



Annual Operational Plan 2019-2020

Research and innovation
for rural prosperity



AgriFutures Australia Annual Operational Plan 2019-20
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Our vision

To grow the long term prosperity of Australian rural industries

1

People and Leadership

Goal
To support the people driving the future prosperity of Australian rural industries and regional communities by providing them with learning opportunities and experiences.

Priorities
Attracting capable people into careers in agriculture.
Building the capability of future rural leaders.

2

National Challenges and Opportunities

Goal
To identify and nurture research and innovation opportunities that are synergistic across rural sectors.

Priorities
Informing debate on issues of importance to rural industries.
Adapting new technologies for use across rural industries.
Working collaboratively on issues common across rural sectors.

3

Growing Profitability

Goal
To enhance the profitability and sustainability of our levied rural industries. Regional communities and the broader Australian economy depend on profitable farms.

Priorities
Engaging industry participants in determining RD&E priorities.
Investing in innovation that assists levied industries to be more profitable.
Delivering outcomes to maximise industry uptake and adoption.

4

Emerging Industries

Goal
To support new and emerging rural industries.

Priorities
Supporting the early stage establishment of high potential rural industries.

Outcome

Rural industries are equipped with skilled people and the leadership to grow and prosper.

Challenges and opportunities that are common across rural sectors are identified and addressed.

Industry participants are confident that their levy investment is delivering value.

High-potential emerging rural industries established.

Approach

1

Listening and influencing

2

Delivering results

3

Partnerships and collaborations

4

Performance culture

5

Efficient business practices

Values

Connected / Positive / Real / Future-thinking
Innovative / Quality / Approachable / Networked / Confident
Professional / Commercially savvy

Purpose

Through research and development, increase knowledge and understanding that fosters innovation, adaptive and valuable rural industries.

1

Purpose of this document

This AgriFutures Australia Annual Operational Plan presents the organisation's planned research and development (R&D) investments and corporate expenditure in 2019-20.

2

Responsible Ministers

The Hon. Bridget McKenzie Minister for Agriculture and Senator Jonathon Duniam Assistant Minister for Forestry and Fisheries.

3

Enabling legislation

AgriFutures Australia's enabling legislation is the Primary Industries Research and Development Act 1989 (Commonwealth Government of Australia) (the PIRD Act).

4

Outcome

Increased knowledge that fosters sustainable, productive and profitable new and existing rural industries and furthers understanding of national rural issues through research and development in government-industry partnership.

We believe in delivering tangible, practical and productive outcomes – until our research leads to practice change on-farm, the return on investment is zero.

Mr John Harvey

Message from the Managing Director

This 2019-20 Annual Operational Plan sets out AgriFutures Australia's research and investment plan for the third year of our Strategic R&D Plan 2017-2022.

In 2017, we launched the AgriFutures Australia Strategic R&D Plan 2017-2022. It is built on four distinct arenas and goals. It also represents the organisation's broad commitments in delivering on the priorities of the Australian Government, its stakeholders and our clear mandate to grow the long-term prosperity of our levied industries, people and communities through research, capacity building and innovation.

As we enter the half way mark of our current Strategic Plan, it is a great time for our organisation to reflect on our mandate and most importantly reinforce our commitment to our thousands of levy payers across the 13 industries that we serve.

This 2019-20 Annual Operational Plan profiles each arena including the strategic priorities, programs and outcome focused key performance indicators that all point to one theme – growing the long-term prosperity of Australian rural industries. We have set KPIs that will deliberately enable and enhance the delivery of results for our levied industries, emerging industries and the people involved in Australian agriculture.

We believe in delivering tangible, practical and productive outcomes – until our research leads to practice change on-farm, the return on investment is zero.

From breeding and pest management programs, to technology developments, to unearthing new and emerging industries that could be the next big industry - the projects we support vary across industry, scope, size, scale and region.

As well as supporting our levy payers and levied industries, it is our responsibility to support people and leadership in agriculture, and cross-sectoral research and engagement.

Our four arenas will guide all research and investment efforts now, well into the future, and hold us accountable to the challenge we have set to build sustainable and profitable rural industries and communities.

We will spend 2019-20 and beyond collaborating, learning and delivering practical actions with a future orientation.

Mr John Harvey
Managing Director
AgriFutures Australia

AgriFutures Australia's investment portfolio

AgriFutures Australia's programs by arena
(R&D program as of 1 July 2019)

Arenas	Outcome	Programs
<p>1</p> <p>People and Leadership</p>	Rural industries are equipped with skilled people and the leadership to grow and prosper.	Rural Women's Award Horizon Scholarship Ignite Network Rural Women's Award Alumni startup.business Country to Canberra
<p>2</p> <p>National Challenges and Opportunities</p>	Challenges and opportunities that are common across rural sectors are identified and addressed.	National Rural Issues evokeAG extensionAUS Farmers2Founders Bridge Hub Nationally coordinated initiatives: <ul style="list-style-type: none"> • The Climate Research Strategy for Primary Industries • The Rural Health and Safety Alliance • Improved seasonal forecasting • Biocontrol of weeds • Securing pollination • Australian biomass and bioenergy assessment
<p>3</p> <p>Growing Profitability</p>	Industry participants are confident that their levy investment is delivering value.	Rice Chicken Meat Export Fodder Honey Bee & Pollination Thoroughbred Horses Ginger Tea Tree Oil Pasture Seeds Smaller levied industries: <ul style="list-style-type: none"> • Goat fibre • Buffalo • Kangaroo • Deer • Ratite
<p>4</p> <p>Emerging Industries</p>	High-potential emerging rural industries established.	New and emerging rural industries

A balanced research portfolio

AgriFutures Australia's investment in Research, Development & Extension (RD&E) is driven by the needs of its stakeholders. To deliver against the strategic priorities, AgriFutures Australia is guided by two overarching factors:

- Strong stakeholder engagement
- Applying a life-cycle approach to target investment

The life-cycle approach provides clarity around the appropriate levels of intervention and investment in industries as they progress from new to emerging and established. The life-cycle approach ensures the RD&E investment is fit for purpose and targeted to the industry's developmental stage.

AgriFutures Australia allocates its expenditure using a range of measures that ensure a balanced, financially responsible approach to its investment of both industry and core funds.

AgriFutures Australia's investments integrate the triple bottom line objectives of economic, environmental and social responsibility. The majority of investment will be aligned with short-to-medium-term adaptive research outcomes and investment returns with the remainder contributing to long-term strategic research objectives.

AgriFutures Australia's project management system enables the portfolio of investments to be viewed through various perspectives including:

- Government research priorities
- Program objectives
- Project length
- Levels of risk, return and leverage

AgriFutures Australia allocates its expenditure using a range of measures that ensure a balanced, financially responsible approach to its investment of both industry and core funds.

Our arenas

Four distinct arenas define our Strategic R&D Plan and represent the organisation's broad commitments to deliver the priorities of the Australian Government, its stakeholders and its ultimate goal to create thriving rural industries and vibrant regional communities.

1 People and Leadership

Goal

To support the people driving the future prosperity of Australian rural industries and regional communities by providing them with learning opportunities and experiences.

To build prosperous and sustainable rural industries, we need rural leaders with the skills and knowledge to make informed decisions about the future of their enterprises and industries.

We believe that human capacity to drive improvements in competitiveness through the adoption of R&D outcomes and innovation is just as important as the research itself.

While new technologies, systems, processes and business models are important, people are the critical element in ensuring the growth of Australian rural industries.

As such, AgriFutures Australia is committed to supporting rural people through the continued investment in leadership, capacity and skills development programs, like the Rural Women's Award, Horizon Scholarship and the Ignite Network.

Priorities

Attracting capable people into careers in agriculture.

Currently the supply of people into agricultural careers is not keeping up with the demand created by an ageing workforce. In fact, most categories of agricultural occupations are undersupplied and action is required now to ensure the future of the sector.

Additionally, with the explosion of new technologies emerging from digital disruption, agriculture also needs more highly skilled people with a diverse range of academic, technical and practical backgrounds.

Introducing agricultural careers pathways in schools is critical and agricultural careers need to be promoted as a successful and respectable career path, not just for students from a family farming background.

Rural industries need to reflect and promote innovation, diversity, forward-thinking and the positive lifestyle that agriculture and farming offers.

AgriFutures Australia will collaborate with the other RDCs, government departments, the private sector and not-for-profit organisations to highlight to young people the opportunities a career in agriculture has to offer through programs like Horizon Scholarship, Startup.business and Country to Canberra.

Building the capability of future rural leaders.

Skilled leadership is one of the most crucial elements in the health and prosperity of any rural industry. But it is not always easy to have the right people assume leadership roles at the right time, nor those with leadership potential to step forward.

Future leaders and decision makers from across industry sectors need to be supported so they can share ideas, be motivated, engage in learning, capacity building, knowledge sharing and community building.

AgriFutures Australia has an ongoing commitment to developing the leadership and human capacity of rural industries and their communities, through programs such as the Rural Women's Award and Alumni, Horizon Scholarship and the Ignite Network.

Outcome

Rural industries are equipped with skilled people and the leadership to grow and prosper.

Investment budget for 2019-20
\$1,344,000



Our arenas

2 National Challenges and Opportunities

Goal

To identify and nurture research and innovation opportunities that are synergistic across rural sectors.

Australian rural industries are faced with challenges and opportunities that are both industry-specific and common across rural sectors. Beyond the commodity level, our rural industries require leadership to identify and respond to national rural issues and enhance shared benefits.

Unlike other RDCs that represent one or a few similar industries, AgriFutures Australia manages R&D for a diverse portfolio of plant and animal industries. As such it is uniquely placed to assist Australian rural industries to prioritise and drive cross-sectoral RD&E.

AgriFutures Australia will broker partnerships, facilitate priority setting and provide advice to strengthen the national agricultural research and innovation effort.

It will also complement individual industry RD&E by investing in research of cross-sectoral value, in areas such as climate change, natural resource management, and safety and welfare.

Priorities

Informing debate on issues of importance to rural industries.

At any time, there are a number of complex opportunities and challenges confronting the rural sector that require careful research and analysis before informed, meaningful policy can be developed and debated by industry and government.

This priority is about delivering research and analysis relevant to broad contemporary issues that are not sector specific.

These issues are expected to change significantly over time in response to changes in industry and government circumstances.

Adapting new technologies for use across rural industries.

Emerging technologies are changing the way agricultural products are made, marketed and transported. Advances in genetics, sensory systems, the Internet of Things, device connectivity and remote sensing, automation, and food traceability will all disrupt the supply chain. Likewise, new synthetic food and fibre products will disrupt demand.

This priority is about collaborating across rural sectors, with other RDCs, our research partners, government and the private sector to realise the benefits these new technologies present.

Outcome

Challenges and opportunities that are common across rural sectors are identified and addressed.

Investment budget for 2019-20
\$8,322,838



Our arenas

3 Growing Profitability

Goal

To enhance the profitability and sustainability of our levied rural industries.

Regional communities and the broader Australian economy depend on profitable farms and industries. We know that there is a clear link between economic prosperity and our capacity for innovation and uptake of new technology. Rural industries that are well placed to adopt new ideas and use technology to create productivity benefits establish their competitive advantage and are structured for sustainable growth.

That's why AgriFutures Australia invests in research, innovation and learning initiatives that enhance the profitability and sustainability of the agriculture, fisheries and forestry sectors.

AgriFutures Australia supports rural industries with an R&D levy and do not have an industry specific Research and Development Corporation.

Industries like the Australian rice industry which has the capacity to produce up to 1 million tonnes of rice per annum and feed 20 million people per day. Over the past 20 years the rice industry has drastically improved their water use efficiency, using 50 per cent less water than the global average per kilogram of rice produced.

AgriFutures Australia also supports the chicken meat industry. 90 per cent of Australians eat chicken meat at least once a week and a third of us are eating it three or more times a week. Total consumer expenditure related to chicken meat in its various forms is estimated to be \$5.6 billion.

The Australian honey bee industry produces between 20,000 and 30,000 tonnes of honey from over half a million hives. Over 100,000 hives are used annually for essential pollination services to the horticulture and grains industries.

AgriFutures Australia also supports farmers producing export fodder, pasture seeds, ginger, kangaroos, buffalo, goat fibre and deer.

AgriFutures Australia will empower our levy-paying industry participants to shape RD&E priorities, encourage industry uptake of innovation, and support our rural industries to adapt to changing environments – at operational, market and regulatory levels.

Priorities

Engaging industry participants in determining RD&E priorities.

Our research is targeted at rapidly unearthing commercial solutions and significantly increasing the profitability of rural industries for rural people. To achieve this, we actively scan the horizon for emerging technologies and innovations and connect with our stakeholders to identify priorities and optimise the R&D portfolio for their industries.

Investing in innovation that assists levied industries to be more profitable.

Each industry has an agreed R&D Plan. Based on this Plan we identify R&D investment opportunities. Industry panels advise AgriFutures Australia on the allocation of levied funds to individual projects.

Program requires ongoing management. In partnership with each industry panel, we intervene when projects are not delivering the outcomes anticipated and when priorities change.

The industry panels consist of industry stakeholders, scientific experts and AgriFutures Australia staff.

Delivering outcomes to maximise industry uptake and adoption.

AgriFutures Australia's investment is focussed on delivering practical actions that individual farmers can implement on their farms to improve the long-term profitability of their businesses. Our success depends on farmers innovating. Until a farmer does something different on their farm and sees a benefit, their return on investment is zero.

Commercial uptake of research findings is critical. Research findings are communicated to farmers through events like field days and workshops and through communication channels including e-newsletters, emails, social media and hardcopy publications.

Outcome

Industry participants are confident that their levy investment is delivering value.

Investment budget for 2019-20
\$13,881,560



Our arenas

4 Emerging Industries

Goal

To support new and emerging rural industries.

With global environmental and market trends impacting food consumption, Australian rural industries have an opportunity to identify new food types and to connect with and drive new and expanding markets.

As such, AgriFutures Australia is dedicated to identifying and supporting the development of new rural industries that can meet changing demand and make an economic contribution to Australia.

AgriFutures Australia will focus on identifying new industries with high potential. This will result in a strong alignment of research activities that address AgriFutures Australia's legislative requirements and the government's research priorities.

AgriFutures Australia will build partnerships with key stakeholders, including partners in the private sector, to support the development of these high-potential emerging rural industries.

Priorities

Supporting the early stage establishment of high potential rural industries.

AgriFutures Australia will target high potential emerging rural industries by supporting rigorous feasibility assessments and identifying critical impediments that can be addressed through R&D.

Outcome

High-potential emerging rural industries established.

Investment budget for 2019-20
\$3,868,000



1

People and Leadership

Key Performance Indicators (KPIs) and investment highlights

KPIs

Planned activity/activities to achieve KPIs

- | KPIs | Planned activity/activities to achieve KPIs |
|--|--|
| 1 1,800 graduates per annum of an agriculture or agricultural science course at Australian universities. | Engage high school students in the AgriFutures™ startup.business Learning in Action program. |
| 2 80% of our stakeholders feel their confidence as a leader has increased significantly or very significantly as a result of participation in an AgriFutures Australia People and Leadership program. | <p>a) Deliver the 2019 AgriFutures™ Horizon Scholarship Program including a four-day workshop and the coordination of industry placements and networking opportunities.</p> <p>b) Continue ongoing engagement with AgriFutures™ Ignite Network members including the delivery of one major capacity-building program.</p> <p>c) Deliver the 2019 AgriFutures™ Rural Women's Award Program including a three-day workshop and a ticketed AgriFutures™ Rural Women's Award Gala Dinner.</p> <p>d) Continue ongoing engagement with the AgriFutures™ Rural Women's Award Alumni.</p> <p>e) Survey all People and Leadership program participants to determine the value of the programs and to evaluate whether the needs of the participants (in relation to capacity-building) have been addressed.</p> |
| 3 Grow the AgriFutures™ Ignite Network to 1,500 members with a minimum of 70% participating as "active members". | Continue the promotion of the AgriFutures™ Ignite Network and identifying opportunities which will reach and engage new audiences. |
| 4 Deliver one major capacity building program for AgriFutures™ Ignite Network members. | Identify the needs of the AgriFutures™ Ignite Network and identify the high-value program which will meet these needs (and future aspirations) of the Network. |
| 5 Continue the development of the AgriFutures™ Rural Women's Award Alumni; ensure more than 80 AgriFutures™ Rural Women's Award Alumni participants are confirmed within the second year of the Alumni Program starting and establish an AgriFutures™ Rural Women's Award Alumni Advisory Panel. | <p>a) Continue the promotion of the AgriFutures™ Rural Women's Award Alumni Program, facilitating networking events and the establishment of the AgriFutures™ Rural Women's Award Alumni Advisory Panel.</p> <p>b) Collaborate with the AgriFutures™ Rural Women's Award Alumni to establish objectives and the roles of the Advisory Panel and deliver two meetings within the 2019-20 Financial Year.</p> |
| 6 80% of AgriFutures™ Horizon Scholars secure employment in our rural industries or a related sector within six months of graduating | Support AgriFutures™ Horizon Scholars through industry placement, conduct a capacity-building workshop and facilitate industry networking opportunities. |

2

National Challenges and Opportunities

KPIs

Planned activity/activities to achieve KPIs

- | KPIs | Planned activity/activities to achieve KPIs |
|---|--|
| 1 Facilitate one international agricultural technology event to lift the prosperity of Australian agrifood industries that engages people and business to share ideas and connect. | Deliver evokeAG, an international agrifood technology event to attract delegates including farmers, entrepreneurs and innovators from Australia and overseas in 2020. |
| 2 Develop agrifood technology innovation that will identify, test and commercialise ideas and technologies of researchers and entrepreneurs for use in Australian rural industries. | <p>a) Deliver The Bridge Hub to establish a global research community between Australia and Israel that generates innovative solutions to rural industry problems through co-investment and collaboration.</p> <p>b) Deliver a new and unique program (Farmers2Founders) that attracts and supports proactive, innovative producers looking to grow and transform their farming businesses through the development and adoption of cutting-edge technology and innovation.</p> |
| 3 Deliver ten collaborative rural research projects that deal with issues of national significance that positively affect more than one sector of agriculture. | Engage Rural Research & Development Corporations in a process to identify collaborative projects. |
| 4 Inform debates of national significance to rural industries through research studies | <p>a) Encourage and facilitate conversations and debates surrounding national rural issues and help share this communications through research studies.</p> <p>b) Publish five significant studies relating to national rural issues.</p> |

3

Growing Profitability

Key Performance Indicators (KPIs) and investment highlights

KPIs	Planned activity/activities to achieve KPIs
1 85% of KPIs outlined in program-specific RD&E five-year plans are met.	a) Monitoring of the alignment of industry KPIs with industry priorities through consultation with the levied industry Advisory Panels and key industry stakeholders at least four times per year. b) Alignment of R&D investment with industry priorities through consultation with levied industry Advisory Panels and key industry stakeholders at least four times per year.
2 75% of stakeholders rate the value of AgriFutures Australia's information products and services as high or very high.	a) Stakeholder satisfaction with information products measured through the AgriFutures Australia annual stakeholder survey. b) Continue ongoing engagement and support of industry extension programs to value add to existing industry communication channels.
3 80% of growers are comfortable or very comfortable with paying the R&D levy.	a) Grower comfort in paying the R&D levy measured through the AgriFutures Australia annual stakeholder survey. b) Alignment of R&D investment with industry priorities
4 Final deliverables from research projects are reviewed, approved and submitted for publication within one month of the final deliverable being submitted.	a) Develop research templates and resources that meet the needs of the research community and enable the deliverable of quality final reports. b) Develop a style guide for researchers to use in the completion of their final deliverables with the Communication and Capacity building team.
5 Research program R&D expenditure is managed within 10% of the annual budget.	Program budget reported to the levied industry Advisory Panels at least four times per year.
6 80% of stakeholders are comfortable or very comfortable with level of engagement between AgriFutures Australia and the industry.	a) Stakeholder comfort with the level of engagement measured through the AgriFutures Australia annual stakeholder survey. b) Host one annual Levied Industry Advisory Panel Chairs meeting. c) Host one annual key stakeholder forum. d) Continue ongoing engagement between AgriFutures Australia research program staff and industry through attendance at least one key industry event and at least three networking opportunities with key stakeholders within each levied industry.

4

Emerging Industries

KPIs	Planned activity/activities to achieve KPIs
1 Generate enhanced economic benefit by investing in research and development to support five new rural industries with high growth potential to exceed \$10m per annum (GVP).	a) Invest in the development of emerging industries that have identified research needs and can demonstrate economic benefits exceeding \$10m per annum. b) Develop the hazelnut industry in Australia by demonstrating sustainable production techniques and increasing production yields in different climatic regions. c) Identify species and design plant hybrids within Leptospermum that will enhance the production of Manuka honey in Australia to supply key markets.
2 Facilitate and support at least one industry capacity building activity to establish or advance emerging industries.	Facilitate the delivery of a pilot workshop program that develops entrepreneurship and technology capabilities to solve critical industry challenges.

Communications KPIs to support all arenas:



Social media

100 new likes/followers across the AgriFutures Australia social media channels each month



Media

50 media mentions each month



Website

An average of 50,000 page views each month



e-newsletter

200 new subscribers to the AgriFutures Australia corporate e-newsletter each month

A Appendix

Budget income and expenses for 2019-20

Budget income and expenses for 2019-20	2018-19 Estimated actual \$'000	2019-20 Budget \$'000	2020-21 Forward estimate \$'000	2021-22 Forward estimate \$'000	2022-23 Forward estimate \$'000
Expenses					
Employee benefits	3,568	3,409	3,409	3,409	3,409
Supplier expenses	3,549	7,363	7,363	7,363	7,363
Grants	22,095	27,416	27,343	30,092	30,316
Depreciation and amortisation	160	185	185	185	185
Total expenses	29,372	38,373	38,300	41,049	41,273
Less: Own-source income					
Own-source revenue					
Industry contributions	3,907	4,733	4,733	4,733	4,733
Interest	546	600	600	600	600
Royalties	328	338	338	338	338
Other	1,183	2,266	3,259	3,259	3,259
Total own-source revenue	5,964	7,937	8,930	8,930	8,930
Total own-source income	5,964	7,937	8,930	8,930	8,930
Net cost of (contribution by) services	23,408	30,436	29,370	32,119	32,343
Revenue from Government ^(a) Commonwealth contribution	20,990	29,737	29,370	32,119	32,343
Total revenue from Government	20,990	29,737	29,370	32,119	32,343
Surplus/(deficit) attributable to the Australian Government	(2,418)	(699)	-	-	-
Total comprehensive income/(loss) attributable to the Australian Government	(2,418)	(699)	-	-	-

^(a) Revenue from Government includes a Commonwealth contribution under the PIRD Act and levies collected from industry by the Department of Agriculture and Water Resources for R&D activities.

Prepared on Australian Accounting Standards basis.

B Appendix

Research and Development expenditure estimates 2019-20 across the Strategic Science and Research Priorities

Science and Research Priorities	Arena 1 (\$'000)	Arena 2 (\$'000)	Arena 3 (\$'000)	Arena 4 (\$'000)	Total (\$'000)	Total (%)
1. Food						
1.1 Knowledge of global and domestic demand, supply chains and the identification of country specific preferences for food Australia can produce.	0	154	129	0	283	1.03%
1.2 Knowledge of the social, economic and other barriers to achieving access to healthy Australian foods.	0	1,415	0	0	1,415	5.16%
1.3 Enhanced food production.	0	6,223	13,069	3,868	23,160	84.48%
2. Soil and Water						
2.1 New and integrated national observing systems, technologies and modelling frameworks across the soil-atmosphere-water-marine systems.	0	0	0	0	0	0.00%
2.2 Better understanding of sustainable limits for productive use of soil, freshwater, river flows and water rights, terrestrial and marine ecosystems.	0	0	0	0	0	0.00%
2.3 Minimising damage to, and developing solutions for restoration and remediation of, soil, fresh and potable water, urban catchments and marine systems.	0	0	50	0	50	0.18%
3. Transport						
3.1 Low emission fuels and technologies for domestic and global markets.	0	0	0	0	0	0.00%
3.2 Improved logistics, modelling and regulation: urban design, autonomous vehicles, electrified transport, sensor technologies, real time data and spatial analysis.	0	0	0	0	0	0.00%
3.3 Effective pricing, operation, and resource allocation.	0	0	0	0	0	0.00%
4. Cybersecurity						
4.1 Highly-secure and resilient communications and data acquisition, storage, retention and analysis for government, defence, business, transport systems, emergency and health services.	0	0	0	0	0	0.00%

Science and Research Priorities	Arena 1 (\$'000)	Arena 2 (\$'000)	Arena 3 (\$'000)	Arena 4 (\$'000)	Total (\$'000)	Total (%)
4.2 Secure, trustworthy and fault-tolerant technologies for software applications, mobile devices, cloud computing and critical infrastructure.	0	0	0	0	0	0.00%
4.3 New technologies and approaches to support the nation's cybersecurity: discovery and understanding of vulnerabilities, threats and their impacts, enabling improved risk-based decision making, resilience and effective responses to cyber intrusions and attacks.	0	0	0	0	0	0.00%
4.4 Understanding the scale of the cyber security challenge for Australia, including the social factors informing individual, organisational, and national attitudes towards cyber security.	0	0	0	0	0	0.00%
5. Energy						
5.1 Low emission energy production from fossil fuels and other sources.	0	0	0	0	0	0.00%
5.2 New clean energy sources and storage technologies that are efficient, cost-effective and reliable.	0	0	0	0	0	0.00%
5.3 Australian electricity grids that can readily integrate and more efficiently transmit energy from all sources including low- and zero-carbon sources.	0	287	0	0	287	1.05%
6. Resources						
6.1 A fundamental understanding of the physical state of the Australian crust, its resource endowment and recovery.	0	0	0	0	0	0.00%
6.2 Knowledge of environmental issues associated with resource extraction.	0	0	0	0	0	0.00%
6.3 Lowering the risk to sedimentary basins and marine environments due to resource extraction.	0	0	0	0	0	0.00%
6.4 Technologies to optimise yield through effective and efficient resource extraction, processing and waste management.	0	20	0	0	20	0.07%

Science and Research Priorities	Arena 1 (\$'000)	Arena 2 (\$'000)	Arena 3 (\$'000)	Arena 4 (\$'000)	Total (\$'000)	Total (%)
7. Advanced manufacturing						
7.1 Knowledge of Australia's comparative advantages, constraints and capacity to meet current and emerging global and domestic demand.	0	0	268	0	268	0.98%
7.2 Cross-cutting technologies that will de-risk, scale up, and add value to Australian manufactured products.	0	0	365	0	365	1.33%
7.3 Specialised, high value-add areas such as high-performance materials, composites, alloys and polymers.	0	0	0	0	0	0.00%
8. Environmental Change						
8.1 Improved accuracy and precision in predicting and measuring the impact of environmental changes caused by climate and local factors.	0	0	0	0	0	0.00%
8.2 Resilient urban, rural and regional infrastructure.	0	0	0	0	0	0.00%
8.3 Options for responding and adapting to the impacts of environmental change on biological systems, urban and rural communities and industry.	1,344	71	0	0	1,415	5.16%
9. Health						
9.1 Better models of health care and services that improve outcomes, reduce disparities for disadvantaged and vulnerable groups, increase efficiency and provide greater value for a given expenditure.	0	153	0	0	153	0.56%
9.2 Improved prediction, identification, tracking, prevention and management of emerging local and regional health threats.	0	0	0	0	0	0.00%
9.3 Better health outcomes for Indigenous people, with strategies for both urban and regional communities.	0	0	0	0	0	0.00%
9.4 Effective technologies for individuals to manage their own health care, for example, using mobile apps, remote monitoring and online access to therapies.	0	0	0	0	0	0.00%
Total	1,344	8,323	13,881	3,868	27,416	100.00%

C Appendix

Research and Development expenditure estimates 2019-20 across the Rural Research and Development Priorities

Rural Research and Development Priorities	Arena 1 (\$'000)	Arena 2 (\$'000)	Arena 3 (\$'000)	Arena 4 (\$'000)	Total (\$'000)	Total (%)
1. Advanced Technology	494	5,381	1,323	8	7,206	26%
2. Biosecurity	0	1,979	574		2,553	9%
3. Soil, water and managing natural resources	0	71	308	0	379	1%
4. Adoption of R&D	850	892	11,676	3,860	17,278	64%
Total	1,344	8,323	13,881	3,868	27,416	100.00%

D Appendix

Science and Research Priorities and the Rural Research and Development Priorities

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
1 People and Leadership	Horizon Scholarship	Horizon Scholarship 2014 - A. Markey (AECL - CSU)	PRJ-009622	8.3	4
	Horizon Scholarship	Horizon Scholarship 2015 - A. Munro (RIRDC - CSU)	PRJ-010041	8.3	4
	Horizon Scholarship	Horizon Scholarship 2015 - C. Daffey (MLA - James Cook University)	PRJ-010042	8.3	4
	Horizon Scholarship	Horizon Scholarship 2015 - E. J. Lim (GRDC - University of Sydney)	PRJ-010055	8.3	4
	Horizon Scholarship	Horizon Scholarship 2016 - Peta Stockwell (GRDC - UQ)	PRJ-010477	8.3	4
	Horizon Scholarship	Horizon Scholarship 2016 - J. Moore (GRDC - University of Sydney)	PRJ-010479	8.3	4
	Horizon Scholarship	Horizon Scholarship 2016 - J. Capps (GRDC - UNE)	PRJ-010482	8.3	4
	Horizon Scholarship	Horizon Scholarship 2016 - W. Camp (MLA - CSU)	PRJ-010485	8.3	4
	Horizon Scholarship	Horizon Scholarship 2016 - S. Knight (CRDC - UNE)	PRJ-010487	8.3	4
	Horizon Scholarship	L. Adler - Horizon Scholarship 2017 (RIRDC-UNE)	PRJ-010740	8.3	4
	Horizon Scholarship	A. Spork - Horizon Scholarship 2017 (AECL-UNE)	PRJ-010741	8.3	4
	Horizon Scholarship	R. Bice - Horizon Scholarship 2017 (DA-CSU)	PRJ-010742	8.3	4
	Horizon Scholarship	E. Walker - Horizon Scholarship 2017 (RIRDC-CSU)	PRJ-010743	8.3	4
	Horizon Scholarship	A. Mitchell - Horizon Scholarship 2017 (DA-CSU)	PRJ-010744	8.3	4
	Horizon Scholarship	E. Sinderberry - Horizon Scholarship 2017 (GRDC-CSU)	PRJ-010745	8.3	4
	Horizon Scholarship	M. Burge - Horizon Scholarship 2017 (GRDC-USQ)	PRJ-010746	8.3	4
Horizon Scholarship	Z. Gallagher - Horizon Scholarship 2017 (GRDC-UQ)	PRJ-010747	8.3	4	
Horizon Scholarship	C. Nock - Horizon Scholarship 2017 (RIRDC CME-UQ)	PRJ-010748	8.3	4	
Horizon Scholarship	H. Chandler - Horizon Scholarship 2017 (CRDC-Curtin)	PRJ-010750	8.3	4	

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
1 People and Leadership	Horizon Scholarship	M. Hyde - Horizon Scholarship 2017 (GRDC-Curtin)	PRJ-010751	8.3	4
	Horizon Scholarship	T. Noonan - Horizon Scholarship 2017 (GRDC-UniMelb)	PRJ-010752	8.3	4
	Horizon Scholarship	J. Reid - Horizon Scholarship 2017 (MLA-UQ)	PRJ-010754	8.3	4
	Horizon Scholarship	A. Gibson - Horizon Scholarship 2017 (AWI-UNE)	PRJ-011305	8.3	4
	Horizon Scholarship	J. Zieltjes - Horizon Scholarship 2017 (McCaughey Institute/ RIRDC Rice Ext-UNE)	PRJ-011352	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - E. Moss (MLA - UQ)	PRJ-011359	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - A. Horton (AWI-UNE)	PRJ-011360	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - J. Peacock (AECL - UQ)	PRJ-011361	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - A.Gray (DA - UNE)	PRJ-011362	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - S. Ludington (DA - UNE)	PRJ-011363	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - A. Smith (GRDC - ANU)	PRJ-011366	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - L. Jepson (GRDC - UCQ)	PRJ-011367	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - J. Gibson (GRDC - LTU)	PRJ-011368	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - A. James (GRDC - UM)	PRJ-011369	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - C. Bergmeier (GRDC - UNE)	PRJ-011370	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - J. Lane (WESTPAC - UNE)	PRJ-011371	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - I. Rhind (AgriFutures - USQ)	PRJ-011372	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - T. Taylor (WESTPAC - University of Sydney)	PRJ-011373	8.3	4
	Horizon Scholarship	2018 Horizon Scholarship - W.Scott (WESTPAC - UT)	PRJ-011374	8.3	4
	People and Leadership	PIEFA/Career Harvest Sponsorship Agreement	PRJ-011092	8.3	1
People and Leadership	2019 AgriFutures startup. business	PRJ-011725	8.3	1	

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
2 National Challenges and Opportunities	Australian Biomass for Bioenergy Assessment	NSW component of Australian Biomass for Bioenergy Assessment	PRJ-010364	5.3	1
	Australian Biomass for Bioenergy Assessment	SA component of Australian Biomass for Bioenergy Assessment	PRJ-010372	1.1	1
	Australian Biomass for Bioenergy Assessment	VIC component of Australian Biomass for Bioenergy Assessment	PRJ-010373	5.3	1
	Australian Biomass for Bioenergy Assessment	WA component of Australian Biomass for Bioenergy Assessment	PRJ-010374	5.3	1
	Australian Biomass for Bioenergy Assessment	QLD component of Australian Biomass for Bioenergy Assessment	PRJ-010375	5.3	1
	Australian Biomass for Bioenergy Assessment	USC component of Australian Biomass for Bioenergy Assessment	PRJ-010376	5.3	1
	Australian Biomass for Bioenergy Assessment	QUT component of Australian Biomass for Bioenergy Assessment	PRJ-010377	5.3	1
	Australian Biomass for Bioenergy Assessment	RIRDC - ARENA project Australian Biomass for Bioenergy Assessment	PRJ-010379	5.3	1
	Australian Biomass for Bioenergy Assessment	TAS component of Australian Biomass for Bioenergy Assessment	PRJ-010475	5.3	1
	Australian Biomass for Bioenergy Assessment	J. Bird - Program Management for Australian Biomass for Bioenergy Assessment	PRJ-011168	1.1	1
	BridgeHub	Project Bridge Hub	PRJ-011469	1.2	1
	AgVet Chemical Priority Use	Project Manager - Access to Industry Priority Uses of Agvet Chemicals	PRJ-010723	1.3	1
	AgVet Chemical Priority Use	Agvet Access Grants 2018	PRJ-011456	1.3	2
	Climate Research Strategy for Primary Industries	CRSPI Program Manager Services - Anwen Lovett	PRJ-011786	8.3	3

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
2 National Challenges and Opportunities	evokeAG	-	-	-	-
	GrowAG	GrowAG Roadmap - concept design	PRJ-011692	1.2	1
	National Rural Issues	Management of the AgChem Access Priorities Forum	PRJ-010722	1.3	1
	National Rural Issues	Managing Climate Variability Program Phase 5 Funding Support	PRJ-010726	1.2	4
	National Rural Issues	Contribution towards Food Agility CRC Limited	PRJ-010765	1.2	1
	National Rural Issues	Contribution towards Plant Biosecurity Research Initiative	PRJ-010855	8.3	3
	National Rural Issues	Contribution RnD4P Project- Forewarned is forearmed (RnD4Profit 16-03-007)	PRJ-011148	1.2	1
	National Rural Issues	Contribution RnD4P Project- Improving Plant Pest Management	PRJ-011151	1.2	1
	National Rural Issues	Farmers2Founders Initiative	PRJ-011666	6.4	1
	Rural Safety and Health Alliance (RSHA)	Project Management for RDC Joint Health and Safety Program	PRJ-011553	9.1	1
	Rural Research and Development (R&D) for Profit	Honey bee genetic improvement program	-	1.3	1
	Rural Research and Development (R&D) for Profit	Underpinning agricultural productivity and biosecurity of weed biological control	-	1.3	2
	Secure Pollination	UOA - Secure Pollination for more productive agriculture (RnD4Profit-15-02-035)	PRJ-010558	1.3	1
	Secure Pollination	US - Secure Pollination for more productive agriculture (RnD4Profit-15-02-035)	PRJ-010559	1.3	1
	Secure Pollination	UNE - Secure Pollination for more productive agriculture (RnD4Profit-15-02-035)	PRJ-010560	1.3	1
	Secure Pollination	ANU - Secure Pollination for more productive agriculture (RnD4Profit-15-02-035)	PRJ-010561	1.3	1
Secure Pollination	Secure Pollination for More Productive Agriculture	PRJ-010571	1.3	1	
Secure Pollination	Project Manager - Secure Pollination for More Productive Agriculture	PRJ-010689	1.3	1	

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities	
2 National Challenges and Opportunities	Secure Pollination	Securing Pollination - Hort Innovation Pool 2 Funds	PRJ-010988	1.3	1	
	Weeds Biocontrol	Biocontrol Solutions for Sustainable Management of Weed Impacts to Agriculture	PRJ-010490	1.3	2	
	Weeds Biocontrol	CSIRO - Weed Biocontrol (RnD4Profit-15-02-005)	PRJ-010527	1.3	2	
	Weeds Biocontrol	NSW DPI - Weed Biocontrol (RnD4Profit-15-02-005)	PRJ-010528	1.3	2	
	Weeds Biocontrol	QDAF - Weed Biocontrol (RnD4Profit-15-02-005)	PRJ-010529	1.3	2	
	Weeds Biocontrol	VDEDJTR - Weed Biocontrol (RnD4Profit-15-02-005)	PRJ-010531	1.3	2	
	Weeds Biocontrol	Project Manager - Biocontrol Solutions for Sustainable Management of Weed Impact	PRJ-010688	1.3	2	
	Weeds Biocontrol	Preparation and production of newsletters for weeds biocontrol project	PRJ-011012	1.3	2	
	3 Growing Profitability	Chicken Meat	Feed Grains R&D Partnership (starting in 2010/11)	PRJ-005882	1.3	4
		Chicken Meat	Resilient plants for free range chicken meat farms	PRJ-010184	1.3	1
Chicken Meat		Moving from concept to control; use of phages for Campylobacter reduction	PRJ-010208	1.3	1	
Chicken Meat		Formulating broiler diets based on protein and starch digestive dynamics	PRJ-010216	1.3	4	
Chicken Meat		A novel way to suppress growth of Campylobacter in chickens prior to processing	PRJ-010237	1.3	1	
Chicken Meat		Clouds and Pasteurella multocida	PRJ-010276	1.3	4	
Chicken Meat		Coordinating the development of Biosecurity DVDs	PRJ-010446	1.3	1	
Chicken Meat		Maternal call simulation to improve welfare, management and productivity	PRJ-010563	1.3	1	
Chicken Meat		Developing visual litter management extension resources for meat chicken growers	PRJ-010603	7.1	1	
Chicken Meat		Utilisation of synthetic amino acids by poultry	PRJ-010623	1.3	4	
Chicken Meat	Dynamics of ILT spread and role of dust in epidemiology, diagnostics and control	PRJ-010639	1.3	4		

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
3 Growing Profitability	Chicken Meat	Novel detection of chicken welfare using machine vision	PRJ-010646	1.3	1
	Chicken Meat	Broiler Farm Odour Modelling	PRJ-010714	1.3	3
	Chicken Meat	2018 Nuffield Australia Farming Scholarship - Emma O'Flaherty	PRJ-010721	1.3	1
	Chicken Meat	CME Program Development Services - K. Hewson	PRJ-010761	1.3	4
	Chicken Meat	Electrolyte supplementation to alleviate the adverse effects of severe heat stress	PRJ-010953	1.3	4
	Chicken Meat	Assessment welfare and carcass quality issues during transport (w/truck design)	PRJ-010961	1.3	4
	Chicken Meat	Review of rodent control for the Australian Chicken Meat and Egg Industries	PRJ-010965	1.3	1
	Chicken Meat	Antimicrobial Sensitivity Testing – a survey of laboratory capacity	PRJ-010967	1.3	4
	Chicken Meat	Increasing Australia's preparedness for vIBDV	PRJ-010978	1.3	4
	Chicken Meat	A time-course study in the processing plant	PRJ-010984	1.3	1
	Chicken Meat	Future market insights for Australia's chicken meat industry	PRJ-010999	1.3	1
	Chicken Meat	Current and potential food safety interventions for meat chicken production	PRJ-011003	1.3	1
	Chicken Meat	Next generation probiotics to enhance the gut health of chickens	PRJ-011008	1.3	4
	Chicken Meat	Antimicrobial stewardship verification in the Australian Chicken Meat Industry	PRJ-011023	1.3	1
	Chicken Meat	Contribution towards RR&D4P Project 16-03-012 High throughput technology for AMR	PRJ-011051	1.3	4
	Chicken Meat	Development of National Environmental Guidelines for the Meat Chicken Industry	PRJ-011090	1.3	3
	Chicken Meat	Suitability of litter amendments for the Australian chicken meat industry	PRJ-011119	1.3	1
Chicken Meat	CME Program contribution towards Poultry Hub Australia	PRJ-011296	1.3	4	
Chicken Meat	Mass Disposal Preparedness Project	PRJ-011301	1.3	4	
Chicken Meat	Scholarship - Ashlee Morgan	PRJ-011475	7.1	1	

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
3 Growing Profitability	Chicken Meat	Development of a Cell Line for ILTV Vaccine Production - Formerly PRJ-010654	PRJ-011481	1.3	4
	Chicken Meat	Economic impact of non-starch polysaccharides in broiler diets	PRJ-011487	1.3	4
	Chicken Meat	Litter and Environment – BMPs and data to support production and industry growth	PRJ-011502	1.3	3
	Chicken Meat	Review of National Animal Welfare Standard and development of BMP material	PRJ-011513	1.3	1
	Chicken Meat	Optimising amino acid profiles and energy in reduced-protein diets	PRJ-011520	1.3	4
	Chicken Meat	Contribution for PRJ-010965 and PRJ-011301	PRJ-011527	1.3	4
	Chicken Meat	Reviewing the Solar Photovoltaic Assessment Tool for the Chicken Meat Industry	PRJ-011528	1.3	3
	Chicken Meat	Branched-chain amino acids in wheat-based, crude protein-reduced diets	PRJ-011541	1.3	4
	Chicken Meat	Optimising ranging behaviour by free-range meat chickens	PRJ-011546	1.3	1
	Chicken Meat	The response of broilers to insoluble fibre and exogenous enzymes in low protein	PRJ-011549	1.3	4
	Chicken Meat	Assessment of sexing options to perform nutritional research in the meat chicken industry	PRJ-011560	1.3	4
	Chicken Meat	Epidemiological case study of routinely measured chicken welfare indicators	PRJ-011562	1.3	1
	Chicken Meat	Review of the Nutrient Content of Australian Feed Ingredients	PRJ-011564	1.3	4
	Chicken Meat	National Pathogen Survey 2019	PRJ-011565	1.3	1
	Chicken Meat	Co-designed Scoping study to unlock the power of digital	PRJ-011566	1.3	1
	Chicken Meat	Development of improved odour emissions and ventilation estimation for farms	PRJ-011568	1.3	3
	Chicken Meat	Decontamination project for the Australian poultry industry	PRJ-011570	1.3	1
Chicken Meat	Case study of pathogen pathways post processing	PRJ-011578	1.3	1	
Chicken Meat	Peri-hatching strategies to endure enteric pathogens in broilers	PRJ-011584	1.3	4	

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
3 Growing Profitability	Chicken Meat	Industry Best Practice Manual for Water Quality Management and Sterilisation	PRJ-011587	1.3	3
	Chicken Meat	Survey of barriers to litter reuse, and Best practice manual for managing litter	PRJ-011589	1.3	3
	Chicken Meat	Sanitisers for commercial use in chicken meat production	PRJ-011593	1.3	1
	Chicken Meat	Undertake a comparative analysis of state legislation	PRJ-011665	1.3	4
	Chicken Meat	An investigative study of shed management simulation training tools	PRJ-011701	7.1	1
	Chicken Meat	Review of chicken meat processing for enteropathogen management	PRJ-011713	1.3	1
	Export Fodder	Export Fodder Workplace Safety Standards	PRJ-010828	1.3	4
	Export Fodder	National Hay Agronomy project	PRJ-011029	1.3	4
	Ginger	Ginger Development and Extension	PRJ-010755	1.3	2
	Ginger	Review of the Biosecurity Plan for the Ginger Industry	PRJ-010862	1.3	2
	Ginger	Ginger Ninja: Automating disease detection in seed ginger stock	PRJ-011522	1.3	2
	Ginger	Site-specific weed control for ginger cropping systems	PRJ-011627	1.3	2
	Ginger	Ginger Extension Coordination Project	PRJ-011740	1.1	4
	Ginger	Chemical Minor Use Permit Research	PRJ-011849	1.3	4
	Honey Bee	Improving Biosecurity Resources and Better Understanding Bee Health in Australia	PRJ-010226	1.3	2
	Honey Bee	Development of honeybee products from a biodiversity hotspot	PRJ-010313	1.3	4
	Honey Bee	Investigating factors that influence chalkbrood outbreaks in Australia	PRJ-010815	1.3	2
	Honey Bee	Improving the health of hives used in pollination	PRJ-010818	1.3	2
	Honey Bee	Probiotic development for bees: analyzing gut bacteria in healthy bees	PRJ-010825	1.3	2
	Honey Bee	Increasing the value of Australian honey as a health food	PRJ-010879	1.3	4

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
3 Growing Profitability	Honey Bee	Honey Bee and Pollination Program Communications 2018-2020	PRJ-011385	1.3	1
	Thoroughbred Horses	Non-invasive ventilatory support for foals	PRJ-011159	1.3	4
	Thoroughbred Horses	Communications needs analysis for Thoroughbred Horses Program	PRJ-011164	1.3	4
	Thoroughbred Horses	Maintaining welfare and integrity in Australian Racing	PRJ-011188	1.3	4
	Thoroughbred Horses	Improving the detection of parasitic infections and control strategies of horses	PRJ-011191	1.3	4
	Thoroughbred Horses	Improving jockey safety through virtual reality and biomarkers of concussion	PRJ-011192	1.3	4
	Thoroughbred Horses	Improved bacterial identification and antimicrobial susceptibility testing	PRJ-011233	1.3	4
	Thoroughbred Horses	Computational modelling of limb loads from galloping horses on different tracks	PRJ-011237	1.3	4
	Thoroughbred Horses	The uterine microbiome- key to equine infertility?	PRJ-011248	1.3	4
	Thoroughbred Horses	Wellbeing from pregnancy to racing- horse demographics	PRJ-011251	1.3	4
	Thoroughbred Horses	PhD Understanding, reducing the effects of heat stress on TB stallion fertility	PRJ-011268	1.3	4
	Thoroughbred Horses	Wellbeing: Racing demographics, reasons for retirement & post racing destinations	PRJ-011271	1.3	4
	Thoroughbred Horses	Postgraduate Scholarship - UoA Laura Nath	PRJ-011357	1.3	4
	Thoroughbred Horses	Understanding the epidemiology of Chlamydia psittaci infections in mares	PRJ-011402	1.3	4
	Thoroughbred Horses	Rapid diagnosis of infectious agents of equine reproductive loss	PRJ-011628	1.3	4
	Thoroughbred Horses	A Novel Device for the On-farm Assessment of Stallion Sperm Fertility	PRJ-011712	1.3	4
	Thoroughbred Horses	The pathology and epidemiology of equine pregnancy loss	PRJ-011719	1.3	4
	Thoroughbred Horses	Developing a novel diagnostic test for early pregnancy in the mare	PRJ-011748	1.3	4
	Thoroughbred Horses	Coxiella burnetii infection in association with equine abortion	PRJ-011758	1.3	4

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
3 Growing Profitability	Thoroughbred Horses	Evaluating a prototype Rhodococcus equi vaccine in foals	PRJ-011770	1.3	4
	Thoroughbred Horses	Science fact not fiction: Detecting gene edited racehorses	PRJ-011777	1.3	3
	Kangaroo	Building trust in Australia's commercial kangaroo industry	PRJ-011811	1.3	4
	Northern Rice	Northern Australia Rice - Developing and building capacity	PRJ-010763	1.3	4
	Northern Rice	Northern Australia Rice - Developing High Quality Rice for Northern Australia	PRJ-010812	1.3	4
	Northern Rice	Northern Australia Rice - Developing varieties with agronomic integrity/market	PRJ-010813	1.3	4
	Northern Rice	Northern Rice Australia - Developing Rice Growing Packages for TropicalNorth Aus	PRJ-010814	1.3	4
	Pasture Seeds	Molecular markers for cultivar ID and seed certification in pasture legumes	PRJ-009750	1.3	1
	Pasture Seeds	Siriver – producing lucerne breeders seed	PRJ-010760	1.3	1
	Pasture Seeds	Ensuring Lucerne seed production in the absence of bees	PRJ-010875	1.3	1
	Pasture Seeds	Lucerne Variety Trial – Assess optimum plant stress levels for seed production	PRJ-010959	1.3	4
	Pasture Seeds	Profitable and environmentally sustainable sub clover and medic seed harvesting	PRJ-011096	1.3	1
	Rice	Rice variety nitrogen & agronomic management	PRJ-009790	1.3	4
	Rice	Australian Rice Partnership 2	PRJ-009950	1.3	4
	Rice	Extension for improved efficiency and sustainability in the rice industry	PRJ-010696	1.3	4
	Rice	Post Graduate Scholarship - C Rixon	PRJ-010705	1.3	1
	Rice	Post Graduate Scholarship - M Van Leeuwen	PRJ-010712	1.3	1
	Rice	Post Graduate Scholarship - J Opena	PRJ-010758	1.3	1
Rice	Improving mid-season nitrogen management of rice	PRJ-011058	1.3	4	
Rice	Traits of importance for aerobic 'DryRice' varieties for the Riverina region	PRJ-011067	1.3	4	

Arena	Program Name	Project	Project Number	Science and Research Priorities	Rural Research and Development Priorities
3 Growing Profitability	Rice	Rice Industry Leadership Program	PRJ-011075	1.3	1
	Rice	Smart irrigation control for water and labour savings in rice growing systems	PRJ-011099	1.3	4
	Rice	Rice Weed Management in Australia	PRJ-011136	1.3	4
	Rice	Australian Rural Leadership Program 2018 - Course 25 - Troy Mauger	PRJ-011226	1.3	1
	Rice	Rice R&D Levy Review	PRJ-011460	1.3	4
	Tea Tree Oil	Tea Tree Breeding 2019 - 2023	PRJ-011309	7.2	4
	Tea Tree Oil	Entomopathogens for management of key pests of tea tree oil	PRJ-011618	7.1	4
	Tea Tree Oil	Contribution to the CRC-P for Cloning tea tree to produce low methyl eugenol	PRJ-011621	7.1	4
	Tea Tree Oil	Chiral Testing of Commercial TTO samples for Adulteration	PRJ-011624	7.1	1
	Tea Tree Oil	US EPA License requirements for tea tree oil as an industrial biocide	PRJ-011625	7.2	1
	Tea Tree Oil	Communication of research findings to tea tree oil industry levy payers	PRJ-011626	7.1	1
	Tea Tree Oil	A Revised Monograph for BP and Ph Eur to align with ISO 4730: 2017	PRJ-011678	7.2	4
	4 Emerging Industries	Emerging Industries	Australian Essential Oils Industry - Improving R&D Communication	PRJ-010517	1.3
Emerging Industries		Development of an agronomy package for teff production in the Murray Valley region	PRJ-010684	1.3	4
Emerging Industries		Leptospermum Plant Breeding Program for Development of High Grade Manuka Honey	PRJ-010702	1.3	4
Emerging Industries		Hazelnuts in Australia: Productivity & Economic Analysis for Industry Expansion	PRJ-010774	1.3	4
Emerging Industries		Accelerate Wattle Seed	PRJ-011307	1.3	4
Emerging Industries		Residue studies to enable acceleration of commercial Plantago production in ORIA	PRJ-011407	1.3	4
Ratite		Post Graduate Scholarship - Lauren Chartier	PRJ-011163	1.3	1

E

Notification of significant events

This plan has been written to align to terms of section 19 of the Public Governance, Performance and Accountability Act 2013, which defines a particular class of proposal as 'significant' and notifiable to Ministers.

The organisation confirms, in the context of section 15, that there are no 'significant' proposals in this Plan that should be drawn to the attention of Ministers.

F

Consultation with stakeholders

Communications channels between AgriFutures Australia and rural industries meet two essential functions - accountability and bringing industry influence to bear on the research agenda. At the peak industry level, the organisation is accountable to:

- The National Farmers' Federation
- The Australian Chicken Meat Federation.

These two organisations are prescribed by section 7 of AgriFutures Australia's enabling legislation. This requires AgriFutures Australia to report on its activities each financial period. This accountability runs parallel to AgriFutures Australia's Annual Report to the Minister and the Parliament.

All of AgriFutures Australia's research programs have advisory or reference panels with stakeholder membership.

G

Service charter

Enabling legislation and the Board AgriFutures Australia's enabling legislation is the Primary Industries Research and Development Act 1989 (the PIRD Act 1989).

The AgriFutures Australia Board is accountable to the Parliament of Australia through the Minister for Agriculture.

H

AgriFutures Australia Board

The AgriFutures Australia Board is accountable to the Parliament of Australia through the Minister for Agriculture.

The Board:

- Sets strategic direction and establishes policies for the organisation
- Oversees operational and functional performance against budget and other key performance indicators on behalf of stakeholders
- Remuneration to Directors estimated at \$605,692 for 2019-20

AgriFutures Australia Board Directors as of 30 June 2019

Chairperson

Mrs Kay Hull AM

Deputy Chair

Mr Ian Henderson

Managing Director

Mr John Harvey

Non-Executive Directors

Dr Kate Andrews

Mr Ric Clark

Dr Tony Hamilton

Dr William Ryan

I

Stakeholders

- The Australian Government on behalf of rural industries and taxpayers
- Industry funders
- Levy payers
- The Australian community
- Primary clients
- For AgriFutures Australia related industries, all participants in the production and marketing chain (producers, processors, distributors and consumers)
- On AgriFutures Australia's strategic cross-sectoral program, the National Farmers' Federation on behalf of all rural industries

Reporting to stakeholders

There are four key accountability documents for stakeholders:

1. A five-year Strategic R&D Plan that sets out strategies, directions and performance indicators for the Corporation.
2. A five-year R&D plan for each industry program within new and Emerging Industries, established rural industries and national rural issues.
3. An Annual Operational Plan that sets out yearly objectives to give effect to the five-year Strategic R&D Plan, the five-year R&D industry plans, the annual budget and annual research priorities.
4. The Annual Report, which sets out achievements against objectives, budgets and administration costs.

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AgriFutures Australia Advisory Panels – Chairs

Rice

Mr Drew Braithwaite

Chicken Meat

Mr Guy Hebblewhite

Export Fodder

Mr Peter Baker

Ginger

Ms Nicole Christodoulou

Emerging Industries

Mr Brian Ruddle

Pasture Seeds

Mrs Lisa Anderson

Honey Bee & Pollination

Dr Doug Somerville

Tea Tree Oil

Mr Michael Flanagan

Thoroughbred Horses

Dr Nigel Perkins

Ignite

No Chair appointed

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Corporate directory

Chair Mrs Kay Hull AM	02 6293 6900	General Manager Business Development Mr Michael Beer	02 6923 6915
Managing Director Mr John Harvey	02 6923 6901	General Manager Communications and Capacity Building Ms Belinda Allitt	02 6923 6919
General Manager Corporate Mrs Louise Heaslip	02 6923 6903	General Manager Research Mr John Smith	02 6923 6921



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