarded the Centenary Medal in 2001 for service to Australian society in plant production and culture.

Originally from a dairy farming region of New South Wales, Stephen attended Tocal College and Hawkesbury Agricultural College then continued his education in the United States and France. He developed and led large research programs at the Waite Research Institute and the University of Western Australia.

Stephen is a fellow of the Australian Academy of Science and the Australian Academy of Technology and Engineering. He has interests in a broadacre cropping farm in the Great Southern region of Western Australia.

Stephen has been Managing Director of the Australian Weed Management Cooperative Research Centre, Director of the Australian Herbicide Resistance Initiative, Chair of the Gene Technology Technical Advisory Committee and a board member of the Western Australian No-tillage Farmers Association.

Directors departed in 2017–18

Andrew Barr
BAgSc, PhD, GAICD

Director (Non-executive)

Appointed: 4 November 2014 to 30 September 2017

As a plant breeder at the South Australian Research and Development Institute and the University of Adelaide, Andrew led the release of 25 varieties of oats and barley. He also taught plant breeding and genetics at undergraduate and postgraduate levels.

Andrew has worked in international agriculture and food security, including collaborative projects with the International Center for Agricultural Research in the Dry Areas and board roles with the International Maize and Wheat Improvement Center (CIMMYT).

Andrew is an affiliate professor in the School of Agriculture, Food and Wine at the University of Adelaide and a director of the Australian Grain Growers Co-operative. He manages a broadacre cropping enterprise in the lower north of South Australia.

Jeremy Burdon
BSc (Hons), PhD, Hon DSc, FAA, FTSE, MAICD

Director (Non-executive)

Appointed: 4 November 2011 to 30 September 2017

Jeremy has an international reputation in evolutionary biology, with particular expertise in epidemiology and genetics. His research has contributed in a wide range of areas, including cereal rust control, pre-breeding and the biological control of weeds.

From late 2003 to 2012, Jeremy led CSIRO Plant Industry, taking responsibility for the development of its scientific capability; the strategic direction of its work; and its financial health and staff training.

Since then he has continued his research interests in the development of approaches for the application of evolutionary principles to farming systems through an appointment as an Honorary Fellow in CSIRO.

He served for six years on the Board of Trustees of Bioversity International and was Chair of the Australian Academy of Science's National Committee for Agriculture, Fisheries and Food. In that role, he led the production of a decadal plan for agricultural science.

Kim Halbert
BComm, GAICD

Director (Non-executive)

Appointed: 4 November 2011 to 30 September 2017

Appointed as Deputy Chair: 10 April 2012 to 3 November 2014; 27 January 2015 to 30 September 2017

Since 1980, Kim has been a grain producer in the mid-west region of Western Australia, where he undertakes numerous production trials and engages in innovative farming practices.

He has experience in the management and conservation of natural resources, which he demonstrated in his role as a member of the management committee overseeing Natural Heritage Trust project funding for the Arrowsmith Catchment Group.

Kim has a strong interest in the marketing of grain, which is reflected in his participation on a number of boards, including the board of Wheat Exports Australia.

As a director of the Geraldton Port Authority, the second largest grain-exporting port in Australia, he consulted with grain marketers, bulk handlers and grower organisations.

Directors departed in 2017–18 (cont.)

Sue Middleton

Director (Non-executive)

Appointed: 1 October 2017

Resigned: 8 May 2018

With her husband, Michael, Sue manages a diversified farm in the wheat belt of Western Australia, producing grains, oaten hay and pork. They have also developed Moora Citrus, a 210-hectare citrus orchard in a new horticultural area near Dandaragan.

As well as managing the finance and administration hub for the farming businesses, Sue manages a rural community development consultancy which provides facilitation and strategy development services. She has been involved in many leadership roles across industry, agriculture and rural community development.

David Shannon
BArch (Hons), NCFM (Durham), GAICD

Director (Non-executive)

Appointed: 4 November 2014 to 30 September 2017

David is a grains and livestock producer with more than 35 years of experience farming in South Australia and Tasmania. In 1987, David was awarded a Nuffield Australia scholarship to study grain legume production in Europe.

David has held many chair and director positions in the agricultural industry. He spent 15 years on the GRDC's Southern Regional Panel, including eight years as Chair.

David is the Independent Chairman of Mutooroo Pastoral Company.

Members

On 30 June 2018, the GRDC Board had eight members, with combined expertise in business management; commodity production, processing and marketing; economics; finance; management and conservation of natural resources; environmental and ecological matters; R&D administration; science and technology; technology transfer; communication; and public administration.

Selection process

Members of the GRDC Board are selected and appointed in accordance with the PIRD Act. Under that Act, the Minister is responsible for the selection and appointment of the Chair of the GRDC Board. The Managing Director is selected by the Board, and holds office at the corporation's pleasure.

All other board members are selected by a selection committee appointed by the Minister, in consultation with the industry representative organisation declared under the PIRD Act and other grower organisations. The selection committee is responsible for nominating five to seven candidates for appointment as GRDC directors. Nominations are made to the Minister and formal appointments of directors are made by the Minister.

The Grains Research and Development Corporation Selection Committee Report for activities in 2017 and 2018 is attached at Appendix B of this report.

Changes in board membership

Four members of the Board departed when their terms expired on 30 September 2017: Andrew Barr, Jeremy Burdon, Kim Halbert and David Shannon. Five new members were appointed from 1 October 2017: Dianne Angus, Chris Blanchard, Richard Heath, Sue Middleton and Stephen Powles. Ms Middleton subsequently retired on 8 May 2018.

Committees

At 30 June 2018, the Board had two committees, as described in Table 6. The Board receives formal reports from the committees, and any decisions that the Board makes in relation to those reports are recorded in the minutes of the subsequent board meeting.

Table 6: Board committees

ROLE	MEMBERSHIP
Audit and Risk Committee	
Assists the Board in fulfilling its corporate governance responsibilities and reviews the GRDC's: • external financial and performance reporting process • internal control system • risk management strategy and processes • internal and external audits • statutory reporting obligations.	At least three non-executive directors appointed by the Board.
Remuneration, People and Performance Committee	
Reviews and makes recommendations to the Board on matters relating to: • the recruitment, remuneration, development, performance and retention policies of the GRDC, including strategic workforce planning and organisational development • fostering a performance culture • the selection, remuneration and performance of the Managing Director • the development and performance of the Board.	Chair, Deputy Chair and two other non-executive directors appointed by the Board.

Policies and practices

The Board Charter sets out the responsibilities and processes of the Board, including the code of conduct for directors. The Board reviews this document at least once a year.

Key policies and practices of the Board include:

- induction and continuous education—New board members participate in a formal induction process, and all board members undergo a process of continuous education.
- disclosure of interests—Directors must comply with the GRDC's policy and procedures for conflict of interest and with legislative requirements regarding material personal interests. The Board reviews declarations of conflicts of interest at the start of each meeting and directors regularly update their declarations.
- independent professional advice—With the Chair's approval, directors may obtain independent professional advice, at the GRDC's expense, on matters arising in the course of their duties.
- performance monitoring—The Board sets out a detailed plan for the corporation at the start of each year, and reviews the corporation's performance against the plan throughout the year. This is a key factor in determining the level of any performance bonuses paid to GRDC staff.
- external review—The Board periodically commissions an external review of its performance. A review was completed in March 2017.

Meetings

During 2017–18, the Board held three meetings in Canberra and one meeting each in Albany (Western Australia), Adelaide and Toowoomba (Queensland). Directors joined the regional panels on their spring tours in September 2017.

Each director's attendance at meetings during the year is set out in Table 7.

Table 7: Attendance at board and committee meetings

MEMBERS	BOARD		AUDIT AND RISK COMMITTEE		REMUNERATION, PEOPLE AND PERFORMANCE COMMITTEE	
	Meetings attended	Meetings held and eligible to attend	Meetings attended	Meetings held and eligible to attend	Meetings attended	Meetings held and eligible to attend
Dianne Angus	4	4	3	3	–	–
Andrew Barr	1	2	2	2	–	–
Chris Blanchard	4	4	–	–	–	–
Jeremy Burdon	2	2	–	–	1	1
Helen Garnett	6	6	4	5	3	3
Kim Halbert	2	2	2	2	1	1
Roseanne Healy	6	6	5	5	2	2
Richard Heath	4	4	–	–	–	–
Steve Jefferies	6	6	–	–	–	–
Sue Middleton	2	3	–	–	0	1
Stephen Powles	4	4	3	3	–	–
David Shannon	2	2	–	–	–	–
John Woods	6	6	–	–	3	3

Accountability and governance

The GRDC is accountable to Australian grain growers and the Australian Government for its performance in addressing their priorities for grains RD&E.

The GRDC also meets its governance responsibilities as a corporate Commonwealth entity.

Legislation

The GRDC was established in 1990 under the PIRD Act.

As a corporate Commonwealth entity, the GRDC is subject to the requirements of the PGPA Act and other Commonwealth legislation.

Accountability to the Australian Government

The GRDC resides in the Australian Government's Agriculture and Water Resources portfolio.

During 2017–18, the position of Minister for Agriculture and Water Resources was held by the Hon Barnaby Joyce MP (from 1 July 2017 to 27 October 2017 and from 6 December 2017 to 20 December 2017); the Hon Malcolm Turnbull MP (from 27 October 2017 to 6 December 2017); and the Hon David Littleproud MP (from 20 December 2017 to 30 June 2018).

Ministerial directions

The GRDC fully complies with relevant directions made by ministers under the PIRD Act, the PGPA Act or other Commonwealth legislation.

Under section 143 of the PIRD Act, the Minister for Agriculture and Water Resources may give written directions to the GRDC as to the performance of its functions and the exercise of its powers. No such directions were given in 2017–18.

Under section 22 of the PGPA Act, the Minister for Finance may give written directions to the corporation regarding complying with the general policies of the government. No such directions were given in 2017–18.

Funding agreement

On 1 June 2015, the GRDC signed a funding agreement with the Department of Agriculture in line with the requirements of the PIRD Act. The funding agreement sets out the terms and conditions under which money paid to the GRDC by the Commonwealth will be spent during the period from June 2015 to June 2019.

In accordance with the funding agreement, the GRDC operates a cost allocation policy and model that support decision making on GRDC investments and provide transparency in achieving value for money.

The GRDC also complies with the funding agreement by integrating government priorities into its strategic approach to RD&E investment, observing government policies in its operations, and working in consultation with the grains industry representative organisations.

The GRDC meets on a biannual basis with the Department of Agriculture and Water Resources to assess compliance against the funding agreement and review progress on policy issues of mutual interest.

Significant events

The GRDC Board writes to the Minister after each board meeting, outlining all key decisions and actions taken at the meeting. This communication includes particulars of any significant decisions, activities or changes as described in section 17BE(p) of the PGPA Rule.

The Board advised the Minister of a number of significant decisions or issues during 2017–18, including:

- the appointment of members to the GRDC's three regional advisory panels for the period from 1 September 2017 to 31 August 2019, and the appointment of new chairs to the Southern and Western regional panels
- the transition of the management of National Variety Trials from Australian Crop Accreditation System Ltd to the GRDC

- the GRDC's entering into a put and call option for the sale of its property at Blackall St, Barton, in Canberra
- an increase in the percentage of GRDC staff based in regional and/or non-Canberra offices, from 25 percent to more than 40 percent, during 2017–18.

The Board also sought the Minister's approval of the GRDC's Research, Development and Extension Plan 2018–23.

The GRDC had nothing to report to the Minister under section 17BE(h) of the PGPA Rule, which relates to non-compliance with the finance law.

Government RD&E priorities

The GRDC's RD&E investment strategies, as articulated in each five-year RD&E plan and annual operational plan, are designed to address the Australian Government's Science and Research Priorities and Rural Research, Development and Extension Priorities. The GRDC's RD&E investments to meet the priorities are detailed in Appendix A of this report.

Accountability to the grains industry

The GRDC is accountable to the Australian grains industry through the industry's representative organisations, as described in the PIRD Act, and consults widely with other industry organisations and grower groups.

Representative organisations

In 2017–18, GrainGrowers and Grain Producers Australia were the declared representative organisations under section 7 of the PIRD Act.

The GRDC meets with the industry representative organisations at least once every six months, and provides a formal opportunity for them to review the GRDC's performance annually.

Consultation with the representative organisations in 2017–18 included discussions on:

- presentation of the GRDC's operating results for 2016–17
- the development of the GRDC's RD&E plan for 2018–23 and annual operational plan for 2018–19
- the Australian Grains Industry Discussion Group's industry good projects funded out of the Wheat Industry Export Grant
- biosecurity research
- the Rural Innovation System Vision
- the implementation of a database of grains levy payers
- the progress of the recruitment process for GRDC directors
- restructuring of the GRDC's organisation and regional deployment of staff.

The GRDC paid $5,393.89 (including GST) to GrainGrowers for industry consultation costs during 2017–18, in accordance with section 15 of the PIRD Act. No payments were made to Grain Producers Australia in 2017–18.

Grains industry RD&E priorities

In setting directions for the Strategic R&D Plan 2012–17, the GRDC considered the Grains Industry National RD&E Strategy, and identified grains industry priorities through direct consultations with a wide range of industry participants, including local research advisory committees, grower groups, grower organisations and individual grain growers.

The GRDC again consulted extensively with grains industry participants to develop the RD&E Plan 2018–23. The process involved multiple consultative mechanisms to reach the widest range of stakeholders, including workshops, roadshows, face-to-face meetings, surveys and open submissions.

The GRDC continually monitors evolving industry priorities, nationally and regionally, through its advisory panels and Regional Cropping Solutions networks; a wide range of other consultative forums, including Grower Solutions Groups; and direct feedback from growers and other industry participants.

Each year, the industry priorities are embedded in the GRDC's annual operational plan and the GRDC's performance in meeting the priorities is described in the corresponding annual report.

Industry levies

In 2017–18, a levy rate of 0.99 percent applied to all leviable crops covered by the GRDC, with the exception of maize, which was levied at 0.693 percent.

The levies were imposed and 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.

Proceeds from levies in 2017–18 are recorded in Note 1.2B of the notes to the financial statements.

The GRDC paid the Department of Agriculture and Water Resources $560,318.51 for the collection and management of levies in 2017–18.

Corporate governance

The GRDC Board has overall responsibility for corporate governance within the organisation and places high value on continuously improving the GRDC's performance in this area.

Key corporate governance activities overseen by the Board in 2017–18 included:

- assessing the GRDC's operating environment and strategic risk profile
- overseeing the completion and approval of the RD&E Plan 2018–23
- monitoring compliance with the funding agreement with the Commonwealth
- approving delegations and instruments relating to the organisational restructure
- allocating resources to, and assessing the effectiveness of, RD&E investments.

Risk management and fraud control

The GRDC continually reviews and refines its risk management framework to reflect changes in the business environment and the GRDC's structure.

The Board's Audit and Risk Committee oversees the preparation and implementation of the GRDC's risk management initiatives and fraud control policy and plan.

In 2017–18, the Board reconsidered and redeveloped the corporation's strategic risk environment in preparation for the RD&E plan for 2018–23. On completion of the strategic risk plan, the Board will implement monthly reporting against strategic risks and seek a review of operational risks by the end of 2018.

The GRDC commissions external assessments of its fraud risk every two years. Fraud risk was reviewed in September 2016.

Independent audits

The Auditor-General is required to audit each Commonwealth entity's financial statements. In addition, the *Auditor-General Act 1997* confirms the power of the Auditor-General's office to carry out performance audits of Commonwealth entities and, in this role, to obtain documents and information.

The Auditor-General's independent audit report on the GRDC's financial statements for 2017–18 is presented on pages 52–53.

Code of conduct

The GRDC Code of Conduct sets out the principles and expected standards of behaviour for directors, staff and panel members.

New directors and staff members are introduced to the code during induction, and presentations on the code are made to staff at regular intervals. All staff have access to the code via the policies section of the GRDC intranet.

Indemnities and insurance premiums for officers

The GRDC holds directors' and officers' liability insurance cover through Comcover. During the year, no indemnity-related claims were made. The cost of directors' and officers' indemnity insurance for 2017–18 was $17,157.92 (excluding GST).

Judicial decisions and reviews by outside bodies

In 2017–18, the GRDC was not affected by judicial decisions or reviews by administrative tribunals, the Auditor-General, parliamentary committees, the Commonwealth Ombudsman or the Office of the Australian Information Commissioner.

Ecologically sustainable development

The principles of ecologically sustainable development (ESD) set out in the *Environment Protection and Biodiversity Conservation Act 1999* are embodied in the outcomes of the GRDC.

Achieving sustainable use and management of natural resources is one of the GRDC's core functions under the PIRD Act. It is also a key element of the Australian Government and grains industry priorities that underpin the GRDC's RD&E investment decisions.

In 2017–18, the GRDC invested in many projects that contributed to ESD objectives, such as work to:

- improve profitability while reducing environmental impact, for example through tactical agronomy, tillage and stubble management, break crops, and varieties adapted for local conditions
- understand and preserve soil and water quality
- optimise biological diversity, for example in pest-suppressive landscapes and disease-suppressive soils
- foster the economic, environmental and social health of the grains industry, in the present and the longer term, through collaboration, education and knowledge sharing.

At the operational level, the GRDC is committed to managing its corporate activities with minimal impact on the environment. For example:

- The GRDC's largest office, in Canberra, is located in a building with a National Australian Built Environment Rating System (NABERS) 5-star rating. An energy-efficient free-air liquid cooling system is used in the room that houses the GRDC's key IT infrastructure.
- Where possible, the GRDC uses IT meeting solutions to reduce the need for staff travel.
- The GRDC's printing services contract requires the provider to comply with ISO 14000 environmental management standards and Australian Government policies related to ESD.
- The GRDC has significantly reduced its printing of corporate publications, placing more emphasis on the availability of materials on the GRDC website.

Work health and safety

The GRDC's work health and safety mission is to create a workplace environment where the health, safety and wellbeing of employees are highly valued and people are encouraged and supported to adopt and maintain a healthy lifestyle.

Table 8 summarises the GRDC's results in relation to reportable indicators of work health and safety performance in 2017–18.

Table 8: Work health and safety performance

INDICATORS	PERFORMANCE
Initiatives undertaken during the year to ensure the health, safety and welfare of workers who carry out work for the GRDC	All staff were provided with driver safety training. Work health and safety was a standing agenda item at board meetings and staff meetings. All first aid attendants were sent to full refresher training courses and all new staff received health and safety training during their induction. Counselling was made available for staff members and members of their families through the Employee Assistance Program. The GRDC offered staff flu vaccinations and provided fresh fruit daily. Activities to ensure that facilities were well maintained included: • twice yearly inspection of fire extinguishers • annual checking and restocking of first aid kits • annual checking and tagging of electrical leads and power cords • regular inspections of smoke and heat detectors • regular cleaning of carpets.
Health and safety outcomes (including the impact on injury rates of workers) achieved as a result of initiatives	The lost time injury rate in the GRDC in 2017–18 was 0.08 injuries per 1 million hours worked.
Statistics of any notifiable incidents of which the GRDC became aware that arose out of the conduct of businesses or undertakings by the GRDC	No incidents occurred.
Details of any investigations conducted during the year that relate to the businesses or undertakings of the GRDC, including details of all notices given to the GRDC under Part 10 of the *Work Health and Safety Act 2011*	No investigations were conducted and no notices were given.
Other matters as required by the guidelines approved on behalf of the Parliament by the Joint Committee of Public Accounts and Audit	No other matters were required to be reported.

4 Financial statements

Independent auditor's report

INDEPENDENT AUDITOR'S REPORT

To the Minister for Agriculture and Water Resources

Opinion

In my opinion, the financial statements of the Grains Research and Development Corporation for the year ended 30 June 2018:

(a) comply with Australian Accounting Standards – Reduced Disclosure Requirements and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and

(b) present fairly the financial position of the Grains Research and Development Corporation as at 30 June 2018 and its financial performance and cash flows for the year then ended.

The financial statements of the Grains Research and Development Corporation, which I have audited, comprise the following statements as at 30 June 2018 and for the year then ended:

- Statement by the Directors, Managing Director and Chief Financial Officer;
- Statement of Comprehensive Income;
- Statement of Financial Position;
- Statement of Changes in Equity;
- Cash Flow Statement; and
- Notes to the financial statements, comprising a summary of significant accounting policies and other explanatory information.

Basis for Opinion

I conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Grains Research and Development Corporation in accordance with the relevant ethical requirements for financial statement audits conducted by the Auditor-General and his delegates. These include the relevant independence requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* (the Code) to the extent that they are not in conflict with the *Auditor-General Act 1997*. I have also fulfilled my other responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Accountable Authority's Responsibility for the Financial Statements

As the Accountable Authority of the Grains Research and Development Corporation, the Directors are responsible under the *Public Governance, Performance and Accountability Act 2013* for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards – Reduced Disclosure Requirements and the rules made under that Act. The Directors are also responsible for such internal control as they determine is necessary to enable the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the Grains Research and Development Corporation's ability to continue as a going concern, taking into account whether the entity's operations will cease as a result of an administrative restructure or for any other reason. The Directors are also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the assessment indicates that it is not appropriate.

GPO Box 707 CANBERRA ACT 2601
19 National Circuit BARTON ACT
Phone (02) 6203 7300 Fax (02) 6203 7777

Auditor's Responsibilities for the Audit of the Financial Statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian National Audit Office Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with the Australian National Audit Office Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Accountable Authority;
- conclude on the appropriateness of the Accountable Authority's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern; and
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Australian National Audit Office

Rita Bhana

Senior Director

Delegate of the Auditor-General

Canberra

10 August 2018

Statement by the Directors, Managing Director and Chief Finance Officer

GRAINS RESEARCH AND DEVELOPMENT CORPORATION

STATEMENT BY THE DIRECTORS, MANAGING DIRECTOR AND CHIEF FINANCE OFFICER

In our opinion, the attached financial statements for the year ended 30 June 2018 comply with subsection 42(2) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Corporation will be able to pay its debts as and when they fall due.

The statement is made in accordance with a resolution of the directors.

Signed.....	Signed.....	Signed.....
Mr J D Woods CHAIRMAN	Dr S P Jefferies MANAGING DIRECTOR	Mr M Priest CHIEF FINANCE OFFICER
9 August 2018	9 August 2018	9 August 2018

Statement of Comprehensive Income

for the period ended 30 June 2018

	NOTES	2018 $'000	2017 $'000	ORIGINAL BUDGET $'000
NET COST OF SERVICES				
Expenses				
Employee benefits	1.1A	**13,152**	10,926	14,400
Research and Development		**192,082**	198,129	199,608
Suppliers	1.1B	**10,476**	11,583	-
Depreciation and amortisation	2.2A	**1,815**	1,489	1,842
Write-down and impairment of assets	1.1C	**-**	1,430	-
Loss on investments at fair value through profit or loss	1.1D	**2,262**	2,453	-
Losses from asset sales	1.1E	**10**	-	-
Total expenses		**219,797**	226,010	215,850
Own-source Income				
Own-source revenue				
Interest	1.2A	**6,908**	6,333	7,567
Industry contributions	1.2B	**117,310**	139,366	114,692
Project refunds	1.2C	**7,516**	5,219	3,318
Royalties	1.2D	**6,028**	11,648	4,818
Grants income	1.2E	**2,425**	2,492	3,102
Dividends	1.2F	**1,946**	-	-
Rental income	1.2G	**74**	-	-
Other revenue	1.2H	**290**	413	-
Total own-source revenue		**142,497**	165,471	133,497
Gains				
Gains from sale of assets	1.2I	**-**	6,070	-
Total gains		**-**	6,070	-
Total own-source income		**142,497**	171,541	133,497
Net (cost) of services		**(77,300)**	(54,469)	(82,353)
Revenue from Government	1.2J	**71,262**	73,285	68,543
(Deficit) / Surplus attributable to the Australian Government		**(6,038)**	18,816	(13,810)
OTHER COMPREHENSIVE INCOME				
Items not subject to subsequent reclassification to net cost of services				
Changes in asset revaluation surplus	2.2A	**(427)**	(476)	-
Total other comprehensive (loss)		**(427)**	(476)	-
Total comprehensive (loss) / income		**(6,465)**	18,340	(13,810)
Total comprehensive (loss) / income attributable to the Australian Government		**(6,465)**	18,340	(13,810)

The above statement should be read in conjunction with the accompanying notes.

Budget Variances Commentary

Statement of Comprehensive Income

The employee benefits expense variance relates to delays in anticipated recruiting activity. The budget assumed the majority of positions filled by October 2017 which did not eventuate.

The total of Suppliers expense including Research and Development expense was in line with budget expectations.

Depreciation and amortisation expense for the 2017-18 year is in line with budget expectations.

Interest own source revenue is less than budget due to actual rates of return being marginally lower than anticipated at the time of estimate preparation.

Industry contributions own source income is higher than estimated. The level of sales in the 2017-18 financial year that related to the previous financial year production was greater than anticipated at the time of preparing the budget estimate.

GRDC has implemented new management systems. Implementation of the new systems also included a review of existing business processes and extant research and development agreements. The review identified liabilities previously recognised that were no longer required to be settled.

Royalty revenue is higher than anticipated due to better than anticipated performance of a number of barley varieties. Also GRDC has implemented improvements in revenue management which has seen royalties recognised earlier than in previous periods.

Grant income was less than what was estimated due to a lower than anticipated level of activity associated with the grant funded projects.

Dividends that were received from investments in unlisted shares, were not anticipated at the time the budget estimate was prepared.

Statement of Financial Position

as at 30 June 2018

	NOTES	2018 $'000	2017 $'000	ORIGINAL BUDGET $'000
ASSETS				
Financial assets				
Cash and cash equivalents	2.1A	**33,660**	9,533	8,798
Trade and other receivables	2.1B	**18,486**	55,594	25,772
Investments in managed funds	2.1C	**199,165**	225,199	190,009
Other investments	2.1D	**4,215**	4,418	4,214
Total financial assets		**255,526**	294,744	228,793
Non-financial assets				
Land and buildings	2.2A	**2,457**	6,283	6,165
Property, plant and equipment	2.2A	**1,447**	615	838
Intangibles	2.2A	**6,229**	4,525	6,209
Other non-financial assets	2.2B	**159**	1,048	804
Total non-financial assets		**10,292**	12,471	14,016
Assets held for sale	2.3	**3,000**	-	-
Total assets		**268,818**	307,215	242,809
LIABILITIES				
Payables				
Suppliers	2.4A	**2,312**	1,713	58,788
Research and development	2.4B	**59,610**	91,536	-
Other payables	2.4C	**3,911**	4,644	-
Total payables		**65,833**	97,893	58,788
Provisions				
Employee provisions	3.1	**2,038**	1,732	1,900
Other provisions	2.5	**1,584**	1,762	1,584
Total provisions		**3,622**	3,494	3,484
Total liabilities		**69,455**	101,387	62,272
Net assets		**199,363**	205,828	180,537
EQUITY				
Retained surplus		**88,792**	99,780	85,563
Asset revaluation surplus		**1,671**	2,098	94,974
Contracted research reserve		**108,900**	103,950	-
Total equity		**199,363**	205,828	180,537

The above statement should be read in conjunction with the accompanying notes.

Budget Variances Commentary

Statement of Financial Position

The higher than anticipated cash balance results from contributions from Government received earlier than anticipated. GRDC also received dividends in June that were not considered in the original budget. The remainder of the variance can be attributed to timing differences between estimated and actual receipts and payments.

Lower than anticipated Trade and other receivables balance resulted from earlier than anticipated receipt of contributions provided by the Government.

The Land and buildings variance resulted from a parcel of land and buildings that was made available for sale during the financial year. This resulted in a reclassification from Land and buildings to "assets held for sale". Prior to the reclassification the Land and building were revalued with the revaluation decrement recognised in Other comprehensive income.

Acquisitions of Property, plant and equipment were higher than originally planned. The purchases were for plant and equipment at new offices and the acquisition of additional computers and related equipment.

The total of Suppliers including Research and development payables was consistent with budget expectations.

The Employee provisions balance was higher than anticipated due to staff recruitment. A number of employees recruited during the year had prior recognised service resulting in GRDC recognising existing transferred leave provision balances.

The balance of Investments in managed funds is higher than anticipated due to better than expected net operating cash flows. The initial budget estimate assumed a requirement for a realisation of investments late in the financial year to fund operating cash flows. This was not required due to unexpected cash receipts in the last quarter of the financial year.

Statement of Changes in Equity

as at 30 June 2018

	NOTES	2018 $'000	2017 $'000	ORIGINAL BUDGET $'000
RETAINED EARNINGS				
Opening balance				
Balance carried forward from previous period		**99,780**	76,014	87,823
Adjusted opening balance		**99,780**	76,014	87,823
Comprehensive income				
(Deficit)/Surplus for the period		**(6,038)**	18,816	(13,810)
Total comprehensive income		**(6,038)**	18,816	(13,810)
Transfers between equity components		**(4,950)**	4,950	11,550
Closing balance as at 30 June		**88,792**	99,780	85,563
ASSET REVALUATION RESERVE				
Opening balance				
Balance carried forward from previous period		**2,098**	2,574	2,574
Adjusted opening balance		**2,098**	2,574	2,574
Comprehensive income				
Other comprehensive income		**(427)**	(476)	-
Total comprehensive income		**(427)**	(476)	-
Closing balance as at 30 June		**1,671**	2,098	2,574
CONTRACTED RESEARCH RESERVE				
Opening balance				
Balance carried forward from previous period		**103,950**	108,900	103,950
Adjusted opening balance		**103,950**	108,900	103,950
Transfers between equity components		**4,950**	(4,950)	(11,550)
Closing balance as at 30 June		**108,900**	103,950	92,400
TOTAL EQUITY				
Opening balance				
Balance carried forward from previous period		**205,828**	187,488	194,347
Adjusted opening balance		**205,828**	187,488	194,347
Comprehensive income				
(Deficit)/Surplus for the period		**(6,038)**	18,816	(13,810)
Other comprehensive income		**(427)**	(476)	-
Total comprehensive income		**(6,465)**	18,340	(13,810)
Transfers between equity components		**-**	-	-
Closing balance as at 30 June		**199,363**	205,828	180,537

The above statement should be read in conjunction with the accompanying notes.

Budget Variances Commentary

Statement of Changes in Equity

The carried forward opening balance of retained earnings was not known at the time of preparing budget estimates. The operating surplus in the 2016-17 year was greater than anticipated at the time of preparing estimates.

The variance between actual and budgeted deficit for the 2017-18 year is explained in the statement of comprehensive income.

The variance in the Asset Revaluation Reserve decrement relates to Land and buildings that was revalued for the purpose of being made available for sale. The potential decrease in value was not considered at the time of preparing estimates.

Cash Flow Statement

for the period ended 30 June 2018

	NOTES	2018 $'000	2017 $'000	ORIGINAL BUDGET $'000
OPERATING ACTIVITIES				
Cash received				
Industry contributions		**117,613**	138,821	114,692
Commonwealth contributions		**84,658**	71,891	69,210
Interest		**6,292**	5,714	7,567
Grants receipts		**1,767**	2,927	-
Dividends		**1,946**	-	-
Other		**17,437**	9,853	8,136
Net GST received		**16,756**	21,616	19,961
Total cash received		**246,469**	250,822	219,566
Cash used				
Research and development		**237,934**	194,557	233,396
Suppliers		**10,554**	13,233	
Employees		**12,996**	11,221	14,200
Total cash used		**261,484**	219,011	247,596
Net cash from/(used by) operating activities		**(15,015)**	31,811	(28,030)
INVESTING ACTIVITIES				
Cash received				
Proceeds from sales of property, plant and equipment		**6**	15	-
Investments		**30,000**	57,524	91,500
Loan Repayments		**17,891**	-	-
Total cash received		**47,897**	57,539	91,500
Cash used				
Purchase of property, plant and equipment		**3,134**	3,475	3,835
Purchase of investments		**5,621**	81,530	58,000
Purchase of shares		**-**	1,430	-
Total cash used		**8,755**	86,435	61,835
Net cash from/(used by) investing activities		**39,142**	(28,896)	29,665
Net increase/(decrease) in cash held		**24,127**	2,915	1,635
Cash and cash equivalents at the beginning of the reporting period		**9,533**	6,618	7,163
Cash and cash equivalents at the end of the reporting period	2.1A	**33,660**	9,533	8,798

The above statement should be read in conjunction with the accompanying notes.

Budget Variances Commentary

Cash Flow Statement

Receipts from Industry contributions were higher than estimated due to the impact of the number of sales in the 2017-18 financial year that related to previous financial year production.

Cash received from Commonwealth contributions was greater than estimated due to a planned 2018-19 payment brought forward and received in 2017-18.

Receipts from interest were less than estimated due to lower than anticipated market performance.

Other receipts includes a higher level of royalty receipts than what was anticipated when preparing the budget. The variance is also attributable to dividend receipts that were not anticipated at the time the budget was prepared.

Cash outflows for Research and development were higher than anticipated due to a management initiated program focused on finalising outstanding requirements with research and development providers to finalise payments.

Net cash flows from investments were consistent with budget estimates. Estimated net cash flows comprise $91.5m in flows and $58m outflows. GRDC were able to effectively manage cash flows which reduced the amount of investment funds required to be realised to fund operating cash outflows.

Notes to and forming part of the financial statements

For the year ended 30 June 2018

Overview

Basis of Preparation

The financial statements are general purpose financial statements and are required by section 42 of the *Public Governance, Performance and Accountability Act 2013*.

The financial statements have been prepared in accordance with:

a) *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015 (FRR);* and

b) Australian Accounting Standards and Interpretations – Reduced Disclosure Requirements issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and in accordance with historical cost convention, except for certain assets and liabilities at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position.

The financial statements are presented in Australian dollars.

New Australian Accounting Standards

Adoption of new Australian Accounting Standard Requirements

No accounting standard has been adopted earlier than the application date as stated in the standard.

None of the new standards, revised standards, interpretations and amendments to standards that were issued prior to the signing of the Statement by Directors, Managing Director and Chief Financial Officer and were applicable to the current reporting period had a material effect on the Grains Research and Development Corporation's (Corporation's) financial statements.

Future Australian Accounting Standard Requirements

The following new standards, revised standards, interpretations and amendments to standards that were issued by the Australian Accounting Standards Board prior to the signing of the Statement of Directors, Managing Director and Chief Financial Officer are expected to have an impact on the Corporation's financial statements for future reporting periods.

ACCOUNTING STANDARDS	SUMMARY OF CHANGES	EFFECTIVE DATE
AASB 9 *Financial Instruments (December 2014)* AASB 2014-7 *Amendments to Australian Accounting Standards arising from AASB 9 (December 2014)* AASB 2014-8 *Amendments to Australian Accounting Standards arising from AASB 9 (December 2014) – Application of AASB 9 (December 2009) and AASB 9 (December 2010)*	The new standard AASB 9 includes revised guidance on the classification and measurement of financial assets, including a new expected credit loss model for calculating impairment, and supplements the new general hedge accounting requirements previously published. It supersedes AASB 9 (issued in December 2009 – as amended) and AASB 9 (issued in December 2010 – as amended). The standard has been assessed as having a moderate impact on the financial reporting of the Corporation. The standard will impact the measurement and recognition of fair value adjustments for some investments.	1 January 2018

ACCOUNTING STANDARDS	SUMMARY OF CHANGES	EFFECTIVE DATE
AASB 16 *Leases*	AASB 16 removes the classification of leases as either operating leases or finance leases – for the lessee – effectively treating all leases as finance leases. AASB 16 requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognise a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligations to make lease payments. AASB 16 requires enhanced disclosures for both lessees and lessors to improve information disclosed about an entity's exposure to leases. The standard has been assessed as having a moderate impact on the financial reporting of the Corporation.	1 January 2019

Consolidation

The Corporation presented consolidated financial statements for the 2016-17 financial year, due to the control of the Grains and Cropping R&D Trust (the Trust) for part of that year. On 17 March 2017, the Corporation lost control of the Trust and a loss on deconsolidation of $4,123,171 was recognised by the consolidated group, being the net assets of the Trust. At no time in the current reporting period did a consolidated group exist, therefore, consolidated financial statements have not been prepared for the current reporting period.

Comparatives

Adjustments have been made to comparatives to ensure consistency with 2017-18 disclosures.

The Comparative for loss of investments at fair value through profit or loss (Note 1.1D) has been adjusted to split the total into its component parts, being interest revenue (Note 1.2A) and loss on investments at fair value through profit or loss (Note 1.1D).

Accrued interest and accrued income have been reclassified from other non-financial assets (Note 2.2B) to Trade and other receivables (Note 2.1B).

Supplier expense classifications (Note 1.1B) have been reclassified to reflect expense categories used in 2017-18.

Financial Instruments classifications (Note 5.1A) have been reclassified to accurately reflect disclosure requirements that have been applied in 2017-18.

Key Management Personnel Remuneration classifications (Note 3.2) have been reclassified to accurately reflect disclosure requirements that have been applied in 2017-18.

Taxation

The Corporation is exempt from all forms of taxation except Fringe Benefits Tax (FBT) and the Goods and Services Tax (GST).

Events After the Reporting Period

There was no subsequent event that had the potential to significantly affect the on-going structure and financial activities of the Corporation.

Financial Performance

1.1: Expenses

	2018 $'000	2017 $'000
1.1A – Employee Benefits		
Wages and salaries	**11,316**	9,272
Superannuation		
Defined contribution plans	**1,094**	993
Defined benefits plans	**149**	158
Leave and other entitlements	**255**	(286)
Separation and redundancies	**338**	789
Total employee benefits	**13,152**	10,926

Accounting Policy

Accounting policies for employee related expenses are contained in Note 3.1.

	2018 $'000	2017 $'000
1.1B – Suppliers		
Goods and services supplied or rendered		
Staff travel and accommodation	**2,224**	2,705
Consultants	**349**	355
Corporate communications	**781**	802
Corporate governance	**195**	152
Corporate services	**4,040**	3,551
Levy collection costs	**560**	798
Other	**736**	1,785
Total goods and services supplied or rendered	**8,885**	10,148
Goods supplied	**128**	104
Services supplied	**8,757**	10,044
Total goods supplied	**8,885**	10,148
Other suppliers		
Operating lease rentals in connection with		
Minimum lease payments	**1,538**	1,376
Workers compensation expenses	**53**	59
Total other suppliers	**1,591**	1,435
Total suppliers	**10,476**	11,583

1.1B – Suppliers (continued)

Leasing commitments

The Corporation in its capacity as lessee has entered the following leases:

NATURE OF LEASE	GENERAL DESCRIPTION OF LEASE AGREEMENT
Leases for office accommodation	Lease payments are subject to annual reviews in accordance with the lease agreements. The lease of the Canberra office commenced on 1 May 2014 for a period of 10 years. There is an option to extend the lease term for 4 years. The annual review of this lease is a fixed percentage increase. As part of the lease agreement, a cash incentive of $1,785,525 (GST exclusive) was received, which has been applied as a rent-free period at the beginning of the lease term. The lease of the Adelaide office commenced on 19 February 2018 for a period of 5 years. There is an option to extend the lease term for 3 years. The annual review of this lease is a fixed percentage increase. The lease agreement includes a monthly rent reduction as a lease incentive. The lease of the Dubbo office commenced on 8 February 2016 for a period of 5 years. There is an option to extend the lease term for 5 years. The annual review for this agreement is based on CPI. As part of the lease agreement, a rent-free period was provided at the beginning of the lease term. The lease of the Toowoomba office commenced on 15 February 2018 for a period of 5 years. There is an option to extend the lease term for 5 years. The annual review of this lease is a fixed percentage increase. The lease of the Perth office commenced on 11 July 2016 for a period of 5 years. There is an option to extend the lease term for 5 years. The annual review for this agreement is based on CPI with market reviews at different times during the lease term. As part of the lease agreement, a rent-free period was provided at the beginning of the lease term. The lease of an additional meeting room for the Perth office commenced on 1 June 2018 for a term of 38.33 months. The annual review of this lease is a fixed percentage increase. The lease of the Melbourne office commenced on 1 December 2017 with a term of 1 year.
Motor vehicles	Leased as part of salary packages and for general employee usage in carrying out work duties. No contingent rentals exist.

	2018 $'000	2017 $'000
1.1B – Suppliers (continued)		
Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:		
Within 1 year	**1,927**	1,437
Between 1 to 5 years	**6,335**	5,000
More than 5 years	**934**	2,054
Total operating lease commitments	**9,196**	8,491

Accounting Policy

Operating lease payments are expensed on a straight-line basis which is representative of the pattern of benefits derived from the leased assets.

	2018 $'000	2017 $'000
1.1C – Write-down and Impairment of Assets		
Asset write-downs and impairments from:		
Investments (shares) at cost - impairment	-	1,430
Total write-down and impairment of assets	-	1,430
1.1D – Loss on investments at fair value through profit or loss		
Managed funds – fair value through profit or loss	**2,058**	2,657
Investments (shares) – revaluation decrement / (increment)	**204**	(204)
Total write-down and impairment of assets	**2,262**	2,453
1.1E – Losses from Asset Sales		
Loss from asset sales from:		
Plant & equipment	**10**	-
Total loss on asset sales	**10**	-

1.2: Own-source Revenue and Gains

Own-source Revenue

	2018 $'000	2017 $'000
Note 1.2A – Interest		
Deposits	**664**	315
Managed funds	**6,056**	5,848
Convertible notes	**127**	114
Loans	**61**	56
Total interest	**6,908**	6,333

Accounting Policy

Interest revenue is recognised using the effective interest method.

	2018 $'000	2017 $'000
Note 1.2B – Industry Contributions		
Coarse grains	**27,131**	26,229
Grain legumes	**16,484**	25,496
Oilseeds	**17,414**	25,643
Wheat	**56,281**	61,998
Total industry contributions	**117,310**	139,366

Accounting Policy

Revenue paid to the Corporation under Section 30 of the *Primary Industries Research and Development Act 1989,* where a research levy is attached to grain producers' output, is for the purpose of providing funds for research and development. Industry contributions are recognised when they are entitled to be received by the Corporation.

	2018 $'000	2017 $'000
Note 1.2C – Project Refunds		
Total project refunds	**7,516**	5,219

Accounting Policy

Project refunds are recognised upon receipt of the refund when it relates to prior years expenditure and when the funds accrued are no longer required for the completion of the project.

	2018 $'000	2017 $'000
Note 1.2D – Royalties		
Coarse grains	**3,406**	3,820
Grain legumes	**367**	2,393
Oilseeds	**458**	148
Wheat	**1,579**	4,958
Other	**218**	329
Total royalties	**6,028**	11,648

Accounting Policy

Royalties are recognised when they can be reliably measured and when they are entitled to be received by the Corporation.

	2018 $'000	2017 $'000
Note 1.2E – Grants Income		
Total grants income	**2,425**	2,492

Accounting Policy

Grants income is revenue paid to the Corporation for the purpose of funding specific research and development projects. Grants and other non-reciprocal contributions from non-government entities are recognised as revenue when the Corporation obtains control over the assets comprising the contributions. Control is normally obtained upon receipt. Grants from government entities are recognised on a systematic basis over the periods in which the Corporation recognises as expenses the related costs for which the grants are intended.

	2018 $'000	2017 $'000
Note 1.2F – Dividends		
Total dividends	**1,946**	-

Accounting Policy

Dividend income is recognised when the right to receive payment is established.

	2018 $'000	2017 $'000
Note 1.2G – Rental Income		
Office rental income	**74**	-

	2018 $'000	2017 $'000
Subleasing rental income commitments		
The Corporation in its capacity as lessor has entered into an arrangement to sublease 130m2 of the Canberra office. The sublease commenced on 14 August 2017 with a term of 1 year.		
Commitments for sublease rental income receivables are as follows:		
Within 1 year	**11**	-
Between 1 to 5 years	**-**	-
More than 5 years	**-**	-
Total sublease rental income commitments	**11**	-

	2018 $'000	2017 $'000
Note 1.2H – Other Revenue		
Levy penalties	**106**	191
Advertising income	**163**	174
Publications revenue	**8**	15
Other income	**13**	33
Total other revenue	**290**	413

	2018 $'000	2017 $'000
Note 1.2I – Gains		
Gain on sale of shares in unlisted companies	-	6,063
Gain on sale of plant and equipment	-	7
Total gain from sale of assets	-	6,070

Accounting Policy

Gain on disposal of investments and non-financial assets

Gains from the sale of investments and non-financial assets are recognised when control of the asset has passed to the buyer.

	2018 $'000	2017 $'000
Note 1.2J – Revenue from Government		
Department of Agriculture and Water Resources		
PIRD Act 1989 contribution	**71,262**	73,285

Accounting Policy

Revenue from Government

Revenue paid to the Corporation under Section 32 of the *Primary Industries Research and Development Act 1989,* representing 0.5% of the three-year (current and previous 2 years) moving average of gross value of production of grains, is for the purpose of funding research and development activities. Revenues from Government are recognised when they are entitled to be received by the Corporation.

Funding received or receivable from non-corporate Commonwealth entities (appropriated to the non-corporate Commonwealth entity as a corporate Commonwealth entity payment item for payment to

the Corporation) is recognised as Revenue from Government by the Corporation unless the funding is in the nature of an equity injection or loan.

Financial Position

2.1: Financial Assets

	2018 $'000	2017 $'000
2.1A – Cash and Cash Equivalents		
Interest bearing cheque account	**33,654**	9,527
Business online saver account	**6**	6
Total cash and cash equivalents	**33,660**	9,533
2.1B – Trade and Other Receivables		
Goods and services receivables		
Goods and services	**9,136**	23,580
Accrued interest	**55**	29
Accrued income	**659**	7,358
Statutory receivables	**4,251**	2,531
Total goods and services receivables	**14,101**	33,498
Accrued interest The interest rates range from 0.65% to 1.50% (2017: 0.65% to 1.50%) and the frequency of payments is monthly.		
Other receivables		
Security deposits receivable[1]	**27**	35
Convertible notes receivable[2]	**3,117**	2,990
Loans receivable	**1,241**	19,071
Total other receivables	**4,385**	22,096
Total trade and other receivables (net)	**18,486**	55,594

No indicators of impairment were found for trade and other receivables.

In July 2015, the Corporation entered into a Convertible Note Agreement with InterGrain Pty Ltd for the amount of $3,000,000 (principal). The Corporation is entitled to receive the equivalent of the 12 month Australian Bank Bill Swap Reference Rate (at each 30 June anniversary) plus 2% based on the principal. The notes are contracted to mature 84 months after the issue date, at which time the principal and interest is to be repaid, unless a mandatory, automatic or voluntary conversion to ordinary shares occurs prior to maturity. The embedded derivative component of the convertible note was separately brought to account on inception, with the fair value movement recognised at each reporting date through profit or loss disclosed at note 1.1D. The embedded derivative component is disclosed at note 2.1D.

At the end of the reporting period, the Corporation had a loan receivable totalling $1,241,270.08. The loan was made to an entity in which the Corporation is an equity holder. The loan matures on 15 July 2022.

Accounting Policy

Loans and Receivables

Trade receivables and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method less impairment.

	2018 $'000	2017 $'000
2.1C – Investments in Managed Funds		
Fixed Interest Individually Managed Funds		
At market value	**161,278**	158,032
Cash Management Individually Managed Funds		
At market value	**37,887**	67,167
Total investments	**199,165**	225,199

Individually managed funds

The funds are available at call. Interest rates will vary to reflect varying market interest rates.

Ministerial approval

The Corporation has received approval under paragraph 59(1)(b)(iii) of the *Public Governance, Performance and Accountability Act 2013* to hold the investments listed above.

Accounting Policy

Accounting policies for investments in managed funds are contained in Note 4.1A.

	2018 $'000	2017 $'000
2.1D – Other Investments		
Shares in unlisted companies		
Australian Grain Technologies Pty Ltd	**11,386**	11,386
Allowance for impairment	**(7,171)**	(7,171)
	4,215	4,215
InterGrain Pty Ltd	**8,630**	8,630
Allowance for impairment	**(8,630)**	(8,630)
	-	-
Other		
Convertible notes – embedded derivative	**-**	203
	-	203
Gross Other Investments	**20,016**	20,219
Total allowance for impairment	**(15,801)**	(15,801)
Net other investments	**4,215**	4,418

The shares held are ordinary shares.

All such investments are expected to be recovered in more than 12 months.

Accounting Policy

Accounting policies for other investments are contained in Note 4.1A.

Accounting Judgements and Estimates

The Corporation has made the following estimate:

The valuation methodology of the embedded derivative component of the convertible note utilised a Binomial Option Pricing Model. The valuation was undertaken by an independent, qualified and appropriately experienced expert.

2.2: Non-Financial Assets

2.2A – Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment and Intangibles

Reconciliation of the opening and closing balances of property, plant and equipment and intangibles – 2018

	LEASEHOLD LAND $'000	BUILDINGS ON LEASEHOLD LAND $'000	TOTAL LAND AND BUILDINGS ON LEASEHOLD LAND $'000	OTHER PROPERTY, PLANT & EQUIPMENT $'000	INTANGIBLES $'000	TOTAL $'000
As at 1 July 2017						
Gross book value	745	6,629	**7,374**	1,213	7,016	**15,603**
Accumulated depreciation and impairment	-	(1,091)	**(1,091)**	(598)	(2,491)	**(4,180)**
Net book value 1 July 2017	**745**	**5,538**	**6,283**	**615**	**4,525**	**11,423**
Additions:						
By purchase	-	65	**65**	1,167	2,269	**3,501**
Revaluations and impairment recognised in other comprehensive income	(94)	(341)	**(435)**	-	-	**(435)**
Depreciation and amortisation expense	-	(456)	**(456)**	(327)	(1,032)	**(1,815)**
Reclassified to Assets Held for Sale	(651)	(2,349)	**(3,000)**	-	-	**(3,000)**
Other movements						
Work in progress	-	-	-	-	467	**467**
Disposals:						
Other	-	-	-	(8)	-	**(8)**
Net book value 30 June 2018	**-**	**2,457**	**2,457**	**1,447**	**6,229**	**10,133**
Net book value as at 30 June 2018 represented by:						
Gross book value	**-**	**4,004**	**4,004**	**2,372**	**9,752**	**16,128**
Accumulated depreciation, amortisation and impairment losses	**-**	**(1,547)**	**(1,547)**	**(925)**	**(3,523)**	**(5,995)**
Net book value 30 June 2018	**-**	**2,457**	**2,457**	**1,447**	**6,229**	**10,133**

No indicators of impairment were found for property, plant and equipment and intangibles.

Revaluations of non-financial assets

All revaluations were conducted in accordance with the revaluation policy stated below. A revaluation of land and building immediately prior to the classification as Held for Sale was conducted during the reporting period by an independent valuer, Herron Todd White.

Accounting Policy

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken.

Financial assets are initially measured at their fair value plus transaction costs where appropriate.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition.

Asset Recognition Threshold

Purchases of property, plant and equipment are recognised initially at cost in the statement of financial position, except for purchases costing less than $2,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

The initial cost of an asset includes an estimate of the cost of dismantling and removing the item and restoring the site on which it is located. This is particularly relevant to 'make good' provisions in property leases taken up by the Corporation where there exists an obligation to restore the property to its original condition. These costs are included in the value of the Corporation's leasehold improvements with a corresponding provision for the 'make good' recognised.

Revaluations

Following initial recognition at cost, property, plant and equipment are carried at fair value less subsequent accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depend upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reversed a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reversed a previous revaluation increment for that class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset is restated to the revalued amount.

Depreciation

Depreciable property, plant and equipment assets are written-down to their estimated residual values over their estimated useful lives to the Corporation using, in all cases, the straight-line method of depreciation.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

	2018	2017
Buildings on leasehold land	**25 years**	25 years
Other infrastructure, plant & equipment	**3 to 12 years**	3 to 12 years

Impairment

All assets were assessed for impairment at 30 June 2018. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to disposal and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if the Corporation were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

Derecognition

An item of property, plant and equipment is derecognised upon disposal or when no further economic benefits are expected from its use or disposal.

Intangibles

The Corporation's intangibles comprise software and intellectual property.

Software is carried at cost less accumulated amortisation and accumulated impairment losses. Software is amortised on a straight-line basis over its anticipated useful life as follows:

	2018	2017
Information management system	**2.5 years**	2.5 years
Other software	**6 years**	6 years

Development costs

Research costs are expensed when incurred. An intangible asset arising from development expenditure is only recognised when technical feasibility studies identify that the expenditure will deliver future economic benefits and these benefits can be measured reliably. Other development expenditure is recognised in the Statement of Comprehensive Income as an expense when incurred.

Following initial recognition of development expenditure, the cost model is applied requiring the asset to be carried at cost less any accumulated amortisation and accumulated impairment losses.

All intangible assets were assessed for indications of impairment as at 30 June 2018.

	2018 $'000	2017 $'000
2.2B – Other Non-Financial Assets		
Prepayments	**159**	1,048
Total other non-financial assets	**159**	1,048

All Other Non-financial Assets are expected to be recovered in no more than 12 months.

No indicators of impairment were found for non-financial assets.

	2018 $'000	2017 $'000
2.3: Assets Held for Sale		
The following assets have been classified as held for sale:		
Land and buildings on leasehold land	3,000	-
Total assets held for sale	**3,000**	-

During the reporting period, the Corporation engaged an agent to sell Level 1, 40 Blackall Street, Barton, ACT. The Corporation expects to sell the land and buildings within 12 months of the reporting date.

Accounting Policy

Assets are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than continuing use and a sale is highly probable. They are measured at the lower of their carrying amount and fair value less costs to sell. Assets classified as held for sale are not depreciated or amortised.

2.4: Payables

	2018 $'000	2017 $'000
2.4A – Suppliers		
Trade creditors – external parties	**1,074**	1,331
Accrued expenses – external parties	**1,238**	382
Total supplier payables	**2,312**	1,713

Settlement is usually made within 30 days apart from those payables with specific settlement terms after 30 days.

	2018 $'000	2017 $'000
2.4B – Research and Development		
Research and development payables	**59,610**	91,536
Total research and development payables	**59,610**	91,536
2.4C – Other Payables		
Salaries & Wages	**658**	424
Unearned grant income – related parties	**3,253**	4,220
Total other payables	**3,911**	4,644

Accounting Policy

Accounting policies for payables are contained in Note 4.1A. Refer to Note 1.2E regarding the Corporation's accounting policy on grant income.

2.5: Other Provisions

	LEASE INCENTIVE $'000	PROVISION FOR MAKE GOOD $'000	TOTAL $'000
As at 1 July 2017	1,220	542	1,762
Amounts used	178	-	178
Total as at 30 June 2018	**1,042**	**542**	**1,584**

The Corporation currently has an agreement for the leasing of premises which have provisions requiring the Corporation to restore the premises to their original condition at the conclusion of the lease. The Corporation has made a provision to reflect the present value of this obligation.

People and Relationships

	2018 $'000	2017 $'000
3.1 – Employee Provisions		
Leave	**2,038**	1,732
Total employee provisions	**2,038**	1,732

Accounting Policy

Liabilities for 'short-term employee benefits' (as defined in AASB 119 *Employee Benefits*) and termination benefits due within twelve months of the end of the reporting period are measured at their nominal amounts.

Leave

The liability for employee benefits includes provision for annual leave and long service leave. The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that applied at the time the leave is taken, including the Corporation's employer superannuation contribution rates, to the extent that the leave is likely to be taken during service rather than paid out on termination. The liability for long service leave has been determined by using the Australian Government shorthand method. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

Separation and Redundancy

Provision is made for separation and redundancy benefit payments. The entity recognises a provision for termination when it has developed a detailed formal plan for the terminations and has informed those employees affected that it will carry out the terminations.

Superannuation

The Corporation's staff are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS), the PSS Accumulation Plan (PSSap), AustralianSuper or an approved superannuation scheme of their choice.

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap and other superannuation schemes are defined contribution schemes.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported in the Department of Finance's administered schedules and notes.

For CSS and PSS members, the Corporation makes contributions based on the rates determined by an actuary to be sufficient to meet the current costs to the Government. The Corporation accounts for the contributions as if they were contributions to defined contribution plans.

For AustralianSuper and other approved superannuation schemes, the Corporation contributes a minimum of 9.5% of superannuable salaries.

As at 30 June, superannuation contributions payable were $NIL (2017: $NIL).

3.2: Key Management Personnel Remuneration

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. The Corporation has determined the key management personnel to be the Directors, including the Managing Director, and the Deputy CEO. Key management personnel remuneration is reported in the table below:

	2018 $'000	2017 $'000
Short-term employee benefits	**1,135,327**	983,045
Post-employment benefits (superannuation)	**102,157**	93,891
Other long-term employee benefits	**74,853**	67,884
Total key management personnel remuneration expenses[1]	**1,312,336**	1,144,820

[1] The above key management personnel remuneration excludes the remuneration and other benefits of the Portfolio Minister. The Portfolio Minister's remuneration and other benefits are set by the Remuneration Tribunal and are not paid by the entity.

The total number of key management personnel that are included in the above table are 13 individuals (2017: 10 individuals). The total number of KMP includes all individuals that were a KMP at any time during the financial year. During the year, retired Directors were replaced which accounts for the additional 3 KMP when compared to 2017.

Additional to the amounts disclosed in the table above, the Corporation has a fee-for-service contracted arrangement for the provision of Key Management Personnel services. The Corporation incurred costs in relation to this contract of $49,428 (2017: $44,945).

3.3: Related Party Disclosures

Related party relationships:

The entity is an Australian Government controlled entity. Related parties to this entity are Directors, Key Management Personnel including the Portfolio Minister, and other Australian Government entities.

Transactions with related parties:

Given the breadth of Government activities, related parties may transact with the government sector in the same capacity as ordinary citizens. Such transactions include the payment or refund of taxes, receipt of a Medicare rebate or higher education loans. These transactions have not been separately disclosed in this note.

Several directors of the Corporation and their close family members hold directorships with other organisations. Any transactions between the Corporation and those organisations or any dealings between the Corporation and the Directors and their close family members individually are conducted using commercial and arms-length principles.

The Corporation made payments of $3,699,286 to Charles Sturt University. The Corporation receipted funds from Charles Sturt University of $35,465 (2017: NIL). At the time of payment and receipt of funds, a Director of the Corporation was a Director of the Charles Sturt University, Functional Grain Centre. At 30 June 2018 an amount of $2,708 was owing from Charles Sturt University (2017: NIL). The Charles Sturt University was not a related party during the financial year ended 30 June 2017.

The Corporation made payments of $40,590 (2017: NIL) to the Australian Farm Institute. At the time of payment, a Director of the Corporation was an Executive Director of the entity. The Australian Farm Institute was not a related party during the financial year ended 30 June 2017.

The Corporation made payments $12,139 of (2017: $638,868) to AgCommunicators Pty Ltd for communication services. At the time of payment a Director of AgCommunicators Pty Ltd was a close family member of a Director of the Corporation. Transactions have been conducted on normal commercial terms.

No loans were made to the Directors or Director-related entities during the reporting period (2017: NIL)

Managing Uncertainties

4.1 Unquantifiable contingencies

The Corporation has engaged legal representation in relation to an ongoing intellectual property matter. It is not currently possible to determine whether there would be any cash outflows or in flows resulting from this matter. The Corporation maintains a professional indemnity insurance policy. The Corporation believes if unsuccessful in defence of any proceedings related to this issue, insurance will indemnify for damages or judgments and defence costs. (2017: $NIL).

Accounting Policy

Contingent liabilities and contingent assets are not recognised in the statement of financial position but are reported in the notes. They may arise from uncertainty as to the existence of a liability or asset or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

5.1: Financial Instruments

	2018 $'000	2017 $'000
5.1A – Categories of Financial Instruments		
Financial Assets		
Loans and receivables		
Cash and cash equivalents	**33,660**	9,533
Trade and other receivables	**6,586**	31,718
Total loans and receivables	**40,246**	41,251
Available-for-sale financial assets		
Shares in unlisted companies	**4,215**	4,215
Total available-for-sale financial assets	**4,215**	4,215
Financial assets at fair value through profit or loss		
Managed funds	**199,165**	225,199
Embedded derivative	**-**	203
Total financial assets at fair value through profit or loss	**199,165**	225,402
Total financial assets	**243,626**	270,868
Financial Liabilities		
Financial liabilities measured at amortised cost		
Payables	**61,742**	93,001
Total financial liabilities measured at amortised cost	**61,742**	93,001
Total financial liabilities	**61,742**	93,001

Accounting Policy

Financial assets

The Corporation classifies its financial assets in the following categories:

a) financial assets at fair value through profit or loss;

b) held-to-maturity investments;

c) available-for-sale financial assets; and

d) loans and receivables.

The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Financial assets are recognised and derecognised upon trade date.

Effective interest method

Income is recognised on an effective interest rate basis except for financial assets at fair value through profit or loss.

Financial assets at fair value through profit or loss

Financial assets are classified as financial assets at fair value through profit or loss where the financial assets:

a) have been acquired principally for the purpose of selling in the near future;

b) are derivatives that are not designated and effective as a hedging instrument; or

c) are parts of an identified portfolio of financial instruments that the Corporation manages together and has a recent actual pattern of short-term profit-taking.

Assets in this category are classified as current assets.

Financial assets at fair value through profit or loss are stated at fair value, with any resultant gain or loss recognised in profit or loss. The net gain or loss recognised in profit or loss incorporates any interest earned on the financial asset.

Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories.

Available-for-sale financial assets are recorded at fair value. Gains and losses arising from changes in fair value are recognised directly in reserves (equity) with the exception of impairment losses. Interest is calculated using the effective interest method and foreign exchange gains and losses on monetary assets are recognised directly in profit or loss. Where the asset is disposed of or is determined to be impaired, part (or all) of the cumulative gain or loss previously recognised in the reserve is included in surplus or deficit for the period.

Where a reliable fair value cannot be established for unlisted investments in equity instruments, these instruments are valued at cost. The Corporation holds shares in the following unlisted companies:

- Australian Grain Technologies Pty Ltd (holding: 39%);
- InterGrain Pty Ltd (holding: 38%).

These companies conduct R&D for the development of new crop varieties and are responsible for the commercialisation of those varieties. The success and ability to generate future economic benefits are subject to uncertainty and the Corporation believes that this will impair the carrying values of the investments.

The Corporation has established an allowance for impairment to record a reduction in the value of each of these investments based on the Corporation's estimate of the trading performance and cash flows of each company. A review of the trading performances will be performed annually. If there is objective evidence that an impairment loss has been incurred, the amount of the impairment loss is the difference between the carrying amount of the assets and the present value of the estimated future cash flows discounted at the current market rate for similar assets. As the investments' carrying value uses the fair value exemption under *AASB139 Financial Instruments*, the allowance for impairment cannot be reversed. The allowance for each investment is disclosed at note 2.1D.

Impairment of financial assets

Financial assets are assessed for impairment at the end of each reporting period.

Financial assets carried at amortised cost – if there is objective evidence that an impairment loss has been incurred for loans and receivables or held-to-maturity investments held at amortised cost, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the Statement of Comprehensive Income.

Available-for-sale financial assets – if there is objective evidence that an impairment loss on an available-for-sale financial asset has been incurred, the amount of the difference between its cost, less principal repayments and amortisation, and its current fair value, less any impairment loss previously recognised in expenses, is transferred from equity to the Statement of Comprehensive Income.

Financial assets carried at cost – if there is objective evidence that an impairment loss has been incurred, the amount of the impairment loss is the difference between the carrying amount of the asset and the present value of the estimated future cash flows discounted at the current market rate for similar assets.

Financial Liabilities

Financial liabilities are classified as either financial liabilities at 'fair value through profit or loss' or other financial liabilities. Financial liabilities are recognised and derecognised upon 'trade date'.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss are initially measured at fair value. Subsequent fair value adjustments are recognised in profit or loss. The net gain or loss recognised in profit or loss incorporates any interest paid on the financial liability.

Other financial liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. These liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective interest basis.

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

	2018 $'000	2017 $'000
5.1B – Net Gains or Losses on Financial Assets		
Loans and receivables		
Interest revenue	**852**	485
Net gain on loans and receivables	**852**	485
Available-for-sale financial assets		
Impairment	**-**	(1,430)
Net (loss) on available-for-sale financial assets	**-**	(1,430)
Financial assets at fair value through profit or loss		
Interest Revenue	**6,056**	5,848
Change in fair value (decrement)	**(2,262)**	(2,453)
Net (loss) on financial assets at fair value through profit and loss	**3,794**	3,395
Net gain on financial assets	**4,646**	2,450

There was no net gain or loss on financial liabilities.

Note 5.2: Fair Value Measurements

Accounting Policy

The Corporation measures its managed fund investments using Level 1 inputs, that is, using quoted prices in active markets for identical assets that the Corporation can access at measurement date.

The Corporation measures the embedded derivative component of convertible notes by using a Binomial Option Pricing Model. Inputs into the model include both Level 2 and Level 3 data, that is, using observable and unobservable data. The valuation at each reporting date is undertaken by an independent, qualified and appropriately experienced expert.

Valuations of non-financial assets are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depend upon the volatility of movements in market values for the relevant assets. Non-financial assets are measured using a range of Level 2 and Level 3 inputs.

The Corporation measures its Leasehold improvements using Level 3 inputs at the reporting date, using the Depreciated replacement cost valuation methodology.

The Corporation measures its Other property, plant and equipment using Level 2 inputs, using adjusted market transactions as a basis.

Immediately prior to the reclassification as assets held for sale, the Corporation revalued its land and building using Level 2 inputs. The inputs included the Capitalisation Approach and the Direct Comparison approach, on a rate per square metre of floor area.

Fair value measurements at the end of the reporting period

	2018 $'000	2017 $'000
Note 5.2A – Fair Value Measurement		
Financial assets		
Investments in managed funds[1]	**199,165**	225,199
Convertible notes – embedded derivative[1]	-	203
Total financial assets	**199,165**	225,402
Non-financial assets		
Leasehold land[1]	-	745
Building on leasehold land[1]	-	2,755
Leasehold improvements[1]	**2,457**	2,783
Other property, plant and equipment[1]	**1,447**	615
Total non-financial assets	**3,904**	6,898
Assets held for sale	**3,000**	-
Total fair value measurements of assets in the Statement of Financial Position	**206,069**	232,300

[1] No change in valuation technique occurred during the period

APPENDICES

Appendix A—Expenditure on government research priorities

Table A1: Expenditure on Science and Research Priorities

THEME	FOOD	SOIL AND WATER	TRANSPORT	CYBERSECURITY	ENERGY	RESOURCES	ADVANCED MANUFACTURING	ENVIRONMENTAL CHANGE	HEALTH	OTHER[a]	TOTAL
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Meeting market requirements	9.4	-	-	-	-	-	-	-	-	-	**9.4**
Improving crop yield	34.8	-	-	-	-	-	-	6.1	-	-	**40.9**
Protecting your crop	3.1	-	-	-	-	-	-	38.1	-	10.7	**51.9**
Advancing profitable farming systems	-	28.1	-	-	-	-	-	9.2	-	-	**37.3**
Improving your farm resource base	-	9.3	-	-	-	-	-	3.7	-	2.4	**15.4**
Building skills and capacity	0.1	0.5	-	-	-	-	-	0.3	-	6.1	**7.0**
Foundational activities	0.4	0.1	-	-	-	-	-	0.1	-	23.9	**24.5**
R&D management	-	0.3	-	-	-	-	0.1	1.2	-	4.1	**5.7**
Total $m	**47.8**	**38.3**	-	-	-	-	**0.1**	**58.7**	-	**47.2**	**192.1**
	%	%	%	%	%	%	%	%	%	%	%
Meeting market requirements	4.9	-	-	-	-	-	-	-	-	-	**4.9**
Improving crop yield	18.1	-	-	-	-	-	-	3.2	-	-	**21.3**
Protecting your crop	1.6	-	-	-	-	-	-	19.8	-	5.6	**27.0**
Advancing profitable farming systems	-	14.6	-	-	-	-	-	4.8	-	-	**19.4**
Improving your farm resource base	-	4.8	-	-	-	-	-	1.9	-	1.3	**8.0**
Building skills and capacity	0.1	0.3	-	-	-	-	-	0.2	-	3.2	**3.6**
Foundational activities	0.2	0.1	-	-	-	-	-	0.1	-	12.4	**12.8**
R&D management	-	0.2	-	-	-	-	0.1	0.6	-	2.1	**3.0**
Total %	**24.9**	**19.9**	-	-	-	-	**0.1**	**30.6**	-	**24.6**	**100.0**

a Other includes a number of investments that relate to commercialisation, impact assessment and evaluation of the portfolio.

Note: Individual percentages may not add up to the totals shown, because of rounding.

Table A2: Expenditure on Rural Research, Development and Extension Priorities

THEME	ADVANCED TECHNOLOGY	BIOSECURITY	SOIL, WATER AND MANAGING NATURAL RESOURCES	ADOPTION OF R&D	OTHER[a]	TOTAL
	$m	$m	$m	$m	$m	$m
Meeting market requirements	1.6	0.4	0.1	1.3	6.0	**9.4**
Improving crop yield	28.9	0.4	4.2	0.3	7.1	**40.9**
Protecting your crop	7.8	35.6	4.4	2.0	2.1	**51.9**
Advancing profitable farming systems	4.6	0.2	10.4	12.0	10.1	**37.3**
Improving your farm resource base	1.7	-	13.2	0.4	0.1	**15.4**
Building skills and capacity	0.3	0.2	0.7	2.9	2.9	**7.0**
Foundational activities	0.3	0.1	0.1	8.6	15.4	**24.5**
R&D management	0.3	-	0.9	1.1	3.4	**5.7**
Total $m	**45.5**	**36.9**	**34.0**	**28.6**	**47.1**	**192.1**
	%	%	%	%	%	%
Meeting market requirements	0.8	0.2	0.1	0.7	3.1	**4.9**
Improving crop yield	15.0	0.2	2.2	0.2	3.7	**21.3**
Protecting your crop	4.1	18.5	2.3	1.0	1.1	**27.0**
Advancing profitable farming systems	2.4	0.1	5.4	6.2	5.3	**19.4**
Improving your farm resource base	0.9	-	6.9	0.2	0.1	**8.0**
Building skills and capacity	0.2	0.1	0.4	1.5	1.5	**3.6**
Foundational activities	0.2	0.1	0.1	4.5	8.0	**12.8**
R&D management	0.2	-	0.5	0.6	1.8	**3.0**
Total %	**23.7**	**19.2**	**17.7**	**14.9**	**24.5**	**100.00**

a Other includes a number of investments that relate to commercialisation, impact assessment and evaluation of the portfolio..

Note: Individual percentages may not add up to the totals shown, because of rounding.

Appendix B—Selection committee report

Grains Research and Development Corporation
Selection Committee

The Hon. David Littleproud
Minister for Agriculture
Parliament House
CANBERRA ACT 2600

Dear Minister

Grains Research and Development Corporation Selection Committee Report for activities in 2017 and 2018

This report summarises the activities of the Grains Research and Development Corporation (GRDC) Selection Committee from the 30th May 2017 to 30th June 2018, pursuant to section 141 of the *Primary Industries Research and Development Act 1898*(PIRD Act), in relation to the nomination of directors for appointment to GRDC.

Establishment of the selection committee

The GRDC selection committee was established under the PIRD Act for the purpose of nominating to the Minister for Agriculture seven persons as directors of the GRDC.

I was appointed by The Hon. Barnaby Joyce as presiding member on 7th April 2017, for a period ending 31st December 2019. On 30th May 2017, following discussions with the GRDC's representative organisations Grain Producers Australia (GPA) and Grain Growers Limited (GGL), Minister Joyce appointed the selection committee as follows:

- Dr Harm van Rees
- Cindy Cassidy
- Bob McKay
- Kerry Regan.

2017 Selection Process

Applications were called for through advertisements placed in the following newspapers:

Friday 5th May 2017 Australian Financial Review
Saturday 6th May 2017 The Weekend Australian
Thursday 11th May 2017 The Land, Queensland Country Life, Stock and Land, Farm Weekly, The Countryman.

Details of the director vacancies were distributed through a range of electronic networks including:

- GRDC
- Women on Boards
- Nuffield Australia Farming Scholars

Grains Research and Development Corporation
Selection Committee

The following industry organisations received notice of the application process:

- Grain Growers Limited
- Grain Producers Australia
- state farming organisations.

Applications closed on the 26th May 2017.

A total of 145 applications were received, of which 57(39 per cent) were received from female applicants. The GRDC's representative organisations—Grain Producers Australia and Grain Growers Limited—were invited to nominate for consideration by the selection committee. Existing GRDC directors who were eligible for a second term were invited to apply and two applied.

Applications were considered by all members of the Selection Committee and a meeting was held in Sydney on the 14th of June 2017 to agree on a shortlist of suitable candidates for interview. Prior to the meeting the Chairman, Mr John Woods briefed the Selection Committee, outlining his vision for the strategic direction of GRDC. This provided an opportunity for the Committee to seek clarification on the needs of the corporation moving forward.

In accordance with the PIRD Act, the advertisement called for written applications against the following criteria:

- Grains production, processing and marketing
- Conservation and management of natural resources
- Science
- Technology and technology transfer
- Environment and ecological matters
- Economics
- Administration of research and development
- Finance and Business Management
- Communication
- Public Administration

All candidates were also required to have:

- An understanding of corporate governance and directors' responsibilities
- Good communication skills and the capacity to represent GRDC to all stakeholders

In developing the shortlist, the selection committee considered the core selection criteria contained in the PIRD Act, along with other criteria agreed as important including:

- Strong strategic thinker
- Demonstrated experience in corporate accountability
- Awareness and understanding of the international research and development environment in both public and private sectors
- Demonstrated experience in commercial deal brokerage
- Geographic diversity of production experience and knowledge
- Effective implementation and management of change.

Grains Research and Development Corporation
Selection Committee

The selection committee met on the 14th June 2017 to review the applications. The committee unanimously agreed to a shortlist of 15 candidates to interview, including two existing directors and six women.

Interview were conducted on the 28th and 29th June 2017 at the Stamford Plaza Hotel, Sydney Airport.

Following the interviews, the selection committee made its final decisions, considering the collective balance of expertise and experience in board affairs required by the PIRD Act.

Board Appointments

Upon completion of the selection process, the GRDC selection committee reported to Minister Joyce with seven nominations and the names of two other candidates considered suitable for appointment.
From these Minister Joyce appointed the following directors:

- Ms Roseanne Healy, reappointment, resident of South Australia
- Dr Helen Garnett, reappointment, resident of the Northern Territory
- Ms Dianne Angus, new appointment, resident of Victoria
- Professor Chis Blanchard, new appointment, resident of New South Wales
- Mr Richard Heath, new appointment, resident of New South Wales
- Professor Stephen Powles, new appointment, resident of Western Australia
- Ms Sue Middleton, new appointment, resident of Western Australia.

Expenses for 2017 process

Selection committee and applicant travel and accommodation expenses	$40,570
Advertising	$14,679
Selection Committee member's fees	$4,874
Presiding Member's fees	$10,388
Secretariat cost	$2,000
Total	$72,511

Grains Research and Development Corporation
Selection Committee

2018 Selection Process

Following the resignation of one of the directors, on 21st June 2018 you asked me to reconvene the selection committee to provide you with a nomination for appointment to fill the vacancy.

On 29th June 2018 the selection committee met by teleconference and considered the remaining list of persons suitable for nomination within the previous twelve months. The selection committee was satisfied that one person from the previous process was suitable for nomination for the current vacancy and was unanimous in providing that nomination to you on 29th June 2018.

Yours Sincerely,

Andrew Earle
Presiding Member
Grains Research and Development Corporation Selection Committee

7th September 2018

REFERENCES

Abbreviations list

AEGIC	Australian Export Grains Innovation Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
ESD	ecologically sustainable development
GRDC	Grains Research and Development Corporation
GST	goods and services tax
Minister, the	Minister for Agriculture and Water Resources
PBR	plant breeder's rights
PGPA Act	*Public Governance, Performance and Accountability Act 2013*
PGPA Rule	Public Governance, Performance and Accountability Rule 2014
PIRD Act	*Primary Industries Research and Development Act 1989*
R&D	research and development
RD&E	research, development and extension
WLYP	water-limited yield potential

Compliance index

REQUIREMENT	SOURCE	PART OF THE REPORT
***Primary Industries Research and Development Act 1989* (PIRD Act)**		
R&D activities	Paragraph 28(a)(i)	ii, 2–4, 12–32
Marketing activities funded by levy	Paragraph 28(a)(ia)	None to report
Expenditure on R&D activities	Paragraph 28(a)(ii)	ii–iv, 18, 20, 22, 24, 26, 28, 82–83
Impact of R&D activities on the grains industry	Paragraph 28(a)(ii)	2–4, 12–31
Revisions of the R&D plan	Paragraph 28(a)(iii)	None to report
Agreements under sections 13 and 14	Paragraph 28(a)(iv)	Published separately
Patents and commercialisation	Paragraph 28(a)(v)	33–35
Companies	Paragraphs 28(a)(vi) and (vii)	34
Real property	Paragraph 28(a)(viii)	46
Assessment of operations	Paragraph 28(b)	2–4, 12–31
Contribution to the objects of the Act	Paragraph 28(c)	12–31
Sources and expenditure of funds	Paragraph 28(d)	iii–iv, 9, 47, 52–78, 82–83
Public Governance, Performance and Accountability Rule 2014		
Approval of the report by directors	Section17BB	Letter of transmittal
Parliamentary standards of presentation	Section 17BC	Throughout
Plain English and clear design	Section 17BD	Throughout
Enabling legislation	Paragraph 17BE(a)	45
Legislated objects and functions	Paragraph 17BE(b)(i)	5, 12–13
Purpose	Paragraph 17BE(b)(ii)	5, 14
Responsible minister	Paragraph 17BE(c)	45
Ministerial directions	Paragraphs 17BE(d) and (f)	45
Policy orders	Paragraphs 17BE(e) and (f)	45
Annual performance statements	Paragraph 17BE(g)	14–17
Significant issues related to financial compliance	Paragraphs 17BE(h) and (i)	46
Information on members of the accountable authority	Paragraph 17BE(j)	38–44
Organisational structure	Paragraph 17BE(k)	5–6
Location	Paragraph 17BE(l)	8
Governance	Paragraph 17BE(m)	43–44, 47
Related entity transactions	Paragraphs 17BE(n) and (o)	Financial statements
Significant activities and changes	Paragraph 17BE(p)	45–46
Judicial decisions or decisions of administrative tribunals	Paragraph 17BE(q)	47
Reports by the Auditor-General, a parliamentary committee, the Commonwealth Ombudsman or the Office of the Australian Information Commissioner	Paragraph 17BE(r)	47

REQUIREMENT	SOURCE	PART OF THE REPORT
Public Governance, Performance and Accountability Rule 2014 (cont.)		
Information from subsidiaries	Paragraph 17BE(s)	Financial statements
Indemnity and insurance	Paragraph 17BE(t)	47
Compliance index	Paragraph 17BE(u)	91–92
Funding Agreement 2015–19		
Implementation of strategies under the National Primary Industries Research, Development and Extension Framework	Paragraph 11.10(a)	6, 12–32
Rationale for mix of RD&E investments	Paragraph 11.10(b)	2–4, 32
Extension activities	Paragraph 11.10(c)	14–29
Collaborations not covered by sections 13 and 14 of the PIRD Act	Paragraph 11.10(d)	None to report
Sources of income	Paragraph 11.10(e)	Financial statements
Costs of R&D and marketing	Paragraph 11.10(f)	Financial statements
Implementation of the strategic R&D plan	Paragraph 11.10(g)	12–32
Efficiency and effectiveness of investments	Paragraph 11.10(h)	2–4, 12–31
Implementation of government priorities and guidelines	Paragraph 11.10(i)	6, 12–32, 46, 82–83
Consultation with representative organisations	Paragraph 11.10(j)	6, 46
Other matters notified by the Commonwealth	Paragraph 11.10(k)	None to report
Other reporting requirements		
Government R&D priorities incorporated into the annual operational plan	Request from the Minister	12–13, 46, 82–83
Ecologically sustainable development	*Environment Protection and Biodiversity Conservation Act 1999*, Section 516A	48
Work health and safety	*Work Health and Safety Act 2011*, Schedule 2, Part 4	49

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